

Johnson Health Tech. Co., Ltd.

TEST REPORT

Model:

FSC-BT1106RC

REPORT NUMBER

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Radio Spectrum TEST REPORT

Applicant:	Johnson Health Tech. Co., Ltd. No.999, Sec. 2, Dongda Rd., Daya Dist Taichung City 428, Taiwan
Product:	Module
Model No.:	FSC-BT1106RC
FCC ID:	TN7FSCBT1106RC
Test Method/ Standard:	47 CFR FCC Part 15.247 & ANSI C63.10-2020 KDB 558074 D01 v05r02
Test By:	Intertek Testing Services Taiwan Ltd., Hsinchu Laboratory No. 17, Ln. 246, Niupu S. Rd., Xiangshan Dist, Hsinchu City 300075, Taiwan



Rich Nien
Engineer



Zero Chen
Reviewer

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Revision History

Report No.	Issue Date	Revision Summary
250900144THC-001	Oct. 29, 2025	Original report

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Summary of Test Data

Test Requirement	Applicable Rule (Section 15.247)	Result
20dB Bandwidth Test	15.247(a)(1)	Pass
Carrier Frequency Separation Test	15.247(a)(1)	Pass
Number of Hopping Frequencies Test	15.247(a)(1)	Pass
Time of Occupancy (Dwell Time) Test	15.247(a)(1)(iii)	Pass
Maximum Output Power Test	15.247(b)	Pass
RF Antenna Conducted Spurious Test	15.247(d)	Pass
Radiated Spurious Emission Test	15.205, 15.209	Pass
Emission on the Band Edge Test	15.247(d)	Pass
AC Power Line Conducted Emission Test	15.207	Pass
Antenna Requirement	15.203	Pass

Note: Please note that the test results with statement of conformity, the decision rules which are based on: Safety Testing: the specification, standard or IEC Guide 115.

Other Testing: the specification, standard and not taking into account the measurement uncertainty.

1. General Information

1.1 Identification of the EUT

Product:	Module
Model No.:	FSC-BT1106RC
Operating Frequency:	2402 MHz ~ 2480 MHz
Channel Number:	79 channels
Frequency of Each Channel:	2402+1 k, k=0 ~ 78
Rating:	DC 3.3V
Power Cord:	N/A
Sample receiving date:	2025/09/15
Sample condition:	Workable
Test Date(s):	2025/09/25 ~ 2025/10/16

1.2 Description of the EUT

Modulation mode	Transmit path
	Chain 0 / Main
DH5(GFSK)	V
2DH5($\pi/4$ DQPSK)	V
3DH5(8DPSK)	V

1.3 Antenna description

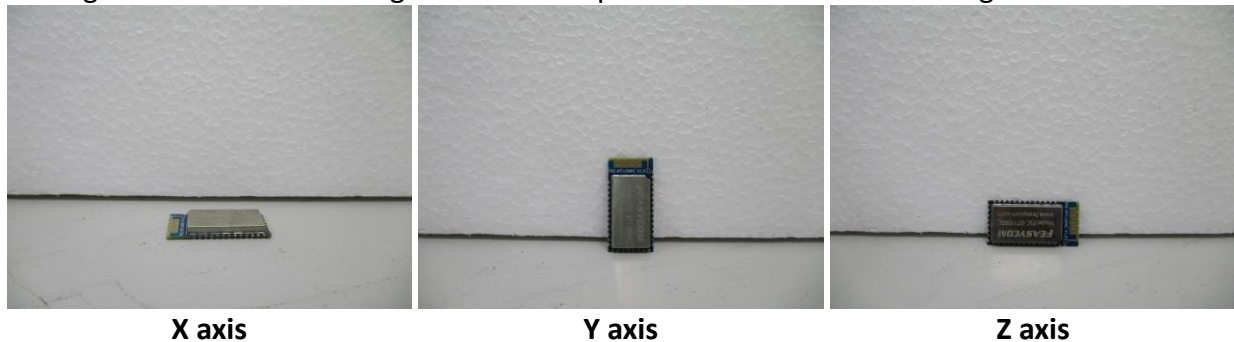
Antenna Gain	: 1.5dBi
Antenna Type	: Coil antenna
Connector Type	: Fixed
Remark	: Antenna information provided by the client.

1.4 Operation mode

Connected to Notebook via USB Cable, executing “RTLBTAPP” to select different frequency and modulation.

With individual verifying, we select GFSK(DH5) & 8-DPSK(3DH5) as the worst cases for radiation above 1GHz.

The signal is maximized through rotation and placement in the Three orthogonal axes.



After verifying three axes, we found the maximum electromagnetic field was occurred at X axis. The final test data was executed under this configuration.

Mode	Channel	Frequency (MHz)	Signal on time (ms)	Signal on+off time (ms)	Duty cycle	Duty Cycle factor (dB)
DH5	39	2441	2.91	3.73	0.78	2.16
2DH5	39	2441	2.91	3.74	0.78	2.18
3DH5	39	2441	2.89	3.73	0.77	2.22

1.5 Peripherals equipment

Peripheral Name	Brand	Model No.	Serial No.
Notebook PC	HP	HP ProBook 440 G3	5CD8021S9H
Fixture	FEASYCOM	FSC-DB008	N/A

Peripheral Name	Length	Shielded(Y/N)	Brand	Model No.
Type-C Cable	1m	N	LG	DC1605
USB Cable	1.5m	Y	UGREEN	20276

2. 20dB Bandwidth Test

2.1 Test Setup & Procedure

The test procedure was according to FCC measurement guidelines DA 00-705.

The 20dB bandwidth per FCC §15.247(a)(1) was measured using a 50 ohm spectrum analyzer with the resolutions bandwidth set $\geq 1\%$ of 20dB Bandwidth, the video bandwidth $\geq$ RBW, and the SPAN may equal to approximately 2 to 3 times the 20dB bandwidth. The test was performed at 3 channels (lowest, middle and highest channel). The maximum 20dB modulation bandwidth is in the following Table.

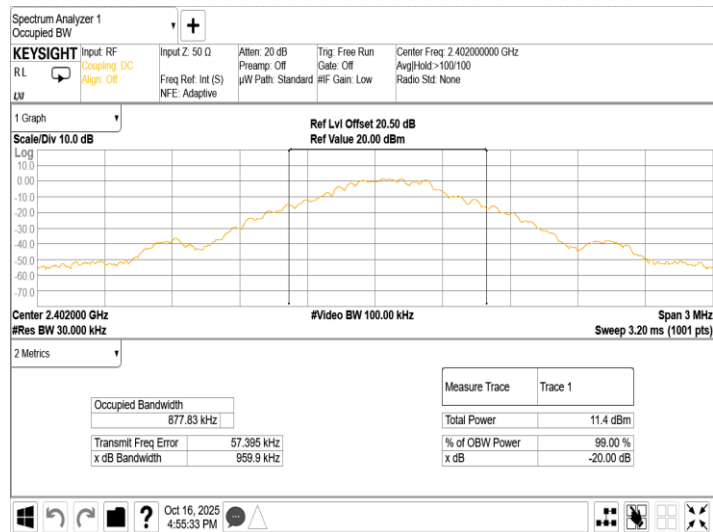
2.2 Operating Environment Condition

Temperature (°C) :	25
Relative Humidity (%) :	66
Test date :	2025/10/16

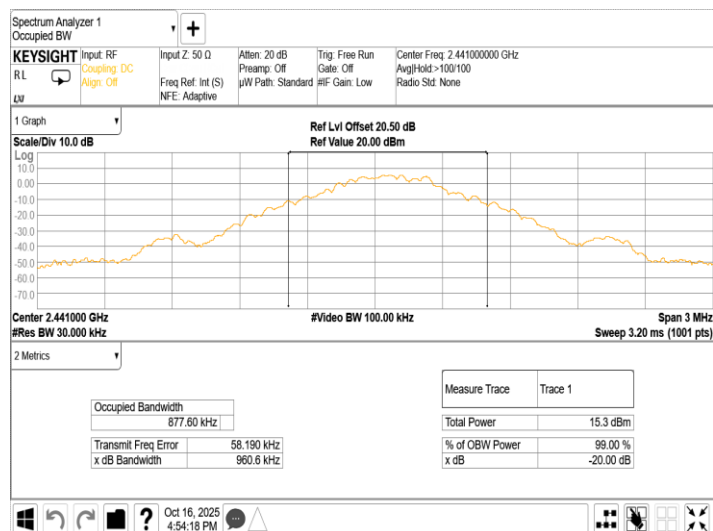
2.3 Test Results

Mode	Channel	Frequency (MHz)	20dB Bandwidth (MHz)
DH5	0	2402	0.96
	39	2441	0.96
	78	2480	0.96
2DH5	0	2402	1.29
	39	2441	1.29
	78	2480	1.29
3DH5	0	2402	1.30
	39	2441	1.30
	78	2480	1.29

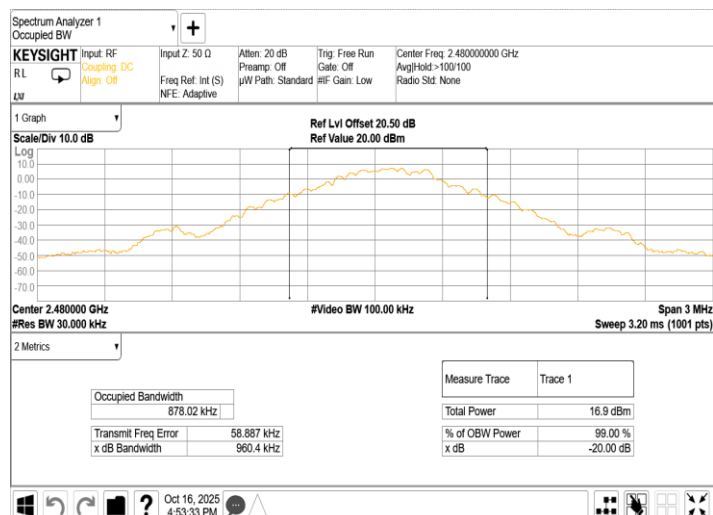
20dB Occupied Bandwidth @ DH5 Ch 0



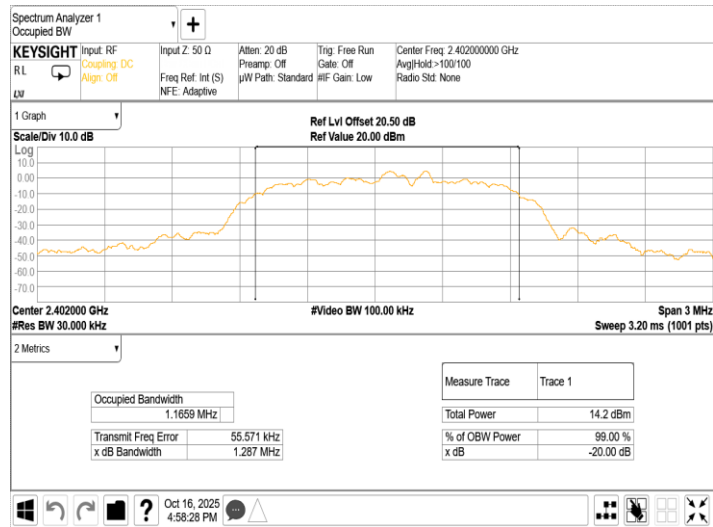
20dB Occupied Bandwidth @ DH5 Ch 39



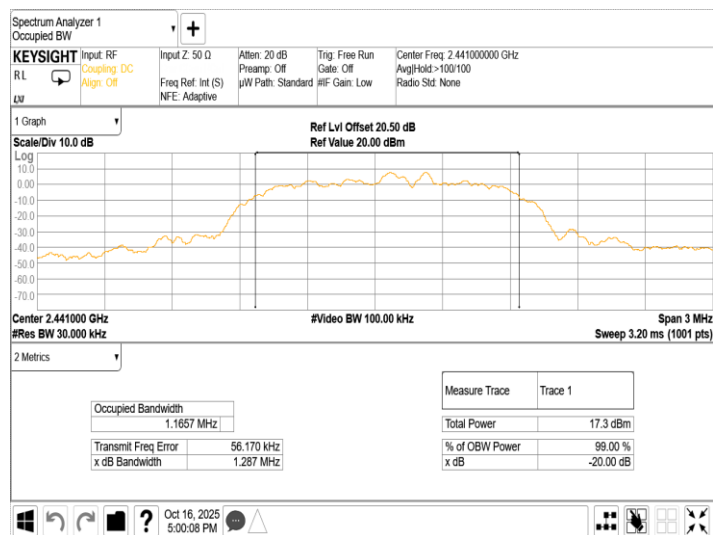
20dB Occupied Bandwidth @ DH5 Ch 78



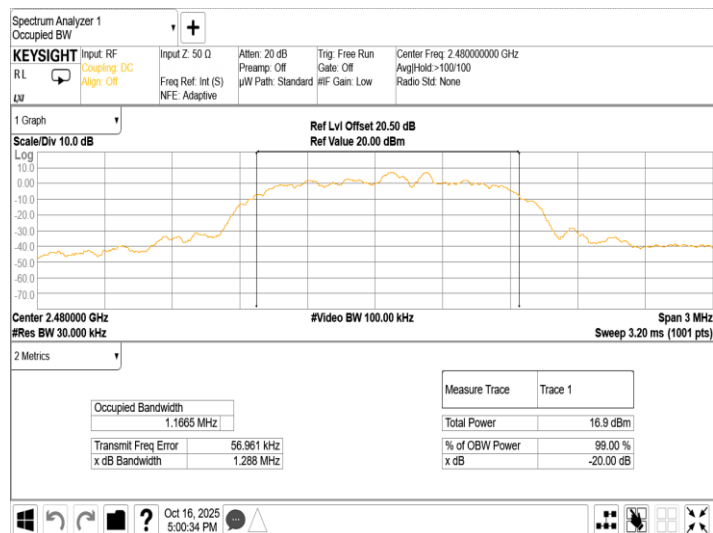
20dB Occupied Bandwidth @ 2DH5 Ch 0



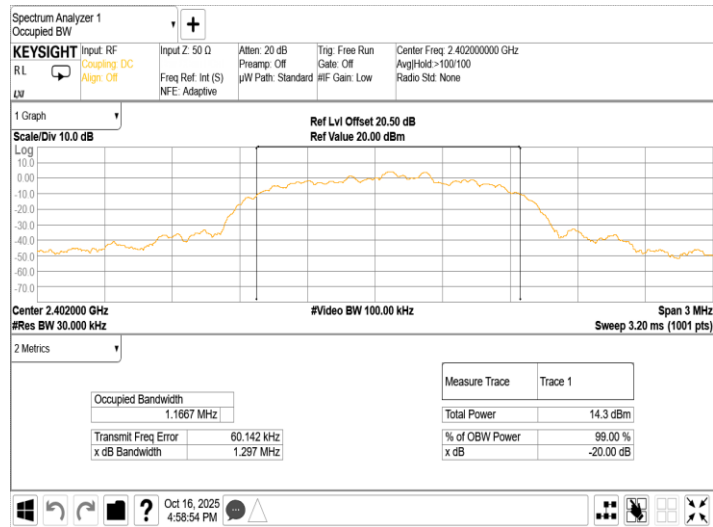
20dB Occupied Bandwidth @ 2DH5 Ch 39



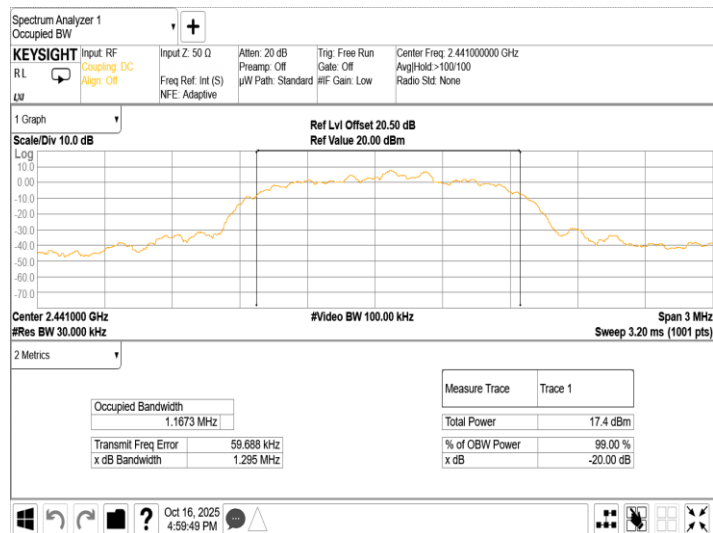
20dB Occupied Bandwidth @ 2DH5 Ch 78



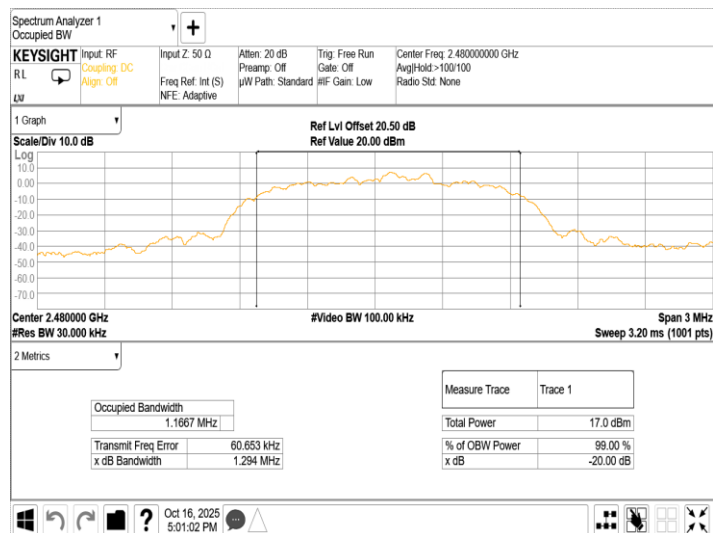
20dB Occupied Bandwidth @ 3DH5 Ch 0



20dB Occupied Bandwidth @ 3DH5 Ch 39



20dB Occupied Bandwidth @ 3DH5 Ch 78



3. Carrier Frequency Separation Test

3.1 Test Setup & Procedure

The test procedure was according to FCC measurement guidelines DA 00-705.

The carrier frequency separation per FCC §15.247(a)(1) was measured using a 50 ohm spectrum analyzer with the resolutions bandwidth set at $\geq 1\%$ of the span, the video bandwidth $\geq$ RBW, and the SPAN was wide enough to capture the peaks of two adjacent channels. The carrier frequency separation result is in the following Table.

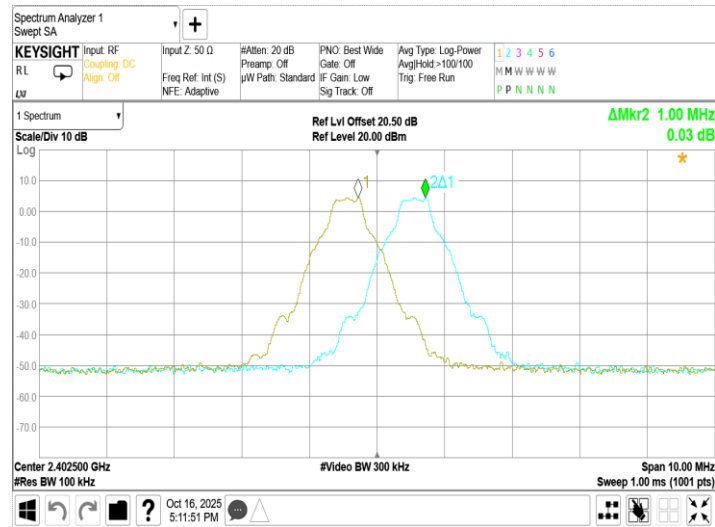
3.2 Operating Environment Condition

Temperature (°C) :	25
Relative Humidity (%) :	66
Test date :	2025/10/16

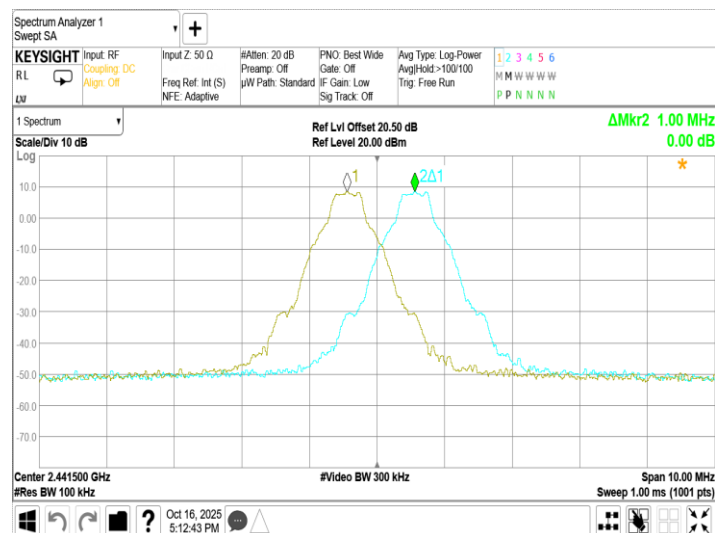
3.3 Test Results

Mode	Channel	Frequency (MHz)	Adjacent channel separation (MHz)	Limit (MHz)
DH5	0	2402	1.00	0.64
	39	2441	1.00	0.64
	78	2480	1.00	0.64
2DH5	0	2402	1.00	0.86
	39	2441	1.00	0.86
	78	2480	1.01	0.86
3DH5	0	2402	1.00	0.86
	39	2441	1.00	0.86
	78	2480	1.00	0.86

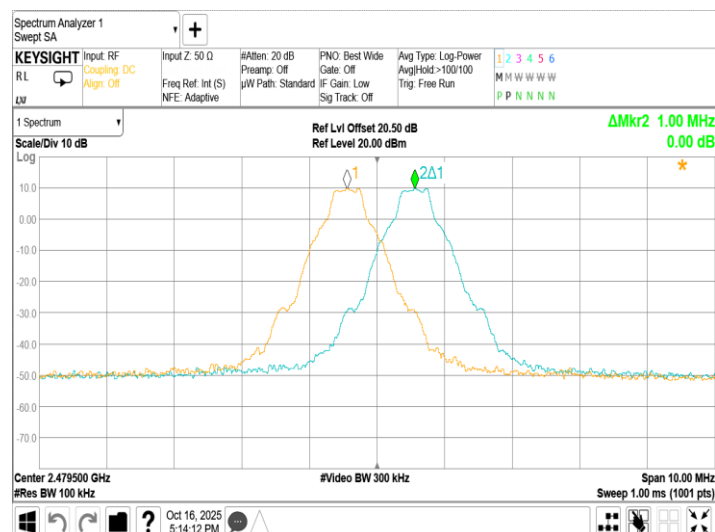
Frequency Separation @ DH5 Ch 0



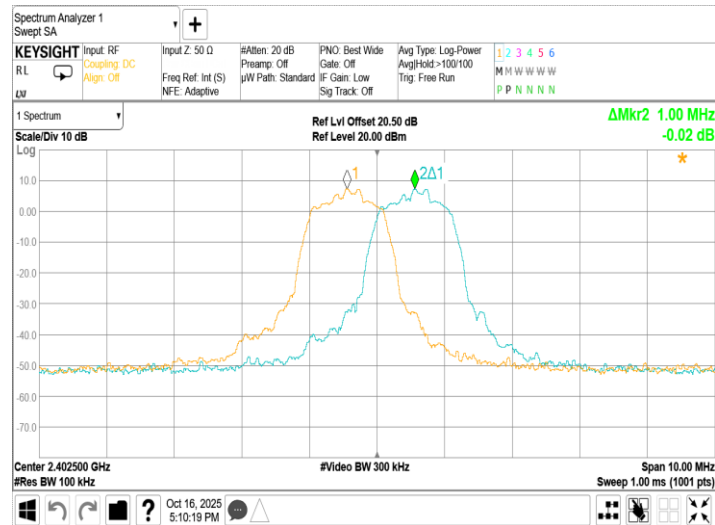
Frequency Separation @ DH5 Ch 39



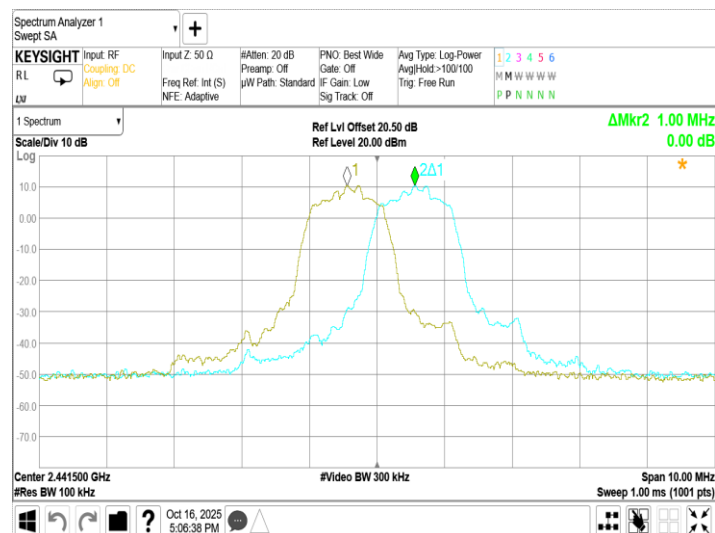
Frequency Separation @ DH5 Ch 78



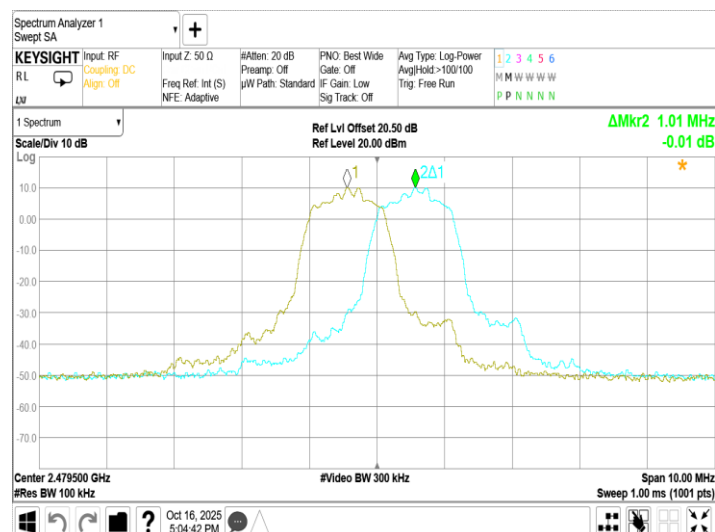
Frequency Separation @ 2DH5 Ch 0



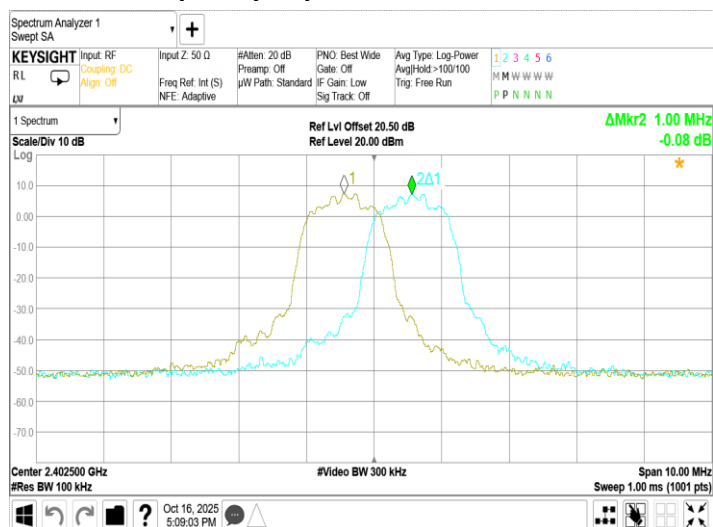
Frequency Separation @ 2DH5 Ch 39



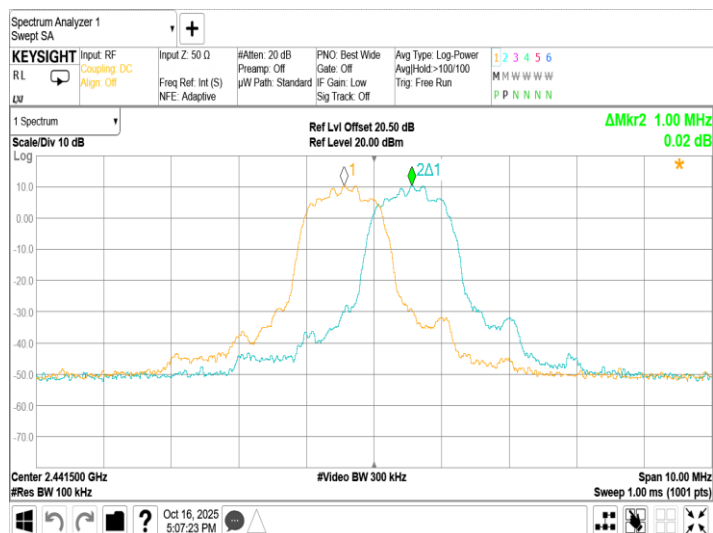
Frequency Separation @ 2DH5 Ch 78



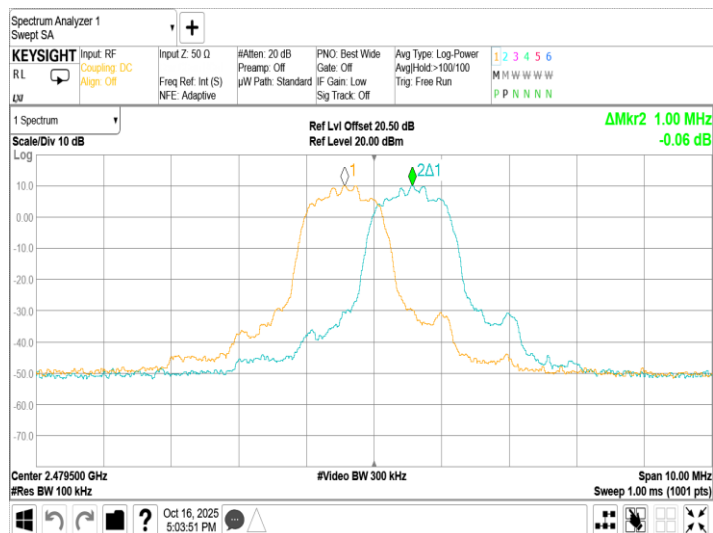
Frequency Separation @ 3DH5 Ch 0



Frequency Separation @ 3DH5 Ch 39



Frequency Separation @ 3DH5 Ch 78



4. Number of Hopping Frequencies Test

4.1 Test Setup & Procedure

The test procedure was according to FCC measurement guidelines DA 00-705.

The number of hopping frequencies per FCC §15.247(a)(1) was measured using a 50 ohm spectrum analyzer with the resolutions bandwidth set at $\geq 1\%$ of the span, the video bandwidth $\geq$ RBW, and the SPAN was the frequency band of operation. The carrier frequency separation result is in the following Table.

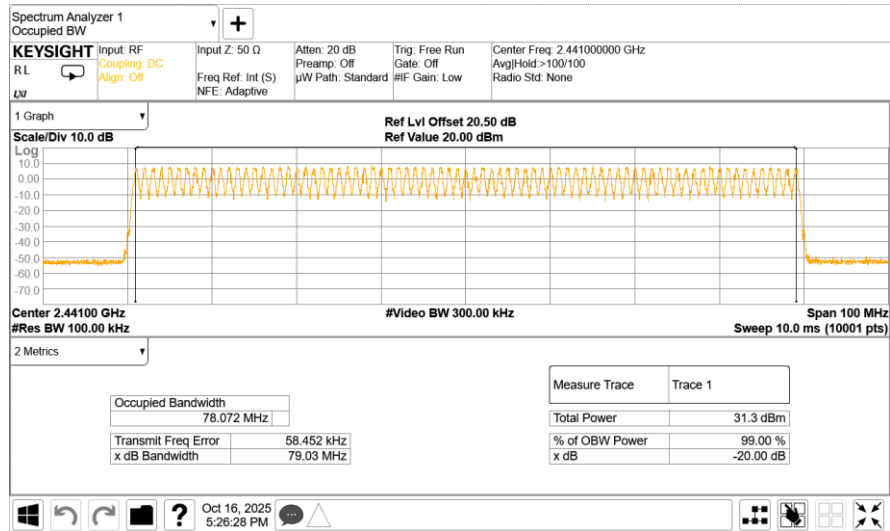
4.2 Operating Environment Condition

Temperature (°C) :	25
Relative Humidity (%) :	66
Test date :	2025/10/16

4.3 Test Results

Frequency Range (MHz)	Hopping Channels
2402~2480	79

Number of Hopping Frequencies @ DH5 Hopping Mode



5. Time of Occupancy (Dwell Time)

5.1 Test Setup & Procedure

The test procedure was according to FCC measurement guidelines DA 00-705.

The time of occupancy (dwell time) per FCC §15.247(a)(1) was measured using a 50 ohm spectrum analyzer with the resolutions bandwidth set at 1MHz, the video bandwidth $\geq$ RBW, and the zero span function of spectrum analyzer was enable. The EUT has its hopping function enable.

5.2 Operating Environment Condition

Temperature (°C) :	25
Relative Humidity (%) :	66
Test date :	2025/10/16

5.3 Test Results

The total sweep time is 0.4×79 Channels = 31.6 seconds

Due to the number of hops in the 31.6s sweep, we determined to reduce the sweep time to 5s, count the number of hops and multiply by 6.32. The total number of hops will be multiplied by the measured time of one pulse.

Mode	Pulse duration (ms)	Measure time (s)	Dwell time (s)	<Limit (s)	Results
DH1	0.38	31.6	0.12	0.4	Pass
DH3	1.64	31.6	0.26	0.4	Pass
DH5	2.88	31.6	0.31	0.4	Pass
2DH1	0.39	31.6	0.12	0.4	Pass
2DH3	1.64	31.6	0.26	0.4	Pass
2DH5	2.89	31.6	0.31	0.4	Pass
3DH1	0.39	31.6	0.12	0.4	Pass
3DH3	1.64	31.6	0.26	0.4	Pass
3DH5	2.89	31.6	0.31	0.4	Pass

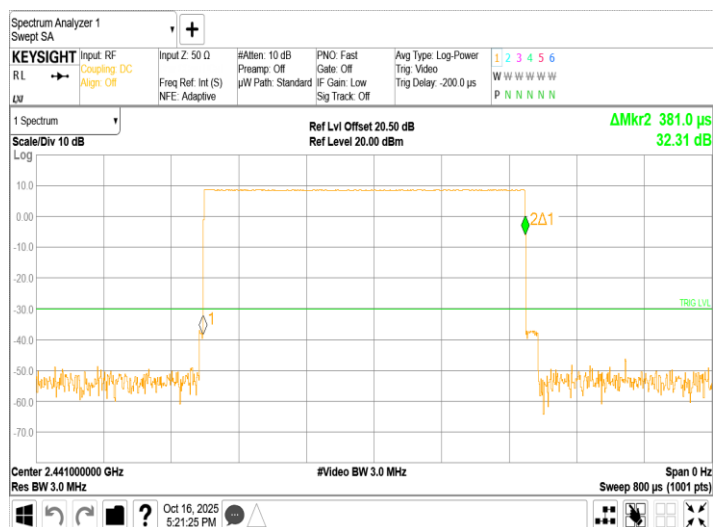
Note: (1) Dwell time = $1600 \div (79 \times N) \times \text{Pulse duration} \times \text{Measure time}$

(2) DH1, N=2

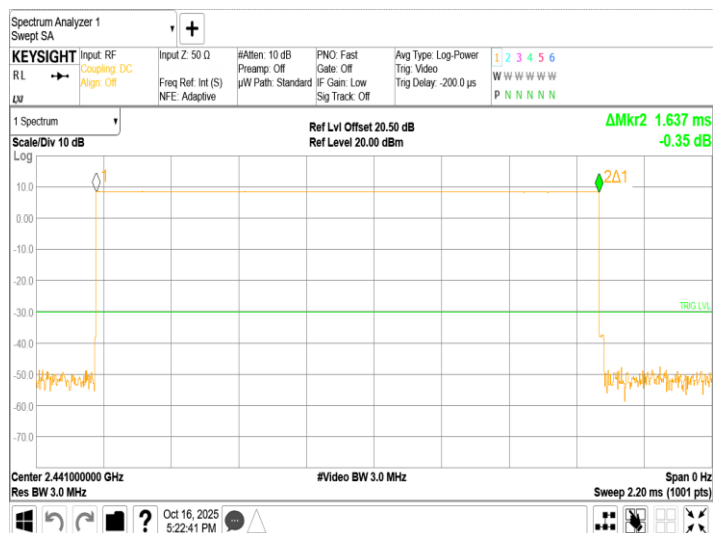
DH3, N=4

DH5, N=6

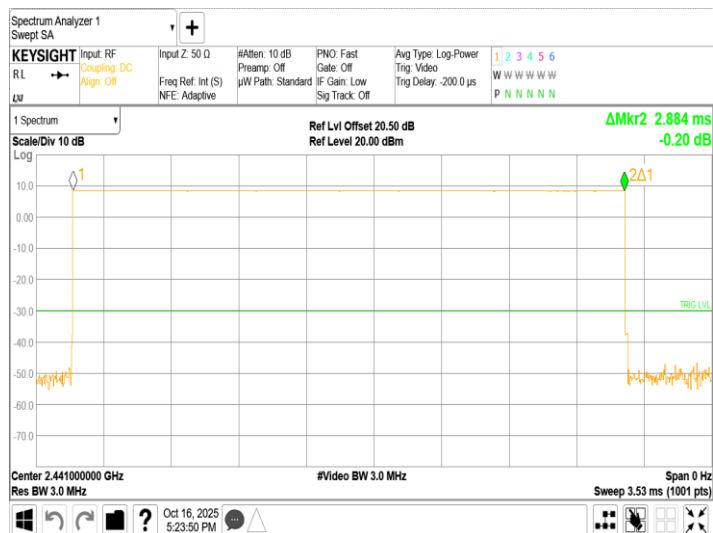
Dwell Time @ DH1 Ch 39



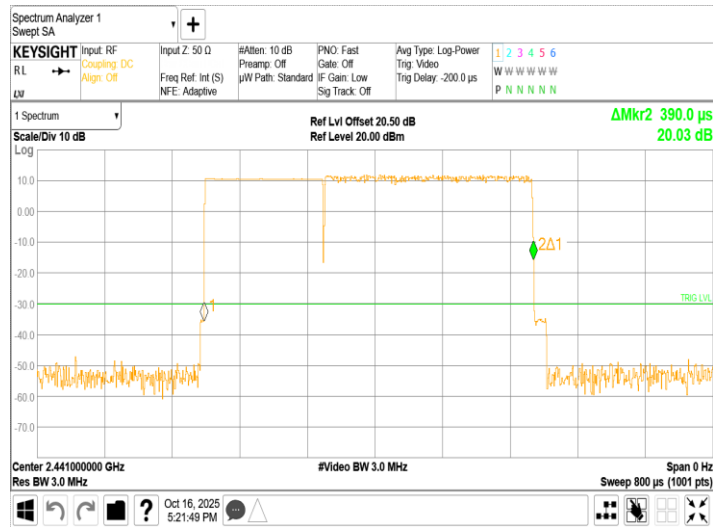
Dwell Time @ DH3 Ch 39



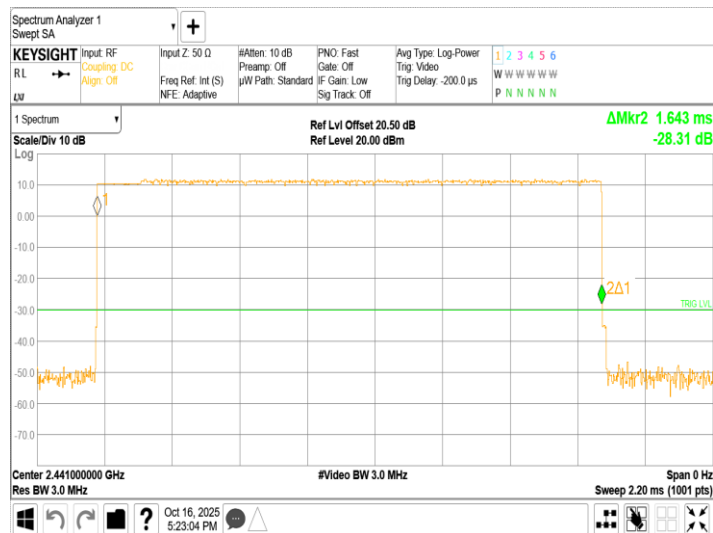
Dwell Time @ DH5 Ch 39



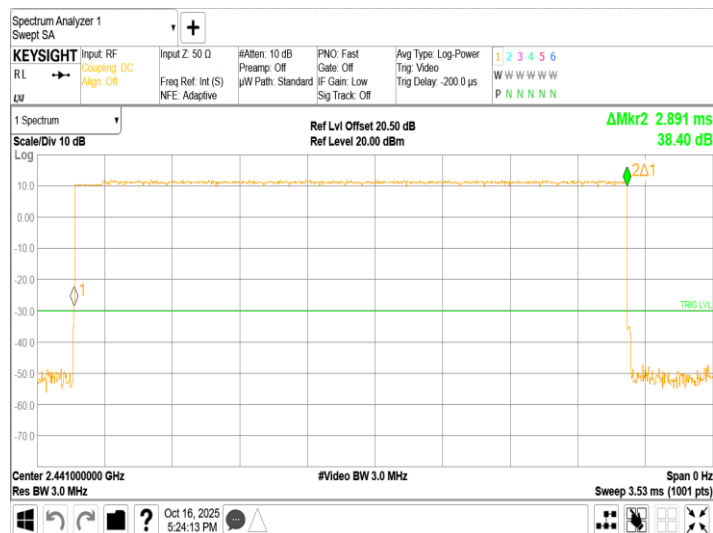
Dwell Time @ 2DH1 Ch 39



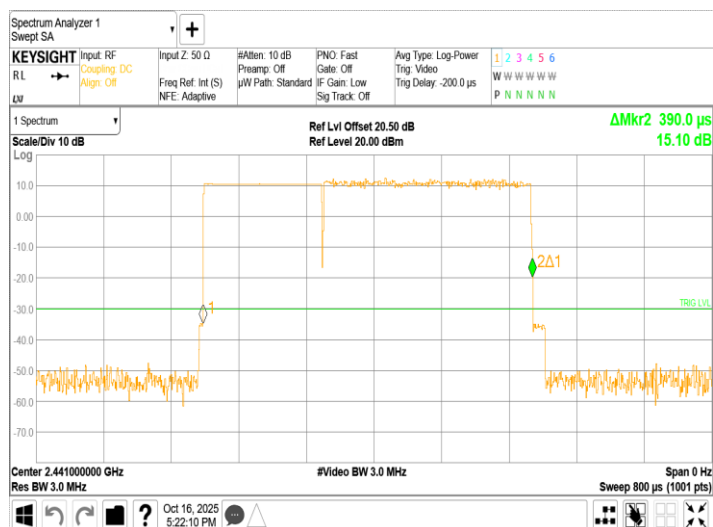
Dwell Time @ 2DH3 Ch 39



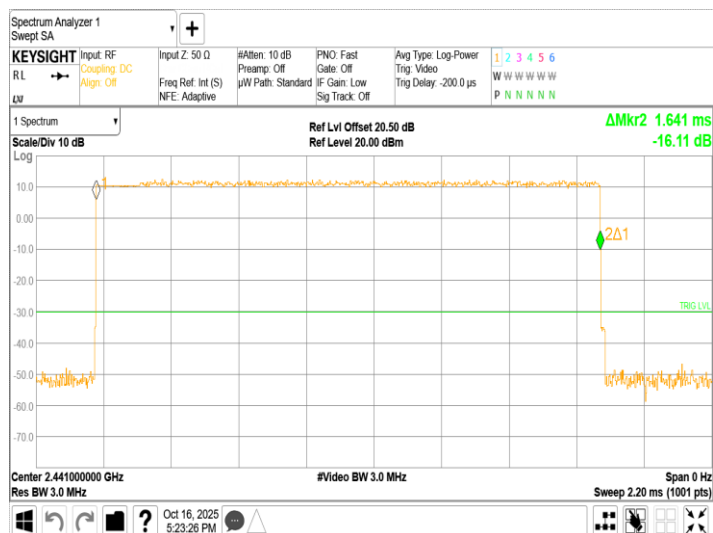
Dwell Time @ 2DH5 Ch 39



Dwell Time @ 3DH1 Ch 39



Dwell Time @ 3DH3 Ch 39



Dwell Time @ 3DH5 Ch 39



6. Maximum Output Power Test

6.1 Test Setup & Procedure

The test procedure was according to FCC measurement guidelines DA 00-705.

The power output per FCC §15.247(b) was measured on the EUT using a 50 ohm SMA cable connected to peak power meter via power sensor. Power was read directly and cable loss correction (2 dB) was added to the reading to obtain power at the EUT antenna terminals. The test was performed at 3 channels (lowest, middle and highest channel).

6.2 Operating Environment Condition

Temperature (°C) :	25
Relative Humidity (%) :	66
Test date :	2025/10/16

6.3 Test Results

Mode	Channel	Frequency (MHz)	Output Power (AV) (dBm)	Total Power (AV) (mW)	Maximun power (PK) (dBm)	Maximun power (PK) (mW)	Limit (dBm)	Margin (dB)
DH5	0	2402	4.80	3.02	5.20	3.31	30	-24.80
	39	2441	8.90	7.76	9.10	8.13	30	-20.90
	78	2480	10.50	11.22	10.60	11.48	30	-19.40
2DH5	0	2402	6.50	4.47	9.20	8.32	21	-11.80
	39	2441	10.70	11.75	12.10	16.22	21	-8.90
	78	2480	10.50	11.22	12.00	15.85	21	-9.00
3DH5	0	2402	6.60	4.57	9.70	9.33	21	-11.30
	39	2441	9.70	9.33	12.60	18.20	21	-8.40
	78	2480	9.50	8.91	12.40	17.38	21	-8.60

7. RF Antenna Conducted Spurious Test

7.1 Test Setup & Procedure

The test procedure was according to FCC measurement guidelines DA 00-705.

The measurements were performed from 30MHz to 25GHz RF antenna conducted per FCC 15.247 (c) was measured from the EUT antenna port using a 50ohm spectrum analyzer with the resolution bandwidth set at 100 kHz, and the video bandwidth set at 100 kHz.

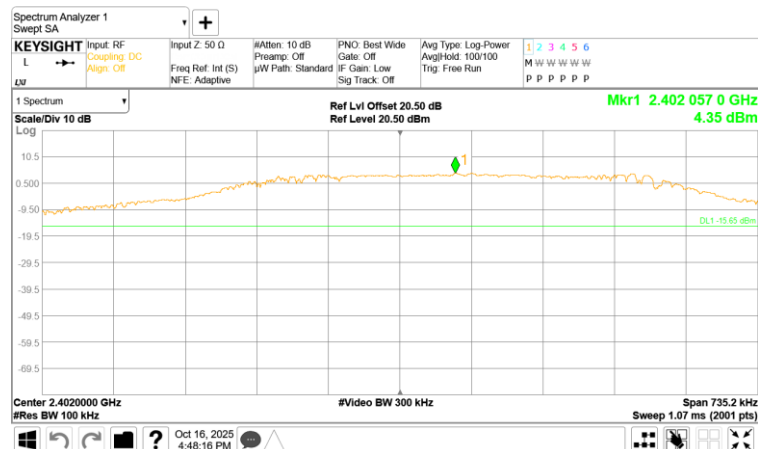
Harmonics and spurious noise must be at least 20dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW.

7.2 Operating Environment Condition

Temperature (°C) :	25
Relative Humidity (%) :	66
Test date :	2025/10/16

Mode	Channel	Frequency (MHz)	Delta (dBc)	Limit (dBc)
DH5	0	2402	57.42	>20
	39	2441	59.91	>20
	78	2480	62.39	>20
2DH5	0	2402	58.73	>20
	39	2441	62.17	>20
	78	2480	60.86	>20
3DH5	0	2402	57.16	>20
	39	2441	62.70	>20
	78	2480	61.43	>20

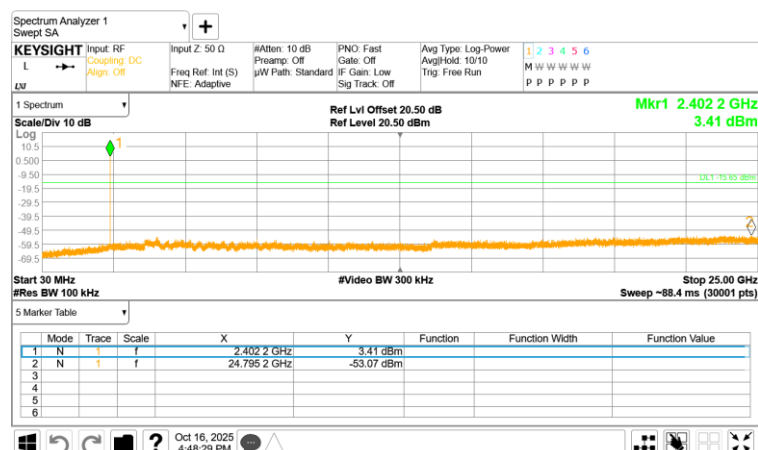
Chain0 : Conducted Spurious @ DH5 Mode Ch 0



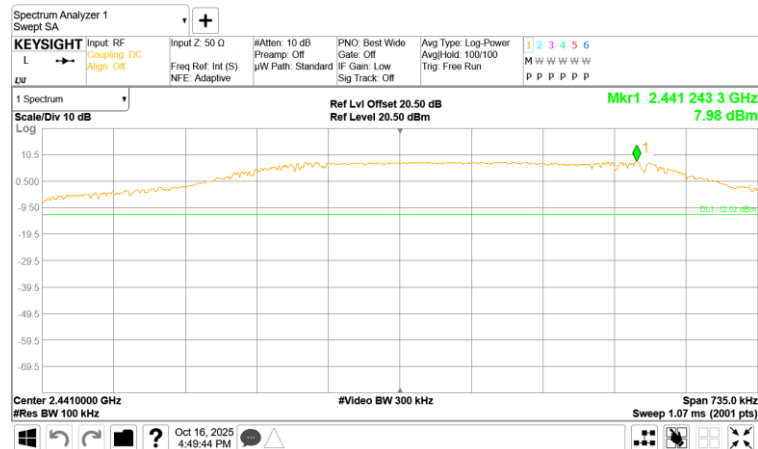
Chain0 : Conducted Spurious @ DH5 Mode Ch 0



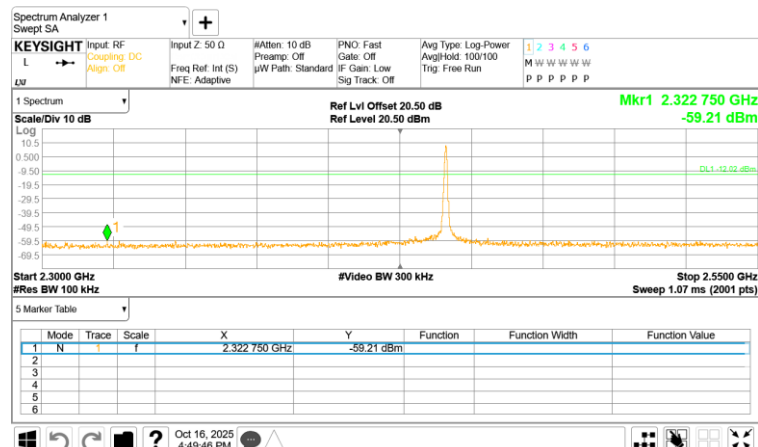
Chain0 : Conducted Spurious @ DH5 Mode Ch 0



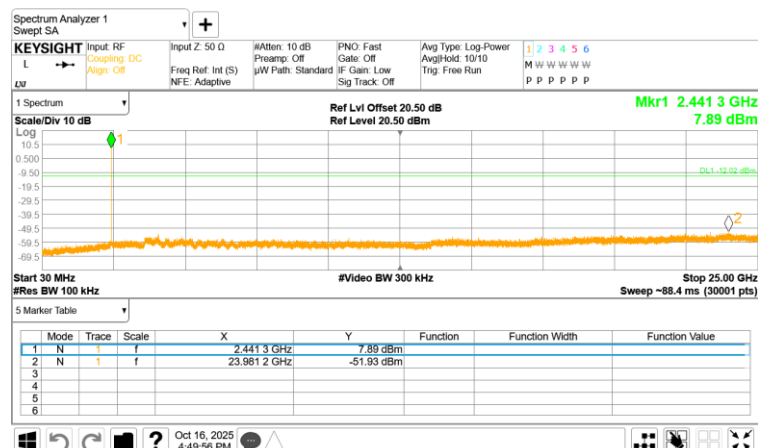
Chain0 : Conducted Spurious @ DH5 Mode Ch 39



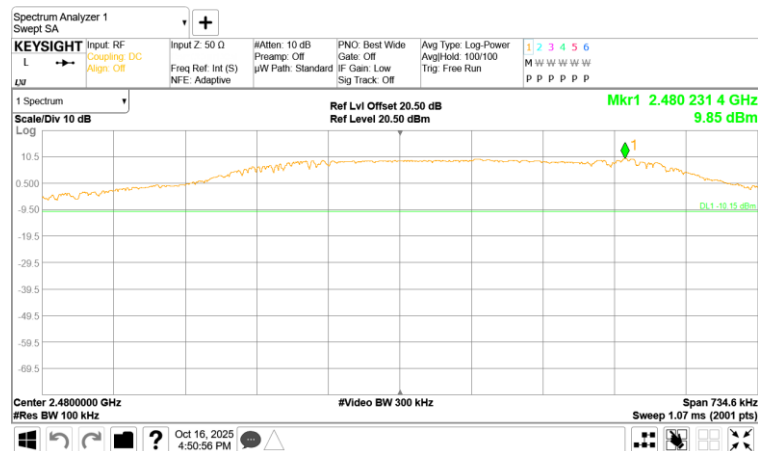
Chain0 : Conducted Spurious @ DH5 Mode Ch 39



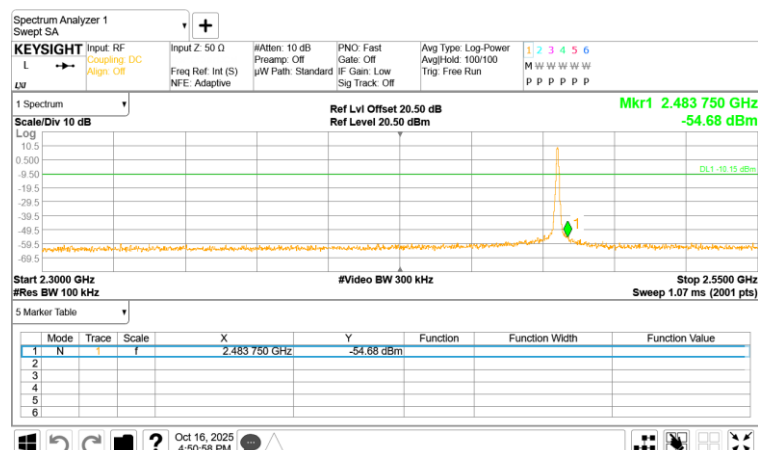
Chain0 : Conducted Spurious @ DH5 Mode Ch 39



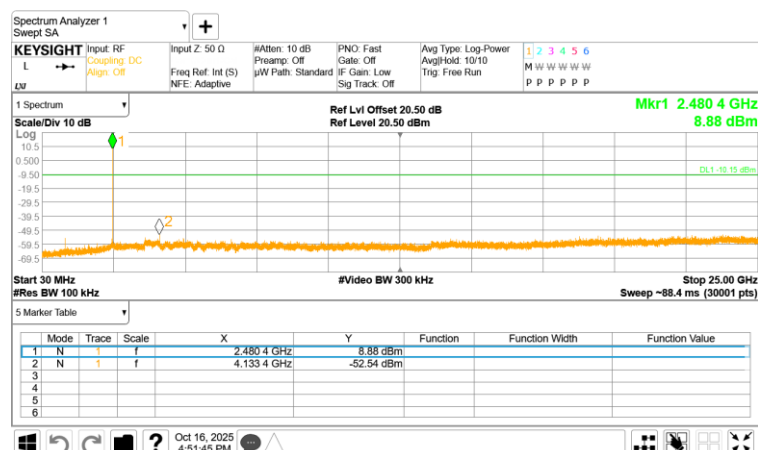
Chain0 : Conducted Spurious @ DH5 Mode Ch 78



Chain0 : Conducted Spurious @ DH5 Mode Ch 78



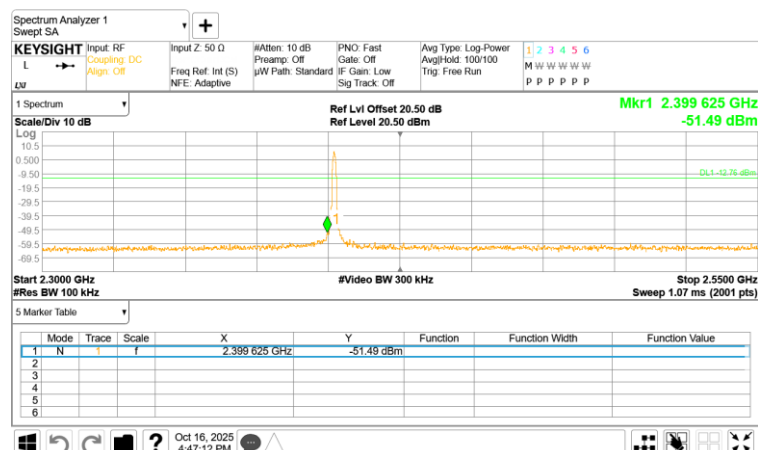
Chain0 : Conducted Spurious @ DH5 Mode Ch 78



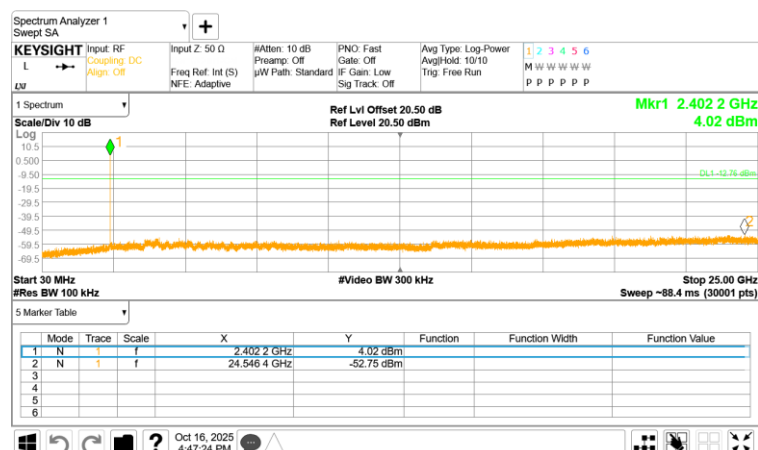
Chain0 : Conducted Spurious @ 2DH5 Mode Ch 0



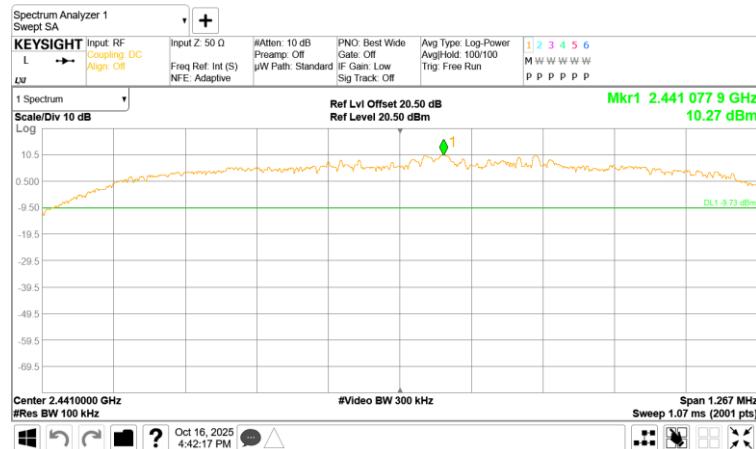
Chain0 : Conducted Spurious @ 2DH5 Mode Ch 0



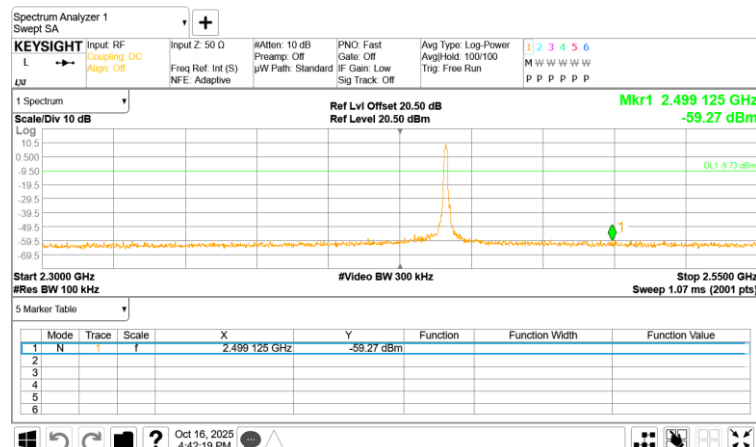
Chain0 : Conducted Spurious @ 2DH5 Mode Ch 0



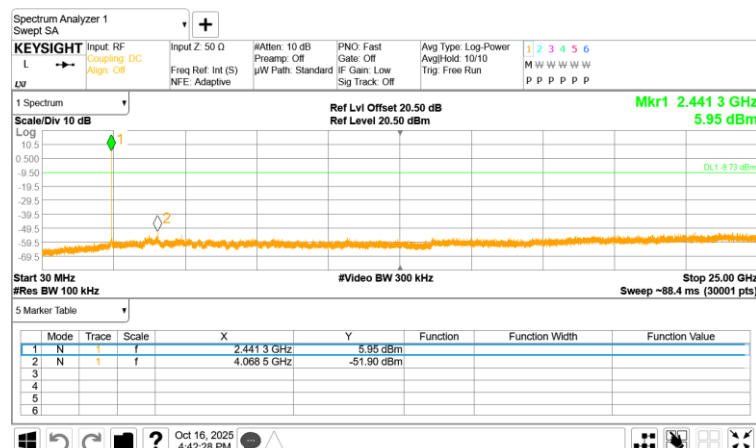
Chain0 : Conducted Spurious @ 2DH5 Mode Ch 39



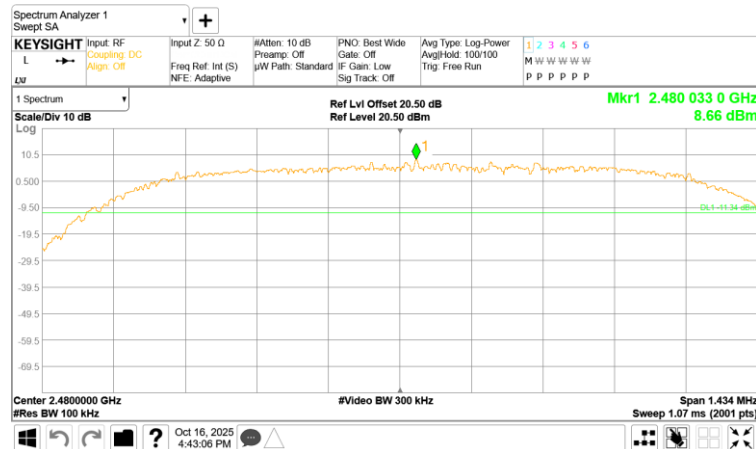
Chain0 : Conducted Spurious @ 2DH5 Mode Ch 39



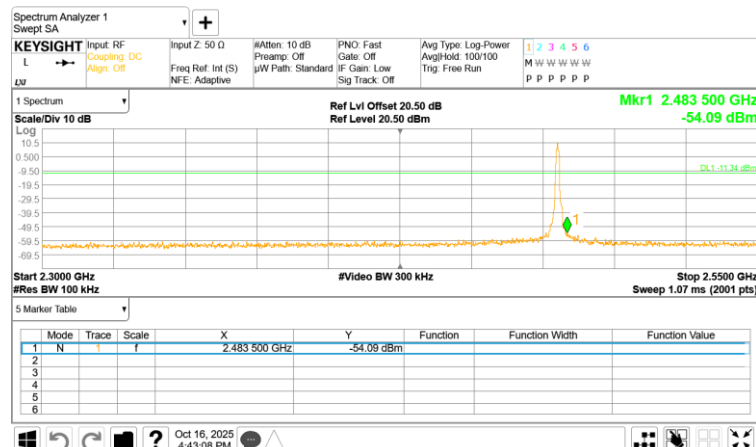
Chain0 : Conducted Spurious @ 2DH5 Mode Ch 39



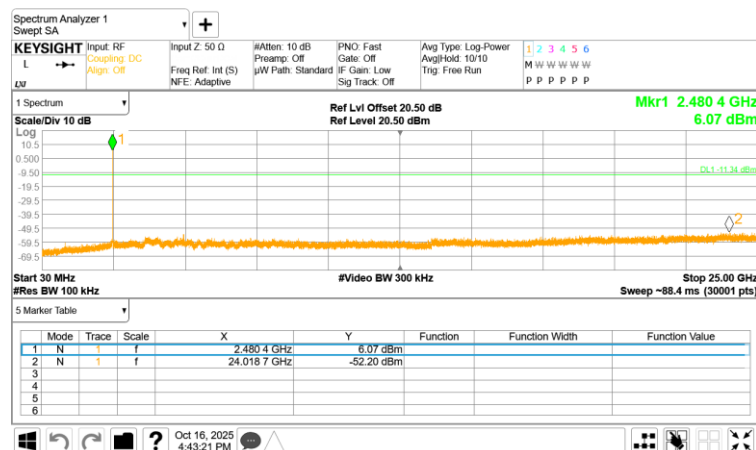
Chain0 : Conducted Spurious @ 2DH5 Mode Ch 78



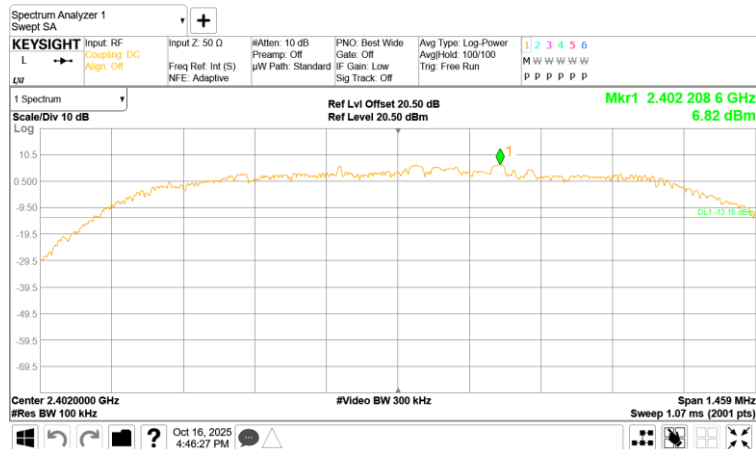
Chain0 : Conducted Spurious @ 2DH5 Mode Ch 78



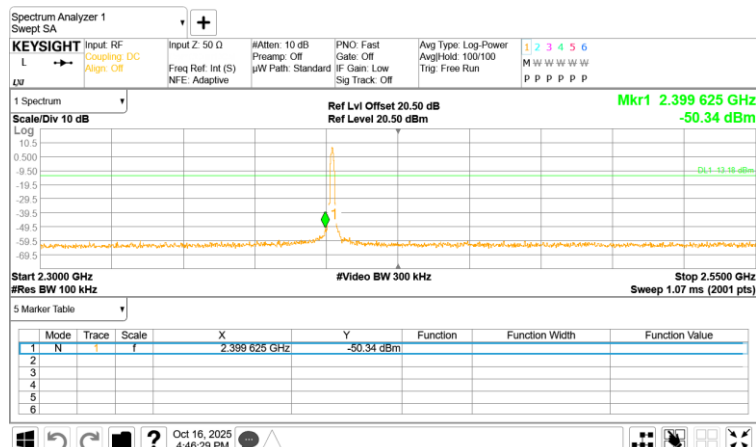
Chain0 : Conducted Spurious @ 2DH5 Mode Ch 78



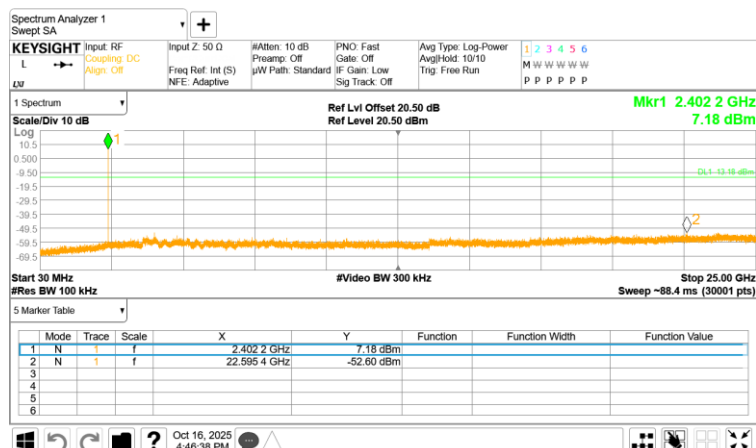
Chain0 : Conducted Spurious @ 3DH5 Mode Ch 0



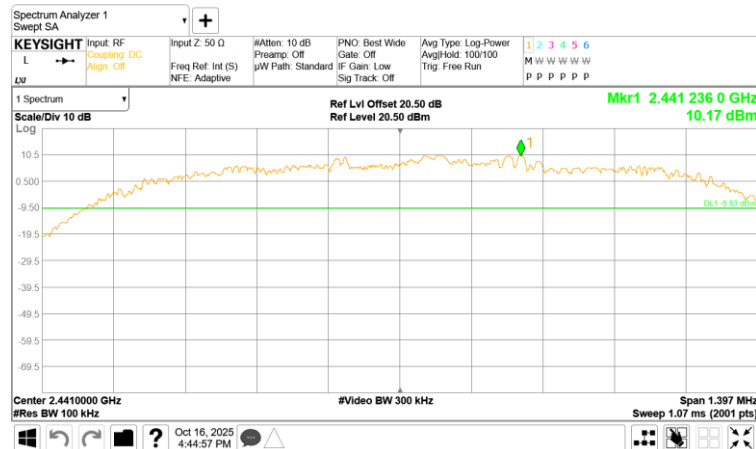
Chain0 : Conducted Spurious @ 3DH5 Mode Ch 0



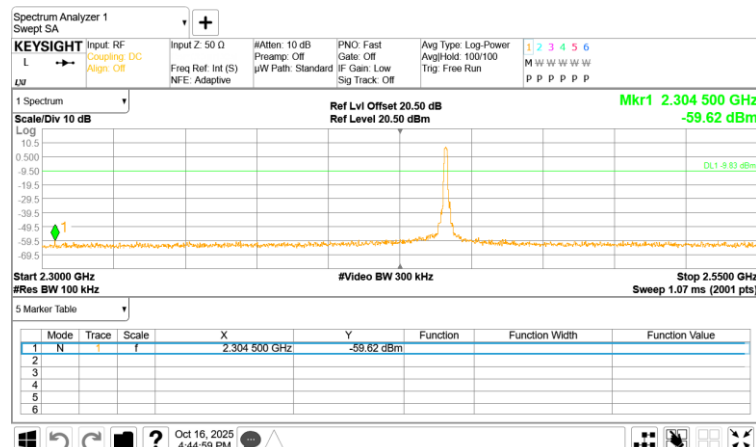
Chain0 : Conducted Spurious @ 3DH5 Mode Ch 0



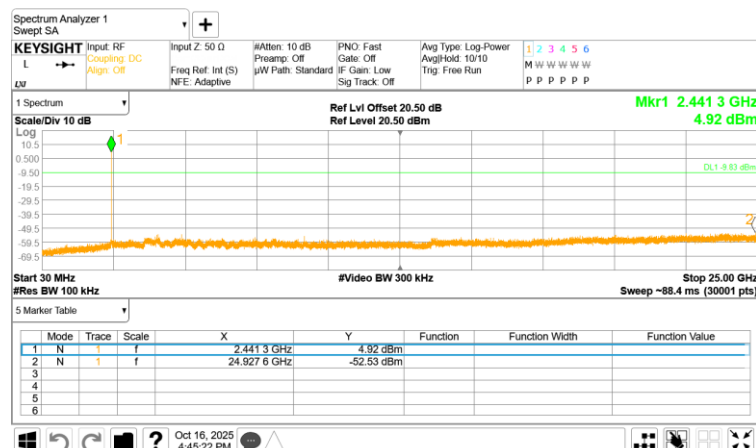
Chain0 : Conducted Spurious @ 3DH5 Mode Ch 39



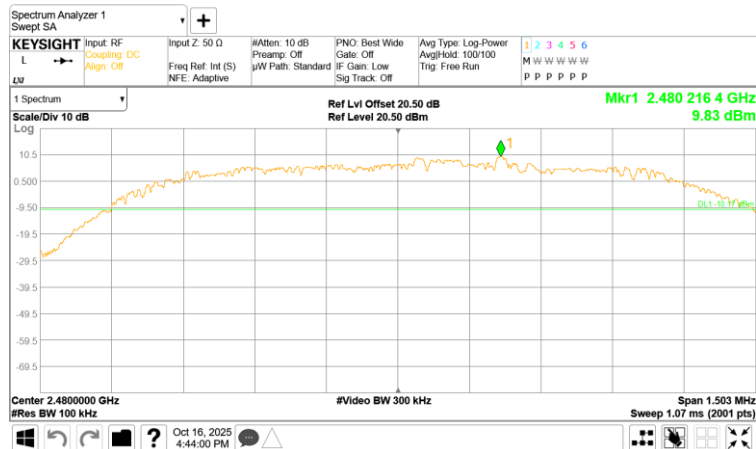
Chain0 : Conducted Spurious @ 3DH5 Mode Ch 39



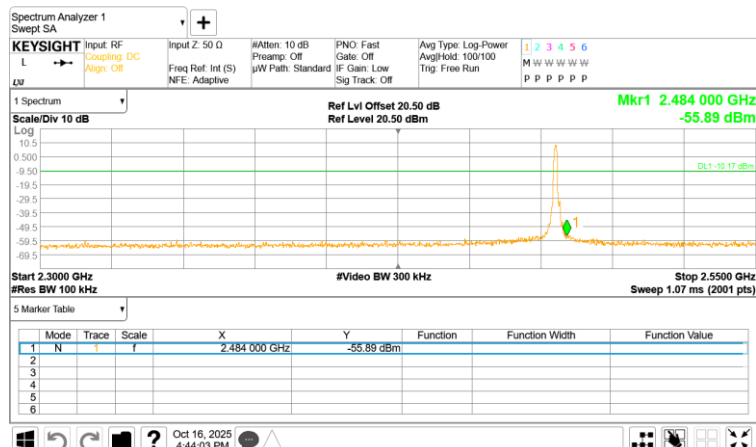
Chain0 : Conducted Spurious @ 3DH5 Mode Ch 39



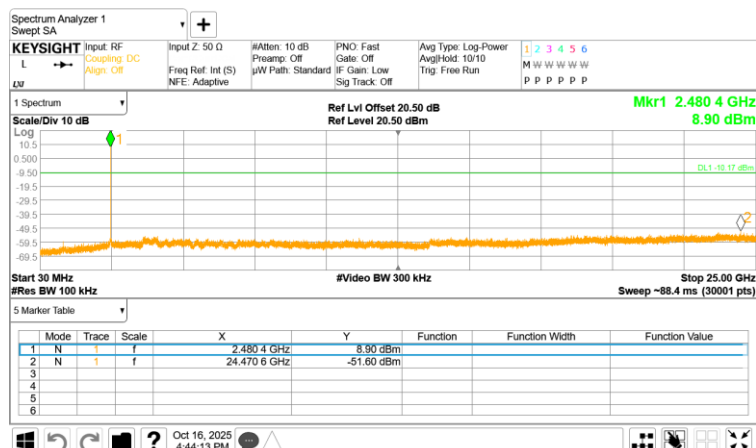
Chain0 : Conducted Spurious @ 3DH5 Mode Ch 78



Chain0 : Conducted Spurious @ 3DH5 Mode Ch 78



Chain0 : Conducted Spurious @ 3DH5 Mode Ch 78



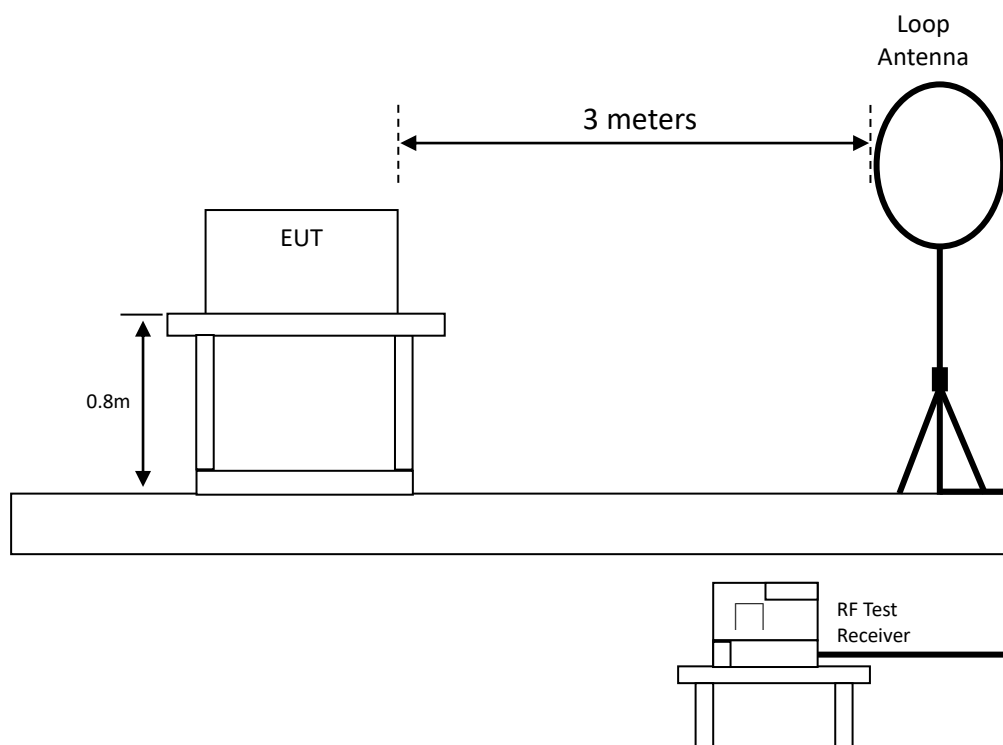
8. Emissions in Restricted Frequency Bands (Radiated emission measurements)

8.1 Instrument Setting

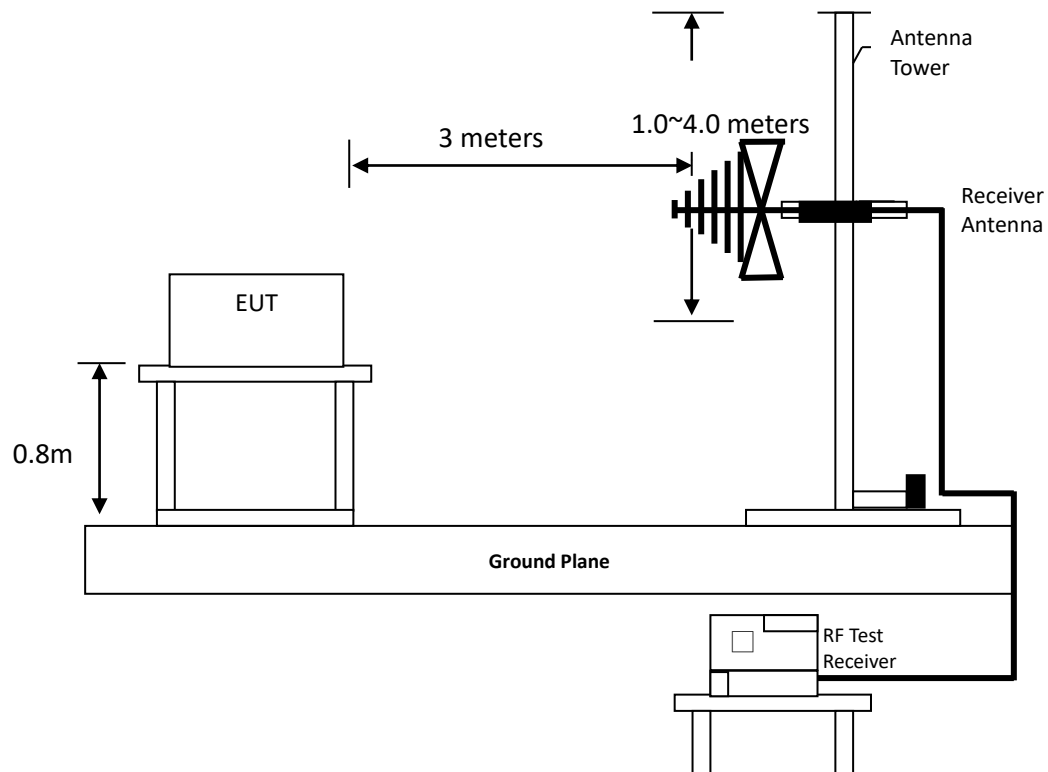
Receiver Function	Setting (Below 1GHz)	Setting (Above 1GHz)
Detector	QP	Peak and Average
RBW	9-150 kHz ; 200-300 Hz 0.15-30 MHz; 9-10 kHz 30-1000 MHz; 100-120 kHz	1MHz
VBW	$\geq 3 \times \text{RBW}$	3MHz & 1/T Minimum VBW
Sweep	Auto couple	Auto couple
Start Frequency	9 kHz	1GHz
Stop Frequency	1 GHz	Tenth harmonic
Attenuation	Auto	Auto

8.2 Test setup & procedure

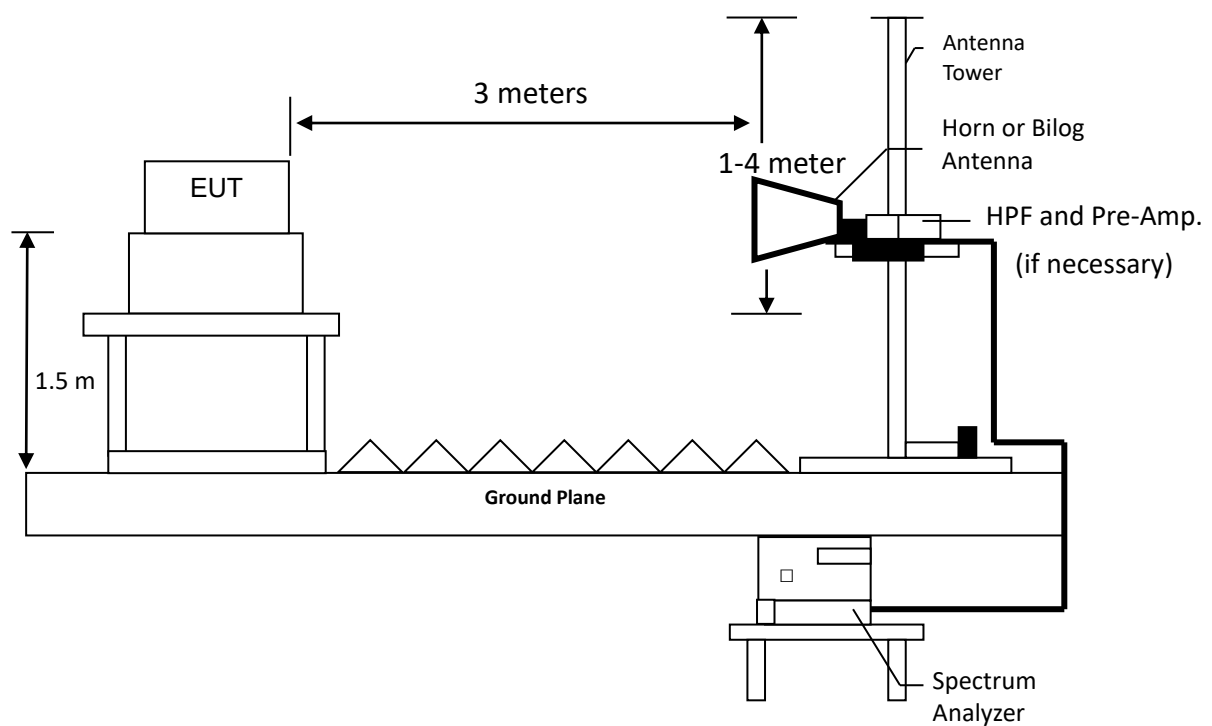
Radiated emission from 9kHz to 30MHz uses Loop Antenna:



Radiated emission below 1GHz using Bilog Antenna



Radiated emission above 1GHz using Horn Antenna



TEST REPORT

Radiated emissions were investigated cover the frequency range from 30MHz to 1000MHz using a receiver RBW of 120kHz record QP reading, and the frequency over 1GHz using a spectrum analyzer RBW of 1MHz and 10Hz VBW record Average reading. (15.209 paragraph), the Peak reading (1 MHz RBW/ 3 MHz VBW) recorded also on the report.

The EUT for testing is arranged on a turntable. If some peripherals apply to the EUT, the peripherals will be connected to EUT and the whole system. During the test, all cables were arranged to produce worst-case emissions. The signal is maximized through rotation. The height of antenna and polarization is changing constantly for exploring for maximum signal level. The height of antenna can be up to 4 meters and down to 1 meter.

The measurement for radiated emission will be done at the distance of three meters unless the signal level is too low to measure at that distance. In the case of the reading under noise floor, a pre-amplifier is used and/or the test is conducted at a closer distance. And then all readings are extrapolated back to the equivalent three meter reading using inverse scaling with distance.

8.3 Limit

Frequency(MHz)	Field Strength($\mu\text{V}/\text{m}$)	Measurement distance(m)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remark:

1. In the above table, the tighter limit applies at the band edges.
2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system

8.4 Operating Environment Condition

Temperature ($^{\circ}\text{C}$) :	23
Relative Humidity (%) :	75
Test date :	2025/10/01

8.5 Test Result

8.5.1 Measurement results: frequencies 9kHz to 30MHz

The test was performed on EUT under continuously transmitting mode. The worst case occurred at 3DH5 Ch 39.

Ant Polarity	Frequency (MHz)	Detector	Factor (dB/m)	Reading (dBμV)	Corrected Reading (dBμV/m)	Limit @ 3m (dBμV/m)	Margin (dB)
Perpendicular	0.61	PK	17.40	36.94	54.34	71.91	-17.57
Perpendicular	1.21	PK	17.38	30.11	47.49	65.96	-18.47
Perpendicular	1.81	PK	17.32	25.57	42.89	69.54	-26.65
Perpendicular	2.47	PK	17.39	21.98	39.37	69.54	-30.17
Perpendicular	3.01	PK	17.50	18.99	36.49	69.54	-33.05
Perpendicular	20.07	PK	20.92	18.72	39.64	69.54	-29.90

Remark: Corr. Factor = Antenna Factor + Cable Loss

Ant Polarity	Frequency (MHz)	Detector	Factor (dB/m)	Reading (dBμV)	Corrected Reading (dBμV/m)	Limit @ 3m (dBμV/m)	Margin (dB)
Parallel	0.61	PK	17.40	31.45	48.85	71.91	-23.06
Parallel	1.21	PK	17.38	25.54	42.92	65.96	-23.04
Parallel	1.78	PK	17.32	20.33	37.65	69.54	-31.89
Parallel	2.38	PK	17.38	17.80	35.18	69.54	-34.36
Parallel	3.01	PK	17.50	17.02	34.52	69.54	-35.02
Parallel	20.01	PK	20.93	19.47	40.40	69.54	-29.14

Remark: Corr. Factor = Antenna Factor + Cable Loss

TEST REPORT

Ant Polarity	Frequency (MHz)	Detector	Factor (dB/m)	Reading (dBμV)	Corrected Reading (dBμV/m)	Limit @ 3m (dBμV/m)	Margin (dB)
Ground-parallel	0.49	PK	17.28	23.00	40.28	93.82	-53.54
Ground-parallel	1.21	PK	17.38	15.87	33.25	65.96	-32.71
Ground-parallel	1.66	PK	17.33	13.36	30.69	63.21	-32.52
Ground-parallel	4.45	PK	18.03	10.66	28.69	69.54	-40.85
Ground-parallel	8.68	PK	19.27	10.65	29.92	69.54	-39.62
Ground-parallel	20.01	PK	20.93	11.82	32.75	69.54	-36.79

Remark: Corr. Factor = Antenna Factor + Cable Loss

TEST REPORT

8.5.2 Measurement results: frequencies below 1 GHz

The test was performed on EUT under continuously transmitting mode. The worst case occurred at 3DH5 Ch 39.

Ant Polarity	Frequency (MHz)	Detector	Factor (dB/m)	Reading (dBμV)	Corrected Reading (dBμV/m)	Limit @ 3m (dBμV/m)	Margin (dB)
Horizontal	80.44	PK	15.65	16.44	32.09	40.00	-7.91
Horizontal	191.99	PK	17.81	16.94	34.75	43.50	-8.75
Horizontal	203.63	PK	17.62	12.14	29.76	43.50	-13.74
Horizontal	323.91	PK	21.80	11.00	32.80	46.00	-13.20
Horizontal	335.55	PK	22.04	12.28	34.32	46.00	-11.68
Horizontal	348.16	PK	22.06	10.02	32.08	46.00	-13.92

Remark: Corr. Factor = Antenna Factor + Cable Loss

Ant Polarity	Frequency (MHz)	Detector	Factor (dB/m)	Reading (dBμV)	Corrected Reading (dBμV/m)	Limit @ 3m (dBμV/m)	Margin (dB)
Vertical	48.43	PK	20.48	7.35	27.83	40.00	-12.17
Vertical	81.41	PK	15.39	14.47	29.86	40.00	-10.14
Vertical	122.15	PK	17.69	9.10	26.79	43.50	-16.71
Vertical	192.96	PK	17.63	11.39	29.02	43.50	-14.48
Vertical	203.63	PK	17.62	11.28	28.90	43.50	-14.60
Vertical	920.46	PK	32.69	3.61	36.30	46.00	-9.70

Remark: Corr. Factor = Antenna Factor + Cable Loss

TEST REPORT

8.5.3 Measurement results: frequency above 1GHz

Temperature (°C) :	22
Relative Humidity (%) :	79
Test date :	2025/09/26

Mode	Frequency (MHz)	Spectrum Analyzer Detector	Ant. Pol. (H/V)	Correction Factor (dB/m)	Reading (dBμV)	Corrected Reading (dBμV/m)	Limit @ 3 m (dBμV/m)	Margin (dB)
DH5_Ch0	4804	PK	H	-6.89	61.61	54.72	74	-19.28
	4804	AV	H	-6.89	59.50	52.61	54	-1.39
	4804	PK	V	-6.89	52.38	45.49	74	-28.51
DH5_Ch39	4882	PK	H	-6.95	59.75	52.80	74	-21.20
	4882	PK	V	-6.95	50.70	43.75	74	-30.25
DH5_Ch78	4960	PK	H	-6.52	55.81	49.29	74	-24.71
	4960	PK	V	-6.52	50.91	44.39	74	-29.61
3DH5_Ch0	4804	PK	H	-6.89	64.01	57.12	74	-16.88
	4804	AV	H	-6.89	59.23	52.34	54	-1.66
	4804	PK	V	-6.89	54.91	48.02	74	-25.98
3DH5_Ch39	4882	PK	H	-6.95	62.44	55.49	74	-18.51
	4882	AV	H	-6.95	57.90	50.95	54	-3.05
	4882	PK	V	-6.95	53.59	46.64	74	-27.36
3DH5_Ch78	4960	PK	H	-6.52	56.55	50.03	74	-23.97
	4960	PK	V	-6.52	49.95	43.43	74	-30.57

Remark: Correction Factor = Antenna Factor + Cable Loss + High Pass Filter Loss - Pre_Amplifier Gain

9. Emission on Band Edge

9.1 Instrument Setting

Spectrum Function	Setting
Detector	Peak and Average
RBW	1MHz
VBW	3MHz & 1/T Minimum VBW
Sweep	Auto couple
Restrict bands	2310 MHz ~ 2390 MHz 2483.5 MHz ~ 2500 MHz
Attenuation	Auto

9.2 Test Procedure

The test procedure is the same as Emissions in Restricted Frequency Bands (Radiated emission measurements).

9.3 Operating Environment Condition

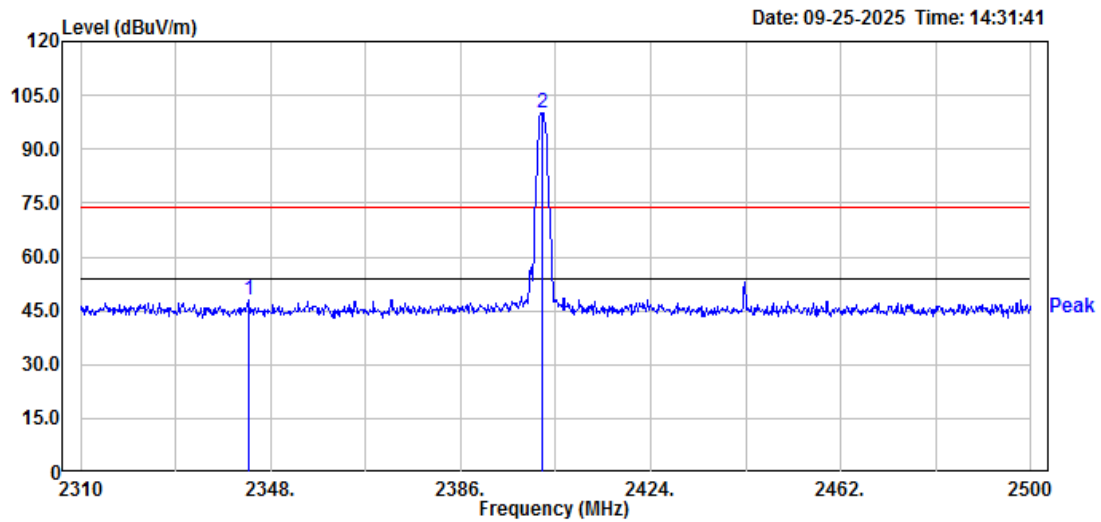
Temperature (°C) :	23
Relative Humidity (%) :	77
Test date :	2025/09/25

9.4 Test Results

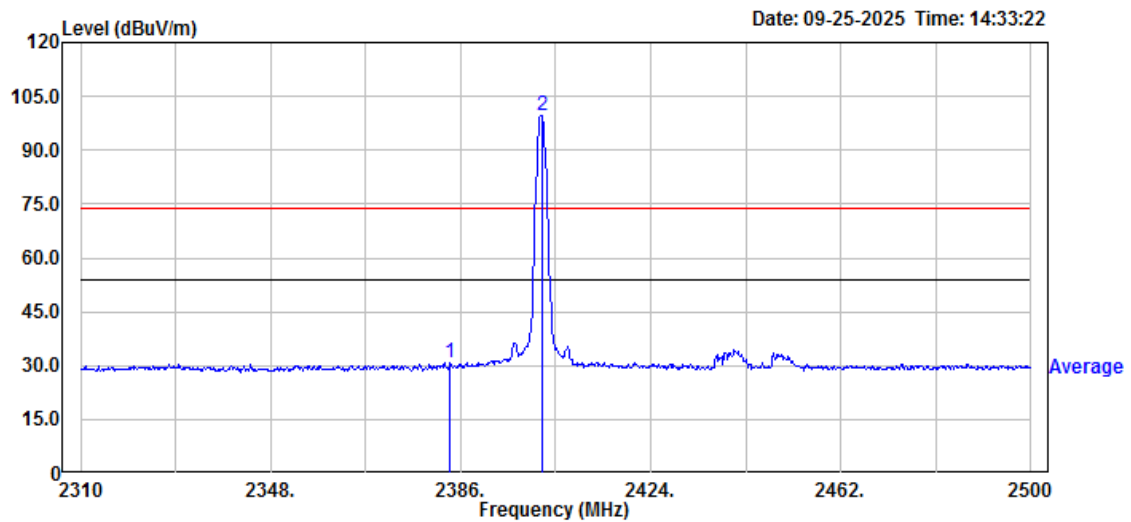
Mode	Frequency (MHz)	Spectrum Analyzer Detector	Ant. Pol. (H/V)	Correction Factor (dB/m)	Reading (dBμV)	Corrected Reading (dBμV/m)	Limit @ 3 m (dBμV/m)	Margin (dB)	Restricted band (MHz)
DH5	2343.63	PK	H	32.40	15.76	48.16	74	-25.84	2310~2390
	2383.91	AV	H	32.31	-1.67	30.64	54	-23.36	
	2483.85	PK	H	32.51	17.09	49.60	74	-24.40	2483.5~2500
	2483.50	AV	H	32.51	4.12	36.63	54	-17.37	
3DH5	2312.85	PK	H	32.78	16.10	48.88	74	-25.12	2310~2390
	2389.80	AV	H	32.31	-1.35	30.96	54	-23.04	
	2483.50	PK	H	32.51	21.42	53.93	74	-20.07	2483.5~2500
	2483.50	AV	H	32.51	6.40	38.91	54	-15.09	

Remark: Correction Factor = Antenna Factor + Cable Loss

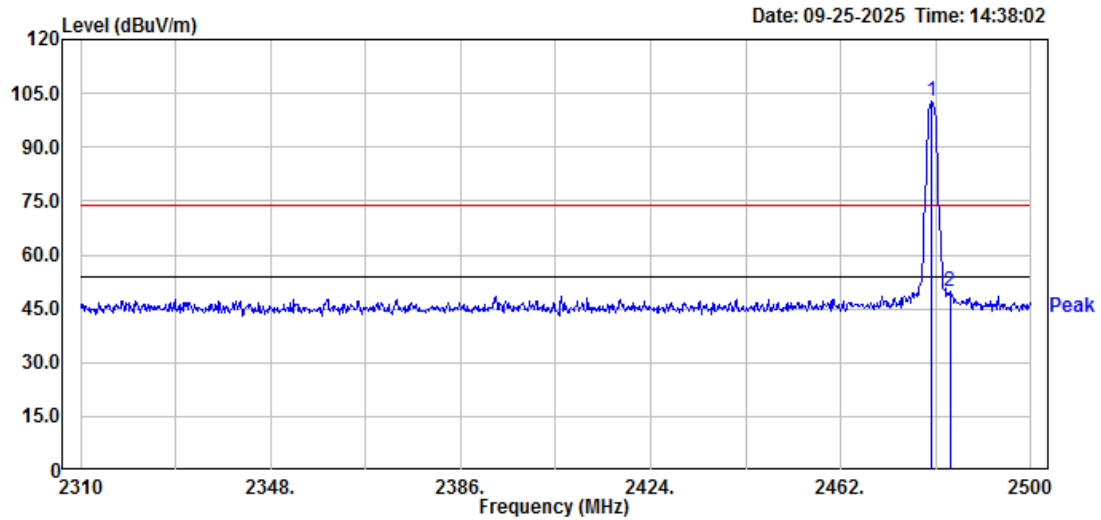
Chain0 : Restricted Band Bandedge @ DH5 Mode Ch0 PK



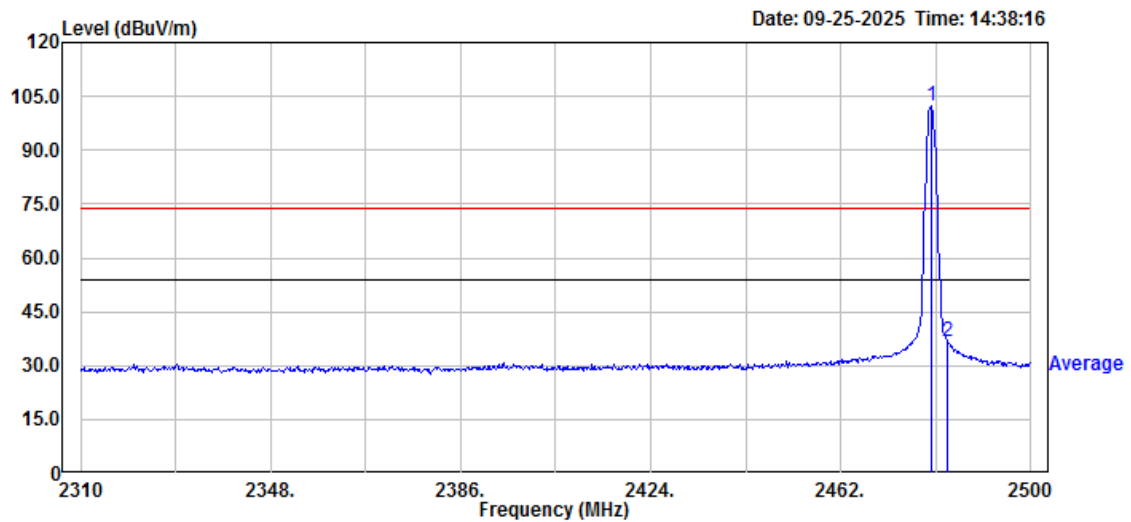
Chain0 : Restricted Band Bandedge @ DH5 Mode Ch0 AV



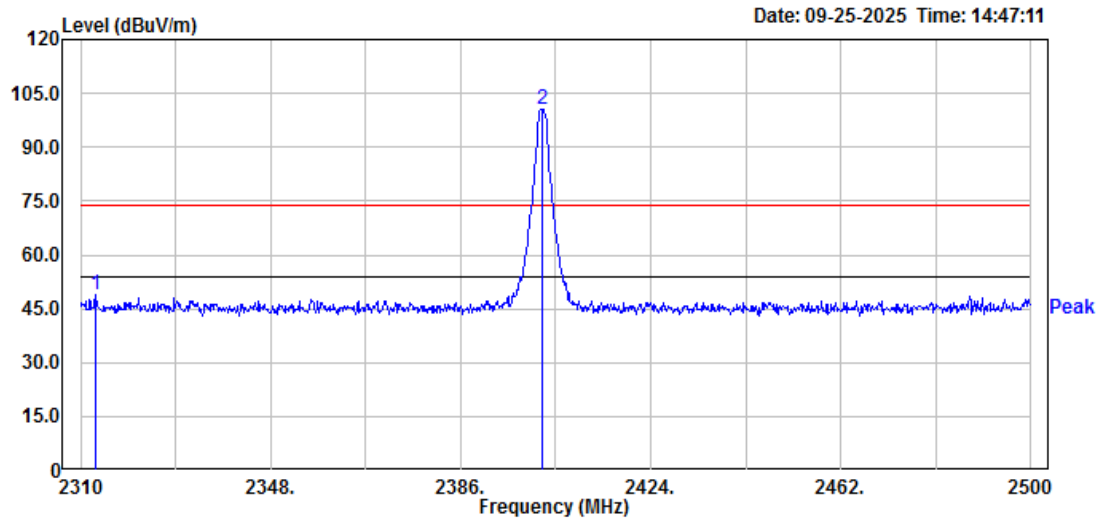
Chain0 : Restricted Band Bandedge @ DH5 Mode Ch78 PK



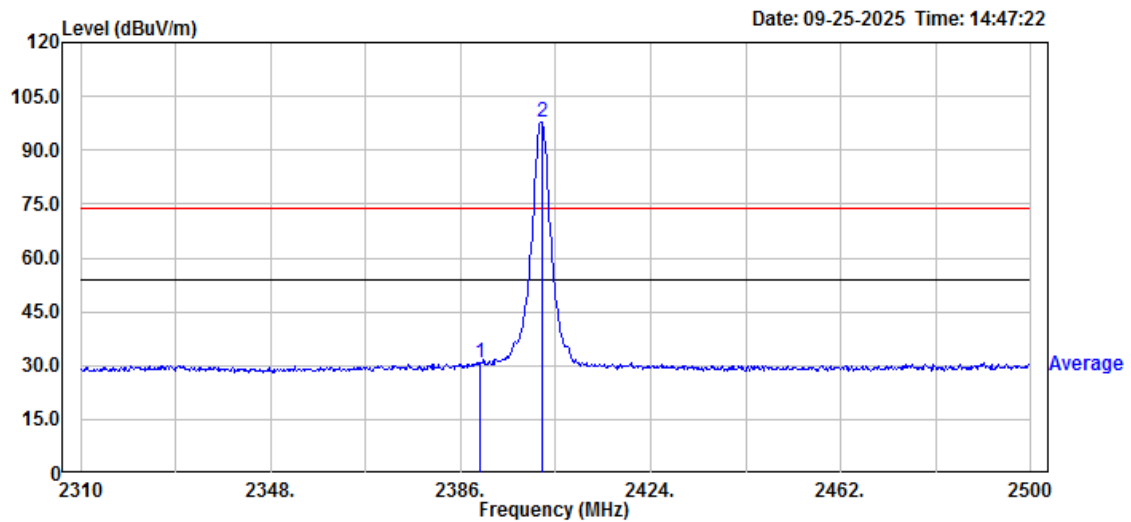
Chain0 : Restricted Band Bandedge @ DH5 Mode Ch78 AV



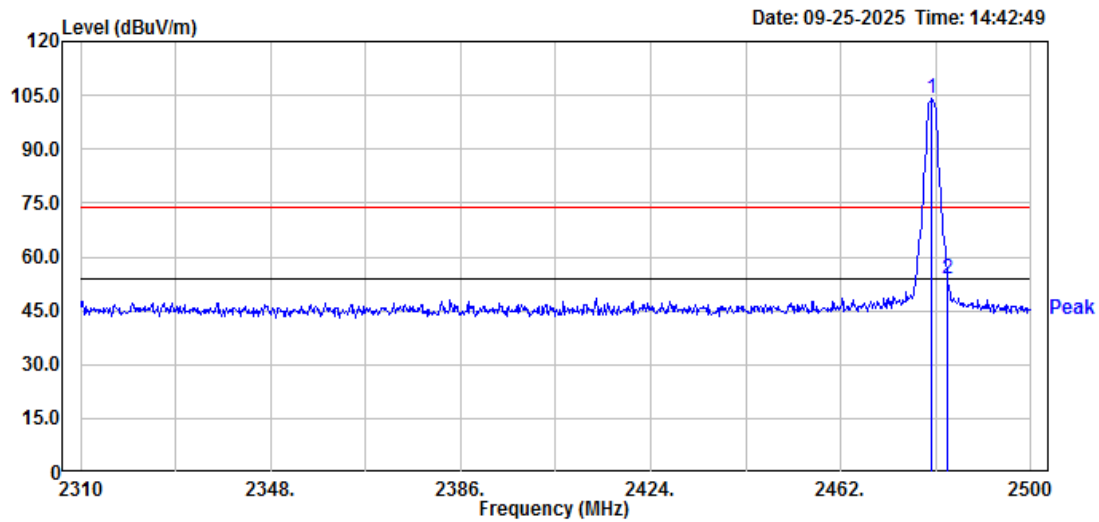
Chain0 : Restricted Band Bandedge @ 3DH5 Mode Ch0 PK



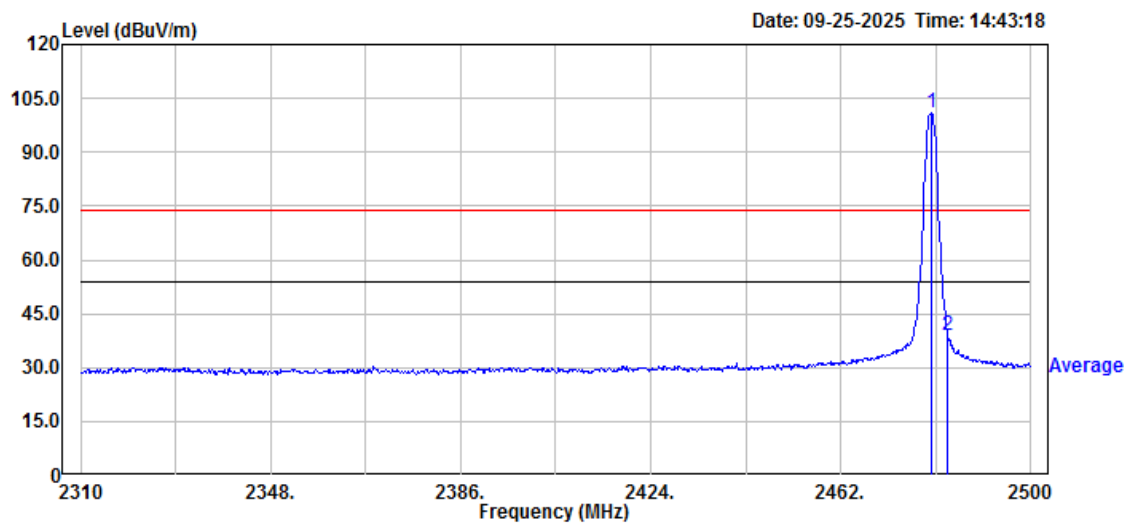
Chain0 : Restricted Band Bandedge @ 3DH5 Mode Ch0 AV



Chain0 : Restricted Band Bandedge @ 3DH5 Mode Ch78 PK



Chain0 : Restricted Band Bandedge @ 3DH5 Mode Ch78 AV



10. AC Power Line Conducted Emission

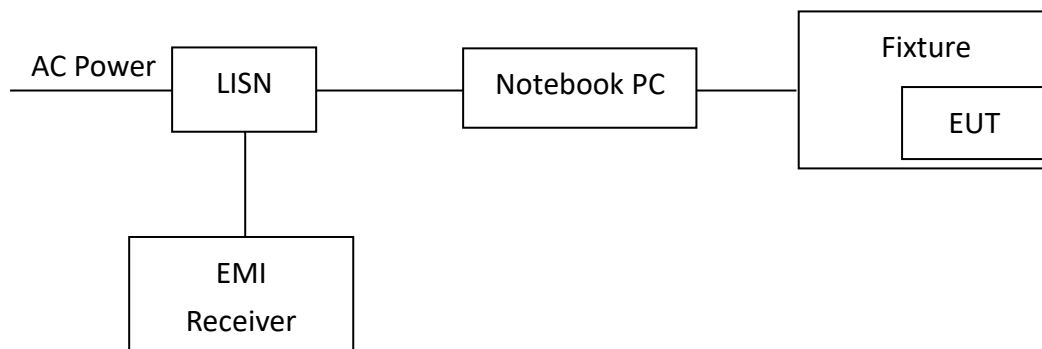
10.1 Measuring instrument setting

Receiver Function	Setting
Detector	QP
Start frequency	0.15MHz
Stop frequency	30MHz
IF bandwidth	9 kHz
Attenuation	10dB

10.2 Test Procedure

Step 1	Configure the EUT according to ANSI C63.10-2020. The EUT or host of EHT has to be placed 0.4 meter far from the conducting wall of the shielding room and at least 80 centimeters from any other grounded conducting surface.
Step 2	Connect EUT or host of EUT to the power mains through a line impedance stabilization network.
Step 3	All the companion devices are connected to the other LISN. The LISN should provide 50Uh/50ohms coupling impedance.
Step 4	The frequency range from 150 kHz to 30MHz was searched.
Step 5	Set the test-receiver system to peak detector and specified bandwidth with maximum hold mode.
Step 6	The measurement has to be done between each power line and ground at the power terminal.

10.3 Test Diagram

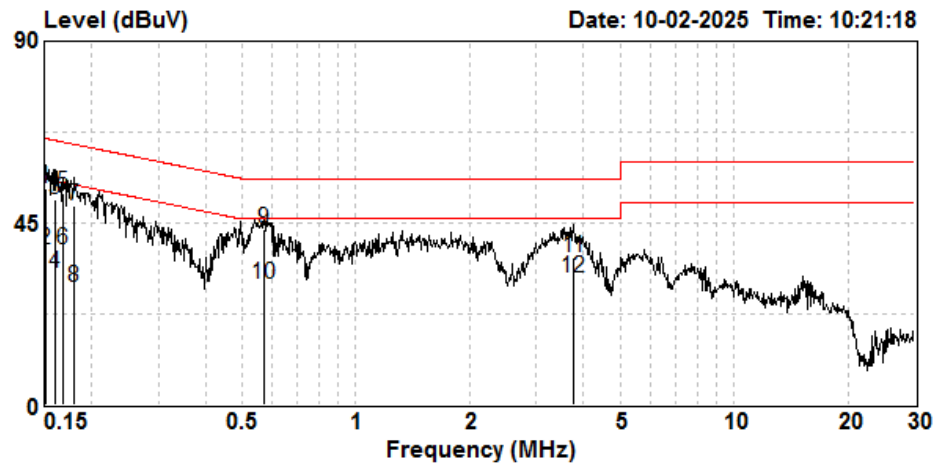


10.4 Limit

Frequency (MHz)	Conducted Limit (dBuV)	
	Q.P.	Ave.
0.15~0.50	66 – 56	56 – 46
0.50~5.00	56	46
5.00~30.0	60	50

TEST REPORT

10.5 Test Results

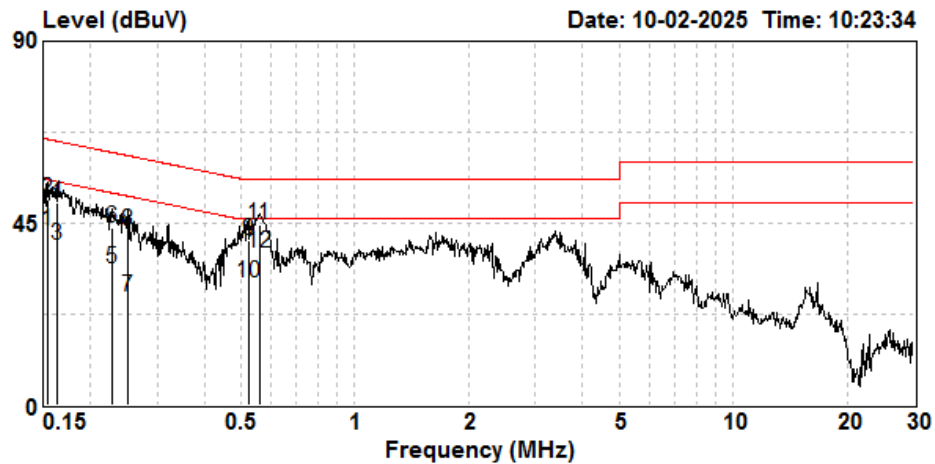


Test voltage :DC 5V
Temp \ Relative Humidity:23 °C \ 76 %RH
Atmospheric pressure :1004 hPa

Phase	Frequency (MHz)	Corr. Factor (dB)	Reading QP (dBuV)	Level QP (dBuV)	Limit QP (dBuV)	Reading AV (dBuV)	Level AV (dBuV)	Limit AV (dBuV)	Margin (dB)	
									QP	AV
LINE	0.152	0.17	53.41	53.58	65.91	38.43	38.59	55.91	-12.33	-17.32
LINE	0.160	0.17	50.74	50.91	65.47	32.58	32.75	55.47	-14.56	-22.73
LINE	0.168	0.16	52.37	52.53	65.08	38.36	38.52	55.08	-12.54	-16.56
LINE	0.180	0.16	48.97	49.13	64.50	29.09	29.24	54.50	-15.38	-25.26
LINE	0.570	0.19	43.08	43.28	56.00	29.57	29.77	46.00	-12.72	-16.23
LINE	3.779	0.31	36.23	36.55	56.00	30.95	31.26	46.00	-19.45	-14.74

Remark:

1. Corr. Factor (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Level (dBuV) = Corr. Factor (dB) + Reading (dBuV)
3. Margin (dB) = Level (dBuV) – Limit (dBuV)



Test voltage :DC 5V
 Temp \ Relative Humidity:23 °C \ 76 %RH
 Atmospheric pressure :1004 hPa

Phase	Frequency (MHz)	Corr. Factor (dB)	Reading	Level	Limit	Reading	Level	Limit	Margin (dB)	
			QP (dBuV)	QP (dBuV)	QP (dBuV)	AV (dBuV)	AV (dBuV)	AV (dBuV)	QP	AV
NEUTRAL	0.155	0.18	50.81	50.99	65.74	42.91	43.09	55.74	-14.75	-12.65
NEUTRAL	0.164	0.18	49.79	49.97	65.25	39.25	39.43	55.25	-15.28	-15.82
NEUTRAL	0.228	0.18	43.62	43.80	62.52	33.47	33.65	52.52	-18.72	-18.88
NEUTRAL	0.252	0.18	42.84	43.02	61.69	26.45	26.63	51.69	-18.67	-25.06
NEUTRAL	0.527	0.18	40.70	40.88	56.00	30.21	30.38	46.00	-15.12	-15.62
NEUTRAL	0.561	0.18	44.49	44.67	56.00	37.50	37.68	46.00	-11.33	-8.32

Remark:

1. Corr. Factor (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Level (dBuV) = Corr. Factor (dB) + Reading (dBuV)
3. Margin (dB) = Level (dBuV) – Limit (dBuV)

Appendix A: Test equipment list

Test Equipment/ Test site	Brand	Model No.	Serial No.	Calibration Date	Next Calibration Date
Spectrum analyzer	KEYSIGHT	N9020B	MY63450146	2025/02/14	2026/02/13
EMI Test Receiver	KEYSIGHT	N9038B	MY63060107	2025/02/08	2026/02/07
Broadband Antenna	SCHWARZBECK	VULB 9168	9168-172	2024/12/30	2025/12/29
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-456	2024/12/10	2025/12/09
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170159	2025/08/04	2026/08/03
Pre-Amplifier	SGH	SGH118	20220105-1	2025/01/14	2026/01/13
Pre-amplifier	SGH	SGH184	20201124-1	2024/10/08	2025/10/07
Cable	SUHNER	SUCOFLEX 104	295105/4	2025/02/27	2026/02/26
Cable	SUHNER	SUCOFLEX 104P	CB0005	2025/02/27	2026/02/26
Cable	SUHNER	SUCOFLEX 104P	9403 / 4P	2024/11/22	2025/11/21
Hight Pass Filter	Wainwright	WHKX3.0/18G-12SS	N/A	2025/05/22	2026/05/21
Power Meter	Anritsu	ML2495A	0844001	2024/12/07	2025/12/06
Power Sensor	Anritsu	MA2491A	031543	2024/12/07	2025/12/06
Attenuator	PE	PE7001-20	N/A	2025/05/22	2026/05/21
966-2_3m Semi-Anechoic Chamber	CHANCE MOST	CEM-966_2	N/A	2025/07/29	2026/07/28
Test software	Audix	e3	V9	NCR	NCR
EMI Test Receiver	R&S	ESCI	100018	2025/07/14	2026/07/13
Con-1 Cable	SUHNER	SUCOFLEX 106	27222 /6	2025/01/09	2026/01/08
LISN	R&S	ESH3-Z5	825562/003	2025/05/28	2026/05/27
Test software	Audix	e3	V4.20040112L	NCR	NCR
Test site	Intertek	Con-1	N/A	NCR	NCR

Note: No Calibration Required (NCR).

Appendix B: Measurement Uncertainty

This uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level using a coverage factor of k=2.

Item	Uncertainty
Radiated disturbances from 9kHz~30MHz in a semi-anechoic chamber at a distance of 3m	2.73 dB
Vertically polarized radiated disturbances from 30MHz~1GHz in a semi-anechoic chamber at a distance of 3m	3.91 dB
Horizontally polarized radiated disturbances from 30MHz~1GHz in a semi-anechoic chamber at a distance of 3m	3.49 dB
Vertically polarized Radiated disturbances from 1GHz~18GHz in a semi-anechoic chamber at a distance of 3m	3.71 dB
Horizontally polarized Radiated disturbances from 1GHz~18GHz in a semi-anechoic chamber at a distance of 3m	3.71 dB
Vertically polarized Radiated disturbances from 18GHz~40GHz in a semi-anechoic chamber at a distance of 3m	3.26 dB
Horizontally polarized Radiated disturbances from 18GHz~40GHz in a semi-anechoic chamber at a distance of 3m	3.26 dB
Conducted Measurement	0.69 dB
AC Power Line Conducted Emission	1.31 dB