

Test Results

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1. Measurement Equipment List

Test Equipment	Model	Manufacturer	Serial No.	Cal Until
Radio Spectrum Test				
EXA Signal Analyzer, Multi-touch	Keysight	N9010B	MY60241175	25.09.2025
MXG X-Series RF Vector Signal Generator	Keysight	N5182B	MY61250137	25.09.2025
EXG X-Series Microwave Analog Signal Generator	Keysight	N5173B	MY61250141	25.09.2025
DC Power Supply	Keysight	E3642A	MY61276100	25.09.2025
Wireless Connectivity Tester	R&S	CMW270	102505	25.09.2025
Power Control Unit	Tonscend	JS0806-4ADC	N/A	25.09.2025
Automation Control Unit	Tonscend	JS0806-2	21C8060396	25.09.2025
Test Software	Tonscend	JS1120-3	N/A	N/A
Control PC	Lenovo	TianYi510S-071MB	YLX23JMF	N/A
Disturbance Voltage				
EMI Test Receiver	R&S	ESR3	102428	22.07. 2026
Artificial Mains Network	R&S	ENV432	101546	22.07. 2026
EMC32 test software	R&S	EMC32(Ver.10.50.00)	N/A	N/A
Spurious Emission (25MHz~26.5GHz)				
EMI Test Receiver	R&S	ESR 7	102021	28.09.2025
Signal Analyzer	R&S	FSV 40	101439	28.09.2025
System Controller Interface	R&S	SCI-100	S10010038	N/A
Filterbank	R&S	Wlan	100759	28.09.2025
OSP	R&S	OSP 120	102040	N/A
Pre-amplifier	R&S	SCU08F1	08320031	28.09.2025
Amplifier	R&S	SCU-18F	180070	28.09.2025
Amplifier	R&S	SCU40A	100475	28.09.2025
Trilog Broadband Antenna (30 MHz - 7 GHz)	Schwarzbeck	VULB 9162	193	27.09.2026
Double-Ridged Antenna (1 -18 GHz)	ETS-LINDGREN	3117	00218717	27.09.2026
Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19067	27.09.2026
Active Loop Antenna	Schwarzbeck	FMZB 1513	302	27.09.2026
Test software	R&S	EMC32 (V10.60.10)	N/A	N/A
Control PC	Dell	OptiPlex 7050	36NV9P2	N/A
3m Semi-Anechoic Chamber	Albatross	SAC-3m	APC17151-SAC	13.09.2027

2. 20dB Emission Bandwidth of BR & EDR

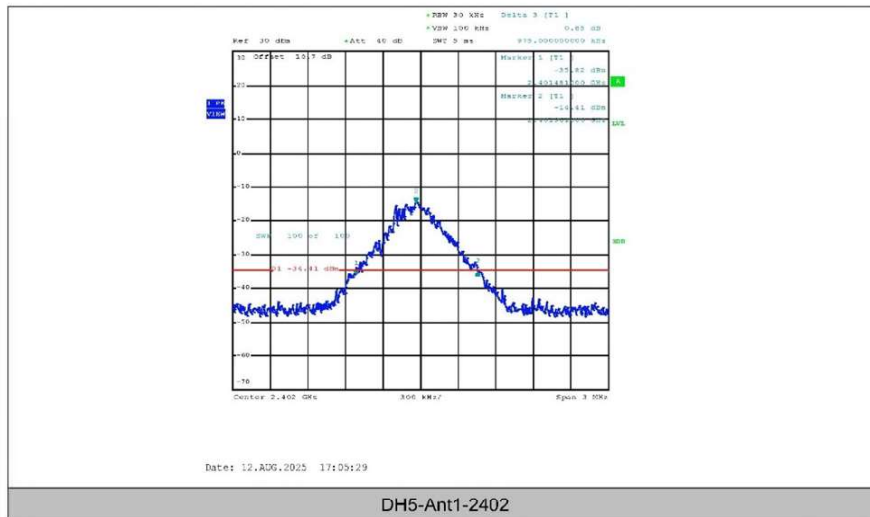
Case No. : 170423584	
Ambient Condition: 25 °C, 50 %RH,	
EUT : ES-503	
Standard : FCC Part 15	
Remark : BR,EDR	
Tested By: Jason Wu	Reviewed By: Jacky Chen
20250812	20250818

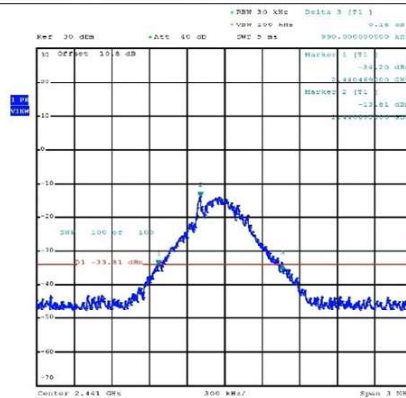
Appendix A: 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.97	2401.48	2402.46	---	---
DH5	Ant1	2441	0.99	2440.47	2441.46	---	---
DH5	Ant1	2480	0.94	2479.50	2480.44	---	---
3DH5	Ant1	2402	1.32	2401.32	2402.63	---	---
3DH5	Ant1	2441	1.30	2440.31	2441.62	---	---
3DH5	Ant1	2480	1.30	2479.31	2480.62	---	---

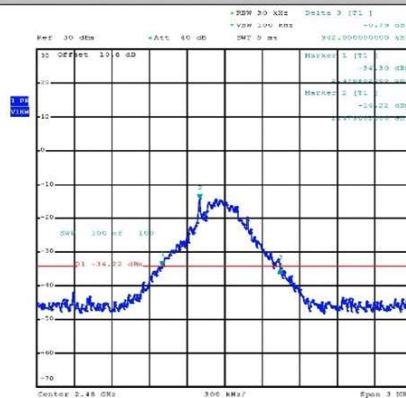
Test Graphs





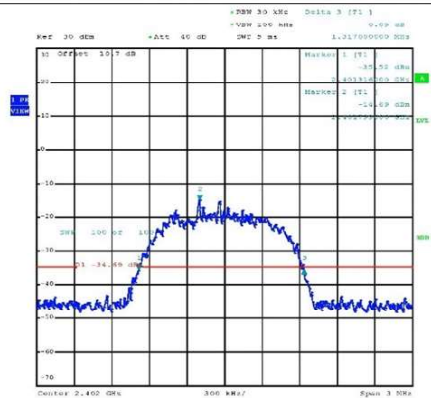
Date: 12.AUG.2025 17:09:49

DH5-Ant1-2441



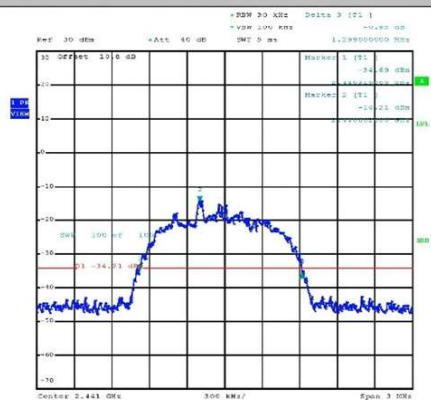
Date: 12.AUG.2025 17:12:49

DH5-Ant1-2480



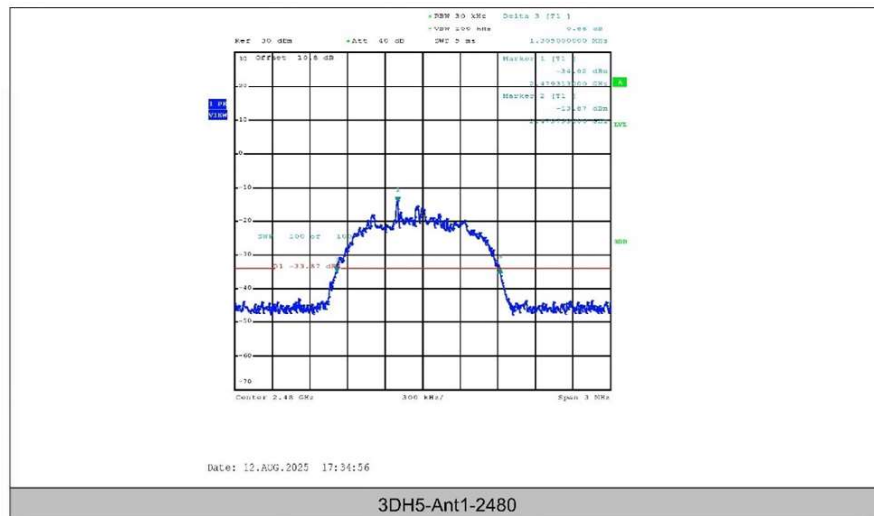
Date: 12.AUG.2025 17:17:15

3DH5-Ant1-2402



Date: 12.AUG.2025 17:27:15

3DH5-Ant1-2441



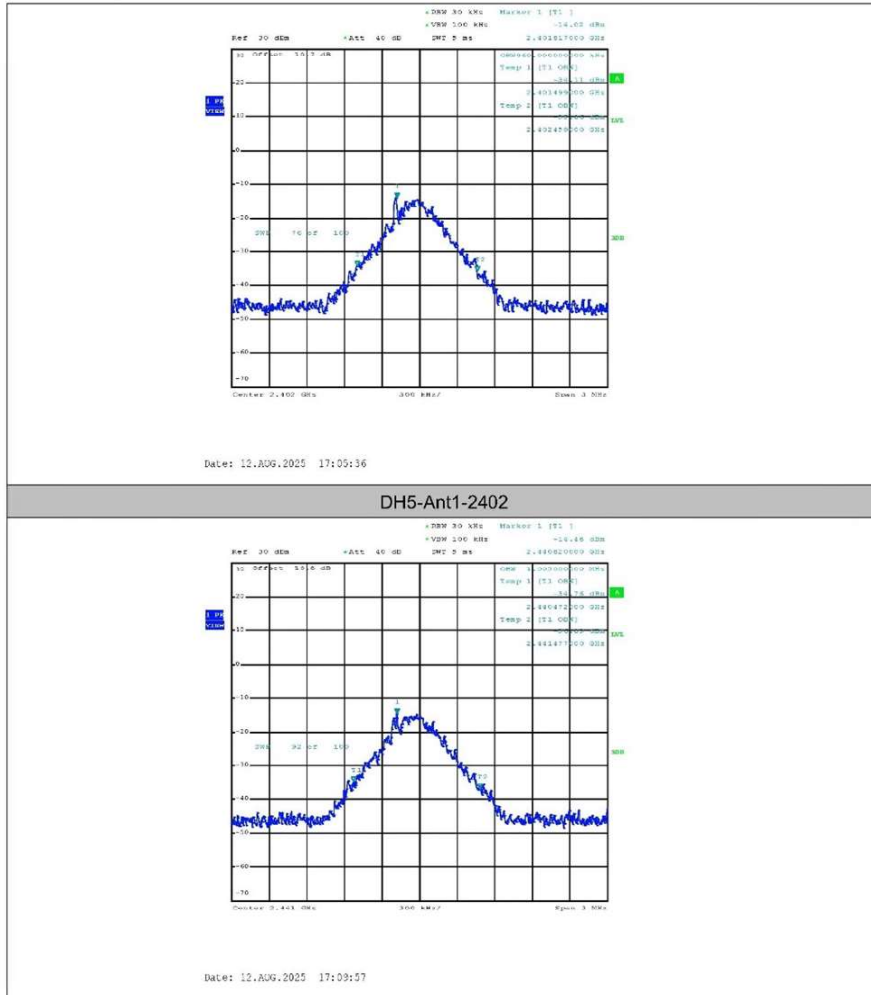
3. Occupied Channel Bandwidth of BR & EDR

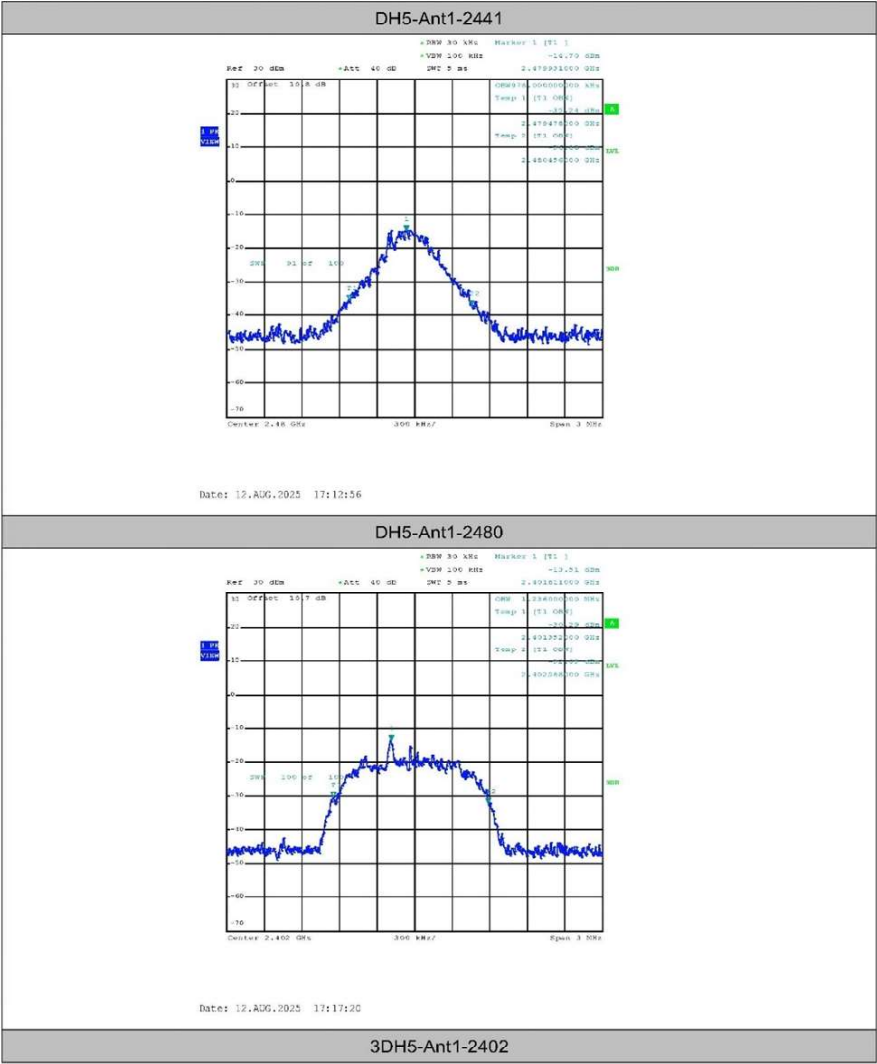
Appendix B: Occupied Channel Bandwidth

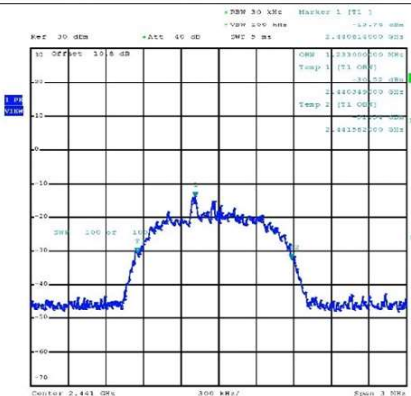
Test Result

TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.96	2401.4990	2402.4590	---	---
DH5	Ant1	2441	1.005	2440.4720	2441.4770	---	---
DH5	Ant1	2480	0.978	2479.4780	2480.4560	---	---
3DH5	Ant1	2402	1.236	2401.3520	2402.5880	---	---
3DH5	Ant1	2441	1.233	2440.3490	2441.5820	---	---
3DH5	Ant1	2480	1.254	2479.3430	2480.5970	---	---

Test Graphs

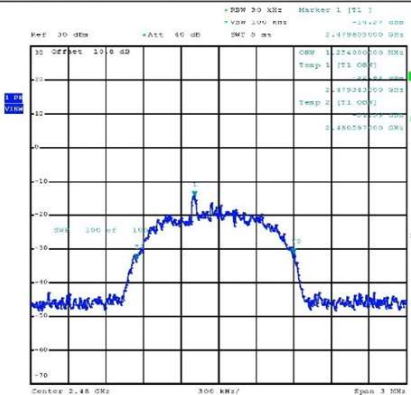






Date: 12.AUG.2025 17:27:22

3DH5-Ant1-2441



Date: 12.AUG.2025 17:35:02

3DH5-Ant1-2480

4. Maximum conducted output power of BR & EDR

Appendix C: Maximum conducted output power

Test Result Peak

Test Mode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	-11.14	≤20.97	PASS
DH5	Ant1	2441	-11.14	≤20.97	PASS
DH5	Ant1	2480	-11.66	≤20.97	PASS
3DH5	Ant1	2402	-9.19	≤30	PASS
3DH5	Ant1	2441	-8.91	≤30	PASS
3DH5	Ant1	2480	-9.31	≤30	PASS

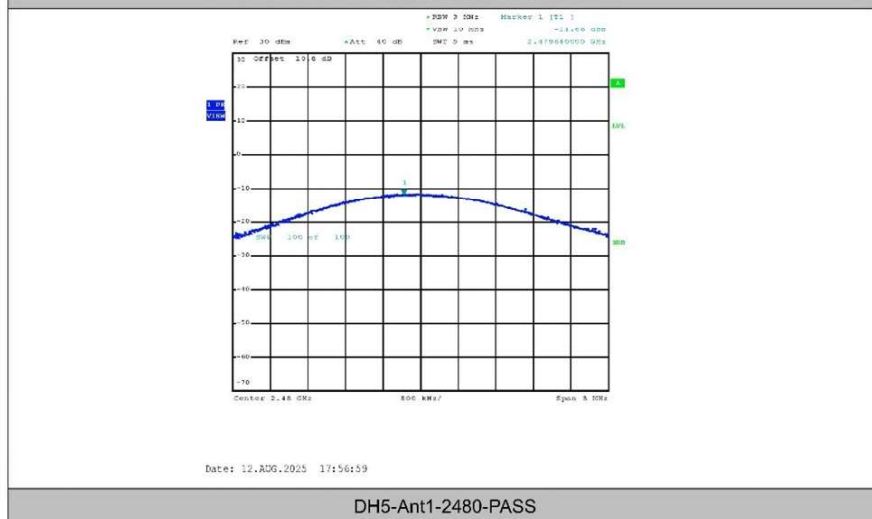
Test Result Average

Test Graphs

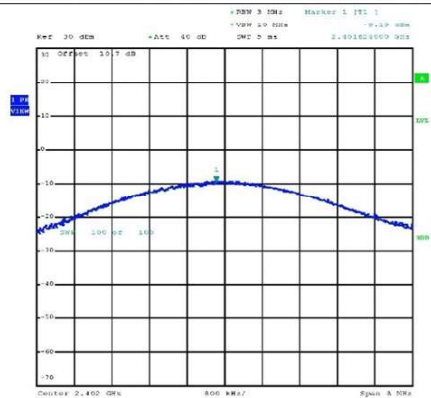




DH5-Ant1-2441-PASS



DH5-Ant1-2480-PASS



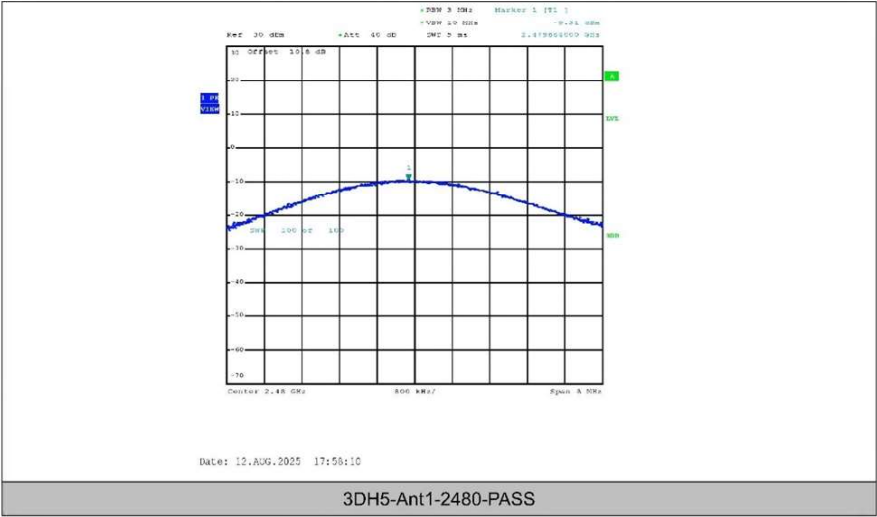
Date: 12.AUG.2025 17:57:25

3DH5-Ant1-2402-PASS



Date: 12.AUG.2025 17:57:48

3DH5-Ant1-2441-PASS



5. Carrier frequency separation of BR & EDR

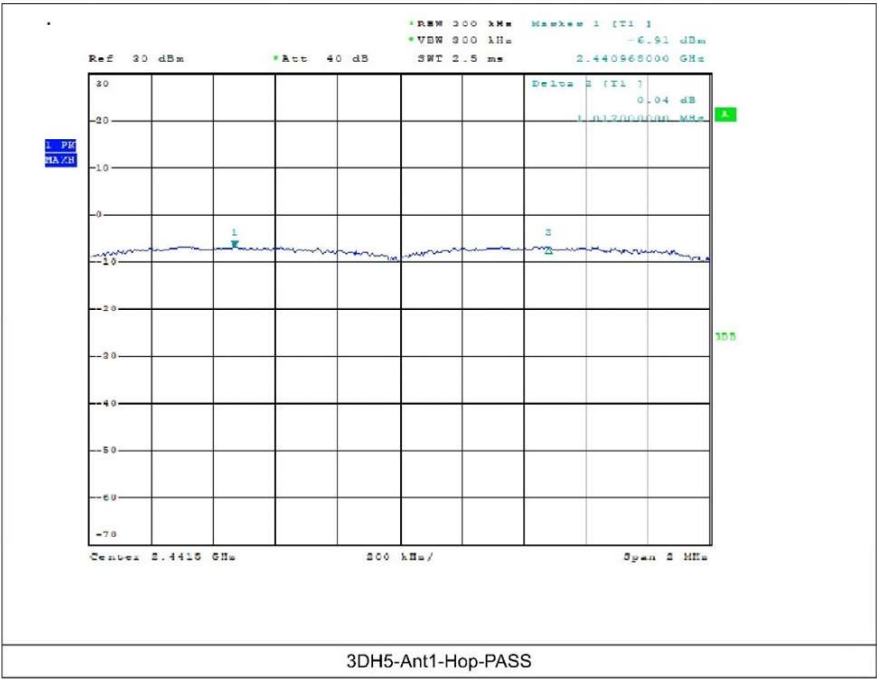
Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Frequency[MHz]	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.028	≥0.660	PASS
3DH5	Ant1	Hop	1.012	≥1.320	PASS

Test Graphs





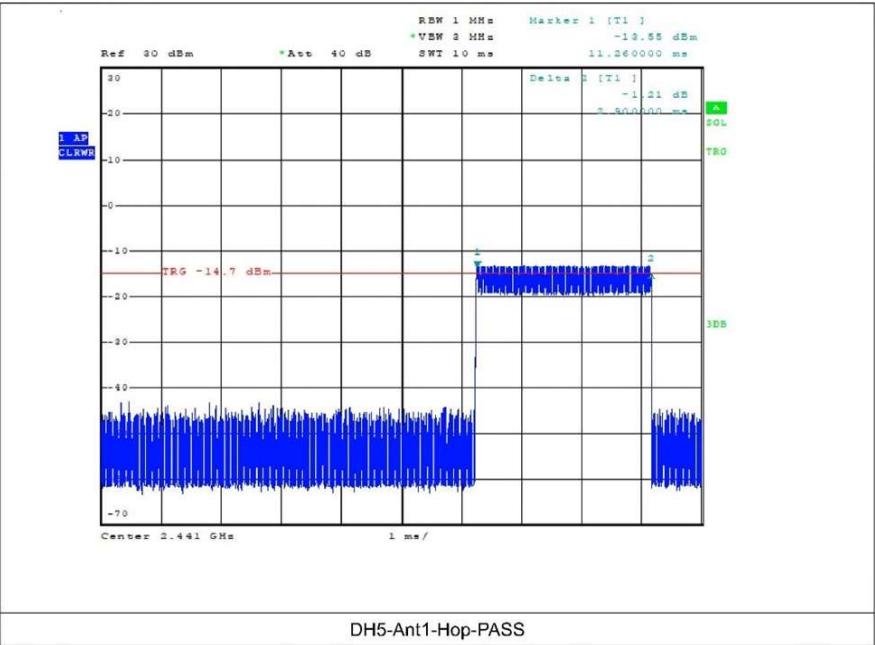
6. Time of occupancy of BR & EDR

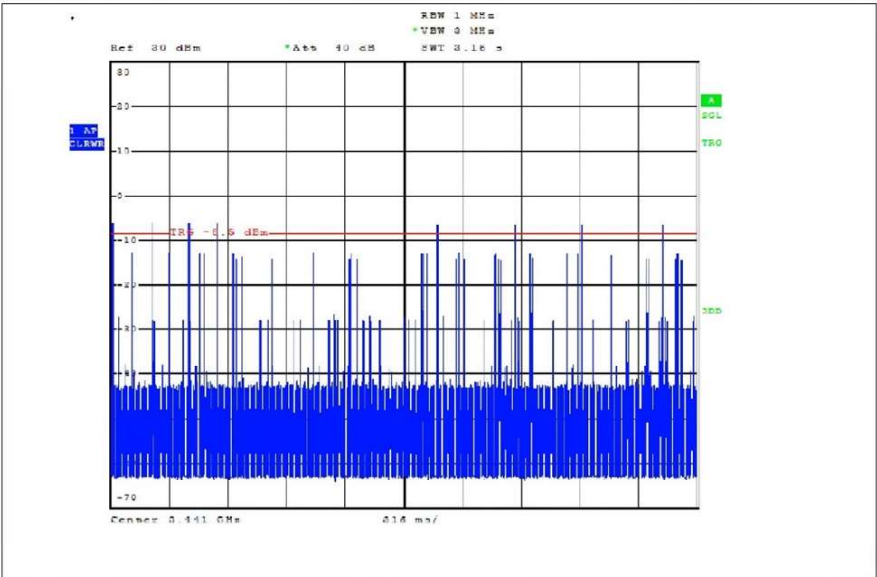
Appendix E: Time of occupancy

Test Result

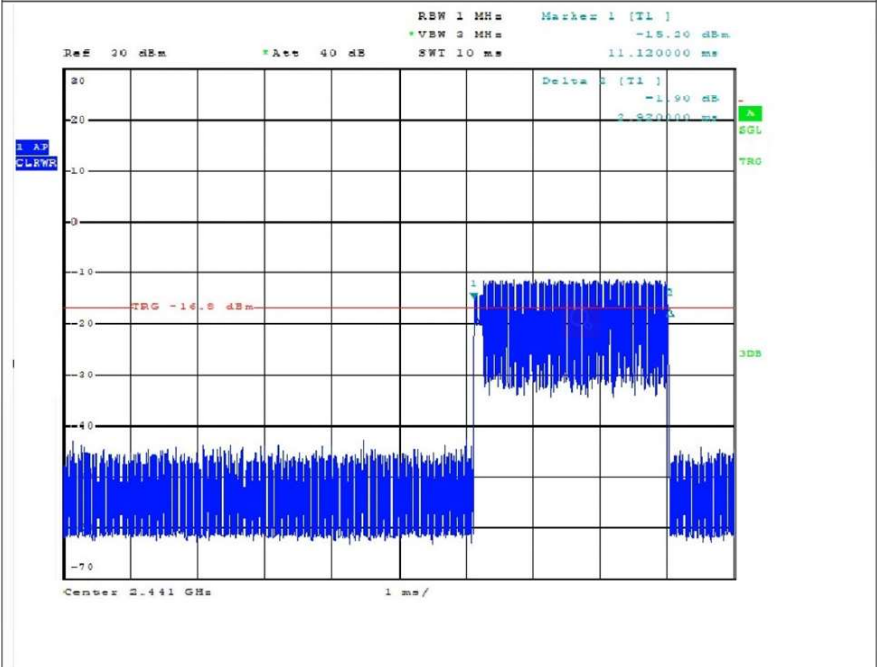
TestMode	Antenna	Frequency[MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.90	90	0.261	≤0.4	PASS
3DH5	Ant1	Hop	2.92	110	0.3212	≤0.4	PASS

Test Graphs

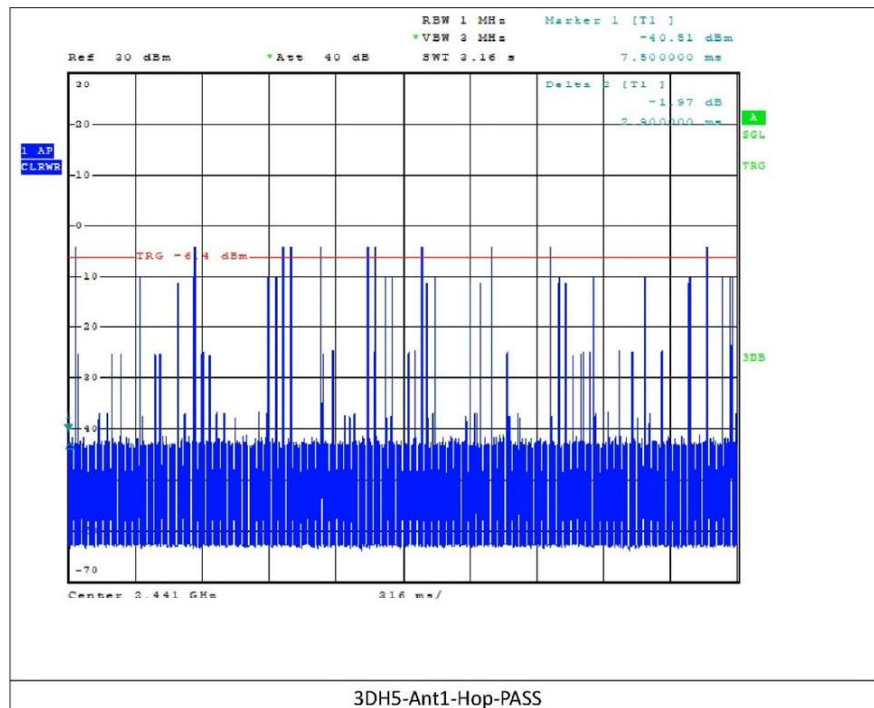




DH5-Ant1-Hop-PASS



3DH5-Ant1-Hop-PASS



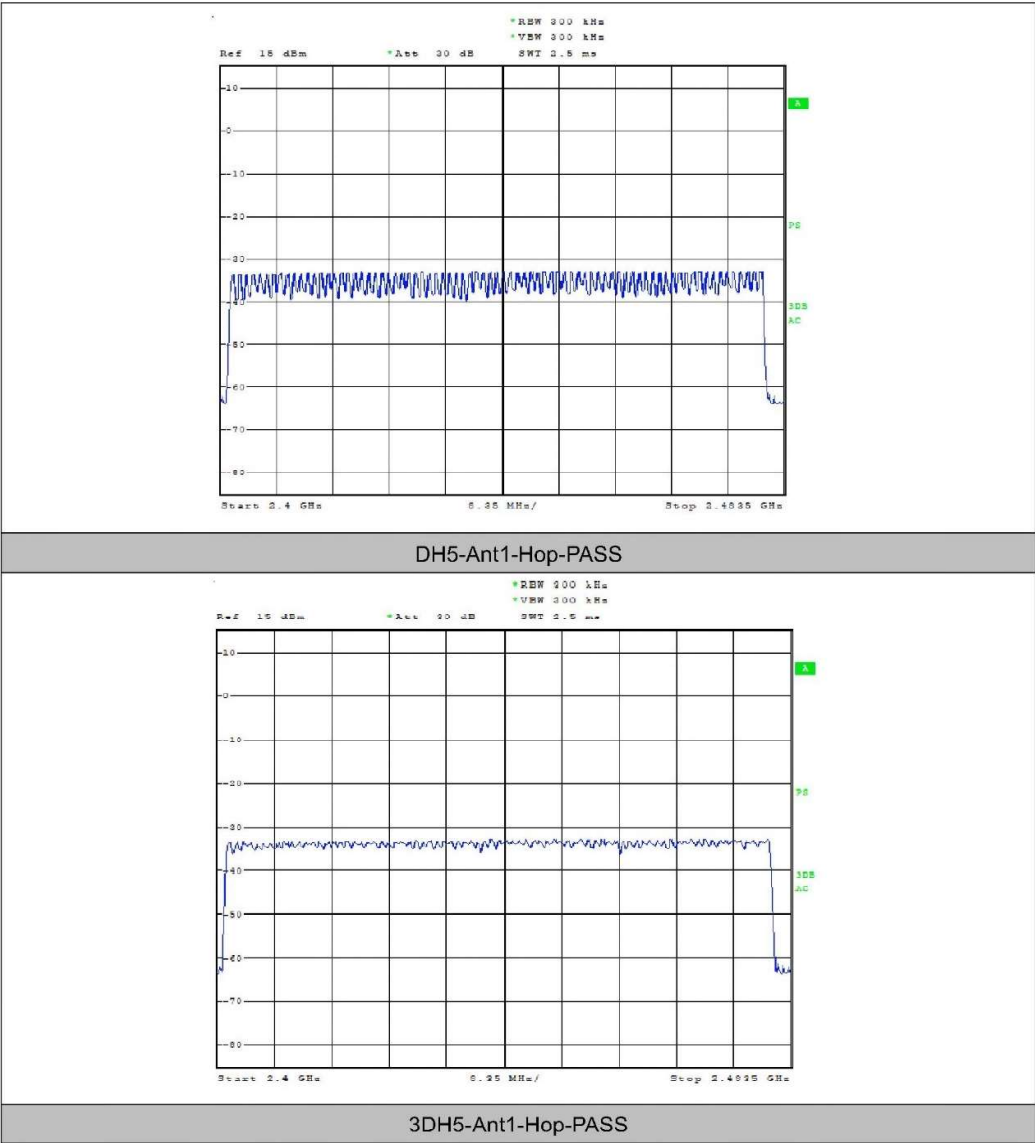
7. Number of hopping channels of BR & EDR

Appendix F: Number of hopping channels

Test Result

TestMode	Antenna	Frequency[MHz]	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS

Test Graphs



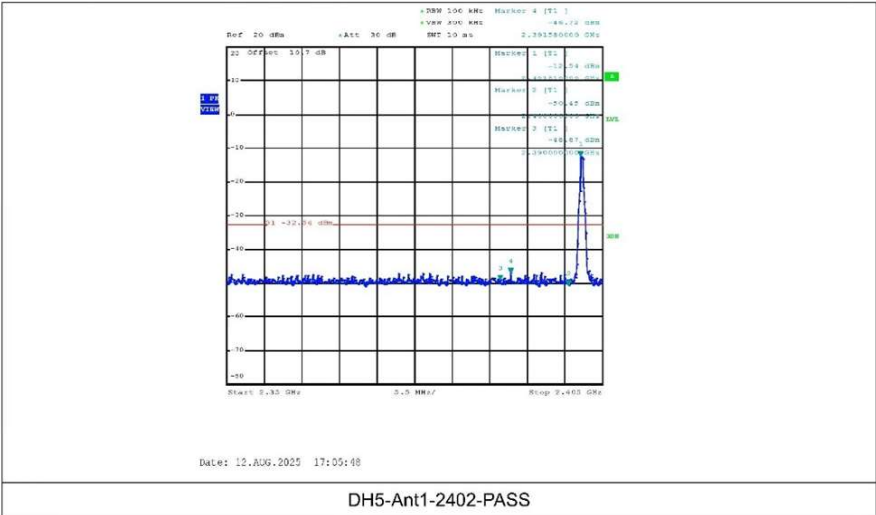
8. Band edge measurements of BR & EDR

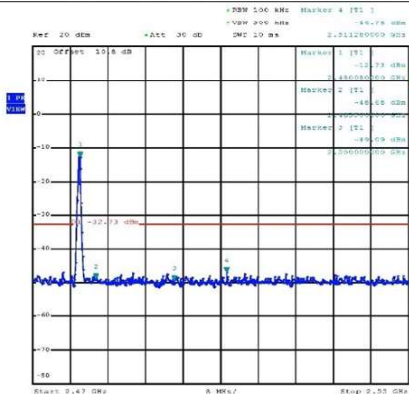
Appendix G: Band edge measurements

Test Result

TestMode	Antenna	ChName	Frequency[MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-12.54	-46.72	≤-32.54	PASS
DH5	Ant1	High	2480	-12.73	-46.78	≤-32.73	PASS
DH5	Ant1	Low	Hop_2402	-13.42	-46.87	≤-33.42	PASS
DH5	Ant1	High	Hop_2480	-12.47	-46.33	≤-32.47	PASS
3DH5	Ant1	Low	2402	-13.46	-46.46	≤-33.46	PASS
3DH5	Ant1	High	2480	-12.58	-46.67	≤-32.58	PASS
3DH5	Ant1	Low	Hop_2402	-12.62	-46.59	≤-32.62	PASS
3DH5	Ant1	High	Hop_2480	-13.68	-46.83	≤-33.68	PASS

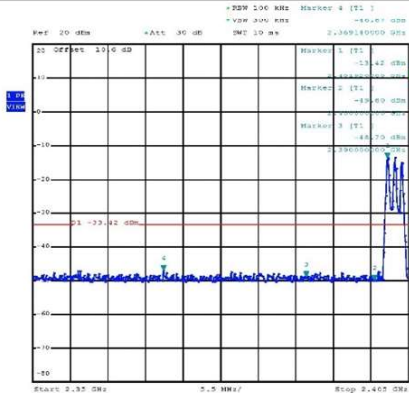
Test Graphs





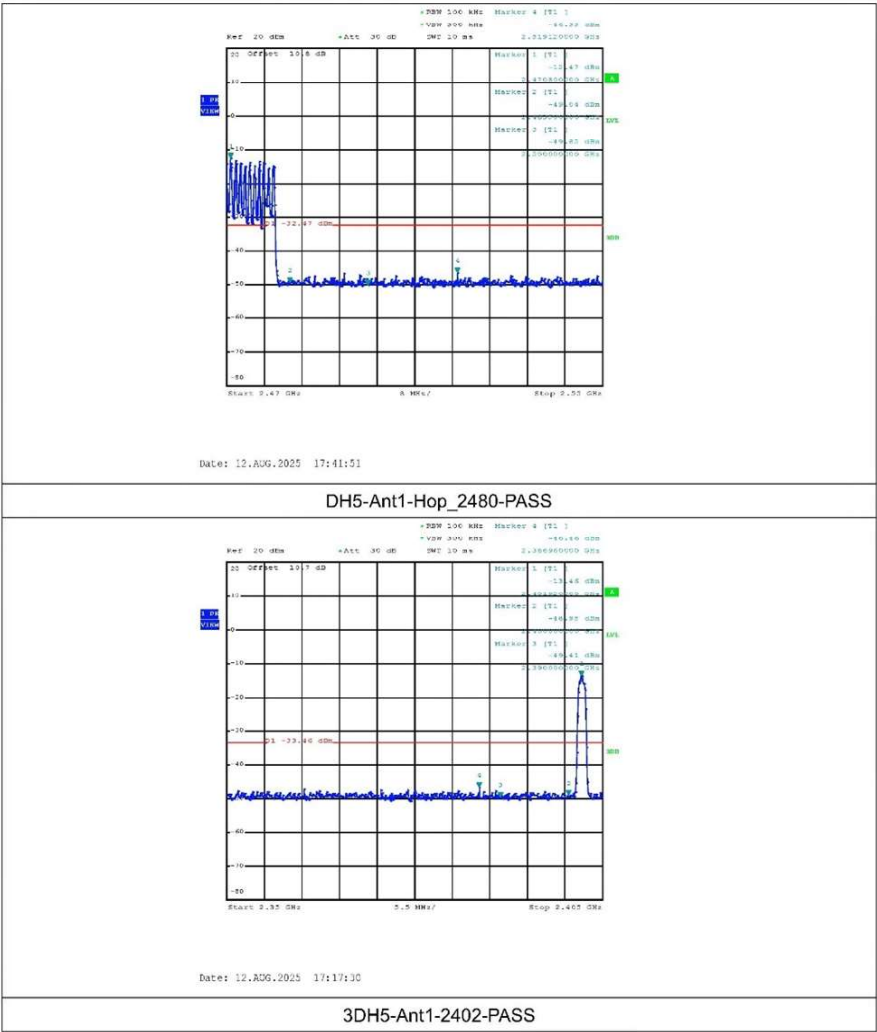
Date: 12.AUG.2025 17:13:07

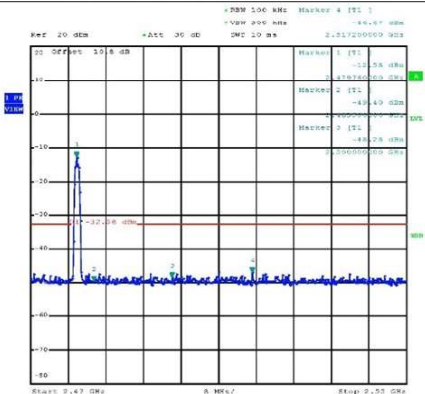
DH5-Ant1-2480-PASS



Date: 12.AUG.2025 17:38:46

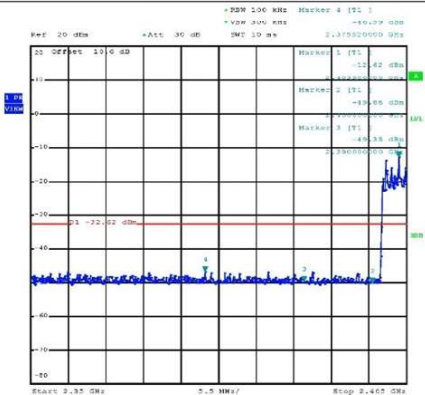
DH5-Ant1-Hop_2402-PASS





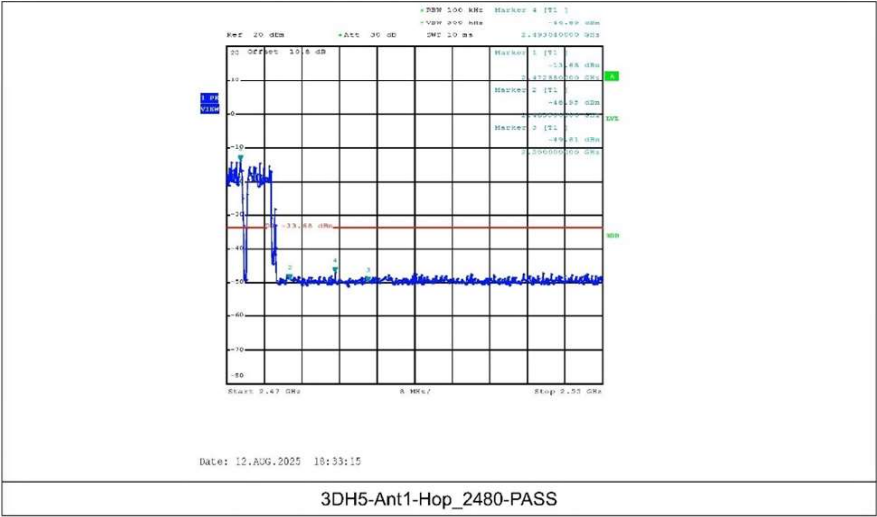
Date: 12.AUG.2025 17:35:15

3DH5-Ant1-2480-PASS



Date: 12.AUG.2025 17:43:03

3DH5-Ant1-Hop_2402-PASS



9. Conducted Spurious Emission of BR & EDR

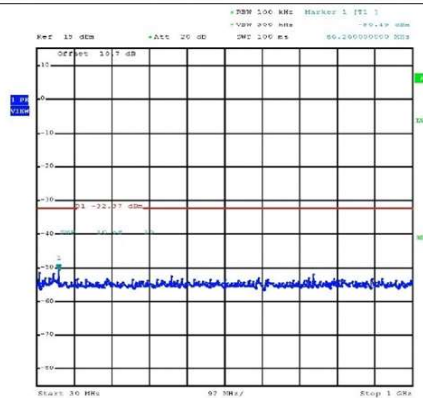
Appendix H: Conducted Spurious Emission

Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	0~Reference	-12.37	-12.37	---	PASS
DH5	Ant1	2402	30~1000	-12.37	-50.49	≤-32.37	PASS
DH5	Ant1	2402	1000~26500	-12.37	-38.56	≤-32.37	PASS
DH5	Ant1	2441	0~Reference	-12.07	-12.07	---	PASS
DH5	Ant1	2441	30~1000	-12.07	-51.66	≤-32.07	PASS
DH5	Ant1	2441	1000~26500	-12.07	-39.84	≤-32.07	PASS
DH5	Ant1	2480	0~Reference	-12.19	-12.19	---	PASS
DH5	Ant1	2480	30~1000	-12.19	-52.02	≤-32.19	PASS
DH5	Ant1	2480	1000~26500	-12.19	-40.63	≤-32.19	PASS
3DH5	Ant1	2402	0~Reference	-12.39	-12.39	---	PASS
3DH5	Ant1	2402	30~1000	-12.39	-50.12	≤-32.39	PASS
3DH5	Ant1	2402	1000~26500	-12.39	-36.46	≤-32.39	PASS
3DH5	Ant1	2441	0~Reference	-12.04	-12.04	---	PASS
3DH5	Ant1	2441	30~1000	-12.04	-50.15	≤-32.04	PASS
3DH5	Ant1	2441	1000~26500	-12.04	-38.17	≤-32.04	PASS
3DH5	Ant1	2480	0~Reference	-12.45	-12.45	---	PASS
3DH5	Ant1	2480	30~1000	-12.45	-50.07	≤-32.45	PASS
3DH5	Ant1	2480	1000~26500	-12.45	-40.4	≤-32.45	PASS

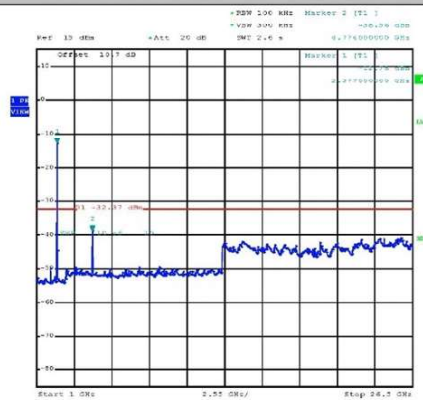
Test Graphs





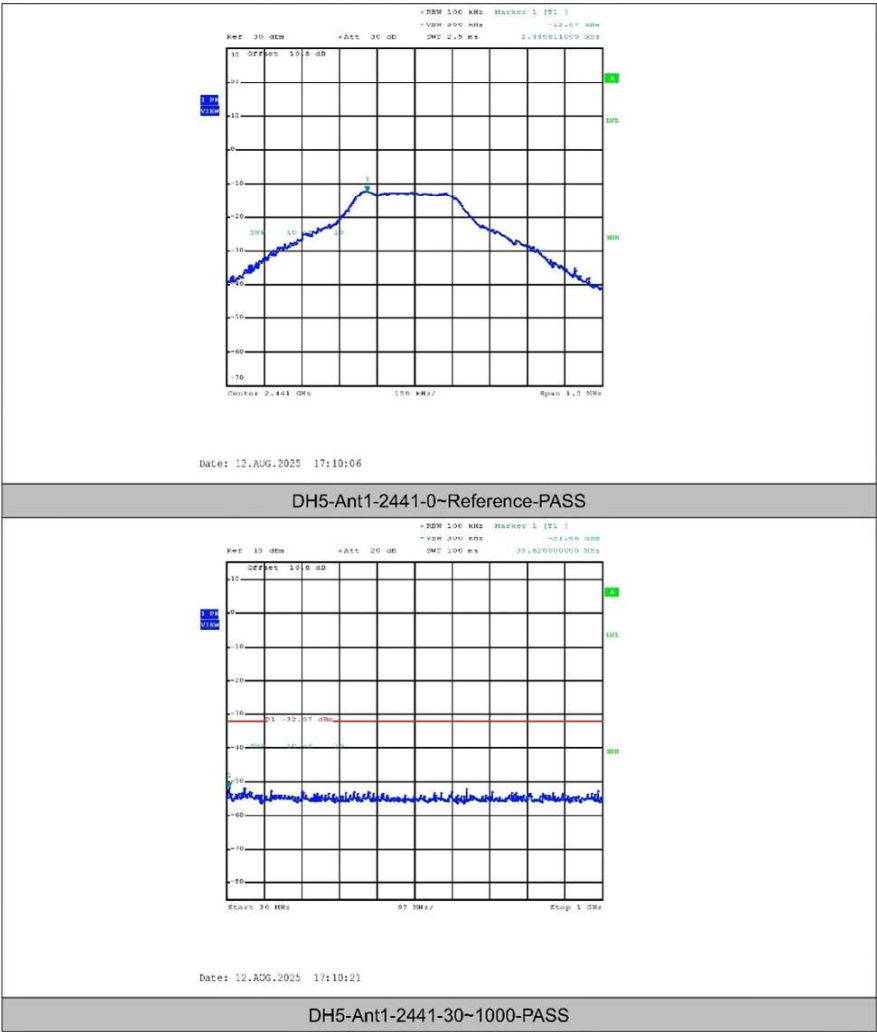
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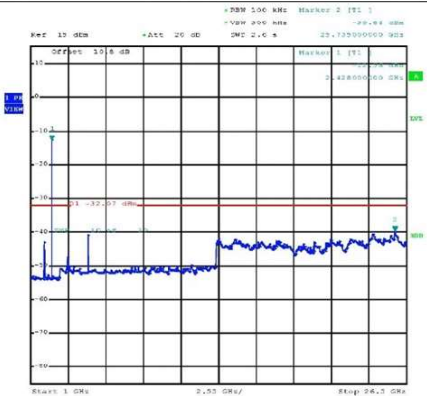
DH5-Ant1-2402-30~1000-PASS



Date: 12.AUG.2025 17:09:02

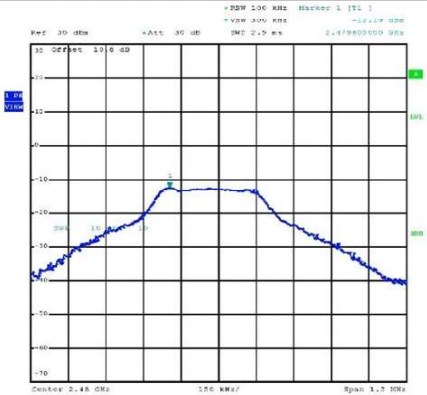
DH5-Ant1-2402-1000~26500-PASS





Date: 12.AUG.2025 17:12:06

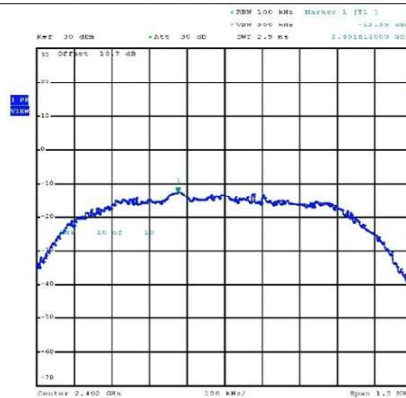
DH5-Ant1-2441-1000-26500-PASS



Date: 12.AUG.2025 17:14:21

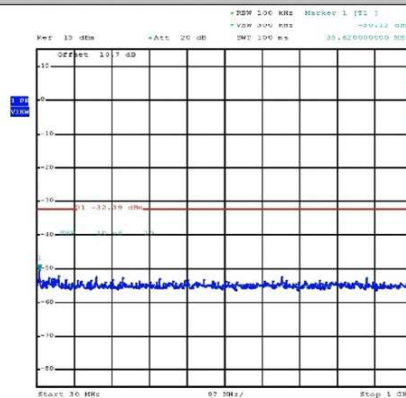
DH5-Ant1-2480-0-Reference-PASS





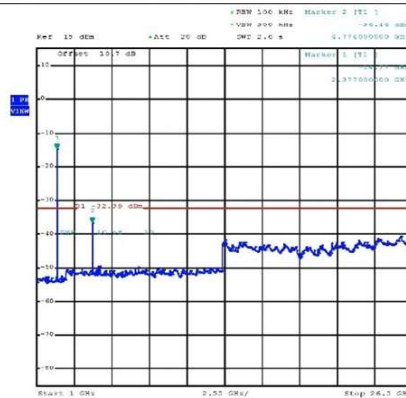
Date: 12.AUG.2025 17:16:41

3DH5-Ant1-2402-0~Reference-PASS



Date: 12.AUG.2025 17:18:56

3DH5-Ant1-2402-30~1000-PASS



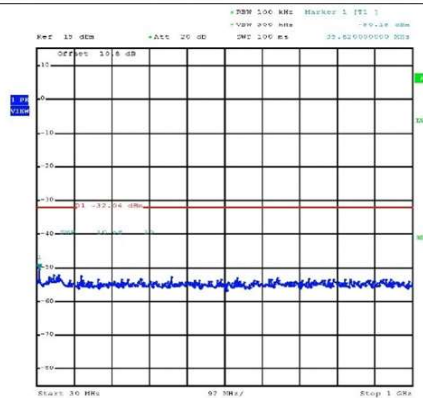
Date: 12.AUG.2025 17:20:40

3DH5-Ant1-2402-1000~26500-PASS



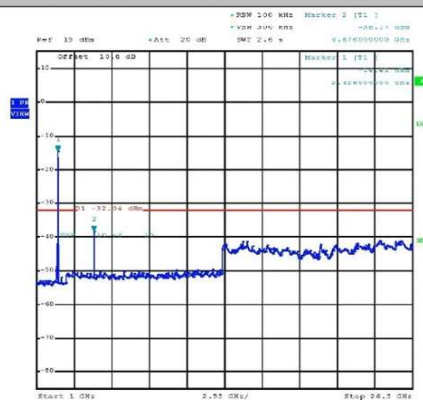
Date: 12.AUG.2025 17:27:30

3DH5-Ant1-2441-0~Reference-PASS



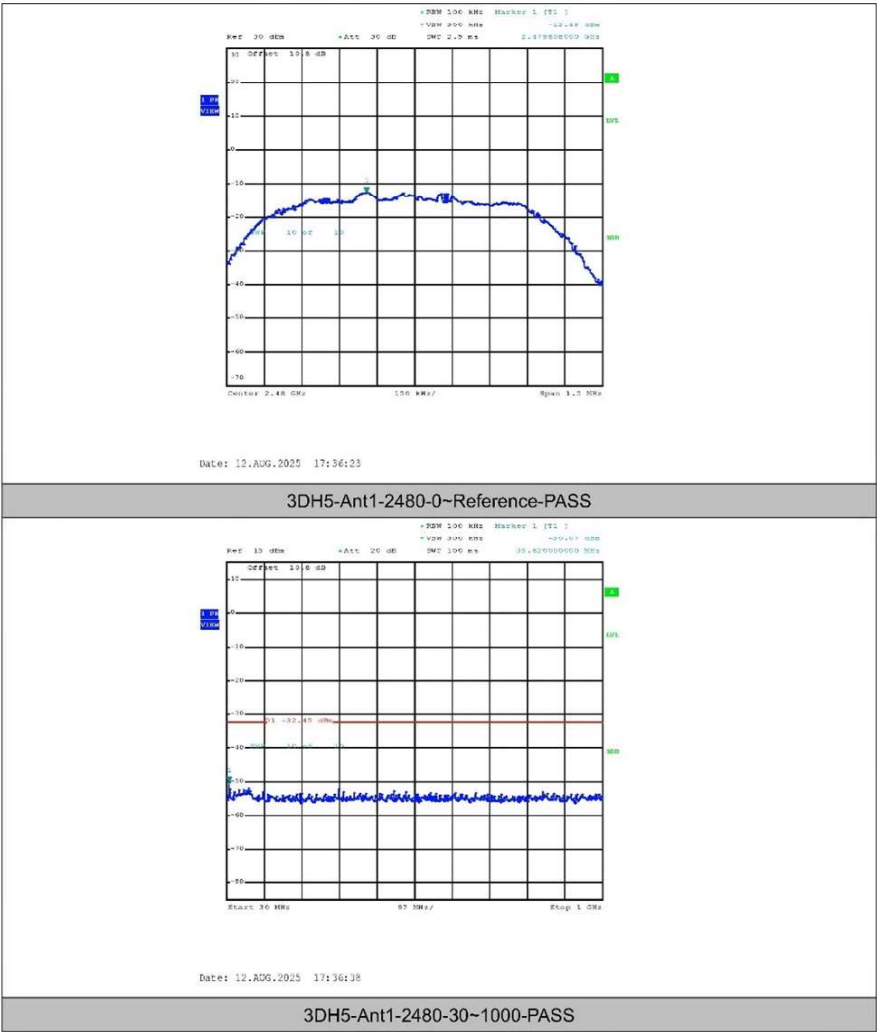
Date: 12.AUG.2025 17:27:44

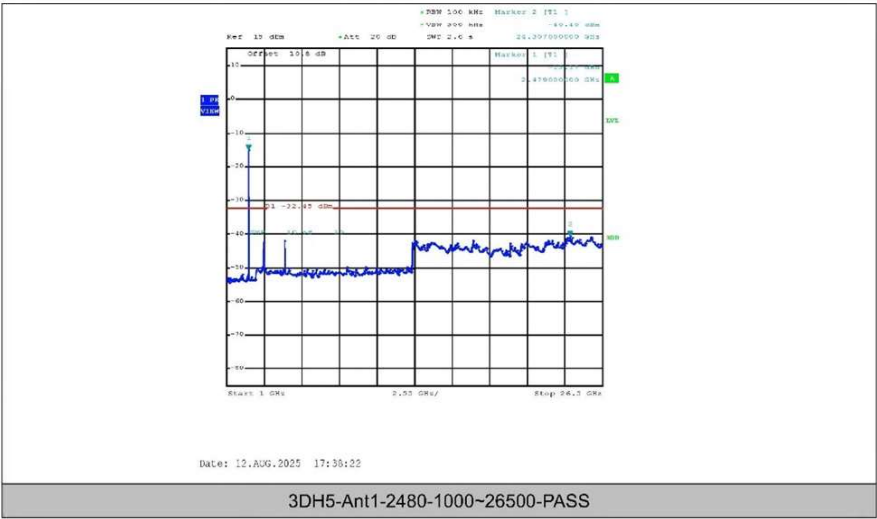
3DH5-Ant1-2441-30~1000-PASS



Date: 12.AUG.2025 17:29:28

3DH5-Ant1-2441-1000~26500-PASS





10.DTS Bandwidth of BLE

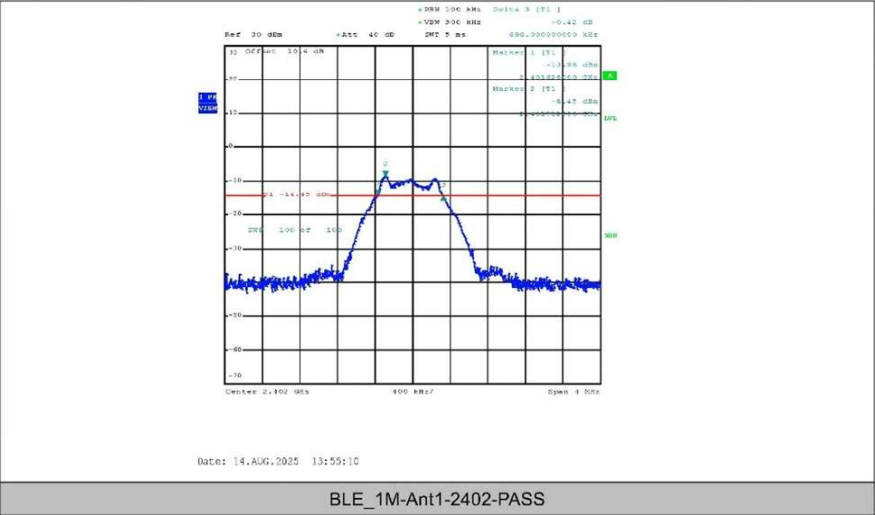
Case No. : 170423584
Ambient Condition: 25 °C, 50 %RH,
EUT : ES-503
Standard : FCC Part 15
Remark : BLE
Tested By: <i>Jason Wu</i> 20250812
Reviewed By: <i>Jacky Chen</i>

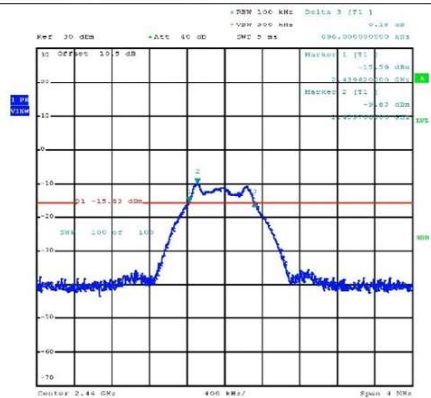
Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.70	2401.63	2402.32	0.5	PASS
BLE_1M	Ant1	2440	0.70	2439.62	2440.32	0.5	PASS
BLE_1M	Ant1	2480	0.70	2479.60	2480.31	0.5	PASS

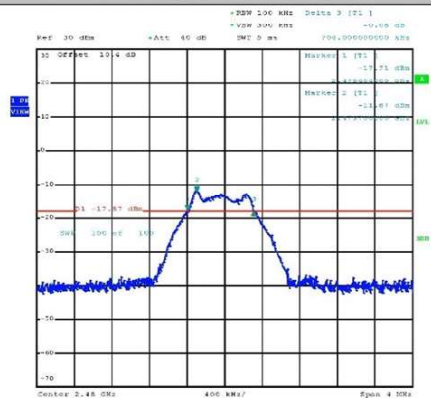
Test Graphs





Date: 14.AUG.2025 14:01:01

BLE_1M-Ant1-2440-PASS



Date: 14.AUG.2025 14:06:13

BLE_1M-Ant1-2480-PASS

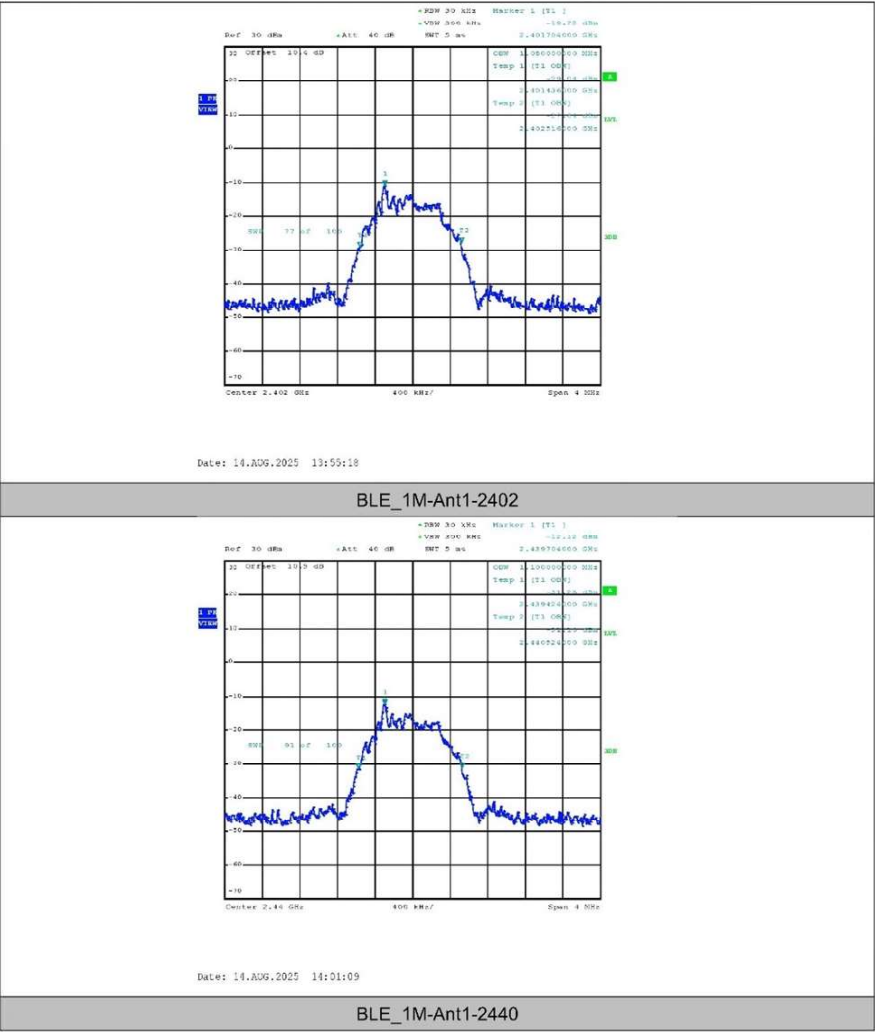
11.Occupied Channel Bandwidth of BLE

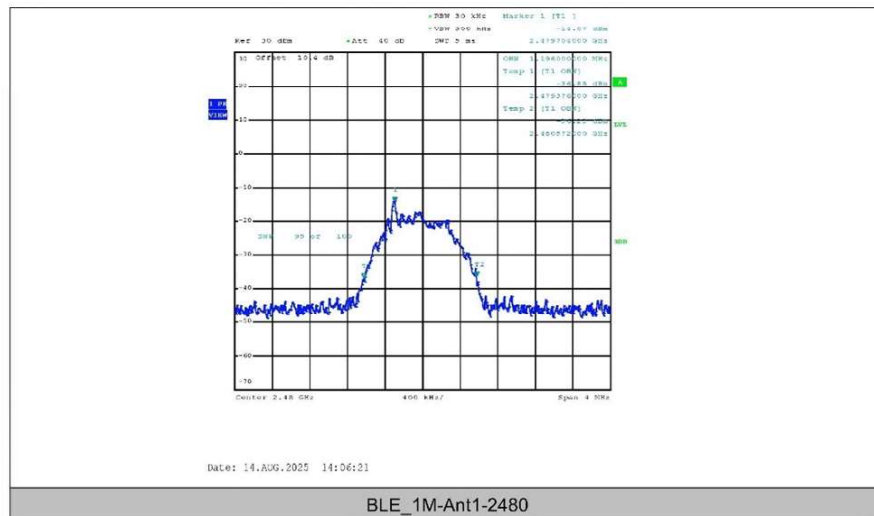
Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.08	2401.4360	2402.5160	---	---
BLE_1M	Ant1	2440	1.1	2439.4240	2440.5240	---	---
BLE_1M	Ant1	2480	1.196	2479.3760	2480.5720	---	---

Test Graphs





12. Maximum conducted output power of BLE

Appendix C: Maximum conducted output power

Test Result Peak

TestMode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	EIRP[dBm]	EIRP Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-7.90	≤30	-4.60	≤36	PASS
BLE_1M	Ant1	2440	-9.12	≤30	-5.82	≤36	PASS
BLE_1M	Ant1	2480	-10.91	≤30	-7.61	≤36	PASS

Test Result Average

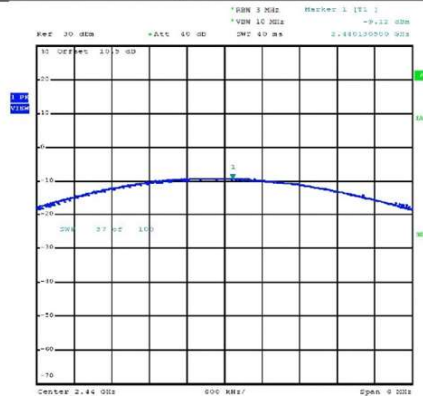
Test Mode	Antenna	Frequency[MHz]	Conducted Sensor power[dBm]	Duty Cycle [%]	DC Factor [dBm]	Result [dBm]	Limit [dBm]	Gain [dBi]	EIRP [dBm]	EIRP Limit [dBm]	Verdict
BLE_1M	Ant1	2402	-10.09	68.25	1.66	-8.43	≤30.00	3.3	-5.13	≤36.00	PASS
BLE_1M	Ant1	2440	-10.31	100.00	0.00	-10.31	≤30.00	3.3	-7.01	≤36.00	PASS
BLE_1M	Ant1	2480	-11.50	100.00	0.00	-11.50	≤30.00	3.3	-8.2	≤36.00	PASS

Test Graphs Peak



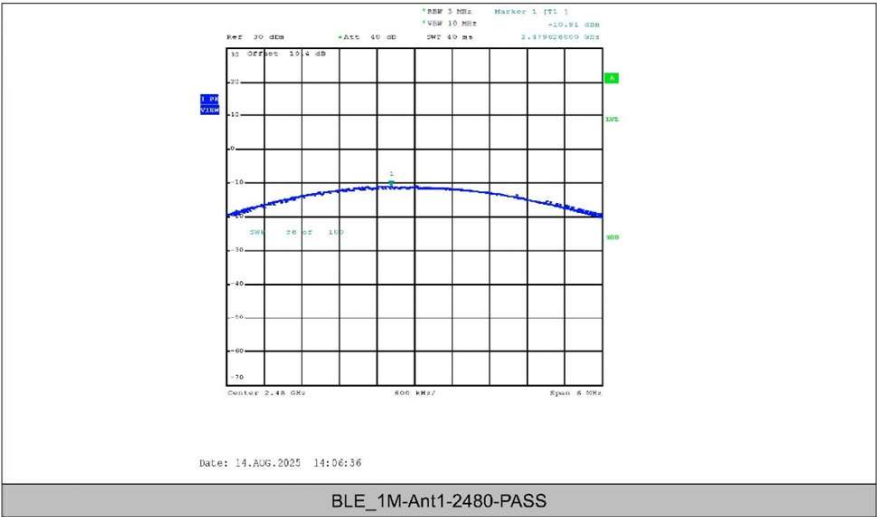
Date: 14.AUG.2025 13:56:26

BLE_1M-Ant1-2402-PASS



Date: 14.AUG.2025 14:02:27

BLE_1M-Ant1-2440-PASS



13.Maximum power spectral density of BLE

Appendix D: Maximum power spectral density

Test Result

TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-23.58	≤8.00	PASS
BLE_1M	Ant1	2440	-24.87	≤8.00	PASS
BLE_1M	Ant1	2480	-26.96	≤8.00	PASS

Test Graphs

