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<table><tr><td>Date/s Tested</td><td>: 04-May-2025 - 13-July-2025</td></tr><tr><td>Report Issue Date</td><td>: 15-July-2025</td></tr><tr><td>Test Location</td><td>: Motorola Penang Advanced Communication Laboratory (ACL)</td></tr><tr><td>Manufacturer/Location</td><td>: Motorola Solutions INC. (Plantation), 8000 West Sunrise Blvd MD 41-128, USA Plantation FL 333222-9947</td></tr><tr><td>Requestor</td><td>: Stankovska Daniela</td></tr><tr><td>Product Type</td><td>: Portable</td></tr><tr><td>Product Marketing Name (PMN)</td><td>: APX NEXT</td></tr><tr><td>Hardware Version Identification Number (HVIN)</td><td>: H55TGT9PW8BN</td></tr><tr><td>Frequency Band</td><td>: 2.402 - 2.480 GHz</td></tr><tr><td>Max RF Output Power</td><td>: GFSK - 100.1mW PI/4 DPSK - 70.80mW 8DPSK - 70.79mW</td></tr><tr><td>Applicant Name</td><td>: Motorola Solutions Inc</td></tr><tr><td>Applicant Address</td><td>: Plot 2A, Medan bayan Lepas, Mukim 12 S.W.D.11900 Bayan Lepas, Penang, Malaysia</td></tr><tr><td>FCC Registrations</td><td>: 461337</td></tr><tr><td>IC Registrations</td><td>: MY0001</td></tr><tr><td>Firmware Version Identification Number (FVIN)</td><td>: D37.00.17 (BP) D37.00.02 (AP)</td></tr></table> The equipment was tested accordance to the requirement listed below: <table><tr><td>(2.4GHz BT) FCC 47CFR Part 15C ISED RSS 247 Issue 4 July 2025</td><td>PASS</td></tr></table>		Date/s Tested	: 04-May-2025 - 13-July-2025	Report Issue Date	: 15-July-2025	Test Location	: Motorola Penang Advanced Communication Laboratory (ACL)	Manufacturer/Location	: Motorola Solutions INC. (Plantation), 8000 West Sunrise Blvd MD 41-128, USA Plantation FL 333222-9947	Requestor	: Stankovska Daniela	Product Type	: Portable	Product Marketing Name (PMN)	: APX NEXT	Hardware Version Identification Number (HVIN)	: H55TGT9PW8BN	Frequency Band	: 2.402 - 2.480 GHz	Max RF Output Power	: GFSK - 100.1mW PI/4 DPSK - 70.80mW 8DPSK - 70.79mW	Applicant Name	: Motorola Solutions Inc	Applicant Address	: Plot 2A, Medan bayan Lepas, Mukim 12 S.W.D.11900 Bayan Lepas, Penang, Malaysia	FCC Registrations	: 461337	IC Registrations	: MY0001	Firmware Version Identification Number (FVIN)	: D37.00.17 (BP) D37.00.02 (AP)	(2.4GHz BT) FCC 47CFR Part 15C ISED RSS 247 Issue 4 July 2025	PASS
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Prepared By:  NURUL NATASHA BINTI ABDUL HAMID Test Personnel	Approved Signatory:  HO SZE KHIAN Responsible Engineer																																

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REVISION HISTORY

Revision History	Description	Date	Originator
Rev. A	Initial Report	15-July-2025	Nurul Natasha
Rev. B	Update Max RF Output Power for GFSK	18-Aug-2025	Nurul Natasha

1.0.General Information

EUT Description:

Technologies	2.4GHz BT
TX Frequency range	2402MHz – 2480MHz
Modulation Type	GFSK, Pi/4 DQPSK,8DPSK
Connector type	PROGRAMMING, TEST & ALIGNMENT CABLE
Antenna type	ILA
Temporary RF Connector	0.59dB

Note: The description and information regarding the EUT are provided by the customer. The laboratory shall not be held responsible for any inaccuracies or misinformation in the provided details that may result in incorrect test outcomes.

The EUT contains following accessory devices and data cable:

Item	Brand	Model or P/N
BATTERY PACK, BATT IMPRES 2 LIION IP68 5800T	MOTOROLA	PMNN4895A
ANTENNA, WHIP, WHIP, ALLBAND	MOTOROLA	AN000297A01
CHARGER, MULTI-UNIT, IMPRES G2, 6-DISP, US/NA/CA/LA PLUG, ACC-CHARGER	MOTOROLA	NNTN9115A
CHARGER, MULTI-UNIT, IMPRES-G2, 6-DISP, BASE w/INSERTS	MOTOROLA	PS000337A01

Channel number and frequency information:

79 channels are provided to this EUT:

Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
0	2402	20	2422	40	2442	60	2462
1	2403	21	2423	41	2443	61	2463
2	2404	22	2424	42	2444	62	2464
3	2405	23	2425	43	2445	63	2465
4	2406	24	2426	44	2446	64	2466
5	2407	25	2427	45	2447	65	2467
6	2408	26	2428	46	2448	66	2468
7	2409	27	2429	47	2449	67	2469
8	2410	28	2430	48	2450	68	2470
9	2411	29	2431	49	2451	69	2471
10	2412	30	2432	50	2452	70	2472
11	2413	31	2433	51	2453	71	2473

12	2414	32	2434	52	2454	72	2474
13	2415	33	2435	53	2455	73	2475
14	2416	34	2436	54	2456	74	2476
15	2417	35	2437	55	2457	75	2477
16	2418	36	2438	56	2458	76	2478
17	2419	37	2439	57	2459	77	2479
18	2420	38	2440	58	2460	78	2480
19	2421	39	2441	59	2461		

General Description of Applied Standards

The EUT is a RF Product. According to the specifications of the manufacturer, the EUT is to comply with the requirements of the following standards:

FCC 47 CFR Part 15 Subpart C

KDB 558074 D01 15.247 Meas Guidance v05

ANSI C63.10-2013

Deviation from standard

Not applicable as no deviation from standard test method

Modifications to EUT

For RF conducted measurements a pigtail was soldered out of the board while for radiated measurements there were no modifications to the device

2.0. Summary of Test Results

FCC Clause	ISED Clause	Test Item	Result	Remark	Serial number tested	Tested by
15.247 (b)(1)	RSS-247 5.4(b)	Conducted RF Output Power (Peak)	Pass	Highest output power: 19.027 (79.928 mW)	437ZBG0038	Natasha
15.247 (a)(1)	RSS-247 5.1(a) RSS-247 5.1(b)	(1) 20dB Channel Bandwidth (2) Channel Separation	Pass	GFSK – 863KF1D Pi/4 DQPSK – 1M18G1D 8DPSK - 1M18G1D	437ZBG0038	Natasha
15.247(a)(1)(iii)	RSS-247 5.1(d)	Number of hopping Frequency used	Pass	Meet the limit requirement.	437ZBG0038	Natasha
15.247(a)(1)(iii)	RSS-247 5.1(d)	Dwell time on each channel	Pass	Meet the limit requirement.	437ZBG0038	Natasha
15.247 (d)	RSS-247 5.5	Band Edge Conducted Spurious Emission	Pass	Worst case emission: -43.84 dB	437ZBG0038	Natasha
15.247 (d)	RSS-247 5.5	Conducted Spurious Emission	Pass	Worst case emission: -50.893 dBm	437ZBG0038	Natasha
15.205, 15.209, 15.247 (d)	RSS-247 5.5	Radiated Emission within Restricted Bands	Pass	Worst case emission: RBE: 41.2162dBuV/m (margin: 12.7838dBuV/m) RSE: 27.4653 dBuV/m (Margin: margin: 12.5347 dB (QPK)	437ZBG0592, 437ZBG0594, 437ZBG0577	Nazrin, Rezza & Fuad
15.207	RSS-Gen 8.8	AC Powerline Conducted Emission	Pass	Meet the limit requirement.	437ZBG0592	Afieqah
15.203	-	Antenna Requirement	NA	Internal antenna is not accessible to the end-user	NA	NA

3.0. Measurement Uncertainty

Measurement	Frequency	Expended Uncertainty (k=1.96) (±dB)
AC Power Line Conducted Spurious Emission	150KHz ~ 30MHz	3.44
Radiated Emissions up to 1 GHz	30MHz ~ 1000MHz	6.00
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	5.14
	18GHz ~ 40GHz	5.36
Conducted Spurious Emissions	9kHz ~ 12.75GHz	2.82

Final Reported Test Results

The final reported test results are calculated using the following equation:

$$\text{Reported RF Measurement Results} = \text{Measured Measurement Results} + \text{Correction Factor}$$

Where:

- **Measured Measurement Results** is the measured test results
- **Correction Factor** is the cumulative loss of all cables used during measurement, including temporary RF connector and antenna gain.

4.0. Equipment List

Bluetooth ATE # 1 (SW Version: Ate Main_3.1.12_R1)

Description	Model	Serial Number	Calibration Date	Calibration Due Date
CHAMBER	SH-641	92003820	04-Jul-24	04-Jul-25
SPECTRUM ANALYZER	E4440A	MY46186938	29-Oct-24	29-Oct-25
POWER SUPPLY	6652A	3541A02371	11-Sep-24	11-Sep-25

Radiated Emission Station (SW Version: EMC.FCC.IC.RE.v1.7.1)

Description	Model	Serial Number	Calibration Date	Calibration Due Date
DRG HORN FREQ.	SAS-571	566	09-Jan-25	09-Jan-26
DRG HORN FREQ.	SAS-571	719	09-Oct-24	09-Oct-25
DC Power Supply	6032A	MY41001736	05-Aug-24	05-Aug-25
SIGNAL GENERATOR	SMB 100A	180683	20-Dec-24	20-Dec-27
EMI TEST RECEIVER	ESW44	101750	07-Aug-24	07-Aug-25
5m SEMI-ANECHOIC CHAMBER	S800-HX	J2308	No Cal. Req'd	No Cal. Req'd
BILOG ANTENNA	CBL6112B	2964	08-Oct-24	08-Oct-25
BILOG ANTENNA	CBL6112D	55546	05-Jun-24	05-Jun-25
DATA LOGGER THERMOHYGROMETER	SDL500	A.016800	26-Jun-24	26-Jun-25
SYSTEM CONTROLLER	SC104V	050806-1	No Cal. Req'd	No Cal. Req'd
TURNTABLE FLUSH MOUNT 2M	FM2011	FM2011-001	No Cal. Req'd	No Cal. Req'd
ANTENNA POSITIONING TOWER	TLT2	090308-5	No Cal. Req'd	No Cal. Req'd
BROAD-BAND HORN ANTENNA	BBHA9170	BBHA9170143	30-Sep-24	30-Sep-25
PREAMPLIFIER 18-40GHz	JS44-18004000-33-8P	2034566	No Cal. Req'd	No Cal. Req'd
PREAMPLIFIER 1-18GHz	EMC0518A45SE	980890	04-Aug-24	04-Aug-25
PREAMPLIFIER	PAM-0118P	269	27-Aug-24	27-Aug-25
LOOP ANTENNA	6502	00208416	08-Oct-24	08-Oct-25

AC Powerline Station (SW Version: EMC32 Ver.10.60.10)

Description	Model	Serial Number	Calibration Date	Calibration Due Date
ISERVER TEMPERATURE & HUMIDITY RECORDER	iTHX-SD	M21280391	08-Dec-24	08-Dec-25
V-NETWORK 2-LINE	ENV216V	101039	04-Mar-25	04-Mar-26
EMI TEST RECEIVER	ESCI	100225	08-May-24	08-Aug-25
PROGRAMMABLE AC SOURCE	61604	ABR000000926	05-Aug-24	05-Aug-25

5.0. Test Mode Applicability and Test Channel Detail

Radiated Emission Test (Above 1GHz)

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Environmental Conditions
Test Mode	0 to 78	0,39,78	FHSS	GFSK, Pi/4 DQPSK,8DPSK	22.8°C, 70.1%RH

Radiated Emission Test (Below 1GHz)

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Environmental Conditions
Test Mode	0 to 78	0,39,78	FHSS	GFSK, Pi/4 DQPSK,8DPSK	22.8°C, 70.1%RH

Power Line Conducted Emission Test

☐ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☐ Following channel(s) was (were) selected for the final test as listed below.

NAEUT Configure Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Environmental Conditions
Application Mode	0 to 78	AUTO	FHSS	AUTO	NA

Antenna Port Conducted Measurement:

☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

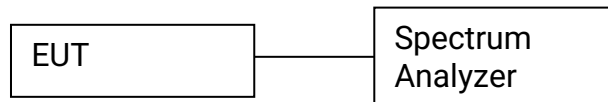
☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Environmental Conditions
Test Mode	0 to 78	0,39,78	FHSS	GFSK, Pi/4 DQPSK,8DPSK	25°C, 54.8%RH

6.0. Transmitter Test Parameters

6.1. Conducted RF Output Power (Peak)

6.1.1. Test Setup



- a) Check and ensure the spectrum analyzer well calibrate.
- b) Turn on the EUT and set EUT to transmit maximum data rate with hopping disable.
- c) Connect EUT's antenna terminal to spectrum analyzer with a low loss cable.
- d) Setting of Spectrum analyzer:
 - a. RBW = > 20 dB bandwidth
 - b. VBW = RBW
 - c. Detector mode = Peak
 - d. AMPLITUDE → Scale/Div = 10 dB
 - e. Trace = Max hold
 - f. Sweep = auto
- e) Measure the captured power within the band and recording the plot.
- f) Repeat above procedure with other different mode of operation.

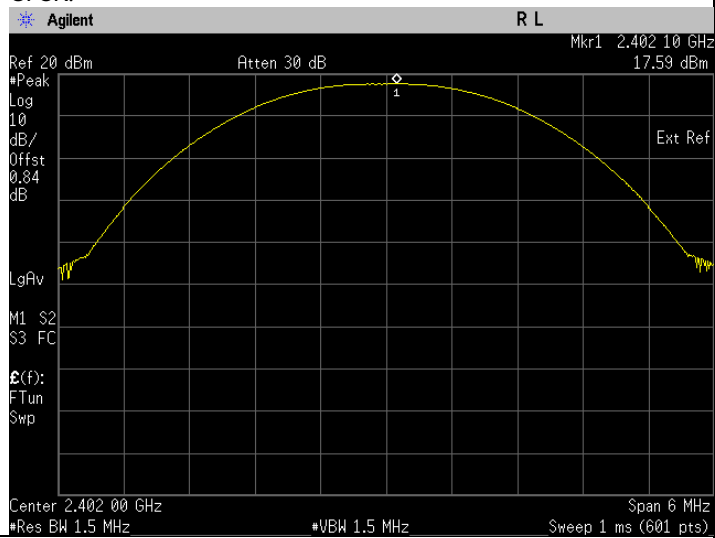
6.1.2. Test Limits:

Normal Condition (25 ° C)
≤ 125mW (or 20.9dBm)

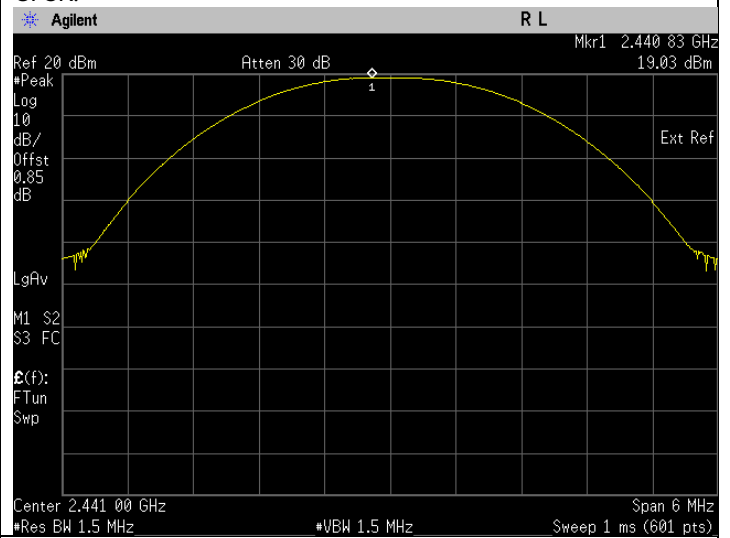
6.1.3. Test Data:

Test Conditions			Results	
Modulation	Voltage(V)	Test Frequency (GHz)	dBm	Status
GFSK	7.50	2.4020	17.586	Pass
		2.4410	19.027	Pass
		2.4800	17.990	Pass
Pi/4 DQPSK	7.50	2.4020	16.363	Pass
		2.4410	17.803	Pass
		2.4800	16.824	Pass
8DPSK	7.50	2.4020	16.524	Pass
		2.4410	18.010	Pass
		2.4800	16.988	Pass

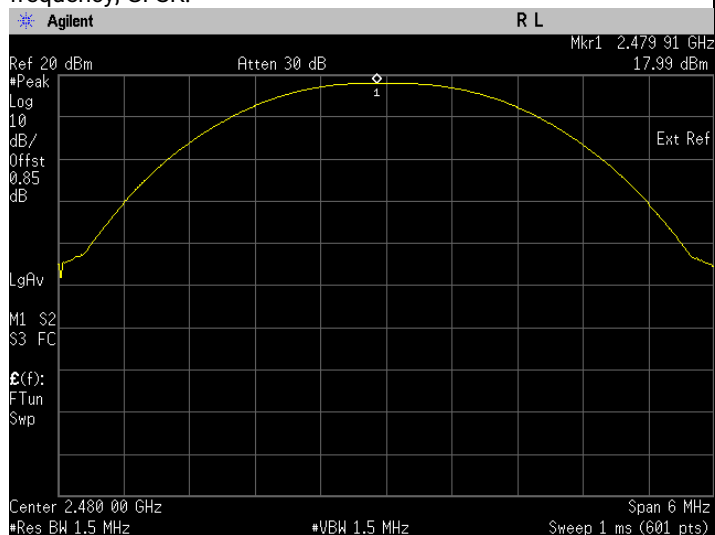
The Conducted RF Output Power test with result at low frequency, GFSK.

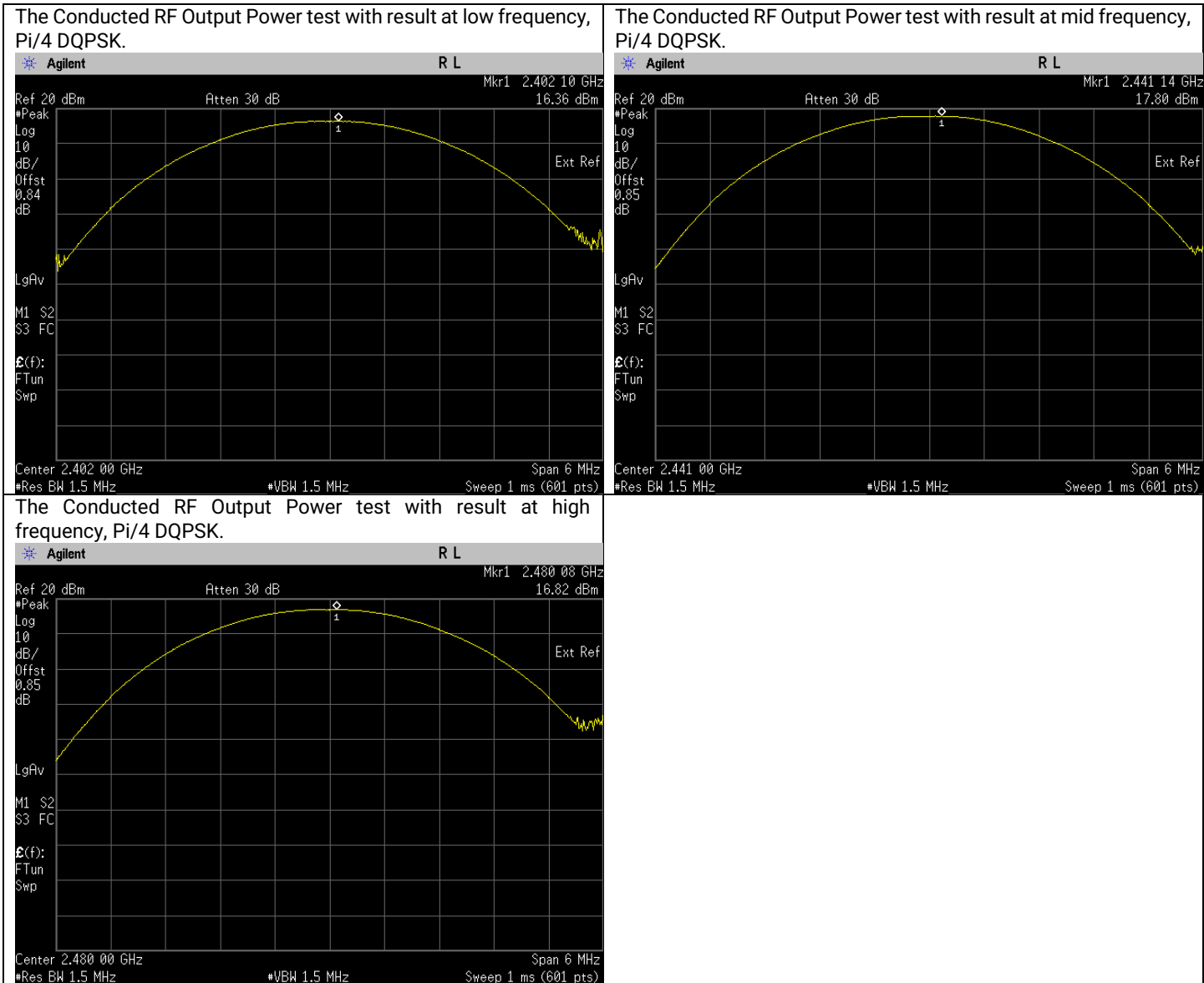


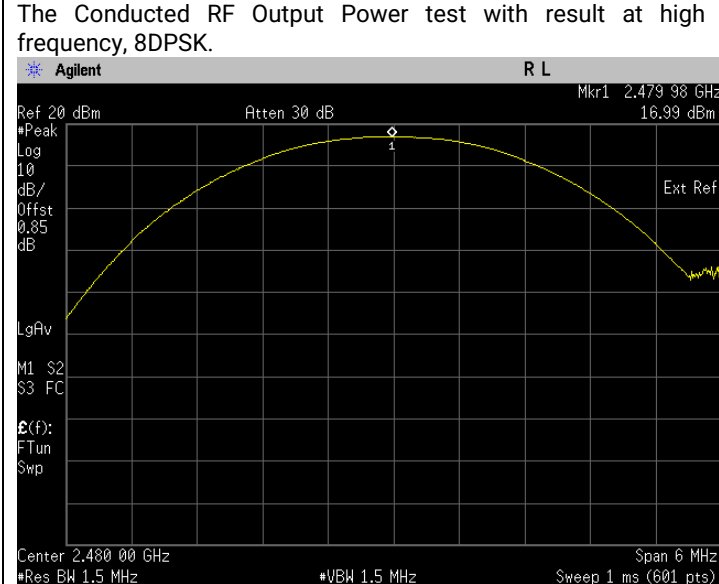
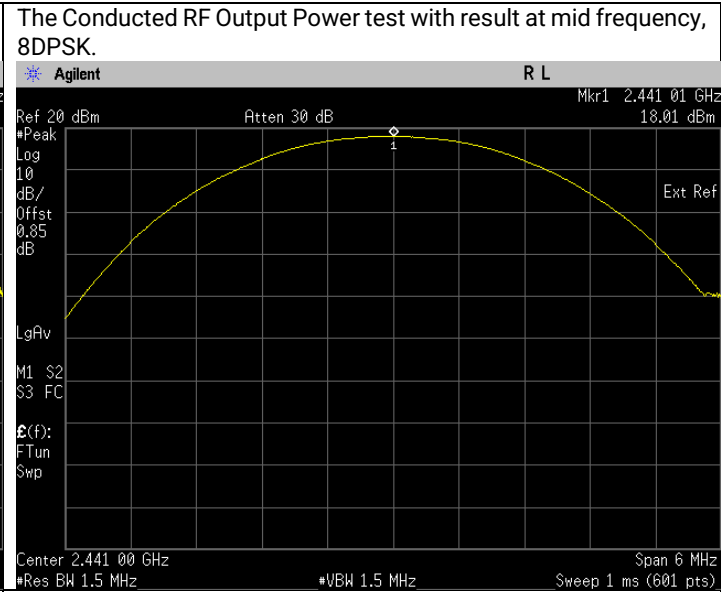
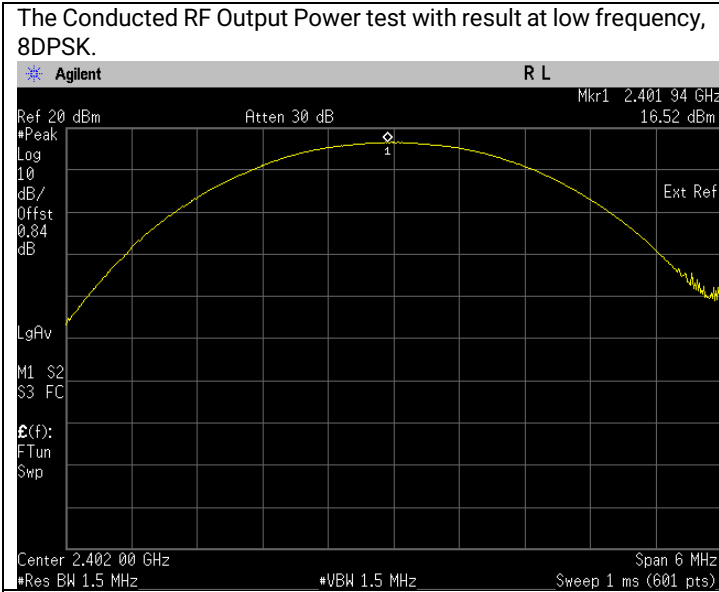
The Conducted RF Output Power test with result at mid frequency, GFSK.



The Conducted RF Output Power test with result at high frequency, GFSK.

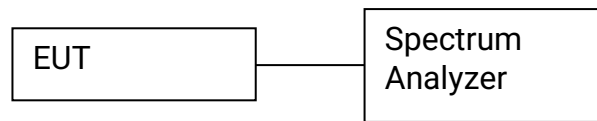






6.2.20dB Channel Bandwidth

6.2.1. Test Setup



- a) Check and ensure the spectrum analyzer well calibrate.
- b) Turn on the EUT and set EUT to transmit maximum data rate with hopping disable.
- c) Connect EUT's antenna terminal to spectrum analyzer with a low loss cable.
- d) Setting of Spectrum analyzer:
 - a. RBW = 30 kHz
 - b. VBW = 100 kHz
 - c. SPAN = 3 MHz, center on test frequency
 - d. AMPLITUDE → Scale/Div = 10 dB
 - e. Detector mode = Peak
 - f. Trace = Max hold
 - g. Sweep = auto
- e) Measure the freq different of two frequencies that were attenuated 20dB from peak of the emission & record the frequency difference as the emission bandwidth.
- f) Save the plot result from spectrum analyzer screen.
- g) Repeat above procedure with other different mode of operation.

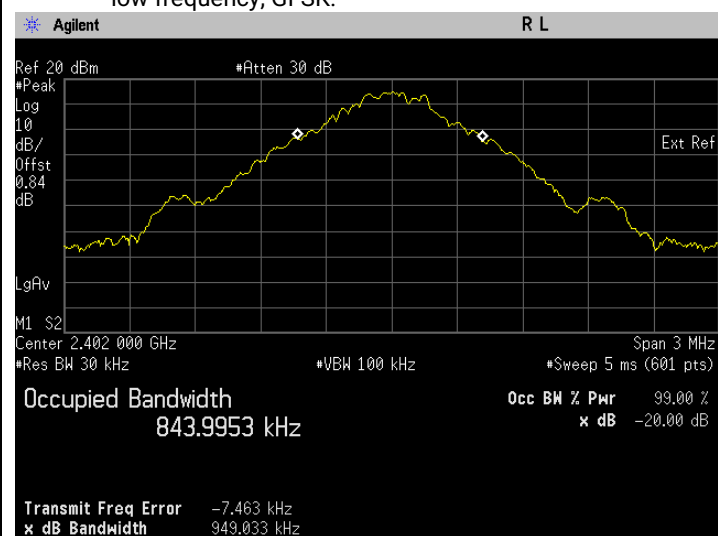
6.2.2. Test Limits:

Frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater.

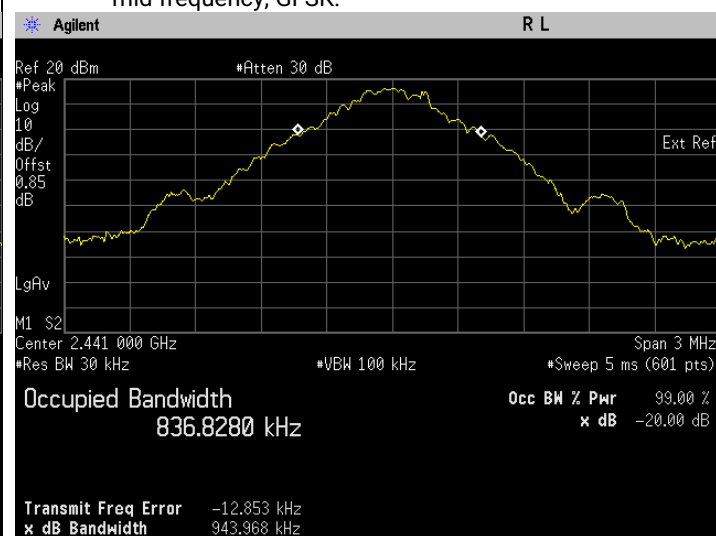
6.2.3. Test Data:

Test Conditions		Test Frequency	Results		
Modulation Type	Voltage(V)	TX (GHz)	20dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Status
GFSK	7.50	2.4020	0.949	0.844	Pass
		2.4410	0.944	0.837	Pass
		2.4800	0.949	0.863	Pass
Pi/4 DQPSK	7.50	2.4020	1.287	1.176	Pass
		2.4410	1.288	1.179	Pass
		2.4800	1.312	1.178	Pass
8DPSK	7.50	2.4020	1.300	1.183	Pass
		2.4410	1.296	1.181	Pass
		2.4800	1.297	1.179	Pass

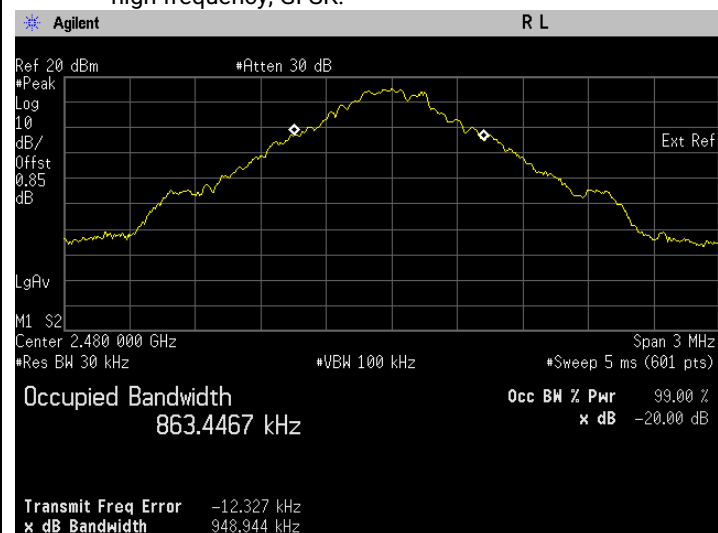
i. The 20 dB BW & occupied bandwidth test with result at low frequency, GFSK.



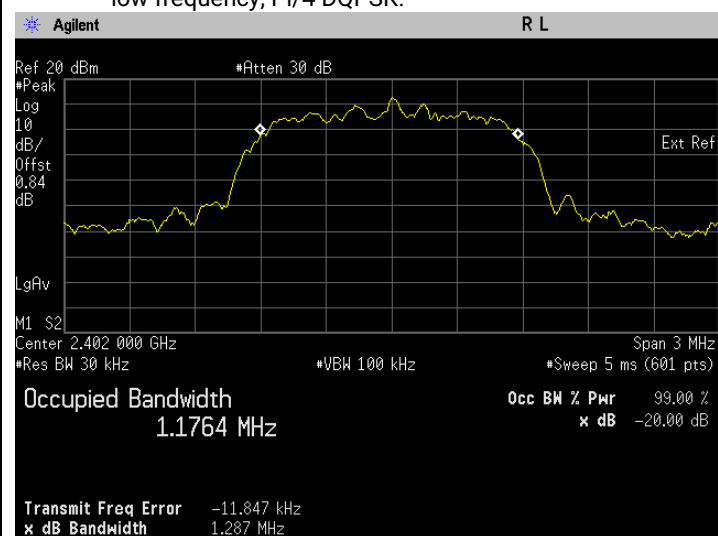
ii. The 20 dB BW & occupied bandwidth test with result at mid frequency, GFSK.



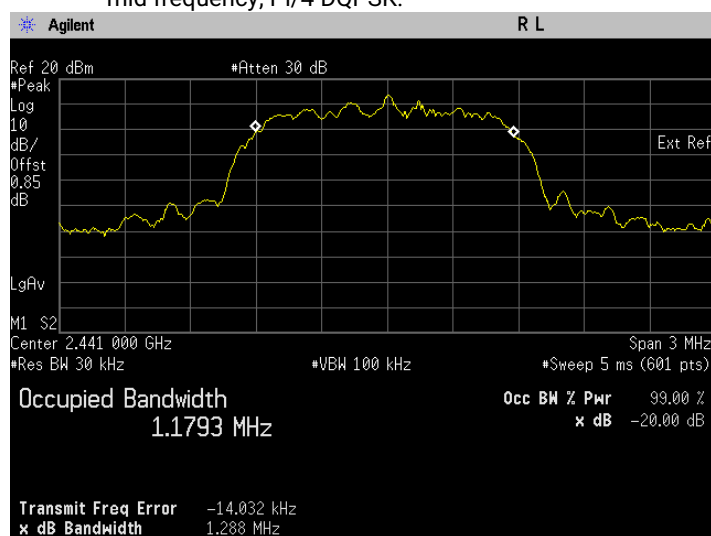
iii. The 20 dB BW & occupied bandwidth test with result at high frequency, GFSK.



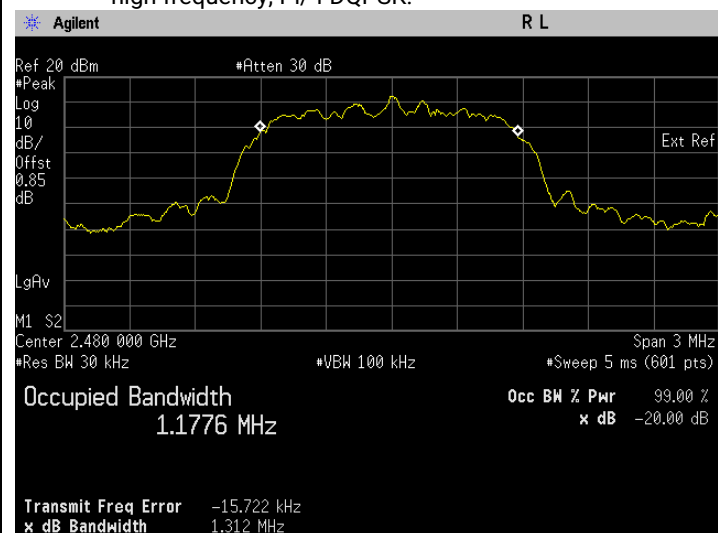
i. The 20 dB BW & occupied bandwidth test with result at low frequency, Pi/4 DQPSK.



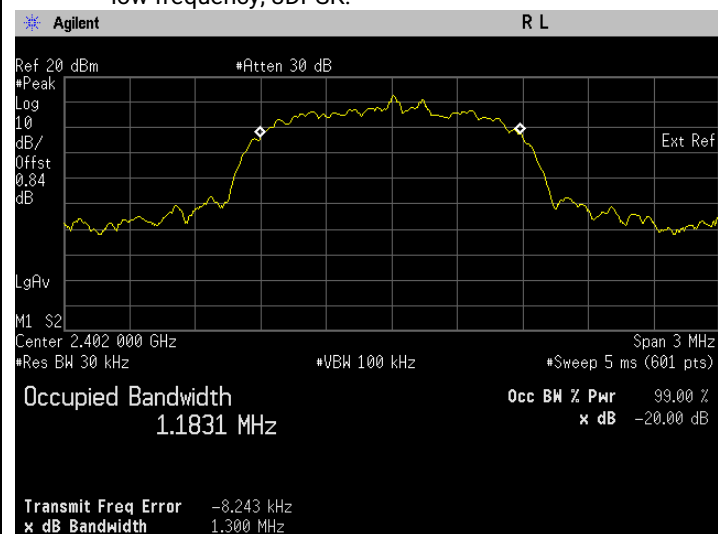
ii. The 20 dB BW & occupied bandwidth test with result at mid frequency, Pi/4 DQPSK.



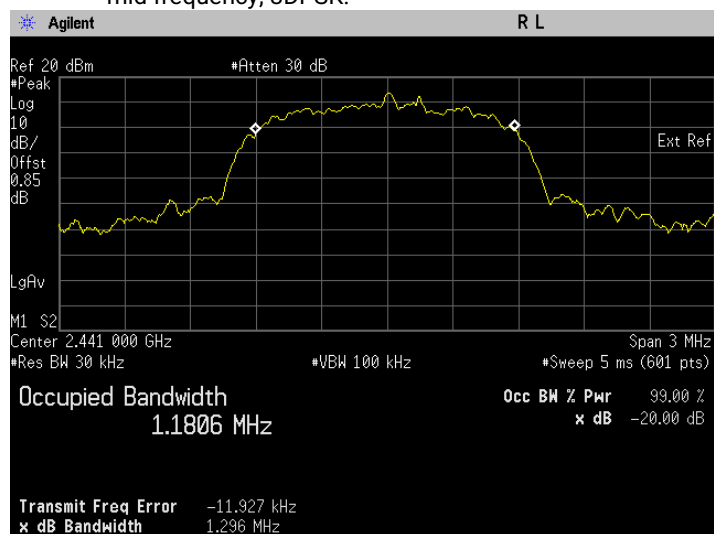
iii. The 20 dB BW & occupied bandwidth test with result at high frequency, Pi/4 DQPSK.



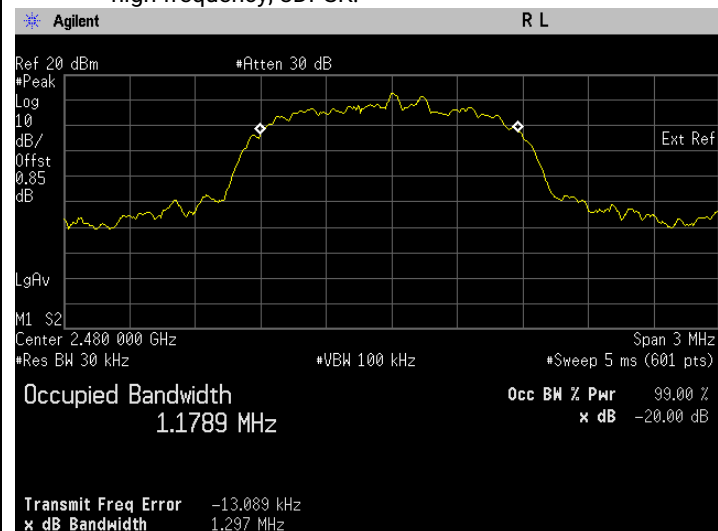
i. The 20 dB BW & occupied bandwidth test with result at low frequency, 8DPSK.



ii. The 20 dB BW & occupied bandwidth test with result at mid frequency, 8DPSK.

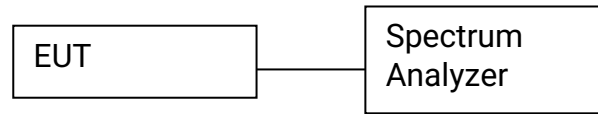


iii. The 20 dB BW & occupied bandwidth test with result at high frequency, 8DPSK.



6.3. Band-edge Conducted Spurious Emission

6.3.1. Test Setup



- a) Check and ensure the spectrum analyzer well calibrate.
- b) Turn on the EUT and keep the EUT in hopping mode.
- c) Connect EUT's antenna terminal to spectrum analyzer with a low loss cable.
- d) Setting of Spectrum analyzer:
 - a. RBW = 100 kHz
 - b. VBW = 300 kHz
 - c. SPAN = 4 MHz (Low channel) or 6MHz (High Channel)
 - d. Detector mode = Peak
 - e. AMPLITUDE → Scale/Div = 10 dB
 - f. Trace = Max hold
 - g. Sweep = auto
- e) Measure the captured band edge emission result and recording the plot.
- f) Repeat above on EUT with hopping disable.
- g) Repeat above procedure with other different test frequency.

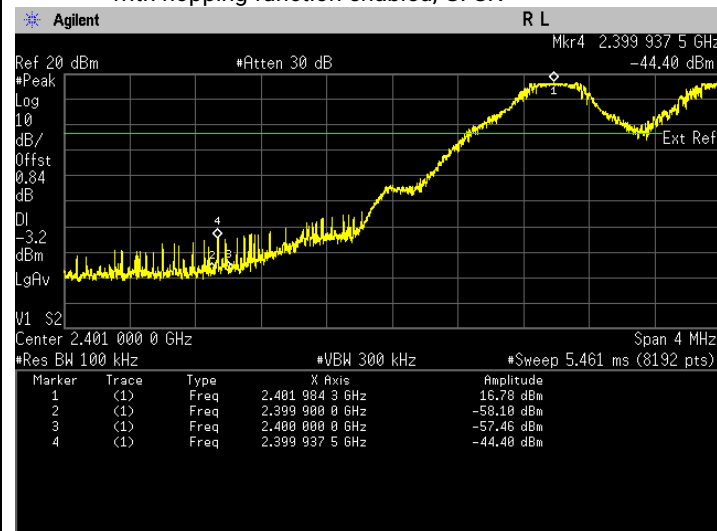
6.3.2. Test Limits

Normal Condition (25 ° C)
Shall be at least 20 dB below the peak power.

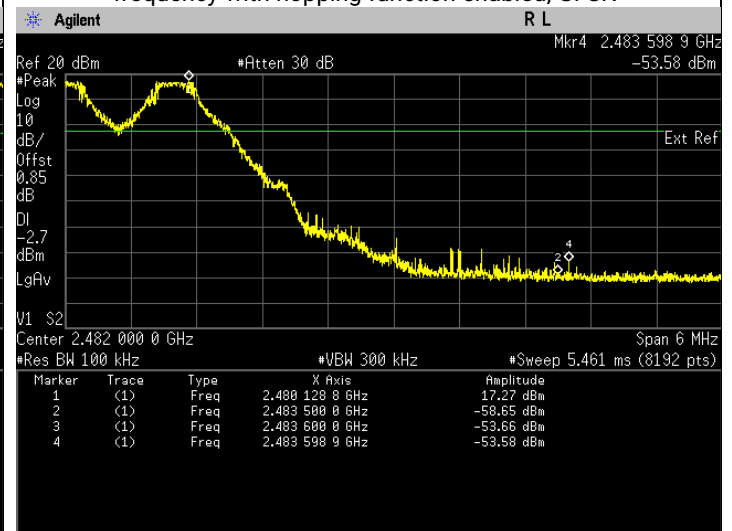
6.3.3. Test Result

Test Conditions				Results	
Modulation	Voltage(V)	Hopping Method	Test Frequency(GHz)	dB	Status
GFSK	7.50	Enabled (continuously)	2.402	-44.40	Pass
			2.480	-53.58	Pass
		Disabled (constantly)	2.402	-43.84	Pass
			2.480	-53.17	Pass
Pi/4 DQPSK	7.50	Enabled (continuously)	2.402	-47.88	Pass
			2.480	-58.33	Pass
		Disabled (constantly)	2.402	-46.50	Pass
			2.480	-55.21	Pass
8 DPSK	7.50	Enabled (continuously)	2.402	-47.27	Pass
			2.480	-56.16	Pass
		Disabled (constantly)	2.402	-46.64	Pass
			2.480	-54.40	Pass

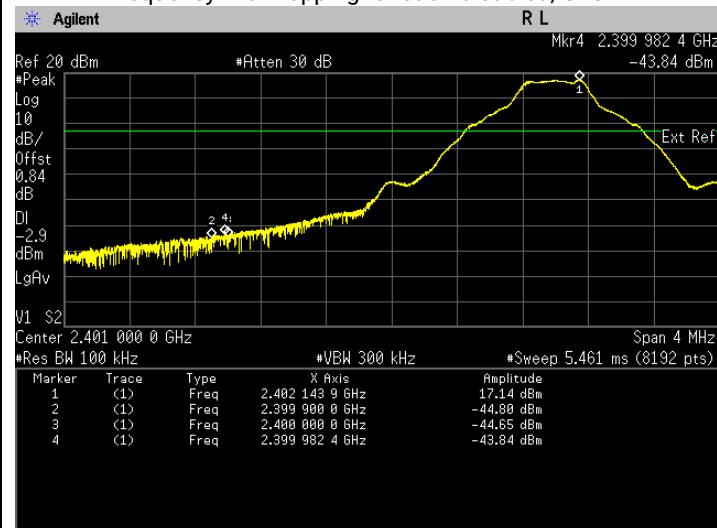
i. The highest band edge emission at low carrier frequency with hopping function enabled, GFSK



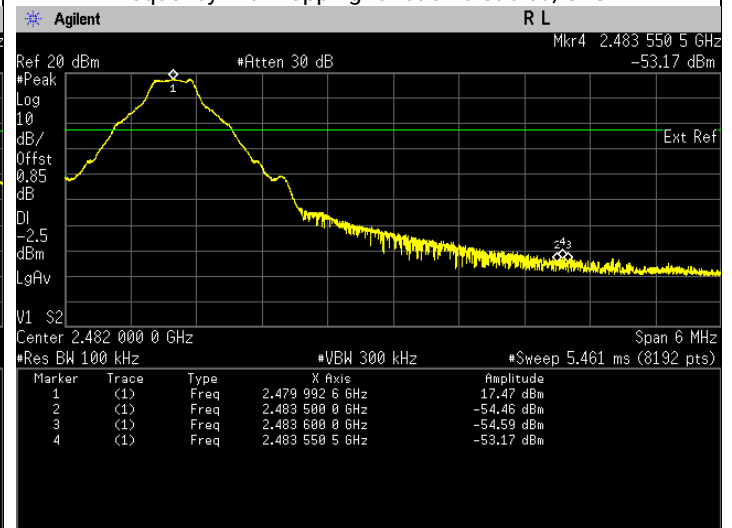
ii. The highest band edge emission at high carrier frequency with hopping function enabled, GFSK



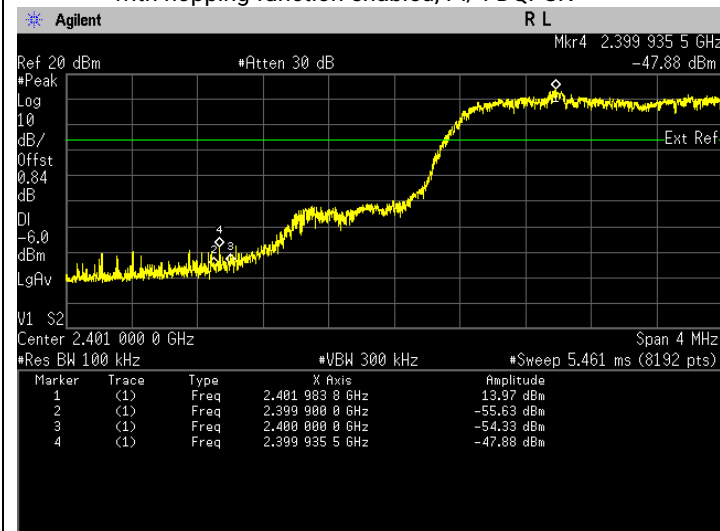
iii. The highest band edge emission at low carrier frequency with hopping function disabled, GFSK



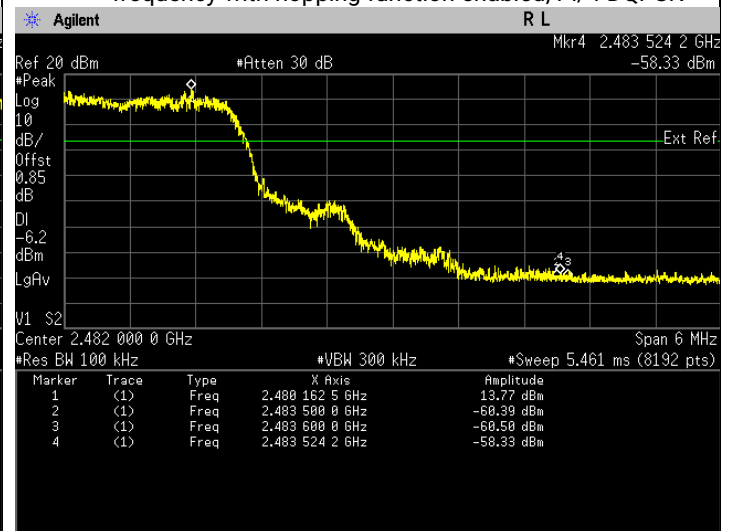
iv. The highest band edge emission at high carrier frequency with hopping function disabled, GFSK



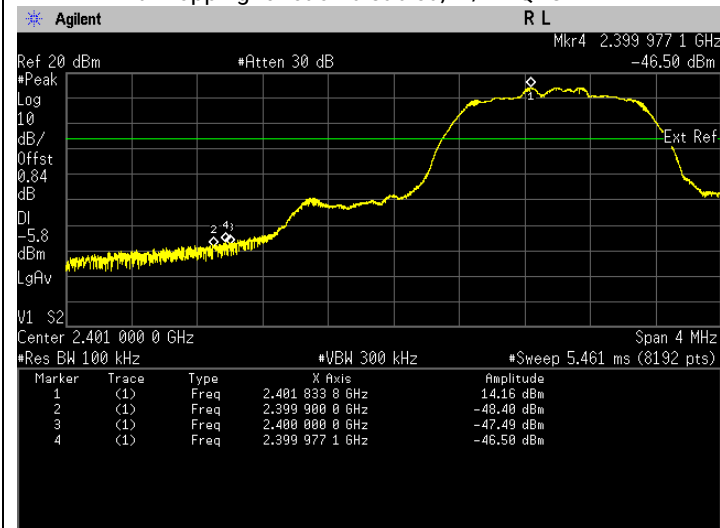
i. The highest band edge emission at low carrier frequency with hopping function enabled, Pi/4 DQPSK



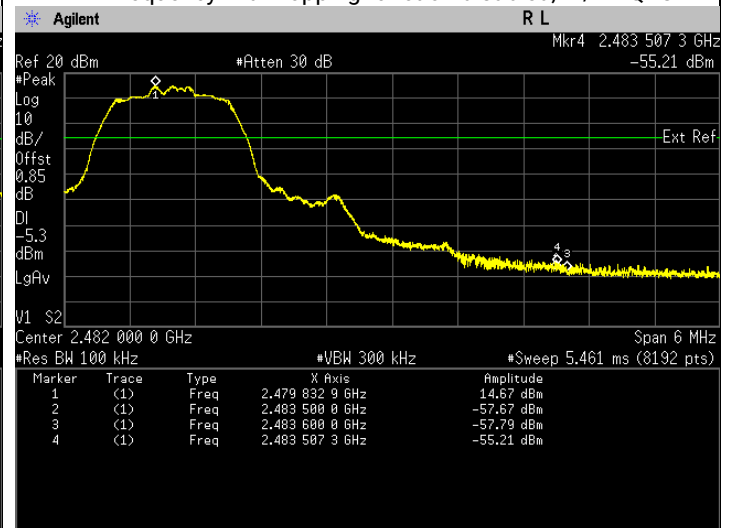
ii. The highest band edge emission at high carrier frequency with hopping function enabled, Pi/4 DQPSK



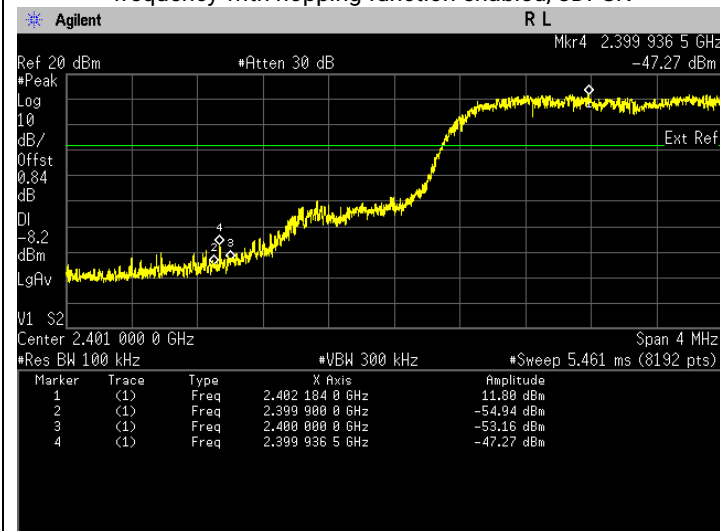
iii. The highest band edge emission at low carrier frequency with hopping function disabled, Pi/4 DQPSK



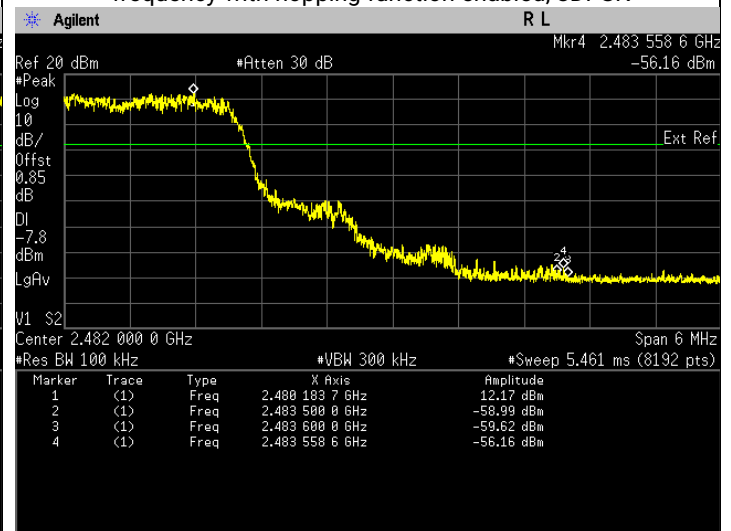
iv. The highest band edge emission at high carrier frequency with hopping function disabled, Pi/4 DQPSK



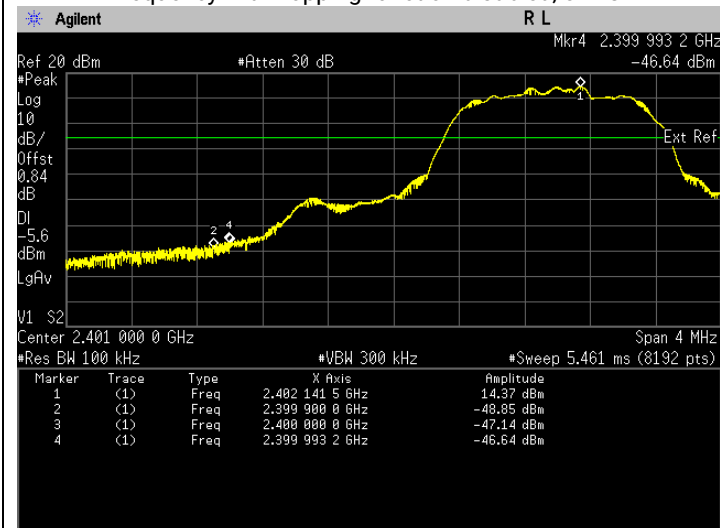
i. The highest band edge emission at low carrier frequency with hopping function enabled, 8DPSK



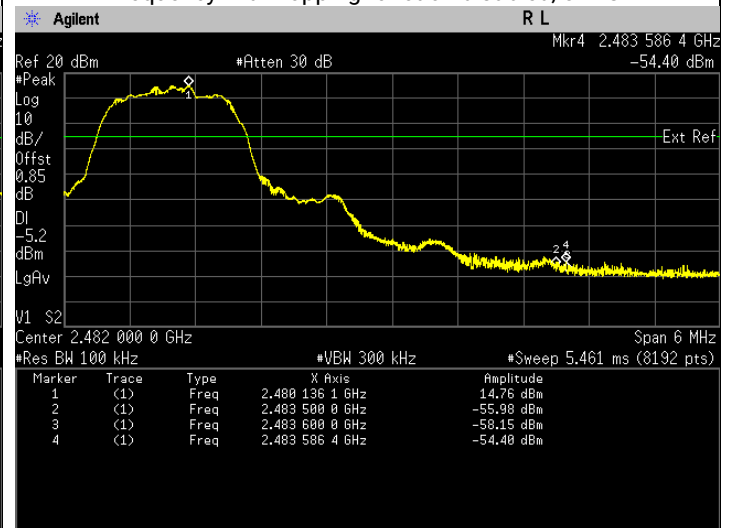
ii. The highest band edge emission at high carrier frequency with hopping function enabled, 8DPSK



iii. The highest band edge emission at low carrier frequency with hopping function disabled, 8DPSK

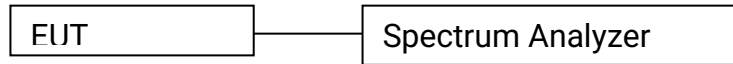


iv. The highest band edge emission at high carrier frequency with hopping function disabled, 8DPSK



6.4. Dwell time on each channel

6.4.1. Test Setup



- a) Check and ensure the spectrum analyzer well calibrate.
- b) Turn on the EUT and keep the EUT in hopping mode.
- c) Connect EUT's antenna terminal to spectrum analyzer with a low loss cable.
- d) Setting of Spectrum analyzer:
 - a. RBW = 100 kHz
 - b. VBW = 300 kHz
 - c. SPAN = Zero SPAN, center on hopping frequency
 - d. Detector mode = Peak
 - e. Trace = Max hold
 - f. Sweep time = 5second
 - g. Sweep = Single
- e) Measure total numbers of transmissions occur in 5 second and save the plot.
- f) Change the setting of spectrum analyzer:
 - a. RBW = 100 kHz
 - b. VBW = 300 kHz
 - c. Sweep time = sufficient to capture dwell time for 1 transmission
 - d. Sweep = Single
- g) Measure dwell time for 1 transmission and save the plot.
- h) Calculate accumulate dwell time in a given period equal to number of hopping frequencies x 0.4
- i) Repeat above procedure with other different mode of operation.

6.4.2. Test Limits:

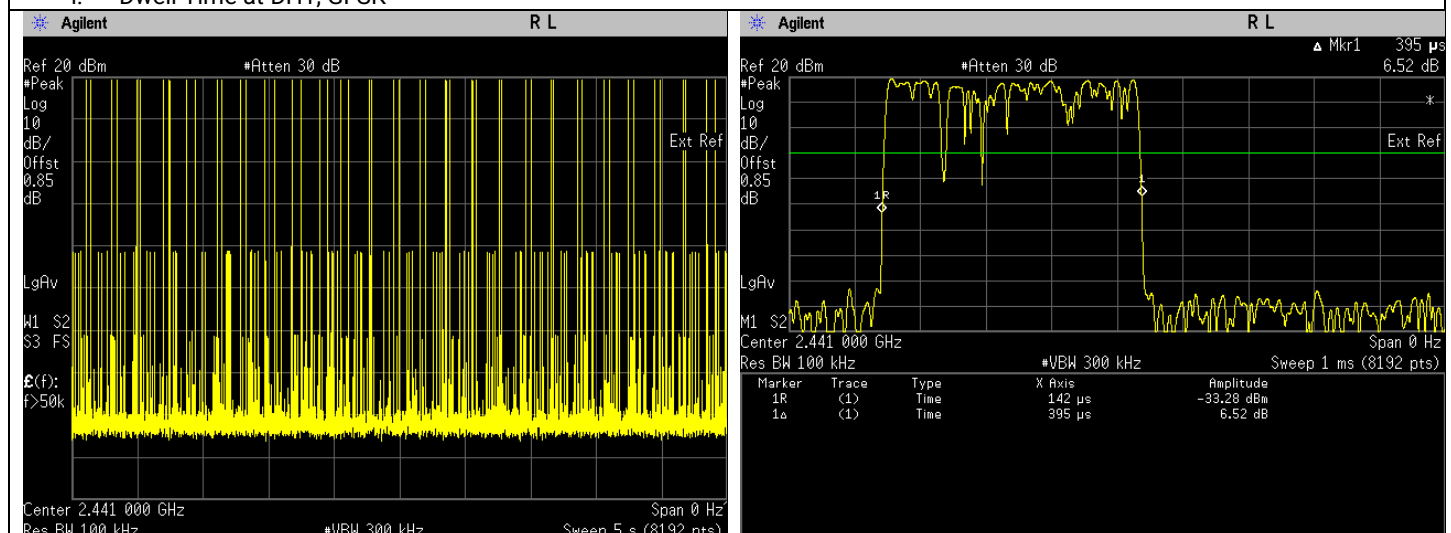
Normal Condition (25 ° C)
≤ 400ms

6.4.3. Test Result

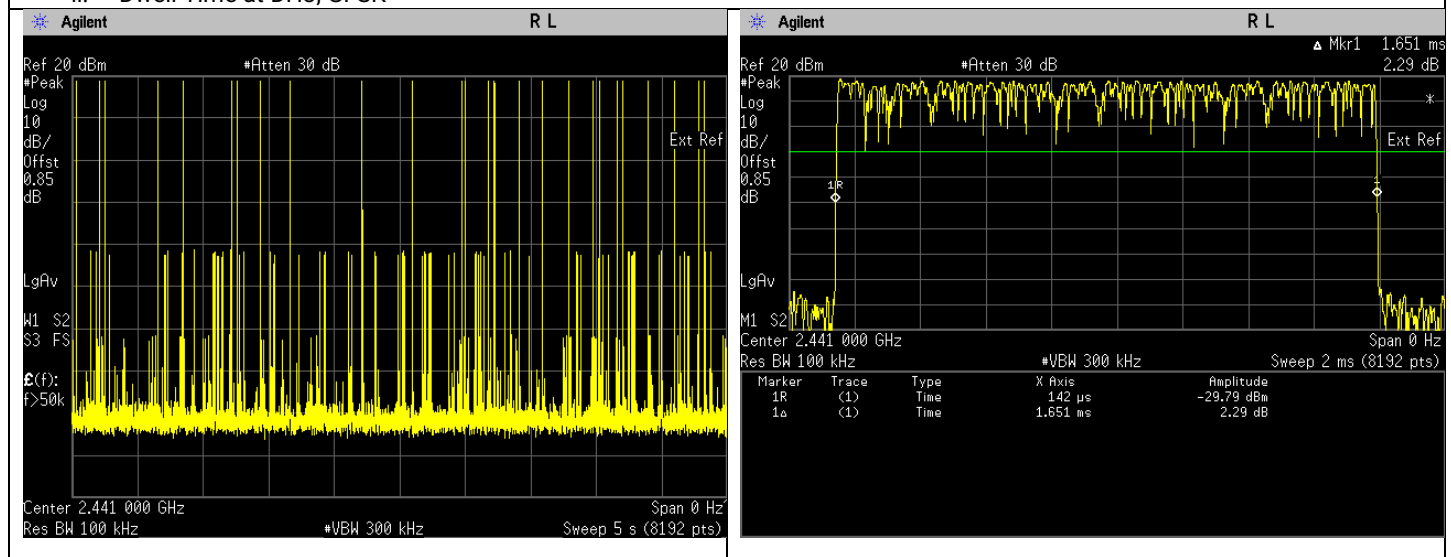
Test Conditions				Results			
Modulation	Voltage (V)	TX Frequency (MHz)	Data Package	No. of transmission in 5s (a)	Dwell time in one transmission (b)	Total accumulate dwell time in 31.6s. (c)	Status
GFSK	7.50	2441	DH1	50	0.395	124.820000	Pass
			DH3	26	1.651	271.292320	Pass
			DH5	21	2.899	384.755280	Pass
Pi/4 DQPSK	7.50	2441	DH1	49	0.401	124.181680	Pass
			DH3	28	1.654	292.691840	Pass
			DH5	20	2.902	366.812800	Pass
8 DPSK	7.50	2441	DH1	48	0.401	121.647360	Pass
			DH3	22	1.652	229.694080	Pass
			DH5	21	2.903	385.286160	Pass

****Note:** Total dwell time 31.6s (79Hopping*0.4), (c) = (a) x 6.32 x (b)

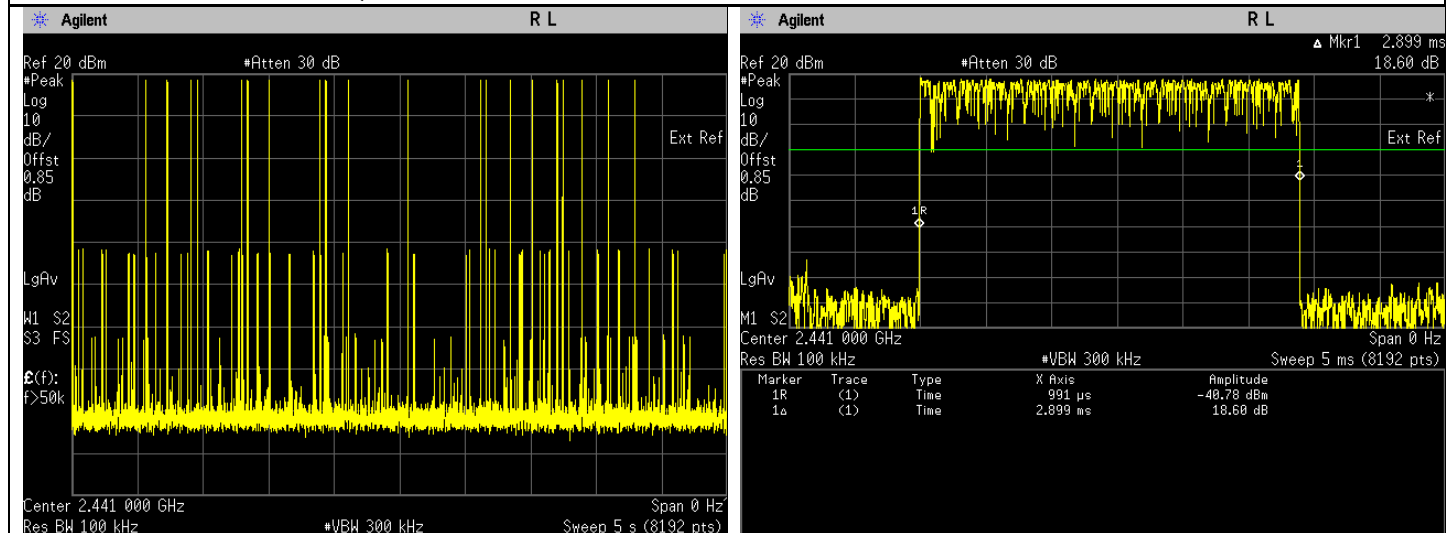
i. Dwell Time at DH1, GFSK



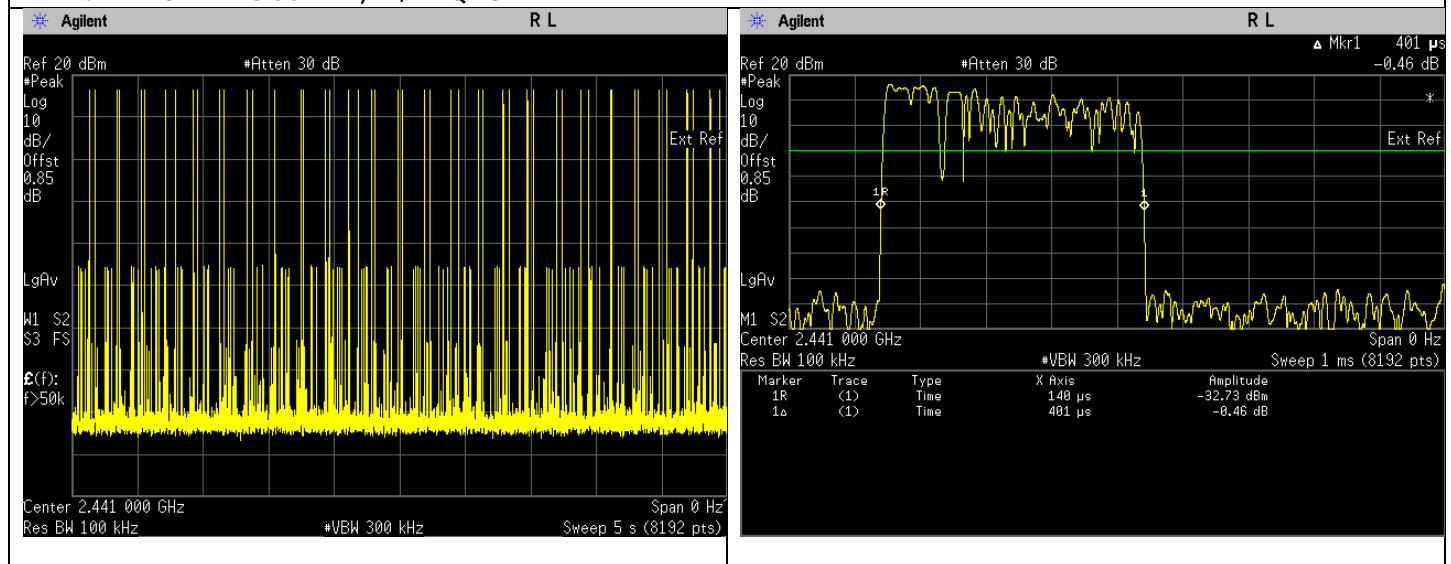
ii. Dwell Time at DH3, GFSK



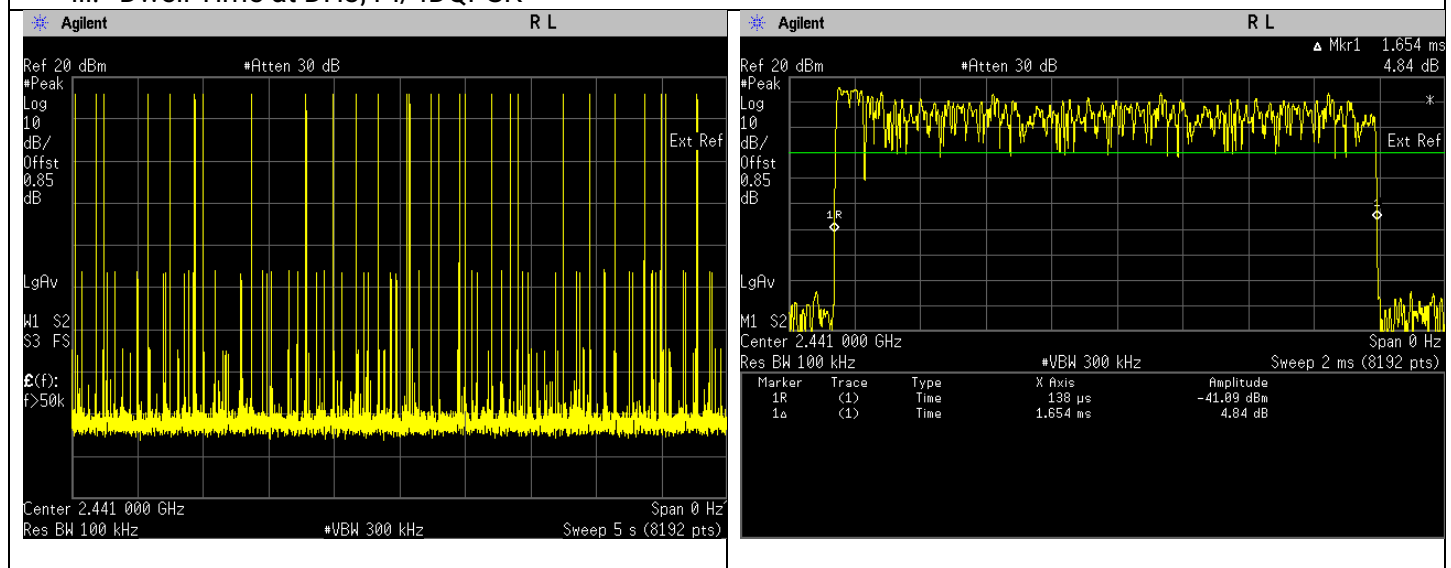
i. Dwell Time at DH5, GFSK



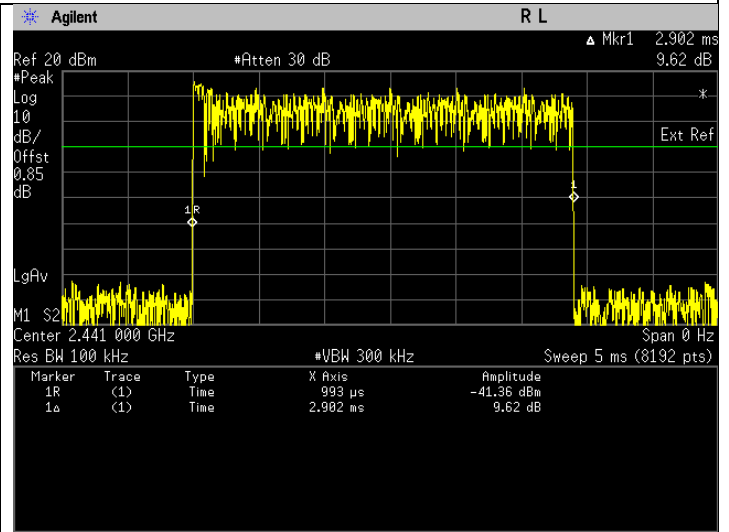
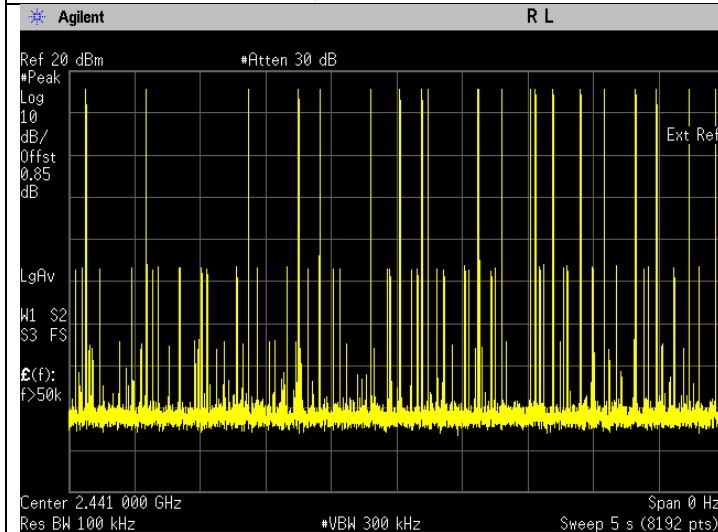
ii. Dwell Time at DH1, PI/4DQPSK



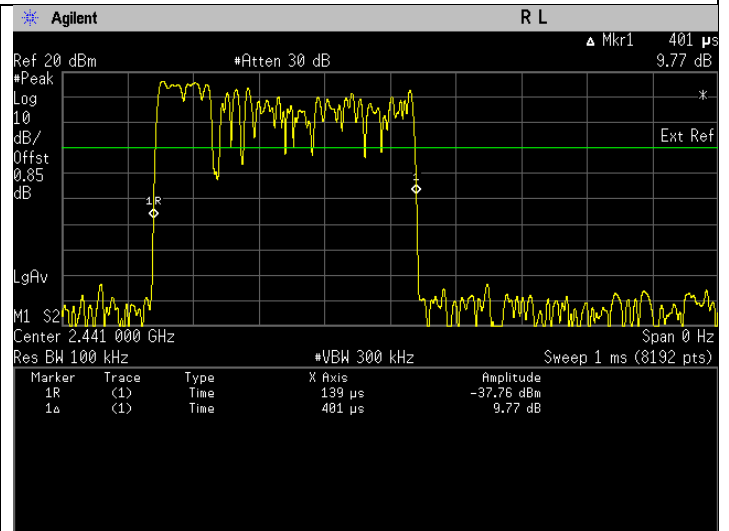
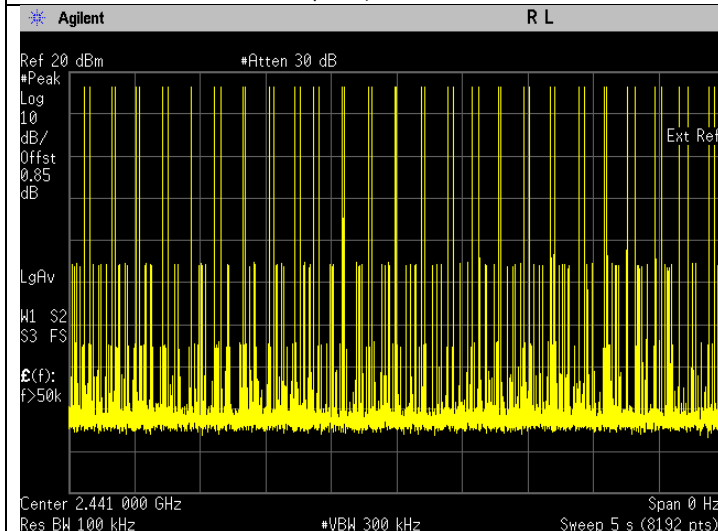
iii. Dwell Time at DH3, PI/4DQPSK



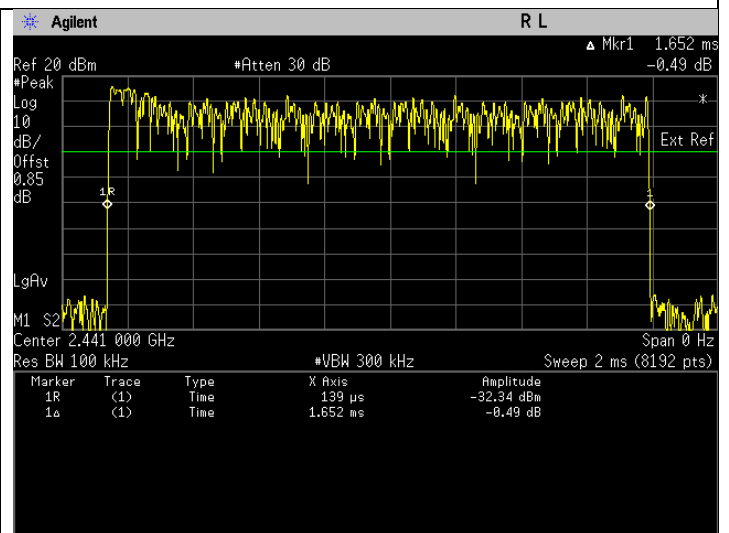
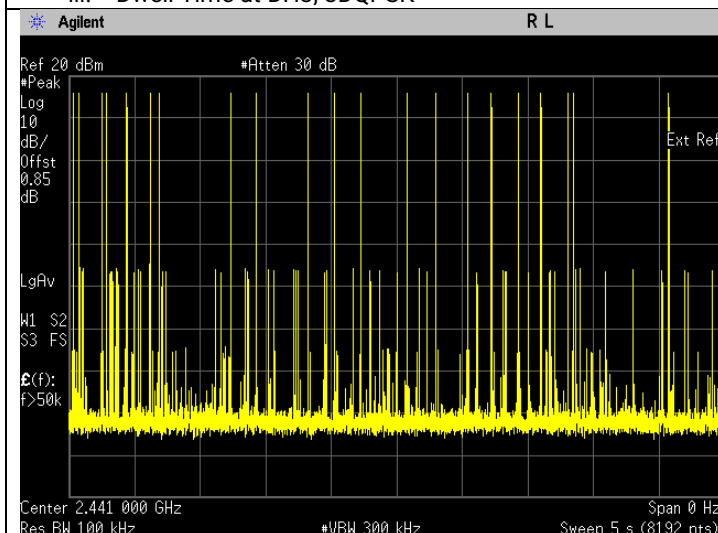
i. Dwell Time at DH5, PI/4QPSK



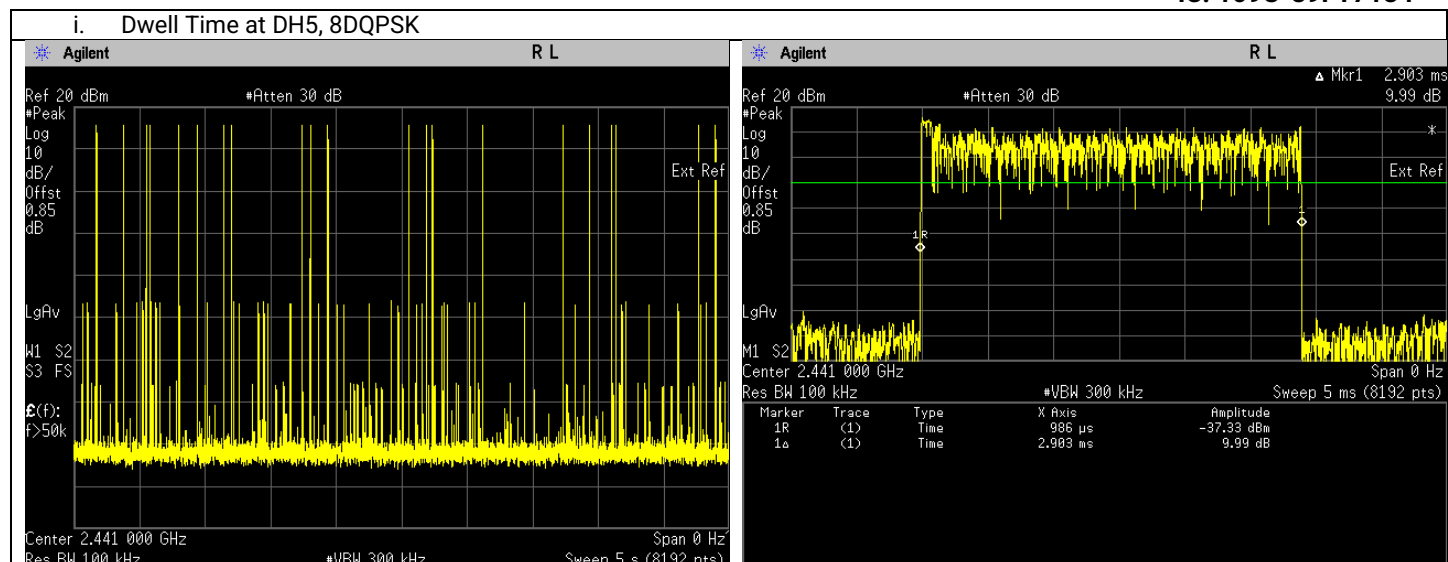
ii. Dwell Time at DH1, 8DQPSK



iii. Dwell Time at DH3, 8DQPSK

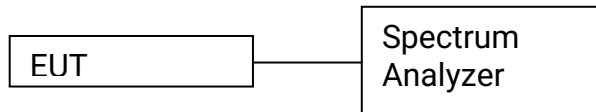


i. Dwell Time at DH5, 8DQPSK



6.5. Number of hopping Frequency

6.5.1. Test Setup



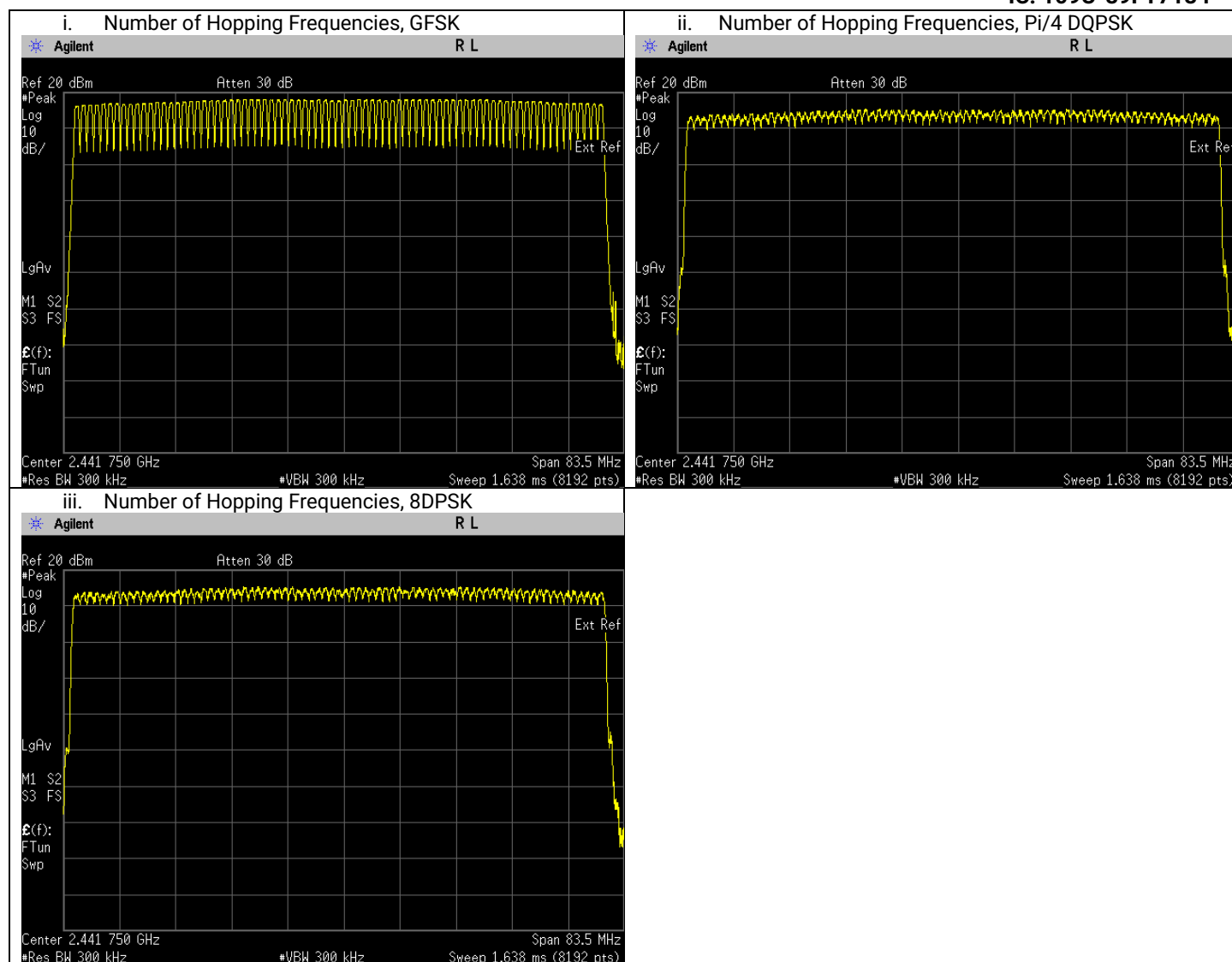
- Check and ensure the spectrum analyzer well calibrate.
- Turn on the EUT and keep the EUT in hopping mode.
- Connect EUT's antenna terminal to spectrum analyzer with a low loss cable.
- Setting of Spectrum analyzer:
 - RBW = 300 kHz
 - VBW = 300 kHz
 - Detector mode = Peak
 - Trace = Max hold
- Allow the trace to stabilized & save the plot result from spectrum analyzer screen.
- Count number of channel frequency in the operating.
- Repeat above procedure for other test frequency.

6.5.2. Test Limits:

Normal Condition (25 ° C)
≥ 15

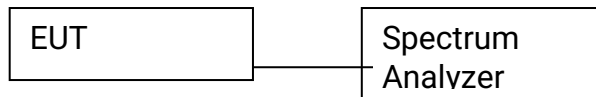
6.5.3. Test Result

Test Conditions			Results	
Modulation	Voltage(V)	Test Frequency (GHz)	No. of Hopping Frequencies	Status
GFSK	7.50	2.4020-2.4835	79	Pass
Pi/4DQPSK	7.50	2.4020-2.4835	79	Pass
8DPSK	7.50	2.4020-2.4835	79	Pass



6.6. Channel Separation

6.6.1. Test Setup



- a) Check and ensure the spectrum analyzer well calibrate.
- b) Turn on the EUT and keep the EUT in hopping mode.
- c) Connect EUT's antenna terminal to spectrum analyzer with a low loss cable.
- d) Setting of Spectrum analyzer:
 - a. RBW = 300 kHz
 - b. VBW = 300 kHz
 - c. SPAN = 3 MHz, center on test frequency
 - d. AMPLITUDE → Scale/Div = 5 dB
 - e. Detector mode = Peak
 - f. Trace = Max hold
 - g. Sweep = auto
- e) Measure the frequency different of these two adjacent channels with marker delta function & record the measurement results.
- f) Repeat above procedure with other different mode of operation.

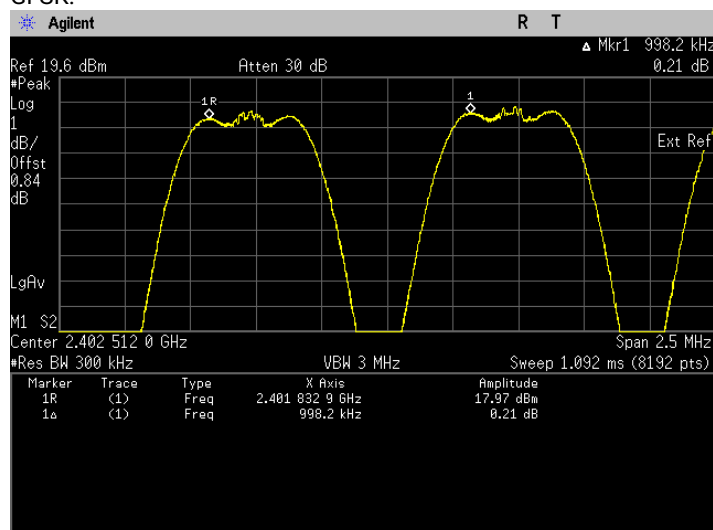
6.6.2. Test Limits:

Normal Condition (25 ° C)
≥ 2/3 of 20dB Bandwidth

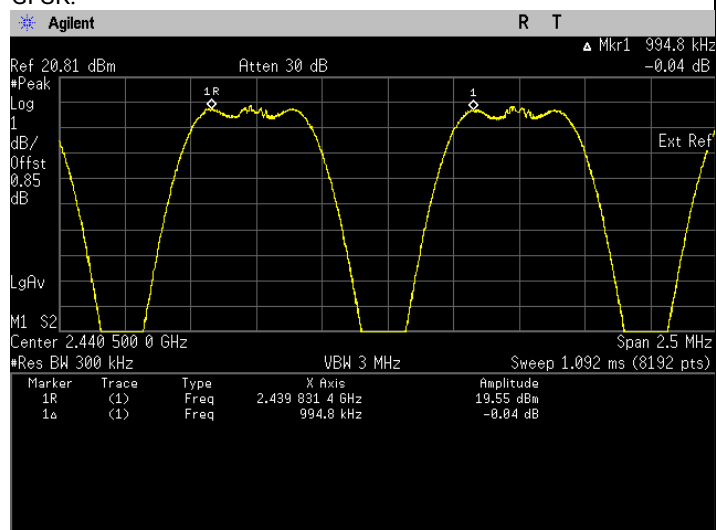
6.6.3. Test Result

Test Conditions			Results			
Modulation	Voltage(V)	Test Frequency (GHz)	Adjacent Channel Separation (MHz)	20dB Bandwidth (MHz)	2/3 of 20dB Bandwidth (kHz)	Status
GFSK	7.50	2.4020	0.998	0.949	632.667	Pass
		2.4410	0.995	0.944	629.333	Pass
		2.4800	0.999	0.949	632.667	Pass
Pi/4DQPSK	7.50	2.4020	1.000	1.287	858.000	Pass
		2.4410	1.000	1.288	858.667	Pass
		2.4800	1.000	1.312	874.667	Pass
8DPSK	7.50	2.4020	1.000	1.300	866.667	Pass
		2.4410	0.998	1.296	864.000	Pass
		2.4800	1.000	1.297	864.667	Pass

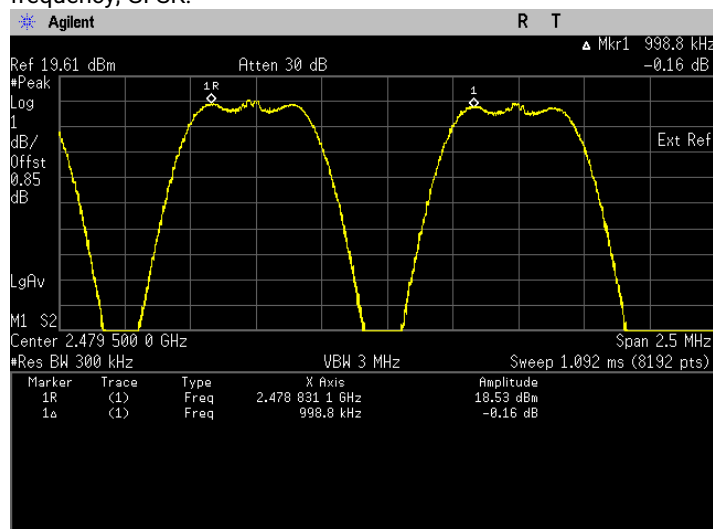
The Conducted RF Output Power test with result at low frequency, GFSK.



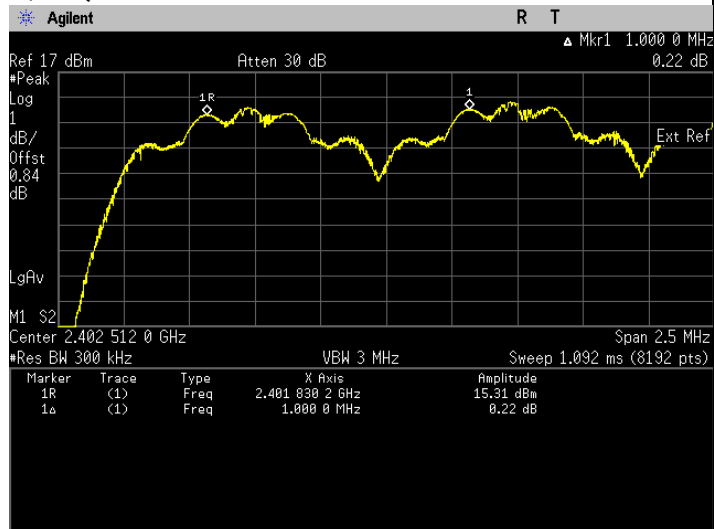
The Conducted RF Output Power test with result at mid frequency, GFSK.



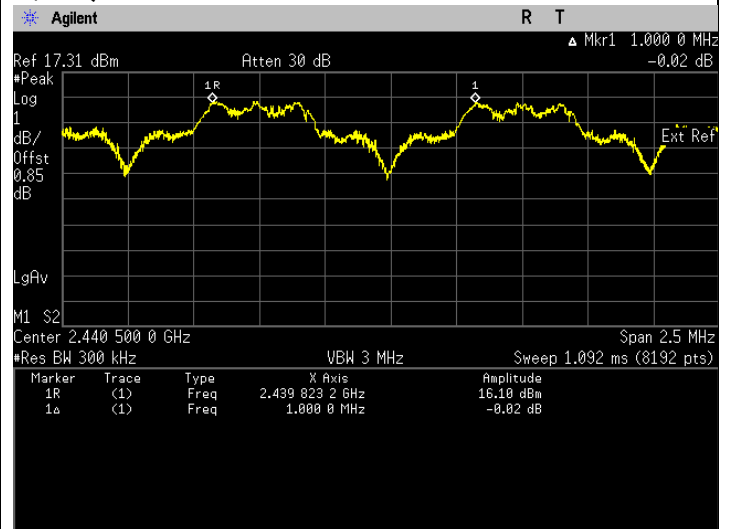
The Conducted RF Output Power test with result at high frequency, GFSK.



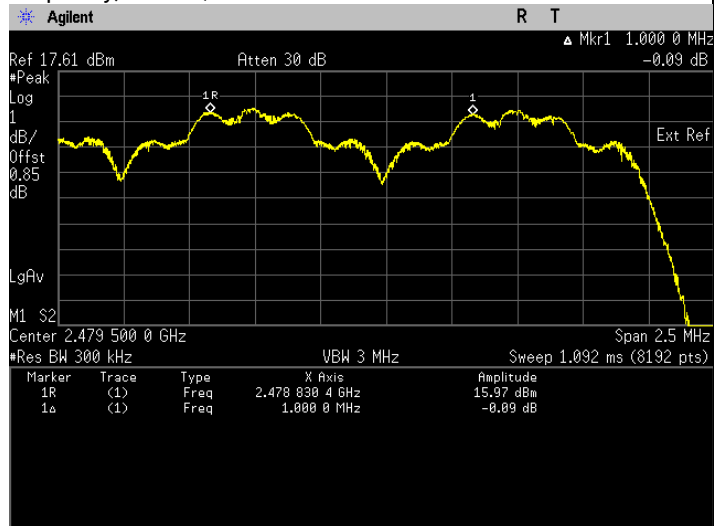
The Conducted RF Output Power test with result at low frequency, Pi/4 DQPSK.



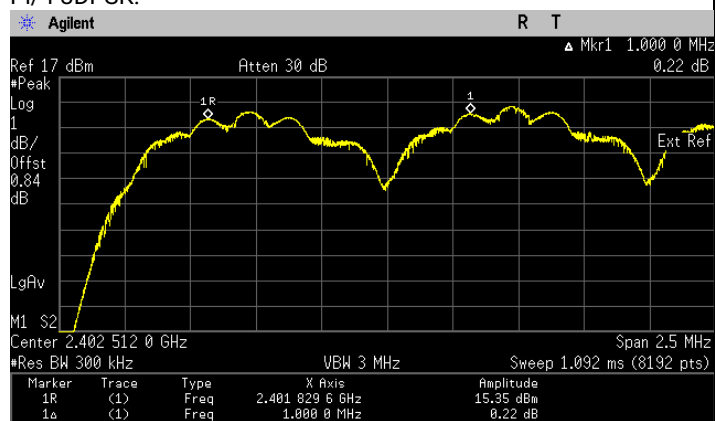
The Conducted RF Output Power test with result at mid frequency, Pi/4 DQPSK.



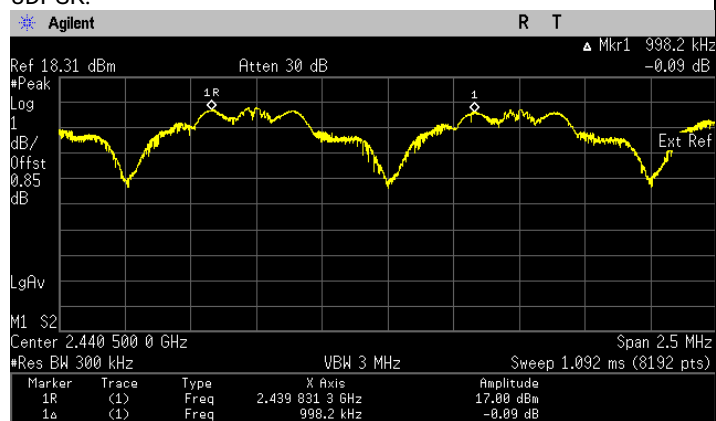
The Conducted RF Output Power test with result at high frequency, Pi/4 DQPSK.



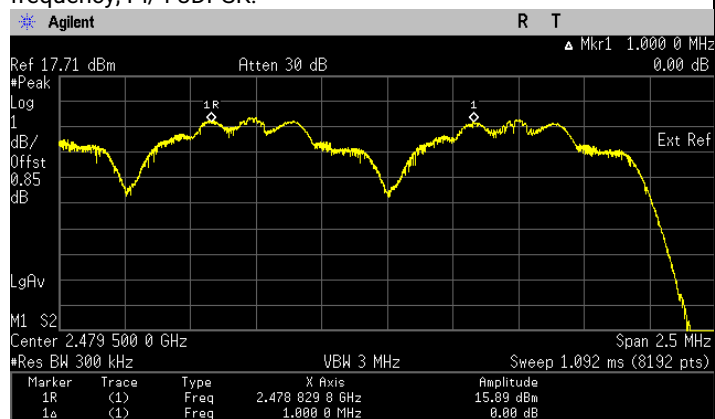
The Conducted RF Output Power test with result at low frequency, Pi/4 8DPSK.



The Conducted RF Output Power test with result at mid frequency, 8DPSK.

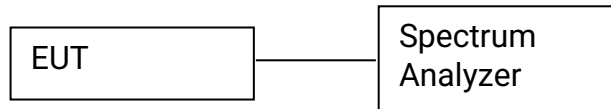


The Conducted RF Output Power test with result at high frequency, Pi/4 8DPSK.



6.7. Conducted Spurious Emission

6.7.1. Test Setup



- a) Check and ensure the spectrum analyzer well calibrate.
- b) Turn on the EUT and set EUT to transmit maximum data rate with hopping disable.
- c) Connect EUT's antenna terminal to spectrum analyzer with a low loss cable.
- d) Setting of Spectrum analyzer:
 - a. RBW = 100 kHz
 - b. VBW = 300 kHz
 - c. SPAN = Cover until 10th harmonic
 - d. Detector mode = Peak
 - e. AMPLITUDE → Scale/Div = 10 dB
 - f. Trace = Max hold
 - g. Sweep = auto
- e) Measure the captured spurious emission result and recording the plot.
- f) Repeat above procedure with other different mode of operation.

6.7.2. Test Limits:

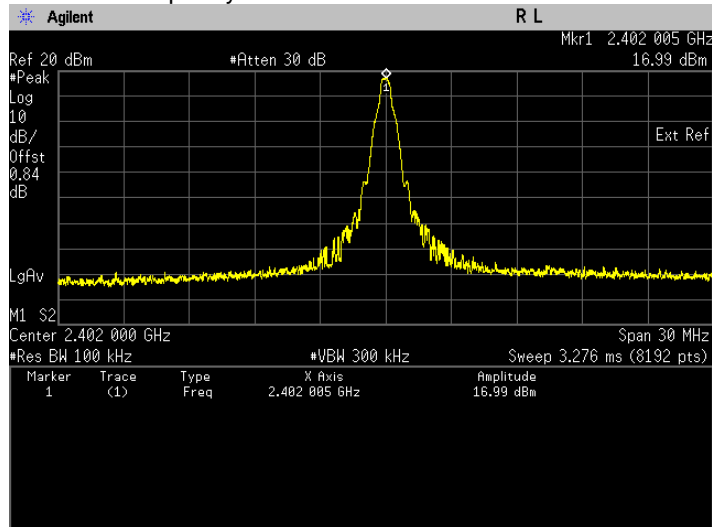
Normal Condition (25 ° C)
Shall be at least 20 dB below for peak power.

6.7.3. Test Data:

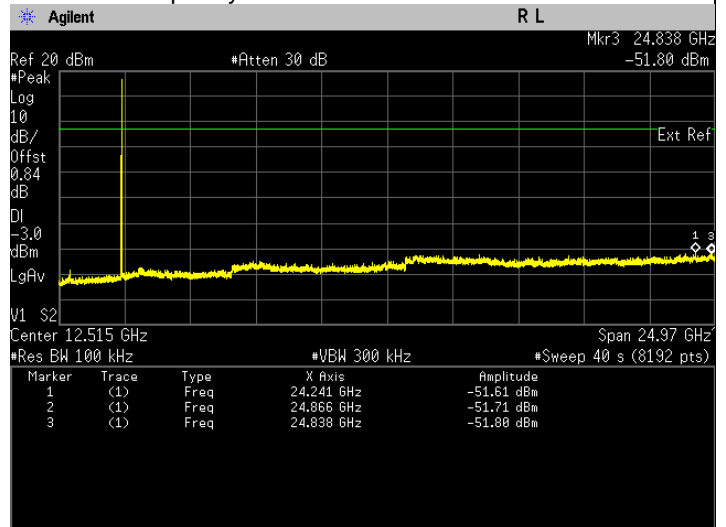
Test Conditions			Results		
Modulation	Voltage(V)	Test Frequency (GHz)	Spurs (MHz)	Level (dBm)	Status
GFSK	7.50	2.4020	24241.000	-51.609	Pass
		2.4410	24814.000	-50.893	Pass
		2.4800	24838.000	-51.399	Pass
Pi/4 DQPSK	7.50	2.4020	24747.000	-51.701	Pass
		2.4410	24201.000	-51.783	Pass
		2.4800	24835.000	-51.599	Pass
8DPSK	7.50	2.4020	24195.000	-51.119	Pass
		2.4410	24835.000	-51.331	Pass
		2.4800	24845.000	-51.465	Pass

GFSK Modulation:

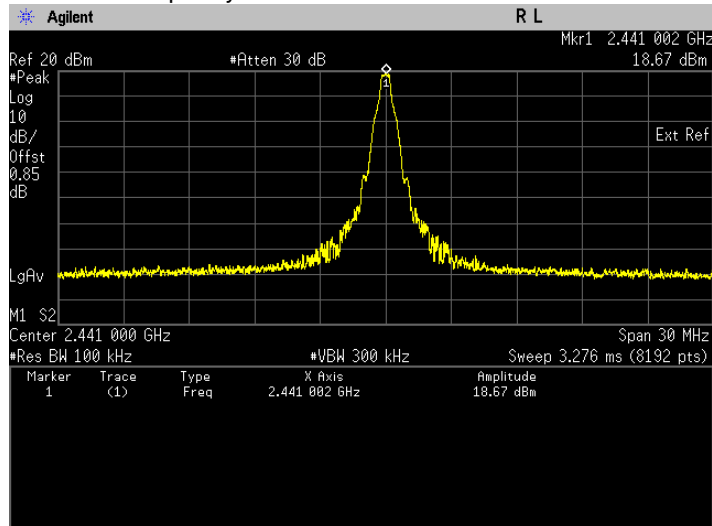
- The high emission level within the assigned band at low carrier frequency.



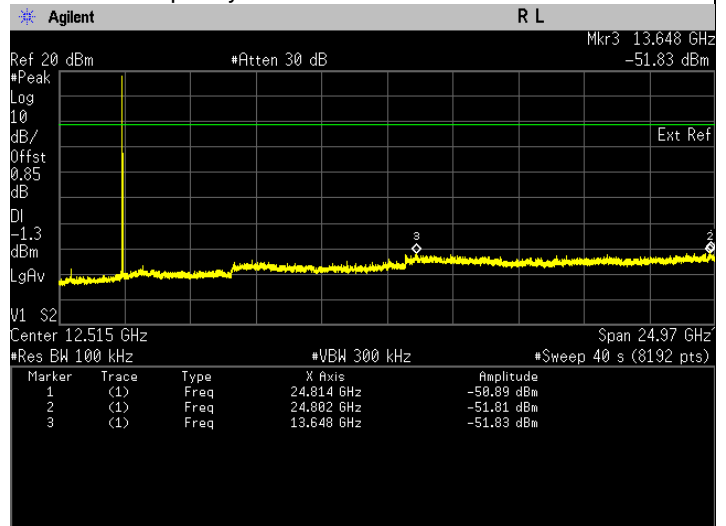
- Spurious emission measurement in 30MHz – 25GHz at low carrier frequency.



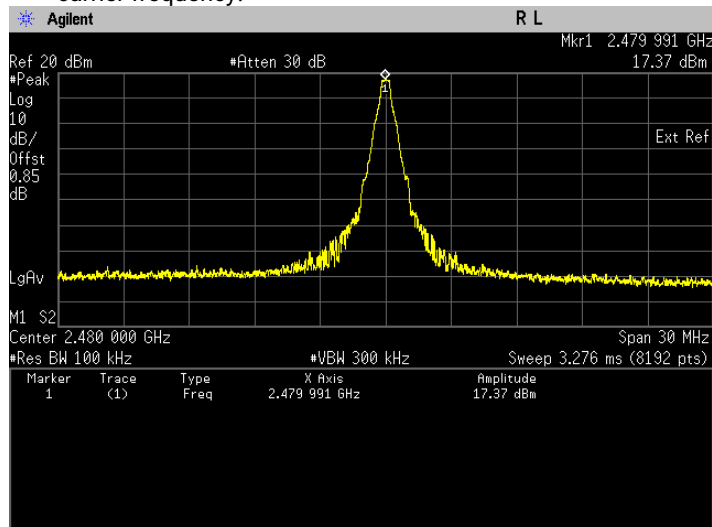
- The high emission level within the assigned band at mid carrier frequency.



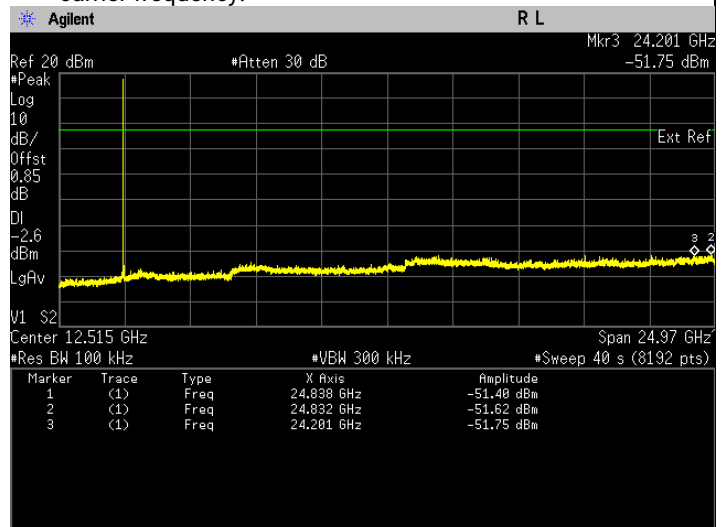
- Spurious emission measurement in 30MHz – 25GHz at mid carrier frequency.



- The high emission level within the assigned band at high carrier frequency.

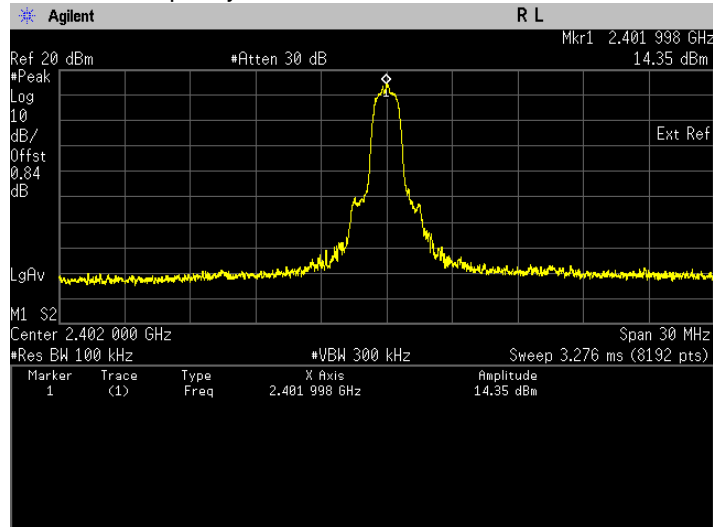


- Spurious emission measurement in 30MHz – 25GHz at high carrier frequency.

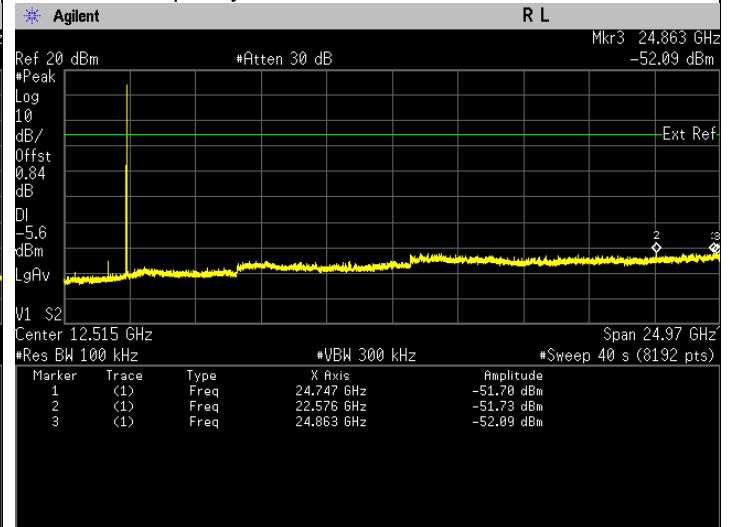


Pi/4 DQPSK Modulation:

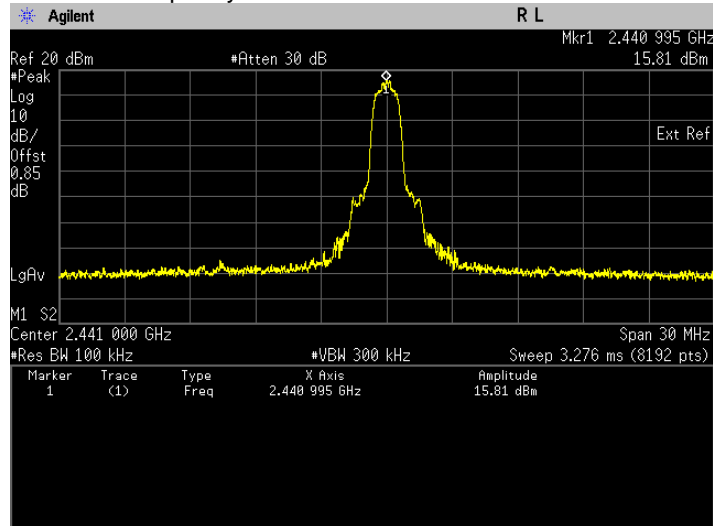
i. The high emission level within the assigned band at low carrier frequency.



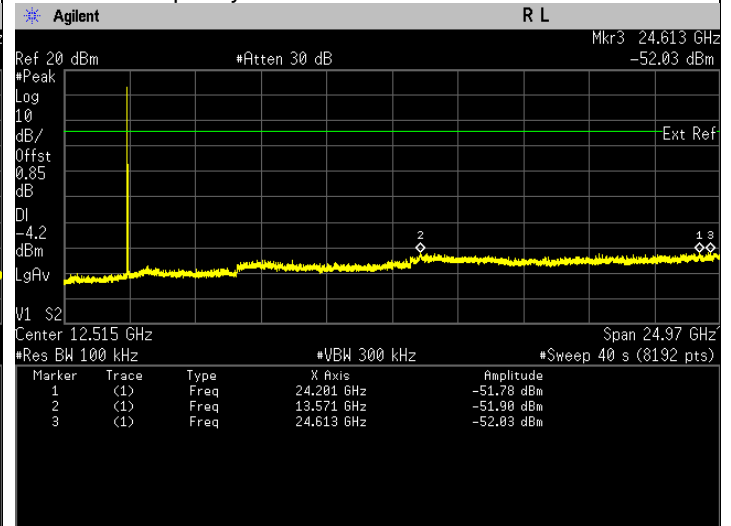
ii. Spurious emission measurement in 30MHz – 25GHz at low carrier frequency.



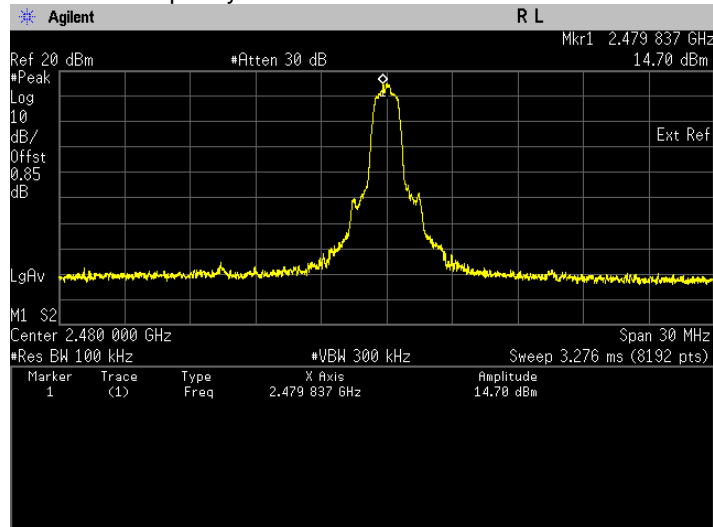
iii. The high emission level within the assigned band at mid carrier frequency.



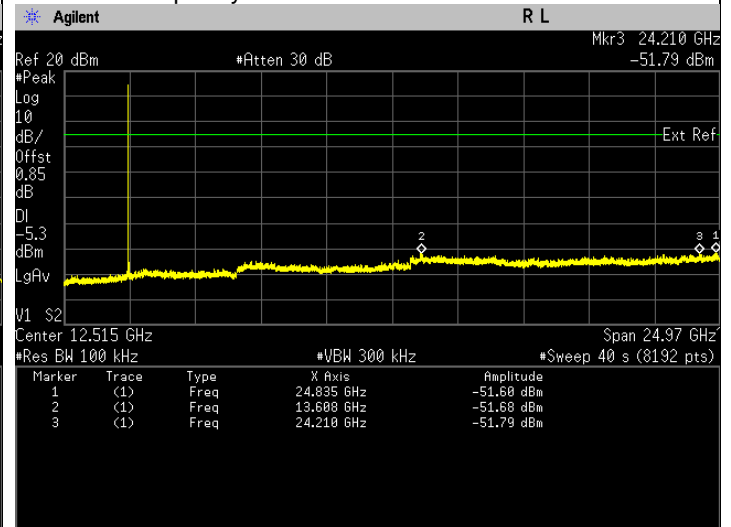
iv. Spurious emission measurement in 30MHz – 25GHz at mid carrier frequency.



v. The high emission level within the assigned band at high carrier frequency.

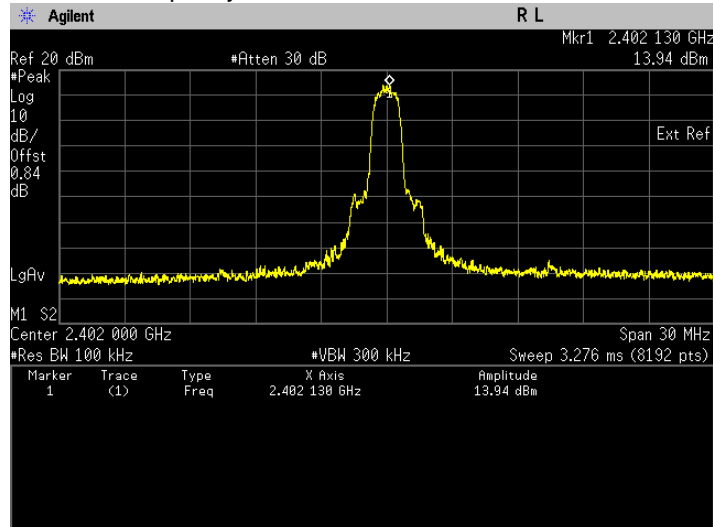


vi. Spurious emission measurement in 30MHz – 25GHz at high carrier frequency.

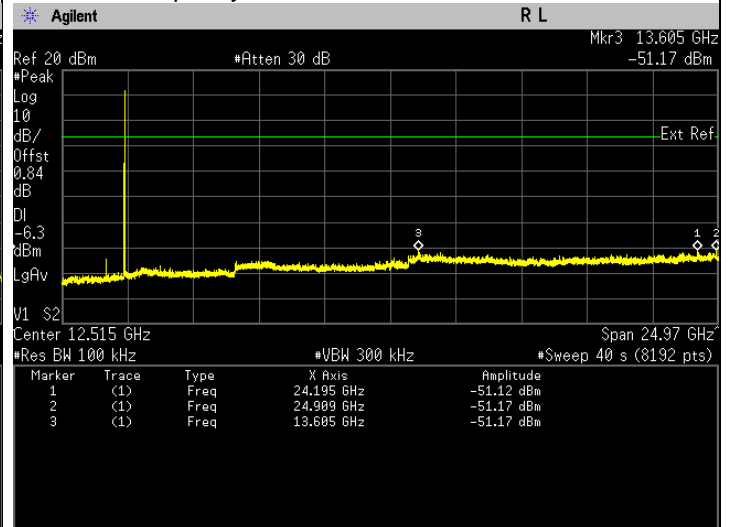


8DPSK Modulation:

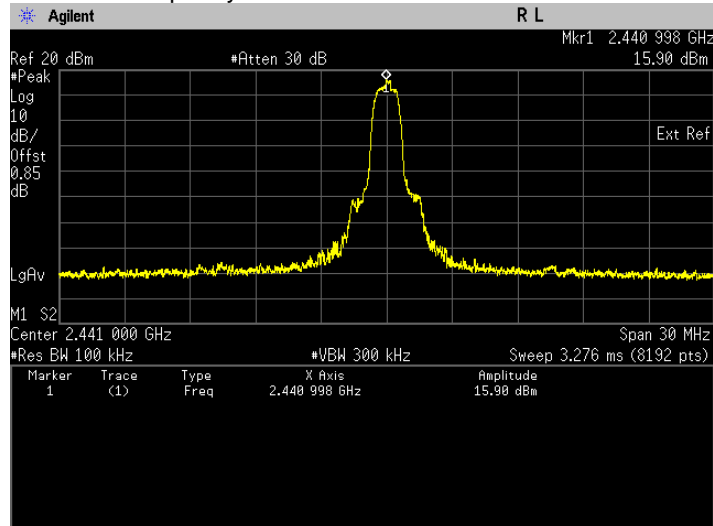
i. The high emission level within the assigned band at low carrier frequency.



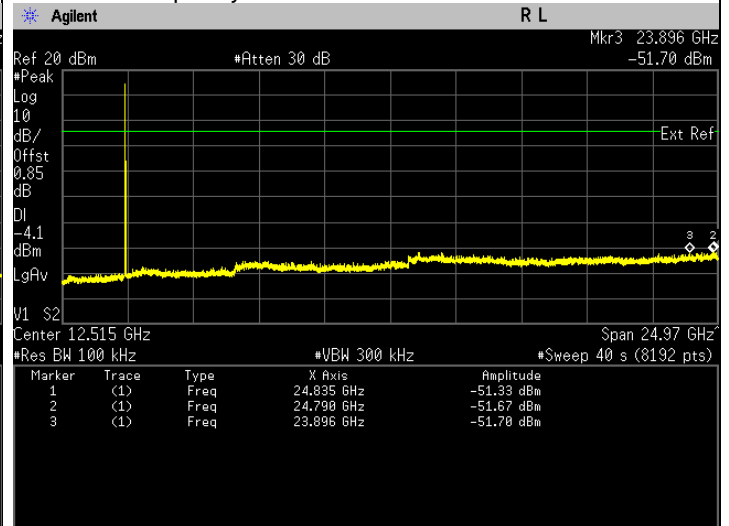
ii. Spurious emission measurement in 30MHz – 25GHz at low carrier frequency.



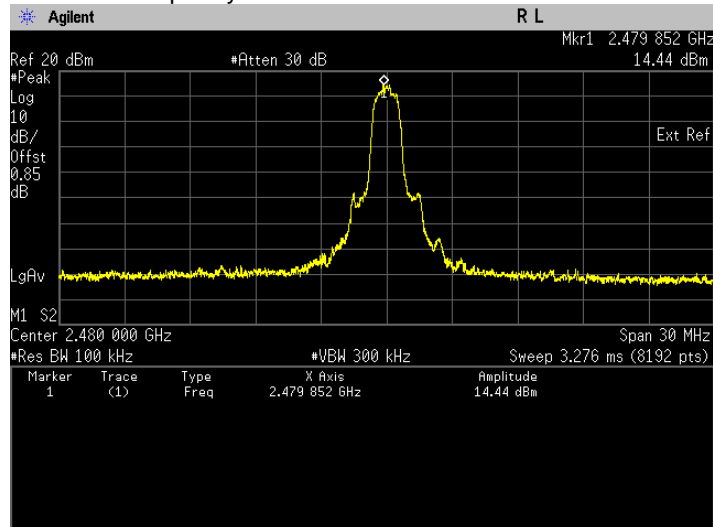
iii. The high emission level within the assigned band at mid carrier frequency.



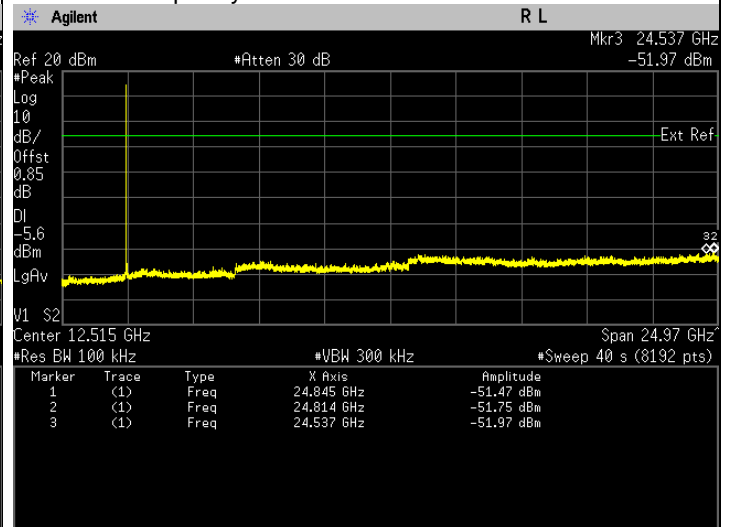
iv. Spurious emission measurement in 30MHz – 25GHz at mid carrier frequency.



v. The high emission level within the assigned band at high carrier frequency.

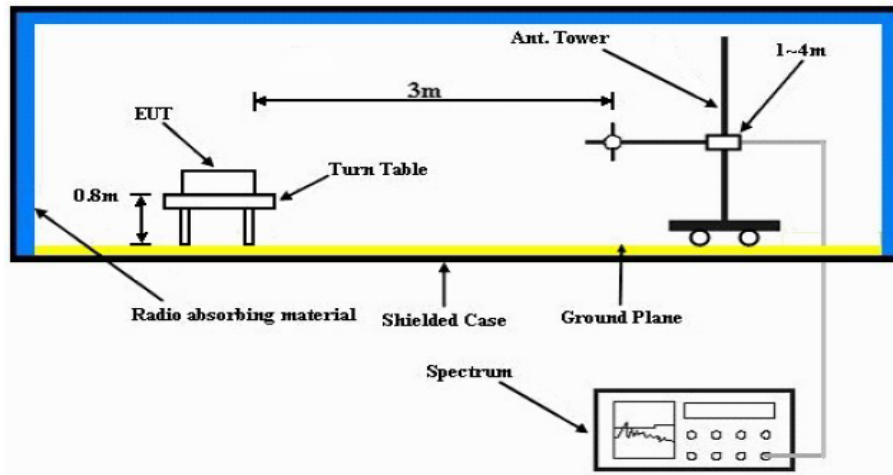


vi. Spurious emission measurement in 30MHz – 25GHz at high carrier frequency.



6.8. Radiated Emission within restricted Bands

6.8.1. Test Setup



- The EUT is placed on the top of a rotating table 0.8m (<1GHz) or 1.5m (>1GHz) above the ground at a 3m semi-anechoic chamber. The table is rotated 360 degrees to determine the position of the highest radiation.
- The EUT is set 3m away from the interference-receiving antenna, which is mounted on the top of a variable-height antenna tower.
- The antenna is Bilog/Horn antenna depend on which frequency range uses, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT is arranged to its worst case and then the antenna is tuned to heights from 1m to 4m and the rotatable table is turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system is set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode is fall within the range of 10dB from the limit specified, the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. Otherwise, the testing could be stopped and the peak values of the EUT would be reported.

NOTE:

- The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection at frequency below 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth is 3 MHz for Peak detection at frequency above 1 GHz.
- All modes of operation were investigated and the worst-case emissions are reported.

6.8.2. Test Limits:

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power.

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

NOTE:

- The lower limit shall apply at the transition frequencies.
- Emission level (dBuV/m) = 20 log Emission level (uV/m).
- For frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

NOTE:

Transmitter Duty Cycle Calculation, FCC Rule 15.35 (b,c)

Based on the Bluetooth Specification Version 2.1+EDR, and worst case AFH mode, transmitter ON time is independent of packet type (DH1, DH3 and DH5) and packet length, the AFH mode Duty cycle connection factor as below:

Channel hop rate = 800 hops/second (AFH Mode)

Adjusted channel hop rate for DH5 mode = 133.33 hops/second

Time per channel hop = 1 / 133.33 hops/second = 7.5 ms

Time to cycle through all channels = 7.5 x 20 channels = 150 ms

Number of times transmitter hits on one channel = 100 ms / 150 ms = 1 time(s)

Worst case dwell time = 7.5 ms

Duty cycle connection factor = $20\log_{10} (7.5\text{ms} / 100\text{ms}) = -22.5 \text{ dB}$

Test: Bluetooth SAC Restricted Band Edge	EMC SR ID: 0875N00-EMC-00074
Model Number: H55TGT9PW8BN	S/N: 437ZBG0592
Battery: PMNN4895A	Softpot power: 10
Accessory: AN000297A01	
Test Channel: Low	Test Frequency: 2402.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: X-Plane
Modulation: GFSK	

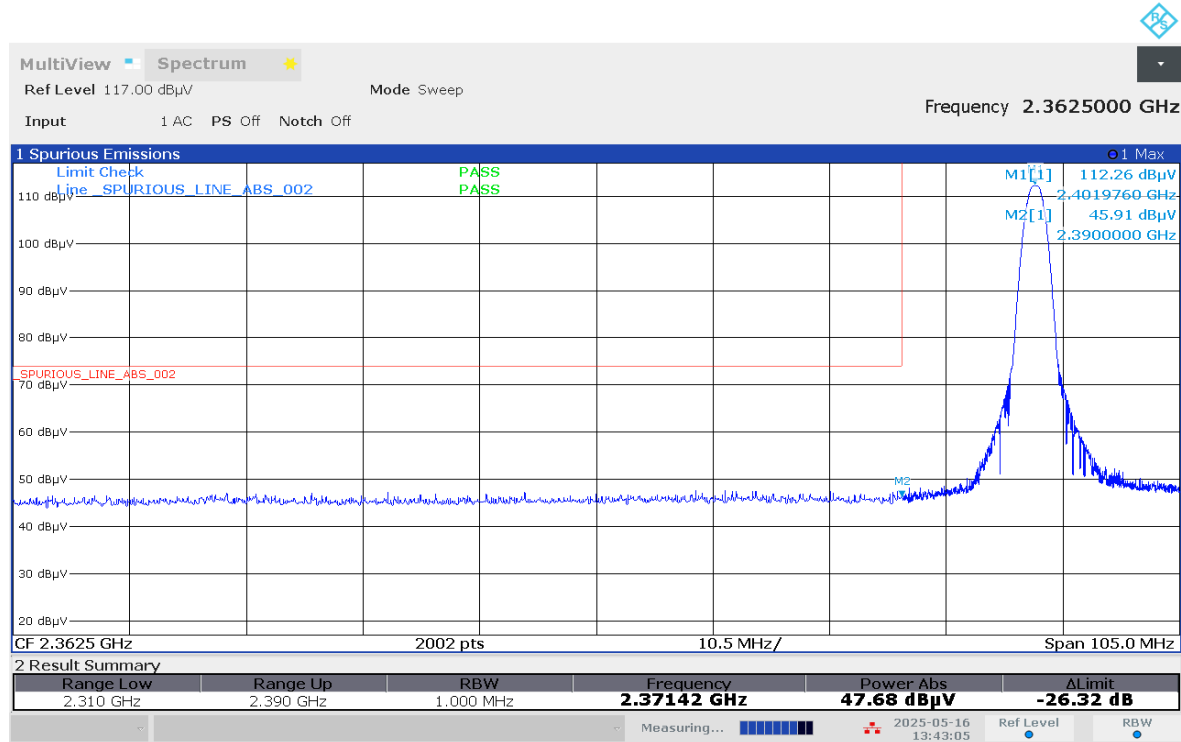
[illegible]

Remarks: Pass Result	Marginal Result	Fail Result
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Humidity (%): 68.6
Test Date: Fri, 16 May, 2025

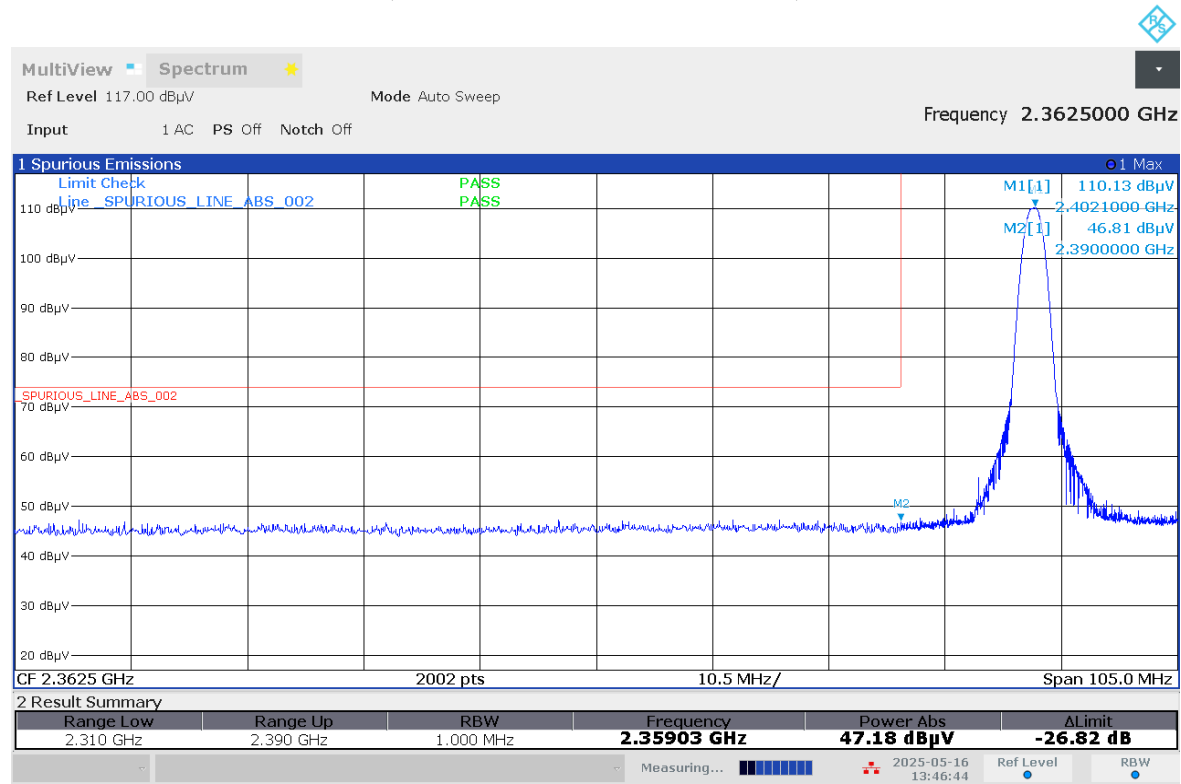
Page 38 of 91

Restricted Band Edge (Low Channel, Vertical, Peak) graphical screen shot



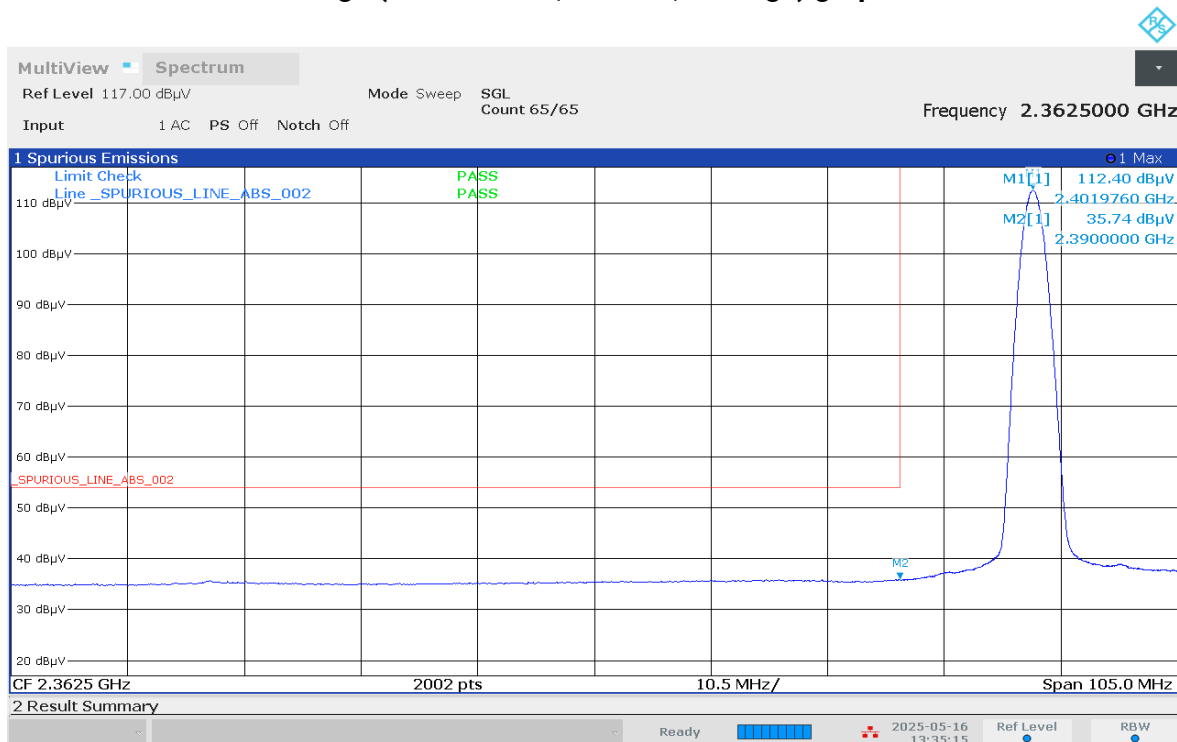
01:43:06 PM 05/16/2025

Restricted Band Edge (Low Channel, Horizontal, Peak) graphical screen shot



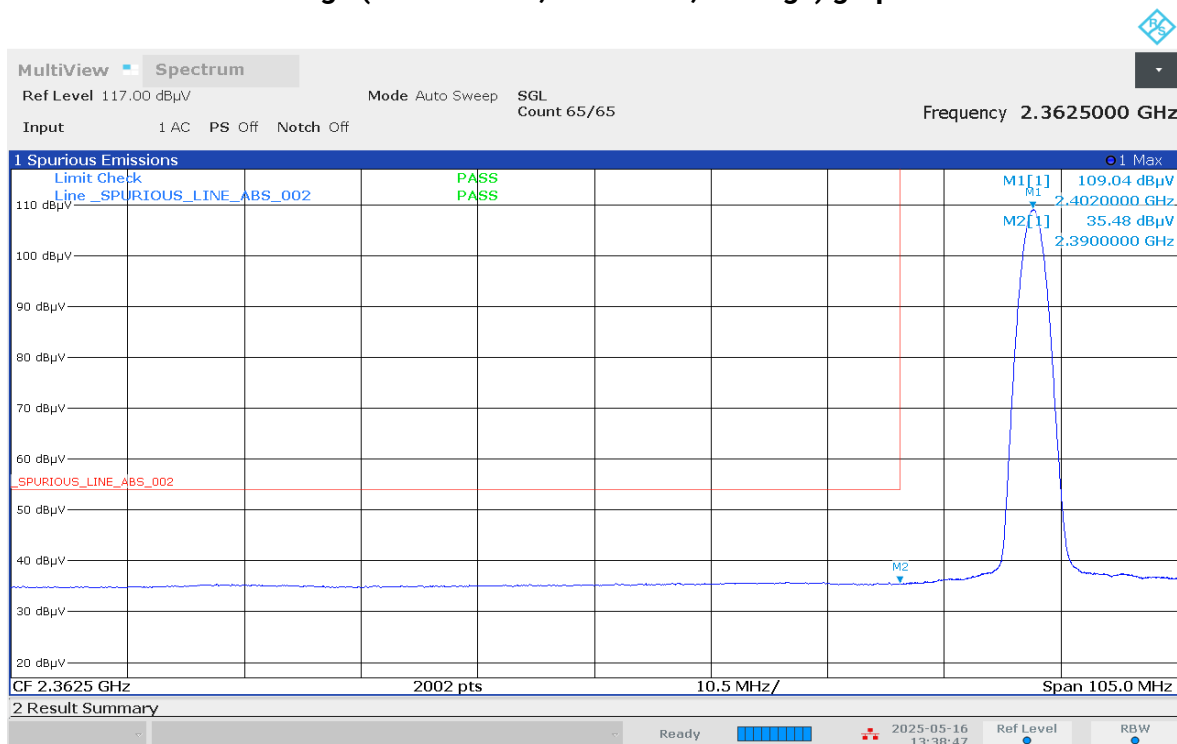
01:46:45 PM 05/16/2025

Restricted Band Edge (Low Channel, Vertical, Average) graphical screen shot



01:35:15 PM 05/16/2025

Restricted Band Edge (Low Channel, Horizontal, Average) graphical screen shot



01:38:49 PM 05/16/2025

Test: Bluetooth SAC Restricted Band Edge	EMC SR ID: 0875N00-EMC-00074
Model Number: H55TGT9PW8BN	S/N: 437ZBG0592
Battery: PMNN4895A	Softpot power: 10
Accessory: AN000297A01	
Test Channel: High	Test Frequency: 2480.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: X-Plane
Modulation: GFSK	

Restricted Band Edge (High Channel) tabular data

[illegible]

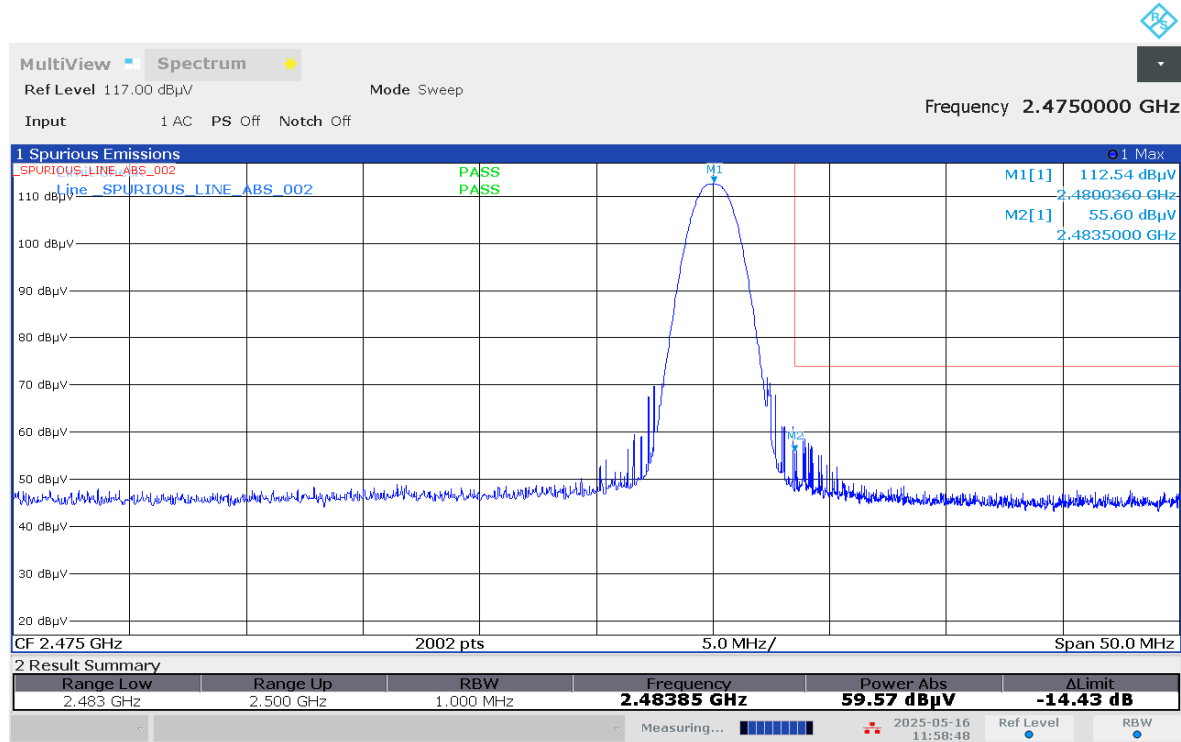
Remarks: Pass Result	Marginal Result	Fail Result
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Temperature (degC): 23.4
Test Performed by: Rezza & Fuad

Humidity (%): 68.6
Test Date: Fri, 16 May, 2025

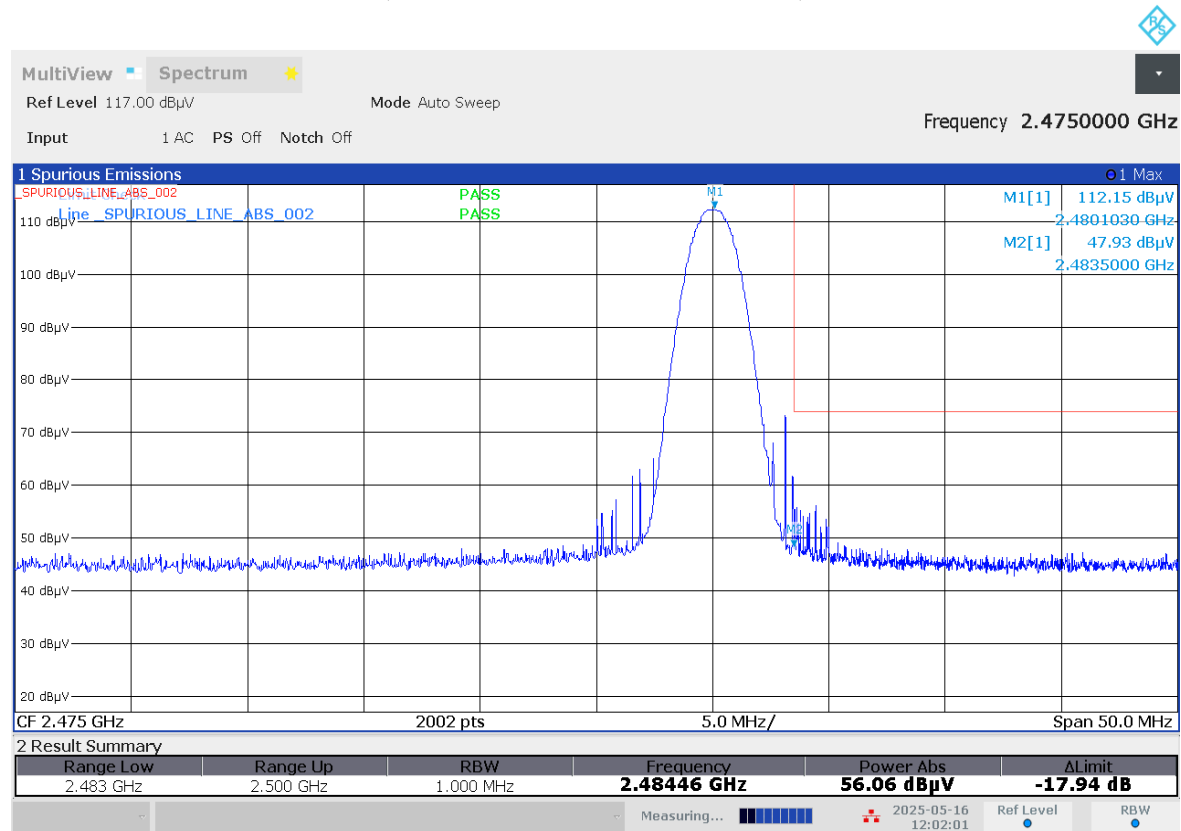
System MU: 5.14dB

Restricted Band Edge (High Channel, Vertical, Peak) graphical screen shot



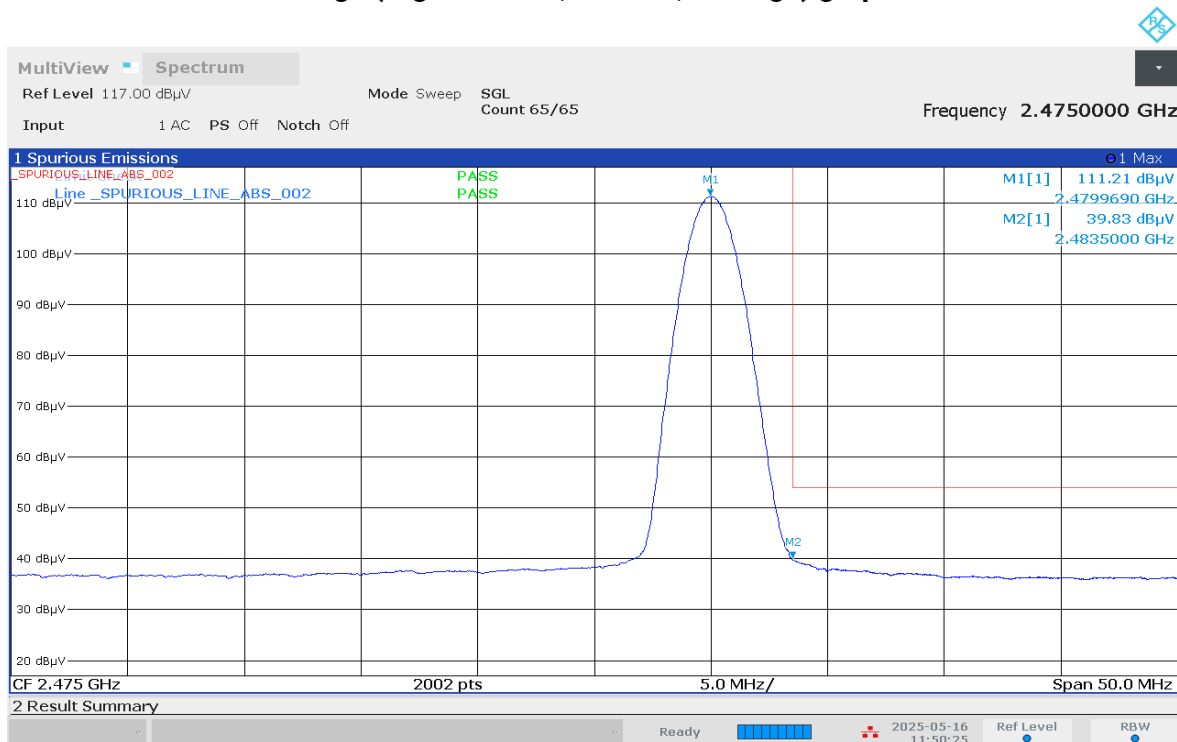
11:58:49 AM 05/16/2025

Restricted Band Edge (High Channel, Horizontal, Peak) graphical screen shot



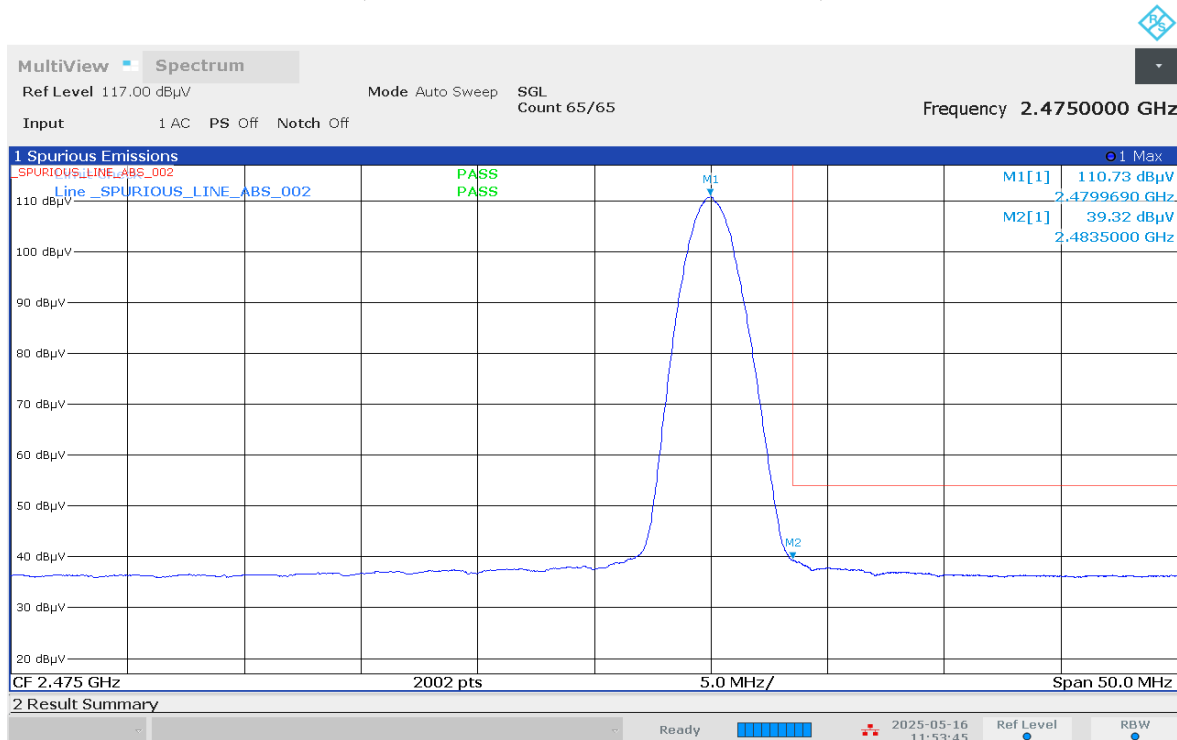
12:02:02 PM 05/16/2025

Restricted Band Edge (High Channel, Vertical, Average) graphical screen shot



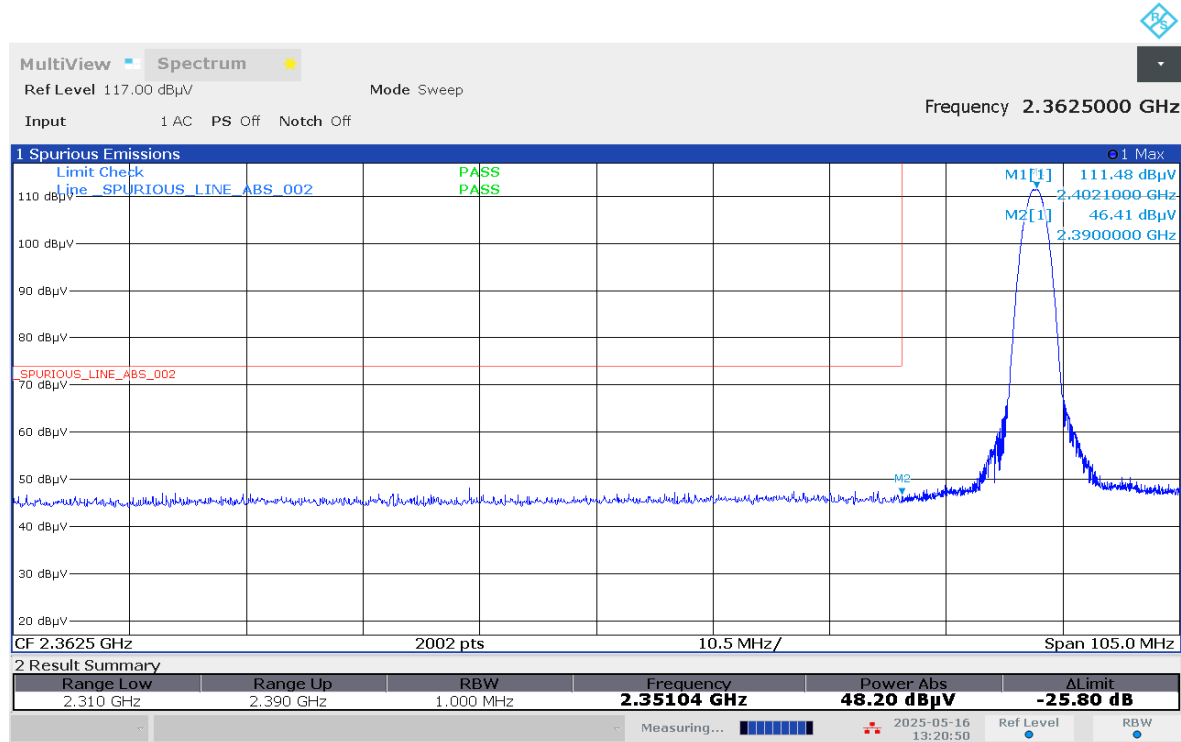
11:50:26 AM 05/16/2025

Restricted Band Edge (High Channel, Horizontal, Average) graphical screen shot



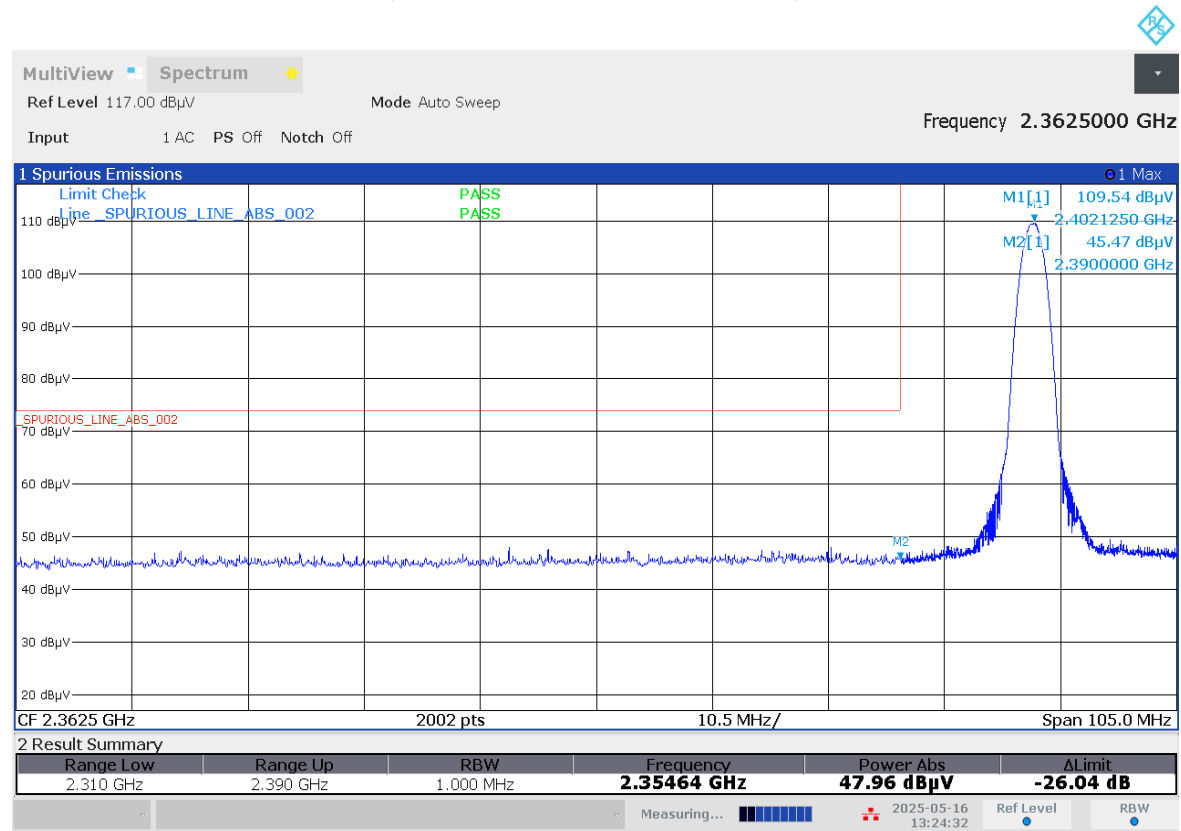
11:53:46 AM 05/16/2025

Restricted Band Edge (Low Channel, Vertical, Peak) graphical screen shot



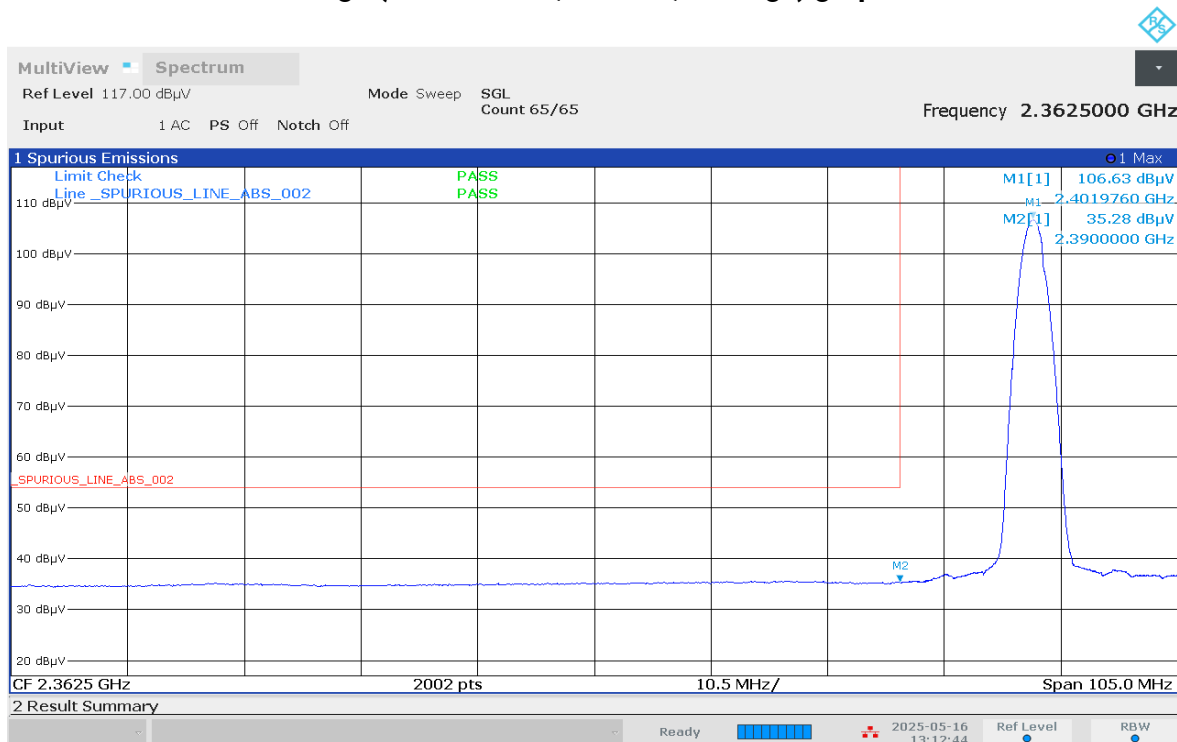
01:20:50 PM 05/16/2025

Restricted Band Edge (Low Channel, Horizontal, Peak) graphical screen shot



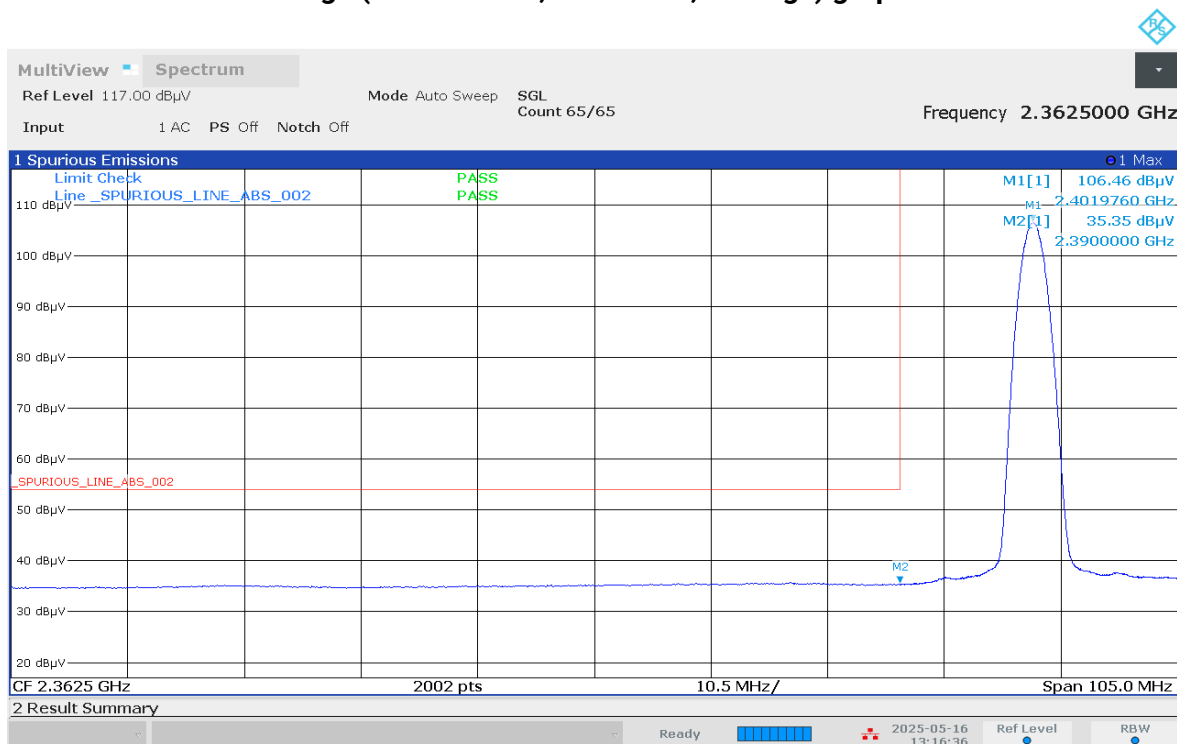
01:24:32 PM 05/16/2025

Restricted Band Edge (Low Channel, Vertical, Average) graphical screen shot



01:12:44 PM 05/16/2025

Restricted Band Edge (Low Channel, Horizontal, Average) graphical screen shot



01:16:37 PM 05/16/2025

Test: Bluetooth SAC Restricted Band Edge	EMC SR ID: 0875N00-EMC-00074
Model Number: H55TGT9PW8BN	S/N: 437ZBG0592
Battery: PMNN4895A	Softpot power: 10
Accessory: AN000297A01	
Test Channel: High	Test Frequency: 2480.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: X-Plane
Modulation: PI/4DQPSK	

Restricted Band Edge (High Channel) tabular data

[illegible]

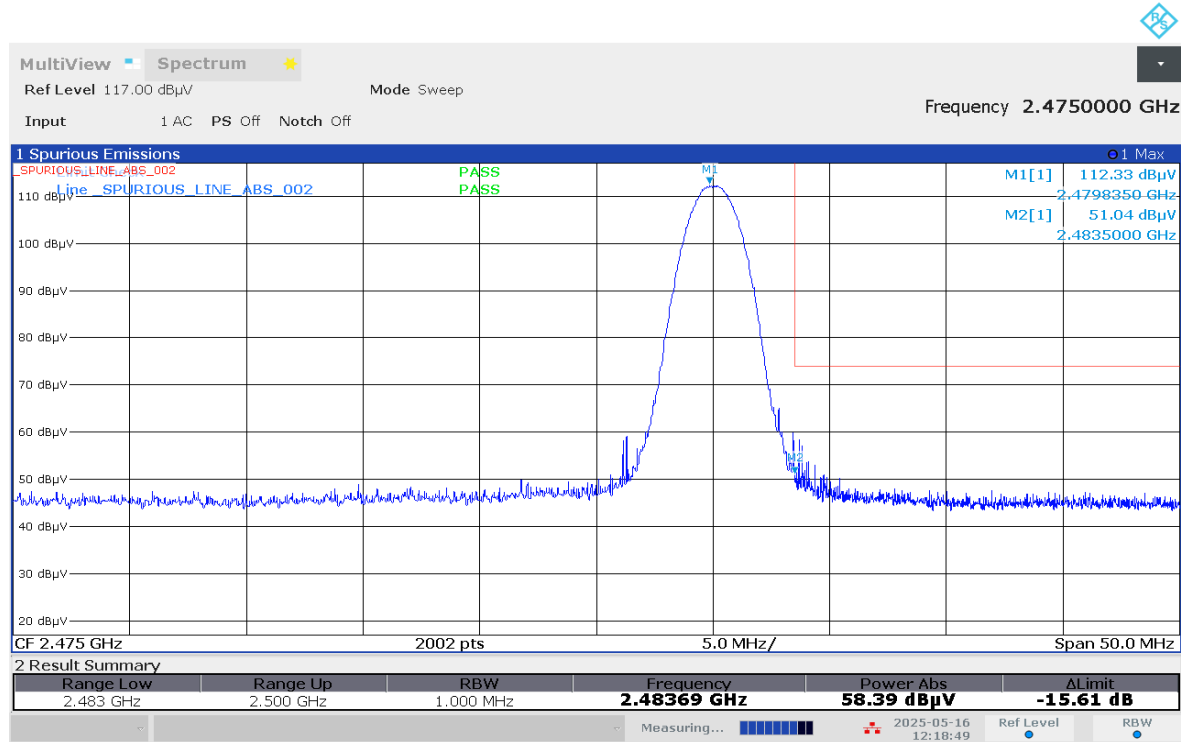
Remarks: Pass Result	Marginal Result	Fail Result
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Temperature (degC): 23.4
Test Performed by: Rezza & Fuad

Humidity (%): 68.6
Test Date: Fri, 16 May, 2025

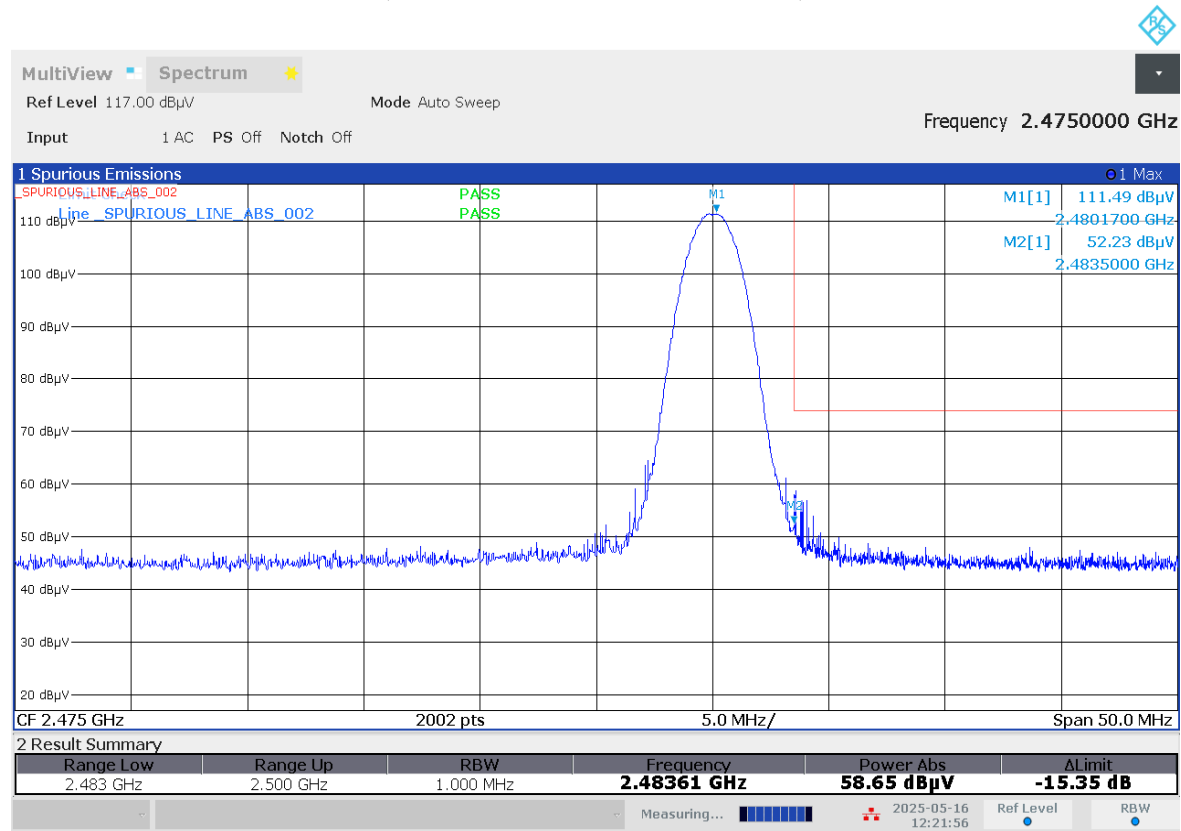
System MU: 5.14dB

Restricted Band Edge (High Channel, Vertical, Peak) graphical screen shot



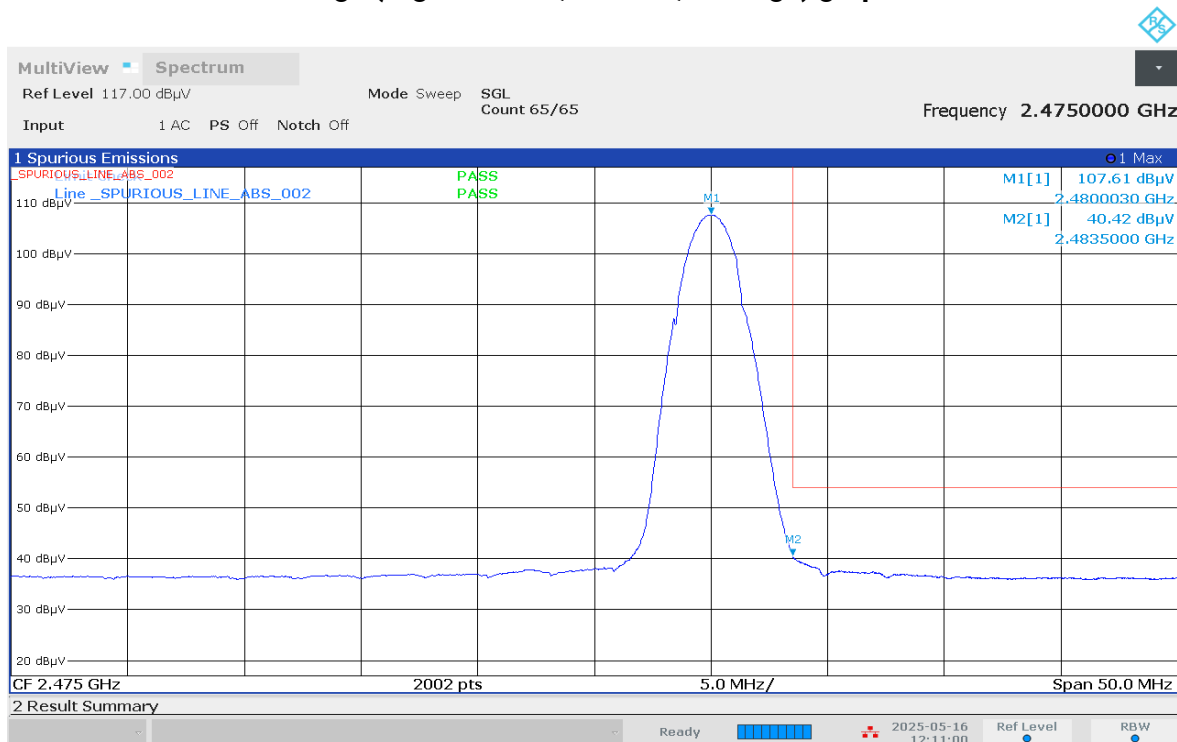
12:18:50 PM 05/16/2025

Restricted Band Edge (High Channel, Horizontal, Peak) graphical screen shot

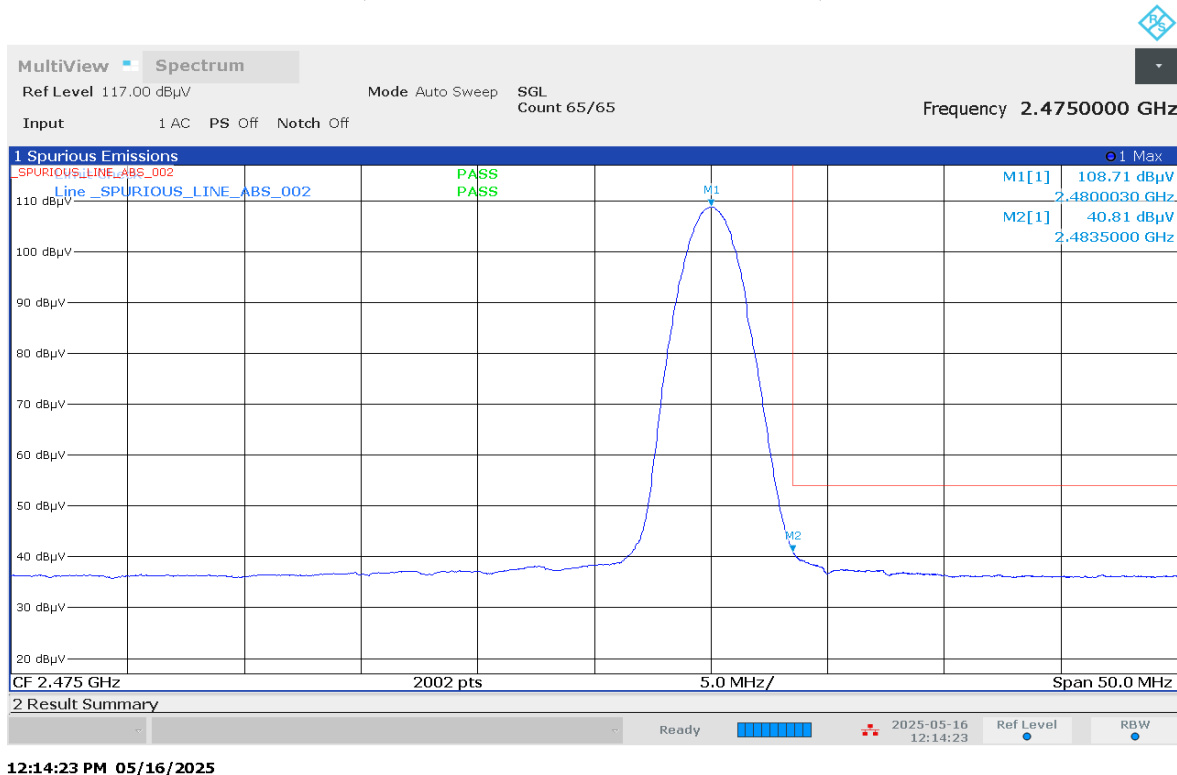


12:21:56 PM 05/16/2025

Restricted Band Edge (High Channel, Vertical, Average) graphical screen shot



Restricted Band Edge (High Channel, Horizontal, Average) graphical screen shot



Test: Bluetooth SAC Restricted Band Edge	EMC SR ID: 0875N00-EMC-00074
Model Number: H55TGT9PW8BN	S/N: 437ZBG0592
Battery: PMNN4895A	Softpot power: 10
Accessory: AN000297A01	
Test Channel: Low	Test Frequency: 2402.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: X-Plane
Modulation: 8DPSK	

Restricted Band Edge (Low Channel) tabular data

[illegible]

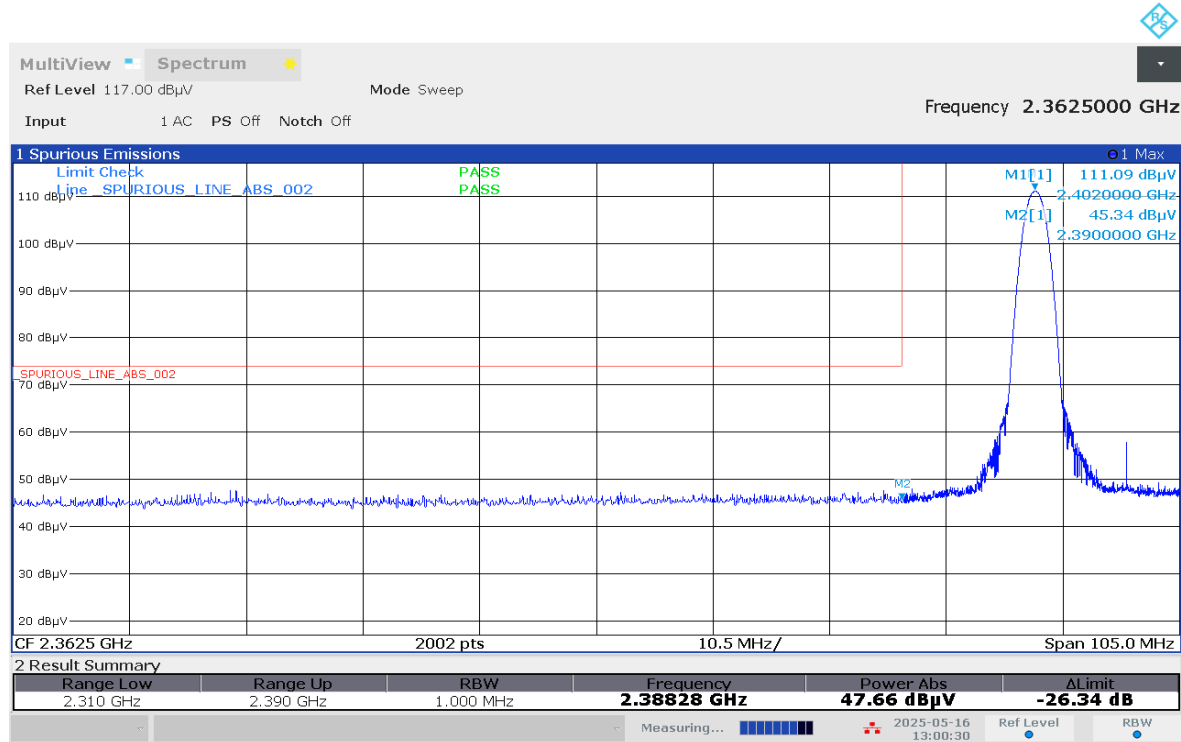
Remarks: Pass Result	Marginal Result	Fail Result
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Temperature (degC): 23.4
Test Performed by: Rezza & Fuad

Humidity (%): 68.6
Test Date: Fri, 16 May, 2025

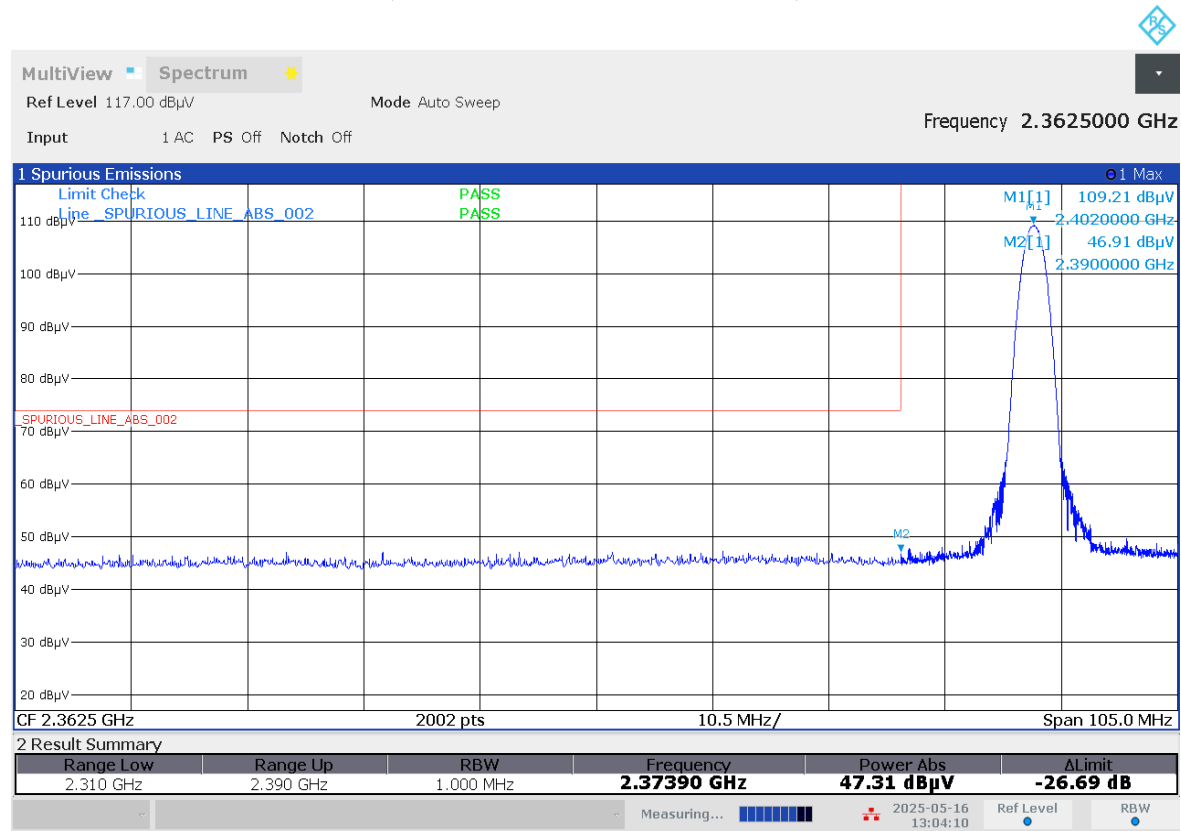
System MU: 5.14dB

Restricted Band Edge (Low Channel, Vertical, Peak) graphical screen shot



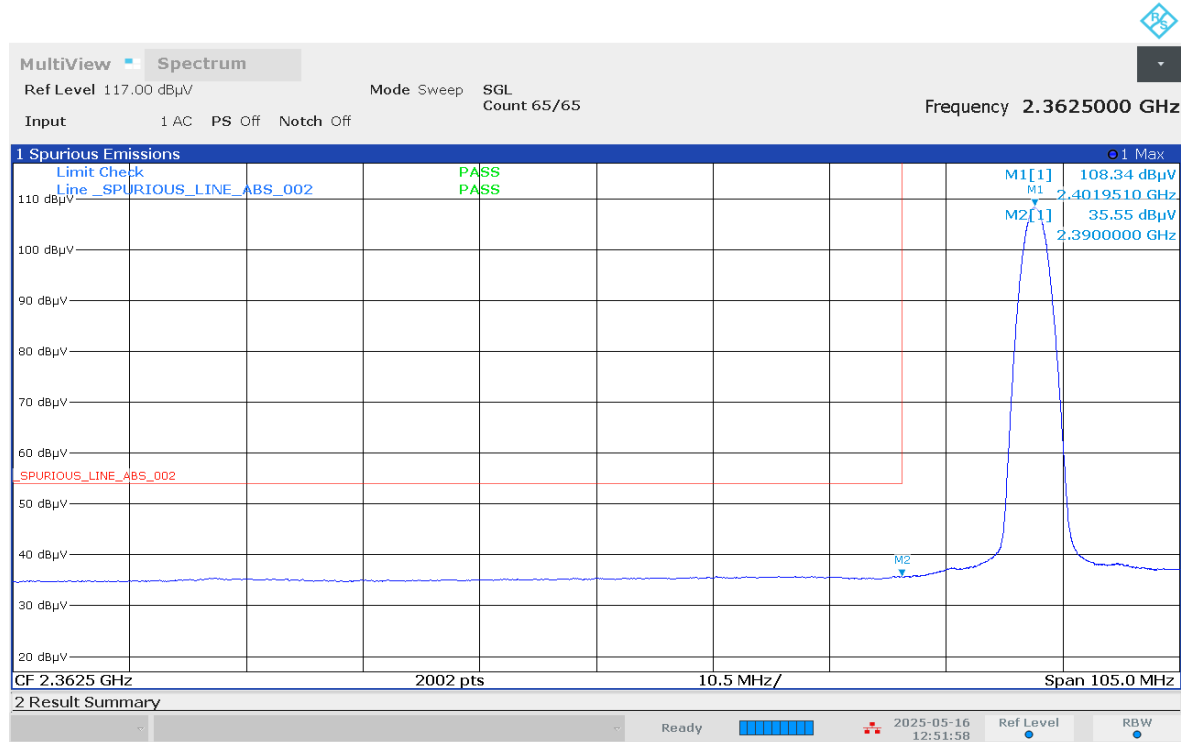
01:00:30 PM 05/16/2025

Restricted Band Edge (Low Channel, Horizontal, Peak) graphical screen shot



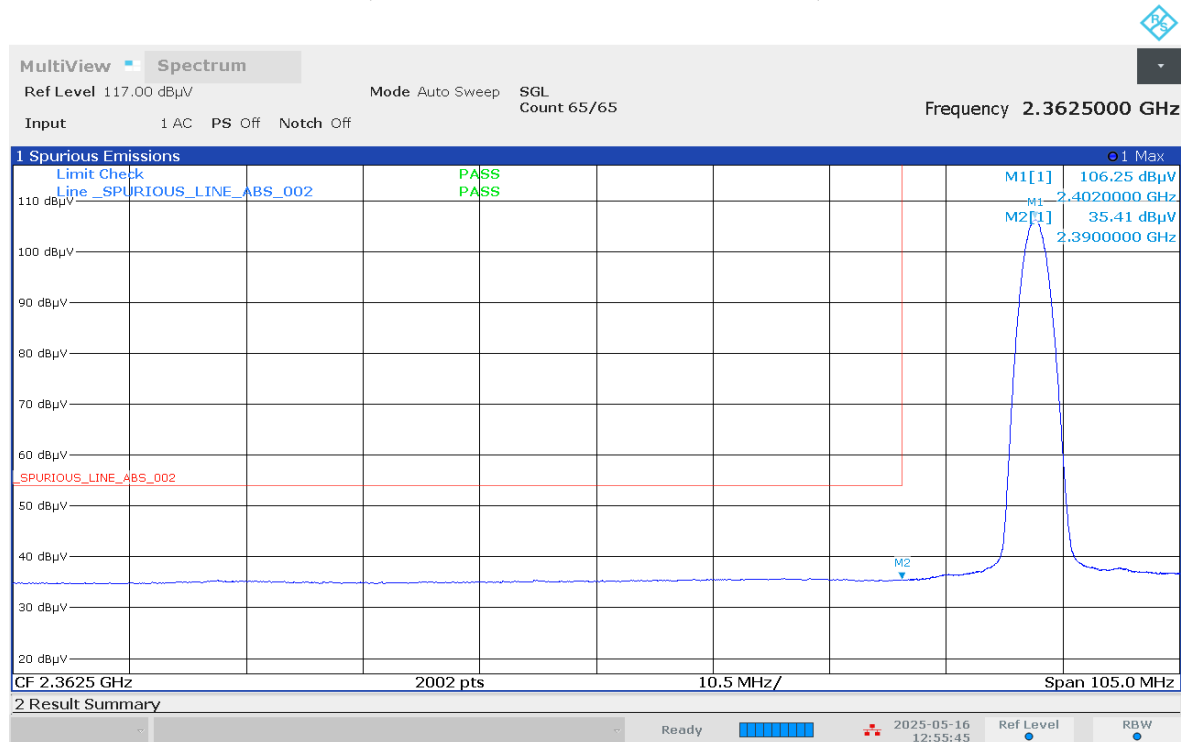
01:04:10 PM 05/16/2025

Restricted Band Edge (Low Channel, Vertical, Average) graphical screen shot



12:51:58 PM 05/16/2025

Restricted Band Edge (Low Channel, Horizontal, Average) graphical screen shot



12:55:45 PM 05/16/2025

Test: Bluetooth SAC Restricted Band Edge	EMC SR ID: 0875N00-EMC-00074
Model Number: H55TGT9PW8BN	S/N: 437ZBG0592
Battery: PMNN4895A	Softpot power: 10
Accessory: AN000297A01	
Test Channel: High	Test Frequency: 2480.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: X-Plane
Modulation: 8DPSK	

Restricted Band Edge (High Channel) tabular data

[illegible]

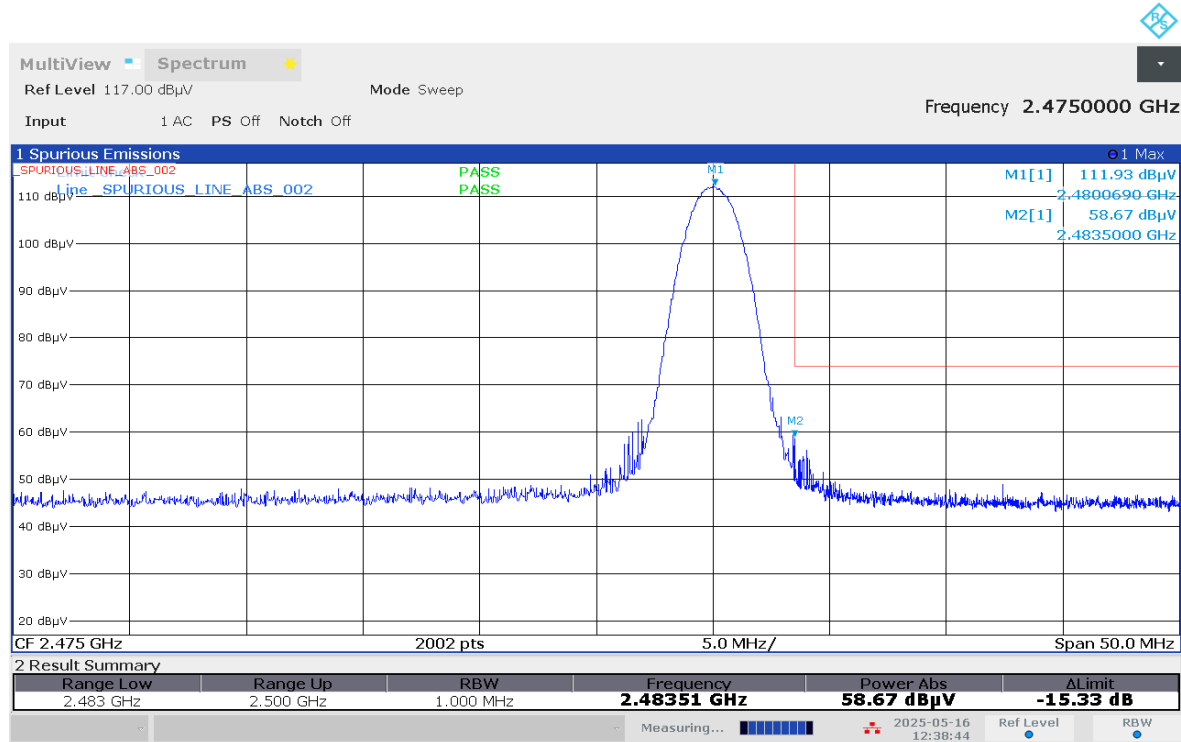
Remarks: Pass Result	Marginal Result	Fail Result
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Temperature (degC): 23.4
Test Performed by: Rezza & Fuad

Humidity (%): 68.6
Test Date: Fri, 16 May, 2025

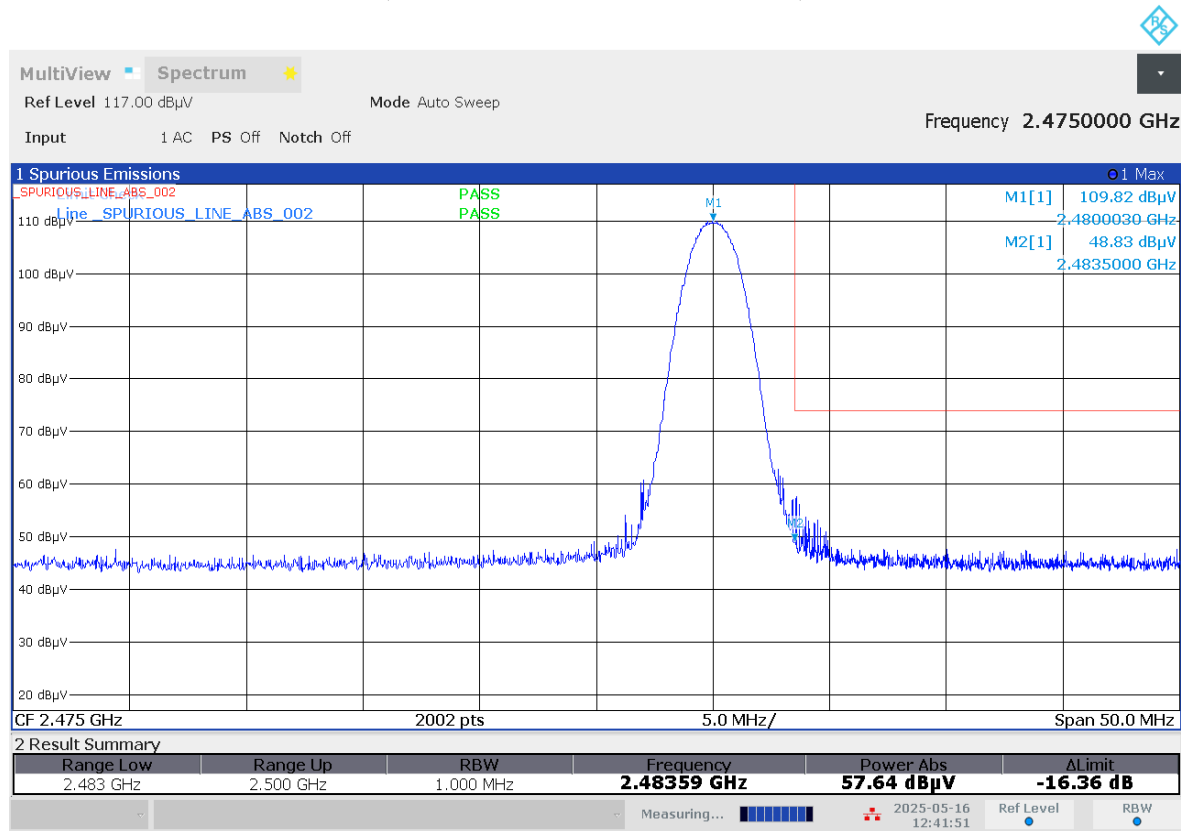
System MU: 5.14dB

Restricted Band Edge (High Channel, Vertical, Peak) graphical screen shot



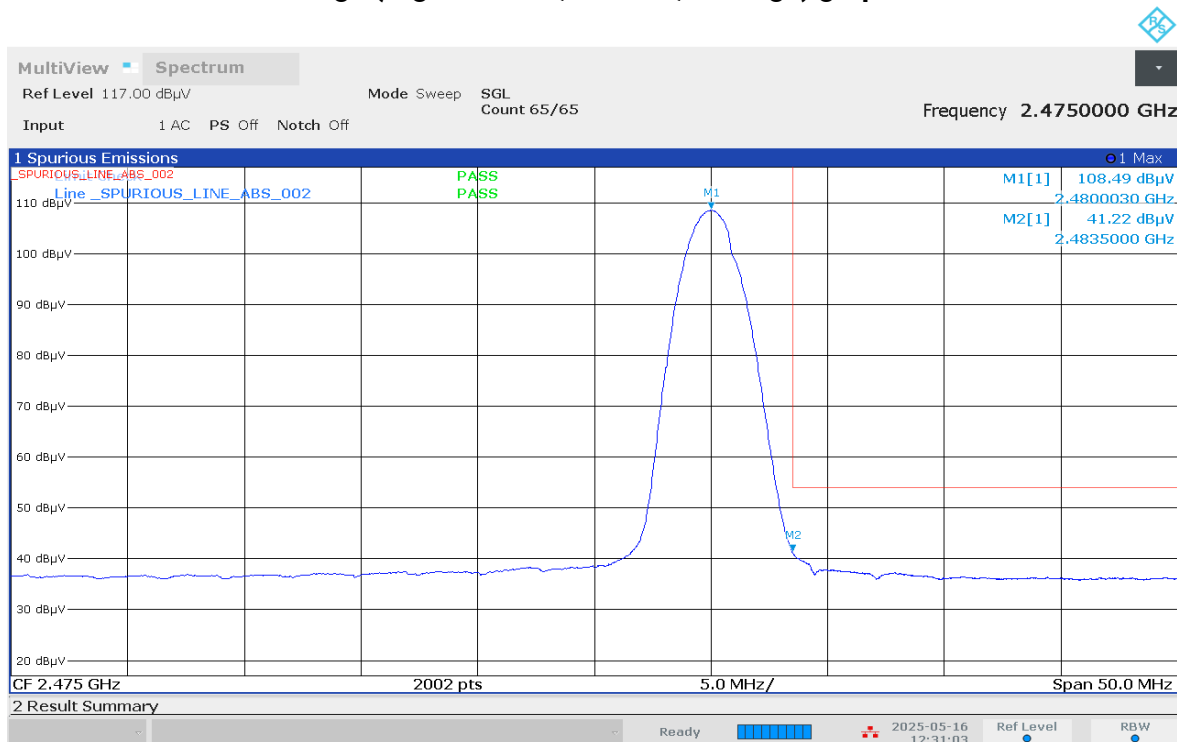
12:38:44 PM 05/16/2025

Restricted Band Edge (High Channel, Horizontal, Peak) graphical screen shot



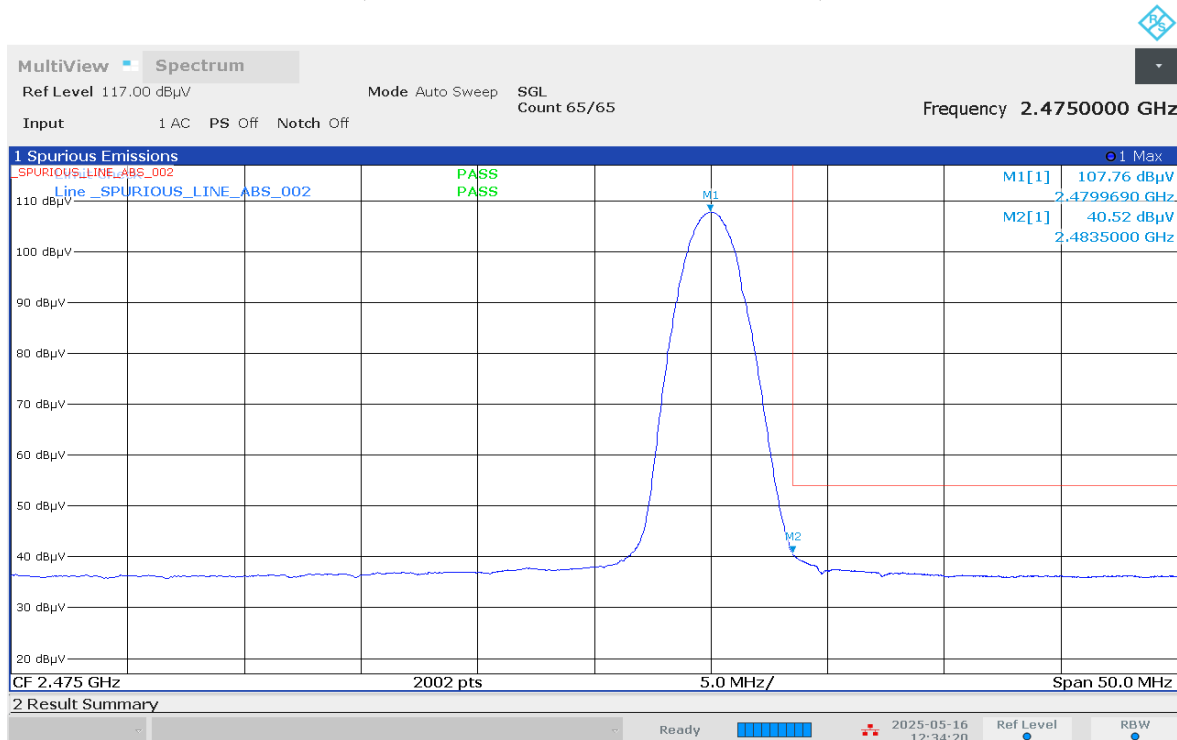
12:41:52 PM 05/16/2025

Restricted Band Edge (High Channel, Vertical, Average) graphical screen shot



12:31:04 PM 05/16/2025

Restricted Band Edge (High Channel, Horizontal, Average) graphical screen shot



12:34:20 PM 05/16/2025

Test: Bluetooth SAC Transmitter Radiated Emission	EMC SR ID: 0875N00-EMC-00074
Model Number: H55TGT9PW8BN	S/N: 437ZBG0592
Battery: PMNN4895A	Softpot power: 10
Accessory: AN000297A01	
Test Channel: Low	Test Frequency: 2402.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: X-Plane
Modulation: GFSK	

Radiated Emission (Low Channel) tabular data

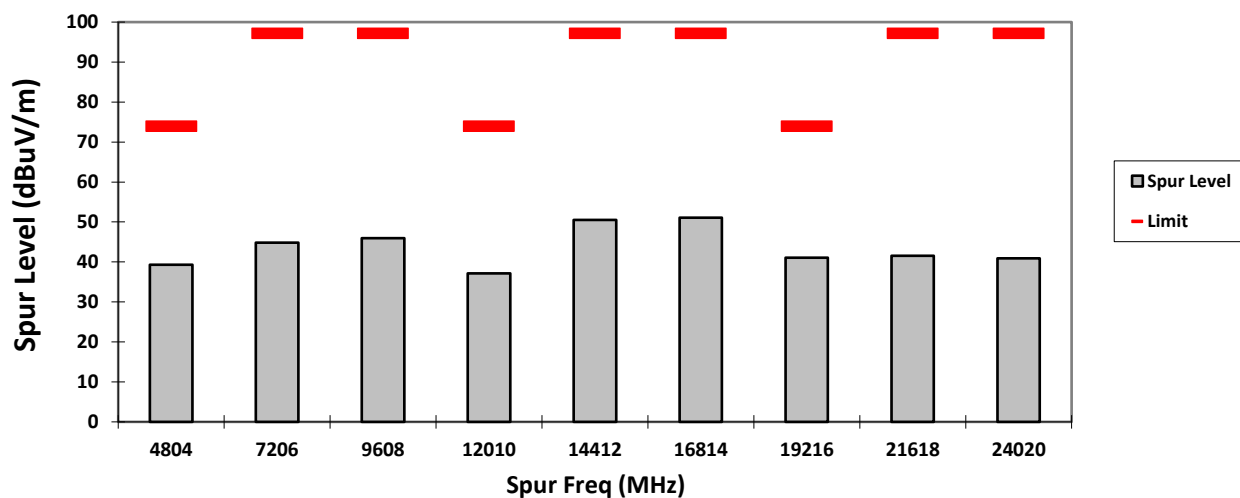
Vertical Radiated Emission Result										
Spur Freq (MHz)	Spur level QPK (dBμV/m)	Spur level PK (dBμV/m)	Spur level AV (dBμV/m)	Limit QPK (dBμV/m)	Limit PK (dBμV/m)	Limit AV (dBμV/m)	Margin QPK (dB)	Margin PK (dB)	Margin AV (dB)	Carrier PK Power (dBμV/m)
4804.0000	-	39.2840**	-	-	74.0000	-	-	34.7160	-	-
7206.0000	-	44.7981**	-	-	97.1916	-	-	52.3935	-	117.1916
9608.0000	-	45.9326**	-	-	97.1916	-	-	51.2590	-	117.1916
12010.0000	-	37.1165**	14.6165**	-	74.0000	54.0000	-	36.8835	39.3835	-
14412.0000	-	50.5170**	-	-	97.1916	-	-	46.6746	-	117.1916
16814.0000	-	51.1024**	-	-	97.1916	-	-	46.0892	-	117.1916
19216.0000	-	41.0547**	-	-	74.0000	-	-	32.9453	-	-
21618.0000	-	41.5597**	-	-	97.1916	-	-	55.6319	-	117.1916
24020.0000	-	40.8885**	-	-	97.1916	-	-	56.3031	-	117.1916
Horizontal Radiated Emission Result										
4804.0000	-	39.8514**	-	-	74.0000	-	-	34.1486	-	-
7206.0000	-	42.6113**	-	-	97.1916	-	-	54.5803	-	117.1916
9608.0000	-	46.9296**	-	-	97.1916	-	-	50.2620	-	117.1916
12010.0000	-	37.0202**	14.5202**	-	74.0000	54.0000	-	36.9798	39.4798	-
14412.0000	-	49.5235**	-	-	97.1916	-	-	47.6681	-	117.1916
16814.0000	-	50.9283**	-	-	97.1916	-	-	46.2633	-	117.1916
19216.0000	-	41.0104**	-	-	74.0000	-	-	32.9896	-	-
21618.0000	-	40.7738**	-	-	97.1916	-	-	56.4178	-	117.1916
24020.0000	-	40.9389**	-	-	97.1916	-	-	56.2527	-	117.1916

Remarks: Pass Result	Marginal Result	Fail Result
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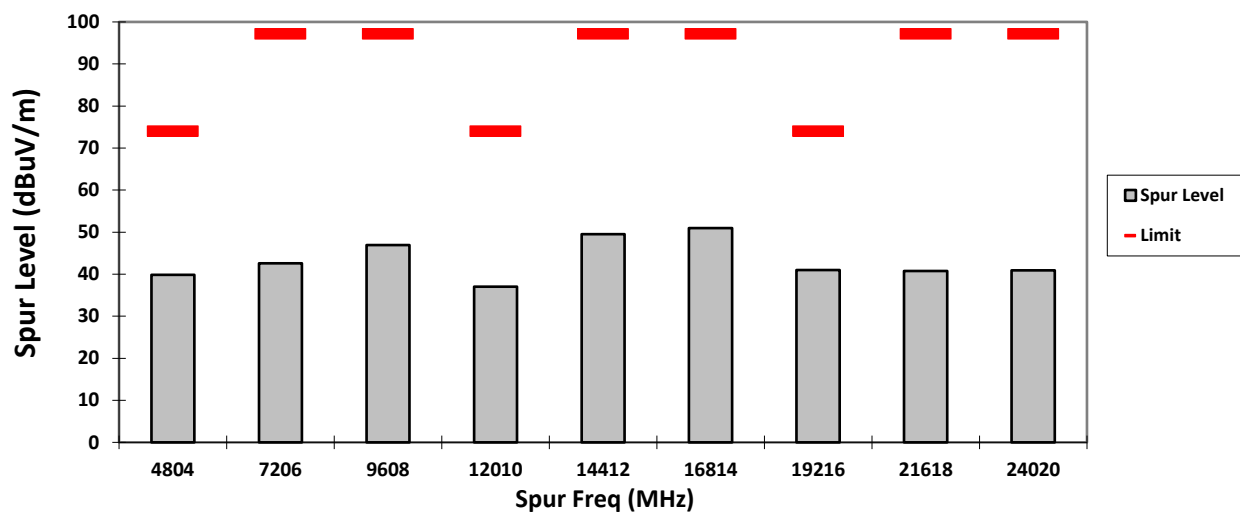
Temperature (degC): 23.4 Humidity (%): 68.6
Test Performed by: Rezza & Fuad Test Date: Sun, 18 May, 2025
System MU: 6.00 dB (30-1000MHz), 5.14 dB (1000-18000MHz), 5.36 dB (18000MHz-40000MHz)

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

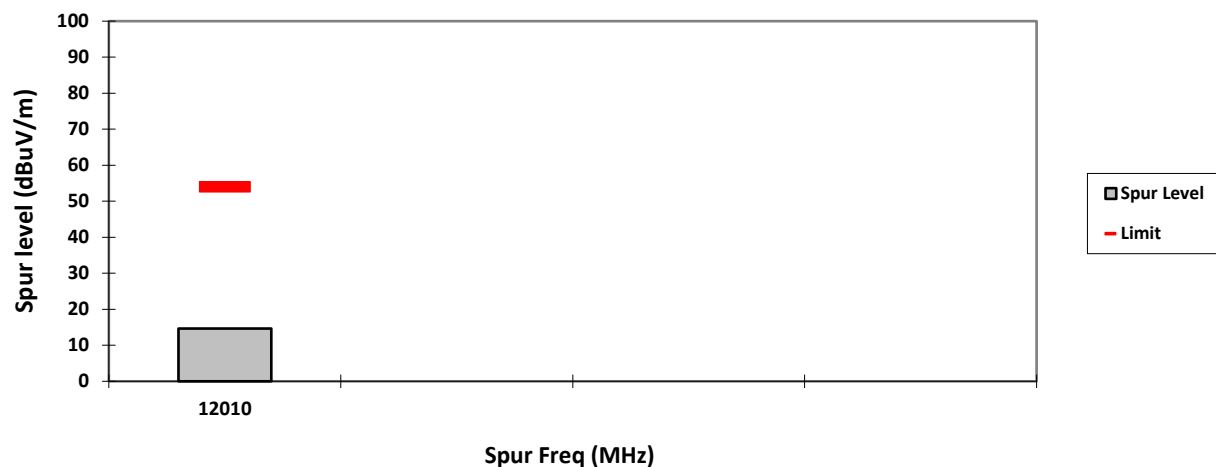
VERTICAL, PK



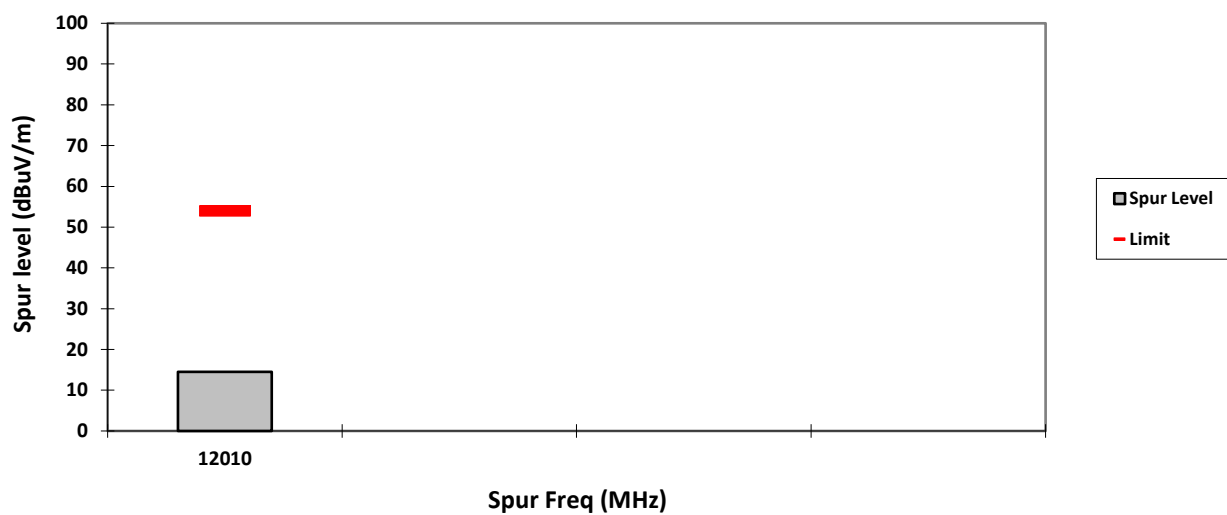
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: Bluetooth SAC Transmitter Radiated Emission	EMC SR ID: 0875N00-EMC-00074
Model Number: H55TGT9PW8BN	S/N: 437ZBG0592
Battery: PMNN4895A	Softpot power: 10
Accessory: AN000297A01	
Test Channel: Mid	Test Frequency: 2441.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: X-Plane
Modulation: GFSK	Test Frequency: 2441.0000 MHz

Radiated Emission (Mid Channel) tabular data

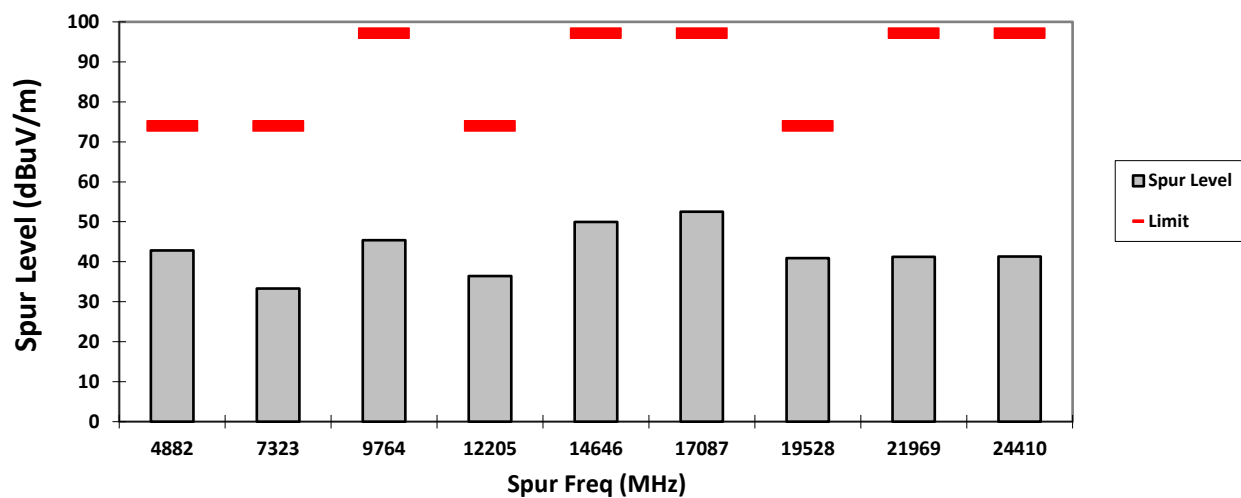
[illegible]

Remarks: Pass Result	Marginal Result	Fail Result
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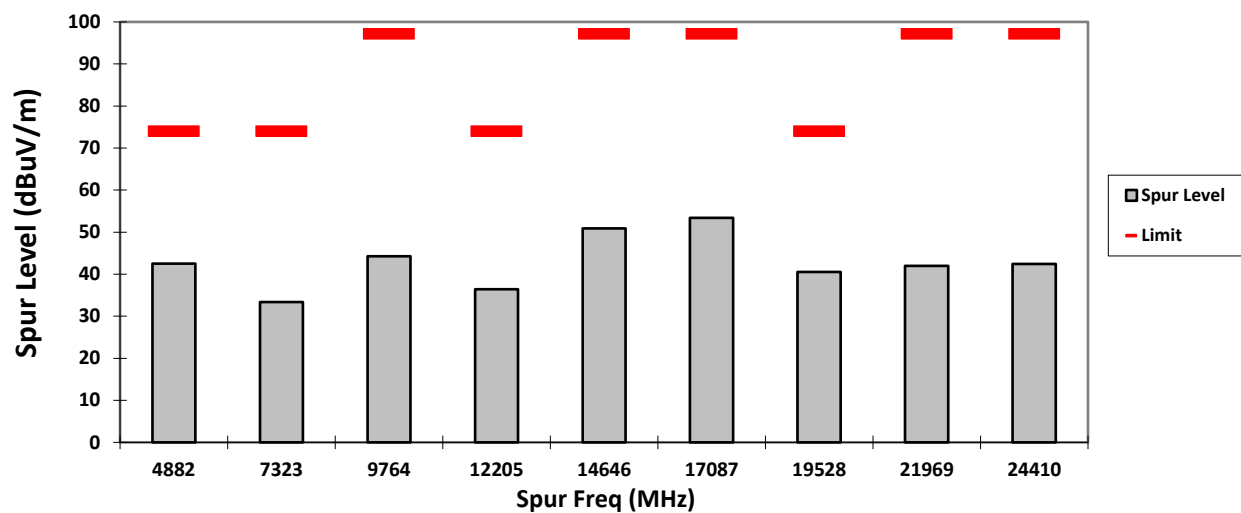
Temperature (degC): 23.4 Humidity (%): 68.6
Test Performed by: Rezza & Fuad Test Date: Sun, 18 May, 2025
System MU: 6.00 dB (30-1000MHz), 5.14 dB (1000-18000MHz), 5.36 dB (18000MHz-40000MHz)

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

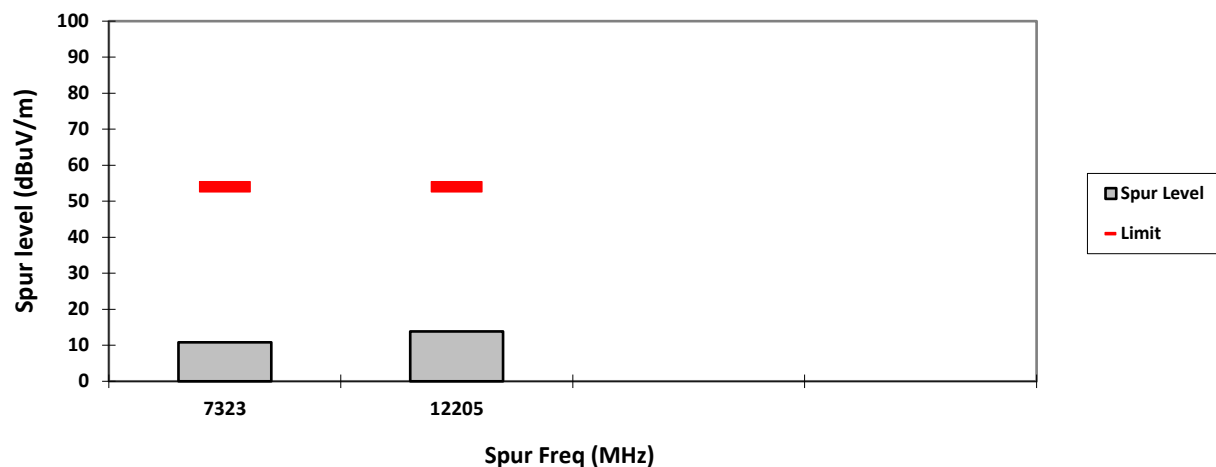
VERTICAL, PK



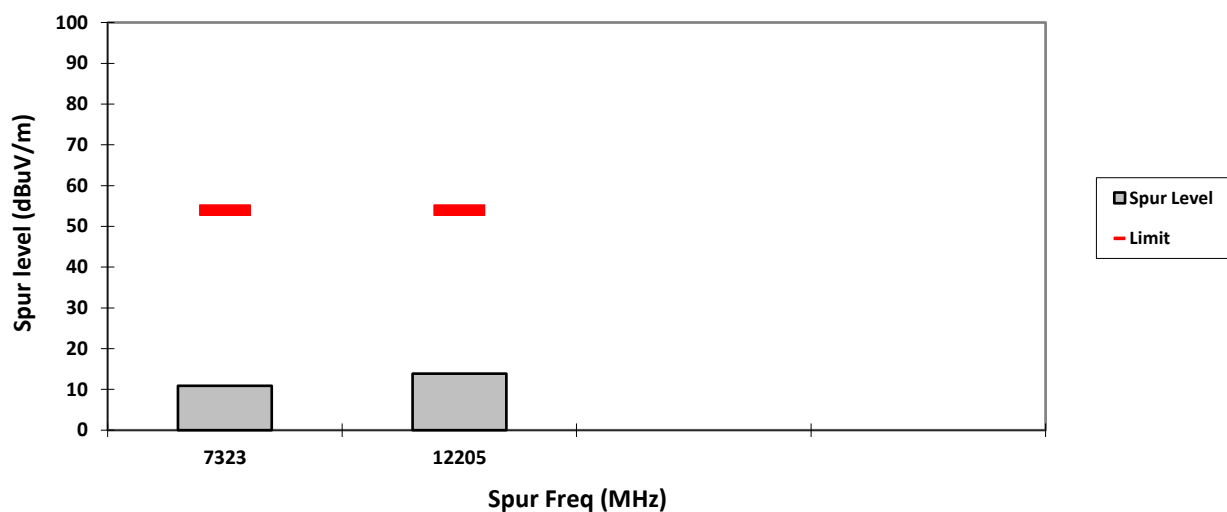
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: Bluetooth SAC Transmitter Radiated Emission	EMC SR ID: 0875N00-EMC-00074
Model Number: H55TGT9PW8BN	S/N: 437ZBG0592
Battery: PMNN4895A	Softpot power: 10
Accessory: AN000297A01	
Test Channel: High	Test Frequency: 2480.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: X-Plane
Modulation: GFSK	

Radiated Emission (High Channel) tabular data

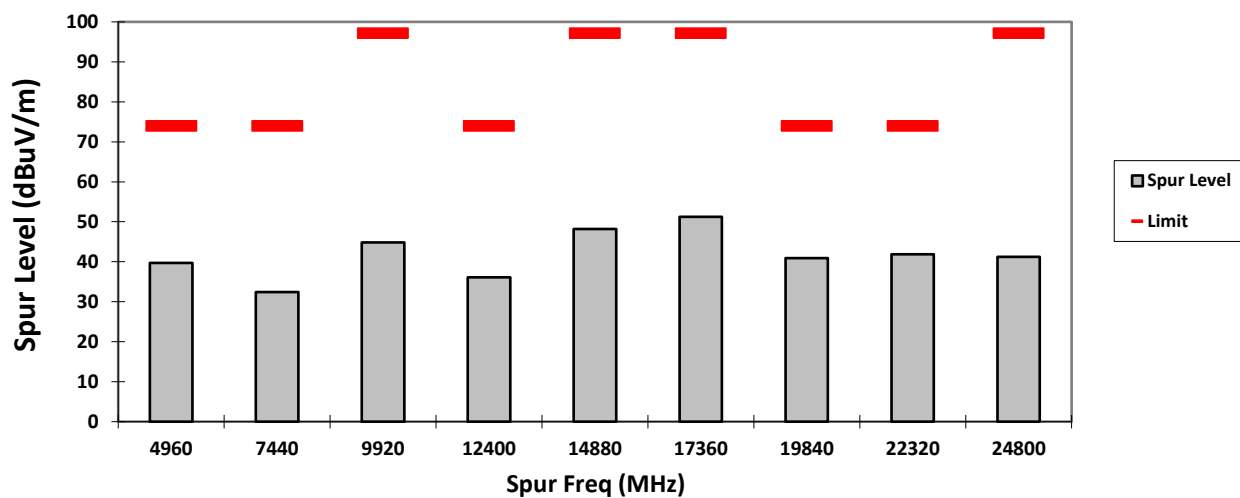
[illegible]

Remarks: Pass Result	Marginal Result	Fail Result
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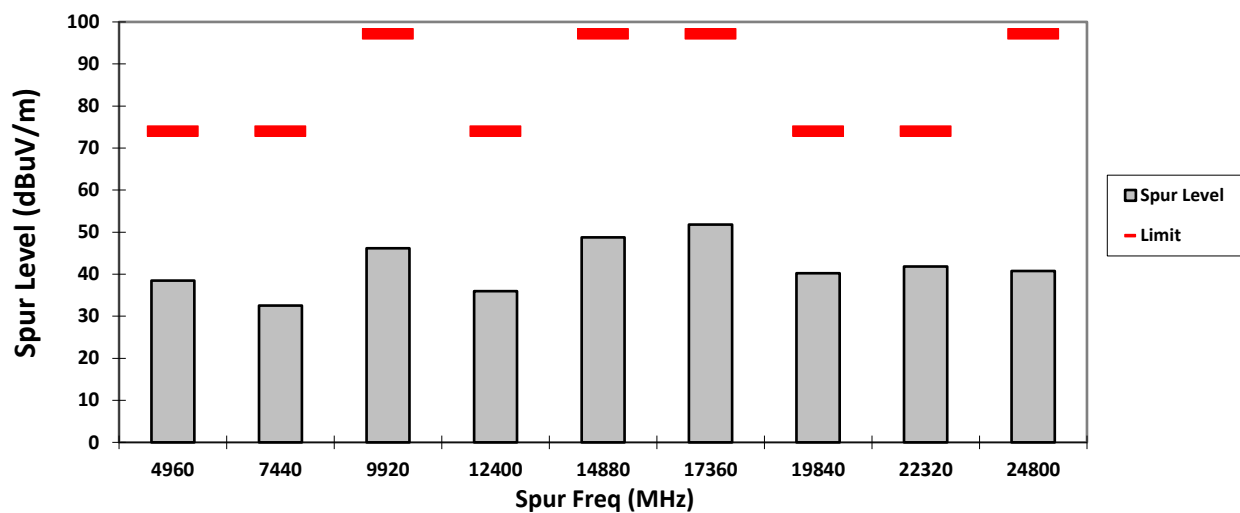
Temperature (degC): 23.4 Humidity (%): 68.6
Test Performed by: Rezza & Fuad Test Date: Sun, 18 May, 2025
System MU: 6.00 dB (30-1000MHz), 5.14 dB (1000-18000MHz), 5.36 dB (18000MHz-40000MHz)

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

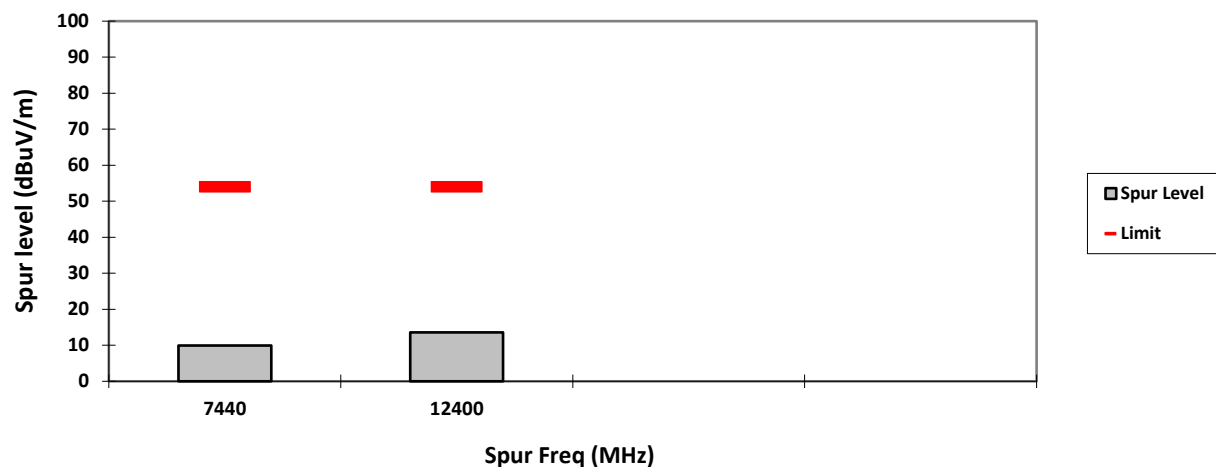
VERTICAL, PK



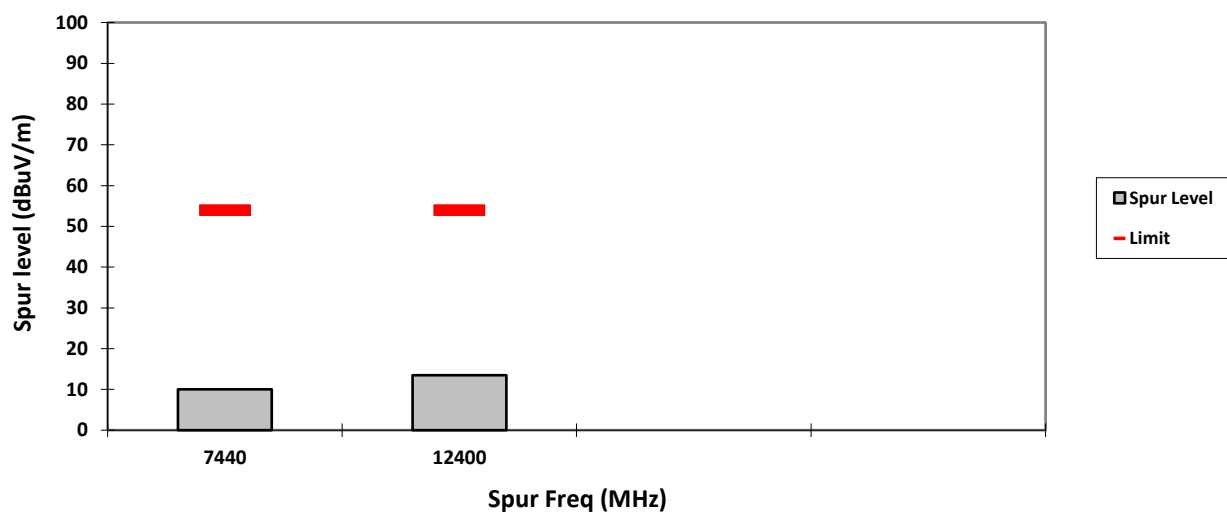
HORIZONTAL, PK



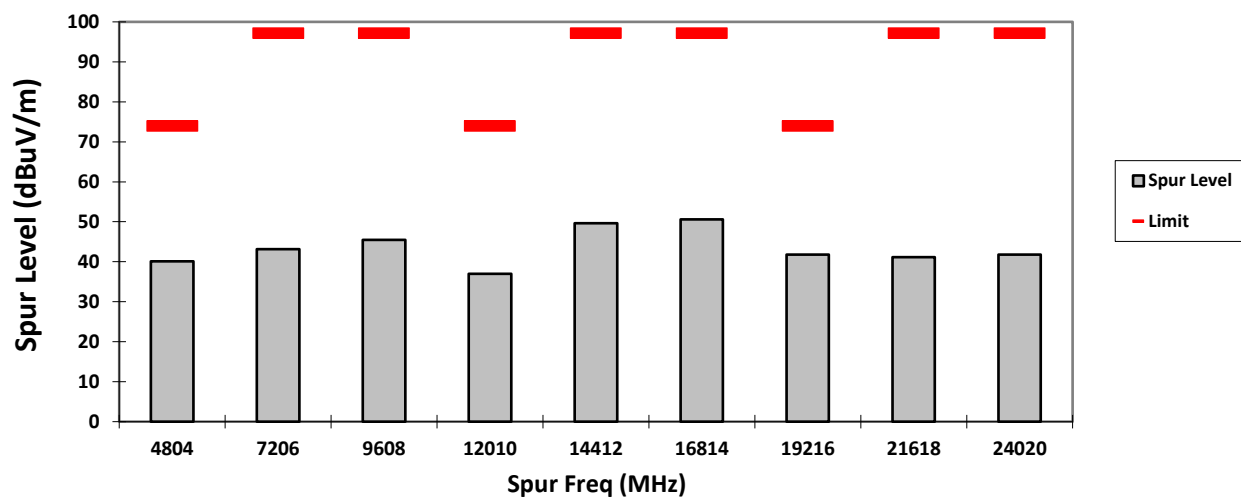
VERTICAL, AV



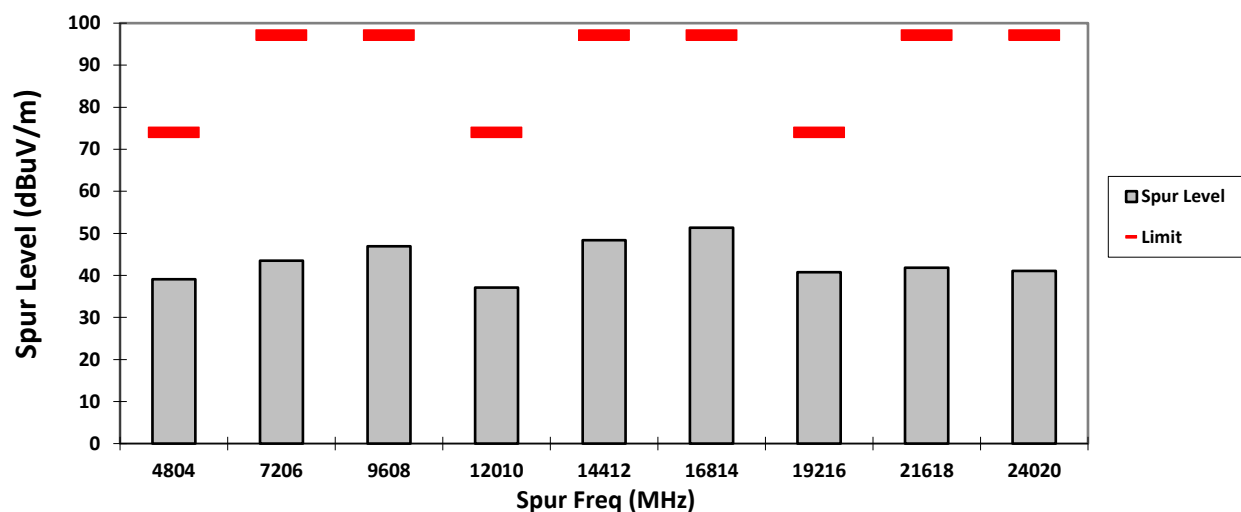
HORIZONTAL, AV



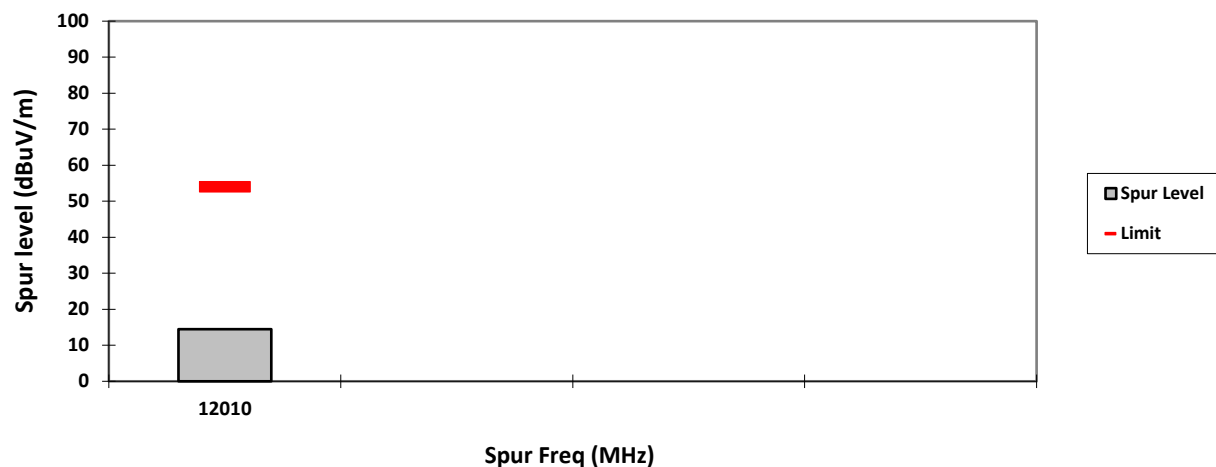
VERTICAL, PK



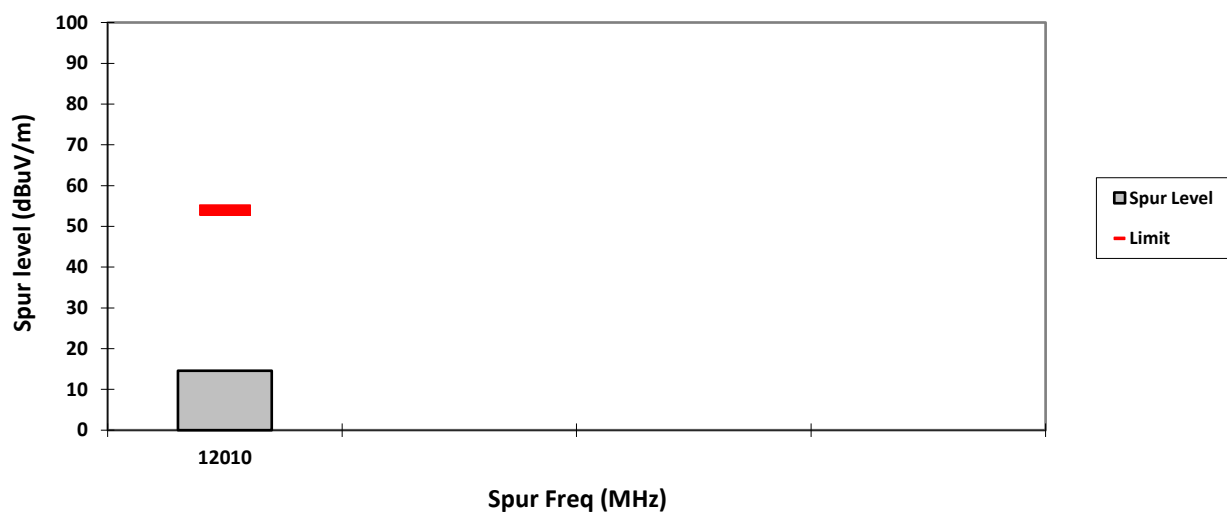
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: Bluetooth SAC Transmitter Radiated Emission	EMC SR ID: 0875N00-EMC-00074
Model Number: H55TGT9PW8BN	S/N: 437ZBG0592
Battery: PMNN4895A	Softpot power: 10
Accessory: AN000297A01	
Test Channel: Mid	Test Frequency: 2441.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: X-Plane
Modulation: Pi4/DQPSK	

Radiated Emission (Mid Channel) tabular data

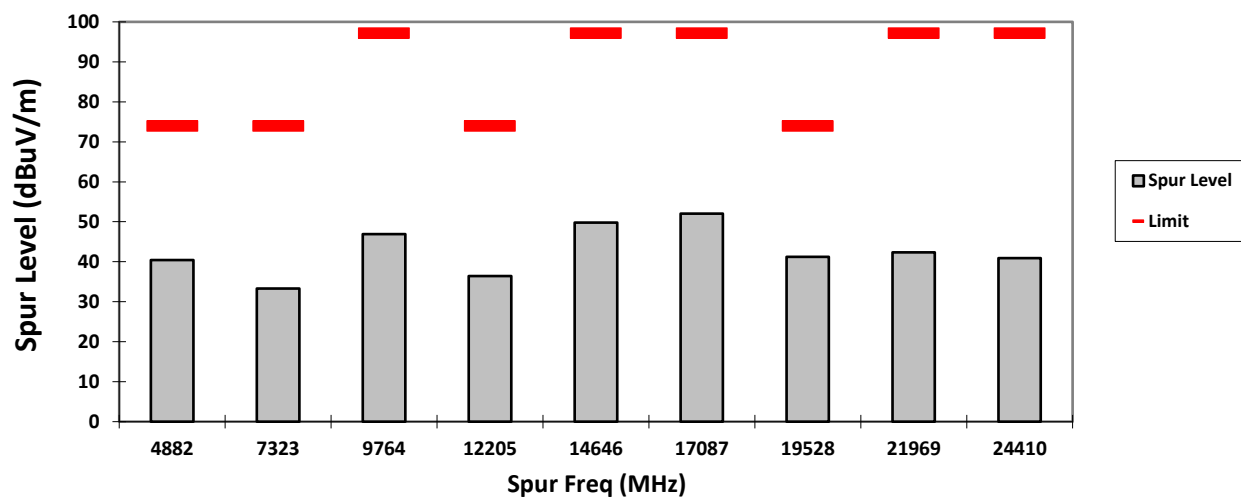
[illegible]

Remarks: Pass Result	Marginal Result	Fail Result
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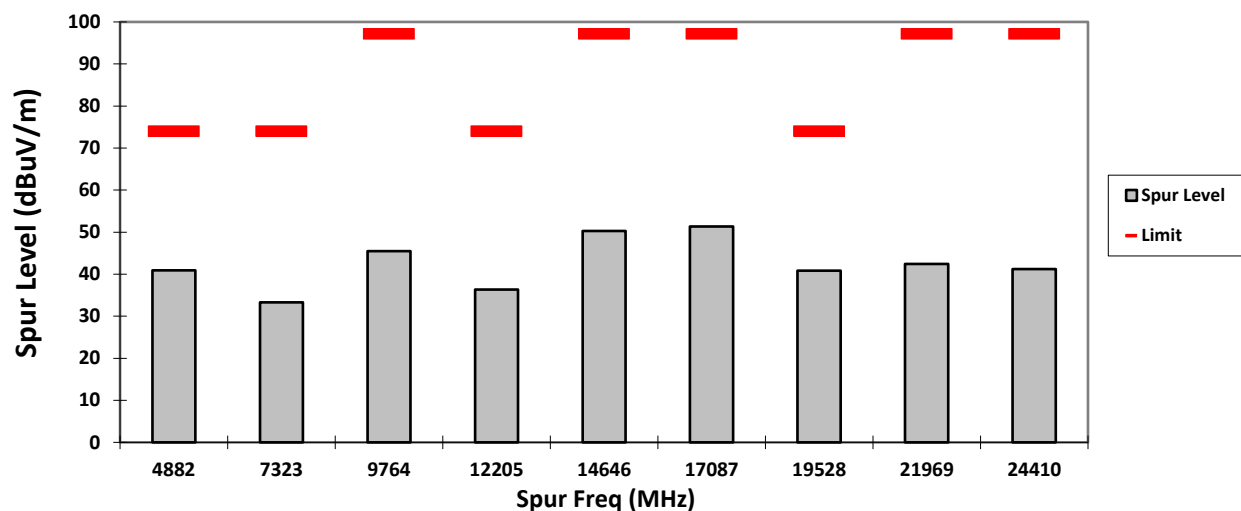
Temperature (degC): 23.4 Humidity (%): 68.6
Test Performed by: Rezza & Fuad Test Date: Sun, 18 May, 2025
System MU: 6.00 dB (30-1000MHz), 5.14 dB (1000-18000MHz), 5.36 dB (18000MHz-40000MHz)

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

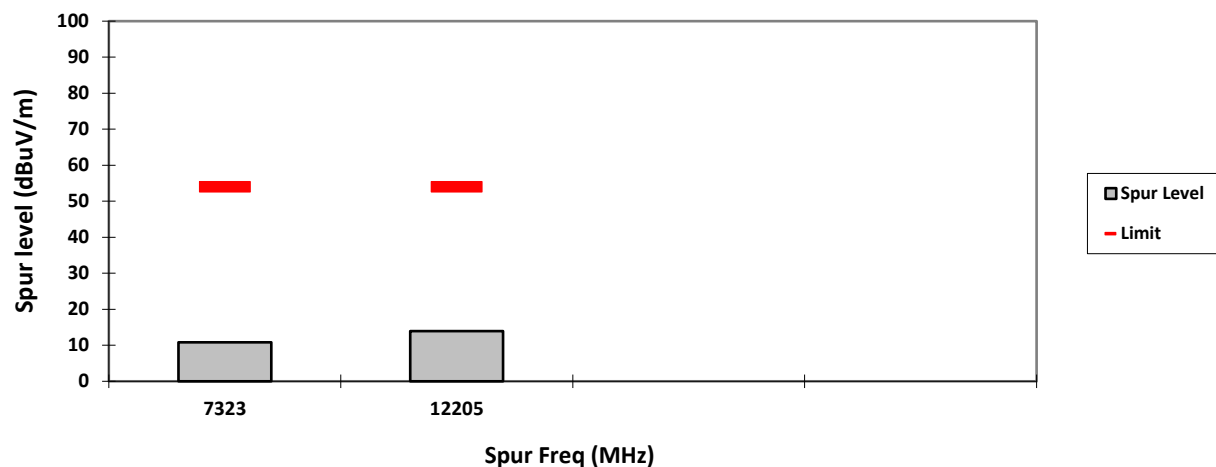
VERTICAL, PK



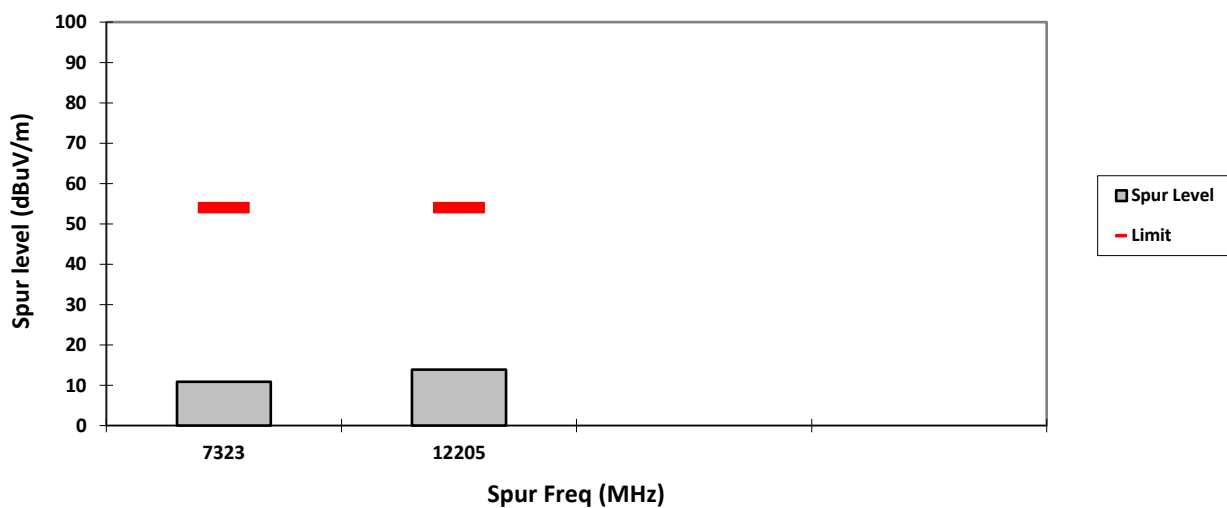
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: Bluetooth SAC Transmitter Radiated Emission	EMC SR ID: 0875N00-EMC-00074
Model Number: H55TGT9PW8BN	S/N: 437ZBG0592
Battery: PMNN4895A	Softpot power: 10
Accessory: AN000297A01	
Test Channel: High	Test Frequency: 2480.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: X-Plane
Modulation: Pi4/DQPSK	

Radiated Emission (High Channel) tabular data

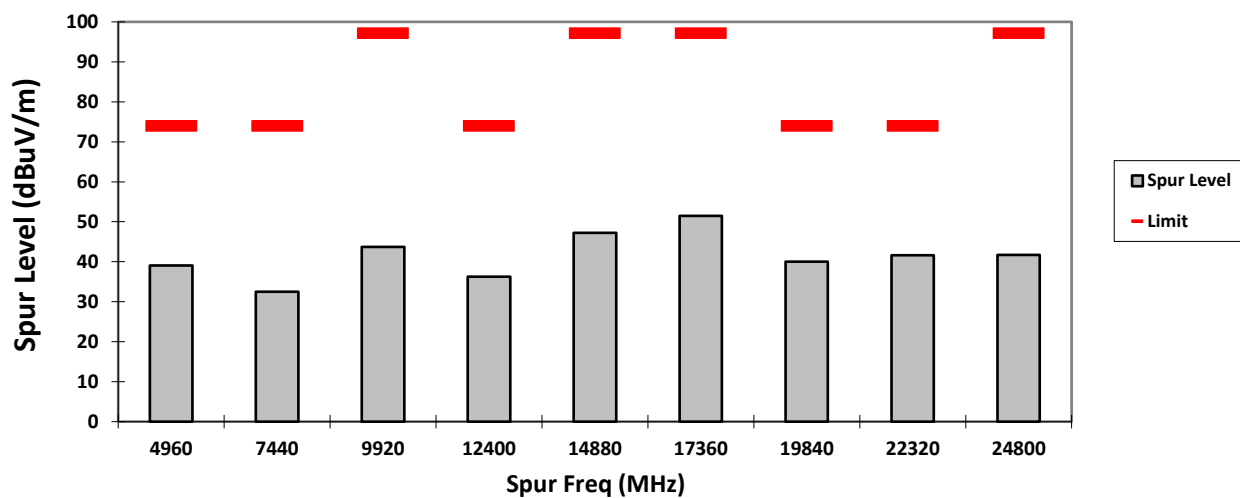
[illegible]

Remarks: Pass Result	Marginal Result	Fail Result
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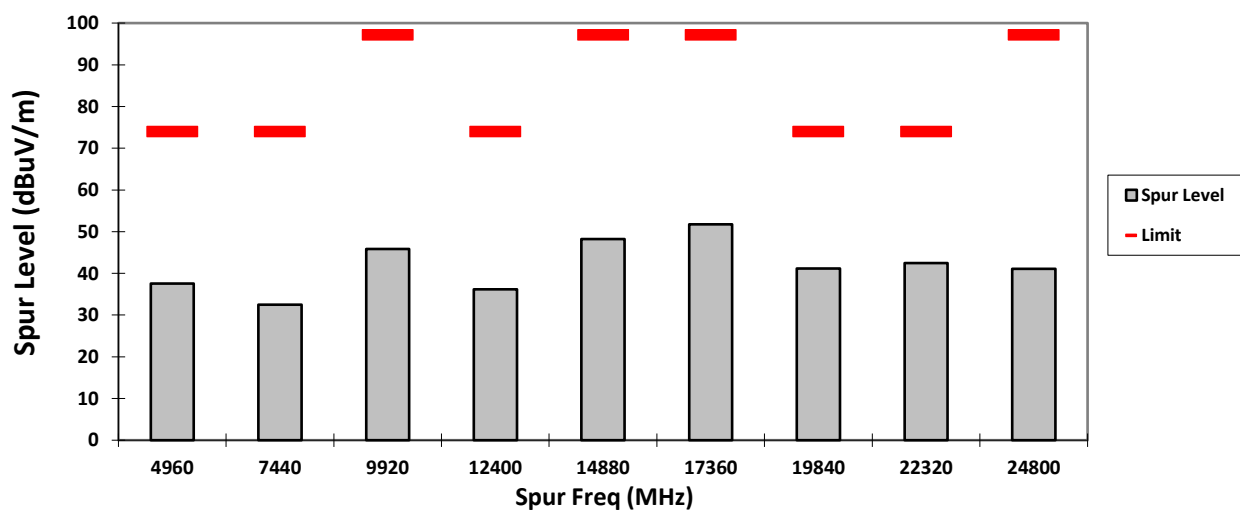
Temperature (degC): 23.4 Humidity (%): 68.6
Test Performed by: Rezza & Fuad Test Date: Sun, 18 May, 2025
System MU: 6.00 dB (30-1000MHz), 5.14 dB (1000-18000MHz), 5.36 dB (18000MHz-40000MHz)

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

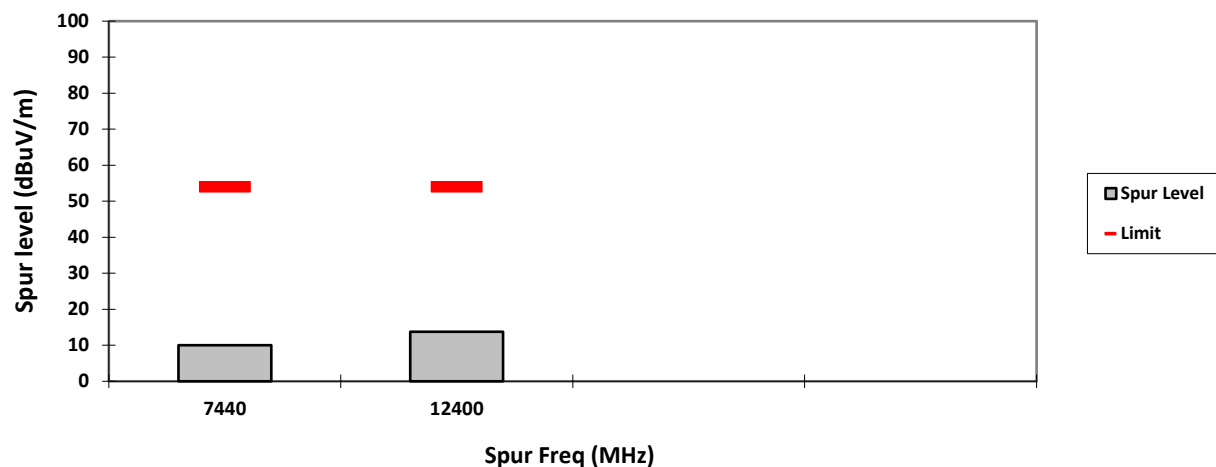
VERTICAL, PK



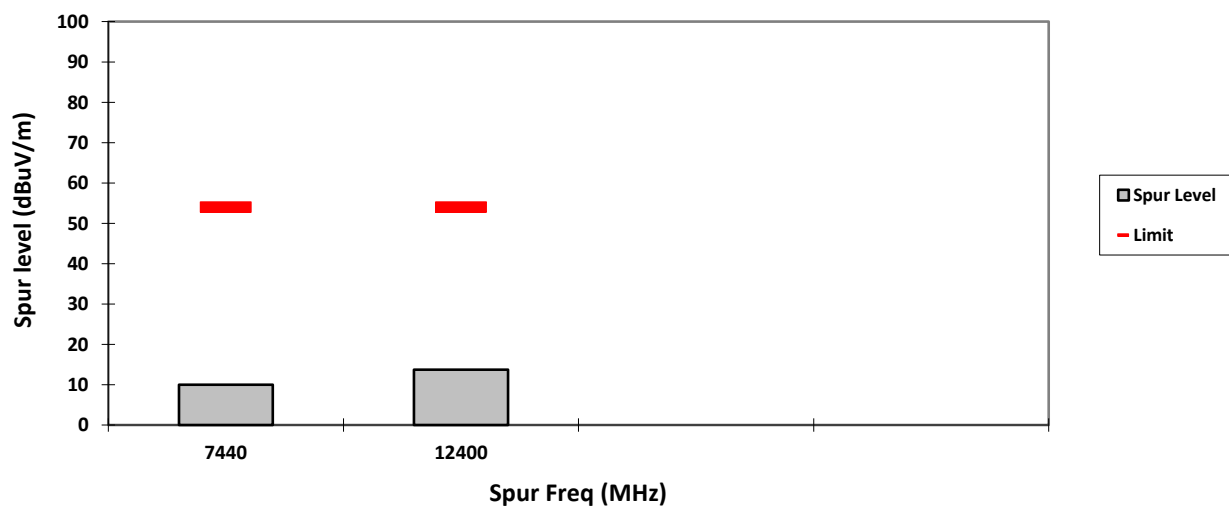
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: Bluetooth SAC Transmitter Radiated Emission	EMC SR ID: 0875N00-EMC-00074
Model Number: H55TGT9PW8BN	S/N: 437ZBG0592
Battery: PMNN4895A	Softpot power: 10
Accessory: AN000297A01	
Test Channel: Low	Test Frequency: 2402.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: X-Plane
Modulation: 8DPSK	

Radiated Emission (Low Channel) tabular data

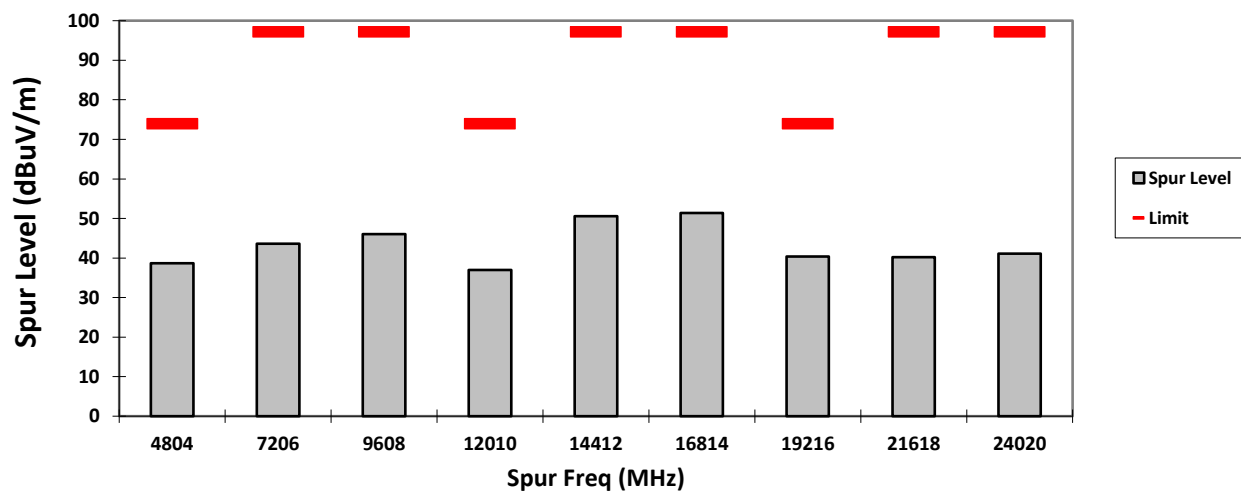
[illegible]

Remarks: Pass Result	Marginal Result	Fail Result
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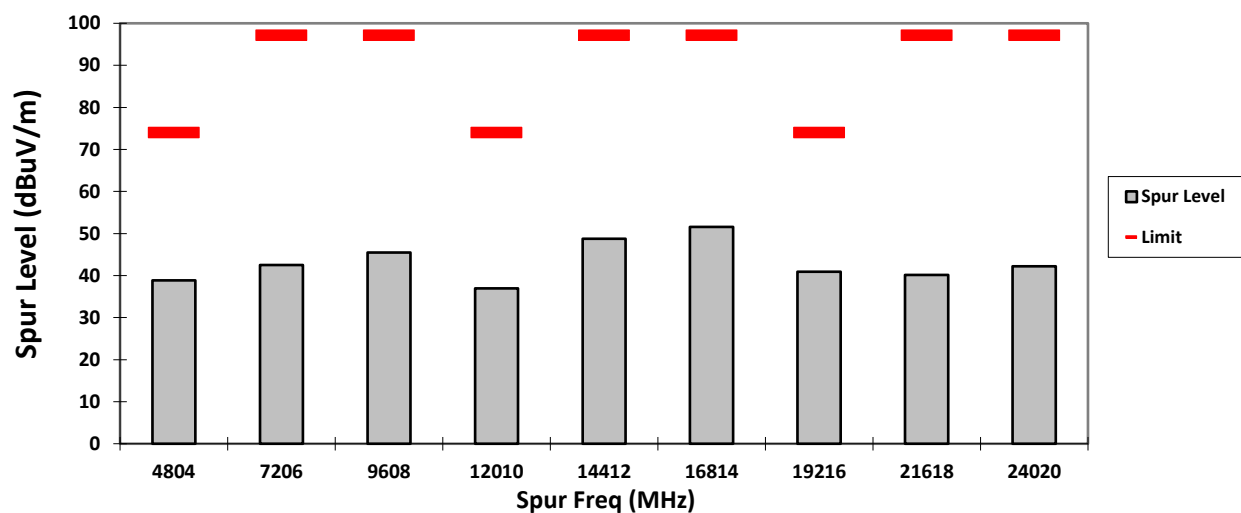
Temperature (degC): 23.4 Humidity (%): 68.6
Test Performed by: Rezza & Fuad Test Date: Sun, 18 May, 2025
System MU: 6.00 dB (30-1000MHz), 5.14 dB (1000-18000MHz), 5.36 dB (18000MHz-40000MHz)

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

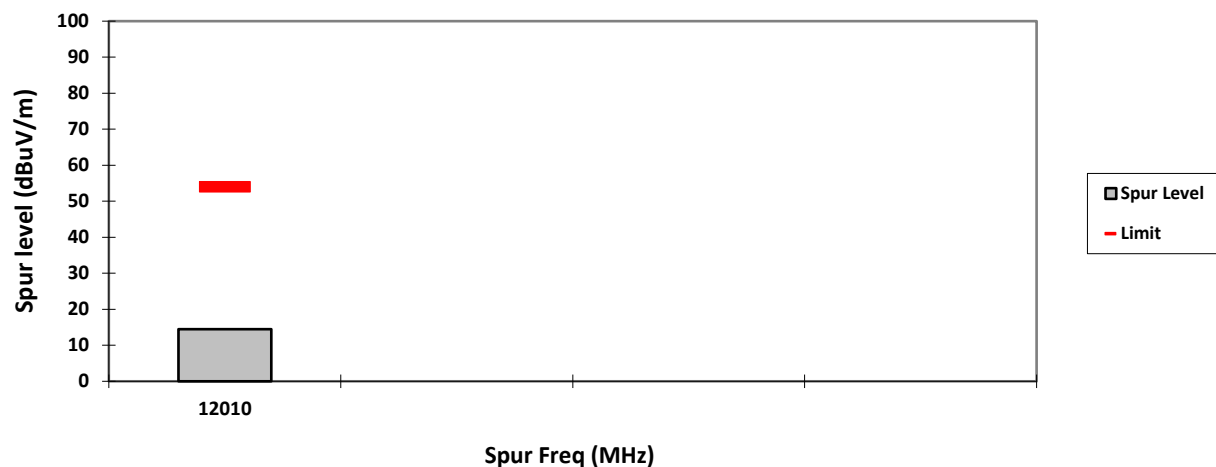
VERTICAL, PK



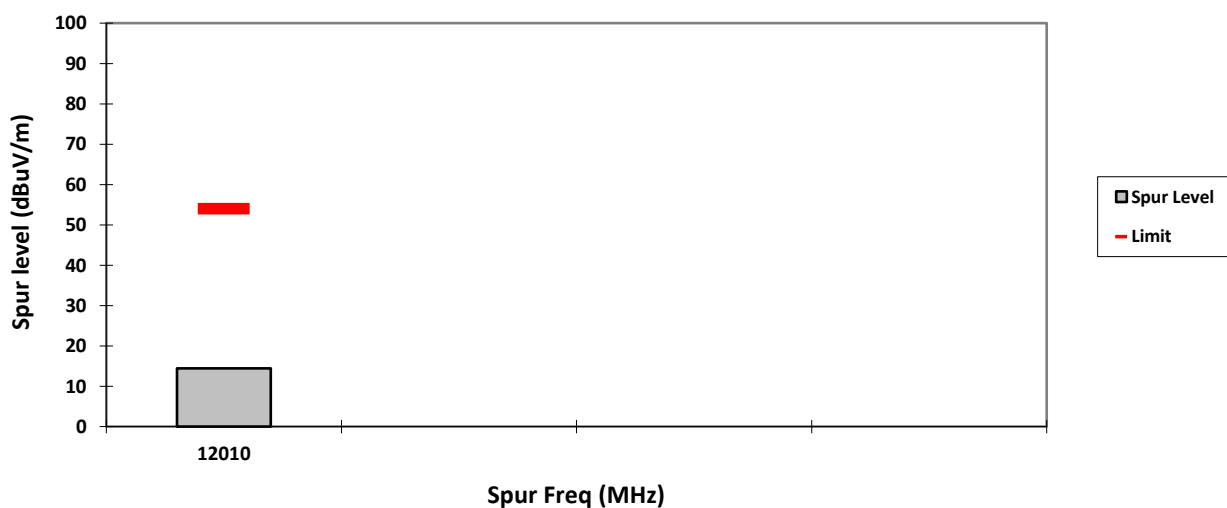
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: Bluetooth SAC Transmitter Radiated Emission	EMC SR ID: 0875N00-EMC-00074
Model Number: H55TGT9PW8BN	S/N: 437ZBG0592
Battery: PMNN4895A	Softpot power: 10
Accessory: AN000297A01	
Test Channel: Mid	Test Frequency: 2441.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: X-Plane
Modulation: 8DPSK	

Radiated Emission (Mid Channel) tabular data

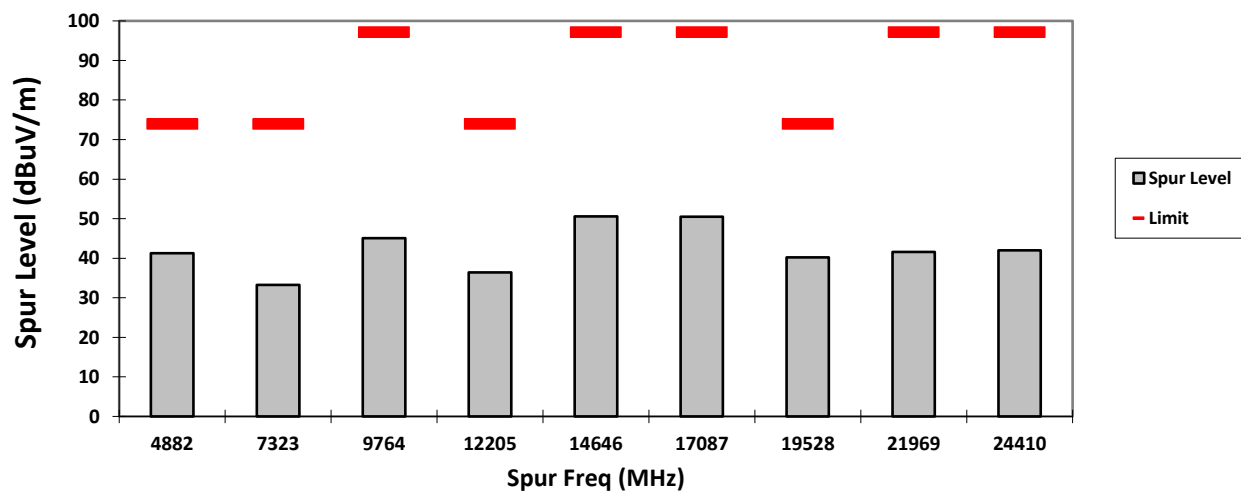
[illegible]

Remarks: Pass Result	Marginal Result	Fail Result
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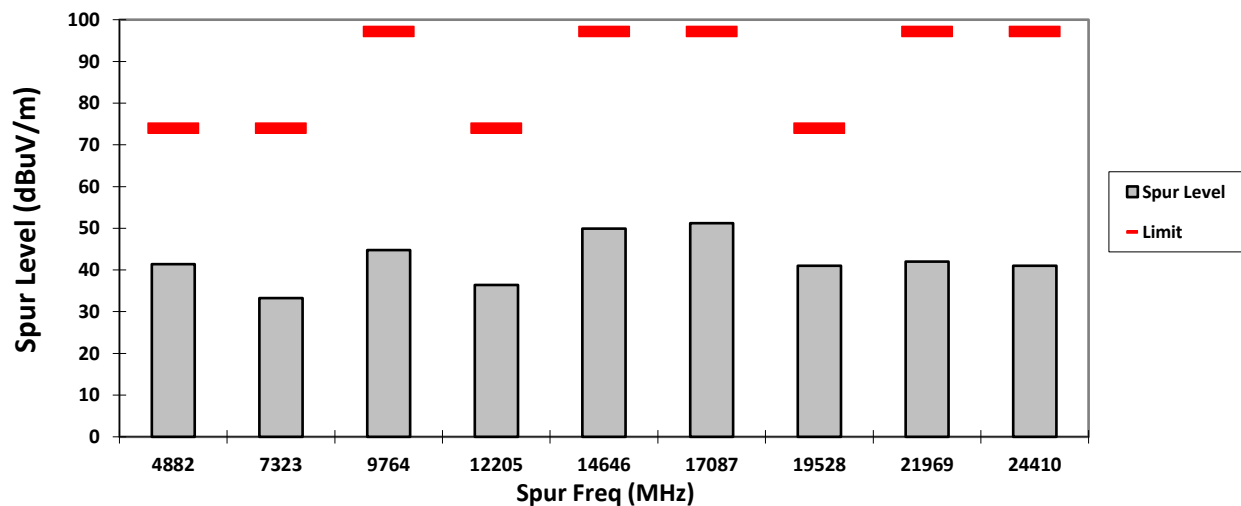
Temperature (degC): 23.4 Humidity (%): 68.6
Test Performed by: Rezza & Fuad Test Date: Sun, 18 May, 2025
System MU: 6.00 dB (30-1000MHz), 5.14 dB (1000-18000MHz), 5.36 dB (18000MHz-40000MHz)

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

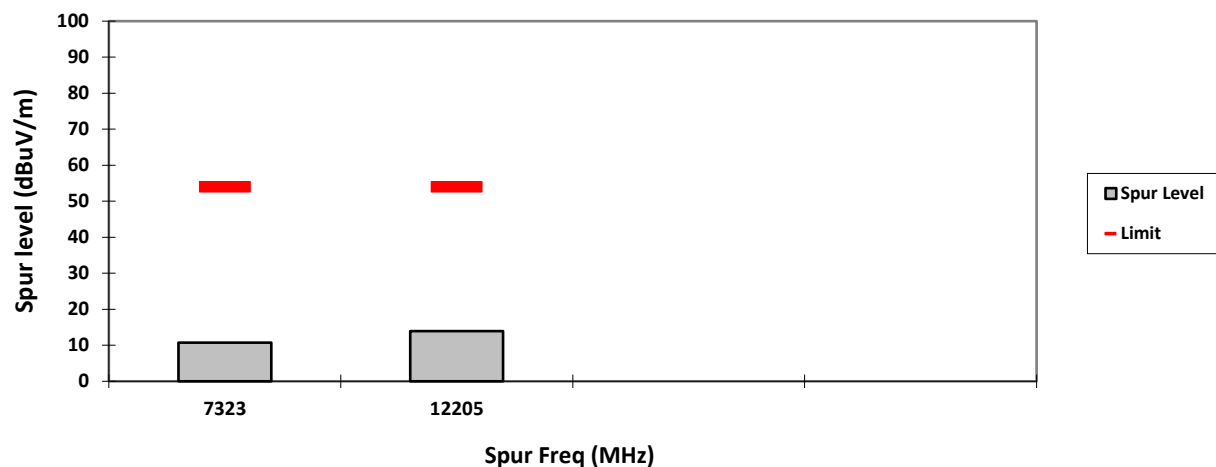
VERTICAL, PK



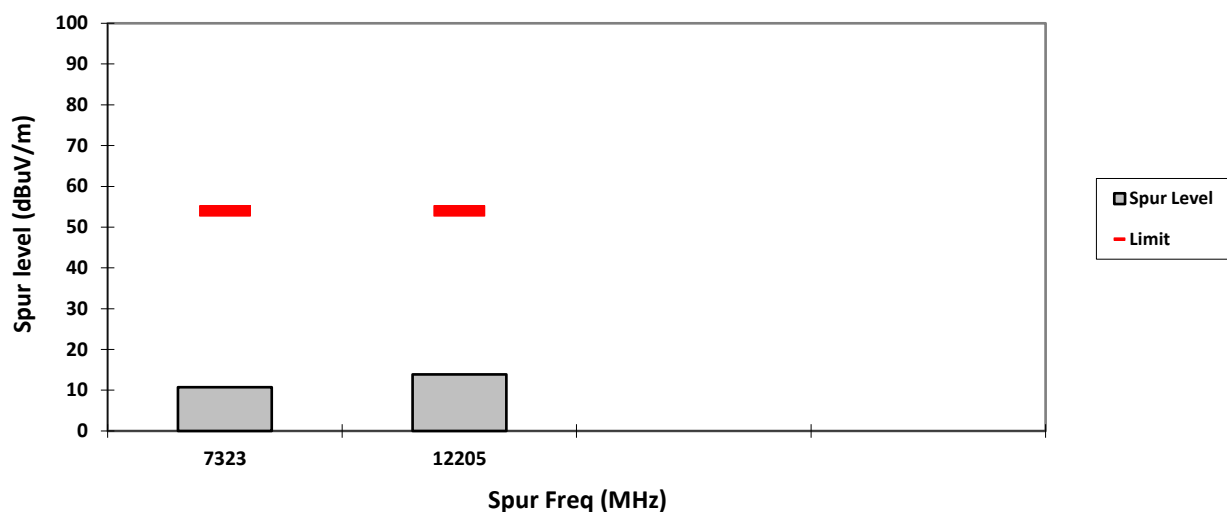
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: Bluetooth SAC Transmitter Radiated Emission	EMC SR ID: 0875N00-EMC-00074
Model Number: H55TGT9PW8BN	S/N: 437ZBG0592
Battery: PMNN4895A	Softpot power: 10
Accessory: AN000297A01	
Test Channel: High	Test Frequency: 2480.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: X-Plane
Modulation: 8DPSK	

Radiated Emission (High Channel) tabular data

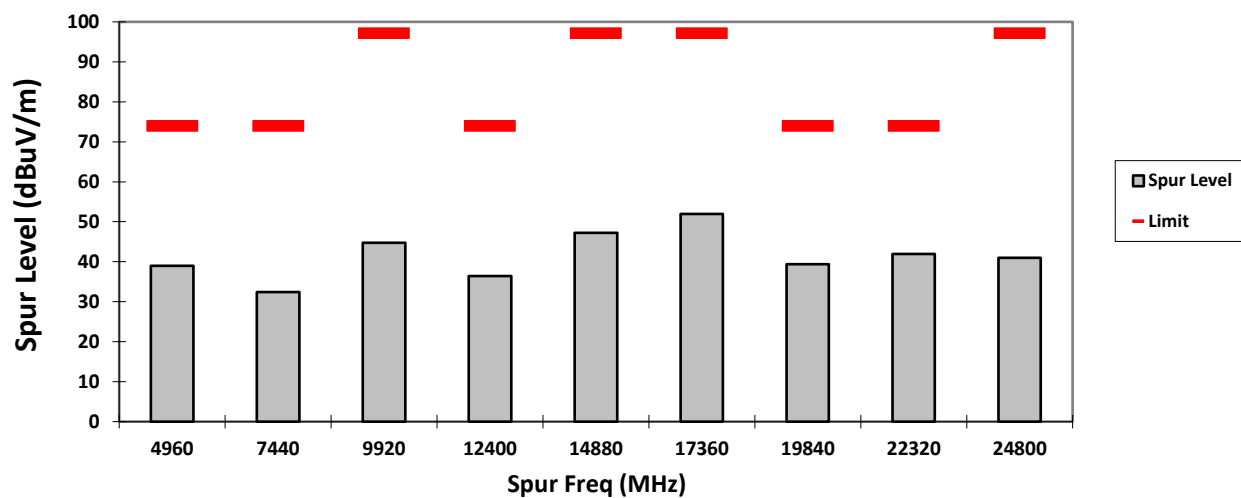
[illegible]

Remarks: Pass Result	Marginal Result	Fail Result
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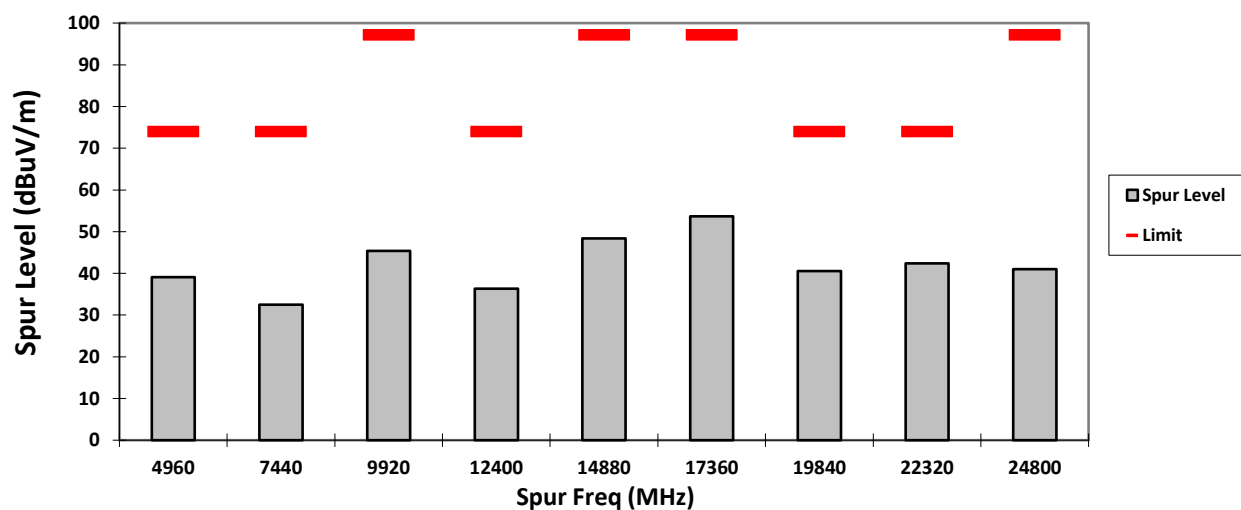
Temperature (degC): 23.4 Humidity (%): 68.6
Test Performed by: Rezza & Fuad Test Date: Sun, 18 May, 2025
System MU: 6.00 dB (30-1000MHz), 5.14 dB (1000-18000MHz), 5.36 dB (18000MHz-40000MHz)

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

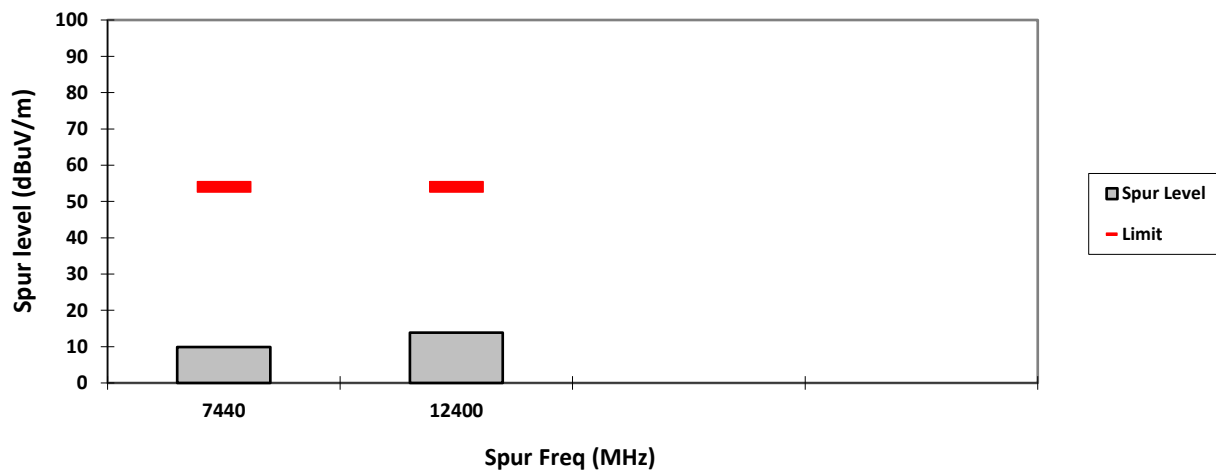
VERTICAL, PK



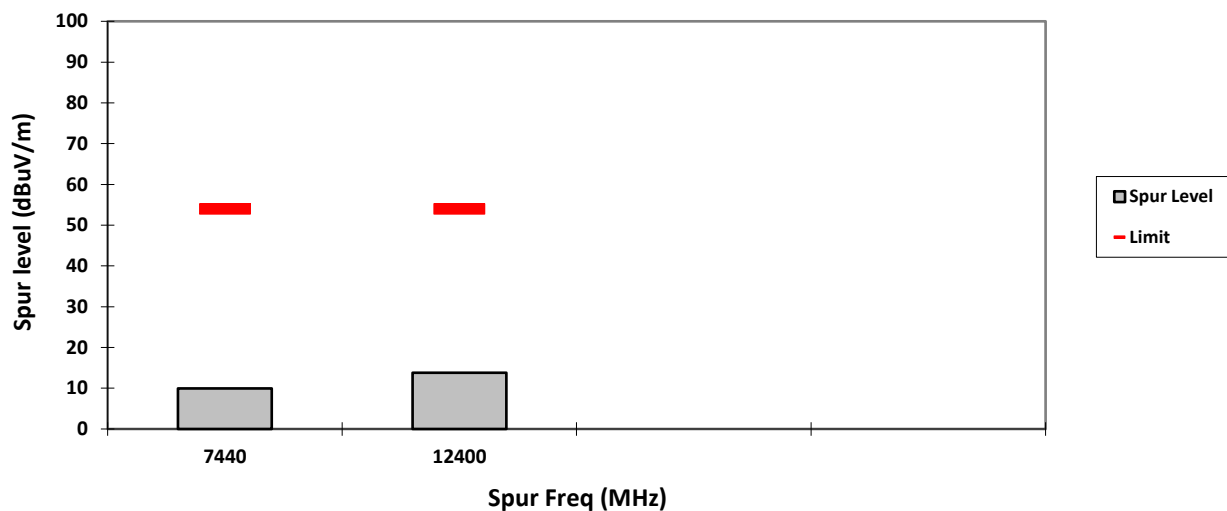
HORIZONTAL, PK



VERTICAL, AV



HORIZONTAL, AV



Test: Bluetooth SAC Transmitter Radiated Emission	EMC SR ID: 0875N00-EMC-00108
Model Number: H55TGT9PW8BN	S/N: 437ZBG0592, 437ZBG0594, 437ZBG0577
Battery: PMNN4895A	Softpot power: 10
Accessory: AN000297A01, NNTN9115A (PS000337A01-C3, 3087791G01)	
Test Channel: Mid	Test Frequency: 2441.0000 MHz
Test Standard: ANSI C63.10-2013	Worst Case Plane: Y-Plane
Modulation: GFSK	

Radiated Emission (Mid Channel) tabular data

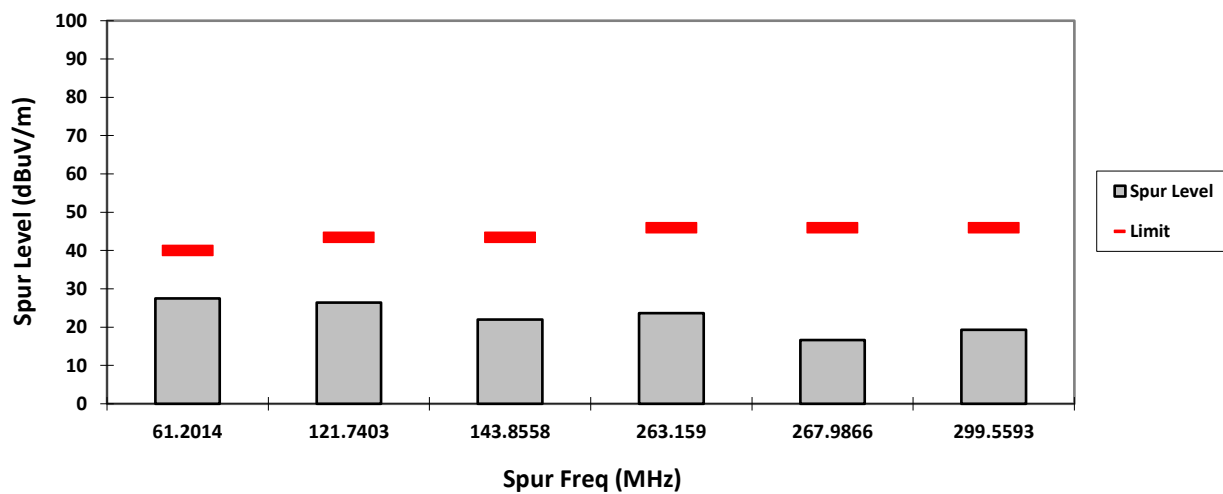
[illegible]

Remarks: Pass Result	Marginal Result	Fail Result
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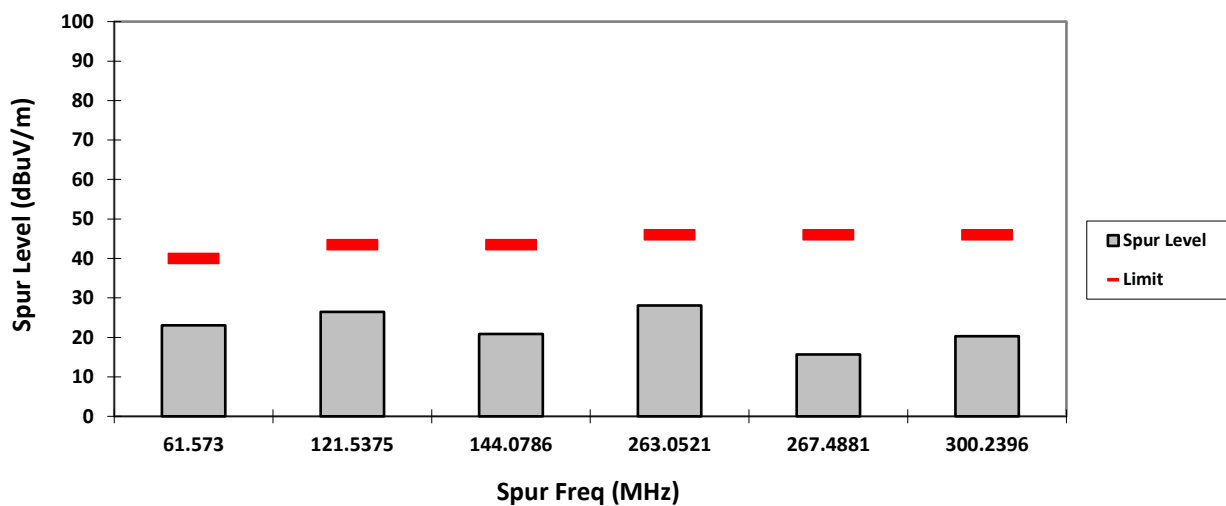
Temperature (degC): 23.1 Humidity (%): 68.4
Test Performed by: Nazrin & Fuad Test Date: Sun, 13 Jul, 2025
System MU: 6.00 dB (30-1000MHz), 5.14 dB (1000-18000MHz), 5.36 dB (18000MHz-40000MHz)

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

VERTICAL, QPK



HORIZONTAL, QPK



6.9.2. Test Limits:

For AC Power Line Conducted Test Limit can be Class A or B depends on product classification.

**Limits for conducted disturbance at the mains ports
of class A ITE**

Frequency range MHz	Limits dB(μV)	
	Quasi-peak	Average
0,15 to 0,50	79	66
0,50 to 30	73	60
NOTE The lower limit shall apply at the transition frequency.		

Table 1: Limits for Conducted Disturbance at the Mains Ports of Class A ITE.

**Limits for conducted disturbance at the mains ports
of class B ITE**

Frequency range MHz	Limits dB(μV)	
	Quasi-peak	Average
0,15 to 0,50	66 to 56	56 to 46
0,50 to 5	56	46
5 to 30	60	50
NOTE 1 The lower limit shall apply at the transition frequencies. NOTE 2 The limit decreases linearly with the logarithm of the frequency in the range 0,15 MHz to 0,50 MHz.		

Table 2: Limits for Conducted Disturbance at the Mains Ports of Class B ITE

6.9.3. Test Result

Test Data

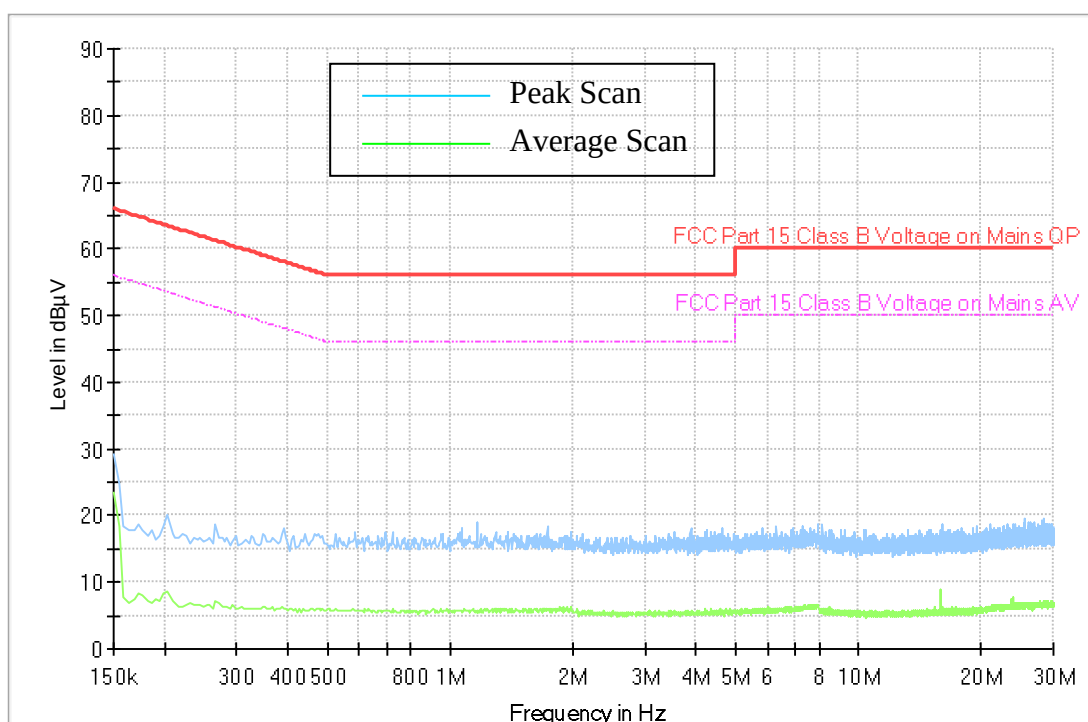
EUT Information

Report ID:	0875N00-EMC-00108
Temperature:	21.3 °C
Humidity:	57.4 %RH
Tester:	Afiegah
Date of Test:	12 July 2025

120 VAC, 60Hz

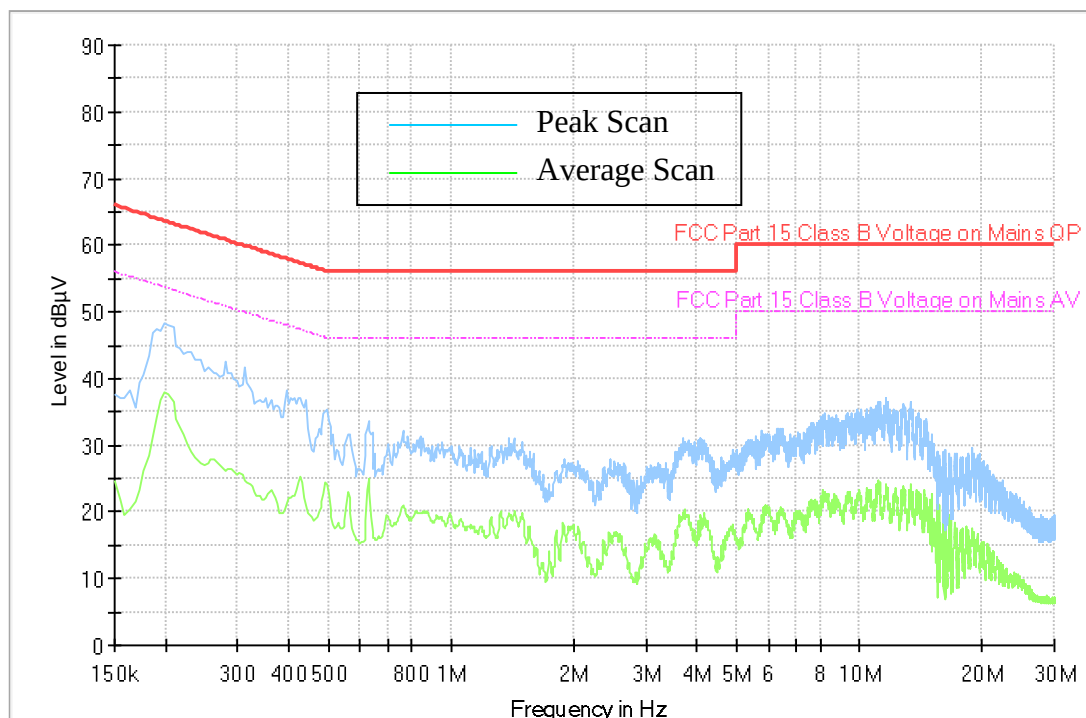
1) Ambient

Full Spectrum



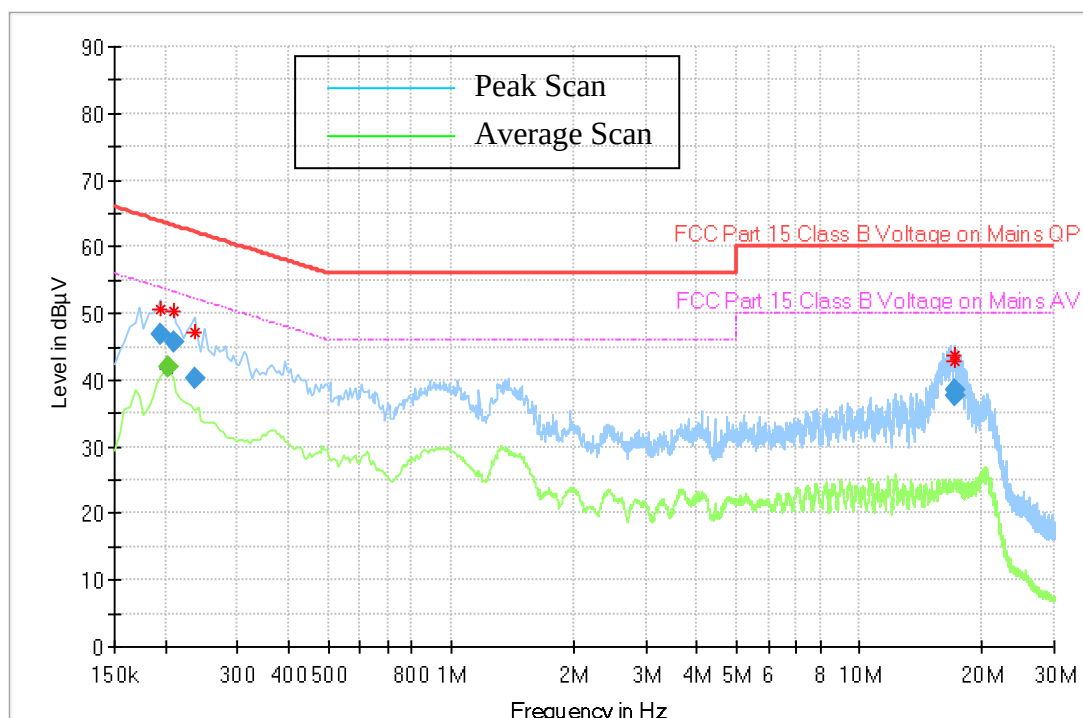
2) Charger Alone

Full Spectrum



3) Charger + Radio Off

Full Spectrum

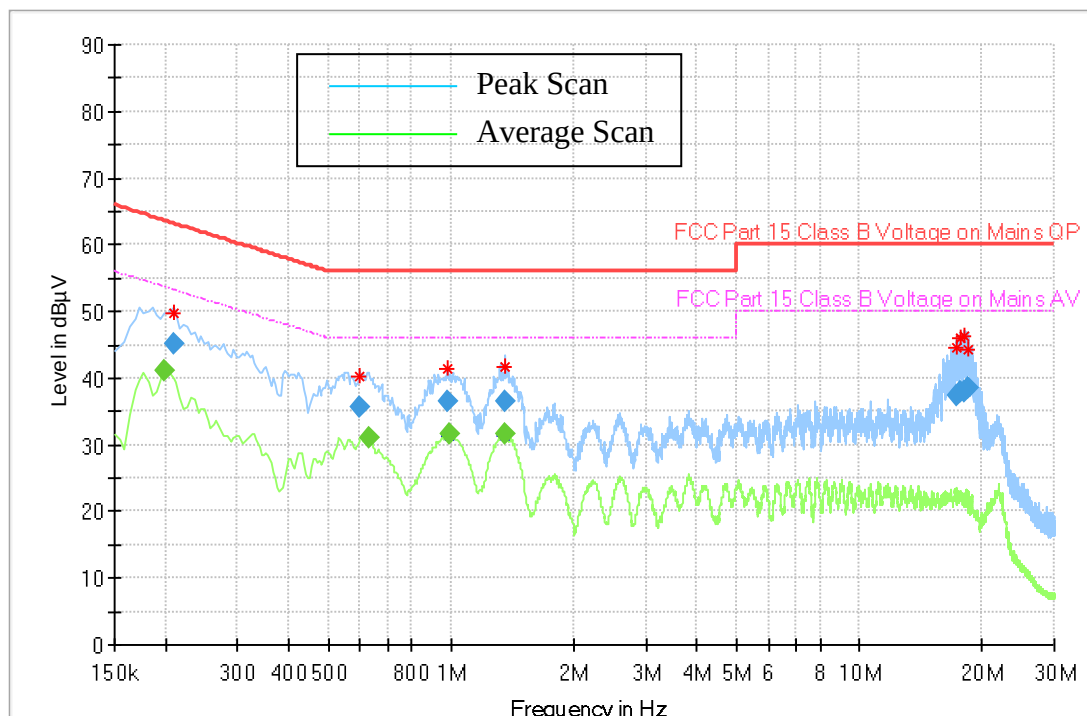


QuasiPeak and Average Measurement

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
0.195000	47.00	---	63.82	16.83	N	ON	10.3
0.204000	---	41.91	53.45	11.54	N	ON	10.3
0.208500	45.60	---	63.27	17.66	N	ON	10.3
0.235500	40.38	---	62.25	21.88	L1	ON	10.3
17.142000	38.59	---	60.00	21.41	L1	ON	10.8
17.209500	37.74	---	60.00	22.26	L1	ON	10.8

4) Charger + Radio Standby

Full Spectrum

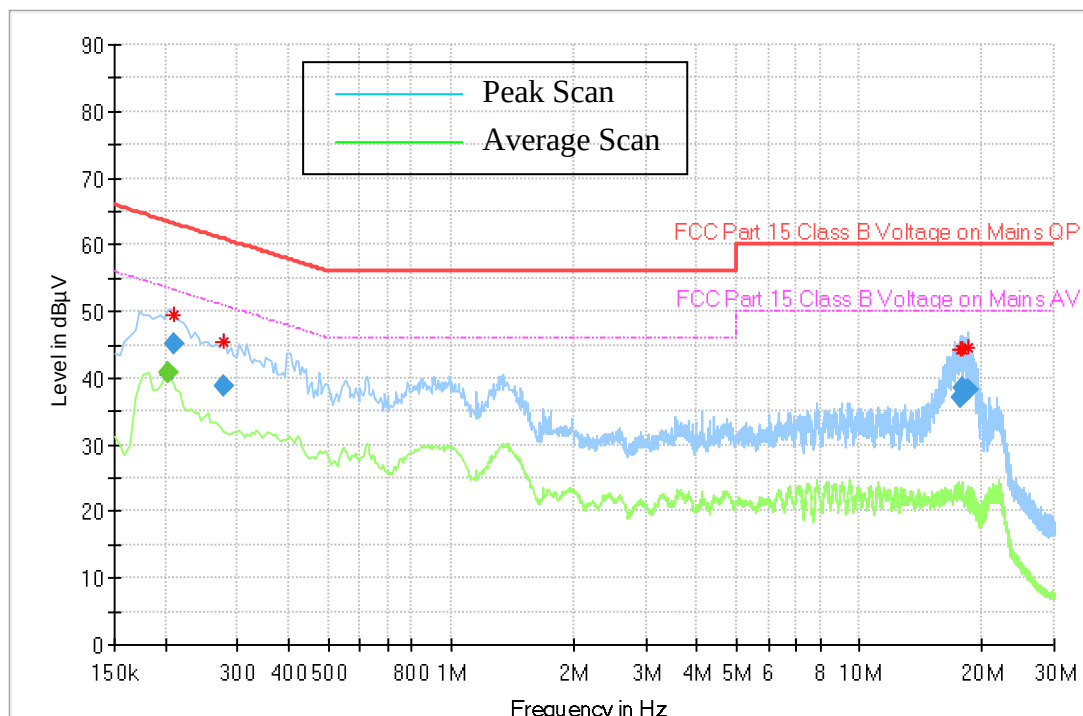


QuasiPeak and Average Measurement

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
0.199500	---	41.01	53.63	12.62	N	ON	10.3
0.208500	45.19	---	63.27	18.07	N	ON	10.3
0.600000	35.73	---	56.00	20.27	N	ON	10.3
0.627000	---	31.16	46.00	14.84	N	ON	10.3
0.978000	36.46	---	56.00	19.54	N	ON	10.3
0.987000	---	31.54	46.00	14.46	N	ON	10.3
1.356000	36.57	---	56.00	19.43	N	ON	10.3
1.360500	---	31.49	46.00	14.51	N	ON	10.3
17.223000	37.48	---	60.00	22.52	L1	ON	10.8
17.601000	37.89	---	60.00	22.11	N	ON	11.0
17.992500	38.01	---	60.00	21.99	N	ON	11.0
18.447000	38.42	---	60.00	21.58	L1	ON	10.8

5) Charger + Radio TX BT GFSK

Full Spectrum



QuasiPeak and Average Measurement

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
0.204000	---	40.75	53.45	12.70	N	ON	10.3
0.208500	45.15	---	63.27	18.12	N	ON	10.3
0.276000	38.85	---	60.94	22.08	L1	ON	10.3
17.601000	37.21	---	60.00	22.79	N	ON	11.0
17.938500	38.48	---	60.00	21.52	L1	ON	10.8
18.429000	38.23	---	60.00	21.77	L1	ON	10.8

END OF TEST REPORT