Regulatory Test Report

Prepared for Harman International Industries, Inc.

This report presents detailed information on

INFO3.6 CSM

Prepared by

Aravind Buddana

Engineer II

Approved by

Jason Kanakry

General Manager

Issue date: 07/20/2023

Report No: AH22100701-HAR-053-TR3 v4

Contents

1. Test Request Information

Test Request #:	7700182604
Test Requested By:	Mark Bowman Harman International Industries, Inc. 30001 Cabot Drive, Novi, MI 48377
Test item Description:	INFO3.6 CSM
Part Number:	8457687
DUT Sample Number:	AH22100701-HAR-053#1, AH22100701-HAR-053#4, AH22100701-HAR-053#5
Hardware Version of DUT:	PV
Software Version of DUT:	17.80.200.219
Component Category of DUT:	N/A
FCC ID:	2AHPN-BE2866
ISED ID:	6434C-BE2866
Type of Test:	FCC/ISED Certification
Test Method:	CFR Title 47 FCC Part 15.247, ISED Canada RSS-247 Issue 2, ISED Canada RSS-Gen Issue 5 and ANSI C63.10-2013, KDB 558074 D01 15.247 Meas Guidance v05r02
Deviations from standard:	None
Approved Test Plan Number:	N/A
Test Plan Revision:	N/A
Date test Sample Received:	10-07-2022
Date Test Started:	12-08-2022
Date Test Finished:	05-10-2023

2. Test Laboratory Information

Location of Test Lab:	The radiated and conducted emissions test sites are located at Bureau Veritas 815 N. Opdyke Rd #100, Auburn Hills, MI 48326, Phone: +1-248-836-4700
Key Contact:	Jason Kanakry (General Manager) Jason.Kanakry@BureauVeritas.com Phone: +1-248-836-4747
Laboratory Accreditations:	BUREAU VERITAS CONSUMER PRODUCTS SERVICES, INC is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories.
ISO/IEC 17025:2017:	5678.01
FCC Test Site Number:	US1278 (242530)
IC Test Site Number:	US0229 (26240)

3. Statement of Conformity

RSS-GEN	RSS 247	Part 15	Comments
6.4		15.15(b)	There are no controls accessible to the user that varies the output power to operate in violation of the regulatory requirements.
		15.19	The label shown in the label exhibit.
		15.21	Information to the user shown in the instruction manual exhibit.
		15.27	No special accessories are required for compliance.
3.2		15.31	The EUT tested in accordance with the measurement standards in this section.
6.13.2		15.33	Frequency range investigated according to this section, unless noted in specific rule section under which the equipment operates.
6.13.1		15.35	The EUT emissions measured using the measurement detector and bandwidth specified in this section, unless noted in specific rule section under which the equipment operates.
6.8		15.203	EUT employs integrated PCB antenna with 5.98dBi gain.
8.10		15.205 15.209	The fundamental is not in a Restricted band and the spurious and harmonic emissions in the Restricted bands comply with the general emission limits of 15.209 or RSS-Gen as applicable
8.8		15.207	N/A. EUT is vehicle battery powered only.

4. Conducted Testing

4.1 Test Summary

This test report supports an application for certification of a transmitter operating pursuant to:

CFR Title 47 FCC Part 15.247, ISED Canada RSS-247 Issue 2

The product is **INFO3.6 CSM** frequency hopping spread spectrum transmitter that operates in the 2402 – 2480 MHz frequency range.

Details	Description
Frequency Range (MHz)	2402 – 2480
Supported Modulation	GFSK, π/4 DQPSK, 8DPSK
Tested Modulation	GFSK (DH5), 8DPSK (3-DH5) - Highest Emissions
Number of Channels	79
Tested Channels	0,39,78
DUT Antenna Type	Integrated PCB antenna
Number of transmit chains	1
Equipment type	Frequency Hopping Spread Spectrum
Dwell Time	350ms
DUT Antenna Gain	5.98dBi ☒ Provided by Customer with Gain Report ☐ Not Provided by Customer
DUT Power Class/Power Settings	Power Class: 0 (MRVL_Class2) Power Level : 4 dBm
DUT Software Tool/Settings	BT_WLAN_Test_Tool_NXP_Chips_v2.4 tool used to configure device Bluetooth modes and data rates.

79 channels are provided for BT mode:

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		

Notes: The channels 0, 39 and 78 selected as representative test channels.

Test Results Summary

Test	Frequency (MHz)	DH1 Result	DH3 Result	DH5 Result	2-DH1 Result	2-DH3 Result	2-DH5 Result	3-DH1 Result	3-DH3 Result	3-DH5 Result
Hopping Frequencies	--- (hopping)	--	--	Pass	--	--	--	--	--	Pass
Band Edge High	--- (hopping)	--	--	Pass	--	--	--	--	--	Pass
Carrier Frequency Separation	2402.000 (hopping)	--	--	Pass	--	--	--	--	--	Pass
Carrier Frequency Separation	2480.000 (hopping)	--	--	Pass	--	--	--	--	--	Pass
Time of Channel Occupancy	2402.000 (hopping)	--	--	Pass	--	--	--	--	--	Pass
Time of Channel Occupancy	2441.000 (hopping)	--	--	Pass	--	--	--	--	--	Pass
Time of Channel Occupancy	2480.000 (hopping)	--	--	Pass	--	--	--	--	--	Pass
Emissions Bandwidth 20dB	2402.000 (single)	--	--	Pass	--	--	--	--	--	Pass
Occupied Channel Bandwidth 99%	2402.000 (single)	--	--	Pass	--	--	--	--	--	Pass
Band Edge Low	2402.000 (single)	--	--	Pass	--	--	--	--	--	Pass
Peak Output Power	2402.000 (single)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Tx Spurious	2402.000 (single)	--	--	Pass	--	--	--	--	--	Pass
Emissions Bandwidth 20dB	2441.000 (single)	--	--	Pass	--	--	--	--	--	Pass
Occupied Channel Bandwidth 99%	2441.000 (single)	--	--	Pass	--	--	--	--	--	Pass
Peak Output Power	2441.000 (single)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Tx Spurious	2441.000 (single)	--	--	Pass	--	--	--	--	--	Pass
Emissions Bandwidth 20dB	2480.000 (single)	--	--	Pass	--	--	--	--	--	Pass
Occupied Channel Bandwidth 99%	2480.000 (single)	--	--	Pass	--	--	--	--	--	Pass
Band Edge High	2480.000 (single)	--	--	Pass	--	--	--	--	--	Pass
Peak Output Power	2480.000 (single)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Tx Spurious	2480.000 (single)	--	--	Pass	--	--	--	--	--	Pass

Test Item	Sample #	Result
FCC 15.247 Bluetooth Classic	AH22100701-HAR-053#1	Meets Requirement

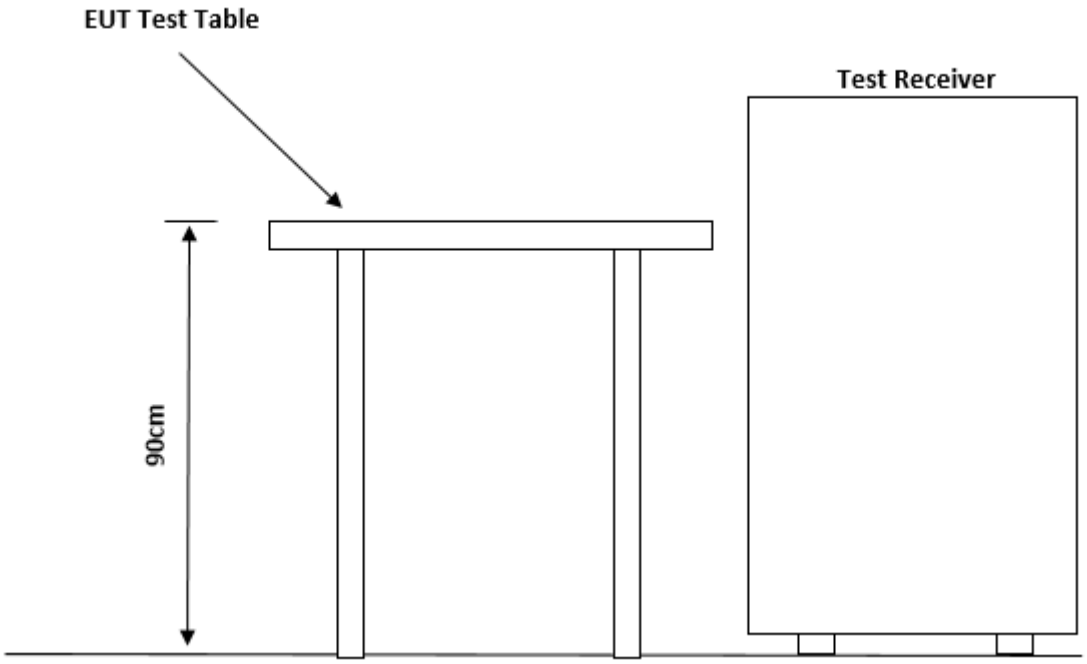
We found that the product met the above requirements without modification.

Test samples received in good condition.

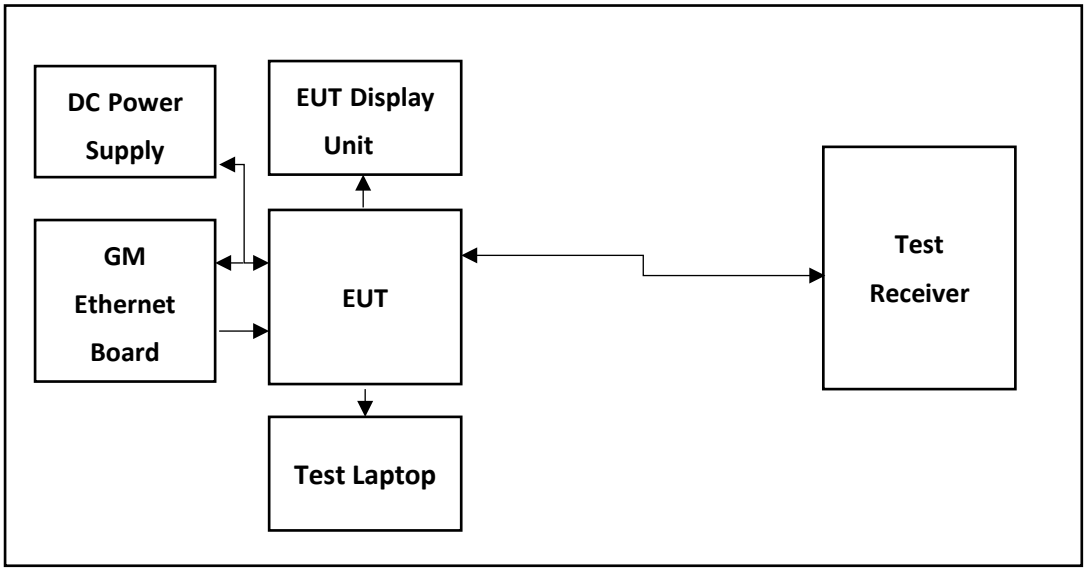
4.2 Test Setup

Conducted Test Site Description

The site is accommodated to test tabletop and floor standing test equipment.



TEST SETUP DIAGRAM



4.3 Test Equipment Used

ID #	Equipment	Manufacturer	Model #	Serial #	Cal Due
BVD0226	Spectrum Analyzer 10Hz-44GHz	Rohde & Schwarz	FSV3044	101018	4/20/2024
BVD0227	8 port switch unit for Wireless Test system	Rohde & Schwarz	OSP150	101100	11/24/2025
BVD0228	8 port switch unit for Wireless Test system	Rohde & Schwarz	OSP220	101632	11/14/2025
BVD0224	Signal Generator 100kHz-40GHz	Rohde & Schwarz	SMB100A	181741	4/20/2024
BVD0225	Signal Generator 100k-6GHz with GPS simulator	Rohde & Schwarz	SMW200A	107664	4/20/2023
BVD0250	Wireless Connectivity Tester 70M-6GHz	Rohde & Schwarz	CMW270	102113	4/20/2024
BVD0302	DC power supply 1-15VDC 60A 110/220 11.5A max input	BK Precision	1693	257F17180	N/A
BVD0321	Fixed Attenuator 2W 20dB -40GHz	Mini-Circuits	BW-K20-2W44+	2103	3/21/2023
BVD0430	Multimeter	Fluke	117	49710262SV	11/11/2023
BVD0229	Temp and Humidity Meter	Fluke	971	12001009	5/1/2023
N/A	Test-PC	Lenovo ThinkPad	E560	PF0L0N9R	N/A

Notes:- DC power supply verified before use with calibrated Multimeter.

Customer Supplied Equipment

ID #	Equipment	Manufacturer	Model	Serial #	Version No.
N/A	Harness	Harman	N/A	N/A	N/A
N/A	Display Unit	Innolux Corp	INFOMM-15524	0024	N/A
N/A	Ethernet Board	GM	N/A	N/A	CSMate rev.4
N/A	GM BT WLAN Test Tool NXP Chips S/W	Harman	N/A	N/A	2.4

Equipment List (Software)

ID #	Equipment	Manufacturer	Model	Version No	
N/A	EMC Test Software	Rodhe & Schwarz	EMC32	11.20.00	N/A

4.4 Test Data

4.4.1 Number of Hopping Frequencies

Test according to FCC title 47 part 15 §15.247(a),(g), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013 7.8.3, RSS-247 Section 5.1(d)

Channels

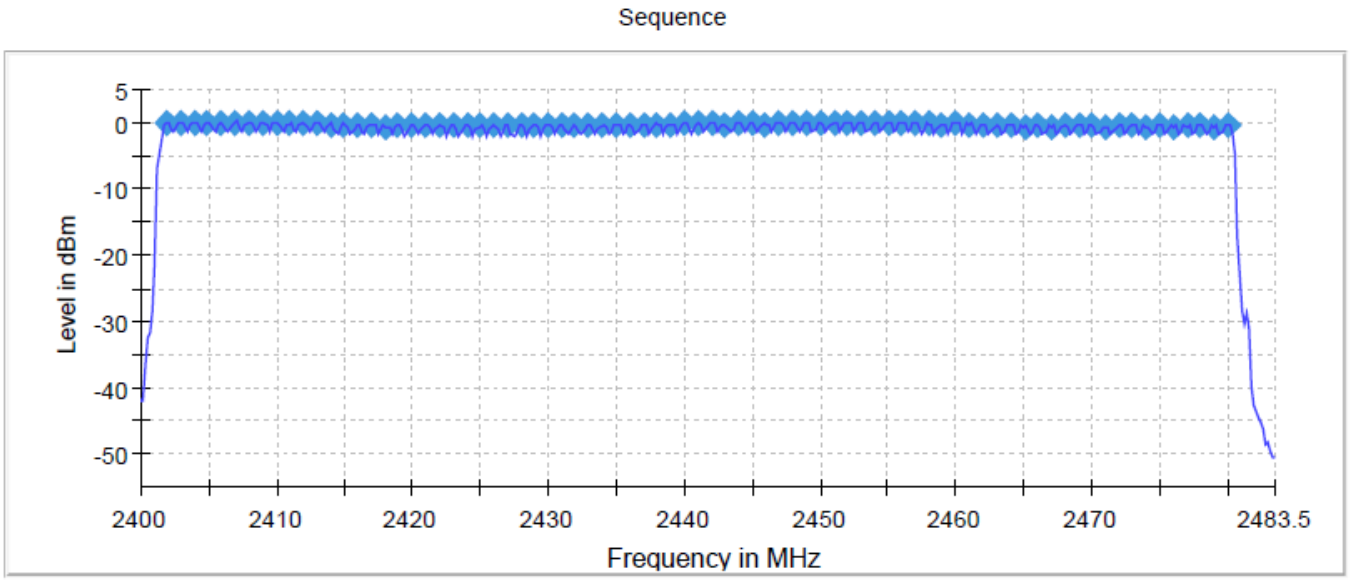
Channels	Limit Min	Result
79	15	PASS

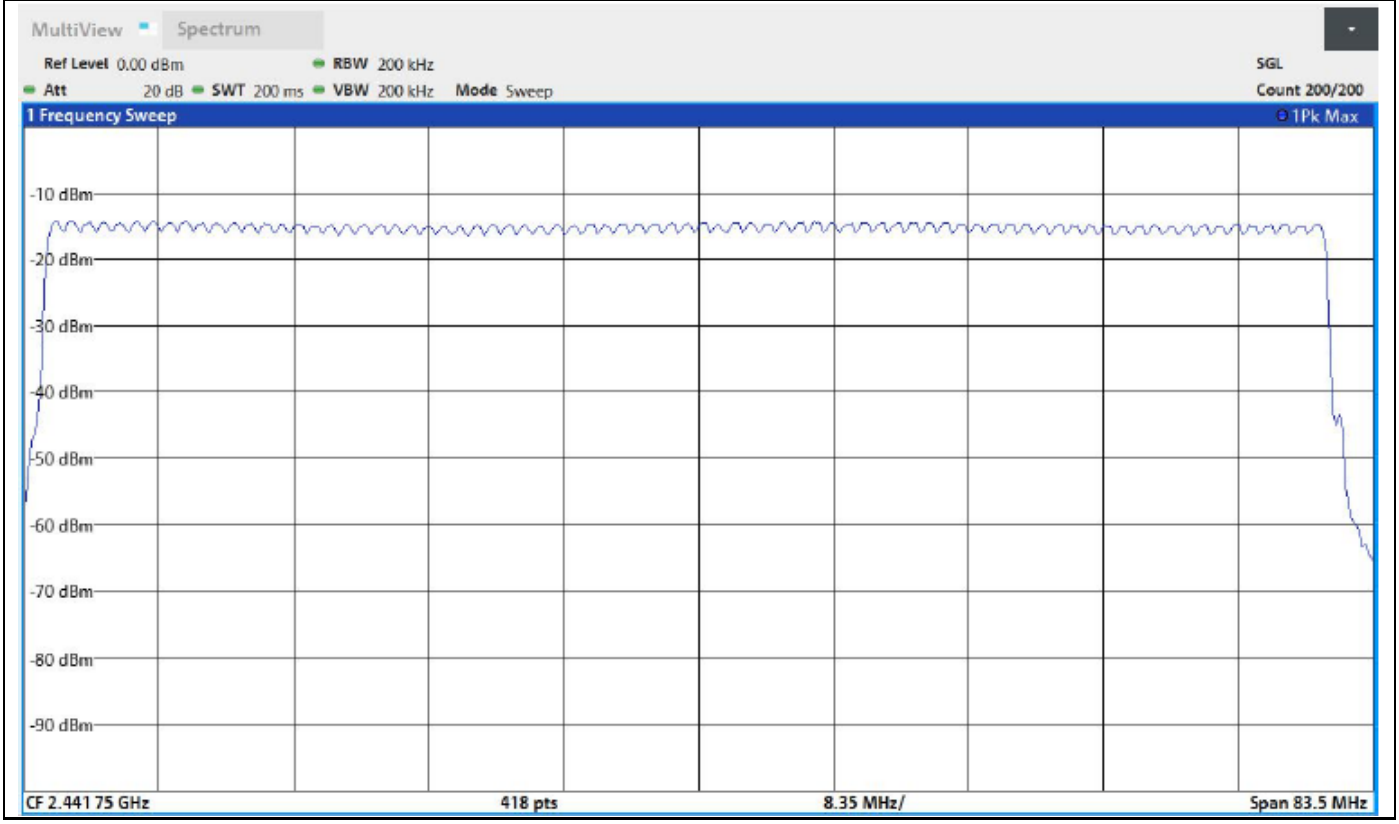
Spectrum Analyzer Settings

Setting	Instrument Value	Target Value
Start Frequency	2.40000 GHz	2.40000 GHz
Stop Frequency	2.48350 GHz	2.48350 GHz
Span	83.500 MHz	83.500 MHz
RBW	200.000 kHz	<= 200.000 kHz
VBW	200.000 kHz	>= 200.000 kHz
SweepPoints	418	~ 418
Sweeptime	200.000 ms	200.000 ms
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	20.000 dB
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	FFT
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	10 / max. 10	max. 10
Stable	1 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

Plots for **3-DH5** packet type shown below.

Hopping Frequencies





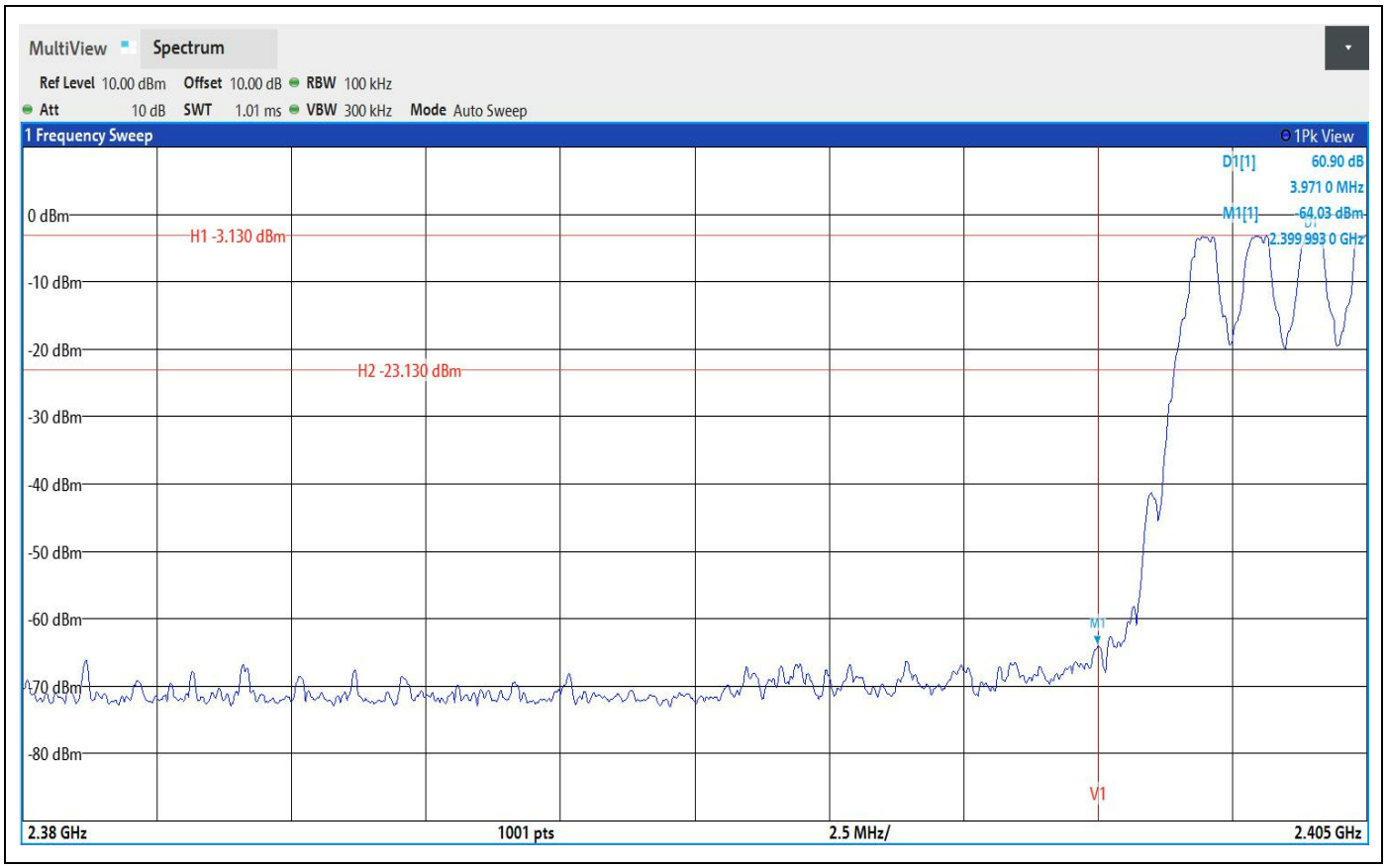
4.4.2 Band Edge (Hopping)

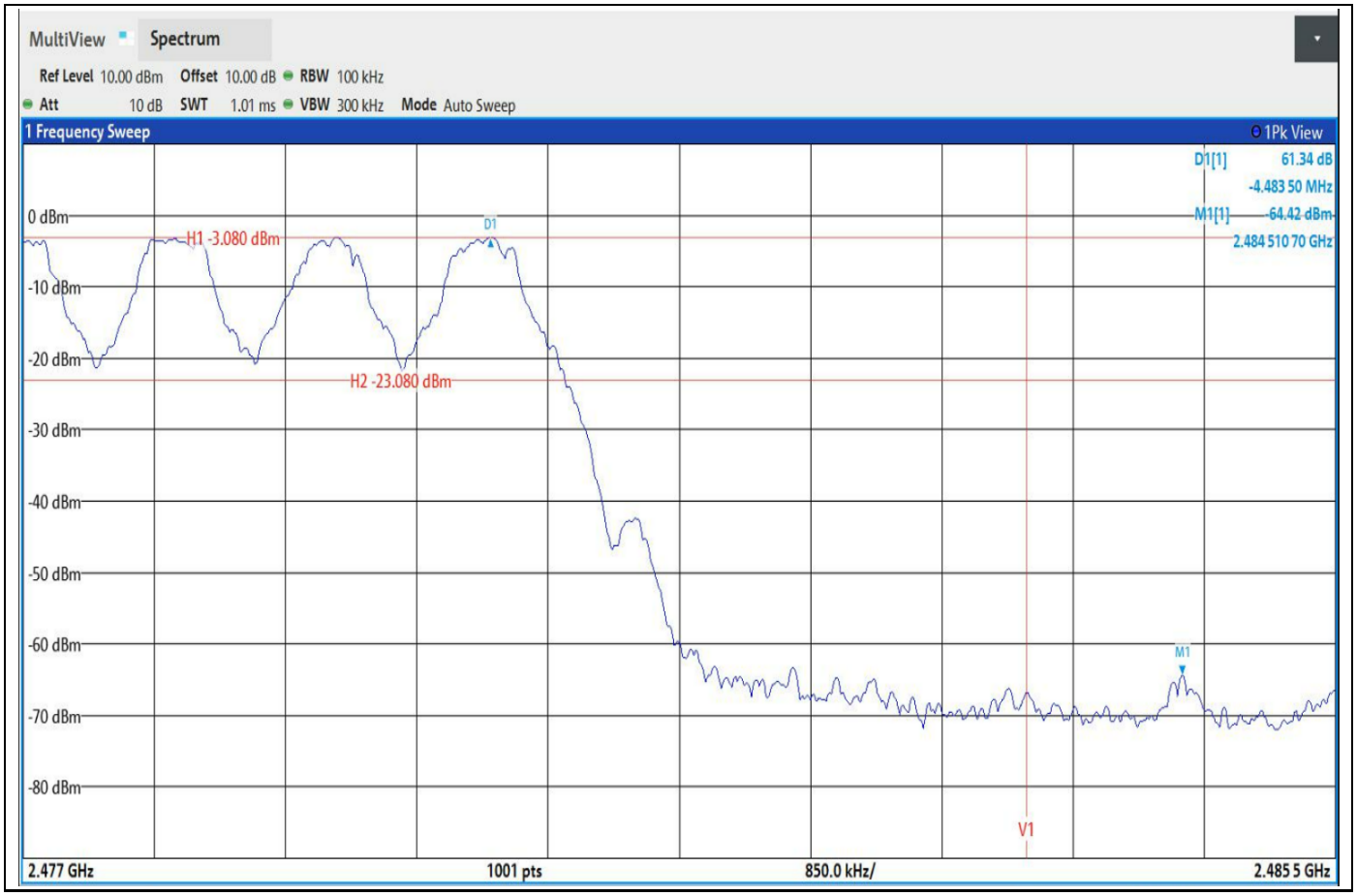
Test according to FCC title 47 part 15 §15.247(d), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013 7.8.6, RSS-247 Section 5.5

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1. Expanded Uncertainty (K=2) < 0.8 dB

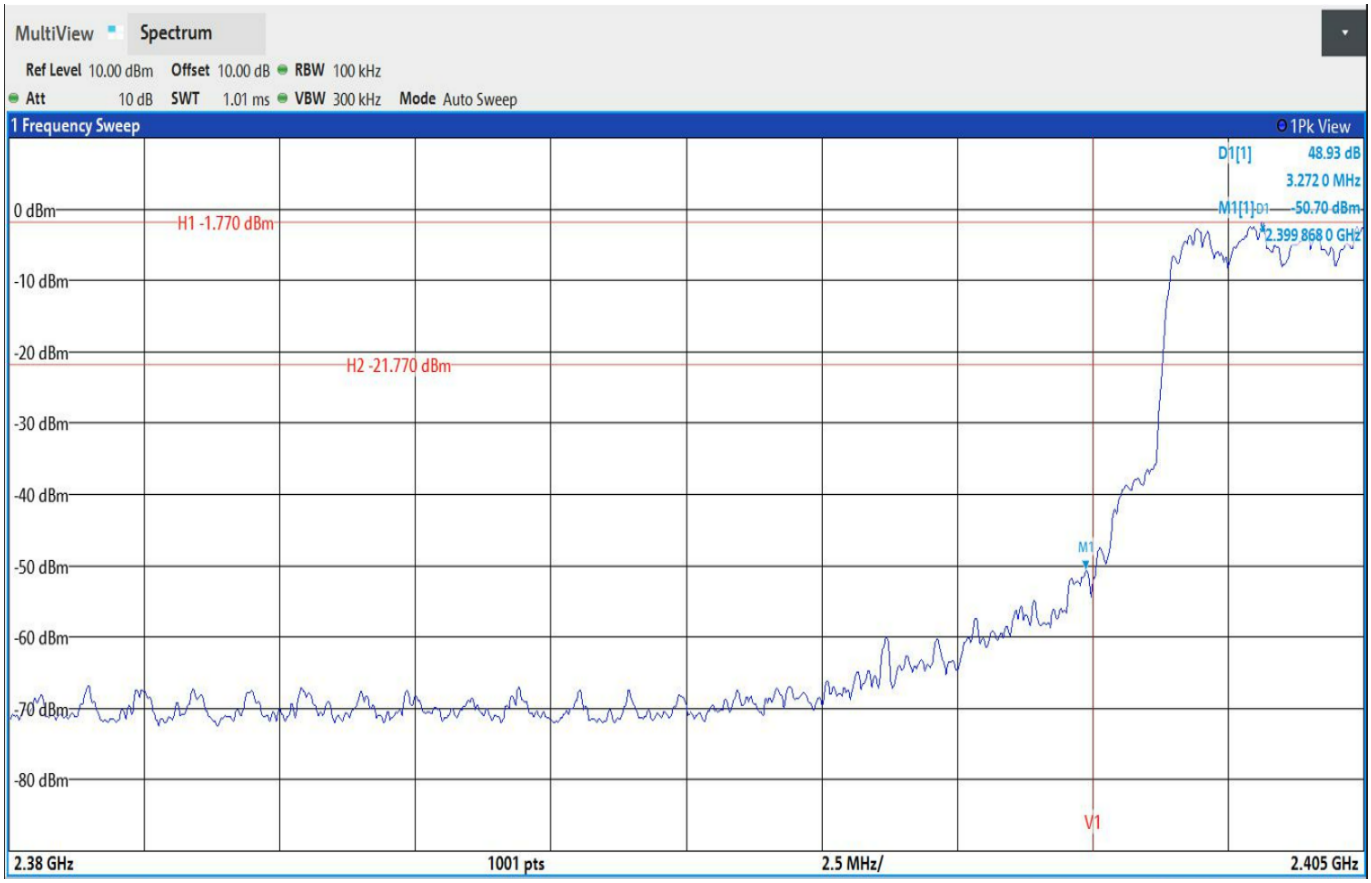
Data Rate	Frequency (MHz)	Level (dBm)
DH5-LCH	2399.9	-3.13
DH5-HCH	2484.5	-3.08
3-DH5-LCH	2399.8	-1.77
3-DH5-HCH	2483.5	-2.02

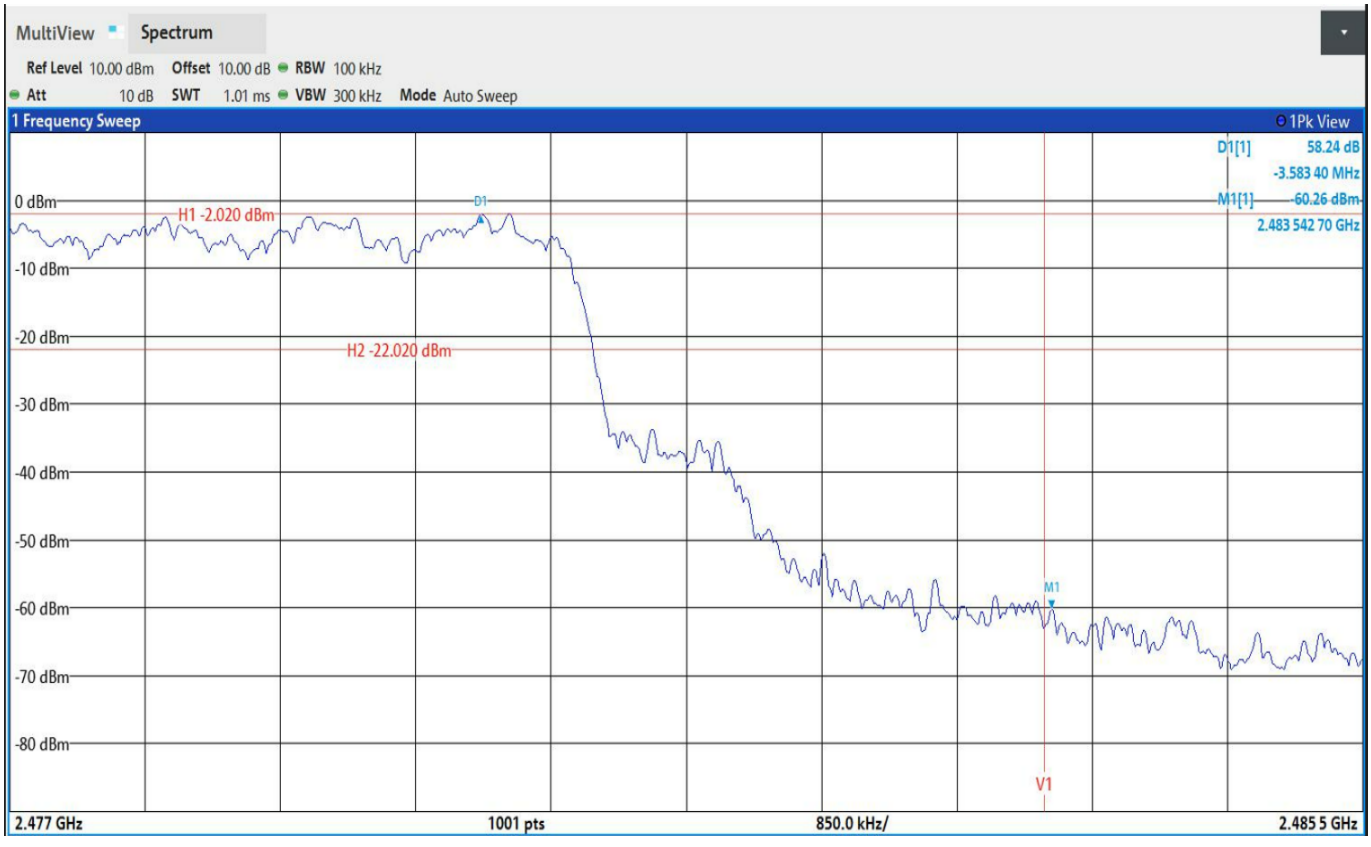
Plots for **DH5** packet type shown below




MultiView
Spectrum
Ref Level 10.00 dBm Offset 10.00 dB RBW 100 kHz
Att 10 dB SWT 1.01 ms VBW 300 kHz Mode Auto Sweep
1 Frequency Sweep
1Pk View
D1[1] 61.34 dB
-4.483 50 MHz
M1[1] -64.42 dBm
2.484 510 70 GHz
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
H1 -3.080 dBm
H2 -23.080 dBm
D1
M1
V1
2.477 GHz
1001 pts
850.0 kHz/
2.485 5 GHz

Plots for **3-DH5** packet type shown below





4.4.3 Carrier Frequency Separation

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013 7.8.2, RSS-247 Section 5.1(b)

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1. Expanded Uncertainty (k = 2) < 1%

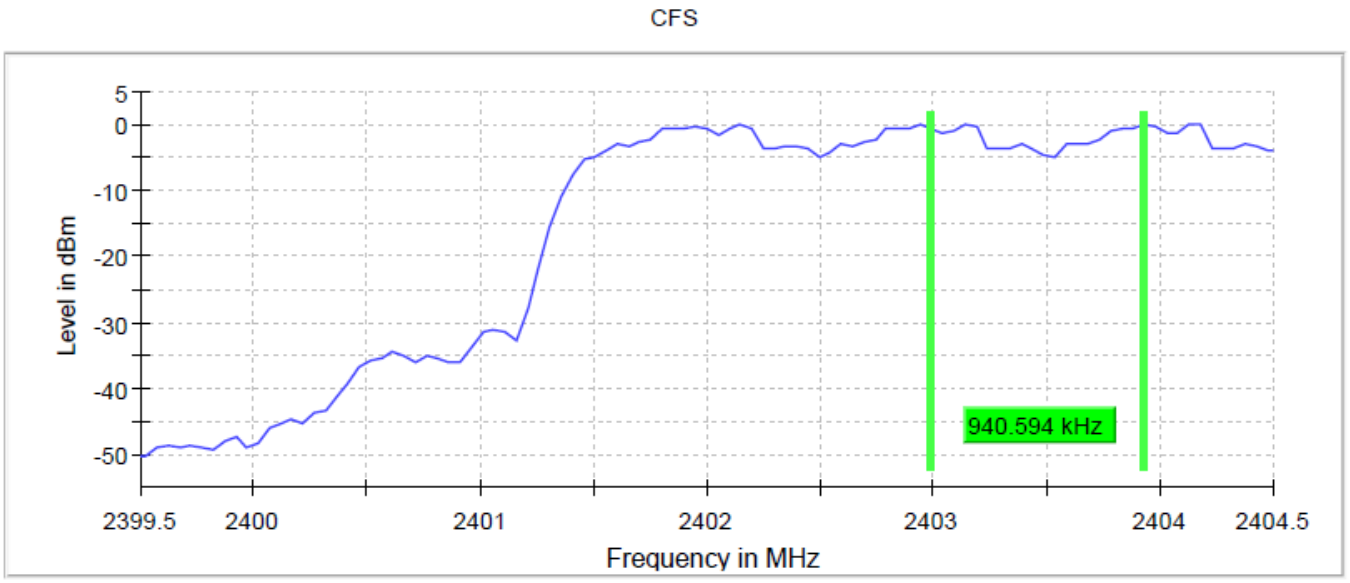
Hopping Mode				
Packet Type	2402MHz		2480MHz	
	Frequency Separation (MHz)	Minimum Limit (MHz)	Frequency Separation (MHz)	Minimum Limit (MHz)
DH5	0.990099	0.666667	0.990099	0.666667
3-DH5	0.940594	0.666667	0.990099	0.666667

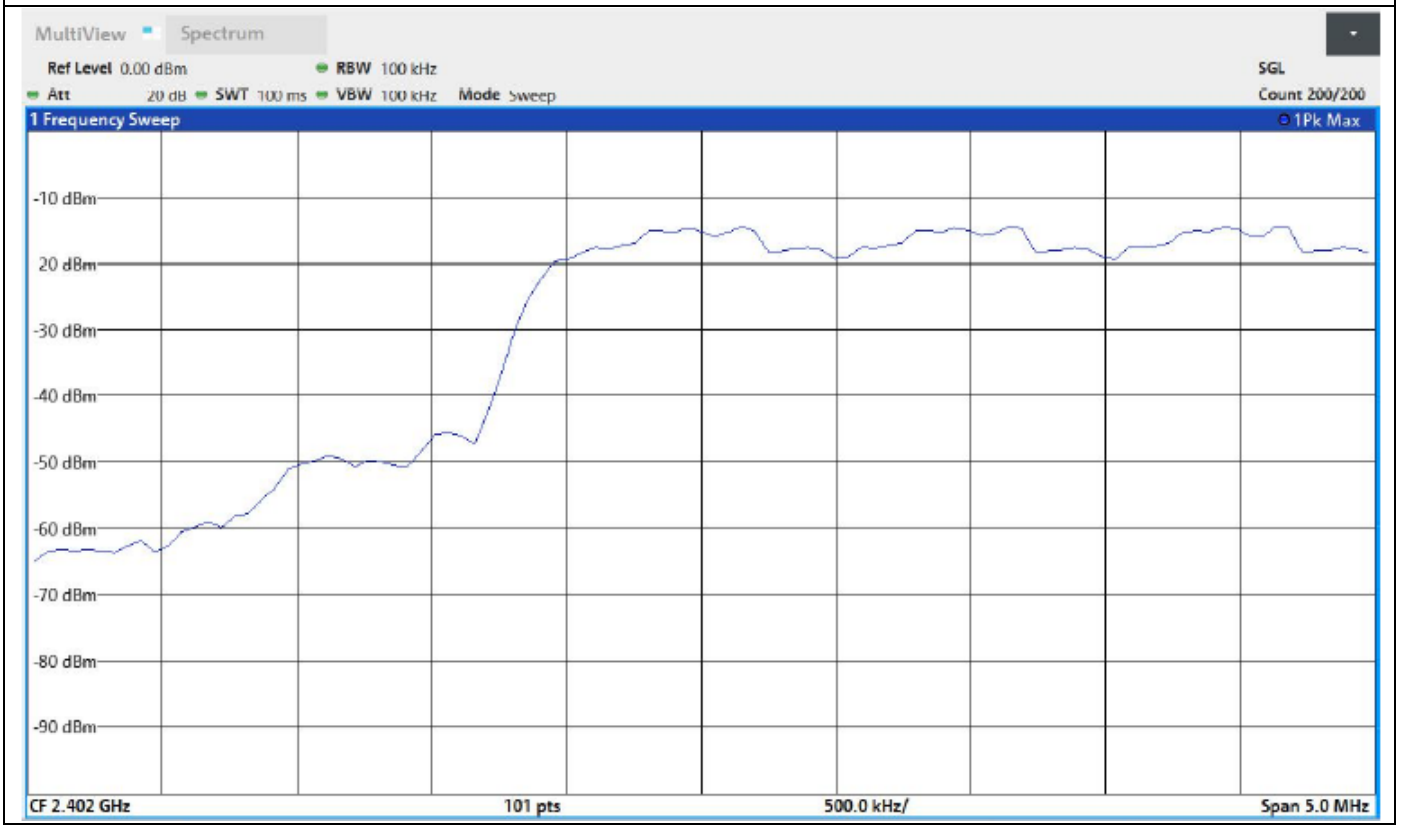
Spectrum Analyzer Settings for 3-DH5 Packet Type

Setting	Instrument Value	Target Value
Start Frequency	2.39950 GHz	2.39950 GHz
Stop Frequency	2.40450 GHz	2.40450 GHz
Span	5.000 MHz	5.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	100.000 kHz	>= 100.000 kHz
SweepPoints	101	~ 50
Sweeptime	100.000 ms	100.000 ms
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	20.000 dB
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	FFT
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	17 / max. 50	max. 50
Stable	10 / 10	10
Max Stable Difference	0.32 dB	0.50 dB

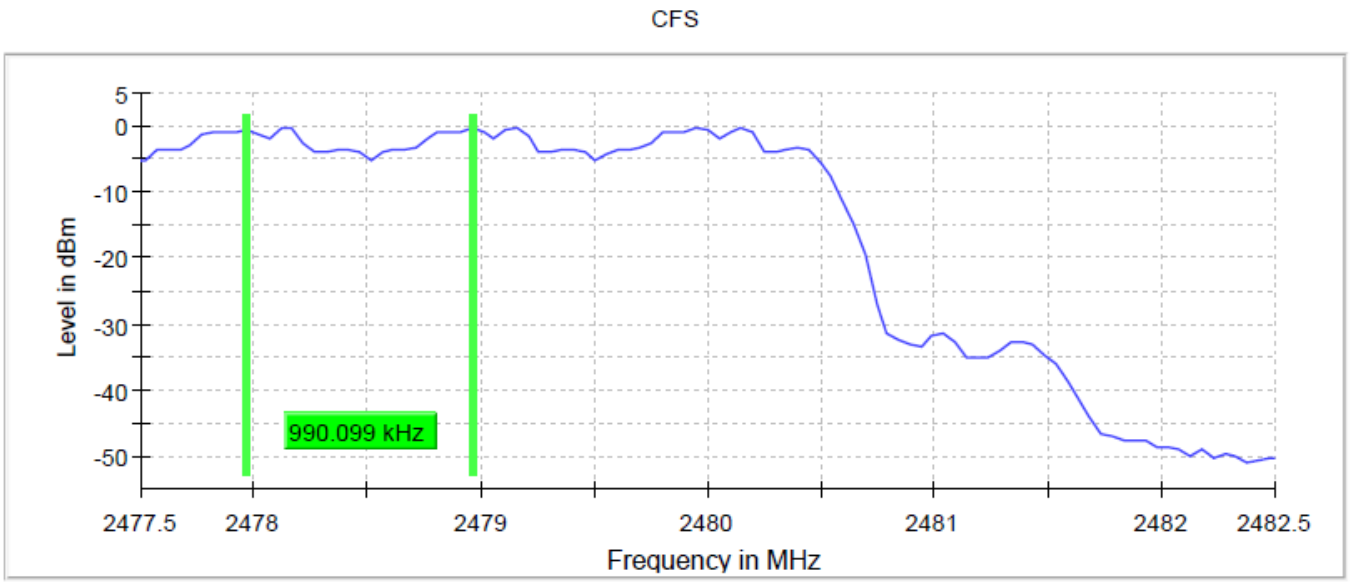
Plots for 3-**DH5** packet type shown below

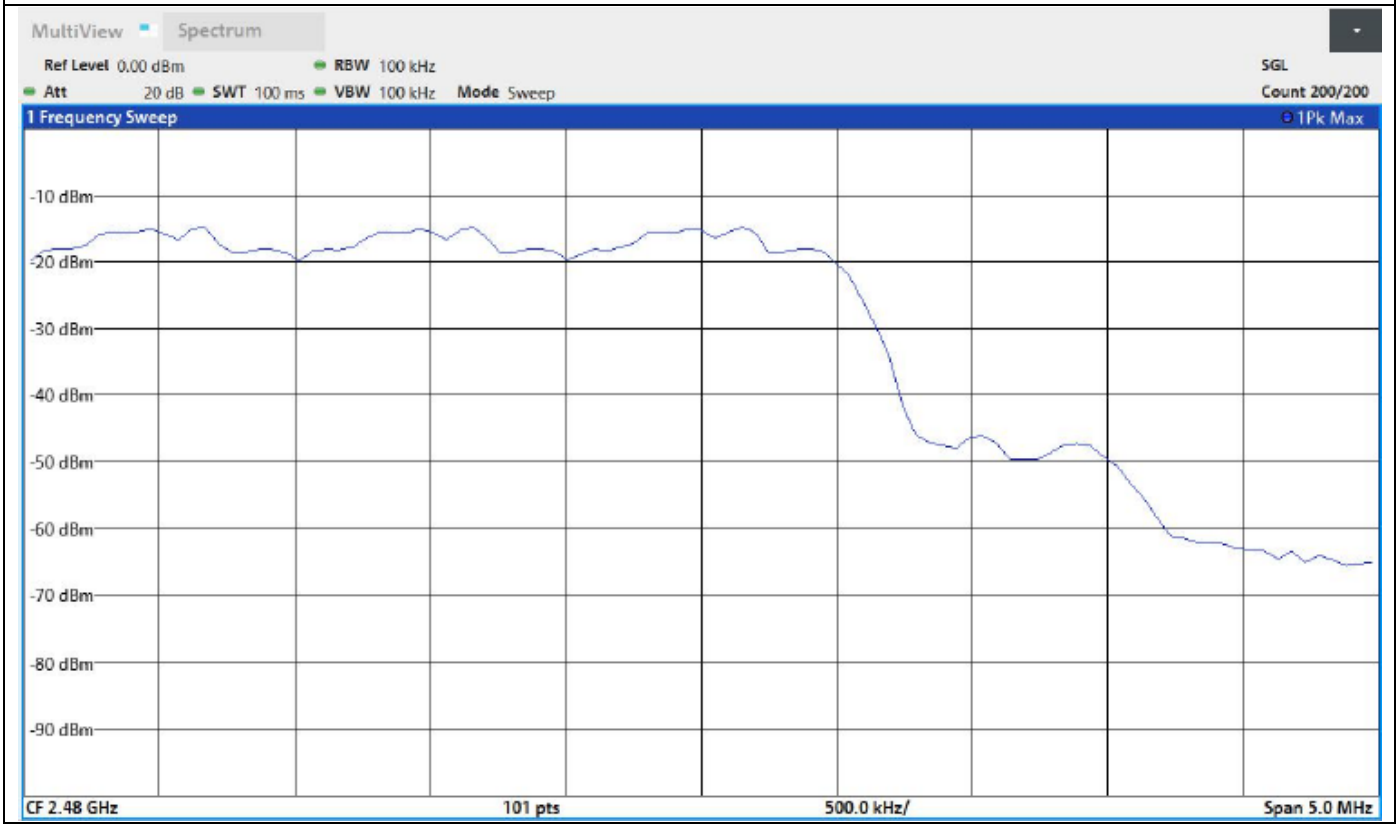
2402MHz 3-DH5





2480MHz 3-DH5





4.4.4 Time of Channel Occupancy

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013 7.8.4, RSS-247 Section 5.1(d)

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1. Expanded Uncertainty (K=2) < 1%

The transmit time per hop was measured by summing the sweep points above a threshold at least 10dB from the maximum level on the spectrum analyzer display.

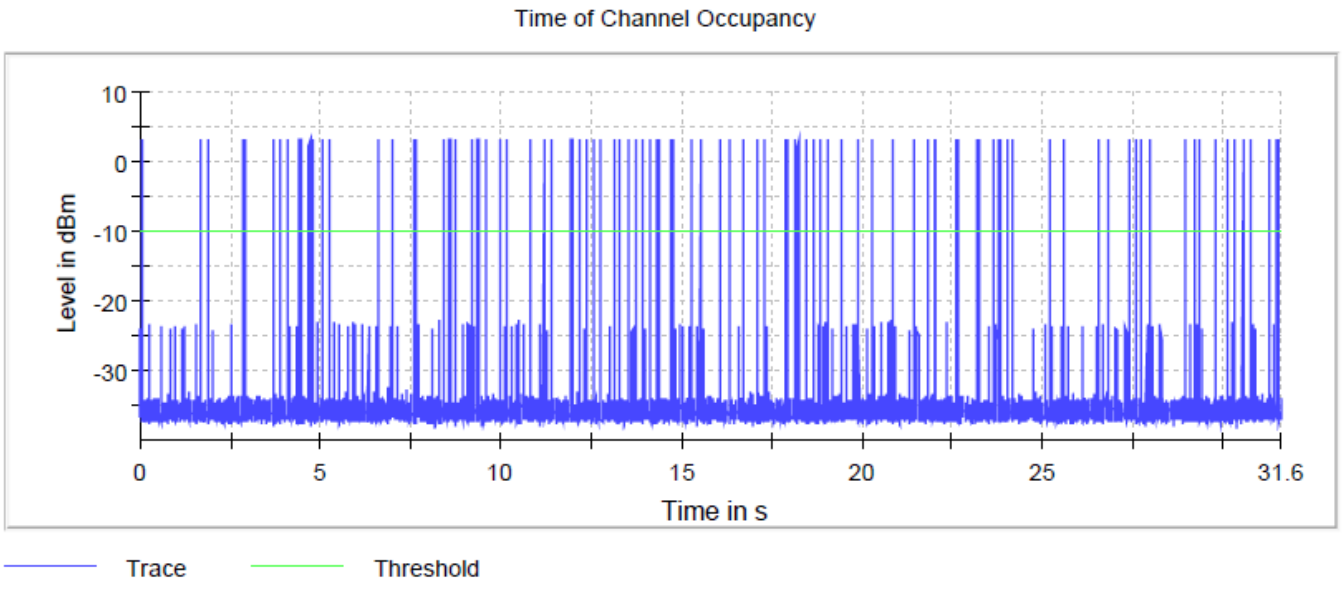
Frequency	Data Rate	Mean Transmit Time per Hop (ms)	Number of Hops	Time (ms)	Limit Max (ms)	Result
2402	DH5	2.899	98	287.050	400.000	PASS
2402	3-DH5	2.866	99	286.620	400.000	PASS
2441	DH5	2.925	113	333.430	400.000	PASS
2441	3-DH5	2.893	98	286.410	400.000	PASS
2480	DH5	2.899	109	318.910	400.000	PASS
2480	3-DH5	2.861	96	277.510	400.000	PASS

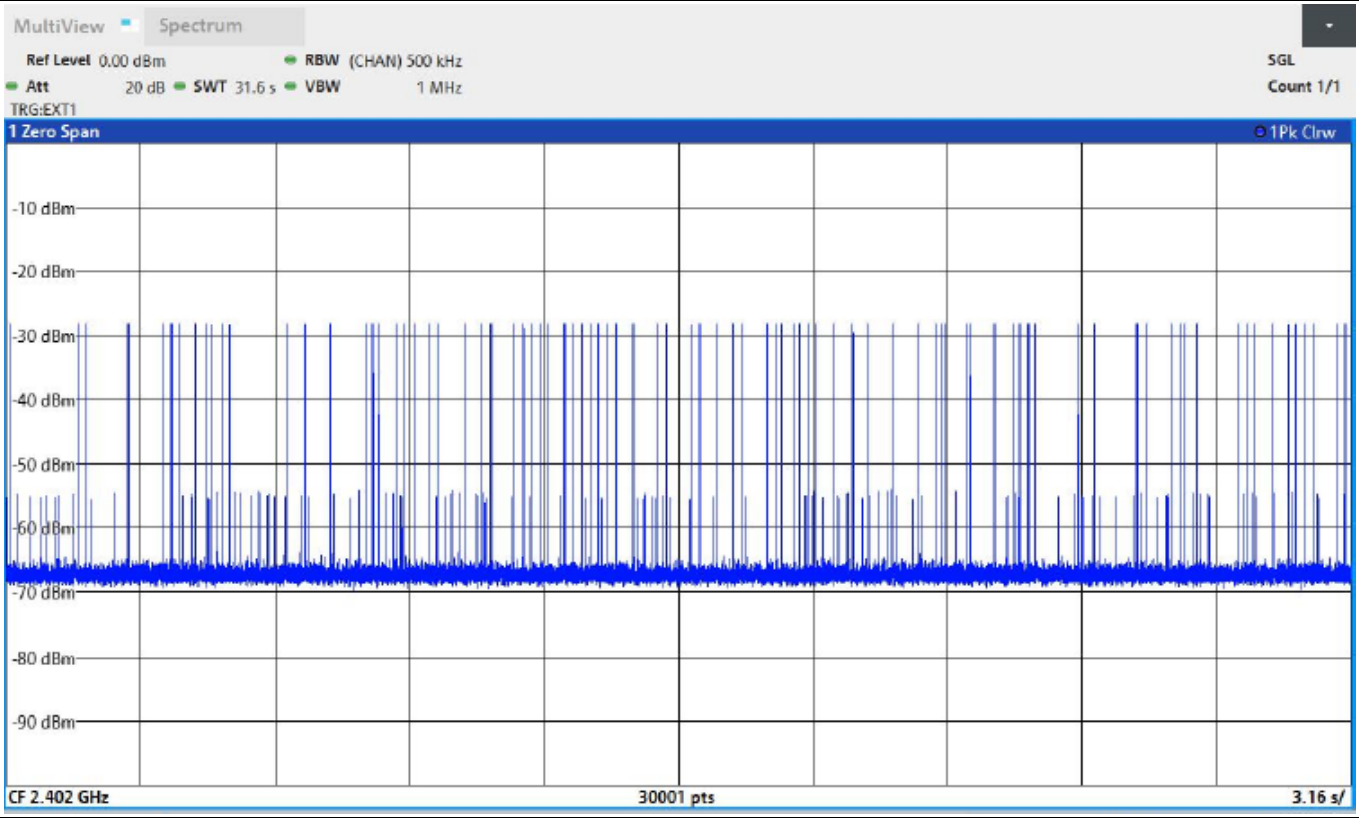
Spectrum Analyzer Settings for 2402MHz

Setting	Instrument Value	Target Value
Center Frequency	2.40200 GHz	2.40200 GHz
Span	ZeroSpan	ZeroSpan
RBW	500.000 kHz	~ 500.000 kHz
VBW	1.000 MHz	~ 1.500 MHz
SweepPoints	30001	~ 30001
Sweeptime	31.600 s	31.600 s
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	20.000 dB
Detector	MaxPeak	MaxPeak
SweepCount	1	1
Filter	Channel	Channel
Trace Mode	Clear Write	Clear Write
Sweeptype	Sweep	AUTO
Preamp	off	off
Trigger	External	External
Trigger Offset	0.000 s	0.000 s

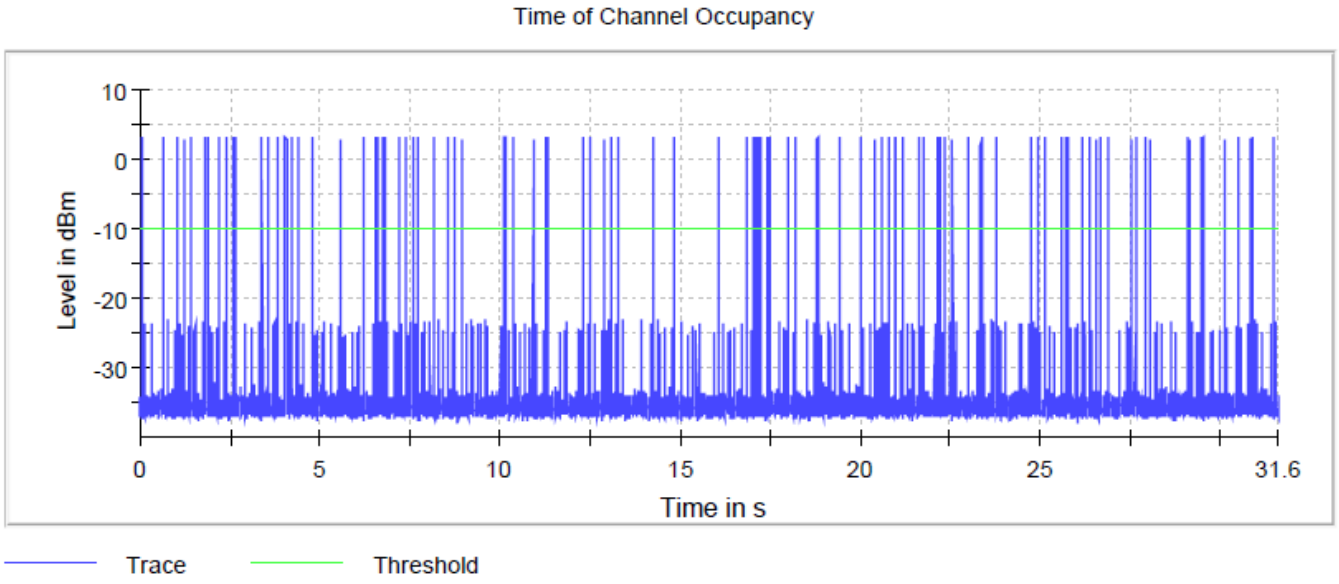
Plots for **3-DH5** packet type shown below

2402MHz 3-DH5

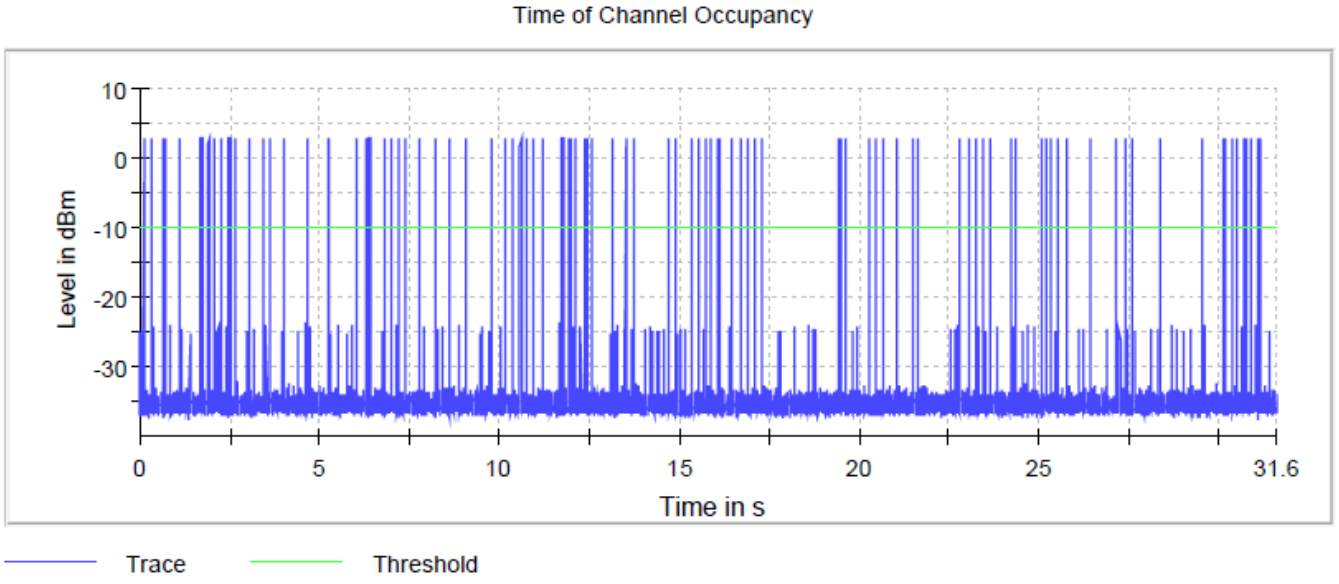




2441MHz 3-DH5



2480MHz 3-DH5



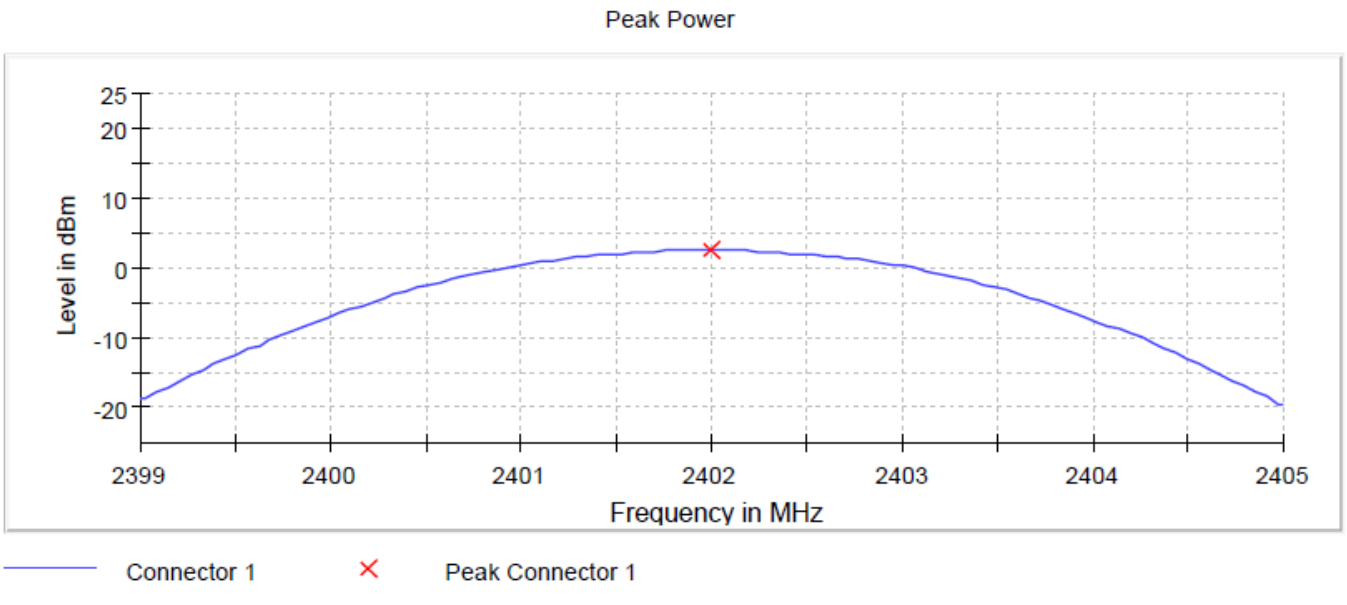
4.4.5 Peak Output Power

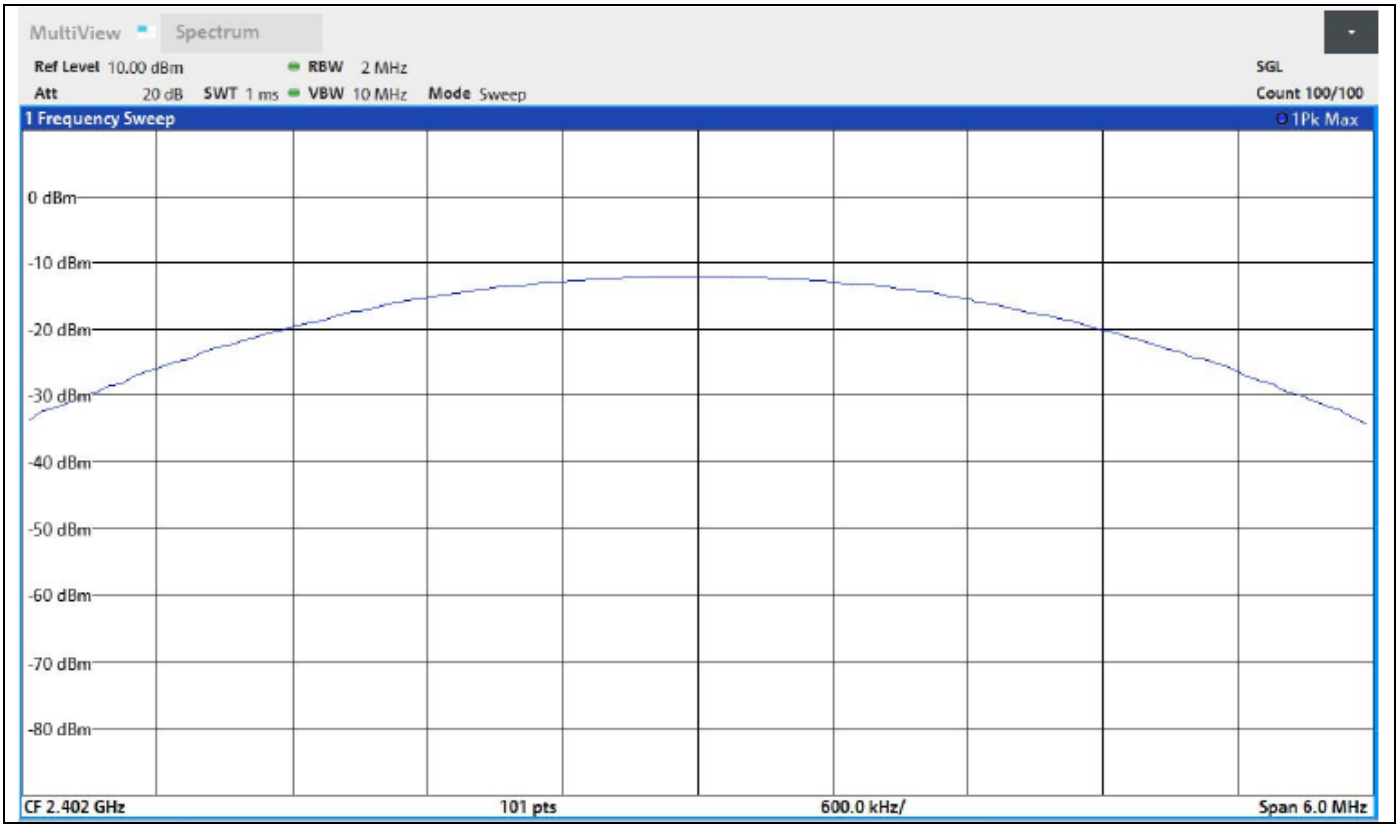
Test according to FCC title 47 part 15 §15.247(b), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013 7.8.5, RSS-247 Section 5.4 (b)

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1. Expanded Combined Uncertainty of absolute Level Measurement (K=2) < 1 dB

Data Rate	2402 MHz	2441 MHz	2480 MHz	Limit dBm
DH1	-0.627	-1.038	-1.377	21.0
DH3	-0.611	-1.007	-1.345	21.0
DH5	**-0.549**	-0.968	-1.296	21.0
2-DH1	2.095	1.909	1.718	21.0
2-DH3	2.102	1.934	1.731	21.0
2-DH5	2.121	1.926	1.752	21.0
3-DH1	2.350	2.175	1.969	21.0
3-DH3	2.343	2.148	1.956	21.0
3-DH5	**2.374**	2.174	1.992	21.0

2402MHz 3-DH5




MultiView
Spectrum
Ref Level 10.00 dBm
RBW 2 MHz
SGL
Att 20 dB
SWT 1 ms
VBW 10 MHz
Mode Sweep
Count 100/100
1 Frequency Sweep
1Pk Max
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
CF 2.402 GHz
101 pts
600.0 kHz/
Span 6.0 MHz

4.4.6 Emission Bandwidth 20dB

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013 7.8.7, RSS-247 Section 5.1(a)

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1. Expanded Uncertainty (K=2) < 2%

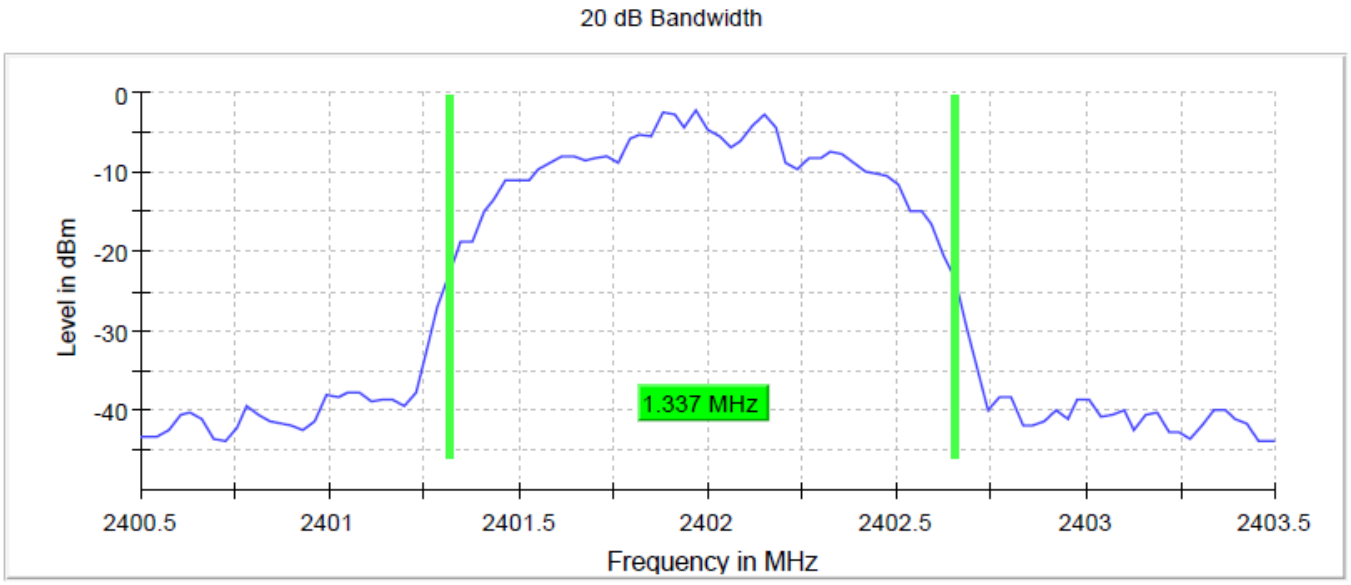
Channel / Frequency (MHz)	Packet Type	Bandwidth (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Result
0 / 2402	**DH5**	1.009900	2401.495050	2402.504950	PASS
	3-DH5	1.336633	2401.316832	2402.653465	PASS
39 / 2441	**DH5**	1.009900	2440.495050	2441.504950	PASS
	3-DH5	1.336633	2440.316832	2441.653465	PASS
78 / 2480	**DH5**	1.009900	2479.495050	2480.504950	PASS
	3-DH5	1.336633	2479.316832	2480.653465	PASS

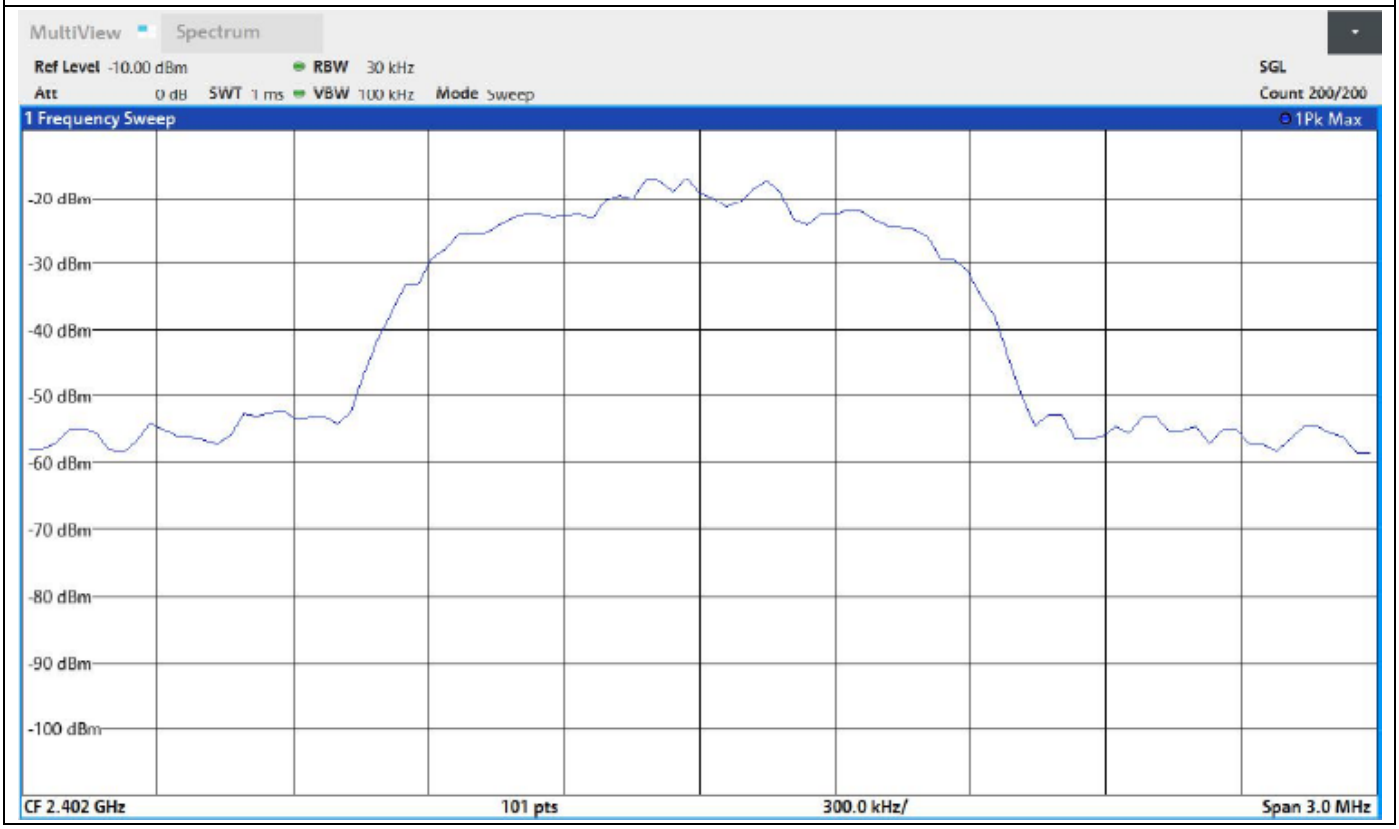
Spectrum Analyzer Settings for 2402MHz

Setting	Instrument Value	Target Value
Start Frequency	2.40050 GHz	2.40050 GHz
Stop Frequency	2.40350 GHz	2.40350 GHz
Span	3.000 MHz	3.000 MHz
RBW	30.000 kHz	>= 30.000 kHz
VBW	100.000 kHz	>= 90.000 kHz
SweepPoints	101	~ 101
Sweeptime	1.000 ms	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	16 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.08 dB	0.50 dB

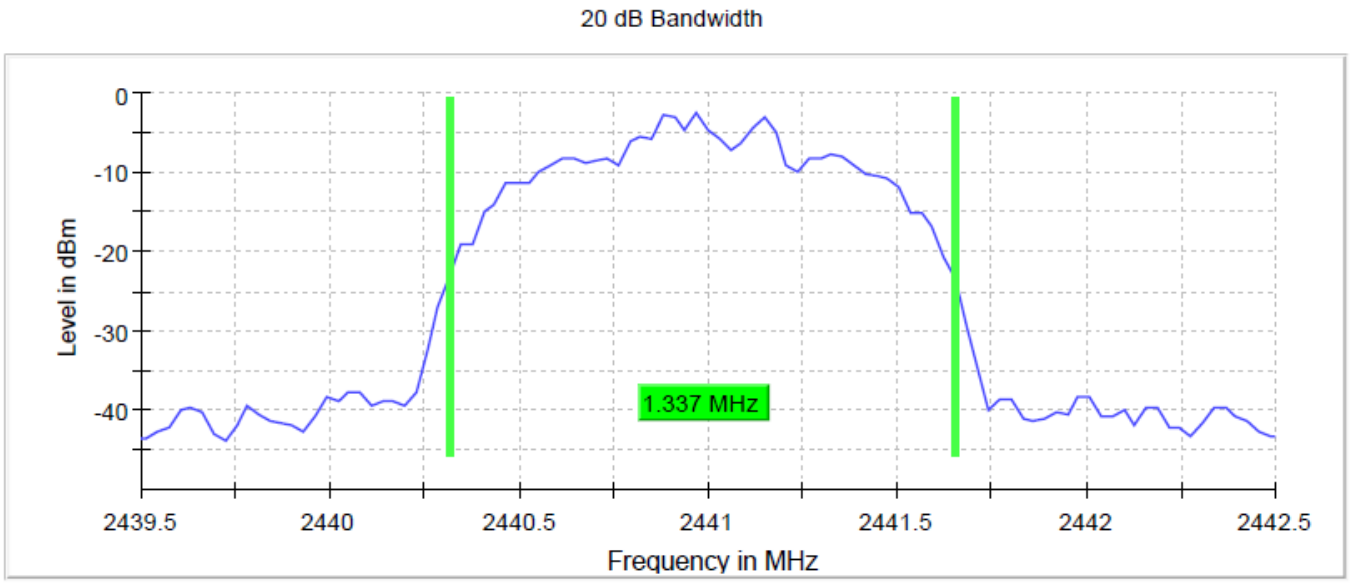
Plots for **3-DH5** Packet Type shown below

2402MHz 3-DH5

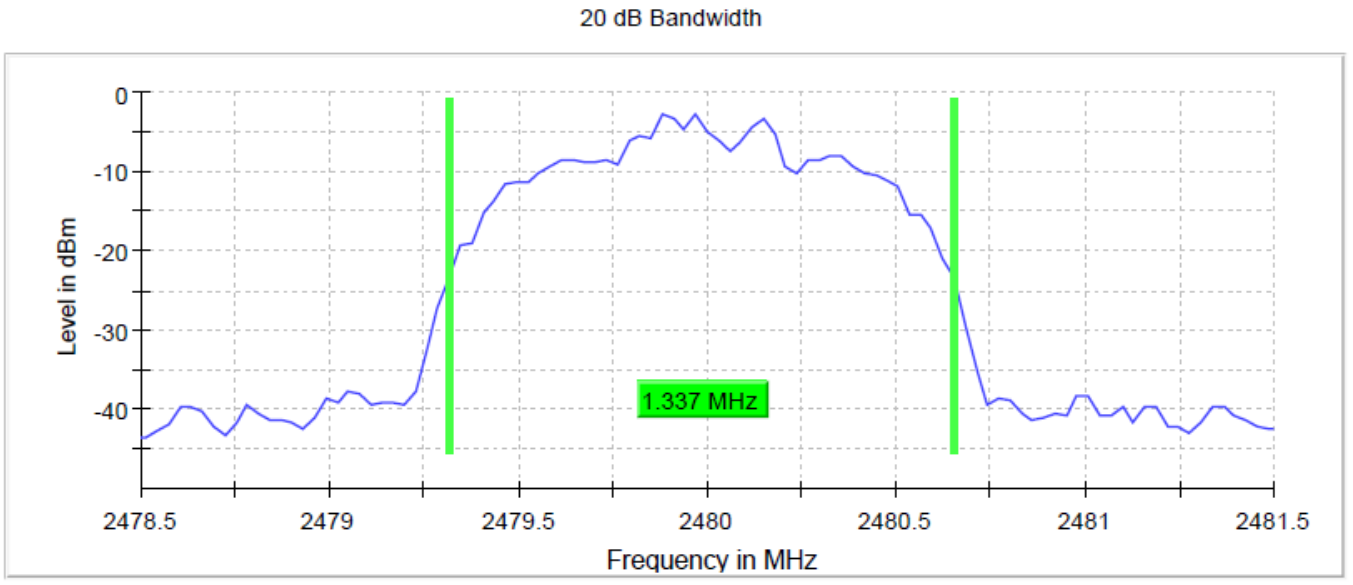




2441MHz 3-DH5



2480MHz 3-DH5



4.4.7 Occupied Channel Bandwidth 99%

Test according to RSS-GEN Section 6.7, KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013

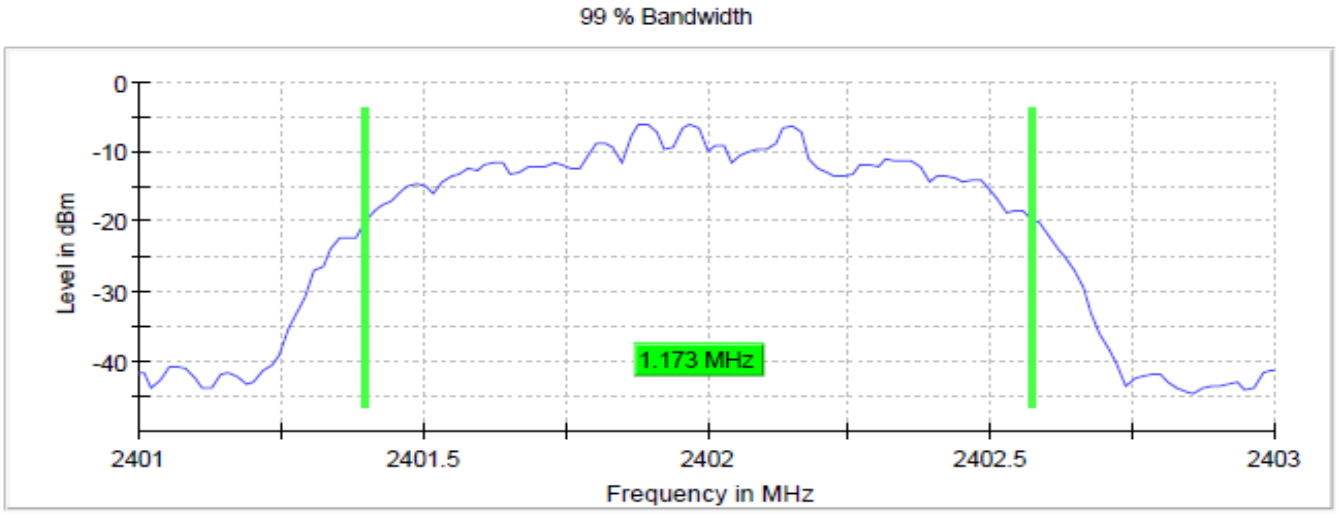
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1. Expanded Uncertainty (K=2) < 2%

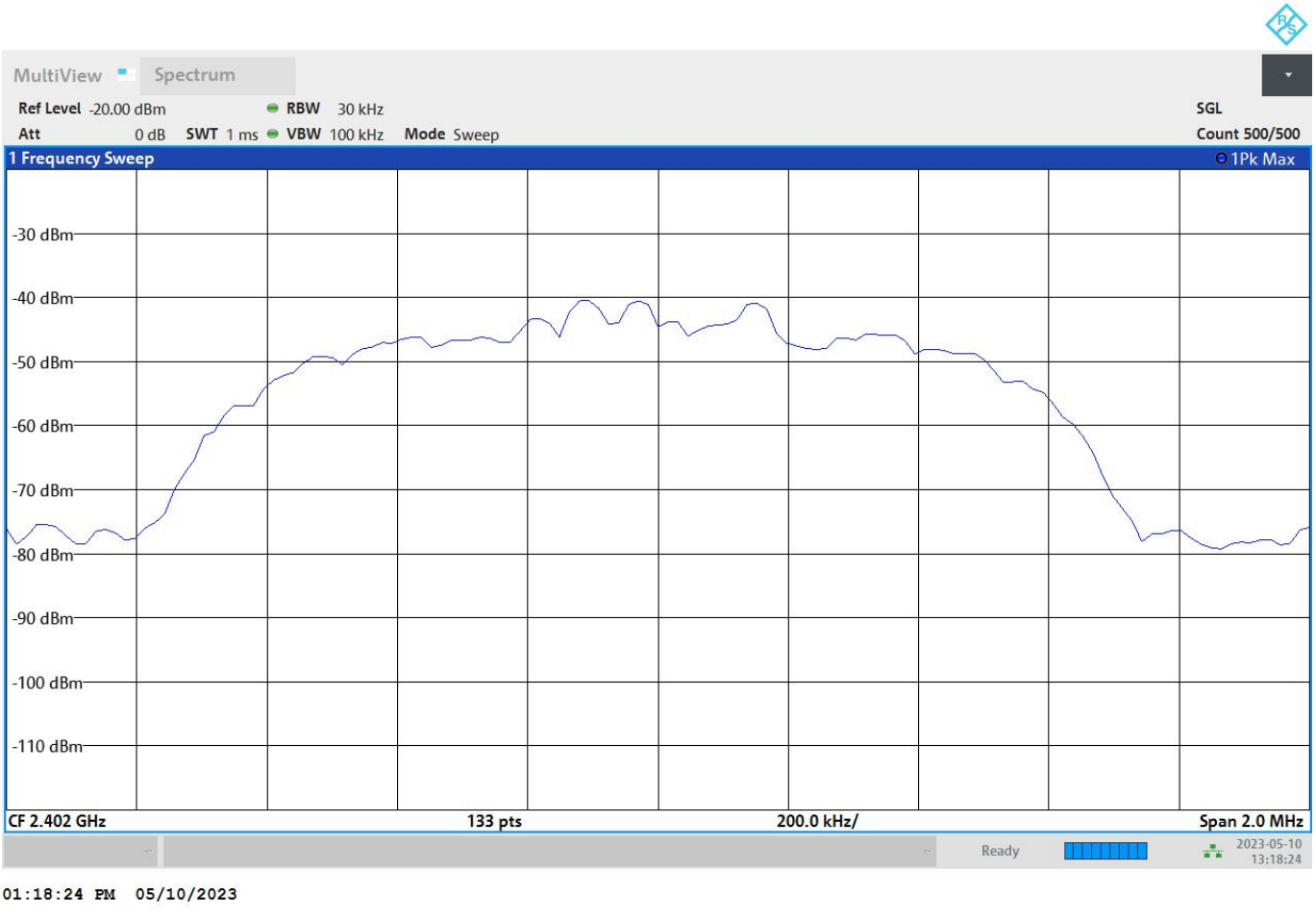
Channel / Frequency (MHz)	Packet Type	Bandwidth (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Result
0 / 2402	**DH1**	0.865000	2401.547500	2402.412500	PASS
	3-DH5	1.172933	2401.398496	2402.571429	PASS
39 / 2441	**DH1**	0.870000	2440.542500	2441.412500	PASS
	3-DH5	1.172933	2440.398496	2441.571429	PASS
78 / 2480	**DH1**	0.870000	2479.542500	2480.412500	PASS
	3-DH5	1.172933	2479.398496	2480.571429	PASS

Spectrum Analyzer Settings for 2402MHz 3-DH5

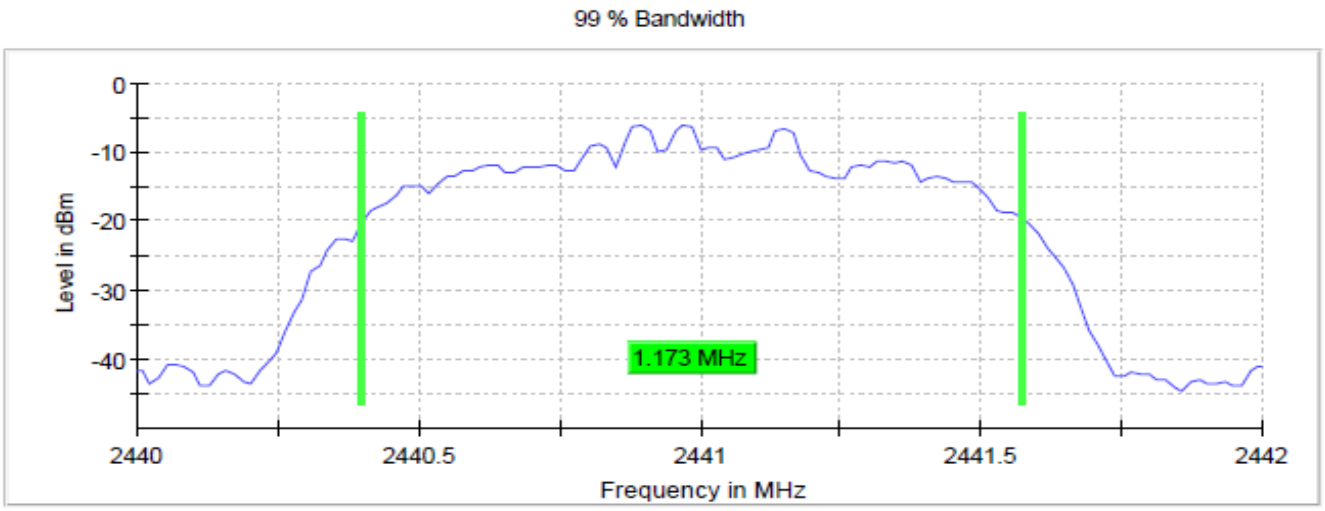
Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40300 GHz	2.40300 GHz
Span	2.000 MHz	2.000 MHz
RBW	30.000 kHz	>= 30.000 kHz
VBW	100.000 kHz	>= 90.000 kHz
SweepPoints	133	~ 133
Sweeptime	1.000 ms	AUTO
Reference Level	-20.000 dBm	-20.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	500	500
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	8 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.02 dB	0.30 dB

2402MHz 3-DH5

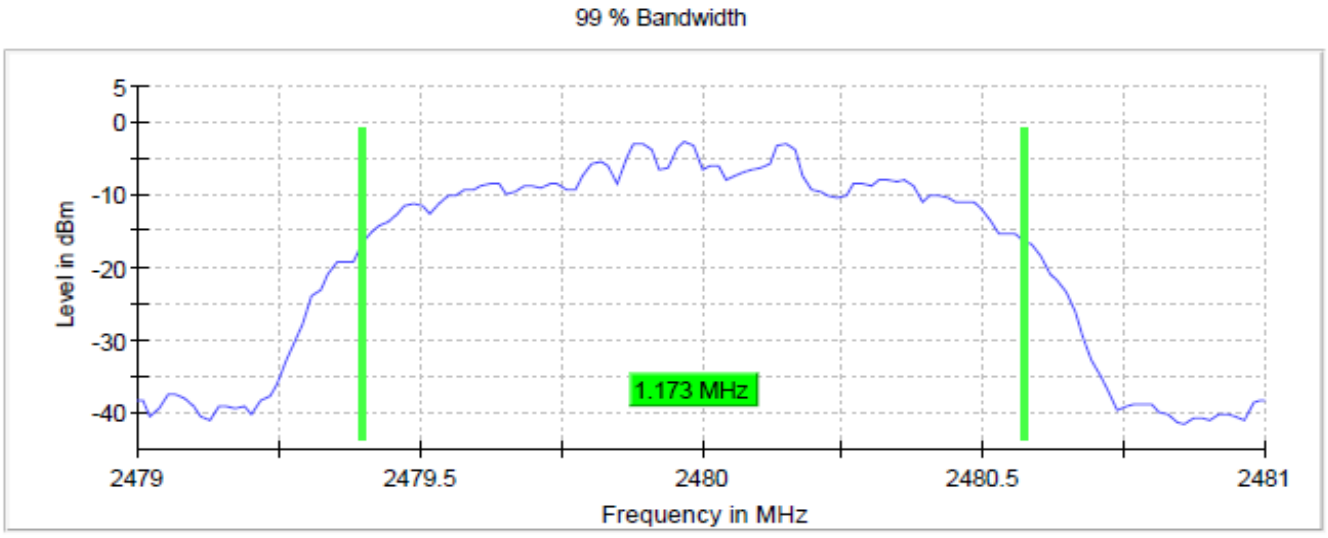




2441MHz 3-DH5



2480MHz 3-DH5



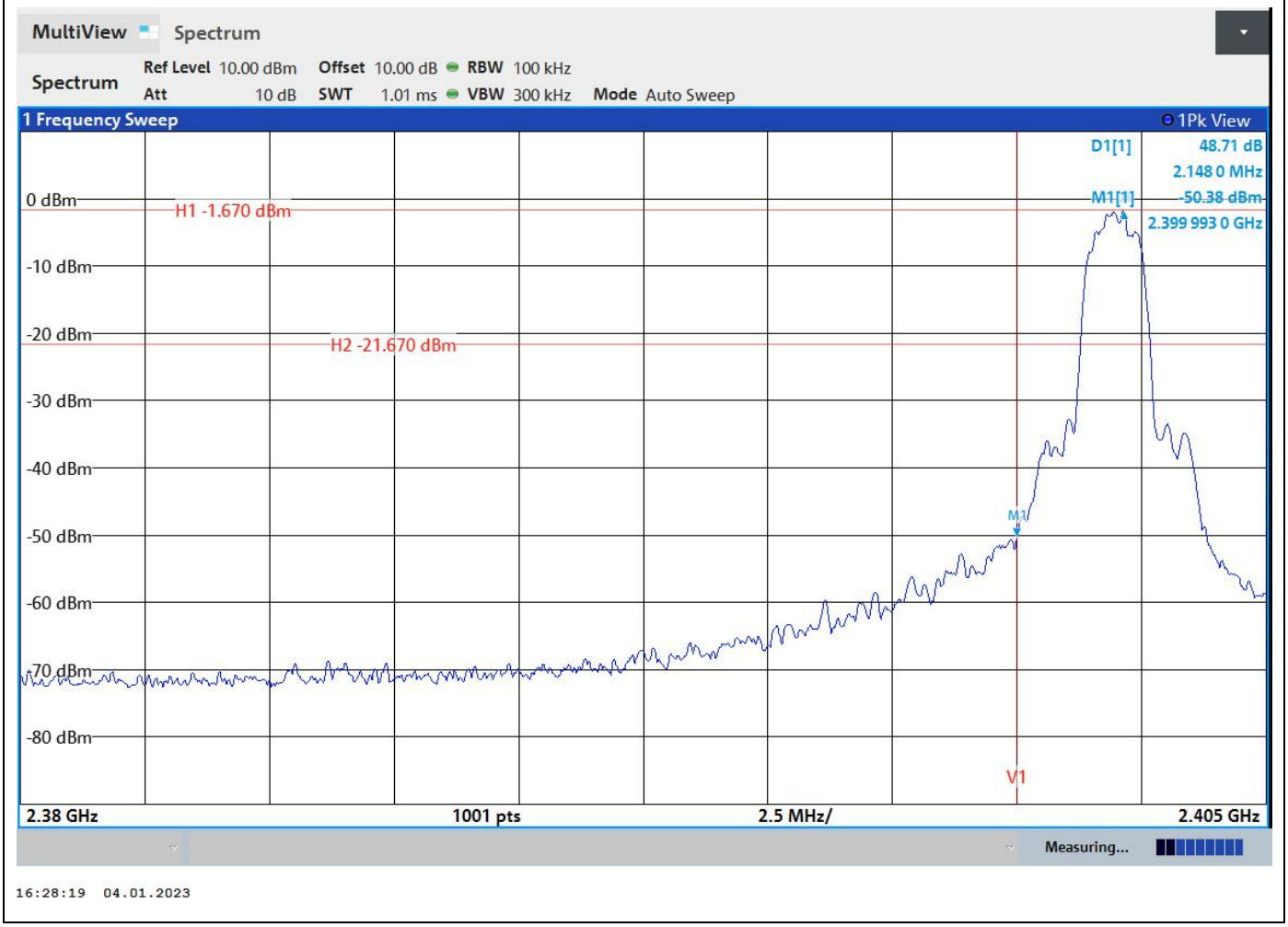
4.4.8 Band Edge Low (2402 MHz)

Test according to FCC title 47 part 15 §15.247(d), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013 7.8.6, RSS-247 Section 5.5

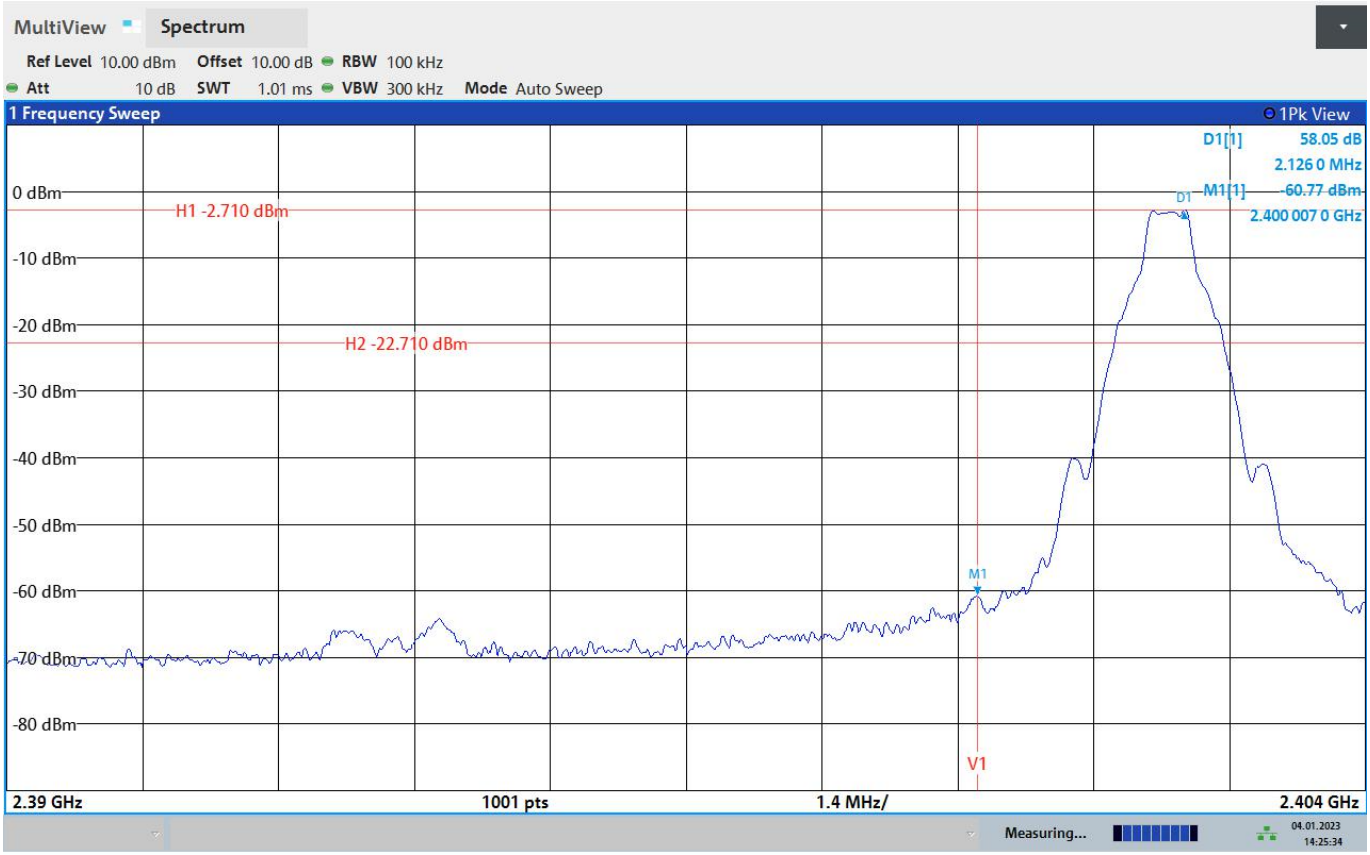
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1. Expanded Uncertainty (K=2) < 0.8 dB

Data Rate	Frequency (MHz)	Level(dBm)
DH5	2400.0070	-2.7
3-DH5	2399.9930	-1.6

2402MHz 3-DH5



2402MHz DH5


MultiView
Spectrum
Ref Level 10.00 dBm Offset 10.00 dB RBW 100 kHz
Att 10 dB SWT 1.01 ms VBW 300 kHz Mode Auto Sweep
1 Frequency Sweep
1Pk View
D1[1] 58.05 dB
2.126 0 MHz
M1[1] -60.77 dBm
2.400 007 0 GHz
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
H1 -2.710 dBm
H2 -22.710 dBm
D1
M1
V1
2.39 GHz
1001 pts
1.4 MHz/
2.404 GHz
Measuring...
04.01.2023
14:25:34

4.4.9 Band Edge High (2480 MHz)

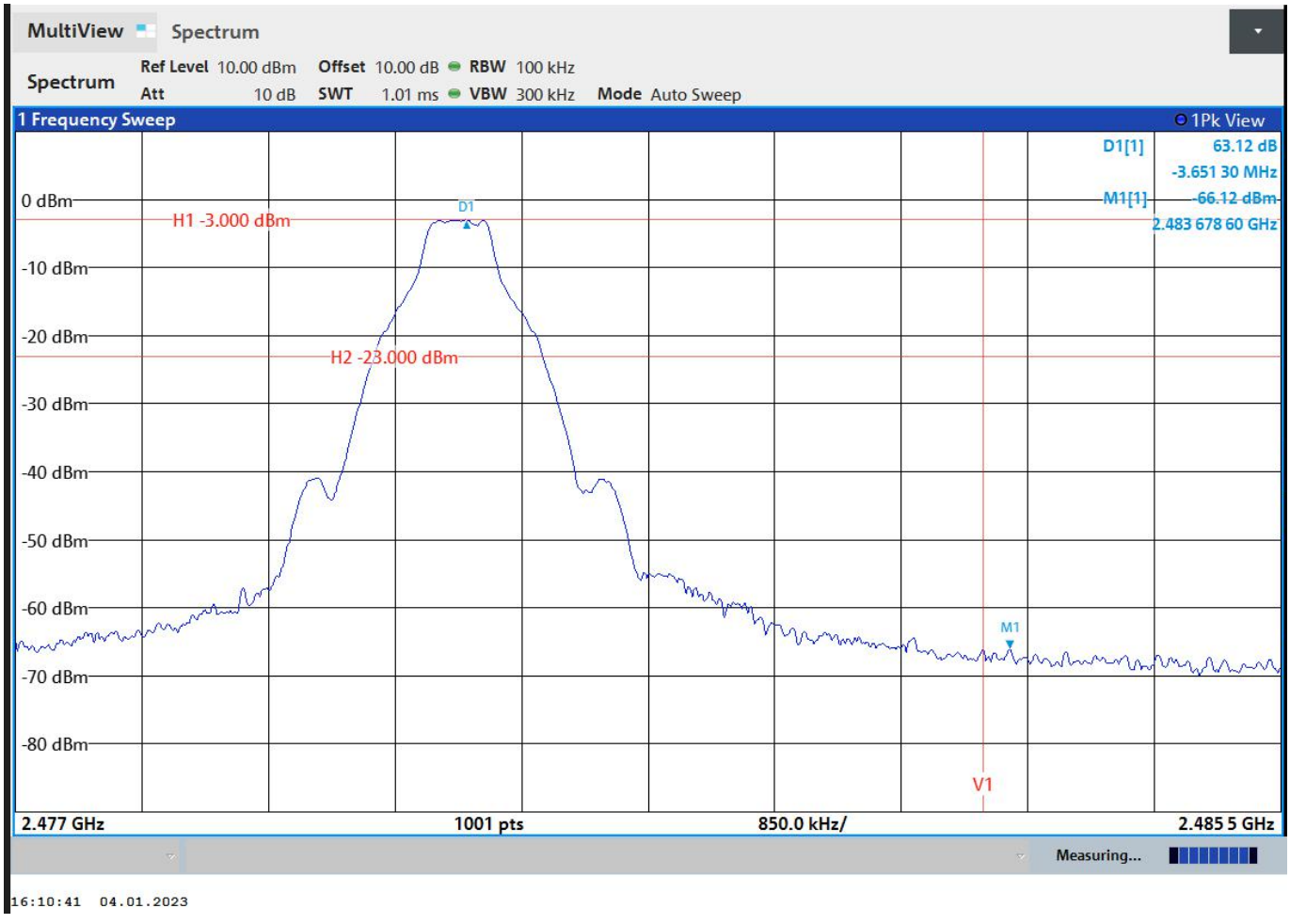
Test according to FCC title 47 part 15 §15.247(d), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013 7.8.6,

RSS-247 Section 5.5

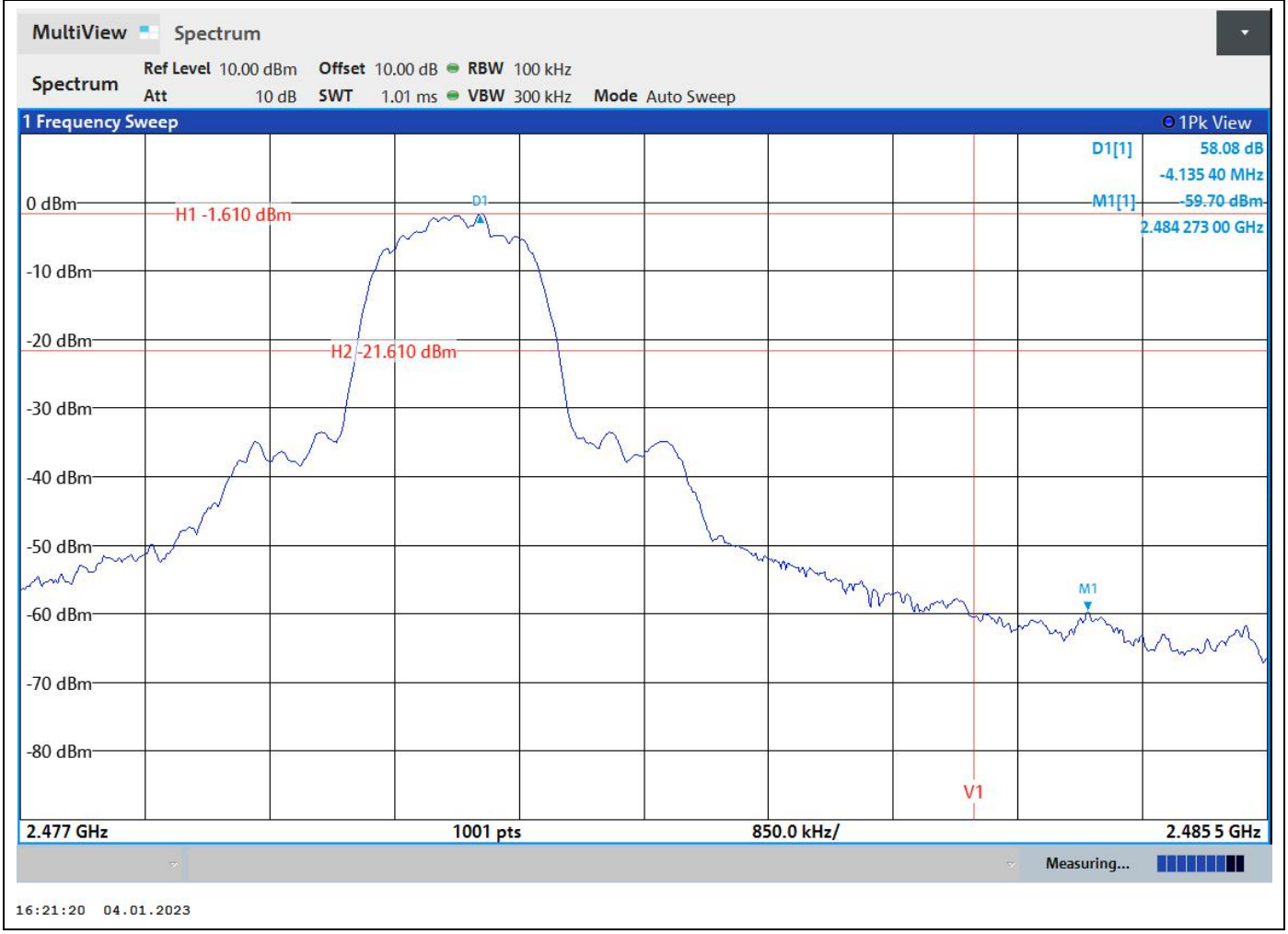
Measurement uncertainty calculated in accordance with ETSI TR 100 028-1. Expanded Uncertainty (K=2) < 0.8 dB

Data Rate	Frequency (MHz)	Level(dBm)
DH5	2483.67860	-3.0
3-DH5	2484.27300	-1.6

2480MHz DH5



2480MHz 3-DH5



4.4.10 Tx Spurious Emission

Test according to FCC title 47 part 15 §15.247(d), KDB 558074 D01 DTS Meas Guidance v05r02 and ANSI C63.10-2013 Section 7.8.8, RSS-247 Section 5.5

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1. Expanded Uncertainty (K=2) < 1.8 dB

2402MHz DH5

Final Measurement

Frequency (MHz)	Level Pre Measurement (dBm)	Level (dBm)	Margin (dB)	Limit (dBm)
2399.958664	-1.7	-65.5	50.4	-15.1

Pre Measurement

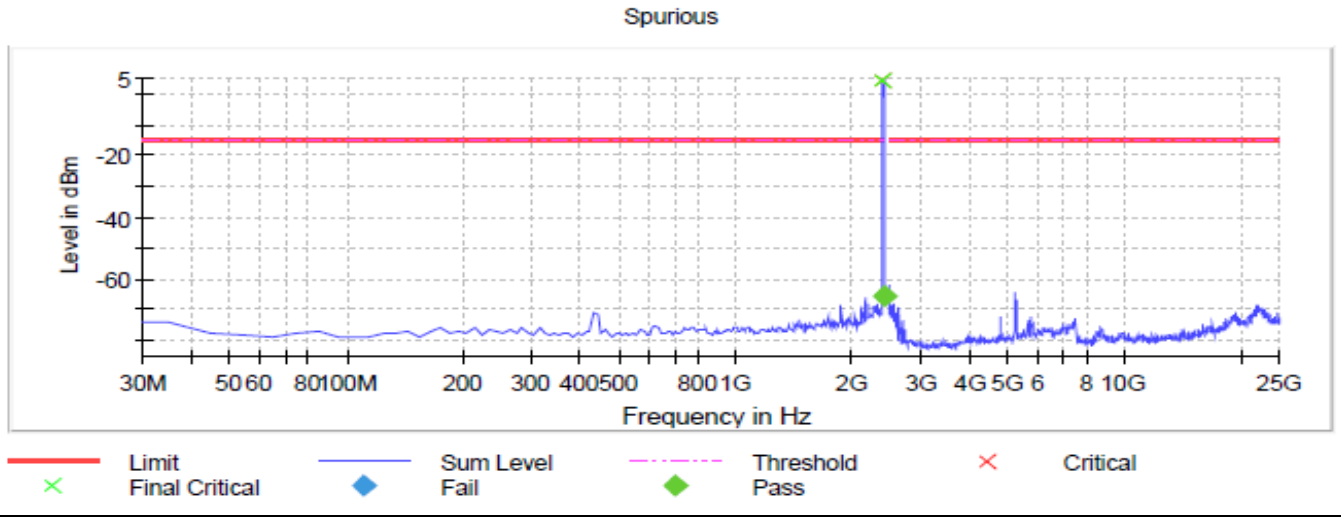
Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2395.021008	4.2	-19.3	-15.1
2385.063025	-61.0	45.9	-15.1
5226.855193	-64.2	49.1	-15.1
5236.849201	-65.2	50.1	-15.1
5216.861185	-65.7	50.6	-15.1
2156.029412	-66.5	51.4	-15.1
5286.819241	-66.7	51.7	-15.1
2538.467044	-68.2	53.1	-15.1
2195.861345	-68.3	53.2	-15.1
22106.734687	-68.5	53.4	-15.1
2508.485020	-68.6	53.5	-15.1
1867.247899	-68.6	53.5	-15.1
5276.825233	-68.8	53.7	-15.1
21726.962383	-68.8	53.8	-15.1
2518.479028	-68.9	53.8	-15.1

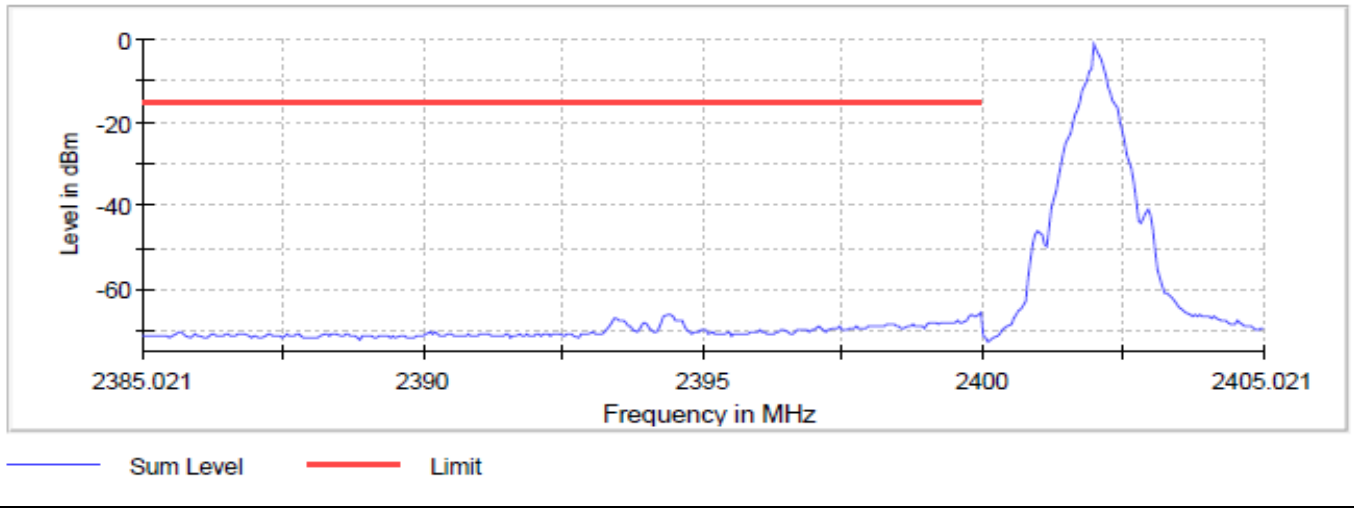
Spectrum Analyzer Pre Measurement Settings

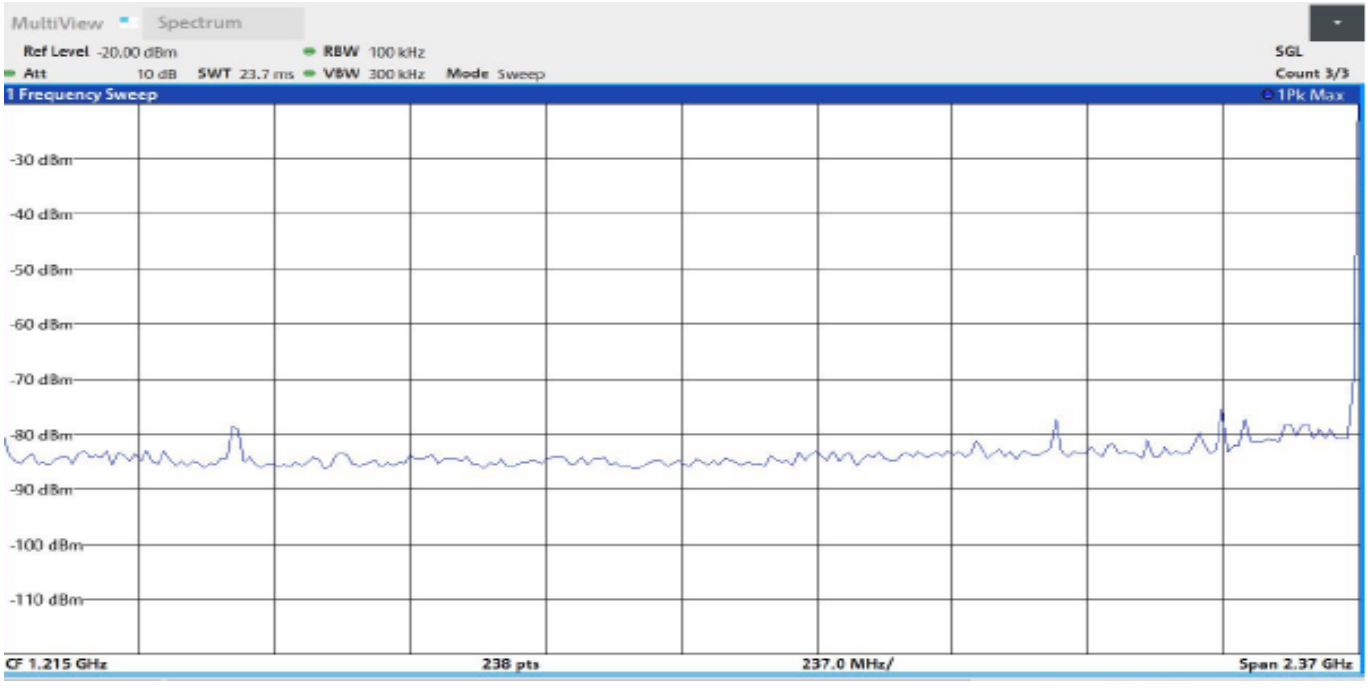
Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	238	~ 238
Sweeptime	23.700 ms	AUTO
Reference Level	-20.000 dBm	-30.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	3	3
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	5 / max. 40	max. 40
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

Spectrum Analyzer Final Measurement Settings

Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	401	~ 401
Sweeptime	1.000 ms	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Average Linear	Average Linear
Sweeptype	Sweep	AUTO
Preamp	off	off


Spurious
Level in dBm
5
-20
-40
-60
30M
50 60
80 100M
200
300 400 500
800 1G
2G
3G
4G 5G 6
8 10G
25G
Frequency in Hz
Limit
Final Critical
Sum Level
Fail
Threshold
Pass
Critical

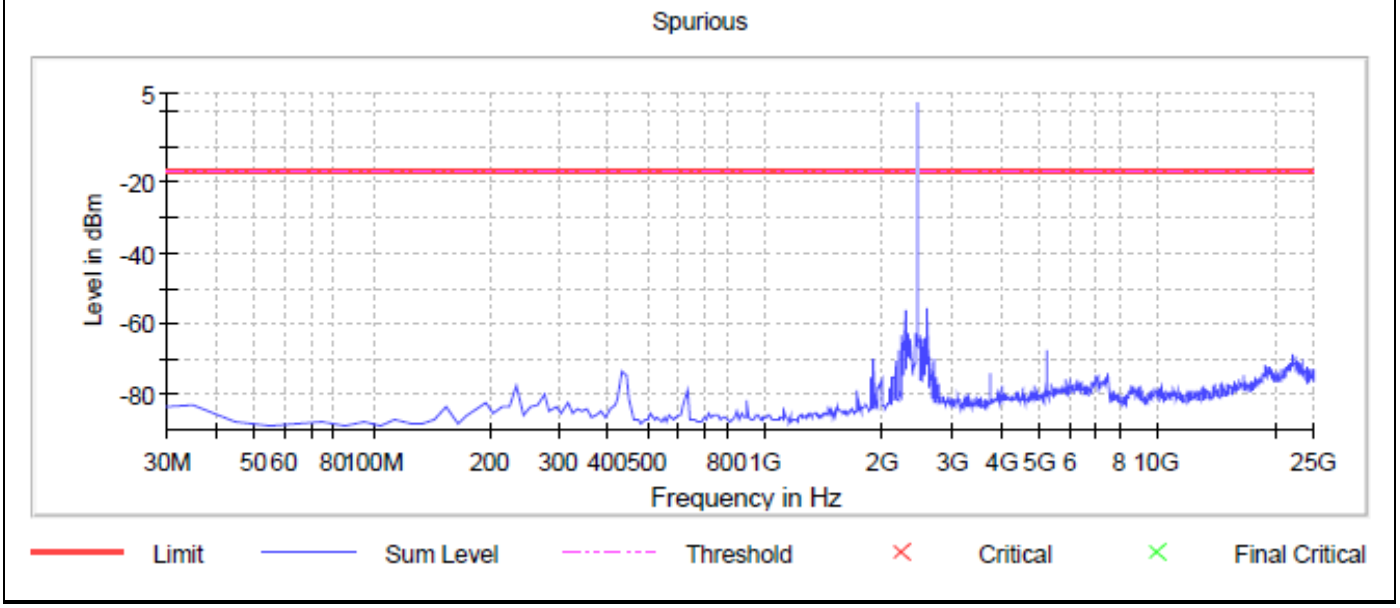

FinalMeas_2395021008Hz
Level in dBm
0
-20
-40
-60
2385.021
2390
2395
2400
2405.021
Frequency in MHz
Sum Level
Limit


MultiView
Spectrum
Ref Level -20.00 dBm
RBW 100 kHz
SGL
Att 10 dB
SWT 23.7 ms
VBW 300 kHz
Mode Sweep
Count 3/3
1 Frequency Sweep
1Pk Max
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
-90 dBm
-100 dBm
-110 dBm
CF 1.215 GHz
238 pts
237.0 MHz/
Span 2.37 GHz

2441MHz DH5

Pre Measurement

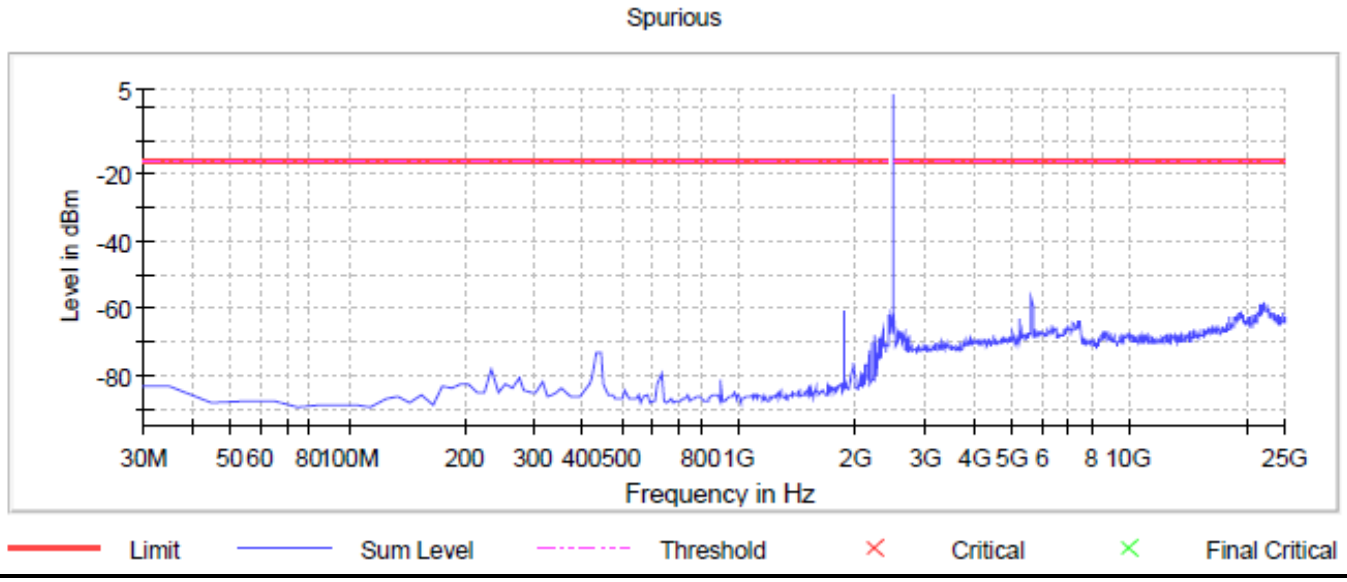
Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2598.431092	-55.8	38.7	-17.1
2275.525210	-56.3	39.2	-17.1
2315.357143	-62.6	45.4	-17.1
2235.693277	-63.1	45.9	-17.1
2558.455060	-64.1	46.9	-17.1
2345.231092	-64.4	47.3	-17.1
2518.479028	-64.7	47.6	-17.1
2528.473036	-65.4	48.2	-17.1
2355.189076	-65.5	48.4	-17.1
2325.315126	-65.7	48.6	-17.1
2195.861345	-67.6	50.4	-17.1
5206.867177	-67.6	50.5	-17.1
2548.461052	-68.2	51.1	-17.1
2265.567227	-68.6	51.5	-17.1
22096.740679	-68.9	51.7	-17.1



2480MHz DH5

Pre Measurement

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
5616.621505	-56.8	40.7	-16.2
22026.782623	-58.2	42.0	-16.2
22136.716711	-58.4	42.3	-16.2
21976.812583	-58.6	42.4	-16.2
22176.692743	-58.7	42.6	-16.2
21996.800599	-58.9	42.7	-16.2
21896.860519	-58.9	42.7	-16.2
22086.746671	-58.9	42.8	-16.2
22336.596871	-58.9	42.8	-16.2
22166.698735	-59.0	42.8	-16.2
21587.046272	-59.1	42.9	-16.2
22486.506991	-59.1	42.9	-16.2
22066.758655	-59.1	42.9	-16.2
5626.615513	-59.1	43.0	-16.2
22196.680759	-59.2	43.0	-16.2



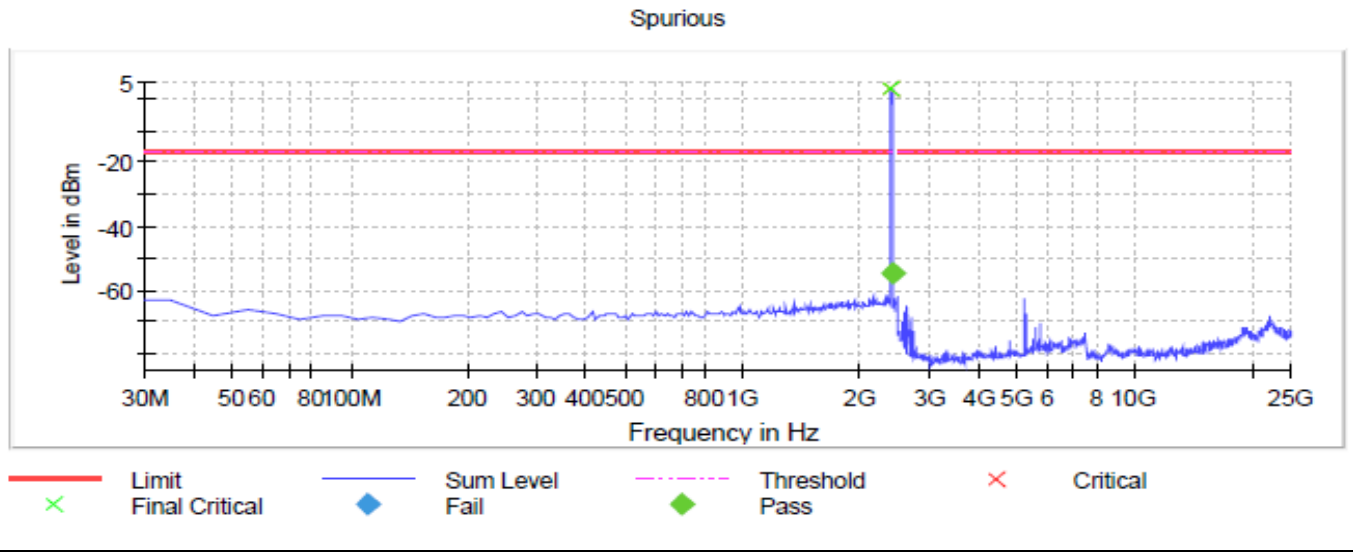
2402MHz 3-DH5

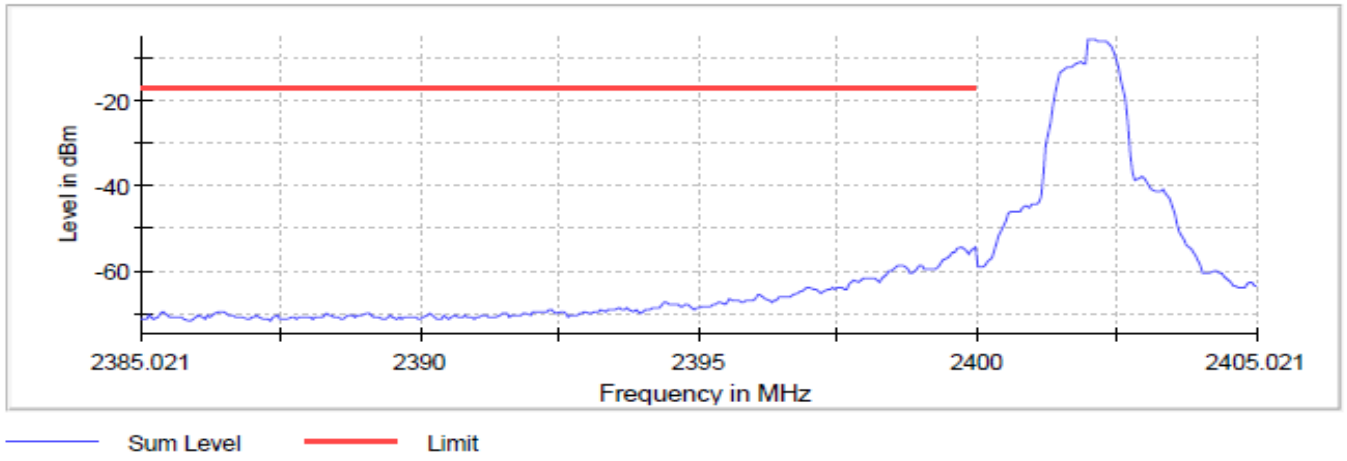
Final Measurement

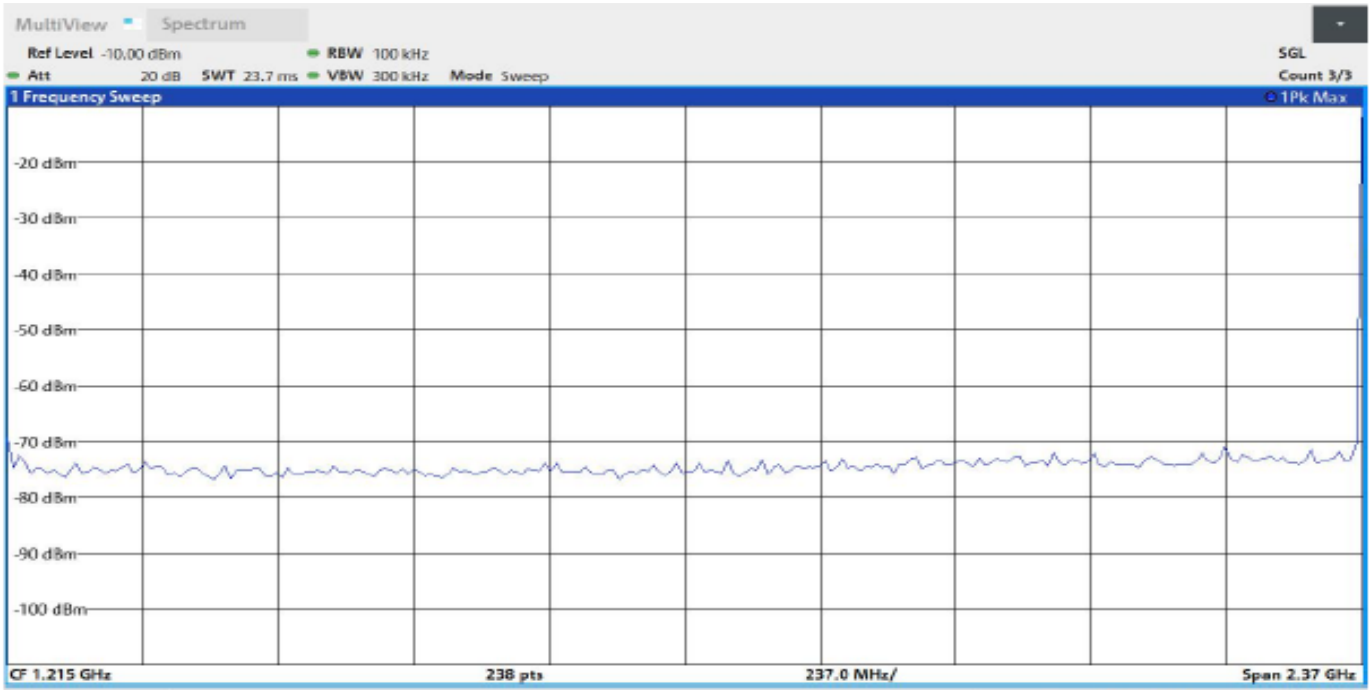
Frequency (MHz)	Level Pre Measurement (dBm)	Level (dBm)	Margin (dB)	Limit (dBm)
2399.958664	-2.5	-54.5	37.7	-16.8

Pre Measurement

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2395.021008	3.4	-20.2	-16.8
2385.063025	-61.1	44.3	-16.8
2156.029412	-62.1	45.3	-16.8
2305.399160	-62.4	45.6	-16.8
2355.189076	-62.7	45.9	-16.8
5216.861185	-62.9	46.1	-16.8
2116.197479	-63.1	46.3	-16.8
34.978992	-63.2	46.4	-16.8
1926.995798	-63.2	46.4	-16.8
1857.289916	-63.2	46.4	-16.8
30.000000	-63.2	46.4	-16.8
2185.903361	-63.4	46.6	-16.8
2235.693277	-63.6	46.8	-16.8
2255.609244	-63.6	46.9	-16.8
2195.861345	-63.7	46.9	-16.8


Spurious
Level in dBm
5
-20
-40
-60
30M
50 60
80 100M
200
300 400 500
800 1G
2G
3G
4G 5G 6
8 10G
25G
Frequency in Hz
Limit
Final Critical
Sum Level
Fail
Threshold
Pass
Critical

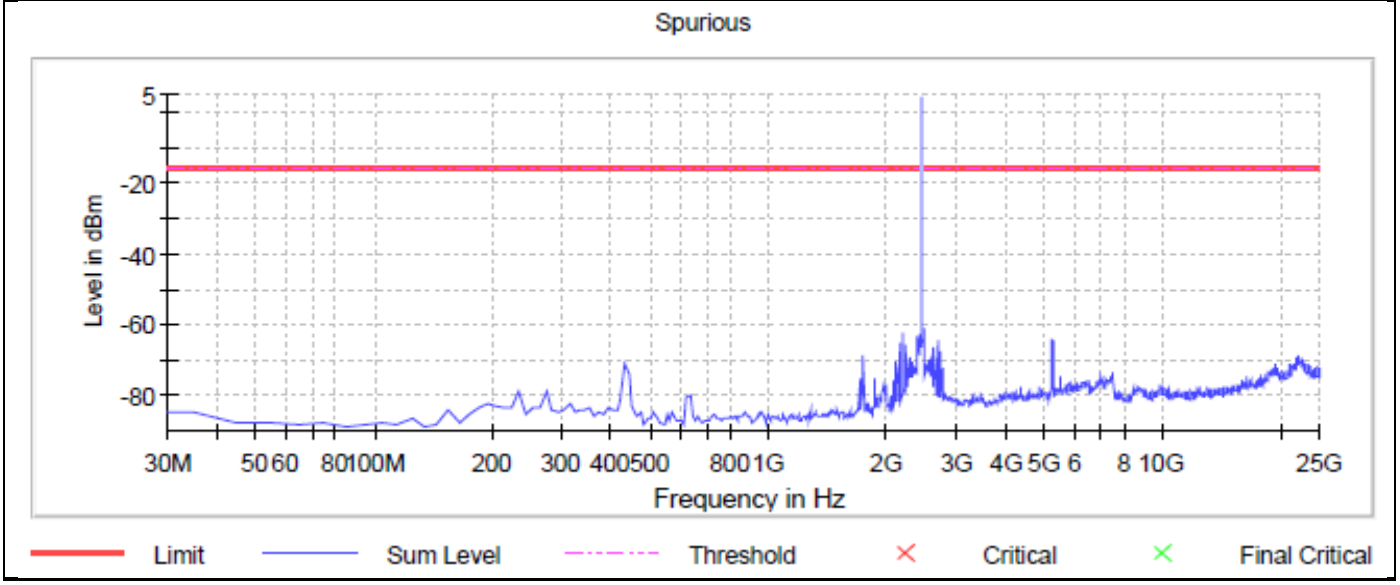

FinalMeas_2395021008Hz
Level in dBm
-20
-40
-60
2385.021
2390
2395
2400
2405.021
Frequency in MHz
Sum Level
Limit


MultiView
Spectrum
Ref Level -10.00 dBm
RBW 100 kHz
SGL
Att 20 dB
SWT 23.7 ms
VBW 300 kHz
Mode Sweep
Count 3/3
1 Frequency Sweep
1Pk Max
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
-90 dBm
-100 dBm
CF 1.215 GHz
238 pts
237.0 MHz/
Span 2.37 GHz

2441MHz 3-DH5

Pre Measurement

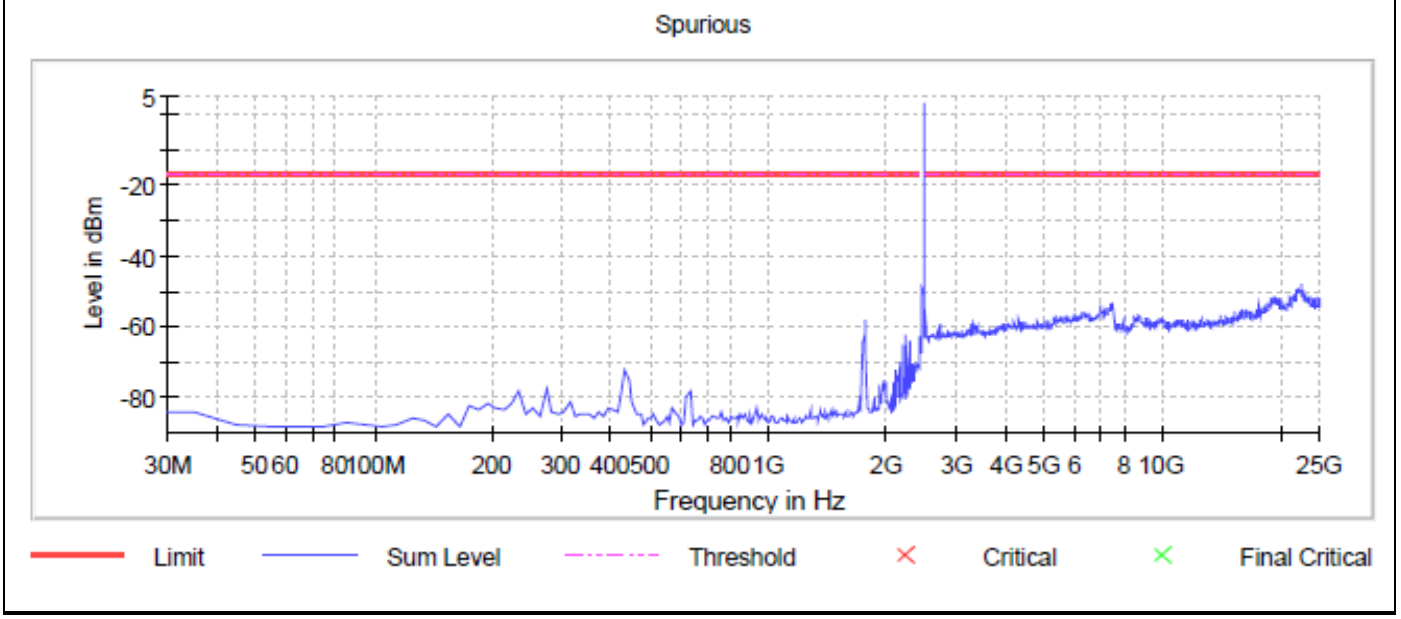
Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2195.861345	-62.4	46.7	-15.7
2395.021008	-63.4	47.7	-15.7
5216.861185	-63.9	48.2	-15.7
2678.383156	-64.3	48.6	-15.7
5276.825233	-64.4	48.8	-15.7
2156.029412	-65.3	49.6	-15.7
2235.693277	-65.4	49.8	-15.7
2638.407124	-66.0	50.4	-15.7
5266.831225	-66.6	50.9	-15.7
2718.359188	-67.7	52.1	-15.7
5256.837217	-68.7	53.1	-15.7
1737.794118	-68.8	53.1	-15.7
22136.716711	-68.9	53.2	-15.7
22126.722703	-68.9	53.3	-15.7
22396.560919	-69.2	53.5	-15.7



2480MHz 3-DH5

Pre Measurement

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
22266.638815	-47.7	30.8	-16.9
22106.734687	-48.8	31.9	-16.9
22096.740679	-48.9	32.0	-16.9
22166.698735	-49.0	32.1	-16.9
22146.710719	-49.1	32.2	-16.9
22456.524967	-49.1	32.2	-16.9
22006.794607	-49.1	32.3	-16.9
22526.483023	-49.2	32.3	-16.9
21986.806591	-49.2	32.3	-16.9
22076.752663	-49.2	32.3	-16.9
22256.644807	-49.2	32.4	-16.9
22086.746671	-49.3	32.4	-16.9
22206.674767	-49.3	32.4	-16.9
22136.716711	-49.3	32.4	-16.9
22046.770639	-49.3	32.5	-16.9



5. Radiated Testing

5.1 Test Summary

Start: 11/23/2022	End: 03/07/2023	Temperature: 23.2°C Humidity: 23.8 %R.H	Initials: AB

DUT S/N	AH22100701-HAR-053#4 AH22100701-HAR-053#5	DUT Operating Mode	BT Classic
Comment	DH5, 3-DH5		

Antenna	Frequency Range	Polarization	Result Over/Under Limit	Notes
Loop	9kHz-30MHz	Parallel	☐Over ☒Under	√
		Perpendicular	☐Over ☒Under	√
		Ground-Parallel	☐Over ☒Under	√
Log Periodic	30MHz-1GHz	Horizontal	☐Over ☒Under	√
		Vertical	☐Over ☒Under	√
Horn	1GHz-18GHz	Horizontal	☐Over ☒Under	√
		Vertical	☐Over ☒Under	√
Horn	18GHz-27.5GHz	Horizontal	☐Over ☒Under	√
		Vertical	☐Over ☒Under	√

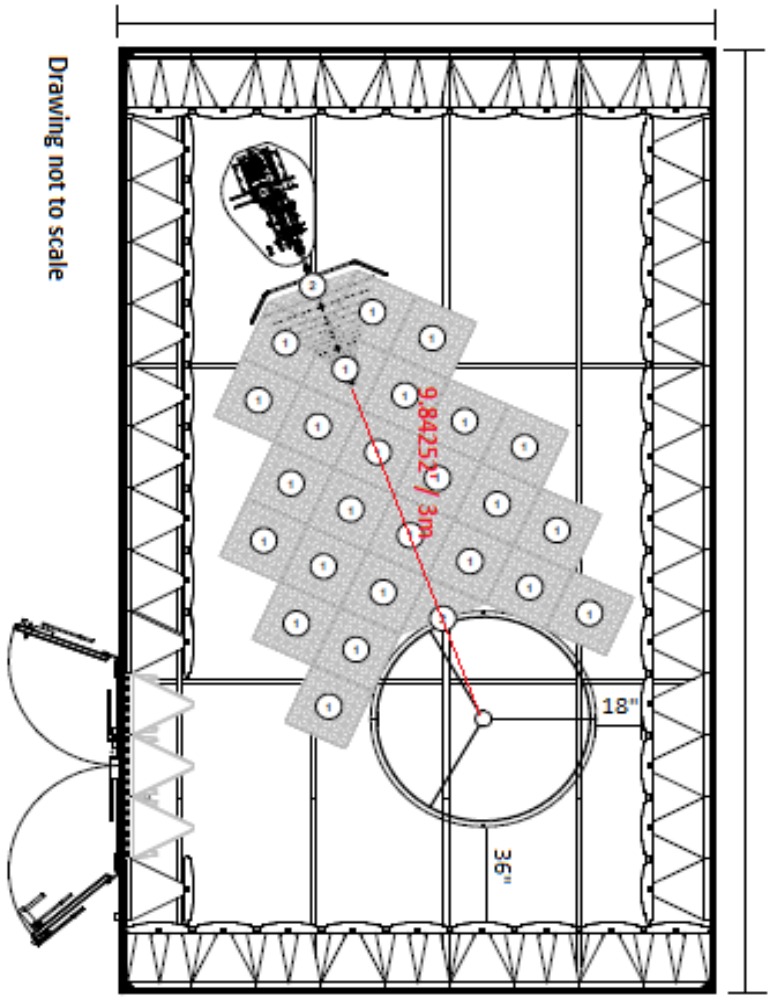
Notes: √ meets the requirements of the acceptance criteria.

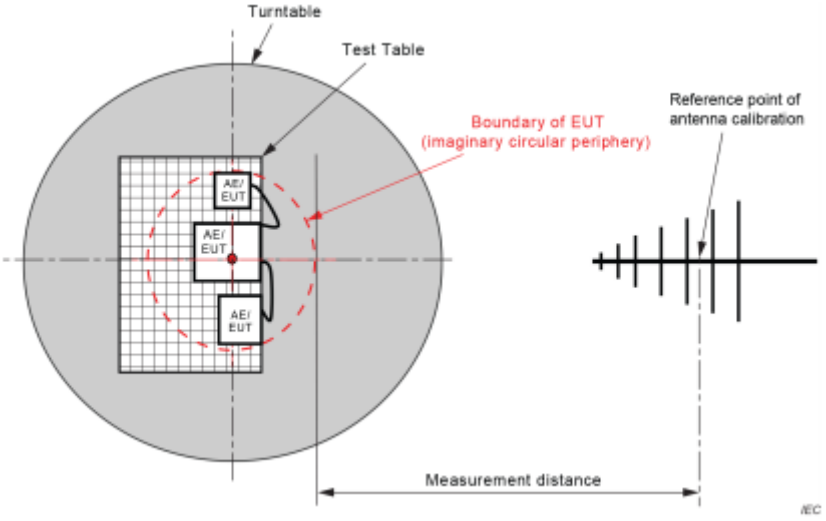
5.2 Test Setup

Semi-Anechoic Chamber Test Site-3 meter

Chamber Location	815 N Opdyke Rd Auburn Hills, Michigan 48326
Chamber Manufacturer:	ETS-Lindgren
Chamber Type	Semi-Anechoic
Model	FACT™ 3-2.0 Plus
Chamber Dimensions (L x W x H)	18'x18'x30'
Quiet Zone Diameter	2.0 meters
Quiet Zone Test Heights	1 & 2 meters (front only)
Test Distance	3.0 meters
Test Frequency Range	1-40 GHz
Measured Performance	4.87 dB Site *s*VSWR

Chamber Dimensions




Turntable
Test Table
Boundary of EUT
(imaginary circular periphery)
Reference point of
antenna calibration
AE/
EUT
AE/
EUT
AE/
EUT
Measurement distance
IEC

5.3 Test Equipment Used

ID #	Equipment	Manufacturer	Model #	Serial #	Cal Due
BVD0217	Receiver 2Hz-44GHz	Rohde & Schwarz	ESW44	101871	4/20/2023
BVD0118	Antenna Mast Position Controller	ETS	7006-001	00214778/00214648	N/A
BVD0111	3 Meter Anechoic Chamber	ETS	N/A	N/A	N/A
BVD0247	Turn Table	ETS	920250	N/A	N/A
BVD0323	Foam Test Table For 3 Meter Chamber	ETS-Lindgren	LDT-1.5	N/A	N/A
BVD0069	Bore Sight Tower	ETS	2171B	226732	N/A
BVD0259	Optima 12V Blue top Marine battery	Optima	D34M	N/A	N/A
BVD0184	Preamplifier 29dB 1-18GHz	Rohde & Schwarz	TS-PR18	101646	5/6/2023
BVD0185	Preamplifier 45dB 18-40GHz	Rohde & Schwarz	TS-PR1840	100064	4/6/2023
BVD0267	Double Ridge Waveguide 800MHz-18GHz	Rohde & Schwarz	HF907	102832	5/5/2023
BVD0021	UltraLog Antenna 30-6000 MHz	Rohde & Schwarz	HL562E	101113	7/21/2023
BVD0320	18-40GHz Horn Antenna	L3 Narda ATM	PNR 180-442-KF	136164-01	4/4/2023
BVD0011	Loop Antenna 9kHz-30MHz	Rohde & Schwarz	FMZB1519B	145	5/4/2023
BVD0045	Field Probe Mast	Rohde & Schwarz	TS-FPMA	N/A	N/A
BVD0480	Band Reject Filter 50dB from 2400 to 2500MHz	Micro-Tronics	BRM50702	G482	4/11/2023
BVD0394	Double Shielded N-Type Cable 6.9 Meter	Rohde & Schwarz	N-Type	N/A	3/11/2023
BVD0398	Double Shielded N-Type Cable 2 Meter	Rohde & Schwarz	N-Type	N/A	12/29/2024
BVD0486	Sucoflex K-Type Coaxial Cable 5 Meter	Huber+Suhner, inc	K-Type Coaxial	474343	3/7/2023
BVD0407	Double Shielded N-Type Cable 410mm (For PreAmp)	Rohde & Schwarz	N-Type	N/A	8/31/2023
BVD0495	SMA Shielded Cable approx 100mm (for Pre-Amp)	Rohde & Schwarz	SMA-Type	N/A	4/6/2023
BVD0552	Double Shielded N-Type Cable 440mm (For PreAmp)	Electronic Assemblies	N-Type	N/A	5/7/2023
BVD0229	Temp and Humidity Meter	Fluke	971	12001009	5/1/2023

Equipment List (Software)

ID #	Equipment	Manufacturer	Model	Version No.	
N/A	EMC Test Software	Rodhe & Schwarz	EMC32	11.20.00	N/A

Customer Supplied Equipment

ID #	Equipment	Manufacturer	Model	Serial #	Version No.
N/A	Harness	Harman	N/A	N/A	N/A
N/A	Display Unit	Innolux Corp	INFOMM-15524	0024	N/A
N/A	Ethernet Board	GM	N/A	N/A	CSMate rev.4
N/A	GM BT WLAN Test Tool NXP Chips S/W	Harman	N/A	N/A	2.4

5.4 Test Limits and Procedures

Radiated emissions that fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a). Other emissions shall be at least 20dB below the highest level of the desired power.

Frequencies (MHz)	Field strength (μV/m)	Field strength (dBμV/m)	Measurement distance (meters)
0.009 ~ 0.490	2400/F(kHz)	48.5 - 13.8	300
0.490 ~ 1.705	24000/F(kHz)	33.8 - 23	30
1.705 ~ 30.0	30	29.54	30
30 ~ 88	100	40.0	3
88 ~ 216	150	43.5	3
216 ~ 960	200	46.0	3
Above 960	500	54.0	3

Note:

a) The lower limit shall apply at the transition frequencies.

b) As per 15.35(b), for frequencies above 1000MHz, the field strength limits 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.

c) For performing measurements at a specified distance of 3m, the values are extrapolated using extrapolation factor.
Frequencies below 30MHz are extrapolated using 40dB/decade.
Frequencies above 30MHz are extrapolated using 20dB/decade.

Frequencies (MHz)	Formula for Limits derivation for below 30MHz	Limits for frequencies below 30MHz (dBuV/m)
0.009 ~ 0.490	2400/F(kHz) + 40 Log (300m/3m)	128.5 ~ 93.8
0.490 ~ 1.705	24000/F(kHz) + 40 Log (30m/3m)	73.8 ~ 62.96
1.705 ~ 30.0	29.54 + 40 Log (30m/3m)	69.54

The limits in CFR 47, Part 15, Subpart C, paragraph 15.209 (a), are identical to those in RSS-GEN Section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table) using the free space impedance of 377Ω.

For example, the measurement frequency 2190KHz resulted in a level of 29.91 dBuV/m, which is equivalent to 29.91 - 51.48 = -21.57 dBuA/m, which has the same margin, -39.63 dB, to the corresponding RSS-GEN Table 6 limit as it has to the 15.209(a) limit.

The measurement procedures are as per ANSI C63.10-2013 Sections 6.3, Section 6.4, Section 6.5, and Section 6.6

1. The table height for emissions measurements
   i) Below 1 GHz, the table height is 80 cm above the reference ground plane.
   ii) Above 1 GHz, the table height is 1.5 m
2. Radiated emission tests are performed in the frequency range
   i) 9 kHz to 30 MHz, using a calibrated loop antenna
   ii) 30 MHz to 1GHz, using a calibrated log antenna
   iii) Above 1 GHz using a calibrated horn antenna
3. Measurements performed with the EUT rotated from 0° to 360°, the antenna height scanned between 1m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations.

5.5 Test Plots

Uncertainty

Radiated Emissions (30MHz to 40GHz)

Test Engineer Initials: AB

The test is to measure the radiated emissions of the EUT. Some error sources that can contribute to the total uncertainty:

- Uncertainty of the receiver
- Uncertainty of the antenna
- Uncertainty of cables
- Uncertainty due to the mismatches
- NSA Calibration
- Etc., details see the below table

30MHz to 1GHZ

Source of Uncertainty	Value (dB)	ProbabilityDistribution	Division	Sensitivity Coefficient	Expanded Uncertainty
Receiver Reading	0.12	Rectangular	1.732	1	0.069284
Cable Insertion Loss	0.21	Normal	2	1	0.105
Filter Insertion Loss	0.25	Normal	2	1	0.125
Antenna Factor	0.65	Normal	2	1	0.325
Receiver CW accuracy	0.5	Rectangular	1.732	1	0.2886836
Pulse Amplitude Response	1.5	Rectangular	1.732	1	0.86605081
PRF Response	1.5	Rectangular	1.732	1	0.86605081
Mismatch Filter – Receiver	0.25	U-Shape	2.449	1	0.1768033
NSA Calibration	4.0	Triangular	1.414	1	1.633332
ETS Foam Table (LDT-1.5)	1.8	Rectangular	1.732	1	1.039261
Combined Standard Uncertainty (square root of the sum of the squares)					2.113781
Expanded Uncertainty (K=2)					**4.227562**

The total derived measurement uncertainty is +/- 4.228 dB

1GHz to 40GHz

Source of Uncertainty	Value (dB)	Probability Distribution	Division	Sensitivity Coefficient	Expanded Uncertainty
Receiver Reading	0.12	Rectangular	1.732	1	0.069284
Cable Insertion Loss	0.21	Normal	2	1	0.105000
Filter Insertion Loss	0.25	Normal	2	1	0.125000
Antenna Factor	0.65	Normal	2	1	0.325000
Receiver CW accuracy	0.5	Rectangular	1.732	1	0.2886836
Pulse Amplitude Response	1.5	Rectangular	1.732	1	0.866051
PRF Response	1.5	Rectangular	1.732	1	0.866051
Mismatch Filter – Receiver	0.25	U-Shape	1.414	1	0.176803
VSWR Calibration	2.0	Triangular	2.449	1	0.816659
ETS Foam Table (LDT-1.5)	1.8	Rectangular	1.732	1	1.039261
Combined Standard Uncertainty (square root of the sum of the squares)					1.869213
Expanded Uncertainty (K=2)					**3.738426**

The total derived measurement uncertainty is +/- 3.738 dB.

Remarks:

1. Level Q-Peak Reading (dBµV/m) = Raw Q-Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Q-Peak Reading – Limit

Remarks:

1. Level Peak Reading (dBµV/m) = Raw Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Peak Reading – Limit

Remarks:

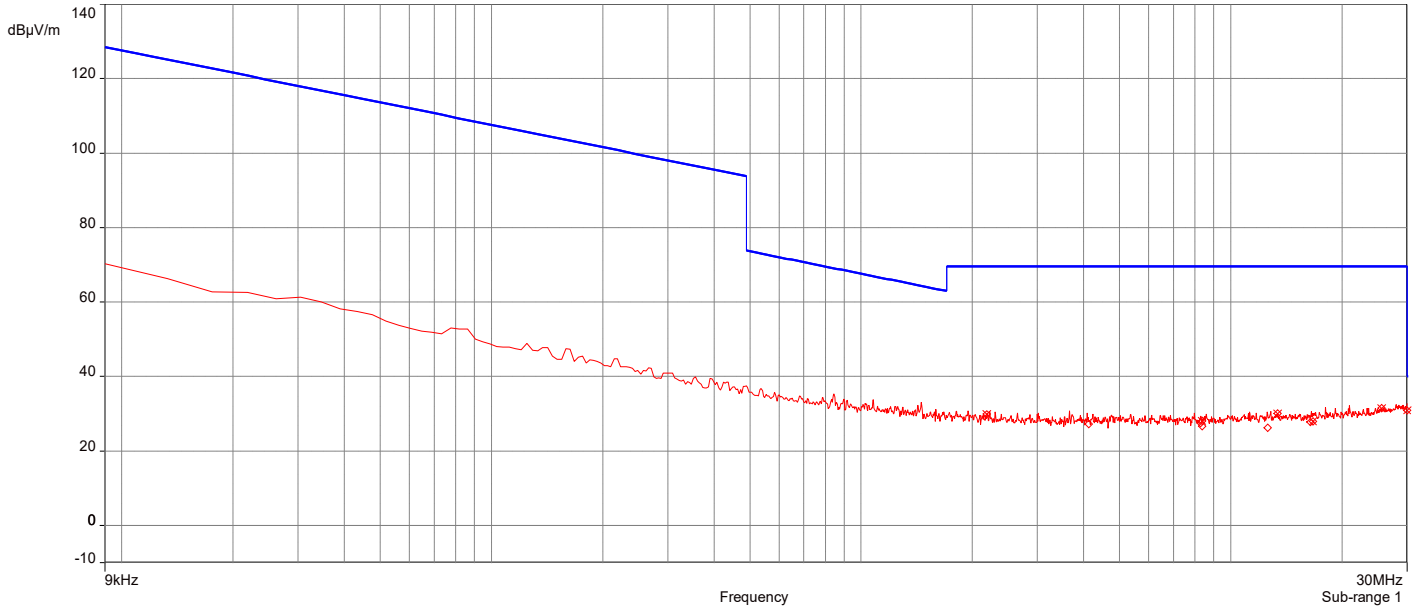
1. Level Average Reading (dBµV/m) = Raw Average Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Average Reading – Limit

AH22100701-HAR-053#5_BT_DH5_Ch 39_9kHz-30MHz_Ground-Parallel

12/1/2022 3:46:25 PM

No	Frequency (MHz)	Level Q-Peak Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1.	2.190086MHz	29.91	19.49	69.54	-39.63	1.00	0.10	H/V	Passed
2.	8.364829MHz	28.10	19.45	69.54	-41.44	1.00	253.20	H/V	Passed
3.	13.408322MHz	30.08	19.85	69.54	-39.46	1.00	29.00	H/V	Passed
4.	16.694949MHz	27.91	19.92	69.54	-41.63	1.00	103.10	H/V	Passed
5.	25.599263MHz	31.48	20.99	69.54	-38.06	1.00	106.50	H/V	Passed
6.	30MHz	30.88	21.85	40.00	-9.12	1.00	270.80	H/V	Passed

Overall Graphs:



Remarks:

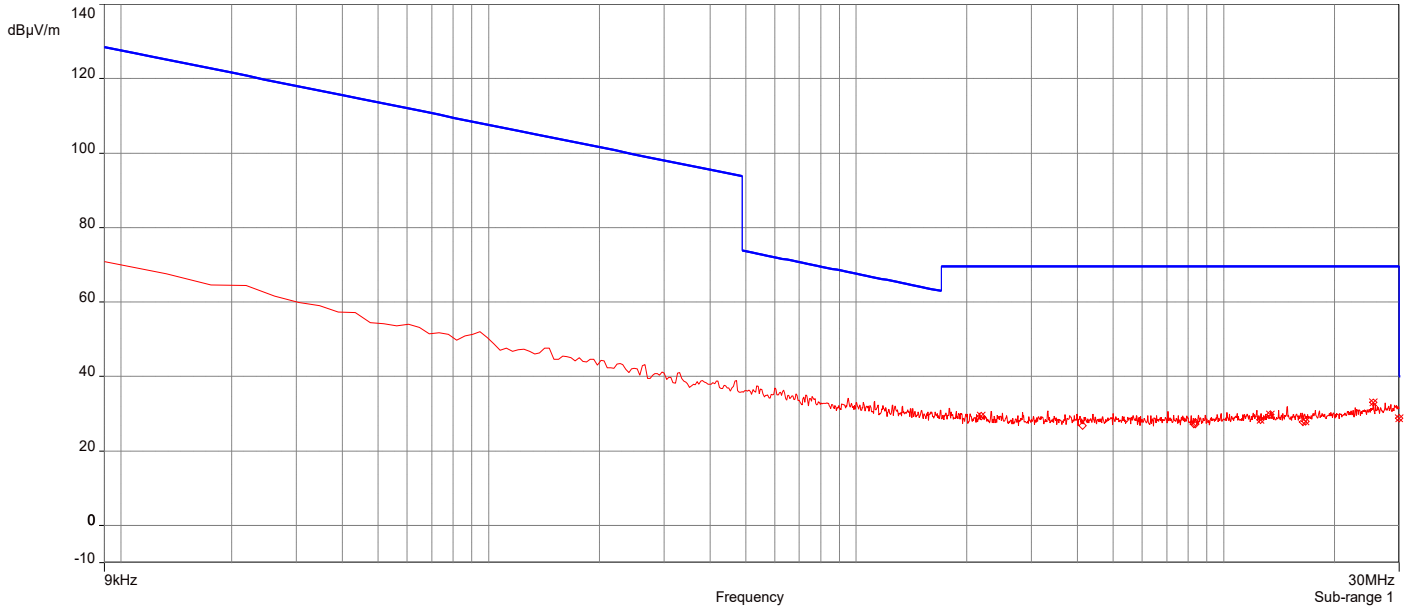
1. Level Q-Peak Reading (dBµV/m) = Raw Q-Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Q-Peak Reading – Limit

AH22100701-HAR-053#5_BT_DH5_Ch 39_9kHz-30MHz_Parallel

12/1/2022 3:43:45 PM

No	Frequency (MHz)	Level Q-Peak Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1.	2.185801MHz	29.39	19.49	69.54	-40.15	1.00	356.90	H/V	Passed
2.	12.577024MHz	28.40	19.83	69.54	-41.14	1.00	171.50	H/V	Passed
3.	13.408322MHz	29.75	19.85	69.54	-39.79	1.00	100.10	H/V	Passed
4.	16.694949MHz	27.96	19.92	69.54	-41.58	1.00	39.20	H/V	Passed
5.	25.513562MHz	33.02	20.98	69.54	-36.52	1.00	183.80	H/V	Passed
6.	30MHz	28.85	21.85	40.00	-11.15	1.00	59.90	H/V	Passed

Overall Graphs:



Remarks:

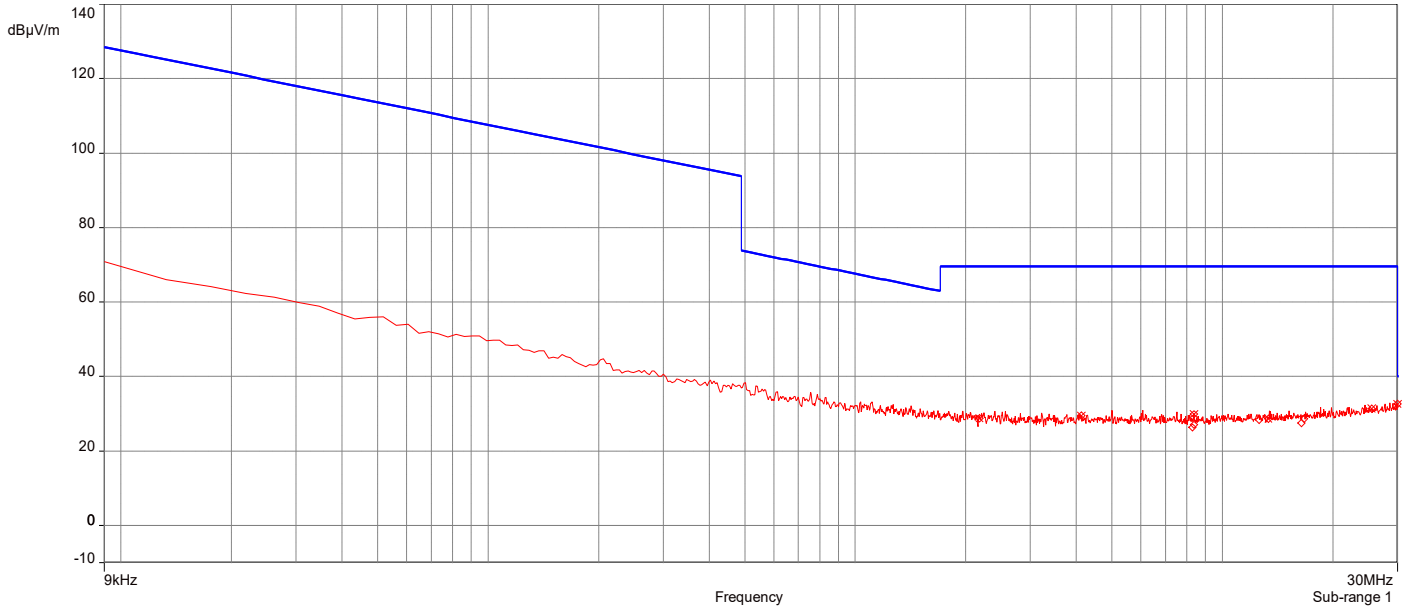
1. Level Q-Peak Reading (dBµV/m) = Raw Q-Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Q-Peak Reading – Limit

AH22100701-HAR-053#5_BT_DH5_Ch 39_9kHz-30MHz_Perpendicular

12/1/2022 3:49:21 PM

No	Frequency (MHz)	Level Q-Peak Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1.	2.177231MHz	28.79	19.49	69.54	-40.75	1.00	204.20	H/V	Passed
2.	4.126924MHz	29.50	19.69	69.54	-40.04	1.00	358.90	H/V	Passed
3.	8.377685MHz	29.97	19.45	69.54	-39.57	1.00	32.90	H/V	Passed
4.	13.365472MHz	28.61	19.85	69.54	-40.93	1.00	65.50	H/V	Passed
5.	25.526417MHz	31.32	20.98	69.54	-38.22	1.00	270.50	H/V	Passed
6.	30MHz	32.66	21.85	40.00	-7.34	1.00	242.40	H/V	Passed

Overall Graphs:



Remarks:

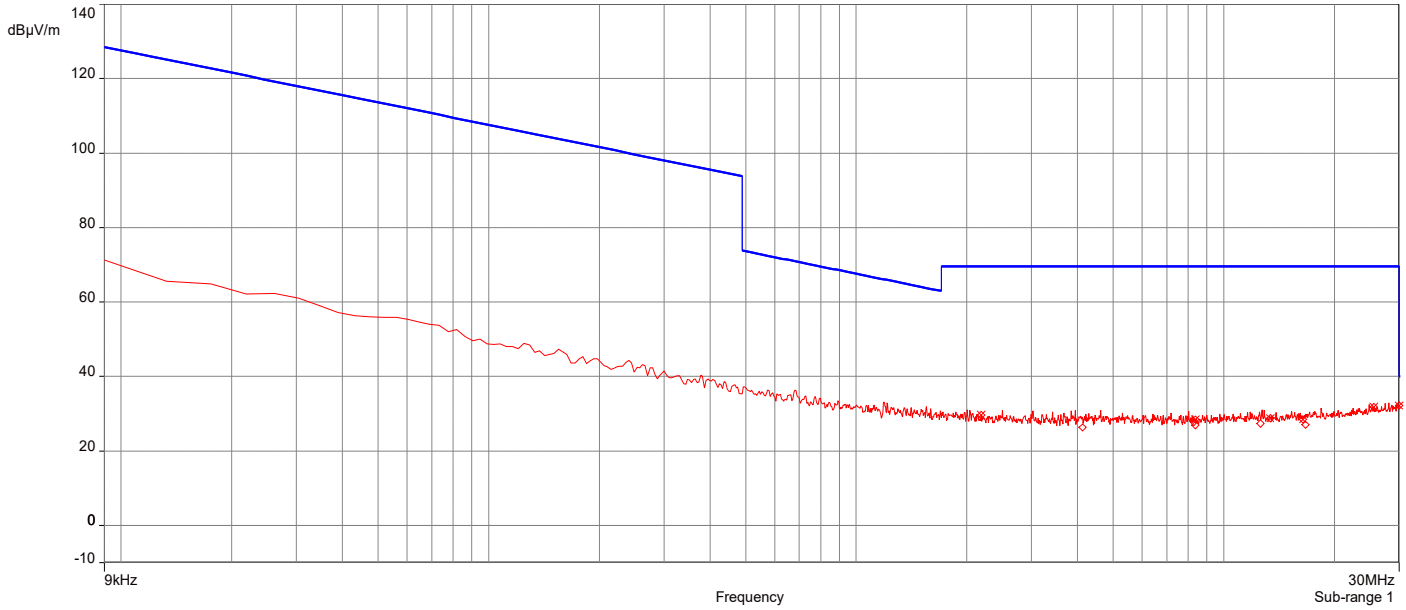
1. Level Q-Peak Reading (dBµV/m) = Raw Q-Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Q-Peak Reading – Limit

AH22100701-HAR-053#4_BT_3-DH5_Ch 39_9kHz-30MHz_Ground-Parallel

12/28/2022 3:27:23 PM

No	Frequency (MHz)	Level Q-Peak Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1.	2.185801MHz	29.69	19.49	69.54	-39.85	1.00	310.10	H/V	Passed
2.	8.377685MHz	28.55	19.45	69.54	-40.99	1.00	218.90	H/V	Passed
3.	13.408322MHz	28.78	19.85	69.54	-40.76	1.00	53.60	H/V	Passed
4.	16.420706MHz	28.50	19.89	69.54	-41.04	1.00	223.40	H/V	Passed
5.	25.594978MHz	31.80	20.99	69.54	-37.74	1.00	0.10	H/V	Passed
6.	30MHz	32.16	21.85	40.00	-7.84	1.00	274.40	H/V	Passed

Overall Graphs:



Remarks:

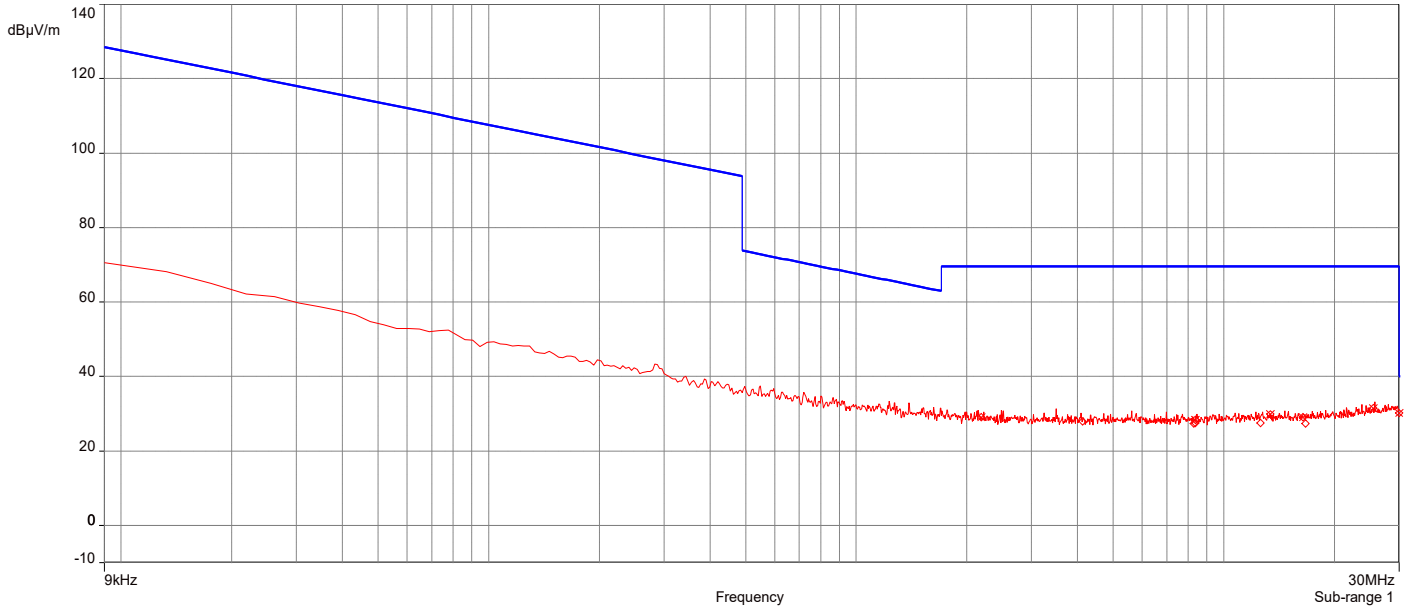
1. Level Q-Peak Reading (dBµV/m) = Raw Q-Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Q-Peak Reading – Limit

AH22100701-HAR-053#4_BT_3-DH5_Ch 39_9kHz-30MHz_Parallel

12/28/2022 3:16:03 PM

No	Frequency (MHz)	Level Q-Peak Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1.	2.185801MHz	29.09	19.49	69.54	-40.45	1.00	303.80	H/V	Passed
2.	8.38197MHz	28.42	19.45	69.54	-41.12	1.00	300.80	H/V	Passed
3.	13.386897MHz	29.89	19.85	69.54	-39.65	1.00	142.30	H/V	Passed
4.	16.420706MHz	29.14	19.89	69.54	-40.40	1.00	195.00	H/V	Passed
5.	25.534988MHz	31.45	20.98	69.54	-38.09	1.00	0.90	H/V	Passed
6.	30MHz	30.17	21.85	40.00	-9.83	1.00	9.60	H/V	Passed

Overall Graphs:



Remarks:

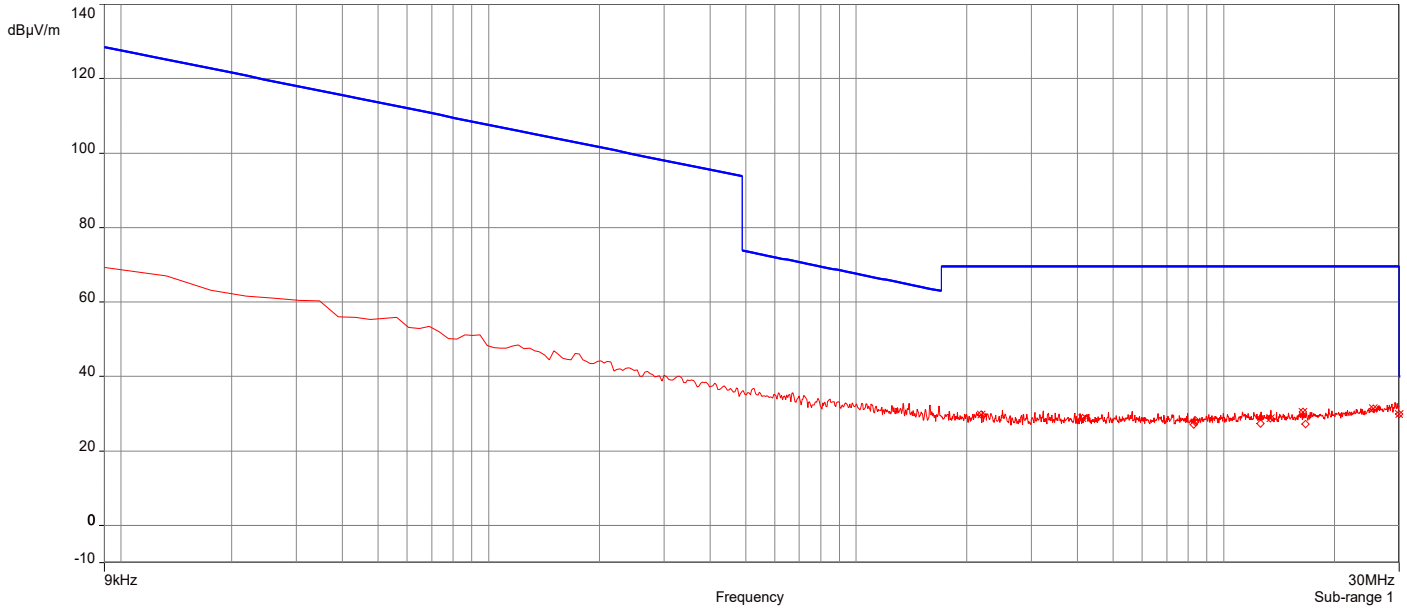
1. Level Q-Peak Reading (dBµV/m) = Raw Q-Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Q-Peak Reading – Limit

AH22100701-HAR-053#4_BT_3-DH5_Ch 39_9kHz-30MHz_Perpendicular

12/28/2022 3:20:27 PM

No	Frequency (MHz)	Level Q-Peak Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1.	2.190086MHz	29.75	19.49	69.54	-39.79	1.00	79.90	H/V	Passed
2.	4.126924MHz	28.78	19.69	69.54	-40.76	1.00	81.20	H/V	Passed
3.	13.369757MHz	28.81	19.85	69.54	-40.73	1.00	73.40	H/V	Passed
4.	16.420706MHz	30.46	19.89	69.54	-39.08	1.00	148.20	H/V	Passed
5.	25.522132MHz	31.29	20.98	69.54	-38.25	1.00	218.00	H/V	Passed
6.	30MHz	29.92	21.85	40.00	-10.08	1.00	78.20	H/V	Passed

Overall Graphs:



Remarks:

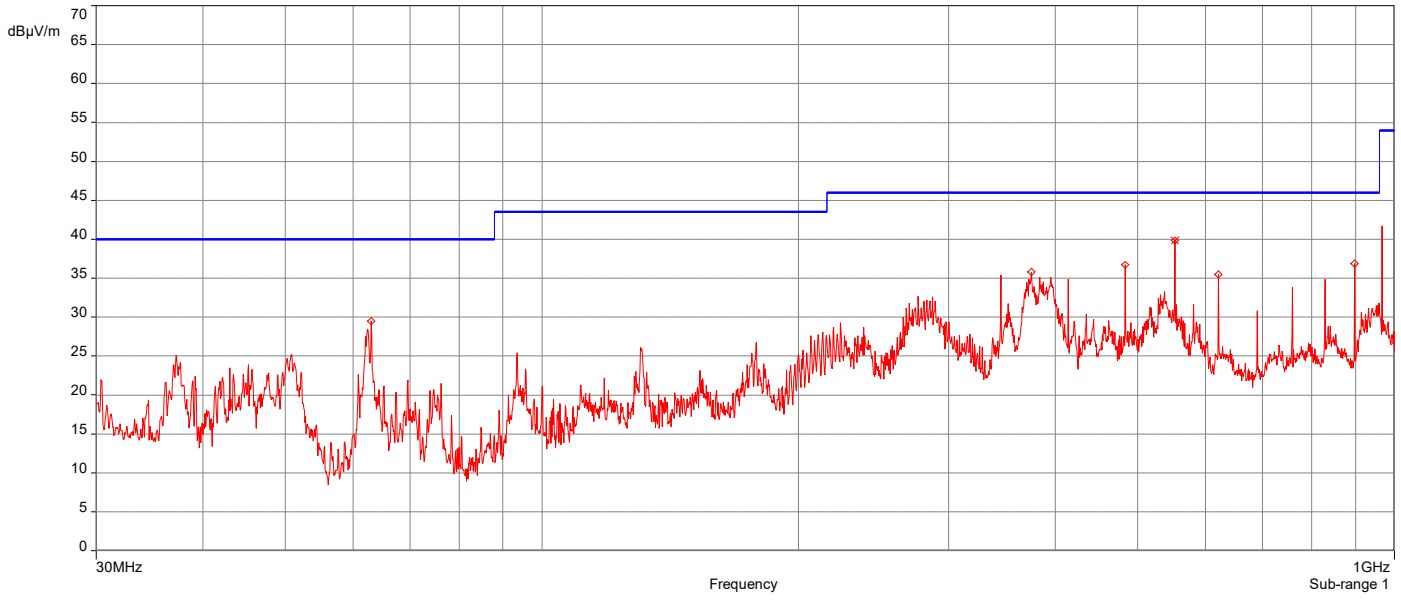
1. Level Q-Peak Reading (dBµV/m) = Raw Q-Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Q-Peak Reading – Limit

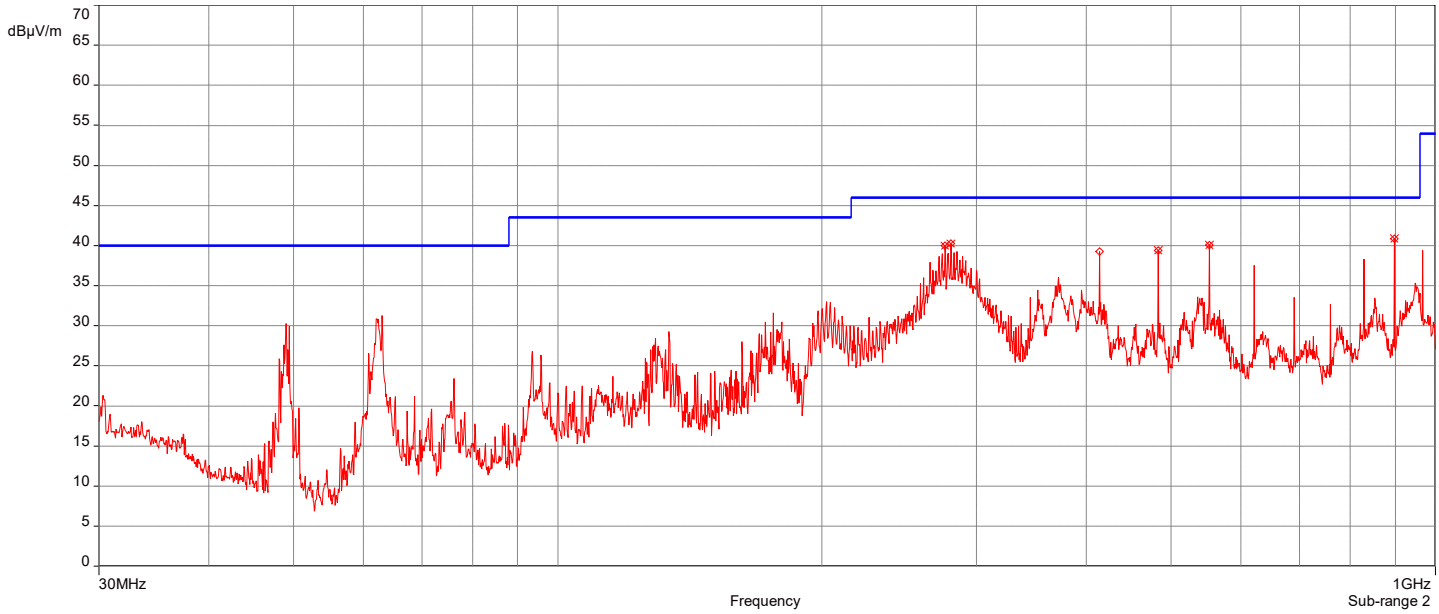
AH22100701-HAR-053#5_BT_DH5_Ch 39_30MHz-1GHz

12/1/2022 11:11:33 AM

No	Frequency (MHz)	Level Q-Peak Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1.	552.40426MHz	39.86	-6.60	46.00	-6.14	1.25	236.60	Vertical	Passed
2.	276.33743MHz	40.00	-11.97	46.00	-6.00	1.25	312.50	Horizontal	Passed
3.	280.50297MHz	40.29	-11.96	46.00	-5.71	1.00	292.90	Horizontal	Passed
4.	483.35902MHz	39.39	-6.80	46.00	-6.61	1.00	197.60	Horizontal	Passed
5.	552.40426MHz	40.03	-5.66	46.00	-5.97	1.00	322.70	Horizontal	Passed
6.	897.68751MHz	40.89	-0.39	46.00	-5.11	1.50	132.60	Horizontal	Passed

Overall Graphs:





Remarks:

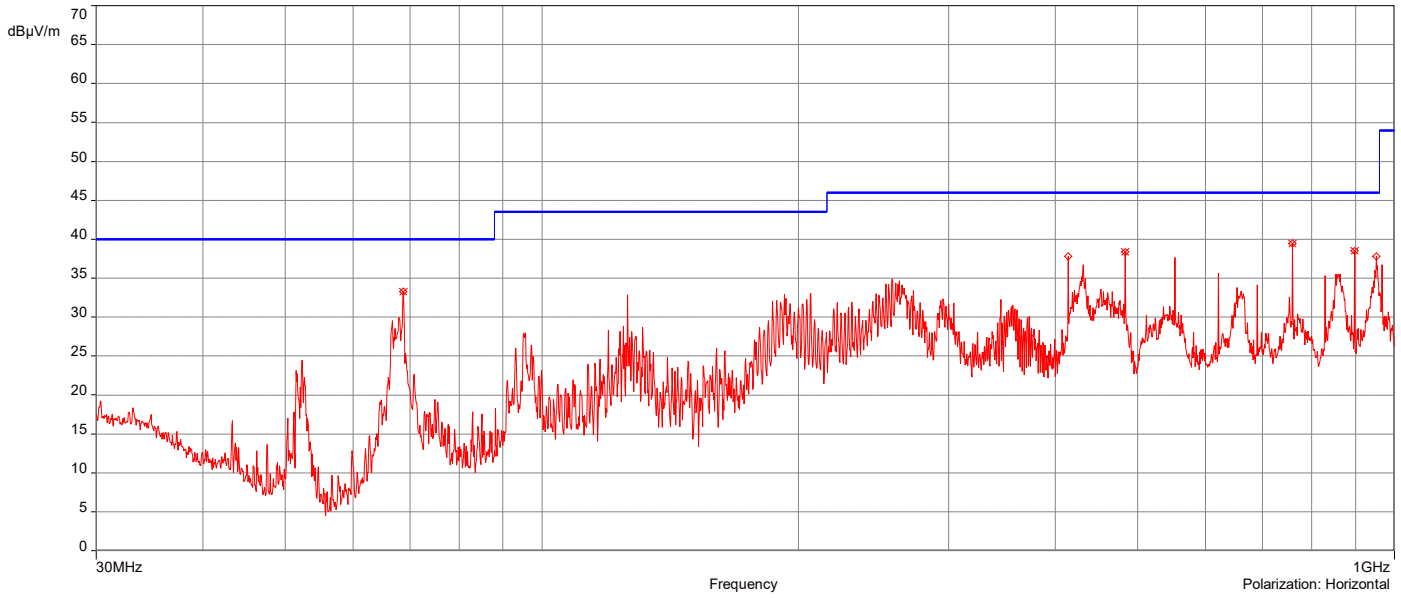
1. Level Q-Peak Reading (dBµV/m) = Raw Q-Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Q-Peak Reading – Limit

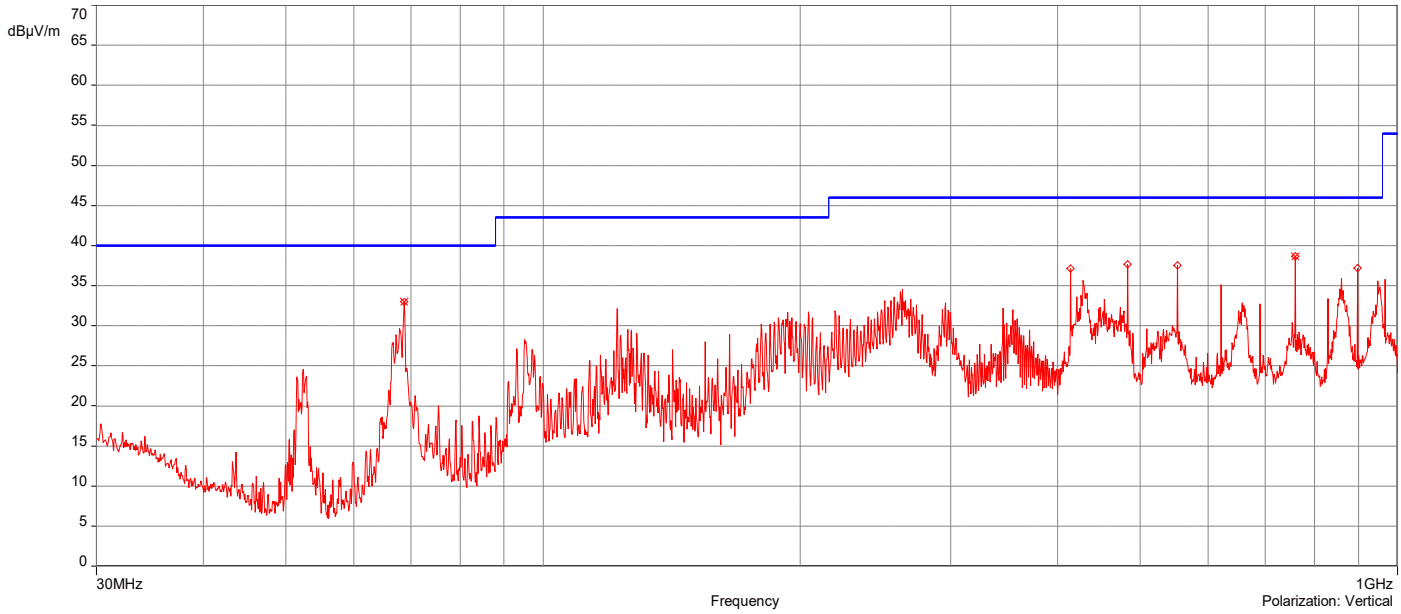
AH22100701-HAR-053#5_BT_3-DH5_Ch 39_30MHz-1GHz

3/7/2023 11:01:07 AM

No	Frequency (MHz)	Level Q-Peak Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1.	68.74522MHz	33.03	-16.72	40.00	-6.97	4.00	5.00	Vertical	Passed
2.	759.59704MHz	38.65	-3.29	46.00	-7.35	1.25	66.10	Vertical	Passed
3.	68.74522MHz	33.29	-16.42	40.00	-6.71	2.50	188.60	Horizontal	Passed
4.	483.35902MHz	38.41	-6.78	46.00	-7.59	1.00	210.70	Horizontal	Passed
5.	759.59704MHz	39.46	-2.19	46.00	-6.54	1.25	72.90	Horizontal	Passed
6.	897.68751MHz	38.52	-0.39	46.00	-7.48	1.50	139.60	Horizontal	Passed

Overall Graphs:





Remarks:

1. Level Q-Peak Reading (dBµV/m) = Raw Q-Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Q-Peak Reading – Limit

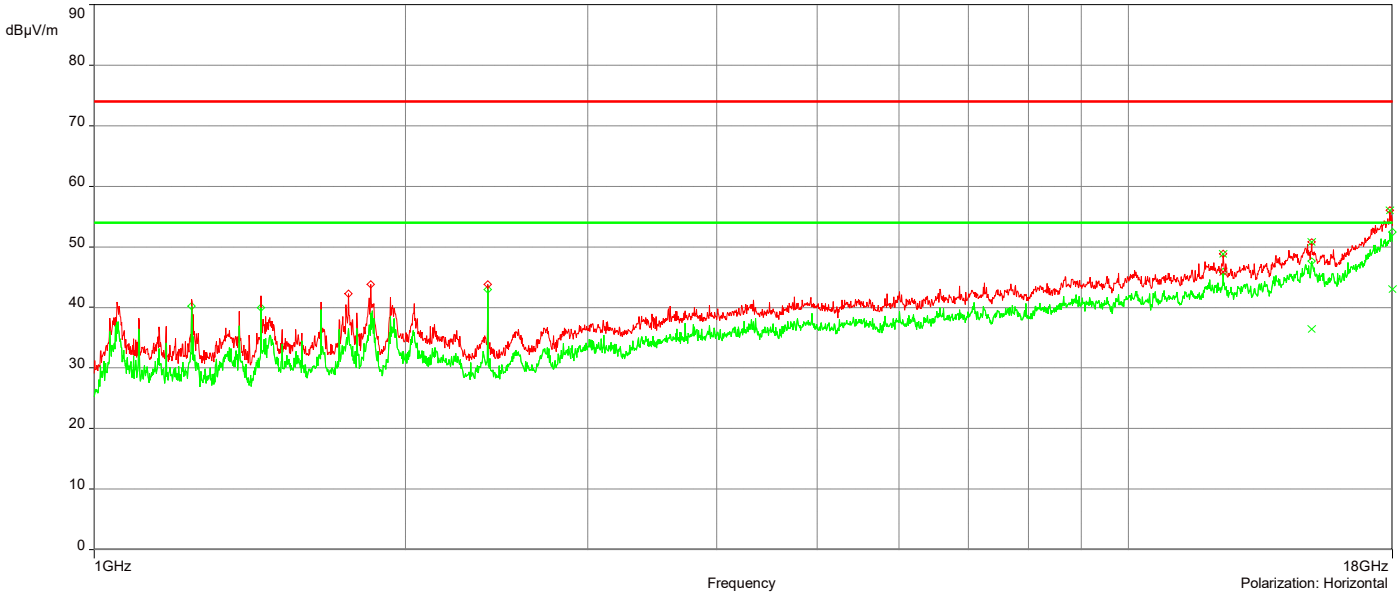
AH22100701-HAR-053#5_BT_DH5_Ch 0_1-18GHz

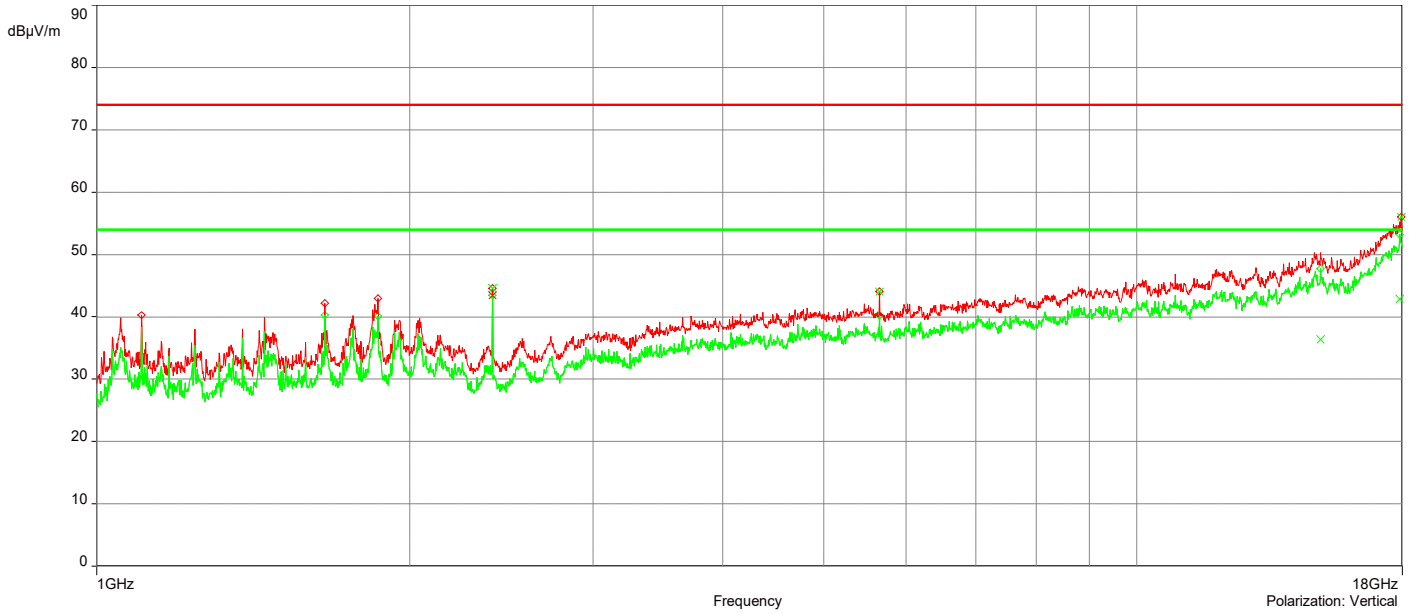
11/23/2022 2:04:22 PM

No	Frequency (MHz)	Level Peak Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1.	2.4020412GHz	44.54	-1.99	74.00	-29.46	1.00	252.10	Vertical	Passed
2.	5.657637GHz	44.03	5.11	74.00	-29.97	2.00	274.60	Vertical	Passed
3.	17.968999GHz	56.07	21.15	74.00	-17.93	3.00	91.40	Vertical	Passed
4.	12.352834GHz	48.86	11.89	74.00	-25.14	2.50	203.90	Horizontal	Passed
5.	15.029413GHz	50.85	14.37	74.00	-23.15	1.50	122.10	Horizontal	Passed
6.	17.896997GHz	56.00	20.47	74.00	-18.00	2.00	219.90	Horizontal	Passed

No	Frequency (MHz)	Level Average Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgment
1.	2.4015412GHz	43.47	-1.99	54.00	-10.53	1.00	252.10	Vertical	Passed
2.	15.020412GHz	36.34	14.23	54.00	-17.66	2.50	303.90	Vertical	Passed
3.	17.901497GHz	42.89	20.57	54.00	-11.11	1.50	139.90	Vertical	Passed
4.	12.352834GHz	45.85	11.89	54.00	-8.15	2.50	203.90	Horizontal	Passed
5.	15.029413GHz	36.48	14.37	54.00	-17.52	1.50	122.10	Horizontal	Passed
6.	17.995GHz	43.04	21.63	54.00	-10.96	3.50	214.90	Horizontal	Passed

Overall Graphs:





Remarks:

1. Level Peak Reading (dBµV/m) = Raw Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Peak Reading – Limit

Remarks:

1. Level Average Reading (dBµV/m) = Raw Average Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Average Reading – Limit

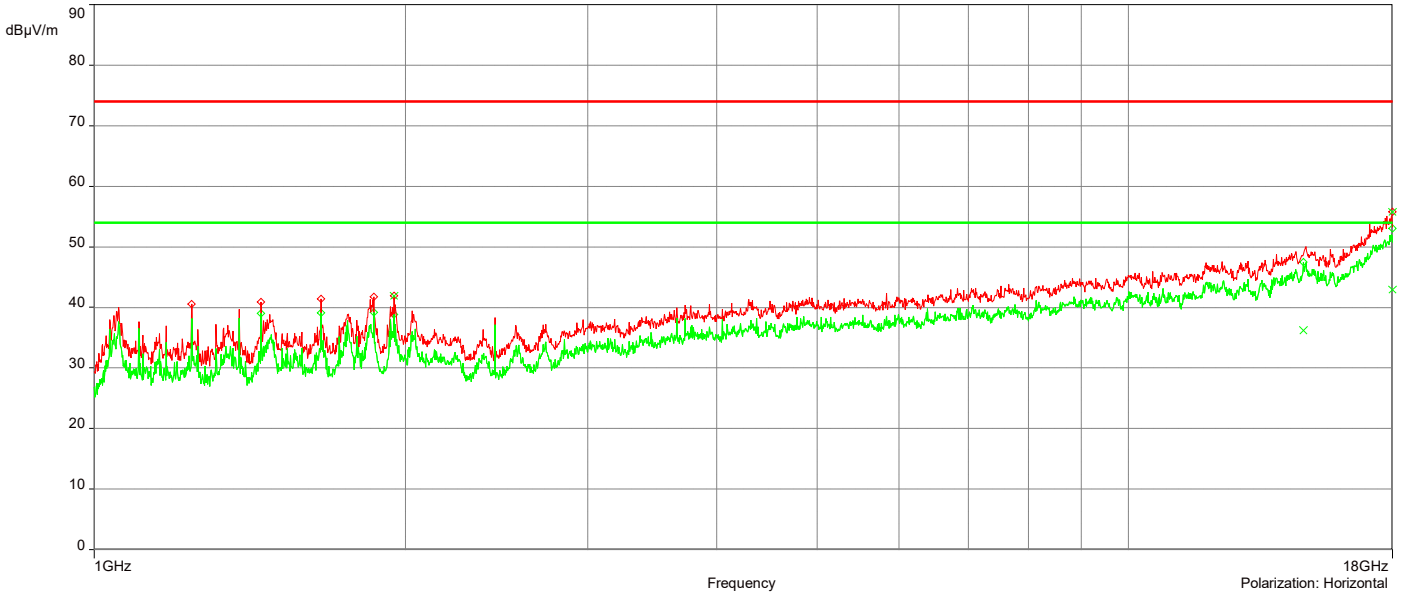
AH22100701-HAR-053#5_BT_DH5_Ch 39_1-18GHz

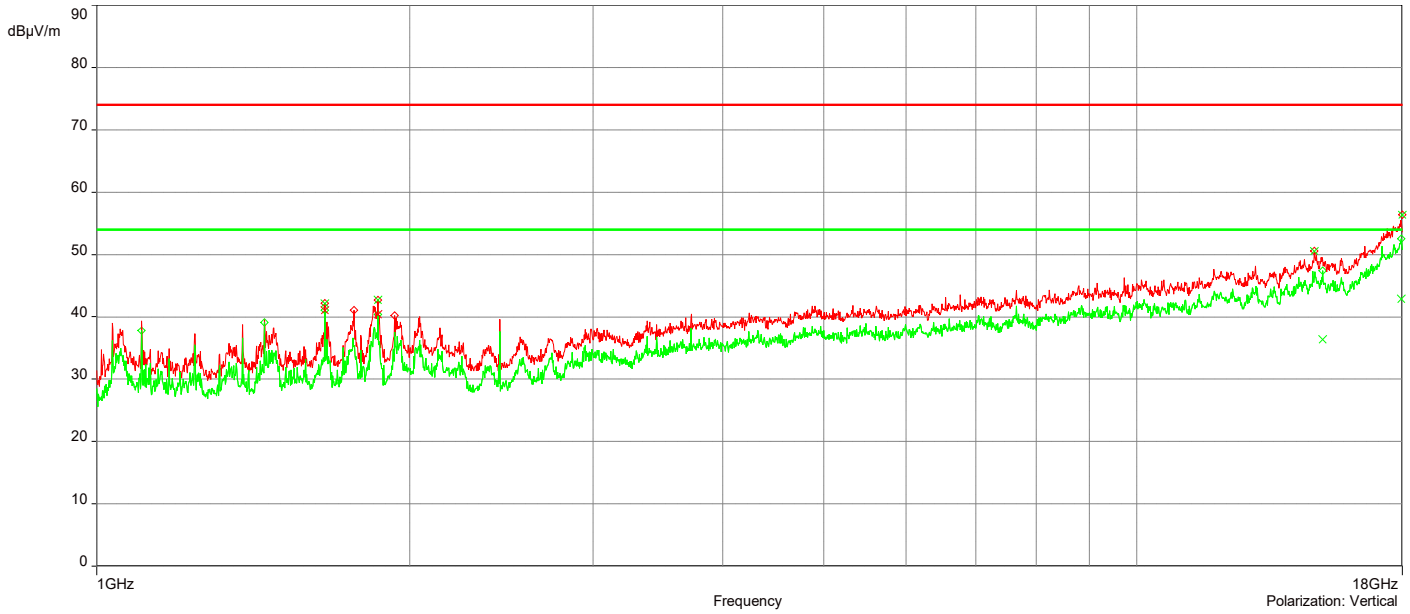
11/23/2022 2:38:59 PM

No	Frequency (MHz)	Level Peak Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1.	1.6570193GHz	42.20	-5.30	74.00	-31.80	2.50	113.00	Vertical	Passed
2.	1.8640254GHz	42.66	-4.31	74.00	-31.34	3.00	93.00	Vertical	Passed
3.	14.813906GHz	50.57	15.45	74.00	-23.43	1.00	195.20	Vertical	Passed
4.	17.9975GHz	56.41	21.72	74.00	-17.59	3.50	0.10	Vertical	Passed
5.	1.950528GHz	41.90	-3.27	74.00	-32.10	3.00	74.80	Horizontal	Passed
6.	17.9995GHz	55.75	21.75	74.00	-18.25	1.00	0.10	Horizontal	Passed

No	Frequency (MHz)	Level Average Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgment
1.	1.6570193GHz	41.03	-5.30	54.00	-12.97	2.50	113.00	Vertical	Passed
2.	1.8640254GHz	40.40	-4.31	54.00	-13.60	3.00	93.00	Vertical	Passed
3.	15.080914GHz	36.36	14.42	54.00	-17.64	3.50	132.10	Vertical	Passed
4.	17.958999GHz	42.87	21.05	54.00	-11.13	4.00	343.90	Vertical	Passed
5.	14.761905GHz	36.17	14.93	54.00	-17.83	1.50	182.10	Horizontal	Passed
6.	17.9995GHz	42.93	21.75	54.00	-11.07	1.00	0.10	Horizontal	Passed

Overall Graphs:





Remarks:

1. Level Peak Reading (dBµV/m) = Raw Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Peak Reading – Limit

Remarks:

1. Level Average Reading (dBµV/m) = Raw Average Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Average Reading – Limit

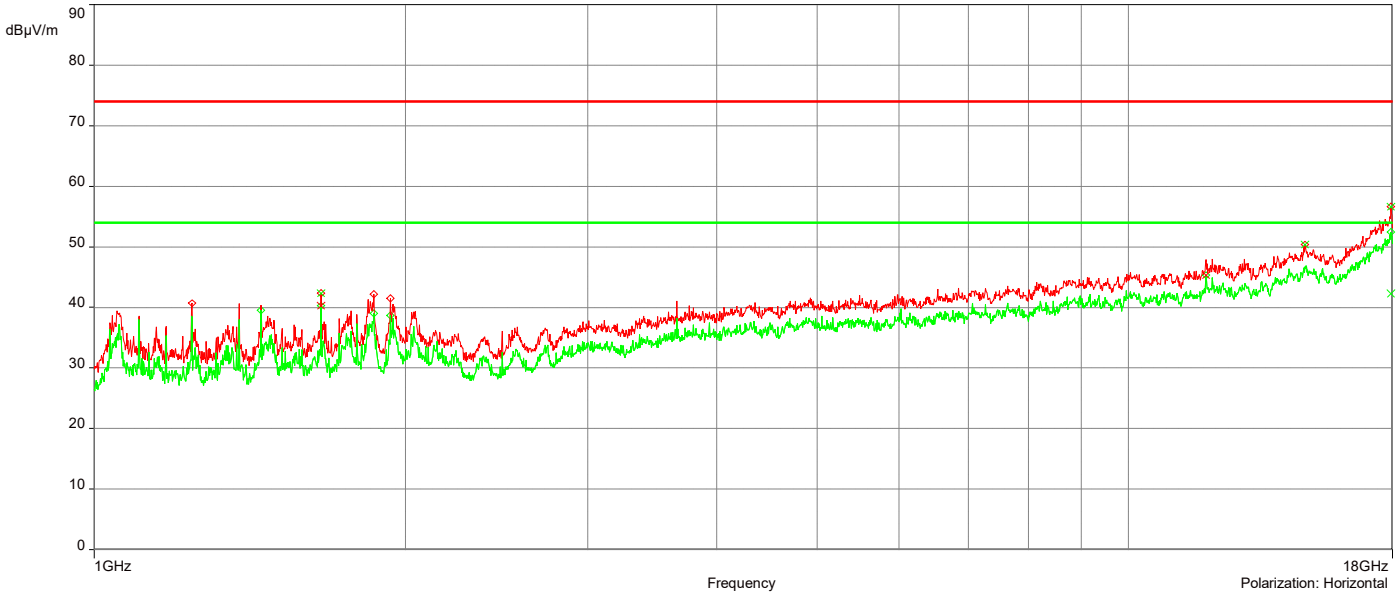
AH22100701-HAR-053#5_BT_DH5_Ch 78_1-18GHz

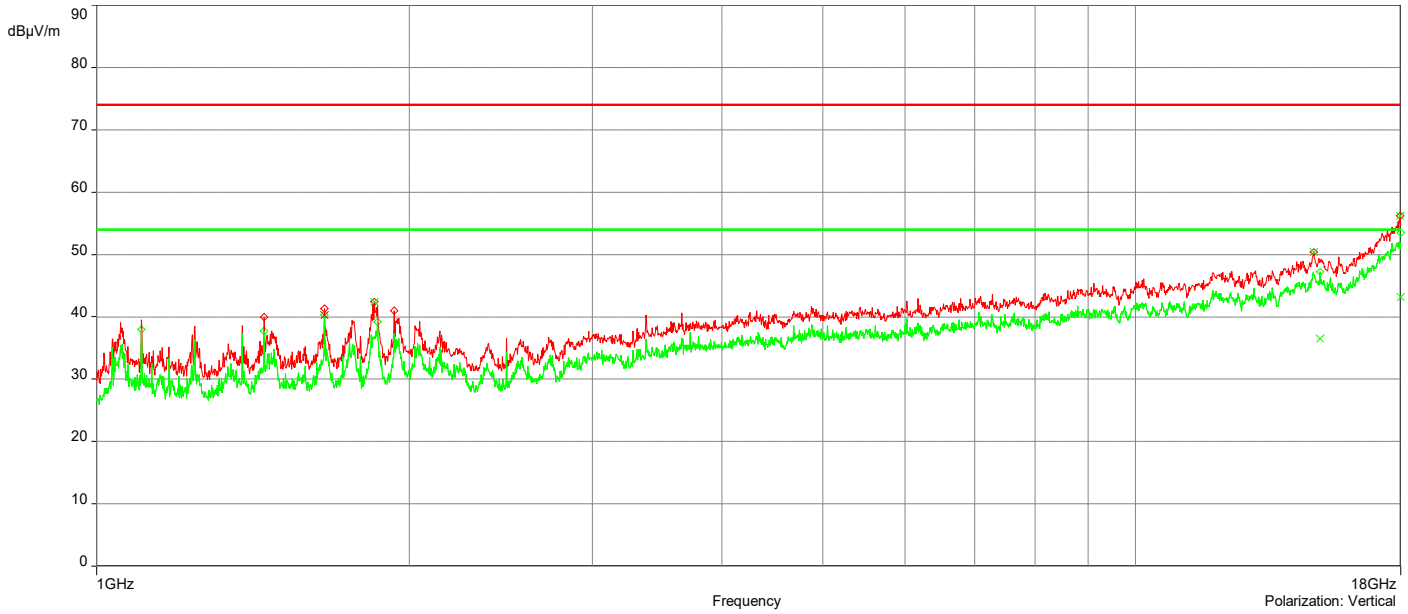
11/23/2022 3:00:08 PM

No	Frequency (MHz)	Level Peak Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1.	1.8520251GHz	42.44	-4.38	74.00	-31.56	2.50	87.30	Vertical	Passed
2.	14.839907GHz	50.36	15.50	74.00	-23.64	3.50	93.00	Vertical	Passed
3.	17.973499GHz	56.25	21.20	74.00	-17.75	4.00	170.70	Vertical	Passed
4.	1.6570193GHz	42.34	-5.42	74.00	-31.66	2.00	128.20	Horizontal	Passed
5.	14.807406GHz	50.36	15.46	74.00	-23.64	2.00	88.20	Horizontal	Passed
6.	17.934498GHz	56.60	20.75	74.00	-17.40	1.00	266.00	Horizontal	Passed

No	Frequency (MHz)	Level Average Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgment
1.	1.6570193GHz	40.29	-5.30	54.00	-13.71	2.50	101.90	Vertical	Passed
2.	15.051913GHz	36.50	14.40	54.00	-17.50	3.50	196.10	Vertical	Passed
3.	17.995GHz	43.24	21.65	54.00	-10.76	2.00	109.90	Vertical	Passed
4.	1.6570193GHz	40.28	-5.42	54.00	-13.72	2.00	128.20	Horizontal	Passed
5.	11.87982GHz	45.37	11.38	54.00	-8.63	1.50	51.40	Horizontal	Passed
6.	17.934498GHz	42.29	20.75	54.00	-11.71	1.00	266.00	Horizontal	Passed

Overall Graphs:





Remarks:

1. Level Peak Reading (dBµV/m) = Raw Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Peak Reading – Limit

Remarks:

1. Level Average Reading (dBµV/m) = Raw Average Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Average Reading – Limit

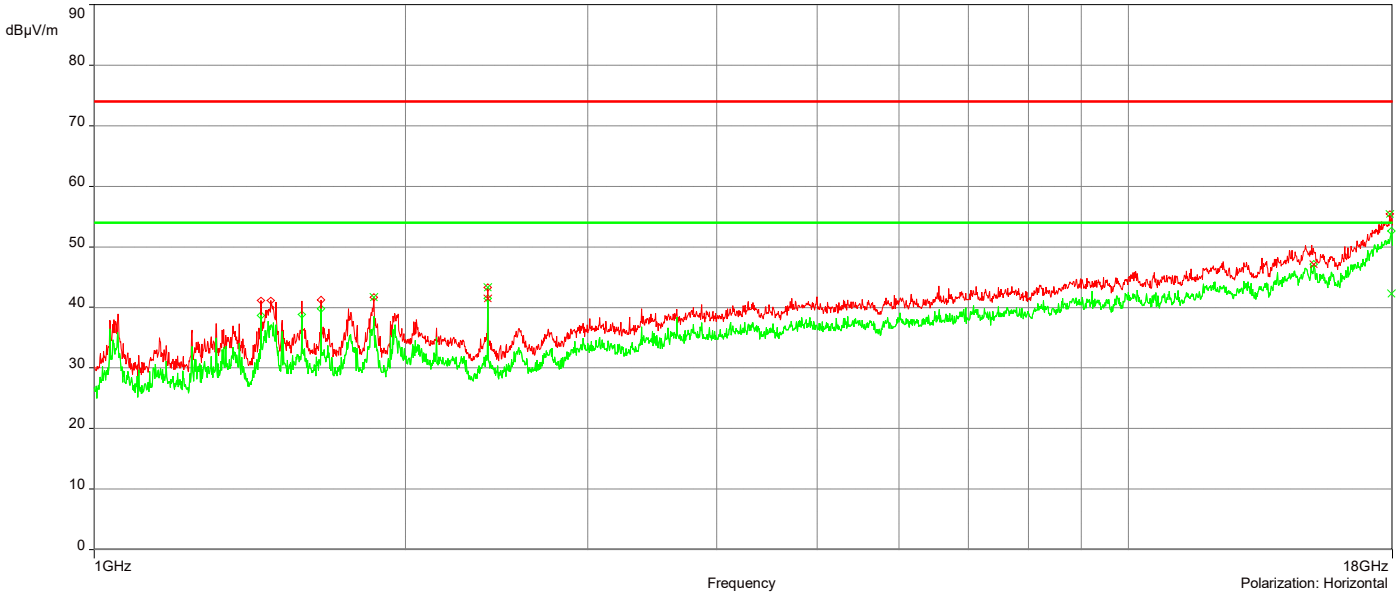
AH22100701-HAR-053#4_BT_3-DH5_Ch 0_1-18GHz

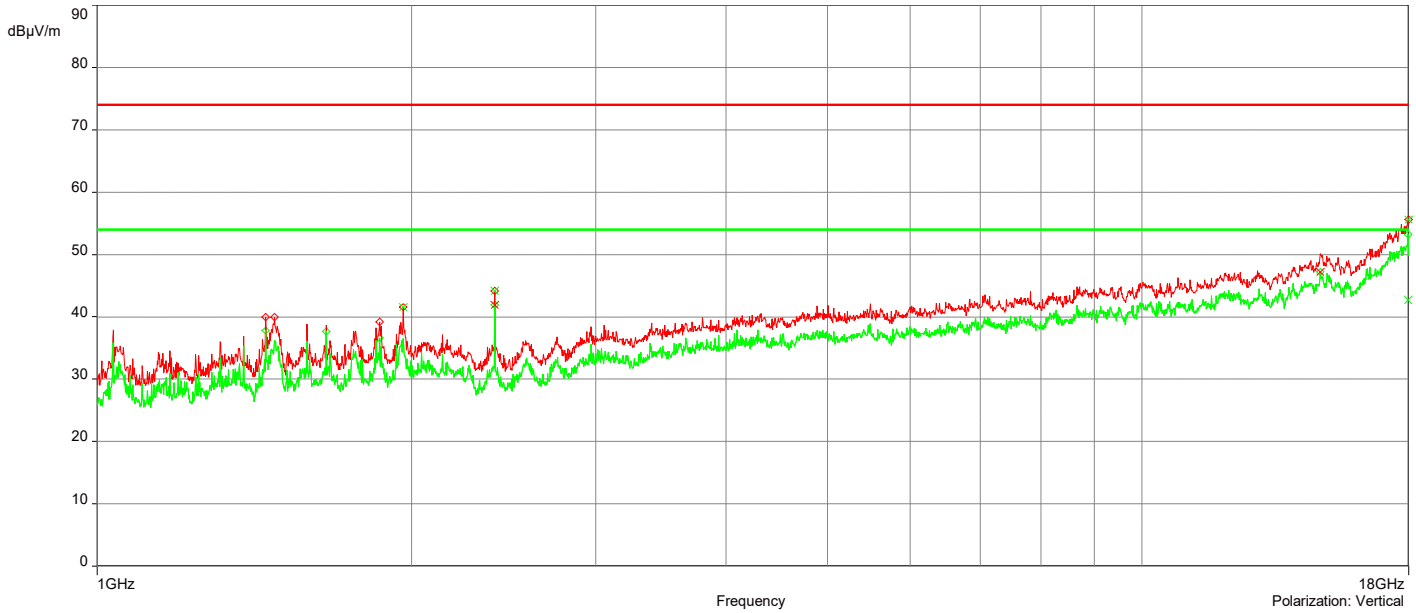
12/15/2022 12:54:22 PM

No	Frequency (MHz)	Level Peak Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1.	1.9625283GHz	41.56	-3.17	74.00	-32.44	1.50	123.10	Vertical	Passed
2.	2.4015412GHz	44.17	-1.99	74.00	-29.83	1.00	252.40	Vertical	Passed
3.	17.992GHz	55.57	21.58	74.00	-18.43	3.00	203.20	Vertical	Passed
4.	1.8645254GHz	41.64	-4.23	74.00	-32.36	2.00	129.50	Horizontal	Passed
5.	2.4015412GHz	43.28	-2.06	74.00	-30.72	1.50	150.50	Horizontal	Passed
6.	17.892997GHz	55.42	20.45	74.00	-18.58	1.00	288.40	Horizontal	Passed

No	Frequency (MHz)	Level Average Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgment
1.	2.4015412GHz	41.93	-1.99	54.00	-12.07	1.00	252.40	Vertical	Passed
2.	14.816406GHz	47.20	15.49	54.00	-6.80	4.00	305.60	Vertical	Passed
3.	17.969499GHz	42.69	21.16	54.00	-11.31	4.00	19.90	Vertical	Passed
4.	2.4020412GHz	41.49	-2.06	54.00	-12.51	2.00	140.10	Horizontal	Passed
5.	15.115415GHz	47.18	14.56	54.00	-6.82	2.00	359.50	Horizontal	Passed
6.	17.956999GHz	42.26	20.97	54.00	-11.74	1.50	144.90	Horizontal	Passed

Overall Graphs:





Remarks:

1. Level Peak Reading (dBµV/m) = Raw Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Peak Reading – Limit

Remarks:

1. Level Average Reading (dBµV/m) = Raw Average Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Average Reading – Limit

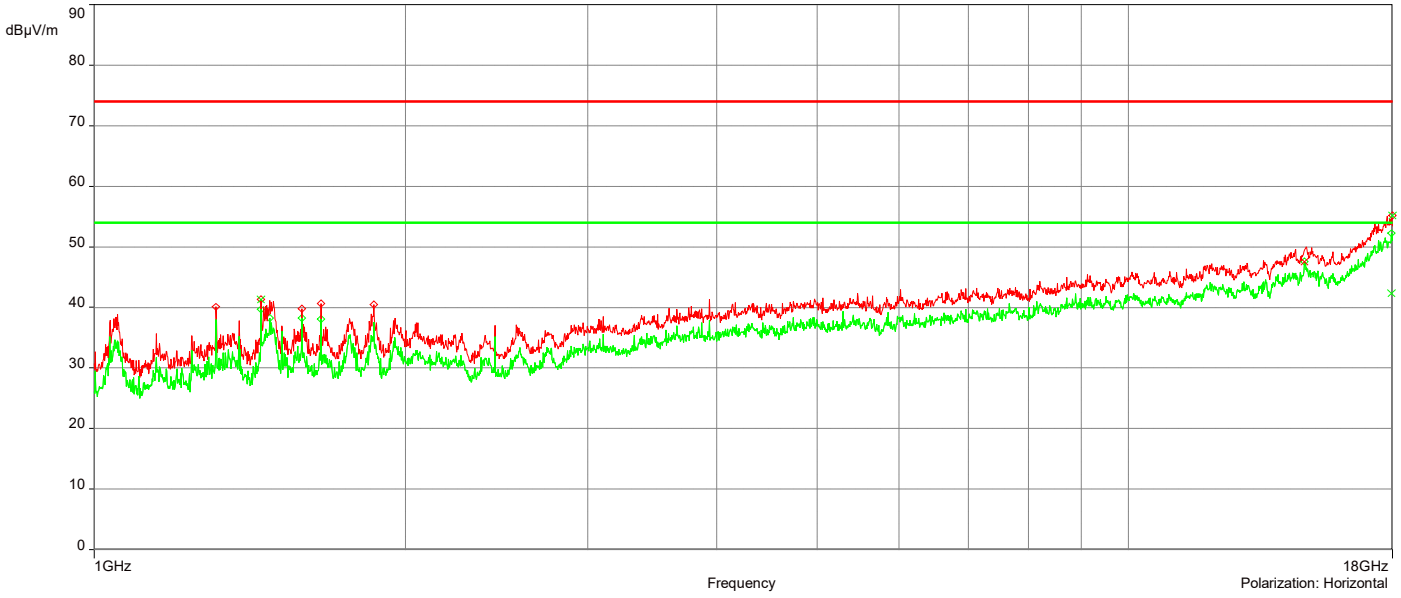
AH22100701-HAR-053#4_BT_3-DH5_Ch 39_1-18GHz

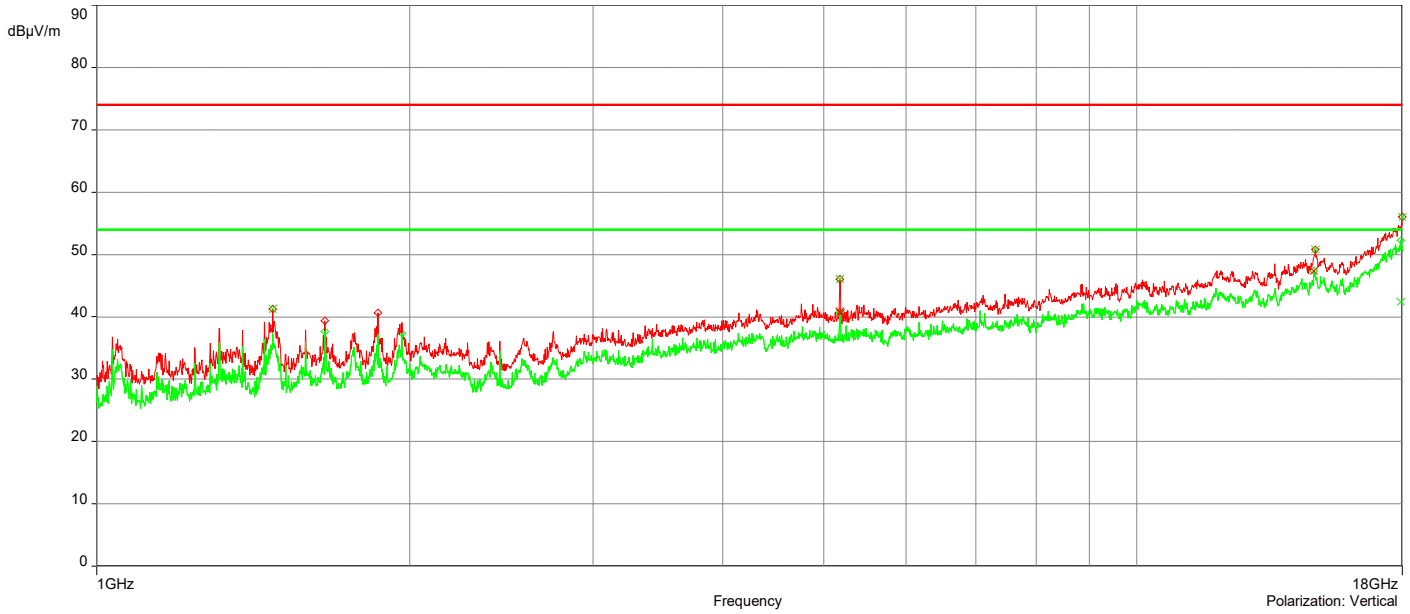
12/15/2022 1:12:40 PM

No	Frequency (MHz)	Level Peak Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1.	1.477014GHz	41.27	-6.52	74.00	-32.73	2.50	115.60	Vertical	Passed
2.	5.1851231GHz	46.06	4.34	74.00	-27.94	2.50	27.20	Vertical	Passed
3.	14.845407GHz	50.85	15.43	74.00	-23.15	2.00	72.30	Vertical	Passed
4.	17.991GHz	56.02	21.55	74.00	-17.98	3.50	232.30	Vertical	Passed
5.	1.4500132GHz	41.32	-7.03	74.00	-32.68	2.50	149.50	Horizontal	Passed
6.	17.9975GHz	55.22	21.70	74.00	-18.78	3.50	343.10	Horizontal	Passed

No	Frequency (MHz)	Level Average Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgment
1.	5.1851231GHz	40.83	4.34	54.00	-13.17	2.50	27.20	Vertical	Passed
2.	5.1871232GHz	40.59	4.33	54.00	-13.41	2.50	27.20	Vertical	Passed
3.	14.801406GHz	47.43	15.27	54.00	-6.57	3.50	359.90	Vertical	Passed
4.	17.931998GHz	42.46	20.79	54.00	-11.54	1.50	327.90	Vertical	Passed
5.	14.801406GHz	47.53	15.38	54.00	-6.47	3.50	92.30	Horizontal	Passed
6.	17.953999GHz	42.36	20.93	54.00	-11.64	1.00	131.10	Horizontal	Passed

Overall Graphs:





Remarks:

1. Level Peak Reading (dBµV/m) = Raw Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Peak Reading – Limit

Remarks:

1. Level Average Reading (dBµV/m) = Raw Average Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Average Reading – Limit

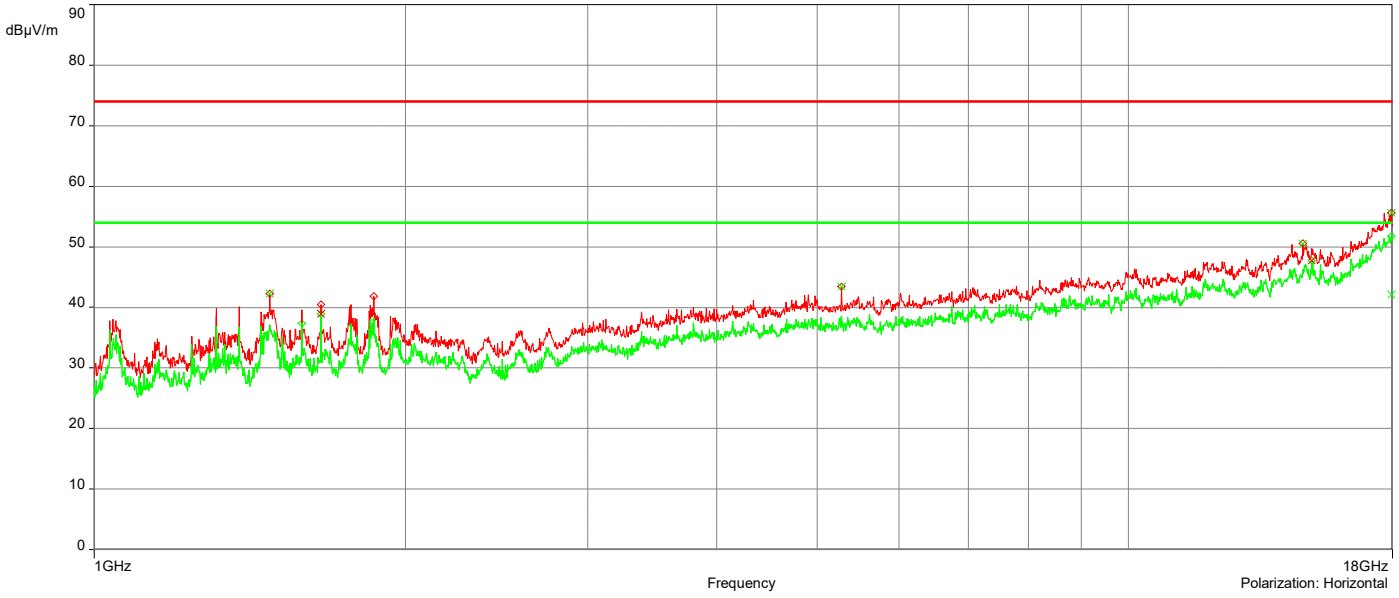
AH22100701-HAR-053#4_BT_3-DH5_Ch 78_1-18GHz

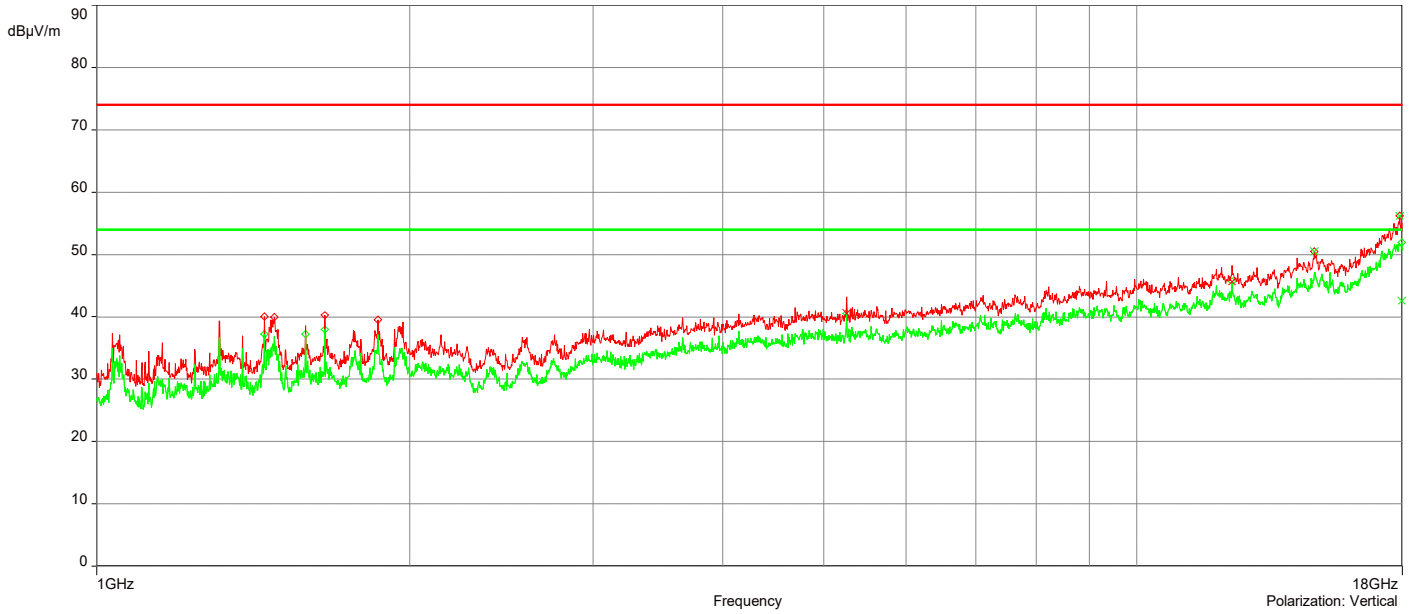
12/15/2022 3:04:23 PM

No	Frequency (MHz)	Level Peak Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1.	14.818906GHz	50.50	15.53	74.00	-23.50	4.00	86.90	Vertical	Passed
2.	17.895497GHz	56.19	20.54	74.00	-17.81	3.50	28.30	Vertical	Passed
3.	1.4785141GHz	42.29	-6.45	74.00	-31.71	2.50	150.70	Horizontal	Passed
4.	5.2791259GHz	43.46	4.52	74.00	-30.54	1.00	357.20	Horizontal	Passed
5.	14.743904GHz	50.57	14.73	74.00	-23.43	1.50	248.90	Horizontal	Passed
6.	17.963499GHz	55.62	21.04	74.00	-18.38	1.00	14.30	Horizontal	Passed

No	Frequency (MHz)	Level Average Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgment
1.	5.2616253GHz	40.57	4.40	54.00	-13.43	3.00	36.20	Vertical	Passed
2.	12.347834GHz	45.73	11.93	54.00	-8.27	3.00	45.80	Vertical	Passed
3.	17.970499GHz	42.63	21.17	54.00	-11.37	2.50	9.90	Vertical	Passed
4.	1.6570193GHz	38.96	-5.42	54.00	-15.04	2.50	140.40	Horizontal	Passed
5.	15.029913GHz	47.74	14.37	54.00	-6.26	1.00	267.30	Horizontal	Passed
6.	17.963499GHz	42.10	21.04	54.00	-11.90	1.00	14.30	Horizontal	Passed

Overall Graphs:





Remarks:

1. Level Peak Reading (dBµV/m) = Raw Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Peak Reading – Limit

Remarks:

1. Level Average Reading (dBµV/m) = Raw Average Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Average Reading – Limit

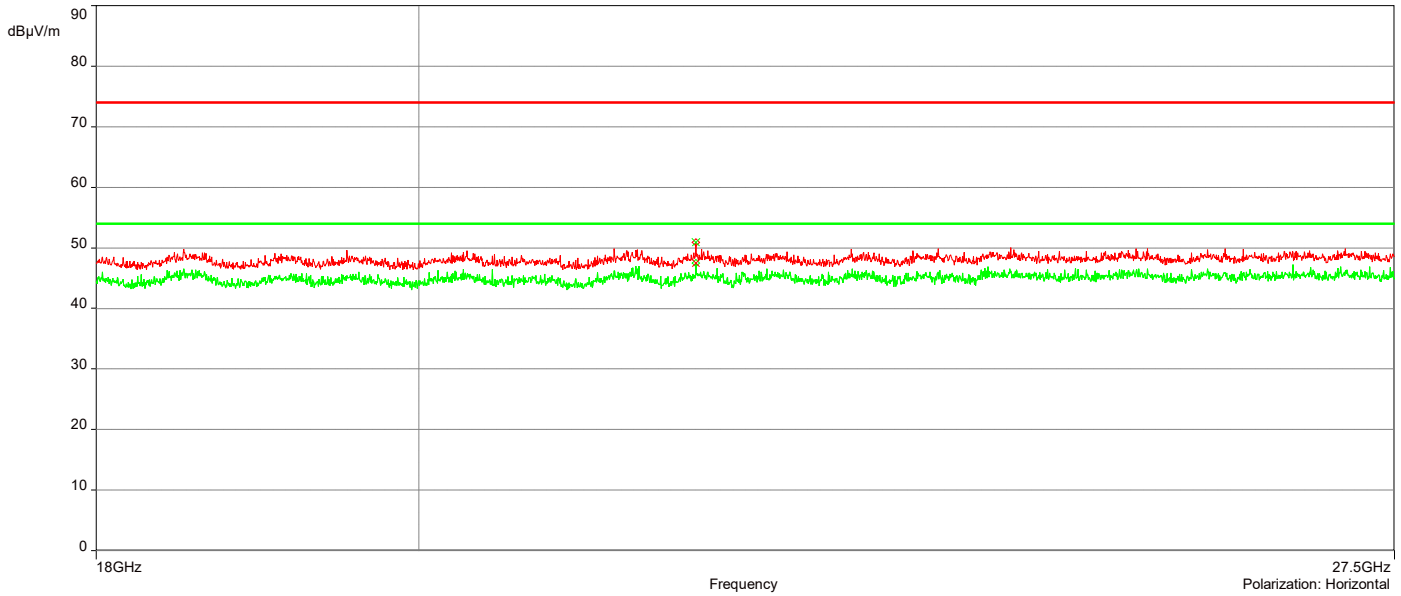
AH22100701-HAR-053#5_BT_DH5_Ch 0_18-27.5GHz

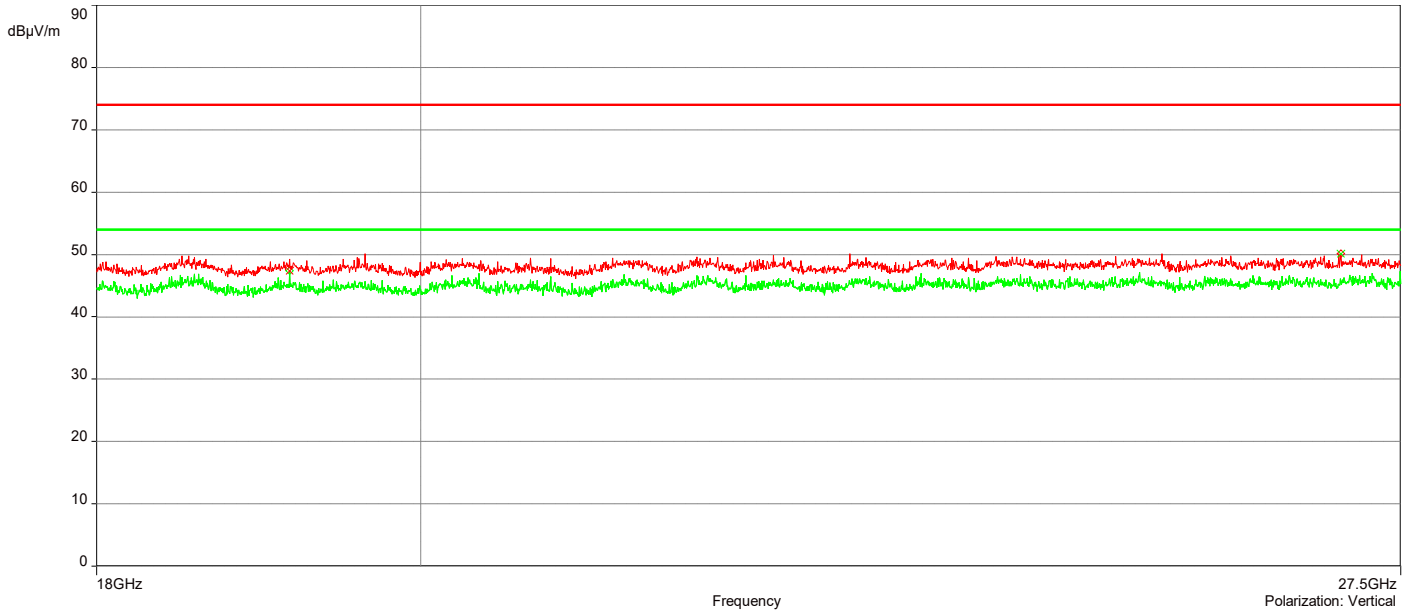
11/28/2022 4:18:51 PM

No	Frequency (MHz)	Level Peak Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1.	26.968448GHz	50.17	5.08	74.00	-23.83	2.91	157.70	Vertical	Passed
2.	21.89092GHz	50.89	0.86	74.00	-23.11	1.03	0.20	Horizontal	Passed

No	Frequency (MHz)	Level Average Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgment
1.	19.165233GHz	47.41	-0.52	54.00	-6.59	3.07	337.40	Vertical	Passed
2.	21.89092GHz	47.50	0.86	54.00	-6.50	1.03	0.20	Horizontal	Passed

Overall Graphs:





Remarks:

1. Level Peak Reading (dBµV/m) = Raw Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Peak Reading – Limit

Remarks:

1. Level Average Reading (dBµV/m) = Raw Average Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Average Reading – Limit

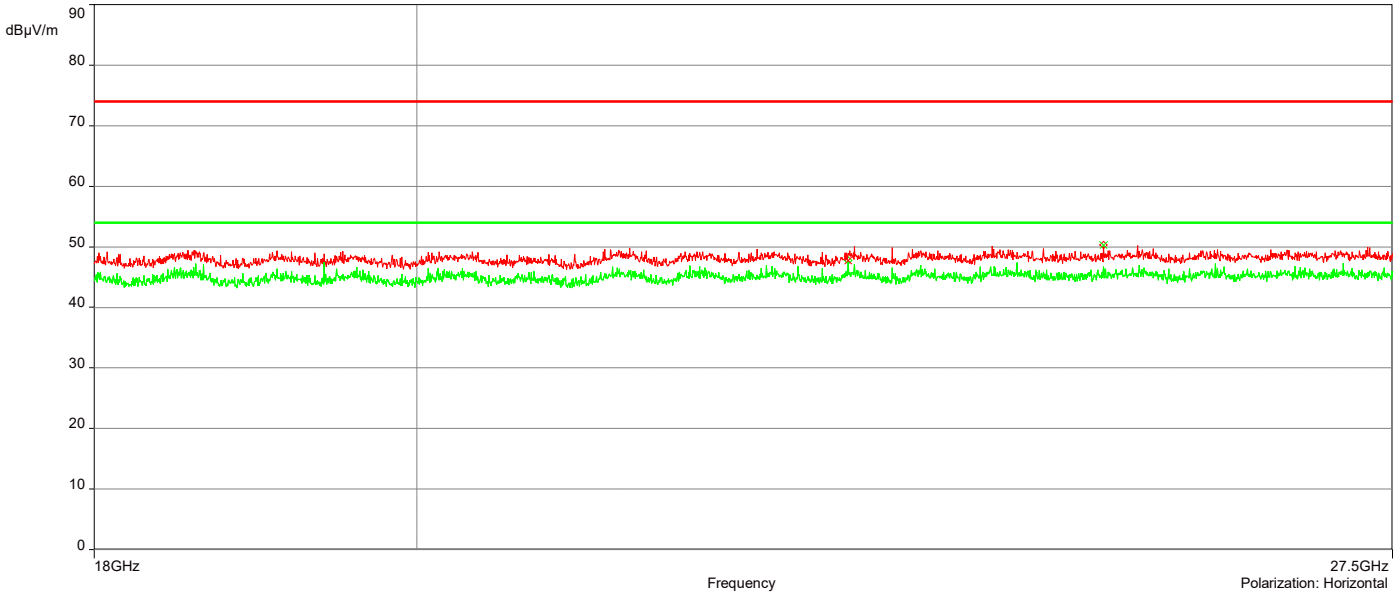
AH22100701-HAR-053#5_BT_DH5_Ch 39_18-27.5GHz

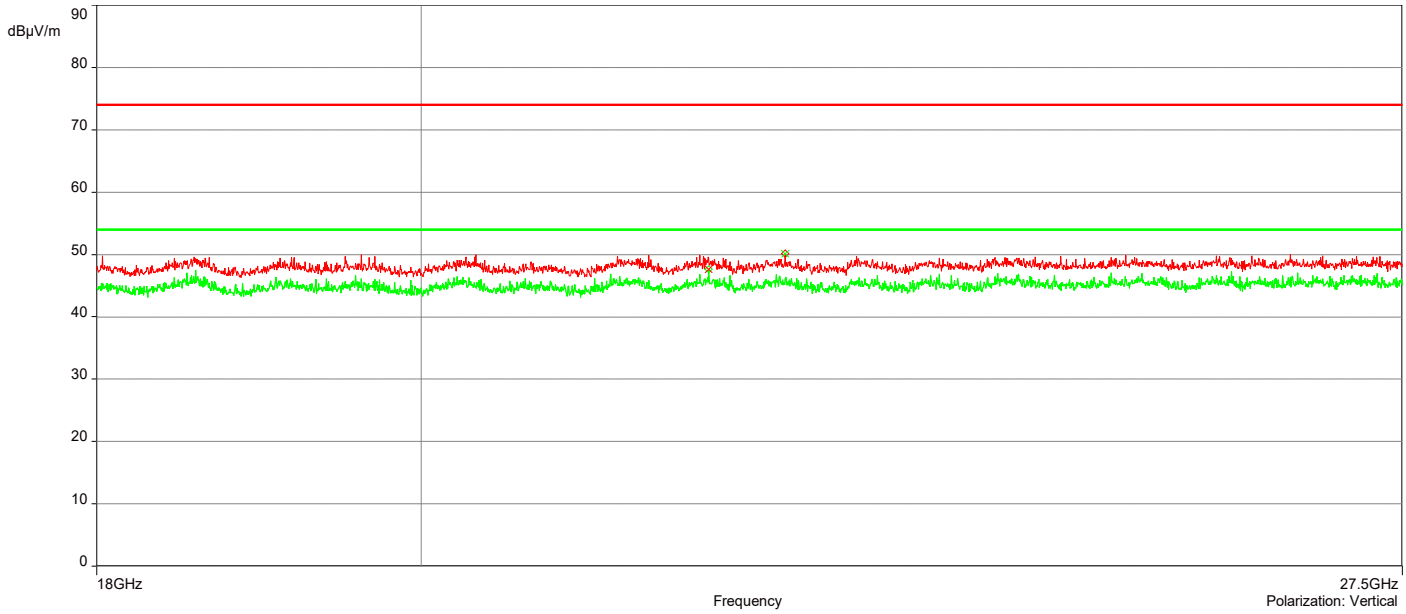
11/28/2022 5:12:29 PM

No	Frequency (MHz)	Level Peak Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1.	22.50655GHz	50.11	1.44	74.00	-23.89	2.76	90.00	Vertical	Passed
2.	25.026076GHz	50.30	2.84	74.00	-23.70	1.03	180.10	Horizontal	Passed

No	Frequency (MHz)	Level Average Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgment
1.	21.955523GHz	47.69	1.02	54.00	-6.31	2.74	22.60	Vertical	Passed
2.	23.023851GHz	47.70	1.86	54.00	-6.30	1.34	90.00	Horizontal	Passed

Overall Graphs:





Remarks:

1. Level Peak Reading (dBµV/m) = Raw Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Peak Reading – Limit

Remarks:

1. Level Average Reading (dBµV/m) = Raw Average Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Average Reading – Limit

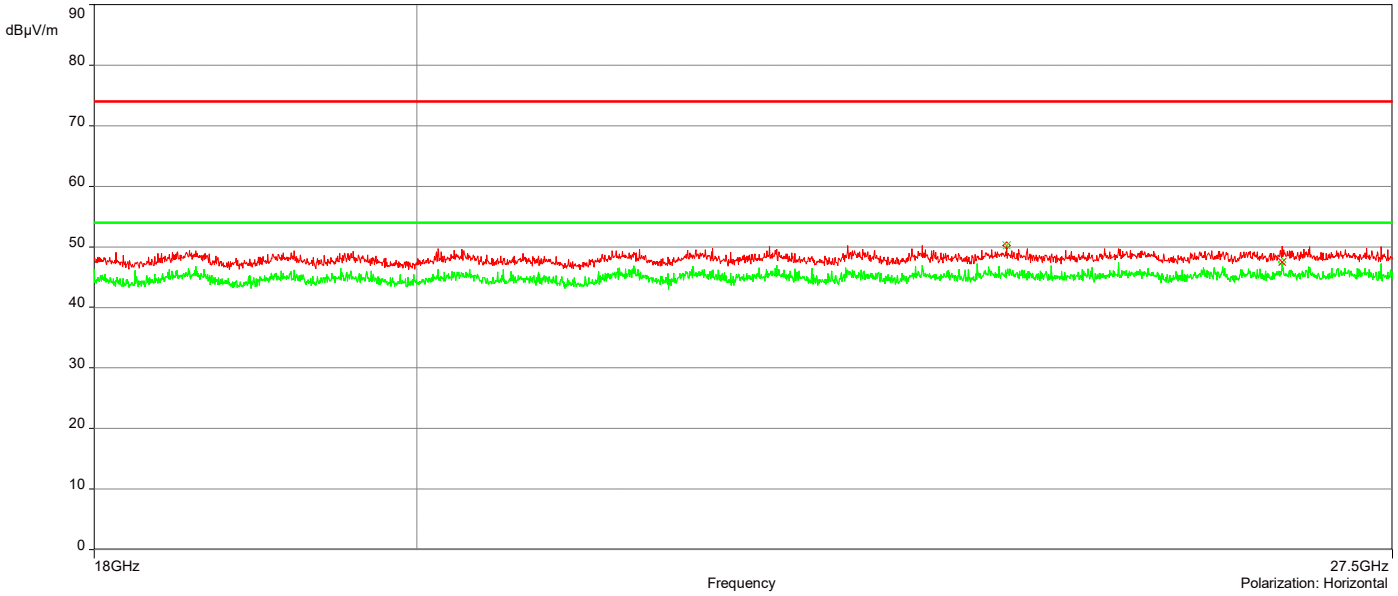
AH22100701-HAR-053#5_BT_DH5_Ch 78_18-27.5GHz

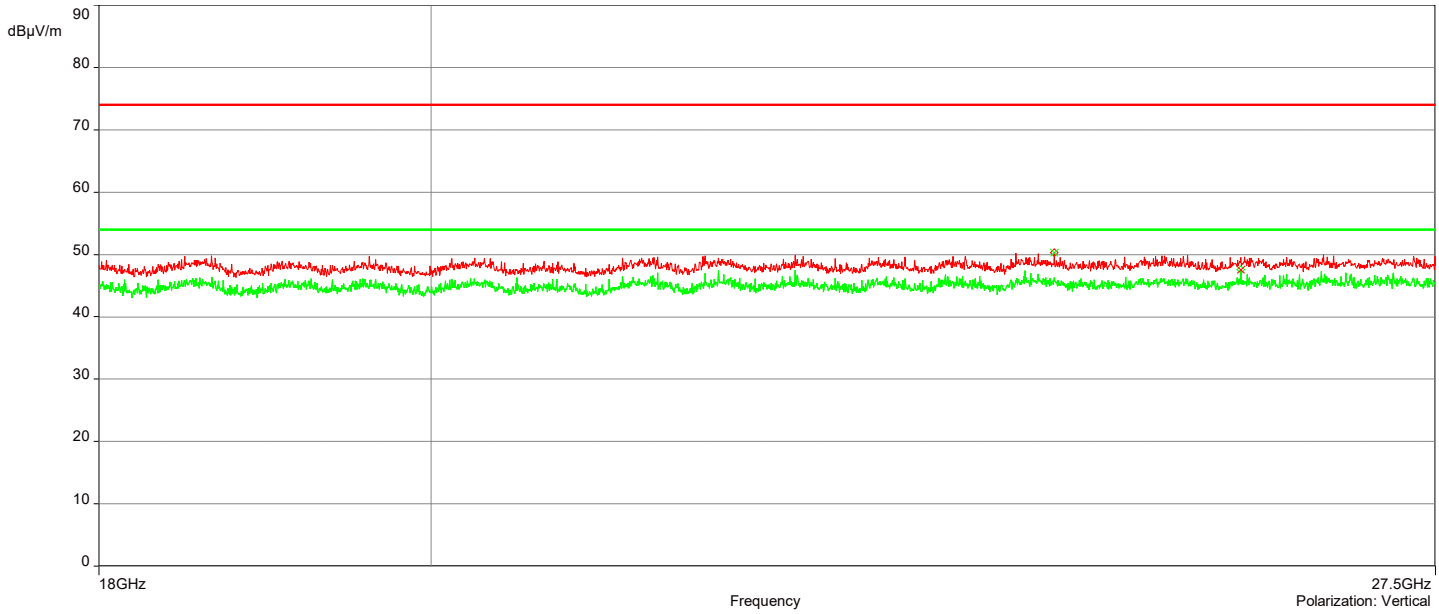
11/28/2022 4:49:01 PM

No	Frequency (MHz)	Level Peak Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1.	24.369593GHz	50.32	2.65	74.00	-23.68	1.89	179.90	Vertical	Passed
2.	24.246562GHz	50.26	2.45	74.00	-23.74	3.97	134.90	Horizontal	Passed

No	Frequency (MHz)	Level Average Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgment
1.	25.854043GHz	47.58	3.73	54.00	-6.42	1.03	0.20	Vertical	Passed
2.	26.528576GHz	47.49	4.27	54.00	-6.51	1.36	22.40	Horizontal	Passed

Overall Graphs:





Remarks:

1. Level Peak Reading (dBµV/m) = Raw Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Peak Reading – Limit

Remarks:

1. Level Average Reading (dBµV/m) = Raw Average Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Average Reading – Limit

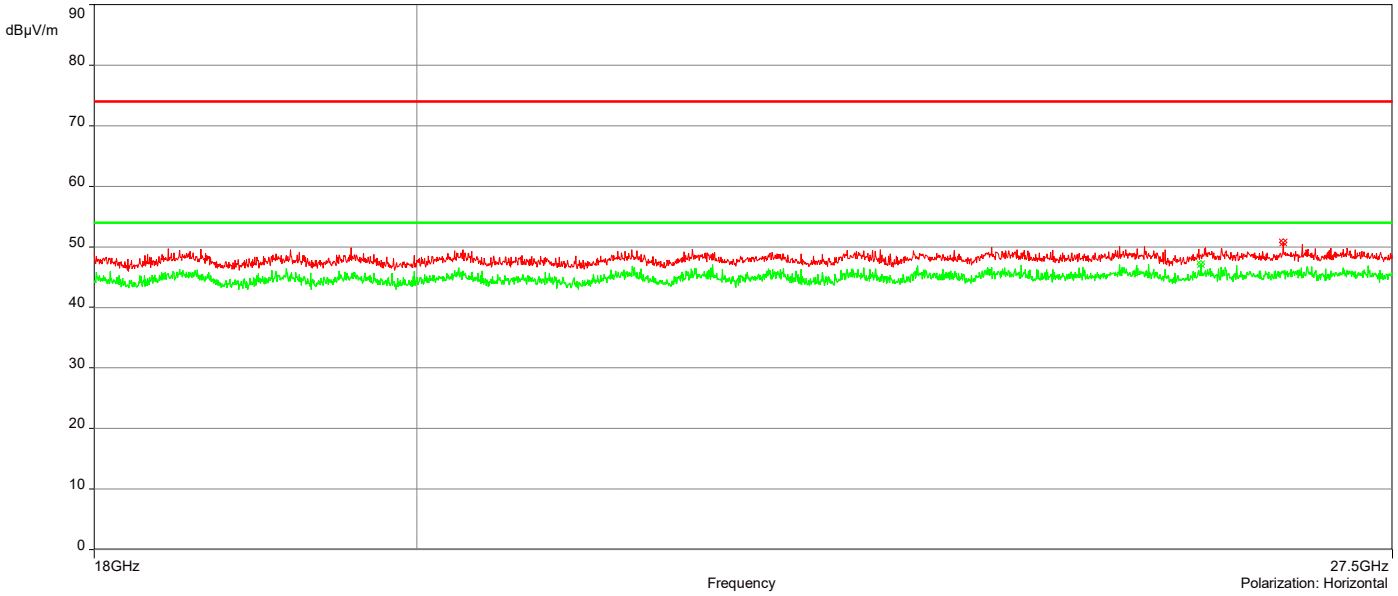
AH22100701-HAR-053#4_BT_3-DH5_Ch 0_18-27.5GHz

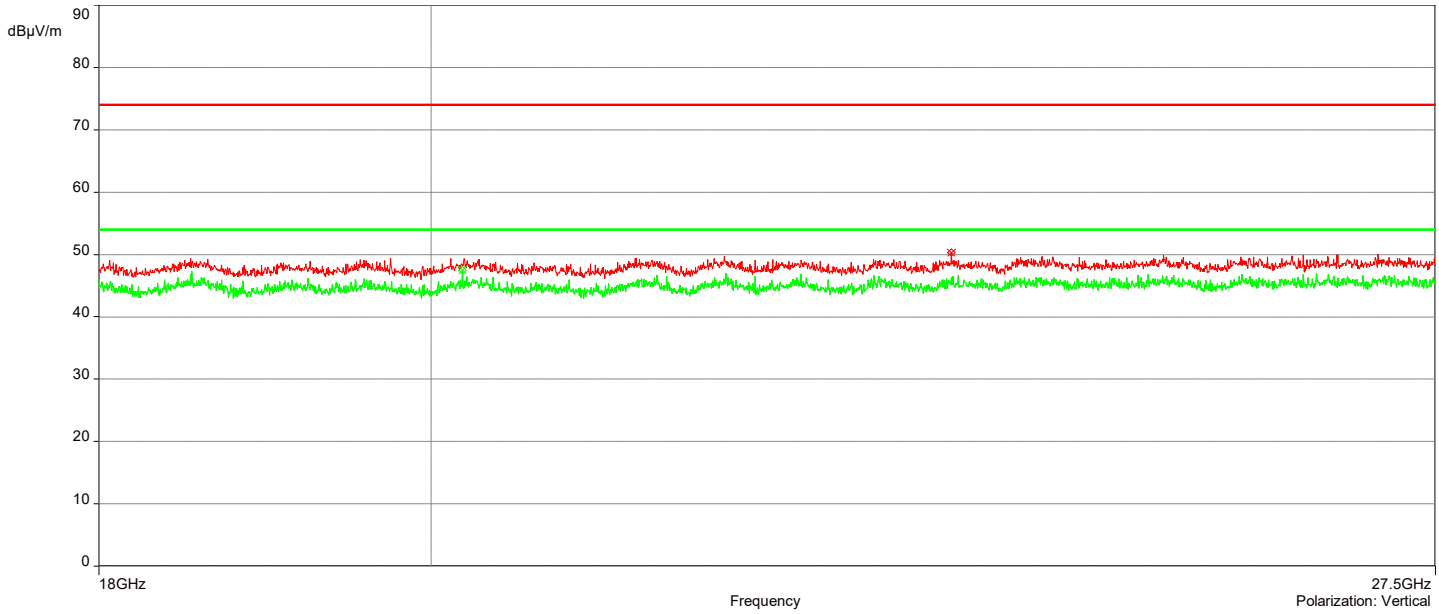
12/14/2022 7:21:12 PM

No	Frequency (MHz)	Level Peak Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1.	23.586754GHz	50.31	2.03	74.00	-23.69	3.01	45.20	Vertical	Passed
2.	26.538552GHz	50.76	4.26	74.00	-23.24	3.57	135.10	Horizontal	Passed

No	Frequency (MHz)	Level Average Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgment
1.	20.199835GHz	47.49	-0.03	54.00	-6.51	3.01	225.10	Vertical	Passed
2.	25.833617GHz	47.16	3.61	54.00	-6.84	1.00	202.60	Horizontal	Passed

Overall Graphs:





Remarks:

1. Level Peak Reading (dBµV/m) = Raw Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Peak Reading – Limit

Remarks:

1. Level Average Reading (dBµV/m) = Raw Average Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Average Reading – Limit

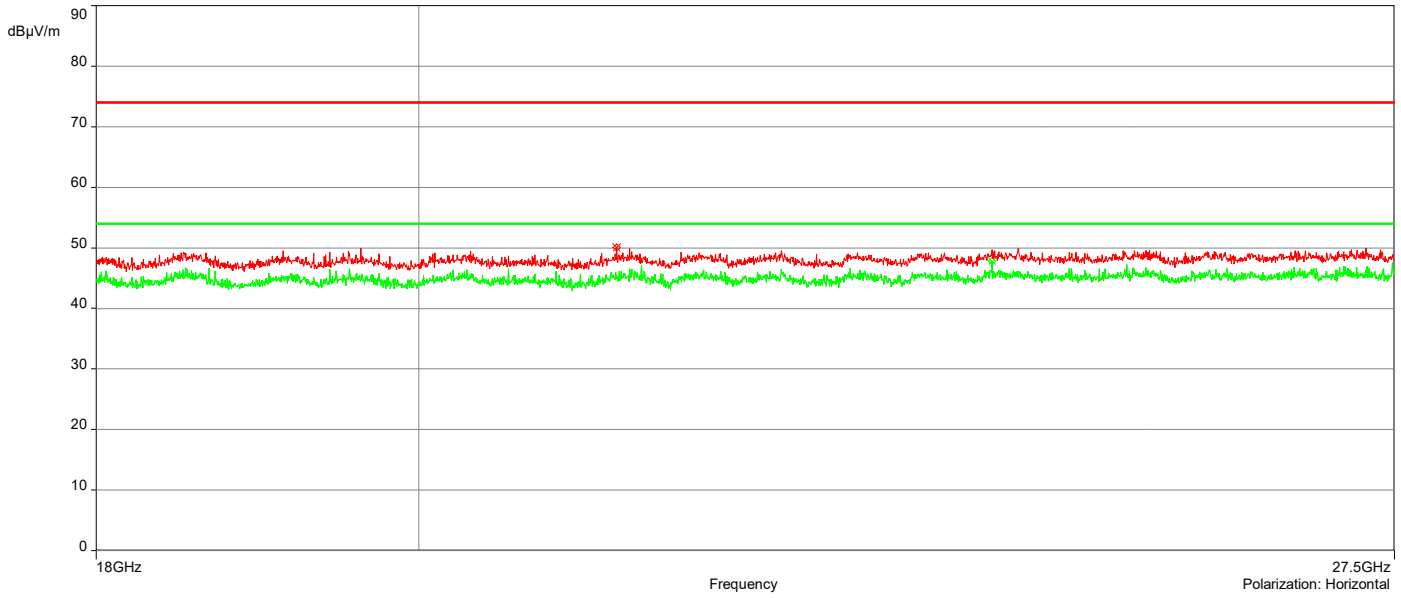
AH22100701-HAR-053#4_BT_3-DH5_Ch 19_18-27.5GHz

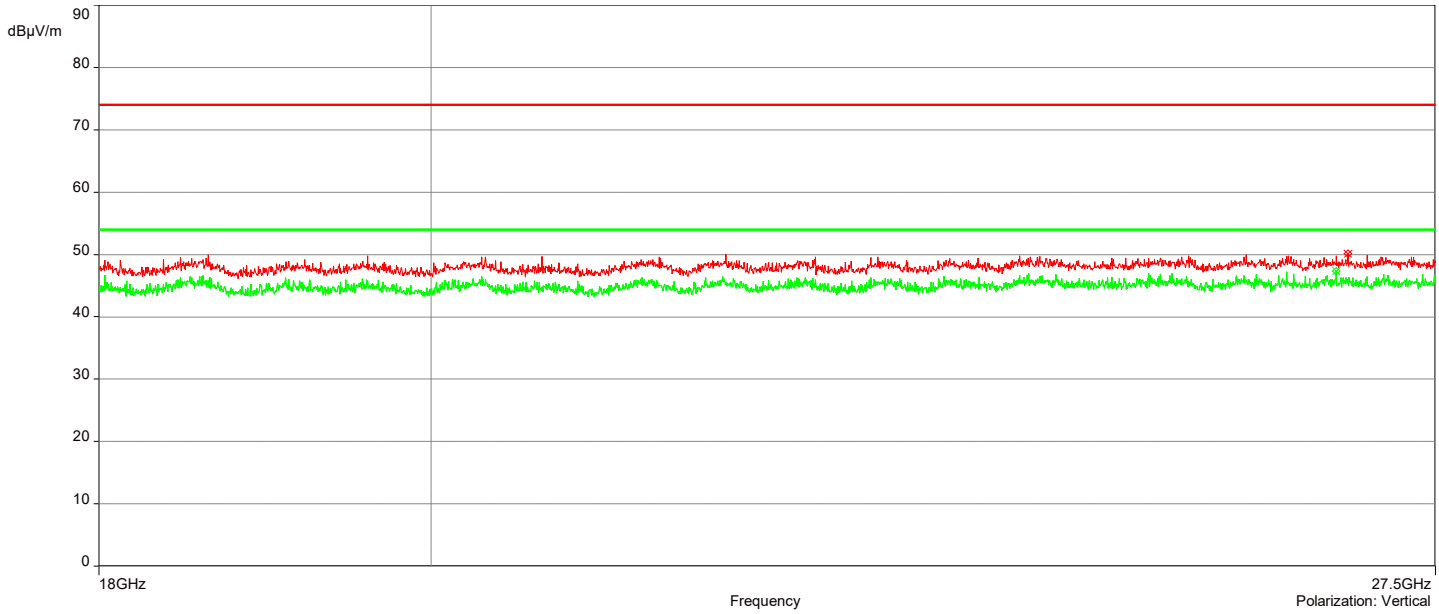
12/14/2022 7:44:41 PM

No	Frequency (MHz)	Level Peak Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1.	26.748987GHz	50.10	4.69	74.00	-23.90	3.55	157.40	Vertical	Passed
2.	21.333242GHz	50.09	0.69	74.00	-23.91	3.42	224.90	Horizontal	Passed

No	Frequency (MHz)	Level Average Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgment
1.	26.649707GHz	47.33	4.17	54.00	-6.67	2.87	202.40	Vertical	Passed
2.	24.115456GHz	47.82	2.45	54.00	-6.18	1.88	157.40	Horizontal	Passed

Overall Graphs:





Remarks:

1. Level Peak Reading (dBµV/m) = Raw Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Peak Reading – Limit

Remarks:

1. Level Average Reading (dBµV/m) = Raw Average Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Average Reading – Limit

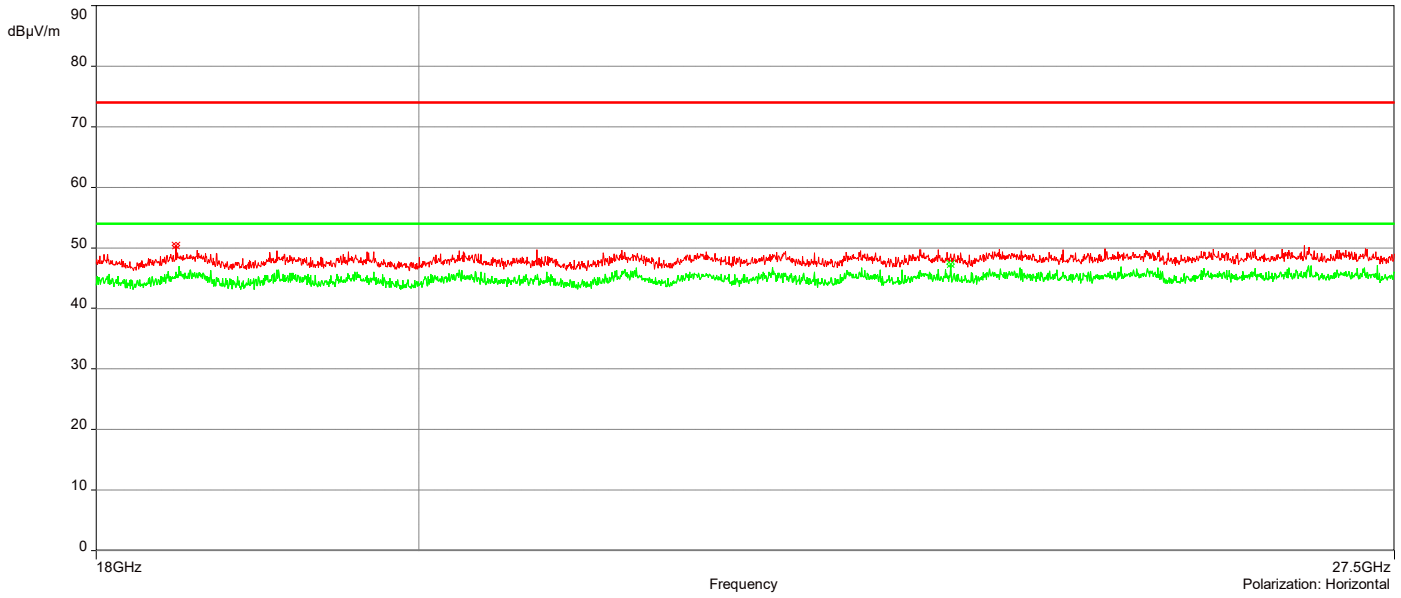
AH22100701-HAR-053#4_BT_3-DH5_Ch 78_18-27.5GHz

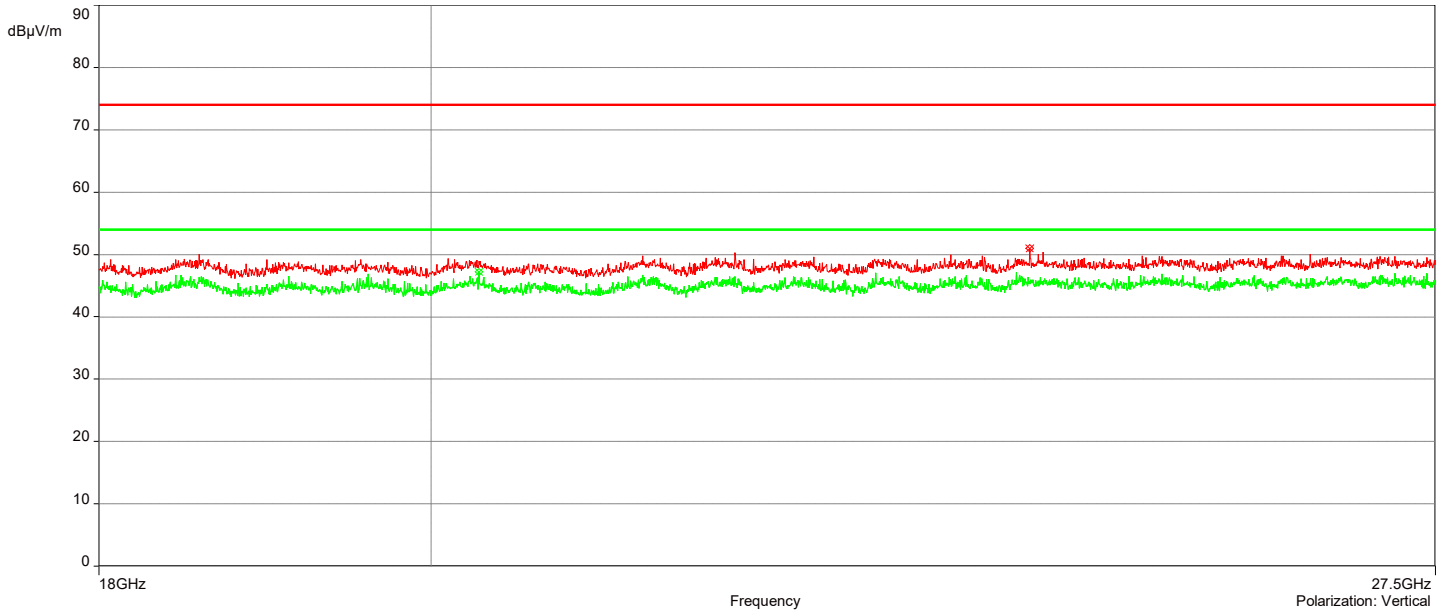
12/14/2022 8:07:41 PM

No	Frequency (MHz)	Level Peak Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1.	24.178634GHz	50.97	2.46	74.00	-23.03	2.51	202.70	Vertical	Passed
2.	18.474074GHz	50.42	-0.27	74.00	-23.58	3.10	157.60	Horizontal	Passed

No	Frequency (MHz)	Level Average Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgment
1.	20.30434GHz	47.21	0.03	54.00	-6.79	2.51	22.50	Vertical	Passed
2.	23.79054GHz	47.28	2.41	54.00	-6.72	1.69	22.50	Horizontal	Passed

Overall Graphs:





Remarks:

1. Level Peak Reading (dBµV/m) = Raw Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Peak Reading – Limit

Remarks:

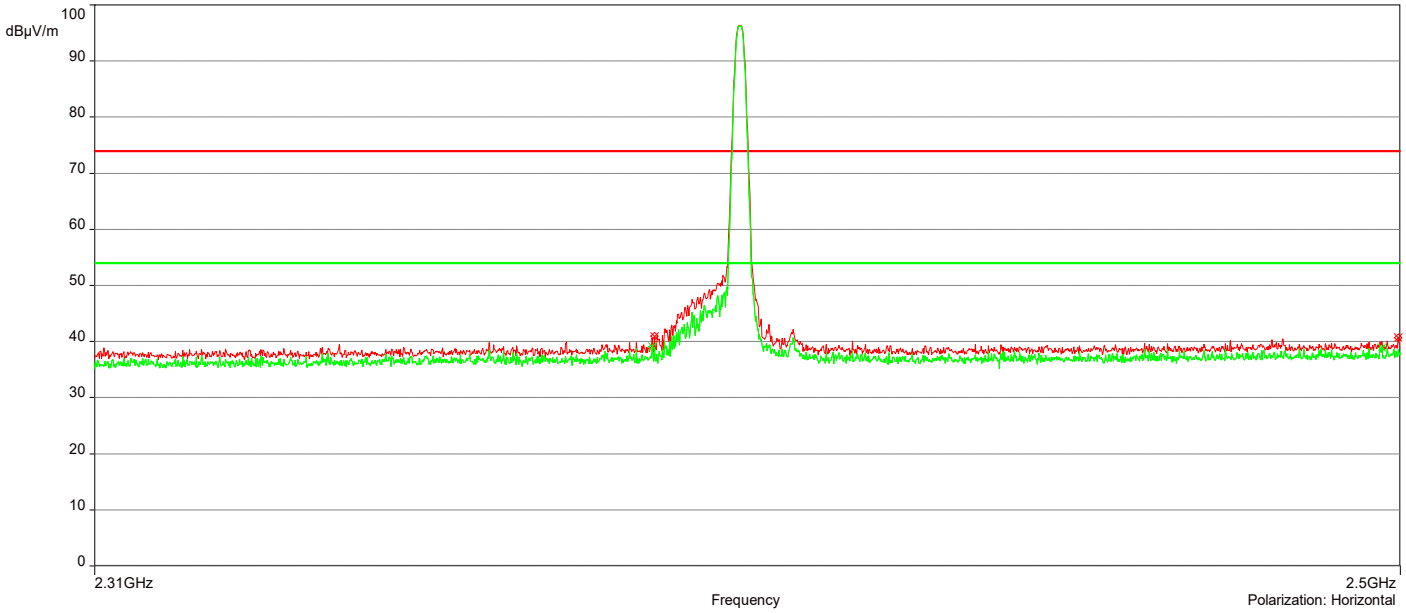
1. Level Average Reading (dBµV/m) = Raw Average Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Average Reading – Limit

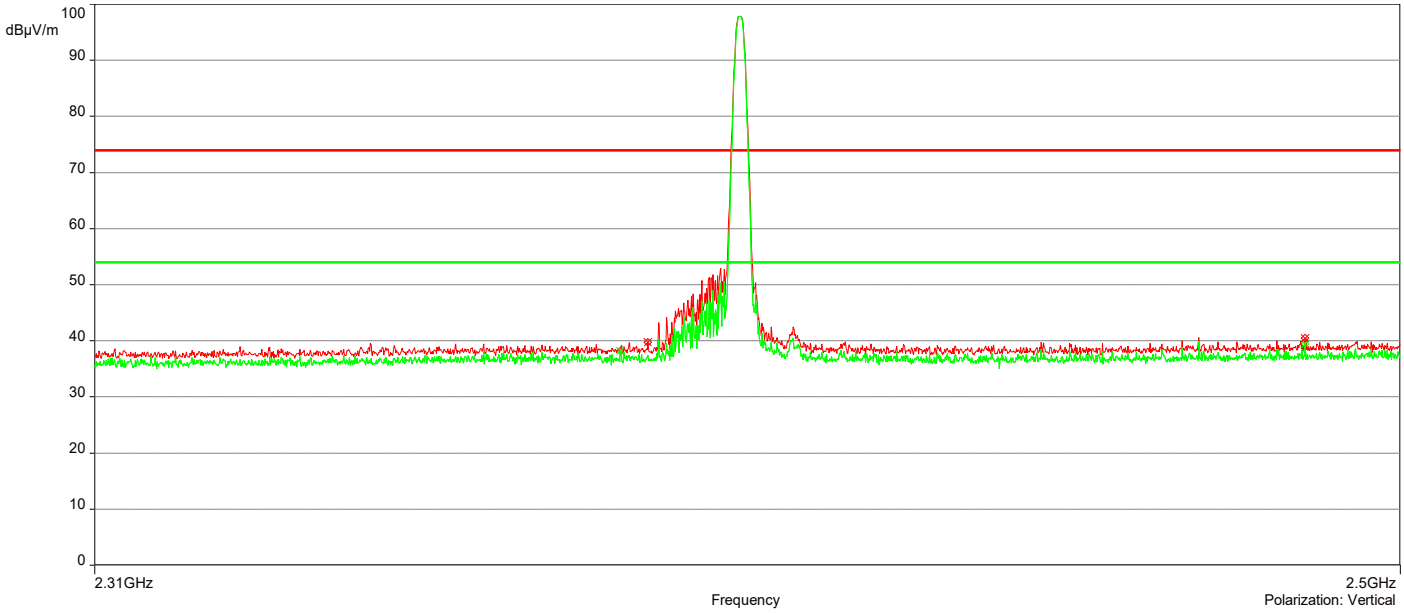
AH22100701-HAR-053#5_Restricted Bandedge_BT Classic_DH5_Ch 0

11/23/2022 3:50:45 PM

No	Frequency (MHz)	Level Peak Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1.	2.3886993GHz	39.69	-3.06	74.00	-34.31	1.00	247.40	Vertical	Passed
2.	2.4856478GHz	40.47	-2.66	74.00	-33.53	3.79	247.40	Vertical	Passed
3.	2.3896498GHz	41.00	-3.08	74.00	-33.00	1.11	134.90	Horizontal	Passed
4.	2.4997149GHz	40.73	-2.33	74.00	-33.27	3.04	314.90	Horizontal	Passed

Overall Graphs:





Remarks:

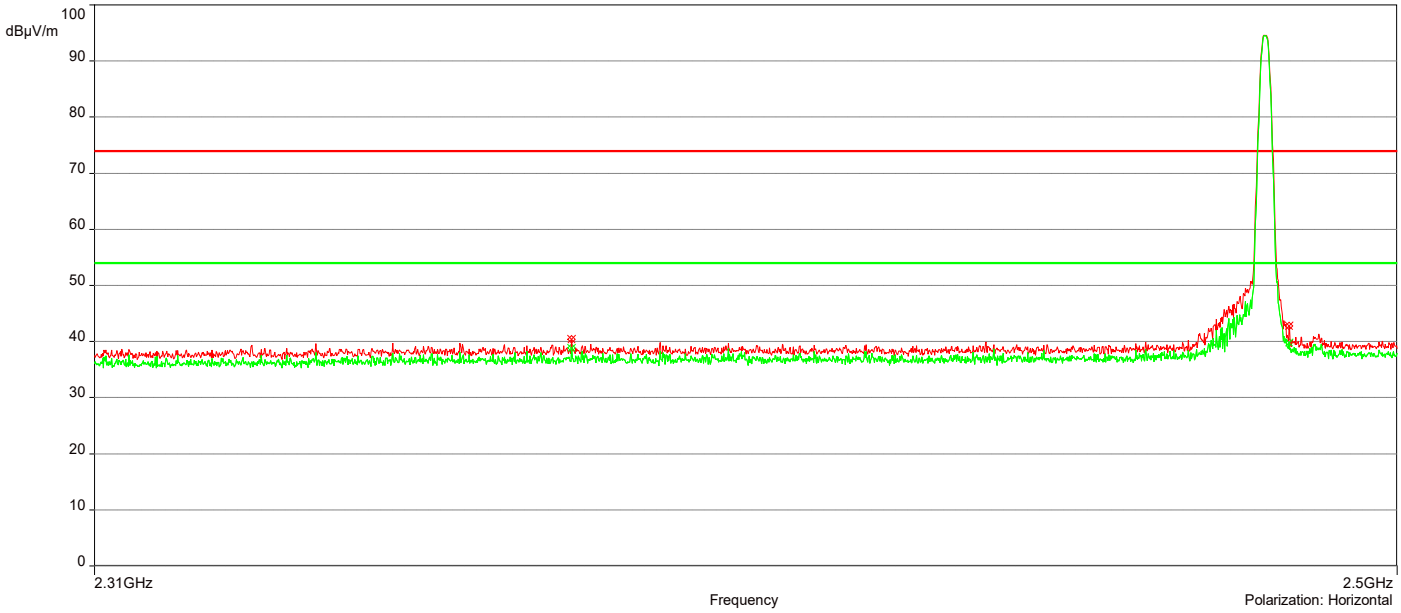
1. Level Peak Reading (dBµV/m)= Raw Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Peak Reading – Limit

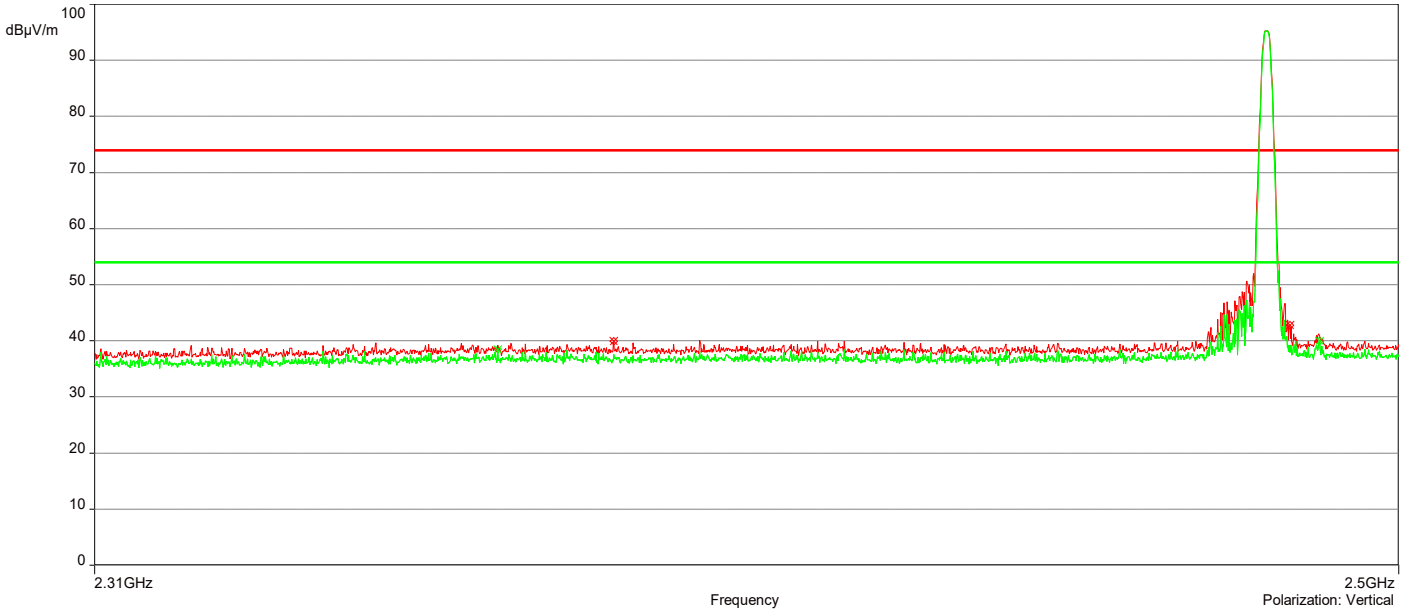
AH22100701-HAR-053#5_Restricted Bandedge_BT Classic_DH5_Ch 78

11/23/2022 3:25:15 PM

No	Frequency (MHz)	Level Peak Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1.	2.3838519GHz	39.93	-3.05	74.00	-34.07	3.40	246.50	Vertical	Passed
2.	2.4835568GHz	42.77	-2.67	74.00	-31.23	1.00	246.50	Vertical	Passed
3.	2.3778639GHz	40.38	-3.10	74.00	-33.62	3.55	291.60	Horizontal	Passed
4.	2.4836518GHz	42.74	-2.48	74.00	-31.26	2.90	291.60	Horizontal	Passed

Overall Graphs:





Remarks:

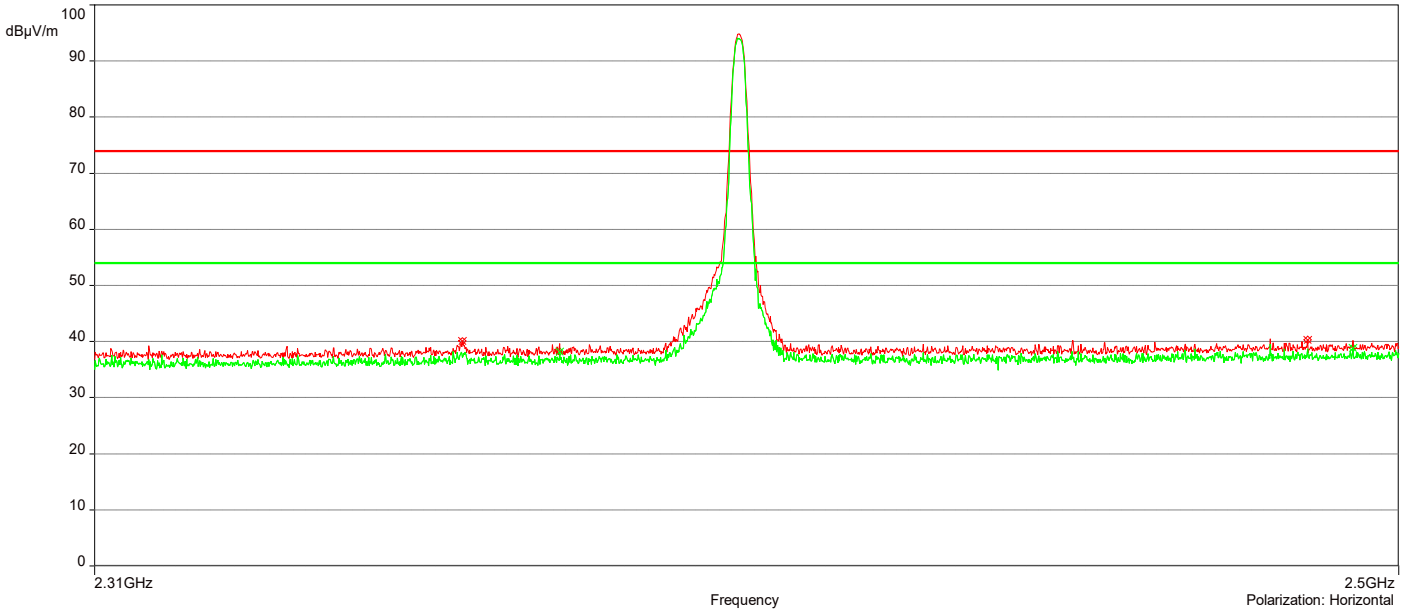
1. Level Peak Reading (dBµV/m)= Raw Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Peak Reading – Limit

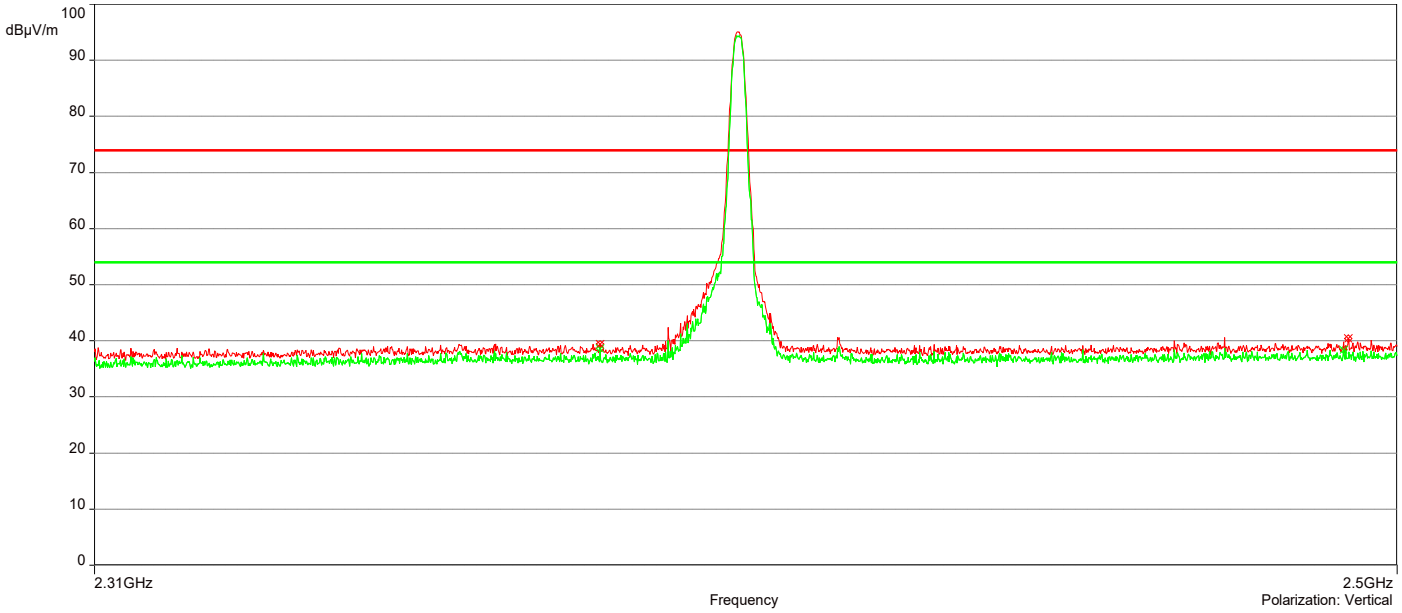
AH22100701-HAR-053#4_Restricted Bandedge_BT Classic_3-DH5_Ch 0

12/15/2022 3:50:57 PM

No	Frequency (MHz)	Level Peak Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1.	2.381951GHz	39.49	-3.03	74.00	-34.51	1.40	358.90	Vertical	Passed
2.	2.4925863GHz	40.37	-2.61	74.00	-33.63	4.00	224.10	Vertical	Passed
3.	2.362086GHz	40.11	-3.10	74.00	-33.89	3.63	336.60	Horizontal	Passed
4.	2.4862181GHz	40.28	-2.46	74.00	-33.72	2.51	156.60	Horizontal	Passed

Overall Graphs:





Remarks:

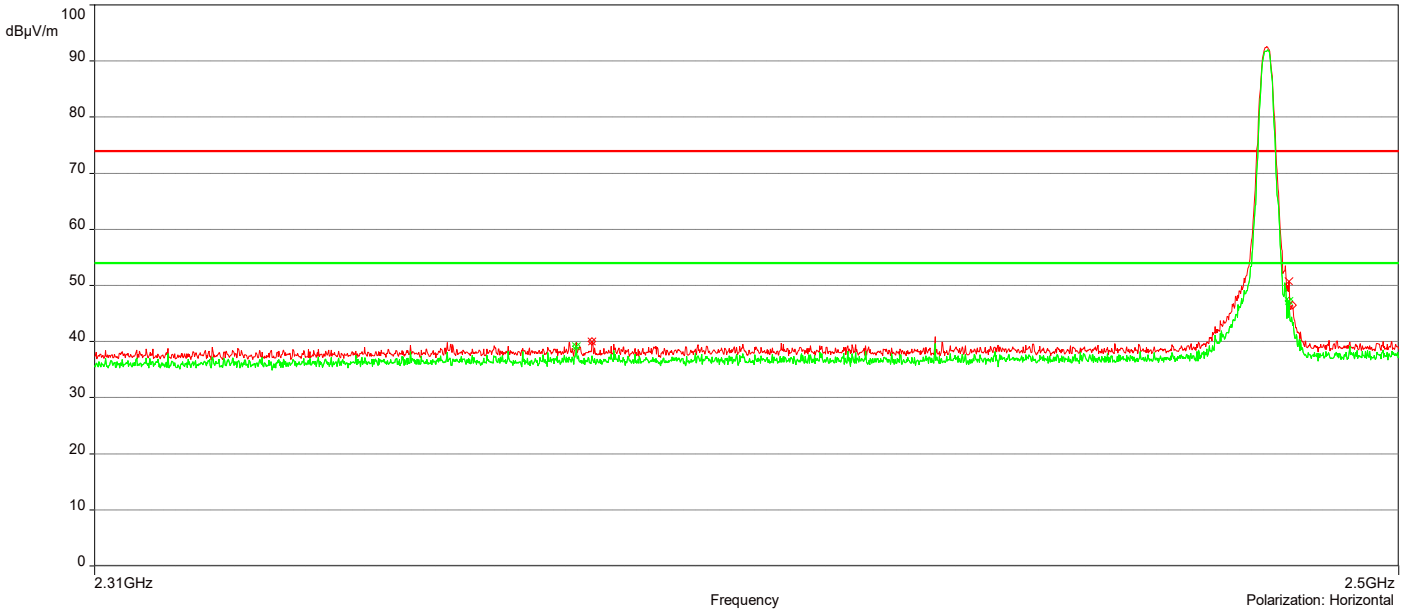
1. Level Peak Reading (dBµV/m)= Raw Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Peak Reading – Limit

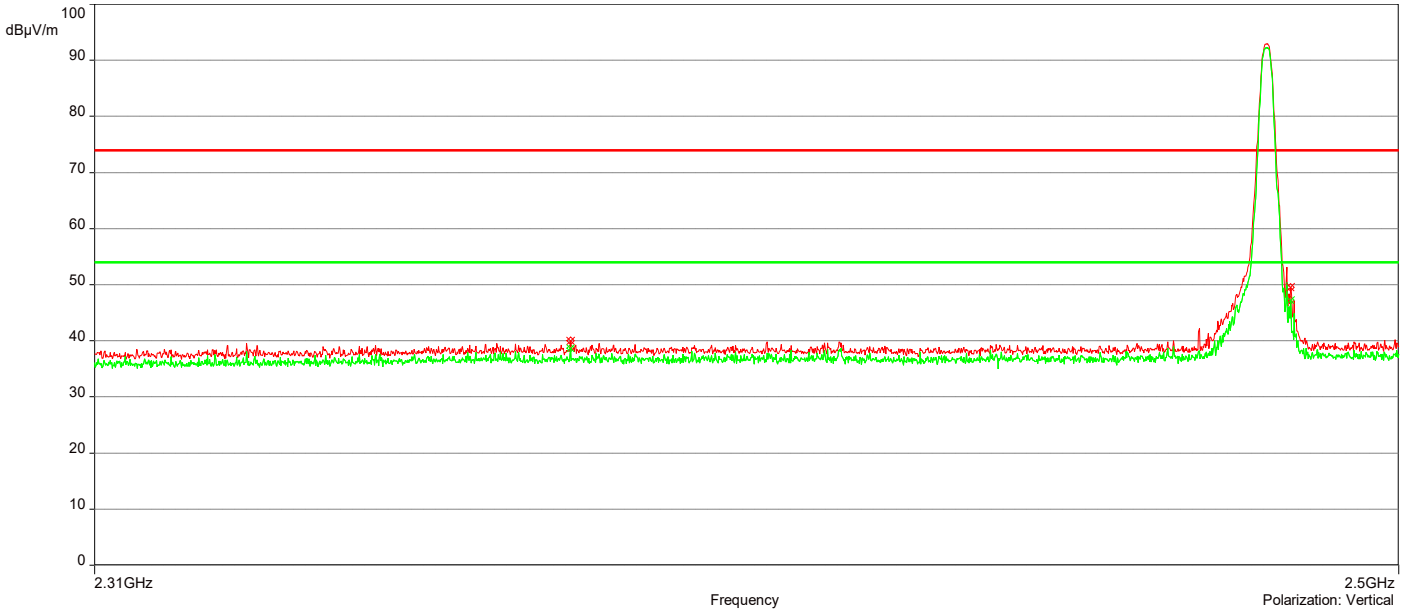
AH22100701-HAR-053#4_Restricted Bandedge_BT Classic_3-DH5_Ch 78

12/15/2022 3:24:14 PM

No	Frequency (MHz)	Level Peak Reading (dBµV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1.	2.3775788GHz	40.01	-3.00	74.00	-33.99	1.59	314.90	Vertical	Passed
2.	2.4836518GHz	49.56	-2.67	74.00	-24.44	1.00	247.40	Vertical	Passed
3.	2.3807154GHz	40.06	-3.10	74.00	-33.94	1.31	89.90	Horizontal	Passed
4.	2.4834617GHz	50.75	-2.48	74.00	-23.25	4.00	292.40	Horizontal	Passed

Overall Graphs:





Remarks:

1. Level Peak Reading (dBµV/m)= Raw Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Peak Reading – Limit

Document Revisions

Version	Date	Modifier	Changes
1.0	03/08/2023	Aravind Buddana	• Initial Release
2.0	05/13/2023	Aravind Buddana	• Updated the KDB version to v05r02 for all applicable tests across the report. • Updated Test summary with DUT Software, power configurations. • Updated RSS-247 Section references for all tests. • Updated channel occupancy Test data with transmit hop time. • Updated occupied bandwidth measurement guidance and the 3-DH5 test data with right RBW. • Updated the Tx Spurious procedure section and final measurements SA settings and data with appropriate detector. • Updated Radiated Emissions Procedure and Limits Information.
3.0	07/13/2023	Aravind Buddana	• Updated Section 5.4 Test Limits and Procedures with limits sample formulas. • Updated Section 4.4.4 Time of Channel occupancy test with a statement on transmit time per hop evaluation.
4.0	07-20-2023	Aravind Buddana	• Updated Section 5.4 with sample calculation that demonstrate the equivalence of magnetic field strength and electric field strength

End of Report