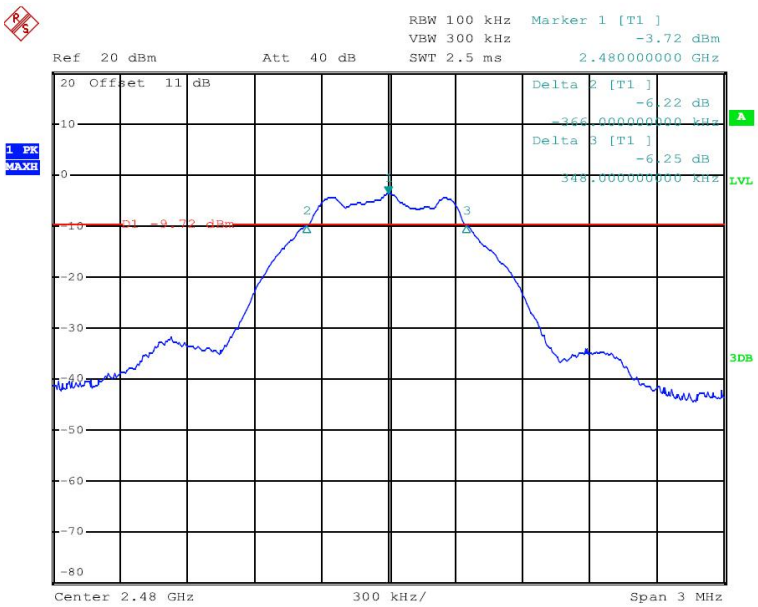

RBW 100 kHz
VBW 300 kHz
SWT 2.5 ms
Marker 1 [T1]
-3.72 dBm
2.480000000 GHz
Ref 20 dBm
Att 40 dB
20 Offset 11 dB
Delta 2 [T1]
-6.22 dB
-366.000000000 kHz
Delta 3 [T1]
-6.25 dB
348.000000000 kHz
1 PK
MAXH
A
LVL
3DB
D1 -9.72 dBm
Center 2.48 GHz
300 kHz/
Span 3 MHz

9 Maximum Peak Output Power

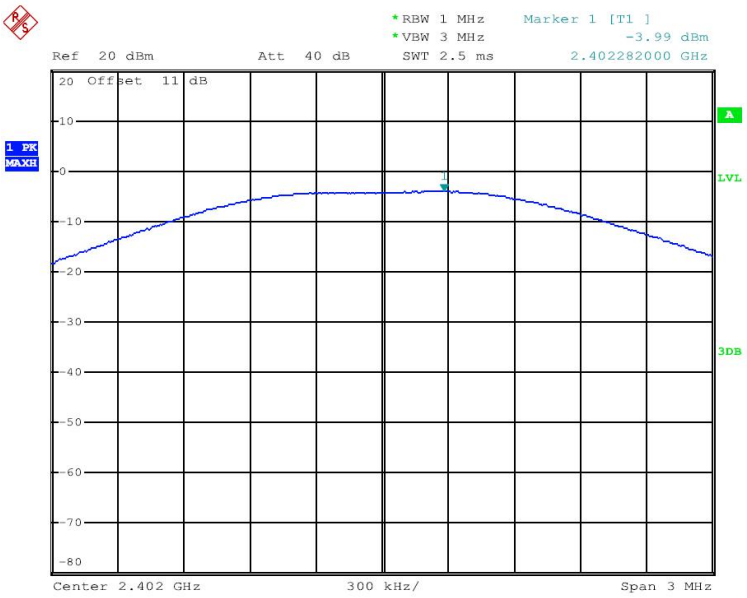
Test Requirement	:	FCC CFR47 Part 15 Section 15.247
Test Method	:	ANSI C63.10:2013
Test Limit	:	Regulation 15.247 (b)(3), For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power.

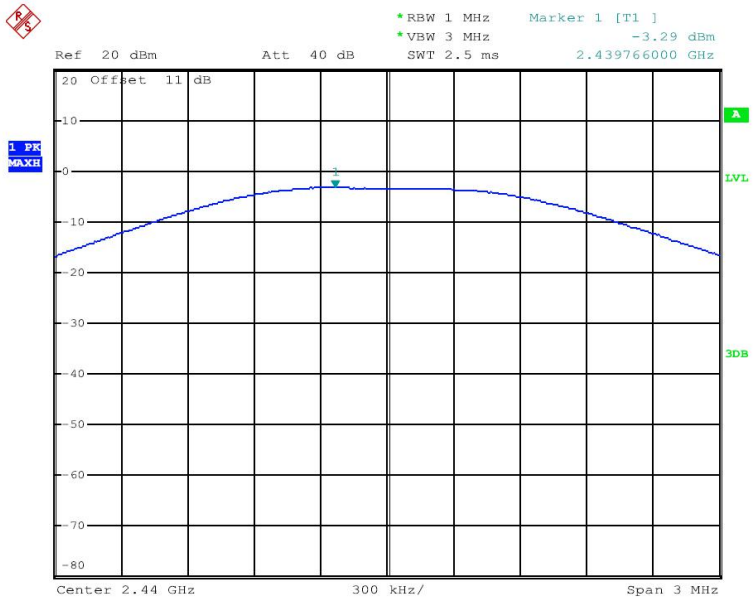
9.1 Test Procedure

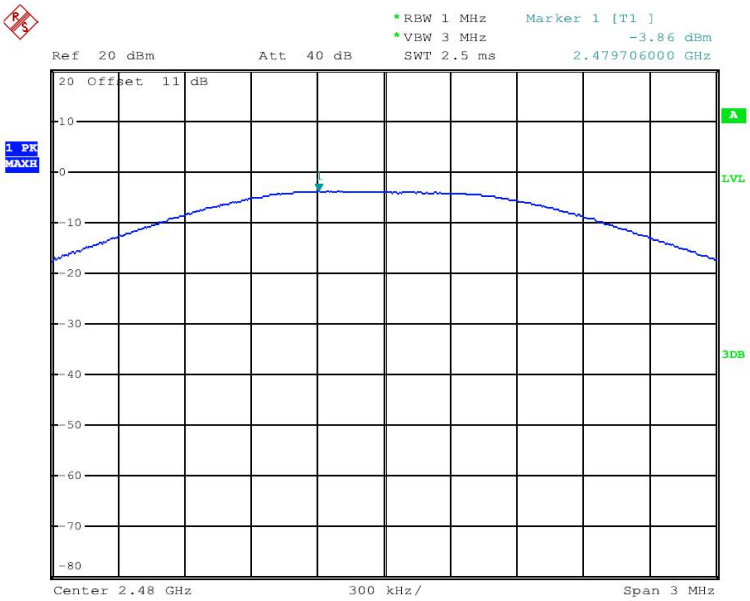
1. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously.
3. Measure the conducted output power and record the results in the test report.

9.2 Test Result

Channel number	Channel Frequency(MHz)	Peak Power Output(dBm)	Peak Power Output(W)	Peak Power Limit(W)	Verdict
00	2402	-3.99	0.00040	1	PASS
19	2440	-3.29	0.00047	1	PASS
39	2480	-3.86	0.00041	1	PASS


*RBW 1 MHz
*VBW 3 MHz
Marker 1 [T1]
-3.99 dBm
2.402282000 GHz
Ref 20 dBm
Att 40 dB
SWT 2.5 ms
20 Offset 11 dB
1 PK
MAXH
A
LVL
3DB
Center 2.402 GHz
300 kHz/
Span 3 MHz


*RBW 1 MHz
*VBW 3 MHz
Marker 1 [T1]
-3.29 dBm
2.439766000 GHz
Ref 20 dBm
Att 40 dB
SWT 2.5 ms
20 Offset 11 dB
1 PK
MAXH
A
LVL
3DB
Center 2.44 GHz
300 kHz/
Span 3 MHz


*RBW 1 MHz
*VBW 3 MHz
Marker 1 [T1]
-3.86 dBm
2.479706000 GHz
Ref 20 dBm
Att 40 dB
SWT 2.5 ms
20 Offset 11 dB
1 PK
MAXH
A
LVL
3DB
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 2.48 GHz
300 kHz/
Span 3 MHz

10 Power Spectral density

Test Requirement : FCC CFR47 Part 15 Section 15.247

Test Method : ANSI C63.10:2013

Test Limit : Regulation 15.247(f) The power spectral density conducted from the intentional radiator to the antenna due to the digital modulation operation of the hybrid system, with the frequency hopping operation turned off, shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

10.1 Test Procedure

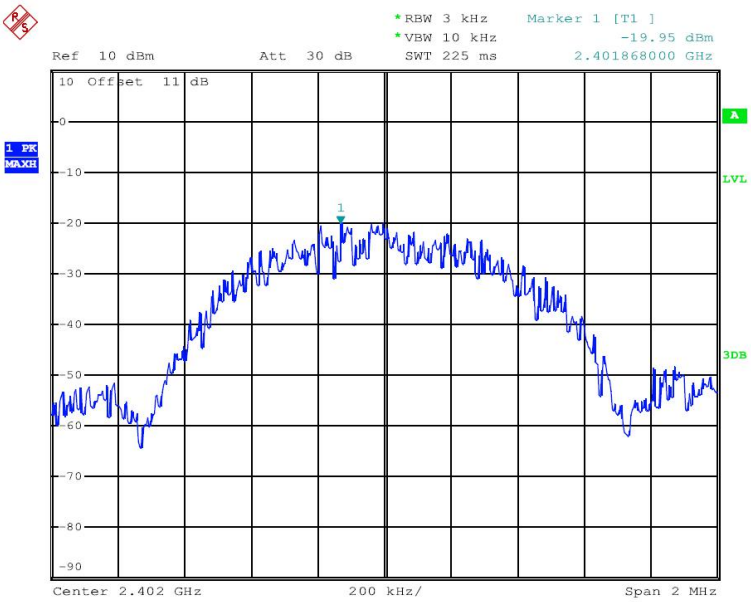
1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.

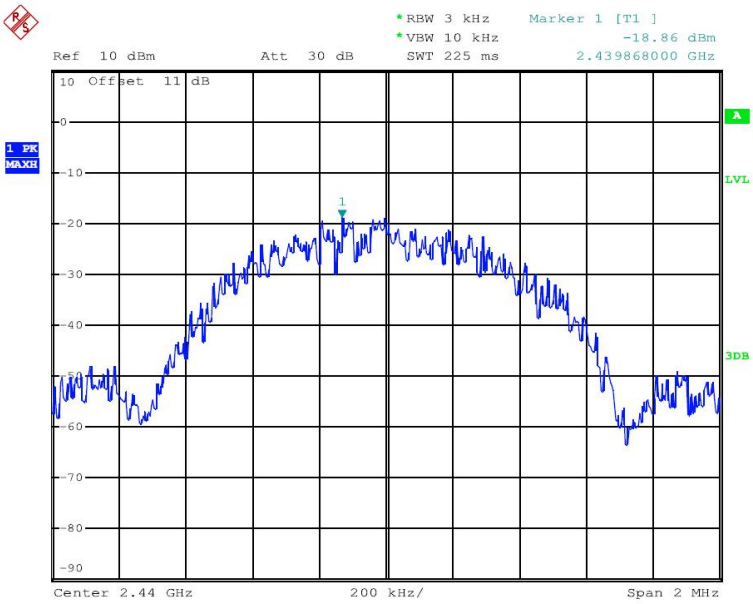
2. Set the spectrum analyzer: RBW = 3kHz. VBW = 10kHz , Span = 1.5 times the DTS channel bandwidth(6 dB bandwidth). Sweep = auto; Detector Function = Peak. Trace = Max hold.

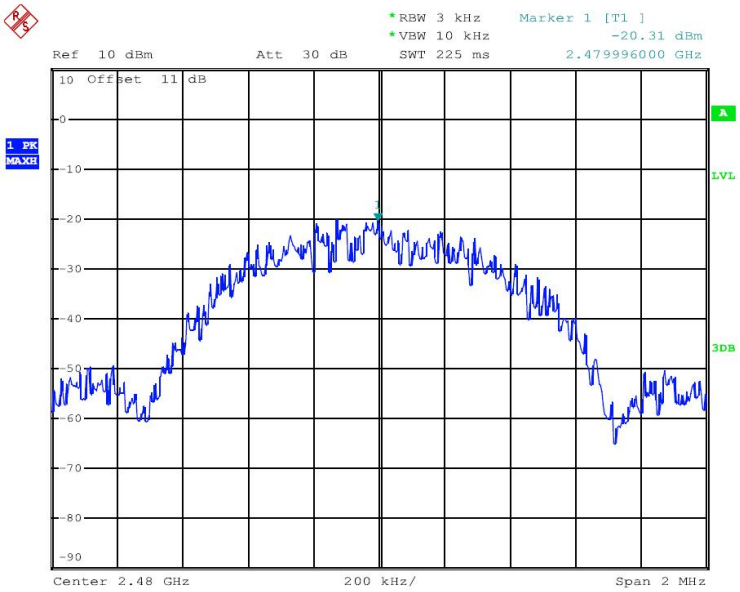
3. Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels. The limit is specified in one of the subparagraphs of this Section Submit this plot.

10.2 Test Result

Channel number	Channel frequency (MHz)	Measurement level (dBm)	Required Limit (dBm/3kHz)	Pass/Fail
		PSD/3kHz		
00	2402	-19.95	8	PASS
19	2440	-18.86	8	PASS
39	2480	-20.31	8	PASS


*RBW 3 kHz
*VBW 10 kHz
SWT 225 ms
Marker 1 [T1]
-19.95 dBm
2.401868000 GHz
Ref 10 dBm
Att 30 dB
10 Offset 11 dB
1 PK
MAXH
A
LVL
3DB
Center 2.402 GHz
200 kHz/
Span 2 MHz


*RBW 3 kHz
*VBW 10 kHz
SWT 225 ms
Marker 1 [T1]
-18.86 dBm
2.439868000 GHz
Ref 10 dBm
Att 30 dB
10 Offset 11 dB
1 PK
MAXH
A
LVL
3DB
Center 2.44 GHz
200 kHz/
Span 2 MHz


RBW 3 kHz
VBW 10 kHz
SWT 225 ms
Marker 1 [T1]
-20.31 dBm
2.479996000 GHz
Ref 10 dBm
Att 30 dB
10 Offset 11 dB
1 PK
MAXH
A
LVL
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Center 2.48 GHz
200 kHz/
Span 2 MHz

11 Antenna Application

11.1 Antenna Requirement

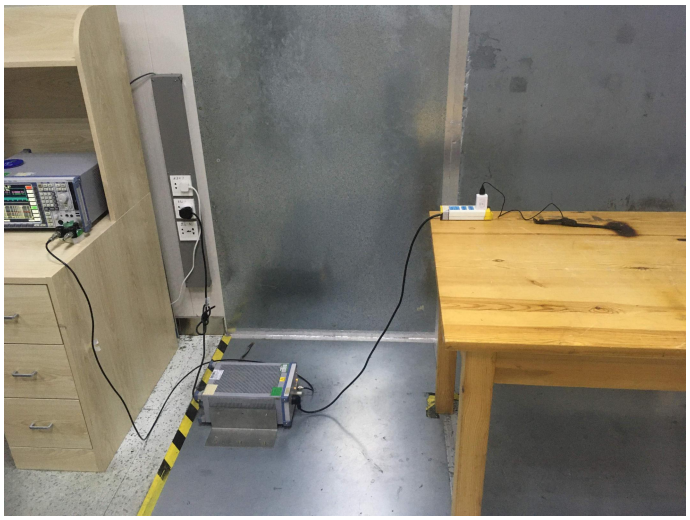
For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

11.2 Result

The EUT'S antenna, permanent attached antenna, is wire Antenna.. The antenna's gain is 0dBi and meets the requirement.

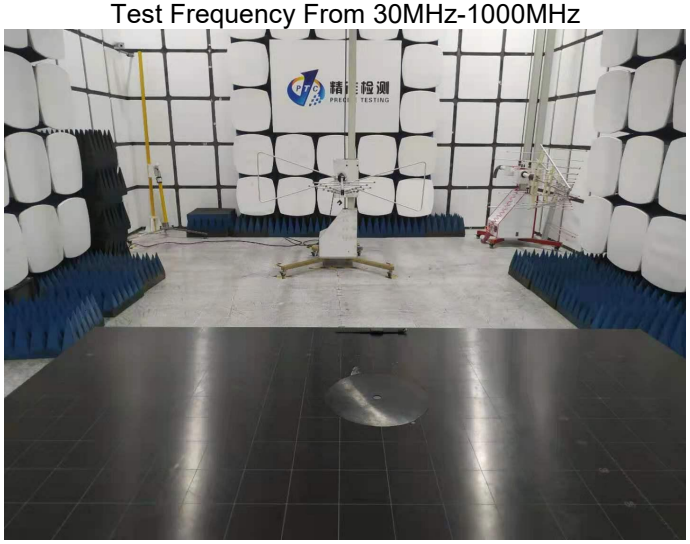
12 Test Setup

Conducted Emissions

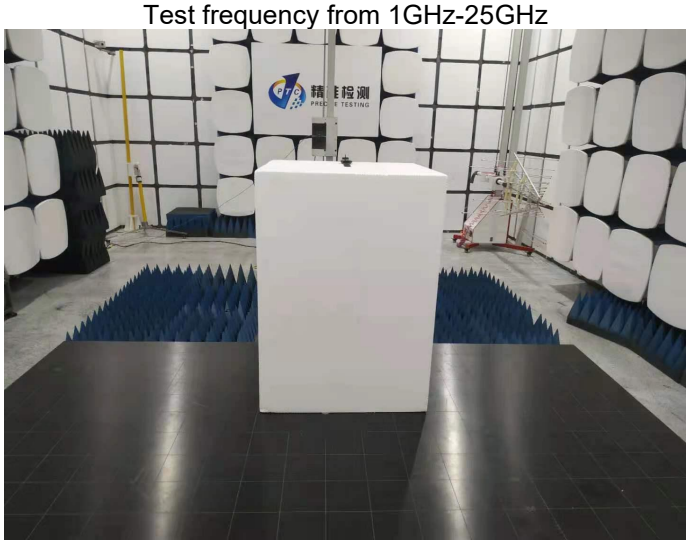


Radiated Spurious Emissions

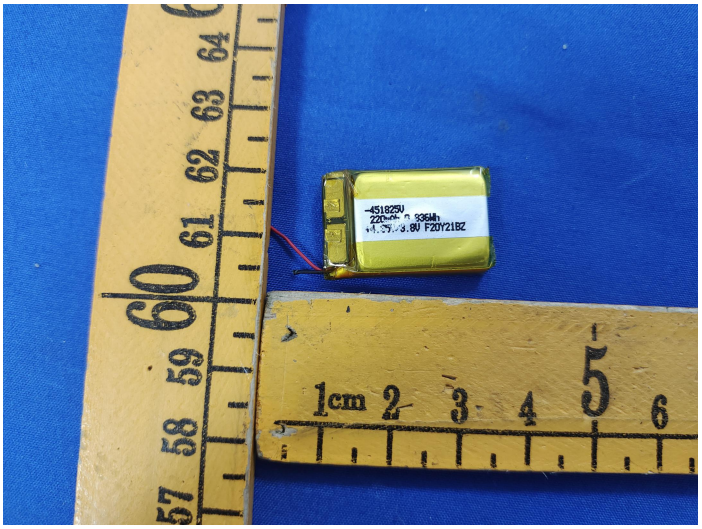
Test Frequency From 30MHz-1000MHz

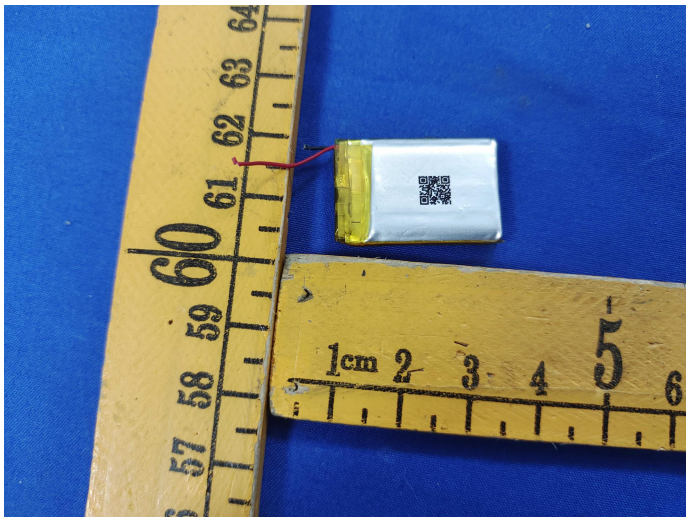


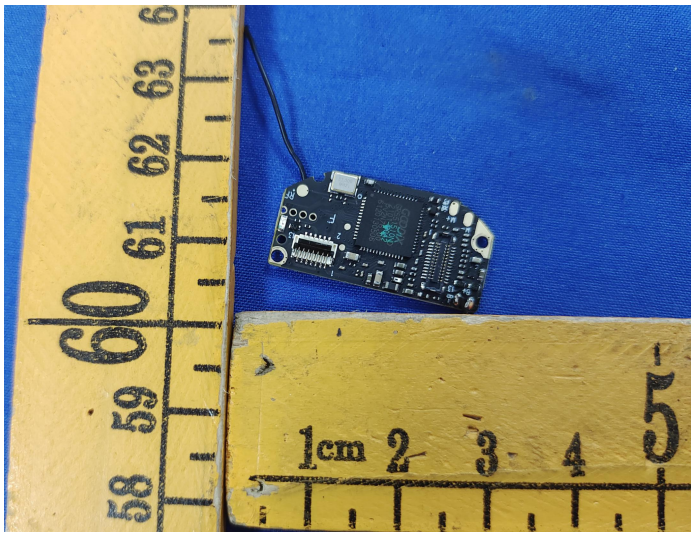
Test frequency from 1GHz-25GHz

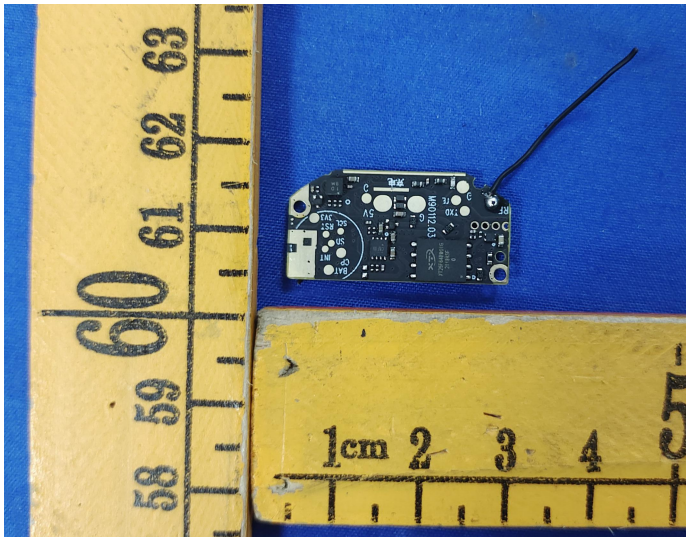


13 EUT Photos









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