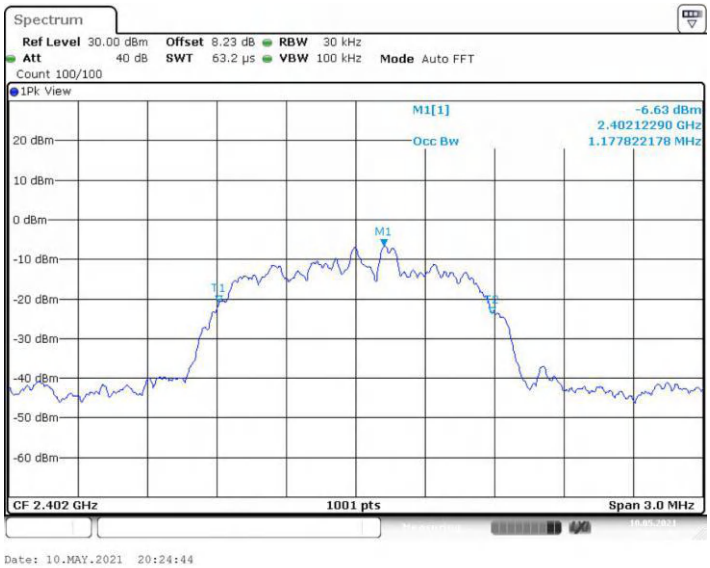
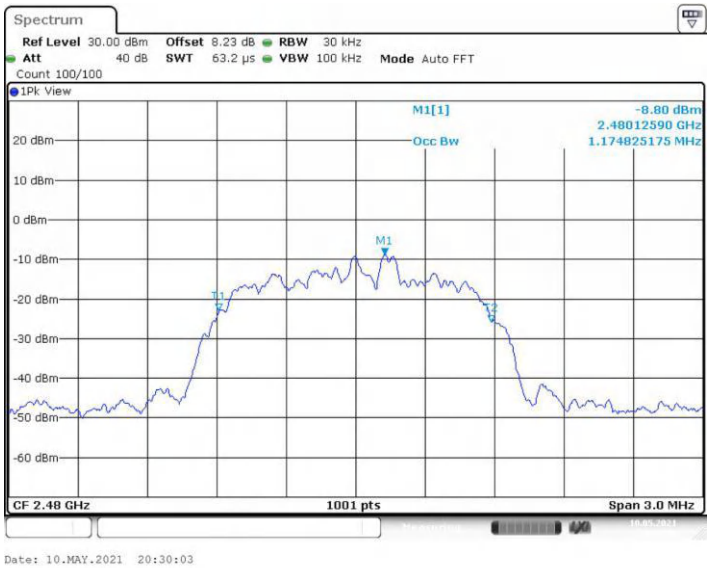
Test Mode:	2DH5			
Channel frequency (MHz)	99% OCB [MHz]	FL[MHz]	FH[MHz]	Verdict
2402	1.178	2401.410	2402.587	PASS
2441	1.175	2440.410	2441.584	PASS
2480	1.175	2479.410	2480.584	PASS

2402 MHz



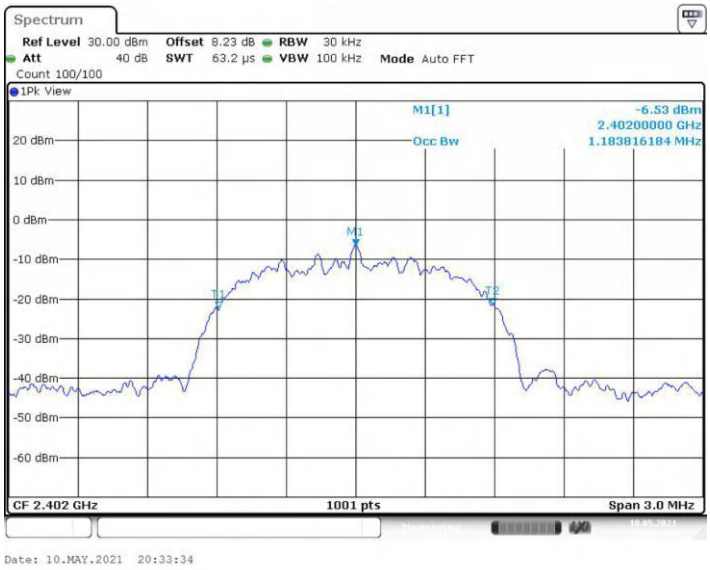
2441 MHz

2480 MHz

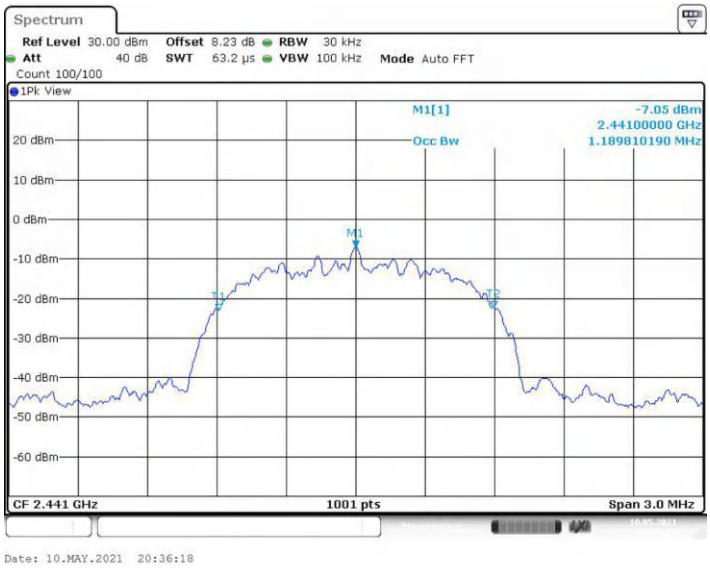

Spectrum
Ref Level 30.00 dBm Offset 8.23 dB RBW 30 kHz
Att 40 dB SWT 63.2 µs VBW 100 kHz Mode Auto FFT
Count 100/100
1Pk View
M1[1] -8.80 dBm
2.48012590 GHz
Occ Bw 1.174825175 MHz
20 dBm
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
M1
T1
T2
CF 2.48 GHz
1001 pts
Span 3.0 MHz
Date: 10.MAY.2021 20:30:03

Test Mode:	3DH5			
Channel frequency (MHz)	99% OCB [MHz]	FL[MHz]	FH[MHz]	Verdict
2402	1.184	2401.410	2402.593	PASS
2441	1.19	2440.407	2441.596	PASS
2480	1.187	2479.407	2480.593	PASS

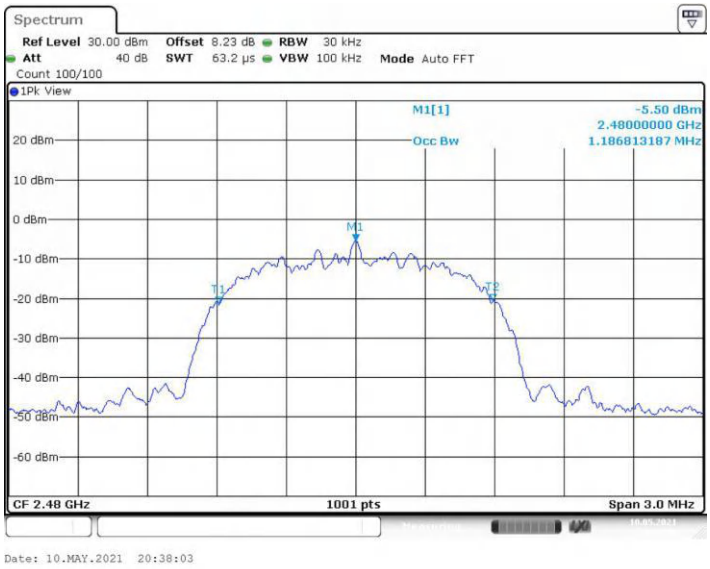
2402 MHz



2441 MHz



2480 MHz


Spectrum
Ref Level 30.00 dBm Offset 8.23 dB RBW 30 kHz
Att 40 dB SWT 63.2 µs VBW 100 kHz Mode Auto FFT
Count 100/100
1Pk View
M1[1] -5.50 dBm
2.48000000 GHz
Occ Bw 1.186813187 MHz
20 dBm
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
M1
T1
T2
CF 2.48 GHz
1001 pts
Span 3.0 MHz
Date: 10.MAY.2021 20:38:03

3.5. Carrier Frequencies Separation

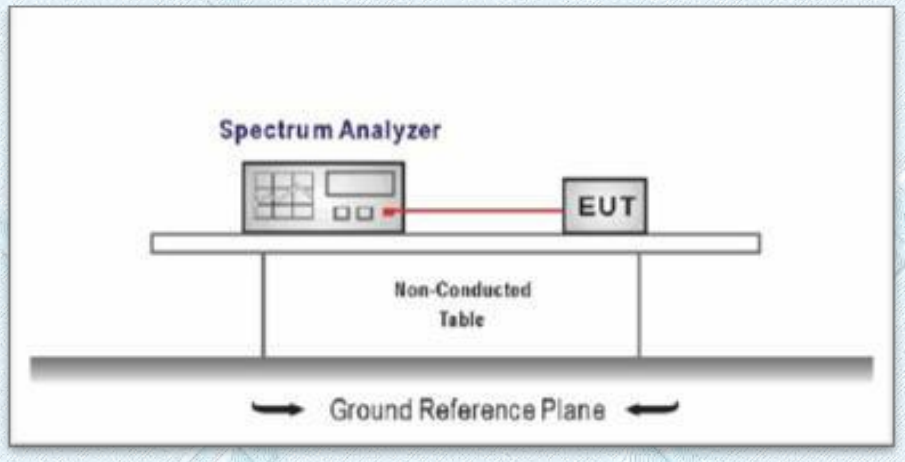
LIMIT

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (a)(1):

frequency hopping systems shall have hopping channel carrier frequencies separated by minimum of 25kHz or the 2/3*20dB bandwidth of the hopping channel, whichever is greater.

Test Item	Limit	Frequency Range(MHz)
Channel Separation	>=25KHz or >=two-thirds of the 20 dB bandwidth Which is greater	2400~2483.5

Test Configuration



Test Procedure

1.Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator.
2.Spectrum Setting:
(1) Set RBW = 100 kHz.
(2) Set the video bandwidth (VBW) ≥ 3 RBW.
(3) Detector = Peak.
(4) Trace mode = Max hold.
(5) Sweep = Auto couple.

NOTE: The EUT was set to continuously transmitting in each mode and low, Middle and high channel for the test.

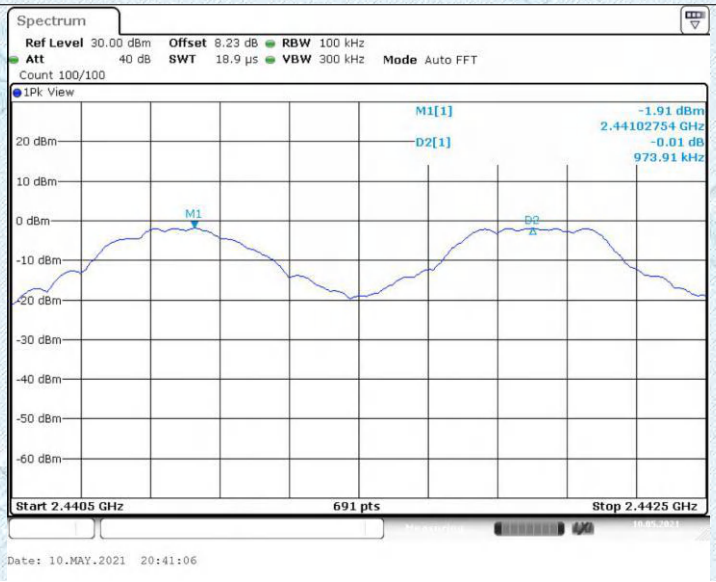
Test Mode

Please refer to the clause 2.3.

Test Results

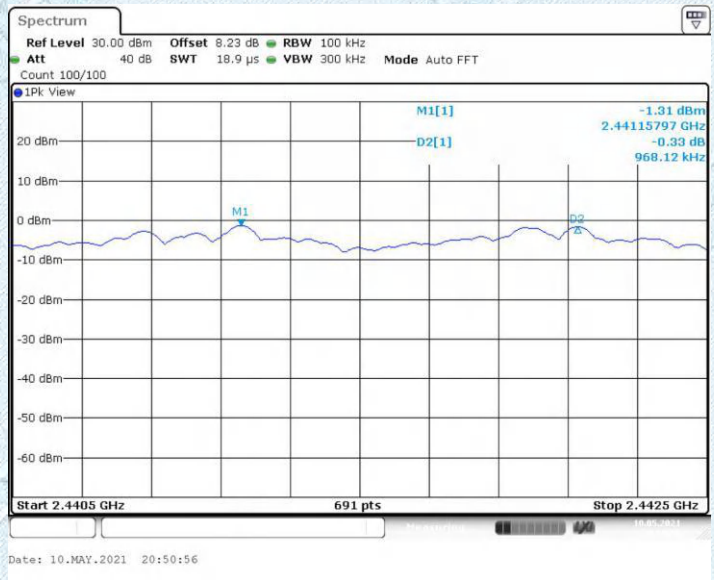
Test Mode:	DH5 Hopping Mode		
Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	0.974	>=0.646	PASS

DH5 Hopping Mode

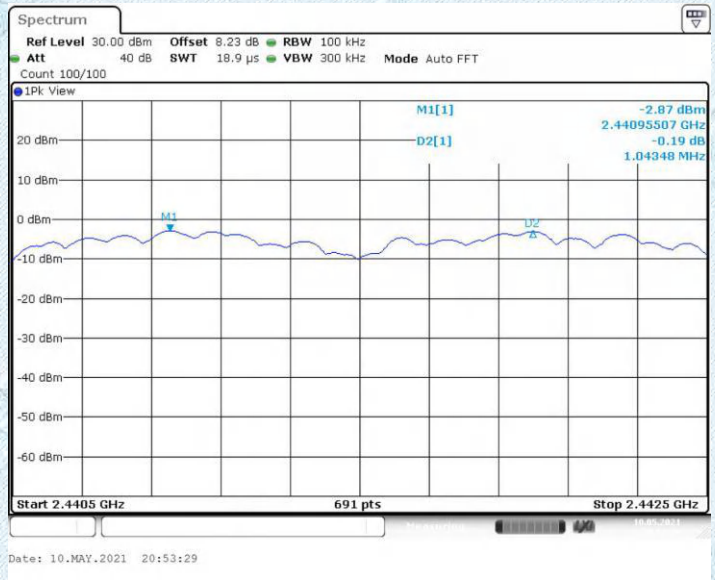


Test Mode:	2DH5 Hopping Mode		
Test Mode	Result[MHz]	Limit[MHz]	Verdict
2DH5	0.968	>=0.876	PASS

2DH5 Hopping Mode



Test Mode:	3DH5 Hopping Mode		
Test Mode	Result[MHz]	Limit[MHz]	Verdict
3DH5	1.043	>=0.866	PASS
3DH5 Hopping Mode			

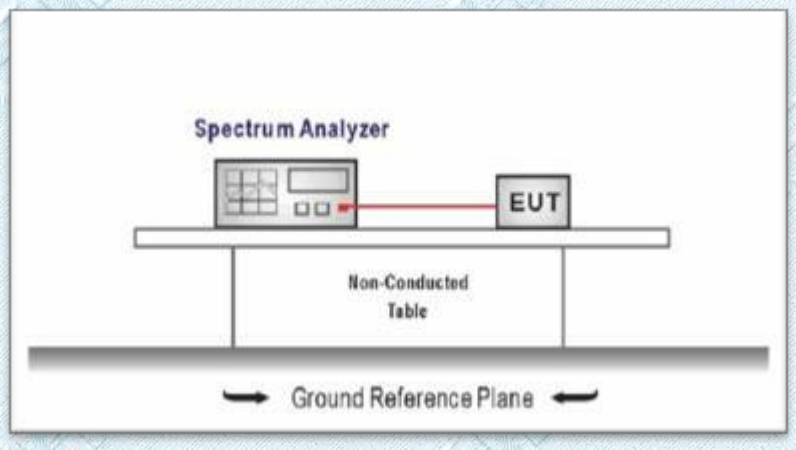


3.6. Number of Hopping Channel

Limit

Section	Test Item	Limit
15.247	Number of Hopping Channel	>15

Test Configuration



Test Procedure

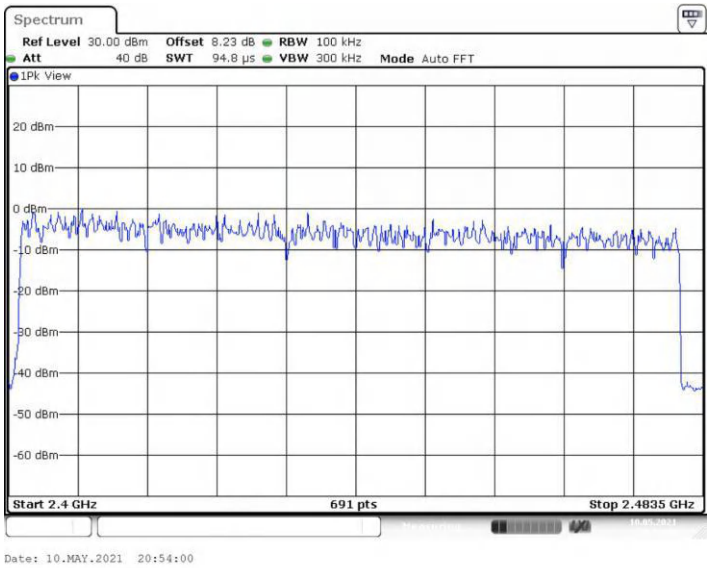
1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator.
2. Spectrum Setting:
   Peak Detector: RBW=100 kHz, VBW≥RBW, Sweep time= Auto.

Test Mode

Please refer to the clause 2.3.

Test Result

Test Mode:	3DH5 Hopping Mode		
Frequency Range	**Test Mode**	**Quantity of Hopping Channel**	**Limit**
2402MHz~2483.5MHz	3DH5	79	**>15**
3DH5 Mode			



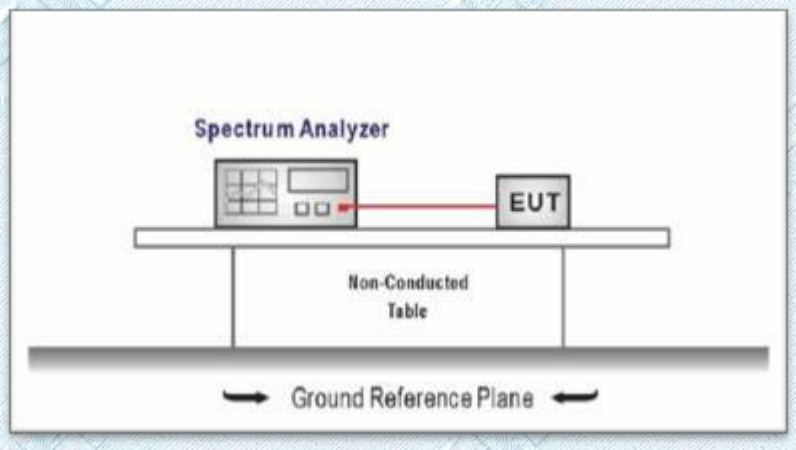
Note: The 8-DPSK modulation is the worst case and recorded in the report.

3.7. Dwell Time

Limit

Section	Test Item	Limit
15.247(a)(1)	Average Time of Occupancy	0.4 sec

Test Configuration



Test Procedure

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator.
2. Spectrum Setting:
   (1) Spectrum Setting: RBW=1MHz, VBW≥RBW.
   (2) Use video trigger with the trigger level set to enable triggering only on full pulses.
   (3) Sweep Time is more than once pulse time.
   (4) Set the center frequency on any frequency would be measure and set the frequency span to zero.
   (5) Measure the maximum time duration of one single pulse.
   (6) Set the EUT for packet transmitting.

Test Mode

Please refer to the clause 2.3

Test Result

Note:

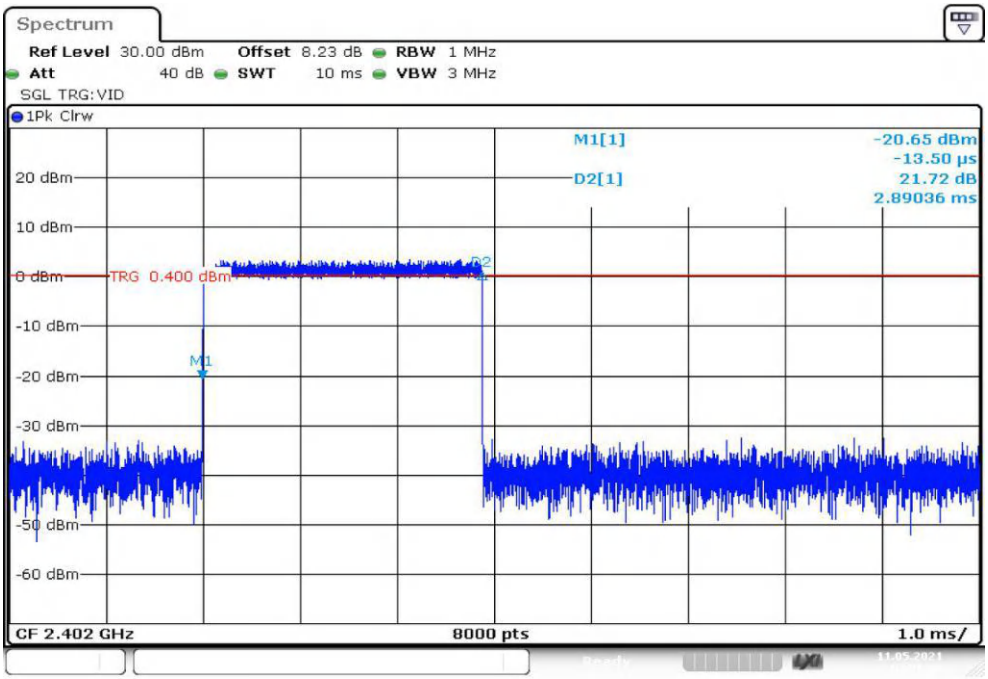
1.Dwell time=Pulse time (ms) × (1600 ÷ 2 ÷ 79) ×31.6 Second for DH1, 2DH1, 3DH1

Dwell time=Pulse time (ms) × (1600 ÷ 4 ÷ 79) ×31.6 Second for DH3, 2DH3, 3DH3

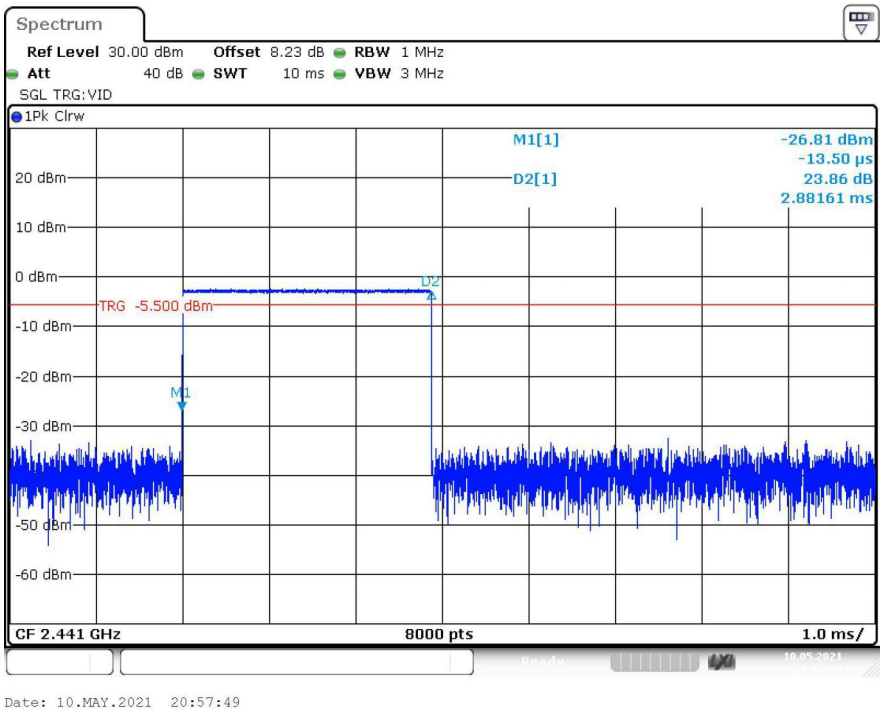
Dwell time=Pulse time (ms) × (1600 ÷ 6 ÷ 79) ×31.6 Second for DH5, 2DH5, 3DH5

2.The 3DH5 modulation is the worst case and recorded in the report .

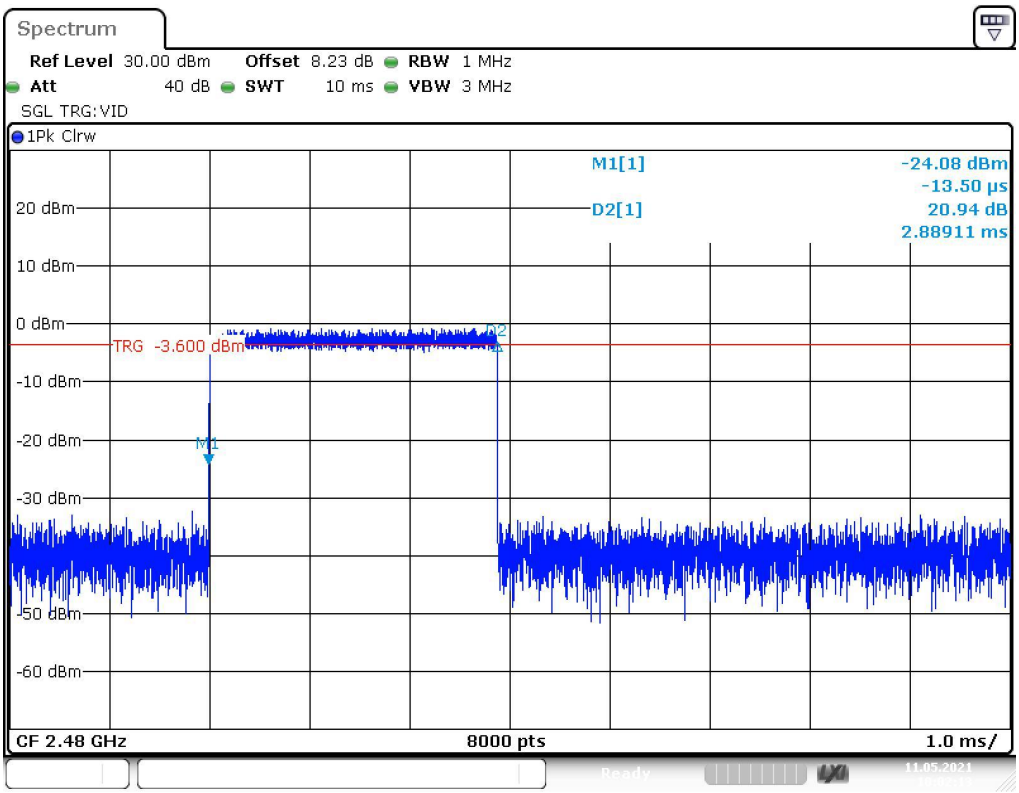
Test Mode	Channel (MHz)	Pulse Time (ms)	Total of Dwell (ms)	Period Time (s)	Limit (ms)	Result
3DH5	2402	2.89	308.27	31.6	**400**	**PASS**



Test Mode	Channel (MHz)	Pulse Time (ms)	Total of Dwell (ms)	Period Time (s)	Limit (ms)	Result
3DH5	2441	2.88	307.20	31.6	**400**	**PASS**



Test Mode	Channel (MHz)	Pulse Time (ms)	Total of Dwell (ms)	Period Time (s)	Limit (ms)	Result
3DH5	2480	2.889	308.16	31.6	**400**	**PASS**



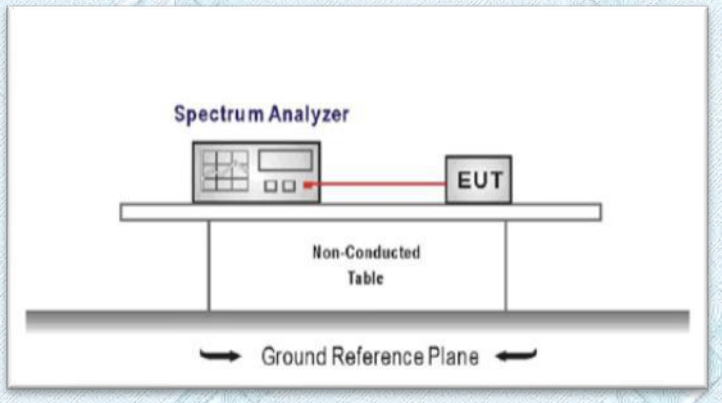
Date: 11.MAY.2021 10:02:13

3.8. Band Edge and Spurious Emission (Conducted)

LIMIT

FCC CFR Title 47 Part 15 Subpart C Section15.247 (d):
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

TEST CONFIGURATION



TEST PROCEDURE

1. Connect EUT RF Output port to the Spectrum Analyzer through an RF attenuator.
2. Spectrum Setting:
   RBW=100KHz
   VBW=3*RBW.
   Detector function: Peak.
   Trace: Max hold.
   Sweep = Auto couple.

   Allow the trace to stabilize.

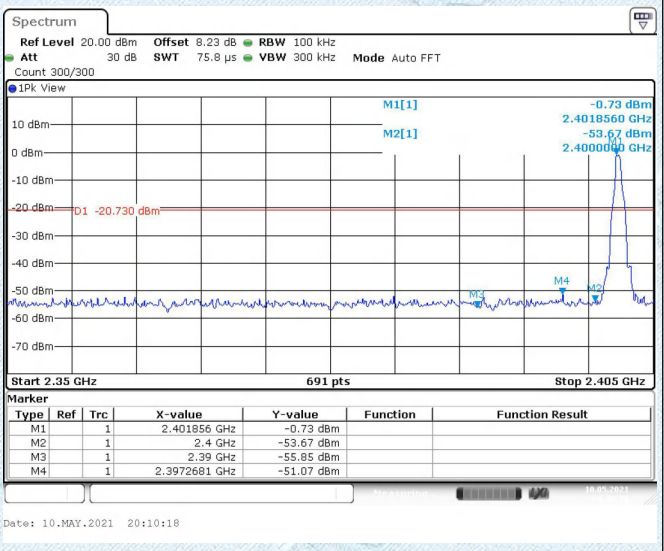
TEST MODE:

Please refer to the clause 2.3.

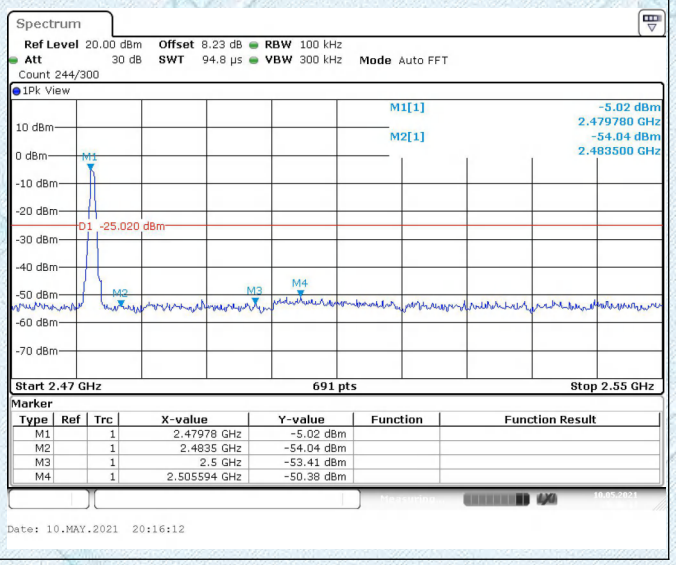
TEST RESULTS

DH5

CH00-Bandedge

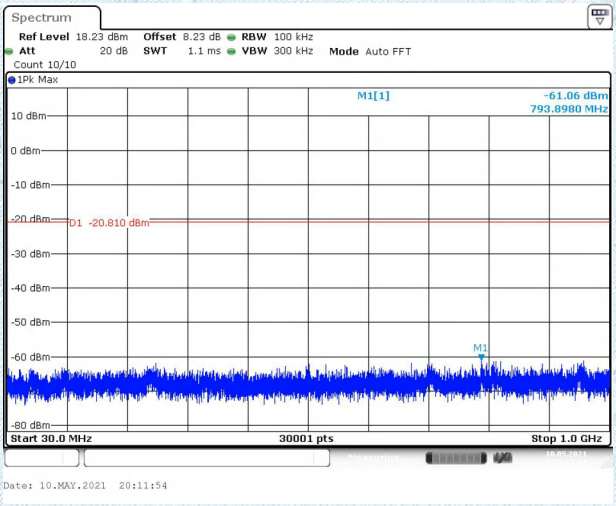


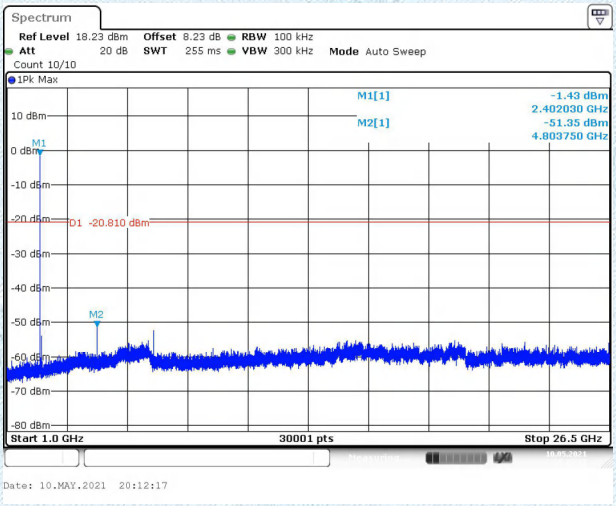
CH78-Bandedge



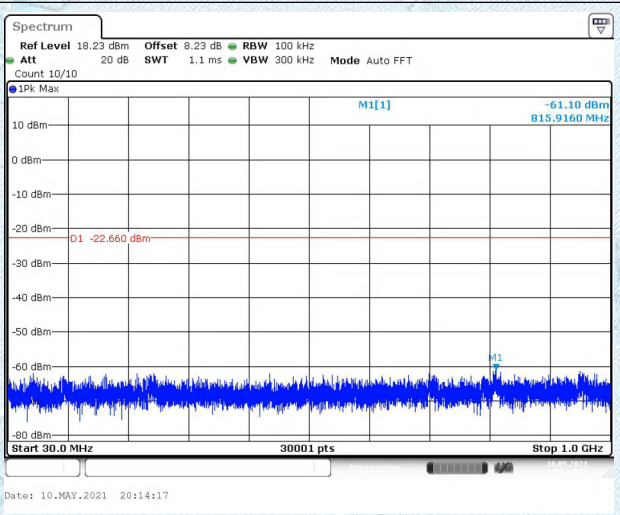
DH5

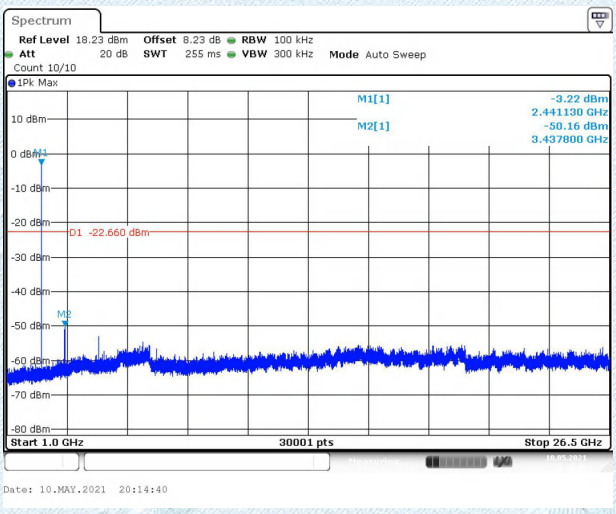
CH00-SE



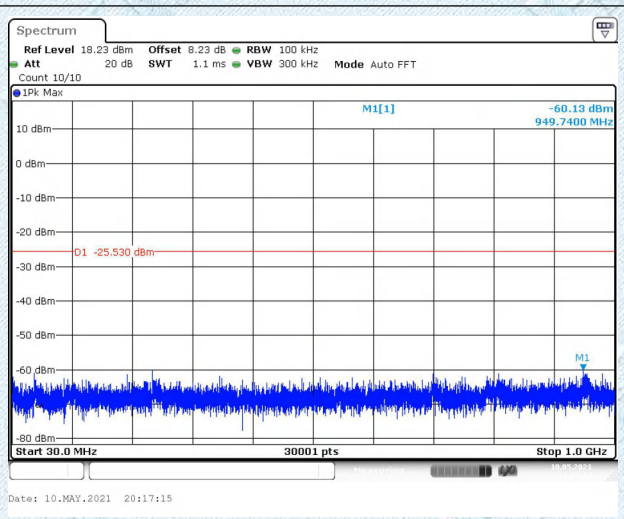


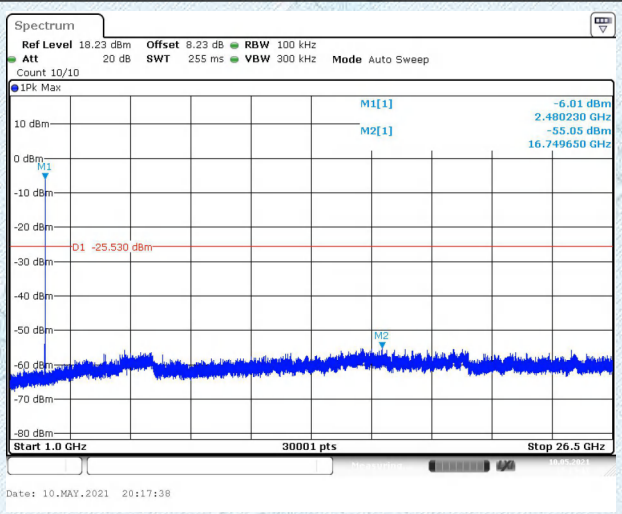
CH39-SE





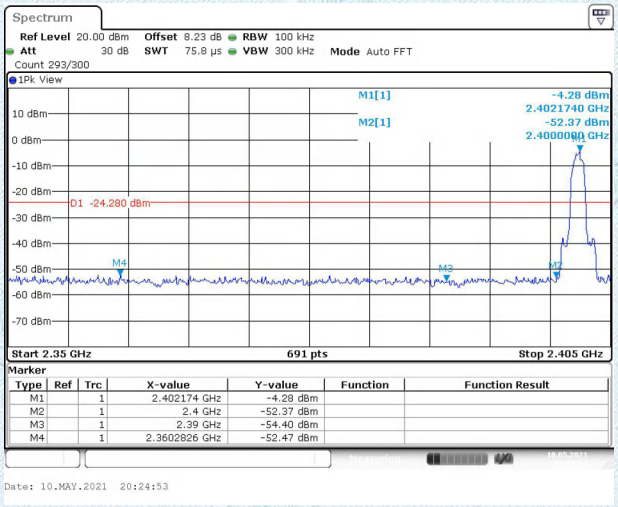
CH78-SE



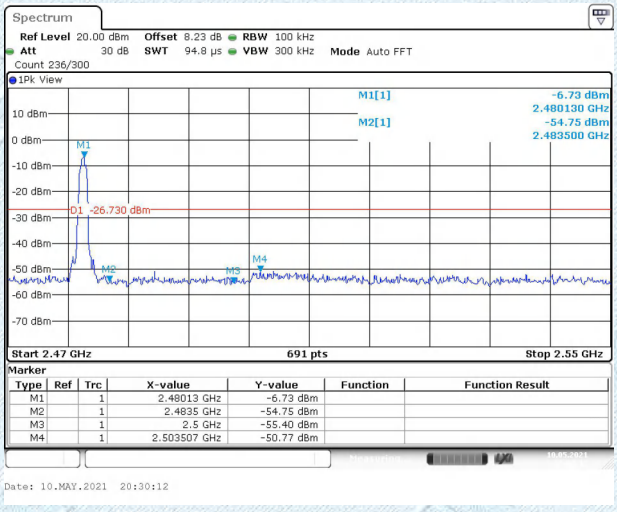


2DH5

CH00-Bandedge

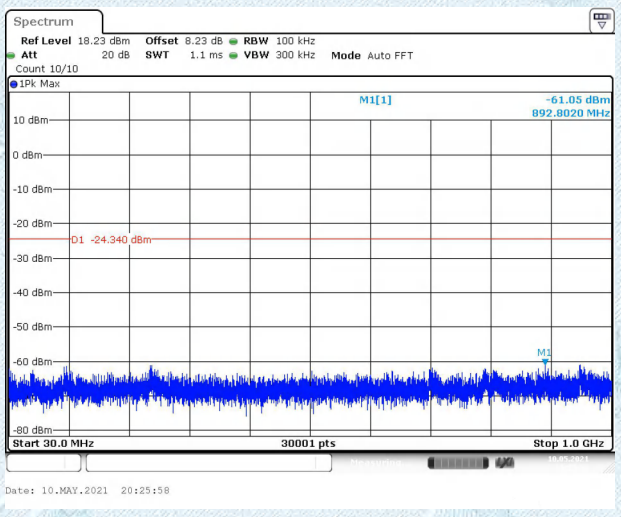


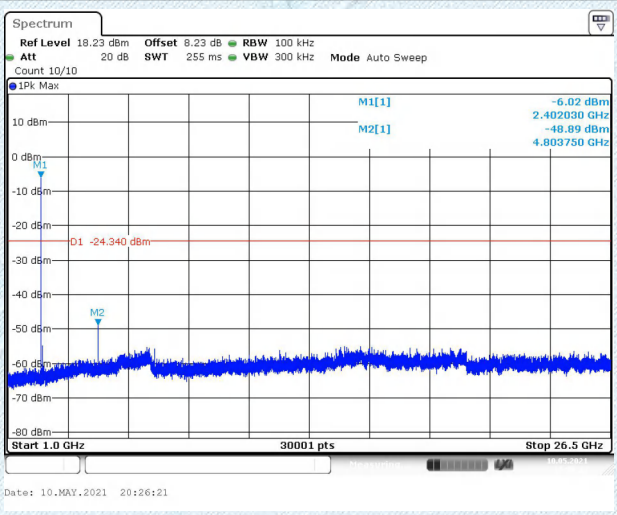
CH78-Bandedge



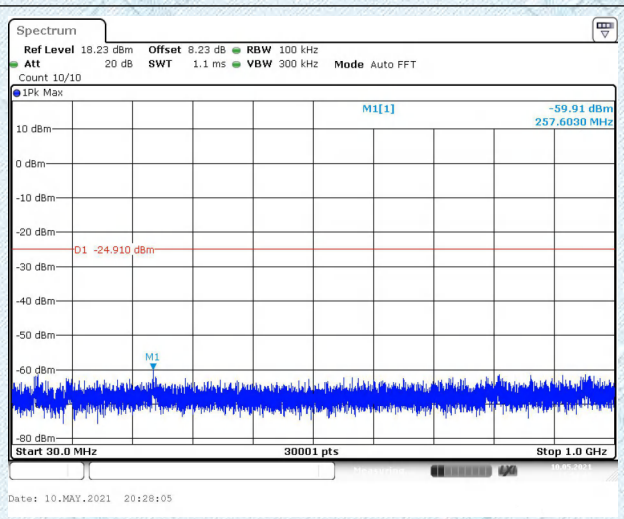
2DH5

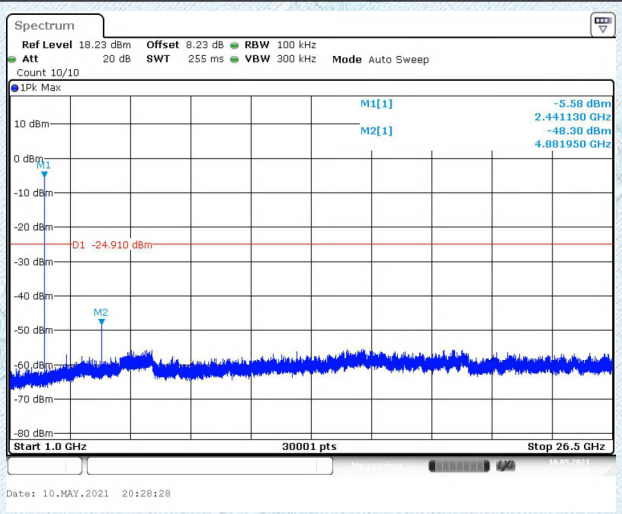
CH00-SE



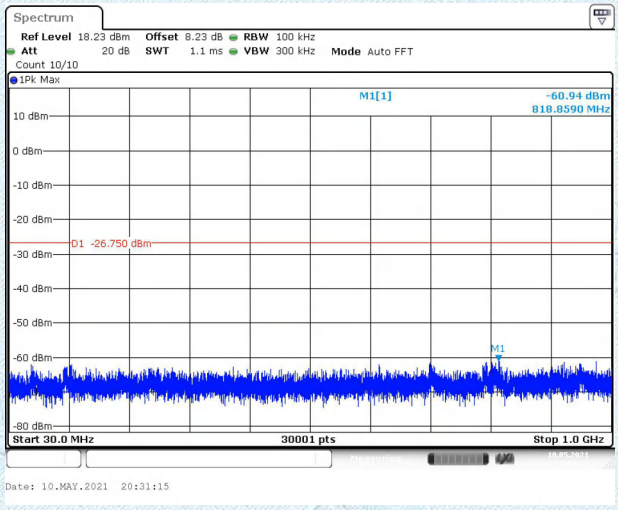


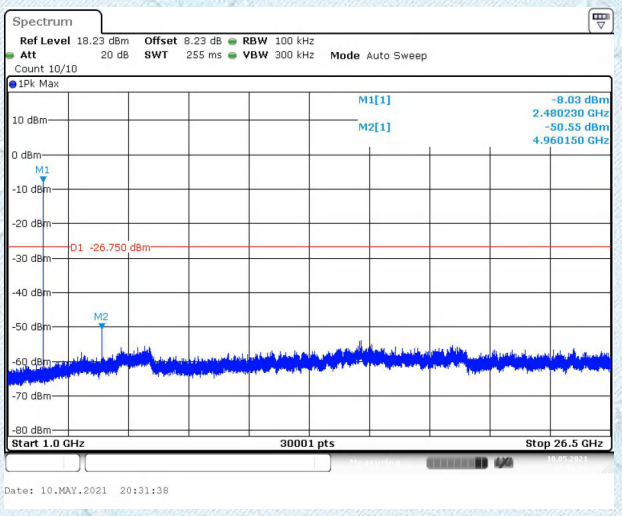
CH39-SE





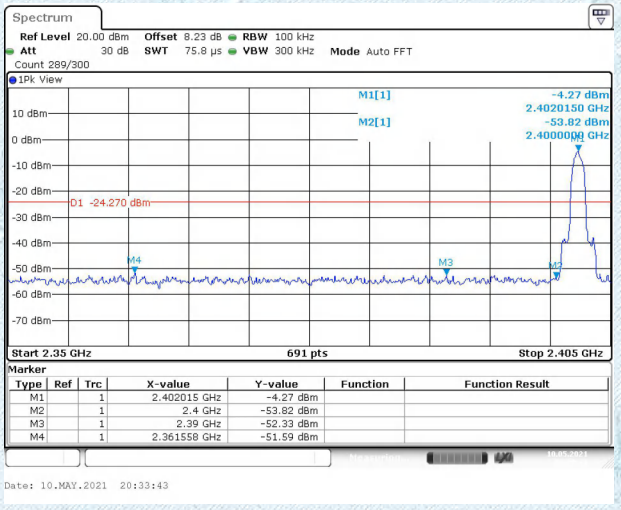
CH78-SE



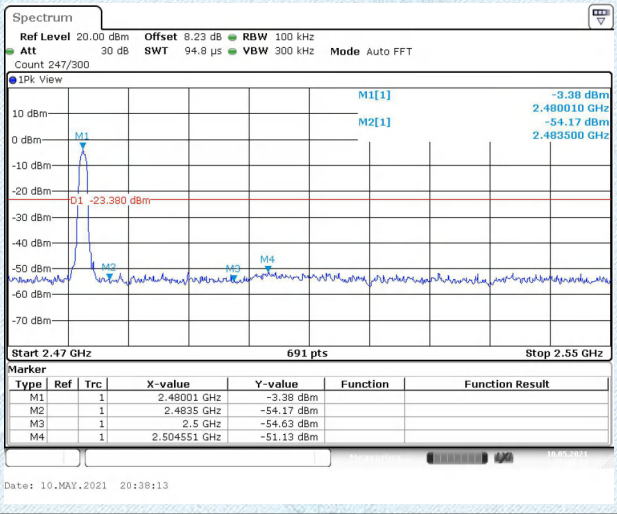


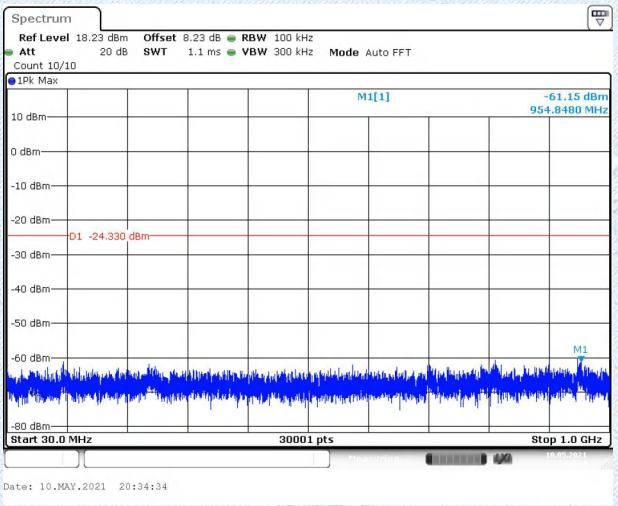
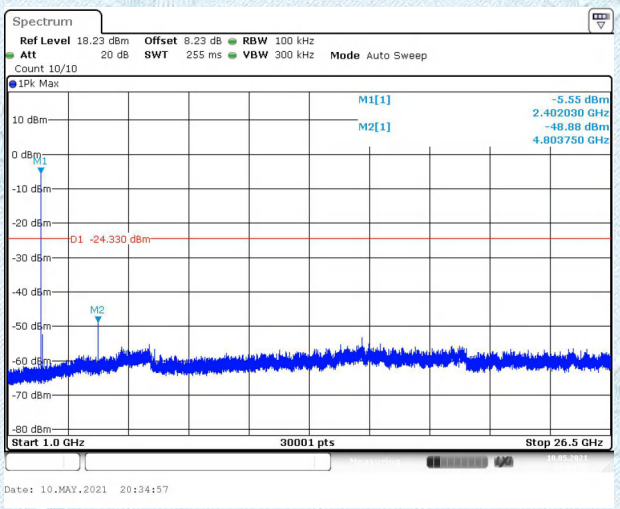
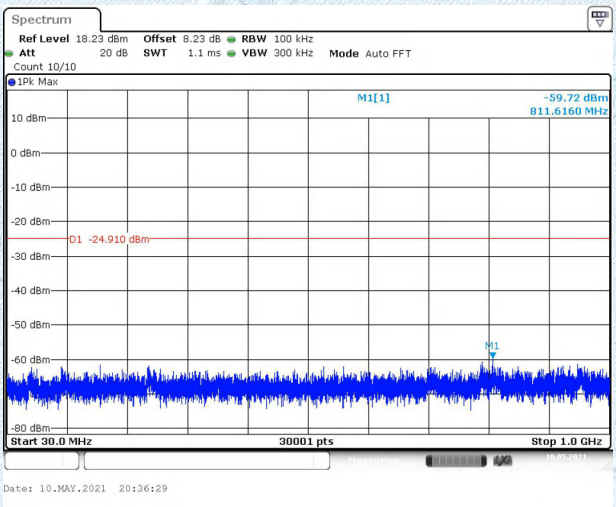
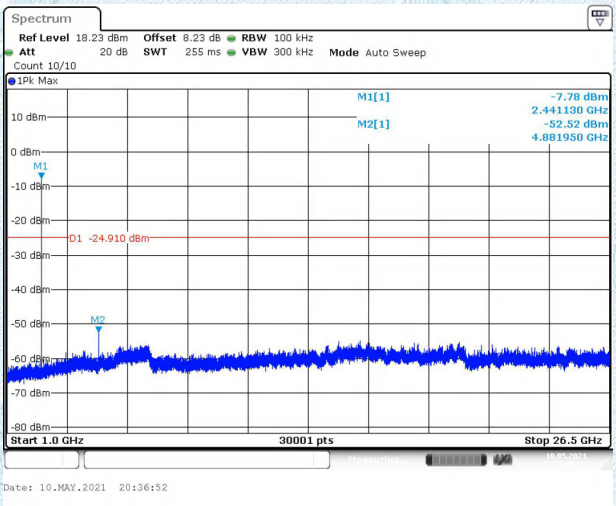
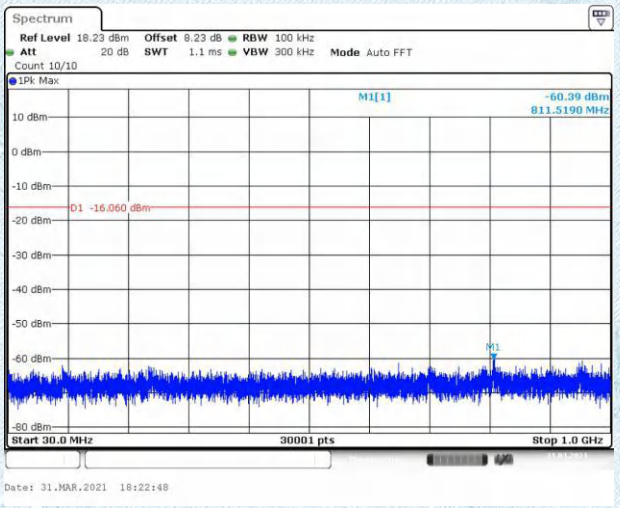
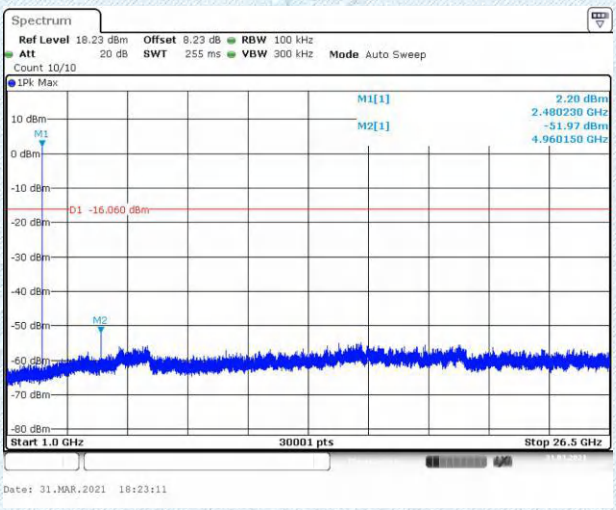
3DH5

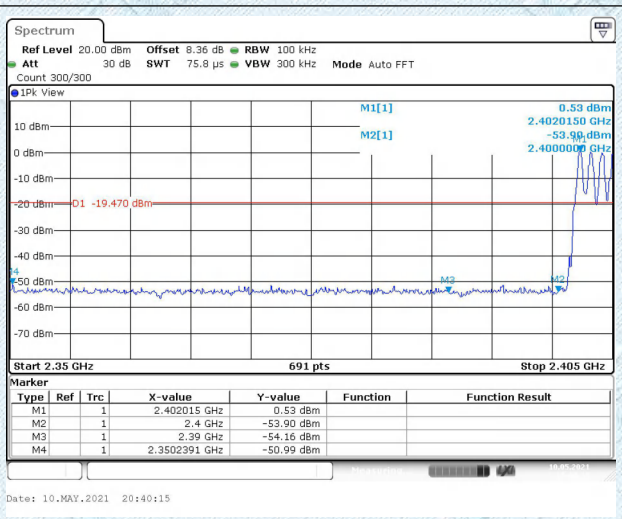
CH00-Bandedge



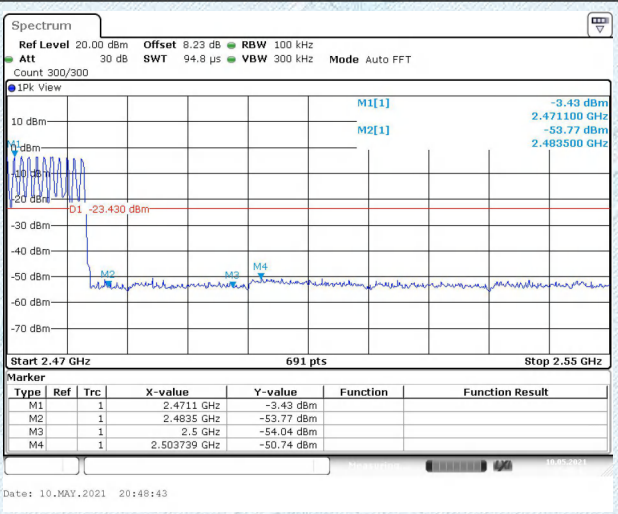
CH78-Bandedge



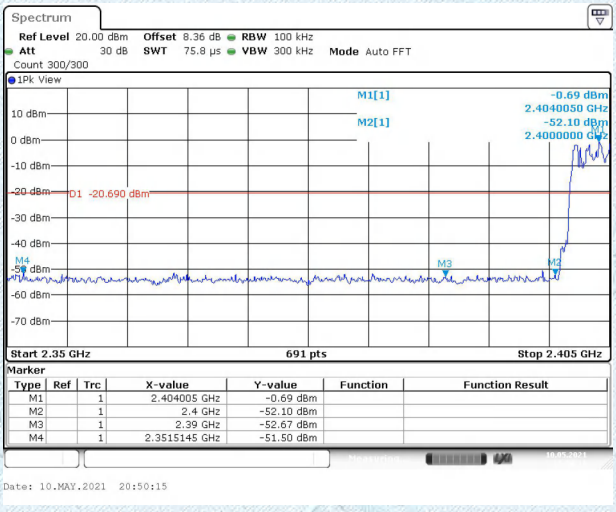
3DH5	
CH00-SE	
	
CH39-SE	
	
CH78-SE	
	
DH5(2402)-Hopping on	DH5(2480)-Hopping on



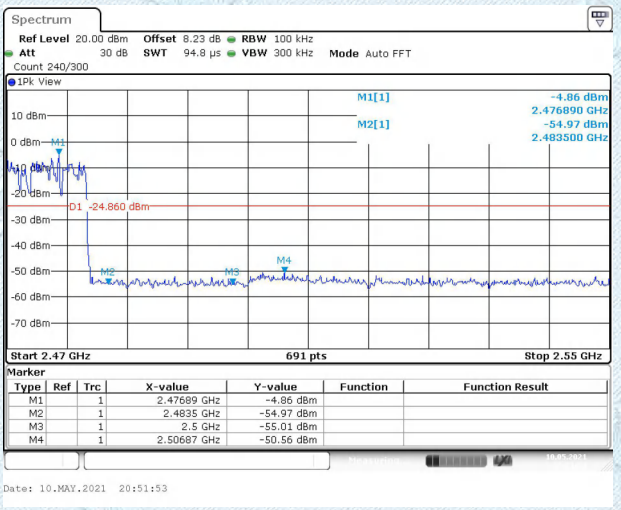
2DH5(2402)-Hopping on



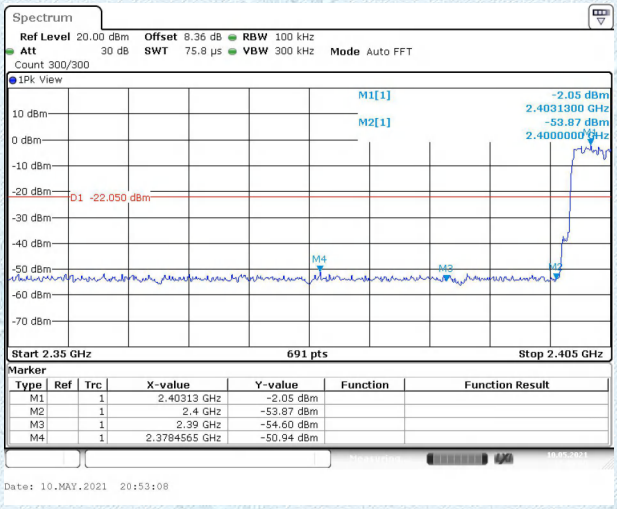
2DH5(2480)-Hopping on

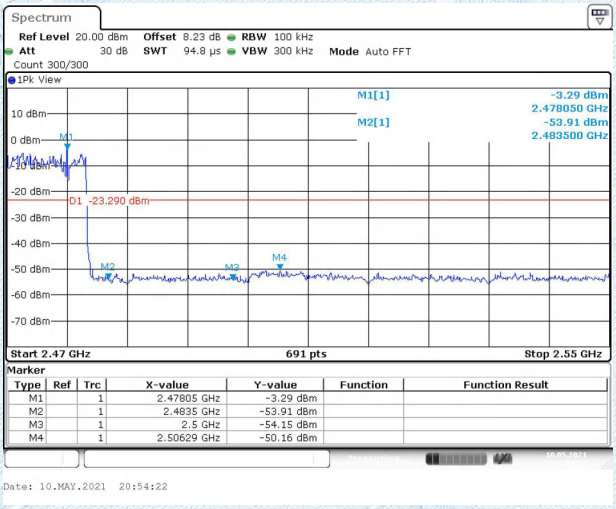


3DH5(2402)-Hopping on



3DH5(2480)-Hopping on



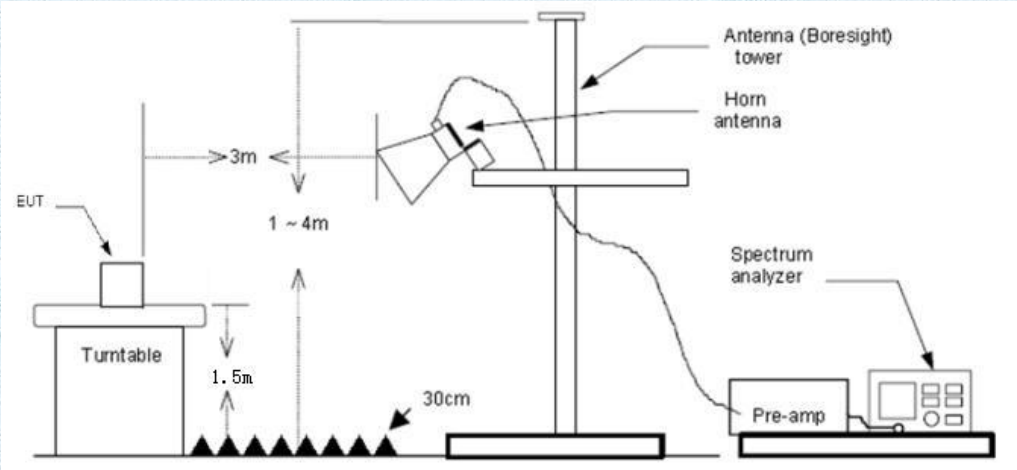


3.9. Band Edge Emissions(Radiated)

Limit

Restricted Frequency Band (MHz)	(dBuV/m)(at 3m)	
	Peak	Average
2310 ~2390	74	54
2483.5 ~2500	74	54
Note: All restriction bands have been tested, only the worst case is reported.		

Test Configuration



Test Procedure

1. The EUT was setup and tested according to ANSI C63.10:2013 requirements.
2. The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
4. The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2013 on radiated measurement.
5. The receiver set as follow:
   RBW=1MHz, VBW=3MHz PEAK detector for Peak value.
   RBW=1MHz, VBW=10Hz with PEAK Detector for Average Value.

Test Mode

Please refer to the clause 2.3.

Test Results

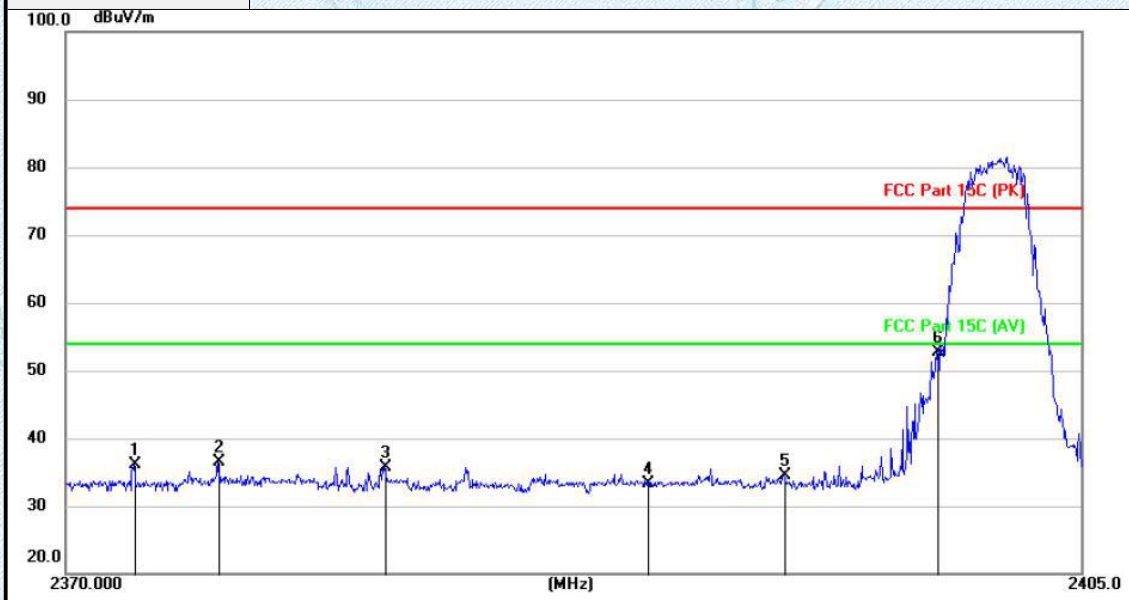
Note:

1.Measurement = Reading level + Correct Factor

Correct Factor=Antenna Factor + Cable Loss -Preamplifier Factor

2.Pre-scan DH5, 2DH5 and 3DH5 modulation, and found the DH5 modulation which it is worse case, so only show the test data for worse case.

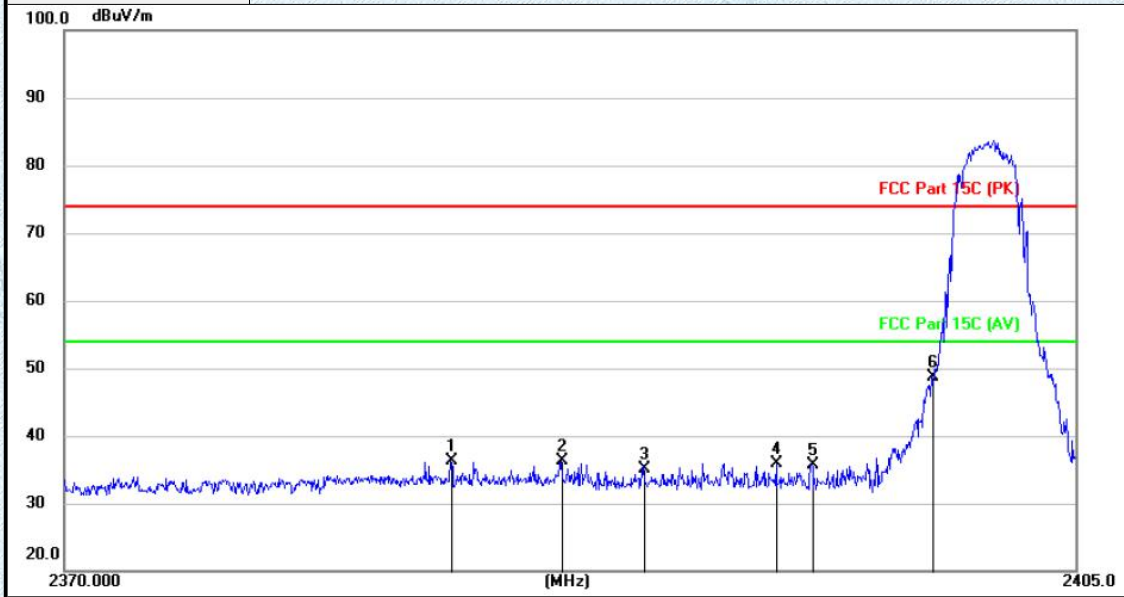
Ant. Pol.	Horizontal
Test Mode:	DH5 Mode 2402MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector
1		2372.345	47.03	-10.92	36.11	74.00	-37.89	peak
2		2375.240	47.39	-10.93	36.46	74.00	-37.54	peak
3		2380.955	46.63	-10.93	35.70	74.00	-38.30	peak
4		2390.000	44.23	-10.92	33.31	74.00	-40.69	peak
5		2394.724	45.36	-10.91	34.45	74.00	-39.55	peak
6	*	2400.000	63.69	-10.92	52.77	74.00	-21.23	peak

Measurement = Reading level + Correct Factor

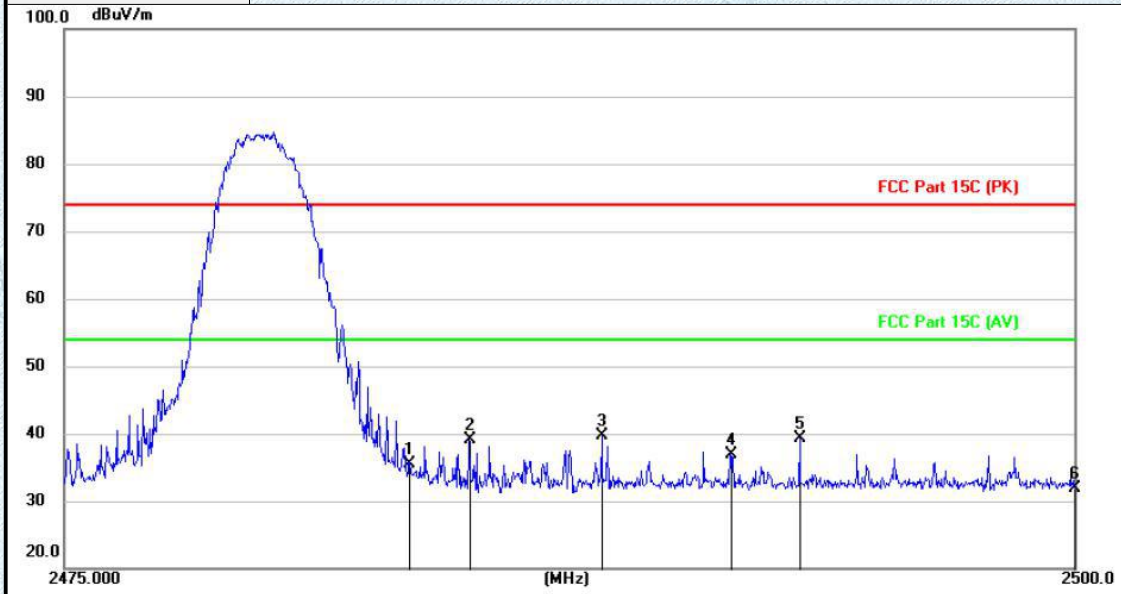
Ant. Pol.	Vertical
Test Mode:	DH5 Mode 2402 MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector
1		2383.335	47.30	-10.92	36.38	74.00	-37.62	peak
2		2387.143	47.25	-10.92	36.33	74.00	-37.67	peak
3		2390.000	46.02	-10.92	35.10	74.00	-38.90	peak
4		2394.615	46.91	-10.91	36.00	74.00	-38.00	peak
5		2395.837	46.70	-10.91	35.79	74.00	-38.21	peak
6	*	2400.000	59.56	-10.92	48.64	74.00	-25.36	peak

Measurement = Reading level + Correct Factor

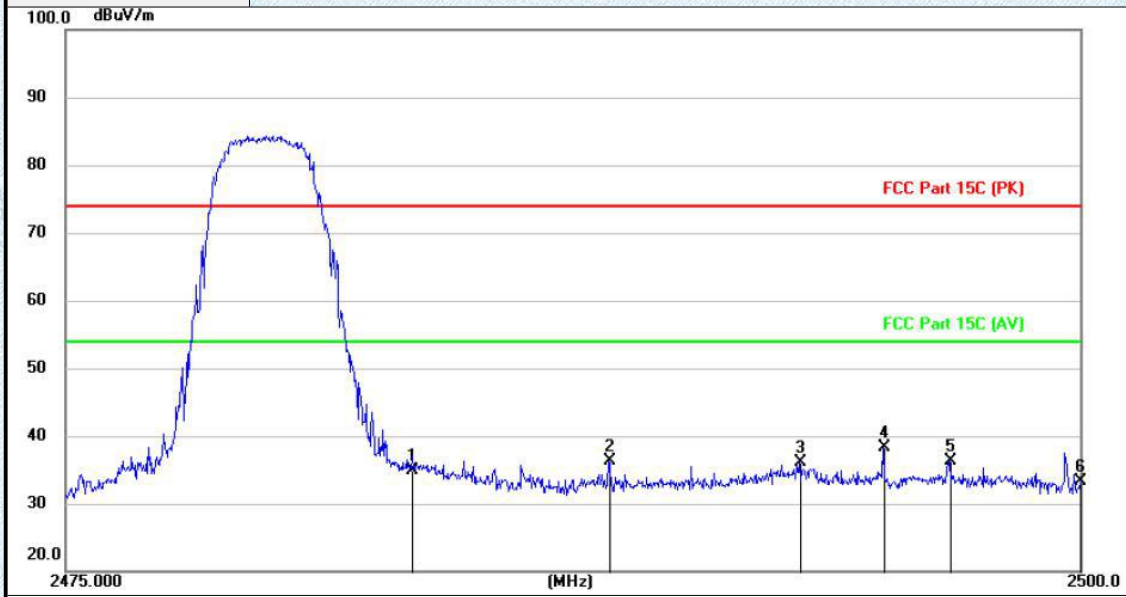
Ant. Pol.	Horizontal
Test Mode:	DH5 Mode 2480MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector
1		2483.500	46.43	-10.88	35.55	74.00	-38.45	peak
2		2485.010	49.89	-10.88	39.01	74.00	-34.99	peak
3	*	2488.293	50.50	-10.88	39.62	74.00	-34.38	peak
4		2491.470	47.77	-10.89	36.88	74.00	-37.12	peak
5		2493.193	50.21	-10.89	39.32	74.00	-34.68	peak
6		2500.000	42.70	-10.88	31.82	74.00	-42.18	peak

Measurement = Reading level + Correct Factor

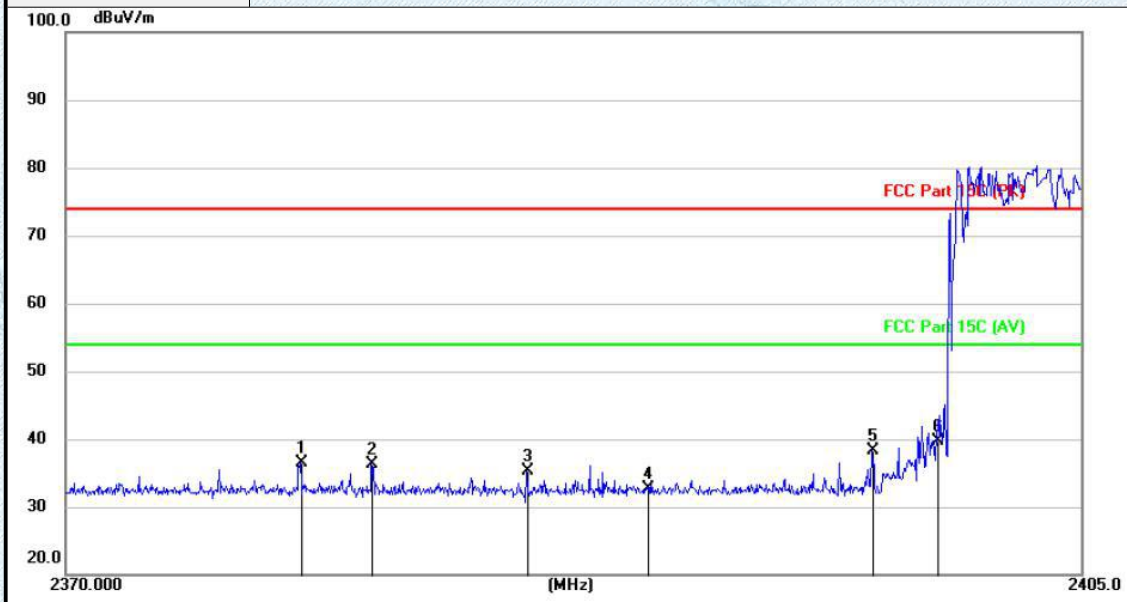
Ant. Pol.	Vertical
Test Mode:	DH5 Mode 2480 MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector
1		2483.500	45.80	-10.88	34.92	74.00	-39.08	peak
2		2488.367	47.10	-10.88	36.22	74.00	-37.78	peak
3		2493.060	47.01	-10.89	36.12	74.00	-37.88	peak
4	*	2495.142	49.12	-10.87	38.25	74.00	-35.75	peak
5		2496.767	47.25	-10.88	36.37	74.00	-37.63	peak
6		2500.000	44.16	-10.88	33.28	74.00	-40.72	peak

Measurement = Reading level + Correct Factor

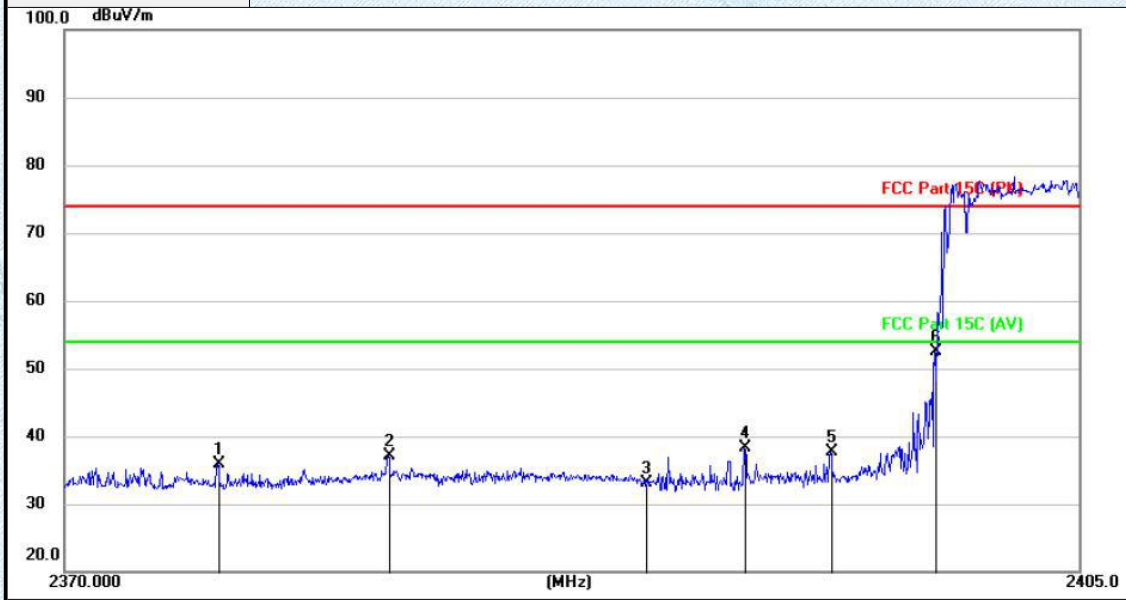
Ant. Pol.	Horizontal
Test Mode:	DH5-Hop Mode 2402MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector
1		2378.046	47.41	-10.92	36.49	74.00	-37.51	peak
2		2380.503	47.27	-10.92	36.35	74.00	-37.65	peak
3		2385.841	46.22	-10.92	35.30	74.00	-38.70	peak
4		2390.000	43.72	-10.92	32.80	74.00	-41.20	peak
5		2397.751	49.17	-10.92	38.25	74.00	-35.75	peak
6	*	2400.000	50.70	-10.92	39.78	74.00	-34.22	peak

Measurement = Reading level + Correct Factor

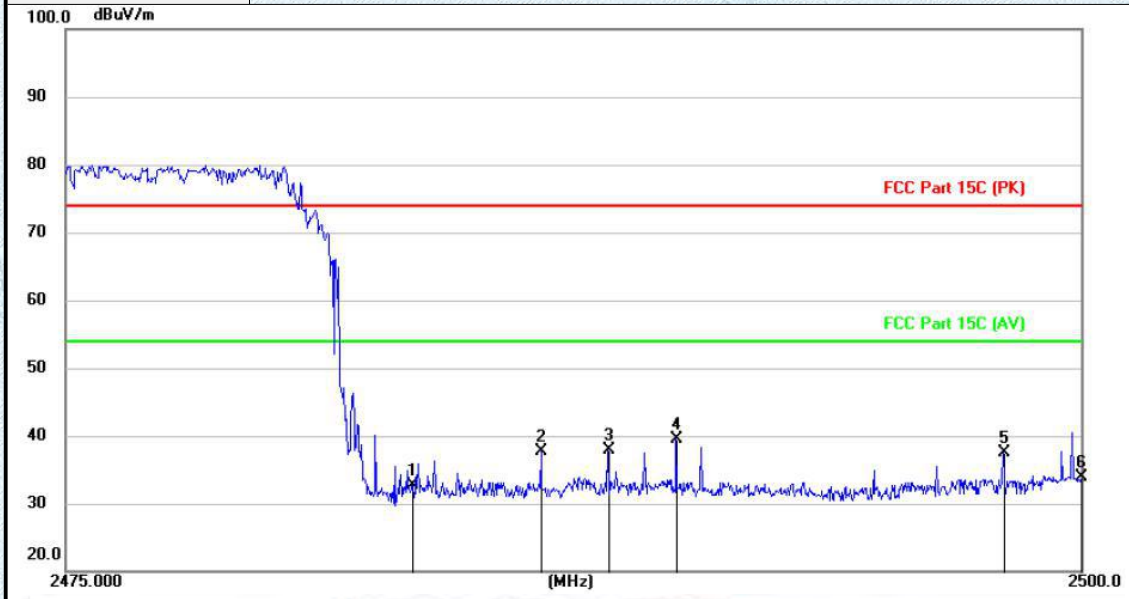
Ant. Pol.	Vertical
Test Mode:	DH5-Hop Mode 2402 MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector
1		2375.274	46.77	-10.93	35.84	74.00	-38.16	peak
2		2381.137	48.10	-10.93	37.17	74.00	-36.83	peak
3		2390.000	44.03	-10.92	33.11	74.00	-40.89	peak
4		2393.401	49.24	-10.92	38.32	74.00	-35.68	peak
5		2396.387	48.62	-10.92	37.70	74.00	-36.30	peak
6	*	2400.000	63.49	-10.92	52.57	74.00	-21.43	peak

Measurement = Reading level + Correct Factor

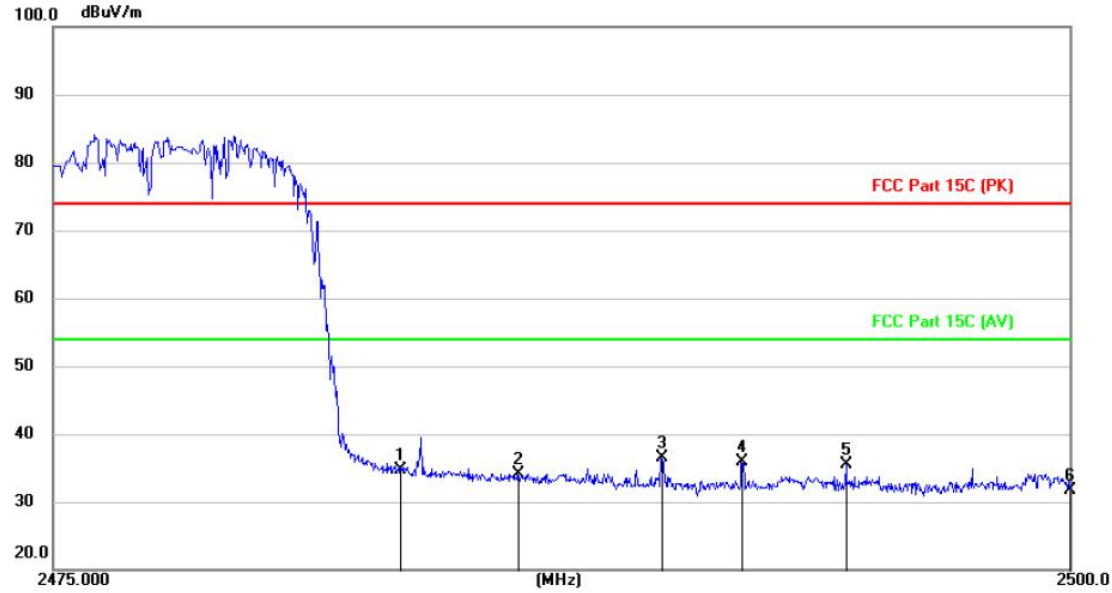
Ant. Pol.	Horizontal
Test Mode:	DH5-Hop Mode 2480MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector
1		2483.500	43.59	-10.88	32.71	74.00	-41.29	peak
2		2486.670	48.51	-10.88	37.63	74.00	-36.37	peak
3		2488.338	48.84	-10.88	37.96	74.00	-36.04	peak
4	*	2490.003	50.30	-10.89	39.41	74.00	-34.59	peak
5		2498.077	48.40	-10.88	37.52	74.00	-36.48	peak
6		2500.000	44.84	-10.88	33.96	74.00	-40.04	peak

Measurement = Reading level + Correct Factor

Ant. Pol.	Vertical
Test Mode:	DH5-Hop Mode 2480 MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector
1		2483.500	45.59	-10.88	34.71	74.00	-39.29	peak
2		2486.405	45.04	-10.88	34.16	74.00	-39.84	peak
3	*	2489.938	47.31	-10.89	36.42	74.00	-37.58	peak
4		2491.920	46.78	-10.89	35.89	74.00	-38.11	peak
5		2494.488	46.40	-10.87	35.53	74.00	-38.47	peak
6		2500.000	42.58	-10.88	31.70	74.00	-42.30	peak

Measurement = Reading level + Correct Factor

3.10. Radiated Spurious Emissions

Limit

Radiated Emission Limits (9 kHz~1000 MHz)

Frequency (MHz)	Field Strength (microvolt/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Radiated Emission Limit (Above 1000MHz)

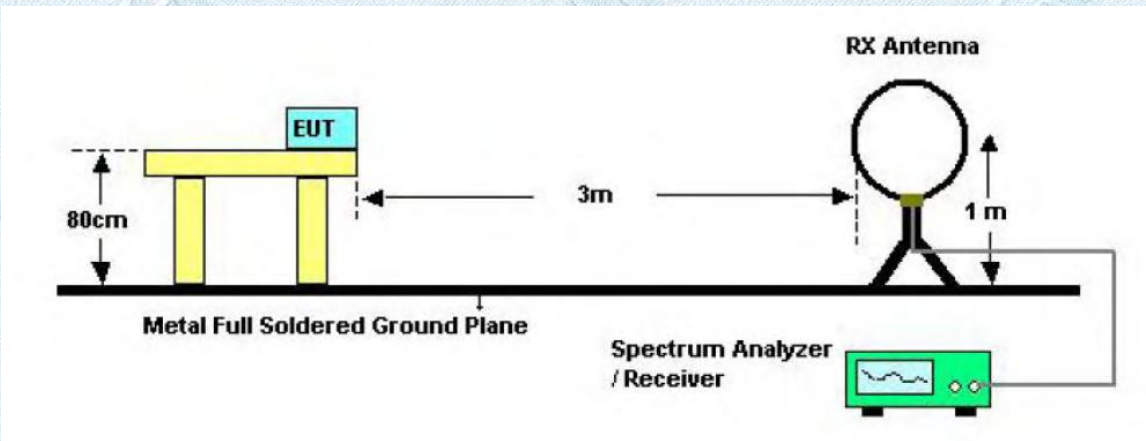
Frequency (MHz)	Distance Meters(at 3m)	
	Peak	Average
Above 1000	74	54

Note:

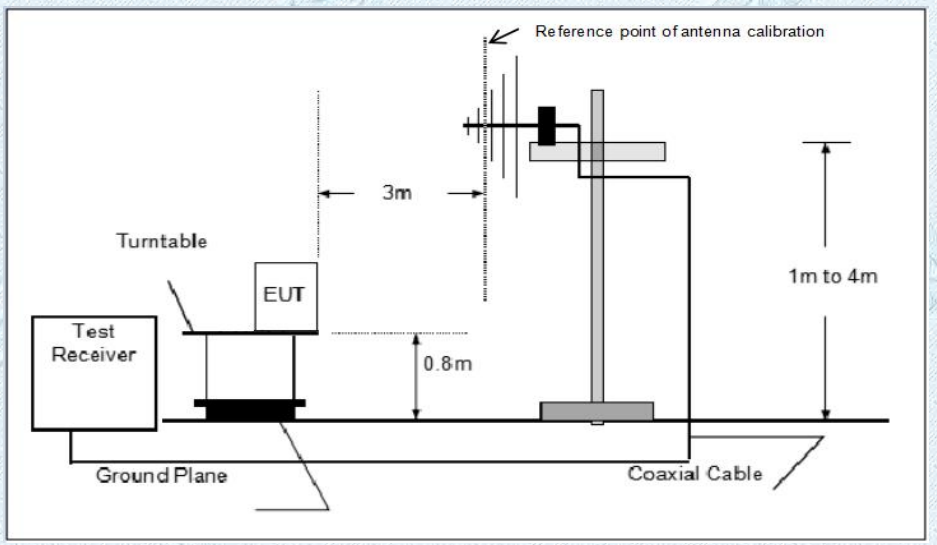
(1) The tighter limit applies at the band edges.

(2) Emission Level (dBuV/m)=20log Emission Level (uV/m).

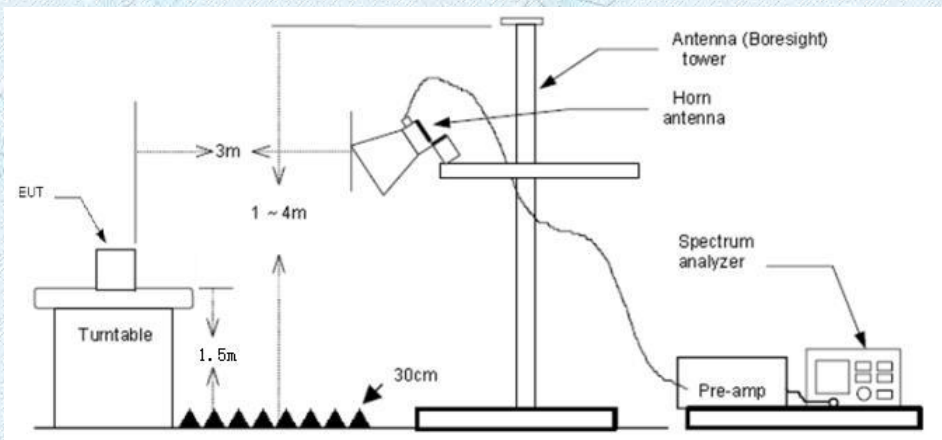
Test Configuration



Below 30MHz Test Setup



Below 1000MHz Test Setup



Above 1GHz Test Setup

Test Procedure

1. The EUT was setup and tested according to ANSI C63.10:2013
2. The EUT is placed on a turn table which is 0.8 meter above ground for below 1 GHz, and 1.5 m for above 1 GHz. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the top of a variable height antenna tower.
4. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.
5. Set to the maximum power setting and enable the EUT transmit continuously.
6. Use the following spectrum analyzer settings

   (1) Span shall wide enough to fully capture the emission being measured;

   (2) Below 1 GHz:

   RBW=120 kHz, VBW=300 kHz, Sweep=auto, Detector function=peak, Trace=max hold;

   If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

   (3) From 1 GHz to 10th harmonic:

   RBW=1MHz, VBW=3MHz Peak detector for Peak value.

   RBW=1MHz, VBW=10Hz Peak detector for Average value.

Test Mode

Please refer to the clause 2.3.

Test Result

9 KHz~30 MHz and 18GHz~25GHz

From 9 KHz~30 MHz and 18GHz~25GHz: Conclusion: PASS

Note:

1) Measurement = Reading level + Correct Factor
   Correct Factor=Antenna Factor + Cable Loss -Preamplifier Factor
2) The peak level is lower than average limit(54 dBuV/m), this data is the too weak instrument of signal is unable to test.
3) The emission levels of other frequencies are very lower than the limit and not show in test report.
4) The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
5) Pre-scan DH5, 2DH5 and 3DH5 modulation, and found the DH5 modulation 2402MHz which it is worse case for 30MHz-1GHz , so only show the test data for worse case.
6) Pre-scan DH5, 2DH5 and 3DH5 modulation, and found the DH5 modulation which it is worse case for above 1GHz, so only show the test data for worse case.

RADIATED EMISSION BELOW 30MHZ

No emission found between lowest internal used/generated frequencies to 30MHz.

30MHz-1GHz

Ant. Pol.	Horizontal

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector
1		43.1411	34.42	-16.46	17.96	40.00	-22.04	QP
2		74.2390	38.81	-20.13	18.68	40.00	-21.32	QP
3	*	131.0663	49.70	-21.08	28.62	43.50	-14.88	QP
4		300.0514	32.28	-14.66	17.62	46.00	-28.38	QP
5		382.3195	33.46	-11.48	21.98	46.00	-24.02	QP
6		468.2189	34.99	-10.18	24.81	46.00	-21.19	QP

Measurement = Reading level + Correct Factor

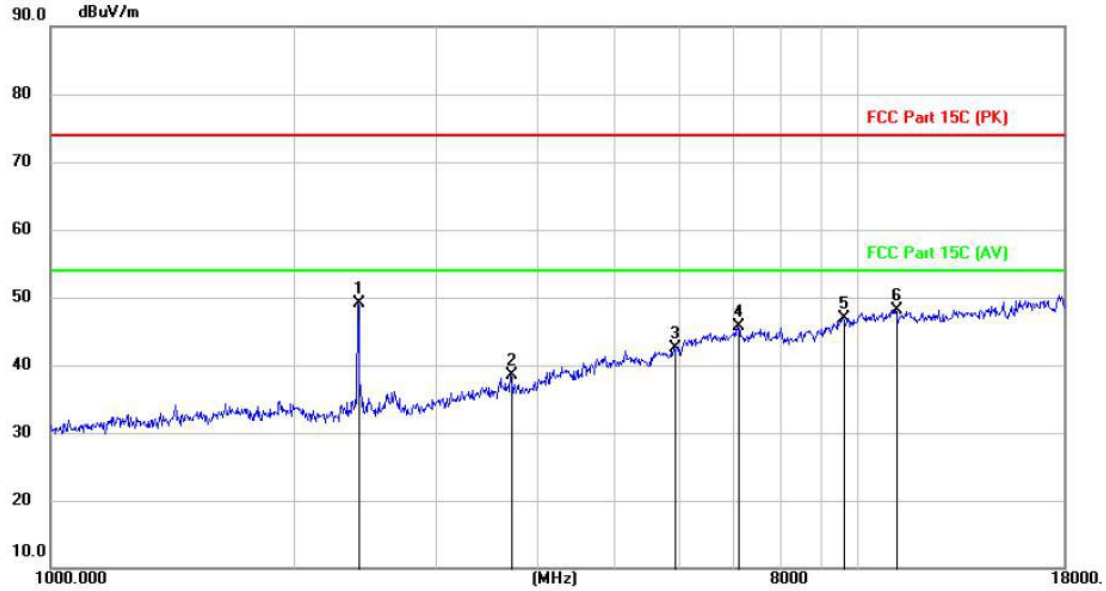
Ant. Pol.	Vertical

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector
1		43.5666	31.45	-16.38	15.07	40.00	-24.93	QP
2		69.0413	36.56	-19.53	17.03	40.00	-22.97	QP
3	*	133.1510	50.70	-21.24	29.46	43.50	-14.04	QP
4		269.9956	36.52	-15.36	21.16	46.00	-24.84	QP
5		370.7022	40.62	-11.86	28.76	46.00	-17.24	QP
6		649.6594	26.07	-7.36	18.71	46.00	-27.29	QP

Measurement = Reading level + Correct Factor

Adobe 1GHz

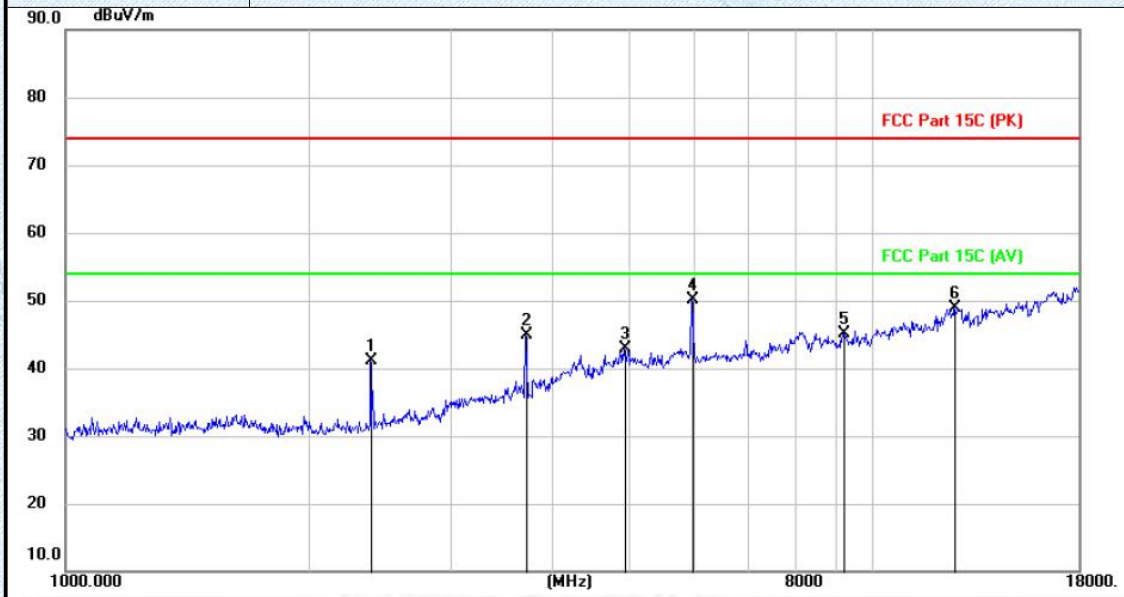
Ant. Pol.	Horizontal
Test Mode:	TX DH5 Mode 2402MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector
1	*	2402.500	59.92	-10.91	49.01	74.00	-24.99	peak
2		3725.100	47.58	-9.12	38.46	74.00	-35.54	peak
3		5931.700	46.52	-3.96	42.56	74.00	-31.44	peak
4		7104.700	46.00	-0.39	45.61	74.00	-28.39	peak
5		9607.100	43.76	3.20	46.96	74.00	-27.04	peak
6		11164.300	42.05	6.08	48.13	74.00	-25.87	peak

Measurement = Reading level + Correct Factor

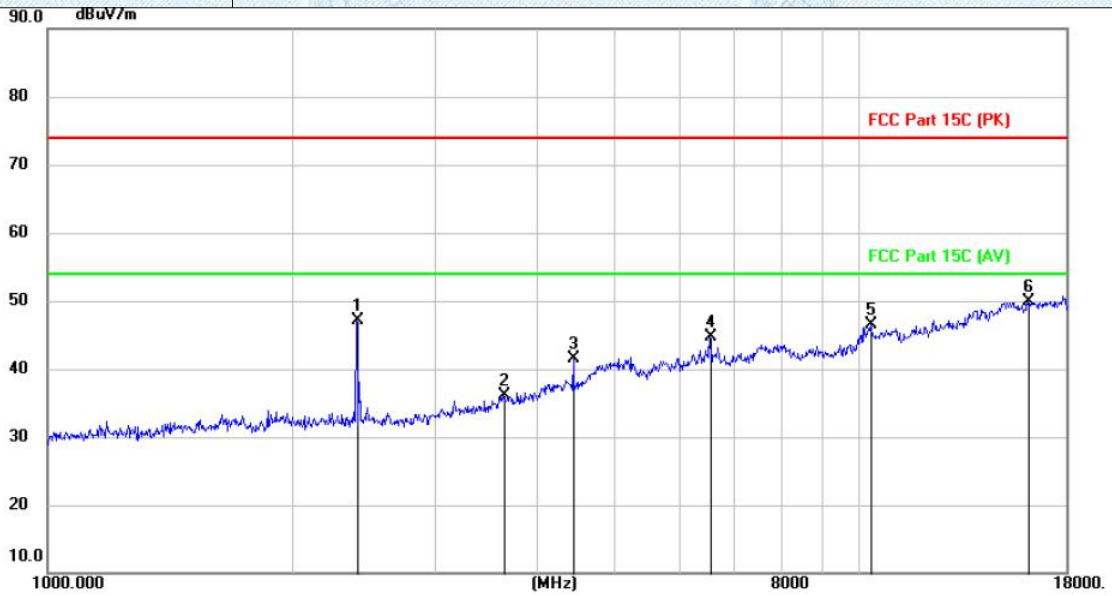
Ant. Pol.	Vertical
Test Mode:	TX DH5 Mode 2402MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector
1		2387.200	51.97	-10.92	41.05	74.00	-32.95	peak
2		3718.300	53.99	-9.14	44.85	74.00	-29.15	peak
3		4930.400	48.54	-5.57	42.97	74.00	-31.03	peak
4	*	5977.600	53.91	-3.85	50.06	74.00	-23.94	peak
5		9188.900	42.89	2.25	45.14	74.00	-28.86	peak
6		12629.700	39.66	9.22	48.88	74.00	-25.12	peak

Measurement = Reading level + Correct Factor

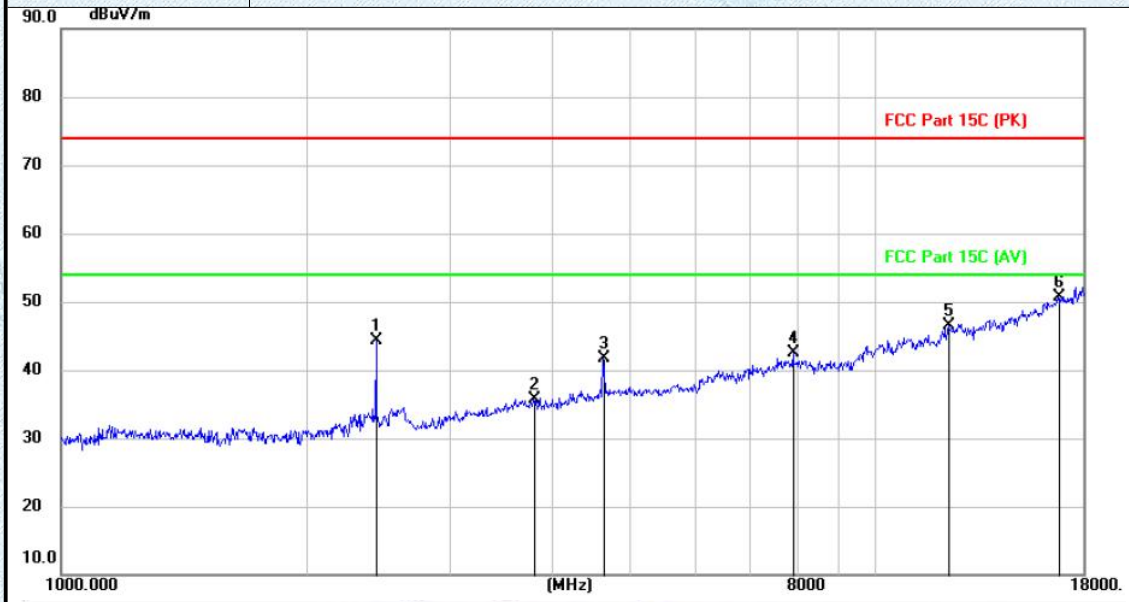
Ant. Pol.	Horizontal
Test Mode:	TX DH5 Mode 2441MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector
1		2402.500	58.06	-10.91	47.15	74.00	-26.85	peak
2		3650.300	45.35	-9.30	36.05	74.00	-37.95	peak
3		4451.000	48.40	-6.92	41.48	74.00	-32.52	peak
4		6545.400	46.65	-1.99	44.66	74.00	-29.34	peak
5		10360.200	41.76	4.69	46.45	74.00	-27.55	peak
6	*	16140.200	36.88	12.95	49.83	74.00	-24.17	peak

Measurement = Reading level + Correct Factor

Ant. Pol.	Vertical
Test Mode:	TX DH5 Mode 2441MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector
1		2441.600	55.17	-10.90	44.27	74.00	-29.73	peak
2		3805.000	44.61	-8.92	35.69	74.00	-38.31	peak
3		4627.800	48.05	-6.40	41.65	74.00	-32.35	peak
4		7936.000	40.53	1.90	42.43	74.00	-31.57	peak
5		12301.600	37.98	8.54	46.52	74.00	-27.48	peak
6	*	16781.100	37.30	13.37	50.67	74.00	-23.33	peak

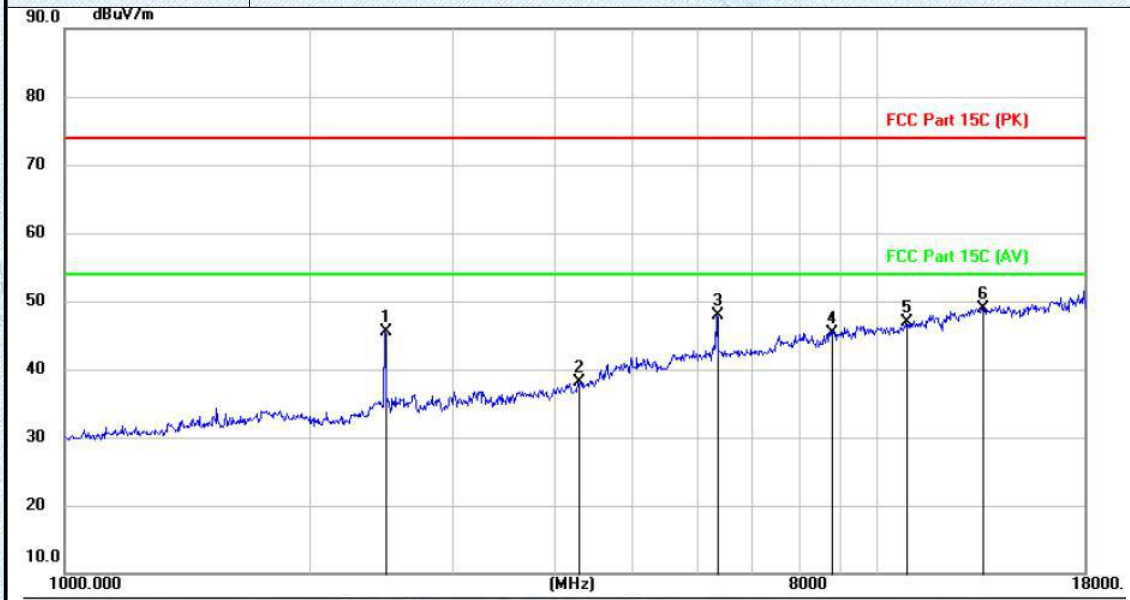
Measurement = Reading level + Correct Factor

Ant. Pol.	Horizontal
Test Mode:	TX DH5 Mode 2480MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector
1		2480.700	53.83	-10.89	42.94	74.00	-31.06	peak
2		3303.500	44.83	-10.04	34.79	74.00	-39.21	peak
3		5154.800	46.79	-5.24	41.55	74.00	-32.45	peak
4		8024.400	42.70	2.06	44.76	74.00	-29.24	peak
5		12786.100	37.32	9.52	46.84	74.00	-27.16	peak
6	*	17277.500	36.41	13.24	49.65	74.00	-24.35	peak

Measurement = Reading level + Correct Factor

Ant. Pol.	Vertical
Test Mode:	TX DH5 Mode 2480MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector
1		2480.700	56.37	-10.89	45.48	74.00	-28.52	peak
2		4291.200	45.60	-7.45	38.15	74.00	-35.85	peak
3		6346.500	50.61	-2.63	47.98	74.00	-26.02	peak
4		8769.000	43.43	1.87	45.30	74.00	-28.70	peak
5		10878.700	41.49	5.51	47.00	74.00	-27.00	peak
6	*	13489.900	38.38	10.60	48.98	74.00	-25.02	peak

Measurement = Reading level + Correct Factor

Note:

1.All test modes had been tested. The GFSK modulation is the worst case and recorded in the report.

2.The main frequency has been screened by the filter .

3.11. Pseudorandom Frequency Hopping Sequence

LIMIT

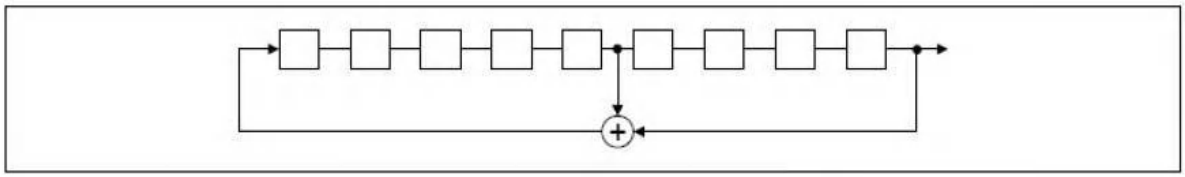
FCC CFR Title 47 Part 15 Subpart C Section 15.247 (a)(1):

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hop-ping channel, whichever is greater. Al-ternatively, frequency hopping systems operating in the 2400–2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW. The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudo randomly ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hop-ping channel bandwidths of their cor-responding transmitters and shall shift frequencies in synchronization with the transmitted signals.

TEST RESULTS

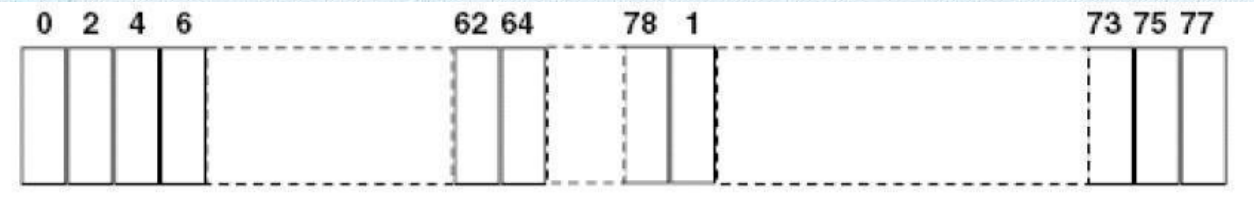
The pseudorandom frequency hopping sequence may be generated in a nice-stage shift register whose 5th and 9th stage outputs are added in a modulo-two addition stage.And the result is fed back to the input of the friststage.The sequence begins with the frist one of 9 consecutive ones, for example: the shift register is initialized with nine ones.

- Number of shift register stages: 9
- Length of pseudo-random sequence:29-1=511 bits
- Longest sequence of zeros:8(non-inverted signal)



Linear Feedback Shift Register for Generation of the PRBS sequence

An explame of pseudorandom frequency hopping sequence as follows:

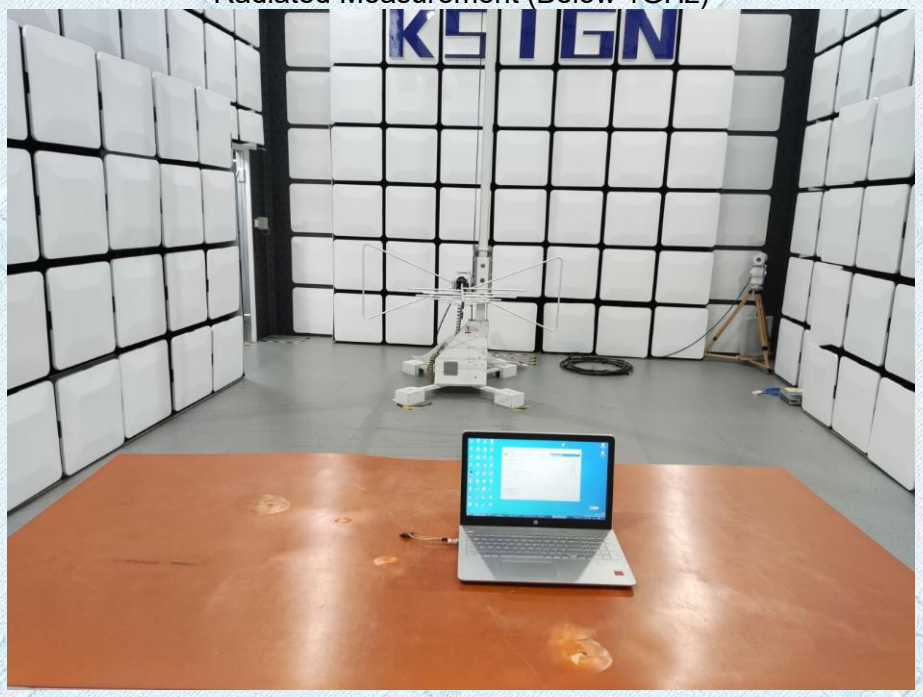


Each frequency used equally one the average by each transmitter.

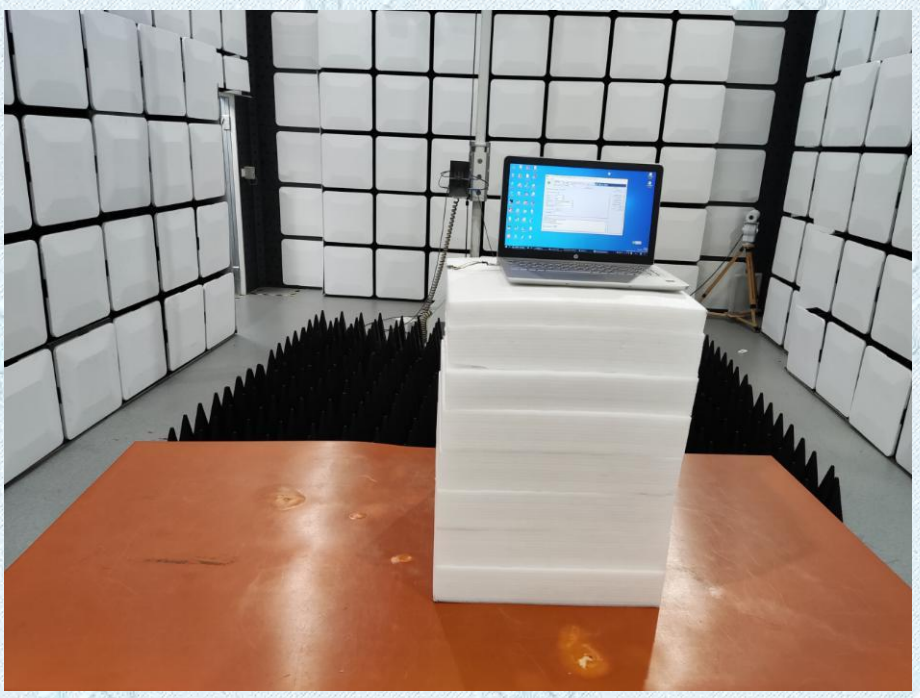
The system receiver have input bandwidths that match the hopping channel bandwidths of their corresponding transmitter and shift frequencies in synchronization with the transmitted signals.

4.EUT TEST PHOTOS

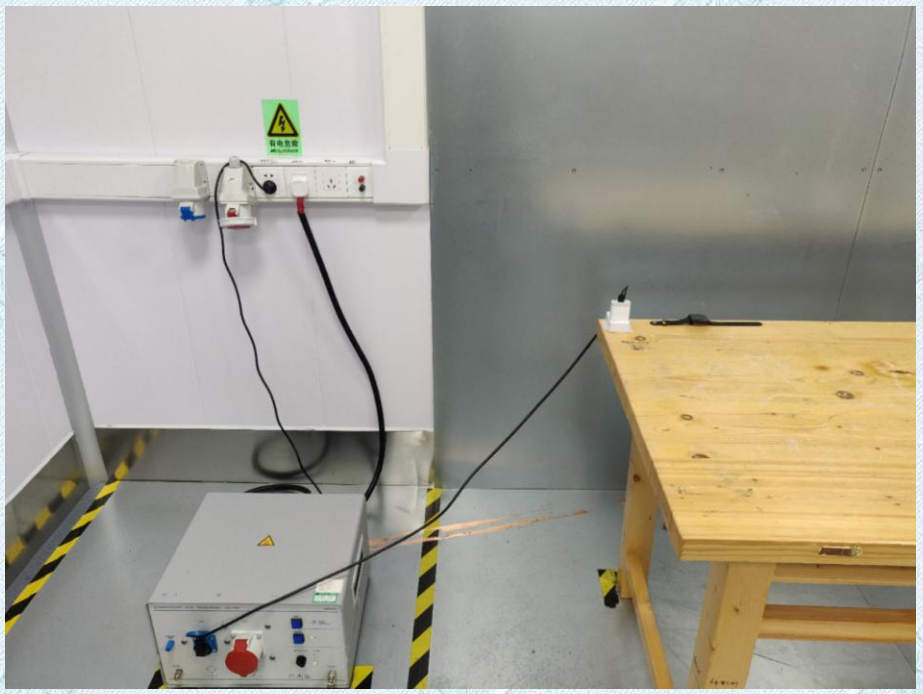
Radiated Measurement (Below 1GHz)



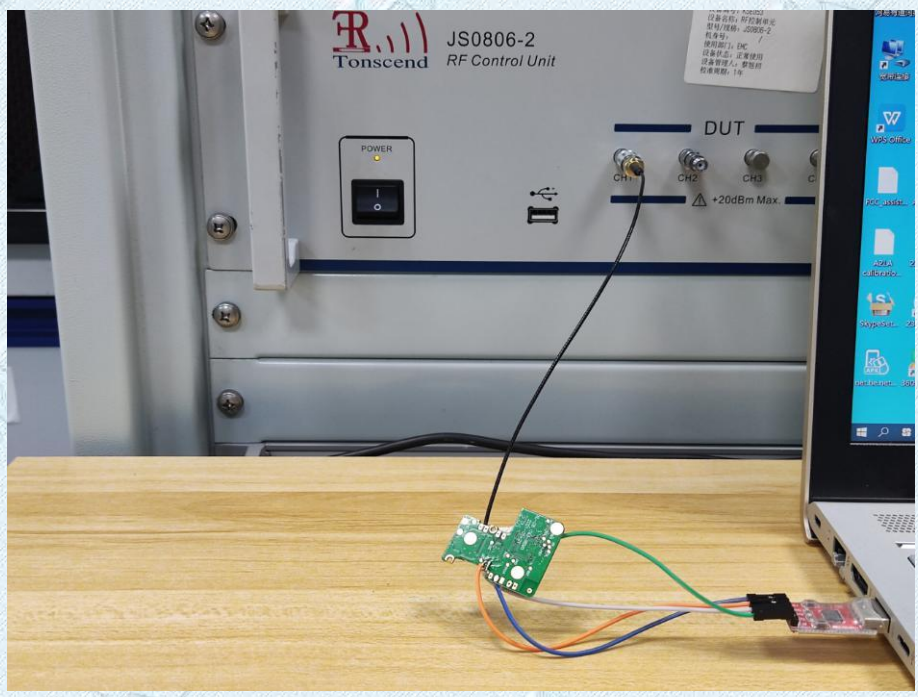
Radiated Measurement (Above 1GHz)



CONDUCTED EMISSION TEST SETUP



RF Conducted


Tonscend
JS0806-2
RF Control Unit
POWER
DUT
CH1
CH2
CH3
+20dBm Max.

5.PHOTOGRAPHS OF EUT CONSTRUCTIONAL

Please refer to the attached external photos and internal photos

**********THE END**********