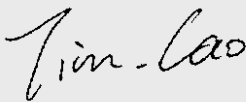


Test report No:
2580829R.704

TEST REPORT

Product Name	5G Smartphone
Trademark	Schok
Model and /or type reference	Schok Volt SV69S
FCC ID	2AM9L-SV69S
Applicant's name / address	Schok, LLC. 5850 Town and Country Blvd, Suite 203 Frisco, TX 75034
Test method requested, standard	47 CFR FCC Part 15 (Section 15.247) ANSI C63.10-2020 + Cor.1-2023
Verdict Summary	IN COMPLIANCE
Documented by (name / position & signature)	Tim Cao/ Project Manager 
Approved by (name / position & signature)	Frank He/ Technical Manager 
Date of issue	2025-12-18
Report Version	V1.1
Report template No.	Template_FCC Part 15C-RF-V1.0

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COMPETENCES AND GUARANTEES

DEKRA is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

DEKRA is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

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GENERAL CONDITIONS

Test Location A	No. 99, Hongye Road, Suzhou Industrial Park Suzhou, 215006, P.R. China	
Test Location B	No. 8213, Fanhua Avenue, Baohe District, Hefei City, Anhui Province, China	
Test Facility	Test Location A	Test Location B
	A2LA (Certificate No. 3235.01)	A2LA (Certificate No. 6579.01)
	CNAS (Certificate No. L5313)	CNAS (Certificate No. L21125)
	FCC - Designation Number: CN1199	FCC - Designation Number: CN1231
	Test Firm Registration Number: 566524	Test Firm Registration Number: 690292
	ISED - CAB identifier: CN0040	ISED - CAB identifier: CN0175
	IC#: 4075B	IC#: 32222
Date (receive sample)	Sept. 15, 2025	
Date (start test)	Sept. 16, 2025	
Date (finish test)	Nov. 16, 2025	
Note: Radiated Emission and Radiated Emission Band Edge were completed at Test Location B, and other tests were completed at Test Location A.		

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or Competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA.
5. The measurement result is considered in conformance with the requirement if it is within the prescribed limit, it is not necessary to account the uncertainty associated with the measurement result.

DOCUMENT HISTORY

Report No.	Version	Description	Issued Date
2580829R.704	V1.0	Initial issue of report.	2025-12-10
2580829R.704	V1.1	Page 120~121: Add data for Emissions in restricted frequency bands above 18GHz. (The test report No.: 2580829R.704 V1.1 is to replace the test report No.: 2580829R.704 V1.0, and test report 2580829R.704 V1.0 is obsoleted.)	2025-12-18

TEST SUMMARY

Test Item	Band ^[2]	FCC rules No.	Test Requirements	Result
Antenna Requirement	--	15.203/15.407(a)	--	PASS
26dB Emission Bandwidth	Band I	15.407(a)(1)	No limit.	PASS
	Band II-A	15.407(a)(2)		
	Band II-C	15.407(a)(2)		
6dB Emission Bandwidth	Band III	15.407(e)	≥ 500 kHz.	PASS
99% Occupied Bandwidth	Band I	KDB 789033 D02S D	No limit.	PASS
	Band II-A			
	Band II-C			
	Band III			
Duty Cycle	Band I Band II-A Band II-C Band III	--	No limit.	PASS
Maximum Conducted Output Power	Band I	15.407(a)	< 250mW	PASS
	Band II-A	15.407(a)(2)	<MIN{250mW,11dBm+10*lg(EBW)}	
	Band II-C			
	Band III	15.407(a)(3)	< 1W	
Maximum Power Spectral Density	Band I	15.407(a)	<11dBm/MHz	PASS
	Band II-A	15.407(a)(2)	<11dBm/MHz	
	Band II-C			
	Band III	15.407(a)(3)	<30dBm/500KHz	
Unwanted Emissions that fall Out of the Restricted Bands (Radiated)	Band I	15.209 15.407(b)	F<1GHz: §15.209/§7.2.5 limit (QP). F≥1GHz & out-restricted: <-27dBm/MHz PK e.i.r.p. (exl. 5.15-5.35 GHz). F≥1GHz & in-restricted: §15.209/§7.2.5 limit (AV&PK).	PASS
	Band II-A	15.407(b) 15.209	F<1GHz: §15.209/§7.2.5 limit (QP). F≥1GHz & out-restricted: <-27dBm/MHz PK e.i.r.p. (exl. 5.25-5.35 GHz).	PASS

			F $\geq$ 1GHz & in-restricted: §15.209/§7.2.5 limit (AV&PK).	
	Band II-C	15.407(b) 15.209	F<1GHz: §15.209/§7.2.5 limit (QP). F $\geq$ 1GHz & out-restricted: <-27dBm/MHz PK e.i.r.p. (exl. 5.47-5.725 GHz). F $\geq$ 1GHz & in-restricted: §15.209/§7.2.5 limit (AV&PK).	PASS
	Band III	15.407(b) 15.209	F<1GHz: §15.209/§7.2.5 limit (QP) F $\geq$ 1GHz & out-restricted:(QP) a) 27 dBm/MHz at frequencies from the band edges decreasing linearly to 15.6 dBm/MHz at 5 MHz above or below the band edges; b) 15.6 dBm/MHz at 5 MHz above or below the band edges decreasing linearly to 10 dBm/MHz at 25 MHz above or below the band edges; c) 10 dBm/MHz at 25 MHz above or below the band edges decreasing linearly to -27 dBm/MHz at 75 MHz above or below the band edges; and d) -27 dBm/MHz at frequencies more than 75 MHz above or below the band edges. F $\geq$ 1GHz & in-restricted: §15.209/§7.2.5 limit (AV&PK).	PASS
Unwanted Emissions in the Restricted Bands (Radiated)	Band I Band II-A Band II-C Band III	15.209	---	PASS
AC Power Line Conducted Emissions	Band I Band II-A Band II-C Band III	15.207	---	PASS
Frequency Stability	Band I Band II-A Band II-C Band III	15.407(g)	Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual	PASS
Dynamic Frequency Selection (DFS)	Band II-A Band II-C	15.407(h)	---	PASS
Remark: Band I: 5150-5250MHz Band II-A: 5250-5350MHz Band II-C: 5470-5725MHz Band III: 5725-5850MHz				

USED EQUIPMENT

Location A: Conducted Test/ TR8

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date	Firmware Version	Software version
Wireless Connectivity Tester	R&S	CMW 270	102593	2025.05.10	2026.05.09	V 4.0.60	N/A
Coaxial Cable	N/A	N/A	2477	2025.06.10	2026.06.09	N/A	N/A
Coaxial Cable	N/A	N/A	2478	2025.06.10	2026.06.09	N/A	N/A
High and low temperature and fast temperature change test box	ASTUOD	ASTD-FBT-225K	N/A	2025.04.13	2026.04.12	N/A	N/A
Temperature/Humidity Meter	RTS	RTS-8S	RF08	2025.06.17	2026.06.16	N/A	N/A
Test system							
Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date	Firmware Version	Software version
MAX Signal Analyzer	Keysight	N9010A	MY48030494	2024.10.26	2025.10.25	A.14.03	N/A
MAX Signal Analyzer	Keysight	N9010A	MY48030494	2025.09.20	2026.09.19	A.14.03	N/A
RF Control Unit	Tonscend	JS0806-2	22G8060594	2025.01.26	2026.01.25	N/A	N/A
MXG-B RF Vector Signal Generator	Keysight	N5182B	MY61252529	2025.03.23	2026.03.22	B.01.96	N/A
Frequency extender for EXG or MXG	Keysight	N5182BX07	MY59362500	2025.03.23	2026.03.22	N/A	N/A
EXG-B MW Analog Signal Generator	Keysight	N5173B	MY61252566	2025.05.10	2026.05.09	B.01.95	N/A
Test Software	Tonscend	TS1120	JS1120-3	N/A	N/A	N/A	V3.0.22

Location A: AC Power Line Conducted Emission / TR1

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date	Firmware Versiom	Software version
EMI Test Receiver	R&S	ESCI	100726	2025.05.18	2026.05.17	4.42 SP1	N/A
Two-Line V-Network	R&S	ENV 216	101189	2025.05.10	2026.05.09	N/A	N/A
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	2025.03.16	2026.03.15	N/A	N/A
Coaxial Cable	Huber+Suhner	RG 223	TR1-C1	2025.03.16	2026.03.15	N/A	N/A
Impedance Stabilization Network	Teseq GmbH	ISN T800	57318	2025.02.25	2026.02.24	N/A	N/A
Temperature/Humidity Meter	RTS	RTS-8S	EMC01	2025.06.17	2026.06.16	N/A	N/A
Dekra test software	Dekra	N/A	N/A	N/A	N/A	N/A	3

Location A: Radiated Emission(9kHz-1GHz) / AC6

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date	Firmware Version	Software version
Signal analyzer	Agilent	N9020A	MY49100159	2025.05.10	2026.05.09	A 08.54	N/A
TRILOG Broadband Antenna	SCHWARZBECK	VULB 9168	01231	2025.05.28	2026.05.27	N/A	N/A
Loop Antenna	R&S	HFH2-Z2E	101149	2025.04.16	2026.04.15	N/A	N/A
Coaxial Cable	N/A	N/A	2225	2025.06.10	2026.06.09	N/A	N/A
Coaxial Cable	N/A	N/A	2229	2025.06.10	2026.06.09	N/A	N/A
Temperature/ Humidity Meter	RTS	RTS-8S	RF07	2025.06.17	2026.06.16	N/A	N/A
Temperature/ Humidity Meter	RTS	RTS-8S	RF06	2025.06.17	2026.06.16	N/A	N/A
Test Software	Tonscend	JS36	N/A	N/A	N/A	N/A	5.0.0

Test Location B: Radiated Emission Band Edge / AC103

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date	Firmware Version	Software version
Signal analyzer	keysight	N9020B	MY63490118	2025.07.19	2026.07.18	A 08.54	N/A
Bilog Antenna	TESEQ	CBL6112D	64164	2024.11.23	2025.11.22	N/A	N/A
Bilog Antenna	TESEQ	CBL6112D	64164	2025.10.27	2026.10.26	N/A	N/A
Horn Antenna	RF SPIN	DRH18-E	KV2D11A18ES	2024.11.02	2025.11.01	N/A	N/A
Horn Antenna	RF SPIN	DRH18-E	KV2D11A18ES	2025.10.19	2026.10.18	N/A	N/A
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	01312	2024.10.28	2025.10.27	N/A	N/A
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	01312	2025.10.24	2026.10.23	N/A	N/A
Amplifier	ESE	LNA0118	LNA23100009	2024.08.10	2025.08.09	N/A	N/A
Amplifier	ESE	LNA0118	LNA23100009	2025.05.10	2026.05.09	N/A	N/A
Amplifier	Tonscend	TAP01018048S	AP23J8060307	2024.11.16	2025.11.15	N/A	N/A
Amplifier	Tonscend	TAP01018048S	AP23J8060307	2025.10.16	2026.10.15	N/A	N/A
Band Reject Filter Group	Tonscend	JS0806-F	23G806F0701	2025.05.10	2026.05.09	N/A	N/A
Temperature/Humidity Meter	RTS	RTS-8S	026	2025.08.29	2026.08.28	N/A	N/A
Test Software	Tonscend	JS36	N/A	N/A	N/A	N/A	5.0.0

UNCERTAINTY

Uncertainties have been calculated according to the DEKRA internal document. The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95% .

Test item Test Location A	Uncertainty
AC Power Line Conducted Emission	9kHz~150kHz: 2.8 dB 150kHz~30MHz: 2.4 dB
Peak Power Output	± 1.3 dB
Radiated Emission(30MHz~1GHz)	Horizontal: 30MHz~300MHz: 3.5 dB, 300MHz~1GHz: 3.6 dB Vertical: 30MHz~300MHz: 3.6 dB, 300MHz~1GHz: 3.5 dB
Radiated Emission(1GHz~40GHz)	Horizontal: 1GHz~40GHz: 5.0 dB Vertical: 1GHz~40GHz: 4.8 dB
RF antenna conducted test	± 1.3 dB
Radiated Emission Band Edge	± 5.0 dB
DTS Bandwidth	± 1.0 kHz
Occupied Bandwidth	± 1.0 kHz
Power Density	± 1.3 dB

Test item Test Location B	Uncertainty
Radiated Emission(30MHz~1GHz)	Horizontal: 30MHz~300MHz: 4.9 dB, 300MHz~1GHz: 4.9 dB Vertical: 30MHz~300MHz: 4.9 dB, 300MHz~1GHz: 4.9 dB
Radiated Emission(1GHz~40GHz)	Horizontal: 1GHz~40GHz: 6.0 dB Vertical: 1GHz~40GHz: 5.8 dB
Radiated Emission Band Edge	± 6.0 dB

1 GENERAL INFORMATION

Product Name	5G Smartphone		
Model No.	Schok Volt SV69S		
Trademark.	Schok		
FCC ID.....	2AM9L-SV69S		
Manufacturer	Schok, LLC.		
Manufacturer Address	5850 Town and Country Blvd, Suite 203 Frisco, TX 75034		
Hardware version.	V1.0		
Software version.....	SV69S4128_v01.01.25_USERDEBUG		
Power Supply	3.87V/2A/20W from internal rechargeable battery which can be charged by AC/DC adapter.		
Test Matrix/ IMEI	RF Conducted	S6835TPFAA000072	
	RF Radiated	S6835TPFAA000103	
Wireless specification	Wi-Fi		
Frequency Range	U-NII-1: 5150 MHz to 5250 MHz		
	U-NII-2A: 5250 MHz to 5350 MHz		
	U-NII-2C: 5470 MHz to 5725 MHz		
	U-NII-3: 5725 MHz to 5850 MHz		
Channel Spacing	802.11a/n/ac: 20MHz		
	802.11n/ac: 40MHz		
	802.11ac: 80MHz		
Modulation technology	802.11a/n/ac: OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM		
DFS Function.....	☐	Master device	
	☐	Slave with radar detection	
	☒	Slave without radar detection	
TPC Function:	☐	Support	☒ Not Support
Antenna Type	Ant 7: PIFA		
	Ant 8: PIFA		
Antenna Gain	Ant 7: -0.59 dBi		
	Ant 8: -0.07 dBi		

Remark:

As above information is provided and confirmed by the applicant. DEKRA is not liable to the accuracy, suitability, reliability or/and integrity of the information.

1.1 TEST ENVIRONMENT

Environment Parameter	101 kPa Selected Values During Tests	
Relative Humidity	44-60 % RH Ambient	
Value	Temperature(°C)	Voltage(V)
NTNV	22~25	3.87
LTLV	-30	3.80
HTLV	50	3.80
LTHV	-30	4.45
HTHV	50	4.45
Remark:		
NV:Normal Voltage	HV: High Extreme Test Voltage	
LV: Low Extreme Test Voltage	NT: Normal Temperature	
LT: Low Extreme Test Temperature	HT: High Extreme Test Temperature	

2 DESCRIPTION OF TEST SETUP

Auxiliary equipment	Type / Version	Manufacturer	Supplied by
(1) Notebook computer	Latitude 5420	DELL	Battery
(2) USB Cable	N/A	N/A	N/A
(3) USB Cable	N/A	N/A	N/A
Software	Type / Version	Manufacturer	Supplied by
SamsungRFTestTool	V3.4	N/A	N/A

Accessories Information	Cable		
	Length used during test [m]	Attached during test	Shielded
(2) USB Cable	1	☒	☒
(3) USB Cable	8	☒	☒

2.1 Power setting in test

Mode	Channel	Frequency (MHz)	Power Setting	
			SISO	MIMO
802.11a 6Mbps	36	5180	20	N/A
	40	5200	20	N/A
	48	5240	20	N/A
	52	5260	20	N/A
	60	5300	20	N/A
	64	5320	20	N/A
	100	5500	20	N/A
	116	5580	20	N/A
	140	5700	20	N/A
	149	5745	20	N/A
	157	5785	20	N/A
	165	5825	20	N/A
802.11n (20MHz) MCS0	36	5180	20	20
	40	5200	20	20
	48	5240	20	20
	52	5260	20	20
	60	5300	20	20
	64	5320	20	20
	100	5500	20	20
	116	5580	20	20
	140	5700	20	20
	149	5745	20	20
	157	5785	20	20
	165	5825	20	20
802.11n	38	5190	20	20

(40MHz) MCS0	46	5230	20	20
	54	5270	20	20
	62	5310	20	20
	102	5510	20	20
	110	5550	20	20
	134	5670	20	20
	151	5755	20	20
	159	5795	20	20
802.11ac (20MHz) MCS0	36	5180	20	20
	40	5200	20	20
	48	5240	20	20
	52	5260	20	20
	60	5300	20	20
	64	5320	20	20
	100	5500	20	20
	116	5580	20	20
	140	5700	20	20
	149	5745	20	20
	157	5785	20	20
	165	5825	20	20
802.11ac (40MHz) MCS0	38	5190	20	20
	46	5230	20	20
	54	5270	20	20
	62	5310	20	20
	102	5510	20	20
	110	5550	20	20
	134	5670	20	20
	151	5755	20	20
	159	5795	20	20
802.11ac (80MHz) MCS0	42	5210	20	20
	58	5290	20	20
	106	5530	20	20
	122	5610	20	20
	155	5775	20	20

3 VERDICT SUMMARY SECTION

This chapter presents an overview of standards and results. Refer to the next chapters for details of measured test results and applied test levels.

3.1 Standards

Standard	Year	Description
FCC CFR Title 47 Part 15 Subpart E	2024	FCC CFR Title 47 Part 15 Subpart E
ANSI C63.10-2020 + Cor.1-2023	2023	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
KDB 789033 D02V02r01	2017	This document provides guidance for determining emissions compliance of U-NII devices under Part 15, Subpart E of the FCC rules.
KDB 662911 D01V02r01	2020	Provision to Allow Measurement of Directional Gain of Multi-Antenna Systems for Compliance Verification
KDB 905462 D02V02	2016	UNII DFS Compliance Procedures New Rules

3.2 Deviation(s) from the Standard(s) / Test Specification(s)

The following deviation(s) was / were made from the published requirements of the listed standards: N/A.

(Please define the deviations from the standard(s) if applicable)

4 TEST ITEMS OF LIMIT/SETUP/PROCEDURE

4.1 AC Power Line Conducted Emission

VERDICT: PASS

4.1.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.207	
Frequency range [MHz]	Limit: QP [dB(μV) ¹⁾]	Limit: AV [dB(μV) ¹⁾]
0,15 - 0,50	66 - 56 ²⁾	56 - 46 ²⁾
0,50 - 5,0	56	46
5,0 - 30	60	50

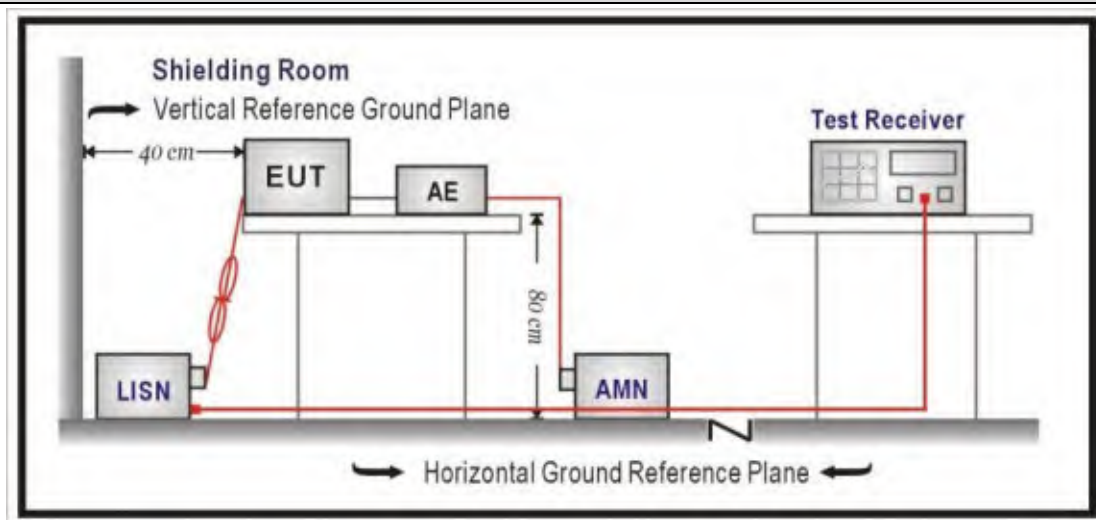
¹⁾ At the transition frequency, the lower limit applies.

²⁾ The limit decreases linearly with the logarithm of the frequency.

NOTE 1: The exclusion band for transmitters shall be considered for transmitters operating at frequencies below 30 MHz.

NOTE 2: Where the AC output port is directly connected (or via a circuit breaker) to the AC power input port of the EUT the AC power output port need not to be tested.

4.1.2 Test Setup



4.1.3 Test Procedure

	References Rule	Chapter	Item
☒	ANSI C63.10-2013	6.2	Standard test method for ac power-line conducted emissions from unlicensed wireless devices

4.2 Radiated Emissions**VERDICT: PASS****4.2.1 Limit****Standard** FCC Part 15 Subpart C Paragraph 15.205

Restricted Bands of operation

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
¹ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(²)
13.36-13.41			

¹Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.²Above 38.6

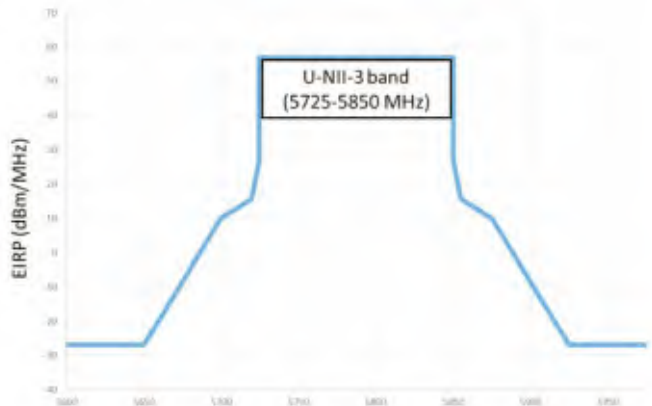
FCC Part 15 Subpart C Paragraph 15.209 (Restricted Band Emissions Limit)

Frequency (MHz)	Field strength (μ V/m)	Field strength (dB μ V/m)	Measurement distance (m)
0.009 - 0.49	2400/F(kHz)	48.5 - 13.8	300 _(Note 1)
0.49 - 1.705	24000/F(kHz)	33.8 - 23	30 _(Note 1)
1.705 - 30	30	29.5	30 _(Note 1)
30 - 88	100	40	3 _(Note 2)
88 - 216	150	43.5	3 _(Note 2)
216 - 960	200	46	3 _(Note 2)
Above 960	500	54	3 _(Note 2)

Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade).

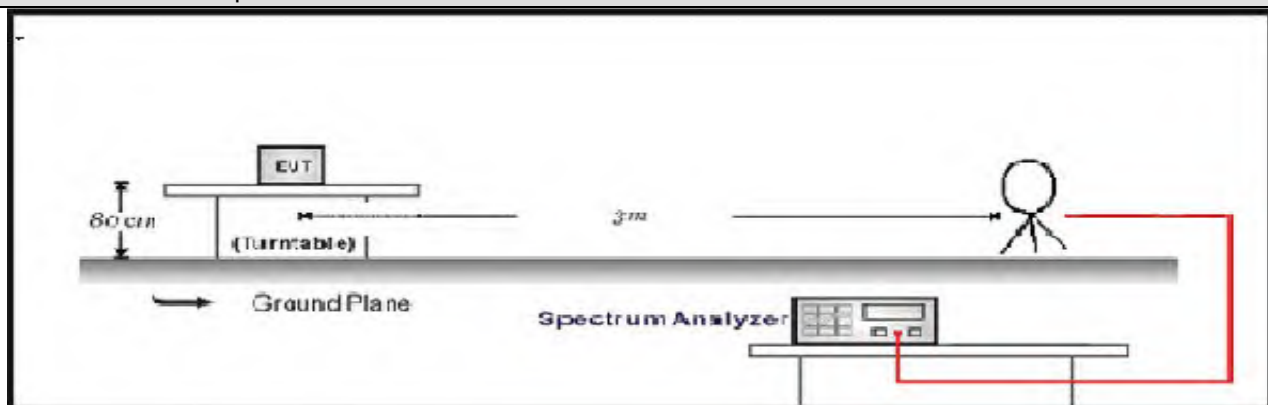
Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

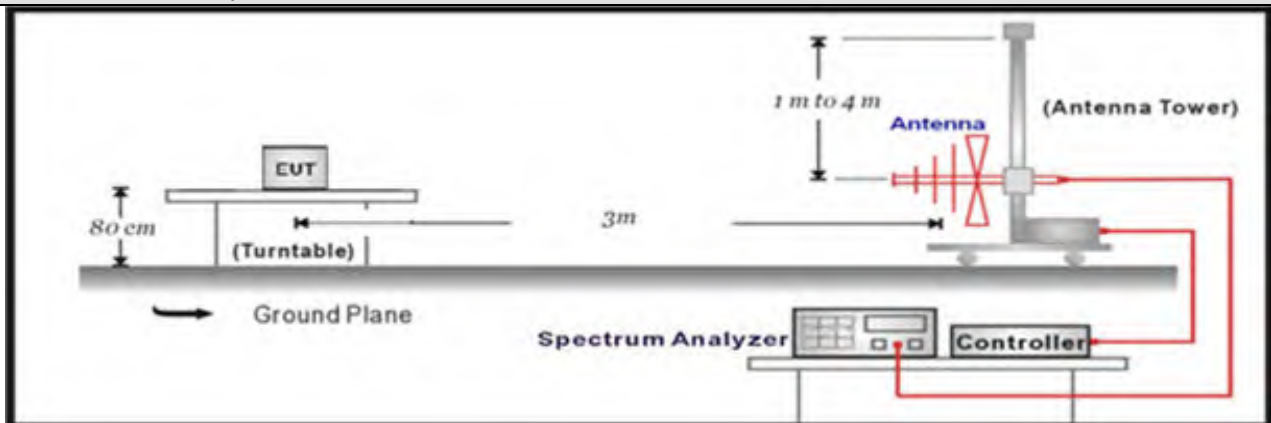
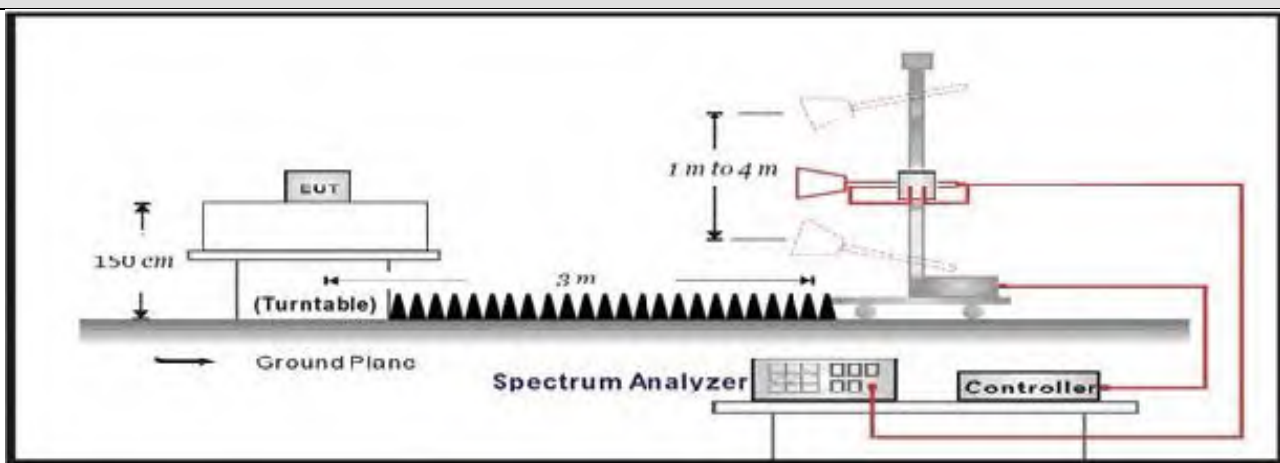
FCC Part 15 Subpart C Paragraph 15.407(5)(b) (Unrestricted Band Emissions Limit)

Operating Frequency Band (MHz)	EIRP Limit (dBm/MHz)	Equivalent Field Strength at 3m (dBμV/m)
5150 - 5250	-27	68.3
5250 - 5350	-27	68.3
5470 - 5725	-27	68.3
Operating Frequency Band (MHz)	EIRP Limit (dBm/MHz)	
5725 - 5850		

4.2.2 Test Setup

Below 30MHz Test Setup:



30MHz-1GHz Test Setup:**Above 1GHz Test Setup:****4.2.3 Test Procedure**

Test Method			
	References Rule	Chapter	Description
☐	ANSI C63.10	12.7.3	Emissions in non-restricted frequency bands
☒	ANSI C63.10	12.7.2	Emissions in restricted frequency bands
☒	ANSI C63.10	12.7.5	Radiated emission measurements
☒	ANSI C63.10	12.7.6	Procedure for peak unwanted emissions measurements above 1000 MHz
☒	ANSI C63.10	12.7.7	Procedures for average unwanted emissions measurements above 1000 MHz
☐	ANSI C63.10	12.7.7.2	Method AD (average detection)—primary method
☒	ANSI C63.10	12.7.7.3	Method VB-A (Alternative)
☒	ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
☒	ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz



	☒	ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz
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4.3 Emission bandwidth

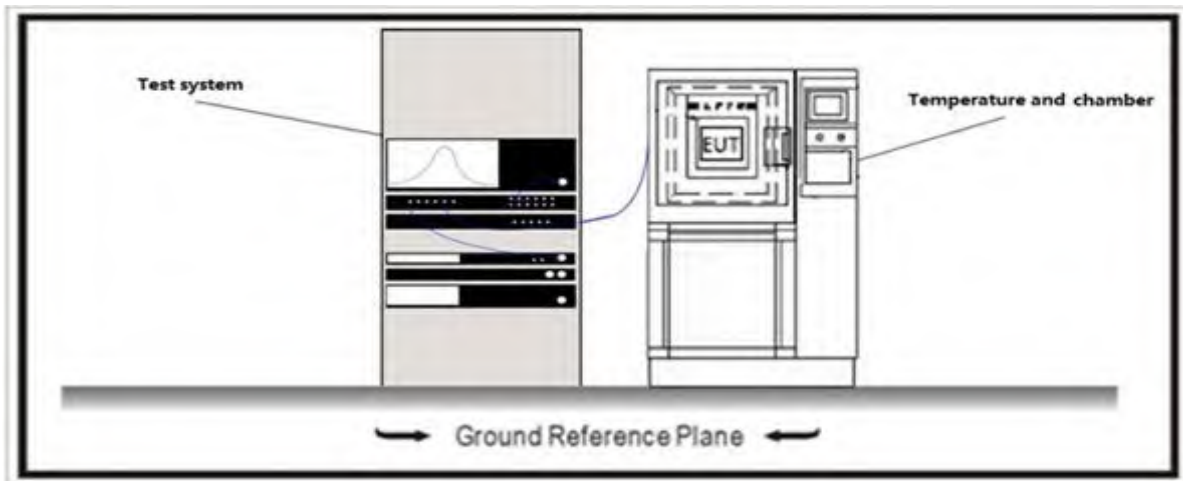
VERDICT: PASS

4.3.1 Limit

Standard FCC CFR Title 47 Part 15 Subpart E: Section 15.407

Within the Frequency band.

4.3.2 Test Setup



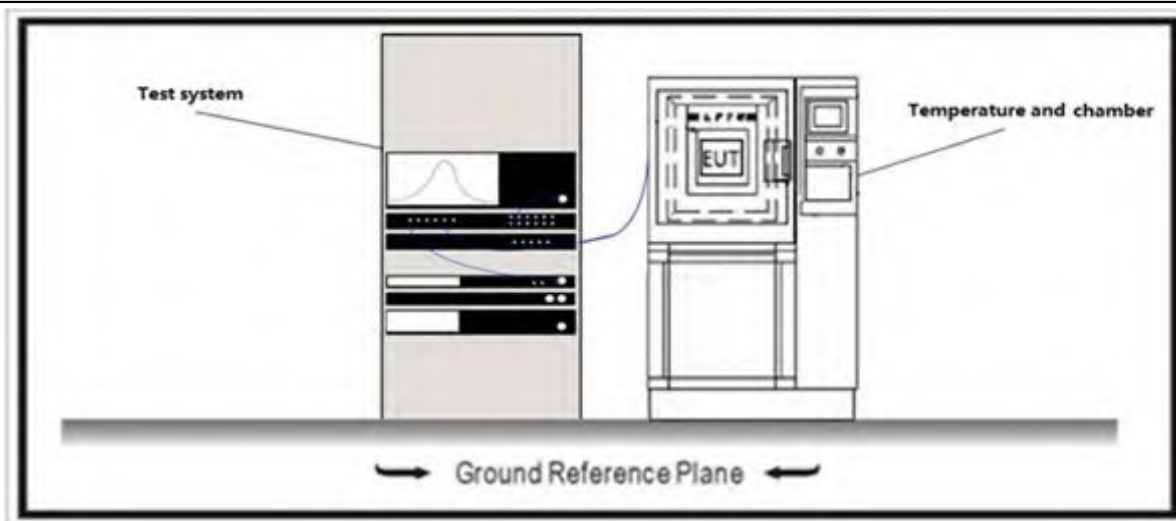
4.3.3 Test Procedure

Test Method

	References Rule	Chapter	Description
☐	ANSI C63.10	12.4	Emission bandwidth and occupied bandwidth
☐	ANSI C63.10	12.4.1	Emission bandwidth (26dB)
☐	ANSI C63.10	12.4.2	Occupied bandwidth (99%)
☒	FCC KDB 789033 D02v02r01	C	Bandwidth Measurement
☒	FCC KDB 789033 D02v02r01	C.1	Emission Bandwidth (26dB)
☐	FCC KDB 789033 D02v02r01	C.2	Minimum Emission Bandwidth for the band 5.725-5.85 GHz (6dB)
☒	FCC KDB 789033 D02v02r01	D	99 Percent Occupied Bandwidth

4.4 6dB bandwidth**VERDICT: PASS****4.4.1 Limit****Standard**

FCC CFR Title 47 Part 15 Subpart E: Section 15.407(e)

6dB Bandwidth $\geq 500\text{kHz}$ **4.4.2 Test Setup****4.4.3 Test Procedure**

Test Method

	References Rule	Chapter	Description
☐	ANSI C63.10	12.4	Emission bandwidth and occupied bandwidth
☐	ANSI C63.10	12.4.1	Emission bandwidth (26dB)
☐	ANSI C63.10	12.4.2	Occupied bandwidth (99%)
☒	FCC KDB 789033 D02v02r01	C	Bandwidth Measurement
☐	FCC KDB 789033 D02v02r01	C.1	Emission Bandwidth (26dB)
☒	FCC KDB 789033 D02v02r01	C.2	Minimum Emission Bandwidth for the band 5.725-5.85 GHz (6dB)
☐	FCC KDB 789033 D02v02r01	D	99 Percent Occupied Bandwidth

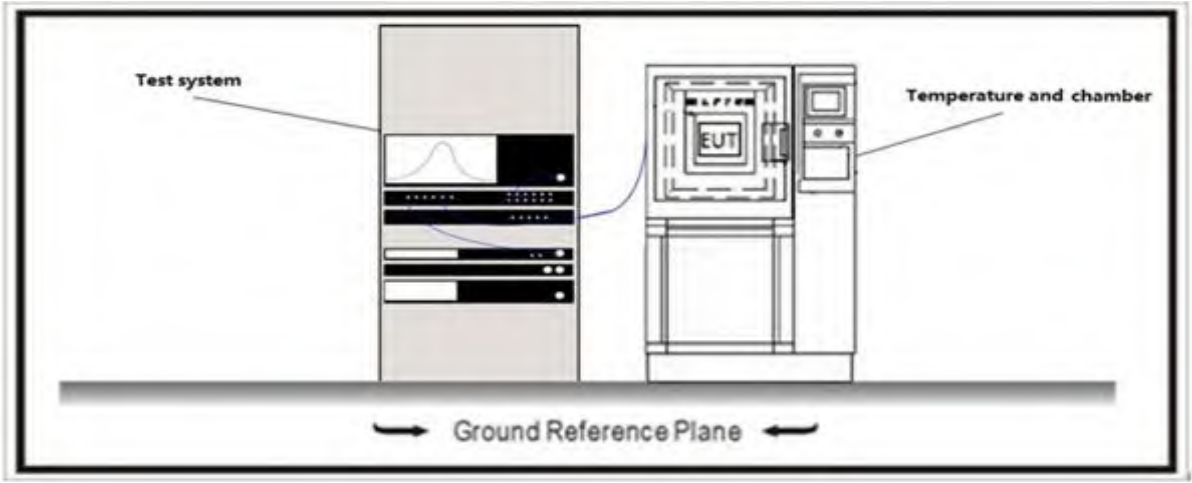
4.5 Duty cycle

VERDICT: PASS

4.5.1 Limit

N/A

4.5.2 Test Setup



4.5.3 Test Procedure

References Rule		Chapter	Description
☒	ANSI C63.10	11.6	Duty cycle (D), transmission duration (T), and maximum power control level

4.6 Power Output

VERDICT: PASS

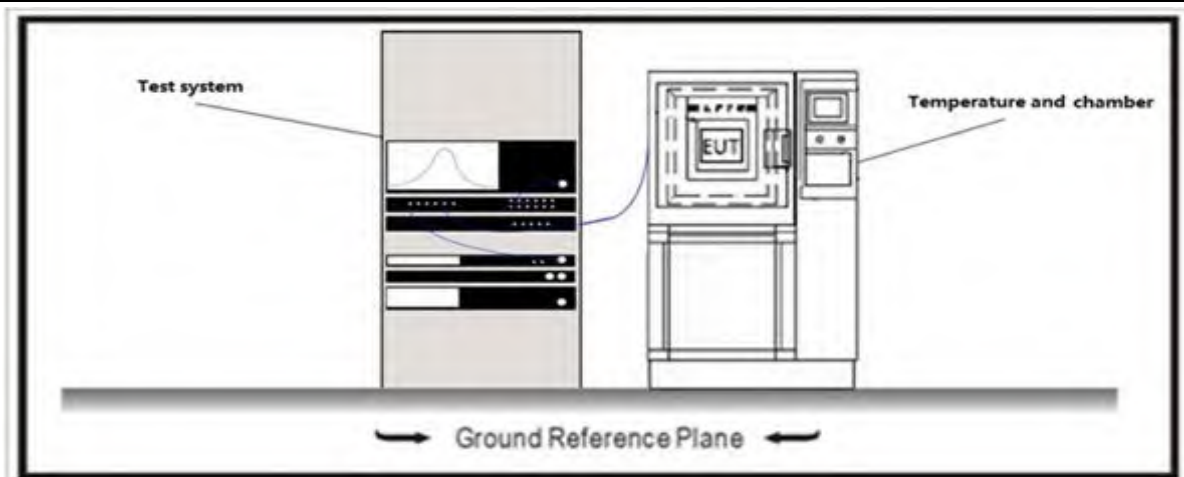
4.6.1 Limit

Standard		FCC Part 15 Subpart E Paragraph 15.407 (a)
☒	For the band 5.15-5.25 GHz	
☒	Outdoor access point: the maximum conducted output power shall not exceed 1 W. If $G_{TX} > 6\text{dBi}$, then $P_{out} \leq 30 - (G_{TX} - 6)$ and $\leq 125\text{mW}$ at any angle above 30 degrees	
☐	Indoor access point: the maximum conducted output power shall not exceed 1 W. If $G_{TX} > 6\text{dBi}$, then $P_{out} \leq 30 - (G_{TX} - 6)$	
☐	Fixed point-to-point access points: the maximum conducted output power shall not exceed 1 W. If $G_{TX} > 23\text{dBi}$, then $P_{out} \leq 30 - (G_{TX} - 23)$	
☐	Mobile and portable client devices: the maximum conducted output power shall not exceed 250mW. If $G_{TX} > 6\text{dBi}$, then $P_{out} \leq 24 - (G_{TX} - 6)$	
☒	For the band 5.25-5.35 GHz:	
☒	The maximum conducted output power shall not exceed 250mW or $11\text{dBm} + 10 \log B$, where B is the 26dB emission bandwidth in MHz. If $G_{TX} > 6\text{dBi}$, then $P_{out} \leq (\text{The lesser of } 24 \text{ or } 11\text{dBm} + 10 \log B) - (G_{TX} - 6)$	
☒	For the 5.47-5.725 GHz:	
☒	The maximum conducted output power shall not exceed 250mW or $11\text{dBm} + 10 \log B$, where B is the 26dB emission bandwidth in MHz. If $G_{TX} > 6\text{dBi}$, then $P_{out} \leq (\text{The lesser of } 24 \text{ or } 11\text{dBm} + 10 \log B) - (G_{TX} - 6)$	
☒	For the band 5.725-5.85 GHz:	
☒	Point-to-multipoint systems (P2M): the maximum conducted output power (P_{out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6 \text{ dBi}$, then $P_{out} = 30 - (G_{TX} - 6)$	
☐	Point-to-point systems (P2P): the maximum conducted output power (P_{out}) shall not exceed the lesser of 1 W	

Note 1 : GTX directional gain of transmitting antennas.

Note 2 : Pout is maximum conducted output power .

4.6.2 Test Setup



4.6.3 Test Procedure

	References Rule		Chapter	Description
☒	ANSI C63.10		12.3	Maximum conducted output power
	☒	ANSI C63.10	12.3.2	Maximum conducted output power measurement using a spectrum analyzer (SA) or EMI receiver
		☐ ANSI C63.10	12.3.2.2	Method SA-1
		☐ ANSI C63.10	12.3.2.3	Method SA-1A (alternative)
		☒ ANSI C63.10	12.3.2.4	Method SA-2
		☐ ANSI C63.10	12.3.2.5	Method SA-2A (alternative)
		☐ ANSI C63.10	12.3.2.6	Method SA-3
		☐ ANSI C63.10	12.3.2.7	Method SA-3A (alternative)
	☒	ANSI C63.10	12.3.3	Maximum conducted output power using a power meter
		☐ ANSI C63.10	12.3.3.1	Method PM
		☒ ANSI C63.10	12.3.3.2	Method PM-G

Directional Gain Calculations for In-Band test method

	References Rule		Chapter	Description
☐	KDB 662911		F2)a)	Basic methodology
	☐	KDB 662911	F2)a) (i)	transmit signals are correlated
	☐	KDB 662911	F2)a) (ii)	transmit signals are uncorrelated
☐	KDB 662911		F2)b)	Sectorized antenna systems.
☐	KDB 662911		F2)c)	Cross-polarized antennas
	☐	ANSI C63.10	F2)c) (i)	Cross-polarized antennas
	☐	ANSI C63.10	F2)c) (ii)	Multiple antennas
☐	KDB 662911		F2)e)	Spatial stream
	☐	KDB 662911	F2)e) (i)	Antennas have the same gain
	☐	KDB 662911	F2)e) (ii)	Antenna have the different gain with one spatial stream
	☐	KDB 662911	F2)e) (iii)	Antenna have the different gain with more than one spatial stream
☒	KDB 662911		F2)f)	Cyclic Delay Diversity (CDD)
	☒	KDB 662911	F2)f) (i)	Antennas have the same gain
	☐	KDB 662911	F2)f) (ii)	Antenna have the different gain with one spatial stream



	☐	KDB 662911	F2)f) (iii)	Antenna have the different gain with more than one spatial stream
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4.7 Maximum Power Spectral Density**VERDICT: PASS****4.7.1 Limit****Standard** FCC Part 15 Subpart E Paragraph 15.407 (a)

☒	For the band 5.15-5.25 GHz
☒	Outdoor access point: the maximum power spectral density shall not exceed 17 dBm/MHz. If $G_{TX} > 6\text{dBi}$, then $P_{out} \leq 17 - (G_{TX} - 6)$
☐	Indoor access point: the maximum power spectral density shall not exceed 17 dBm/MHz. If $G_{TX} > 6\text{dBi}$, then $P_{out} \leq 17 - (G_{TX} - 6)$
☐	Fixed point-to-point access points: the maximum power spectral density shall not exceed 17 dBm/MHz. If $G_{TX} > 23\text{dBi}$, then $P_{out} \leq 17 - (G_{TX} - 23)$
☐	Mobile and portable client devices: the maximum power spectral density shall not exceed 11 dBm/MHz. If $G_{TX} > 6\text{dBi}$, then $P_{out} \leq 11 - (G_{TX} - 6)$
☒	For the 5.25-5.35 GHz:
☒	The maximum power spectral density shall not exceed 11 dBm/MHz. If $G_{TX} > 6\text{dBi}$, then $P_{out} \leq 11 - (G_{TX} - 6)$
☒	For the 5.47-5.725 GHz:
☒	The maximum power spectral density shall not exceed 11 dBm/MHz. If $G_{TX} > 6\text{dBi}$, then $P_{out} \leq 11 - (G_{TX} - 6)$
☒	For the band 5.725-5.85 GHz:
☒	The maximum power spectral density shall not exceed 30 dBm/500KHz. If $G_{TX} > 6\text{dBi}$, then $P_{out} \leq 30 - (G_{TX} - 6)$

Note 1 : GTX directional gain of transmitting antennas.

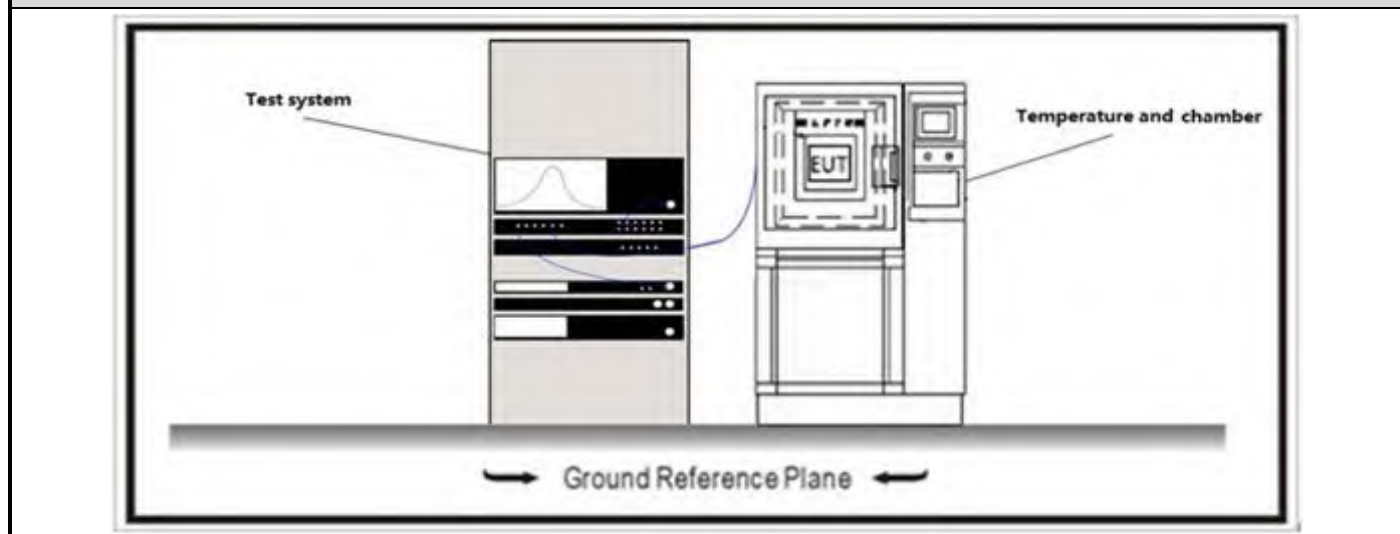
Note 2 : Pout is maximum conducted output power .

Directional Gain Calculations for In-Band test method

	References Rule	Chapter	Description
☐	KDB 662911	F2)a)	Basic methodology
☐	KDB 662911	F2)a) (i)	transmit signals are correlated
☐	KDB 662911	F2)a) (ii)	transmit signals are uncorrelated
☐	KDB 662911	F2)b)	Sectorized antenna systems.
☐	KDB 662911	F2)c)	Cross-polarized antennas
☐	ANSI C63.10	F2)c) (i)	Cross-polarized antennas
☐	ANSI C63.10	F2)c) (ii)	Multiple antennas
☐	KDB 662911	F2)e)	Spatial stream
☐	KDB 662911	F2)e) (i)	Antennas have the same gain
☐	KDB 662911	F2)e) (ii)	Antenna have the different gain with one spatial stream

☐	KDB 662911	F2)e) (iii)	Antenna have the different gain with more than one spatial stream
☒	KDB 662911	F2)f)	Cyclic Delay Diversity (CDD)
☒	KDB 662911	F2)f) (i)	Antennas have the same gain
☐	KDB 662911	F2)f) (ii)	Antenna have the different gain with one spatial stream
☐	KDB 662911	F2)f) (iii)	Antenna have the different gain with more than one spatial stream

4.7.2 Test Setup



4.7.3 Test Procedure

	References Rule	Chapter	Description
☒	ANSI C63.10	12.5	Peak power spectral density
☒	FCC KDB 789033 D02v02r01	F	Maximum Power Spectral Density (PSD)

4.8 Radiated Emission Band Edge**VERDICT: PASS****4.8.1 Limit****Standard** FCC Part 15 Subpart C Paragraph 15.205

Restricted Bands of operation

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
¹ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(²)
13.36-13.41			

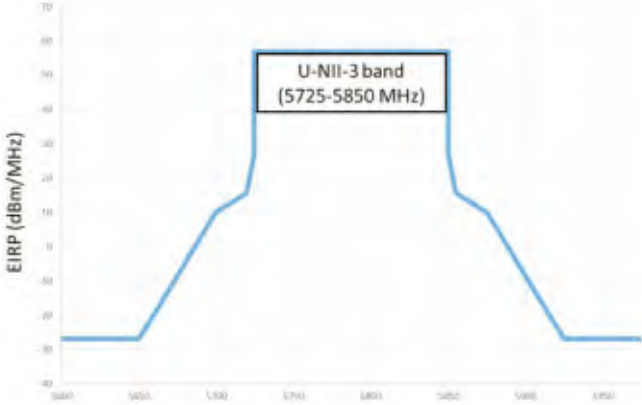
¹Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.²Above 38.6

FCC Part 15 Subpart C Paragraph 15.209 (Restricted Band Emissions Limit)

Frequency (MHz)	Field strength (μ V/m)	Field strength (dB μ V/m)	Measurement distance (m)
0.009 - 0.49	2400/F(kHz)	48.5 - 13.8	300 _(Note 1)
0.49 - 1.705	24000/F(kHz)	33.8 - 23	30 _(Note 1)
1.705 - 30	30	29.5	30 _(Note 1)
30 - 88	100	40	3 _(Note 2)
88 - 216	150	43.5	3 _(Note 2)
216 - 960	200	46	3 _(Note 2)
Above 960	500	54	3 _(Note 2)

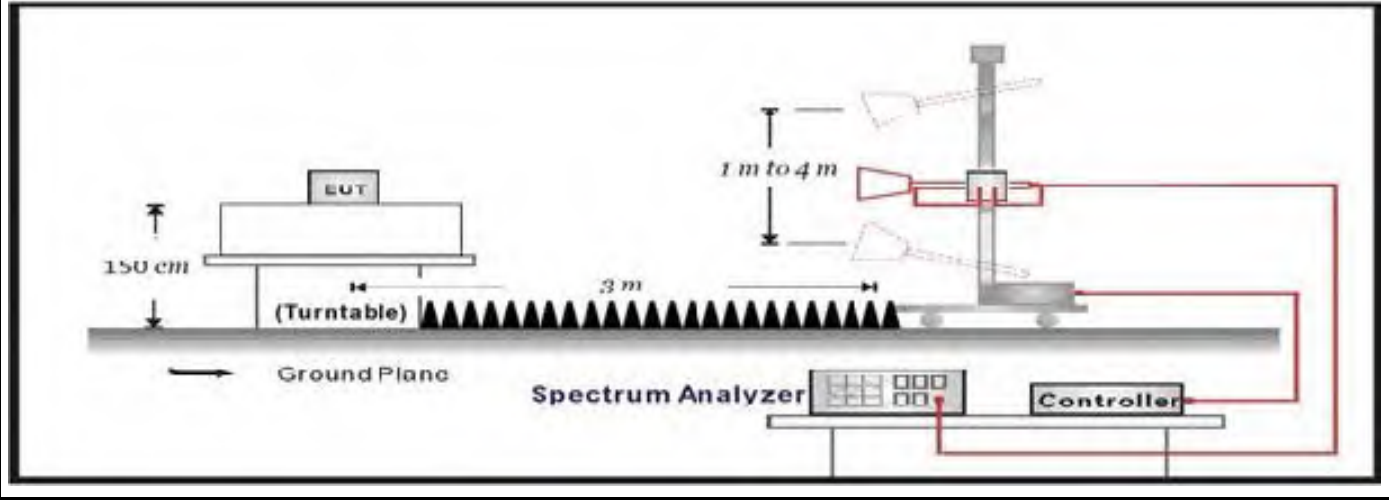
Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified

distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade).
Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment.
Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

FCC Part 15 Subpart C Paragraph 15.407(5)(b) (Unrestricted Band Emissions Limit)		
Operating Frequency Band (MHz)	EIRP Limit (dBm/MHz)	Equivalent Field Strength at 3m (dBμV/m)
5150 - 5250	-27	68.3
5250 - 5350	-27	68.3
5470 - 5725	-27	68.3
Operating Frequency Band (MHz)	EIRP Limit (dBm/MHz)	
5725 - 5850		

4.8.2 Test Setup

Above 1GHz Test Setup:



4.8.3 Test Procedure

	References Rule		Chapter	Description
☐	ANSI C63.10		12.7.3	Emissions in non-restricted frequency bands
☒	ANSI C63.10		12.7.2	Emissions in restricted frequency bands
	☐	ANSI C63.10	12.7.5	Radiated emission measurements
	☒	ANSI C63.10	12.7.6	Procedure for peak unwanted emissions measurements above 1000 MHz
	☒	ANSI C63.10	12.7.7	Procedures for average unwanted emissions measurements above 1000 MHz
	☐	ANSI C63.10	12.7.7.2	Method AD (average detection)—primary method
	☒	ANSI C63.10	12.7.7.3	Method VB-A (Alternative)
	☐	ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
	☐	ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
	☐	ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz
☐	FCC KDB 789033 D02v02r01		G.2	Unwanted Emissions that fall Outside of the Restricted Bands
☐	FCC KDB 789033 D02v02r01		G.1	Unwanted Emissions in the Restricted Bands
	☐	FCC KDB 789033 D02v02r01	G.4	Procedure for Unwanted Emissions Measurements below 1000 MHz
	☐	FCC KDB 789033 D02v02r01	G.5	Procedure for Unwanted Maximum Emissions Measurements above 1000 MHz
	☐	FCC KDB 789033 D02v02r01	G.6	Procedures for Average Unwanted Emissions Measurements above 1000 MHz
	☐	FCC KDB 789033 D02v02r01	G.6.c	Method AD (Average detection)—primary method
	☐	FCC KDB 789033 D02v02r01	G.6.d	Method VB (Averaging using reduced video bandwidth): Alternative method.

4.9 Frequency Stability

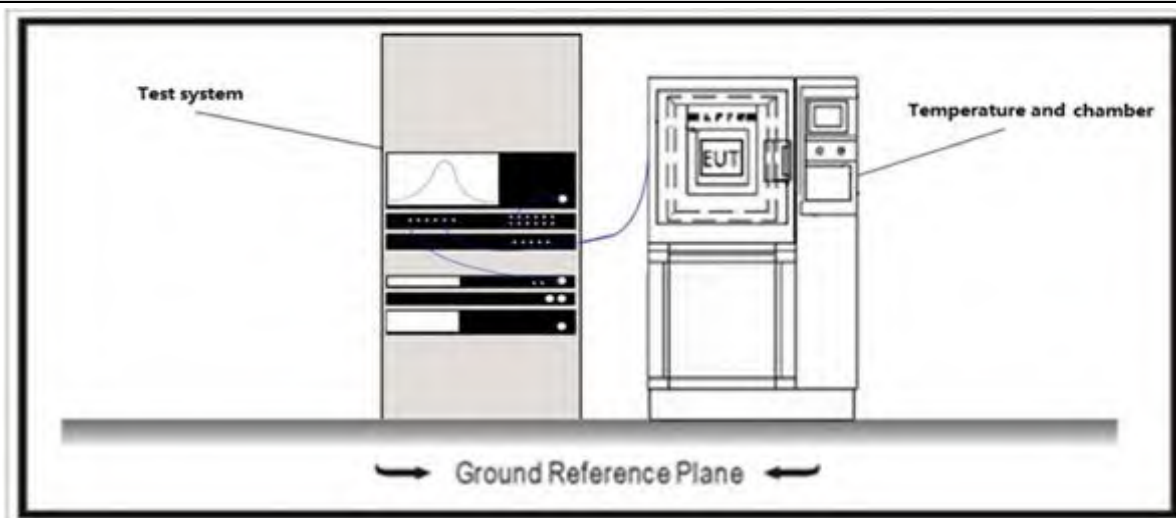
VERDICT: PASS

4.9.1 Limit:

In-band emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

The transmitter center frequency tolerance shall be ± 20 ppm maximum for the 5 GHz band and ± 25 ppm maximum for the 2.4 GHz band.

4.9.2 Test Setup



4.9.3 Test Procedure

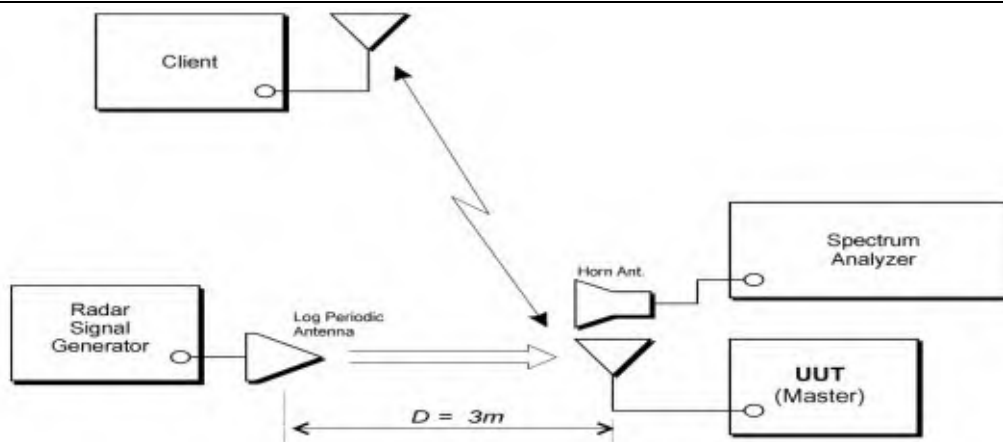
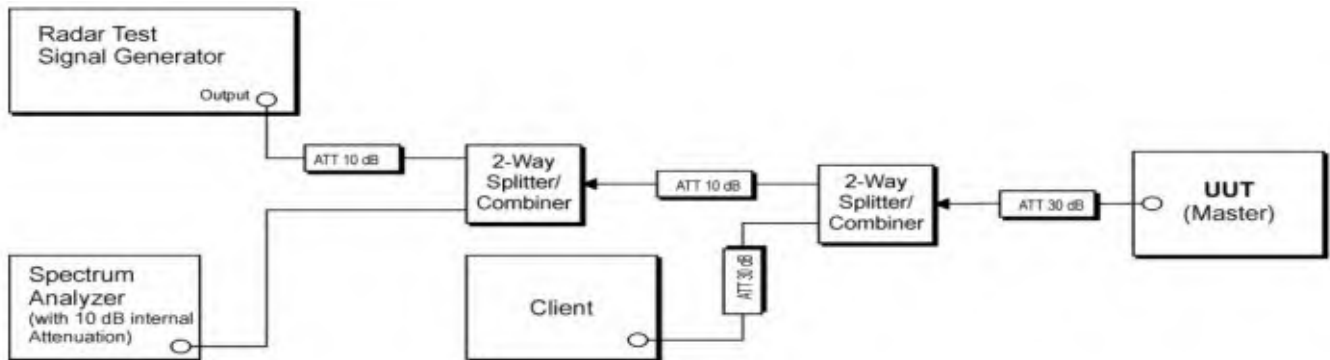
	References Rule		Chapter	Description
☒	ANSI C63.10		6.8	Frequency stability tests
	☒	ANSI C63.10	6.8.1	Frequency stability with respect to ambient temperature
	☒	ANSI C63.10	6.8.2	Frequency stability when varying supply voltage

4.10 Dynamic Frequency Selection (DFS)**VERDICT: PASS****4.10.1 Limit**

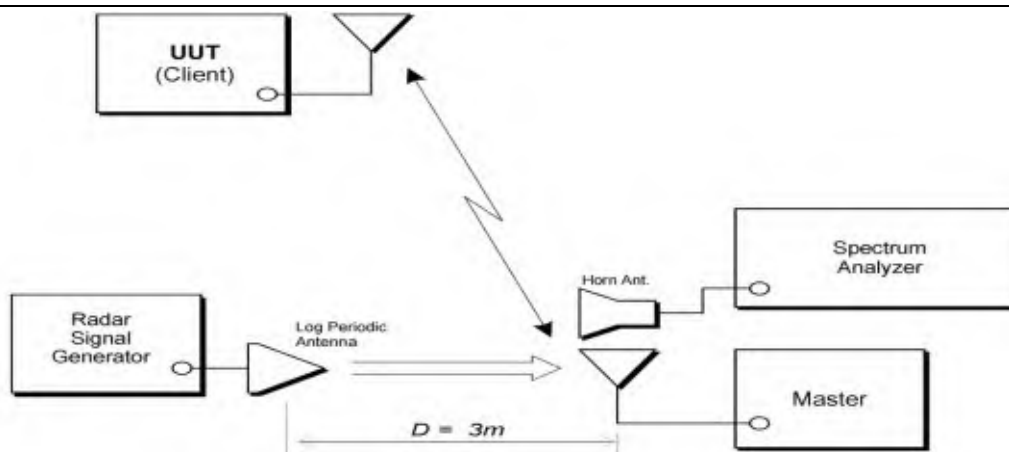
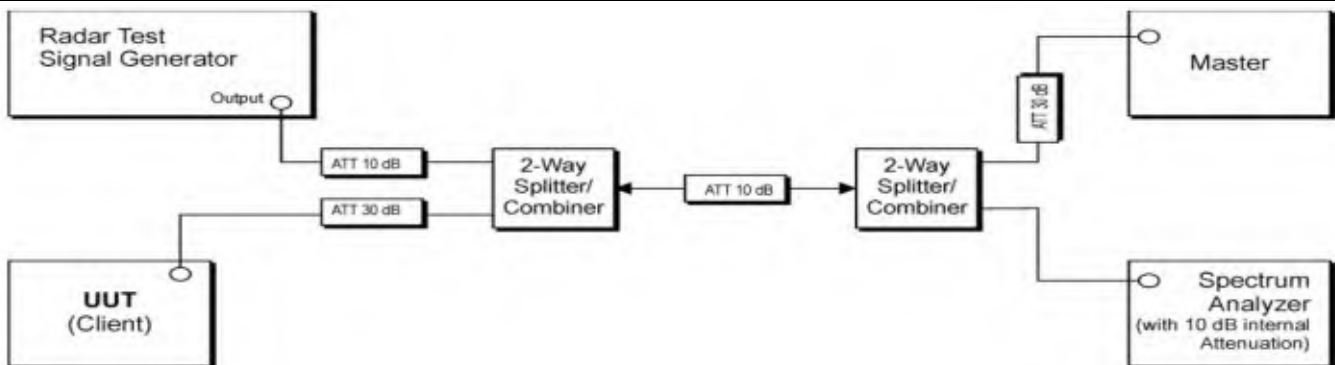
Standard	FCC Part 15 Subpart E Paragraph 15.407(h)
Channel Availability Check (CAC)	
60 Seconds	
Radar Detection Threshold Level	
EIRP $\geq$ 200 milliwatt, level value: -64 dBm EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz, level value: -62 dBm EIRP < 200 milliwatt that do not meet the power spectral density requirement, level value: -62 dBm Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna. Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response. Note3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.	
U-NII Detection Bandwidth	
Minimum 100% of the UNII 99% transmission power bandwidth. See Note Note: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.	
In-Service Monitoring	
the RLAN device shall be capable of detecting any of the radar test signals. Detection Probability (P_d): 60%	
Channel Shutdown - Channel Move Time.	
10 Seconds	
Channel Shutdown - Channel Closing Transmission Time	
200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period.(See Notes 1 and 2) Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst. Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions. Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.	
Non-Occupancy Period	
Minimum 30 minutes	

4.10.2 Test Setup

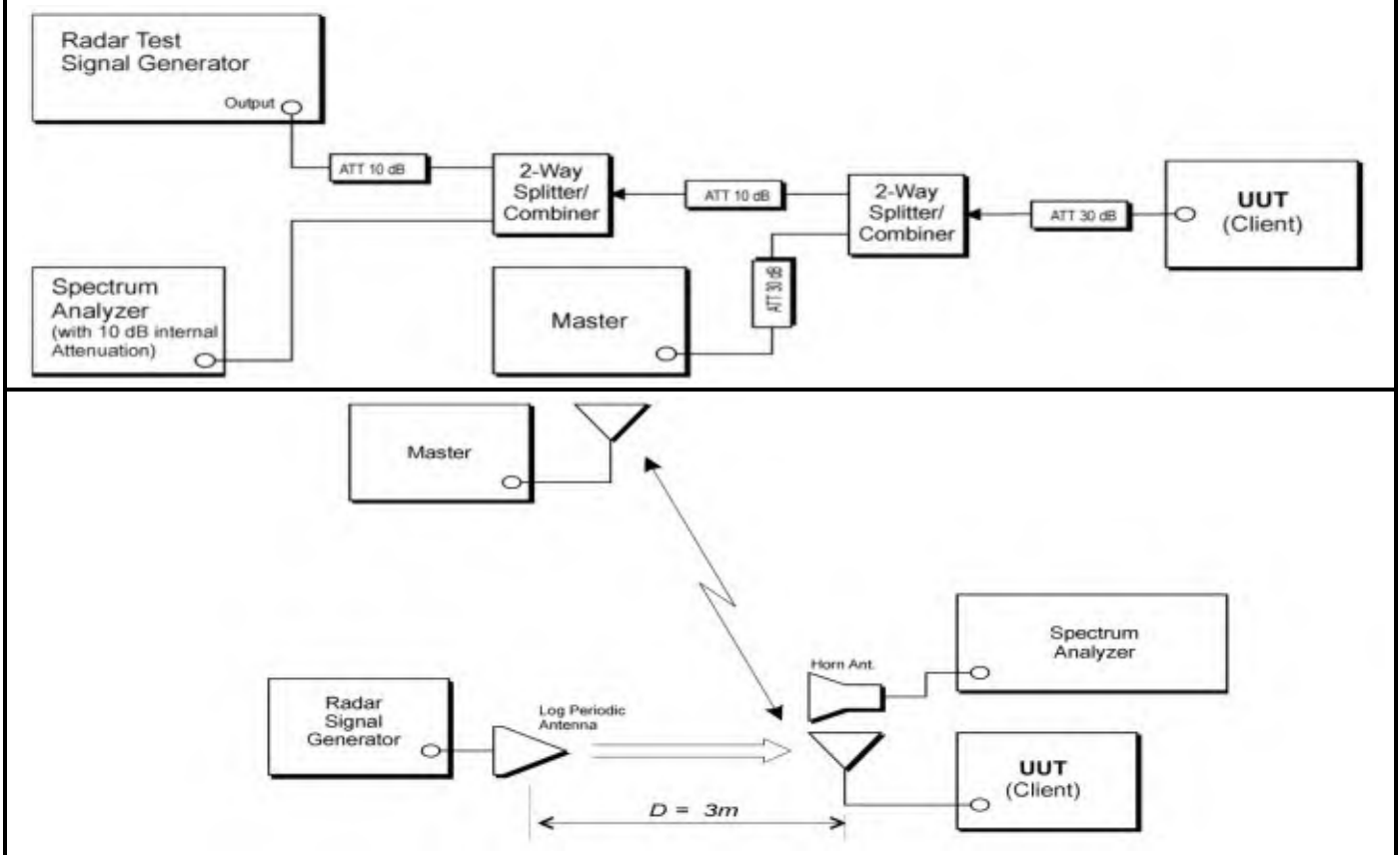
Master with injection at the Master



Client with injection at the Master



Client with injection at the Client



4.10.3 Test Procedure

References Rule	Description
☒ KDB 905462 D02	Dynamic Frequency Selection (DFS)

For a UUT with antenna connector(s) and using dedicated external antenna(s), or for a UUT with integral antenna(s) but with a temporary antenna connector(s) provided, conducted measurements shall be used.

When performing DFS testing on smart antenna systems, a power splitter/combiner shall be used to combine all the receive chains (antenna inputs) into a single test point. The insertion loss of the splitter/combiner shall be taken into account.

The UUT shall be configured to operate at the highest transmitter output power setting.

Beamforming gain Y of smart antenna systems, operating in a mode where beamforming is active, is ignored in order to test the worst case.

The centre frequencies of the radar test signals used in the test procedures below shall fall within the central 80 % of the Occupied Channel Bandwidth of the RLAN channel under test.

Tests with a radar burst at the beginning of the Channel Availability Check Time

a) The signal generator and UUT are connected using Set-up A as described in clause 5.4.8.1.3.1. The power of the UUT is switched off.

b) The UUT is powered on at T_0 . T_1 denotes the instant when the UUT has completed its power-up sequence ($T_{\text{power_up}}$) and is ready to start the radar detection. The *Channel Availability Check* is expected to commence on Ch_r at instant T_1 and is expected to end no sooner than $T_1 + T_{\text{ch_avail_check}}$ unless the radar test signal is detected sooner. Additional verification may be needed to define T_1 in case it is not exactly known or indicated by the UUT.

c) A single radar burst is generated on Ch_r using the reference test signal defined in table D.3 at a level of up to 10 dB above the level defined in clause 5.4.8.2.1.1. This single-burst radar test signal shall commence within 2 s after time T_1 .

d) It shall be recorded if the radar test signal was detected.

e) A timing trace or description of the observed timing and behaviour of the UUT shall be recorded.

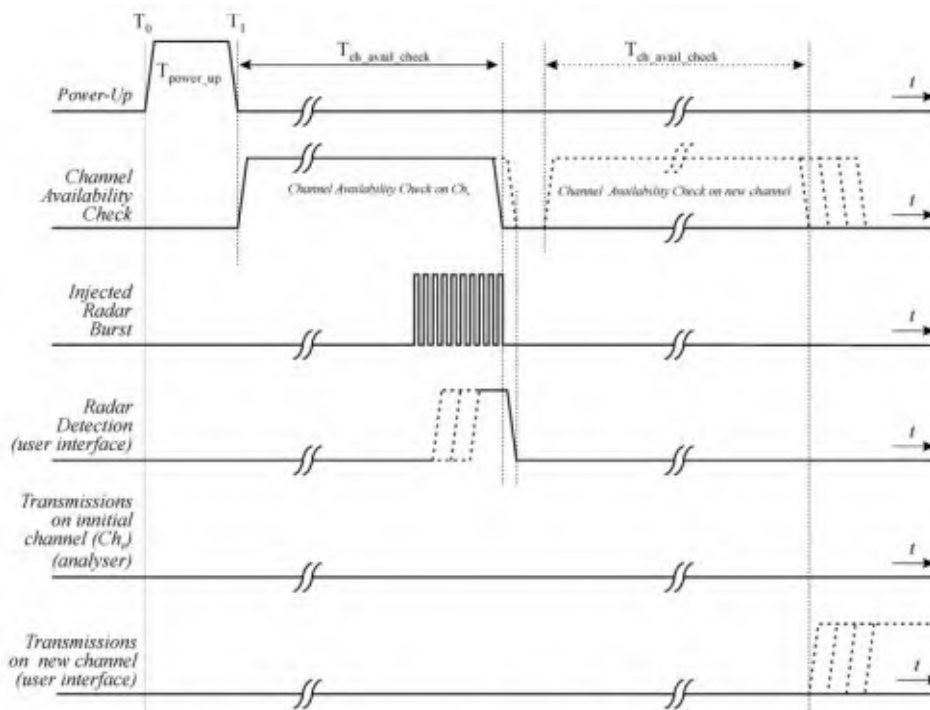


Figure 9: Example of timing for radar testing towards the end of the Channel Availability Check Time

In-Service Monitoring for Channel Move Time, Channel Closing Transmission Time and Non-Occupancy Period

These tests define how the following DFS parameters are verified during *In-Service Monitoring*;

- Channel Closing Transmission Time
- Channel Move Time
- Non-Occupancy Period

The steps below define the procedure to determine the above mentioned parameters when a radar Burst with a level equal to the DFS Detection Threshold + 1dB is generated on the Operating Channel of the UNII device (In- Service Monitoring).

- a) One frequency will be chosen from the Operating Channels of the UUT within the 5250-5350 MHz or 5470-5725 MHz bands. For 802.11 devices, the test frequency must contain control signals. This can be verified by disabling channel loading and monitoring the spectrum analyzer. If no control signals are detected, another frequency must be selected within the emission bandwidth where control signals are detected.
- b) In case the UUT is a U-NII device operating as a Client Device (with or without DFS), a U-NII device operating as a Master Device will be used to allow the UUT (Client device) to Associate with the Master Device. In case the UUT is a Master Device, a U-NII device operating as a Client Device will be used and it is assumed that the Client will Associate with the UUT (Master). In both cases for conducted tests, the Radar Waveform generator will be connected to the Master Device. For radiated tests, the emissions of the Radar Waveform generator will be directed towards the Master Device. If the Master Device has antenna gain, the main beam of the antenna will be directed toward the radar emitter. Vertical polarization is used for testing.
- c) Stream the channel loading test file from the Master Device to the Client Device on the test Channel for the entire period of the test.
- d) At time T_0 the Radar Waveform generator sends a Burst of pulses for one of the Radar Type 0 in **Table 5** at levels defined in **Table 3**, on the Operating Channel. An additional 1 dB is added to the radar test signal to ensure it is at or above the DFS Detection Threshold, accounting for equipment variations/errors.
- e) Observe the transmissions of the UUT at the end of the radar Burst on the Operating Channel for duration greater than 10 seconds. Measure and record the transmissions from the UUT during the observation time (Channel Move Time). Measure and record the Channel Move Time and Channel Closing Transmission Time if radar detection occurs. **Figure 17** illustrates Channel Closing Transmission Time.
- f) When operating as a Master Device, monitor the UUT for more than 30 minutes following instant T_2 to verify that the UUT does not resume any transmissions on this Channel. Perform this test once and record the measurement result.
- g) In case the UUT is a U-NII device operating as a Client Device with In-Service Monitoring, perform steps a) to f).

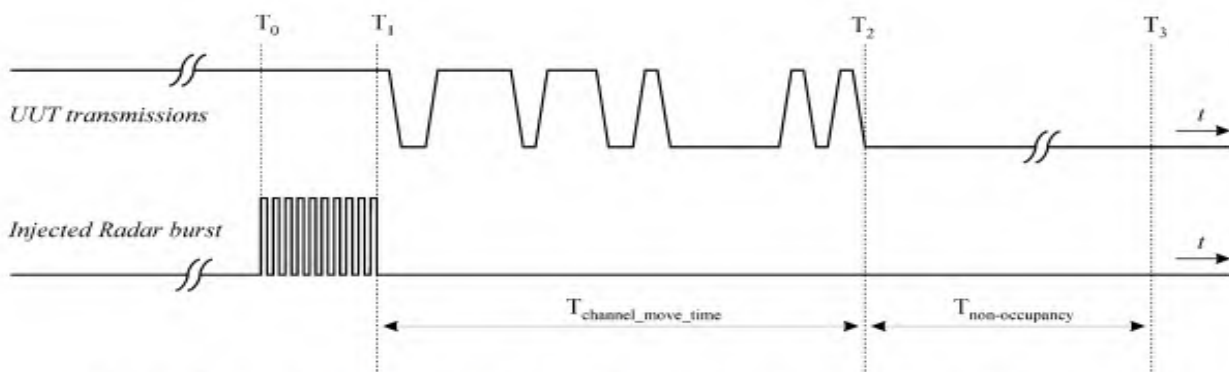


Figure 17: Example of Channel Closing Transmission Time & Channel Closing Time

Statistical Performance Check

The steps below define the procedure to determine the minimum percentage of successful detection requirements found in **Tables 5-7** when a radar burst with a level equal to the DFS Detection Threshold + 1dB is generated on the Operating Channel of the U-NII device (In- Service Monitoring).

- a) One frequency will be chosen from the Operating Channels of the UUT within the 5250-5350 MHz or 5470-5725 MHz bands.
- b) In case the UUT is a U-NII device operating as a Client Device (with or without Radar Detection), a U-NII device operating as a Master Device will be used to allow the UUT (Client device) to Associate with the Master Device. In case the UUT is a Master Device, a U-NII device operating as a Client Device will be used and it is assumed that the Client will Associate with the UUT (Master). In both cases for conducted tests, the Radar Waveform generator will be connected to the Master Device. For radiated tests, the emissions of the Radar Waveform generator will be directed towards the Master Device. If the Master Device has antenna gain, the main beam of the antenna will be directed toward the radar emitter. Vertical polarization is used for testing.
- c) Stream the channel loading test file from the Master Device to the Client Device on the test Channel for the entire period of the test.
- d) At time T₀ the Radar Waveform generator sends the individual waveform for each of the Radar Types 1- 6 in **Tables 5-7**, at levels defined in **Table 3**, on the Operating Channel. An additional 1 dB is added to the radar test signal to ensure it is at or above the DFS Detection Threshold, accounting for equipment variations/errors.
- e) Observe the transmissions of the UUT at the end of the Burst on the Operating Channel for duration greater than 10 seconds for Radar Type 0 to ensure detection occurs.
- f) Observe the transmissions of the UUT at the end of the Burst on the Operating Channel for duration greater than 22 seconds for Long Pulse Radar Type 5 to ensure detection occurs.
- g) In case the UUT is a U-NII device operating as a Client Device with In-Service Monitoring, perform steps a) to f).

Radar Detection Threshold Level (during Off-Channel CAC)

- a) The signal generator, the UUT (master device) and a slave device associated with the UUT, are connected using *Set-up A* described in clause 5.4.8.1.3.1.
- b) The UUT shall transmit a test transmission sequence in accordance with clause 5.3.1.2 on (all) the *Operating Channel(s)*.
- c) A multi burst radar test signal is generated on Chr using any of the radar test signals defined in table D.4 at a level defined in clause 5.4.8.2.1.1. The radar test signal used shall be recorded in the report. This multi burst radar test signal shall commence at T₃ and shall continue for the total duration of the *Off-Channel CAC Time* ($T_{\text{Off-Channel_CAC}}$) as declared by the manufacturer in accordance with table D.1. For channels within the 5 600 MHz to 5 650 MHz band test signals #3 and #4 shall not be used and the Burst Interval Time (BIT) during the test shall be varied between 8 min and 10 min. For channels outside this band, the Burst Interval Time (BIT) during the test shall be varied between 45 s and 60 s.
- d) The UUT shall detect the radar test signal before the end of the *Off-Channel CAC Time* and this shall be recorded. For the purpose of reducing test time, the test may be terminated immediately once the UUT has reported detection of the radar test signal.

Detection Probability (P_d)

This test may be facilitated by disabling the *Channel Shutdown* feature for the duration of the test. For channels outside the 5 600 MHz to 5 650 MHz band, the test in clause 5.4.8.2.1.4.2 is sufficient to demonstrate that the UUT meets the Detection Probability (P_d) defined in table D.5.

Where the declared channel plan includes channels whose nominal bandwidth falls completely or partly within the 5 600 MHz to 5 650 MHz band, the procedure in the steps below has to be performed on one of these channels. See clause 5.3.2.

a) A multi burst radar test signal is generated on Chr using any of the radar test signals defined in table D.4 (except signals #3 and #4) at a level of 10 dB above the level defined in clause 5.4.8.2.1.1. The radar test signal used shall be recorded in the report. This multi burst radar test signal shall commence at T₃ and shall continue for the total duration of the *Off-Channel CAC Time* ($T_{\text{Off-Channel_CAC}}$) as declared by the manufacturer in accordance with table D.1. The Burst Interval Time (BIT) during the test shall be varied between 8 minutes and 10 minutes.

b) It shall be recorded how many bursts have been detected by the UUT at the end of the *Off-Channel CAC Time*. The minimum number of bursts that the UUT shall detect in order to comply with the detection probability defined for this frequency range in table D.5 is given by table 12.

For the purpose of reducing test time, the test may be terminated immediately the UUT has reported the minimum number of burst detections required.

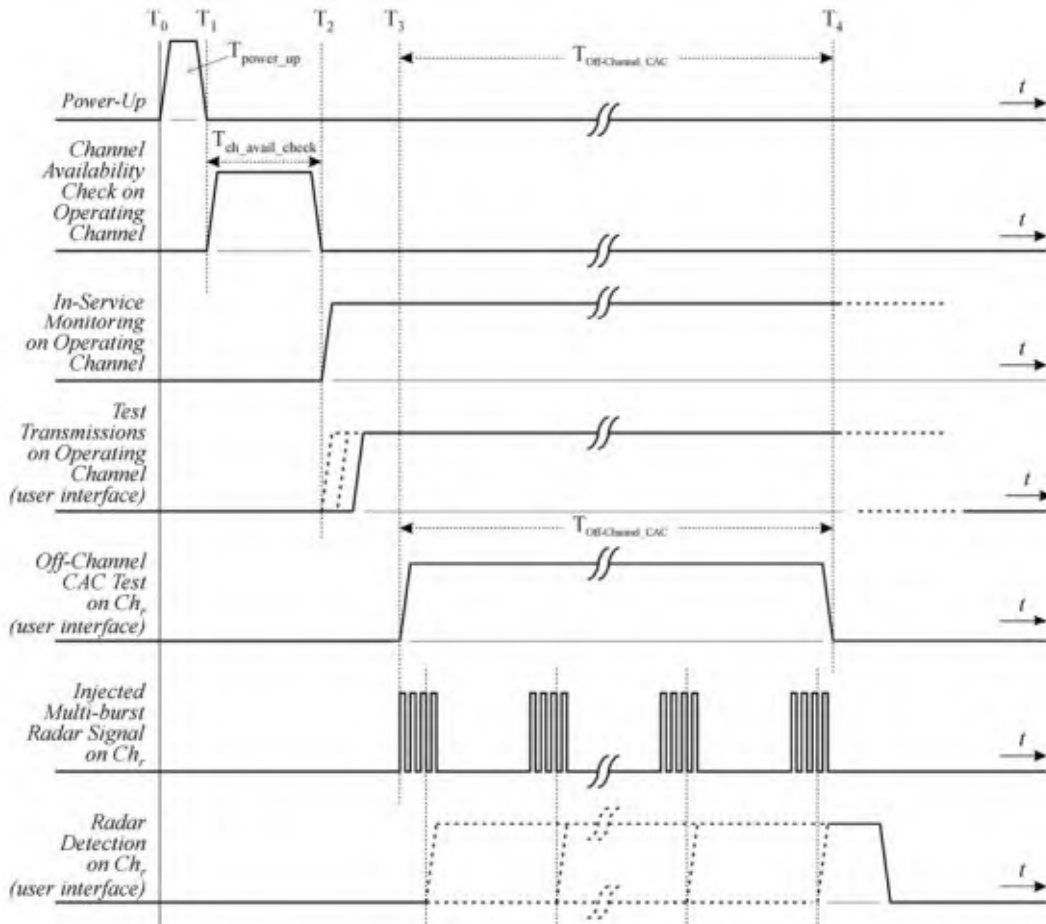


Figure 11: Example of timing for radar testing during the Off-Channel CAC

In-Service Monitoring

The steps below define the procedure to verify the *In-Service Monitoring* and the *Radar Detection Threshold Level* during the *In-Service Monitoring*.

The channel, on which the *In-Service Monitoring* test will be performed, shall be selected in accordance with clause 5.3.2. This channel, designated as *Chr*, is an *Operating Channel*.

a) When the UUT is a master device, a slave device will be used that associates with the UUT. The signal generator and the UUT are connected using *Set-up A* described in clause 5.4.8.1.3.1.

When the UUT is a slave device with a *Radar Interference Detection* function, the UUT shall associate with a master device. The signal generator and the UUT are connected using *Set-up C* described in clause 5.4.8.1.3.3.

b) The UUT shall transmit a test transmission sequence in accordance with clause 5.3.1.2 on the selected channel *Chr*. While the testing is performed on *Chr*, the equipment is allowed to have simultaneous transmissions on other adjacent or non-adjacent *Operating Channels*.

c) At a certain time T_0 , a single burst radar test signal is generated on *Chr* using radar test signal #1 defined in table D.4 and at a level defined in clause 5.4.8.2.1.1. T_1 denotes the end of the radar burst.

d) It shall be recorded if the radar test signal was detected.

e) Step b) to step d) shall be performed 20 times, each time a random value shall be chosen for pulse width and pulse repetition frequency from the corresponding ranges provided in table D.4. For radar test signal #5 and radar

test signal #6 provided in table D.4 the number of PRF values shall vary between 2 or 3. The radar test signal shall be detected at least 12 times out of the 20 trials in order to comply with the detection probability specified in table D.5.

f) Step b) to step e) shall be repeated for each of the radar test signals defined in table D.4 and as described in clause 5.4.8.1.2.

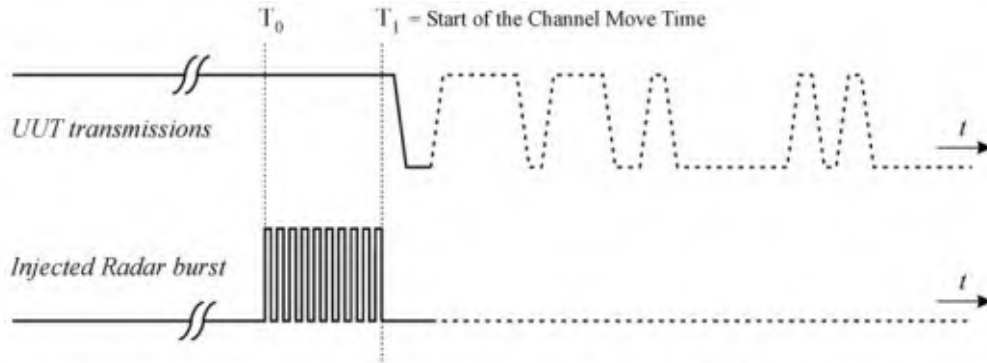


Figure 12: Example of timing for radar testing during In-Service Monitoring

Channel Shutdown and Non-Occupancy period

The steps below define the procedure to verify the *Channel Shutdown* process and to determine the *Channel Closing Transmission Time*, the *Channel Move Time* and the *Non-Occupancy Period*. This is illustrated in figure 13.

The channel, on which these tests will be performed, shall be selected in accordance with clause 5.3.2. This channel, designated as Chr, is an *Operating Channel*.

a) When the UUT is a master device, a slave device will be used that associates with the UUT. The signal generator and the UUT shall be connected using *Set-up A* described in clause 5.4.8.1.3.1.

When the UUT is a slave device (with or without a *Radar Interference Detection* function), the UUT shall associate with a master device. The signal generator and the UUT shall be connected using *Set-up B* described in clause 5.4.8.1.3.2.

In both cases, it is assumed that the channel selection mechanism for the *Uniform Spreading* requirement is disabled in the master.

b) The UUT shall transmit a test transmission sequence in accordance with clause 5.3.1.2 on the selected channel Chr. While the testing is performed on Chr, the equipment is allowed to have simultaneous transmissions on other adjacent or non-adjacent *Operating Channels*.

c) At a certain time T_0 , a single burst test signal is generated on Chr using the reference DFS test signal defined in table D.3 and at a level of up to 10 dB above the level defined in clause 5.4.8.2.1.1 on the selected channel. T_1 denotes the end of the radar burst.

d) The transmissions of the UUT following instant T_1 on the selected channel Chr shall be observed for a period greater than or equal to the *Channel Move Time* defined in table D.1. The aggregate duration (*Channel Closing Transmission Time*) of all transmissions from the UUT on Chr during the *Channel Move Time* shall be compared to the limit defined in table D.1. For equipment capable of having simultaneous transmissions on multiple (adjacent or non-adjacent) *Operating Channels*, the equipment is allowed to continue transmissions on other *Operating Channels* (different from Chr).

The aggregate duration of all transmissions of the UUT does not include quiet periods in between transmissions of the UUT.

e) T_2 denotes the instant when the UUT has ceased all transmissions on the channel Chr. The time difference between T_1 and T_2 shall be measured. This value (*Channel Move Time*) shall be noted and compared with the limit defined in table D.1.

f) Following instant T_2 , the selected channel Chr shall be observed for a period equal to the *Non-Occupancy Period* ($T_3 - T_2$) to verify that the UUT does not resume any transmissions on this channel.

g) When the UUT is a slave device with a *Radar Interference Detection* function step b) to step f) shall be repeated with the generator connected to the UUT using *Set-up C* as described in clause 5.4.8.1.3.3. See also note 2 in table D.2.

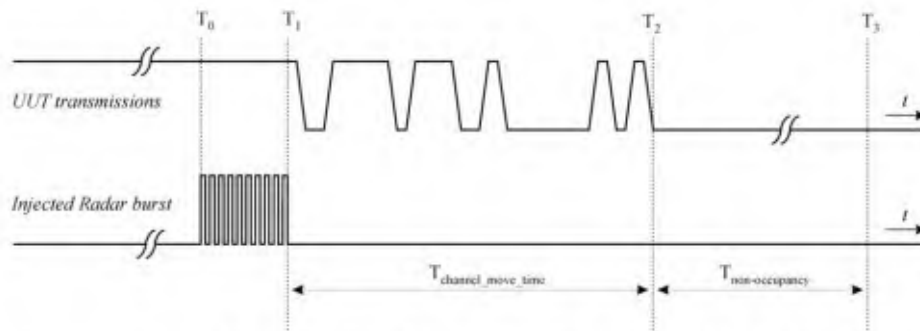


Figure 13: Channel Closing Transmission Time, Channel Move Time and Non-Occupancy Period

4.11 Antenna Requirement**VERDICT: PASS****4.11.1 Limit:**

Standard	FCC Part 15 Subpart C Paragraph 15.203;
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.	

4.11.2 Antenna Connector Construction:

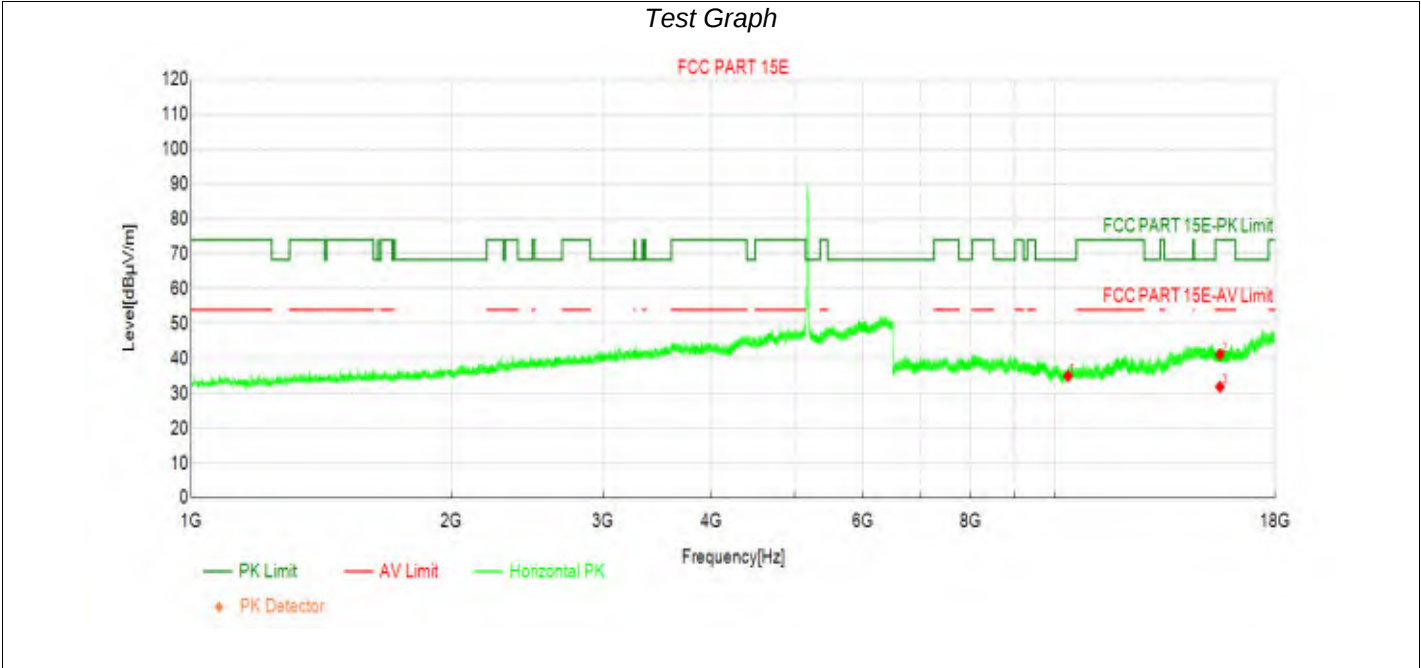
☒	The use of a permanently attached antenna
☐	The antenna use of a unique coupling to the intentional radiator
☐	The use of a nonstandard antenna jack or electrical connector
Please refer to the attached document "Internal Photograph" to show the antenna connector.	

5 TEST SETUP PHOTO AND EUT PHOTO

Remark: The test setup photo and EUT Photo please see appendix.

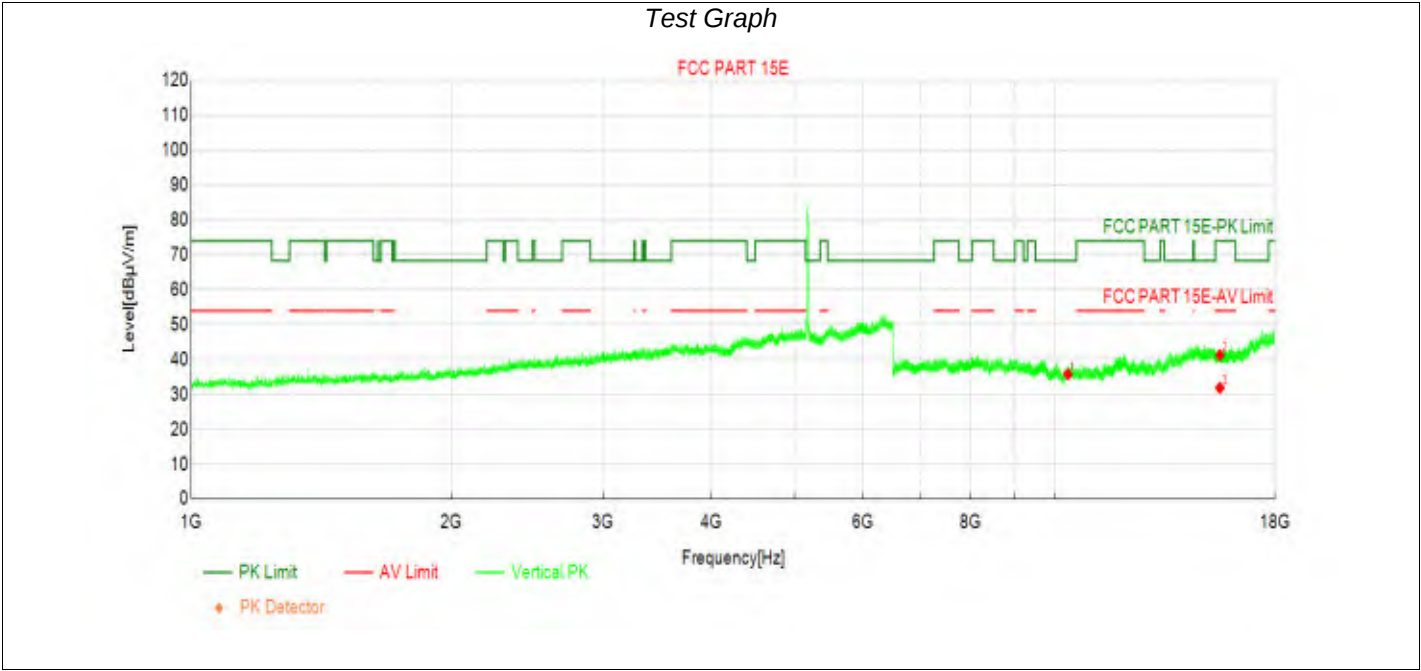
Appendix A: Test result of Radiated Emission

Above 1GHz:
Transmit at 5180MHz by 802.11a with Ant7



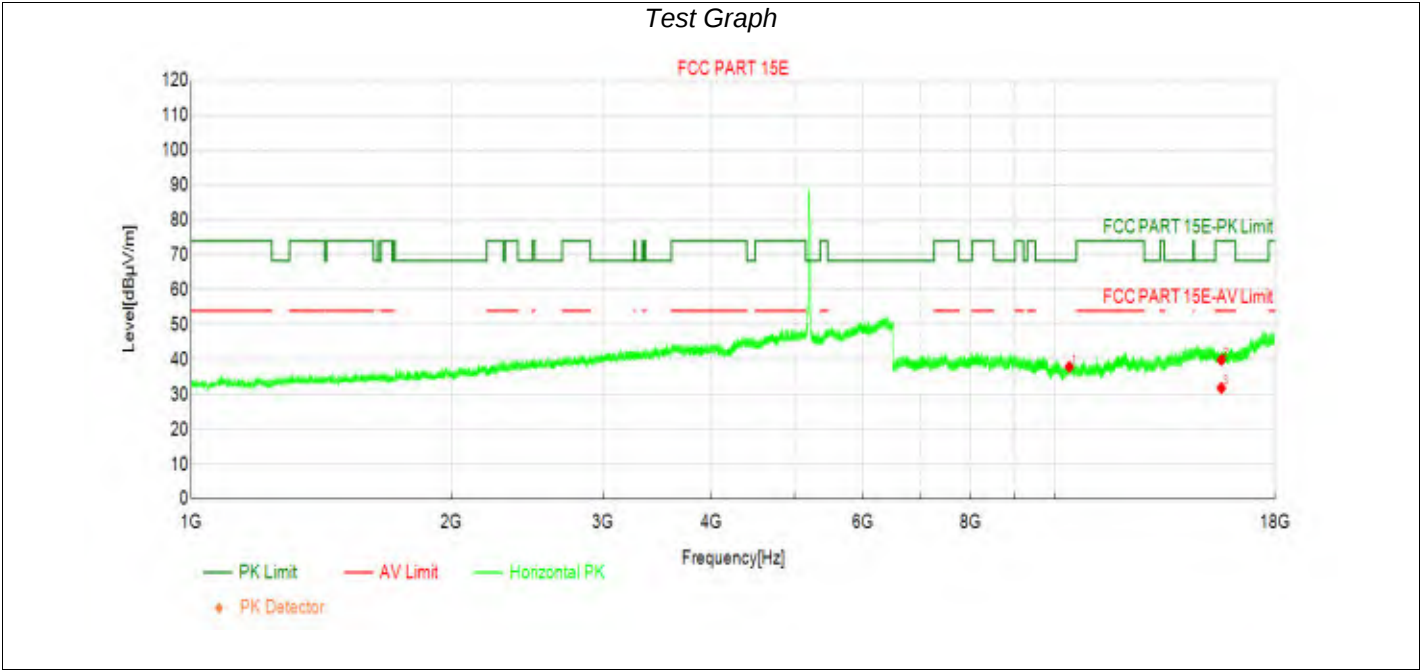
Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	10360.00	27.72	34.97	7.25	68.30	33.33	PK	Horizo	PASS
2	15540.00	25.36	41.14	15.78	74.00	32.86	PK	Horizo	PASS
3	15540.00	16.13	31.91	15.78	54.00	22.09	AV	Horizo	PASS

Transmit at 5180MHz by 802.11a with Ant7



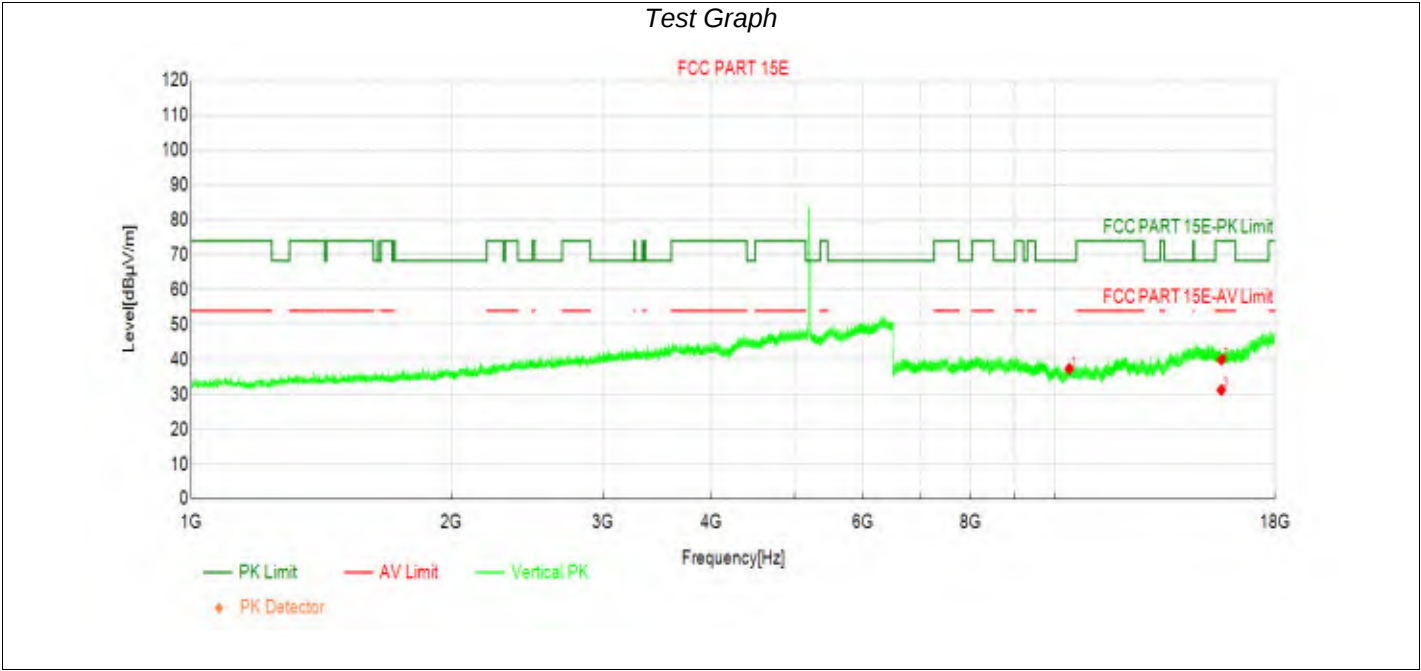
Data List									
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1	10360.00	28.52	35.77	7.25	68.30	32.53	PK	Vertic	PASS
2	15540.00	25.45	41.23	15.78	74.00	32.77	PK	Vertic	PASS
3	15540.00	16.11	31.89	15.78	54.00	22.11	AV	Vertic	PASS

Transmit at 5200MHz by 802.11a with Ant7



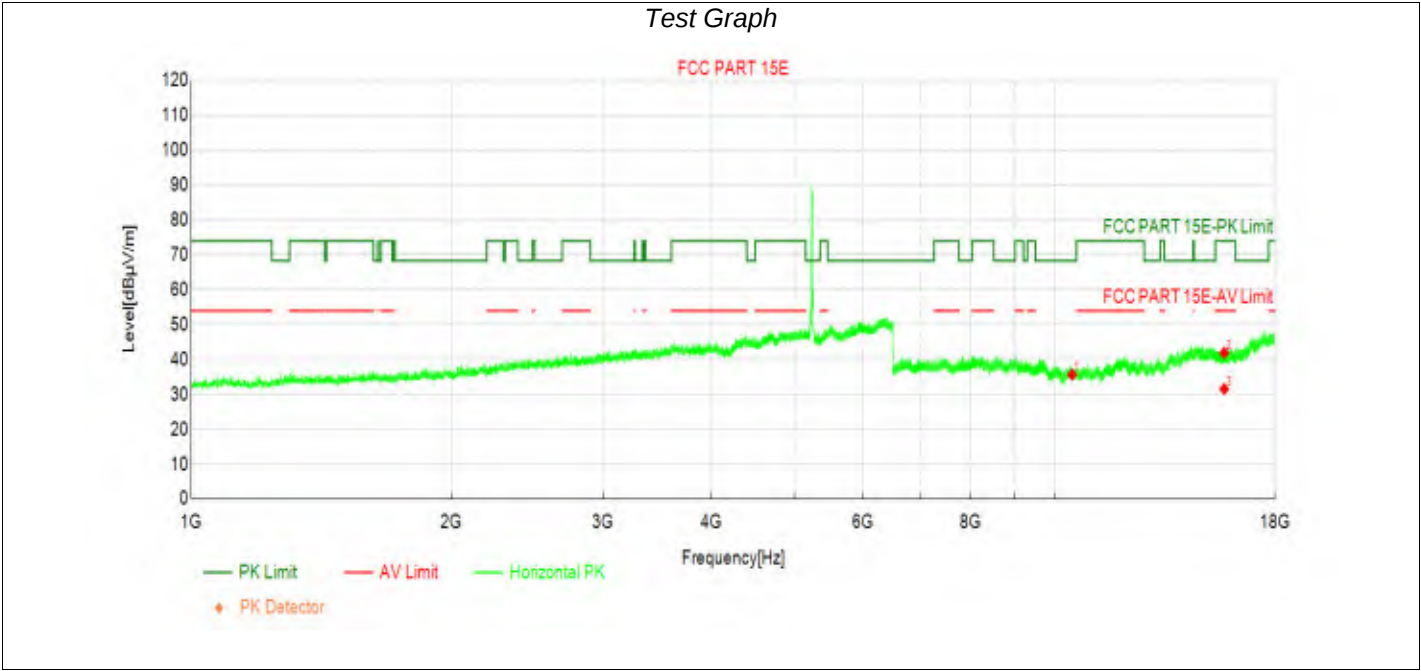
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1	10400.00	30.58	37.89	7.31	68.30	30.41	PK	Horizo	PASS
2	15600.00	24.14	39.88	15.74	74.00	34.12	PK	Horizo	PASS
3	15600.00	16.08	31.82	15.74	54.00	22.18	AV	Horizo	PASS

Transmit at 5200MHz by 802.11a with Ant7



Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	10400.00	30.05	37.36	7.31	68.30	30.94	PK	Vertic	PASS
2	15600.00	24.22	39.96	15.74	74.00	34.04	PK	Vertic	PASS
3	15600.00	15.50	31.24	15.74	54.00	22.76	AV	Vertic	PASS

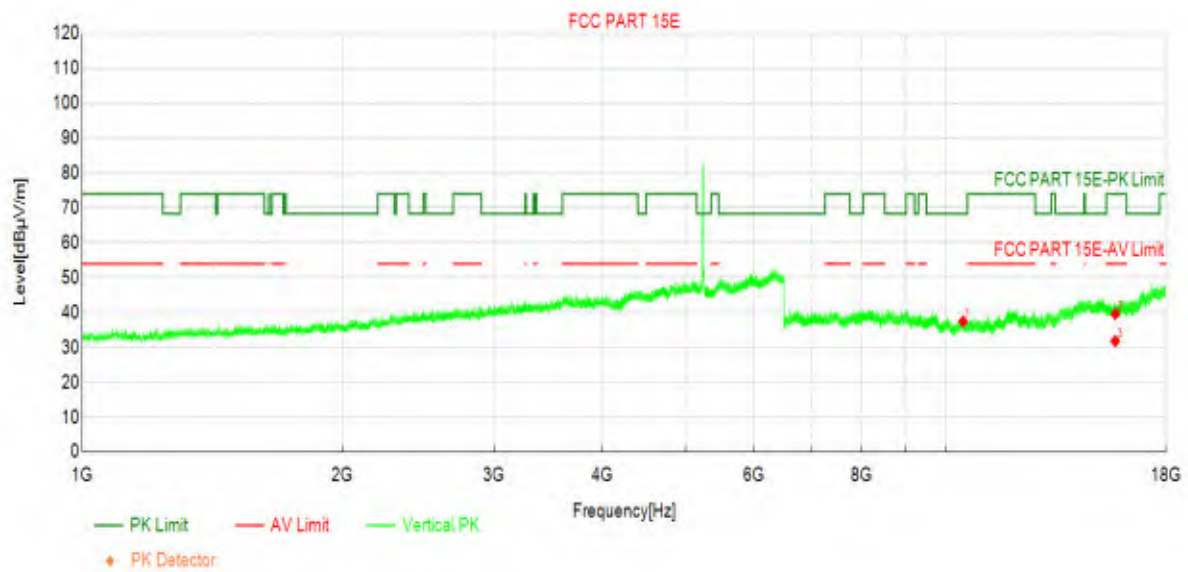
Transmit at 5240MHz by 802.11a with Ant7



Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	10480.00	27.90	35.66	7.76	68.30	32.64	PK	Horizo	PASS
2	15720.00	26.03	41.89	15.86	74.00	32.11	PK	Horizo	PASS
3	15720.00	15.70	31.56	15.86	54.00	22.44	AV	Horizo	PASS

Transmit at 5240MHz by 802.11a with Ant7

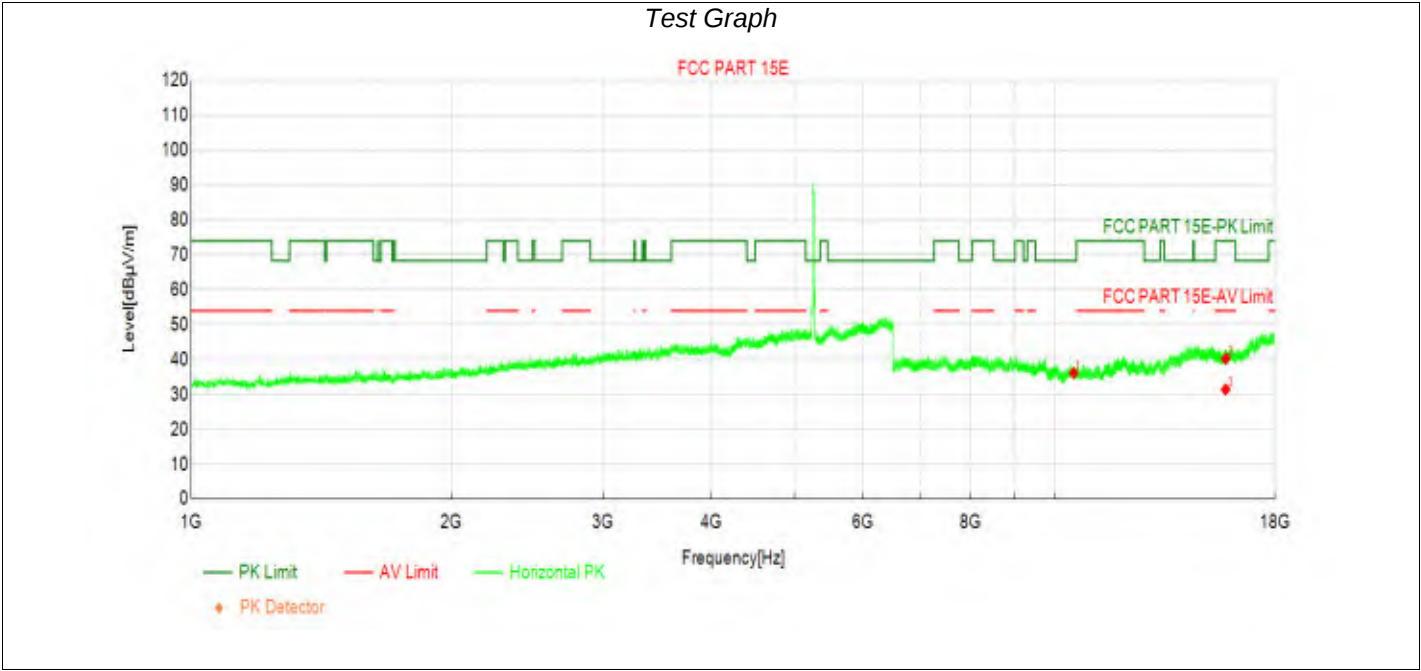
Test Graph



Data List

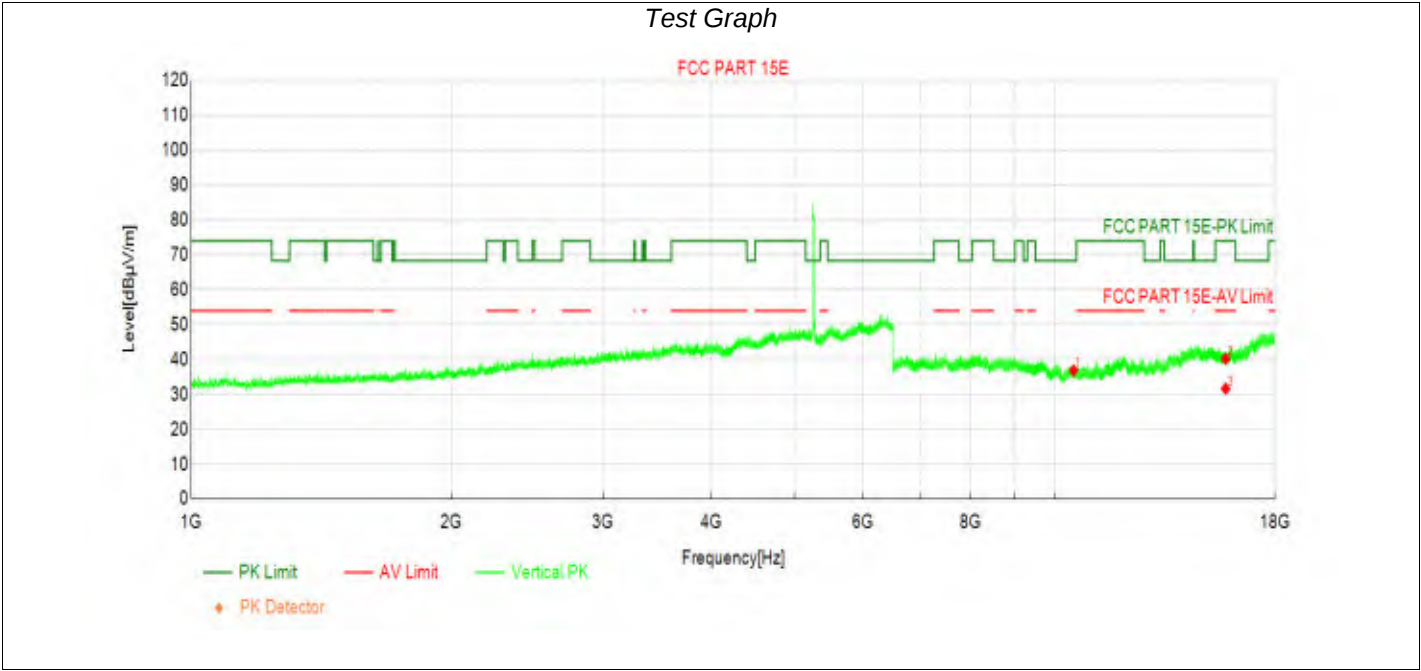
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1	10480.00	29.71	37.47	7.76	68.30	30.83	PK	Vertic	PASS
2	15720.00	23.72	39.58	15.86	74.00	34.42	PK	Vertic	PASS
3	15720.00	15.94	31.80	15.86	54.00	22.20	AV	Vertic	PASS

Transmit at 5260MHz by 802.11a with Ant7



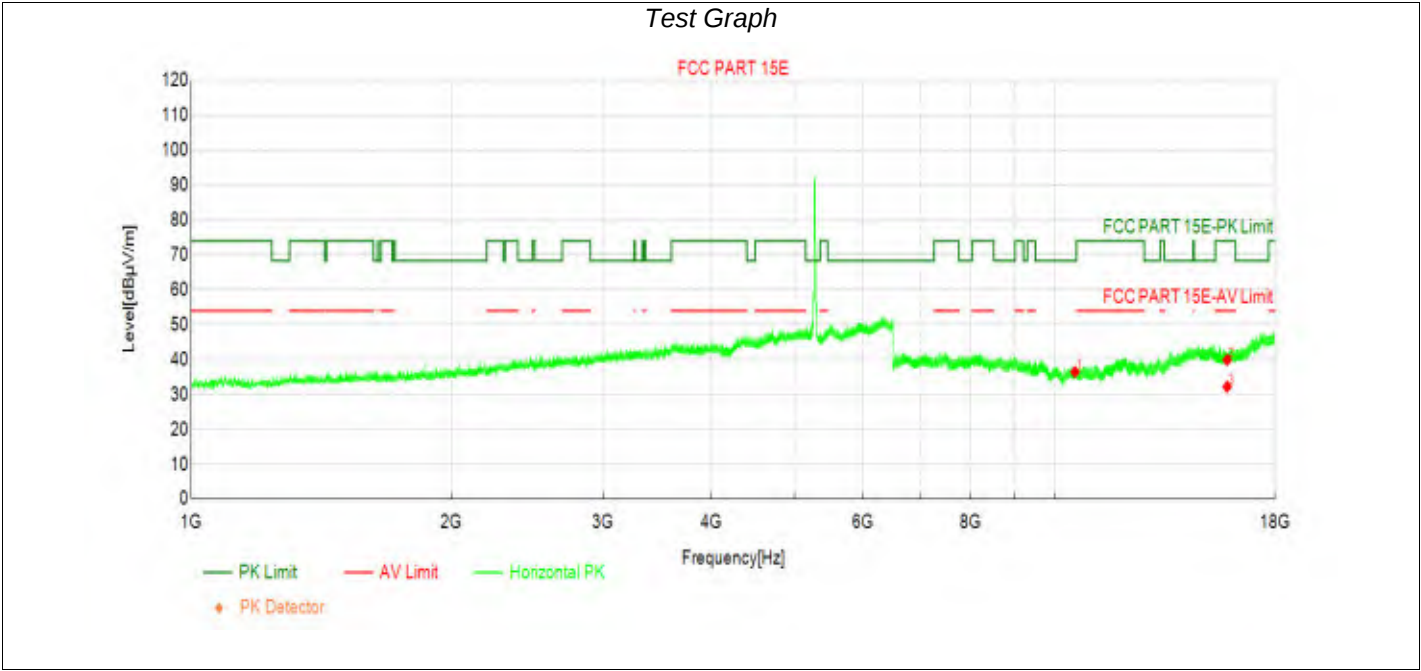
Data List									
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1	10520.00	28.25	36.15	7.90	68.30	32.15	PK	Horizo	PASS
2	15780.00	24.24	40.20	15.96	74.00	33.80	PK	Horizo	PASS
3	15780.00	15.47	31.43	15.96	54.00	22.57	AV	Horizo	PASS

Transmit at 5260MHz by 802.11a with Ant7



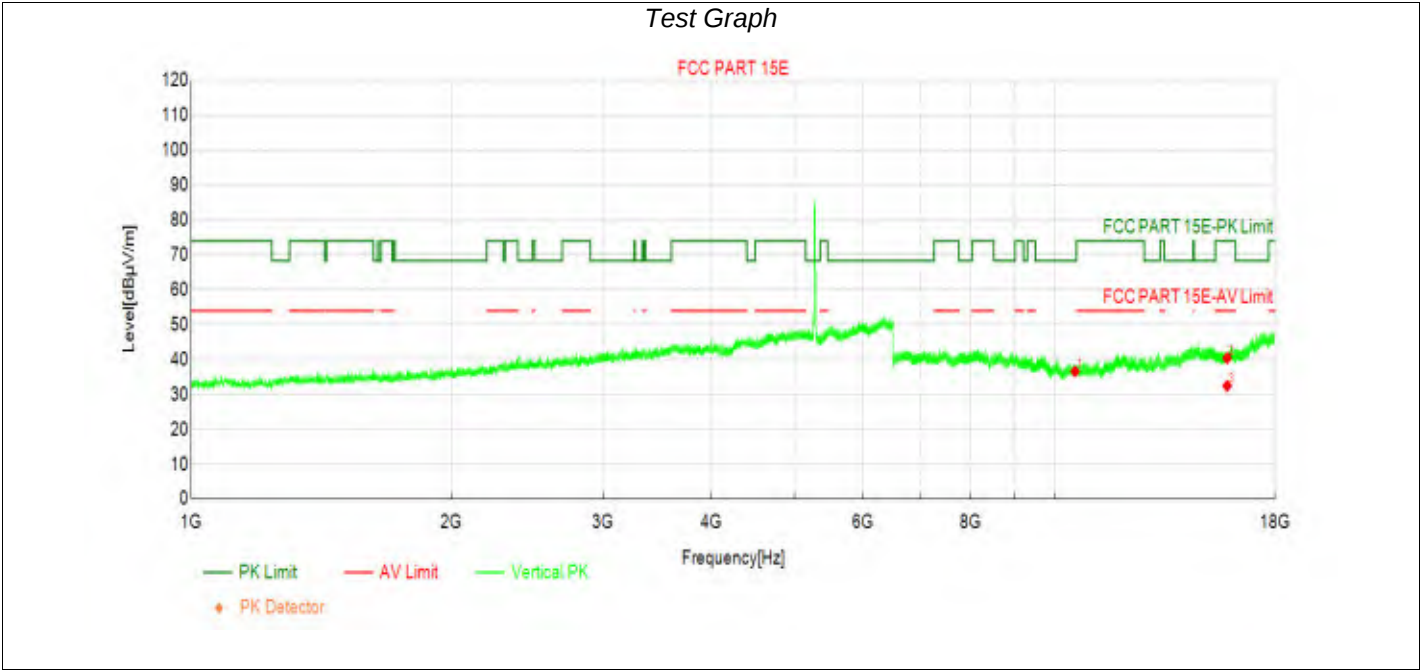
Data List									
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1	10520.00	28.98	36.88	7.90	68.30	31.42	PK	Vertic	PASS
2	15780.00	24.25	40.21	15.96	74.00	33.79	PK	Vertic	PASS
3	15780.00	15.70	31.66	15.96	54.00	22.34	AV	Vertic	PASS

Transmit at 5280MHz by 802.11a with Ant7



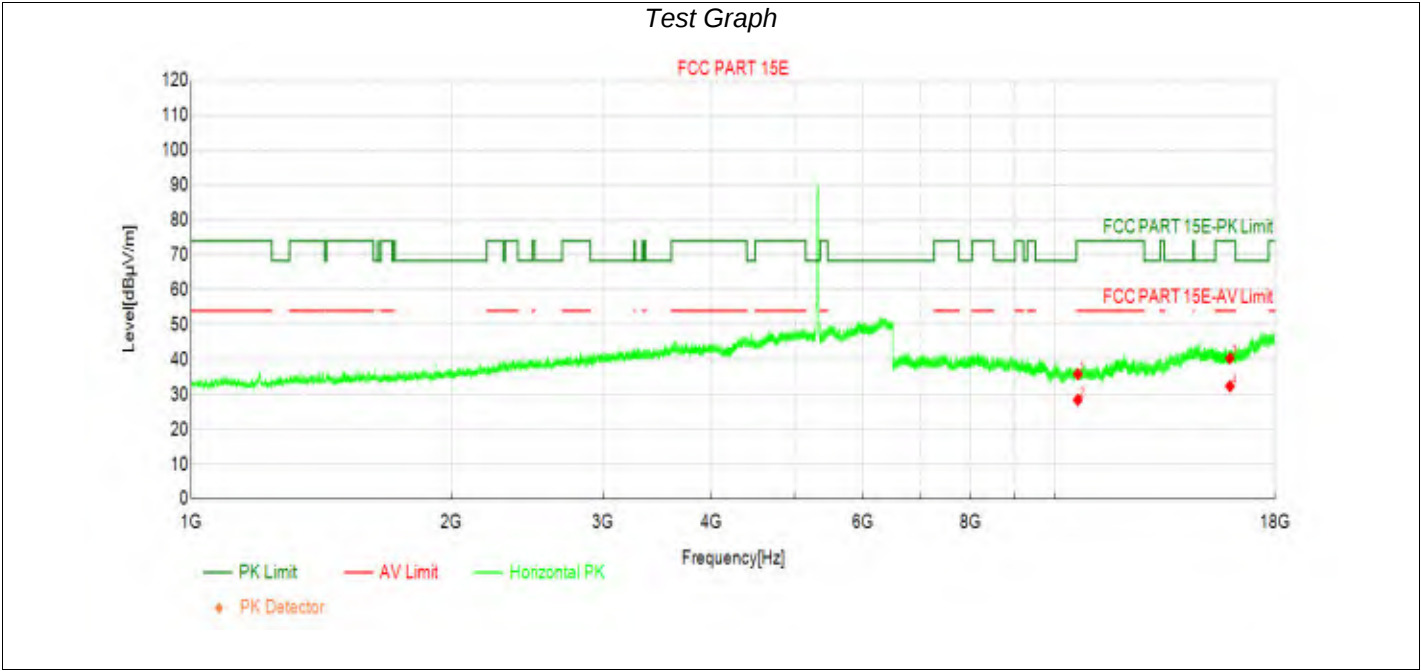
Data List									
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1	10560.00	28.49	36.47	7.98	68.30	31.83	PK	Horizo	PASS
2	15840.00	23.73	39.84	16.11	74.00	34.16	PK	Horizo	PASS
3	15840.00	16.12	32.23	16.11	54.00	21.77	AV	Horizo	PASS

Transmit at 5280MHz by 802.11a with Ant7



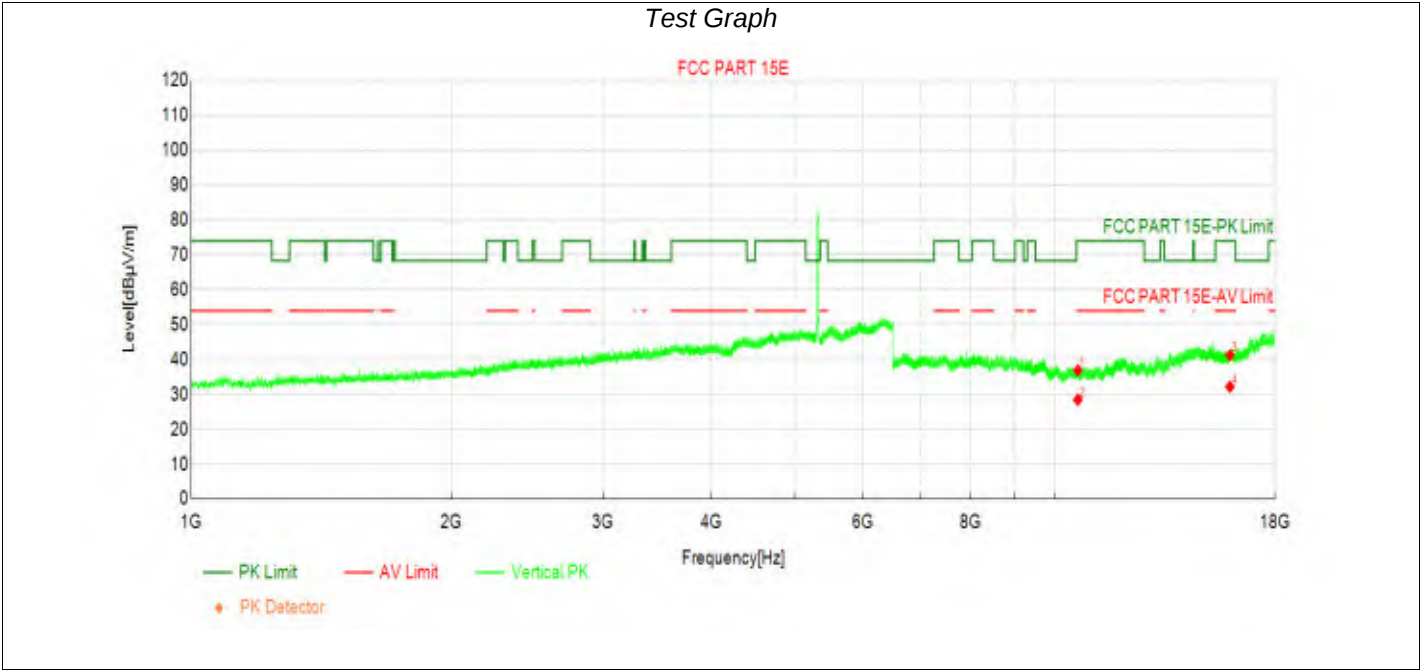
Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	10560.00	28.61	36.59	7.98	68.30	31.71	PK	Vertic	PASS
2	15840.00	24.27	40.38	16.11	74.00	33.62	PK	Vertic	PASS
3	15840.00	16.32	32.43	16.11	54.00	21.57	AV	Vertic	PASS

Transmit at 5320MHz by 802.11a with Ant7



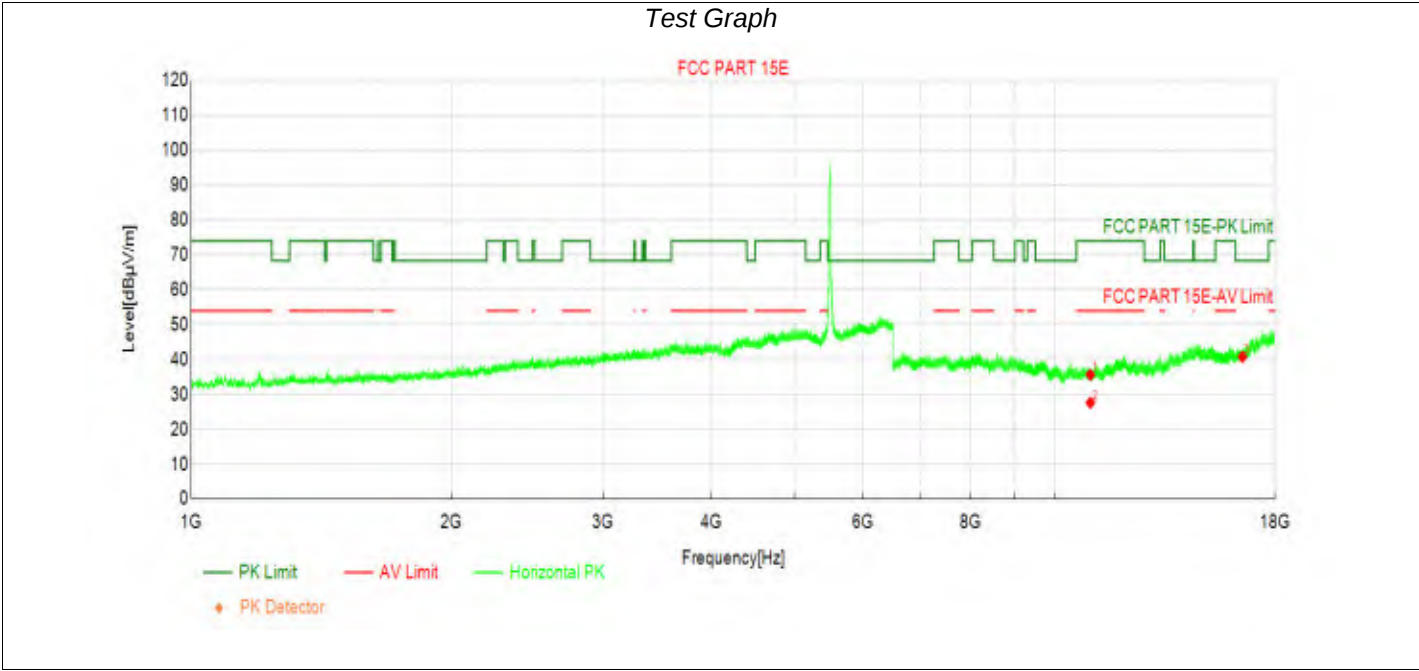
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1	10640.00	27.80	35.81	8.01	74.00	38.19	PK	Horizo	PASS
2	10640.00	20.41	28.42	8.01	54.00	25.58	AV	Horizo	PASS
3	15960.00	23.80	40.34	16.54	74.00	33.66	PK	Horizo	PASS
4	15960.00	15.81	32.35	16.54	54.00	21.65	AV	Horizo	PASS

Transmit at 5320MHz by 802.11a with Ant7



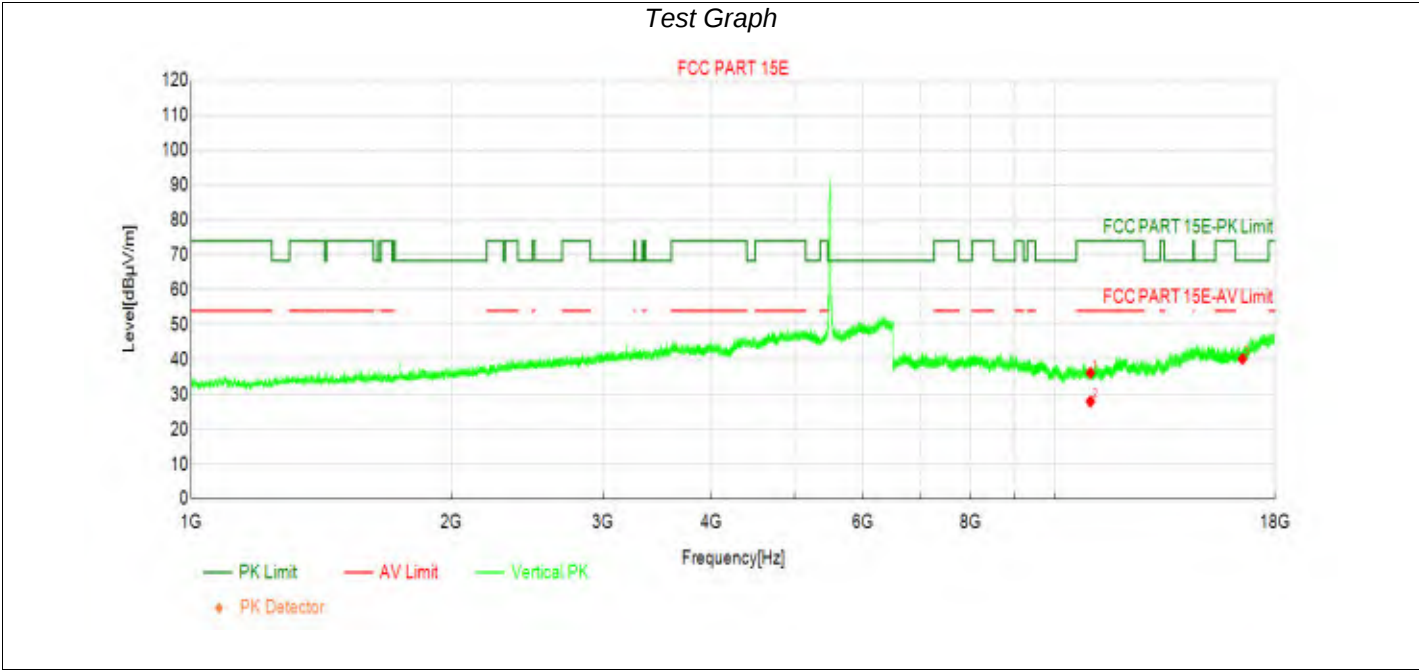
Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	10640.00	28.91	36.92	8.01	74.00	37.08	PK	Vertic	PASS
2	10640.00	20.44	28.45	8.01	54.00	25.55	AV	Vertic	PASS
3	15960.00	24.67	41.21	16.54	74.00	32.79	PK	Vertic	PASS
4	15960.00	15.67	32.21	16.54	54.00	21.79	AV	Vertic	PASS

Transmit at 5500MHz by 802.11a with Ant7



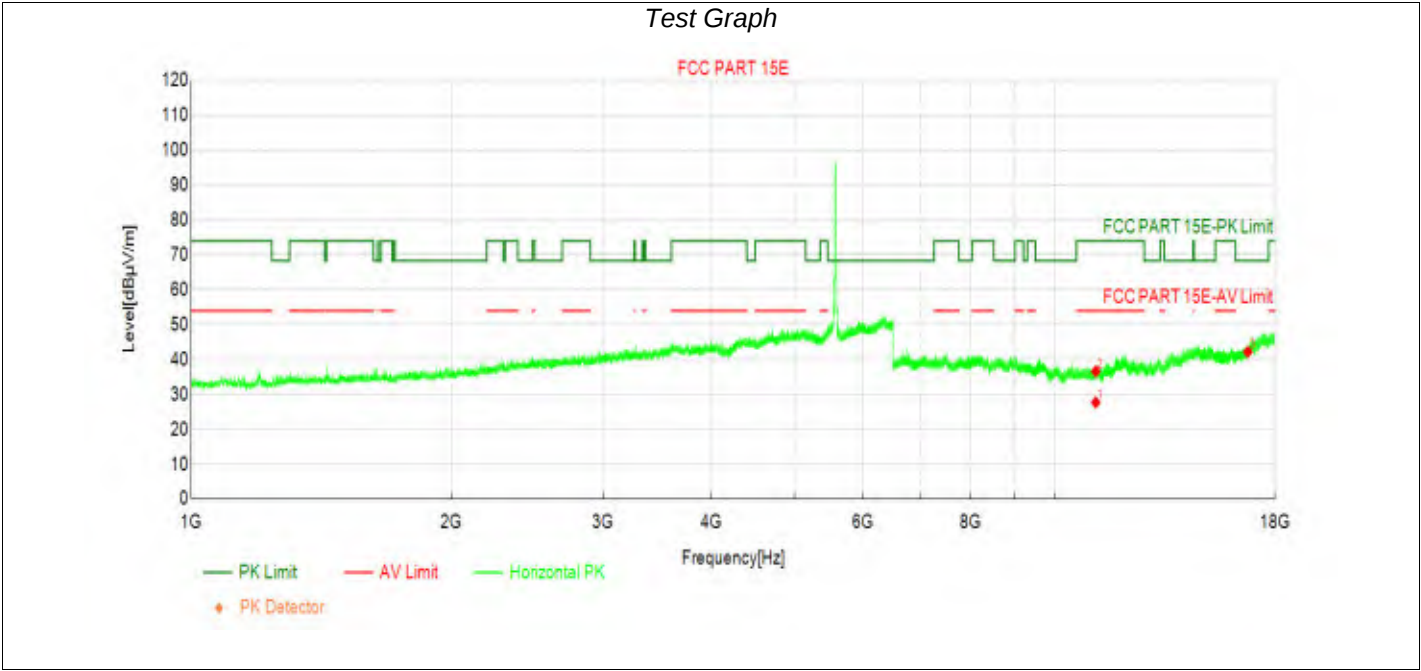
Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	11000.00	26.53	35.64	9.11	74.00	38.36	PK	Horizo	PASS
2	11000.00	18.51	27.62	9.11	54.00	26.38	AV	Horizo	PASS
3	16500.00	23.96	40.78	16.82	68.30	27.52	PK	Horizo	PASS

Transmit at 5500MHz by 802.11a with Ant7



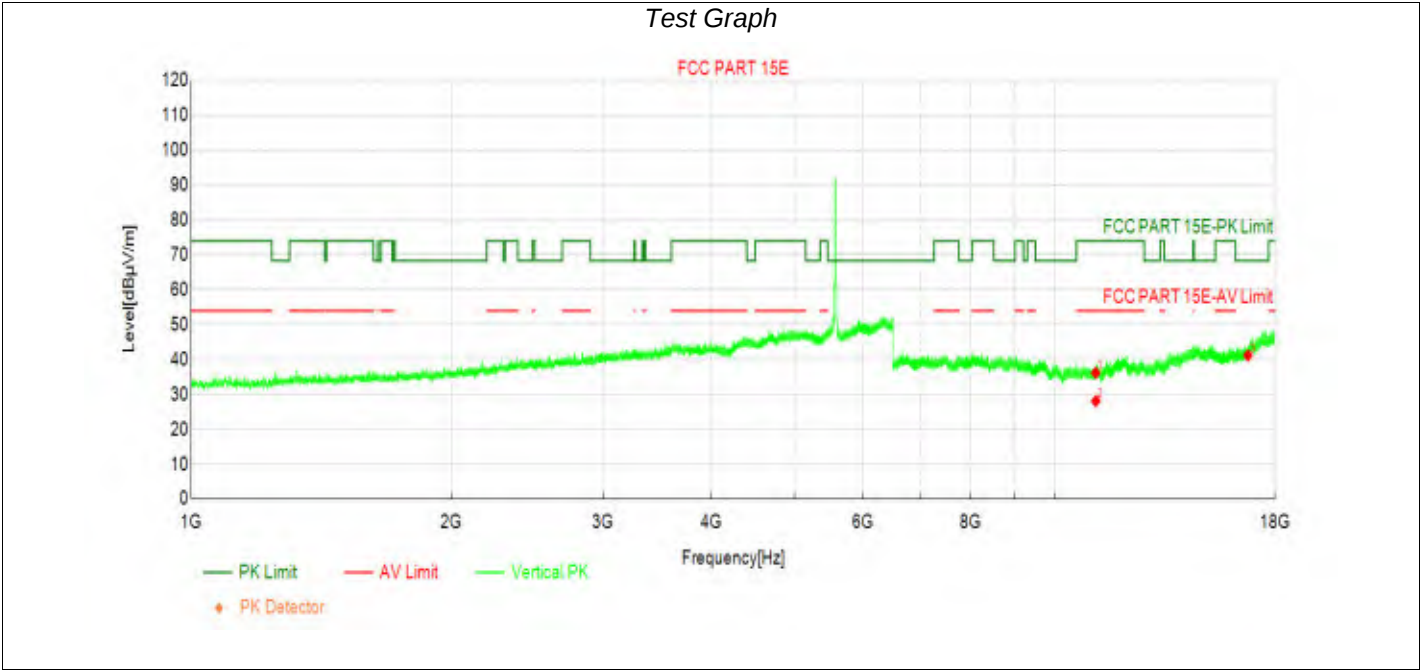
Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	11000.00	27.07	36.18	9.11	74.00	37.82	PK	Vertic	PASS
2	11000.00	18.86	27.97	9.11	54.00	26.03	AV	Vertic	PASS
3	16500.00	23.32	40.14	16.82	68.30	28.16	PK	Vertic	PASS

Transmit at 5580MHz by 802.11a with Ant7



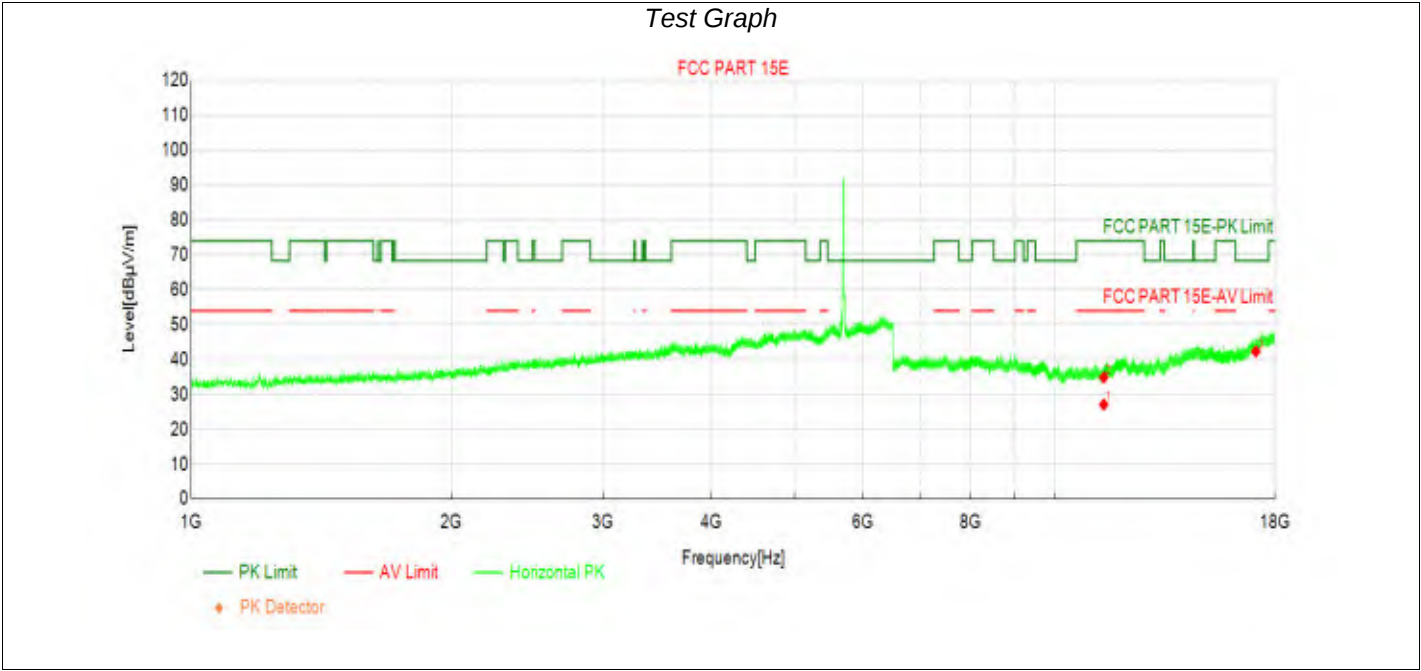
Data List									
NO	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	11160.00	18.52	27.71	9.19	54.00	26.29	AV	Horizo	PASS
2	11160.00	27.42	36.61	9.19	74.00	37.39	PK	Horizo	PASS
3	16740.00	24.91	42.21	17.30	68.30	26.09	PK	Horizo	PASS

Transmit at 5580MHz by 802.11a with Ant7



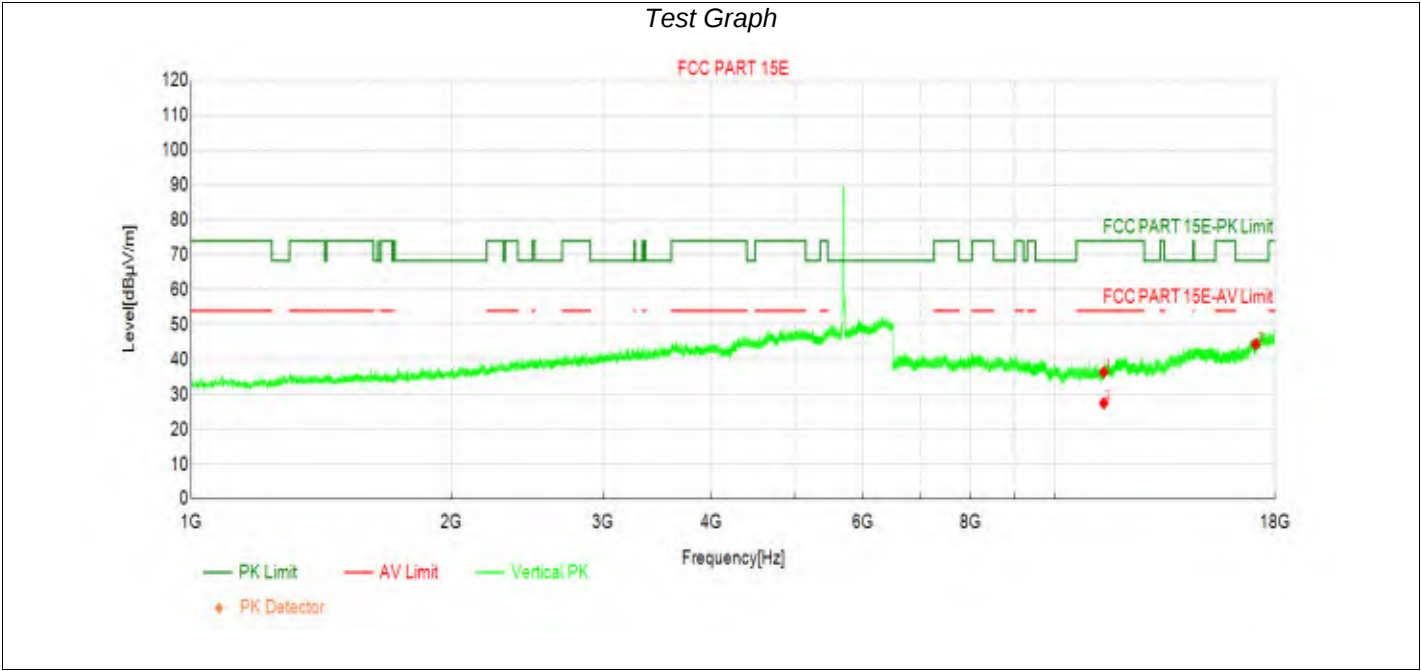
Data List									
NO	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	11160.00	26.99	36.18	9.19	74.00	37.82	PK	Vertic	PASS
2	11160.00	18.89	28.08	9.19	54.00	25.92	AV	Vertic	PASS
3	16740.00	23.87	41.17	17.30	68.30	27.13	PK	Vertic	PASS

Transmit at 5700MHz by 802.11a with Ant7



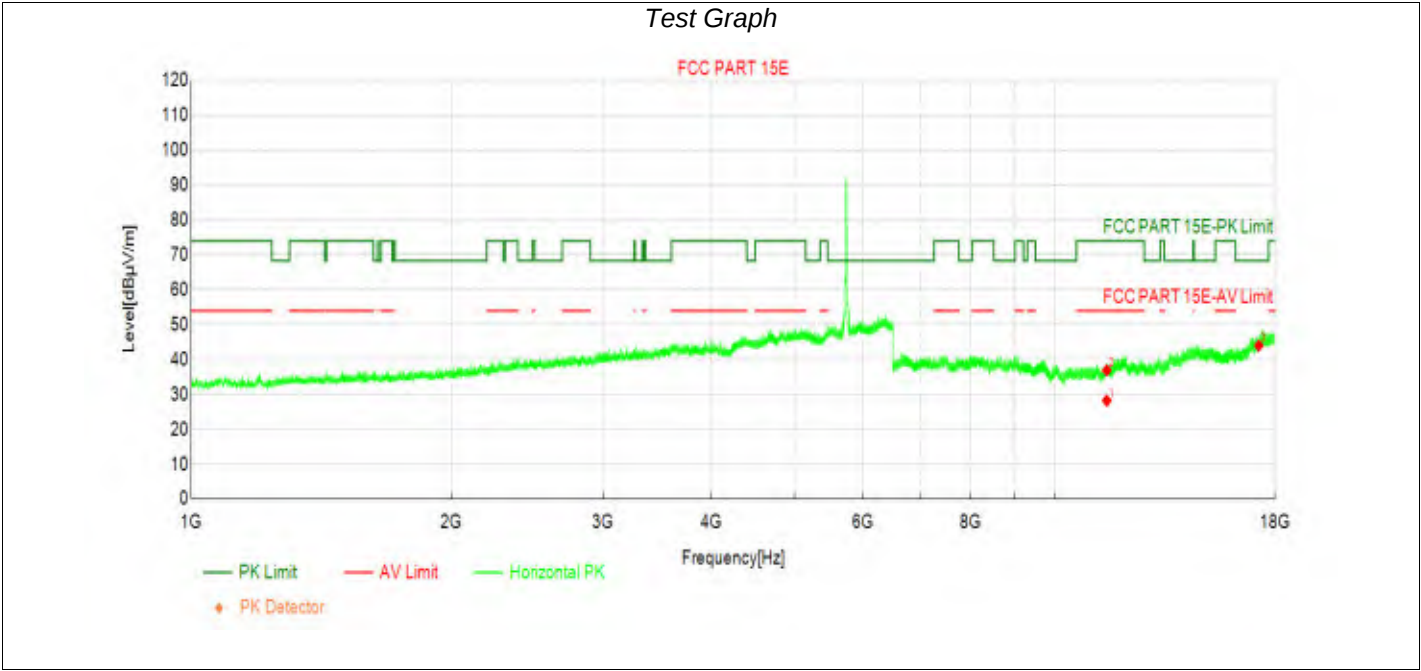
Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	11400.00	17.23	27.11	9.88	54.00	26.89	AV	Horizo	PASS
2	11400.00	24.98	34.86	9.88	74.00	39.14	PK	Horizo	PASS
3	17100.00	23.94	42.30	18.36	68.30	26.00	PK	Horizo	PASS

Transmit at 5700MHz by 802.11a with Ant7



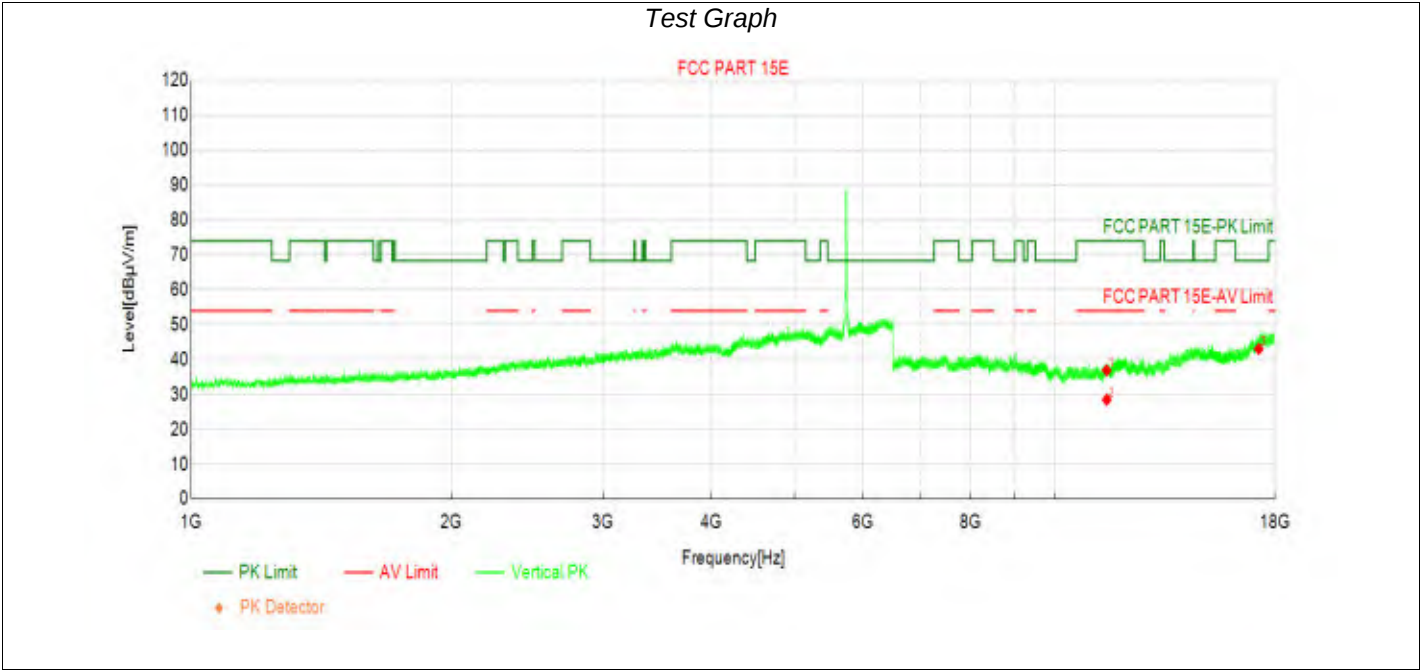
Data List									
NO	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	11400.00	26.55	36.43	9.88	74.00	37.57	PK	Vertic	PASS
2	11400.00	17.63	27.51	9.88	54.00	26.49	AV	Vertic	PASS
3	17100.00	26.04	44.40	18.36	68.30	23.90	PK	Vertic	PASS

Transmit at 5745MHz by 802.11a with Ant7



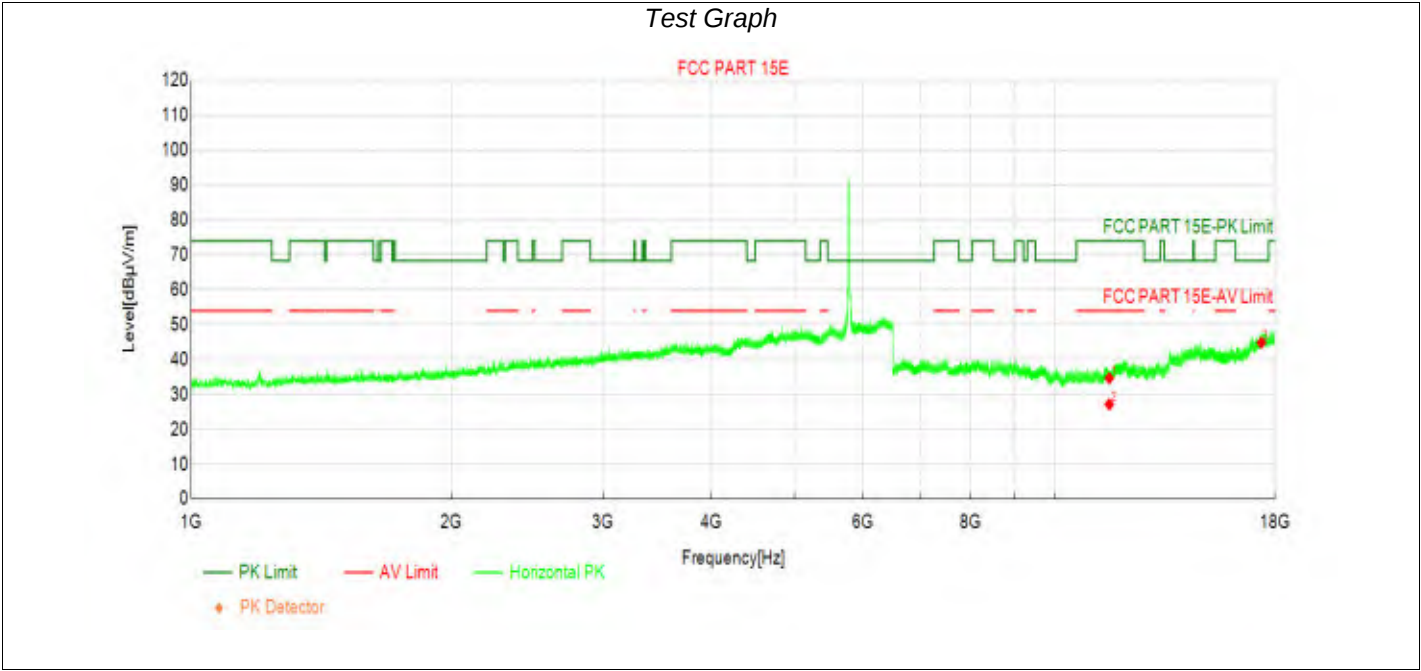
Data List									
NO	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	11490.00	18.22	28.22	10.00	54.00	25.78	AV	Horizo	PASS
2	11490.00	26.88	36.88	10.00	74.00	37.12	PK	Horizo	PASS
3	17235.00	26.06	43.98	17.92	68.30	24.32	PK	Horizo	PASS

Transmit at 5745MHz by 802.11a with Ant7



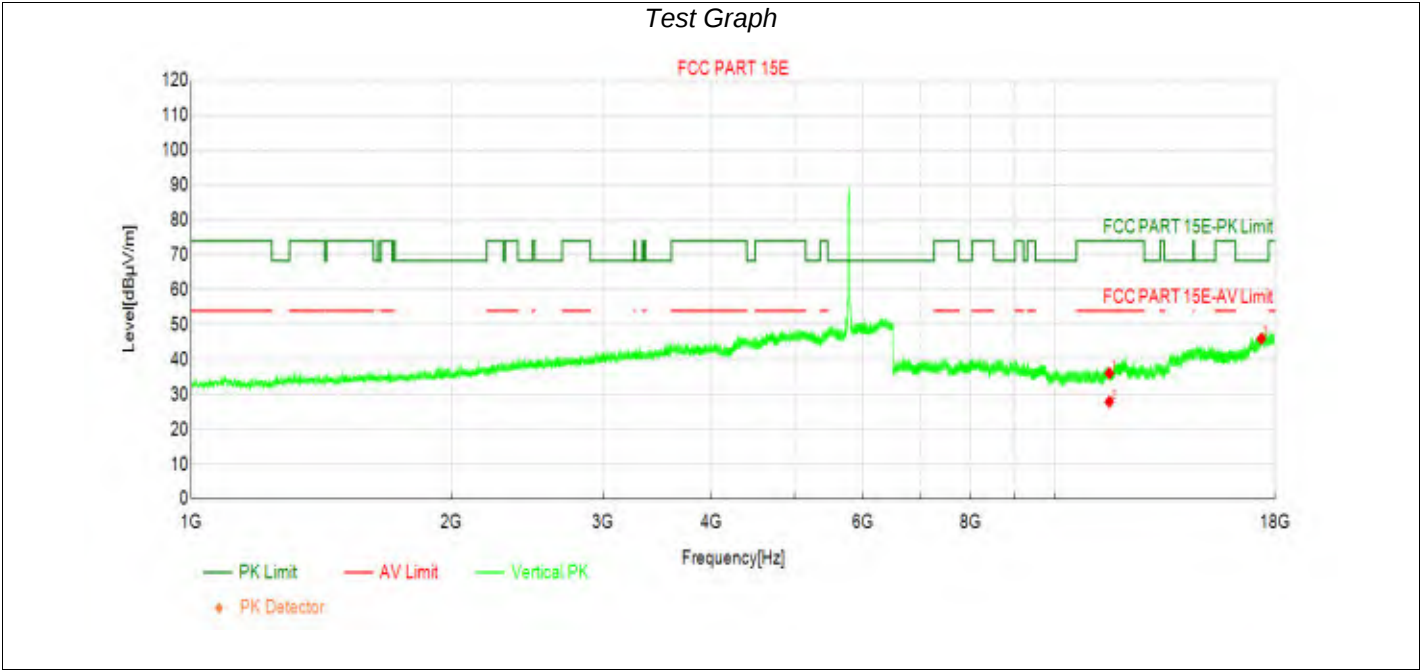
Data List									
NO	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	11490.00	26.90	36.90	10.00	74.00	37.10	PK	Vertic	PASS
2	11490.00	18.45	28.45	10.00	54.00	25.55	AV	Vertic	PASS
3	17235.00	25.13	43.05	17.92	68.30	25.25	PK	Vertic	PASS

Transmit at 5785MHz by 802.11a with Ant7



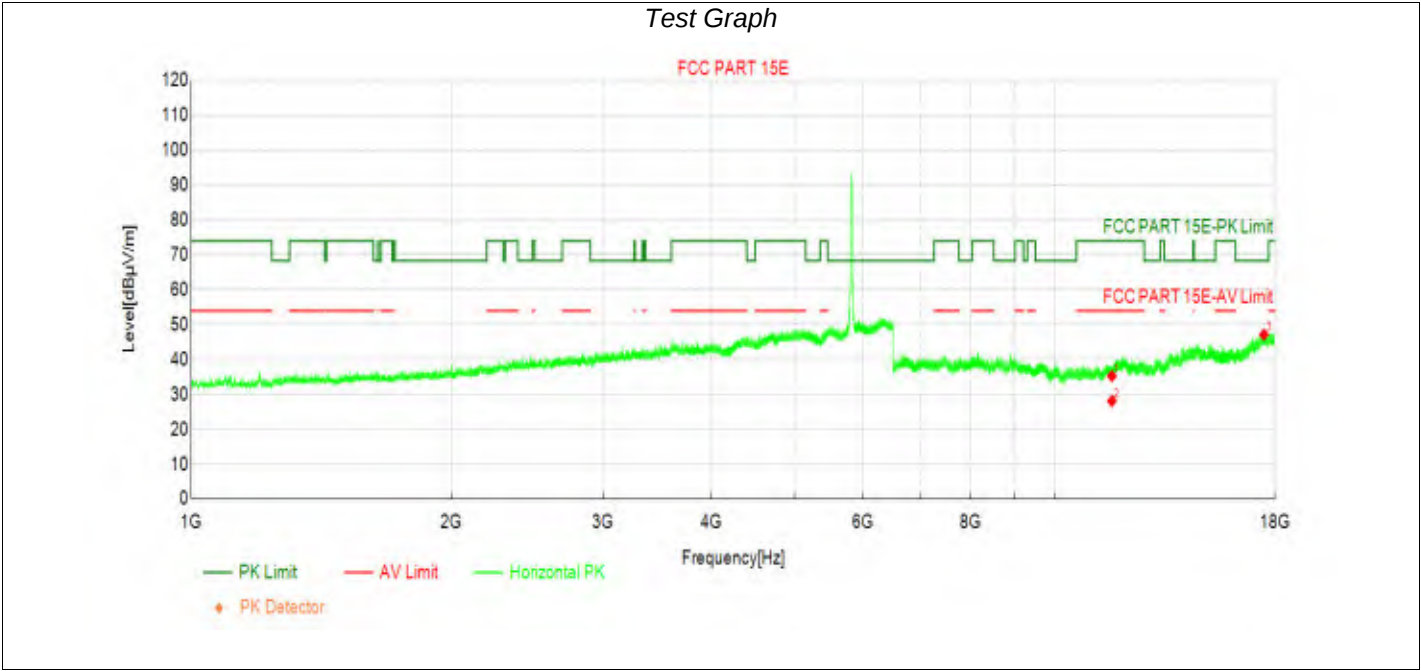
Data List									
NO	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	11570.00	24.16	34.65	10.49	74.00	39.35	PK	Horizo	PASS
2	11570.00	16.67	27.16	10.49	54.00	26.84	AV	Horizo	PASS
3	17355.00	25.92	44.82	18.90	68.30	23.48	PK	Horizo	PASS

Transmit at 5785MHz by 802.11a with Ant7



Data List									
NO	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	11570.00	25.59	36.08	10.49	74.00	37.92	PK	Vertic	PASS
2	11570.00	17.40	27.89	10.49	54.00	26.11	AV	Vertic	PASS
3	17355.00	27.09	45.99	18.90	68.30	22.31	PK	Vertic	PASS

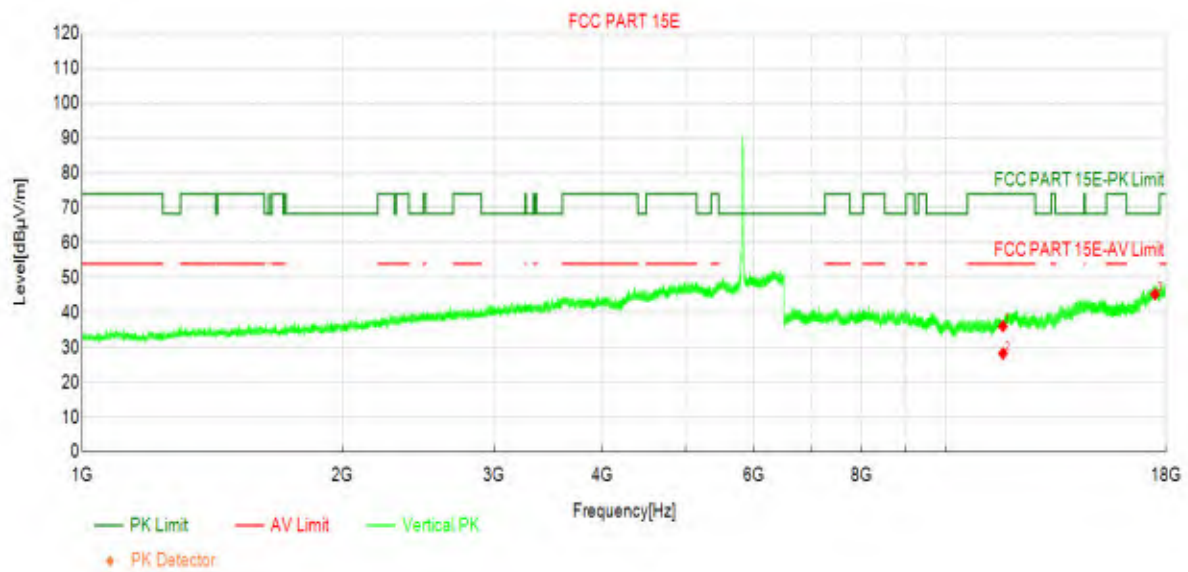
Transmit at 5825MHz by 802.11a with Ant7



Data List									
NO	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	11650.00	24.56	35.27	10.71	74.00	38.73	PK	Horizo	PASS
2	11650.00	17.40	28.11	10.71	54.00	25.89	AV	Horizo	PASS
3	17475.00	27.85	47.15	19.30	68.30	21.15	PK	Horizo	PASS

Transmit at 5825MHz by 802.11a with Ant7

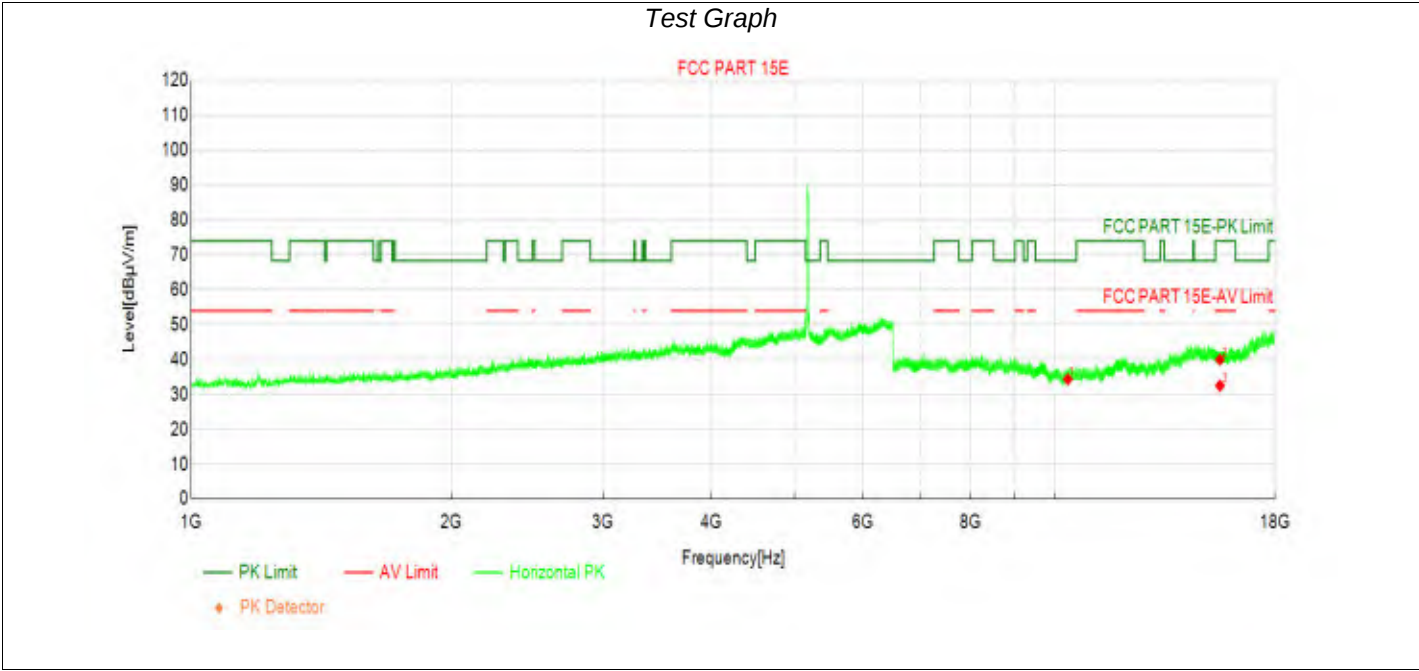
Test Graph



Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	11650.00	25.37	36.08	10.71	74.00	37.92	PK	Vertic	PASS
2	11650.00	17.52	28.23	10.71	54.00	25.77	AV	Vertic	PASS
3	17475.00	25.95	45.25	19.30	68.30	23.05	PK	Vertic	PASS

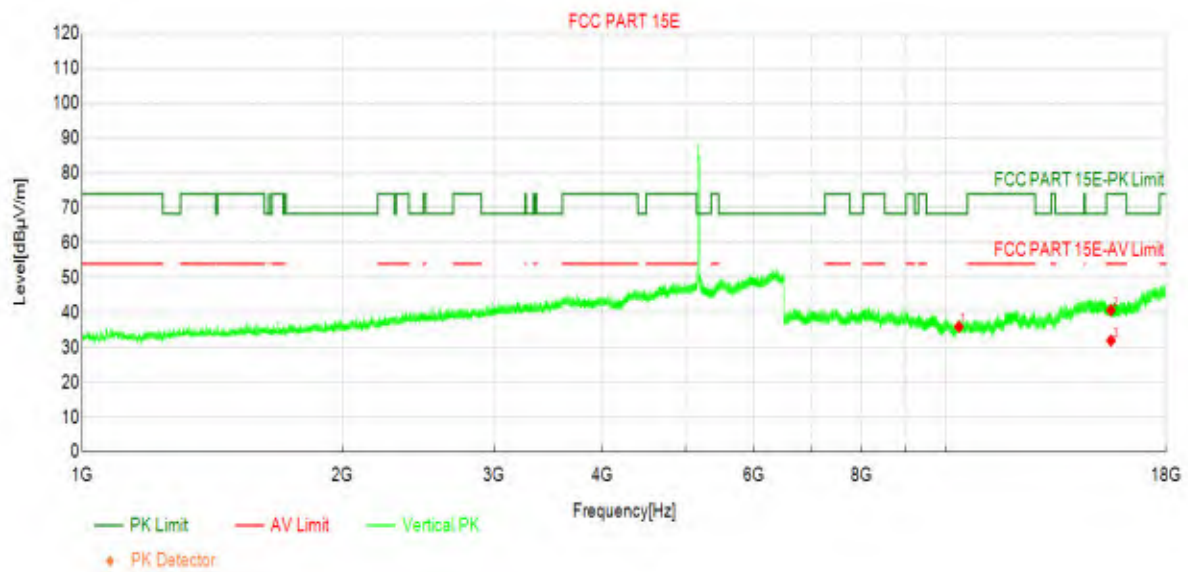
Transmit at 5180MHz by 802.11n(20MHz) with Ant7+8



Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	10360.00	27.11	34.36	7.25	68.30	33.94	PK	Horizo	PASS
2	15540.00	24.19	39.97	15.78	74.00	34.03	PK	Horizo	PASS
3	15540.00	16.73	32.51	15.78	54.00	21.49	AV	Horizo	PASS

Transmit at 5180MHz by 802.11n(20MHz) with Ant7+8

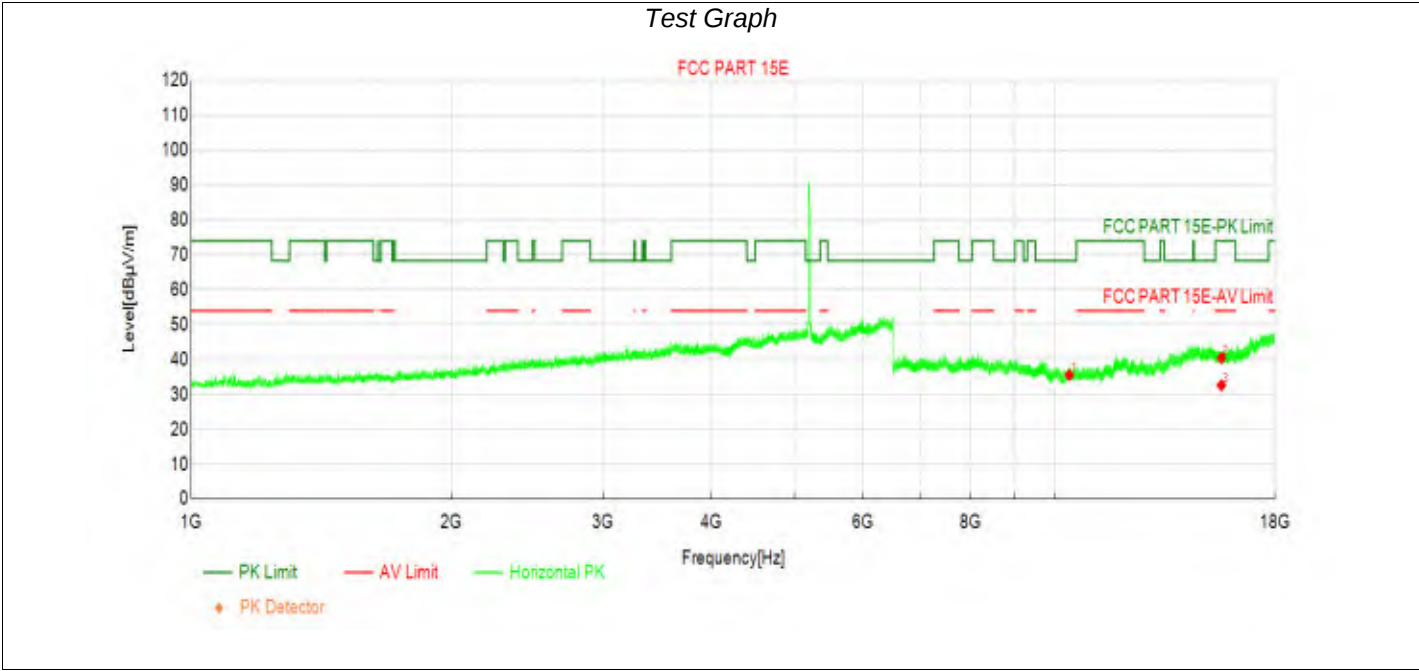
Test Graph



Data List

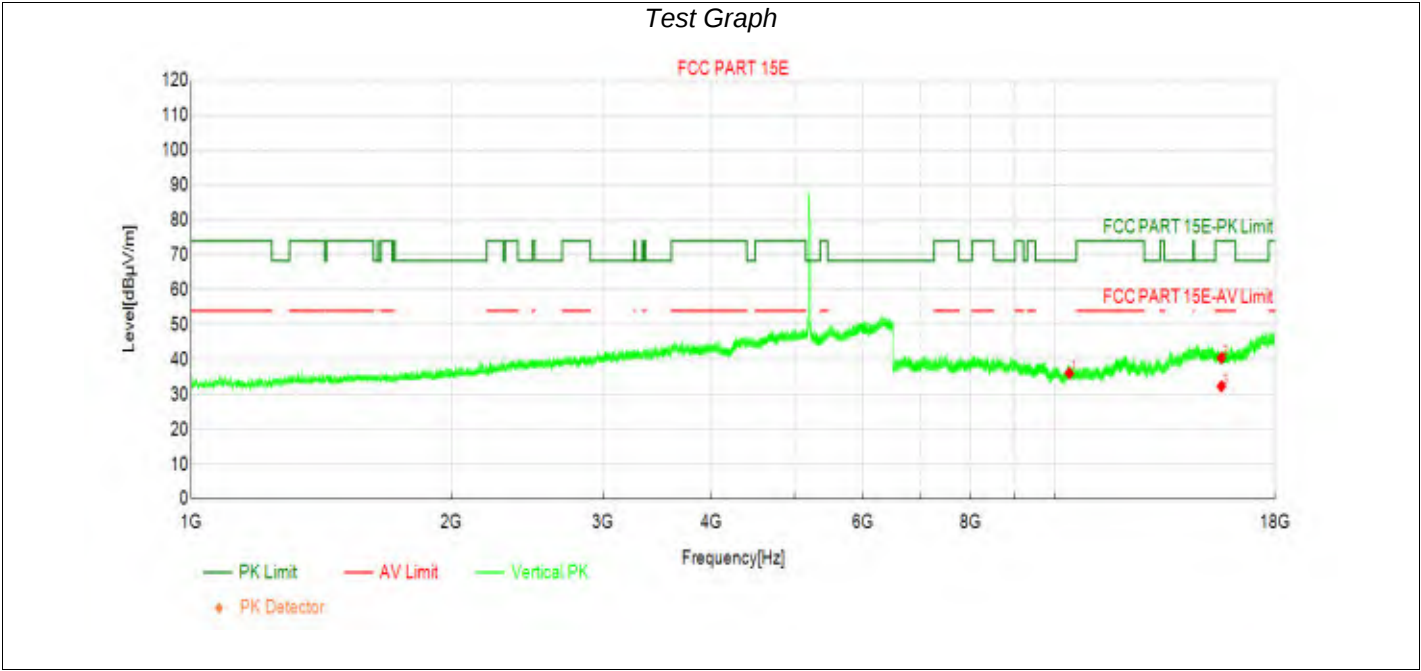
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	10360.00	28.67	35.92	7.25	68.30	32.38	PK	Vertic	PASS
2	15540.00	24.89	40.67	15.78	74.00	33.33	PK	Vertic	PASS
3	15540.00	16.19	31.97	15.78	54.00	22.03	AV	Vertic	PASS

Transmit at 5200MHz by 802.11n(20MHz) with Ant7+8



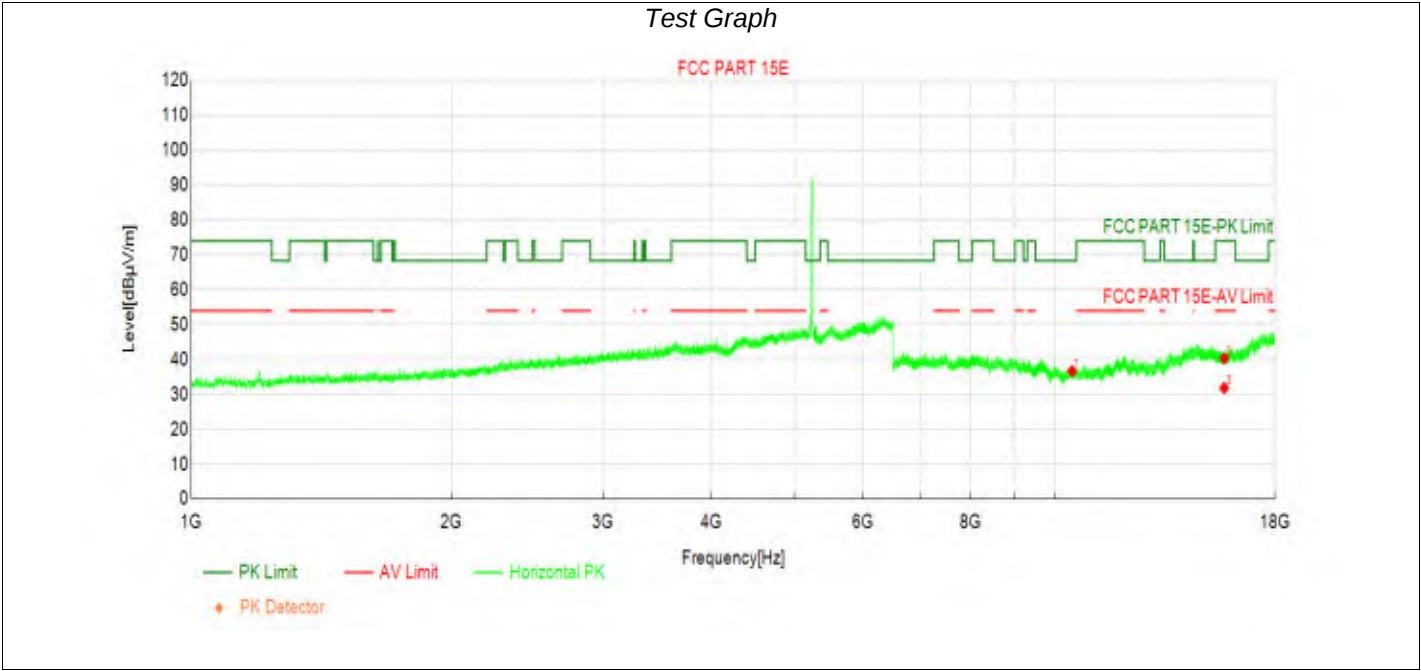
Data List									
NO	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	10400.00	28.24	35.55	7.31	68.30	32.75	PK	Horizo	PASS
2	15600.00	24.72	40.46	15.74	74.00	33.54	PK	Horizo	PASS
3	15600.00	16.89	32.63	15.74	54.00	21.37	AV	Horizo	PASS

Transmit at 5200MHz by 802.11n(20MHz) with Ant7+8



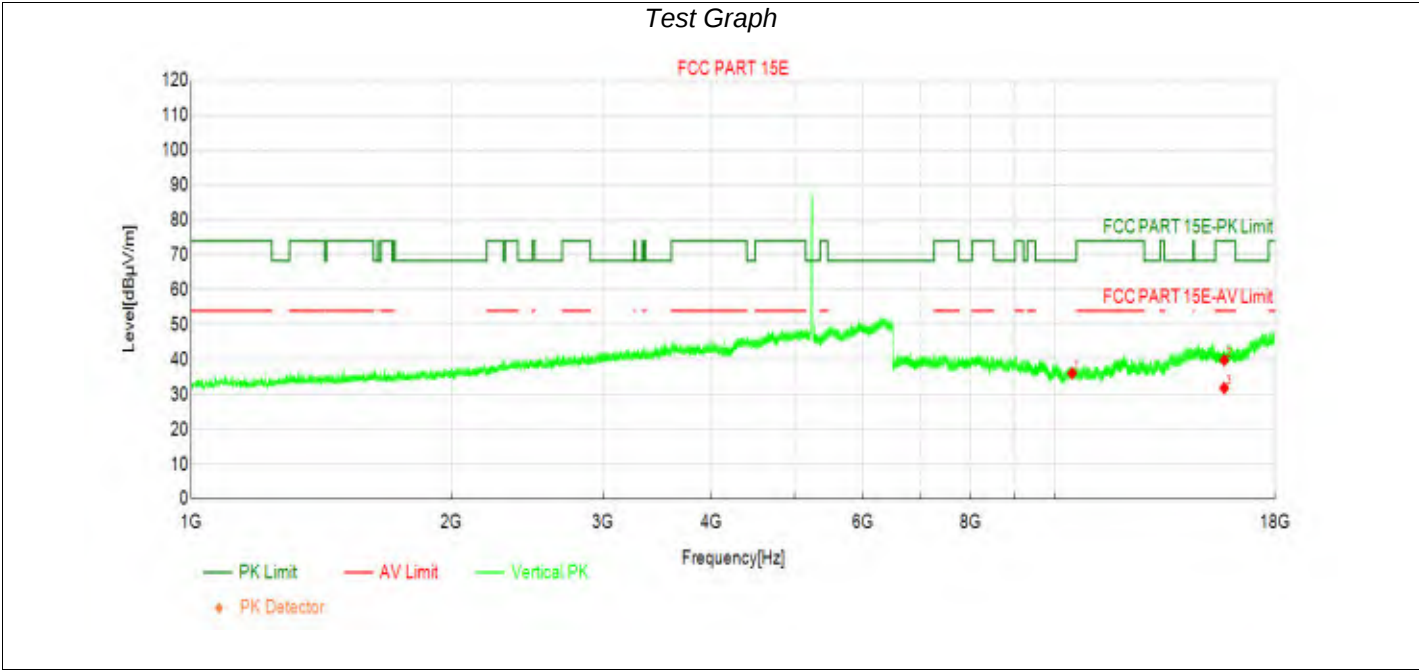
Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	10400.00	28.78	36.09	7.31	68.30	32.21	PK	Vertic	PASS
2	15600.00	24.74	40.48	15.74	74.00	33.52	PK	Vertic	PASS
3	15600.00	16.58	32.32	15.74	54.00	21.68	AV	Vertic	PASS

Transmit at 5240MHz by 802.11n(20MHz) with Ant7+8



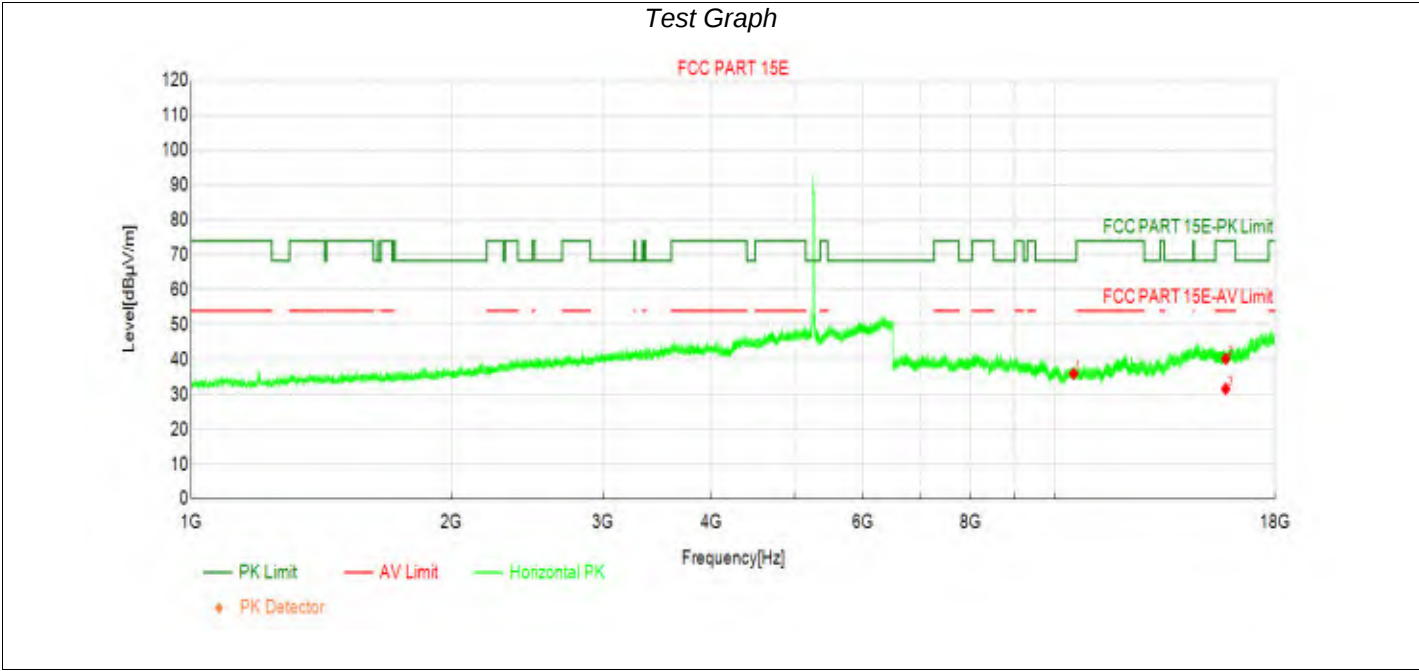
Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	10480.00	28.89	36.65	7.76	68.30	31.65	PK	Horizo	PASS
2	15720.00	24.45	40.31	15.86	74.00	33.69	PK	Horizo	PASS
3	15720.00	16.00	31.86	15.86	54.00	22.14	AV	Horizo	PASS

Transmit at 5240MHz by 802.11n(20MHz) with Ant7+8



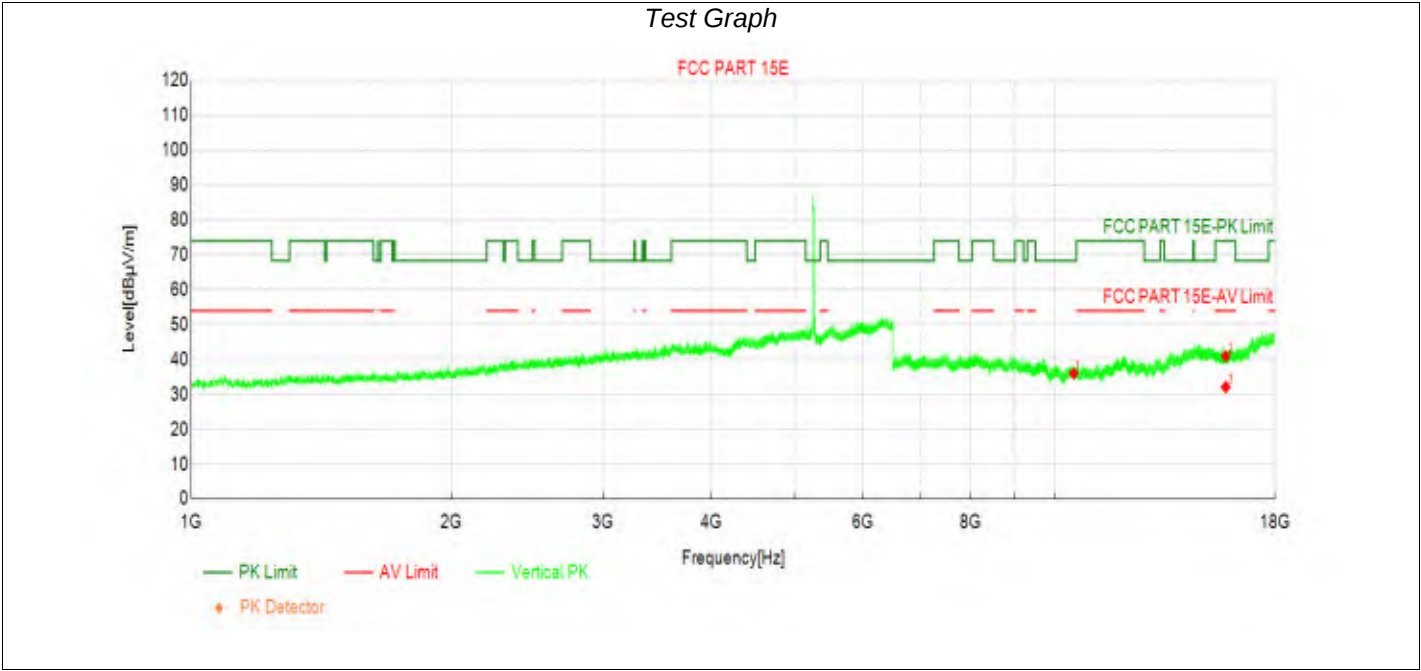
Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	10480.00	28.31	36.07	7.76	68.30	32.23	PK	Vertic	PASS
2	15720.00	23.94	39.80	15.86	74.00	34.20	PK	Vertic	PASS
3	15720.00	16.00	31.86	15.86	54.00	22.14	AV	Vertic	PASS

Transmit at 5260MHz by 802.11n(20MHz) with Ant7+8



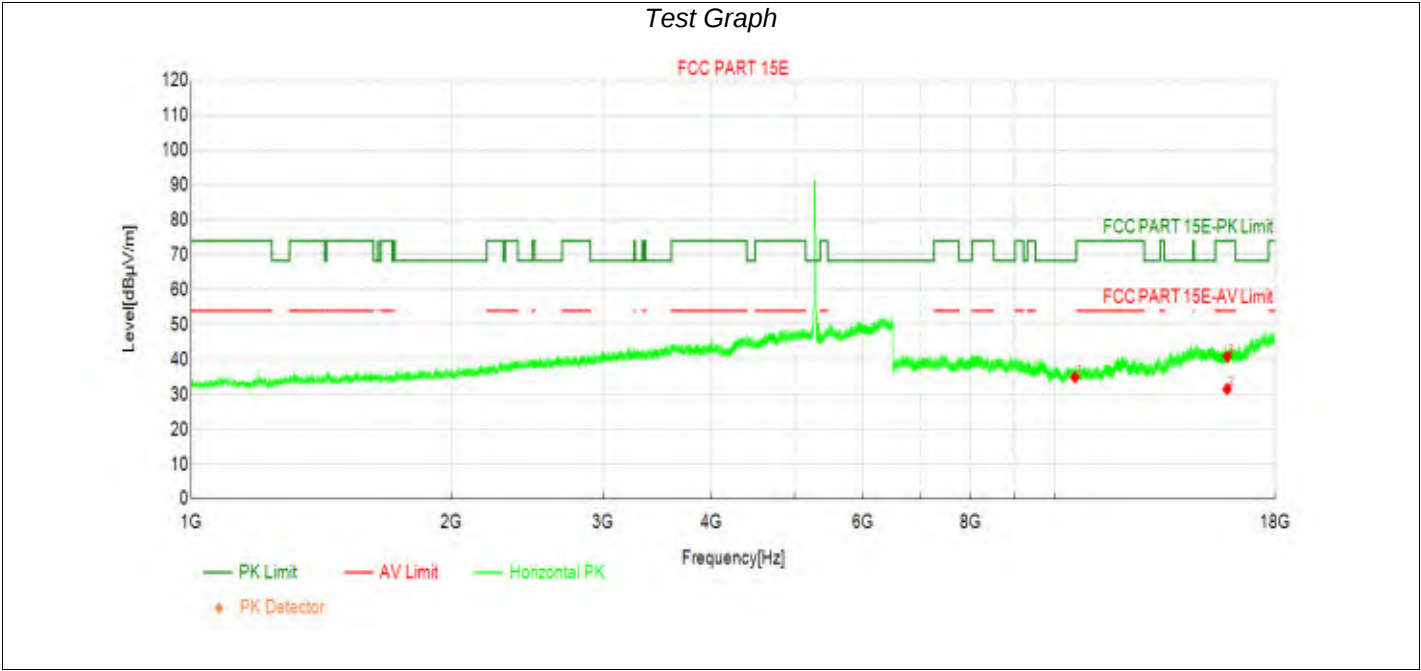
Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	10520.00	28.02	35.92	7.90	68.30	32.38	PK	Horizo	PASS
2	15780.00	24.24	40.20	15.96	74.00	33.80	PK	Horizo	PASS
3	15780.00	15.62	31.58	15.96	54.00	22.42	AV	Horizo	PASS

Transmit at 5260MHz by 802.11n(20MHz) with Ant7+8



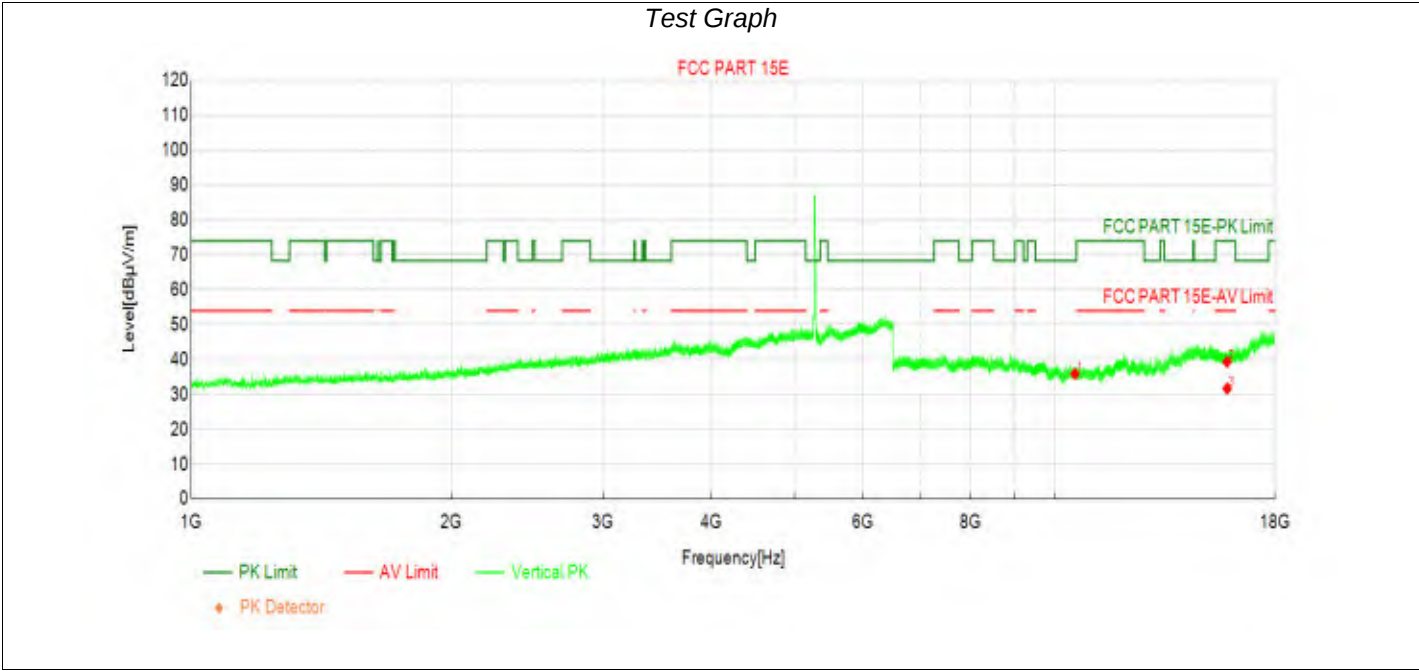
Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	10520.00	28.12	36.02	7.90	68.30	32.28	PK	Vertic	PASS
2	15780.00	24.98	40.94	15.96	74.00	33.06	PK	Vertic	PASS
3	15780.00	16.17	32.13	15.96	54.00	21.87	AV	Vertic	PASS

Transmit at 5280MHz by 802.11n(20MHz) with Ant7+8



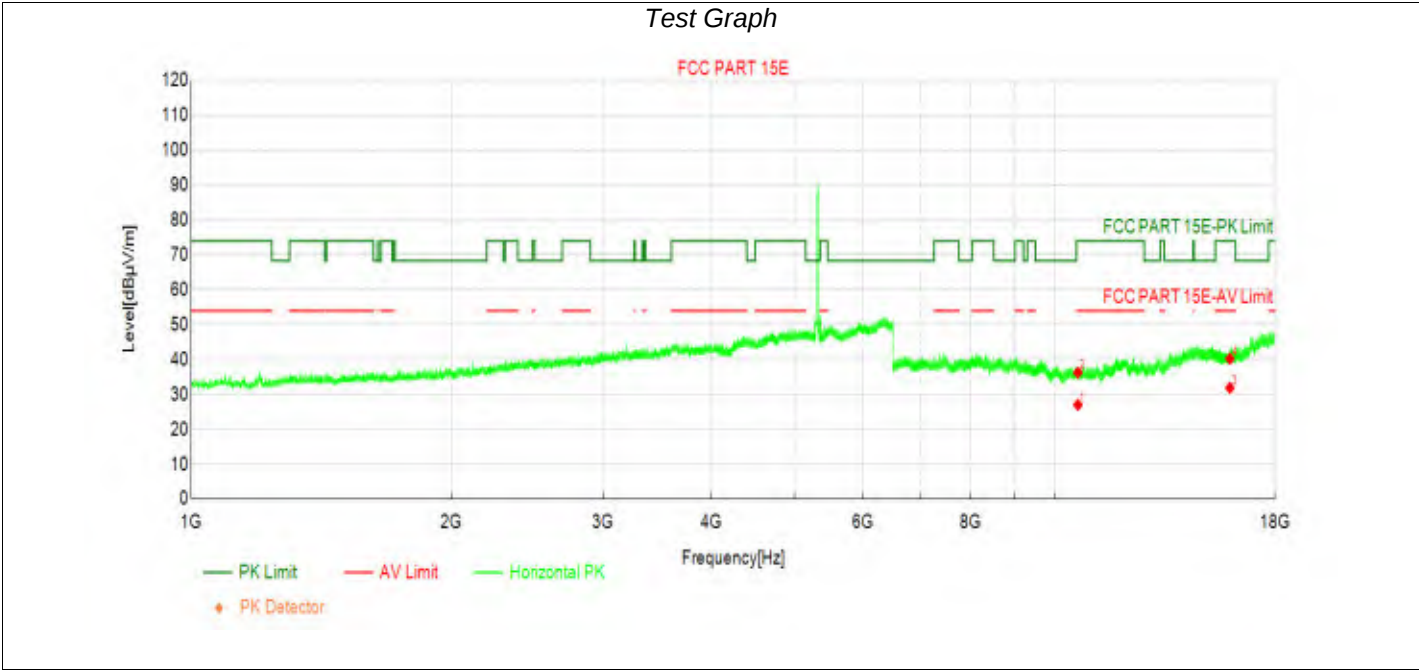
Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	10560.00	26.92	34.90	7.98	68.30	33.40	PK	Horizo	PASS
2	15840.00	15.46	31.57	16.11	54.00	22.43	AV	Horizo	PASS
3	15840.00	24.75	40.86	16.11	74.00	33.14	PK	Horizo	PASS

Transmit at 5280MHz by 802.11n(20MHz) with Ant7+8



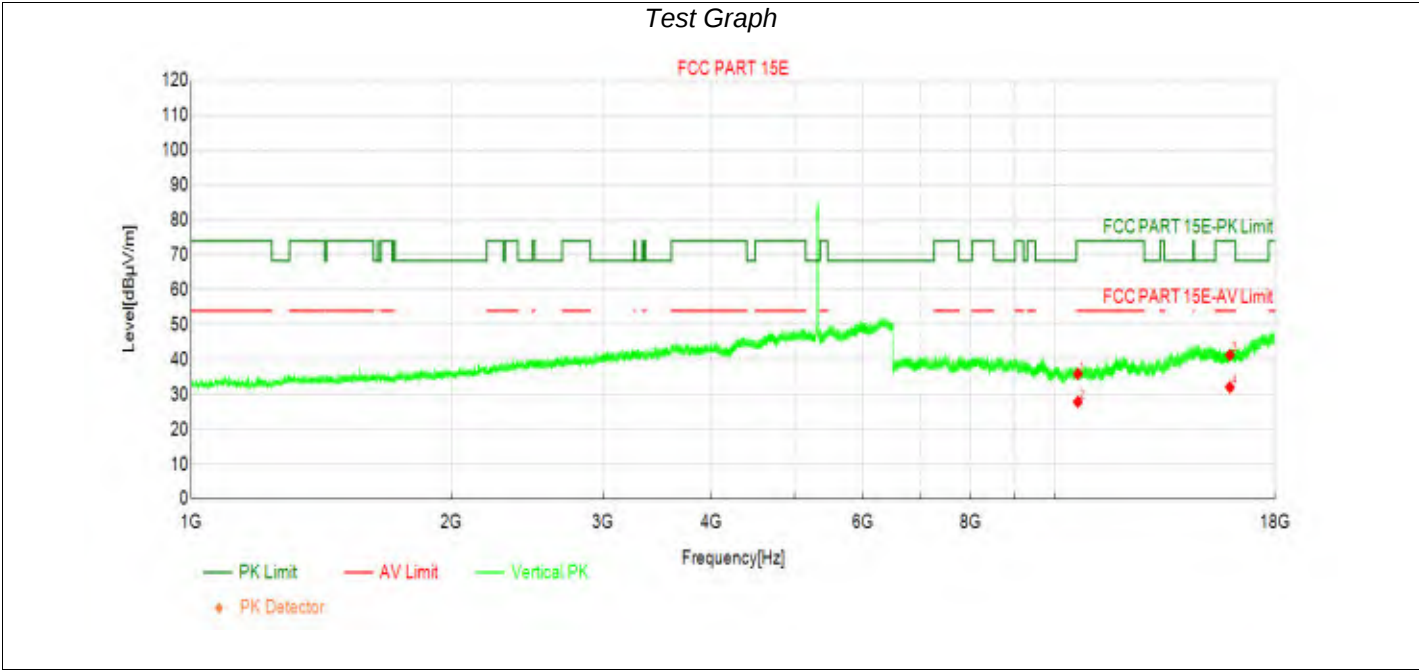
Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	10560.00	27.91	35.89	7.98	68.30	32.41	PK	Vertic	PASS
2	15840.00	23.21	39.32	16.11	74.00	34.68	PK	Vertic	PASS
3	15840.00	15.59	31.70	16.11	54.00	22.30	AV	Vertic	PASS

Transmit at 5320MHz by 802.11n(20MHz) with Ant7+8



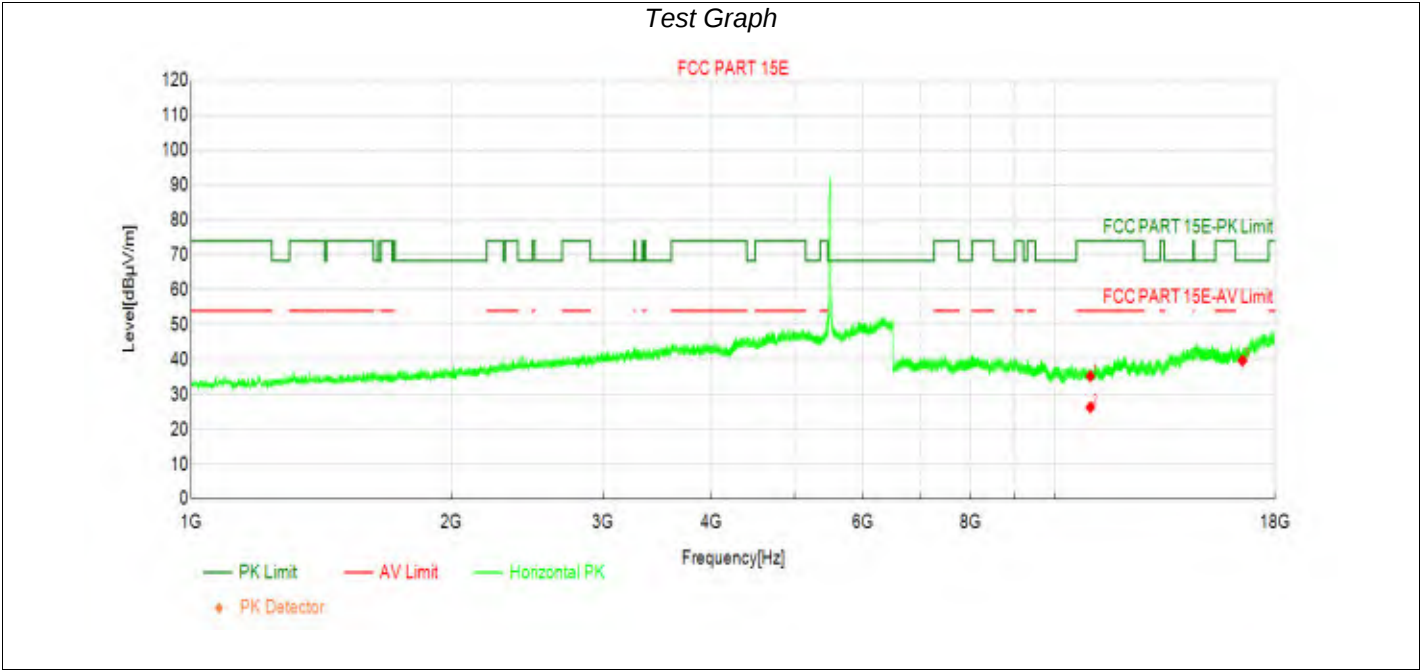
Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	10640.00	19.02	27.03	8.01	54.00	26.97	AV	Horizo	PASS
2	10640.00	28.24	36.25	8.01	74.00	37.75	PK	Horizo	PASS
3	15960.00	15.33	31.87	16.54	54.00	22.13	AV	Horizo	PASS
4	15960.00	23.71	40.25	16.54	74.00	33.75	PK	Horizo	PASS

Transmit at 5320MHz by 802.11n(20MHz) with Ant7+8



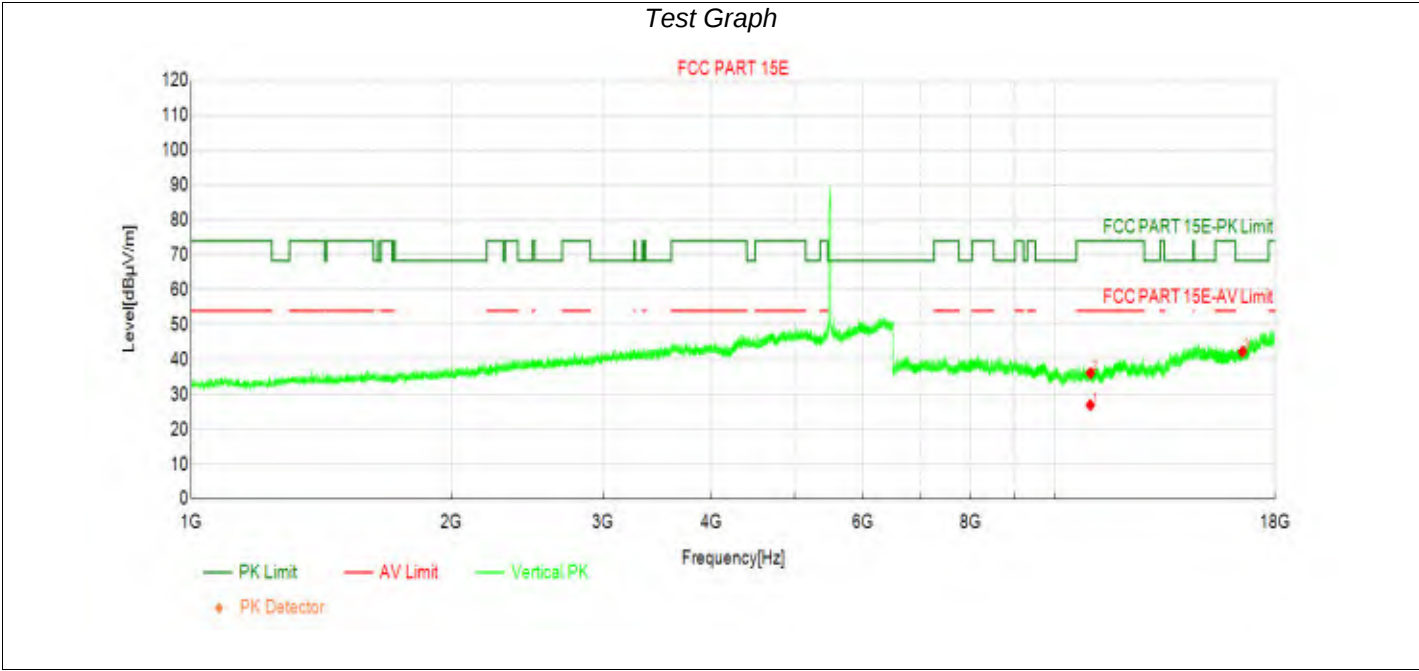
Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	10640.00	27.86	35.87	8.01	74.00	38.13	PK	Vertic	PASS
2	10640.00	19.86	27.87	8.01	54.00	26.13	AV	Vertic	PASS
3	15960.00	24.73	41.27	16.54	74.00	32.73	PK	Vertic	PASS
4	15960.00	15.53	32.07	16.54	54.00	21.93	AV	Vertic	PASS

Transmit at 5500MHz by 802.11n(20MHz) with Ant7+8



Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	11000.00	26.14	35.25	9.11	74.00	38.75	PK	Horizo	PASS
2	11000.00	17.23	26.34	9.11	54.00	27.66	AV	Horizo	PASS
3	16500.00	22.82	39.64	16.82	68.30	28.66	PK	Horizo	PASS

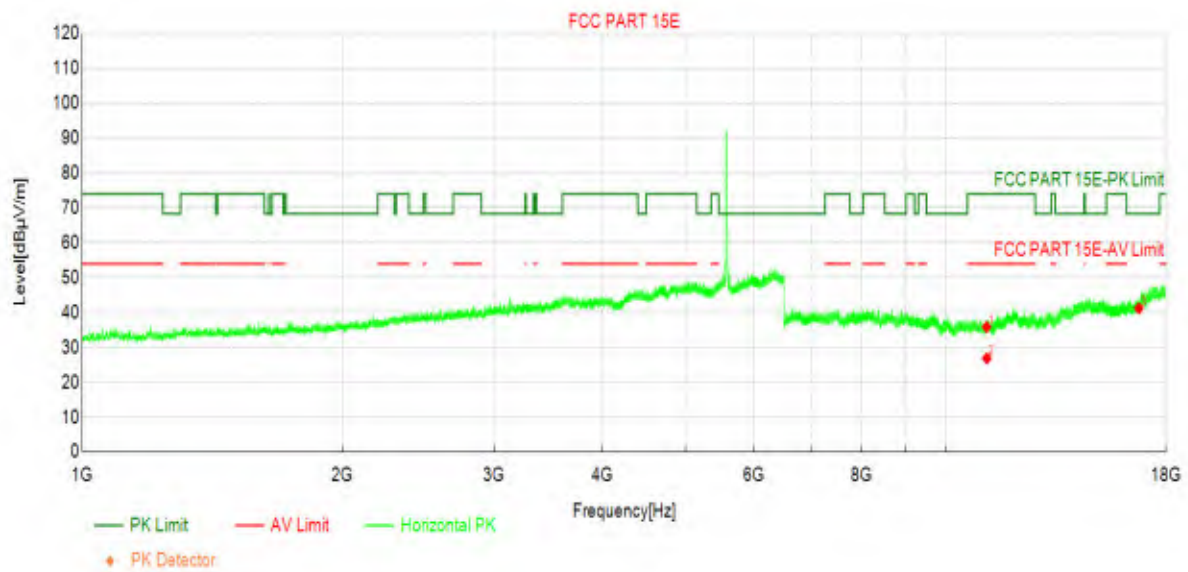
Transmit at 5500MHz by 802.11n(20MHz) with Ant7+8



Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	11000.00	17.86	26.97	9.11	54.00	27.03	AV	Vertic	PASS
2	11000.00	27.01	36.12	9.11	74.00	37.88	PK	Vertic	PASS
3	16500.00	25.42	42.24	16.82	68.30	26.06	PK	Vertic	PASS

Transmit at 5580MHz by 802.11n(20MHz) with Ant7+8

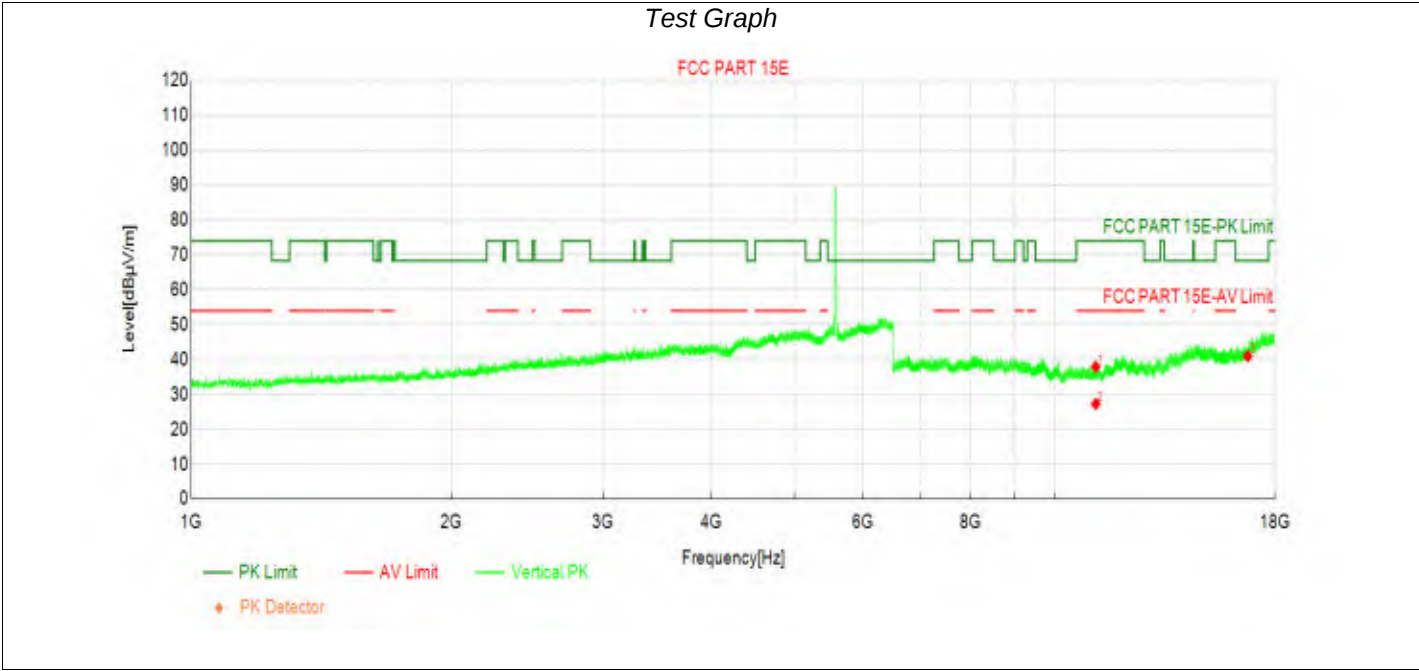
Test Graph



Data List

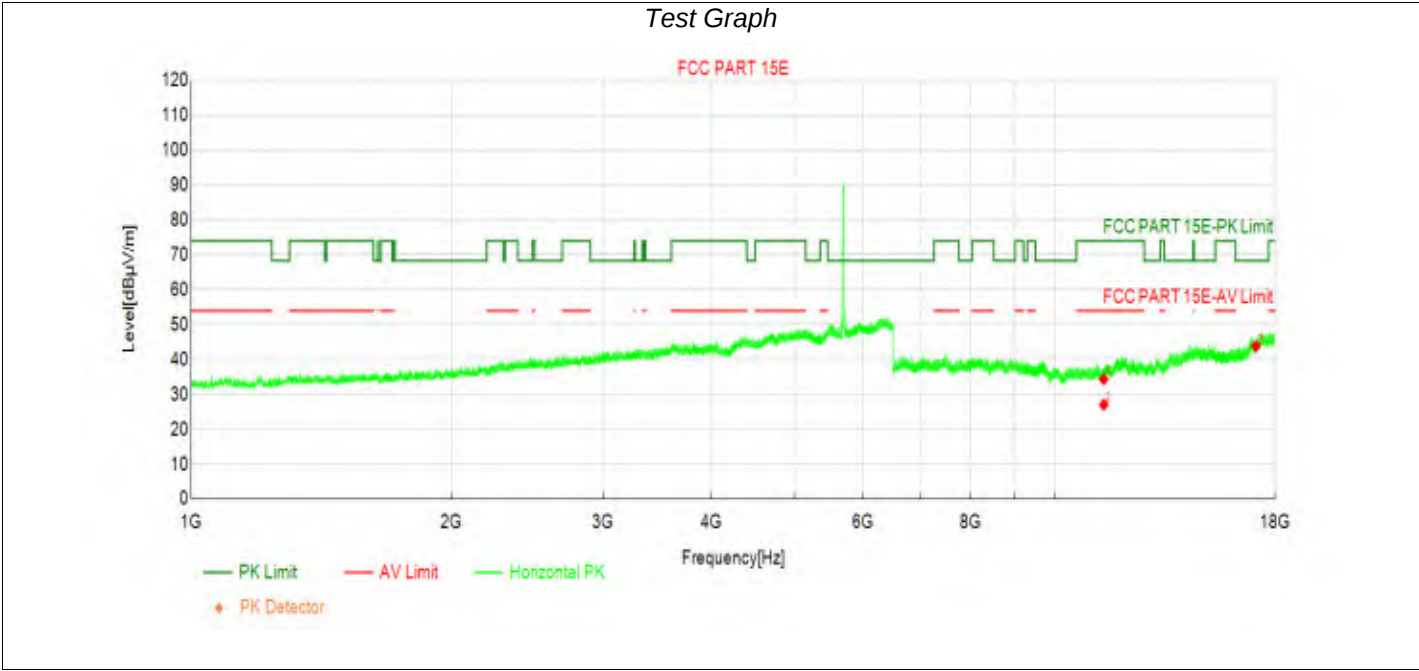
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	11160.00	26.65	35.84	9.19	74.00	38.16	PK	Horizo	PASS
2	11160.00	17.65	26.84	9.19	54.00	27.16	AV	Horizo	PASS
3	16740.00	23.89	41.19	17.30	68.30	27.11	PK	Horizo	PASS

Transmit at 5580MHz by 802.11n(20MHz) with Ant7+8



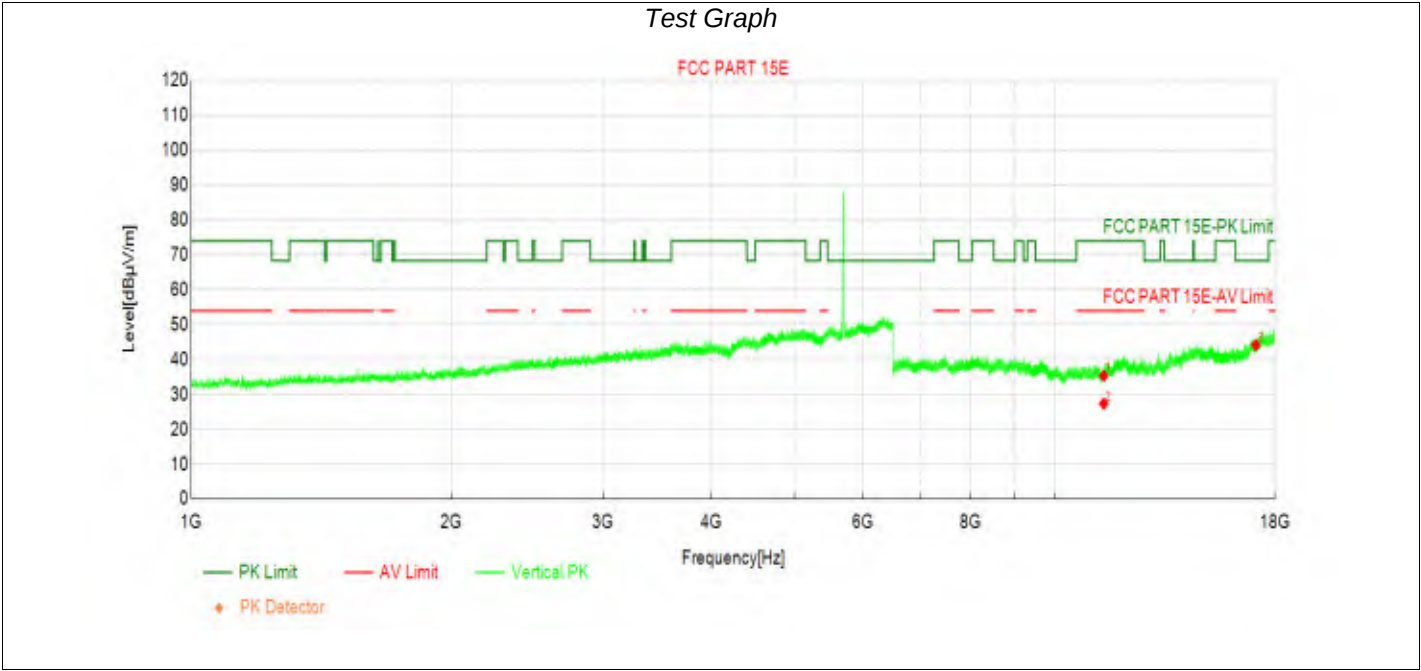
Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	11160.00	28.73	37.92	9.19	74.00	36.08	PK	Vertic	PASS
2	11160.00	18.10	27.29	9.19	54.00	26.71	AV	Vertic	PASS
3	16740.00	23.68	40.98	17.30	68.30	27.32	PK	Vertic	PASS

Transmit at 5700MHz by 802.11n(20MHz) with Ant7+8



Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	11400.00	24.46	34.34	9.88	74.00	39.66	PK	Horizo	PASS
2	11400.00	17.16	27.04	9.88	54.00	26.96	AV	Horizo	PASS
3	17100.00	25.48	43.84	18.36	68.30	24.46	PK	Horizo	PASS

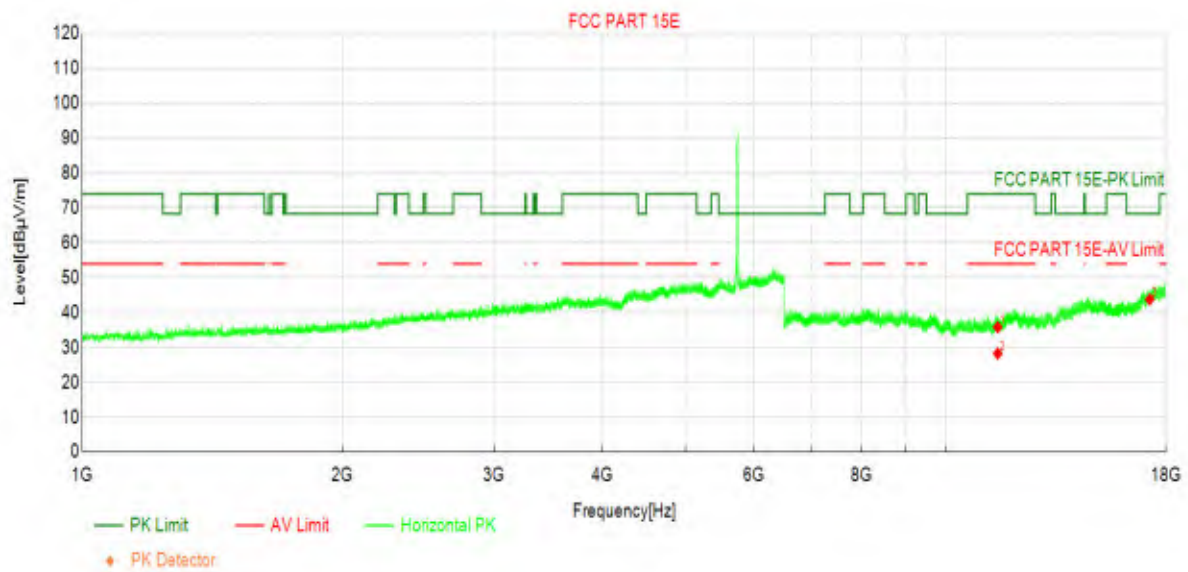
Transmit at 5700MHz by 802.11n(20MHz) with Ant7+8



Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	11400.00	25.48	35.36	9.88	74.00	38.64	PK	Vertic	PASS
2	11400.00	17.46	27.34	9.88	54.00	26.66	AV	Vertic	PASS
3	17100.00	25.79	44.15	18.36	68.30	24.15	PK	Vertic	PASS

Transmit at 5745MHz by 802.11n(20MHz) with Ant7+8

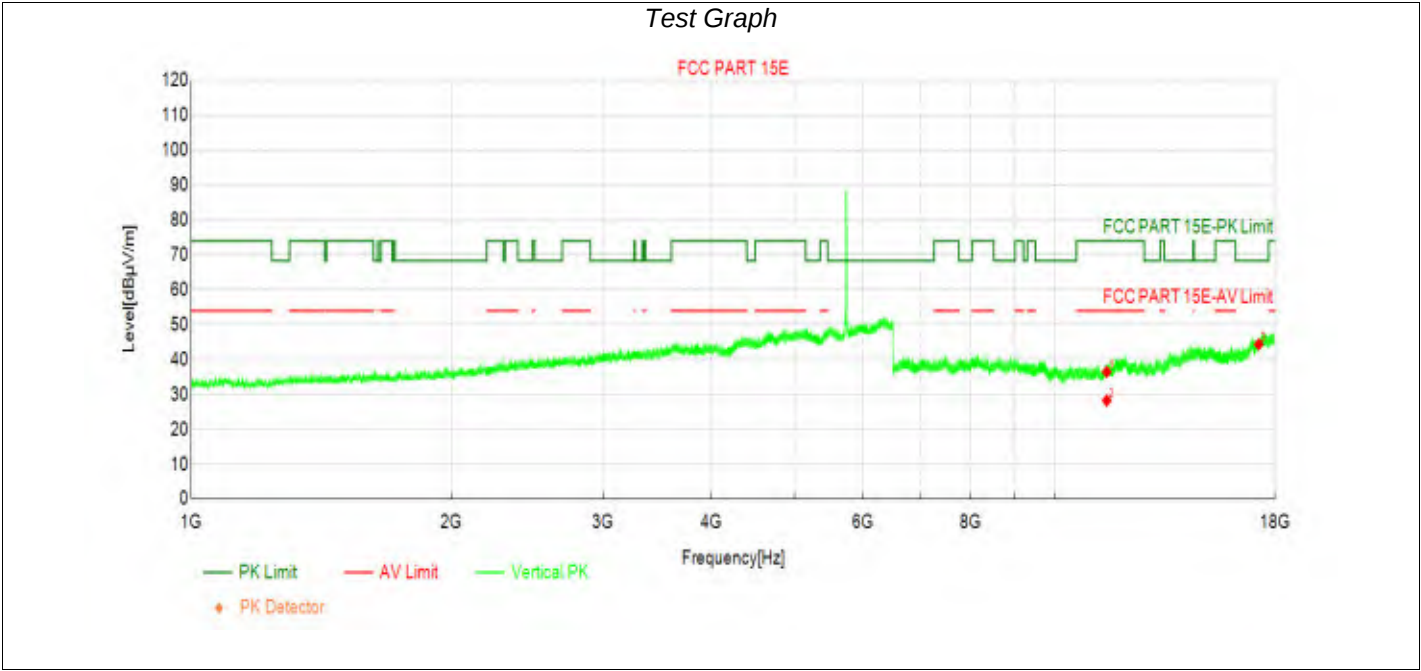
Test Graph



Data List

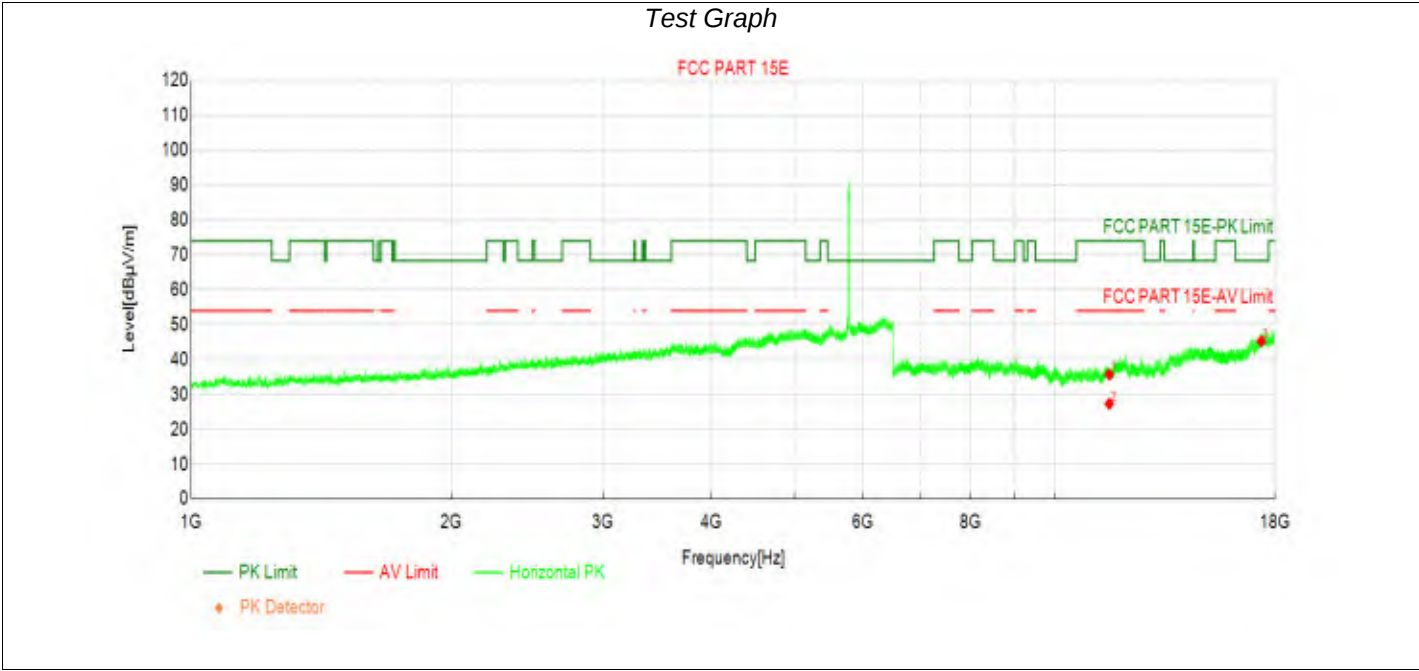
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	11490.00	25.80	35.80	10.00	74.00	38.20	PK	Horizo	PASS
2	11490.00	18.23	28.23	10.00	54.00	25.77	AV	Horizo	PASS
3	17235.00	25.85	43.77	17.92	68.30	24.53	PK	Horizo	PASS

Transmit at 5745MHz by 802.11n(20MHz) with Ant7+8



Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	11490.00	26.48	36.48	10.00	74.00	37.52	PK	Vertic	PASS
2	11490.00	18.23	28.23	10.00	54.00	25.77	AV	Vertic	PASS
3	17235.00	26.43	44.35	17.92	68.30	23.95	PK	Vertic	PASS

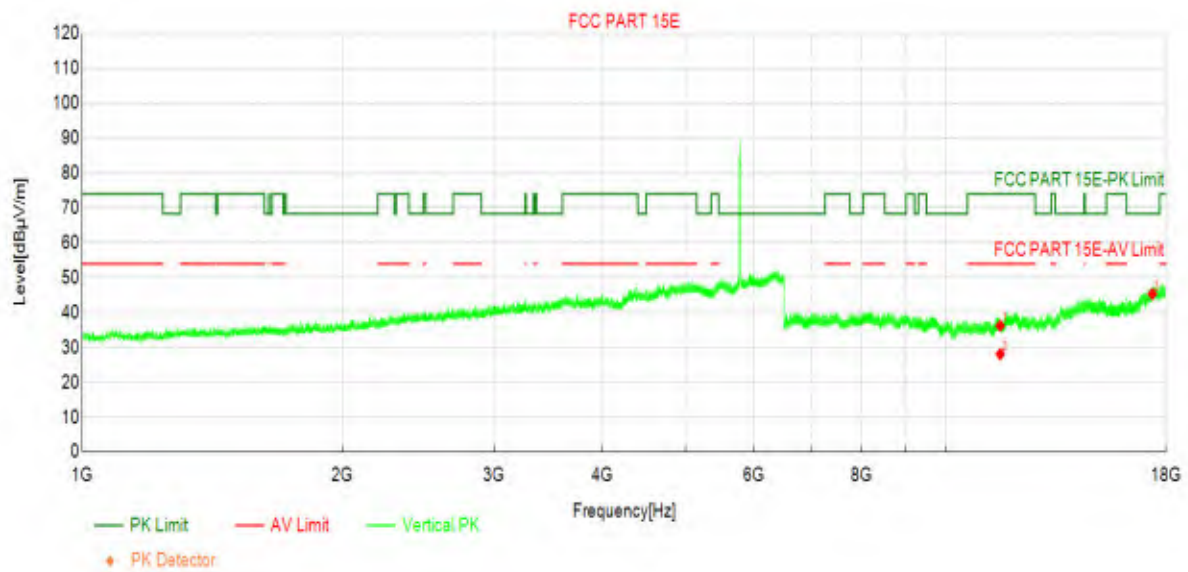
Transmit at 5785MHz by 802.11n(20MHz) with Ant7+8



Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	11570.00	25.21	35.70	10.49	74.00	38.30	PK	Horizo	PASS
2	11570.00	16.84	27.33	10.49	54.00	26.67	AV	Horizo	PASS
3	17355.00	26.35	45.25	18.90	68.30	23.05	PK	Horizo	PASS

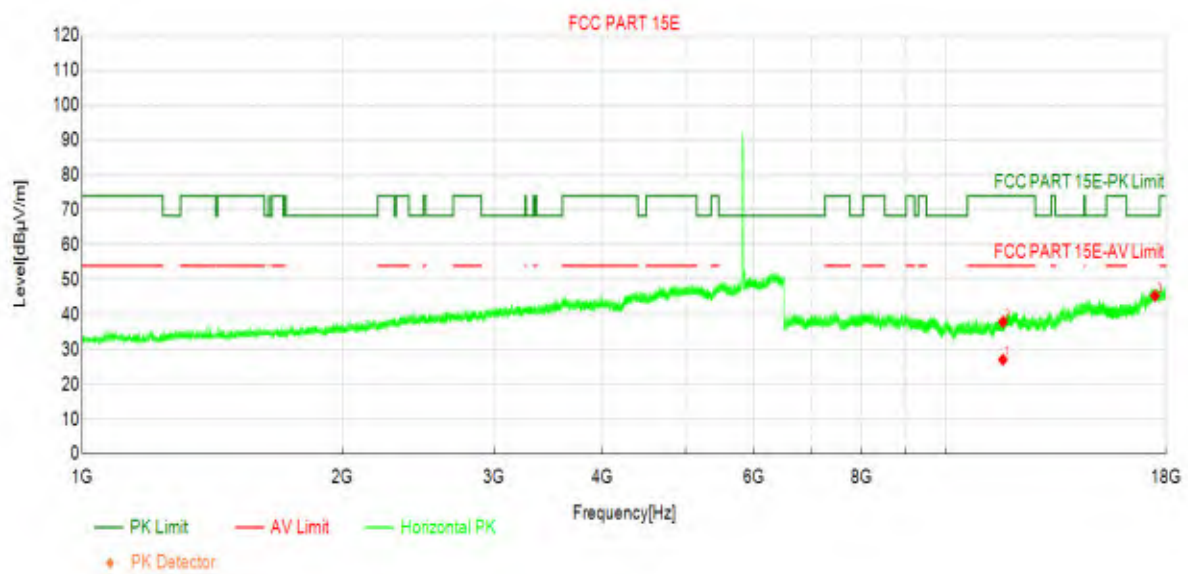
Transmit at 5785MHz by 802.11n(20MHz) with Ant7+8

Test Graph



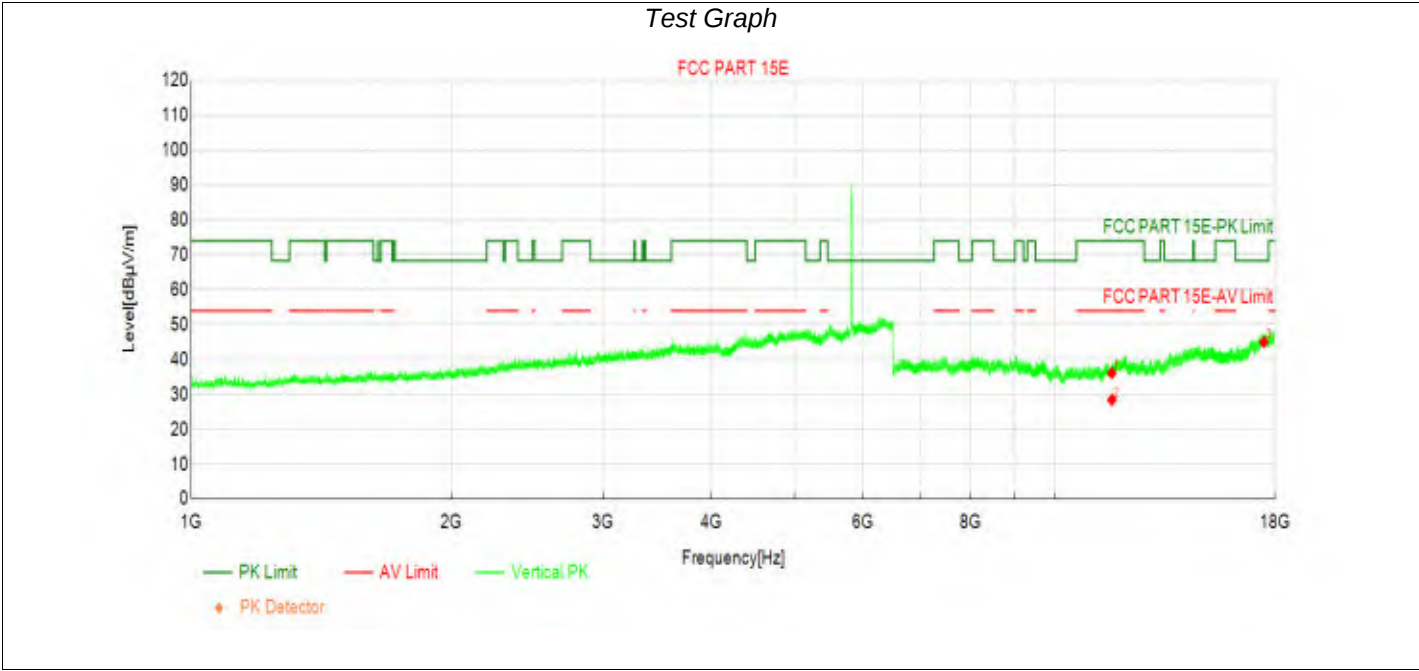
Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	11570.00	25.72	36.21	10.49	74.00	37.79	PK	Vertic	PASS
2	11570.00	17.57	28.06	10.49	54.00	25.94	AV	Vertic	PASS
3	17355.00	26.43	45.33	18.90	68.30	22.97	PK	Vertic	PASS

Transmit at 5825MHz by 802.11n(20MHz) with Ant7+8*Test Graph***Data List**

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	11650.00	16.37	27.08	10.71	54.00	26.92	AV	Horizo	PASS
2	11650.00	27.14	37.85	10.71	74.00	36.15	PK	Horizo	PASS
3	17475.00	26.08	45.38	19.30	68.30	22.92	PK	Horizo	PASS

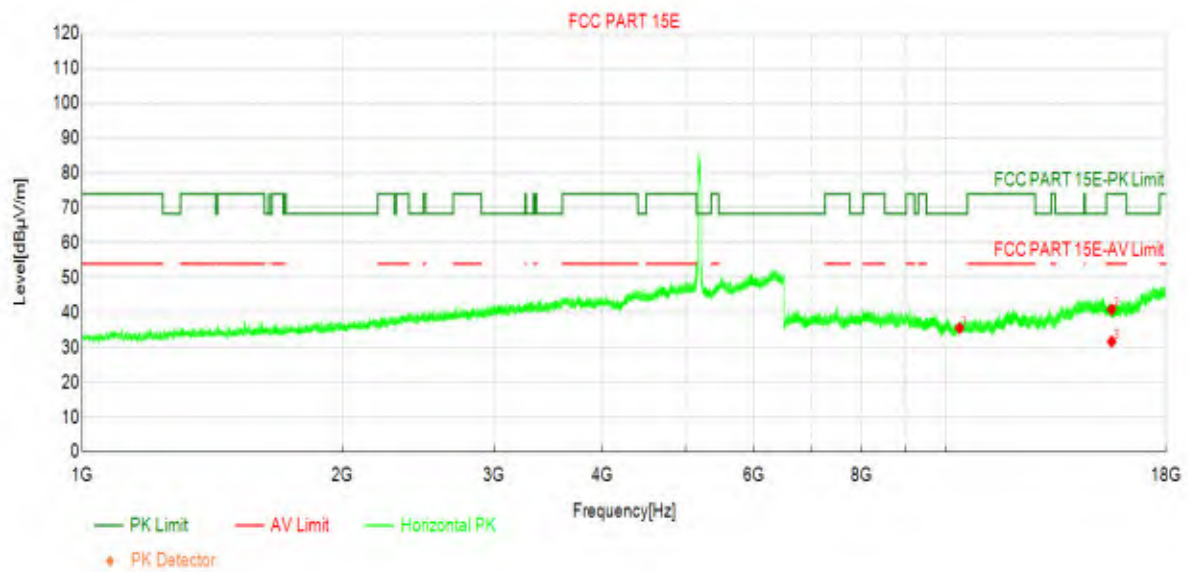
Transmit at 5825MHz by 802.11n(20MHz) with Ant7+8



Data List									
NO	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	11650.00	25.41	36.12	10.71	74.00	37.88	PK	Vertic	PASS
2	11650.00	17.71	28.42	10.71	54.00	25.58	AV	Vertic	PASS
3	17475.00	25.75	45.05	19.30	68.30	23.25	PK	Vertic	PASS

Transmit at 5190MHz by 802.11n(40MHz) with Ant7+8

Test Graph

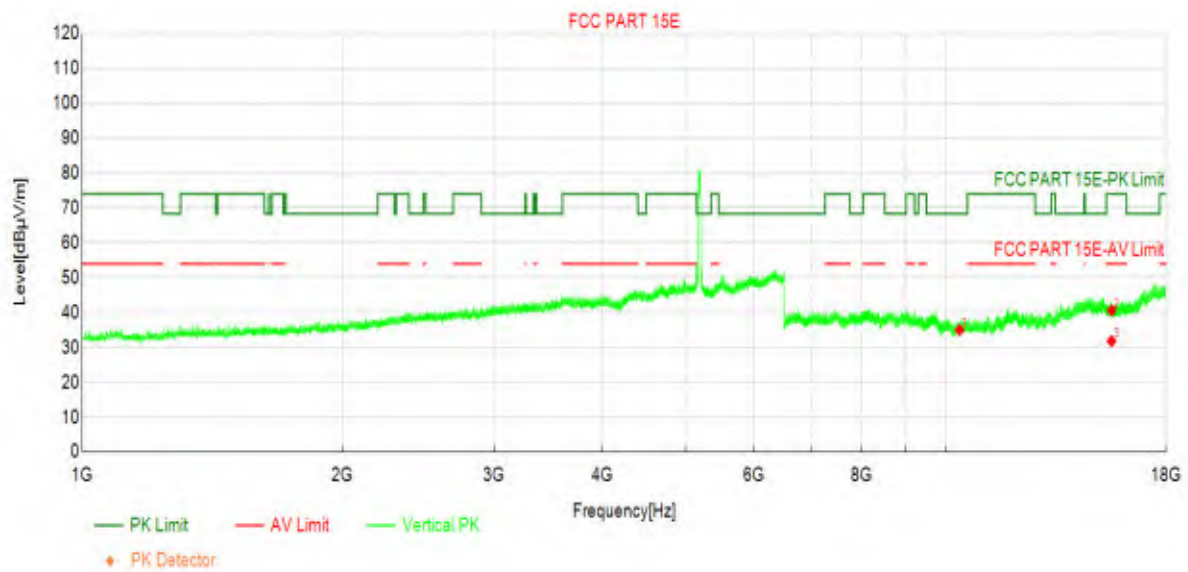


Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	10380.00	28.27	35.54	7.27	68.30	32.76	PK	Horizo	PASS
2	15570.00	25.10	40.86	15.76	74.00	33.14	PK	Horizo	PASS
3	15570.00	15.89	31.65	15.76	54.00	22.35	AV	Horizo	PASS

Transmit at 5190MHz by 802.11n(40MHz) with Ant7+8

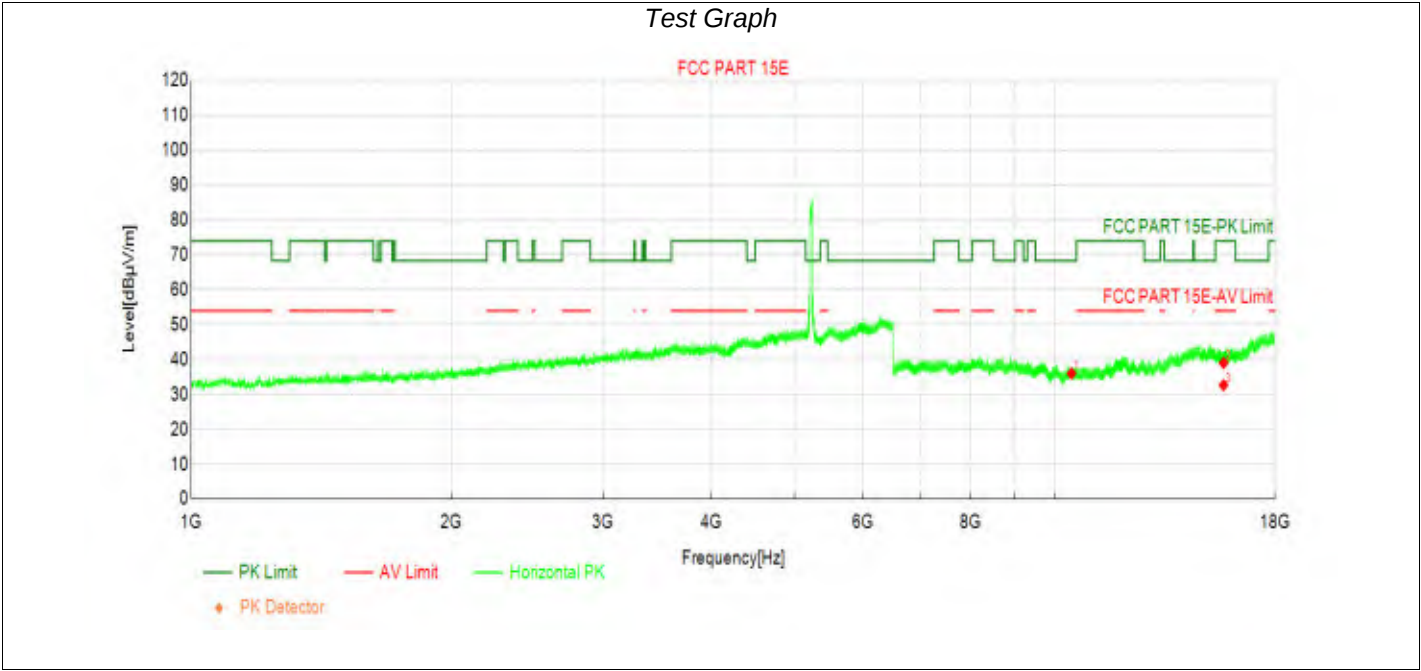
Test Graph



Data List

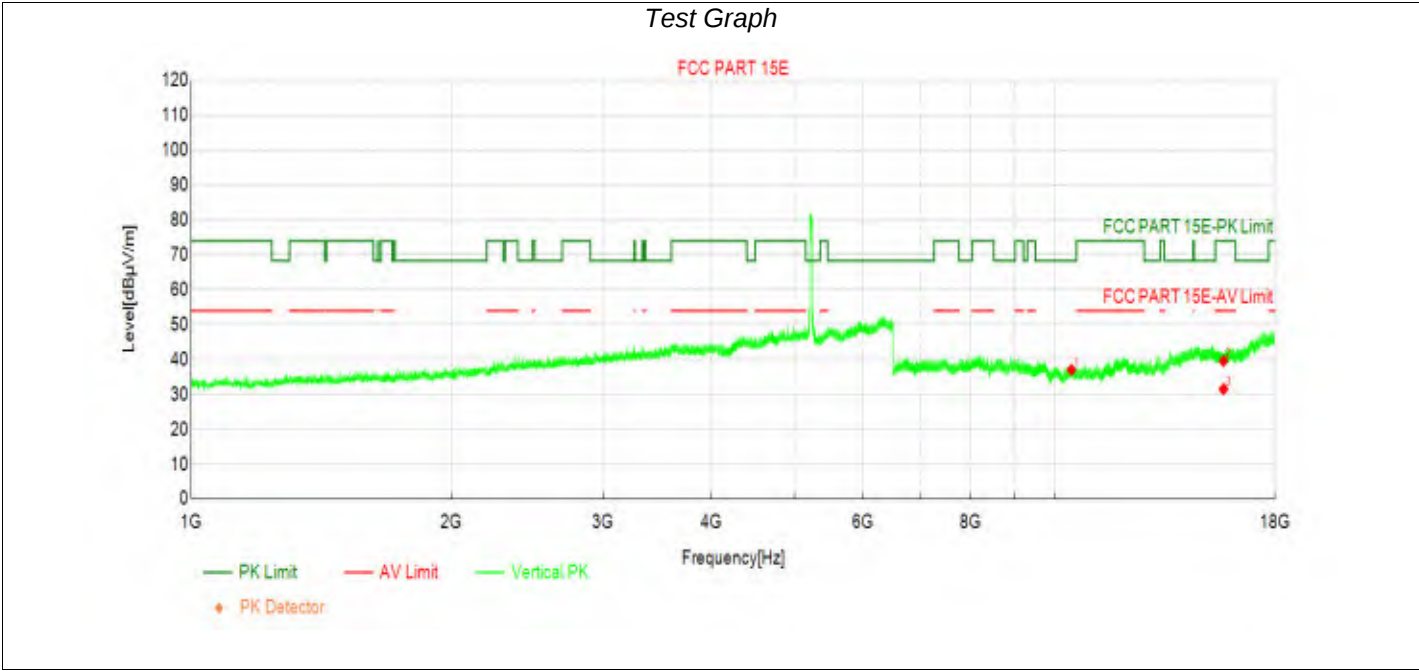
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	10380.00	27.72	34.99	7.27	68.30	33.31	PK	Vertic	PASS
2	15570.00	24.83	40.59	15.76	74.00	33.41	PK	Vertic	PASS
3	15570.00	16.04	31.80	15.76	54.00	22.20	AV	Vertic	PASS

Transmit at 5230MHz by 802.11n(40MHz) with Ant7+8



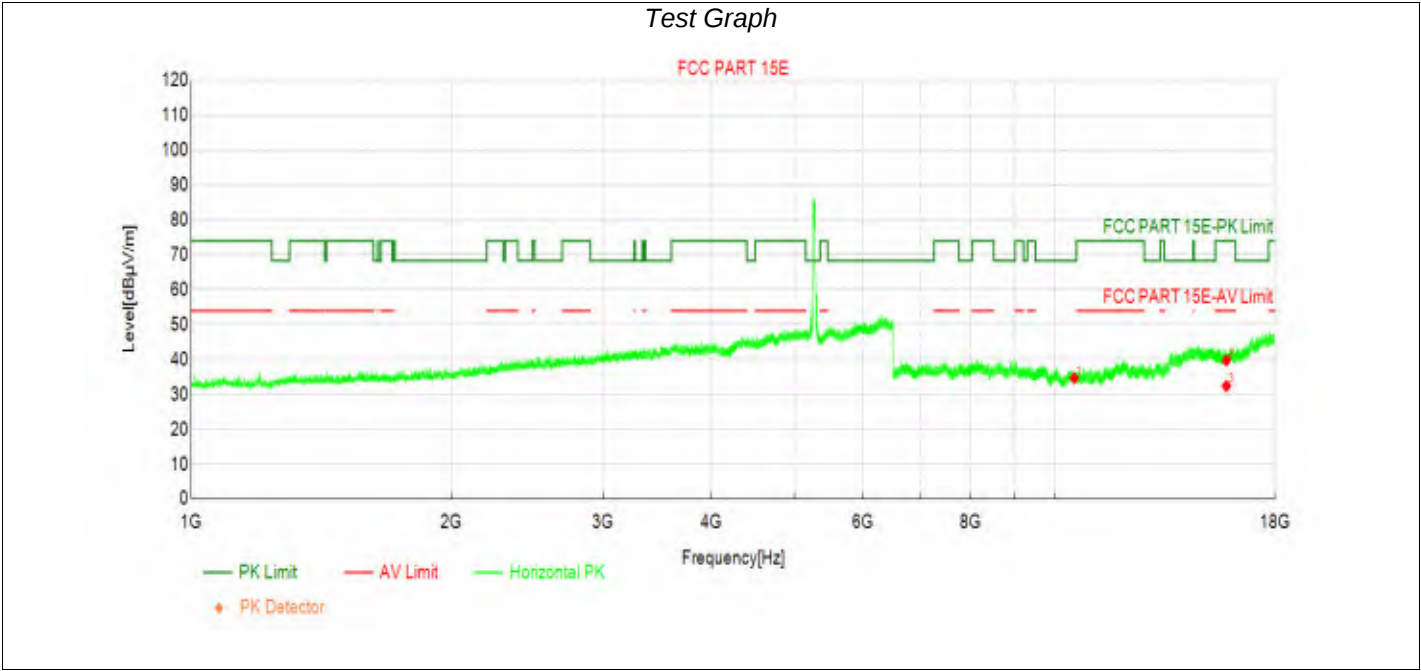
Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	10460.00	28.38	36.03	7.65	68.30	32.27	PK	Horizo	PASS
2	15690.00	23.19	39.01	15.82	74.00	34.99	PK	Horizo	PASS
3	15690.00	16.83	32.65	15.82	54.00	21.35	AV	Horizo	PASS

Transmit at 5230MHz by 802.11n(40MHz) with Ant7+8



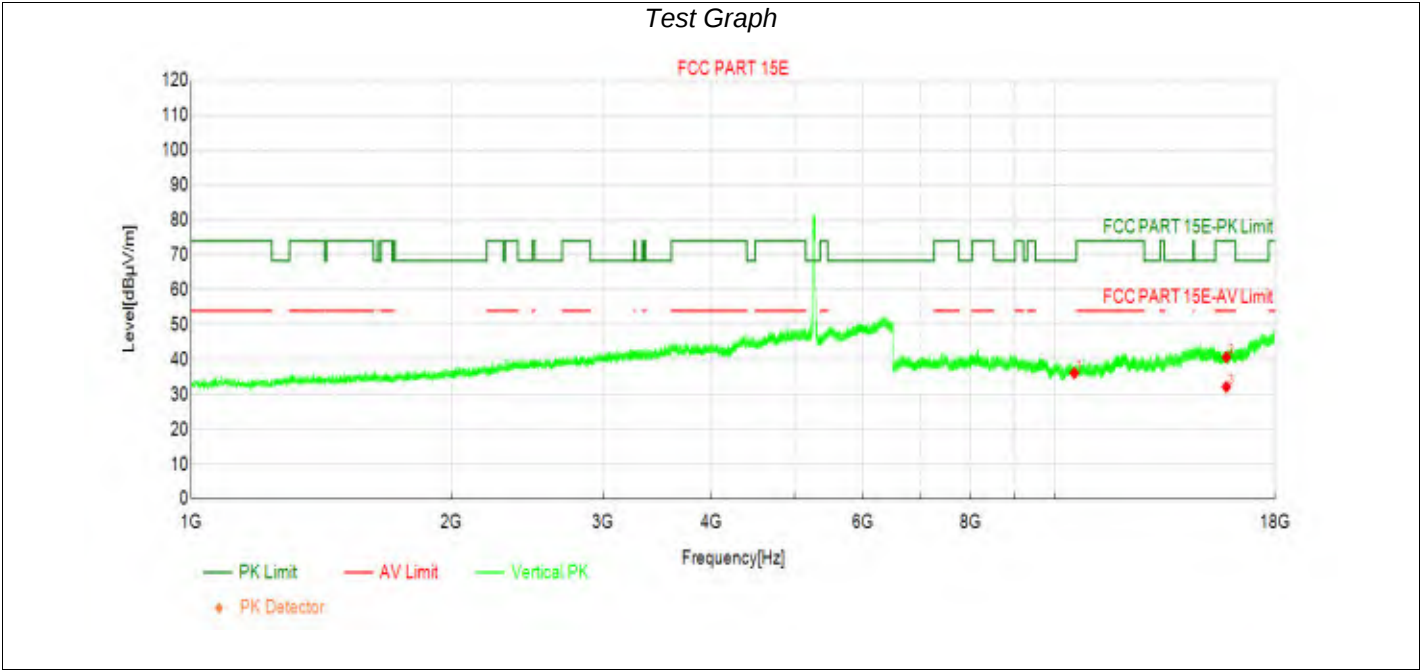
Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	10460.00	29.39	37.04	7.65	68.30	31.26	PK	Vertic	PASS
2	15690.00	23.76	39.58	15.82	74.00	34.42	PK	Vertic	PASS
3	15690.00	15.68	31.50	15.82	54.00	22.50	AV	Vertic	PASS

Transmit at 5270MHz by 802.11n(40MHz) with Ant7+8



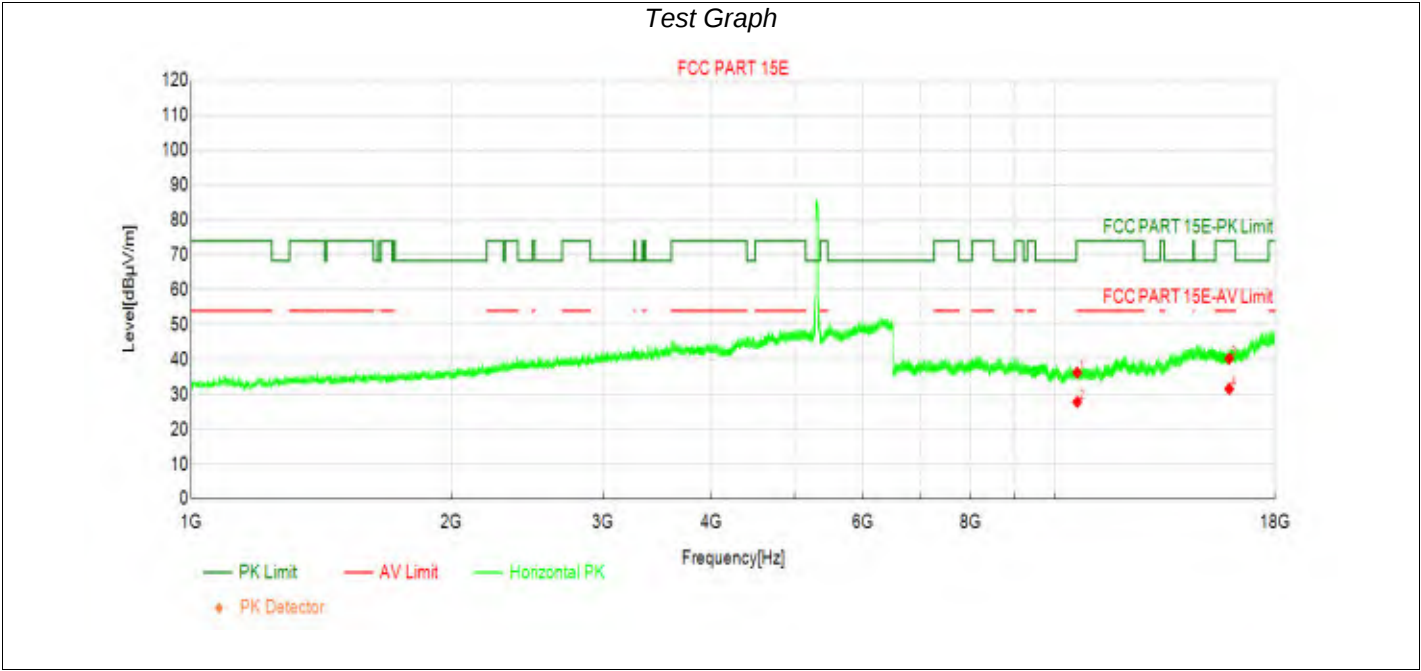
Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	10540.00	26.73	34.67	7.94	68.30	33.63	PK	Horizo	PASS
2	15810.00	23.70	39.72	16.02	74.00	34.28	PK	Horizo	PASS
3	15810.00	16.39	32.41	16.02	54.00	21.59	AV	Horizo	PASS

Transmit at 5270MHz by 802.11n(40MHz) with Ant7+8



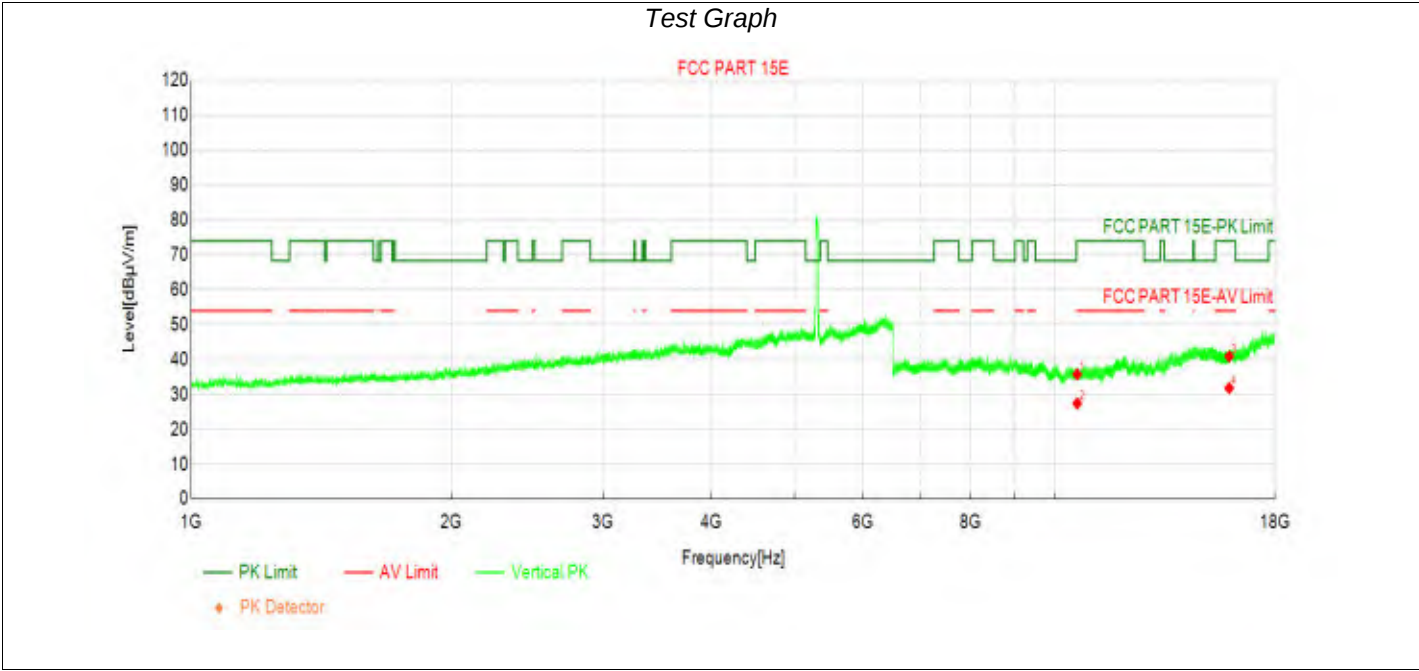
Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	10540.00	28.18	36.12	7.94	68.30	32.18	PK	Vertic	PASS
2	15810.00	24.69	40.71	16.02	74.00	33.29	PK	Vertic	PASS
3	15810.00	16.15	32.17	16.02	54.00	21.83	AV	Vertic	PASS

Transmit at 5310MHz by 802.11n(40MHz) with Ant7+8



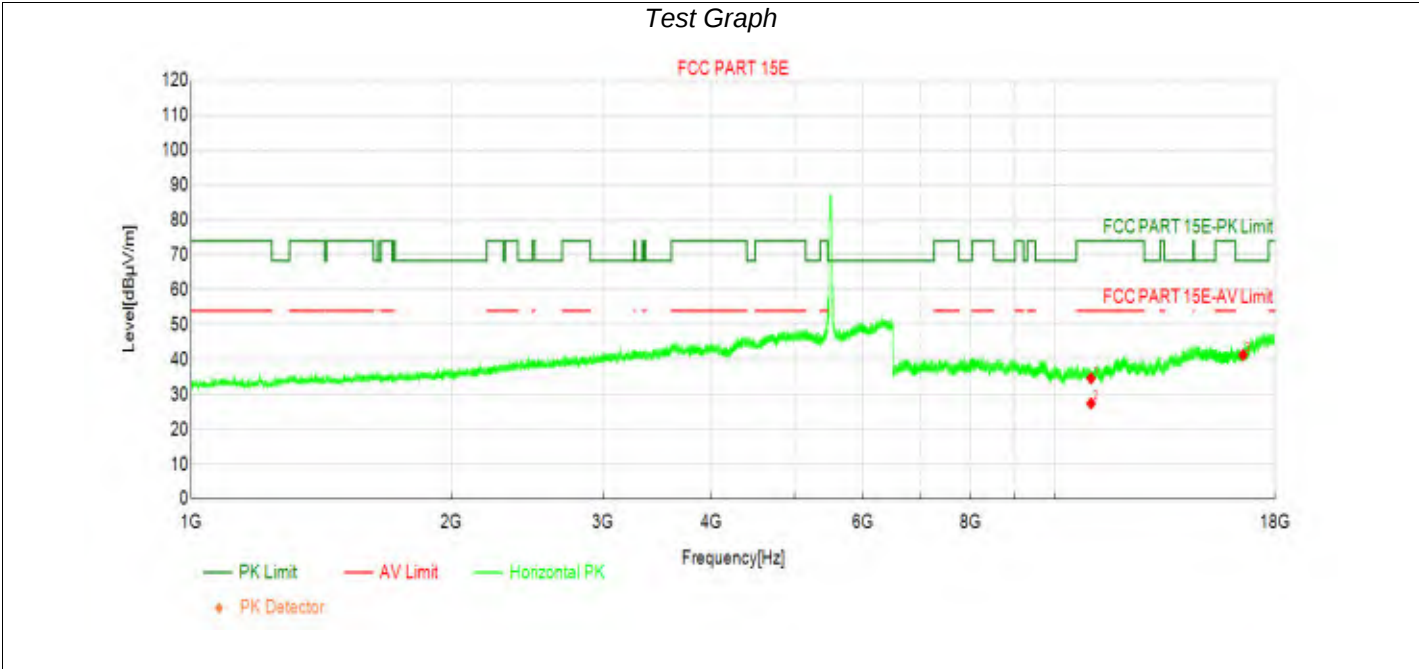
Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	10620.00	28.21	36.24	8.03	74.00	37.76	PK	Horizo	PASS
2	10620.00	19.81	27.84	8.03	54.00	26.16	AV	Horizo	PASS
3	15930.00	23.86	40.27	16.41	74.00	33.73	PK	Horizo	PASS
4	15930.00	15.20	31.61	16.41	54.00	22.39	AV	Horizo	PASS

Transmit at 5310MHz by 802.11n(40MHz) with Ant7+8



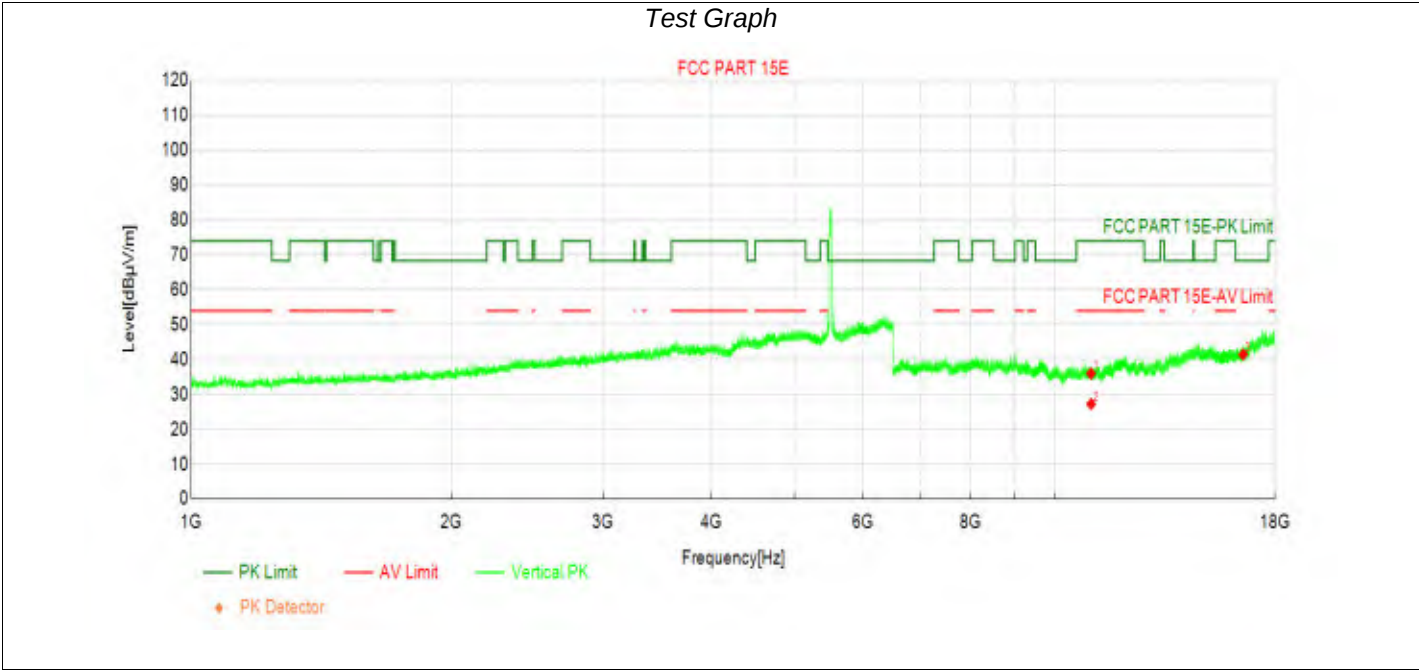
Data List									
NO	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	10620.00	27.73	35.76	8.03	74.00	38.24	PK	Vertic	PASS
2	10620.00	19.37	27.40	8.03	54.00	26.60	AV	Vertic	PASS
3	15930.00	24.48	40.89	16.41	74.00	33.11	PK	Vertic	PASS
4	15930.00	15.41	31.82	16.41	54.00	22.18	AV	Vertic	PASS

Transmit at 5510MHz by 802.11n(40MHz) with Ant7+8



Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	11020.00	25.52	34.60	9.08	74.00	39.40	PK	Horizo	PASS
2	11020.00	18.35	27.43	9.08	54.00	26.57	AV	Horizo	PASS
3	16530.00	24.35	41.31	16.96	68.30	26.99	PK	Horizo	PASS

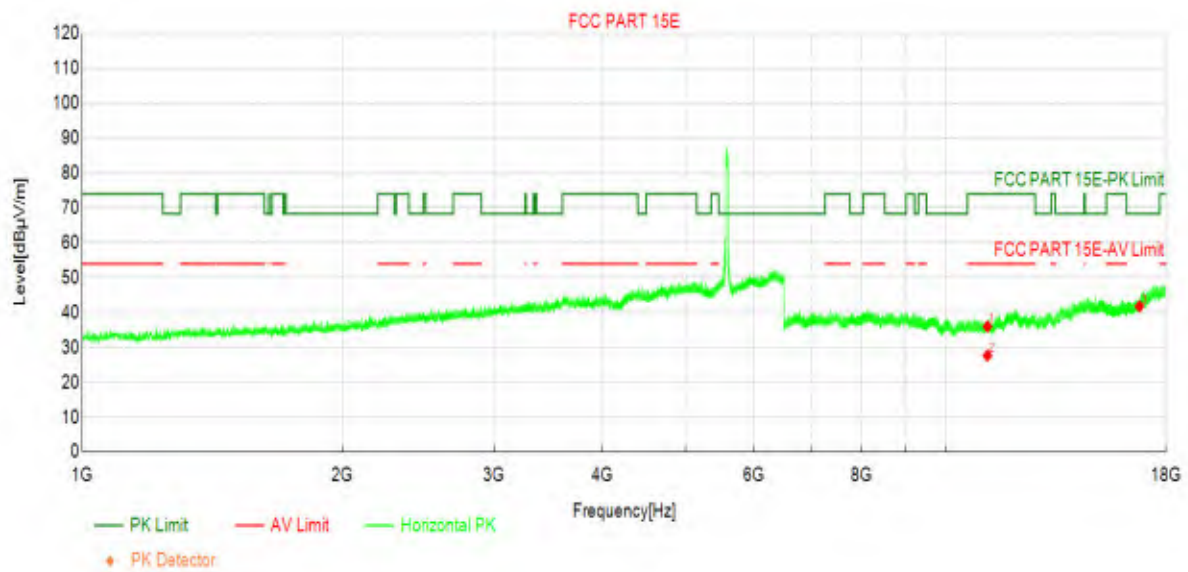
Transmit at 5510MHz by 802.11n(40MHz) with Ant7+8



Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	11020.00	26.90	35.98	9.08	74.00	38.02	PK	Vertic	PASS
2	11020.00	18.17	27.25	9.08	54.00	26.75	AV	Vertic	PASS
3	16530.00	24.49	41.45	16.96	68.30	26.85	PK	Vertic	PASS

Transmit at 5590MHz by 802.11n(40MHz) with Ant7+8

Test Graph

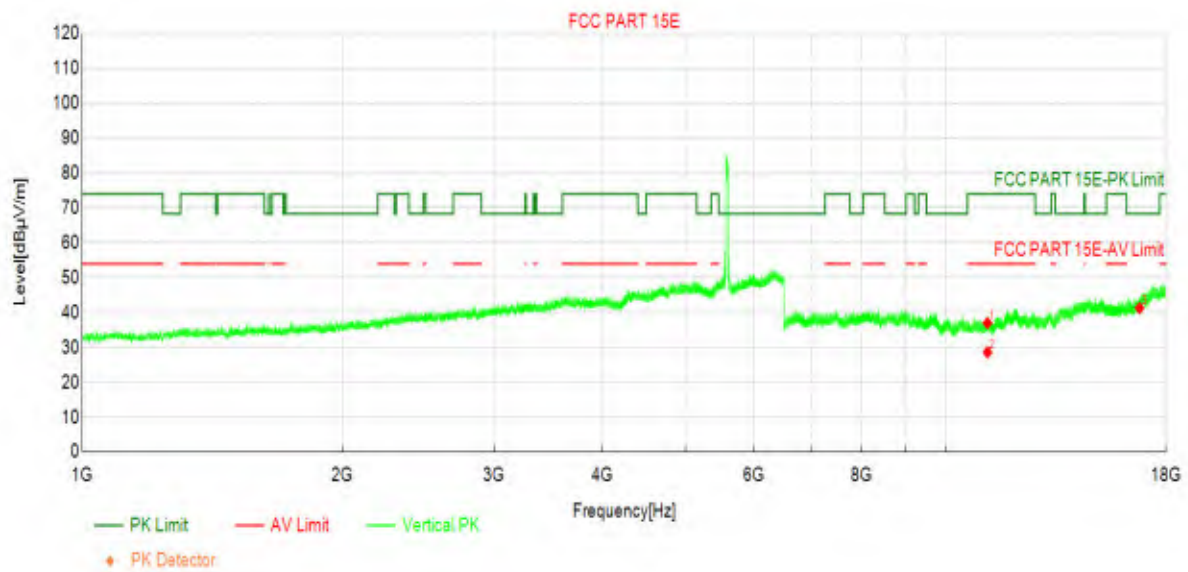


Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	11180.00	26.71	35.98	9.27	74.00	38.02	PK	Horizo	PASS
2	11180.00	18.40	27.67	9.27	54.00	26.33	AV	Horizo	PASS
3	16770.00	24.18	41.76	17.58	68.30	26.54	PK	Horizo	PASS

Transmit at 5590MHz by 802.11n(40MHz) with Ant7+8

Test Graph

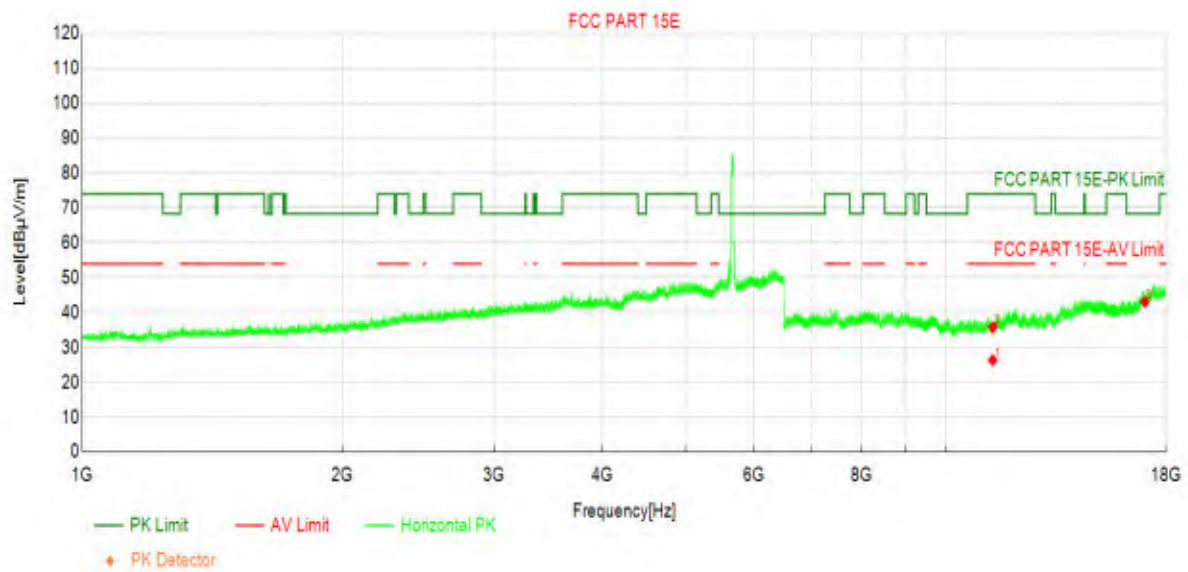


Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	11180.00	27.72	36.99	9.27	74.00	37.01	PK	Vertic	PASS
2	11180.00	19.31	28.58	9.27	54.00	25.42	AV	Vertic	PASS
3	16770.00	23.72	41.30	17.58	68.30	27.00	PK	Vertic	PASS

Transmit at 5670MHz by 802.11n(40MHz) with Ant7+8

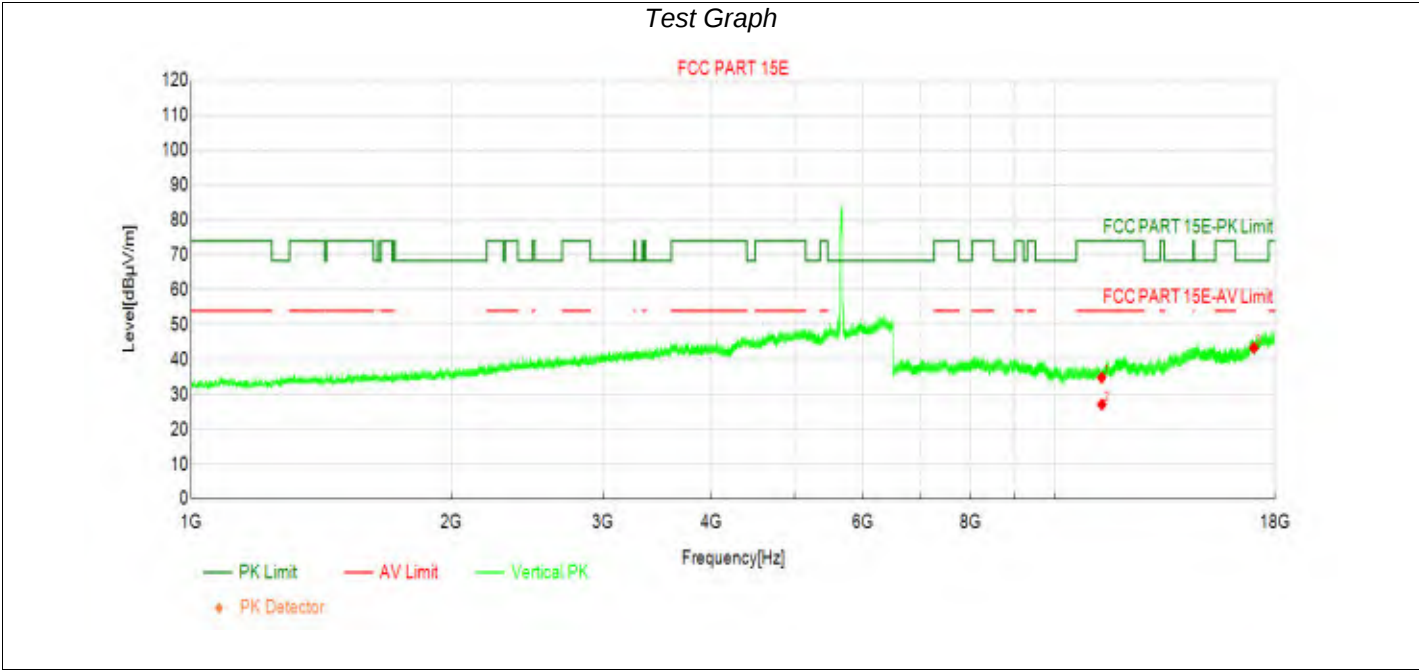
Test Graph



Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	11340.00	16.73	26.37	9.64	54.00	27.63	AV	Horizo	PASS
2	11340.00	26.15	35.79	9.64	74.00	38.21	PK	Horizo	PASS
3	17010.00	23.60	43.06	19.46	68.30	25.24	PK	Horizo	PASS

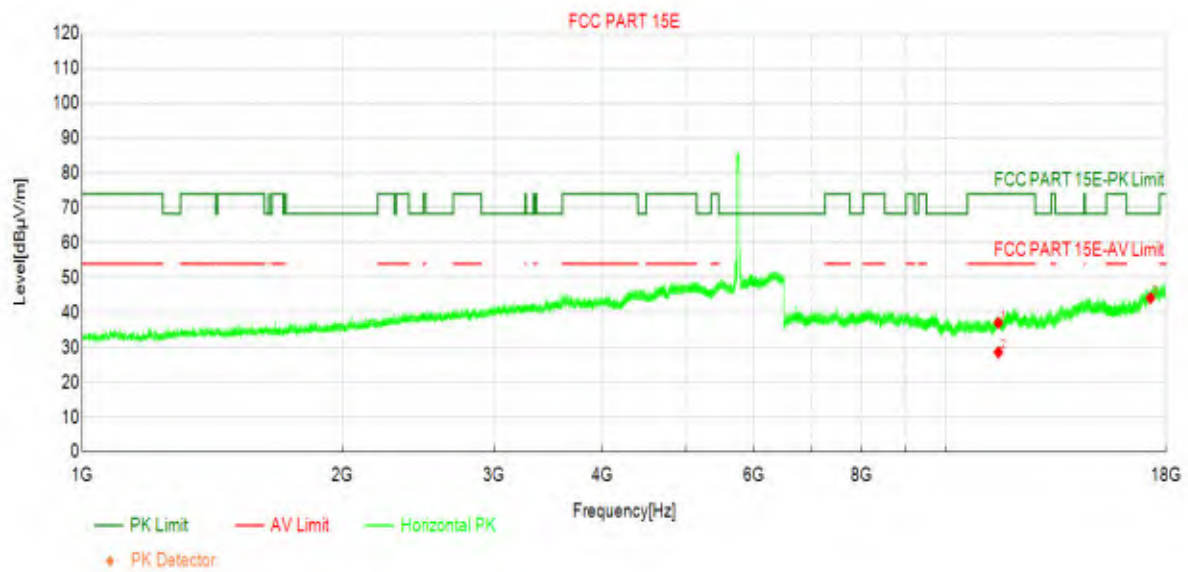
Transmit at 5670MHz by 802.11n(40MHz) with Ant7+8



Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	11340.00	25.20	34.84	9.64	74.00	39.16	PK	Vertic	PASS
2	11340.00	17.47	27.11	9.64	54.00	26.89	AV	Vertic	PASS
3	17010.00	23.86	43.32	19.46	68.30	24.98	PK	Vertic	PASS

Transmit at 5755MHz by 802.11n(40MHz) with Ant7+8

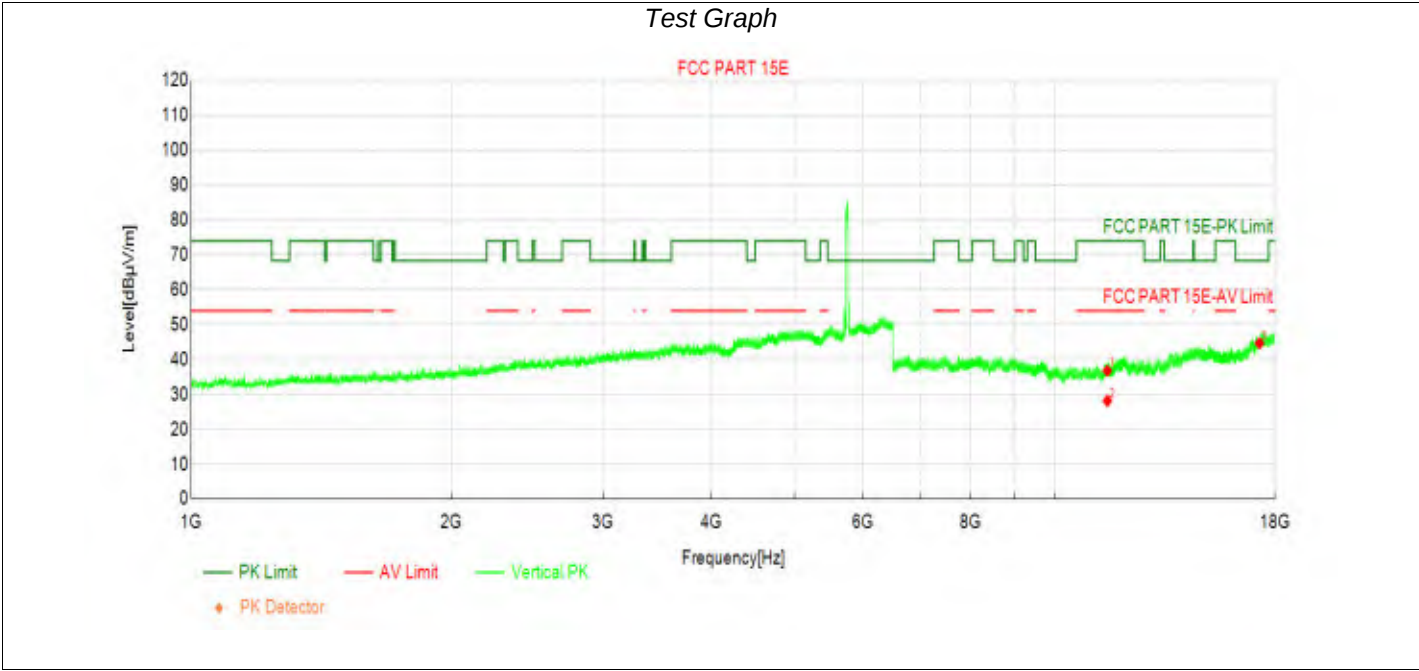
Test Graph



Data List

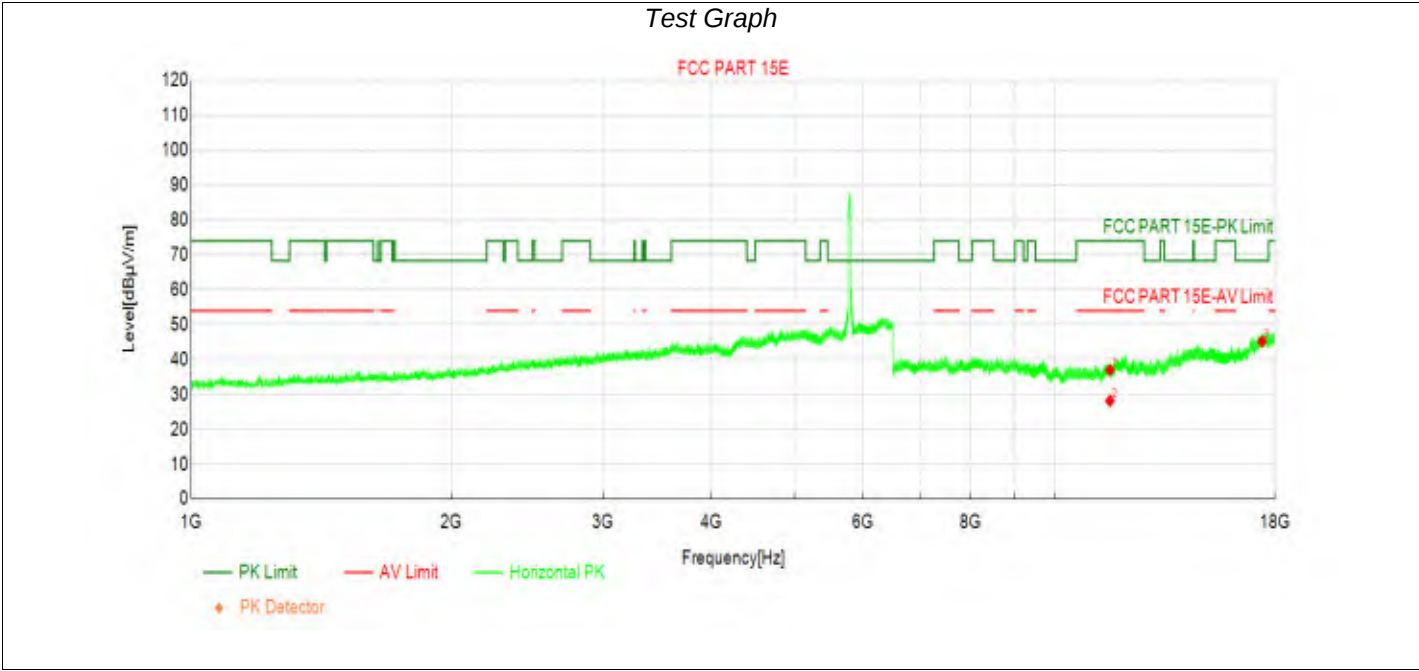
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	11510.00	26.94	37.02	10.08	74.00	36.98	PK	Horizo	PASS
2	11510.00	18.53	28.61	10.08	54.00	25.39	AV	Horizo	PASS
3	17265.00	26.12	44.14	18.02	68.30	24.16	PK	Horizo	PASS

Transmit at 5755MHz by 802.11n(40MHz) with Ant7+8



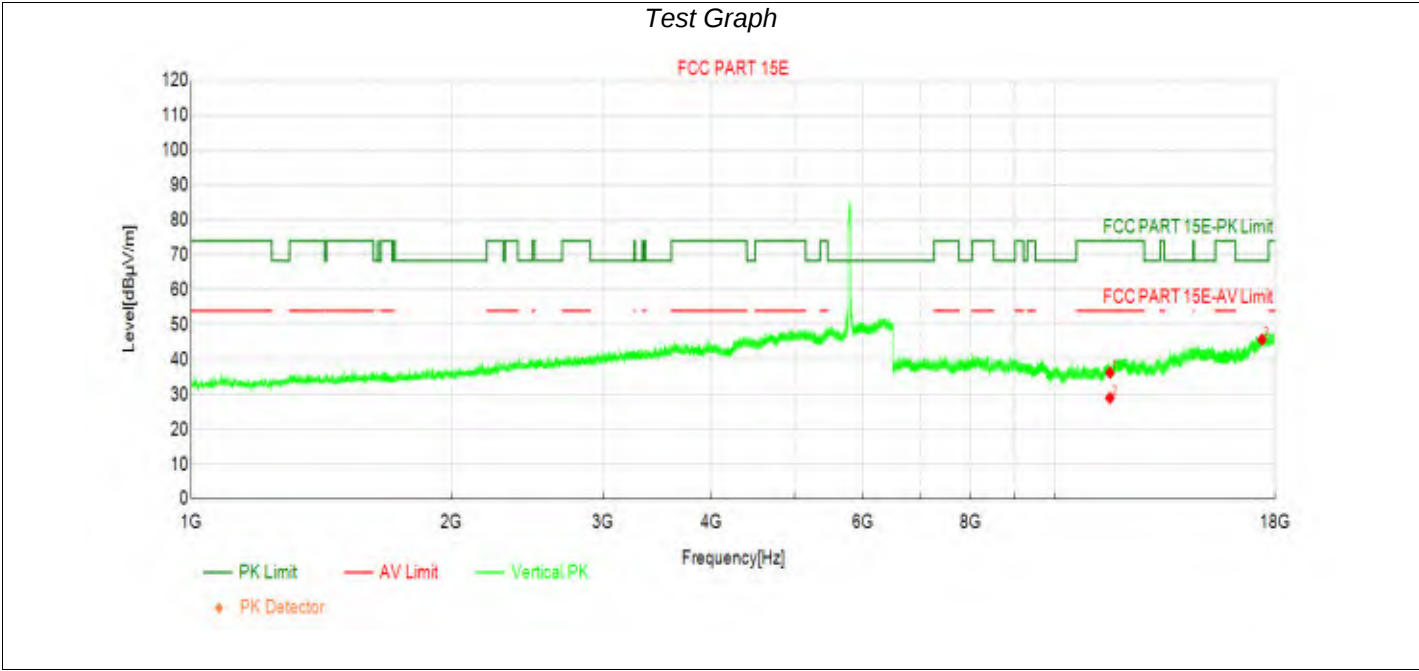
Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	11510.00	26.70	36.78	10.08	74.00	37.22	PK	Vertic	PASS
2	11510.00	18.11	28.19	10.08	54.00	25.81	AV	Vertic	PASS
3	17265.00	26.63	44.65	18.02	68.30	23.65	PK	Vertic	PASS

Transmit at 5795MHz by 802.11n(40MHz) with Ant7+8



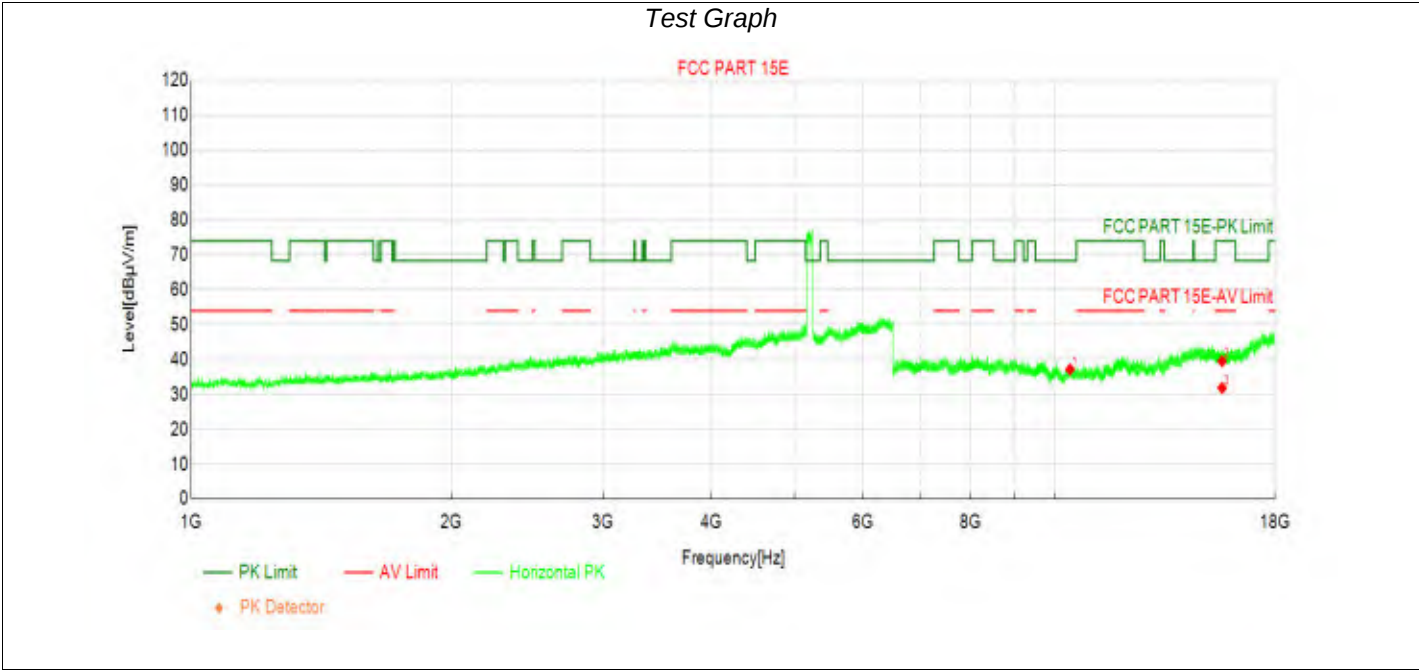
Data List									
NO	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	11590.00	26.34	36.98	10.64	74.00	37.02	PK	Horizo	PASS
2	11590.00	17.52	28.16	10.64	54.00	25.84	AV	Horizo	PASS
3	17385.00	25.83	45.15	19.32	68.30	23.15	PK	Horizo	PASS

Transmit at 5795MHz by 802.11n(40MHz) with Ant7+8



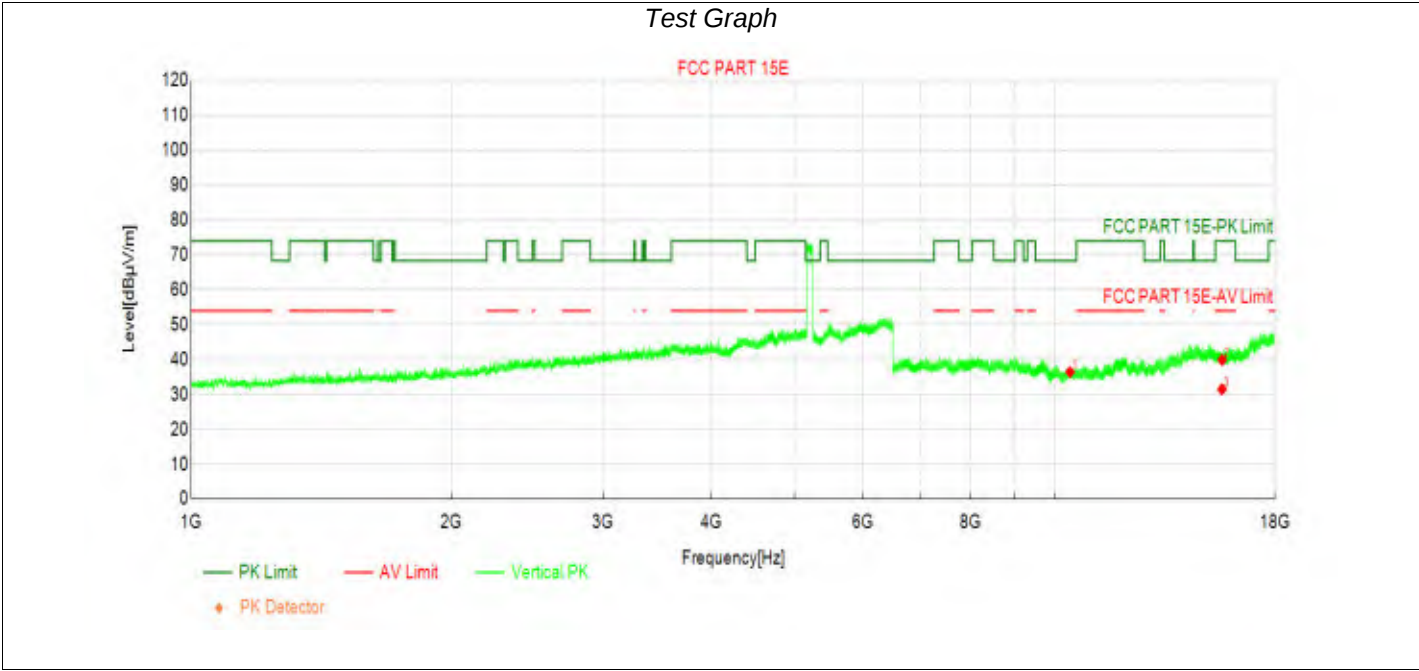
Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	11590.00	25.61	36.25	10.64	74.00	37.75	PK	Vertic	PASS
2	11590.00	18.32	28.96	10.64	54.00	25.04	AV	Vertic	PASS
3	17385.00	26.39	45.71	19.32	68.30	22.59	PK	Vertic	PASS

Transmit at 5210MHz by 802.11ac(80MHz) with Ant7+8



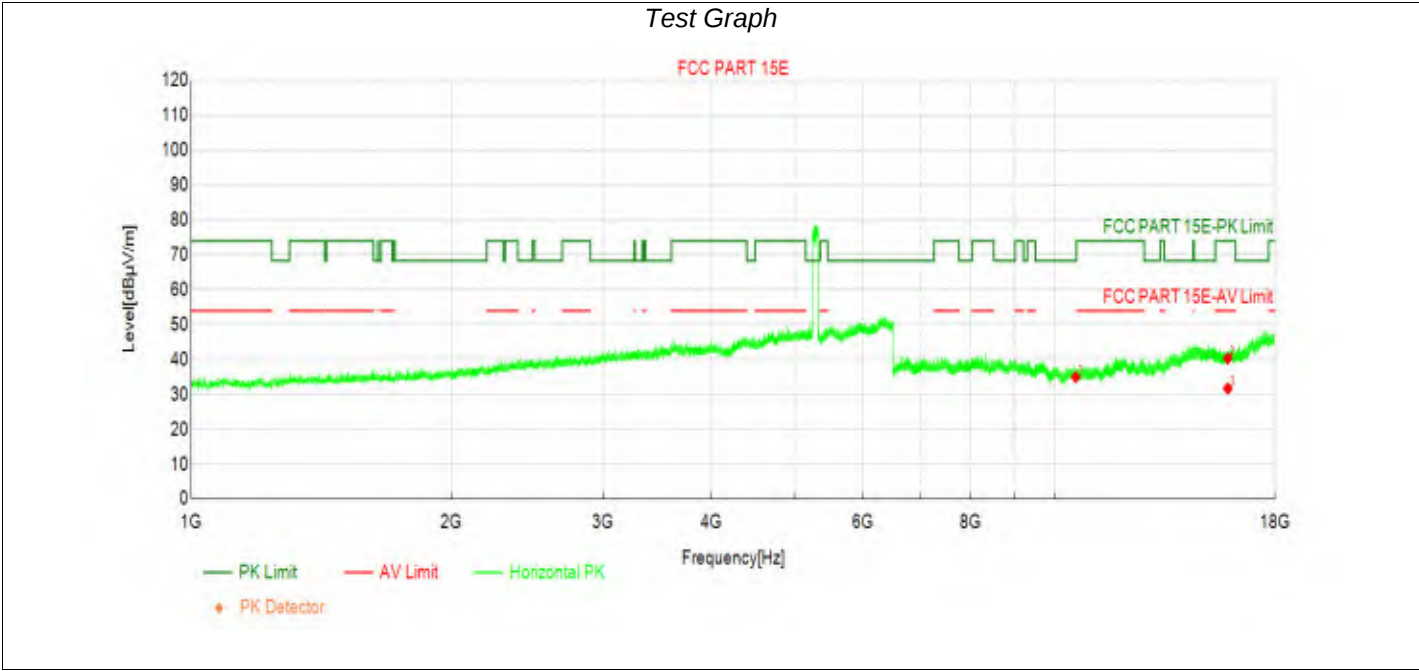
Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	10420.00	29.76	37.18	7.42	68.30	31.12	PK	Horizo	PASS
2	15630.00	23.77	39.54	15.77	74.00	34.46	PK	Horizo	PASS
3	15630.00	16.08	31.85	15.77	54.00	22.15	AV	Horizo	PASS

Transmit at 5210MHz by 802.11ac(80MHz) with Ant7+8



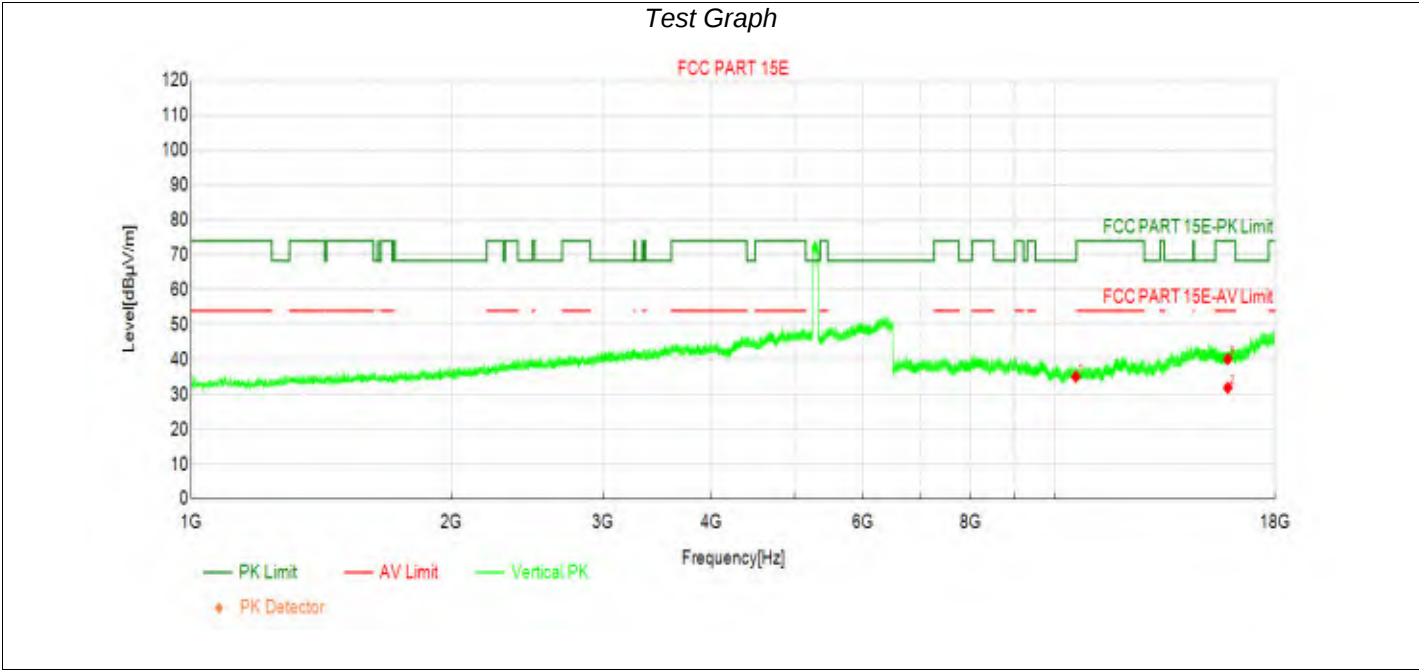
Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	10420.00	29.02	36.44	7.42	68.30	31.86	PK	Vertic	PASS
2	15630.00	24.12	39.89	15.77	74.00	34.11	PK	Vertic	PASS
3	15630.00	15.70	31.47	15.77	54.00	22.53	AV	Vertic	PASS

Transmit at 5290MHz by 802.11ac(80MHz) with Ant7+8



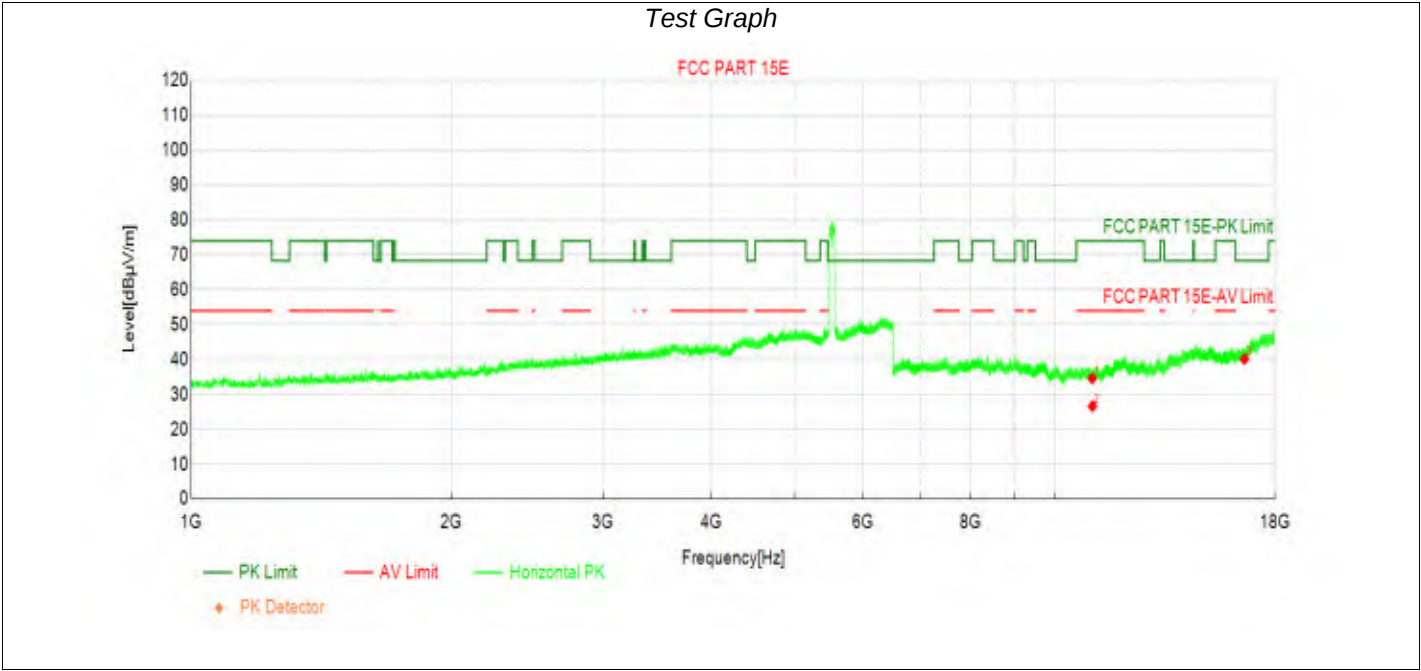
Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	10580.00	26.94	34.96	8.02	68.30	33.34	PK	Horizo	PASS
2	15870.00	24.11	40.31	16.20	74.00	33.69	PK	Horizo	PASS
3	15870.00	15.50	31.70	16.20	54.00	22.30	AV	Horizo	PASS

Transmit at 5290MHz by 802.11ac(80MHz) with Ant7+8



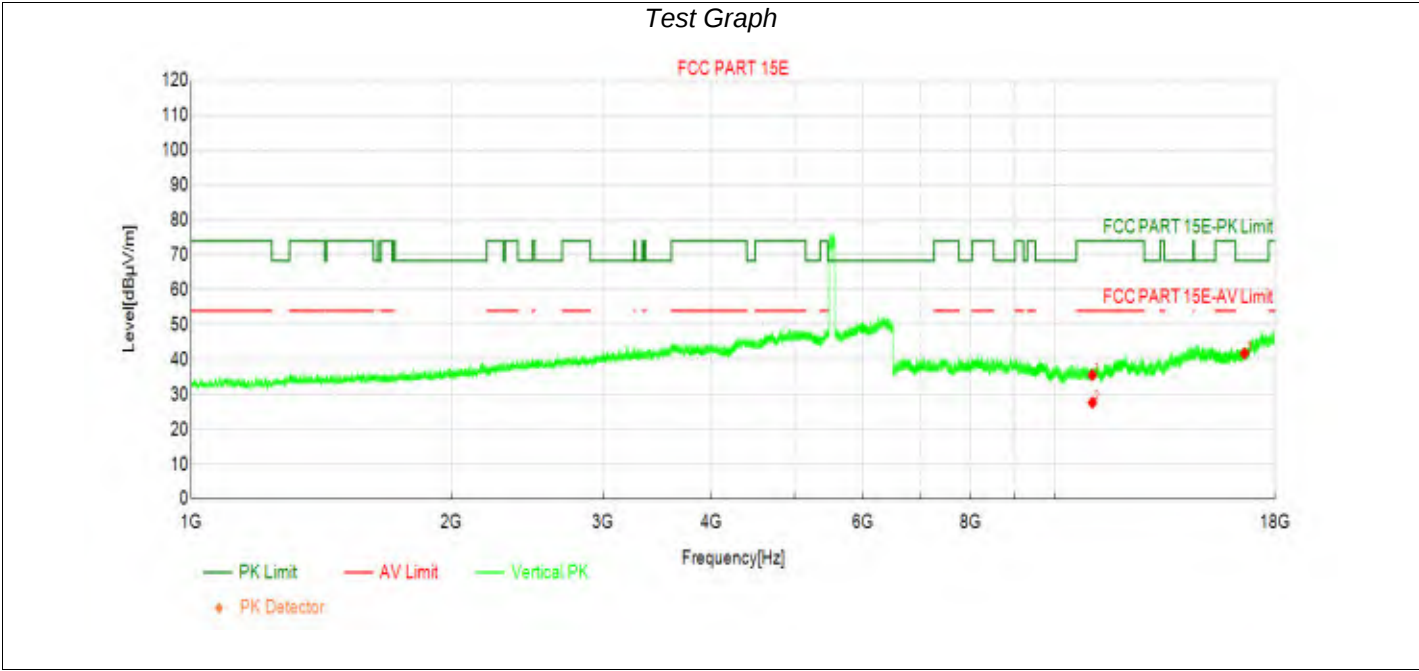
Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	10580.00	27.04	35.06	8.02	68.30	33.24	PK	Vertic	PASS
2	15870.00	15.71	31.91	16.20	54.00	22.09	AV	Vertic	PASS
3	15870.00	23.92	40.12	16.20	74.00	33.88	PK	Vertic	PASS

Transmit at 5530MHz by 802.11ac(80MHz) with Ant7+8



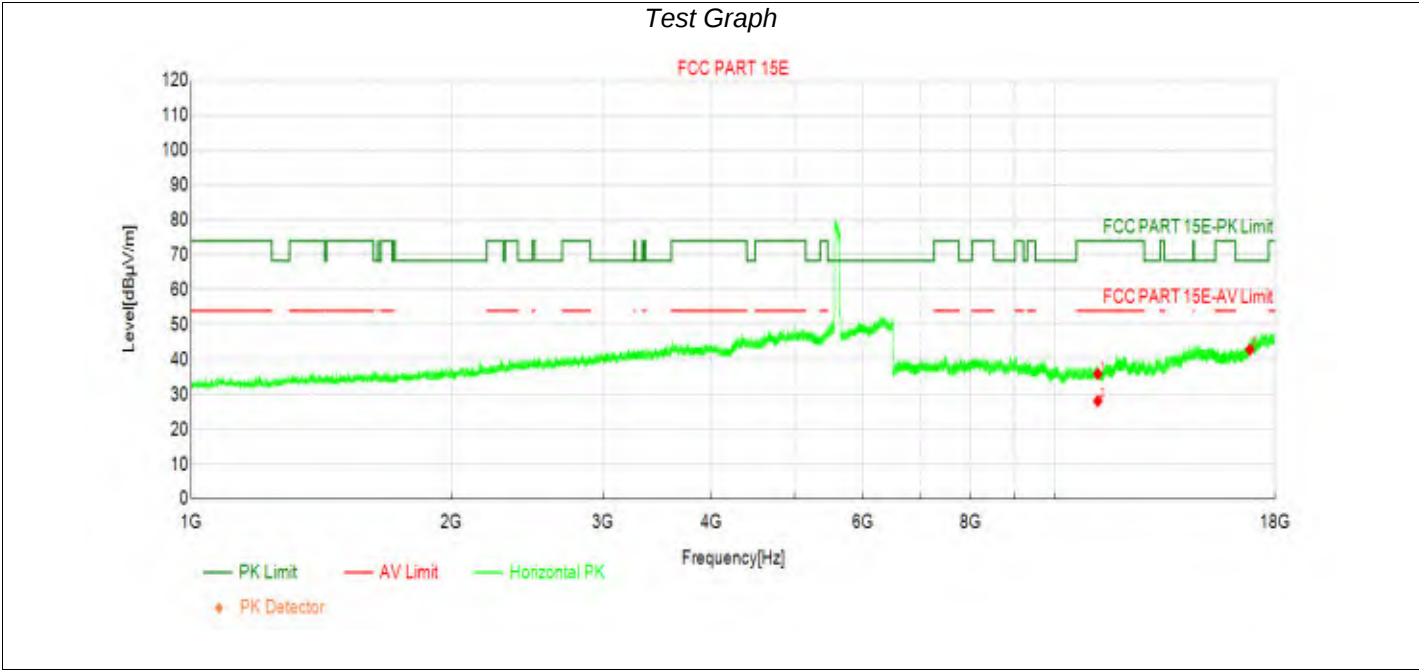
Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	11060.00	25.56	34.60	9.04	74.00	39.40	PK	Horizo	PASS
2	11060.00	17.57	26.61	9.04	54.00	27.39	AV	Horizo	PASS
3	16590.00	22.93	40.14	17.21	68.30	28.16	PK	Horizo	PASS

Transmit at 5530MHz by 802.11ac(80MHz) with Ant7+8



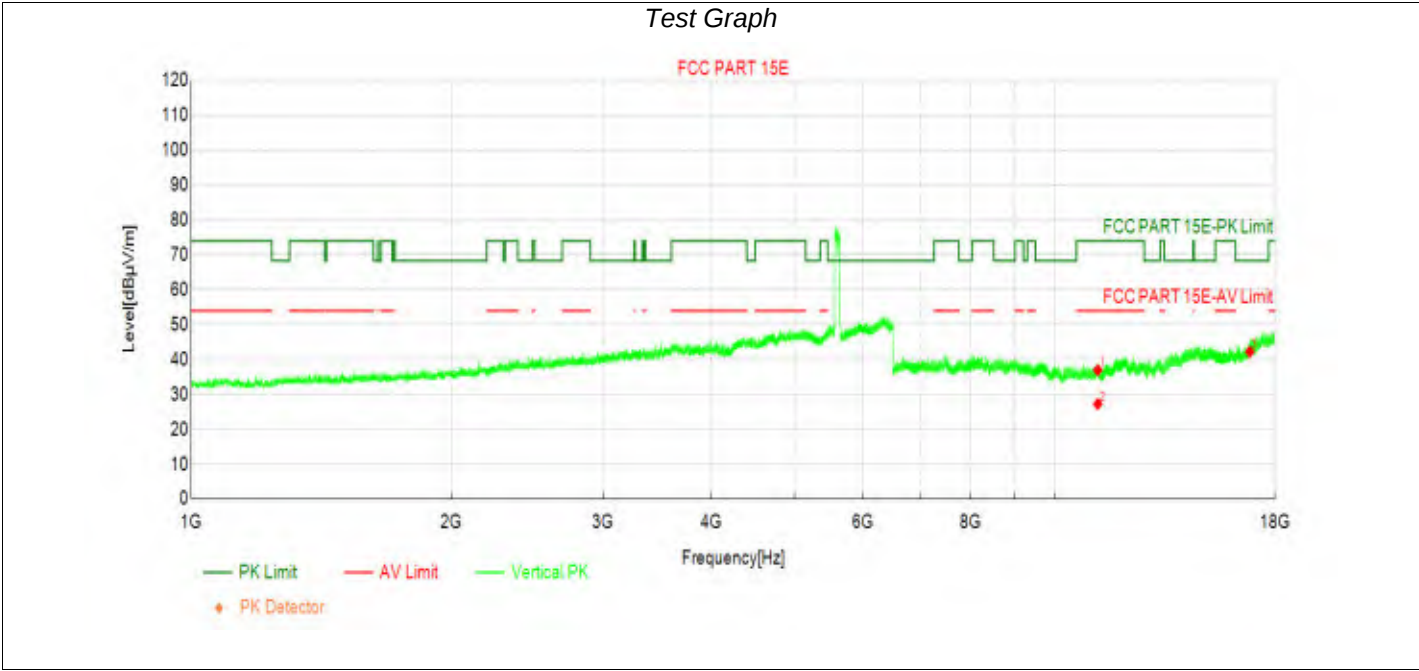
Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	11060.00	26.50	35.54	9.04	74.00	38.46	PK	Vertic	PASS
2	11060.00	18.59	27.63	9.04	54.00	26.37	AV	Vertic	PASS
3	16590.00	24.54	41.75	17.21	68.30	26.55	PK	Vertic	PASS

Transmit at 5610MHz by 802.11ac(80MHz) with Ant7+8



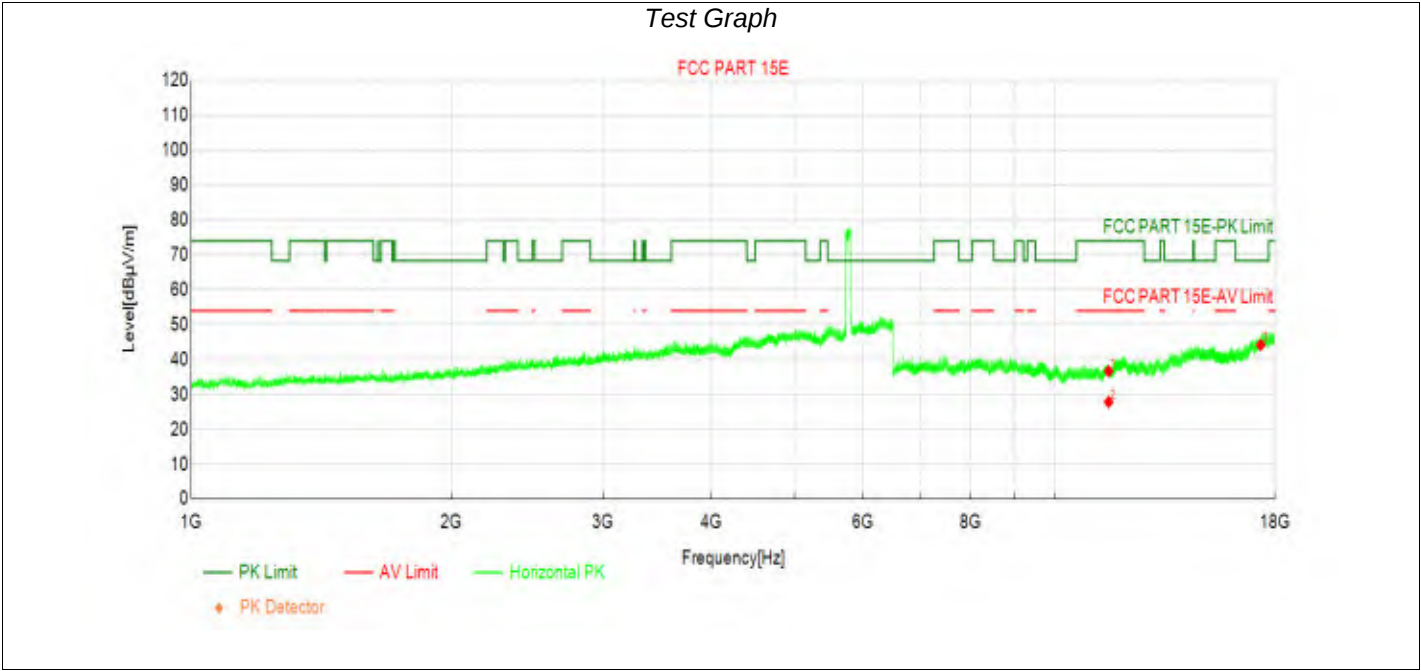
Data List									
NO	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	11220.00	26.49	35.85	9.36	74.00	38.15	PK	Horizo	PASS
2	11220.00	18.74	28.10	9.36	54.00	25.90	AV	Horizo	PASS
3	16830.00	24.51	42.83	18.32	68.30	25.47	PK	Horizo	PASS

Transmit at 5610MHz by 802.11ac(80MHz) with Ant7+8



Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	11220.00	27.61	36.97	9.36	74.00	37.03	PK	Vertic	PASS
2	11220.00	17.91	27.27	9.36	54.00	26.73	AV	Vertic	PASS
3	16830.00	23.90	42.22	18.32	68.30	26.08	PK	Vertic	PASS

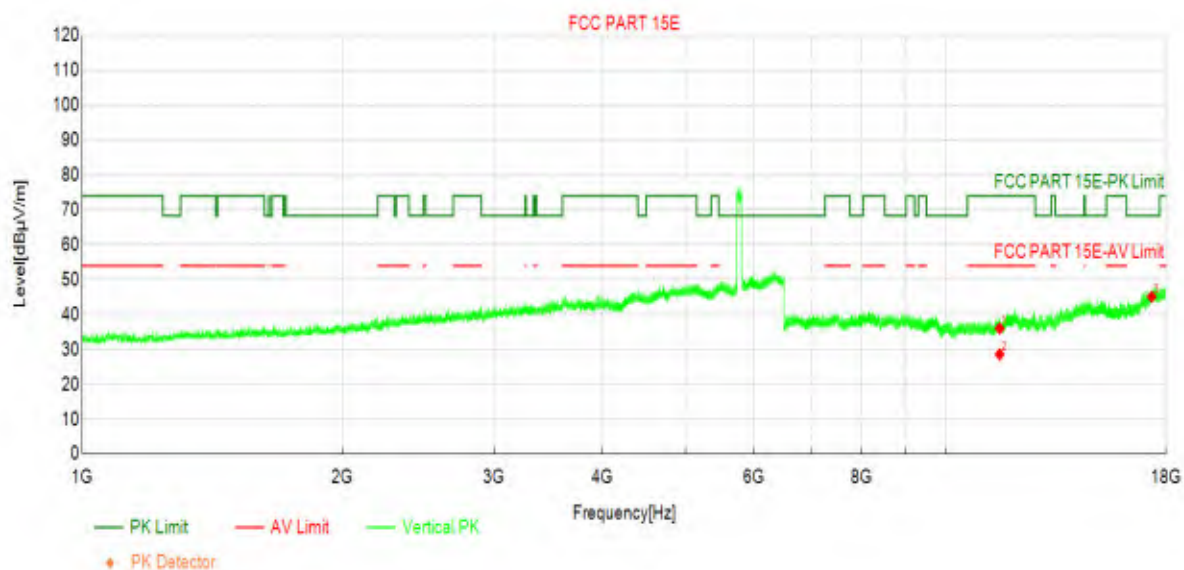
Transmit at 5775MHz by 802.11ac(80MHz) with Ant7+8



Data List									
NO	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	11550.00	26.33	36.69	10.36	74.00	37.31	PK	Horizo	PASS
2	11550.00	17.50	27.86	10.36	54.00	26.14	AV	Horizo	PASS
3	17325.00	25.70	44.17	18.47	68.30	24.13	PK	Horizo	PASS

Transmit at 5775MHz by 802.11ac(80MHz) with Ant7+8

Test Graph



Data List

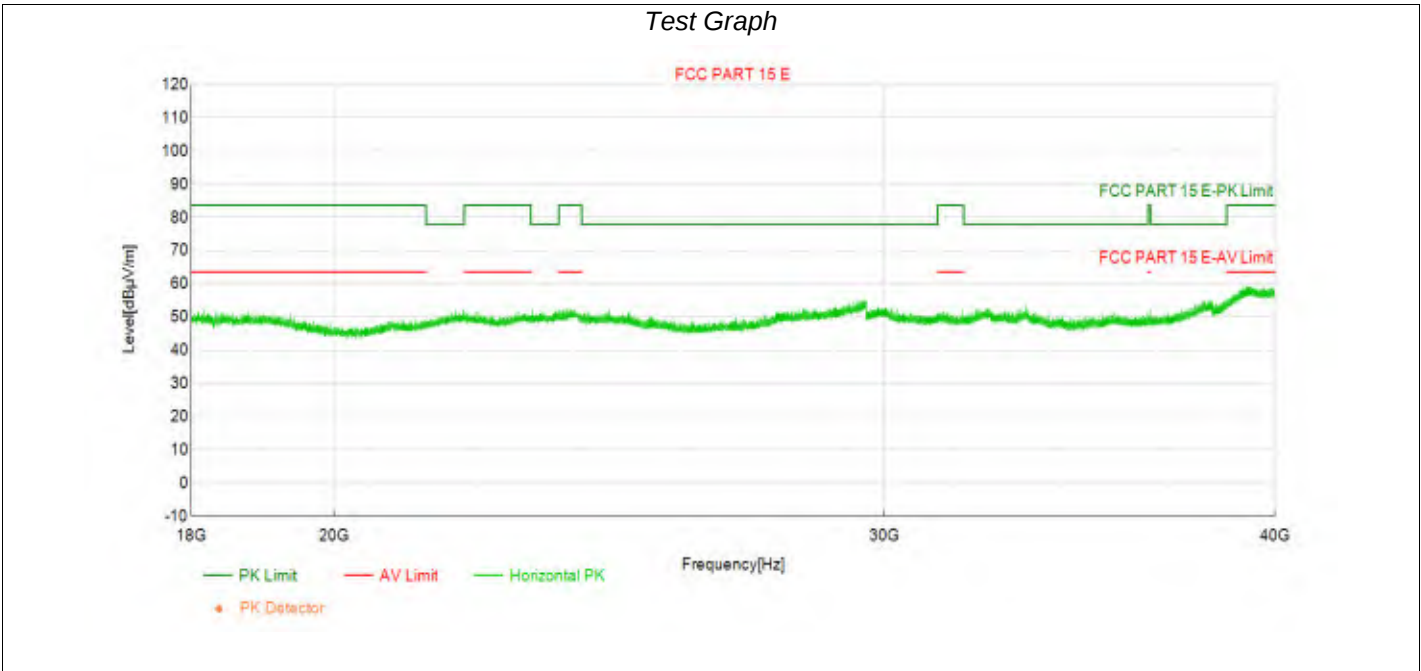
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	11550.00	25.67	36.03	10.36	74.00	37.97	PK	Vertic	PASS
2	11550.00	18.22	28.58	10.36	54.00	25.42	AV	Vertic	PASS
3	17325.00	26.62	45.09	18.47	68.30	23.21	PK	Vertic	PASS

Note:

1. Level = Reading + Factor(Probe+Cable-Amp)
2. Margin = Limit – Level
3. We have evaluated both SISO Ant7, SISO Ant8 and MIMO Ant+Ant8, shown in report is the worst data only.

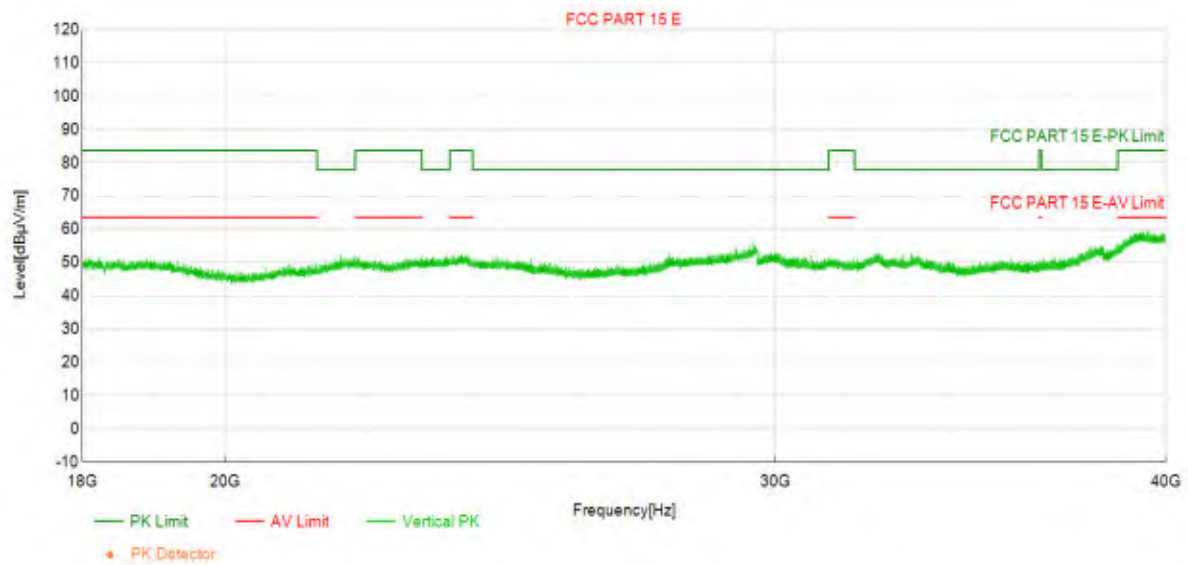
The worst data of radiated emission above 18GHz

Transmit at 5180MHz by 802.11a



Transmit at 5180MHz by 802.11a

Test Graph



Note 1: Actual test distance is 1 meter; limits have been converted to values at 1meter distance.

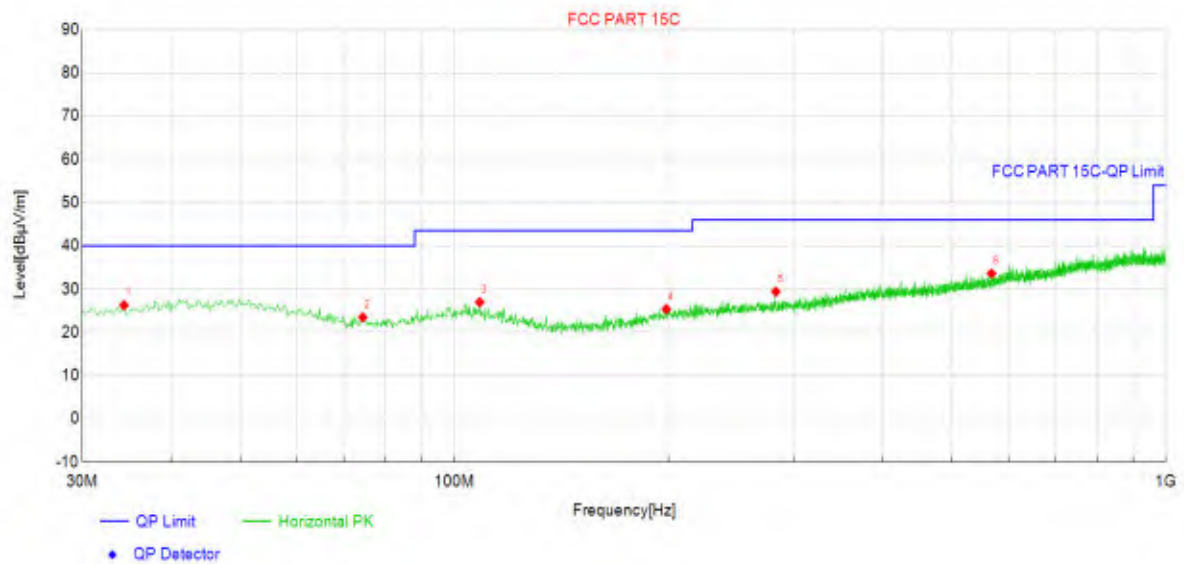
Note 2: All data above 18 GHz is noise floor, therefore, no frequencies are marked.

Note 3: The minimum margin for peaks above 18 GHz exceeds 20 dB; thus, no average testing was performed.

The worst data of radiated emission below 1GHz

Transmit at 5180MHz by 802.11a

Test Graph

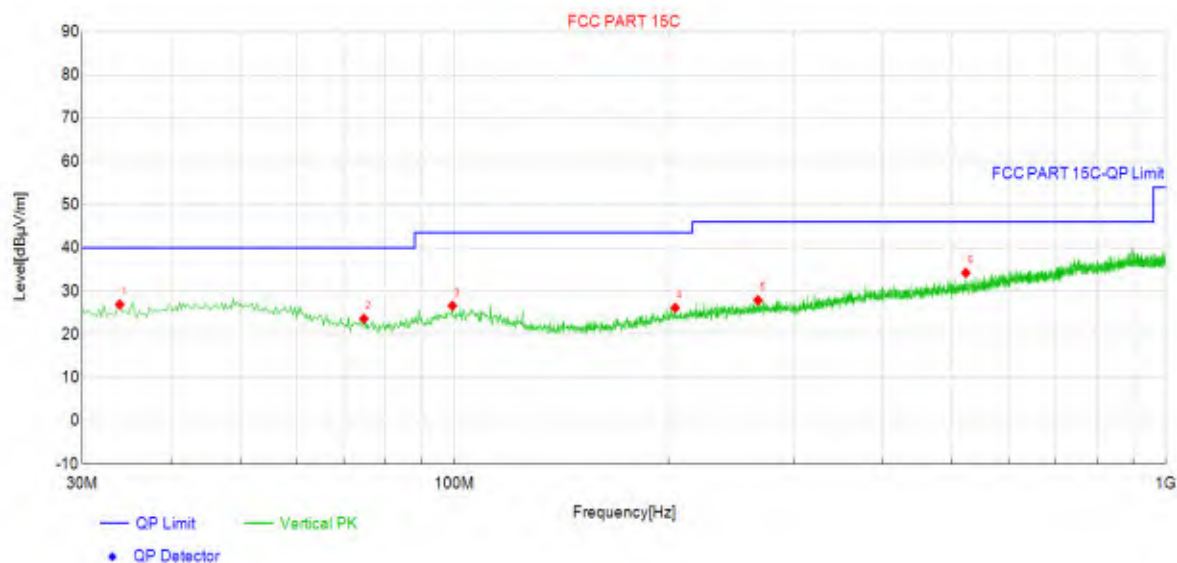


Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	34.37	13.1	26.24	13.140	40.00	13.76	PK	Horizo	PASS
2	74.38	13.4	23.46	10.070	40.00	16.54	PK	Horizo	PASS
3	108.57	14.7	26.96	12.290	43.50	16.54	PK	Horizo	PASS
4	198.54	13.5	25.35	11.830	43.50	18.15	PK	Horizo	PASS
5	282.93	15.6	29.39	13.810	46.00	16.61	PK	Horizo	PASS
6	568.59	14.6	33.60	18.960	46.00	12.40	PK	Horizo	PASS

Transmit at 5180MHz by 802.11a

Test Graph



Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	33.88	13.8	26.88	13.120	40.00	13.12	PK	Vertic	PASS
2	74.62	13.5	23.59	10.060	40.00	16.41	PK	Vertic	PASS
3	99.36	14.1	26.58	12.520	43.50	16.92	PK	Vertic	PASS
4	204.36	14.1	26.14	12.070	43.50	17.36	PK	Vertic	PASS
5	267.17	14.3	27.84	13.590	46.00	18.16	PK	Vertic	PASS
6	523.25	16.2	34.20	18.050	46.00	11.80	PK	Vertic	PASS

Note:

1. Level = Reading + Factor(Probe+Cable-Amp)
2. Margin = Limit – Level
3. The test frequency range, 9kHz~30MHz, worst case are at least 20dB below the limits, therefore no data appear in the report.
4. All test data above 18GHz are noise base, so no data shown in this report.
5. In the report, below 1G, only the verification test is carried out for the worst channel of 1~18G worst mode.
6. The below 1G test data was measured on the worst-case configuration selected from each transmission mode on the low and high channel.

Appendix B: Test result of Emission bandwidth and occupied bandwidth

TestMode	Frequency[MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	5180	20.360	5170.040	5190.400	N/A	Pass
11A	5200	20.240	5189.920	5210.160	N/A	Pass
11A	5240	19.920	5230.200	5250.120	N/A	Pass
11A	5260	20.080	5250.160	5270.240	N/A	Pass
11A	5280	20.000	5270.280	5290.280	N/A	Pass
11A	5320	20.160	5310.040	5330.200	N/A	Pass
11A	5500	19.800	5490.000	5509.800	N/A	Pass
11A	5580	23.080	5569.520	5592.600	N/A	Pass
11A	5700	20.920	5689.600	5710.520	N/A	Pass
11A	5745	20.880	5735.120	5756.000	N/A	Pass
11A	5785	20.640	5774.720	5795.360	N/A	Pass
11A	5825	20.920	5814.760	5835.680	N/A	Pass
11N20	5180	21.120	5169.600	5190.720	N/A	Pass
11N20	5200	20.960	5189.680	5210.640	N/A	Pass
11N20	5240	20.840	5229.600	5250.440	N/A	Pass
11N20	5260	21.280	5249.480	5270.760	N/A	Pass
11N20	5280	20.720	5269.640	5290.360	N/A	Pass
11N20	5320	20.800	5309.600	5330.400	N/A	Pass
11N20	5500	20.560	5489.840	5510.400	N/A	Pass
11N20	5580	20.720	5569.520	5590.240	N/A	Pass
11N20	5700	20.840	5689.640	5710.480	N/A	Pass
11N20	5745	20.720	5734.600	5755.320	N/A	Pass
11N20	5785	20.960	5774.400	5795.360	N/A	Pass
11N20	5825	20.560	5814.640	5835.200	N/A	Pass
11N40	5190	39.840	5170.160	5210.000	N/A	Pass
11N40	5230	51.280	5209.840	5261.120	N/A	Pass
11N40	5270	40.160	5250.160	5290.320	N/A	Pass
11N40	5310	44.720	5286.960	5331.680	N/A	Pass
11N40	5510	39.920	5490.080	5530.000	N/A	Pass
11N40	5550	64.720	5516.000	5580.720	N/A	Pass
11N40	5670	56.000	5633.920	5689.920	N/A	Pass
11N40	5755	43.200	5732.040	5775.240	N/A	Pass
11N40	5795	40.000	5775.240	5815.240	N/A	Pass
11AC20	5180	20.720	5169.800	5190.520	N/A	Pass
11AC20	5200	20.960	5189.760	5210.720	N/A	Pass
11AC20	5240	21.240	5229.440	5250.680	N/A	Pass
11AC20	5260	21.120	5249.640	5270.760	N/A	Pass
11AC20	5280	21.040	5269.560	5290.600	N/A	Pass
11AC20	5320	21.040	5309.680	5330.720	N/A	Pass
11AC20	5500	21.560	5489.160	5510.720	N/A	Pass
11AC20	5580	20.880	5569.360	5590.240	N/A	Pass
11AC20	5700	20.840	5689.760	5710.600	N/A	Pass
11AC20	5745	21.040	5734.480	5755.520	N/A	Pass
11AC20	5785	21.480	5774.000	5795.480	N/A	Pass
11AC20	5825	20.960	5814.600	5835.560	N/A	Pass
11AC40	5190	40.320	5169.840	5210.160	N/A	Pass
11AC40	5230	40.560	5210.080	5250.640	N/A	Pass

11AC40	5270	40.080	5250.160	5290.240	N/A	Pass
11AC40	5310	40.160	5289.920	5330.080	N/A	Pass
11AC40	5510	40.640	5489.440	5530.080	N/A	Pass
11AC40	5550	40.320	5529.920	5570.240	N/A	Pass
11AC40	5670	46.400	5642.880	5689.280	N/A	Pass
11AC40	5755	40.160	5734.680	5774.840	N/A	Pass
11AC40	5795	40.160	5774.840	5815.000	N/A	Pass
11AC80	5210	86.720	5167.280	5254.000	N/A	Pass
11AC80	5290	86.240	5247.440	5333.680	N/A	Pass
11AC80	5530	113.760	5459.760	5573.520	N/A	Pass
11AC80	5610	86.400	5565.680	5652.080	N/A	Pass
11AC80	5775	120.640	5701.880	5822.520	N/A	Pass



11A-5180



11A-5200



11A-5240



11A-5260



11A-5280



11A-5320



11A-5500



11A-5580



11A-5700



11A-5745



11A-5785



11A-5825



11N20-5180



11N20-5200



11N20-5240



11N20-5260



11N20-5280



11N20-5320





11N20-5700



11N20-5745



11N20-5785



11N20-5825



11N40-5190



11N40-5230





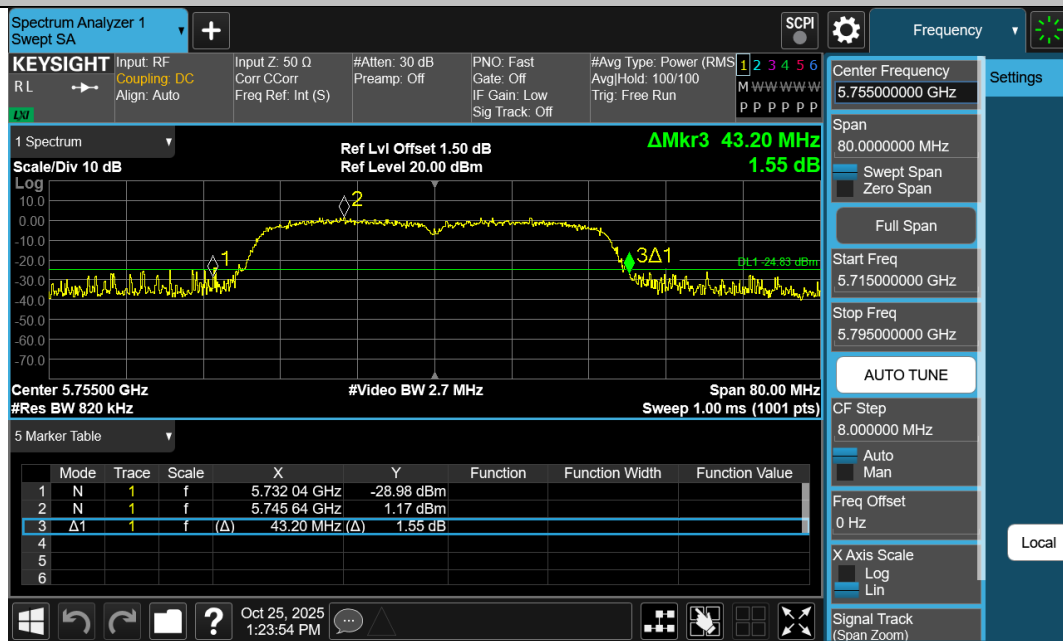
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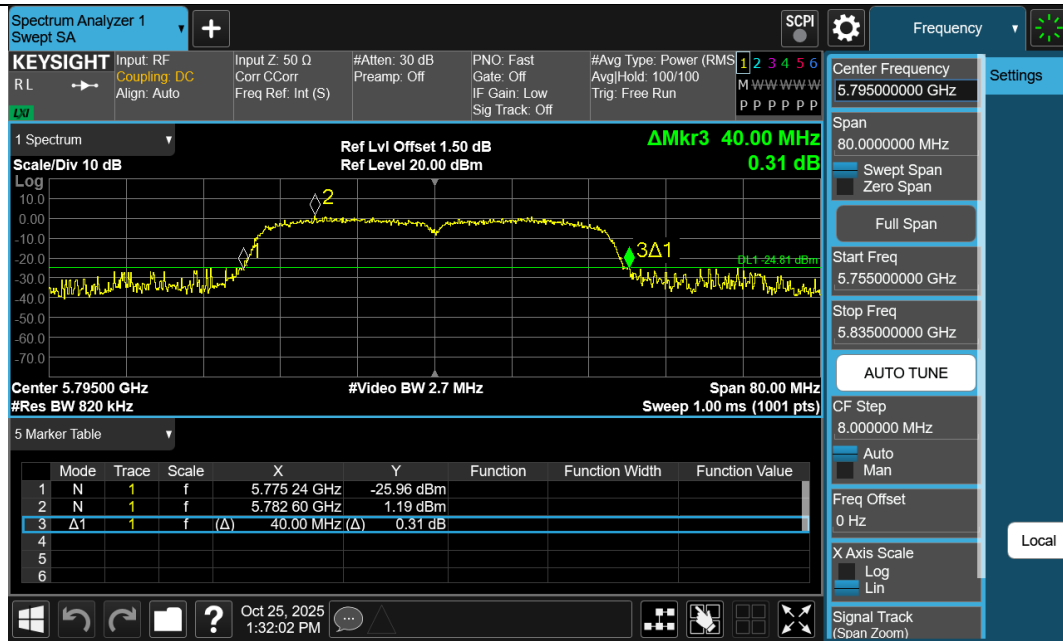
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11N40-5755



11N40-5795



11AC20-5180



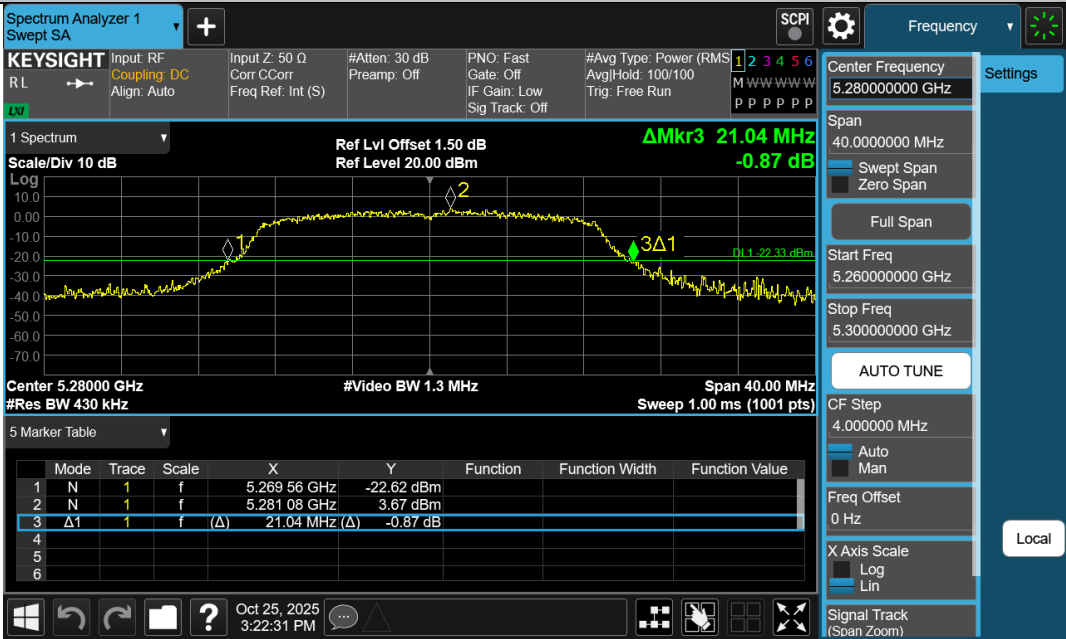
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11AC20-5240



11AC20-5260



11AC20-5280