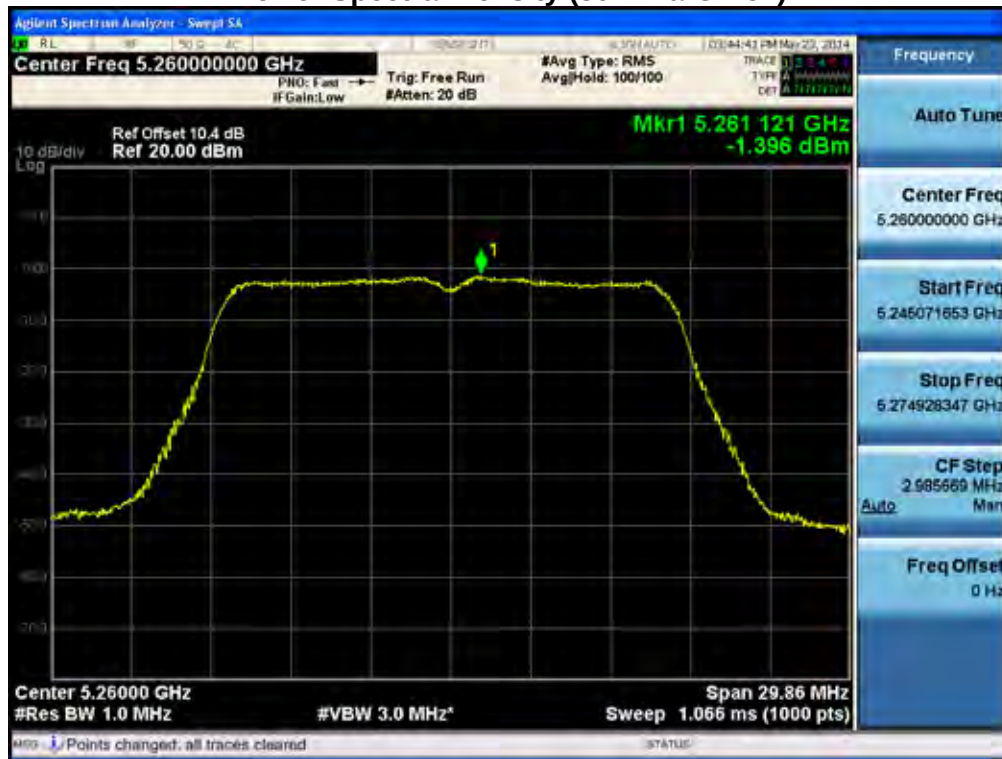


## Monitoring Port Ant.0

### RESULT PLOTS

20 MHz BW

#### Power Spectral Density (802.11a-CH 52)



#### Power Spectral Density (802.11a-CH 60)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

### Power Spectral Density (802.11a-CH 64)



### Power Spectral Density (802.11a-CH 100)



### Power Spectral Density (802.11a-CH 116)



### Power Spectral Density (802.11a-CH 144)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |



## Monitoring Port Ant.1

### RESULT PLOTS

20 MHz BW

Power Spectral Density (802.11a-CH 52)



Power Spectral Density (802.11a-CH 60)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

### Power Spectral Density (802.11a-CH 64)



### Power Spectral Density (802.11a-CH 100)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

### Power Spectral Density (802.11a-CH 116)



### Power Spectral Density (802.11a-CH 144)





## Monitoring Port Ant.2

### RESULT PLOTS

20 MHz BW

Power Spectral Density (802.11a-CH 52)



Power Spectral Density (802.11a-CH 60)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

### Power Spectral Density (802.11a-CH 64)



### Power Spectral Density (802.11a-CH 100)





### Power Spectral Density (802.11a-CH 116)



### Power Spectral Density (802.11a-CH 144)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

Power Spectral Density (802.11a-CH 52)



Power Spectral Density (802.11a-CH 60)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

### Power Spectral Density (802.11a-CH 64)



### Power Spectral Density (802.11a-CH 100)





## Power Spectral Density (802.11a-CH 116)



## Power Spectral Density (802.11a-CH 144)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

### Power Spectral Density (802.11n-CH 52)



### Power Spectral Density (802.11n-CH 60)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

### Power Spectral Density (802.11n-CH 64)



### Power Spectral Density (802.11n-CH 100)





### Power Spectral Density (802.11n-CH 116)



### Power Spectral Density (802.11n-CH 144)



## Power Spectral Density (802.11ac-CH 52)



## Power Spectral Density (802.11ac-CH 60)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

## Power Spectral Density (802.11ac-CH 64)



## Power Spectral Density (802.11ac-CH 100)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |



### Power Spectral Density (802.11ac-CH 116)

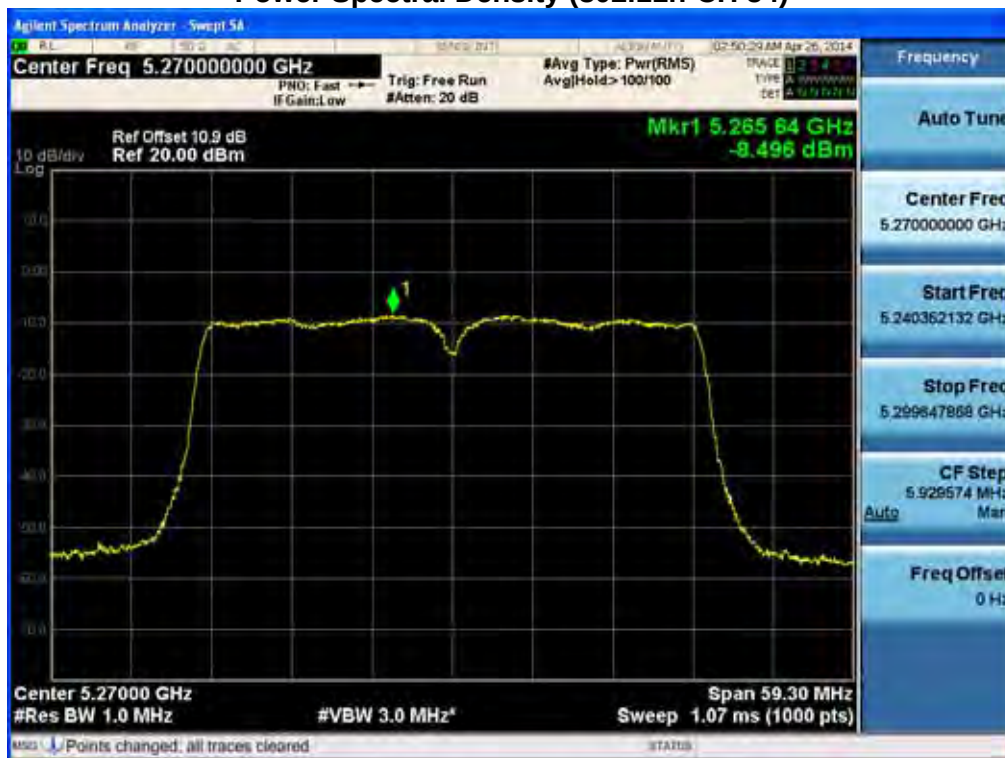


### Power Spectral Density (802.11ac-CH 144)

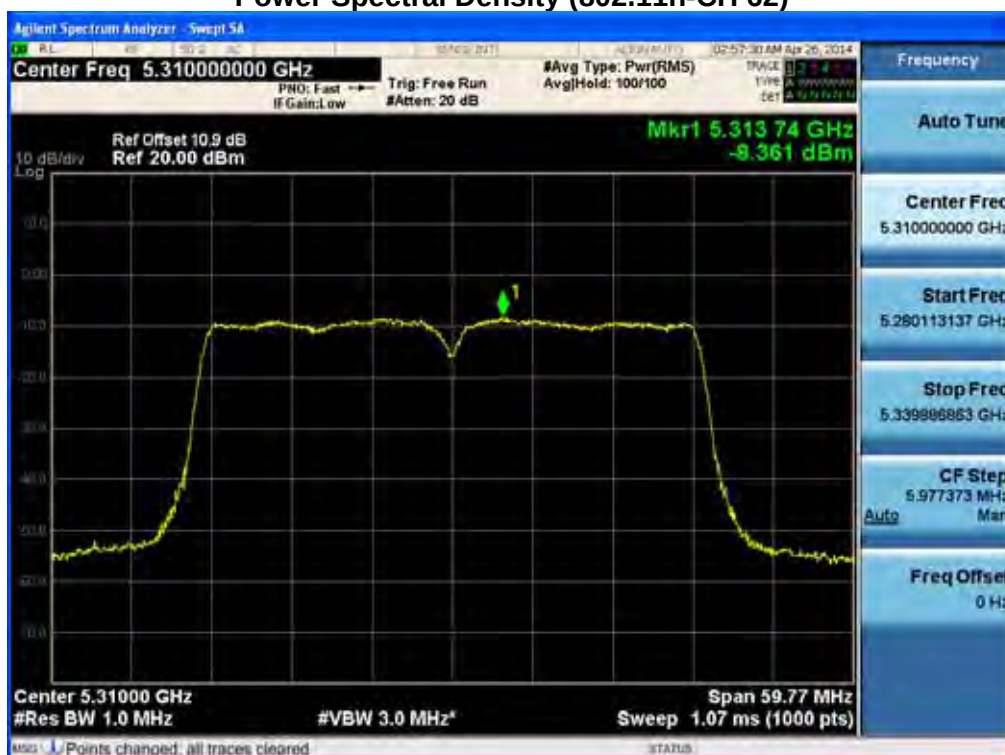


40 MHz BW

### Power Spectral Density (802.11n-CH 54)



### Power Spectral Density (802.11n-CH 62)

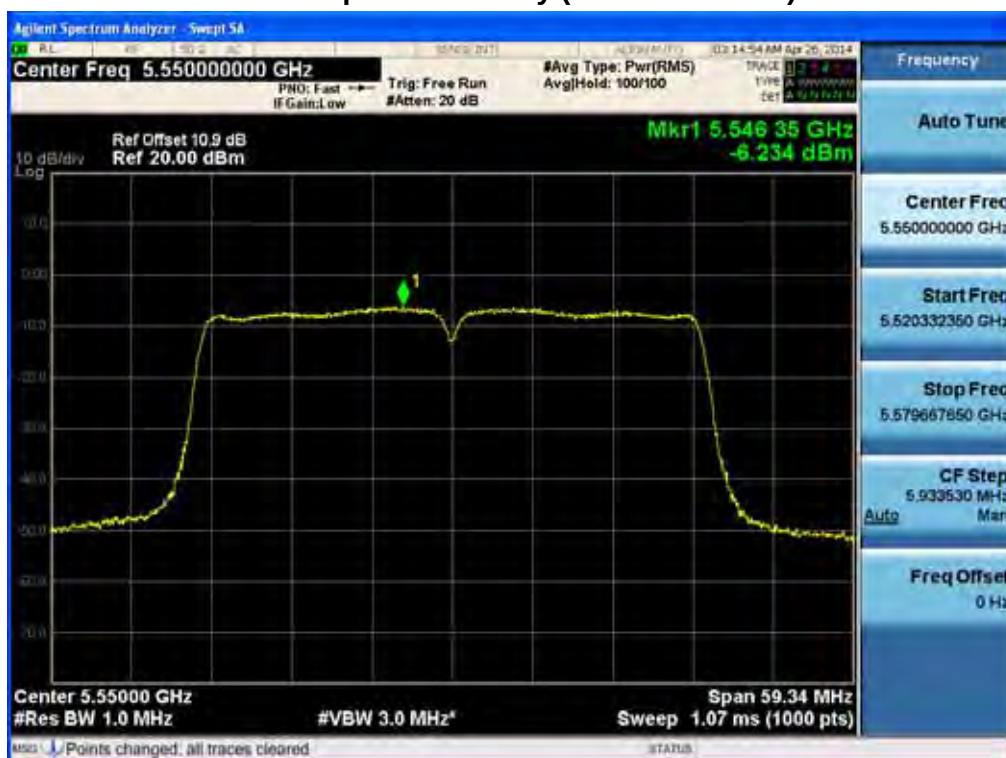


|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

## Power Spectral Density (802.11n-CH 102)



## Power Spectral Density (802.11n-CH 110)





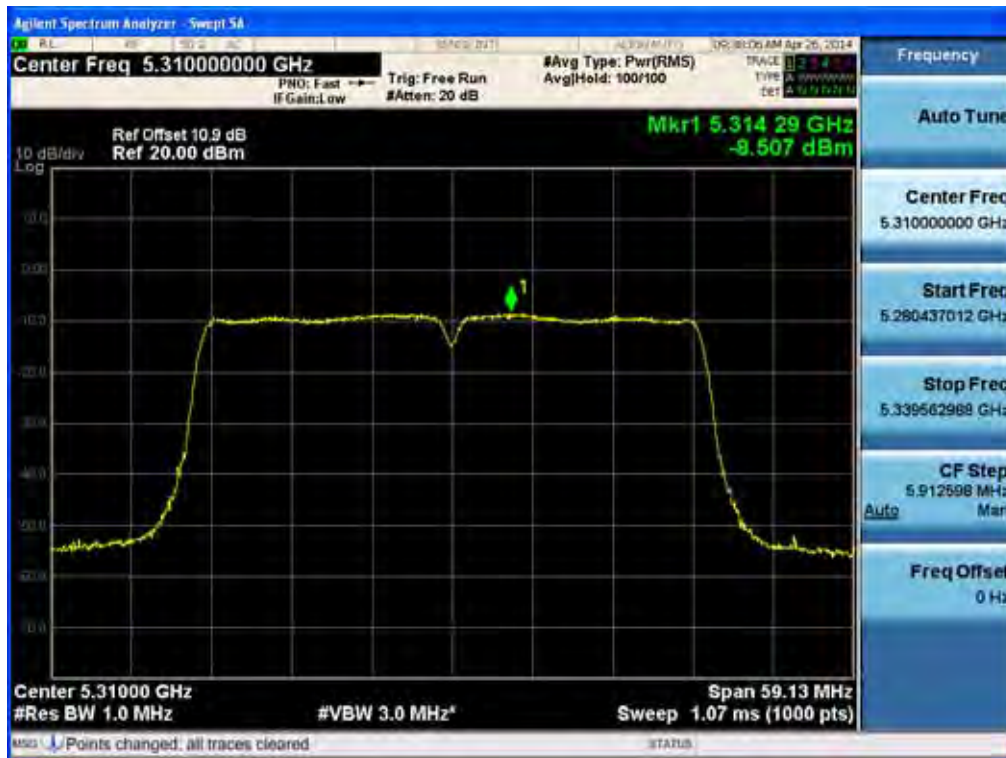
### Power Spectral Density (802.11n-CH 142)



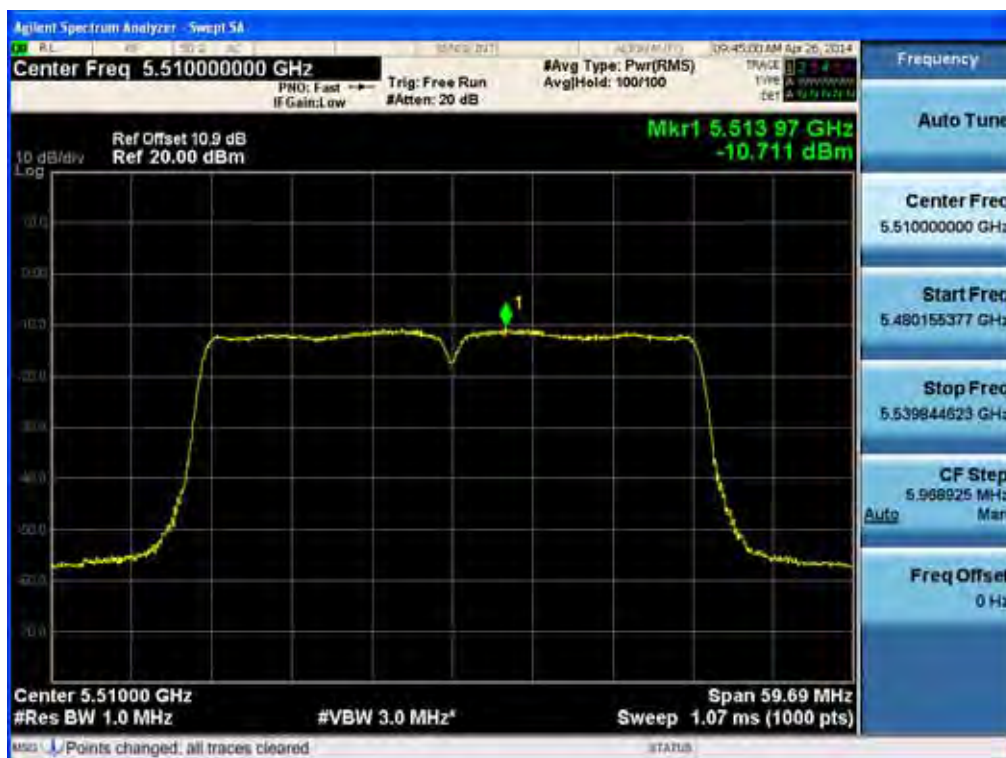
### Power Spectral Density (802.11ac-CH 54)



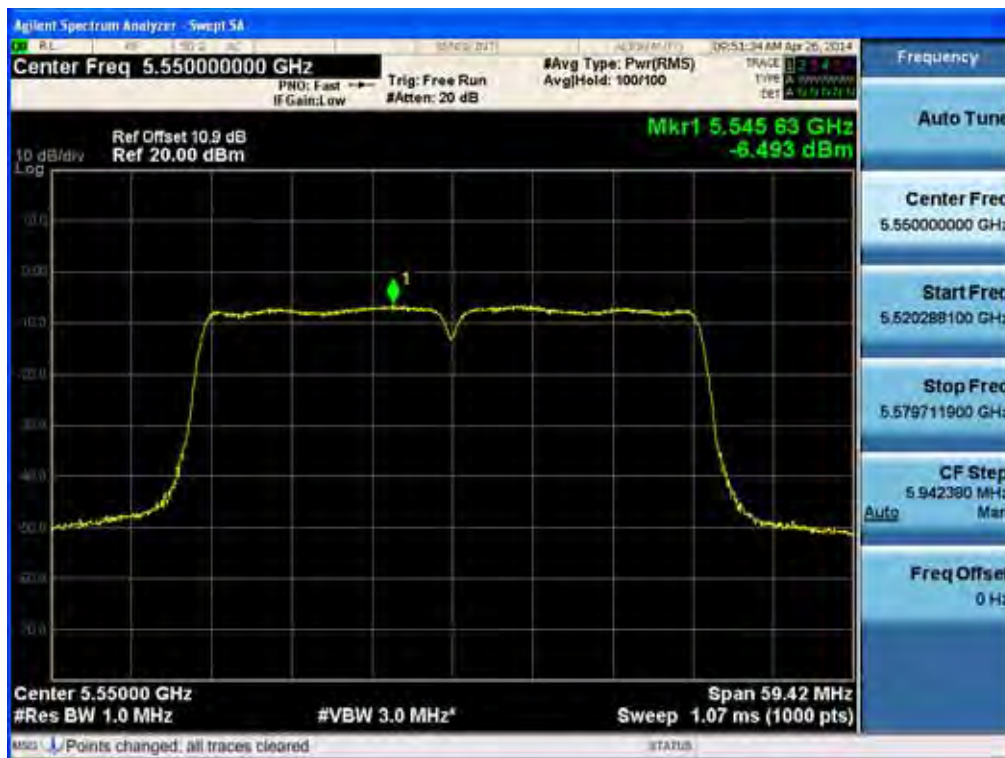
### Power Spectral Density (802.11ac-CH 62)



### Power Spectral Density (802.11ac-CH 102)



### Power Spectral Density (802.11ac-CH 110)



### Power Spectral Density (802.11ac-CH 142)





### Power Spectral Density (802.11ac-CH 58)



### Power Spectral Density (802.11ac-CH 106)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

## Power Spectral Density (802.11ac-CH 138)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

## Service Port Ant.1

### RESULT PLOTS

20 MHz BW

#### Power Spectral Density (802.11a-CH 52)



#### Power Spectral Density (802.11a-CH 60)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |



### Power Spectral Density (802.11a-CH 64)



### Power Spectral Density (802.11a-CH 100)

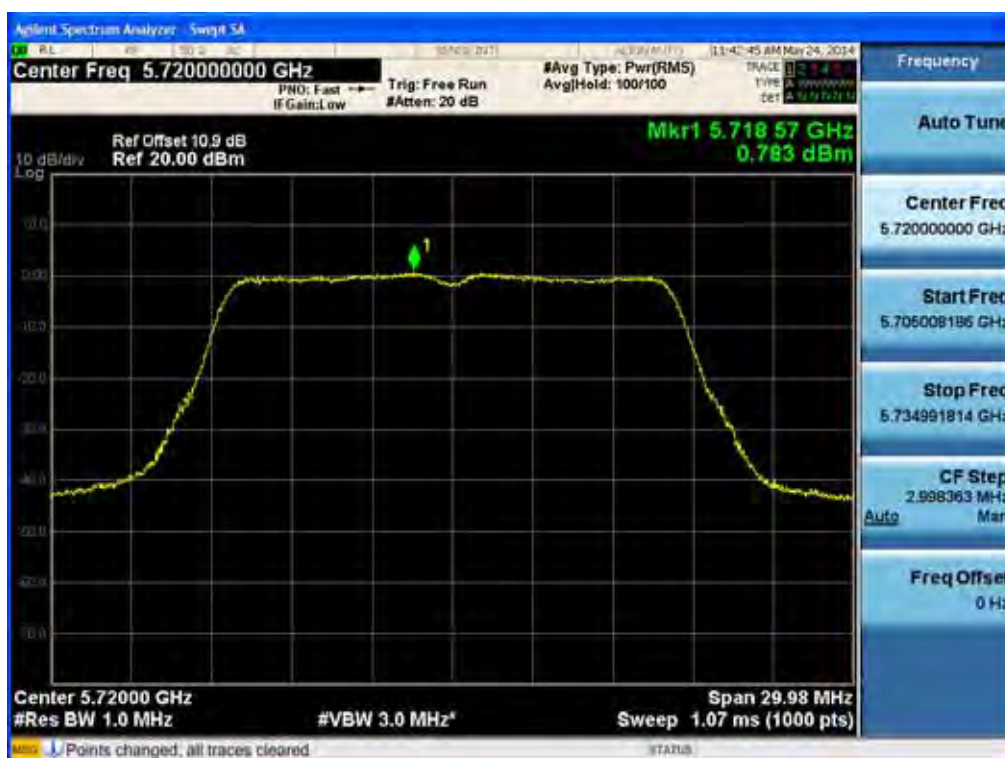


|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

### Power Spectral Density (802.11a-CH 116)



### Power Spectral Density (802.11a-CH 144)



### Power Spectral Density (802.11n-CH 52)



### Power Spectral Density (802.11n-CH 60)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |



### Power Spectral Density (802.11n-CH 64)



### Power Spectral Density (802.11n-CH 100)

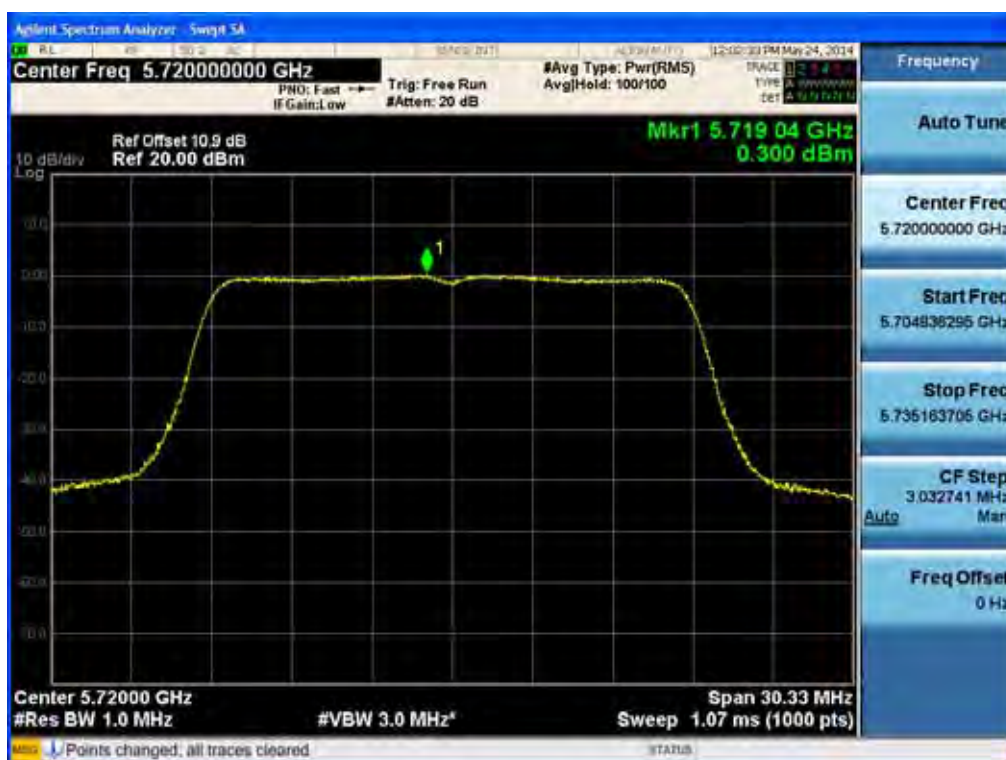


|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

## Power Spectral Density (802.11n-CH 116)



## Power Spectral Density (802.11n-CH 144)



## Power Spectral Density (802.11ac-CH 52)



## Power Spectral Density (802.11ac-CH 60)





## Power Spectral Density (802.11ac-CH 64)



## Power Spectral Density (802.11ac-CH 100)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

### Power Spectral Density (802.11ac-CH 116)

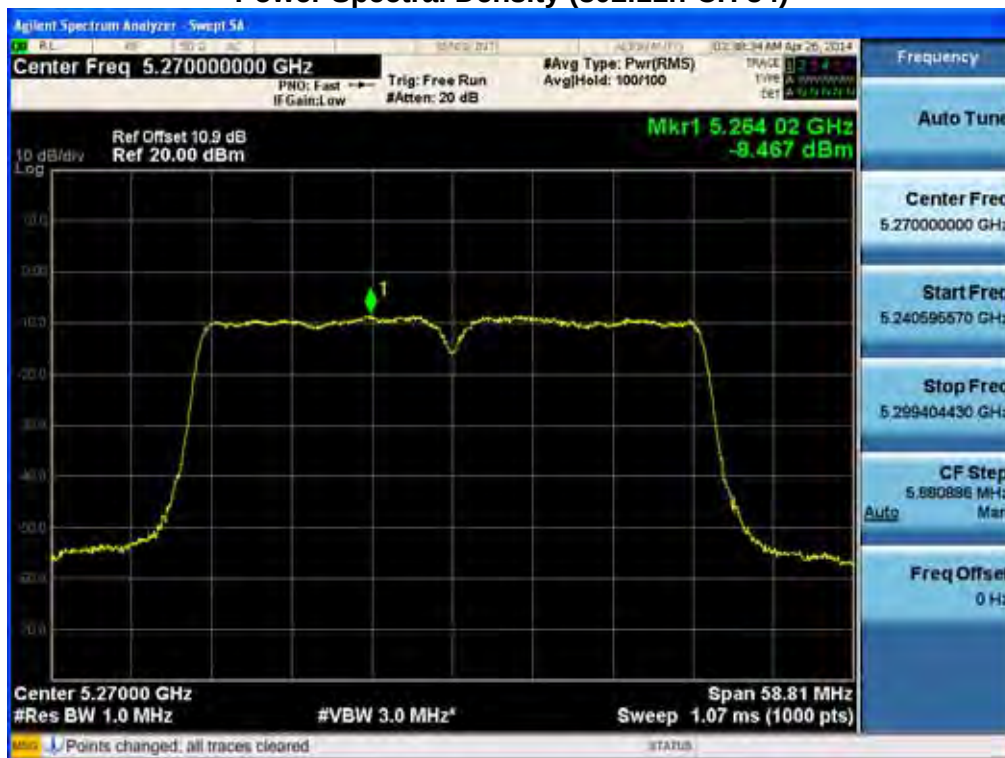


### Power Spectral Density (802.11ac-CH 144)

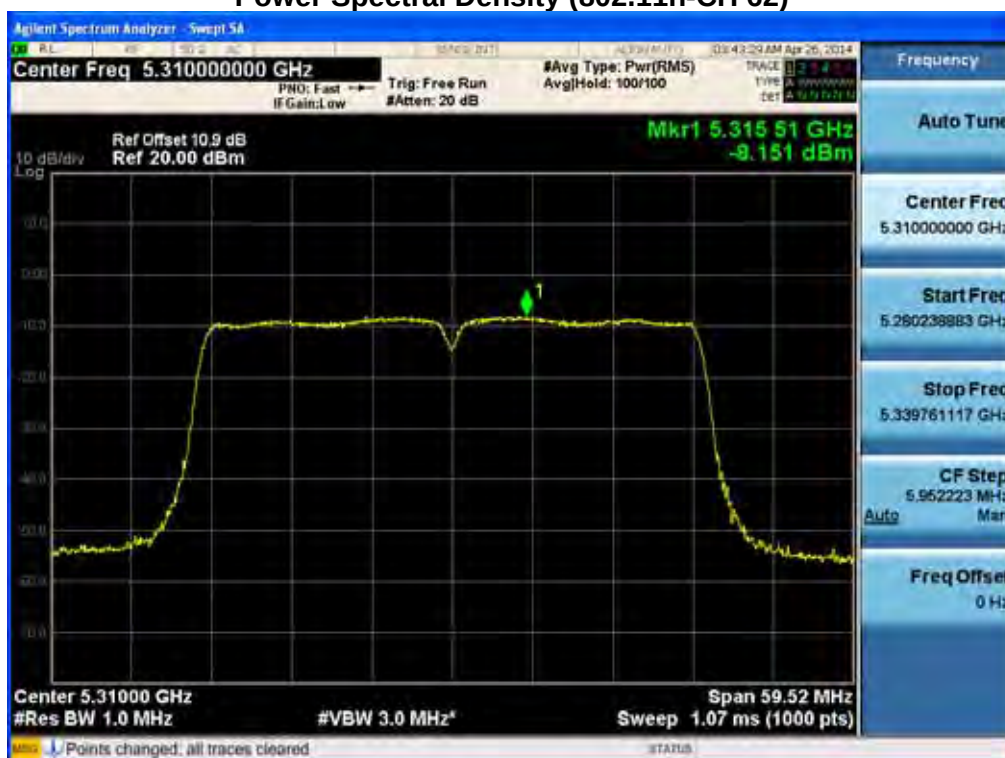


40 MHz BW

### Power Spectral Density (802.11n-CH 54)



### Power Spectral Density (802.11n-CH 62)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |



### Power Spectral Density (802.11n-CH 102)



### Power Spectral Density (802.11n-CH 110)



### Power Spectral Density (802.11n-CH 142)



### Power Spectral Density (802.11ac-CH 54)



### Power Spectral Density (802.11ac-CH 62)



### Power Spectral Density (802.11ac-CH 102)





### Power Spectral Density (802.11ac-CH 110)



### Power Spectral Density (802.11ac-CH 142)



### Power Spectral Density (802.11ac-CH 58)



### Power Spectral Density (802.11ac-CH 106)



## Power Spectral Density (802.11ac-CH 138)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |



## Service Port Ant.2

### RESULT PLOTS

20 MHz BW

#### Power Spectral Density (802.11a-CH 52)



#### Power Spectral Density (802.11a-CH 60)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
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### Power Spectral Density (802.11a-CH 64)



### Power Spectral Density (802.11a-CH 100)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

## Power Spectral Density (802.11a-CH 116)



## Power Spectral Density (802.11a-CH 144)





## Power Spectral Density (802.11n-CH 52)



## Power Spectral Density (802.11n-CH 60)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

### Power Spectral Density (802.11n-CH 64)



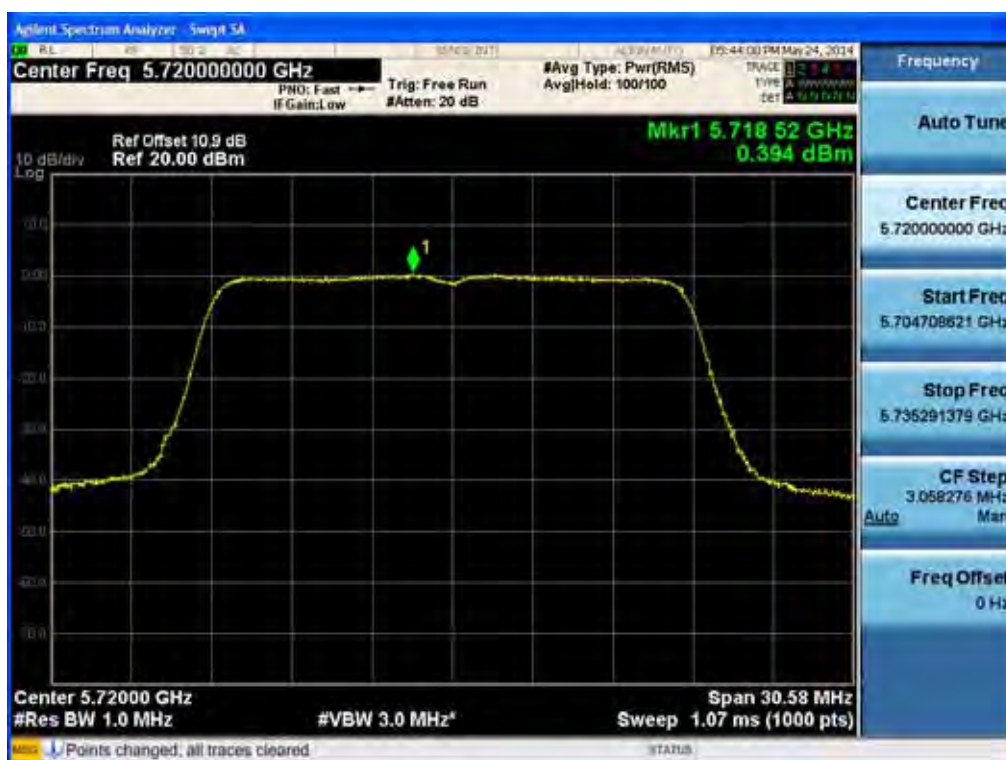
### Power Spectral Density (802.11n-CH 100)



### Power Spectral Density (802.11n-CH 116)



### Power Spectral Density (802.11n-CH 144)





## Power Spectral Density (802.11ac-CH 52)



## Power Spectral Density (802.11ac-CH 60)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
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## Power Spectral Density (802.11ac-CH 64)



## Power Spectral Density (802.11ac-CH 100)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

### Power Spectral Density (802.11ac-CH 116)



### Power Spectral Density (802.11ac-CH 144)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |



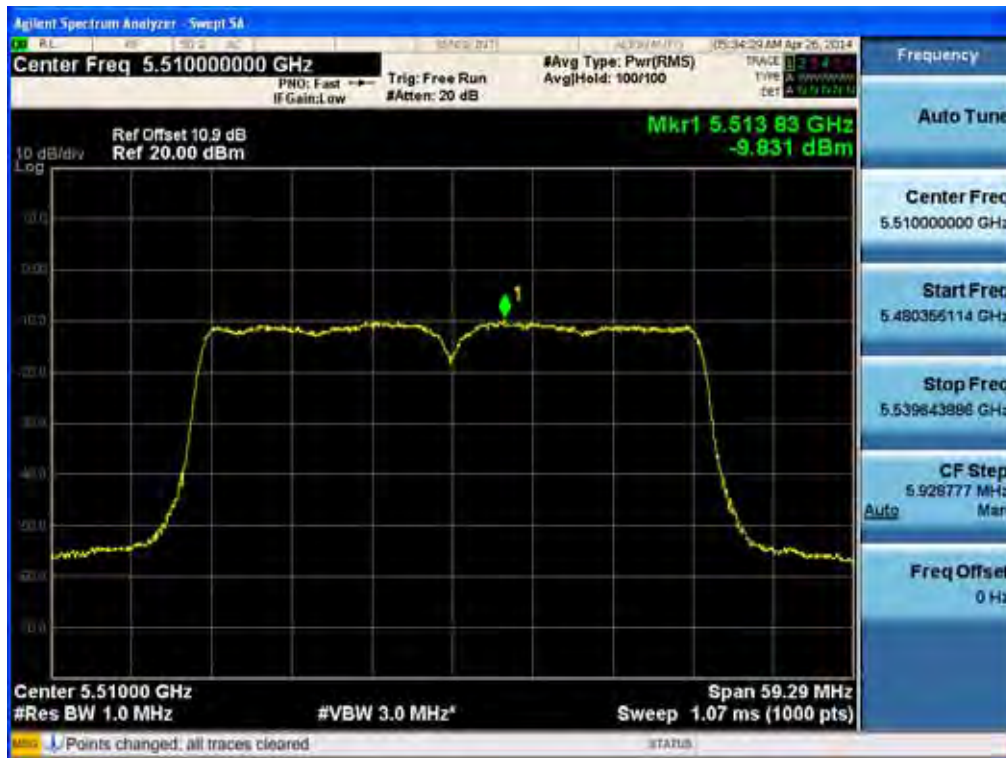
## Power Spectral Density (802.11n-CH 54)



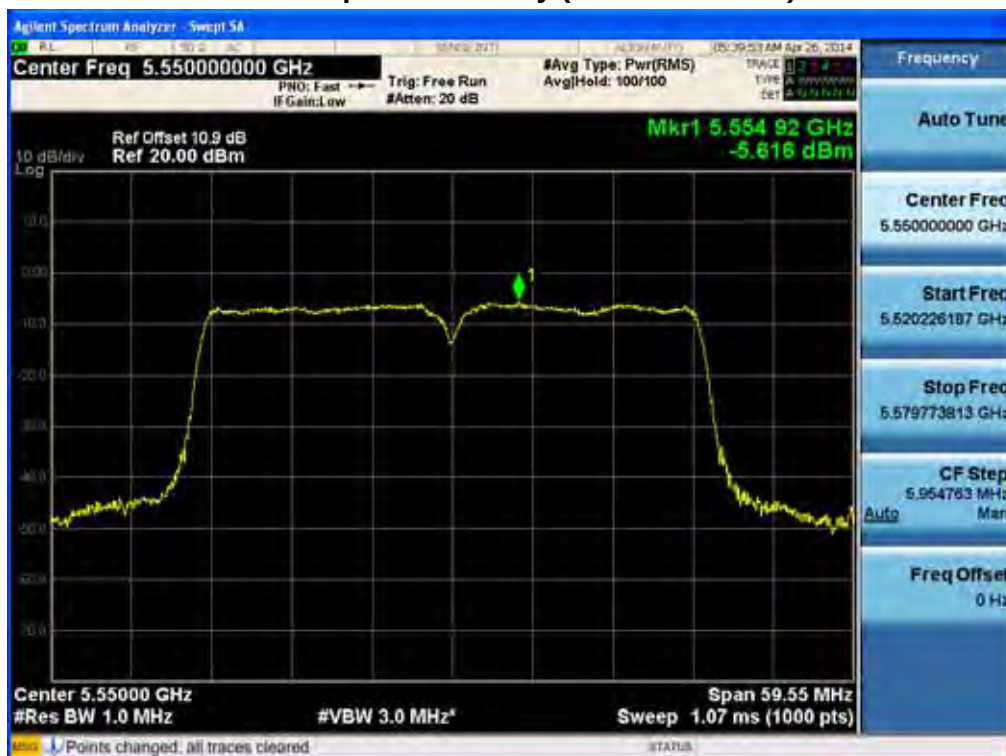
## Power Spectral Density (802.11n-CH 62)



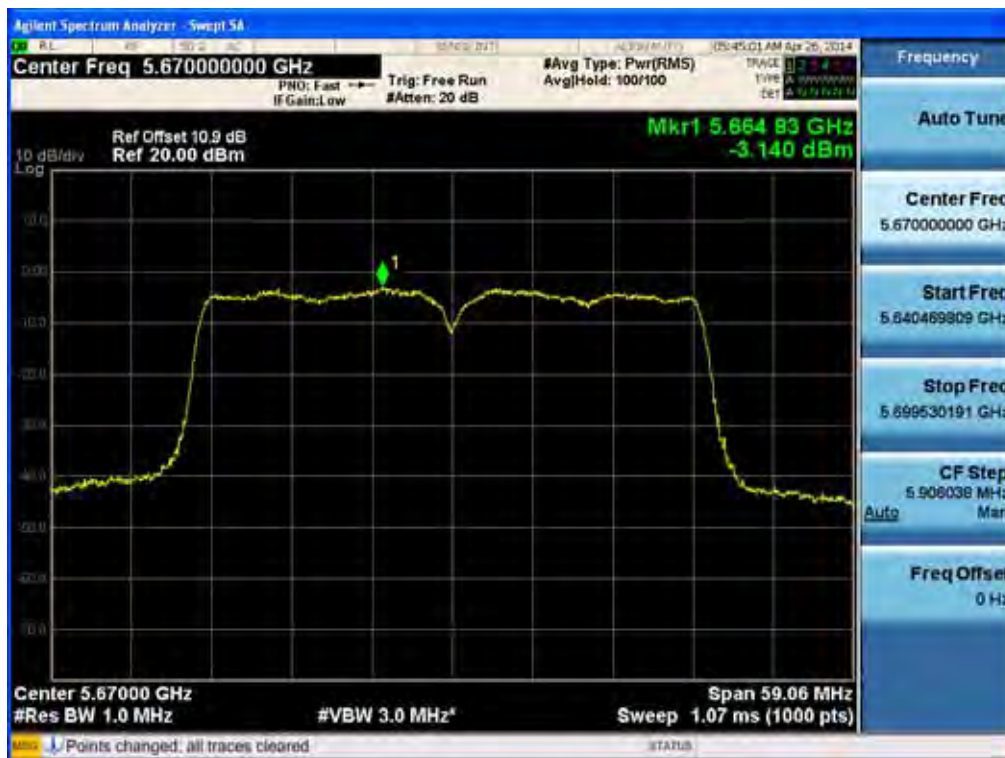
### Power Spectral Density (802.11n-CH 102)



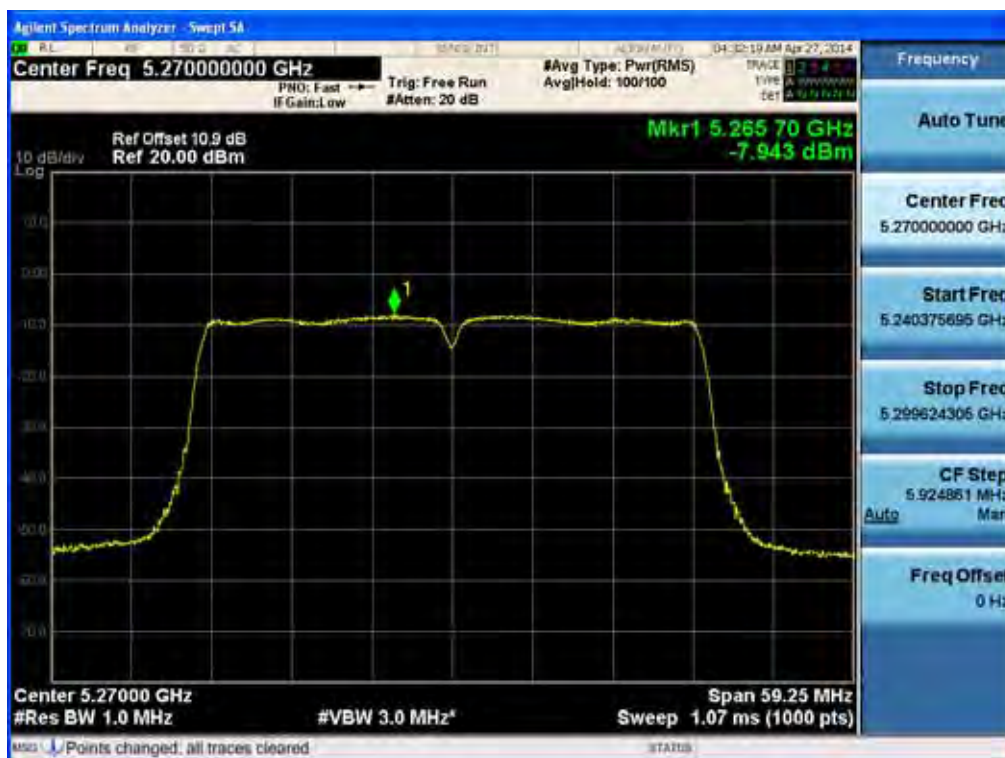
### Power Spectral Density (802.11n-CH 110)



### Power Spectral Density (802.11n-CH 142)



### Power Spectral Density (802.11ac-CH 54)

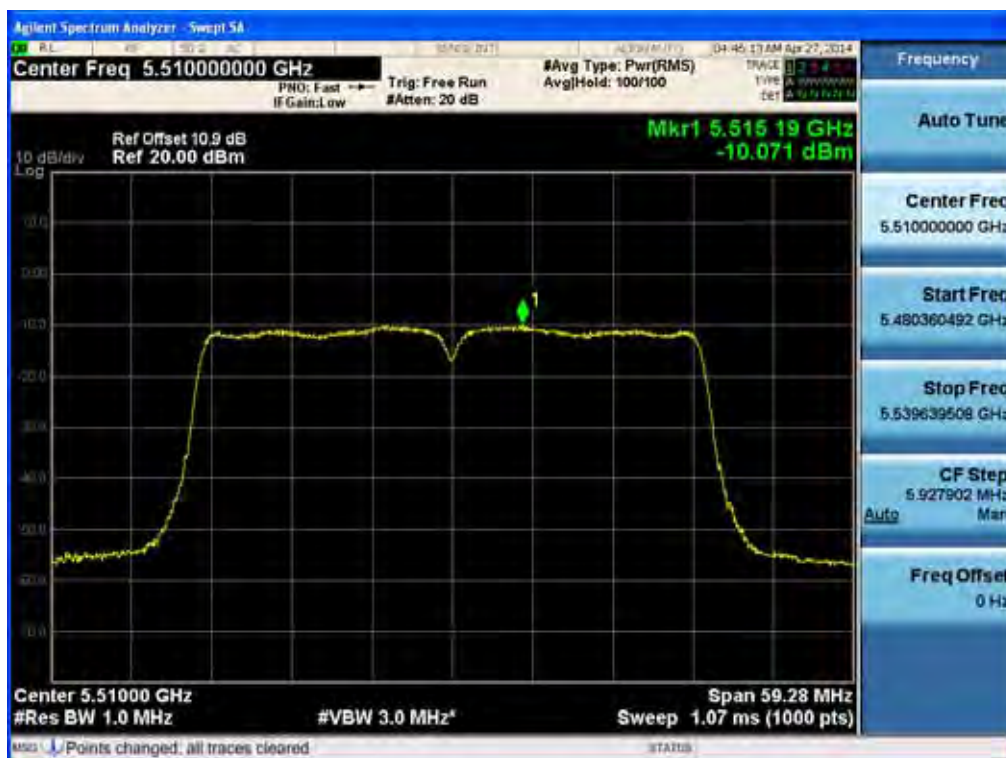




## Power Spectral Density (802.11ac-CH 62)



## Power Spectral Density (802.11ac-CH 102)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

### Power Spectral Density (802.11ac-CH 110)



### Power Spectral Density (802.11ac-CH 142)



### Power Spectral Density (802.11ac-CH 58)



### Power Spectral Density (802.11ac-CH 106)





## Power Spectral Density (802.11ac-CH 138)

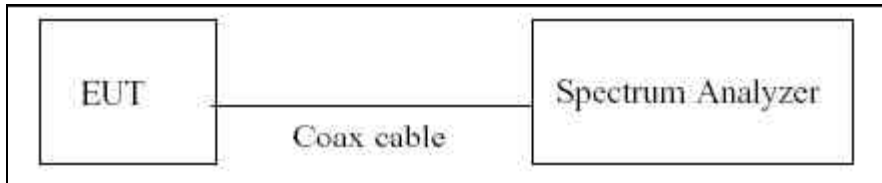


|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

## 8.6 PEAK EXCURSION RATIO

The spectrum analyzer was connected to the antenna terminal while the EUT was operating in the continuous transmission mode at the appropriate center frequencies. The largest permissible difference between the modulation envelope(measured using a peak hold function) and the maximum conducted output power 13 dB/MHz.

### ▣ TEST CONFIGURATION



### ▣ TEST PROCEDURE

We tested according to KDB 789033(issued 06/06/2014).

The spectrum analyzer is set to :

1. Span = Set the span to view the entire emission bandwidth.
2. RBW = 1 MHz
3. VBW  $\geq$  3 MHz
4. Detector Mode = Peak
5. Trace Mode = Max hold
6. Allow the sweeps to continue until the trace stabilizes.
7. Use the peak search function to find the peak of the spectrum.
8. Use the procedure to measure the PPSD
9. Compute the ratio of the maximum of the peak-max-hold spectrum to the PPSD.

Note :

1. The PSD results in plot is already including the actual values of loss for the attenuator and cable combination.
2. Spectrum offset = Attenuator loss + Cable loss
3. We apply to the offset in the UNII 2A/2C band that was rounded off to the closest tenth dB. Actual value of loss for the attenuator and cable combination is below table. We used the particular cable type that is supported by manufacture.

| Band    | Loss(dB) |
|---------|----------|
| UNII 2  | 10.9     |
| UNII 2e | 10.9     |

(Actual value of loss for the attenuator and cable combination)

| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
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## Monitoring Port Ant.0

### RESULT PLOTS

20 MHz BW

#### Peak Excursion Ratio (802.11a-CH 52)



#### Peak Excursion Ratio (802.11a-CH 60)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
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### Peak Excursion Ratio (802.11a-CH 64)



### Peak Excursion Ratio (802.11a-CH 100)

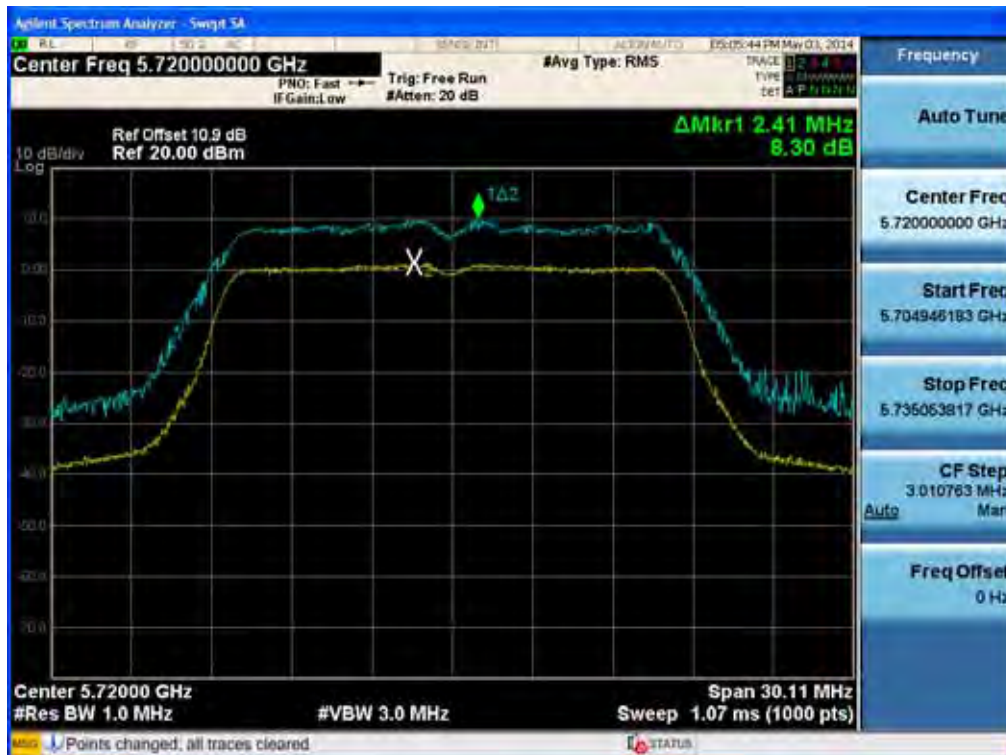


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|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
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### Peak Excursion Ratio (802.11a-CH 116)



### Peak Excursion Ratio (802.11a-CH 144)



## Monitoring Port Ant.1

### RESULT PLOTS

20 MHz BW

#### Peak Excursion Ratio (802.11a-CH 52)



#### Peak Excursion Ratio (802.11a-CH 60)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |



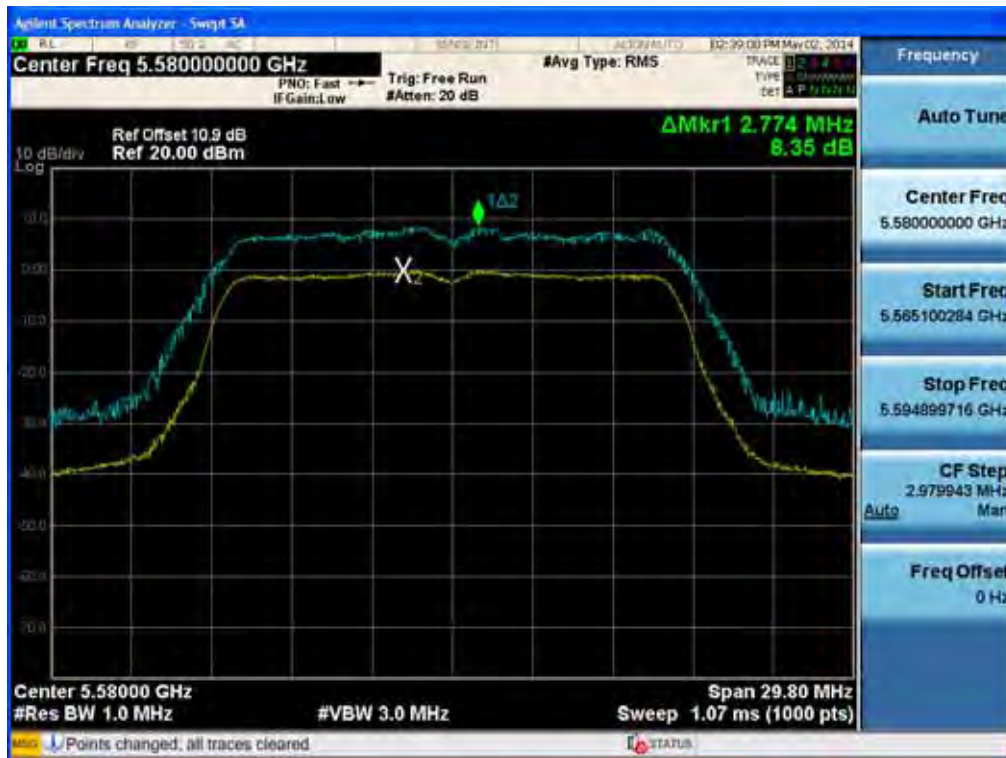
### Peak Excursion Ratio (802.11a-CH 64)



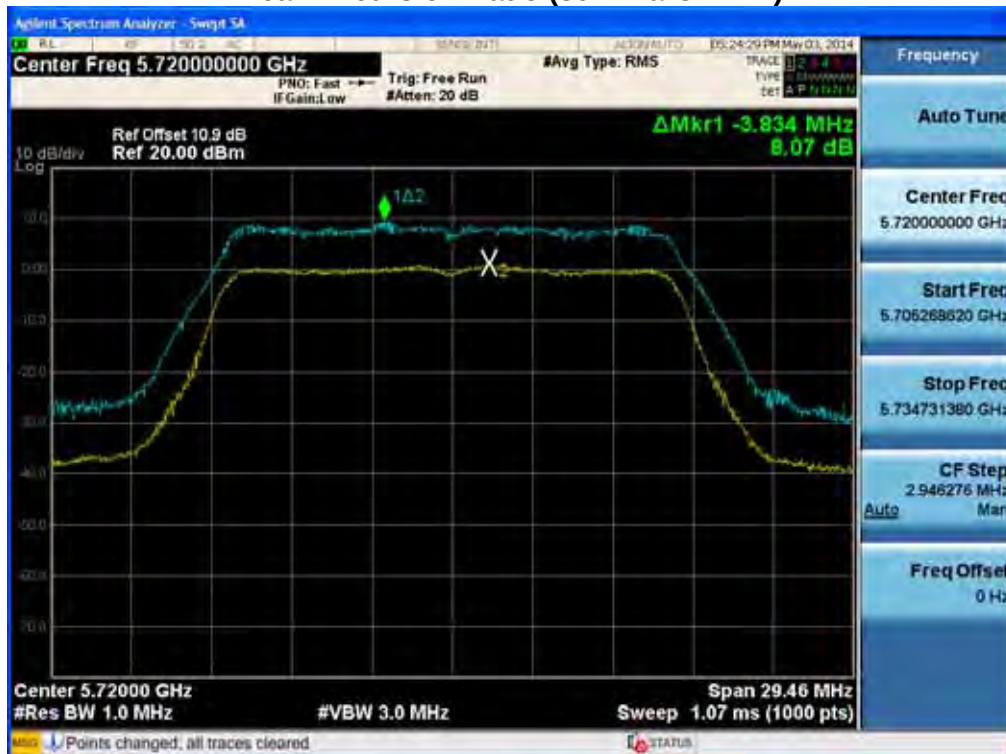
### Peak Excursion Ratio (802.11a-CH 100)



### Peak Excursion Ratio (802.11a-CH 116)



### Peak Excursion Ratio (802.11a-CH 144)

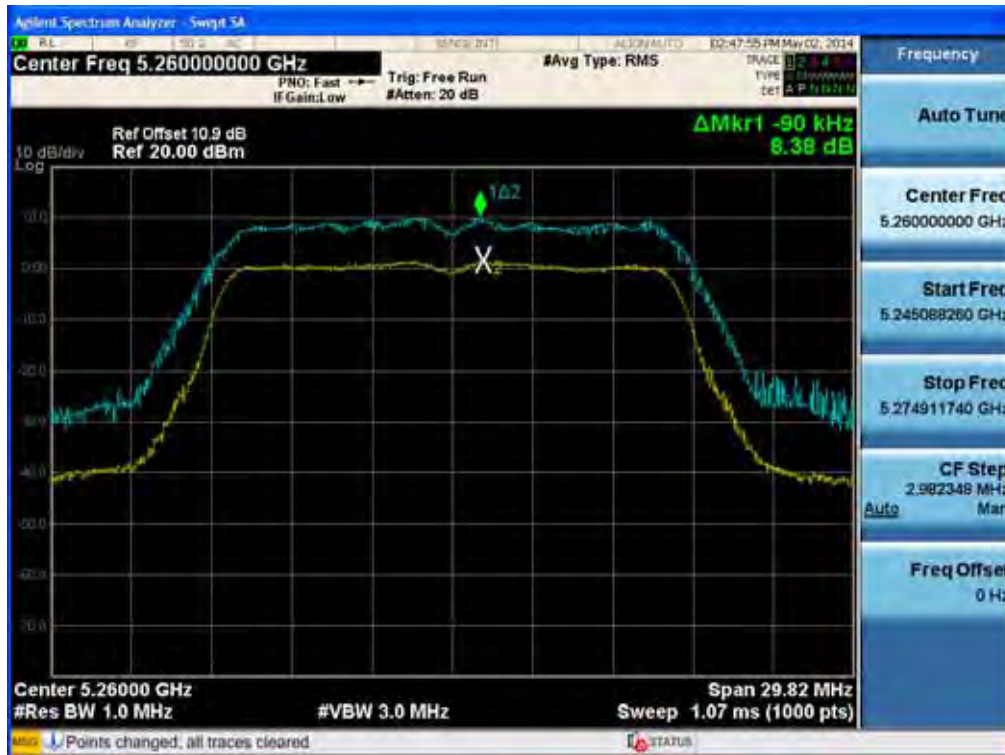


## Monitoring Port Ant.2

### RESULT PLOTS

20 MHz BW

#### Peak Excursion Ratio (802.11a-CH 52)



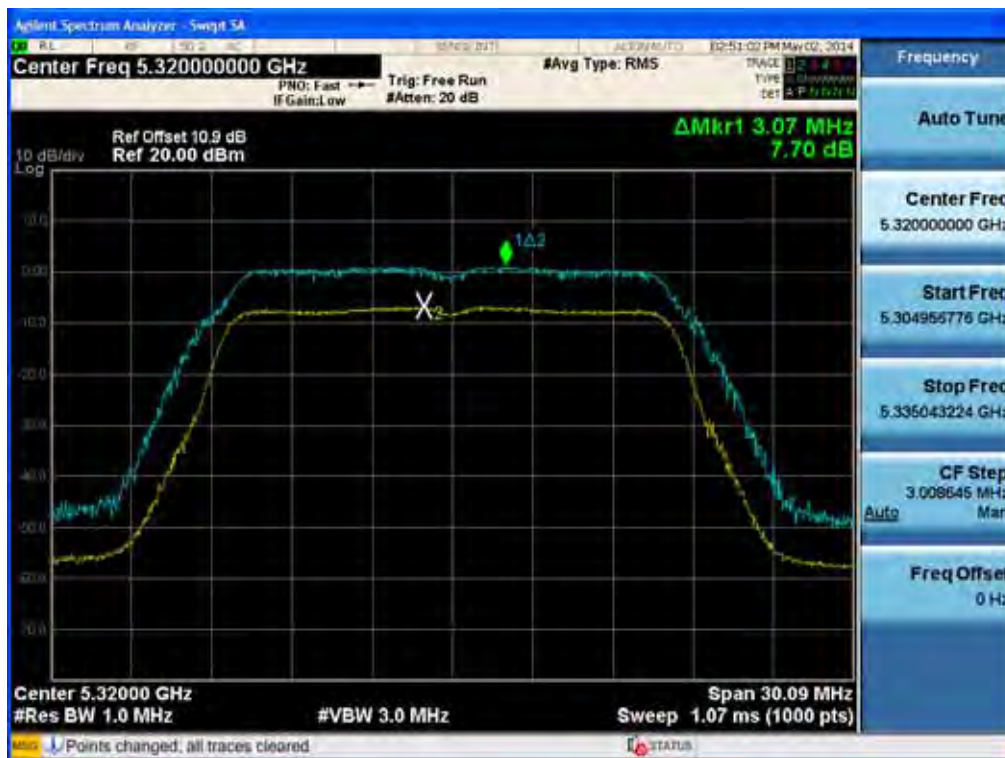
#### Peak Excursion Ratio (802.11a-CH 60)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |



### Peak Excursion Ratio (802.11a-CH 64)



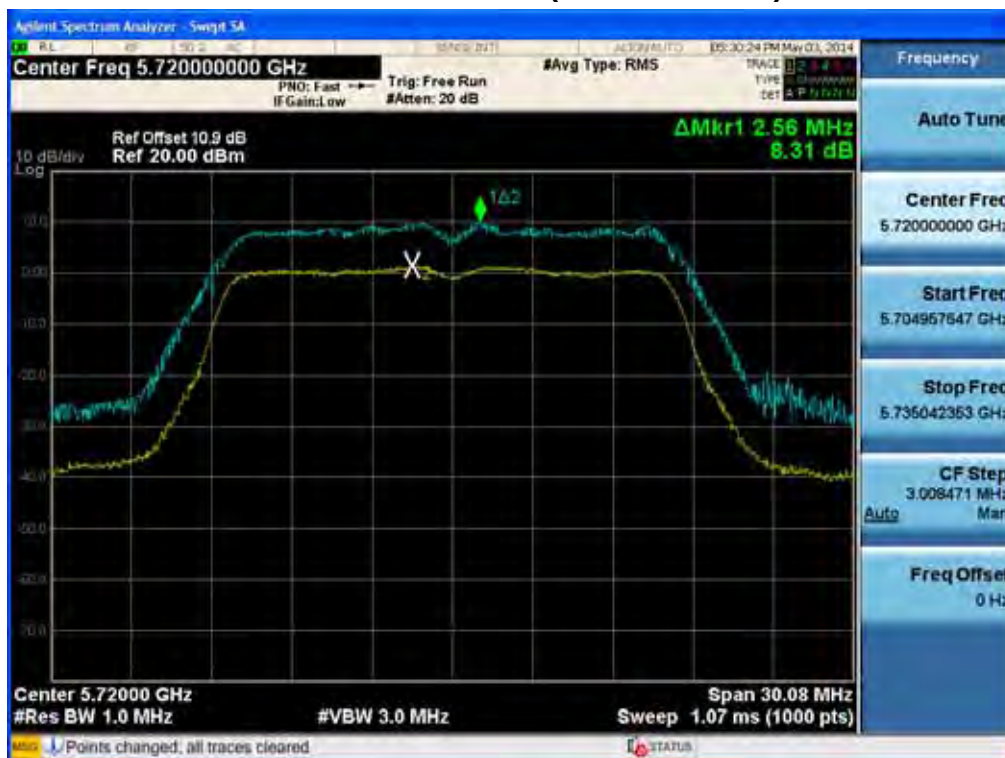
### Peak Excursion Ratio (802.11a-CH 100)



### Peak Excursion Ratio (802.11a-CH 116)



### Peak Excursion Ratio (802.11a-CH 144)

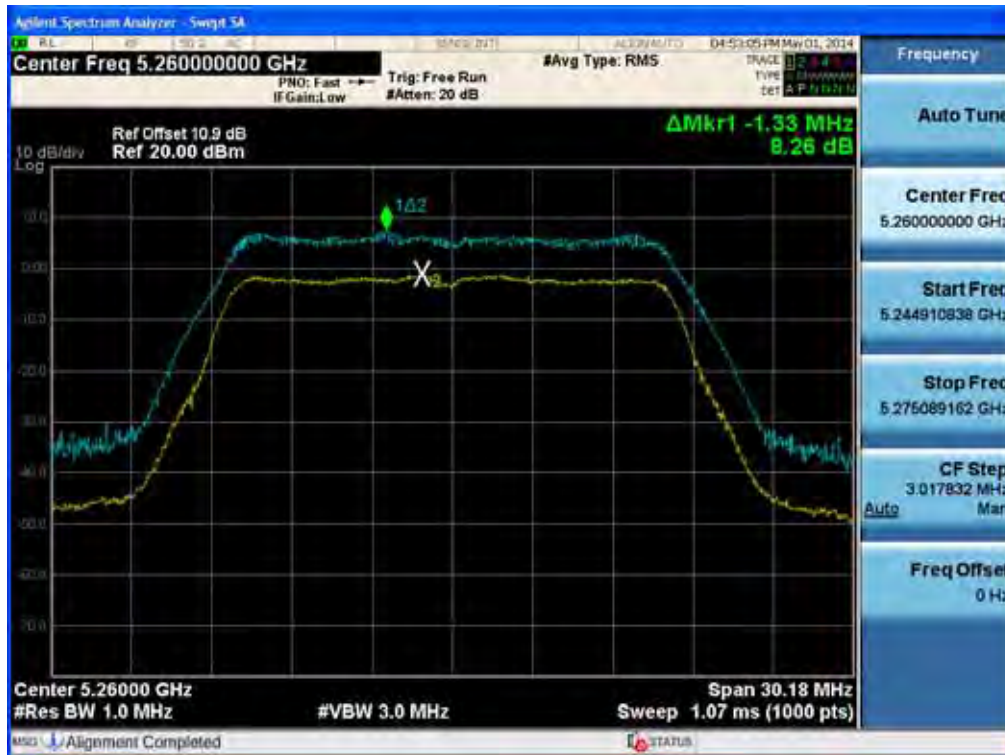


Service Port Ant.0

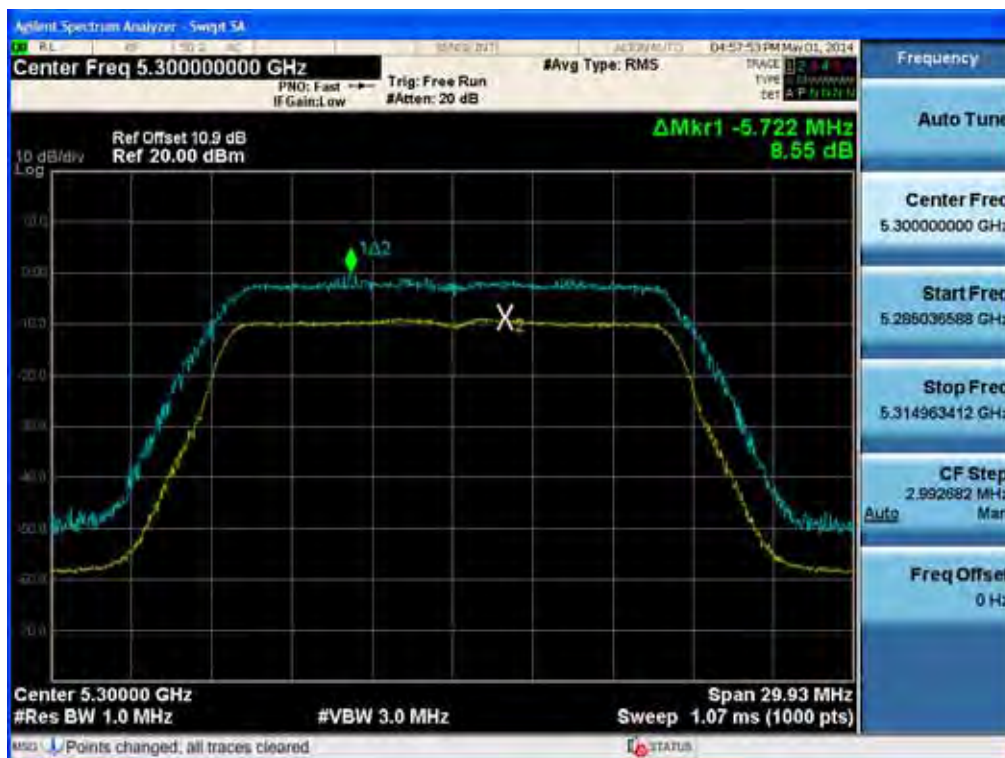
▣ RESULT PLOTS

20 MHz BW

### Peak Excursion Ratio (802.11a-CH 52)



### Peak Excursion Ratio (802.11a-CH 60)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
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### Peak Excursion Ratio (802.11a-CH 64)



### Peak Excursion Ratio (802.11a-CH 100)

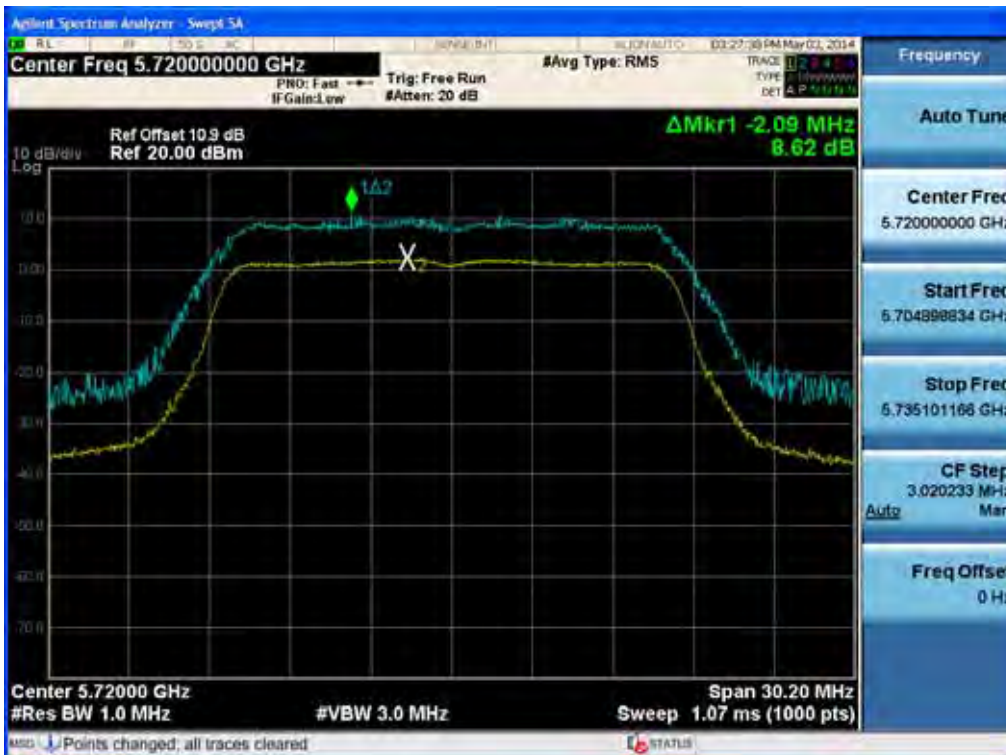


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|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

### Peak Excursion Ratio (802.11a-CH 116)



### Peak Excursion Ratio (802.11a-CH 144)

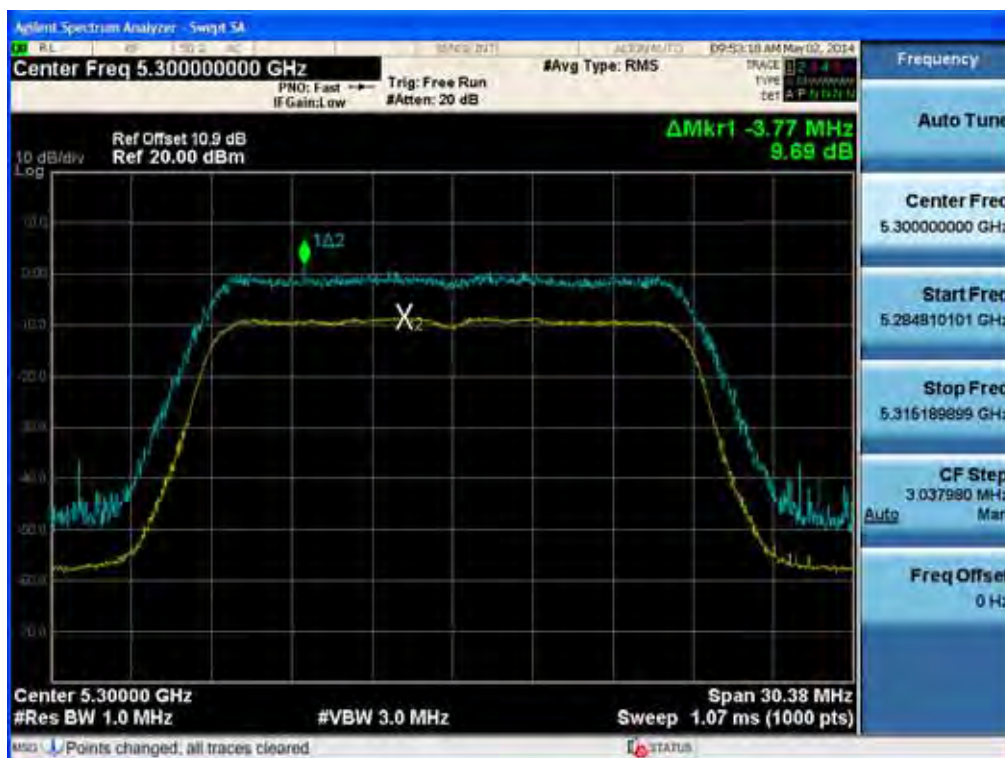


|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

### Peak Excursion Ratio (802.11n-CH 52)

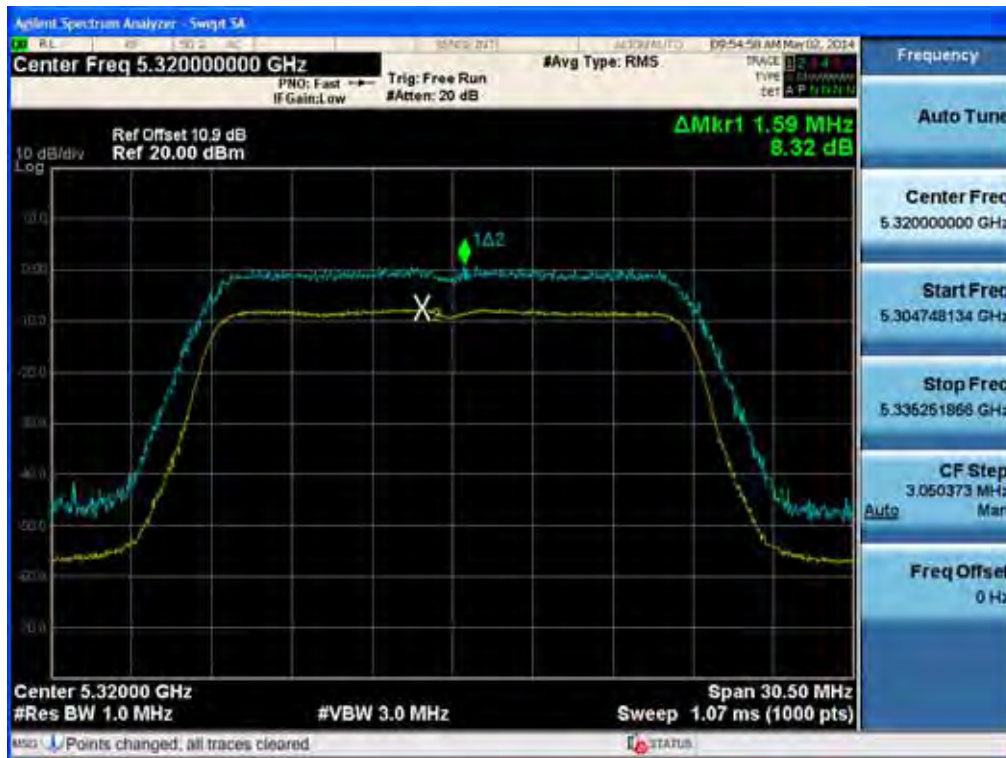


### Peak Excursion Ratio (802.11n-CH 60)

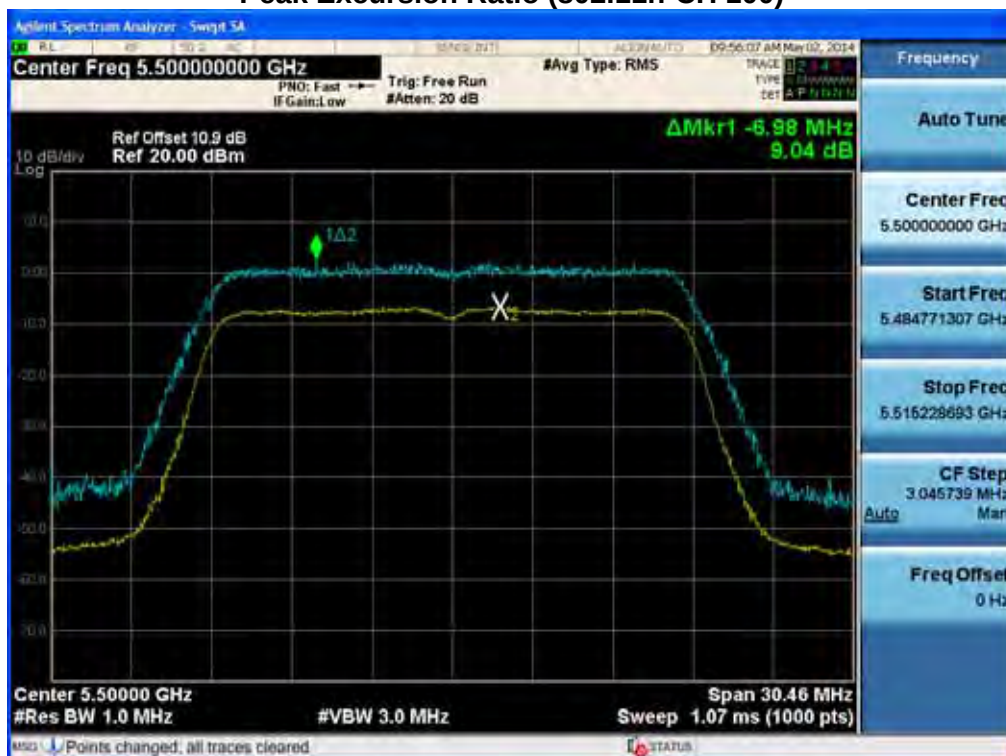




### Peak Excursion Ratio (802.11n-CH 64)



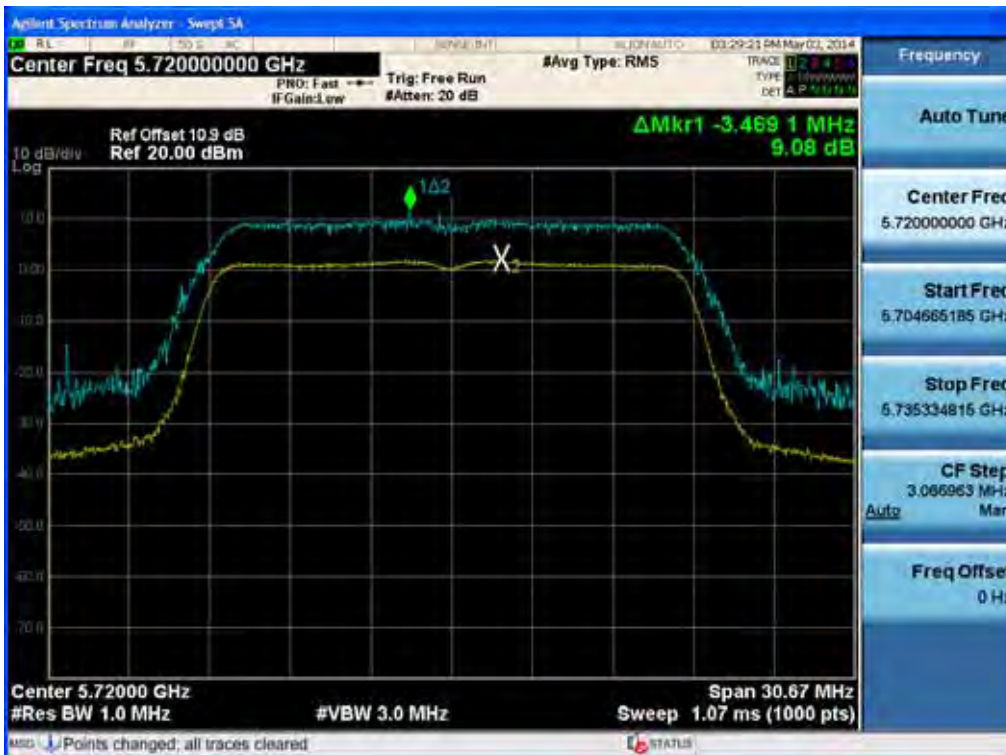
### Peak Excursion Ratio (802.11n-CH 100)



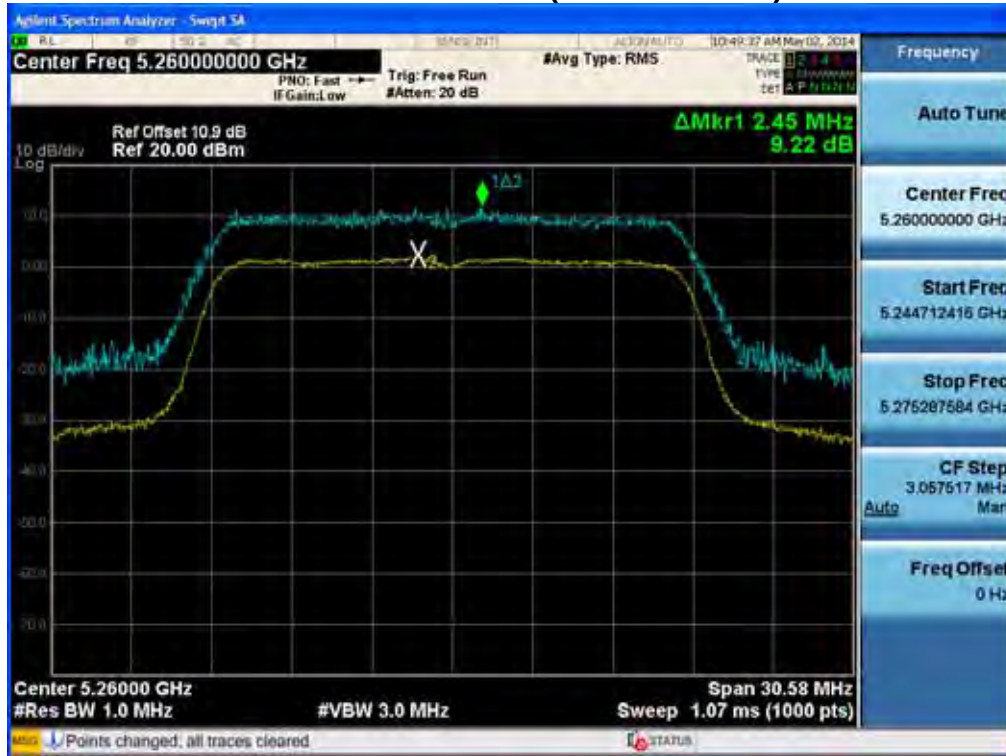
### Peak Excursion Ratio (802.11n-CH 116)



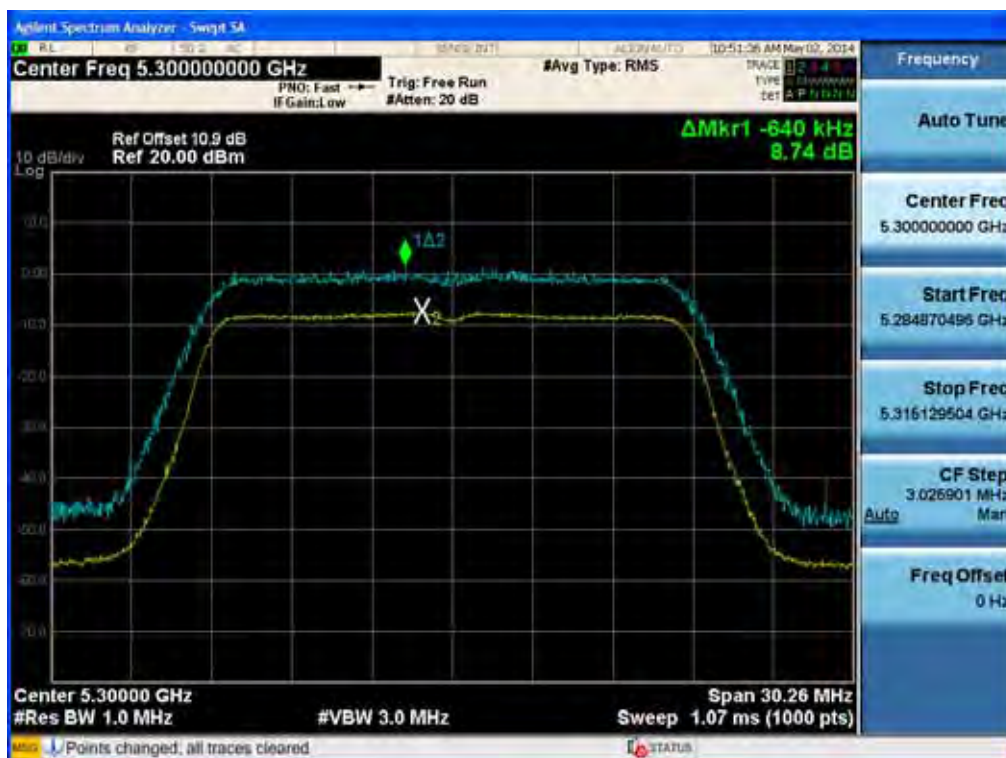
### Peak Excursion Ratio (802.11n-CH 144)



### Peak Excursion Ratio (802.11ac-CH 52)

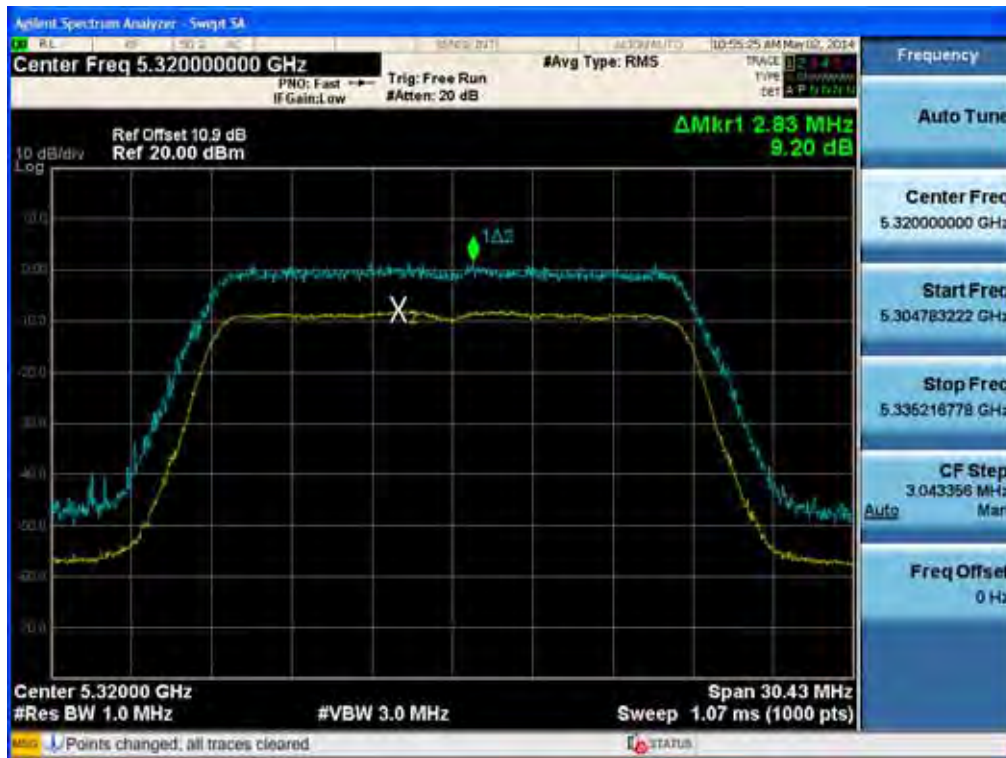


### Peak Excursion Ratio (802.11ac-CH 60)

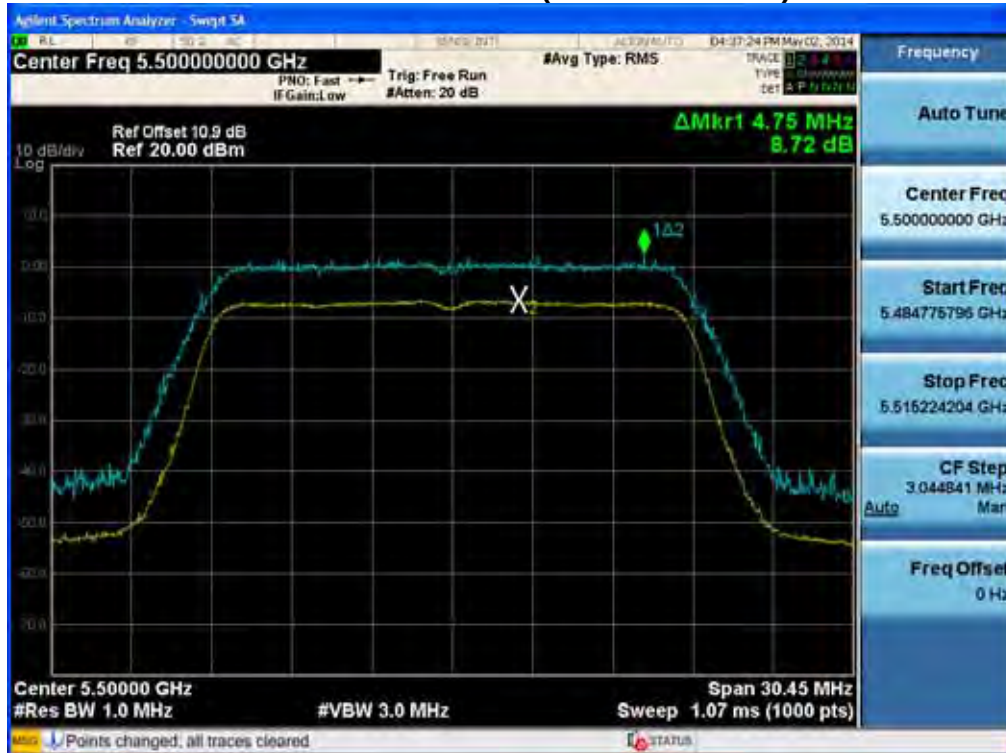




### Peak Excursion Ratio (802.11ac-CH 64)



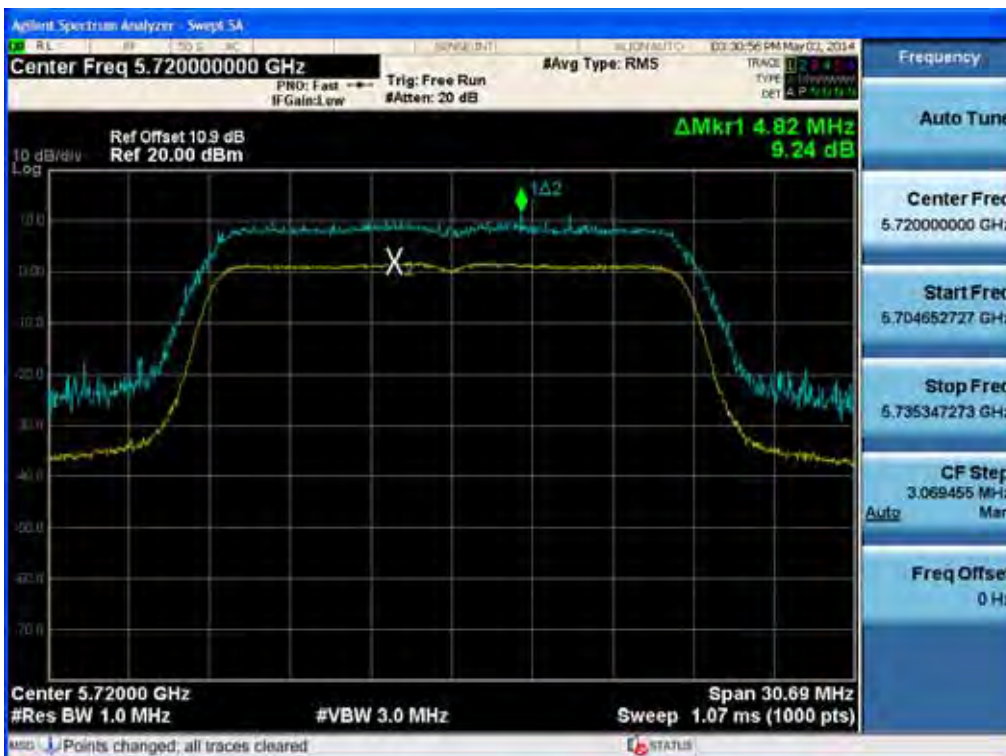
### Peak Excursion Ratio (802.11ac-CH 100)



### Peak Excursion Ratio (802.11ac-CH 116)



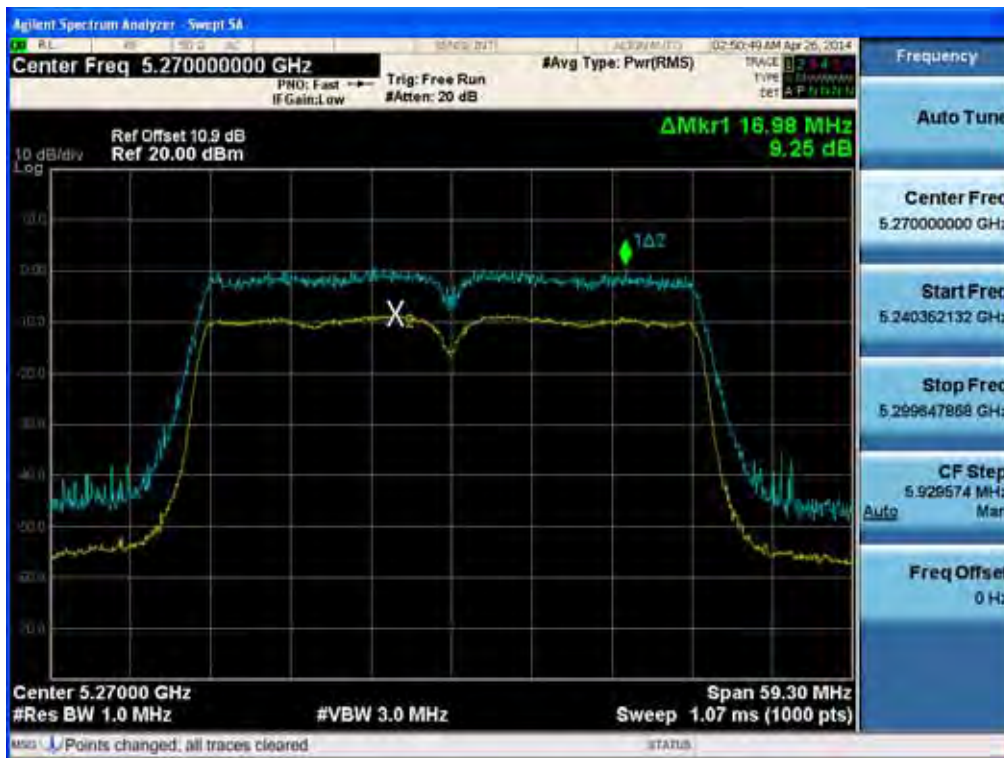
### Peak Excursion Ratio (802.11ac-CH 144)



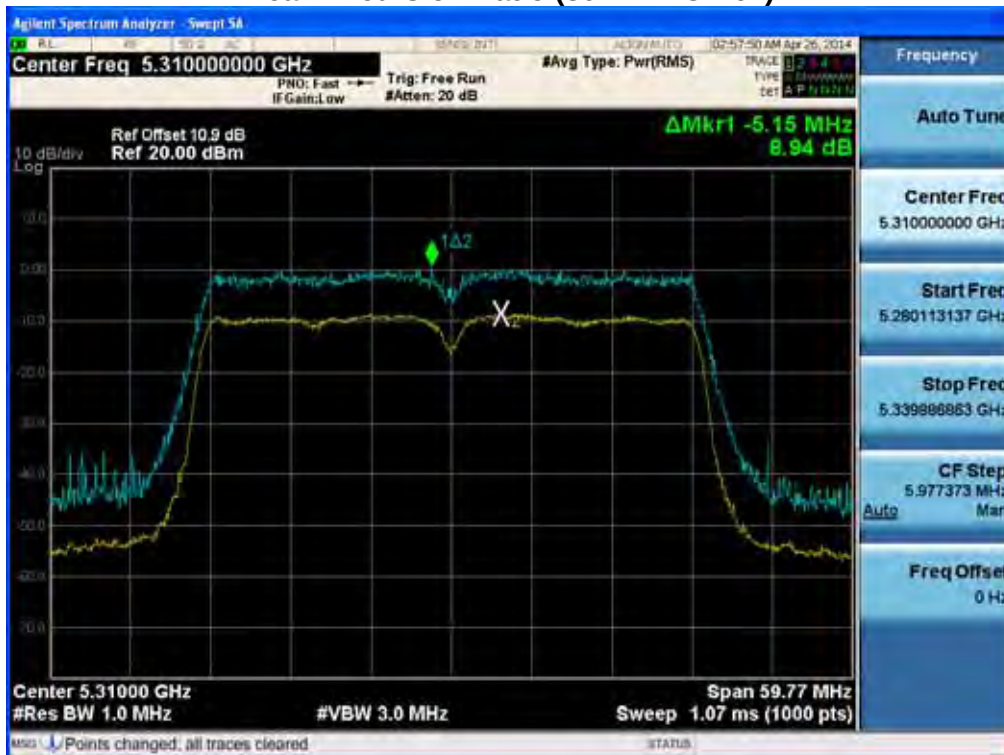
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|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
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40MHz BW

### Peak Excursion Ratio (802.11n-CH 54)



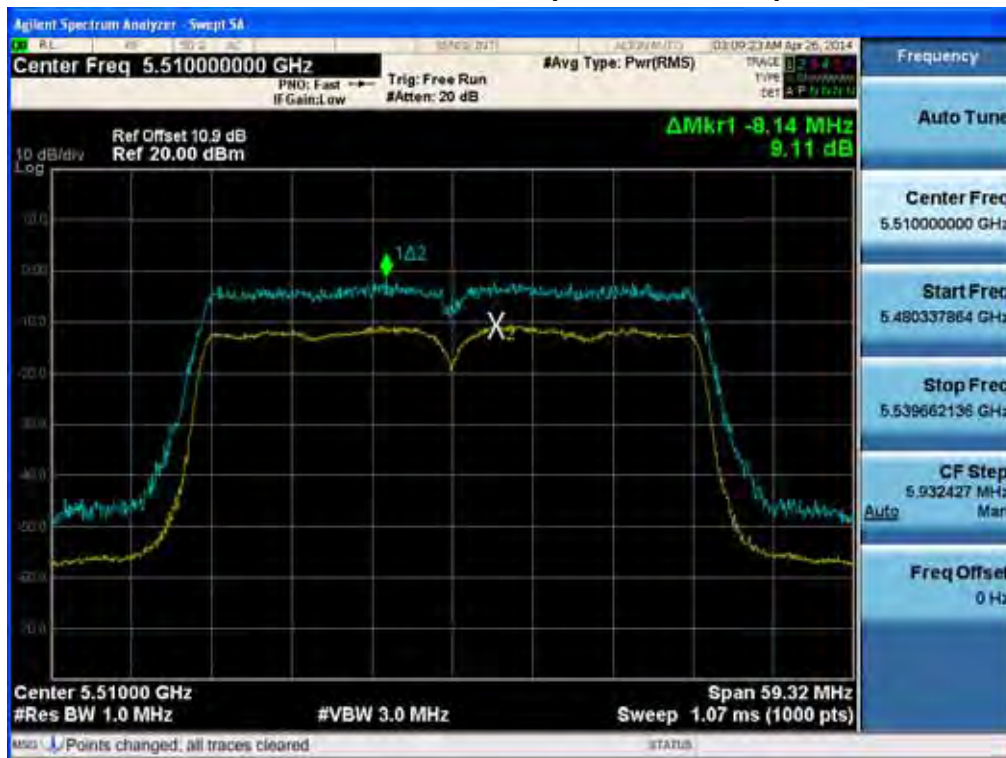
### Peak Excursion Ratio (802.11n-CH 62)



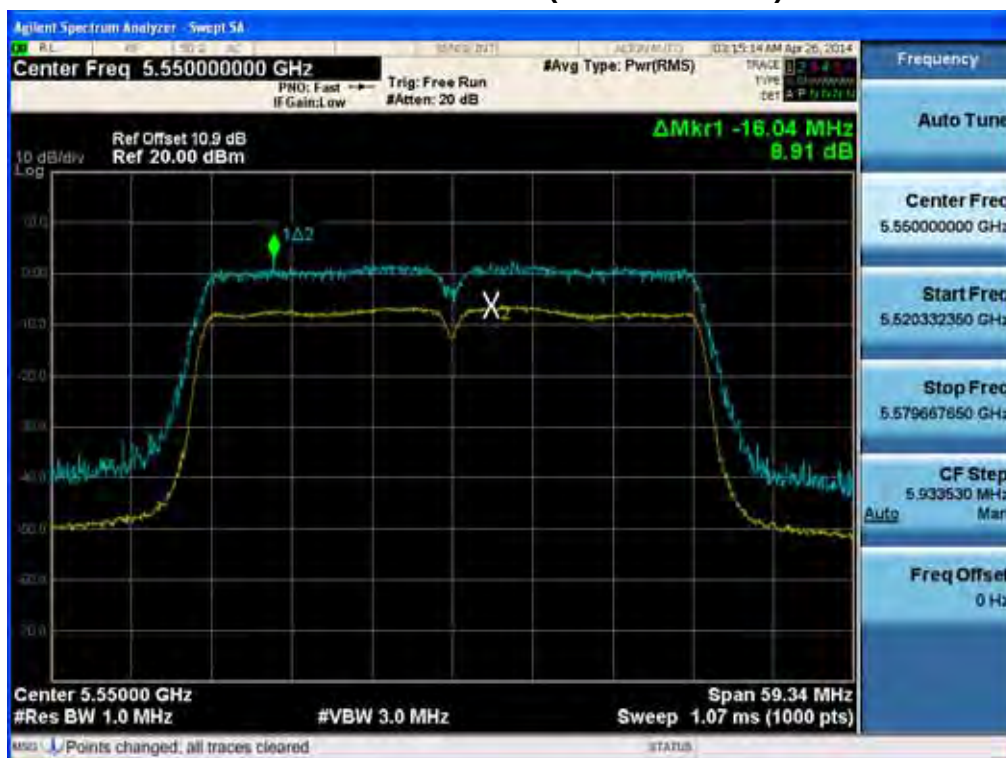
|                                      |                                 |                             |                       |                                                  |
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| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |



### Peak Excursion Ratio (802.11n-CH 102)



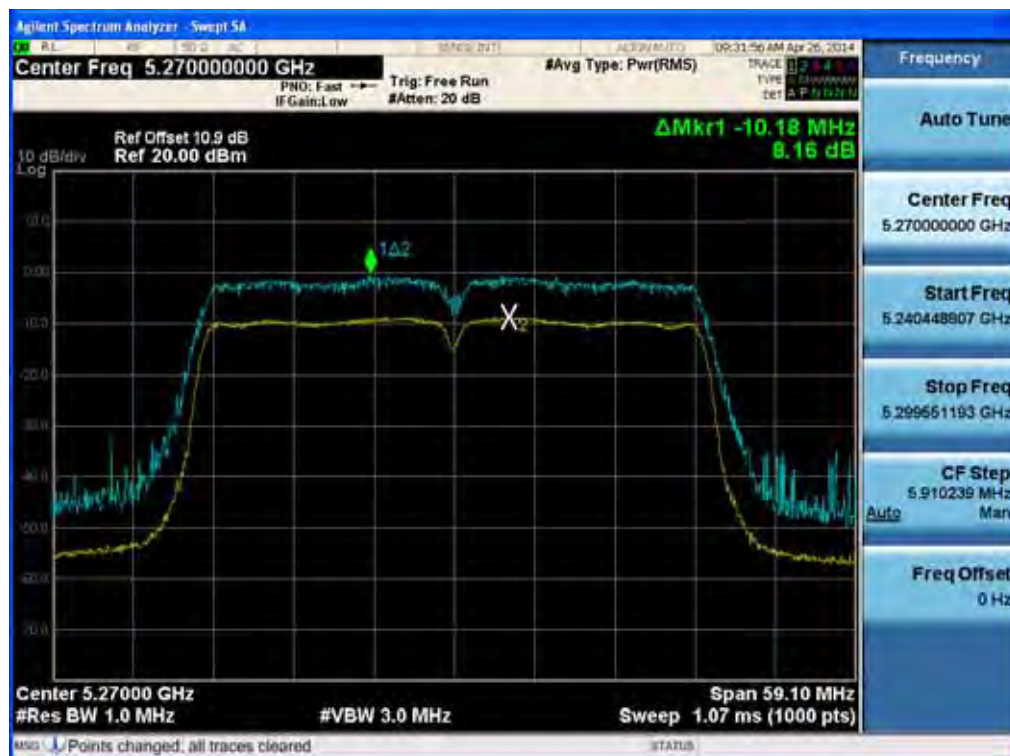
### Peak Excursion Ratio (802.11n-CH 110)



### Peak Excursion Ratio (802.11n-CH 142)

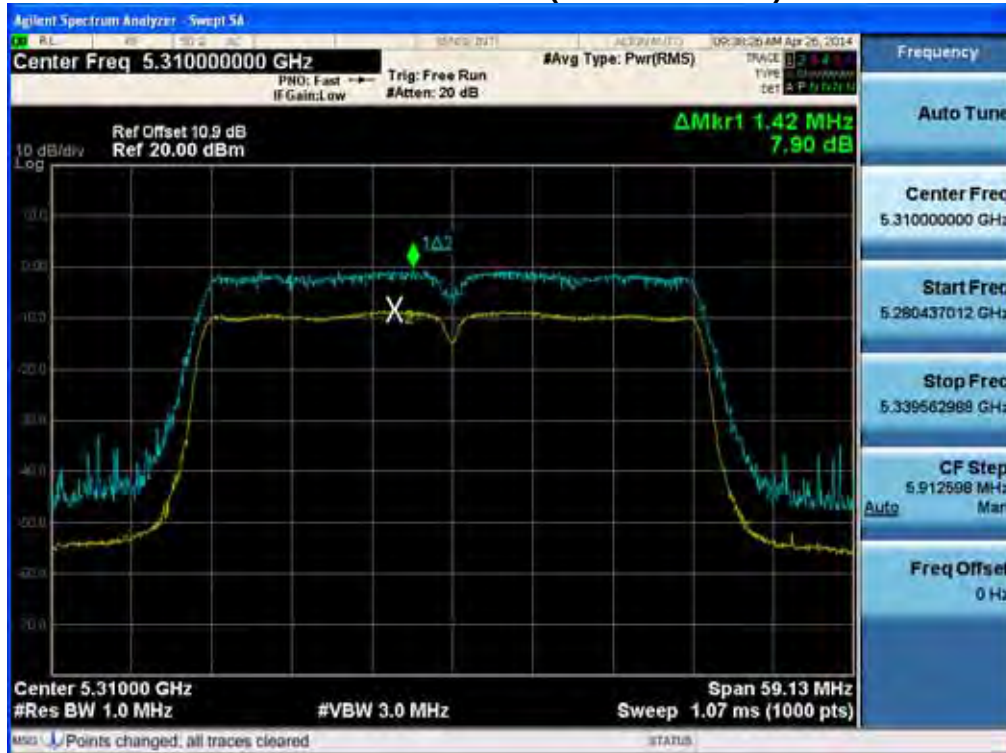


### Peak Excursion Ratio (802.11ac-CH 54)

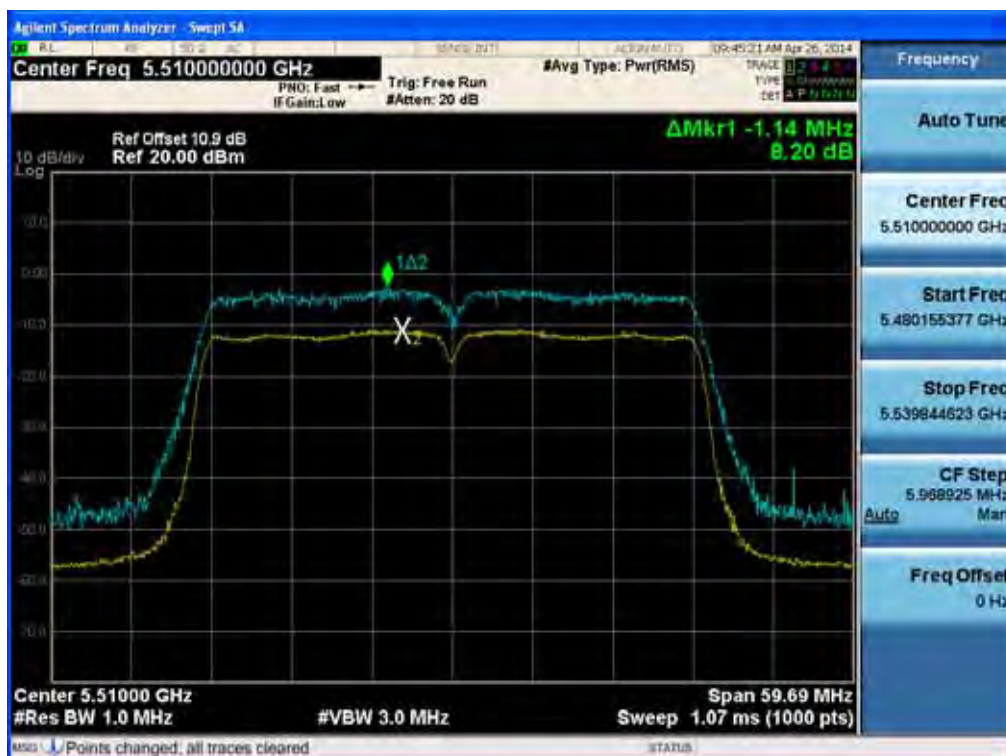


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| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

### Peak Excursion Ratio (802.11ac-CH 62)



### Peak Excursion Ratio (802.11ac-CH 102)



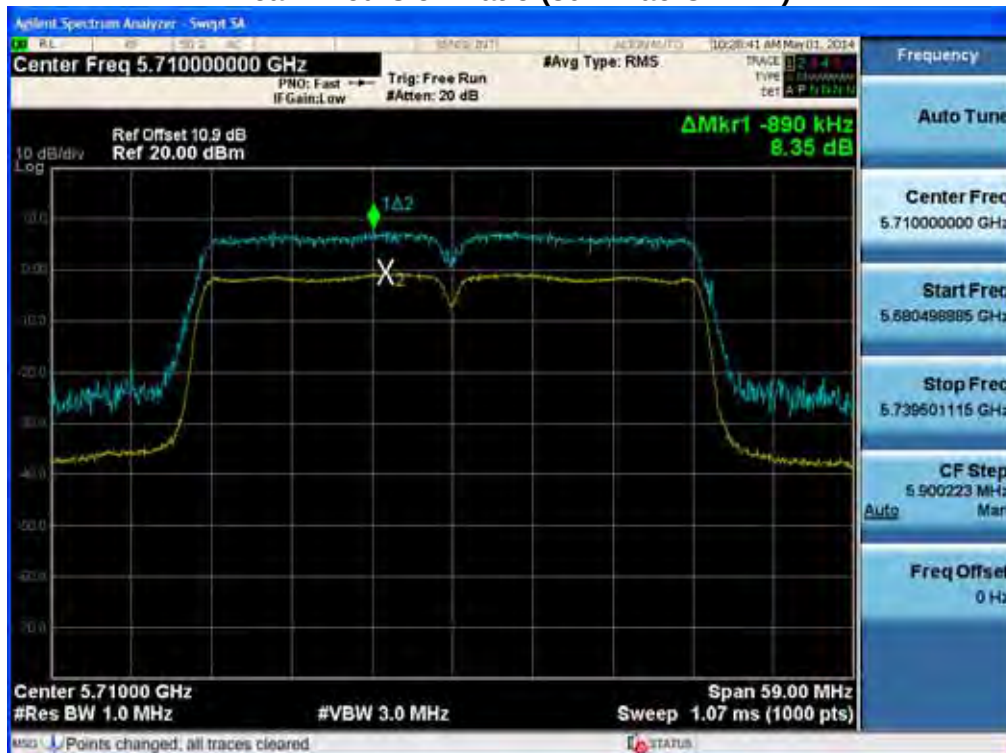
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| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
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### Peak Excursion Ratio (802.11ac-CH 110)



### Peak Excursion Ratio (802.11ac-CH 142)

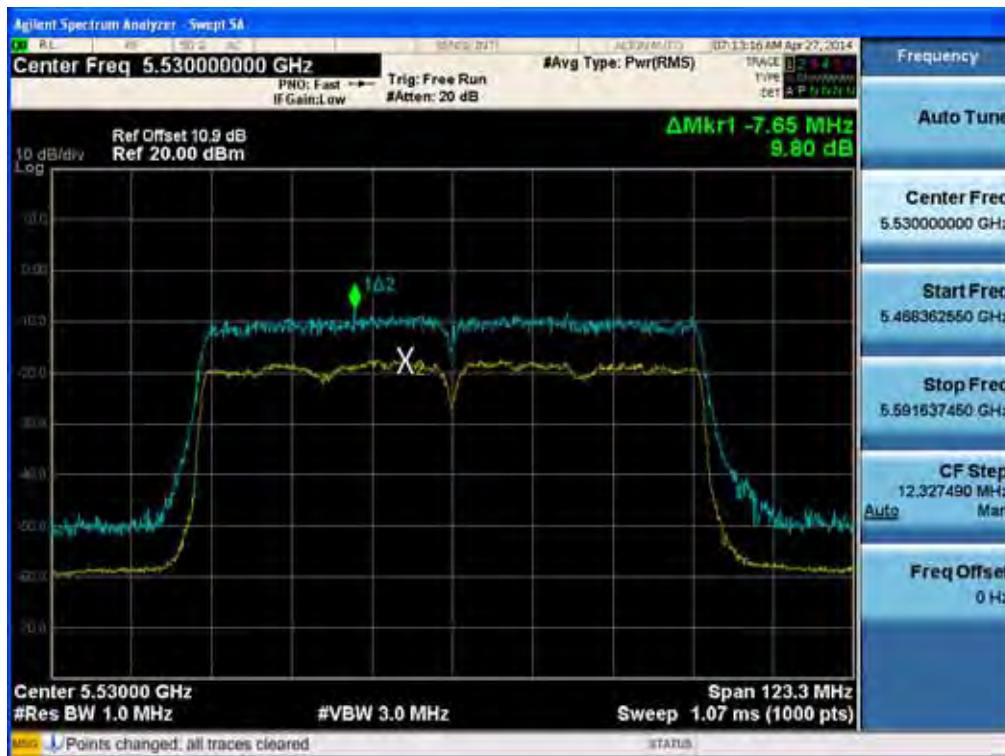


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|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
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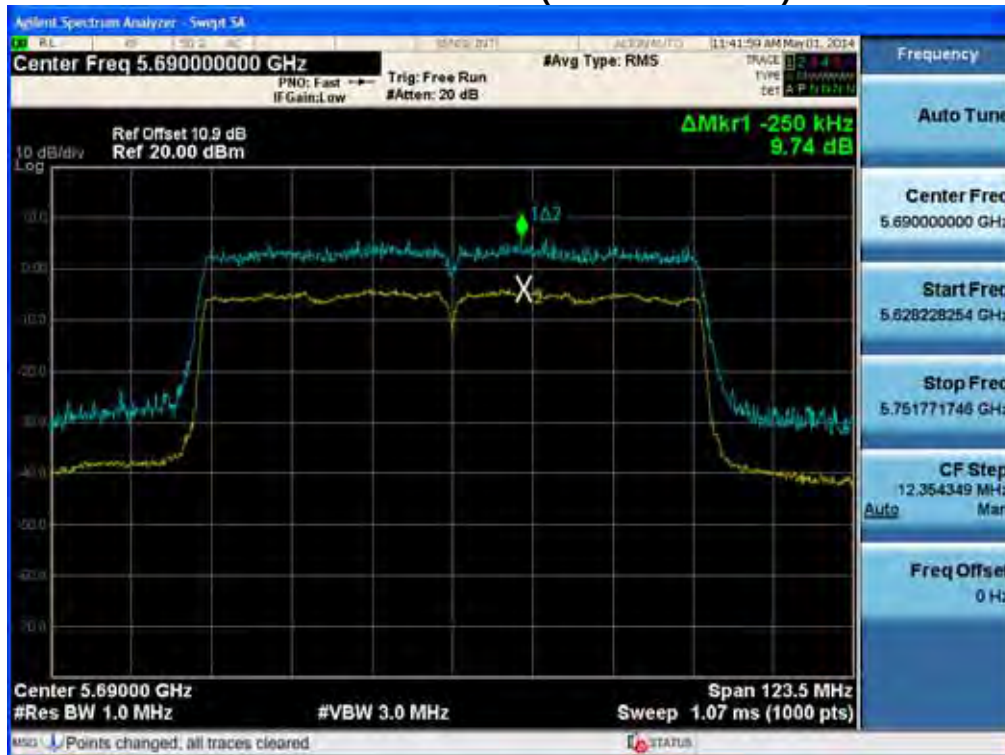
### Peak Excursion Ratio (802.11ac-CH 58)



### Peak Excursion Ratio (802.11ac-CH 106)



## Peak Excursion Ratio (802.11ac-CH 138)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
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## Service Port Ant.1

### RESULT PLOTS

20 MHz BW

#### Peak Excursion Ratio (802.11a-CH 52)



#### Peak Excursion Ratio (802.11a-CH 60)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
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### Peak Excursion Ratio (802.11a-CH 64)



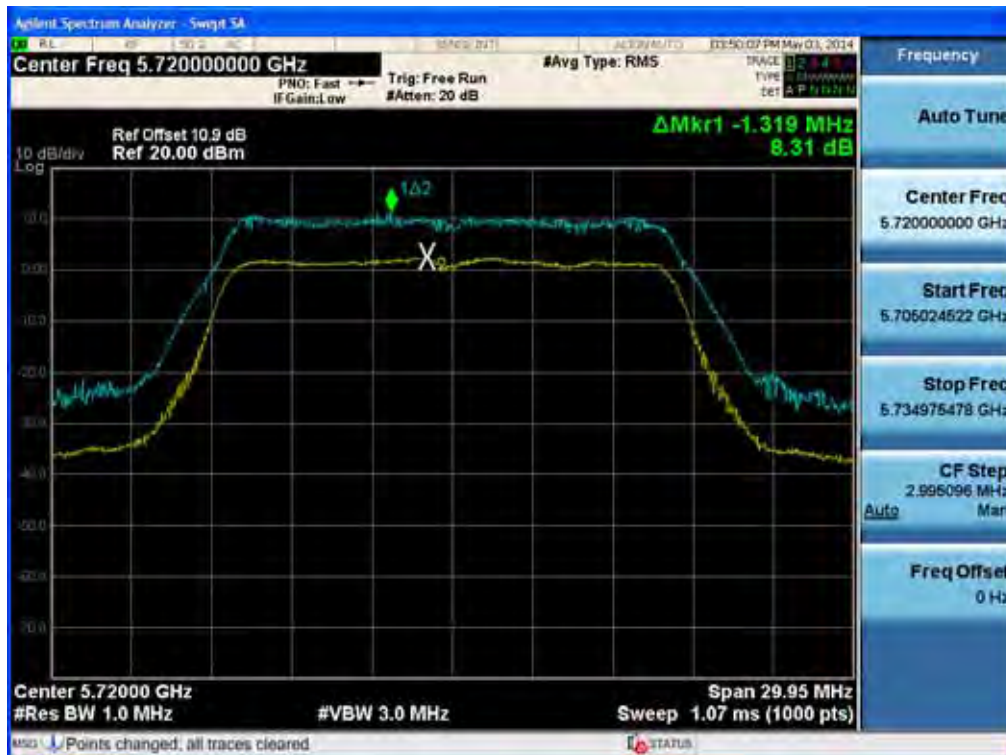
### Peak Excursion Ratio (802.11a-CH 100)



### Peak Excursion Ratio (802.11a-CH 116)



### Peak Excursion Ratio (802.11a-CH 144)



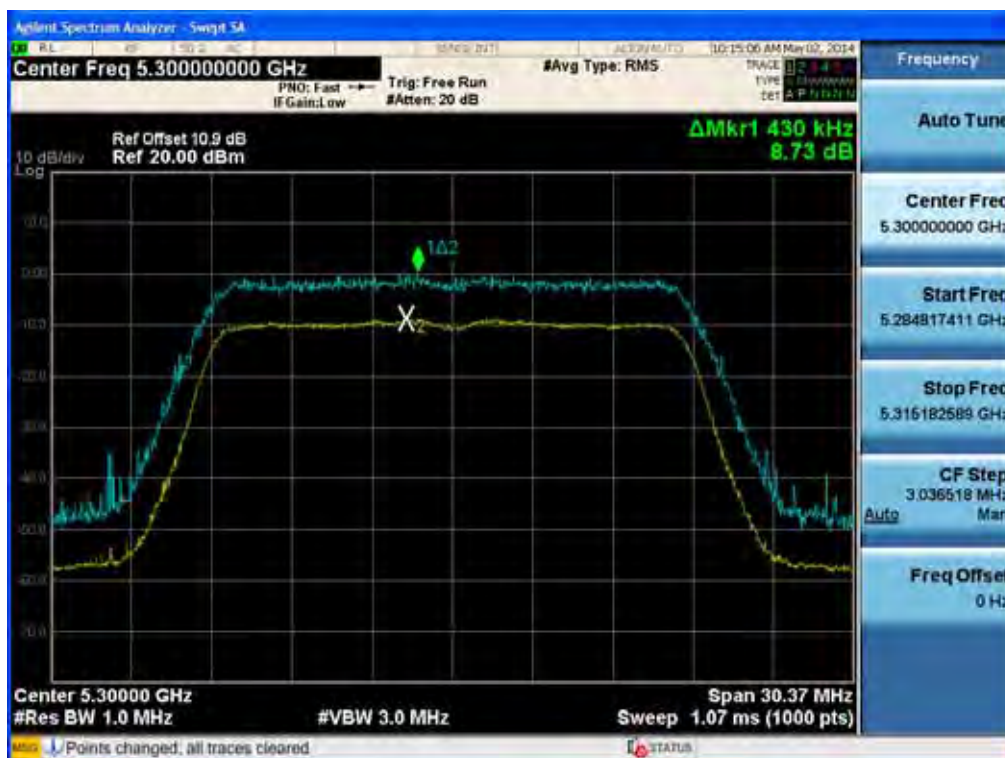
|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |



### Peak Excursion Ratio (802.11n-CH 52)



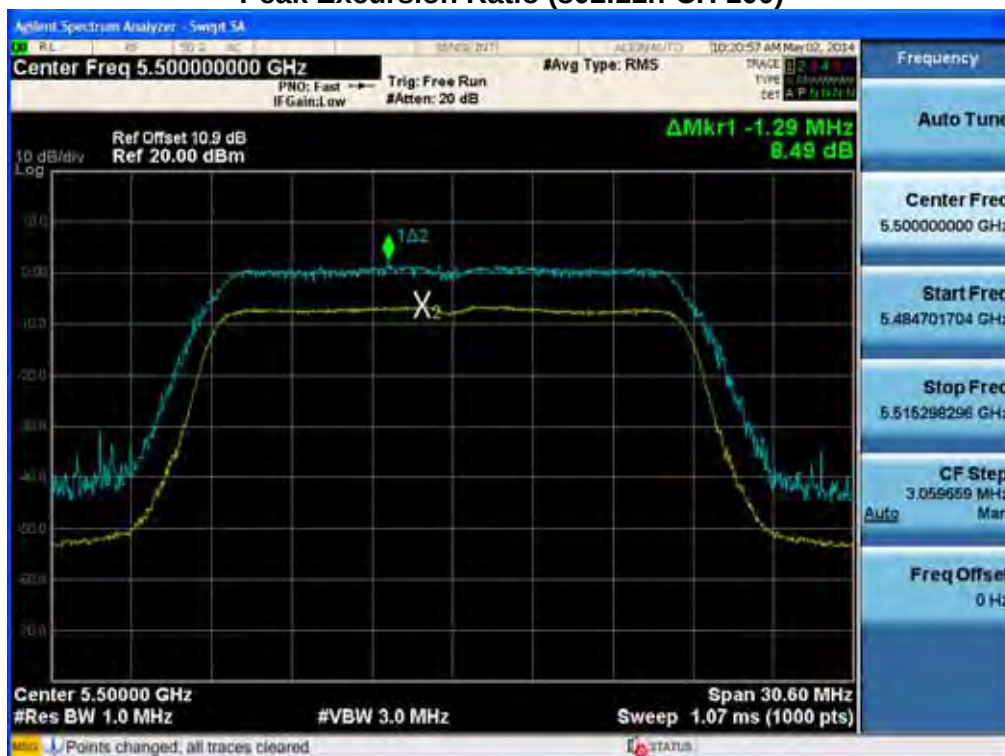
### Peak Excursion Ratio (802.11n-CH 60)



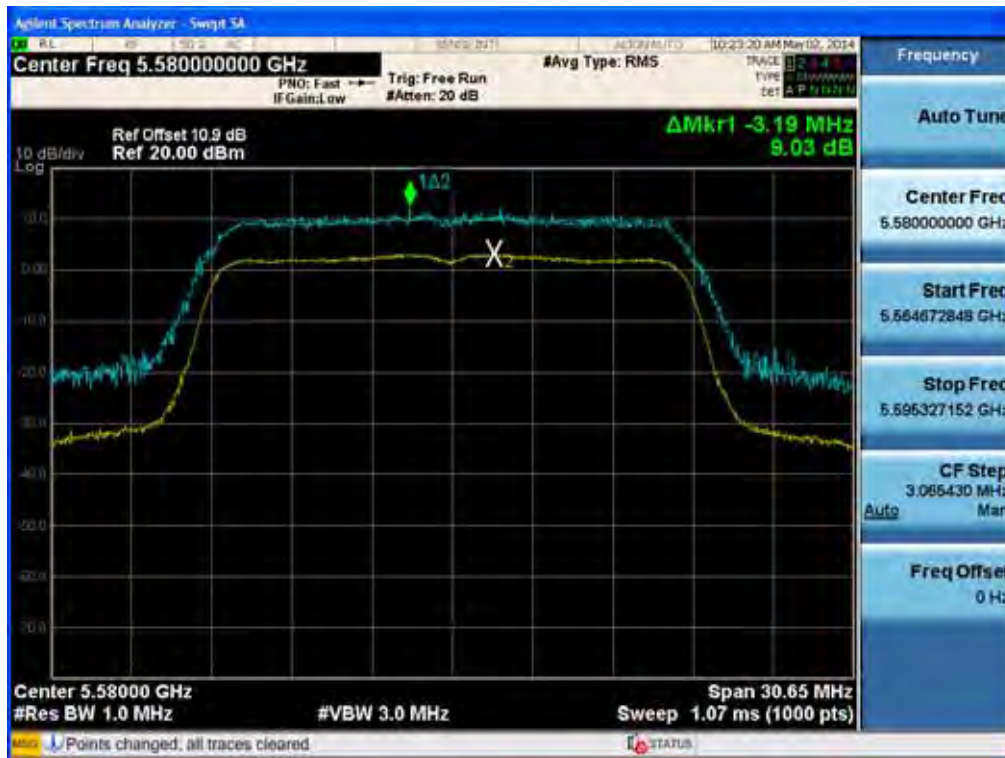
### Peak Excursion Ratio (802.11n-CH 64)



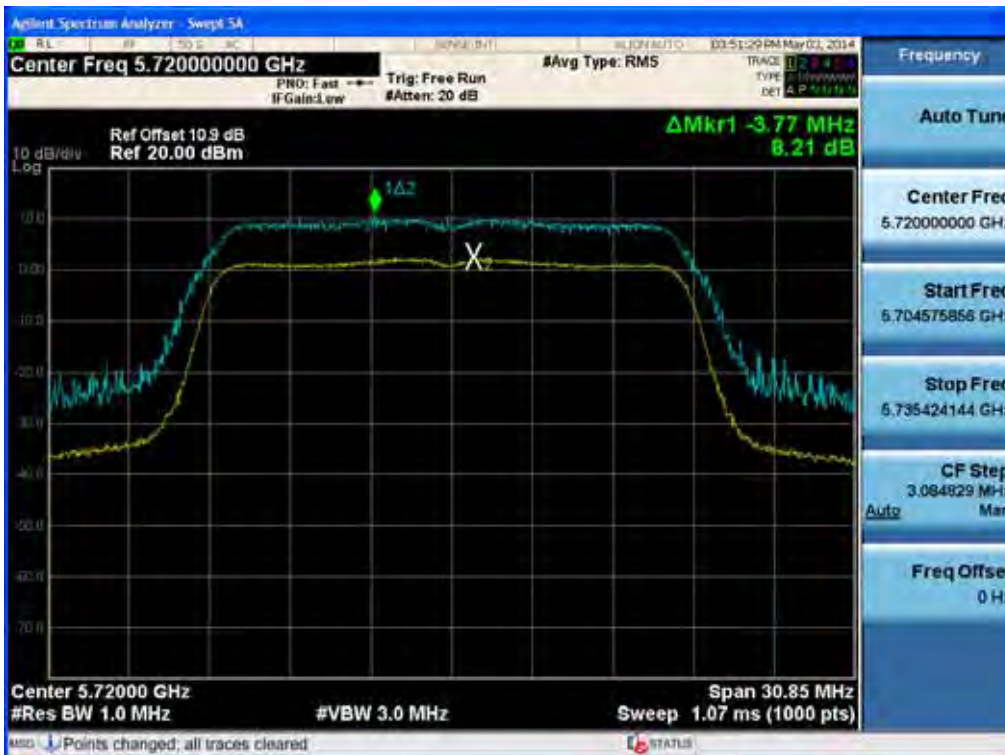
### Peak Excursion Ratio (802.11n-CH 100)



### Peak Excursion Ratio (802.11n-CH 116)



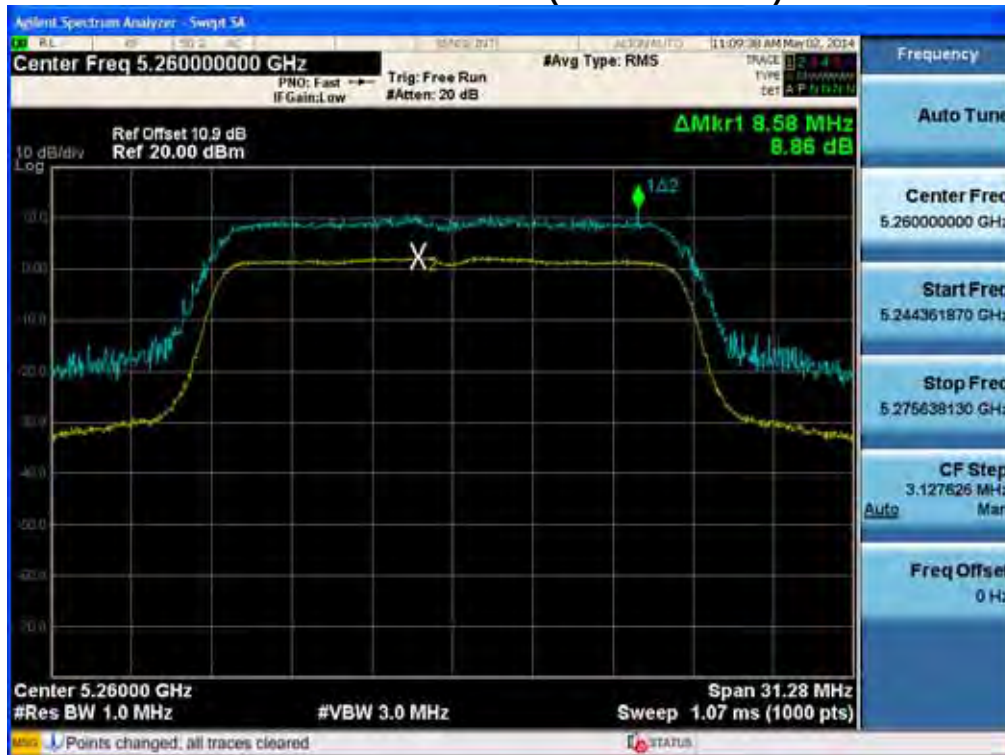
### Peak Excursion Ratio (802.11n-CH 144)



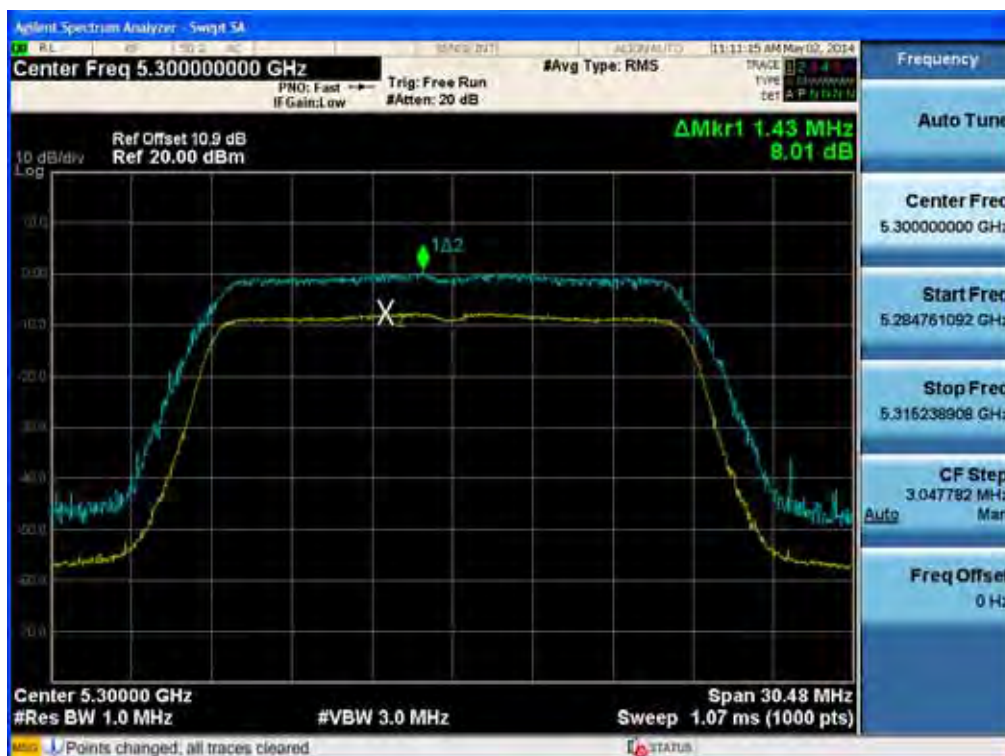
|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
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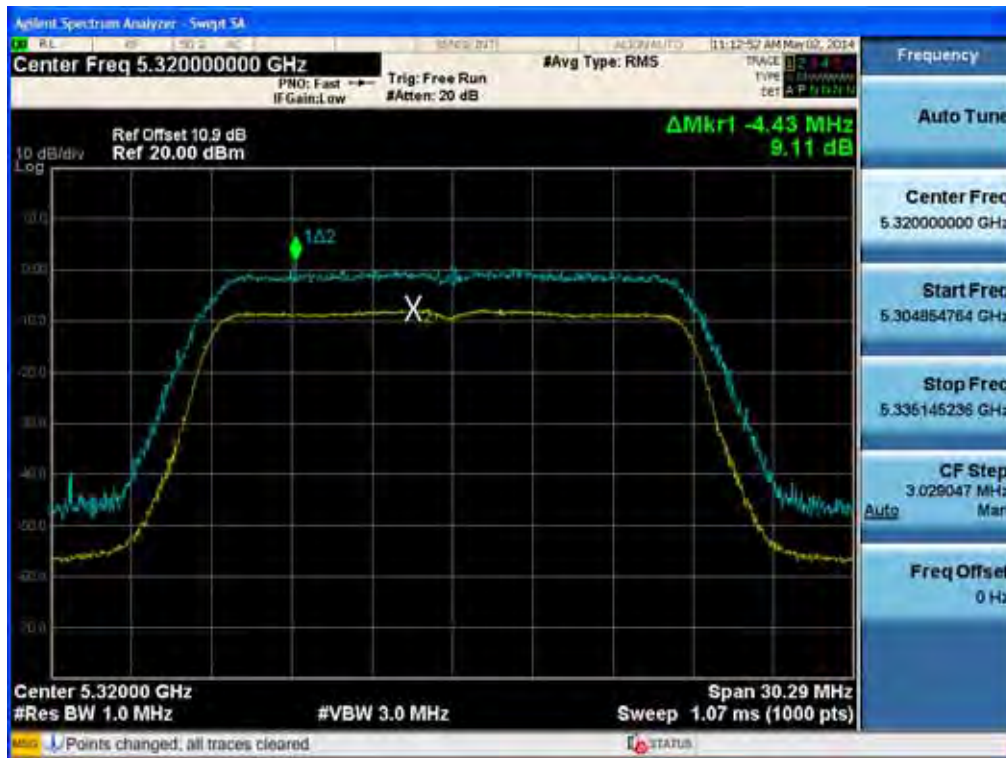
### Peak Excursion Ratio (802.11ac-CH 52)



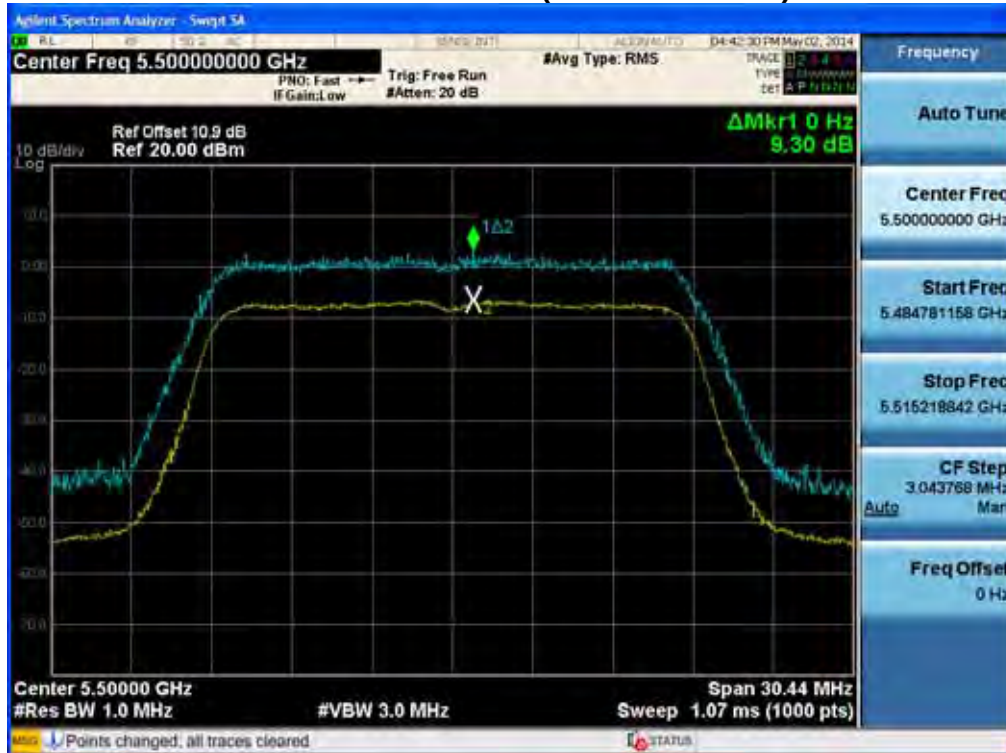
### Peak Excursion Ratio (802.11ac-CH 60)



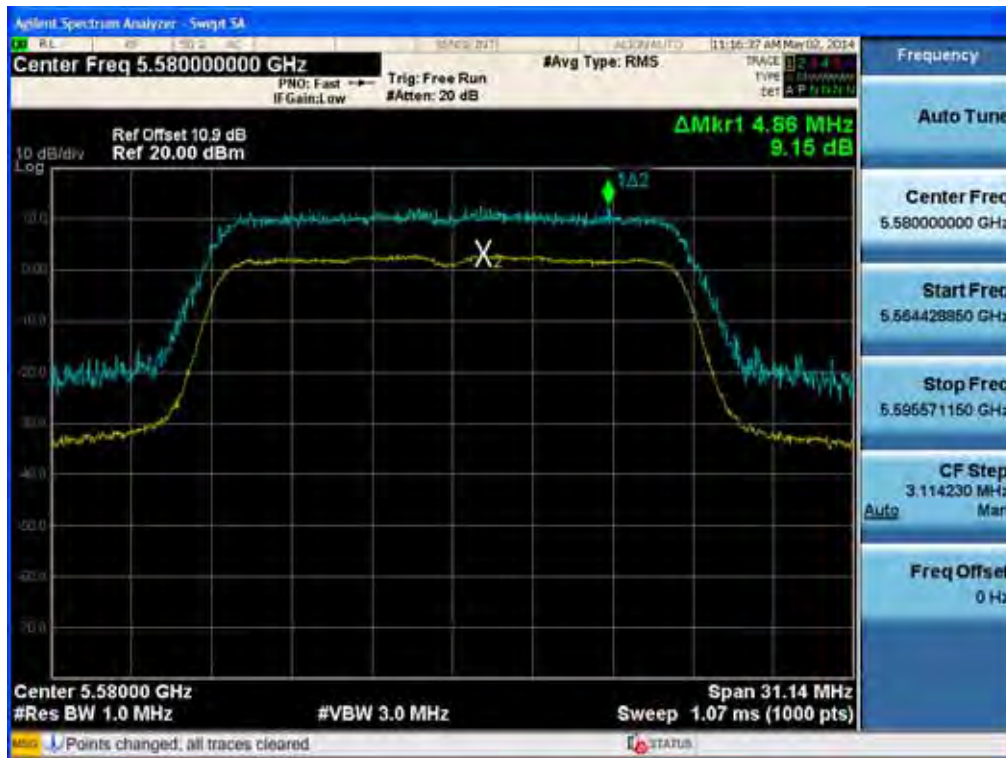
### Peak Excursion Ratio (802.11ac-CH 64)



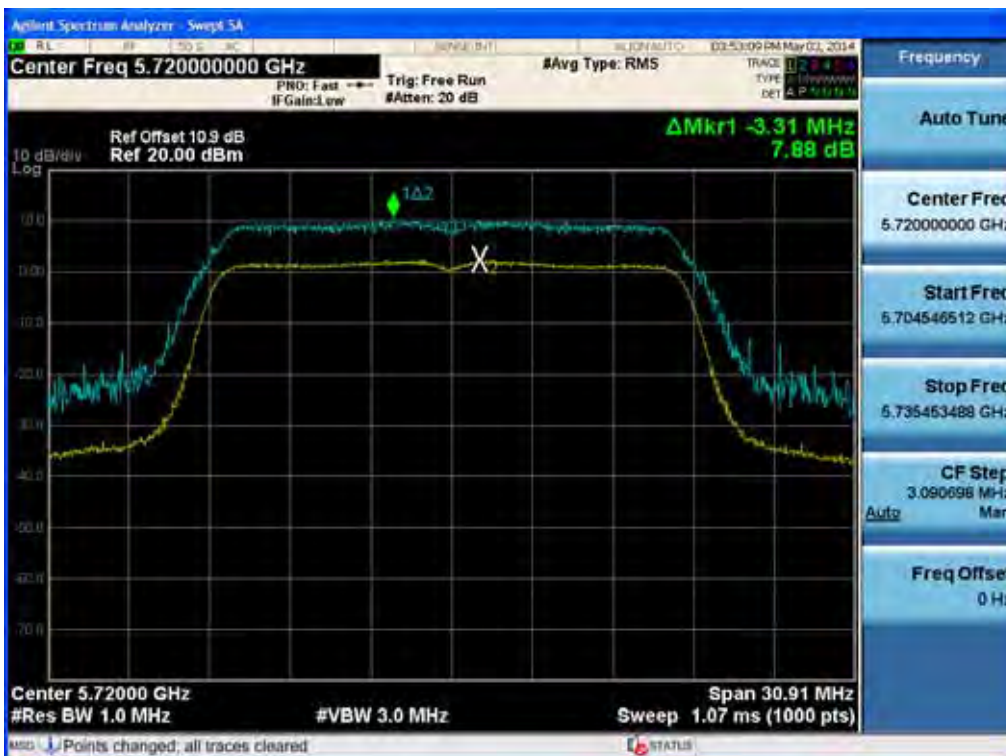
### Peak Excursion Ratio (802.11ac-CH 100)



### Peak Excursion Ratio (802.11ac-CH 116)



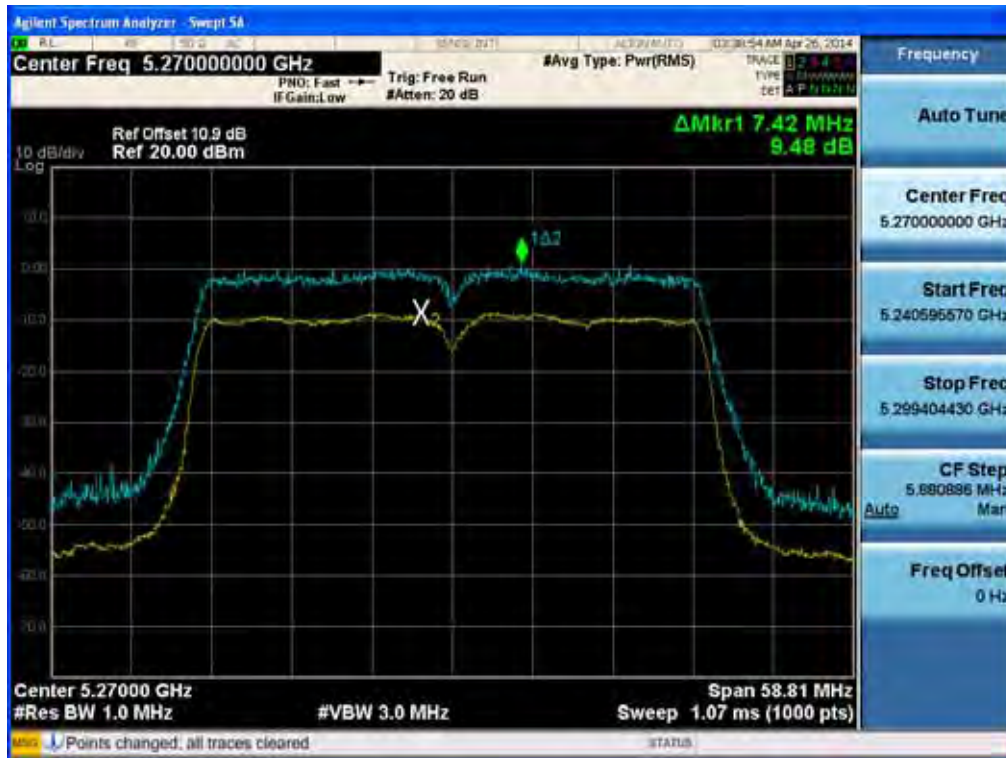
### Peak Excursion Ratio (802.11ac-CH 144)





40MHz BW

### Peak Excursion Ratio (802.11n-CH 54)



### Peak Excursion Ratio (802.11n-CH 62)

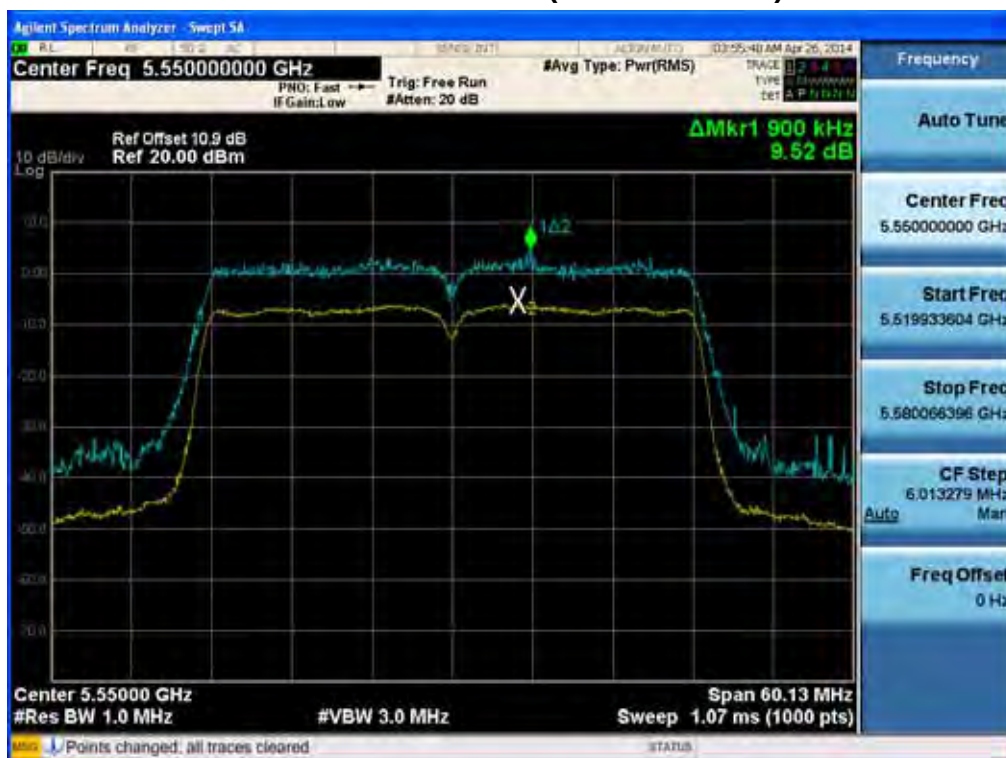


|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

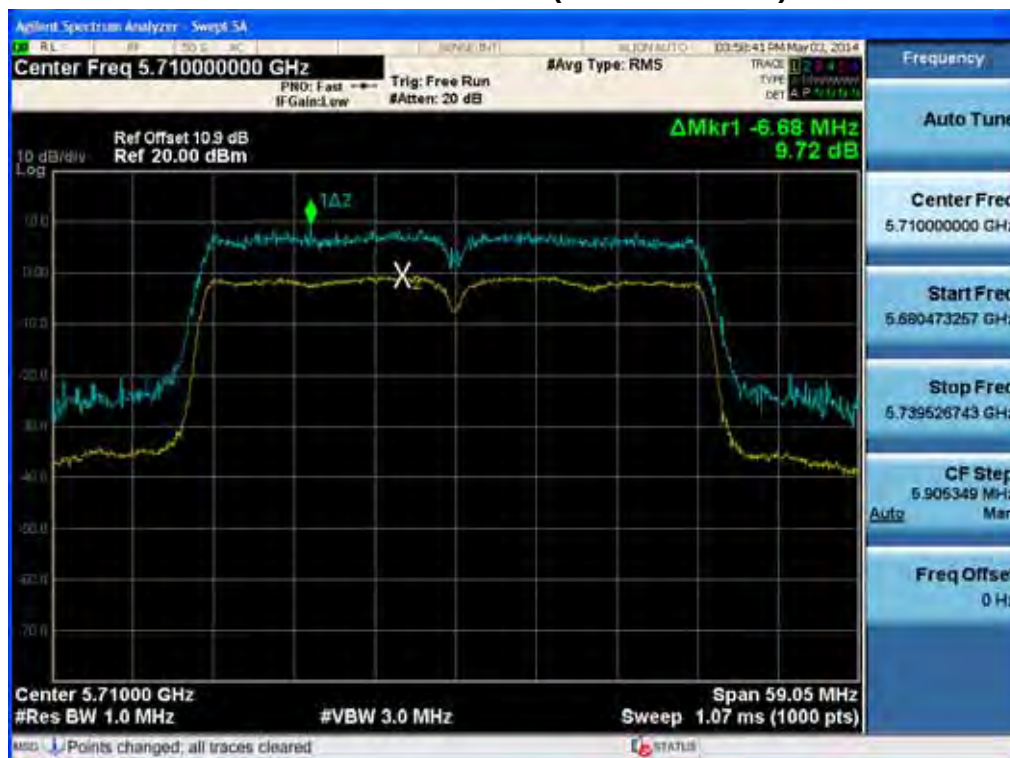
### Peak Excursion Ratio (802.11n-CH 102)



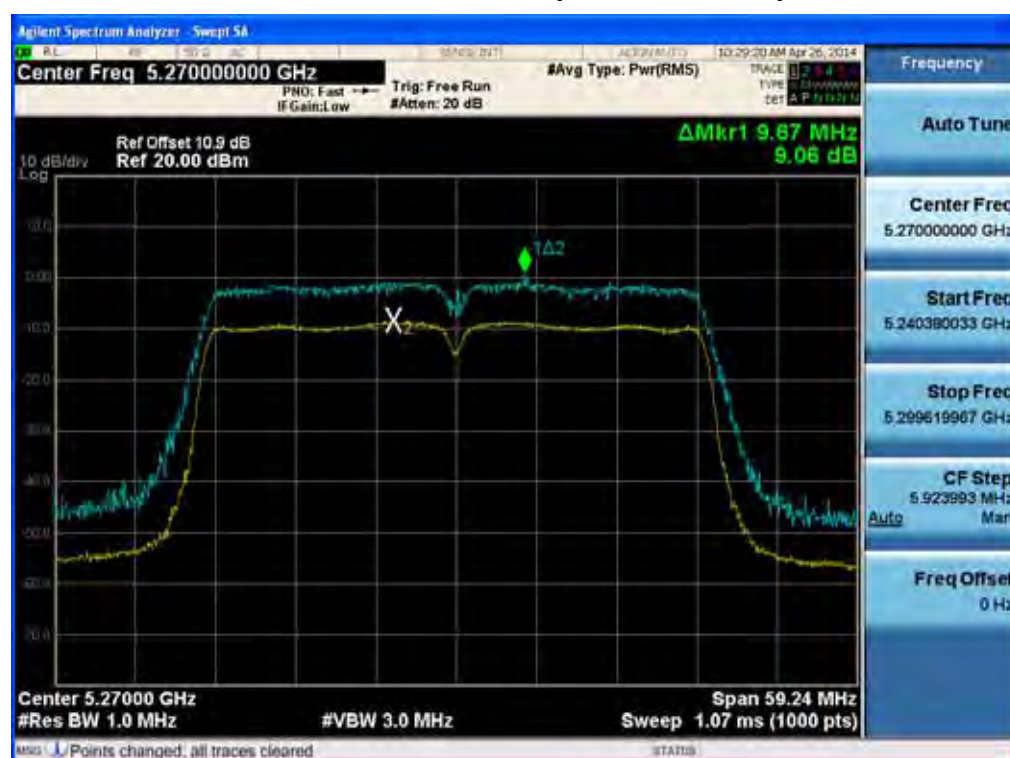
### Peak Excursion Ratio (802.11n-CH 110)



### Peak Excursion Ratio (802.11n-CH 142)

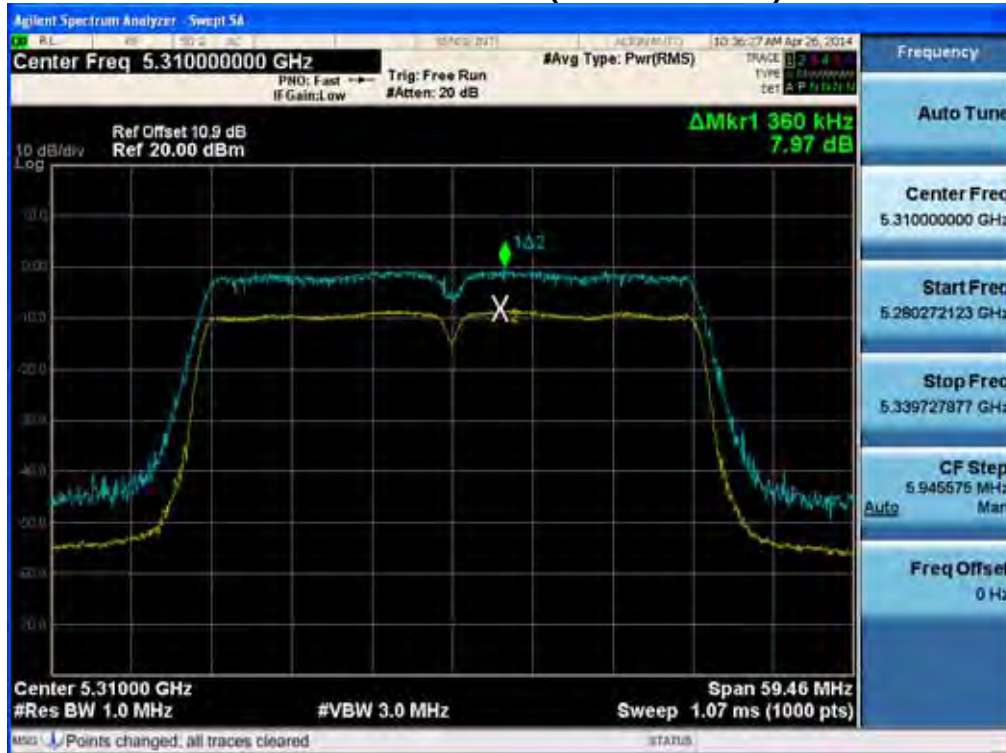


### Peak Excursion Ratio (802.11ac-CH 54)

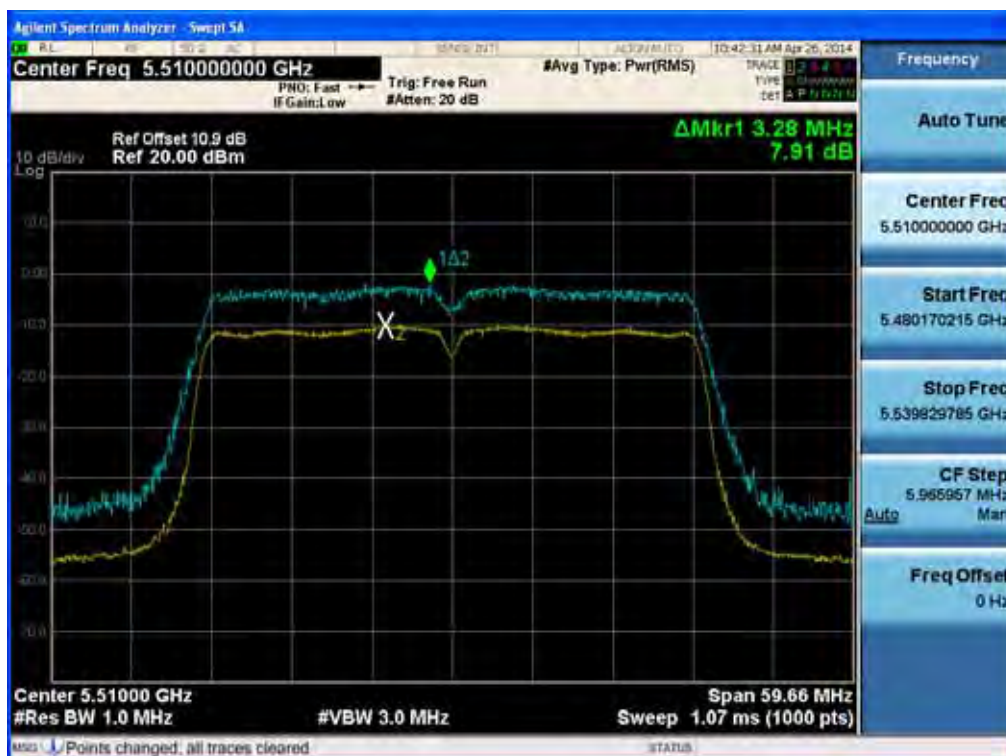




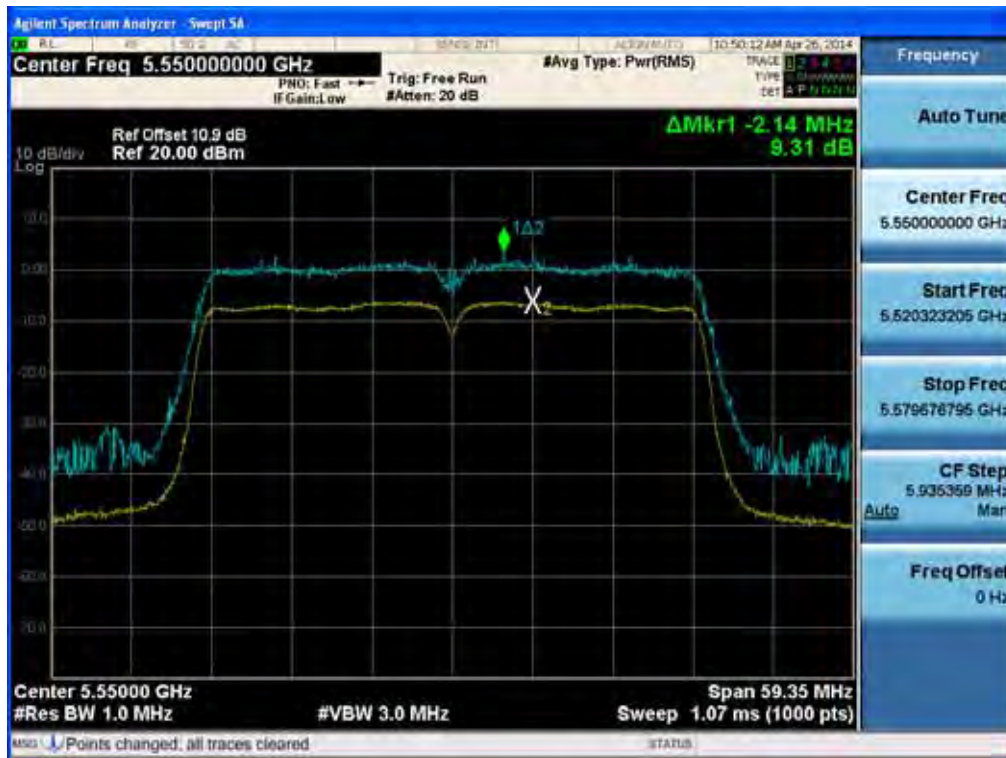
### Peak Excursion Ratio (802.11ac-CH 62)



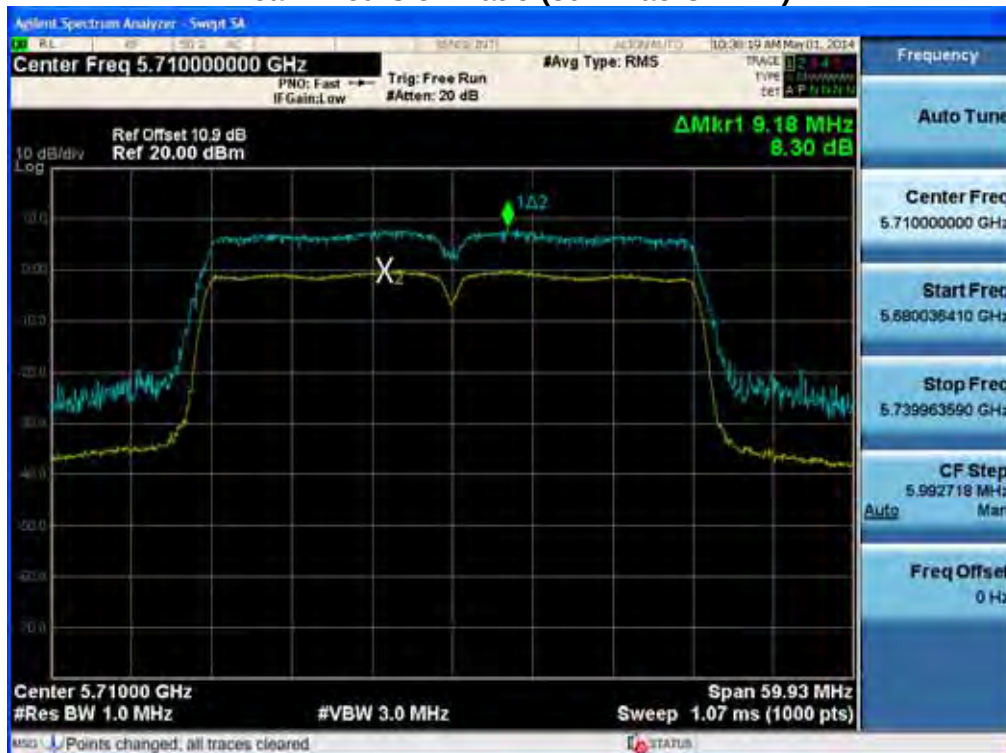
### Peak Excursion Ratio (802.11ac-CH 102)



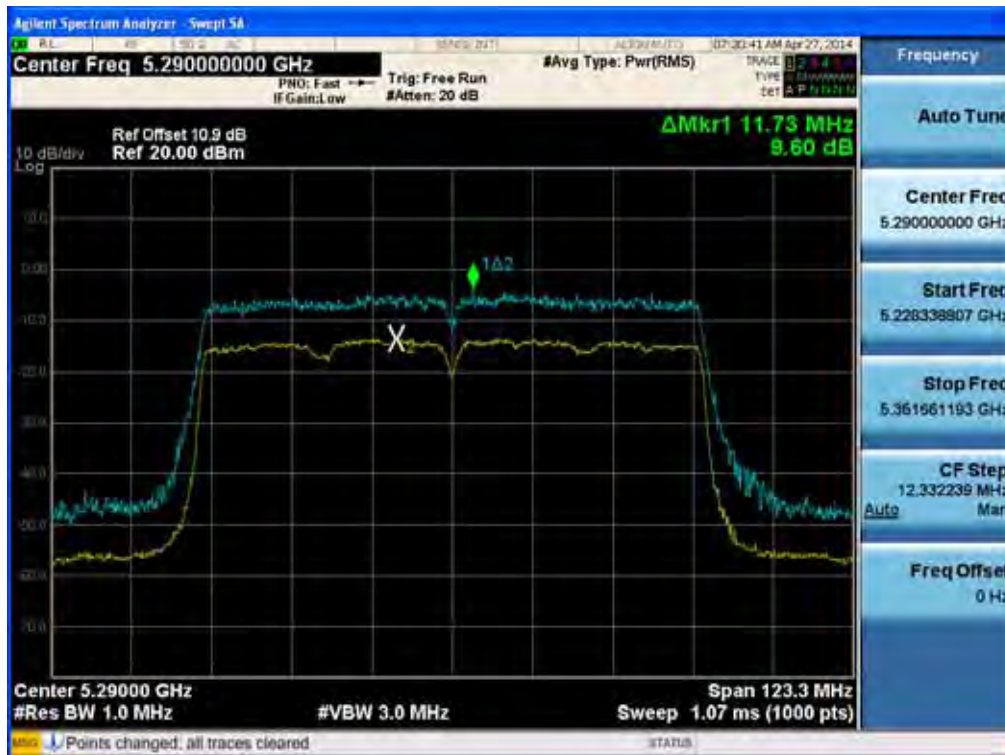
### Peak Excursion Ratio (802.11ac-CH 110)



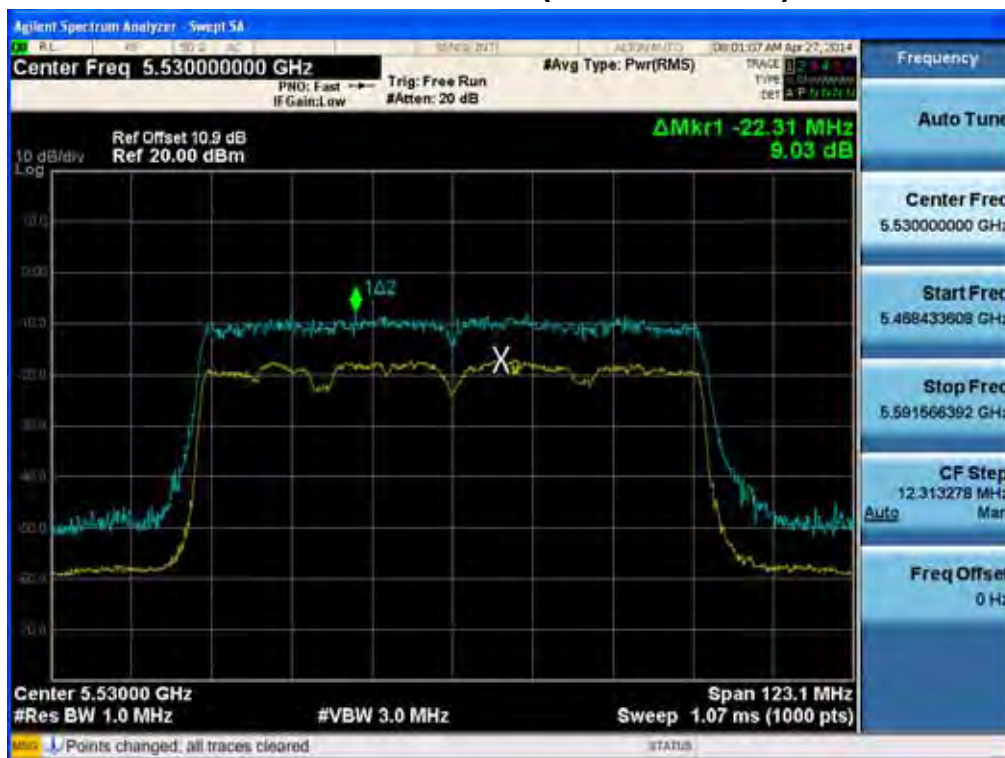
### Peak Excursion Ratio (802.11ac-CH 142)



### Peak Excursion Ratio (802.11ac-CH 58)

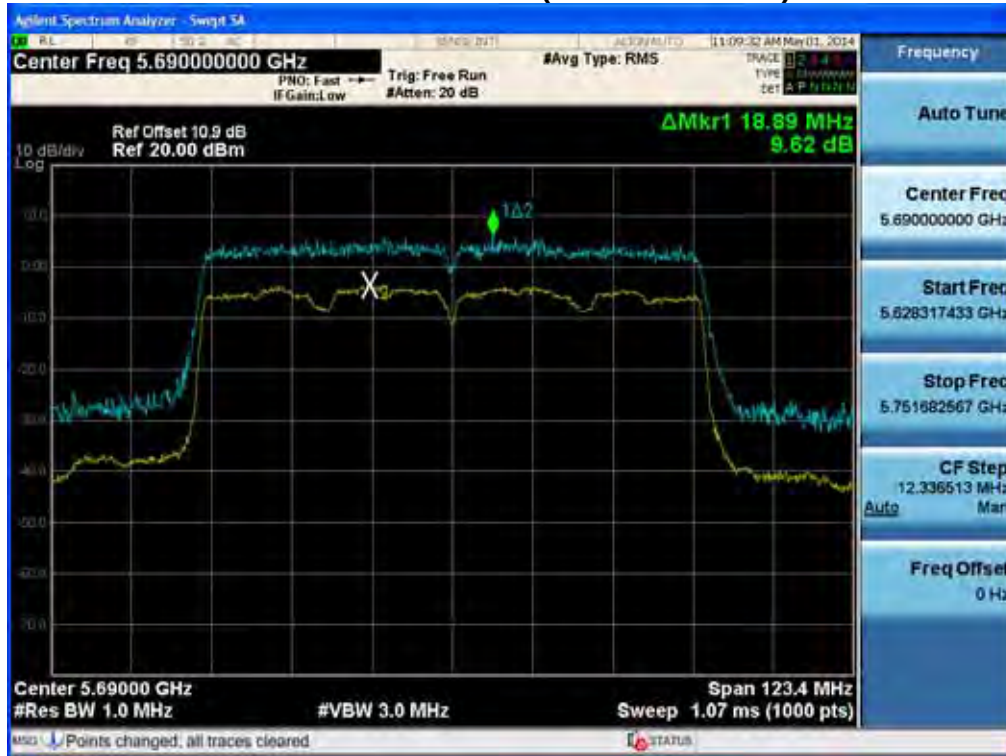


### Peak Excursion Ratio (802.11ac-CH 106)





Peak Excursion Ratio (802.11ac-CH 138)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

## Service Port Ant.2

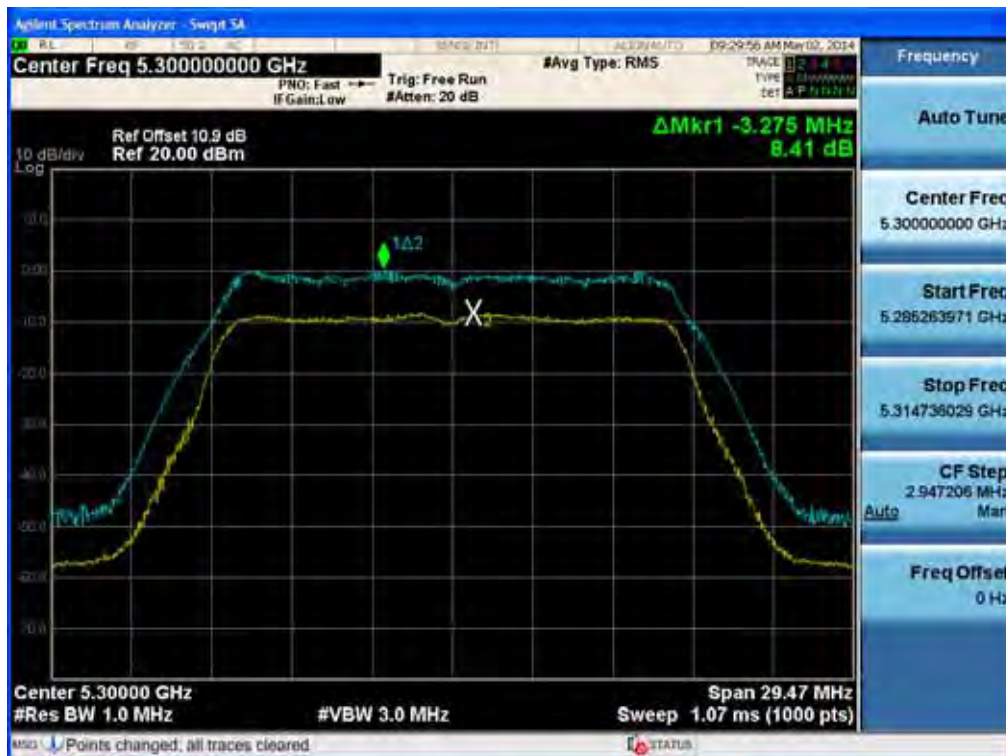
### RESULT PLOTS

20 MHz BW

#### Peak Excursion Ratio (802.11a-CH 52)



#### Peak Excursion Ratio (802.11a-CH 60)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

### Peak Excursion Ratio (802.11a-CH 64)



### Peak Excursion Ratio (802.11a-CH 100)

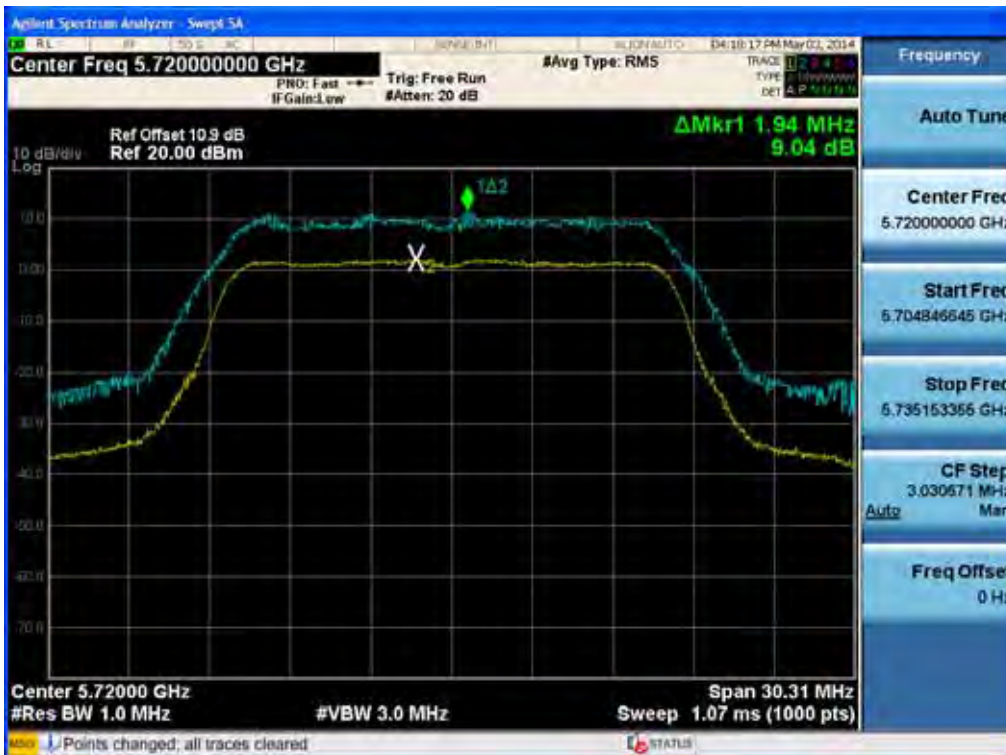




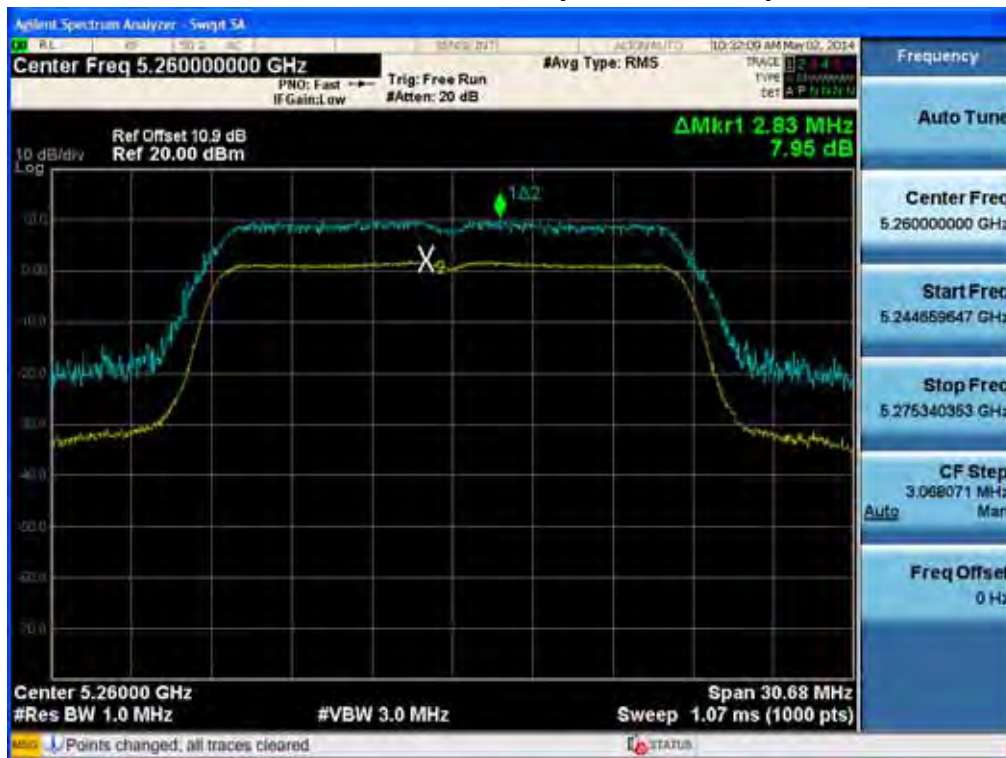
### Peak Excursion Ratio (802.11a-CH 116)



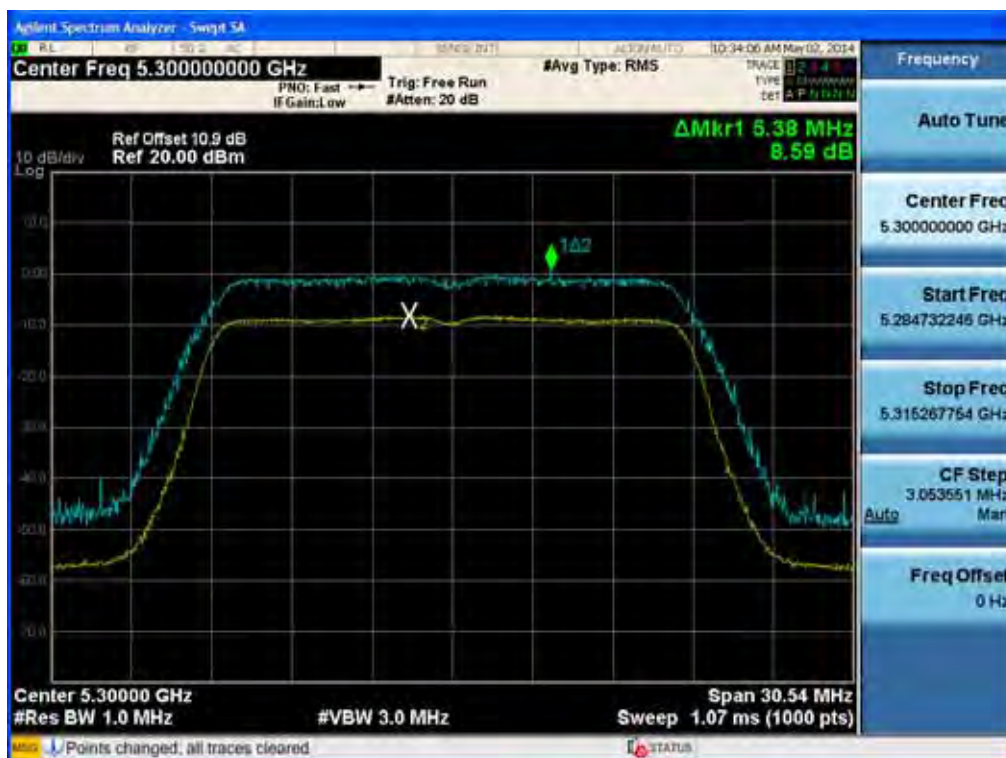
### Peak Excursion Ratio (802.11a-CH 144)



### Peak Excursion Ratio (802.11n-CH 52)



### Peak Excursion Ratio (802.11n-CH 60)



### Peak Excursion Ratio (802.11n-CH 64)

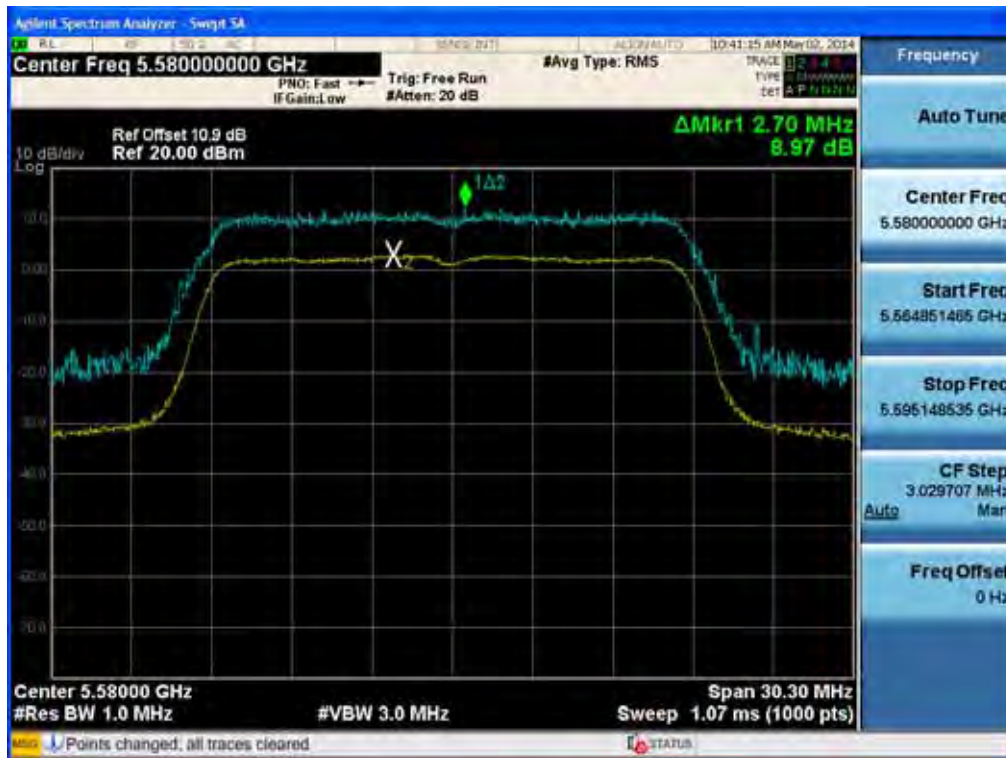


### Peak Excursion Ratio (802.11n-CH 100)





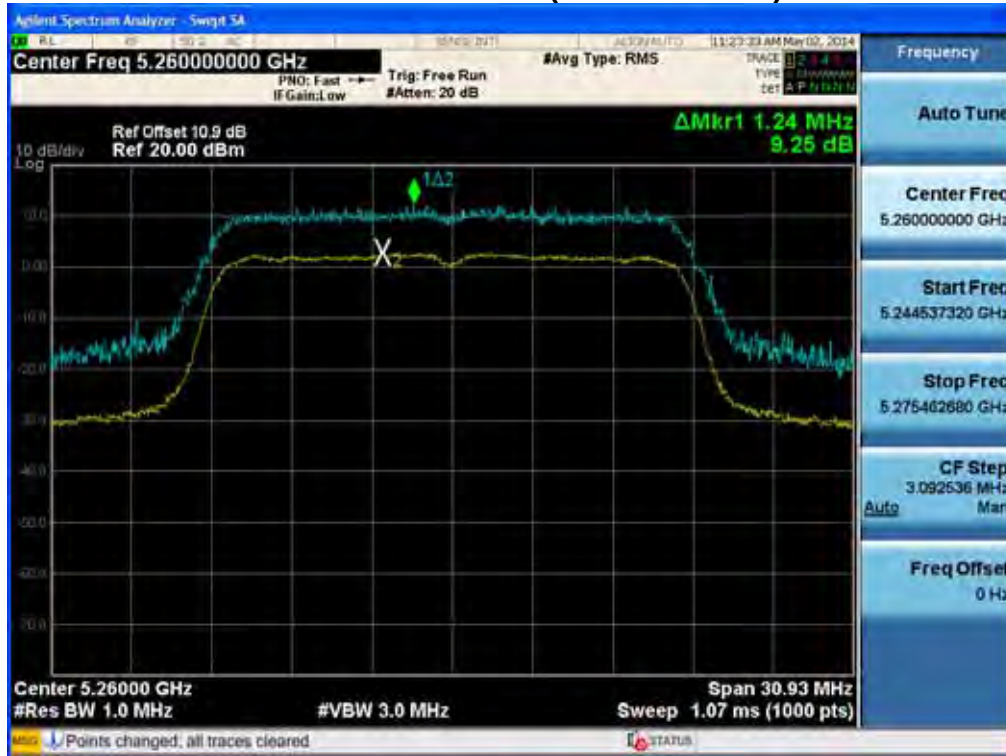
### Peak Excursion Ratio (802.11n-CH 116)



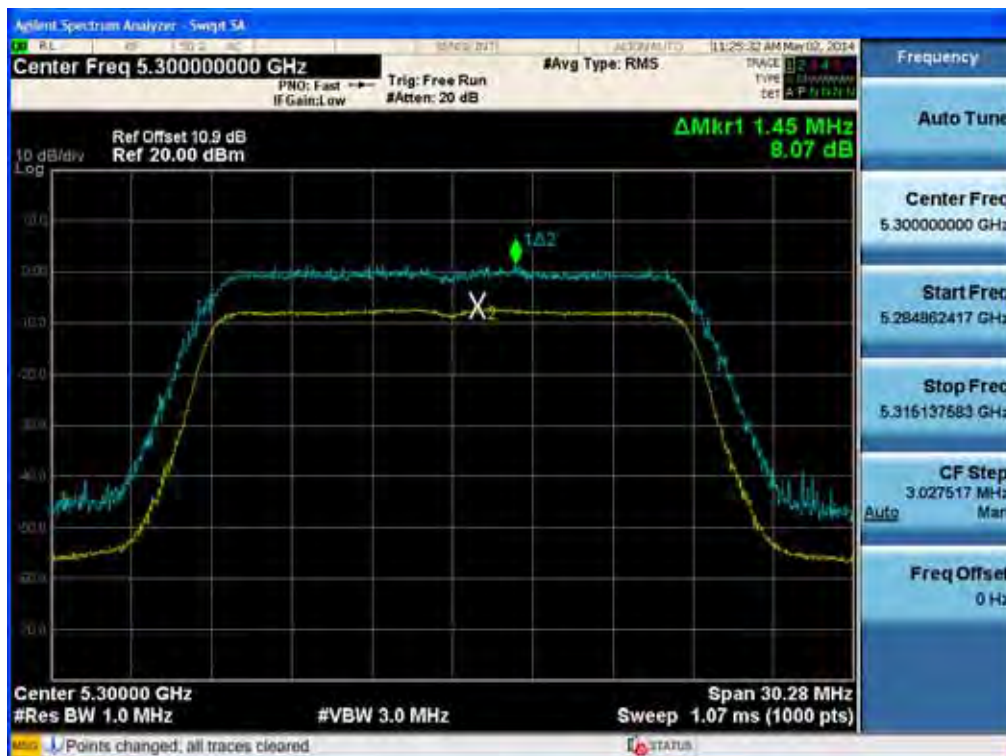
### Peak Excursion Ratio (802.11n-CH 144)



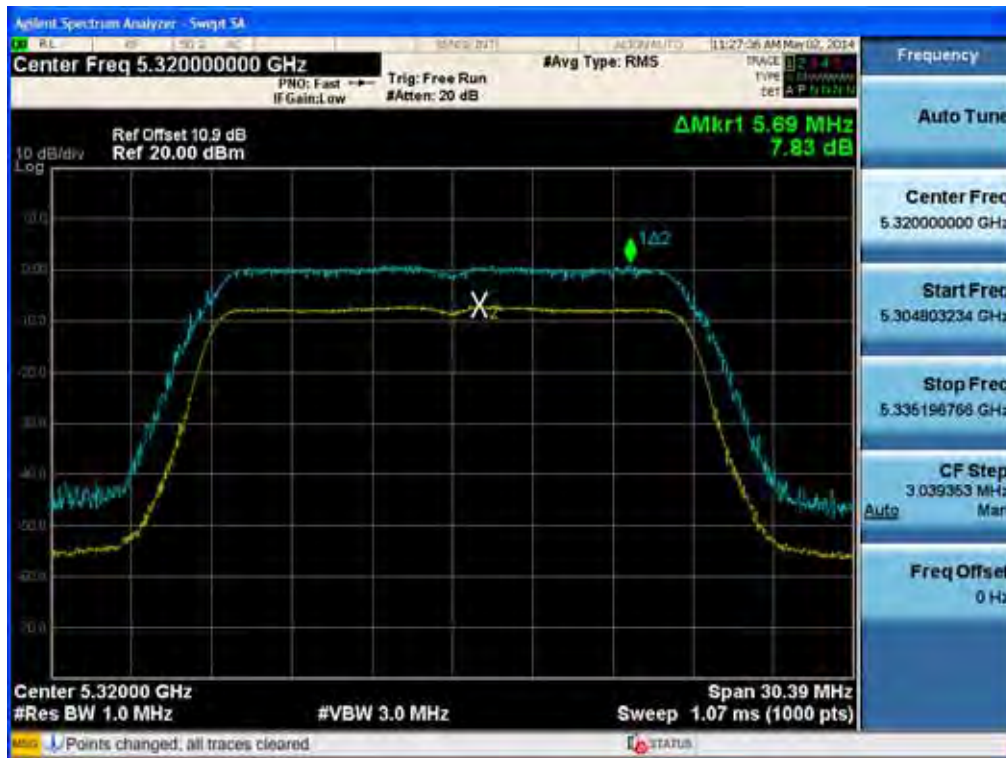
### Peak Excursion Ratio (802.11ac-CH 52)



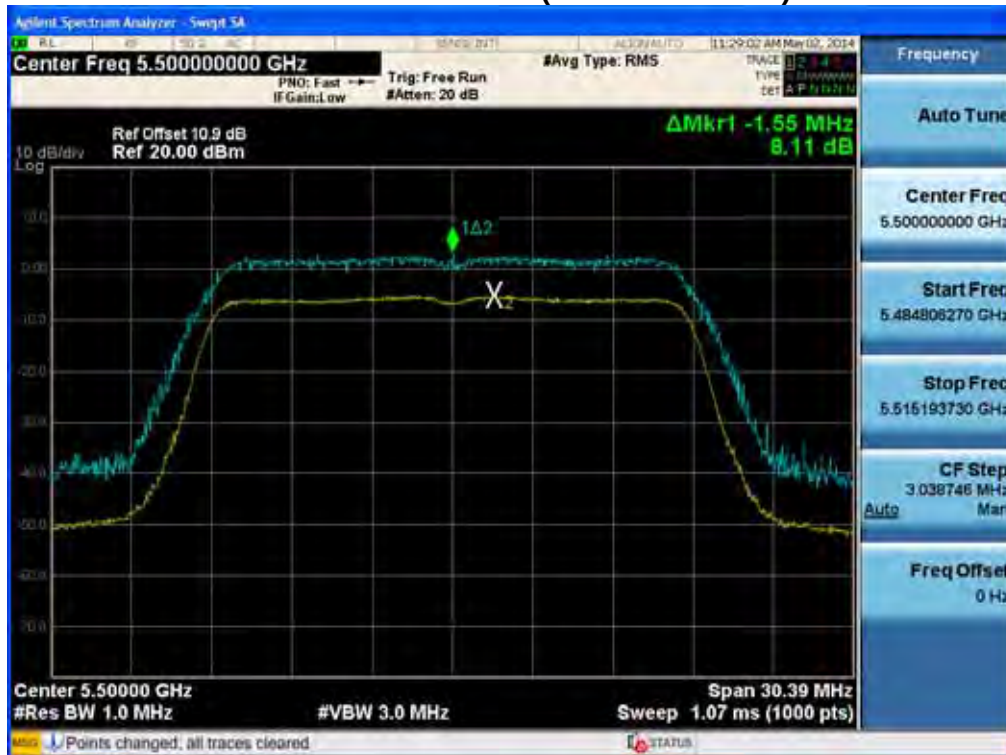
### Peak Excursion Ratio (802.11ac-CH 60)



### Peak Excursion Ratio (802.11ac-CH 64)



### Peak Excursion Ratio (802.11ac-CH 100)

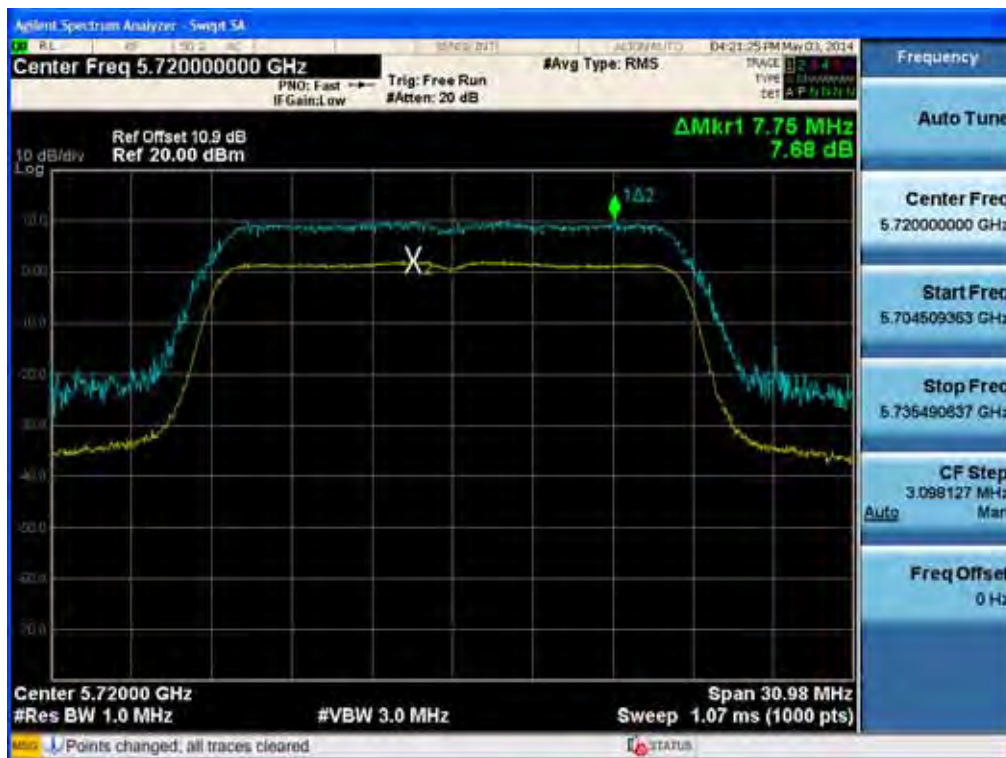




### Peak Excursion Ratio (802.11ac-CH 116)

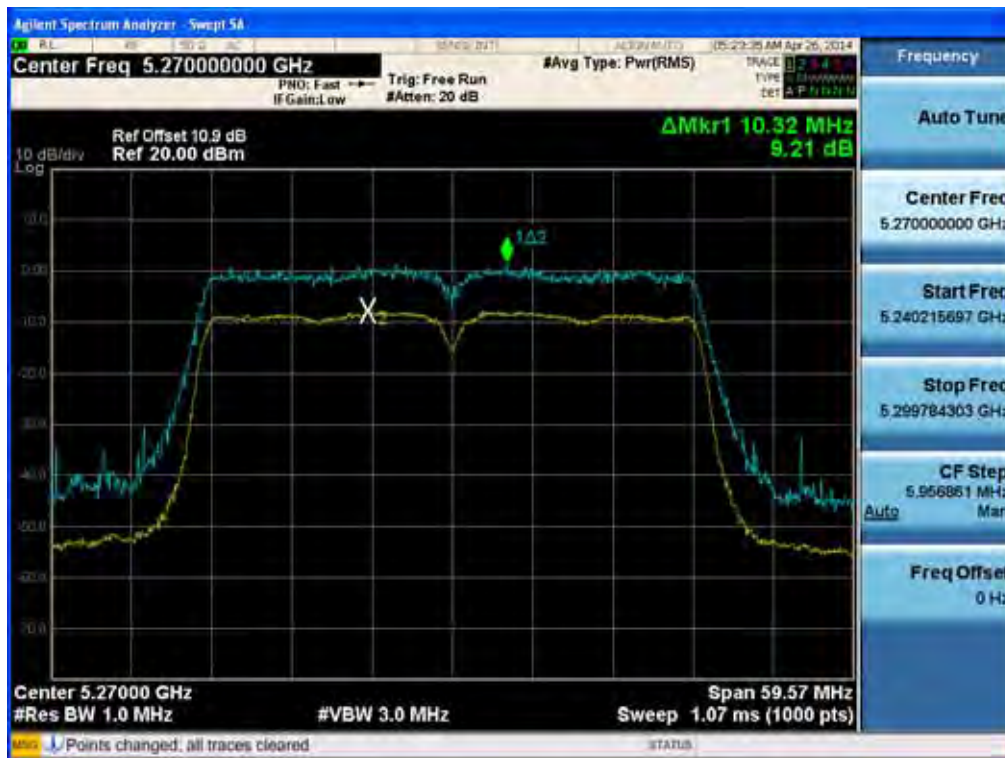


### Peak Excursion Ratio (802.11ac-CH 144)

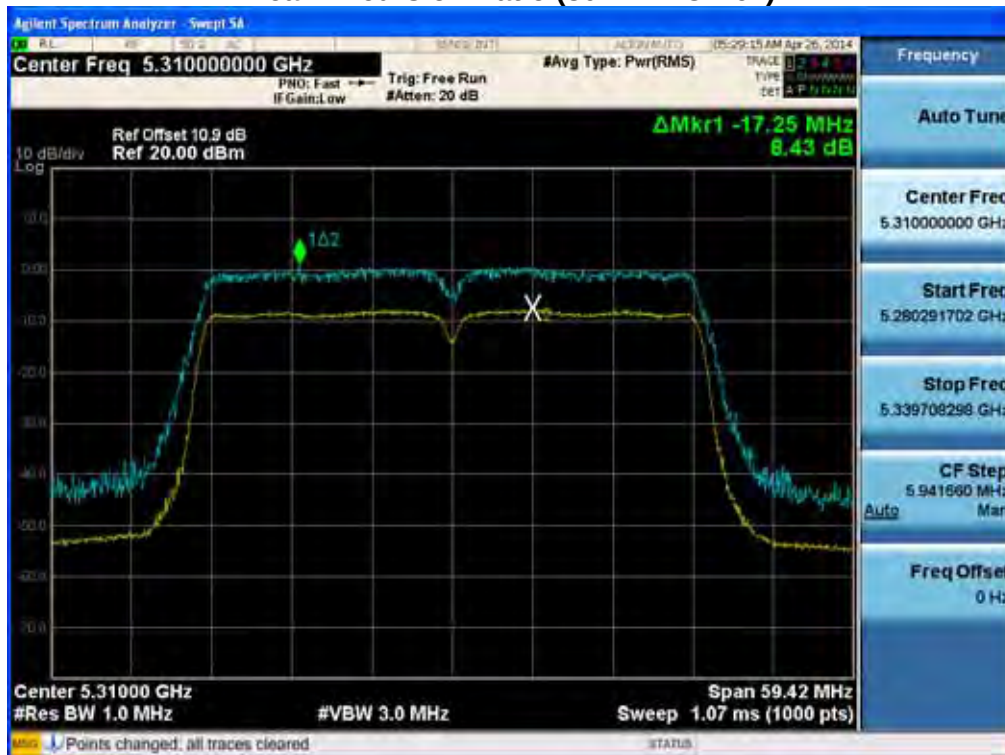


40MHz BW

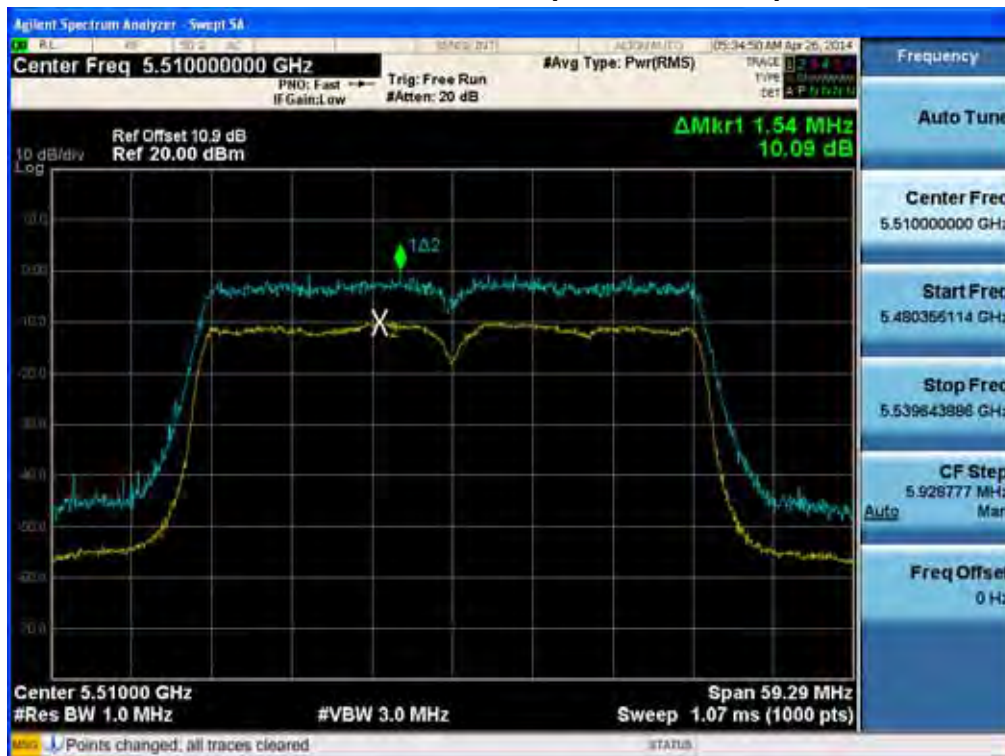
### Peak Excursion Ratio (802.11n-CH 54)



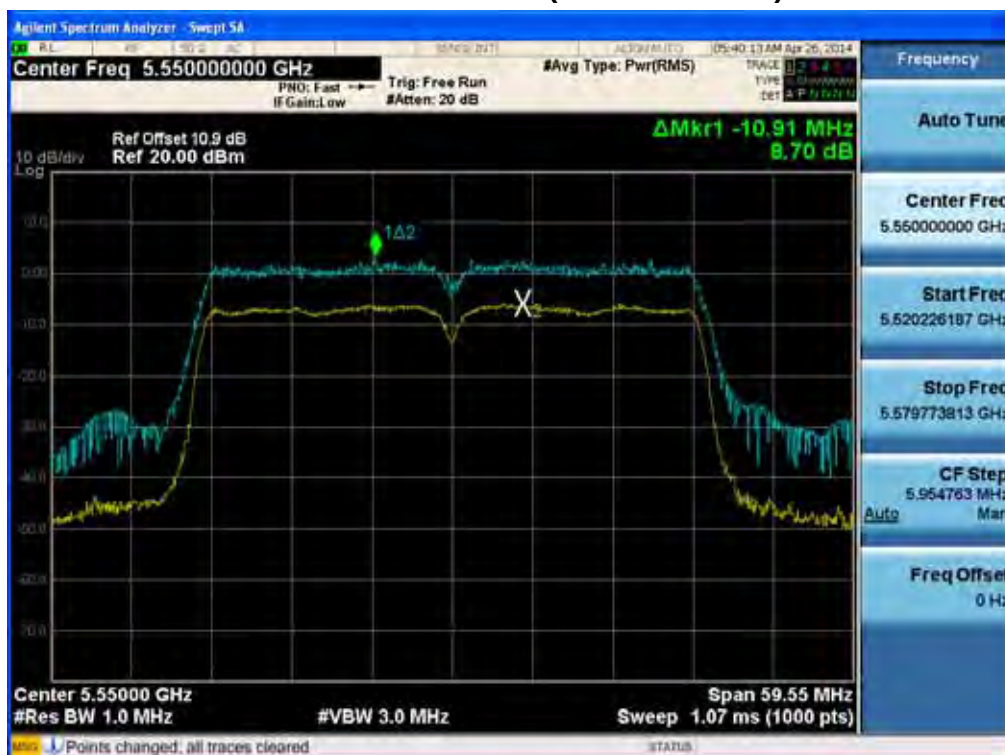
### Peak Excursion Ratio (802.11n-CH 62)



### Peak Excursion Ratio (802.11n-CH 102)



### Peak Excursion Ratio (802.11n-CH 110)

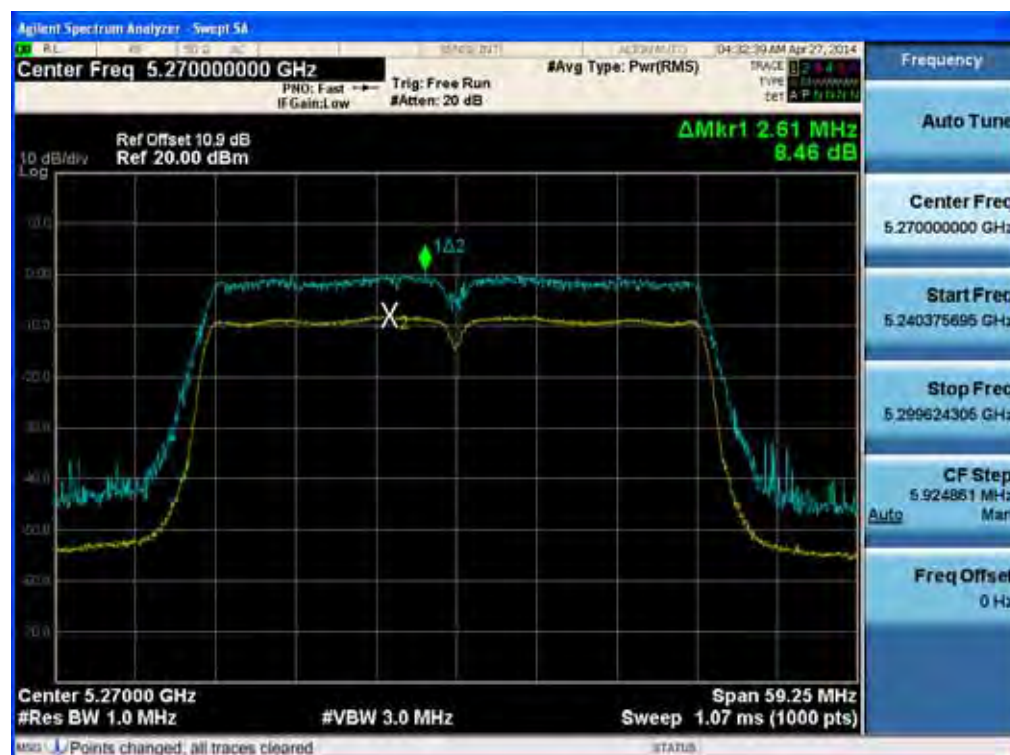




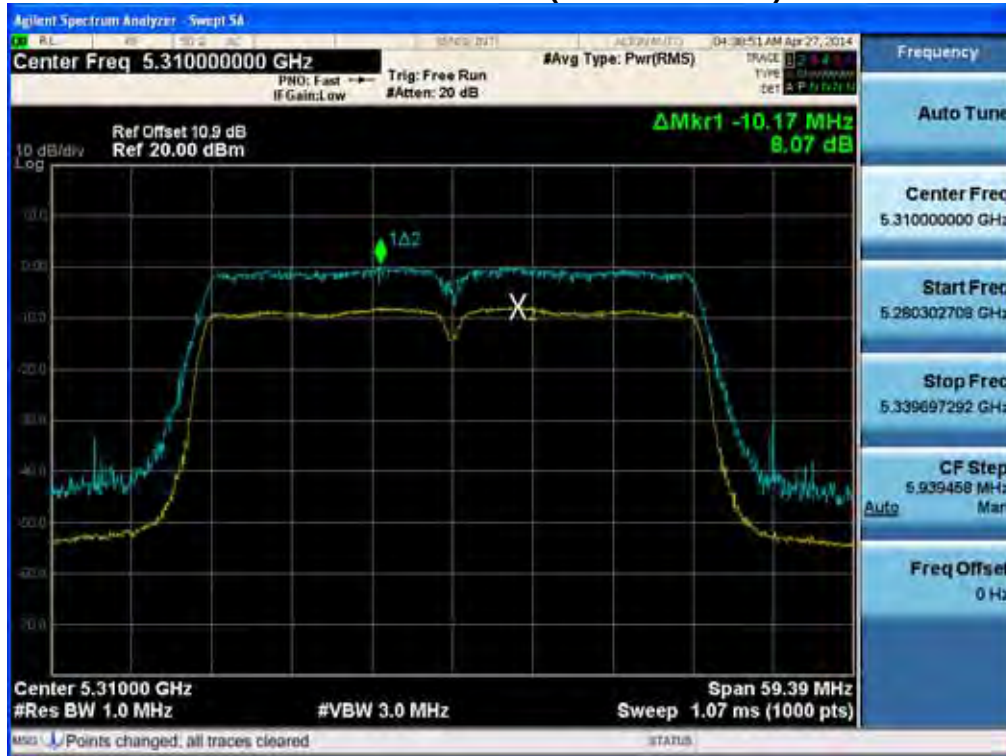
### Peak Excursion Ratio (802.11n-CH 142)



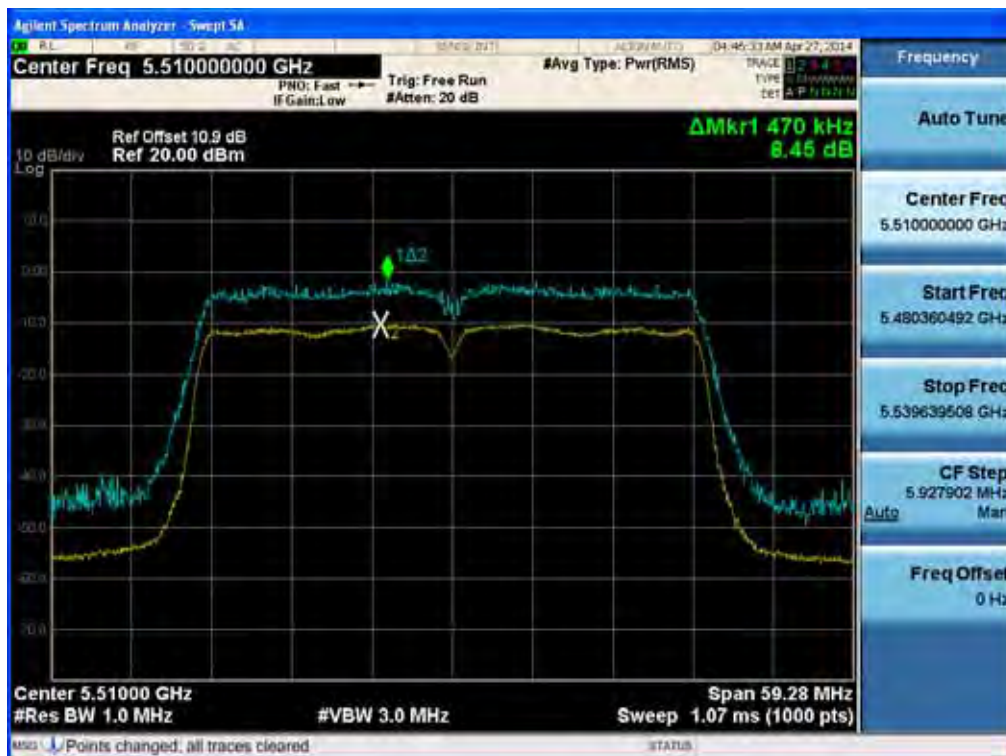
### Peak Excursion Ratio (802.11ac-CH 54)



### Peak Excursion Ratio (802.11ac-CH 62)



### Peak Excursion Ratio (802.11ac-CH 102)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

### Peak Excursion Ratio (802.11ac-CH 110)

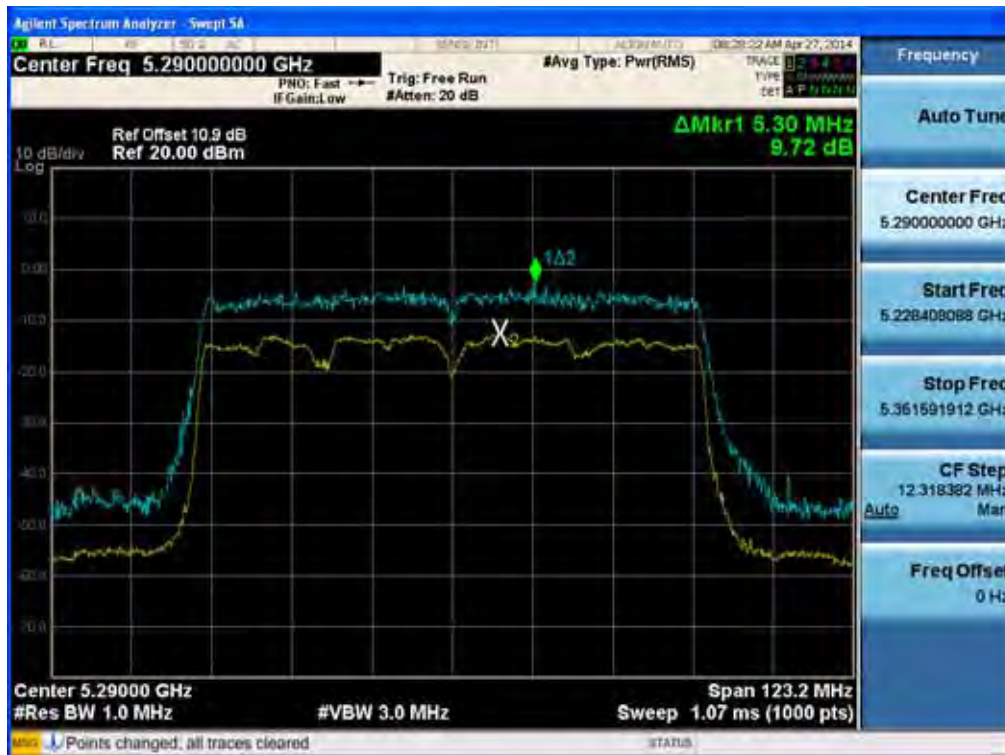


### Peak Excursion Ratio (802.11ac-CH 142)

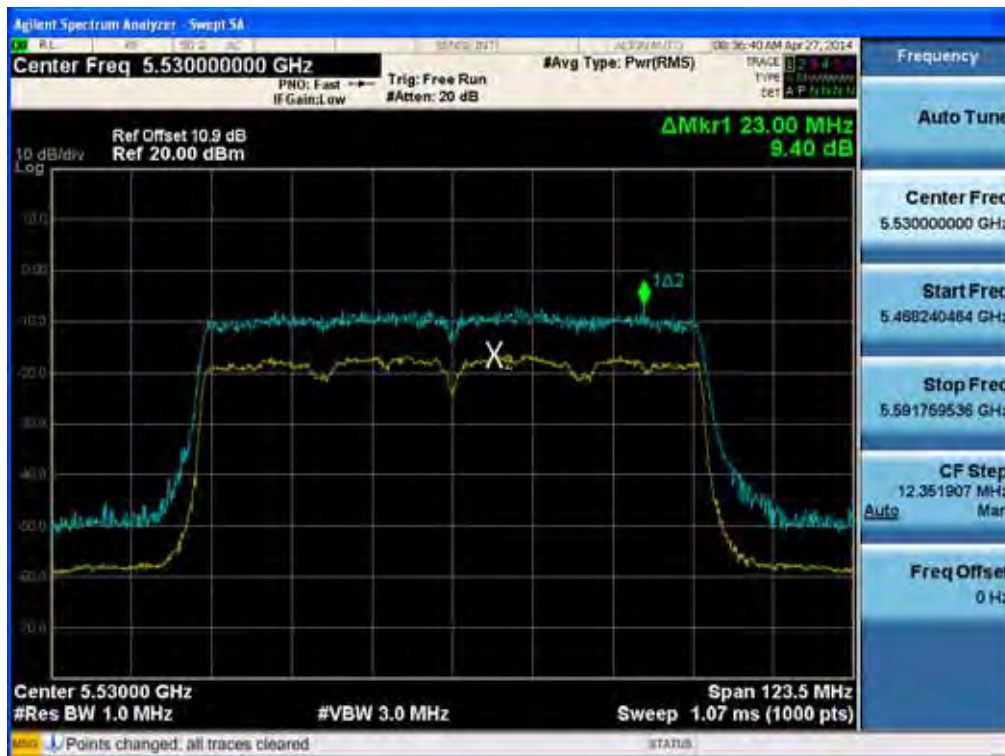




### Peak Excursion Ratio (802.11ac-CH 58)

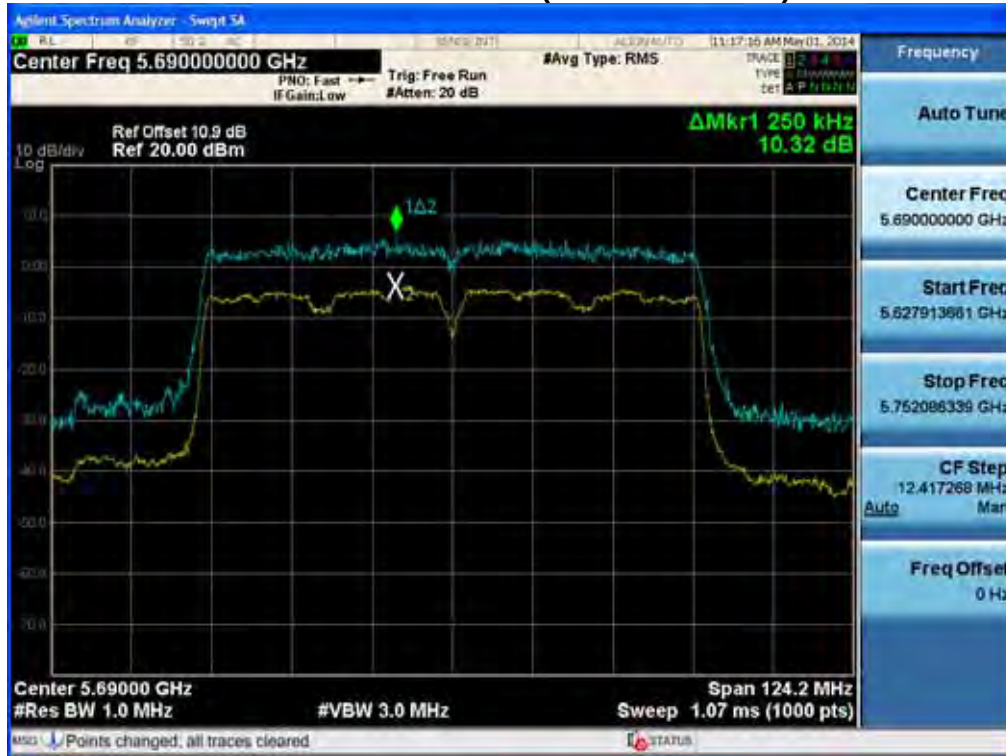


### Peak Excursion Ratio (802.11ac-CH 106)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

## Peak Excursion Ratio (802.11ac-CH 138)



|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

## 8.7 FREQUENCY STABILITY.

The EUT was placed inside an environmental chamber as the temperature in the chamber was varied between -30 °C and 50 °C. The temperature was incremented by 10 °C intervals and the unit was allowed to stabilize at each temperature before each measurement. The center frequency of the transmitting channel was evaluated at each temperature and the frequency deviation from the channel's center frequency was recorded.

### Service Port

#### 20 MHz BW

|                      |                  |
|----------------------|------------------|
| OPERATING BAND:      | UNII Band 2A     |
| OPERATING FREQUENCY: | 5,260,000,000 Hz |
| CHANNEL:             | 52               |
| REFERENCE VOLTAGE:   | 220 VAC          |

| Voltage (%)    | Power (VAC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|----------------|-------------|------------|-----------------|-----------------------|
| 100            | 220         | +20(Ref)   | 5 259 911       | -89.0                 |
| 100            |             | -30        | 5 259 983       | -17.0                 |
| 100            |             | -20        | 5 259 981       | -19.0                 |
| 100            |             | -10        | 5 259 965       | -35.0                 |
| 100            |             | 0          | 5 259 958       | -42.0                 |
| 100            |             | +10        | 5 259 941       | -59.0                 |
| 100            |             | +30        | 5 259 921       | -79.0                 |
| 100            |             | +40        | 5 259 933       | -67.0                 |
| 100            |             | +50        | 5 259 945       | -55.0                 |
| 115            | 253         | +20        | 5 259 975       | -25.0                 |
| Batt. Endpoint | 187         | +20        | 5 259 986       | -14.0                 |

### Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.



|                      |                         |
|----------------------|-------------------------|
| OPERATING BAND:      | <u>UNII Band 2C</u>     |
| OPERATING FREQUENCY: | <u>5,500,000,000 Hz</u> |
| CHANNEL:             | <u>100</u>              |
| REFERENCE VOLTAGE:   | <u>220 VAC</u>          |

| Voltage<br>(%) | Power<br>(VAC) | Temp.<br>(°C) | Frequency<br>(kHz) | Frequency<br>Error (kHz) |
|----------------|----------------|---------------|--------------------|--------------------------|
| 100            | 220            | +20(Ref)      | 5 499 903          | -97.0                    |
| 100            |                | -30           | 5 499 964          | -36.0                    |
| 100            |                | -20           | 5 499 951          | -49.0                    |
| 100            |                | -10           | 5 499 949          | -51.0                    |
| 100            |                | 0             | 5 499 956          | -44.0                    |
| 100            |                | +10           | 5 499 943          | -57.0                    |
| 100            |                | +30           | 5 499 925          | -75.0                    |
| 100            |                | +40           | 5 499 922          | -78.0                    |
| 100            |                | +50           | 5 499 919          | -81.0                    |
| 115            | 253            | +20           | 5 499 962          | -38.0                    |
| Batt. Endpoint | 187            | +20           | 5 499 979          | -21.0                    |

**Note:**

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

#### 40 MHz BW

|                      |                  |
|----------------------|------------------|
| OPERATING BAND:      | UNII Band 2A     |
| OPERATING FREQUENCY: | 5,270,000,000 Hz |
| CHANNEL:             | 54               |
| REFERENCE VOLTAGE:   | 220 VAC          |

| Voltage (%)    | Power (VAC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|----------------|-------------|------------|-----------------|-----------------------|
| 100            | 220         | +20(Ref)   | 5 269 963       | -37.0                 |
| 100            |             | -30        | 5 269 971       | -29.0                 |
| 100            |             | -20        | 5 269 973       | -27.0                 |
| 100            |             | -10        | 5 269 965       | -35.0                 |
| 100            |             | 0          | 5 269 968       | -32.0                 |
| 100            |             | +10        | 5 269 962       | -38.0                 |
| 100            |             | +30        | 5 269 939       | -61.0                 |
| 100            |             | +40        | 5 269 923       | -77.0                 |
| 100            |             | +50        | 5 269 918       | -82.0                 |
| 115            | 253         | +20        | 5 269 974       | -26.0                 |
| Batt. Endpoint | 187         | +20        | 5 269 985       | -15.0                 |

#### Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

|                      |                  |
|----------------------|------------------|
| OPERATING BAND:      | UNII Band 2C     |
| OPERATING FREQUENCY: | 5,510,000,000 Hz |
| CHANNEL:             | 102              |
| REFERENCE VOLTAGE:   | 220 VAC          |

| Voltage (%)    | Power (VAC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|----------------|-------------|------------|-----------------|-----------------------|
| 100            | 220         | +20(Ref)   | 5 509 957       | -43.0                 |
| 100            |             | -30        | 5 509 975       | -25.0                 |
| 100            |             | -20        | 5 509 978       | -22.0                 |
| 100            |             | -10        | 5 509 971       | -29.0                 |
| 100            |             | 0          | 5 509 969       | -31.0                 |
| 100            |             | +10        | 5 509 965       | -35.0                 |
| 100            |             | +30        | 5 509 941       | -59.0                 |
| 100            |             | +40        | 5 509 925       | -75.0                 |
| 100            |             | +50        | 5 509 907       | -93.0                 |
| 115            | 253         | +20        | 5 509 972       | -28.0                 |
| Batt. Endpoint | 187         | +20        | 5 509 981       | -19.0                 |

**Note:**

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.



# 80 MHz BW

|                      |                  |
|----------------------|------------------|
| OPERATING BAND:      | UNII Band 2A     |
| OPERATING FREQUENCY: | 5,290,000,000 Hz |
| CHANNEL:             | 52               |
| REFERENCE VOLTAGE:   | 220 VAC          |

| Voltage (%)    | Power (VAC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|----------------|-------------|------------|-----------------|-----------------------|
| 100            | 220         | +20(Ref)   | 5 289 931       | -69.0                 |
| 100            |             | -30        | 5 289 963       | -37.0                 |
| 100            |             | -20        | 5 289 971       | -29.0                 |
| 100            |             | -10        | 5 289 959       | -41.0                 |
| 100            |             | 0          | 5 289 948       | -52.0                 |
| 100            |             | +10        | 5 289 932       | -68.0                 |
| 100            |             | +30        | 5 289 934       | -66.0                 |
| 100            |             | +40        | 5 289 927       | -73.0                 |
| 100            |             | +50        | 5 289 905       | -95.0                 |
| 115            | 253         | +20        | 5 289 963       | -37.0                 |
| Batt. Endpoint | 187         | +20        | 5 289 978       | -22.0                 |

## Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

|                      |                         |
|----------------------|-------------------------|
| OPERATING BAND:      | <u>UNII Band 2C</u>     |
| OPERATING FREQUENCY: | <u>5,530,000,000 Hz</u> |
| CHANNEL:             | <u>100</u>              |
| REFERENCE VOLTAGE:   | <u>220 VAC</u>          |

| Voltage (%)    | Power (VAC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|----------------|-------------|------------|-----------------|-----------------------|
| 100            | 220         | +20(Ref)   | 5 529 947       | -53.0                 |
| 100            |             | -30        | 5 529 981       | -19.0                 |
| 100            |             | -20        | 5 529 984       | -16.0                 |
| 100            |             | -10        | 5 529 978       | -22.0                 |
| 100            |             | 0          | 5 529 975       | -25.0                 |
| 100            |             | +10        | 5 529 967       | -33.0                 |
| 100            |             | +30        | 5 529 947       | -53.0                 |
| 100            |             | +40        | 5 529 934       | -66.0                 |
| 100            |             | +50        | 5 529 903       | -97.0                 |
| 115            | 253         | +20        | 5 529 972       | -28.0                 |
| Batt. Endpoint | 187         | +20        | 5 529 982       | -18.0                 |

**Note:**

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

## Monitoring Port

### 20 MHz BW

|                      |                  |
|----------------------|------------------|
| OPERATING BAND:      | UNII Band 2A     |
| OPERATING FREQUENCY: | 5,260,000,000 Hz |
| CHANNEL:             | 52               |
| REFERENCE VOLTAGE:   | 220 VAC          |

| Voltage (%)    | Power (VAC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|----------------|-------------|------------|-----------------|-----------------------|
| 100            | 220         | +20(Ref)   | 5 179 929       | -71.0                 |
| 100            |             | -30        | 5 179 942       | -58.0                 |
| 100            |             | -20        | 5 179 951       | -49.0                 |
| 100            |             | -10        | 5 179 966       | -34.0                 |
| 100            |             | 0          | 5 179 976       | -24.0                 |
| 100            |             | +10        | 5 179 971       | -29.0                 |
| 100            |             | +30        | 5 179 932       | -68.0                 |
| 100            |             | +40        | 5 179 923       | -77.0                 |
| 100            |             | +50        | 5 179 919       | -81.0                 |
| 115            | 253         | +20        | 5 179 965       | -35.0                 |
| Batt. Endpoint | 187         | +20        | 5 179 979       | -21.0                 |

### Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.



|                      |                         |
|----------------------|-------------------------|
| OPERATING BAND:      | <u>UNII Band 2C</u>     |
| OPERATING FREQUENCY: | <u>5,500,000,000 Hz</u> |
| CHANNEL:             | <u>100</u>              |
| REFERENCE VOLTAGE:   | <u>220 VAC</u>          |

| Voltage<br>(%) | Power<br>(VAC) | Temp.<br>(°C) | Frequency<br>(kHz) | Frequency<br>Error (kHz) |
|----------------|----------------|---------------|--------------------|--------------------------|
| 100            | 220            | +20(Ref)      | 5 499 905          | -95.0                    |
| 100            |                | -30           | 5 499 966          | -34.0                    |
| 100            |                | -20           | 5 499 954          | -46.0                    |
| 100            |                | -10           | 5 499 953          | -47.0                    |
| 100            |                | 0             | 5 499 955          | -45.0                    |
| 100            |                | +10           | 5 499 944          | -56.0                    |
| 100            |                | +30           | 5 499 927          | -73.2                    |
| 100            |                | +40           | 5 499 924          | -76.0                    |
| 100            |                | +50           | 5 499 923          | -77.0                    |
| 115            | 253            | +20           | 5 499 965          | -35.0                    |
| Batt. Endpoint | 187            | +20           | 5 499 980          | -20.0                    |

**Note:**

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

## 8.8 RADIATED MEASUREMENT.

### 8.8.1 RADIATED SPURIOUS EMISSIONS.

Test Requirements and limit, §15.205, §15.209, §15.407

| Frequency (MHz) | Field Strength (uV/m) | Measurement Distance (m) |
|-----------------|-----------------------|--------------------------|
| 0.009 – 0.490   | 2400/F(kHz)           | 300                      |
| 0.490 – 1.705   | 24000/F(kHz)          | 30                       |
| 1.705 – 30      | 30                    | 30                       |
| 30-88           | 100                   | 3                        |
| 88-216          | 150                   | 3                        |
| 216-960         | 200                   | 3                        |
| Above 960       | 500                   | 3                        |

#### ■ §15.407, KDB 789033

All harmonics that do not lie in a restricted band are subject to a peak limit of -27 dBm/MHz. At a distance of 3 meters the field strength limit in dBµV/m can be determined by adding a “conversion” factor of 95.2 dB to the EIRP limit of -27 dBm/MHz to obtain the limit for out of band spurious emissions of 68.2 dBµV/m.

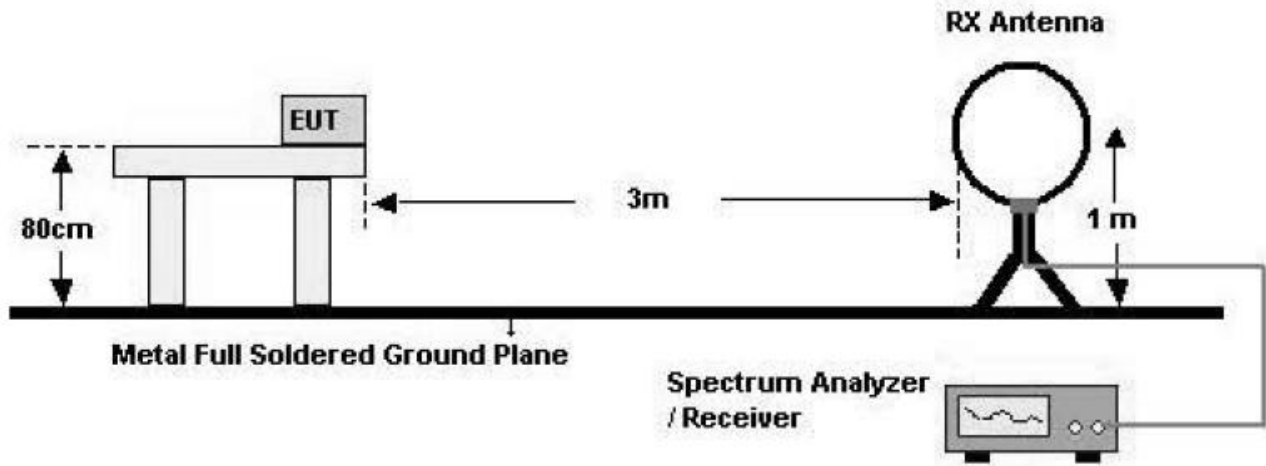
#### ■ Test case

|            |      |                           |
|------------|------|---------------------------|
| Monitoring | MIMO | Ant 0 & 1 & 2(Worst Case) |
| Service    | SISO | Ant 0                     |
|            |      | Ant 1                     |
|            |      | Ant 2                     |
|            | MIMO | Ant 0 & 1                 |
|            |      | Ant 0 & 1 & 2(Worst Case) |

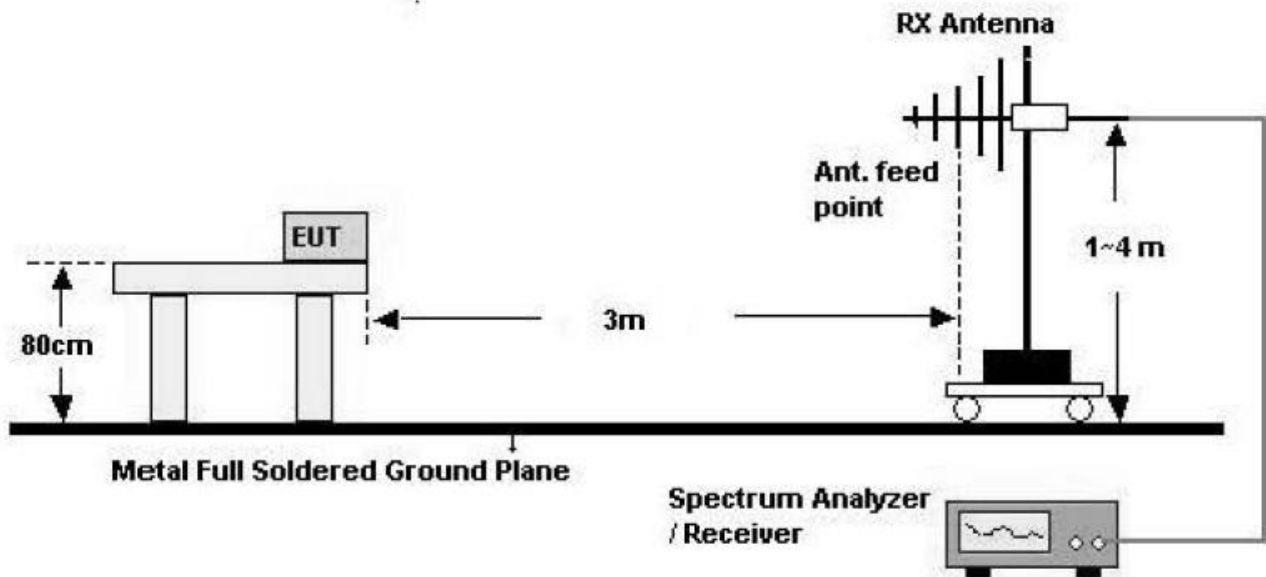
Note : We have done all test case. We attached the results of only worst case.

## Test Configuration

Below 30 MHz

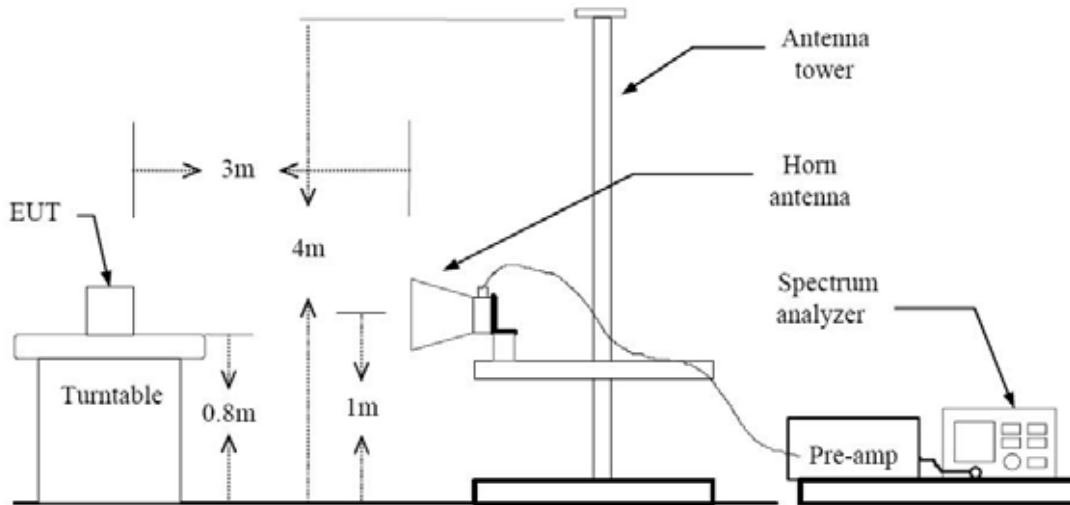


30 MHz - 1 GHz





## Above 1 GHz



### TEST PROCEDURE USED

ANSI C63.4(2003)

Method H)5) in KDB 789033, issued 06/06/2014 (Peak)

Method H)6)d) in KDB 789033, issued 06/06/2014 (Average)

#### . Spectrum setting:

- Peak.

1. RBW = 1 MHz

2. VBW  $\geq$  3 MHz

3. Detector = Peak

4. Sweep Time = auto

5. Trace mode = max hold

6. Allow sweeps to continue until the trace stabilizes.

7. Note that if the transmission is not continuous, the time required for the trace to stabilize will increase by a factor of approximately  $1/x$ , where  $x$  is the duty cycle.

- Average ( Method VB :Averaging using reduced video bandwidth)

1. RBW = 1 MHz

2. VBW

2.1. If the EUT is configured to transmit with duty cycle  $\geq$  98 percent, set  $VBW \leq RBW/100$ (i.e., 10 kHz) but not less than 10 Hz.

2.2. If the EUT duty cycle is  $<$  98 percent, set  $VBW \geq 1/T$ , where  $T$  is the minimum transmission duration.

3. The analyzer is set to linear detector mode.

4. Detector = Peak.

| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

5. Sweep time = auto.
6. Trace mode = max hold.
7. Allow max hold to run for at least 50 traces if the transmitted signal is continuous or has at least 98 percent duty cycle. For lower duty cycles, increase the minimum number of traces by a factor of  $1/x$ , where  $x$  is the duty cycle.

**Note :**

1. We used the case 2 for 802.11a/n\_20/n\_40/ac\_20/ac\_40/ac\_80 to perform the average field strength measurements for RSE and radiated band edge test.
2. The actual setting value of VBW for 802.11a/n\_20/n\_40/ac\_20/ac\_40/ac\_80.

**Monitoring**

| Mode | Worst Data rate (Mbps) | T <sub>on</sub> (ms) | T <sub>total</sub> (ms) | Duty Cycle (%) | VBW(1/T) (Hz) | The actual setting value of VBW (Hz) |
|------|------------------------|----------------------|-------------------------|----------------|---------------|--------------------------------------|
| a    | 6                      | 2.060                | 2.170                   | 94.93          | 485           | 1000                                 |

**Service**

| Mode  | Worst Data rate (Mbps) | T <sub>on</sub> (ms) | T <sub>total</sub> (ms) | Duty Cycle (%) | VBW(1/T) (Hz) | The actual setting value of VBW (Hz) |
|-------|------------------------|----------------------|-------------------------|----------------|---------------|--------------------------------------|
| a     | 6                      | 2.060                | 2.170                   | 94.93          | 485           | 1000                                 |
| n_20  | 6.5                    | 1.920                | 2.015                   | 95.29          | 521           | 1000                                 |
| n_40  | 13.5                   | 0.944                | 1.042                   | 90.60          | 1059          | 3000                                 |
| ac_20 | 6.5                    | 1.920                | 2.015                   | 95.29          | 521           | 1000                                 |
| ac_40 | 13.5                   | 0.944                | 1.042                   | 90.60          | 1059          | 3000                                 |
| ac_80 | 29.3                   | 0.459                | 0.488                   | 94.06          | 2179          | 3000                                 |

## TEST RESULTS

9 kHz – 30MHz

Operation Mode: Normal Mode

| Frequency               | Reading    | Ant. factor | Cable loss | Ant. POL | Total        | Limit        | Margin |
|-------------------------|------------|-------------|------------|----------|--------------|--------------|--------|
| MHz                     | dB $\mu$ V | dB /m       | dB         | (H/V)    | dB $\mu$ V/m | dB $\mu$ V/m | dB     |
| No Critical peaks found |            |             |            |          |              |              |        |

### Notes:

1. Measuring frequencies from 9 kHz to the 30MHz.
2. The reading of emissions are attenuated more than 20 dB below the permissible limits or the field strength is too small to be measured.
3. Distance extrapolation factor = 40 log (specific distance / test distance) (dB)
4. Limit line = specific Limits (dB $\mu$ V) + Distance extrapolation factor
5. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.



## TEST RESULTS

Below 1 GHz

Operation Mode: Normal Mode

| Frequency               | Reading    | Ant. factor | Cable loss | Ant. POL | Total        | Limit        | Margin |
|-------------------------|------------|-------------|------------|----------|--------------|--------------|--------|
| MHz                     | dB $\mu$ V | dB /m       | dB         | (H/V)    | dB $\mu$ V/m | dB $\mu$ V/m | dB     |
| No Critical peaks found |            |             |            |          |              |              |        |

### Notes:

1. Measuring frequencies from 30 MHz to the 1 GHz.
2. Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Quasi peak detector mode.
3. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

## Above 1 GHz

### Monitoring MIMO(Ant.0 & 1 & 2)

|                     |          |
|---------------------|----------|
| Band :              | UNII 2A  |
| Operation Mode:     | 802.11 a |
| Transfer Rate:      | 6 Mbps   |
| Operating Frequency | 5260 MHz |
| Channel No.         | 52 Ch    |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 10520              | 65.65           | -6.52                 | V                 | 59.13             | 68.20             | 9.07           | PK     |
| 15780              | 63.12           | -6.67                 | V                 | 56.45             | 73.98             | 17.53          | PK     |
| 15780              | 49.49           | -6.67                 | V                 | 42.82             | 53.98             | 11.16          | AV     |
| 10520              | 63.03           | -6.52                 | H                 | 56.51             | 68.20             | 11.69          | PK     |
| 15780              | 63.14           | -6.67                 | H                 | 56.47             | 73.98             | 17.51          | PK     |
| 15780              | 49.36           | -6.67                 | H                 | 42.69             | 53.98             | 11.29          | AV     |

#### Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

|                     |          |
|---------------------|----------|
| Band :              | UNII 2A  |
| Operation Mode:     | 802.11 a |
| Transfer Rate:      | 6 Mbps   |
| Operating Frequency | 5300 MHz |
| Channel No.         | 60 Ch    |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 10600              | 62.95           | -6.72                 | V                 | 56.23             | 73.98             | 17.75          | PK     |
| 10600              | 48.68           | -6.72                 | V                 | 41.96             | 53.98             | 12.02          | AV     |
| 15900              | 62.89           | -7.00                 | V                 | 55.89             | 73.98             | 18.09          | PK     |
| 15900              | 49.29           | -7.00                 | V                 | 42.29             | 53.98             | 11.69          | AV     |
| 10600              | 62.17           | -6.72                 | H                 | 55.45             | 73.98             | 18.53          | PK     |
| 10600              | 48.27           | -6.72                 | H                 | 41.55             | 53.98             | 12.43          | AV     |
| 15900              | 62.65           | -7.00                 | H                 | 55.65             | 73.98             | 18.33          | PK     |
| 15900              | 49.12           | -7.00                 | H                 | 42.12             | 53.98             | 11.86          | AV     |

#### Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.



|                     |          |
|---------------------|----------|
| Band :              | UNII 2A  |
| Operation Mode:     | 802.11 a |
| Transfer Rate:      | 6 Mbps   |
| Operating Frequency | 5320 MHz |
| Channel No.         | 64 Ch    |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 10640              | 63.06           | -6.43                 | V                 | 56.63             | 73.98             | 17.35          | PK     |
| 10640              | 48.71           | -6.43                 | V                 | 42.28             | 53.98             | 11.70          | AV     |
| 15960              | 62.98           | -6.93                 | V                 | 56.05             | 73.98             | 17.93          | PK     |
| 15960              | 49.35           | -6.93                 | V                 | 42.42             | 53.98             | 11.56          | AV     |
| 10640              | 62.39           | -6.43                 | H                 | 55.96             | 73.98             | 18.02          | PK     |
| 10640              | 48.34           | -6.43                 | H                 | 41.91             | 53.98             | 12.07          | AV     |
| 15960              | 62.95           | -6.93                 | H                 | 56.02             | 73.98             | 17.96          | PK     |
| 15960              | 49.27           | -6.93                 | H                 | 42.34             | 53.98             | 11.64          | AV     |

#### Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

|                     |          |
|---------------------|----------|
| Band :              | UNII 2C  |
| Operation Mode:     | 802.11 a |
| Transfer Rate:      | 6 Mbps   |
| Operating Frequency | 5500 MHz |
| Channel No.         | 100 Ch   |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 11000              | 62.47           | -5.06                 | V                 | 57.41             | 73.98             | 16.57          | PK     |
| 11000              | 48.74           | -5.06                 | V                 | 43.68             | 53.98             | 10.30          | AV     |
| 16500              | 61.99           | -4.35                 | V                 | 57.64             | 68.20             | 10.56          | PK     |
| 11000              | 63.18           | -5.06                 | H                 | 58.12             | 73.98             | 15.86          | PK     |
| 11000              | 48.33           | -5.06                 | H                 | 43.27             | 53.98             | 10.71          | AV     |
| 16500              | 62.05           | -4.35                 | H                 | 57.70             | 68.20             | 10.50          | PK     |

#### Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

|                     |          |
|---------------------|----------|
| Band :              | UNII 2C  |
| Operation Mode:     | 802.11 a |
| Transfer Rate:      | 6 Mbps   |
| Operating Frequency | 5580 MHz |
| Channel No.         | 116 Ch   |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 11160              | 62.68           | -5.55                 | V                 | 57.13             | 73.98             | 16.85          | PK     |
| 11160              | 48.26           | -5.55                 | V                 | 42.71             | 53.98             | 11.27          | AV     |
| 16740              | 64.08           | -3.73                 | V                 | 60.35             | 68.20             | 7.85           | PK     |
| 11160              | 61.90           | -5.55                 | H                 | 56.35             | 73.98             | 17.63          | PK     |
| 11160              | 48.17           | -5.55                 | H                 | 42.62             | 53.98             | 11.36          | AV     |
| 16740              | 63.89           | -3.73                 | H                 | 60.16             | 68.20             | 8.04           | PK     |

#### Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.



|                     |          |
|---------------------|----------|
| Band :              | UNII 2C  |
| Operation Mode:     | 802.11 a |
| Transfer Rate:      | 6 Mbps   |
| Operating Frequency | 5720 MHz |
| Channel No.         | 144 Ch   |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 11440              | 62.58           | -6.08                 | V                 | 56.50             | 73.98             | 17.48          | PK     |
| 11440              | 48.61           | -6.08                 | V                 | 42.53             | 53.98             | 11.45          | AV     |
| 17160              | 63.84           | -0.85                 | V                 | 62.99             | 68.20             | 5.21           | PK     |
| 11440              | 62.38           | -6.08                 | H                 | 56.30             | 73.98             | 17.68          | PK     |
| 11440              | 48.28           | -6.08                 | H                 | 42.20             | 53.98             | 11.78          | AV     |
| 17160              | 63.62           | -0.85                 | H                 | 62.77             | 68.20             | 5.43           | PK     |

#### Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

## Service MIMO(Ant.0 & 1 & 2)

|                     |          |
|---------------------|----------|
| Band :              | UNII 2A  |
| Operation Mode:     | 802.11 a |
| Transfer Rate:      | 6 Mbps   |
| Operating Frequency | 5260 MHz |
| Channel No.         | 52 Ch    |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 10520              | 63.51           | -6.52                 | V                 | 56.99             | 68.20             | 11.21          | PK     |
| 15780              | 63.74           | -6.67                 | V                 | 57.07             | 73.98             | 16.91          | PK     |
| 15780              | 49.50           | -6.67                 | V                 | 42.83             | 53.98             | 11.15          | AV     |
| 10520              | 63.28           | -6.52                 | H                 | 56.76             | 68.20             | 11.44          | PK     |
| 15780              | 63.52           | -6.67                 | H                 | 56.85             | 73.98             | 17.13          | PK     |
| 15780              | 49.24           | -6.67                 | H                 | 42.57             | 53.98             | 11.41          | AV     |

### Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

|                     |          |
|---------------------|----------|
| Band :              | UNII 2A  |
| Operation Mode:     | 802.11 a |
| Transfer Rate:      | 6 Mbps   |
| Operating Frequency | 5300 MHz |
| Channel No.         | 60 Ch    |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 10600              | 62.91           | -6.72                 | V                 | 56.19             | 73.98             | 17.79          | PK     |
| 10600              | 48.61           | -6.72                 | V                 | 41.89             | 53.98             | 12.09          | AV     |
| 15900              | 62.70           | -7.00                 | V                 | 55.70             | 73.98             | 18.28          | PK     |
| 15900              | 49.36           | -7.00                 | V                 | 42.36             | 53.98             | 11.62          | AV     |
| 10600              | 62.82           | -6.72                 | H                 | 56.10             | 73.98             | 17.88          | PK     |
| 10600              | 48.39           | -6.72                 | H                 | 41.67             | 53.98             | 12.31          | AV     |
| 15900              | 62.62           | -7.00                 | H                 | 55.62             | 73.98             | 18.36          | PK     |
| 15900              | 49.21           | -7.00                 | H                 | 42.21             | 53.98             | 11.77          | AV     |

#### Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.



|                     |          |
|---------------------|----------|
| Band :              | UNII 2A  |
| Operation Mode:     | 802.11 a |
| Transfer Rate:      | 6 Mbps   |
| Operating Frequency | 5320 MHz |
| Channel No.         | 64 Ch    |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 10640              | 62.68           | -6.43                 | V                 | 56.25             | 73.98             | 17.73          | PK     |
| 10640              | 48.28           | -6.43                 | V                 | 41.85             | 53.98             | 12.13          | AV     |
| 15960              | 62.42           | -6.93                 | V                 | 55.49             | 73.98             | 18.49          | PK     |
| 15960              | 49.21           | -6.93                 | V                 | 42.28             | 53.98             | 11.70          | AV     |
| 10640              | 62.54           | -6.43                 | H                 | 56.11             | 73.98             | 17.87          | PK     |
| 10640              | 48.13           | -6.43                 | H                 | 41.70             | 53.98             | 12.28          | AV     |
| 15960              | 62.30           | -6.93                 | H                 | 55.37             | 73.98             | 18.61          | PK     |
| 15960              | 49.06           | -6.93                 | H                 | 42.13             | 53.98             | 11.85          | AV     |

#### Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

|                     |                    |
|---------------------|--------------------|
| Band :              | UNII 2A            |
| Operation Mode:     | 802.11 n_20 MHz BW |
| Transfer Rate:      | 6.5 Mbps           |
| Operating Frequency | 5260 MHz           |
| Channel No.         | 52 Ch              |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 10520              | 69.94           | -6.52                 | V                 | 63.42             | 68.20             | 4.78           | PK     |
| 15780              | 62.97           | -6.67                 | V                 | 56.30             | 73.98             | 17.68          | PK     |
| 15780              | 49.22           | -6.67                 | V                 | 42.55             | 53.98             | 11.43          | AV     |
| 10520              | 69.86           | -6.52                 | H                 | 63.34             | 68.20             | 4.86           | PK     |
| 15780              | 62.88           | -6.67                 | H                 | 56.21             | 73.98             | 17.77          | PK     |
| 15780              | 49.17           | -6.67                 | H                 | 42.50             | 53.98             | 11.48          | AV     |

#### Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n\_20 MHz BW. Worst case is 6.5 Mbps in 802.11n\_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

|                     |                    |
|---------------------|--------------------|
| Band :              | UNII 2A            |
| Operation Mode:     | 802.11 n_20 MHz BW |
| Transfer Rate:      | 6.5 Mbps           |
| Operating Frequency | 5300 MHz           |
| Channel No.         | 60 Ch              |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 10600              | 62.45           | -6.72                 | V                 | 55.73             | 73.98             | 18.25          | PK     |
| 10600              | 48.38           | -6.72                 | V                 | 41.66             | 53.98             | 12.32          | AV     |
| 15900              | 62.56           | -7.00                 | V                 | 55.56             | 73.98             | 18.42          | PK     |
| 15900              | 49.18           | -7.00                 | V                 | 42.18             | 53.98             | 11.80          | AV     |
| 10600              | 62.31           | -6.72                 | H                 | 55.59             | 73.98             | 18.39          | PK     |
| 10600              | 48.26           | -6.72                 | H                 | 41.54             | 53.98             | 12.44          | AV     |
| 15900              | 62.48           | -7.00                 | H                 | 55.48             | 73.98             | 18.50          | PK     |
| 15900              | 49.02           | -7.00                 | H                 | 42.02             | 53.98             | 11.96          | AV     |

#### Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n\_20 MHz BW. Worst case is 6.5 Mbps in 802.11n\_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.



|                     |                    |
|---------------------|--------------------|
| Band :              | UNII 2A            |
| Operation Mode:     | 802.11 n_20 MHz BW |
| Transfer Rate:      | 6.5 Mbps           |
| Operating Frequency | 5320 MHz           |
| Channel No.         | 64 Ch              |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 10640              | 62.86           | -6.43                 | V                 | 56.43             | 73.98             | 17.55          | PK     |
| 10640              | 48.61           | -6.43                 | V                 | 42.18             | 53.98             | 11.80          | AV     |
| 15960              | 62.89           | -6.93                 | V                 | 55.96             | 73.98             | 18.02          | PK     |
| 15960              | 49.27           | -6.93                 | V                 | 42.34             | 53.98             | 11.64          | AV     |
| 10640              | 62.79           | -6.43                 | H                 | 56.36             | 73.98             | 17.62          | PK     |
| 10640              | 48.39           | -6.43                 | H                 | 41.96             | 53.98             | 12.02          | AV     |
| 15960              | 62.58           | -6.93                 | H                 | 55.65             | 73.98             | 18.33          | PK     |
| 15960              | 49.21           | -6.93                 | H                 | 42.28             | 53.98             | 11.70          | AV     |

#### Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n\_20 MHz BW. Worst case is 6.5 Mbps in 802.11n\_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

|                     |                     |
|---------------------|---------------------|
| Band :              | UNII 2A             |
| Operation Mode:     | 802.11 ac_20 MHz BW |
| Transfer Rate:      | 6.5 Mbps            |
| Operating Frequency | 5260 MHz            |
| Channel No.         | 52 Ch               |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 10520              | 71.21           | -6.52                 | V                 | 64.69             | 68.20             | 3.51           | PK     |
| 15780              | 63.28           | -6.67                 | V                 | 56.61             | 73.98             | 17.37          | PK     |
| 15780              | 49.29           | -6.67                 | V                 | 42.62             | 53.98             | 11.36          | AV     |
| 10520              | 69.72           | -6.52                 | H                 | 63.20             | 68.20             | 5.00           | PK     |
| 15780              | 63.14           | -6.67                 | H                 | 56.47             | 73.98             | 17.51          | PK     |
| 15780              | 49.20           | -6.67                 | H                 | 42.53             | 53.98             | 11.45          | AV     |

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11ac\_20 MHz BW. Worst case is 6.5 Mbps in 802.11ac\_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

|                     |                     |
|---------------------|---------------------|
| Band :              | UNII 2A             |
| Operation Mode:     | 802.11 ac_20 MHz BW |
| Transfer Rate:      | 6.5 Mbps            |
| Operating Frequency | 5300 MHz            |
| Channel No.         | 60 Ch               |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 10600              | 62.38           | -6.72                 | V                 | 55.66             | 73.98             | 18.32          | PK     |
| 10600              | 48.24           | -6.72                 | V                 | 41.52             | 53.98             | 12.46          | AV     |
| 15900              | 63.14           | -7.00                 | V                 | 56.14             | 73.98             | 17.84          | PK     |
| 15900              | 49.23           | -7.00                 | V                 | 42.23             | 53.98             | 11.75          | AV     |
| 10600              | 62.37           | -6.72                 | H                 | 55.65             | 73.98             | 18.33          | PK     |
| 10600              | 48.19           | -6.72                 | H                 | 41.47             | 53.98             | 12.51          | AV     |
| 15900              | 63.05           | -7.00                 | H                 | 56.05             | 73.98             | 17.93          | PK     |
| 15900              | 48.79           | -7.00                 | H                 | 41.79             | 53.98             | 12.19          | AV     |

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11ac\_20 MHz BW. Worst case is 6.5 Mbps in 802.11ac\_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.



|                     |                     |
|---------------------|---------------------|
| Band :              | UNII 2A             |
| Operation Mode:     | 802.11 ac_20 MHz BW |
| Transfer Rate:      | 6.5 Mbps            |
| Operating Frequency | 5320 MHz            |
| Channel No.         | 64 Ch               |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 10640              | 62.22           | -6.43                 | V                 | 55.79             | 73.98             | 18.19          | PK     |
| 10640              | 48.19           | -6.43                 | V                 | 41.76             | 53.98             | 12.22          | AV     |
| 15960              | 63.21           | -6.93                 | V                 | 56.28             | 73.98             | 17.70          | PK     |
| 15960              | 49.17           | -6.93                 | V                 | 42.24             | 53.98             | 11.74          | AV     |
| 10640              | 62.15           | -6.43                 | H                 | 55.72             | 73.98             | 18.26          | PK     |
| 10640              | 48.23           | -6.43                 | H                 | 41.80             | 53.98             | 12.18          | AV     |
| 15960              | 63.17           | -6.93                 | H                 | 56.24             | 73.98             | 17.74          | PK     |
| 15960              | 49.04           | -6.93                 | H                 | 42.11             | 53.98             | 11.87          | AV     |

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11ac\_20 MHz BW. Worst case is 6.5 Mbps in 802.11ac\_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

|                     |                   |
|---------------------|-------------------|
| Band :              | UNII 2A           |
| Operation Mode:     | 802.11n_40 MHz BW |
| Transfer Rate:      | 13.5 Mbps         |
| Operating Frequency | 5270 MHz          |
| Channel No.         | 54 Ch             |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 10540              | 62.80           | -5.77                 | V                 | 57.03             | 68.20             | 11.17          | PK     |
| 15810              | 63.35           | -7.47                 | V                 | 55.88             | 73.98             | 18.10          | PK     |
| 15810              | 50.21           | -7.47                 | V                 | 42.74             | 53.98             | 11.24          | AV     |
| 10540              | 62.31           | -5.77                 | H                 | 56.54             | 68.20             | 11.66          | PK     |
| 15810              | 63.27           | -7.47                 | H                 | 55.80             | 73.98             | 18.18          | PK     |
| 15810              | 49.97           | -7.47                 | H                 | 42.50             | 53.98             | 11.48          | AV     |

#### Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n\_40 MHz BW. Worst case is 13.5 Mbps in 802.11n\_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

|                     |                   |
|---------------------|-------------------|
| Band :              | UNII 2A           |
| Operation Mode:     | 802.11n_40 MHz BW |
| Transfer Rate:      | 13.5 Mbps         |
| Operating Frequency | 5310 MHz          |
| Channel No.         | 62 Ch             |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 10620              | 62.47           | -6.36                 | V                 | 56.11             | 73.98             | 17.87          | PK     |
| 10620              | 49.31           | -6.36                 | V                 | 42.95             | 53.98             | 11.03          | AV     |
| 15930              | 63.36           | -6.77                 | V                 | 56.59             | 73.98             | 17.39          | PK     |
| 15930              | 50.31           | -6.77                 | V                 | 43.54             | 53.98             | 10.44          | AV     |
| 10620              | 62.18           | -6.36                 | H                 | 55.82             | 73.98             | 18.16          | PK     |
| 10620              | 49.27           | -6.36                 | H                 | 42.91             | 53.98             | 11.07          | AV     |
| 15930              | 63.11           | -6.77                 | H                 | 56.34             | 73.98             | 17.64          | PK     |
| 15930              | 50.09           | -6.77                 | H                 | 43.32             | 53.98             | 10.66          | AV     |

#### Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n\_40 MHz BW. Worst case is 13.5 Mbps in 802.11n\_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.



|                     |                    |
|---------------------|--------------------|
| Band :              | UNII 2A            |
| Operation Mode:     | 802.11ac_40 MHz BW |
| Transfer Rate:      | 13.5 Mbps          |
| Operating Frequency | 5270 MHz           |
| Channel No.         | 54 Ch              |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 10540              | 62.72           | -5.77                 | V                 | 56.95             | 68.20             | 11.25          | PK     |
| 15810              | 63.25           | -7.47                 | V                 | 55.78             | 73.98             | 18.20          | PK     |
| 15810              | 50.13           | -7.47                 | V                 | 42.66             | 53.98             | 11.32          | AV     |
| 10540              | 62.27           | -5.77                 | H                 | 56.50             | 68.20             | 11.70          | PK     |
| 15810              | 63.18           | -7.47                 | H                 | 55.71             | 73.98             | 18.27          | PK     |
| 15810              | 49.91           | -7.47                 | H                 | 42.44             | 53.98             | 11.54          | AV     |

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11ac\_40 MHz BW. Worst case is 13.5 Mbps in 802.11ac\_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

|                     |                    |
|---------------------|--------------------|
| Band :              | UNII 2A            |
| Operation Mode:     | 802.11ac_40 MHz BW |
| Transfer Rate:      | 13.5 Mbps          |
| Operating Frequency | 5310 MHz           |
| Channel No.         | 62 Ch              |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 10620              | 62.33           | -6.36                 | V                 | 55.97             | 73.98             | 18.01          | PK     |
| 10620              | 49.27           | -6.36                 | V                 | 42.91             | 53.98             | 11.07          | AV     |
| 15930              | 63.42           | -6.77                 | V                 | 56.65             | 73.98             | 17.33          | PK     |
| 15930              | 50.25           | -6.77                 | V                 | 43.48             | 53.98             | 10.50          | AV     |
| 10620              | 62.10           | -6.36                 | H                 | 55.74             | 73.98             | 18.24          | PK     |
| 10620              | 49.13           | -6.36                 | H                 | 42.77             | 53.98             | 11.21          | AV     |
| 15930              | 63.04           | -6.77                 | H                 | 56.27             | 73.98             | 17.71          | PK     |
| 15930              | 50.02           | -6.77                 | H                 | 43.25             | 53.98             | 10.73          | AV     |

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11ac\_40 MHz BW. Worst case is 13.5 Mbps in 802.11ac\_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

|                     |                    |
|---------------------|--------------------|
| Band :              | UNII 2A            |
| Operation Mode:     | 802.11ac_80 MHz BW |
| Transfer Rate:      | 29.3 Mbps          |
| Operating Frequency | 5290 MHz           |
| Channel No.         | 58 Ch              |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 10580              | 62.33           | -5.70                 | V                 | 56.63             | 68.20             | 11.57          | PK     |
| 15870              | 63.24           | -7.27                 | V                 | 55.97             | 73.98             | 18.01          | PK     |
| 15870              | 50.41           | -7.27                 | V                 | 43.14             | 53.98             | 10.84          | AV     |
| 10580              | 62.32           | -5.70                 | H                 | 56.62             | 68.20             | 11.58          | PK     |
| 15870              | 63.56           | -7.27                 | H                 | 56.29             | 73.98             | 17.69          | PK     |
| 15870              | 50.91           | -7.27                 | H                 | 43.64             | 53.98             | 10.34          | AV     |

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11ac\_80 MHz BW. Worst case is 29.3 Mbps in 802.11ac\_80 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.



|                     |          |
|---------------------|----------|
| Band :              | UNII 2C  |
| Operation Mode:     | 802.11 a |
| Transfer Rate:      | 6 Mbps   |
| Operating Frequency | 5500 MHz |
| Channel No.         | 100 Ch   |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 11000              | 63.20           | -5.06                 | V                 | 58.14             | 73.98             | 15.84          | PK     |
| 11000              | 48.39           | -5.06                 | V                 | 43.33             | 53.98             | 10.65          | AV     |
| 16500              | 63.75           | -4.35                 | V                 | 59.40             | 68.20             | 8.80           | PK     |
| 11000              | 63.14           | -5.06                 | H                 | 58.08             | 73.98             | 15.90          | PK     |
| 11000              | 48.21           | -5.06                 | H                 | 43.15             | 53.98             | 10.83          | AV     |
| 16500              | 63.61           | -4.35                 | H                 | 59.26             | 68.20             | 8.94           | PK     |

#### Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

|                     |          |
|---------------------|----------|
| Band :              | UNII 2C  |
| Operation Mode:     | 802.11 a |
| Transfer Rate:      | 6 Mbps   |
| Operating Frequency | 5580 MHz |
| Channel No.         | 116 Ch   |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 11160              | 64.03           | -5.55                 | V                 | 58.48             | 73.98             | 15.50          | PK     |
| 11160              | 50.68           | -5.55                 | V                 | 45.13             | 53.98             | 8.85           | AV     |
| 16740              | 62.65           | -3.73                 | V                 | 58.92             | 68.20             | 9.28           | PK     |
| 11160              | 63.85           | -5.55                 | H                 | 58.30             | 73.98             | 15.68          | PK     |
| 11160              | 50.34           | -5.55                 | H                 | 44.79             | 53.98             | 9.19           | AV     |
| 16740              | 62.39           | -3.73                 | H                 | 58.66             | 68.20             | 9.54           | PK     |

#### Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

|                     |          |
|---------------------|----------|
| Band :              | UNII 2C  |
| Operation Mode:     | 802.11 a |
| Transfer Rate:      | 6 Mbps   |
| Operating Frequency | 5720 MHz |
| Channel No.         | 144 Ch   |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 11440              | 63.57           | -6.08                 | V                 | 57.49             | 73.98             | 16.49          | PK     |
| 11440              | 48.62           | -6.08                 | V                 | 42.54             | 53.98             | 11.44          | AV     |
| 17160              | 63.69           | -0.85                 | V                 | 62.84             | 68.20             | 5.36           | PK     |
| 11440              | 63.42           | -6.08                 | H                 | 57.34             | 73.98             | 16.64          | PK     |
| 11440              | 48.55           | -6.08                 | H                 | 42.47             | 53.98             | 11.51          | AV     |
| 17160              | 63.36           | -0.85                 | H                 | 62.51             | 68.20             | 5.69           | PK     |

#### Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.



|                     |                    |
|---------------------|--------------------|
| Band :              | UNII 2C            |
| Operation Mode:     | 802.11 n_20 MHz BW |
| Transfer Rate:      | 6.5 Mbps           |
| Operating Frequency | 5500 MHz           |
| Channel No.         | 100 Ch             |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 11000              | 62.81           | -5.06                 | V                 | 57.75             | 73.98             | 16.23          | PK     |
| 11000              | 48.42           | -5.06                 | V                 | 43.36             | 53.98             | 10.62          | AV     |
| 16500              | 62.73           | -4.35                 | V                 | 58.38             | 68.20             | 9.82           | PK     |
| 11000              | 62.53           | -5.06                 | H                 | 57.47             | 73.98             | 16.51          | PK     |
| 11000              | 48.27           | -5.06                 | H                 | 43.21             | 53.98             | 10.77          | AV     |
| 16500              | 62.61           | -4.35                 | H                 | 58.26             | 68.20             | 9.94           | PK     |

#### Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n\_20 MHz BW. Worst case is 6.5 Mbps in 802.11n\_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

|                     |                    |
|---------------------|--------------------|
| Band :              | UNII 2C            |
| Operation Mode:     | 802.11 n_20 MHz BW |
| Transfer Rate:      | 6.5 Mbps           |
| Operating Frequency | 5580 MHz           |
| Channel No.         | 116 Ch             |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 11160              | 63.95           | -5.55                 | V                 | 58.40             | 73.98             | 15.58          | PK     |
| 11160              | 50.57           | -5.55                 | V                 | 45.02             | 53.98             | 8.96           | AV     |
| 16740              | 62.38           | -3.73                 | V                 | 58.65             | 68.20             | 9.55           | PK     |
| 11160              | 63.59           | -5.55                 | H                 | 58.04             | 73.98             | 15.94          | PK     |
| 11160              | 50.29           | -5.55                 | H                 | 44.74             | 53.98             | 9.24           | AV     |
| 16740              | 62.19           | -3.73                 | H                 | 58.46             | 68.20             | 9.74           | PK     |

#### Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n\_20 MHz BW. Worst case is 6.5 Mbps in 802.11n\_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

|                     |                    |
|---------------------|--------------------|
| Band :              | UNII 2C            |
| Operation Mode:     | 802.11 n_20 MHz BW |
| Transfer Rate:      | 6.5 Mbps           |
| Operating Frequency | 5720 MHz           |
| Channel No.         | 144 Ch             |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 11440              | 62.67           | -6.08                 | V                 | 56.59             | 73.98             | 17.39          | PK     |
| 11440              | 48.31           | -6.08                 | V                 | 42.23             | 53.98             | 11.75          | AV     |
| 17160              | 62.33           | -0.85                 | V                 | 61.48             | 68.20             | 6.72           | PK     |
| 11440              | 62.29           | -6.08                 | H                 | 56.21             | 73.98             | 17.77          | PK     |
| 11440              | 48.19           | -6.08                 | H                 | 42.11             | 53.98             | 11.87          | AV     |
| 17160              | 62.11           | -0.85                 | H                 | 61.26             | 68.20             | 6.94           | PK     |

#### Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n\_20 MHz BW. Worst case is 6.5 Mbps in 802.11n\_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

|                     |                     |
|---------------------|---------------------|
| Band :              | UNII 2C             |
| Operation Mode:     | 802.11 ac_20 MHz BW |
| Transfer Rate:      | 6.5 Mbps            |
| Operating Frequency | 5500 MHz            |
| Channel No.         | 100 Ch              |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 11000              | 62.61           | -5.06                 | V                 | 57.55             | 73.98             | 16.43          | PK     |
| 11000              | 48.85           | -5.06                 | V                 | 43.79             | 53.98             | 10.19          | AV     |
| 16500              | 62.10           | -4.35                 | V                 | 57.75             | 68.20             | 10.45          | PK     |
| 11000              | 62.56           | -5.06                 | H                 | 57.50             | 73.98             | 16.48          | PK     |
| 11000              | 48.73           | -5.06                 | H                 | 43.67             | 53.98             | 10.31          | AV     |
| 16500              | 62.14           | -4.35                 | H                 | 57.79             | 68.20             | 10.41          | PK     |

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11ac\_20 MHz BW. Worst case is 6.5 Mbps in 802.11ac\_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.



|                     |                     |
|---------------------|---------------------|
| Band :              | UNII 2C             |
| Operation Mode:     | 802.11 ac_20 MHz BW |
| Transfer Rate:      | 6.5 Mbps            |
| Operating Frequency | 5580 MHz            |
| Channel No.         | 116 Ch              |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 11160              | 68.85           | -5.55                 | V                 | 63.30             | 73.98             | 10.68          | PK     |
| 11160              | 52.89           | -5.55                 | V                 | 47.34             | 53.98             | 6.64           | AV     |
| 16740              | 62.58           | -3.73                 | V                 | 58.85             | 68.20             | 9.35           | PK     |
| 11160              | 68.40           | -5.55                 | H                 | 62.85             | 73.98             | 11.13          | PK     |
| 11160              | 52.69           | -5.55                 | H                 | 47.14             | 53.98             | 6.84           | AV     |
| 16740              | 62.72           | -3.73                 | H                 | 58.99             | 68.20             | 9.21           | PK     |

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11ac\_20 MHz BW. Worst case is 6.5 Mbps in 802.11ac\_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

|                     |                     |
|---------------------|---------------------|
| Band :              | UNII 2C             |
| Operation Mode:     | 802.11 ac_20 MHz BW |
| Transfer Rate:      | 6.5 Mbps            |
| Operating Frequency | 5720 MHz            |
| Channel No.         | 144 Ch              |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 11440              | 63.33           | -6.08                 | V                 | 57.25             | 73.98             | 16.73          | PK     |
| 11440              | 49.12           | -6.08                 | V                 | 43.04             | 53.98             | 10.94          | AV     |
| 17160              | 61.96           | -0.85                 | V                 | 61.11             | 68.20             | 7.09           | PK     |
| 11440              | 63.13           | -6.08                 | H                 | 57.05             | 73.98             | 16.93          | PK     |
| 11440              | 49.05           | -6.08                 | H                 | 42.97             | 53.98             | 11.01          | AV     |
| 17160              | 62.00           | -0.85                 | H                 | 61.15             | 68.20             | 7.05           | PK     |

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11ac\_20 MHz BW. Worst case is 6.5 Mbps in 802.11ac\_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. We applied the 15.407 for Ch.144 in 802.11ac according to KDB 644545 D01 v01r02.

|                     |                   |
|---------------------|-------------------|
| Band :              | UNII 2C           |
| Operation Mode:     | 802.11n_40 MHz BW |
| Transfer Rate:      | 13.5 Mbps         |
| Operating Frequency | 5510 MHz          |
| Channel No.         | 102 Ch            |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 11020              | 62.23           | -5.86                 | V                 | 56.37             | 73.98             | 17.61          | PK     |
| 11020              | 49.46           | -5.86                 | V                 | 43.60             | 53.98             | 10.38          | AV     |
| 16530              | 62.61           | -3.75                 | V                 | 58.86             | 68.20             | 9.34           | PK     |
| 11020              | 61.94           | -5.86                 | H                 | 56.08             | 73.98             | 17.90          | PK     |
| 11020              | 49.33           | -5.86                 | H                 | 43.47             | 53.98             | 10.51          | AV     |
| 16530              | 62.64           | -3.75                 | H                 | 58.89             | 68.20             | 9.31           | PK     |

#### Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n\_40 MHz BW. Worst case is 13.5 Mbps in 802.11n\_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

|                     |                   |
|---------------------|-------------------|
| Band :              | UNII 2C           |
| Operation Mode:     | 802.11n_40 MHz BW |
| Transfer Rate:      | 13.5 Mbps         |
| Operating Frequency | 5590 MHz          |
| Channel No.         | 118 Ch            |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 11180              | 62.29           | -6.14                 | V                 | 56.15             | 73.98             | 17.83          | PK     |
| 11180              | 49.63           | -6.14                 | V                 | 43.49             | 53.98             | 10.49          | AV     |
| 16770              | 62.80           | -3.11                 | V                 | 59.69             | 68.20             | 8.51           | PK     |
| 11180              | 62.14           | -6.14                 | H                 | 56.00             | 73.98             | 17.98          | PK     |
| 11180              | 49.46           | -6.14                 | H                 | 43.32             | 53.98             | 10.66          | AV     |
| 16770              | 62.73           | -3.11                 | H                 | 59.62             | 68.20             | 8.58           | PK     |

#### Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n\_40 MHz BW. Worst case is 13.5 Mbps in 802.11n\_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.



|                     |                   |
|---------------------|-------------------|
| Band :              | UNII 2C           |
| Operation Mode:     | 802.11n_40 MHz BW |
| Transfer Rate:      | 13.5 Mbps         |
| Operating Frequency | 5710 MHz          |
| Channel No.         | 142 Ch            |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 11420              | 62.06           | -5.10                 | V                 | 56.96             | 73.98             | 17.02          | PK     |
| 11420              | 48.67           | -5.10                 | V                 | 43.57             | 53.98             | 10.41          | AV     |
| 17130              | 62.29           | -1.27                 | V                 | 61.02             | 68.20             | 7.18           | PK     |
| 11420              | 61.96           | -5.10                 | H                 | 56.86             | 73.98             | 17.12          | PK     |
| 11420              | 48.53           | -5.10                 | H                 | 43.43             | 53.98             | 10.55          | AV     |
| 17130              | 62.23           | -1.27                 | H                 | 60.96             | 68.20             | 7.24           | PK     |

#### Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n\_40 MHz BW. Worst case is 13.5 Mbps in 802.11n\_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

|                     |                    |
|---------------------|--------------------|
| Band :              | UNII 2C            |
| Operation Mode:     | 802.11ac_40 MHz BW |
| Transfer Rate:      | 13.5 Mbps          |
| Operating Frequency | 5510 MHz           |
| Channel No.         | 102 Ch             |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 11020              | 62.17           | -5.86                 | V                 | 56.31             | 73.98             | 17.67          | PK     |
| 11020              | 49.41           | -5.86                 | V                 | 43.55             | 53.98             | 10.43          | AV     |
| 16530              | 62.52           | -3.75                 | V                 | 58.77             | 68.20             | 9.43           | PK     |
| 11020              | 61.83           | -5.86                 | H                 | 55.97             | 73.98             | 18.01          | PK     |
| 11020              | 49.27           | -5.86                 | H                 | 43.41             | 53.98             | 10.57          | AV     |
| 16530              | 62.58           | -3.75                 | H                 | 58.83             | 68.20             | 9.37           | PK     |

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11ac\_40 MHz BW. Worst case is 13.5 Mbps in 802.11ac\_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

|                     |                    |
|---------------------|--------------------|
| Band :              | UNII 2C            |
| Operation Mode:     | 802.11ac_40 MHz BW |
| Transfer Rate:      | 13.5 Mbps          |
| Operating Frequency | 5590 MHz           |
| Channel No.         | 118 Ch             |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 11180              | 62.17           | -6.14                 | V                 | 56.03             | 73.98             | 17.95          | PK     |
| 11180              | 49.51           | -6.14                 | V                 | 43.37             | 53.98             | 10.61          | AV     |
| 16770              | 62.42           | -3.11                 | V                 | 59.31             | 68.20             | 8.89           | PK     |
| 11180              | 62.21           | -6.14                 | H                 | 56.07             | 73.98             | 17.91          | PK     |
| 11180              | 49.40           | -6.14                 | H                 | 43.26             | 53.98             | 10.72          | AV     |
| 16770              | 62.65           | -3.11                 | H                 | 59.54             | 68.20             | 8.66           | PK     |

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11ac\_40 MHz BW. Worst case is 13.5 Mbps in 802.11ac\_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

|                     |                    |
|---------------------|--------------------|
| Band :              | UNII 2C            |
| Operation Mode:     | 802.11ac_40 MHz BW |
| Transfer Rate:      | 13.5 Mbps          |
| Operating Frequency | 5710 MHz           |
| Channel No.         | 142 Ch             |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 11420              | 61.98           | -6.07                 | V                 | 55.91             | 73.98             | 18.07          | PK     |
| 11420              | 48.62           | -6.07                 | V                 | 42.55             | 53.98             | 11.43          | AV     |
| 17130              | 62.14           | -0.81                 | V                 | 61.33             | 68.20             | 6.87           | PK     |
| 11420              | 62.02           | -6.07                 | H                 | 55.95             | 73.98             | 18.03          | PK     |
| 11420              | 48.39           | -6.07                 | H                 | 42.32             | 53.98             | 11.66          | AV     |
| 17130              | 62.17           | -0.81                 | H                 | 61.36             | 68.20             | 6.84           | PK     |

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11ac\_40 MHz BW. Worst case is 13.5 Mbps in 802.11ac\_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
7. We applied the 15.407 for Ch.142 in 802.11ac according to KDB 644545 D01 v01r02.



|                     |                    |
|---------------------|--------------------|
| Band :              | UNII 2C            |
| Operation Mode:     | 802.11ac_80 MHz BW |
| Transfer Rate:      | 29.3 Mbps          |
| Operating Frequency | 5530 MHz           |
| Channel No.         | 106 Ch             |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 11060              | 62.58           | -6.21                 | V                 | 56.37             | 73.98             | 17.61          | PK     |
| 11060              | 49.18           | -6.21                 | V                 | 42.97             | 53.98             | 11.01          | AV     |
| 16590              | 63.26           | -3.20                 | V                 | 60.06             | 68.20             | 8.14           | PK     |
| 11060              | 62.50           | -6.21                 | H                 | 56.29             | 73.98             | 17.69          | PK     |
| 11060              | 49.10           | -6.21                 | H                 | 42.89             | 53.98             | 11.09          | AV     |
| 16590              | 63.18           | -3.20                 | H                 | 59.98             | 68.20             | 8.22           | PK     |

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11ac\_80 MHz BW. Worst case is 29.3 Mbps in 802.11ac\_80 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna

|                     |                    |
|---------------------|--------------------|
| Band :              | UNII 2C            |
| Operation Mode:     | 802.11ac_80 MHz BW |
| Transfer Rate:      | 29.3 Mbps          |
| Operating Frequency | 5690 MHz           |
| Channel No.         | 138 Ch             |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL-Amp G.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-----------------------|-------------------|-------------------|-------------------|----------------|--------|
| 11380              | 62.68           | -5.59                 | V                 | 57.09             | 73.98             | 16.89          | PK     |
| 11380              | 49.21           | -5.59                 | V                 | 43.62             | 53.98             | 10.36          | AV     |
| 17070              | 63.30           | -1.32                 | V                 | 61.98             | 68.20             | 6.22           | PK     |
| 11380              | 62.54           | -5.59                 | H                 | 56.95             | 73.98             | 17.03          | PK     |
| 11380              | 49.26           | -5.59                 | H                 | 43.67             | 53.98             | 10.31          | AV     |
| 17070              | 63.21           | -1.32                 | H                 | 61.89             | 68.20             | 6.31           | PK     |

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11ac\_80 MHz BW. Worst case is 29.3 Mbps in 802.11ac\_80 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna
7. We applied the 15.407 for Ch.138 in 802.11ac according to KDB 644545 D01 v01r02.

## 8.8.2 RADIATED RESTRICTED BAND EDGE MEASUREMENTS

### Test Requirements and limit, §15.247(d) §15.205, §15.209

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in section 15.209(a) (See section 15.205(c)).

### Monitoring MIMO(Ant.0 & 1 & 2)

|                     |          |
|---------------------|----------|
| Band :              | UNII 2A  |
| Operation Mode:     | 802.11 a |
| Transfer Rate:      | 6 Mbps   |
| Operating Frequency | 5320 MHz |
| Channel No.         | 64 Ch    |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL+AMP+ATT.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-------------------------|-------------------|-------------------|-------------------|----------------|--------|
| 5350               | 52.44           | 9.28                    | H                 | 61.72             | 73.98             | 12.26          | PK     |
| 5350               | 41.52           | 9.28                    | H                 | 50.80             | 53.98             | 3.18           | AV     |
| 5350               | 53.31           | 9.28                    | V                 | 62.59             | 73.98             | 11.39          | PK     |
| 5350               | 42.10           | 9.28                    | V                 | 51.38             | 53.98             | 2.60           | AV     |

### Notes:

1. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + ATT
2. We have done all data rate in 802.11a mode test. . Worst case of EUT is lowest data rate in 802.11a.
3. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

|                     |          |
|---------------------|----------|
| Band :              | UNII 2C  |
| Operation Mode:     | 802.11 a |
| Transfer Rate:      | 6 Mbps   |
| Operating Frequency | 5500 MHz |
| Channel No.         | 100 Ch   |

| Frequency<br>[MHz] | Reading<br>DBuV | AN.+CL+AMP+ATT.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-------------------------|-------------------|-------------------|-------------------|----------------|--------|
| 5460               | 51.78           | 10.08                   | H                 | 61.86             | 73.98             | 12.12          | PK     |
| 5460               | 40.34           | 10.08                   | H                 | 50.42             | 53.98             | 3.56           | AV     |
| *5470              | 48.73           | 9.95                    | H                 | 58.68             | 68.20             | 9.52           | PK     |
| 5460               | 52.75           | 10.08                   | V                 | 62.83             | 73.98             | 11.15          | PK     |
| 5460               | 41.68           | 10.08                   | V                 | 51.76             | 53.98             | 2.22           | AV     |
| *5470              | 48.40           | 9.95                    | V                 | 58.35             | 68.20             | 9.85           | PK     |

|                     |          |
|---------------------|----------|
| Band :              | UNII 2C  |
| Operation Mode:     | 802.11 a |
| Transfer Rate:      | 6 Mbps   |
| Operating Frequency | 5720 MHz |
| Channel No.         | 144 Ch   |

| Frequency<br>[MHz] | Reading<br>DBuV | AN.+CL+AMP+ATT.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-------------------------|-------------------|-------------------|-------------------|----------------|--------|
| *5725              | 53.80           | 11.37                   | H                 | 65.17             | 68.20             | 3.03           | PK     |
| *5725              | 53.05           | 11.37                   | V                 | 64.42             | 68.20             | 3.78           | PK     |

#### Notes:

1. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + ATT
2. We have done all data rate in 802.11a mode test. . Worst case of EUT is lowest data rate in 802.11a.
3. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
4. '\*' is radiated band edge test frequency.(not restricted band emissions)



## Service MIMO(Ant.0 & 1 & 2)

|                     |          |
|---------------------|----------|
| Band :              | UNII 2A  |
| Operation Mode:     | 802.11 a |
| Transfer Rate:      | 6 Mbps   |
| Operating Frequency | 5320 MHz |
| Channel No.         | 64 Ch    |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL+AMP+ATT.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-------------------------|-------------------|-------------------|-------------------|----------------|--------|
| 5350               | 52.18           | 9.28                    | H                 | 61.46             | 73.98             | 12.52          | PK     |
| 5350               | 41.01           | 9.28                    | H                 | 50.29             | 53.98             | 3.69           | AV     |
| 5350               | 51.34           | 9.28                    | V                 | 60.62             | 73.98             | 13.36          | PK     |
| 5350               | 39.12           | 9.28                    | V                 | 48.40             | 53.98             | 5.58           | AV     |

|                     |                    |
|---------------------|--------------------|
| Band :              | UNII 2A            |
| Operation Mode:     | 802.11 n_20 MHz BW |
| Transfer Rate:      | 6.5 Mbps           |
| Operating Frequency | 5320 MHz           |
| Channel No.         | 64 Ch              |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL+AMP+ATT.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-------------------------|-------------------|-------------------|-------------------|----------------|--------|
| 5350               | 52.42           | 9.28                    | H                 | 61.70             | 73.98             | 12.28          | PK     |
| 5350               | 41.09           | 9.28                    | H                 | 50.37             | 53.98             | 3.61           | AV     |
| 5350               | 52.06           | 9.28                    | V                 | 61.34             | 73.98             | 12.64          | PK     |
| 5350               | 40.28           | 9.28                    | V                 | 49.56             | 53.98             | 4.42           | AV     |

Band : UNII 2A  
 Operation Mode: 802.11 ac\_20 MHz BW  
 Transfer Rate: 6.5 Mbps  
 Operating Frequency 5320 MHz  
 Channel No. 64 Ch

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL+AMP+ATT.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-------------------------|-------------------|-------------------|-------------------|----------------|--------|
| 5350               | 52.72           | 9.28                    | H                 | 62.00             | 73.98             | 11.98          | PK     |
| 5350               | 41.24           | 9.28                    | H                 | 50.52             | 53.98             | 3.46           | AV     |
| 5350               | 52.08           | 9.28                    | V                 | 61.36             | 73.98             | 12.62          | PK     |
| 5350               | 40.72           | 9.28                    | V                 | 50.00             | 53.98             | 3.98           | AV     |

Band : UNII 2A  
 Operation Mode: 802.11n\_40 MHz BW  
 Transfer Rate: 13.5 Mbps  
 Operating Frequency 5310 MHz  
 Channel No. 62 Ch

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL+AMP+ATT.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-------------------------|-------------------|-------------------|-------------------|----------------|--------|
| 5350               | 54.81           | 9.28                    | H                 | 64.09             | 73.98             | 9.89           | PK     |
| 5350               | 41.08           | 9.28                    | H                 | 50.36             | 53.98             | 3.62           | AV     |
| 5350               | 53.10           | 9.28                    | V                 | 62.38             | 73.98             | 11.60          | PK     |
| 5350               | 40.29           | 9.28                    | V                 | 49.57             | 53.98             | 4.41           | AV     |

|                     |                     |
|---------------------|---------------------|
| Band :              | UNII 2A             |
| Operation Mode:     | 802.11 ac_40 MHz BW |
| Transfer Rate:      | 13.5 Mbps           |
| Operating Frequency | 5310 MHz            |
| Channel No.         | 62 Ch               |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL+AMP+ATT.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-------------------------|-------------------|-------------------|-------------------|----------------|--------|
| 5350               | 55.77           | 9.28                    | H                 | 65.05             | 73.98             | 8.93           | PK     |
| 5350               | 41.56           | 9.28                    | H                 | 50.84             | 53.98             | 3.14           | AV     |
| 5350               | 55.28           | 9.28                    | V                 | 64.56             | 73.98             | 9.42           | PK     |
| 5350               | 40.95           | 9.28                    | V                 | 50.23             | 53.98             | 3.75           | AV     |

|                     |                     |
|---------------------|---------------------|
| Band :              | UNII 2A             |
| Operation Mode:     | 802.11 ac_80 MHz BW |
| Transfer Rate:      | 29.3 Mbps           |
| Operating Frequency | 5290 MHz            |
| Channel No.         | 58 Ch               |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL+AMP+ATT.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-------------------------|-------------------|-------------------|-------------------|----------------|--------|
| 5350               | 56.84           | 9.28                    | H                 | 66.12             | 73.98             | 7.86           | PK     |
| 5350               | 40.88           | 9.28                    | H                 | 50.16             | 53.98             | 3.82           | AV     |
| 5350               | 56.07           | 9.28                    | V                 | 65.35             | 73.98             | 8.63           | PK     |
| 5350               | 40.13           | 9.28                    | V                 | 49.41             | 53.98             | 4.57           | AV     |

#### Notes:

1. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + ATT
2. We have done all data rate in 802.11a/n/ac mode test. . Worst case of EUT is lowest data rate in 802.11a/n/ac
3. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band : UNII 2C

Operation Mode: 802.11 a

Transfer Rate: 6 Mbps

Operating Frequency 5500 MHz

Channel No. 100 Ch

| Frequency<br>[MHz] | Reading<br>DBuV | AN.+CL+AMP+ATT.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-------------------------|-------------------|-------------------|-------------------|----------------|--------|
| 5460               | 51.52           | 10.08                   | H                 | 61.60             | 73.98             | 12.38          | PK     |
| 5460               | 40.83           | 10.08                   | H                 | 50.91             | 53.98             | 3.07           | AV     |
| *5470              | 48.49           | 9.95                    | H                 | 58.44             | 68.20             | 9.76           | PK     |
| 5460               | 50.68           | 10.08                   | V                 | 60.76             | 73.98             | 13.22          | PK     |
| 5460               | 38.96           | 10.08                   | V                 | 49.04             | 53.98             | 4.94           | AV     |
| *5470              | 48.25           | 9.95                    | V                 | 58.20             | 68.20             | 10.00          | PK     |

Band : UNII 2C

Operation Mode: 802.11 a

Transfer Rate: 6 Mbps

Operating Frequency 5720 MHz

Channel No. 144 Ch

| Frequency<br>[MHz] | Reading<br>DBuV | AN.+CL+AMP+ATT.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-------------------------|-------------------|-------------------|-------------------|----------------|--------|
| *5725              | 53.43           | 11.37                   | H                 | 64.80             | 68.20             | 3.40           | PK     |
| *5725              | 53.13           | 11.37                   | V                 | 64.50             | 68.20             | 3.70           | PK     |



|                     |                    |
|---------------------|--------------------|
| Band :              | UNII 2C            |
| Operation Mode:     | 802.11 n_20 MHz BW |
| Transfer Rate:      | 6.5 Mbps           |
| Operating Frequency | 5500 MHz           |
| Channel No.         | 100 Ch             |

| Frequency<br>[MHz] | Reading<br>DBuV | AN.+CL+AMP+ATT.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-------------------------|-------------------|-------------------|-------------------|----------------|--------|
| 5460               | 52.11           | 10.08                   | H                 | 62.19             | 73.98             | 11.79          | PK     |
| 5460               | 40.52           | 10.08                   | H                 | 50.60             | 53.98             | 3.38           | AV     |
| *5470              | 48.54           | 9.95                    | H                 | 58.49             | 68.20             | 9.71           | PK     |
| 5460               | 51.39           | 10.08                   | V                 | 61.47             | 73.98             | 12.51          | PK     |
| 5460               | 39.68           | 10.08                   | V                 | 49.76             | 53.98             | 4.22           | AV     |
| *5470              | 48.27           | 9.95                    | V                 | 58.22             | 68.20             | 9.98           | PK     |

|                     |                    |
|---------------------|--------------------|
| Band :              | UNII 2C            |
| Operation Mode:     | 802.11 n_20 MHz BW |
| Transfer Rate:      | 6.5 Mbps           |
| Operating Frequency | 5720 MHz           |
| Channel No.         | 144 Ch             |

| Frequency<br>[MHz] | Reading<br>DBuV | AN.+CL+AMP+ATT.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-------------------------|-------------------|-------------------|-------------------|----------------|--------|
| *5725              | 53.45           | 11.37                   | H                 | 64.82             | 68.20             | 3.38           | PK     |
| *5725              | 53.06           | 11.37                   | V                 | 64.43             | 68.20             | 3.77           | AV     |

Band : UNII 2C

Operation Mode: 802.11 ac\_20 MHz BW

Transfer Rate: 6.5 Mbps

Operating Frequency 5500 MHz

Channel No. 100 Ch

| Frequency<br>[MHz] | Reading<br>DBuV | AN.+CL+AMP+ATT.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-------------------------|-------------------|-------------------|-------------------|----------------|--------|
| 5460               | 51.61           | 10.08                   | H                 | 61.69             | 73.98             | 12.29          | PK     |
| 5460               | 40.65           | 10.08                   | H                 | 50.73             | 53.98             | 3.25           | AV     |
| *5470              | 48.70           | 9.95                    | H                 | 58.65             | 68.20             | 9.55           | PK     |
| 5460               | 50.68           | 10.08                   | V                 | 60.76             | 73.98             | 13.22          | PK     |
| 5460               | 39.86           | 10.08                   | V                 | 49.94             | 53.98             | 4.04           | AV     |
| *5470              | 48.06           | 9.95                    | V                 | 58.01             | 68.20             | 10.19          | PK     |

Band : UNII 2C

Operation Mode: 802.11n\_40 MHz BW

Transfer Rate: 13.5 Mbps

Operating Frequency 5510 MHz

Channel No. 102 Ch

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL+AMP+ATT.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-------------------------|-------------------|-------------------|-------------------|----------------|--------|
| 5460               | 49.92           | 10.08                   | H                 | 60.00             | 73.98             | 13.98          | PK     |
| 5460               | 38.47           | 10.08                   | H                 | 48.55             | 53.98             | 5.43           | AV     |
| *5470              | 54.87           | 9.95                    | H                 | 64.82             | 68.20             | 3.38           | PK     |
| 5460               | 49.26           | 10.08                   | V                 | 59.34             | 73.98             | 14.64          | PK     |
| 5460               | 37.68           | 10.08                   | V                 | 47.76             | 53.98             | 6.22           | AV     |
| *5470              | 53.99           | 9.95                    | V                 | 63.94             | 68.20             | 4.26           | PK     |

|                     |                    |
|---------------------|--------------------|
| Band :              | UNII 2C            |
| Operation Mode:     | 802.11 n_40 MHz BW |
| Transfer Rate:      | 13.5 Mbps          |
| Operating Frequency | 5710 MHz           |
| Channel No.         | 142 Ch             |

| Frequency<br>[MHz] | Reading<br>DBuV | AN.+CL+AMP+ATT.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-------------------------|-------------------|-------------------|-------------------|----------------|--------|
| *5725              | 52.91           | 11.37                   | H                 | 64.28             | 68.20             | 3.92           | PK     |
| *5725              | 52.66           | 11.37                   | V                 | 64.03             | 68.20             | 4.17           | AV     |

|                     |                     |
|---------------------|---------------------|
| Band :              | UNII 2C             |
| Operation Mode:     | 802.11 ac_40 MHz BW |
| Transfer Rate:      | 13.5 Mbps           |
| Operating Frequency | 5510 MHz            |
| Channel No.         | 102 Ch              |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL+AMP+ATT.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-------------------------|-------------------|-------------------|-------------------|----------------|--------|
| 5460               | 50.58           | 10.08                   | H                 | 60.66             | 73.98             | 13.32          | PK     |
| 5460               | 39.03           | 10.08                   | H                 | 49.11             | 53.98             | 4.87           | AV     |
| *5470              | 52.70           | 9.95                    | H                 | 62.65             | 68.20             | 5.55           | PK     |
| 5460               | 50.21           | 10.08                   | V                 | 60.29             | 73.98             | 13.69          | PK     |
| 5460               | 38.59           | 10.08                   | V                 | 48.67             | 53.98             | 5.31           | AV     |
| *5470              | 52.26           | 9.95                    | V                 | 62.21             | 68.20             | 5.99           | PK     |

|                     |                     |
|---------------------|---------------------|
| Band :              | UNII 2C             |
| Operation Mode:     | 802.11 ac_80 MHz BW |
| Transfer Rate:      | 29.3 Mbps           |
| Operating Frequency | 5530 MHz            |
| Channel No.         | 106 Ch              |

| Frequency<br>[MHz] | Reading<br>dBuV | AN.+CL+AMP+ATT.<br>[dB] | ANT. POL<br>[H/V] | Total<br>[dBuV/m] | Limit<br>[dBuV/m] | Margin<br>[dB] | Detect |
|--------------------|-----------------|-------------------------|-------------------|-------------------|-------------------|----------------|--------|
| 5460               | 49.84           | 10.08                   | H                 | 59.92             | 73.98             | 14.06          | PK     |
| 5460               | 36.27           | 10.08                   | H                 | 46.35             | 53.98             | 7.63           | AV     |
| *5470              | 55.19           | 9.95                    | H                 | 65.14             | 68.20             | 3.06           | PK     |
| 5460               | 49.23           | 10.08                   | V                 | 59.31             | 73.98             | 14.67          | PK     |
| 5460               | 35.87           | 10.08                   | V                 | 45.95             | 53.98             | 8.03           | AV     |
| *5470              | 54.95           | 9.95                    | V                 | 64.90             | 68.20             | 3.30           | PK     |

#### Notes:

1. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + ATT
2. We have done all data rate in 802.11a/n/ac mode test. . Worst case of EUT is lowest data rate in 802.11a/n/ac.
3. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
4. '\*' is radiated band edge test frequency.(not restricted band emissions)



### 8.8.3 RECEIVER SPURIOUS EMISSIONS

IC Rule(s) RSS-GEN  
 Test Requirements: Blow the table  
 Operating conditions: Under normal test conditions  
 Method of testing: Radiated

S/A. Settings: F < 1 GHz: RBW: 120 kHz, VBW: 300 kHz (Quasi Peak)  
 F > 1 GHz: RBW: 1 MHz, VBW: 1 MHz (Peak)  
 Mode of operation: Receive

| Frequency<br>(MHz) | Field Strength<br>(microvolts/m at 3 meters) |
|--------------------|----------------------------------------------|
| 30 – 88            | 100                                          |
| 88 - 216           | 150                                          |
| 216 – 960          | 200                                          |
| Above 960          | 500                                          |

#### Operation Mode: Receive:

30 MHz ~ 1 GHz

| Frequency               | Reading | Ant. factor | Cable loss | Ant. POL | Total  | Limit  | Margin |
|-------------------------|---------|-------------|------------|----------|--------|--------|--------|
| MHz                     | dBμV    | dB /m       | dB         | (H/V)    | dBμV/m | dBμV/m | dB     |
| No Critical peaks found |         |             |            |          |        |        |        |

Above 1 GHz

| Frequency               | Reading | Ant. factor | Cable loss | Ant. POL | Total  | Limit  | Margin |
|-------------------------|---------|-------------|------------|----------|--------|--------|--------|
| MHz                     | dBμV    | dB /m       | dB         | (H/V)    | dBμV/m | dBμV/m | dB     |
| No Critical peaks found |         |             |            |          |        |        |        |

## 8.9 POWERLINE CONDUCTED EMISSIONS

### Test Requirements and limit, §15.207

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed 250 microvolts (The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz). The limits at specific frequency range is listed as follows:

| Frequency Range (MHz) | Limits (dBμV) |          |
|-----------------------|---------------|----------|
|                       | Quasi-peak    | Average  |
| 0.15 to 0.50          | 66 to 56      | 56 to 46 |
| 0.50 to 5             | 56            | 46       |
| 5 to 30               | 60            | 50       |

Compliance with this provision shall be based on the measurement of the radio frequency voltage between each power line (LINE and NEUTRAL) and ground at the power terminals.

### Test Configuration

See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.

### TEST PROCEDURE

1. The EUT is placed on a wooden table 80 cm above the reference groundplane.
2. The EUT is connected via LISN to a test power supply.
3. The measurement results are obtained as described below:
4. Detectors – Quasi Peak and Average Detector.
5. We are performed the AC Power Line Conducted Emission test for 263.3 Mbps, Ch.138 and 802.11ac\_80 MHz BW mode in UNII 2C\_3 TX MIMO. Because the mode in UNII 2C is worst case.

## RESULT PLOTS

### Conducted Emissions (Line 1)

EMI Auto Test(2)

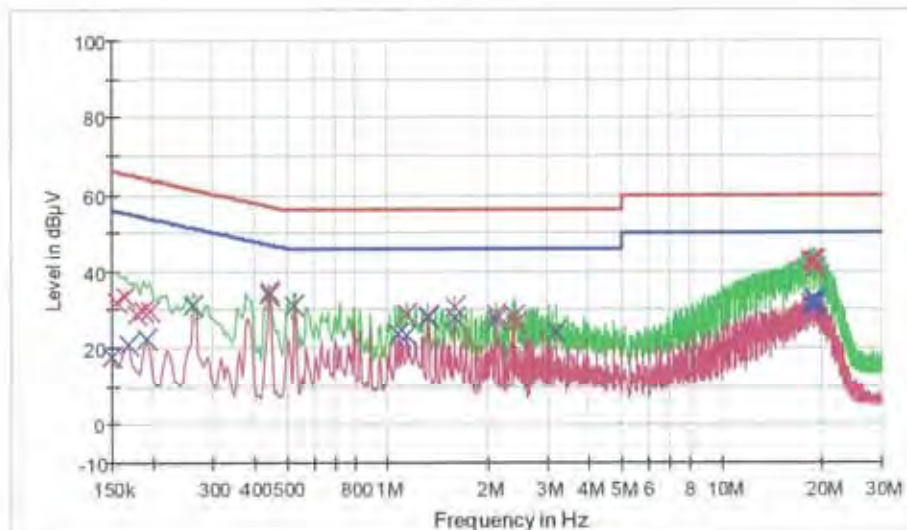
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## HCT TEST Report

### Common Information

EUT: WEA403I  
 Manufacturer: SAMSUNG  
 Test Site: SHIELD ROOM  
 Operating Conditions: WLAN MODE(UNII)  
 Operator Name: JS LEE

FCC CLASS B



— FCC CLASS B\_0P — FCC CLASS B\_4V — Preview Result 1-PK  
 — Preview Result 2-AVG X Final Result 1-CPK X Final Result 2-CAV

### Final Result 1

| Frequency (MHz) | QuasiPeak (dBμV) | Bandwidth (kHz) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBμV) |
|-----------------|------------------|-----------------|--------|------|------------|-------------|--------------|
| 0.154500        | 31.9             | 9.000           | Off    | N    | 9.7        | 33.9        | 65.2         |
| 0.163500        | 33.5             | 9.000           | Off    | N    | 9.7        | 31.8        | 65.3         |
| 0.177000        | 28.7             | 9.000           | Off    | N    | 9.7        | 35.9        | 64.6         |
| 0.186000        | 29.6             | 9.000           | Off    | N    | 9.7        | 34.6        | 64.2         |
| 0.195000        | 29.6             | 9.000           | Off    | N    | 9.7        | 34.2        | 63.8         |
| 0.442500        | 34.8             | 9.000           | Off    | N    | 9.7        | 22.2        | 57.0         |
| 1.143500        | 28.6             | 9.000           | Off    | N    | 9.8        | 27.4        | 56.0         |
| 1.323500        | 28.5             | 9.000           | Off    | N    | 9.8        | 27.5        | 56.0         |
| 1.584500        | 30.8             | 9.000           | Off    | N    | 9.8        | 25.2        | 56.0         |
| 2.111000        | 28.7             | 9.000           | Off    | N    | 9.9        | 27.3        | 56.0         |
| 2.381000        | 28.4             | 9.000           | Off    | N    | 9.9        | 27.6        | 56.0         |
| 2.417000        | 26.7             | 9.000           | Off    | N    | 9.9        | 29.3        | 56.0         |
| 18.378500       | 42.8             | 9.000           | Off    | N    | 10.7       | 17.2        | 60.0         |
| 18.455000       | 42.9             | 9.000           | Off    | N    | 10.7       | 17.1        | 60.0         |
| 18.536000       | 42.5             | 9.000           | Off    | N    | 10.8       | 17.5        | 60.0         |
| 18.779000       | 42.8             | 9.000           | Off    | N    | 10.8       | 17.2        | 60.0         |

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## EMI Auto Test(2)

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| Frequency (MHz) | QuasiPeak (dBμV) | Bandwidth (kHz) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBμV) |
|-----------------|------------------|-----------------|--------|------|------------|-------------|--------------|
| 19.008500       | 42.6             | 9.000           | Off    | N    | 10.8       | 17.4        | 60.0         |
| 19.044500       | 41.0             | 9.000           | Off    | N    | 10.8       | 19.0        | 60.0         |

## Final Result 2

| Frequency (MHz) | CAverage (dBμV) | Bandwidth (kHz) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBμV) |
|-----------------|-----------------|-----------------|--------|------|------------|-------------|--------------|
| 0.150000        | 17.7            | 9.000           | Off    | N    | 9.7        | 38.3        | 56.0         |
| 0.168000        | 21.1            | 9.000           | Off    | N    | 9.7        | 34.0        | 55.1         |
| 0.190500        | 22.3            | 9.000           | Off    | N    | 9.7        | 31.7        | 54.0         |
| 0.262500        | 31.0            | 9.000           | Off    | N    | 9.7        | 20.4        | 51.4         |
| 0.442500        | 34.1            | 9.000           | Off    | N    | 9.7        | 12.9        | 47.0         |
| 0.527000        | 31.4            | 9.000           | Off    | N    | 9.7        | 14.6        | 46.0         |
| 1.080500        | 23.9            | 9.000           | Off    | N    | 9.8        | 22.1        | 46.0         |
| 1.143500        | 23.3            | 9.000           | Off    | N    | 9.8        | 22.7        | 46.0         |
| 1.323500        | 28.0            | 9.000           | Off    | N    | 9.8        | 18.0        | 46.0         |
| 1.584500        | 28.0            | 9.000           | Off    | N    | 9.8        | 18.0        | 46.0         |
| 2.115500        | 27.6            | 9.000           | Off    | N    | 9.9        | 18.4        | 46.0         |
| 3.173000        | 24.2            | 9.000           | Off    | N    | 10.0       | 21.8        | 46.0         |
| 18.455000       | 31.7            | 9.000           | Off    | N    | 10.7       | 18.3        | 50.0         |
| 18.612500       | 31.0            | 9.000           | Off    | N    | 10.8       | 19.0        | 50.0         |
| 18.711500       | 32.0            | 9.000           | Off    | N    | 10.8       | 18.0        | 50.0         |
| 18.783500       | 33.0            | 9.000           | Off    | N    | 10.8       | 17.0        | 50.0         |
| 19.008500       | 30.5            | 9.000           | Off    | N    | 10.8       | 19.5        | 50.0         |
| 19.170500       | 32.3            | 9.000           | Off    | N    | 10.8       | 17.7        | 50.0         |

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|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |



## Conducted Emissions (Line 2)

EMI Auto Test(2)

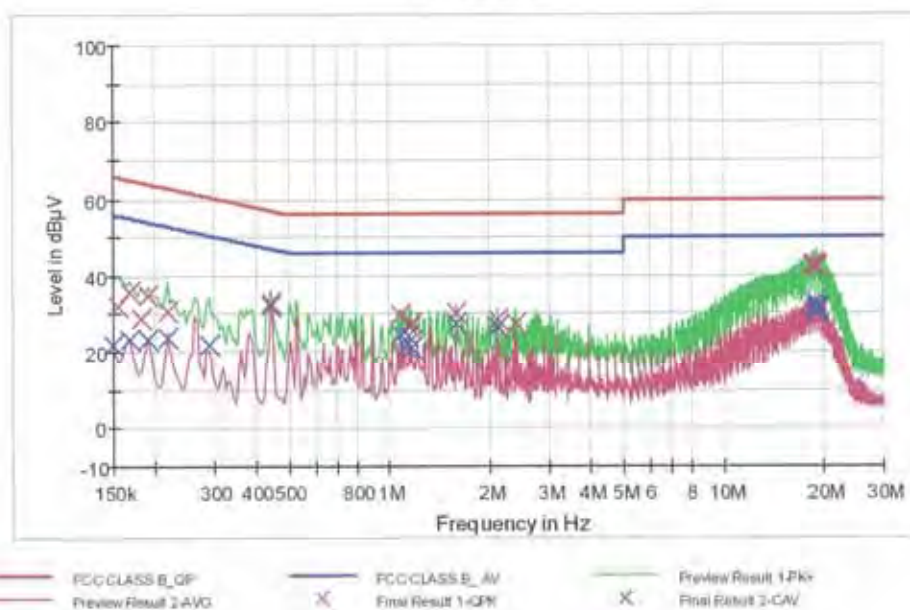
1 / 2

# HCT TEST Report

## Common Information

EUT: WEA403I  
 Manufacturer: SAMSUNG  
 Test Site: SHIELD ROOM  
 Operating Conditions: WLAN MODE(UNII)  
 Operator Name: JS LEE

FCC CLASS B



## Final Result 1

| Frequency (MHz) | QuasiPeak (dBμV) | Bandwidth (kHz) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBμV) |
|-----------------|------------------|-----------------|--------|------|------------|-------------|--------------|
| 0.154500        | 32.1             | 9.000           | Off    | L1   | 9.7        | 33.7        | 65.8         |
| 0.168000        | 35.9             | 9.000           | Off    | L1   | 9.7        | 29.2        | 65.1         |
| 0.181500        | 28.6             | 9.000           | Off    | L1   | 9.7        | 35.8        | 64.4         |
| 0.190500        | 34.8             | 9.000           | Off    | L1   | 9.7        | 29.2        | 64.0         |
| 0.217500        | 36.5             | 9.000           | Off    | L1   | 9.7        | 32.4        | 62.9         |
| 0.442500        | 33.2             | 9.000           | Off    | L1   | 9.7        | 23.9        | 57.0         |
| 1.080500        | 29.9             | 9.000           | Off    | L1   | 9.7        | 26.1        | 56.0         |
| 1.148000        | 26.4             | 9.000           | Off    | L1   | 9.8        | 29.6        | 56.0         |
| 1.166000        | 27.5             | 9.000           | Off    | L1   | 9.8        | 28.5        | 56.0         |
| 1.584500        | 30.2             | 9.000           | Off    | L1   | 9.8        | 25.8        | 56.0         |
| 2.111000        | 28.5             | 9.000           | Off    | L1   | 9.8        | 27.5        | 56.0         |
| 2.381000        | 27.2             | 9.000           | Off    | L1   | 9.8        | 28.8        | 56.0         |
| 18.464000       | 42.7             | 9.000           | Off    | L1   | 10.8       | 17.3        | 60.0         |
| 18.540500       | 42.5             | 9.000           | Off    | L1   | 10.8       | 17.5        | 60.0         |
| 18.702500       | 42.6             | 9.000           | Off    | L1   | 10.8       | 17.4        | 60.0         |
| 18.851000       | 42.6             | 9.000           | Off    | L1   | 10.8       | 17.4        | 60.0         |

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EMI Auto Test(2)

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| Frequency (MHz) | QuasiPeak (dBμV) | Bandwidth (kHz) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBμV) |
|-----------------|------------------|-----------------|--------|------|------------|-------------|--------------|
| 18.941000       | 42.4             | 9.000           | Off    | L1   | 10.9       | 17.6        | 60.0         |
| 19.094000       | 42.4             | 9.000           | Off    | L1   | 10.9       | 17.6        | 60.0         |

## Final Result 2

| Frequency (MHz) | CAverage (dBμV) | Bandwidth (kHz) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBμV) |
|-----------------|-----------------|-----------------|--------|------|------------|-------------|--------------|
| 0.150000        | 21.9            | 9.000           | Off    | L1   | 9.7        | 34.1        | 56.0         |
| 0.168000        | 23.4            | 9.000           | Off    | L1   | 9.7        | 31.7        | 55.1         |
| 0.190500        | 23.4            | 9.000           | Off    | L1   | 9.7        | 30.6        | 54.0         |
| 0.217500        | 23.6            | 9.000           | Off    | L1   | 9.7        | 29.3        | 52.9         |
| 0.209500        | 22.0            | 9.000           | Off    | L1   | 9.7        | 28.5        | 50.5         |
| 0.442500        | 32.1            | 9.000           | Off    | L1   | 9.7        | 14.9        | 47.0         |
| 1.080500        | 24.7            | 9.000           | Off    | L1   | 9.7        | 21.3        | 46.0         |
| 1.112000        | 21.4            | 9.000           | Off    | L1   | 9.8        | 24.6        | 46.0         |
| 1.143500        | 24.3            | 9.000           | Off    | L1   | 9.8        | 21.7        | 46.0         |
| 1.166000        | 21.0            | 9.000           | Off    | L1   | 9.8        | 25.0        | 46.0         |
| 1.584500        | 27.3            | 9.000           | Off    | L1   | 9.8        | 18.7        | 46.0         |
| 2.115500        | 26.7            | 9.000           | Off    | L1   | 9.9        | 19.3        | 46.0         |
| 18.702500       | 31.5            | 9.000           | Off    | L1   | 10.8       | 18.5        | 50.0         |
| 18.783500       | 33.1            | 9.000           | Off    | L1   | 10.8       | 16.9        | 50.0         |
| 18.941000       | 31.5            | 9.000           | Off    | L1   | 10.9       | 18.5        | 50.0         |
| 19.013000       | 30.4            | 9.000           | Off    | L1   | 10.9       | 19.6        | 50.0         |
| 19.098500       | 31.3            | 9.000           | Off    | L1   | 10.9       | 18.7        | 50.0         |
| 19.112000       | 31.7            | 9.000           | Off    | L1   | 10.9       | 18.3        | 50.0         |

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|                                      |                                 |                             |                       |                                                  |
|--------------------------------------|---------------------------------|-----------------------------|-----------------------|--------------------------------------------------|
| FCC PT.15.407<br>TEST REPORT         | FCC & IC CERTIFICATION REPORT   |                             |                       | <a href="http://www.hct.co.kr">www.hct.co.kr</a> |
| Test Report No.<br>HCT-R-1405-F041-1 | Date of Issue:<br>June 30, 2014 | EUT Type: WLAN Access Point | FCC ID:<br>A3LWEA403I | IC:<br>649E-WEA403I                              |

## 9. LIST OF TEST EQUIPMENT

### 9.1 LIST OF TEST EQUIPMENT(Conducted Test)

| Manufacturer    | Model / Equipment          | Calibration Date | Calibration Interval | Calibration Due | Serial No.             |
|-----------------|----------------------------|------------------|----------------------|-----------------|------------------------|
| Rohde & Schwarz | ENV216/ LISN               | 01/29/2014       | Annual               | 01/29/2015      | 100073                 |
| Rohde & Schwarz | FSV40/Spectrum Analyzer    | 06/10/2013       | Annual               | 06/10/2014      | 1307.9002K40-100931-NK |
| Agilent         | N9020A/ SIGNAL ANALYZER    | 05/23/2013       | Annual               | 05/23/2014      | MY51110063             |
| Agilent         | N9020A/ SIGNAL ANALYZER    | 05/20/2013       | Annual               | 05/20/2014      | MY50510304             |
| Agilent         | N1911A/Power Meter         | 01/24/2014       | Annual               | 01/24/2015      | MY45100523             |
| Agilent         | N1921A /POWER SENSOR       | 07/11/2013       | Annual               | 07/11/2014      | MY45241059             |
| Hewlett Packard | 11636B/Power Divider       | 10/22/2013       | Annual               | 10/22/2014      | 11377                  |
| Agilent         | 87300B/Directional Coupler | 12/18/2013       | Annual               | 12/18/2014      | 3116A03621             |
| DIGITAL         | EP-3010 /DC POWER SUPPLY   | 10/29/2013       | Annual               | 10/29/2014      | 3110117                |
| ITECH           | IT6720 / DC POWER SUPPLY   | 11/05/2013       | Annual               | 11/05/2014      | 010002156287001199     |
| Agilent         | 8493C / Attenuator(10 dB)  | 07/24/2013       | Annual               | 07/24/2014      | 76649                  |
| WEINSCHEL       | 2-3 / Attenuator(3 dB)     | 10/28/2013       | Annual               | 10/28/2014      | BR0617                 |

## 9.2 LIST OF TEST EQUIPMENT(Radiated Test)

| Manufacturer          | Model / Equipment                                      | Calibration Due | Calibration Interval | Calibration Due | Serial No.             |
|-----------------------|--------------------------------------------------------|-----------------|----------------------|-----------------|------------------------|
| Schwarzbeck           | VULB 9160/ TRILOG Antenna                              | 12/17/2012      | Biennial             | 12/17/2014      | 3150                   |
| Rohde & Schwarz       | ESCI / EMI TEST RECEIVER                               | 01/24/2014      | Annual               | 01/24/2015      | 100584                 |
| HD                    | MA240/ Antenna Position Tower                          | N/A             | N/A                  | N/A             | 556                    |
| EMCO                  | 1050/ Turn Table                                       | N/A             | N/A                  | N/A             | 114                    |
| HD GmbH               | HD 100/ Controller                                     | N/A             | N/A                  | N/A             | 13                     |
| HD GmbH               | KMS 560/ SlideBar                                      | N/A             | N/A                  | N/A             | 12                     |
| Rohde & Schwarz       | SCU-18/ Signal Conditioning Unit                       | 09/10/2013      | Annual               | 09/10/2014      | 10094                  |
| CERNEX                | CBL18265035 / POWER AMP                                | 07/24/2013      | Annual               | 07/24/2014      | 22966                  |
| CERNEX                | CBL26405040 / POWER AMP                                | 04/04/2014      | Annual               | 04/04/2015      | 19660                  |
| Schwarzbeck           | BBHA 9120D/ Horn Antenna                               | 07/05/2013      | Biennial             | 07/05/2015      | 1151                   |
| Schwarzbeck           | BBHA9170 / Horn Antenna(15 GHz ~ 40 GHz)               | 10/30/2012      | Biennial             | 10/30/2014      | BBHA9170124            |
| Rohde & Schwarz       | FSV40/Spectrum Analyzer                                | 06/10/2013      | Annual               | 06/10/2014      | 1307.9002K40-100931-NK |
| Rohde & Schwarz       | FSP / Spectrum Analyzer                                | 01/24/2014      | Annual               | 01/24/2015      | 839117/011             |
| Wainwright Instrument | WHF3.0/18G-10EF / High Pass Filter                     | 02/03/2014      | Annual               | 02/03/2015      | F6                     |
| Wainwright Instrument | WHNX6.0/26.5G-6SS / High Pass Filter                   | 04/09/2014      | Annual               | 04/09/2015      | 1                      |
| Wainwright Instrument | WHNX7.0/18G-8SS / High Pass Filter                     | 04/04/2014      | Annual               | 04/04/2015      | 29                     |
| Wainwright Instrument | WRCJ2400/2483.5-2370/2520-60/14SS / Band Reject Filter | 06/24/2013      | Annual               | 06/24/2014      | 1                      |
| Rohde & Schwarz       | LOOP ANTENNA                                           | 08/14/2012      | Biennial             | 08/14/2014      | 100179                 |
| CERNEX                | CBL06185030 / POWER AMP                                | 07/24/2013      | Annual               | 07/24/2014      | 22965                  |
| CERNEX                | CBLU1183540 / POWER AMP                                | 07/24/2013      | Annual               | 07/24/2014      | 22964                  |