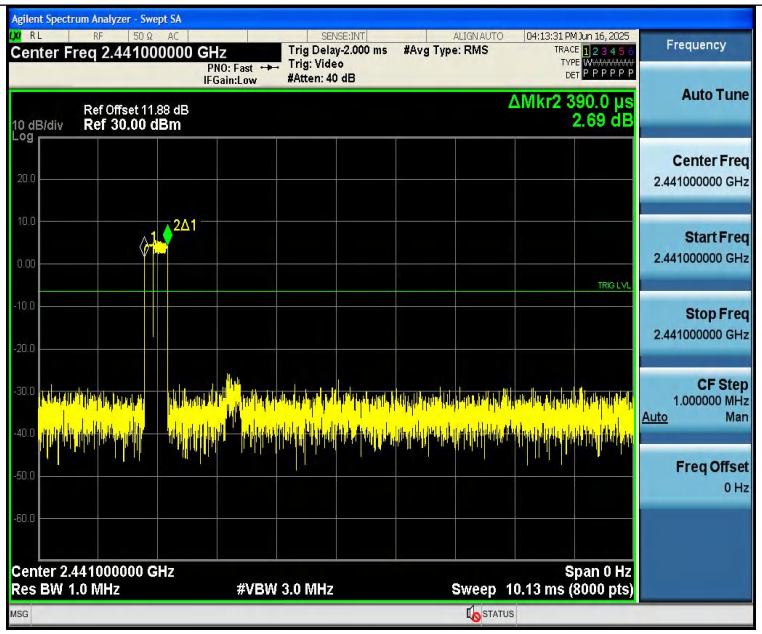
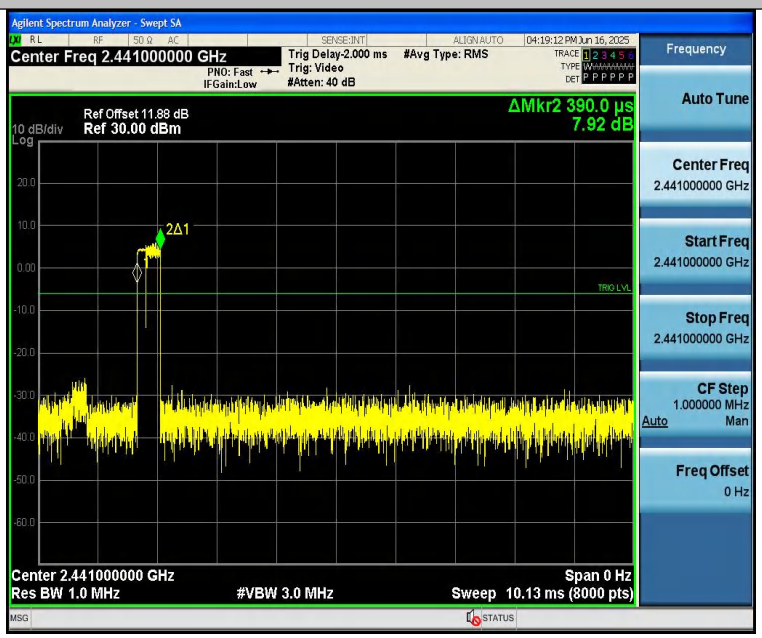
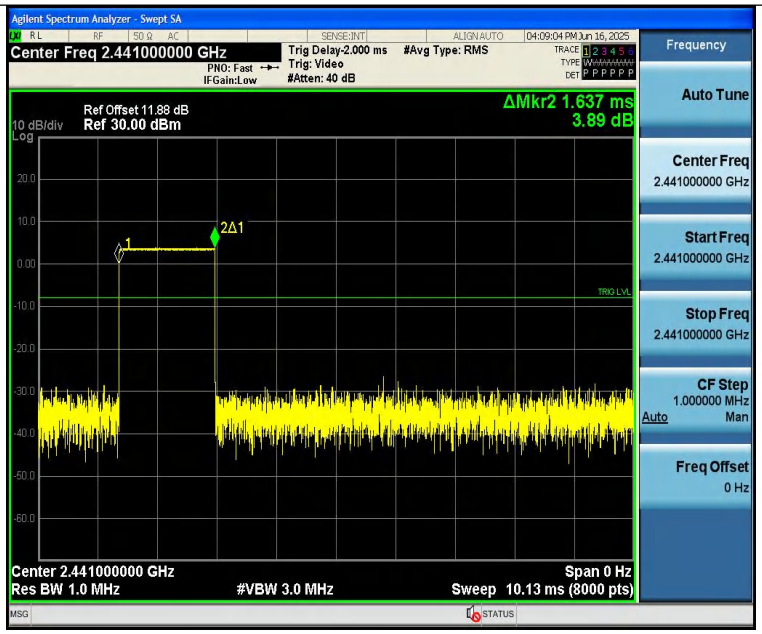


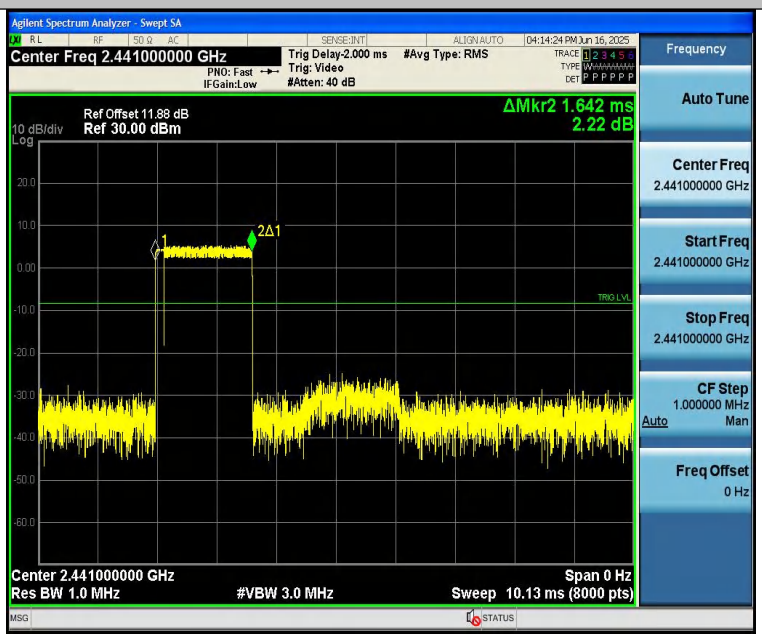
3DH1-Ant1-Hop-PASS



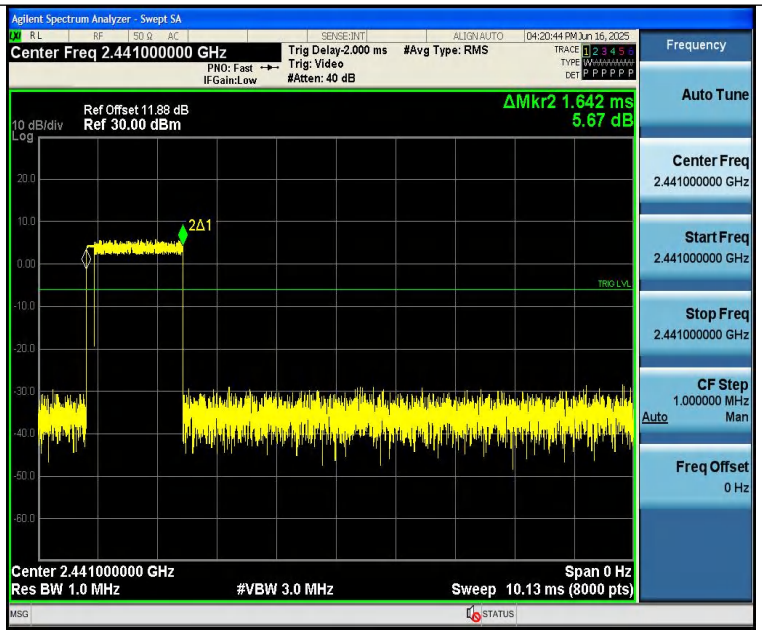
DH3-Ant1-Hop-PASS



2DH3-Ant1-Hop-PASS



3DH3-Ant1-Hop-PASS

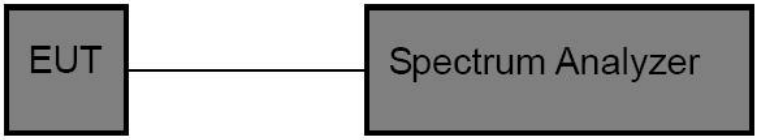

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.441000000 GHz
Trig Delay-2.000 ms
#Avg Type: RMS
Trig: Video
#Atten: 40 dB
PNO: Fast
IFGain:Low
04:20:44 PM Jun 16, 2025
Ref Offset 11.88 dB
10 dB/div
Ref 30.00 dBm
Log
ΔMkr2 1.642 ms
5.67 dB
2Δ1
TRIG LVL
Center 2.441000000 GHz
Res BW 1.0 MHz
#VBW 3.0 MHz
Span 0 Hz
Sweep 10.13 ms (8000 pts)
Frequency
Auto Tune
Center Freq
2.441000000 GHz
Start Freq
2.441000000 GHz
Stop Freq
2.441000000 GHz
CF Step
1.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

13 100kHz Bandwidth of Frequency Band Edge Requirement

13.1 Test Standard and Limit

Test Standard	FCC Part15 C Section 15.247 (d)
Test Limit	in any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator in operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in 15.209(a).

13.2 Test Setup



13.3 Test Procedure

The EUT must have its hopping/Non-hopping function enabled. Using the following spectrum analyzer setting:

1. Set the RBW = 100kHz.

2. Set the VBW = 300kHz.

3. Sweep time = auto couple.

4. Detector function = peak.

5. Trace mode = max hold.

6. Allow trace to fully stabilize.

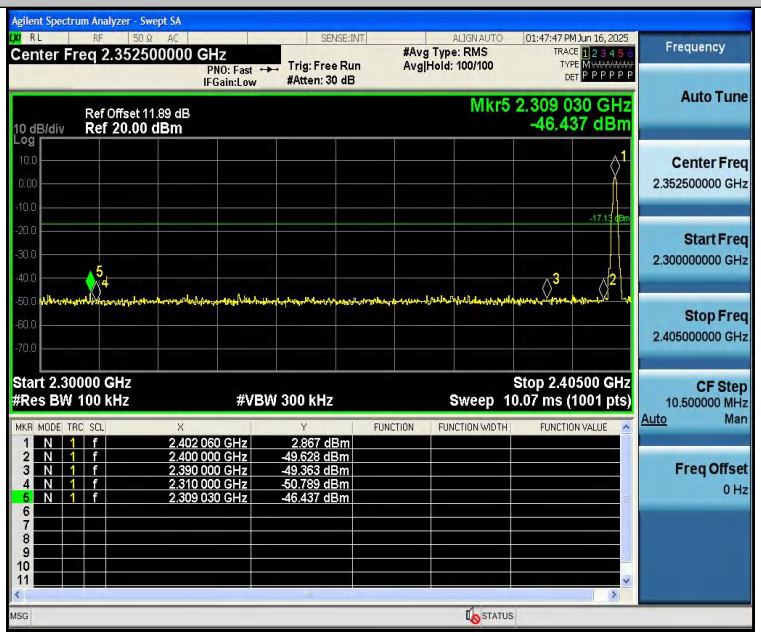
13.4 Test Data

Test Item	:	Band edge	Test Mode	:	CH Low ~ CH High
Test Voltage	:	5V	Temperature	:	24.5℃
Test Result	:	PASS	Humidity	:	55%RH

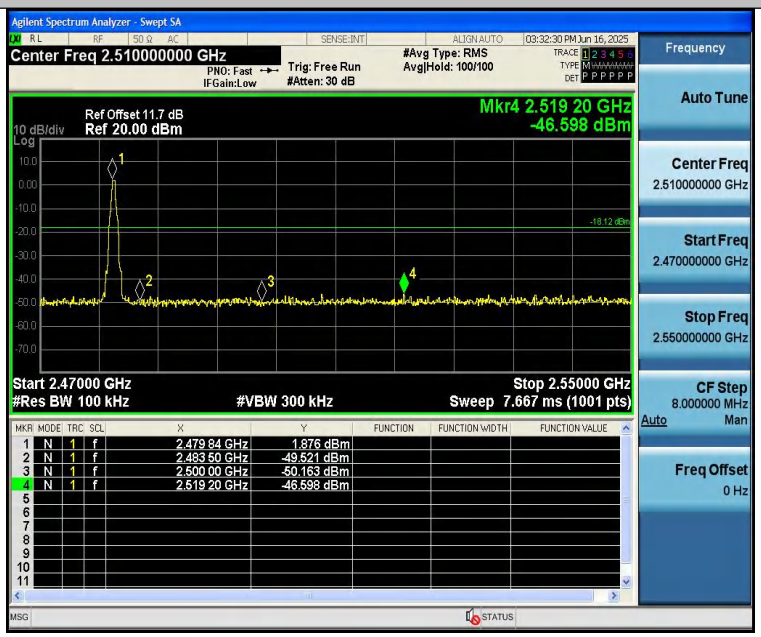
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	2.87	-46.44	≤-17.13	PASS
DH5	Ant1	High	2480	1.88	-46.6	≤-18.12	PASS
DH5	Ant1	Low	Hop_2402	4.07	-46.25	≤-15.93	PASS
DH5	Ant1	High	Hop_2480	3.67	-45.26	≤-16.33	PASS
2DH5	Ant1	Low	2402	3.11	-46.89	≤-16.89	PASS
2DH5	Ant1	High	2480	2.62	-46.6	≤-17.39	PASS
2DH5	Ant1	Low	Hop_2402	3.33	-46.29	≤-16.67	PASS
2DH5	Ant1	High	Hop_2480	2.28	-45.49	≤-17.72	PASS
3DH5	Ant1	Low	2402	3.59	-46.55	≤-16.41	PASS
3DH5	Ant1	High	2480	1.90	-45.76	≤-18.1	PASS
3DH5	Ant1	Low	Hop_2402	2.28	-46.67	≤-17.72	PASS
3DH5	Ant1	High	Hop_2480	1.88	-44.65	≤-18.12	PASS

Test Graphs:

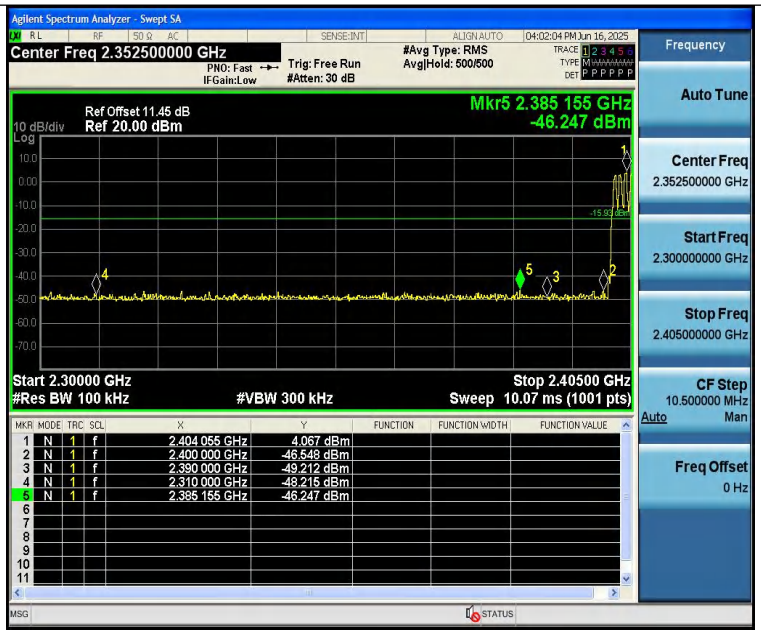
DH5-Ant1-2402-PASS



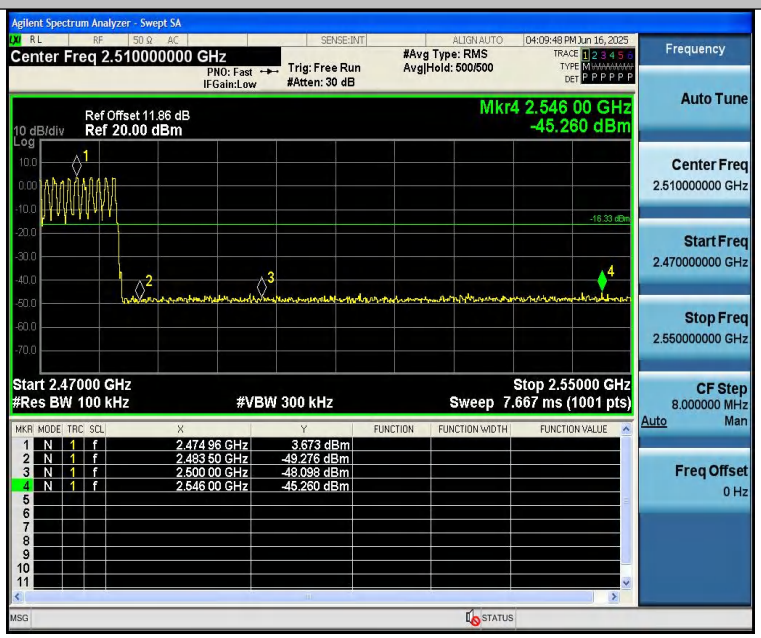
DH5-Ant1-2480-PASS



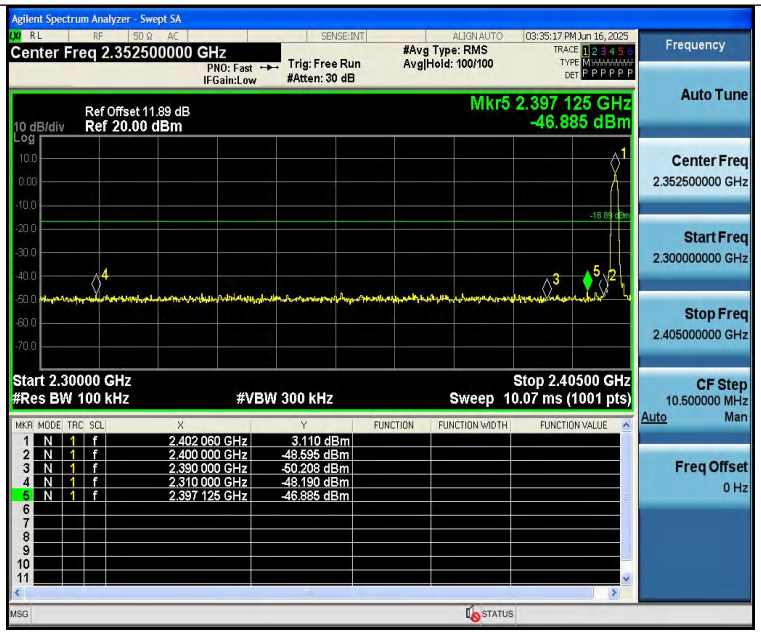
DH5-Ant1-Hop_2402-PASS



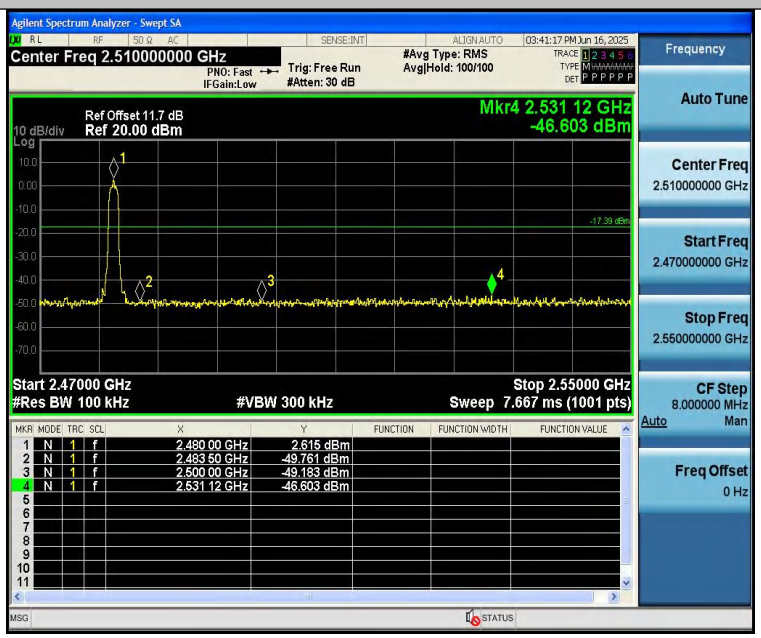
DH5-Ant1-Hop_2480-PASS



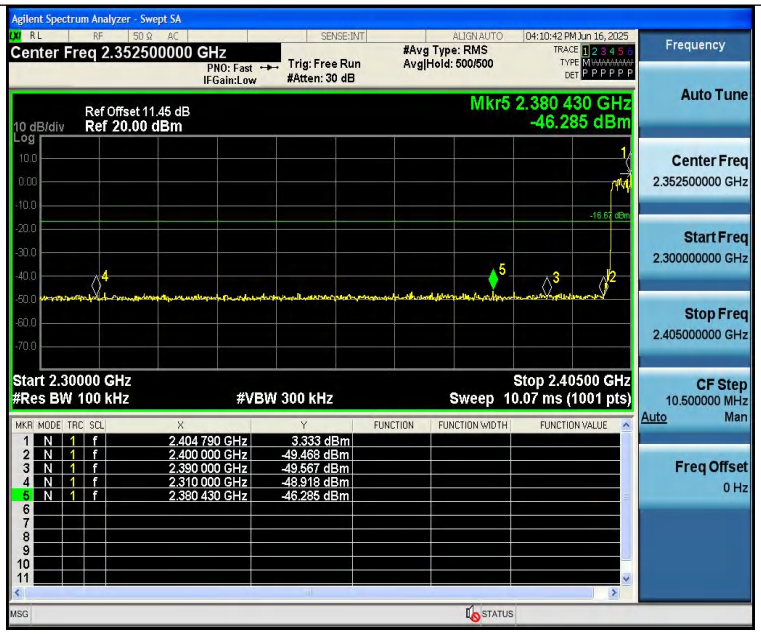
2DH5-Ant1-2402-PASS



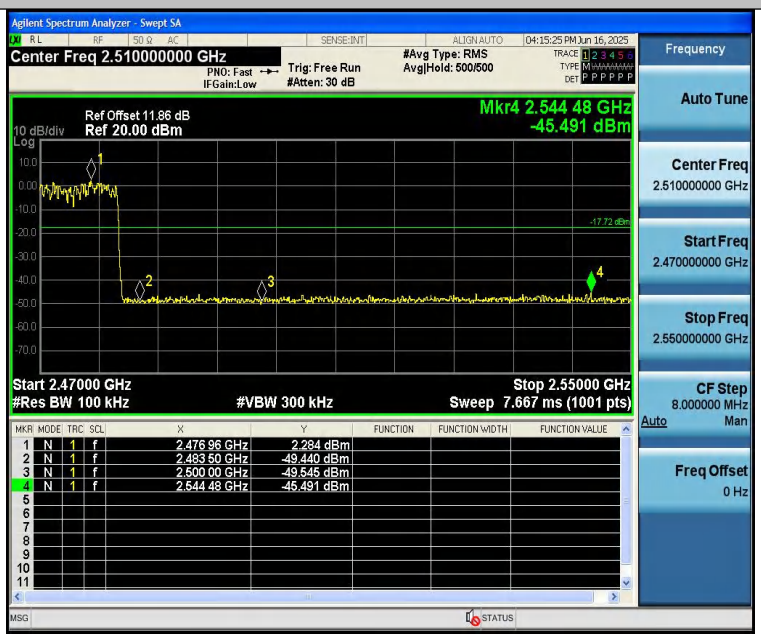
2DH5-Ant1-2480-PASS



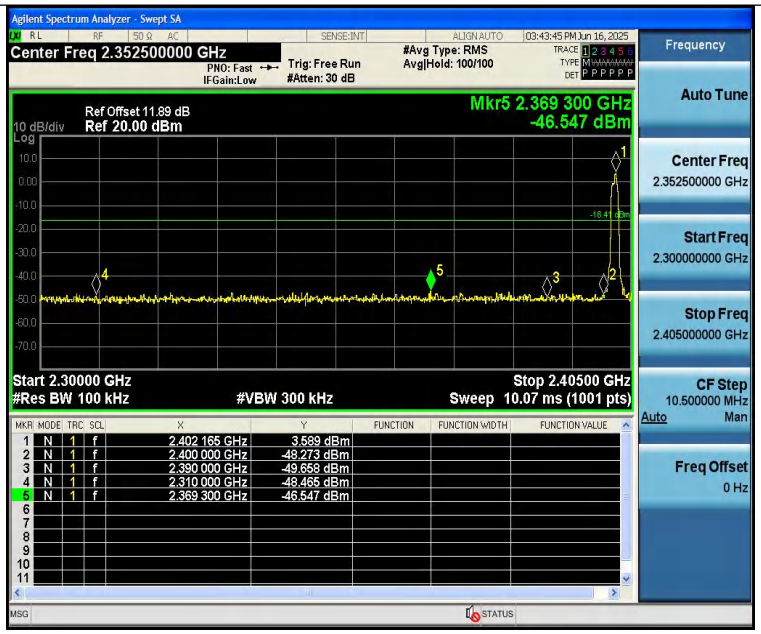
2DH5-Ant1-Hop_2402-PASS



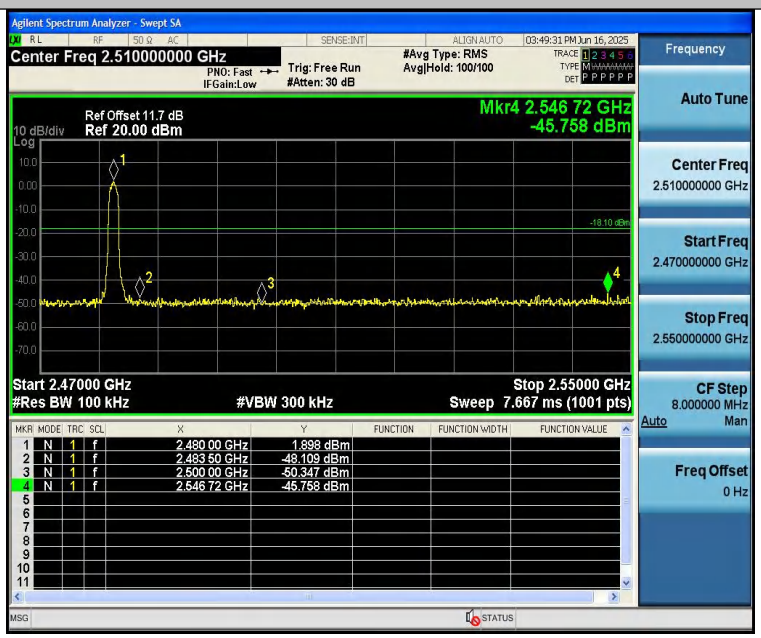
2DH5-Ant1-Hop_2480-PASS



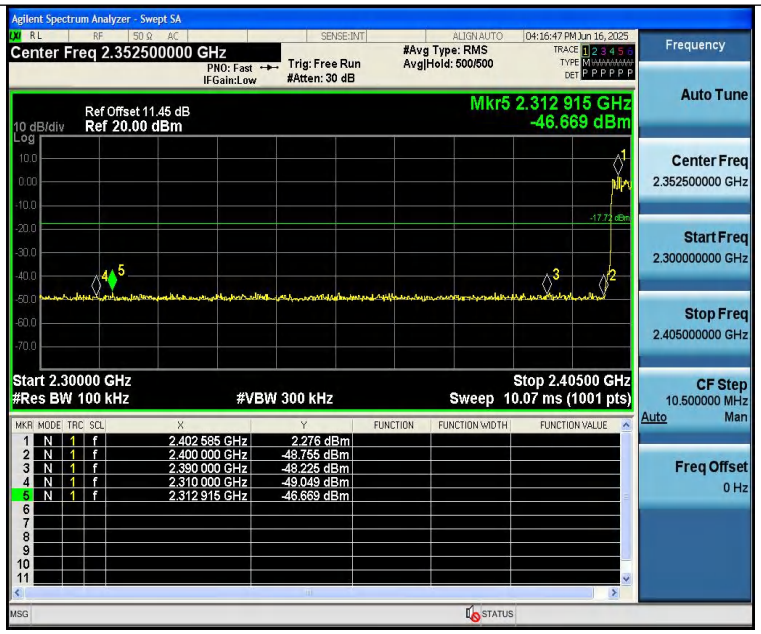
3DH5-Ant1-2402-PASS



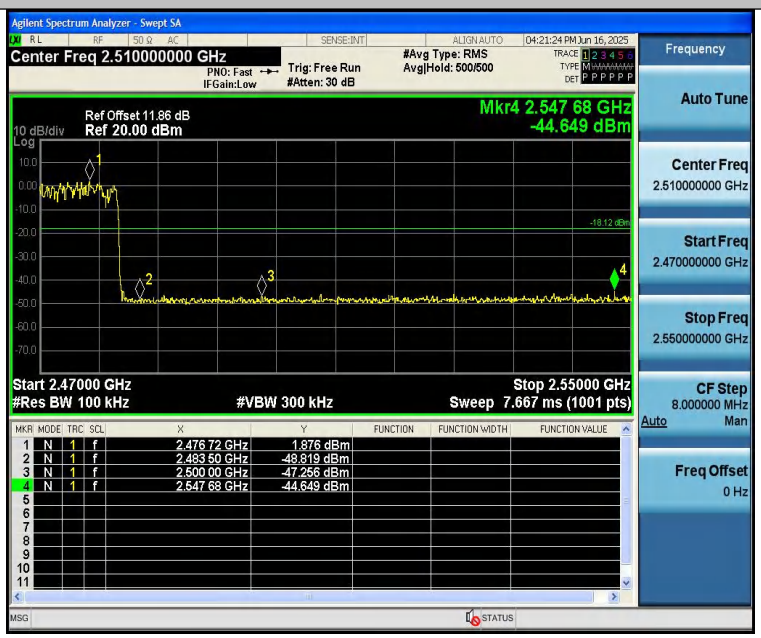
3DH5-Ant1-2480-PASS



3DH5-Ant1-Hop_2402-PASS



3DH5-Ant1-Hop_2480-PASS



Conducted Emission Method

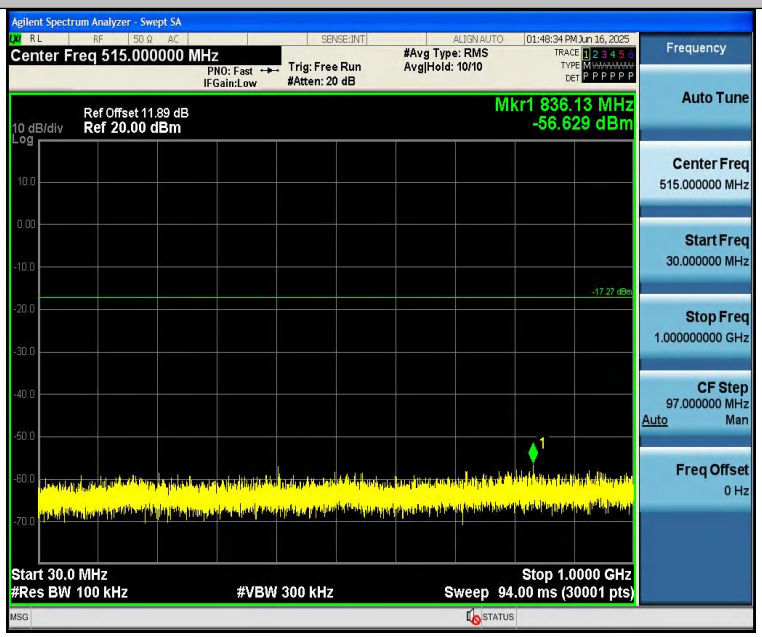
Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	0~Reference	2.73	2.73	---	PASS
DH5	Ant1	2402	30~1000	2.73	-56.63	≤-17.27	PASS
DH5	Ant1	2402	1000~26500	2.73	-42.53	≤-17.27	PASS
DH5	Ant1	2441	0~Reference	2.01	2.01	---	PASS
DH5	Ant1	2441	30~1000	2.01	-57.5	≤-17.99	PASS
DH5	Ant1	2441	1000~26500	2.01	-42.43	≤-17.99	PASS
DH5	Ant1	2480	0~Reference	2.22	2.22	---	PASS
DH5	Ant1	2480	30~1000	2.22	-57.49	≤-17.78	PASS
DH5	Ant1	2480	1000~26500	2.22	-42.8	≤-17.78	PASS
2DH5	Ant1	2402	0~Reference	2.56	2.56	---	PASS
2DH5	Ant1	2402	30~1000	2.56	-57.24	≤-17.44	PASS
2DH5	Ant1	2402	1000~26500	2.56	-42.32	≤-17.44	PASS
2DH5	Ant1	2441	0~Reference	1.23	1.23	---	PASS
2DH5	Ant1	2441	30~1000	1.23	-58.04	≤-18.77	PASS
2DH5	Ant1	2441	1000~26500	1.23	-41.32	≤-18.77	PASS
2DH5	Ant1	2480	0~Reference	2.58	2.58	---	PASS
2DH5	Ant1	2480	30~1000	2.58	-58.73	≤-17.42	PASS
2DH5	Ant1	2480	1000~26500	2.58	-42.3	≤-17.42	PASS
3DH5	Ant1	2402	0~Reference	1.15	1.15	---	PASS
3DH5	Ant1	2402	30~1000	1.15	-57.49	≤-18.85	PASS
3DH5	Ant1	2402	1000~26500	1.15	-41.5	≤-18.85	PASS
3DH5	Ant1	2441	0~Reference	1.80	1.80	---	PASS
3DH5	Ant1	2441	30~1000	1.80	-58.13	≤-18.2	PASS
3DH5	Ant1	2441	1000~26500	1.80	-42.04	≤-18.2	PASS
3DH5	Ant1	2480	0~Reference	2.42	2.42	---	PASS
3DH5	Ant1	2480	30~1000	2.42	-58.46	≤-17.58	PASS
3DH5	Ant1	2480	1000~26500	2.42	-42	≤-17.58	PASS

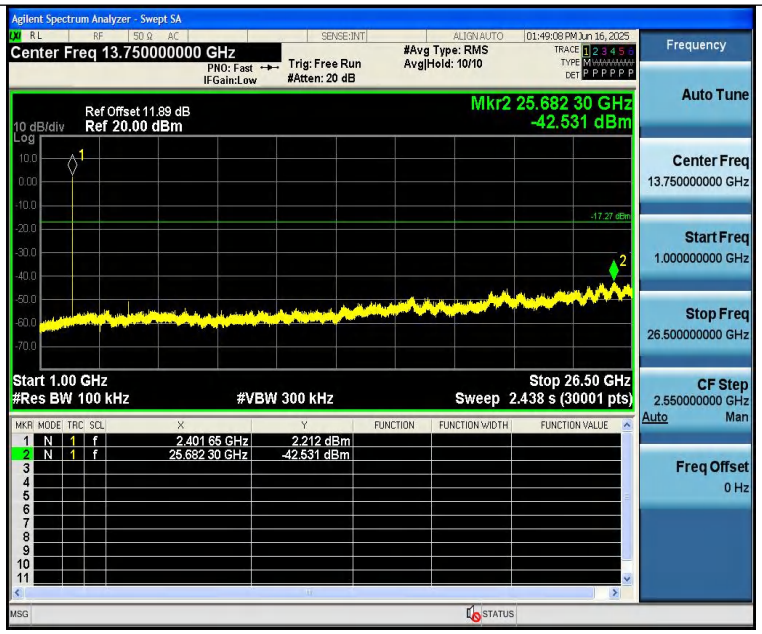
Test Graphs:

DH5-Ant1-2402-0~Reference-PASS

DH5-Ant1-2402-30~1000-PASS

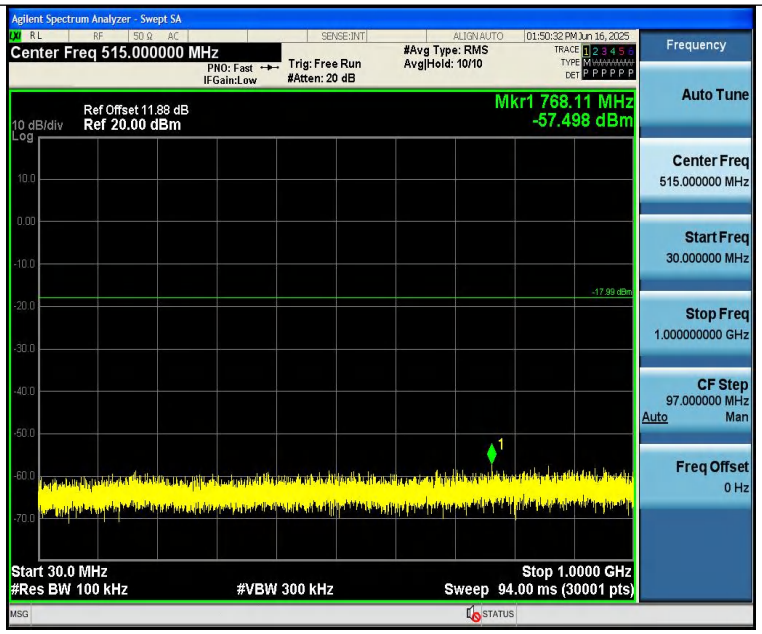


DH5-Ant1-2402-1000~26500-PASS

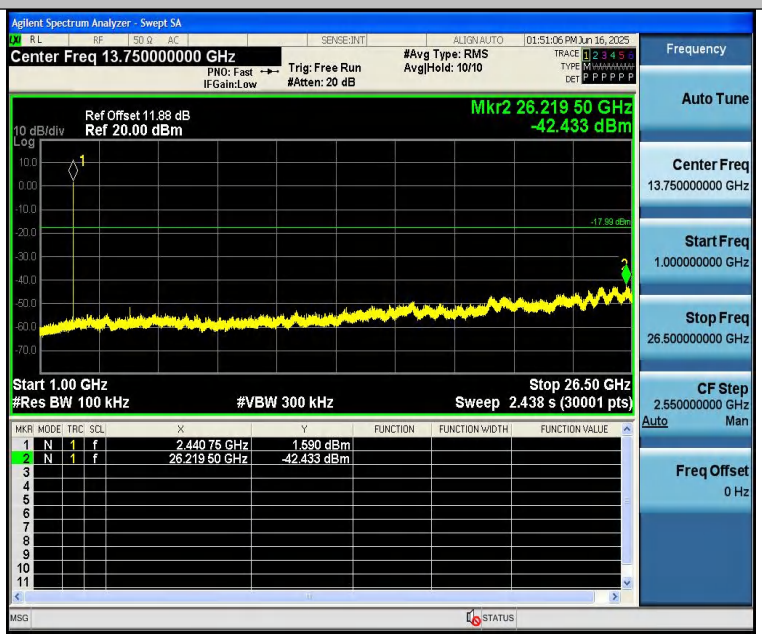


DH5-Ant1-2441-0~Reference-PASS

DH5-Ant1-2441-30~1000-PASS

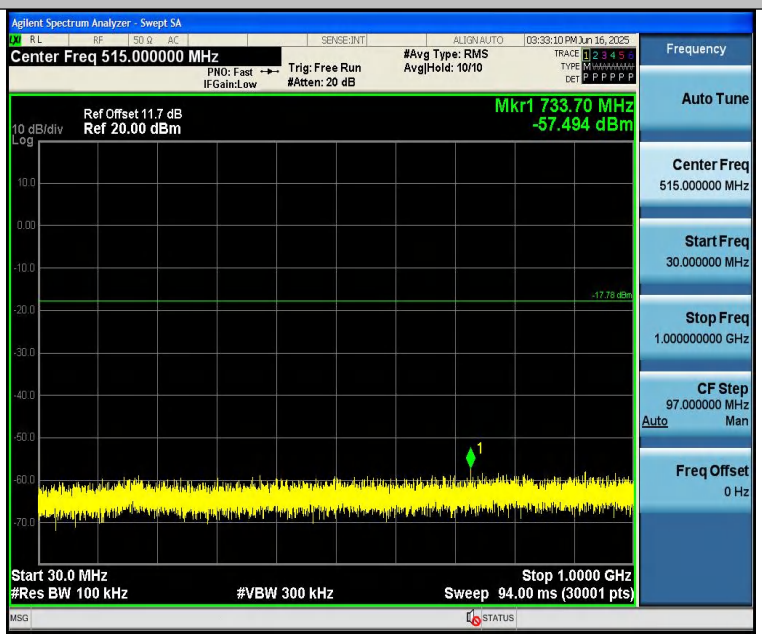


DH5-Ant1-2441-1000~26500-PASS

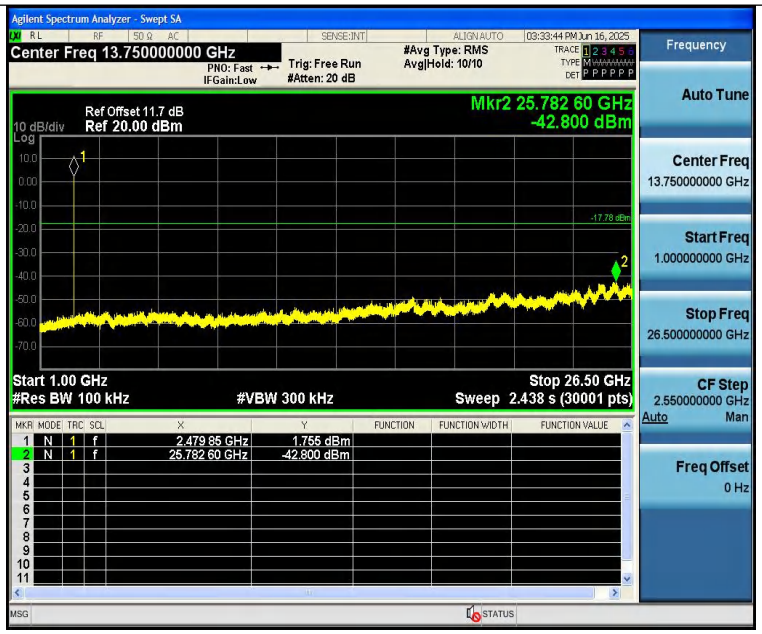


DH5-Ant1-2480-0~Reference-PASS

DH5-Ant1-2480-30~1000-PASS

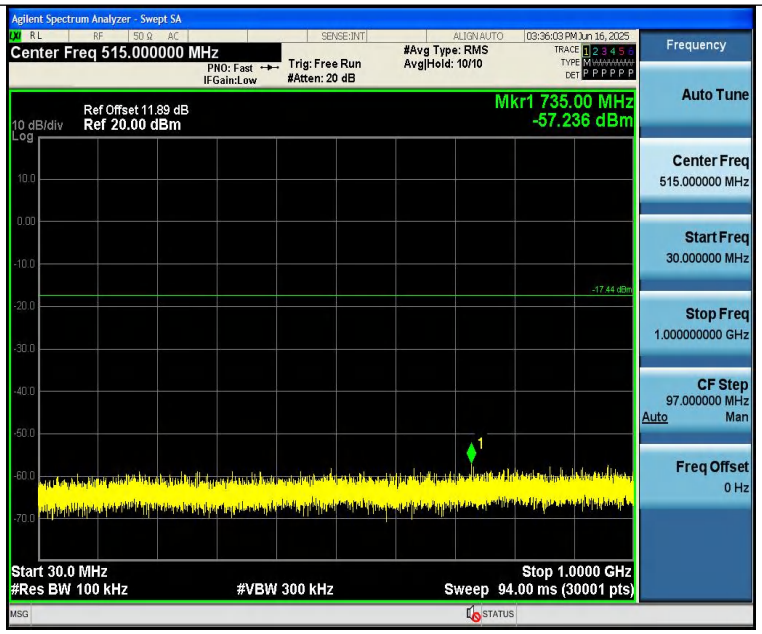


DH5-Ant1-2480-1000~26500-PASS

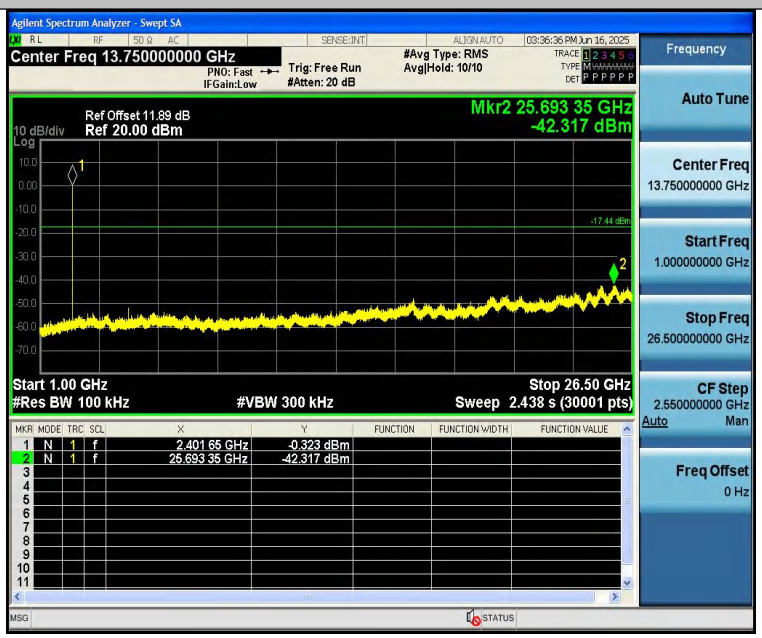


2DH5-Ant1-2402-0~Reference-PASS

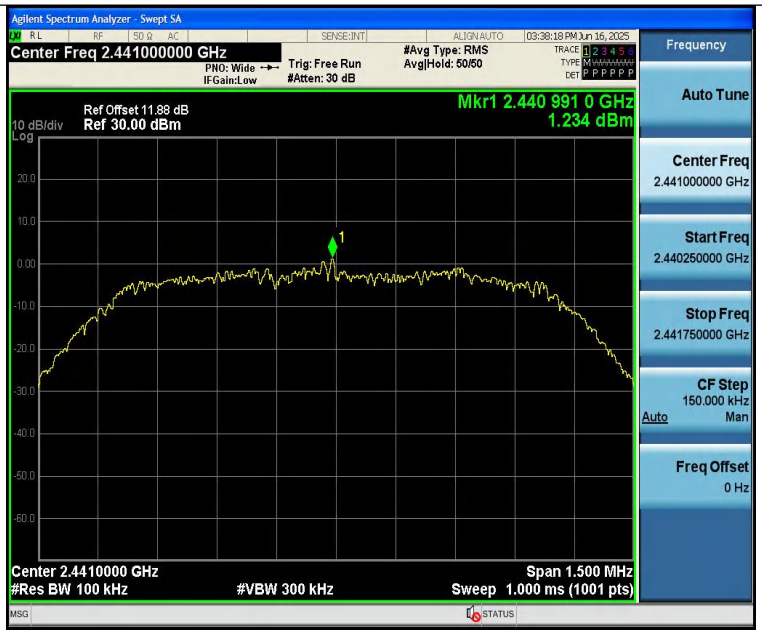
2DH5-Ant1-2402-30~1000-PASS



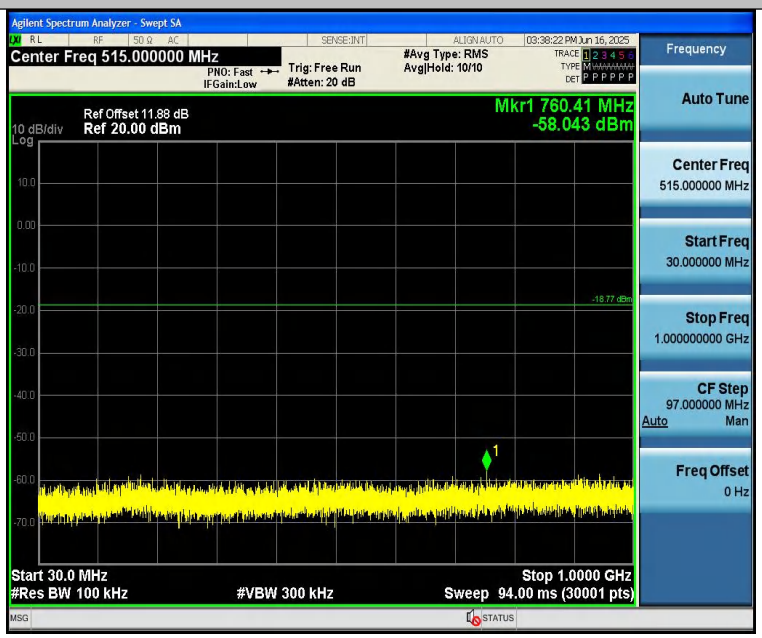
2DH5-Ant1-2402-1000~26500-PASS



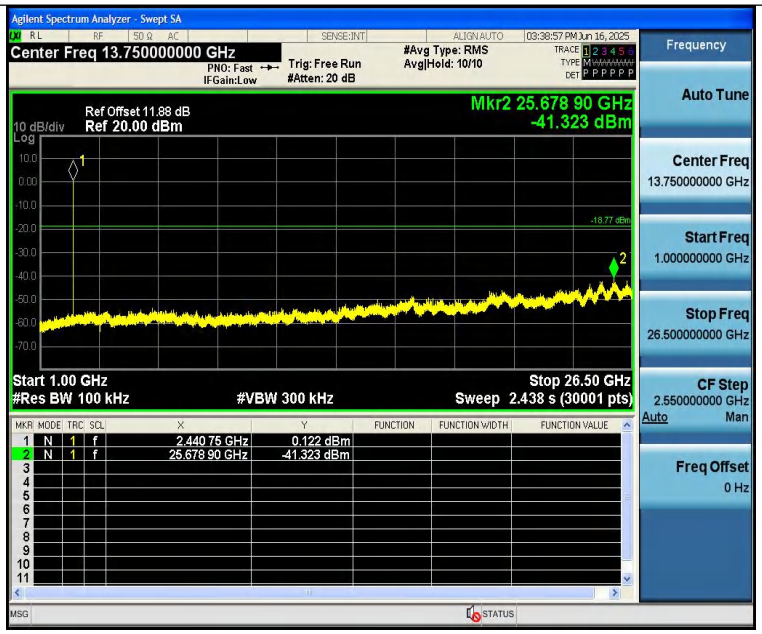
2DH5-Ant1-2441-0~Reference-PASS



2DH5-Ant1-2441-30~1000-PASS

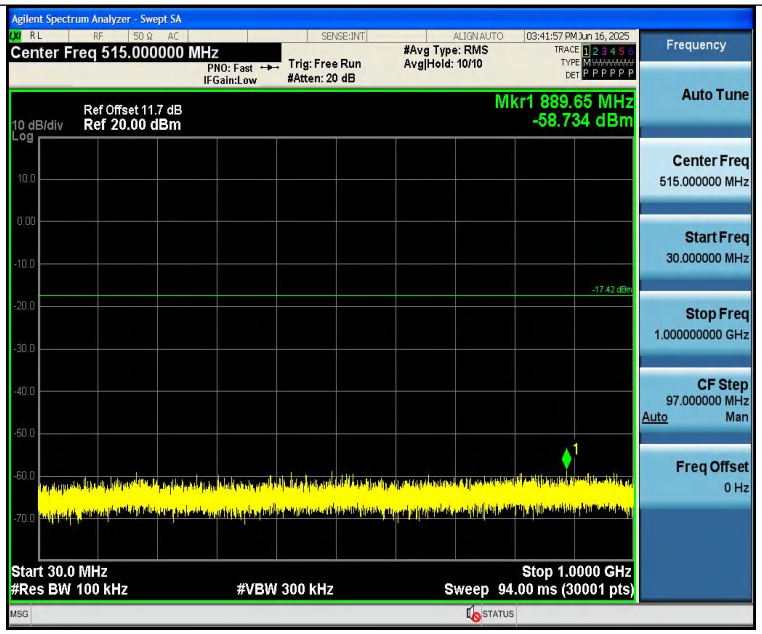


2DH5-Ant1-2441-1000~26500-PASS

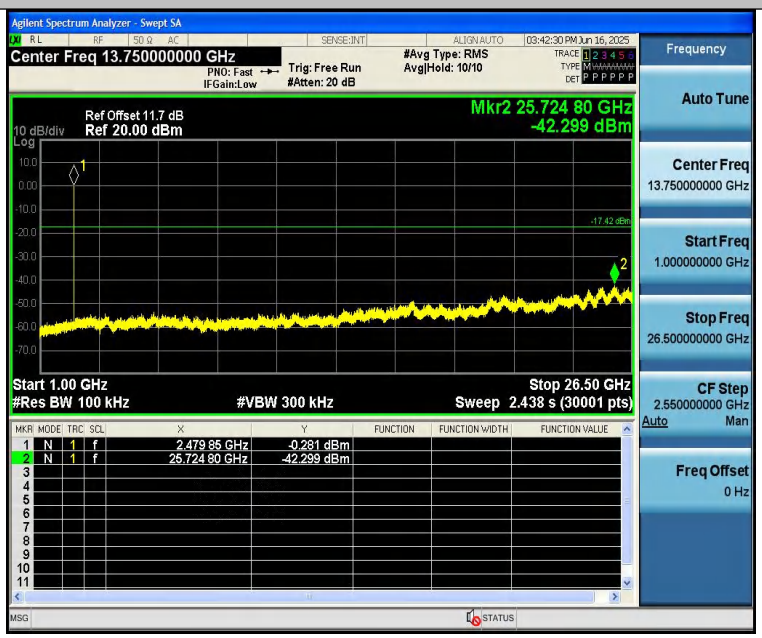


2DH5-Ant1-2480-0~Reference-PASS

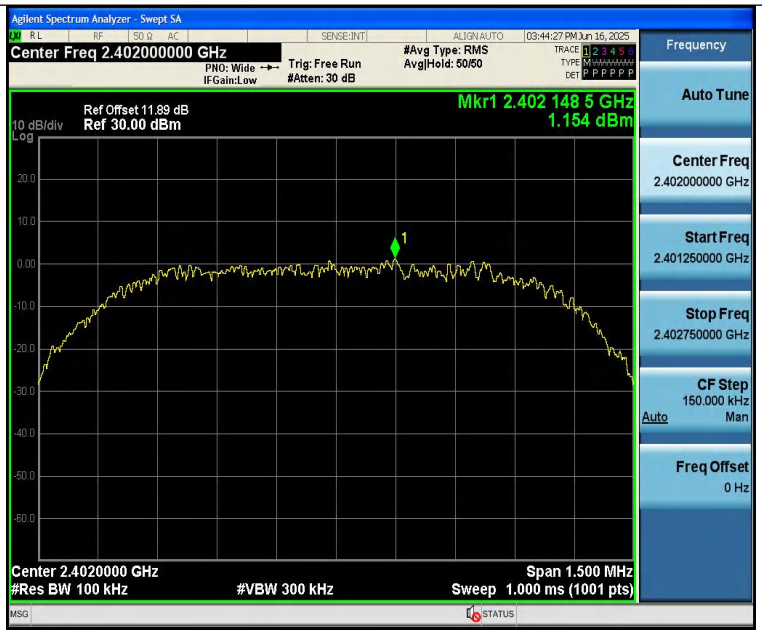
2DH5-Ant1-2480-30~1000-PASS



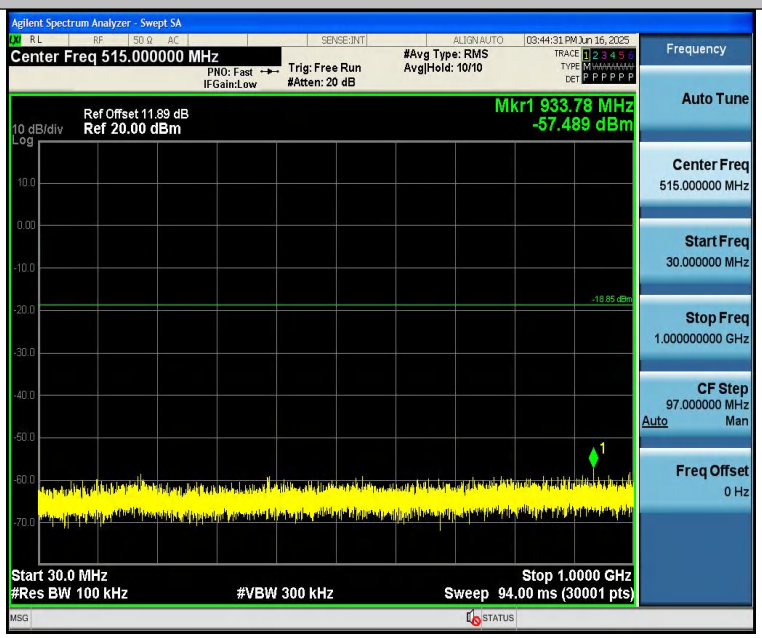
2DH5-Ant1-2480-1000~26500-PASS



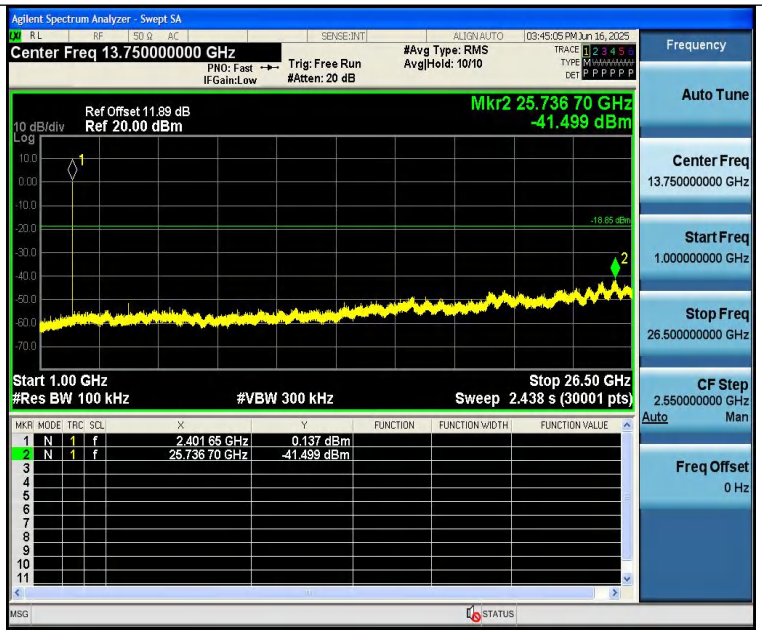
3DH5-Ant1-2402-0~Reference-PASS



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

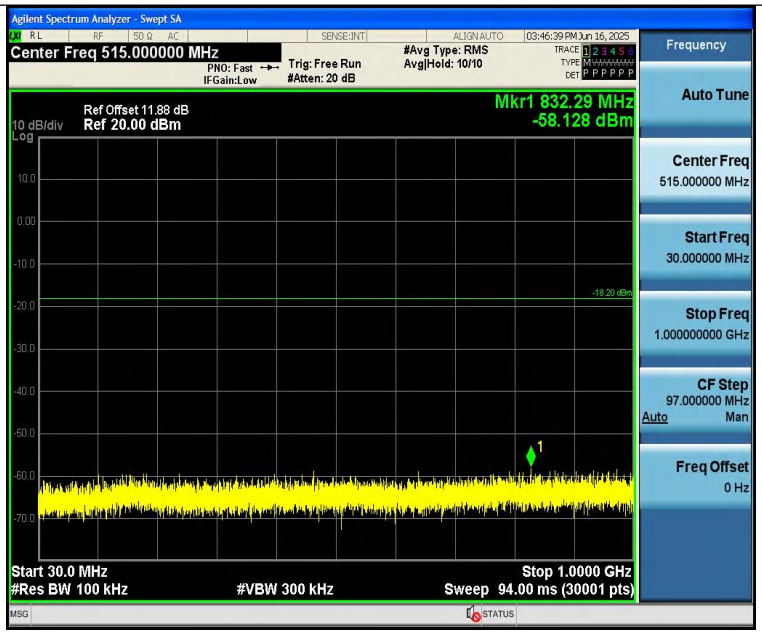


3DH5-Ant1-2402-1000~26500-PASS

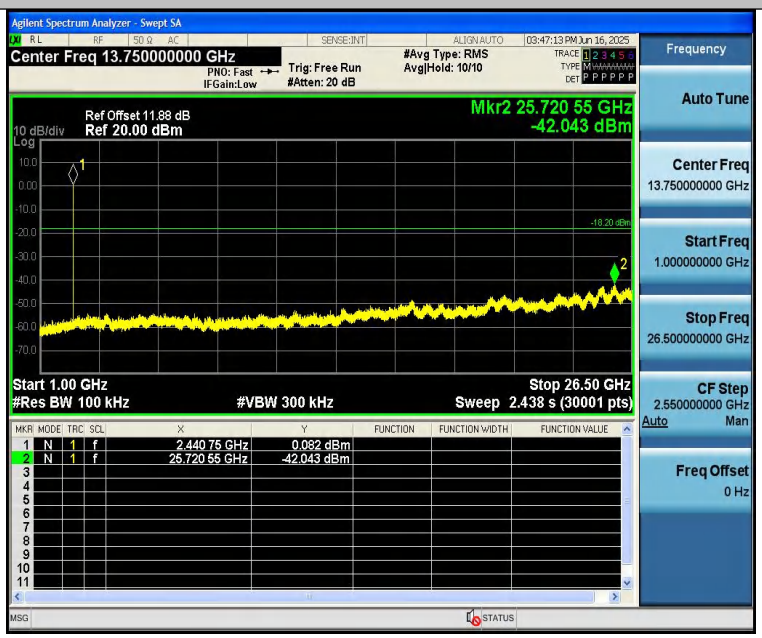


3DH5-Ant1-2441-0~Reference-PASS

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

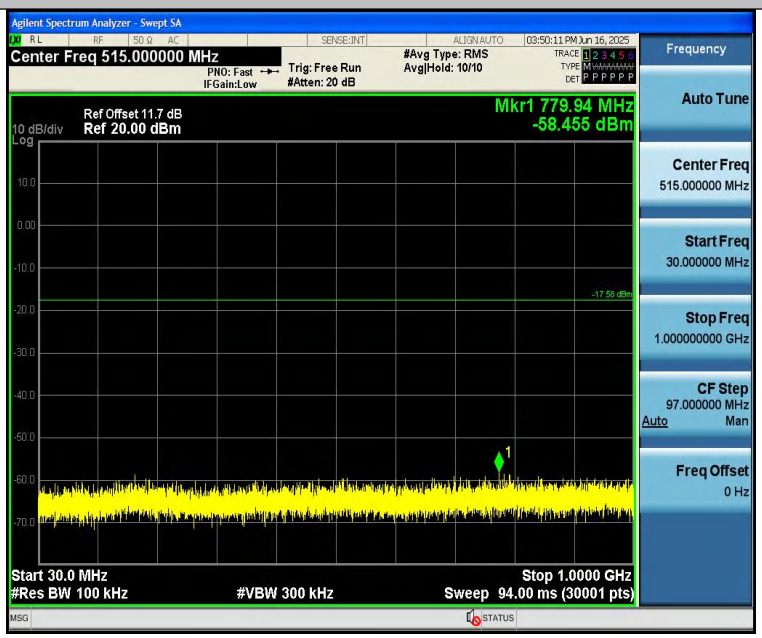


3DH5-Ant1-2441-1000~26500-PASS

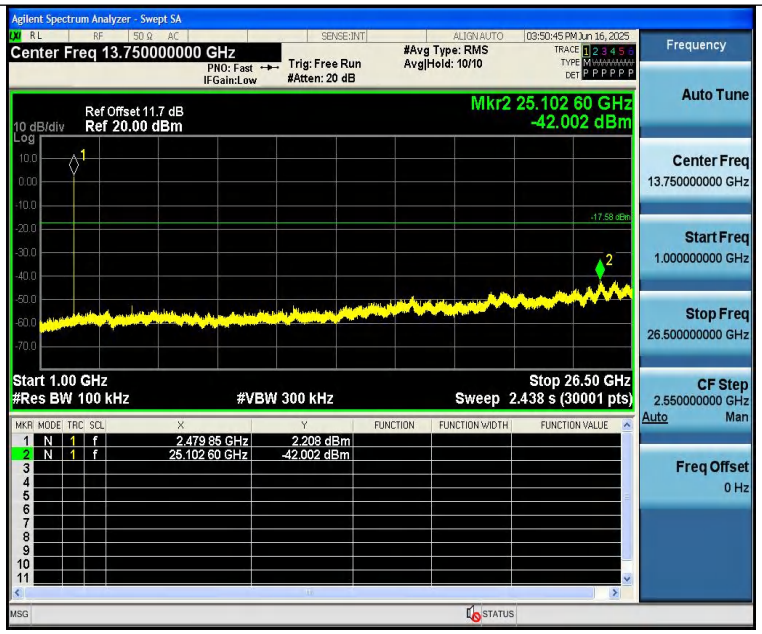


3DH5-Ant1-2480-0~Reference-PASS

3DH5-Ant1-2480-30~1000-PASS



3DH5-Ant1-2480-1000~26500-PASS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Center Freq 13.750000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
#Avg Type: RMS
Avg|Hold: 10/10
03:50:45 PM Jun 16, 2025
Ref Offset 11.7 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr2 25.102 60 GHz
-42.002 dBm
-17.58 dBm
Start 1.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 26.50 GHz
Sweep 2.438 s (30001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 2.479 85 GHz 2.208 dBm
2 N 1 f 25.102 60 GHz -42.002 dBm
Frequency
Auto Tune
Center Freq
13.750000000 GHz
Start Freq
1.000000000 GHz
Stop Freq
26.500000000 GHz
CF Step
2.550000000 GHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

14 Antenna Requirement

14.1 Test Standard and Requirement

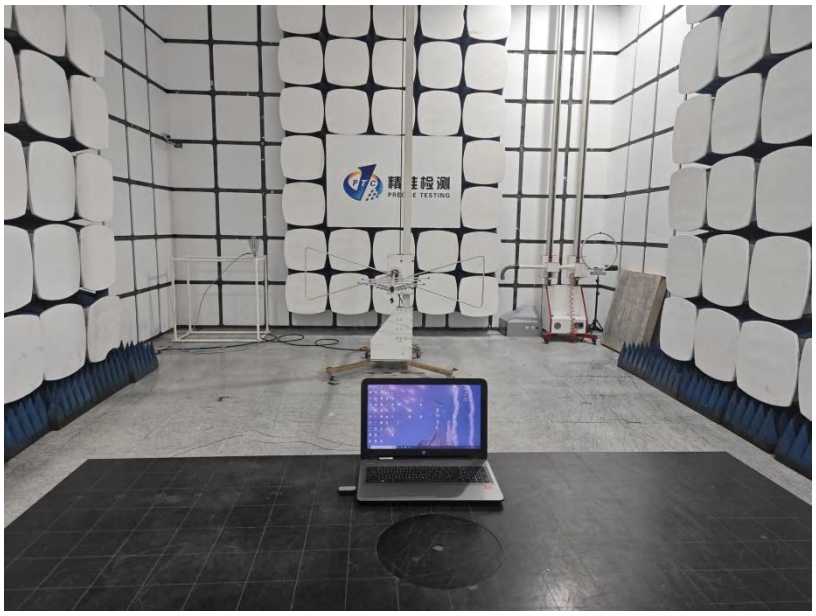
Test Standard	FCC Part15 Section 15.203 /247(c)
Requirement	1) 15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. 2) 15.247(c) (1)(i) requirement: Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

14.2 Antenna Connected Construction

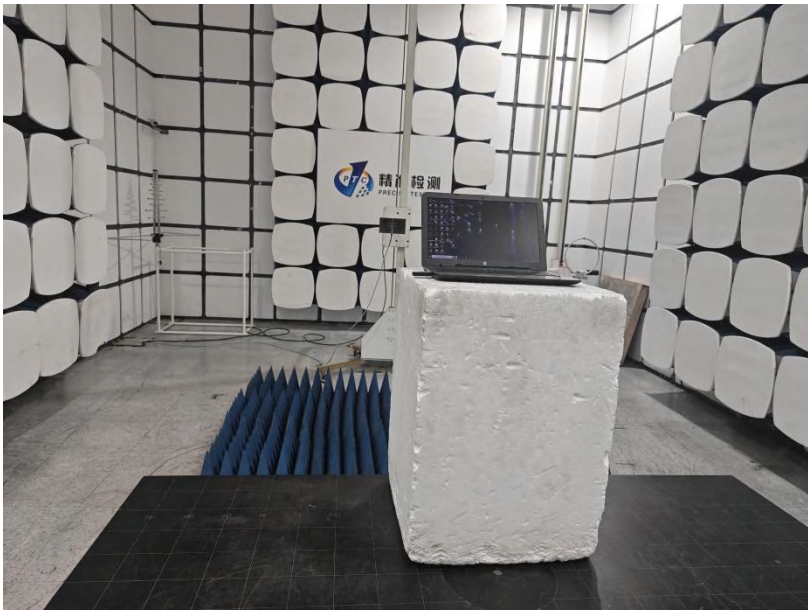
The antenna is PCB Antenna which permanently attached, and the best case gain of the antenna is 1.08 dBi. It complies with the standard requirement.

15 APPENDIX I -- TEST SETUP PHOTOGRAPH

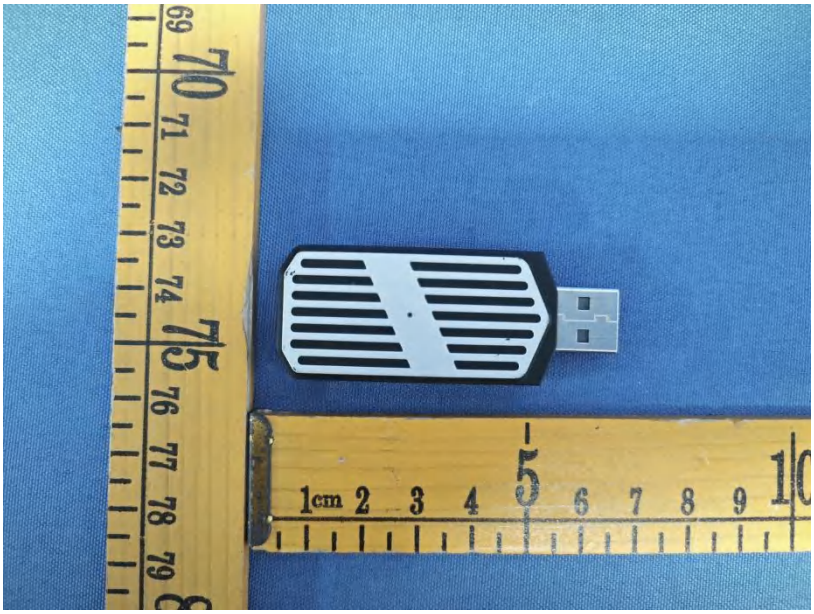
Radiated Emissions
From 30M-1GHz

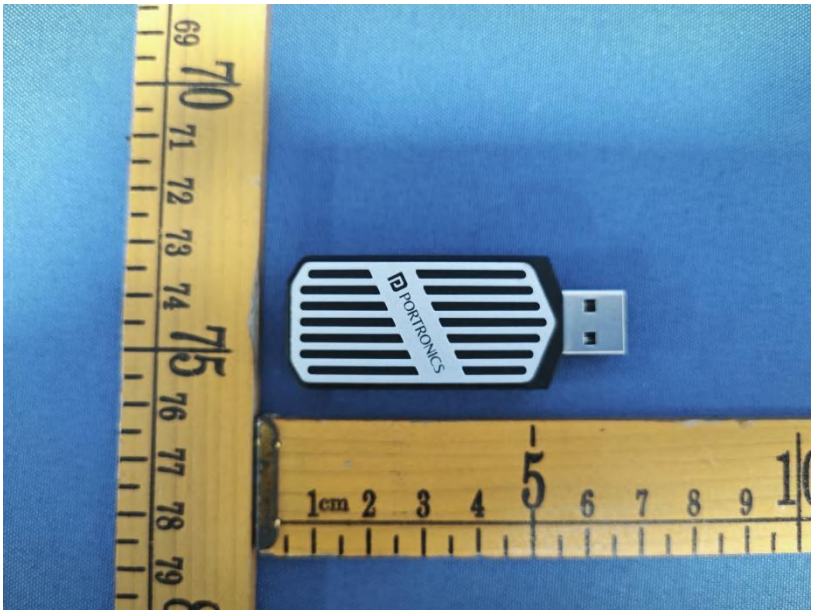


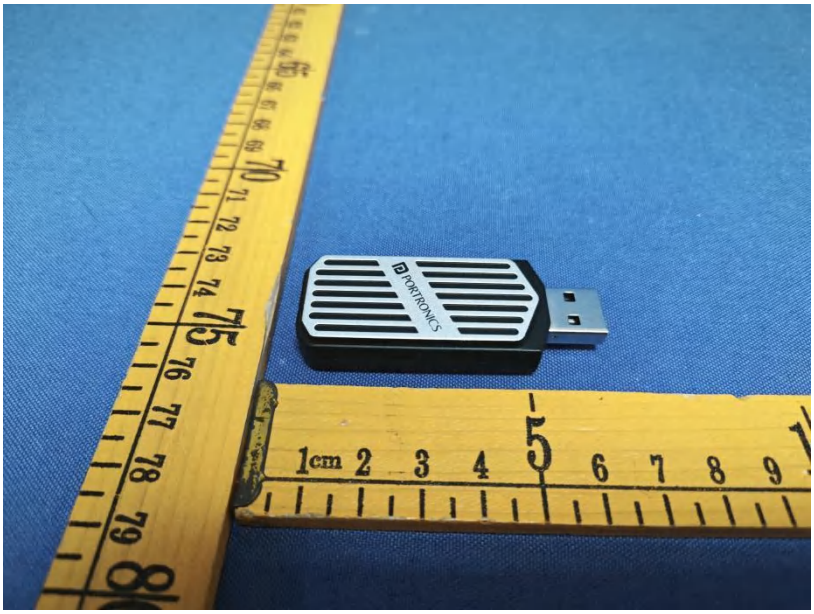
Above 1GHz

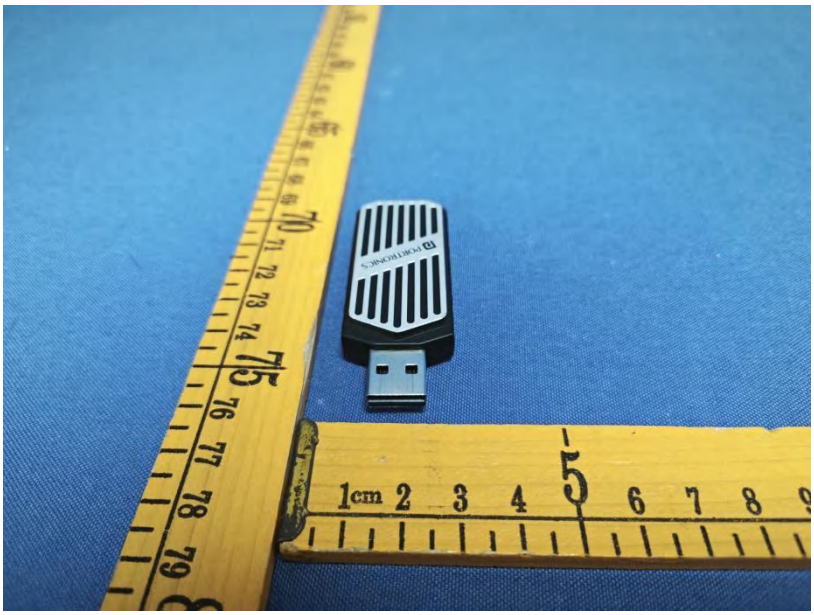


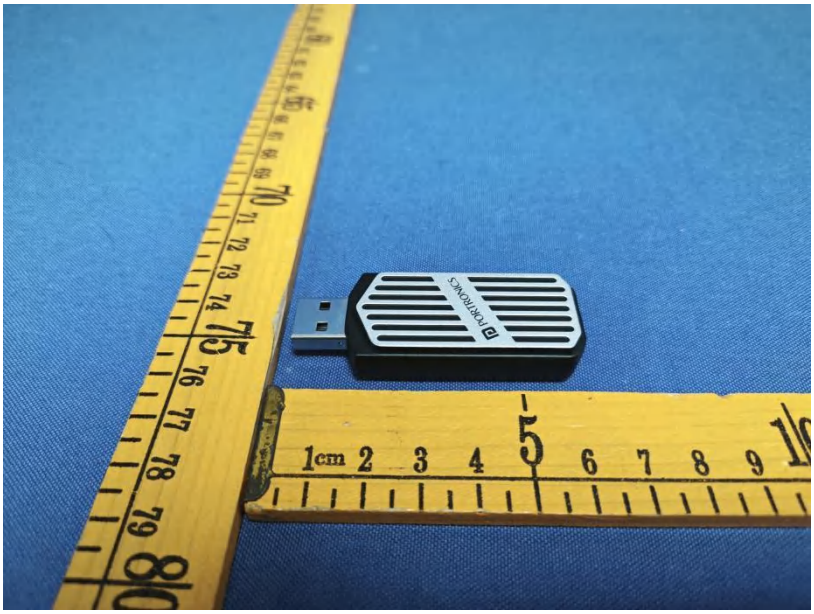
16 APPENDIX II -- EUT PHOTOGRAPH

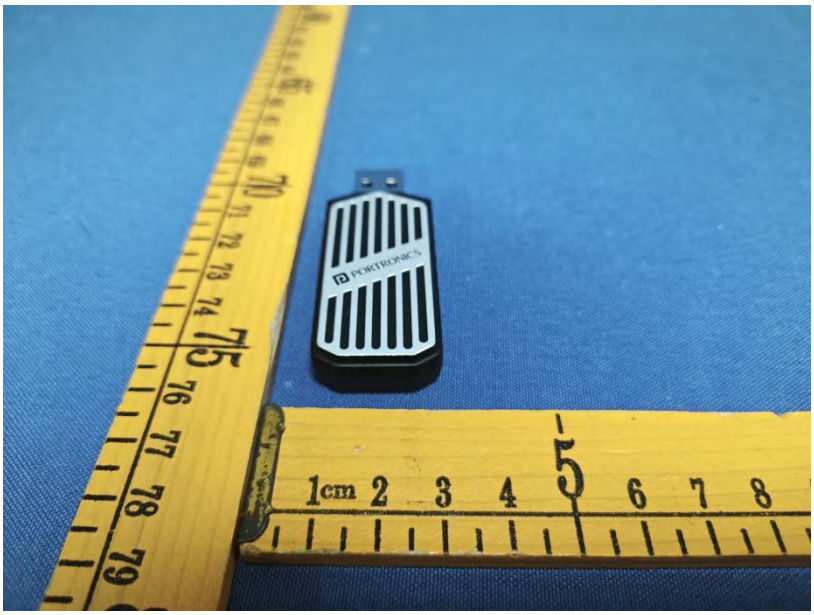


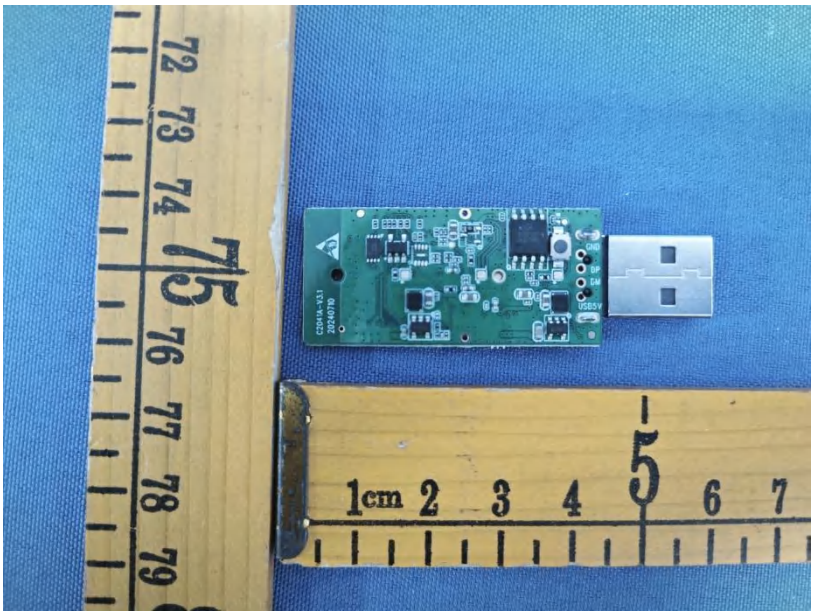


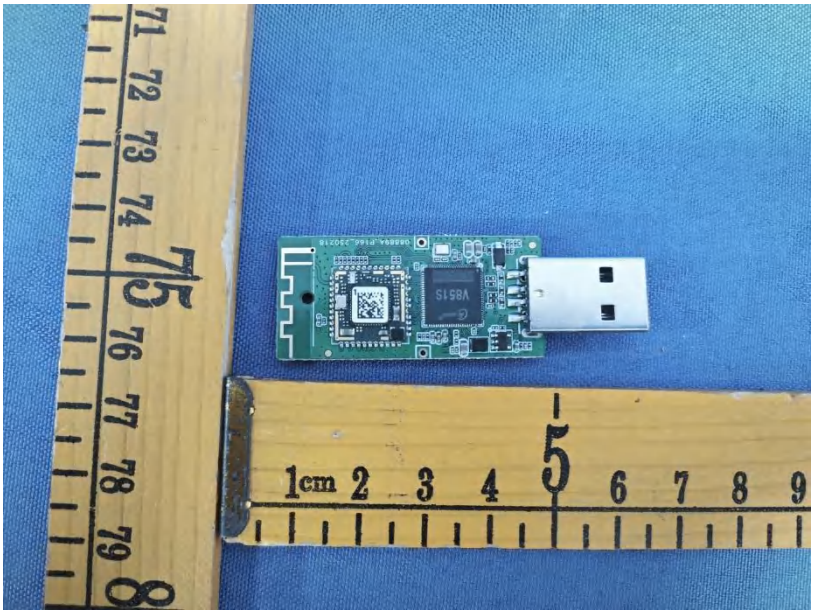

PORTRONICS
1cm 2 3 4 5 6 7 8 9

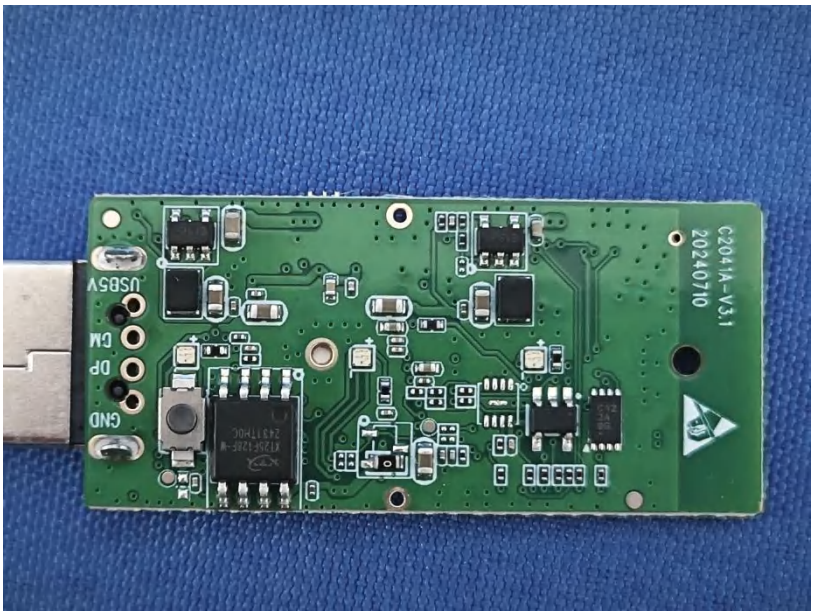

PORTRONICS
1cm 2 3 4 5 6 7 8 9

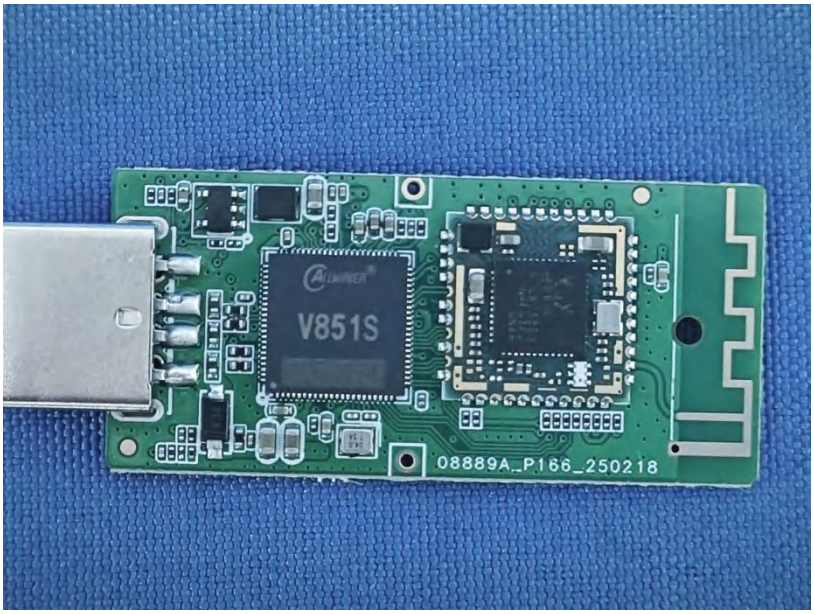

PORTRONICS
1cm 2 3 4 5 6 7 8 9


PORTRONICS
1cm 2 3 4 5 6 7 8




1cm 2 3 4 5 6 7 8 9
71 72 73 74 75 76 77 78 79 80


USB5V
CM
DP
GND
C2041A-V3.1
20240710



********THE END REPORT********