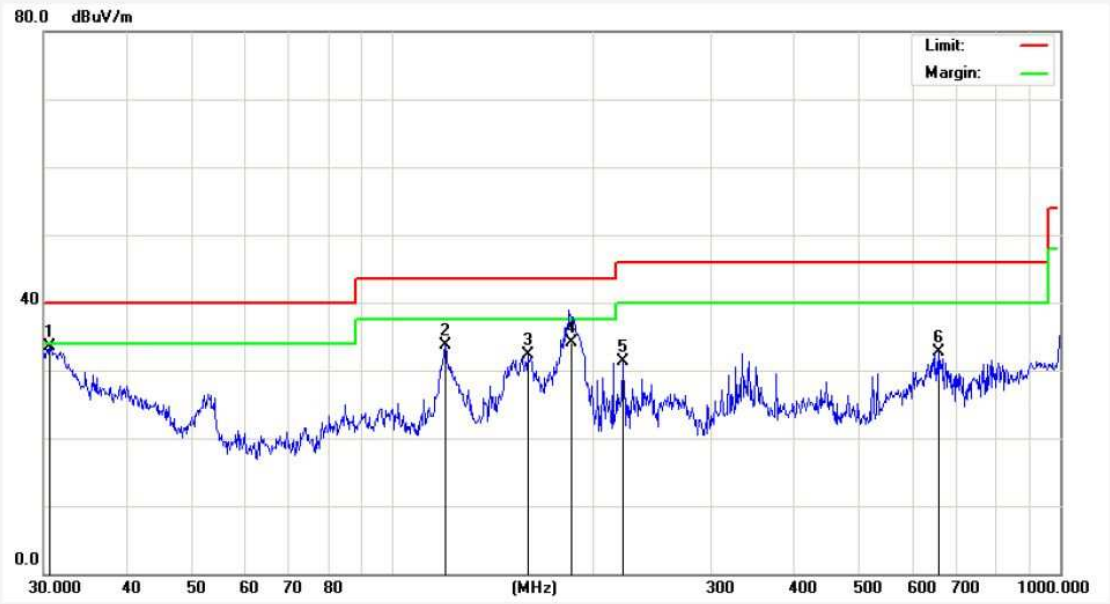
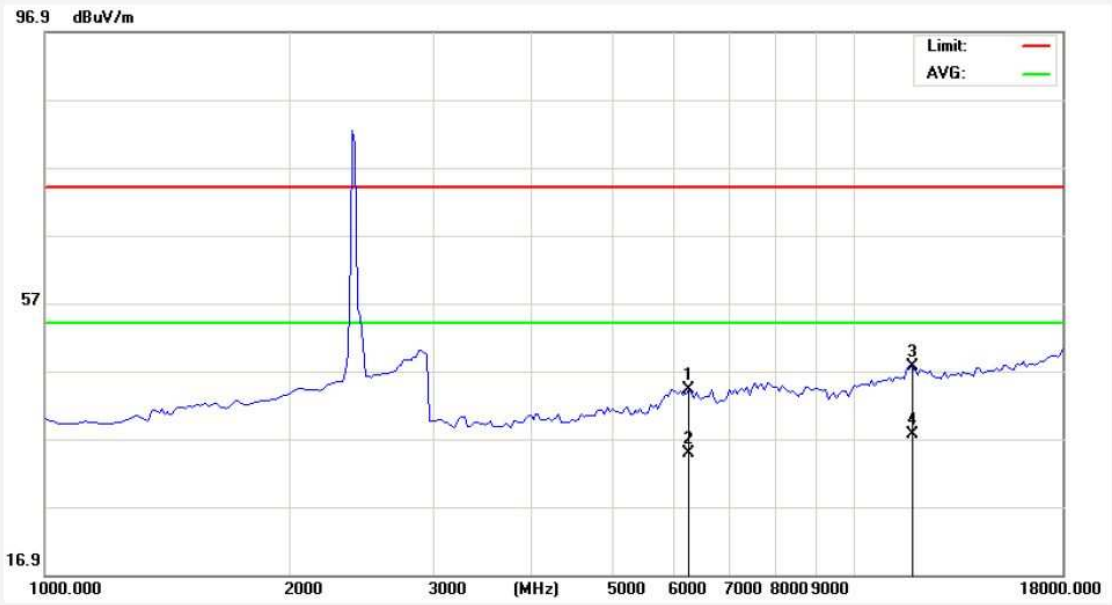
Job No.:	**R011412112E**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15C _3m**	**Power Source:**	**DC 3.7V**
Test item:	**Radiation Test (30~1000MHz)**	**Temp.(C)/Hum.(%RH):**	**24.3(C)/55%RH**
Test Mode:	**BT Mode**	**Distance:**	**3m**



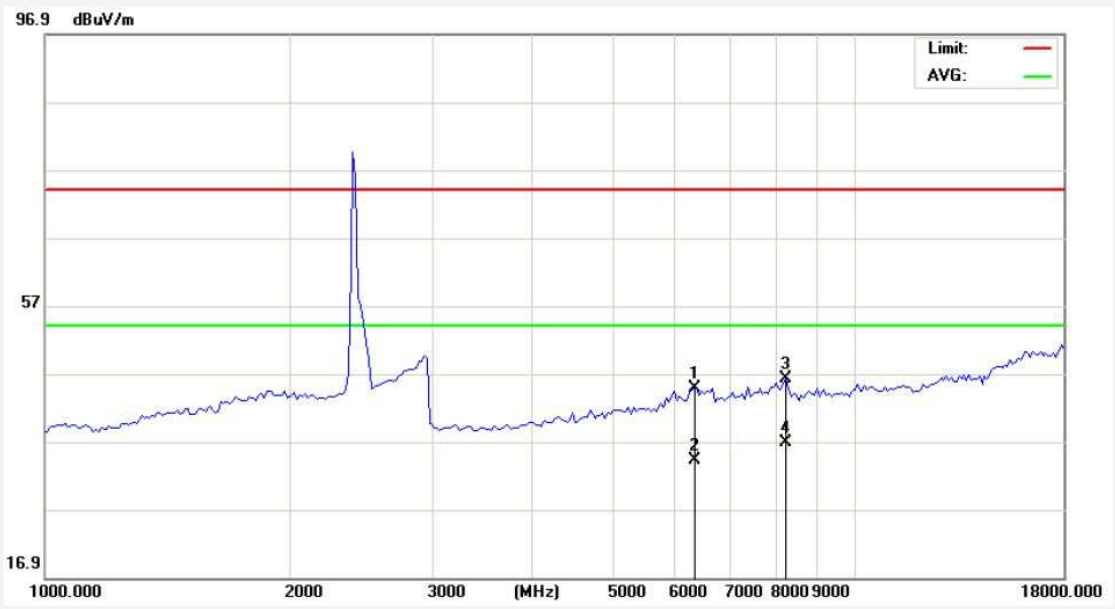
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	30.6378	50.12	-16.61	33.51	40.00	-6.49	peak			
2	119.8555	49.99	-16.32	33.67	43.50	-9.83	peak			
3	159.2251	50.26	-17.91	32.35	43.50	-11.15	peak			
4	185.4840	50.52	-16.34	34.18	43.50	-9.32	QP	100	360	
5	221.3920	46.39	-15.04	31.35	46.00	-14.65	peak			
6	656.5298	41.59	-8.80	32.79	46.00	-13.21	peak			

Job No.:	**R011412112E**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15C_Class B_3m**	**Power Source:**	**DC 3.7V**
Test item:	**Radiation Test (Above 1GHz)**	**Temp.(C)/Hum.(%RH):**	**24.3(C)/55%RH**
Test Mode:	**TX(2402 MHz)**	**Distance:**	**3m**



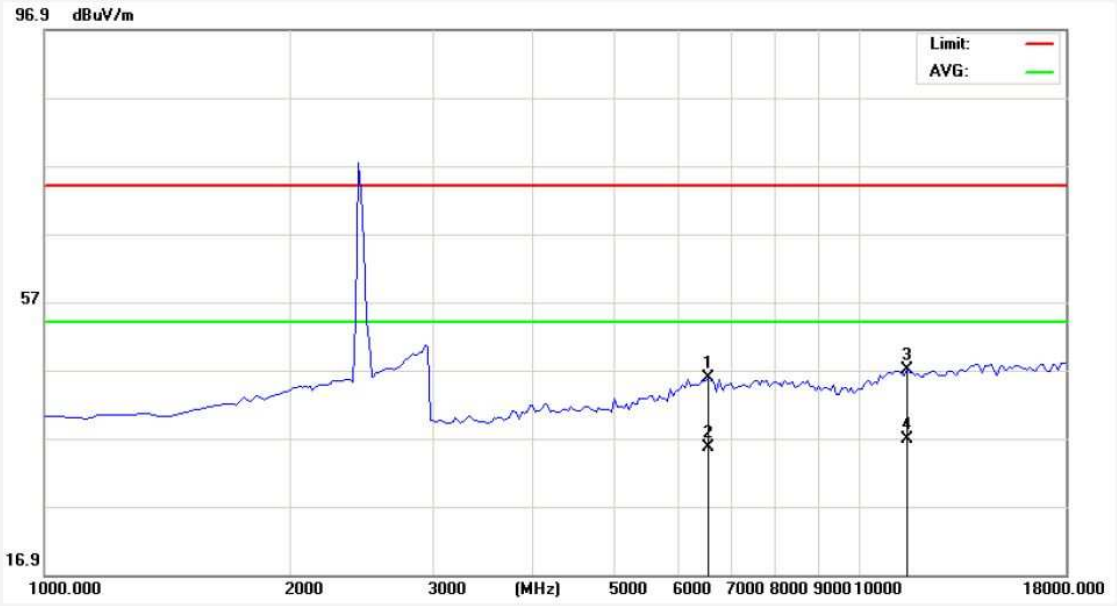
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	6227.500	36.84	7.34	44.18	74.00	-29.82	peak			
2	6227.500	27.40	7.34	34.74	54.00	-19.26	AVG			
3	11795.000	35.96	11.64	47.60	74.00	-26.40	peak			
4	11795.000	25.90	11.64	37.54	54.00	-16.46	AVG			

Job No.:	**R011412112E**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15C_Class B_3m**	**Power Source:**	**DC 3.7V**
Test item:	**Radiation Test (Above 1GHz)**	**Temp.(C)/Hum.(%RH):**	**24.3(C)/55%RH**
Test Mode:	**TX(2402 MHz)**	**Distance:**	**3m**



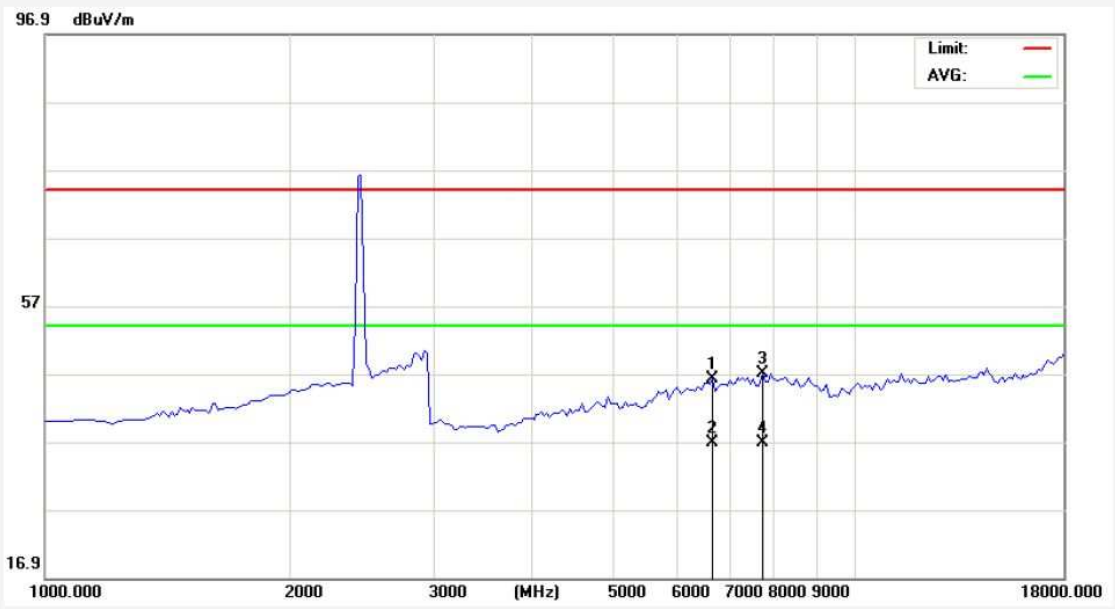
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	6355.000	37.32	7.46	44.78	74.00	-29.22	peak			
2	6355.000	26.79	7.46	34.25	54.00	-19.75	AVG			
3	8225.000	36.46	9.66	46.12	74.00	-27.88	peak			
4	8225.000	27.19	9.66	36.85	54.00	-17.15	AVG			

Job No.:	**R011412112E**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15C_Class B_3m**	**Power Source:**	**DC 3.7V**
Test item:	**Radiation Test (Above 1GHz)**	**Temp.(C)/Hum.(%RH):**	**24.3(C)/55%RH**
Test Mode:	**TX(2441 MHz)**	**Distance:**	**3m**



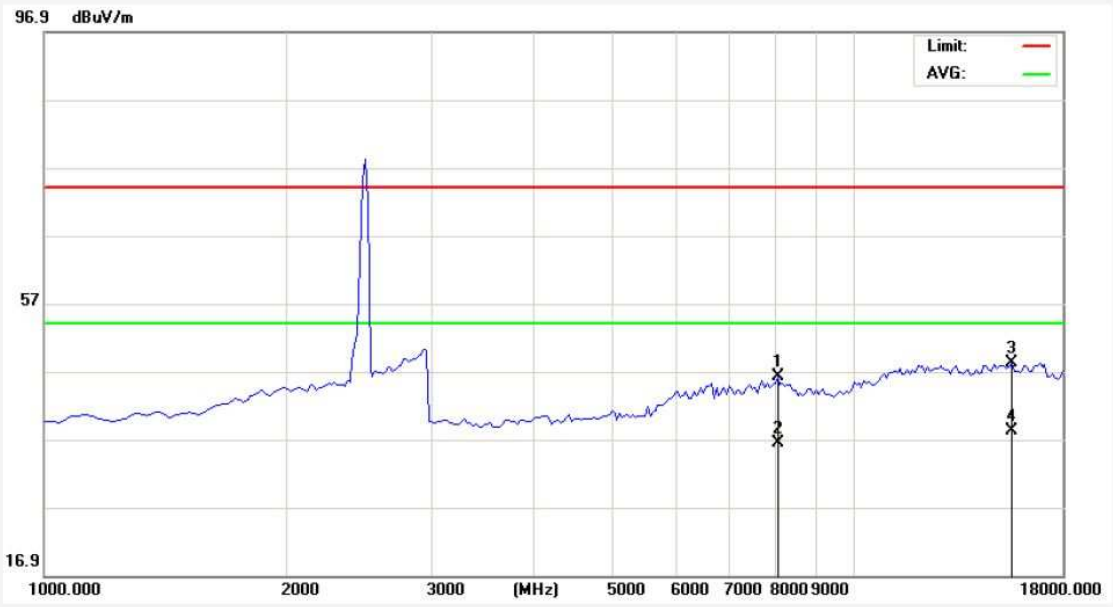
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	6567.500	38.15	7.68	45.83	74.00	-28.17	peak			
2	6567.500	27.96	7.68	35.64	54.00	-18.36	AVG			
3	11582.500	35.47	11.48	46.95	74.00	-27.05	peak			
4	11582.500	25.23	11.48	36.71	54.00	-17.29	AVG			

Job No.:	**R011412112E**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15C_Class B_3m**	**Power Source:**	**DC 3.7V**
Test item:	**Radiation Test (Above 1GHz)**	**Temp.(C)/Hum.(%RH):**	**24.3(C)/55%RH**
Test Mode:	**TX(2441 MHz)**	**Distance:**	**3m**



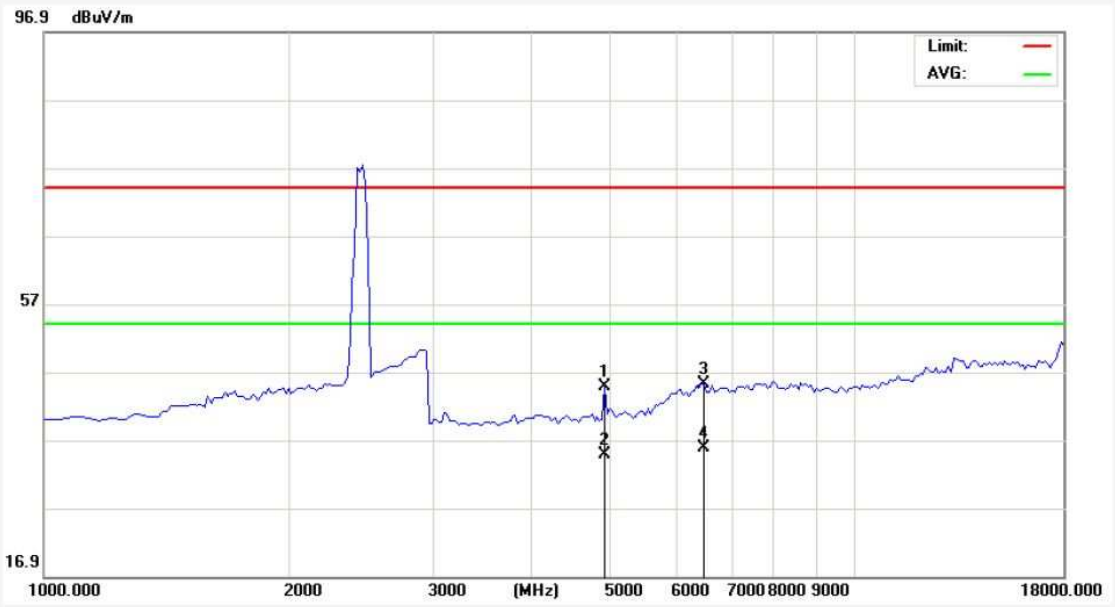
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	6652.500	38.43	7.78	46.21	74.00	-27.79	peak			
2	6652.500	29.04	7.78	36.82	54.00	-17.18	AVG			
3	7715.000	37.83	9.16	46.99	74.00	-27.01	peak			
4	7715.000	27.68	9.16	36.84	54.00	-17.16	AVG			

Job No.:	**R011412112E**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15C_Class B_3m**	**Power Source:**	**DC 3.7V**
Test item:	**Radiation Test (Above 1GHz)**	**Temp.(C)/Hum.(%RH):**	**24.3(C)/55%RH**
Test Mode:	**TX(2480 MHz)**	**Distance:**	**3m**



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	8055.000	36.48	9.67	46.15	74.00	-27.85	peak			
2	8055.000	26.68	9.67	36.35	54.00	-17.65	AVG			
3	15662.500	35.32	12.86	48.18	74.00	-25.82	peak			
4	15662.500	25.42	12.86	38.28	54.00	-15.72	AVG			

Job No.:	**R011412112E**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15C_Class B_3m**	**Power Source:**	**DC 3.7V**
Test item:	**Radiation Test (Above 1GHz)**	**Temp.(C)/Hum.(%RH):**	**24.3(C)/55%RH**
Test Mode:	**TX(2480 MHz)**	**Distance:**	**3m**



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	4910.000	41.24	3.49	44.73	74.00	-29.27	peak			
2	4910.000	31.36	3.49	34.85	54.00	-19.15	AVG			
3	6525.000	37.56	7.63	45.19	74.00	-28.81	peak			
4	6525.000	28.11	7.63	35.74	54.00	-18.26	AVG			

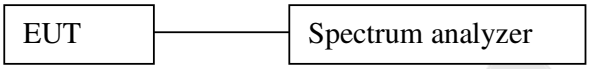
5. CHANNEL SEPARATION TEST

5.1 Measurement Procedure

The EUT must have its hopping function enabled. Using the following spectrum analyzer settings:

1. Span= Wide enough to capture the peaks of two adjacent channels
2. Set the RBW = 30 kHz.
3. Set the VBW = 100 kHz.
4. Sweep time = auto couple.
5. Detector function = peak.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.

5.2 Test SET-UP



5.3 Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analysis	Agilent	E4407B	US39390582	Aug. 08, 2014	1 Year
2.	Preamplifier	Instruments corporation	EMC011830	980100	Aug. 08, 2014	1 Year
3.	EMI Test Receiver	Rohde & Schwarz	ESPI	101604	Apr. 22, 2014	1 Year
4.	Double Ridged Horn Antenna	Instruments corporation	GTH-0118	351600	Apr. 04, 2014	1 Year
5.	Bilog Broadband Antenna	Schwarzbeck	VULB9163	VULB 9163-289	Apr. 24, 2014	1 Year
6.	Pre-amplifier	SONOMA	310N	186860	Aug. 08, 2014	1 Year
7.	EMI Test Software EZ-EMC	SHURPLE	N/A	N/A	N/A	N/A

5.4 Test Results

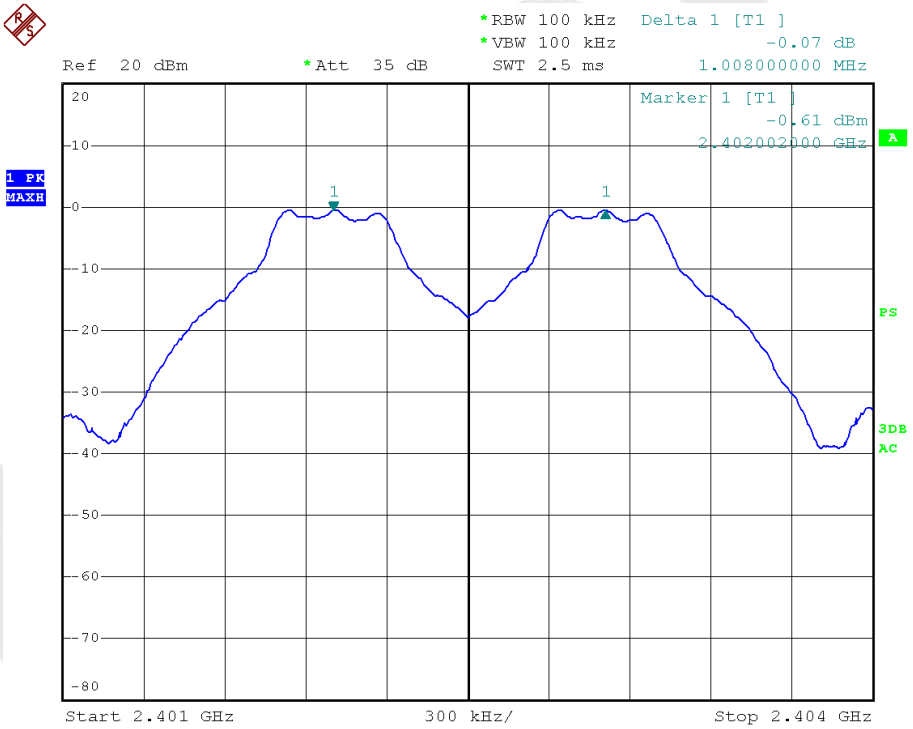
Test Item	:	Frequency Separation	Test Mode	:	CH Low ~ CH High
Test Voltage	:	DC 3.7V	Temperature	:	24℃
Test Result	:	PASS	Humidity	:	55%RH

Channel	Frequency (MHz)	Separation Read Value (kHz)	Limit (kHz)	Mode
Low	2401	1008	800	BDR
Mid	2441	1002	800	BDR
High	2480	1002	776	BDR
Low	2401	1008	848	EDR
Mid	2441	1008	844	EDR
High	2480	1002	844	EDR

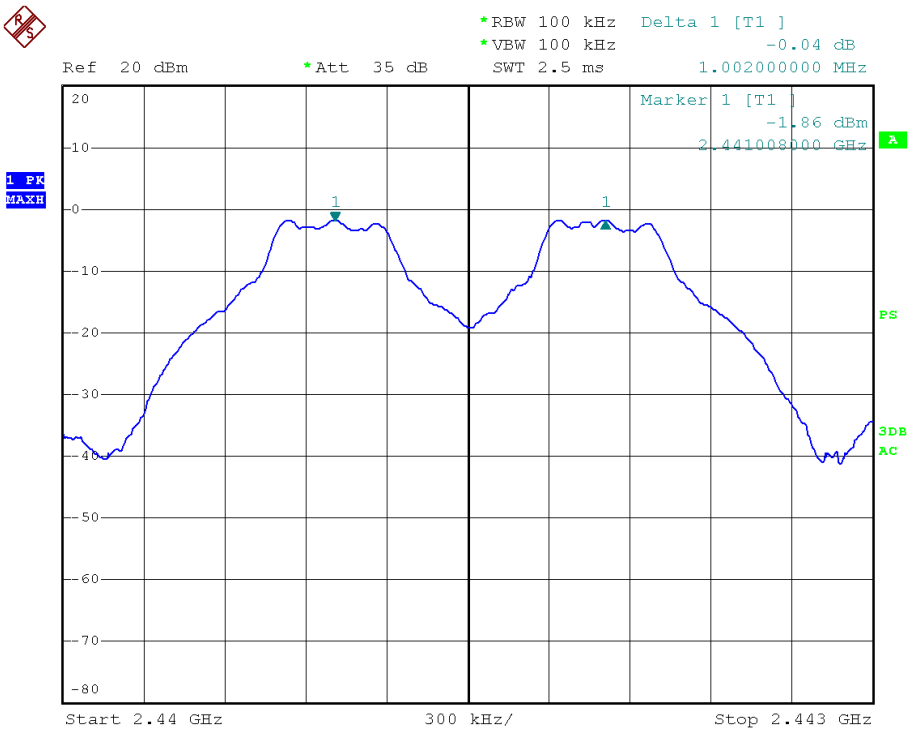
Remark:
1. The limit of mode (EDR) is 2/3 of 20dB BW;

Mode: BDR

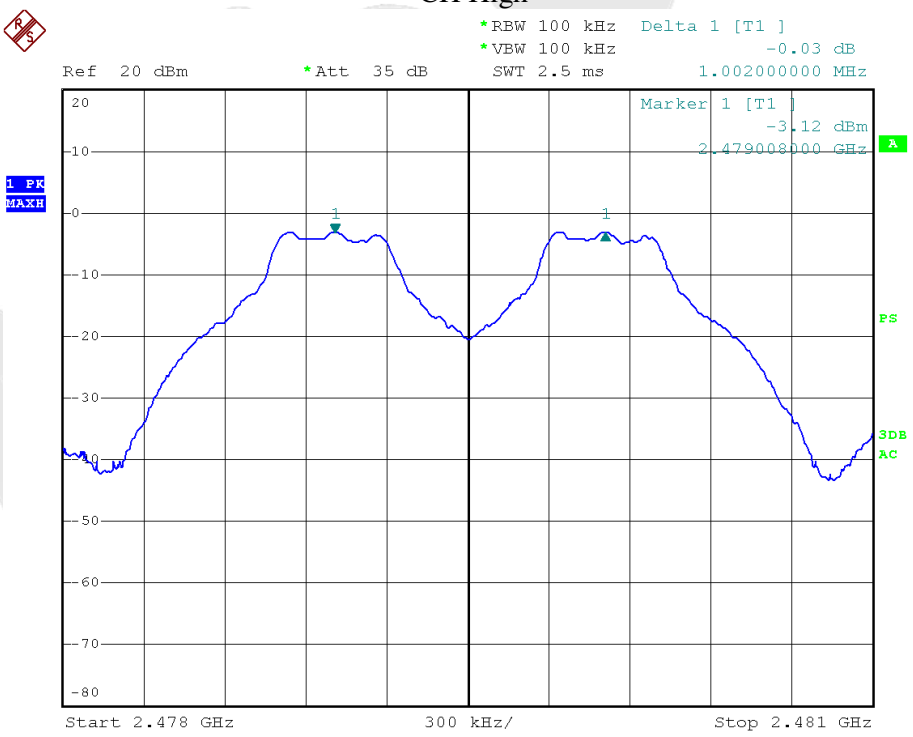
CH Low



CH Mid

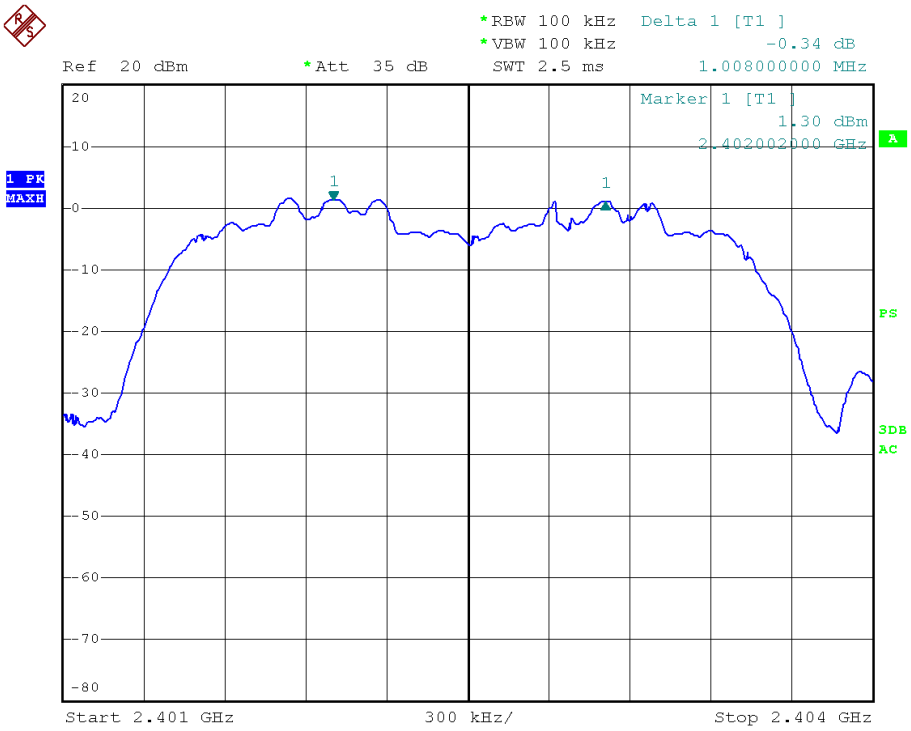


CH High

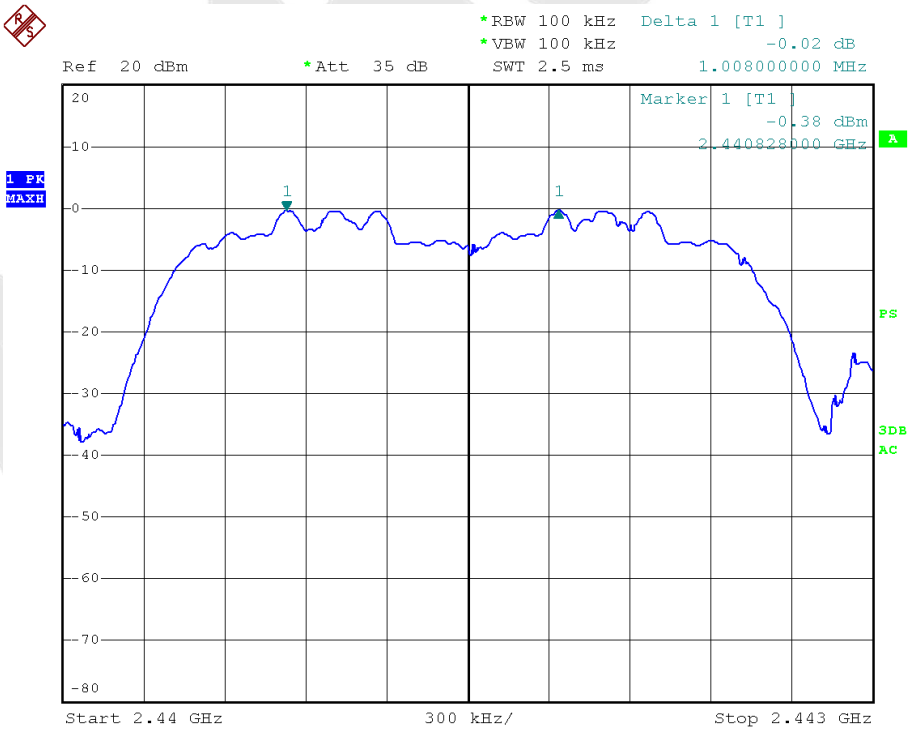


Mode: EDR

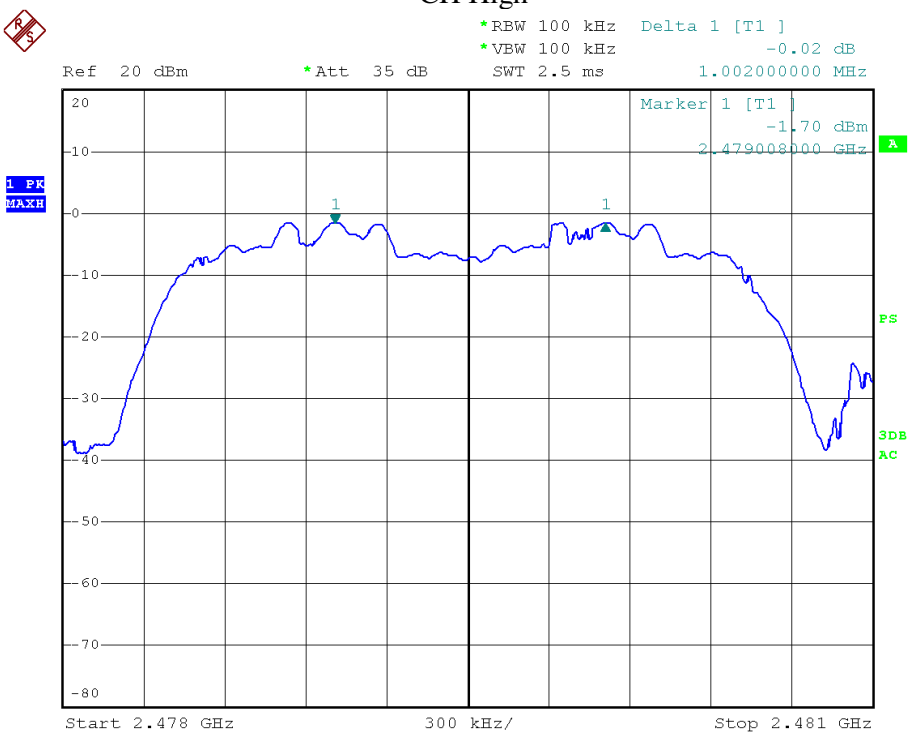
CH Low



CH Mid



CH High

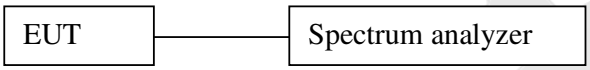

*RBW 100 kHz
*VBW 100 kHz
Delta 1 [T1]
-0.02 dB
1.002000000 MHz
Ref 20 dBm
*Att 35 dB
SWT 2.5 ms
Marker 1 [T1]
-1.70 dBm
2.479008000 GHz
1 PK
MAXH
A
PS
3DB
AC
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Start 2.478 GHz
300 kHz/
Stop 2.481 GHz

6. 20DB BANDWIDTH TEST

6.1 Measurement Procedure

Using the following spectrum analyzer settings:
1. Span= approximately 2 to 3 times the 20dB bandwidth, centered on a hopping channel.
2. Set the RBW = 30 kHz.
3. Set the VBW = 100 kHz.
4. Sweep time = auto couple.
5. Detector function = peak.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.

6.2 Test SET-UP



6.3 Test Equipment

Same as the equipment listed in 5.3.

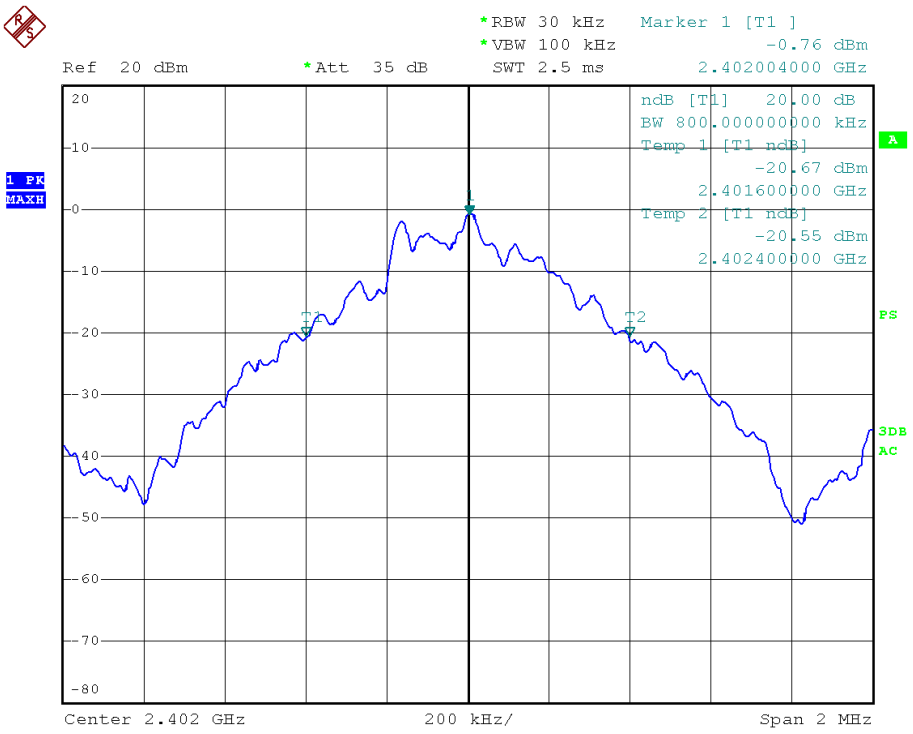
6.4 Test Results

Test Item	:	20dB BW	Test Mode	:	CH Low ~ CH High
Test Voltage	:	DC 3.7V	Temperature	:	24℃
Test Result	:	PASS	Humidity	:	55%RH

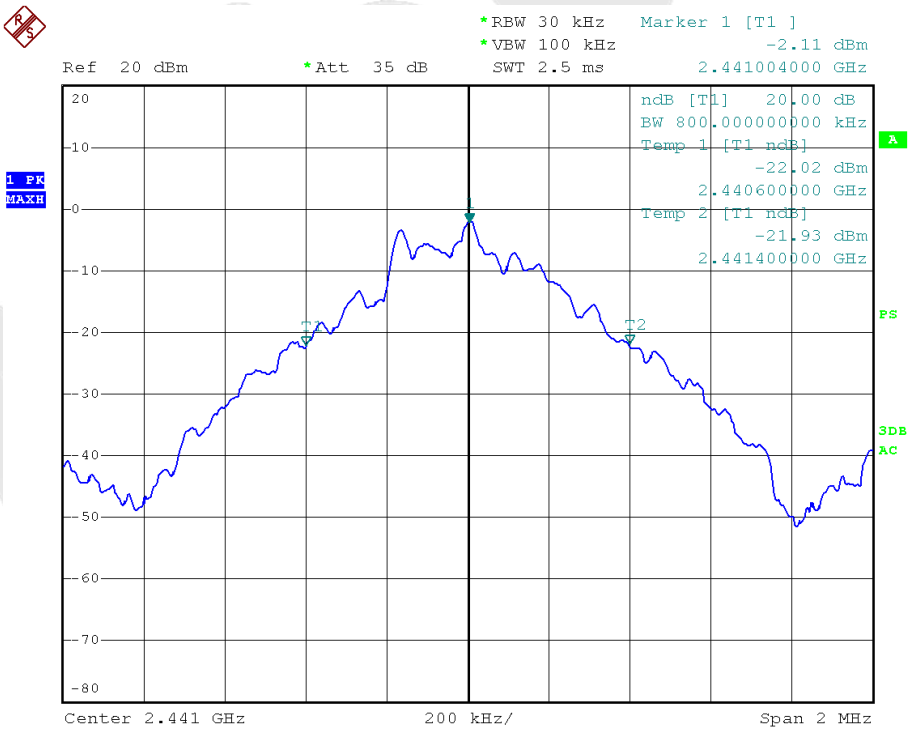
Channel	Frequency (MHz)	20dB Down BW(kHz)	Mode
Low	2401	800	BDR
Mid	2441	800	BDR
High	2480	776	BDR
Low	2401	1272	EDR
Mid	2441	1266	EDR
High	2480	1266	EDR

Mode: BDR

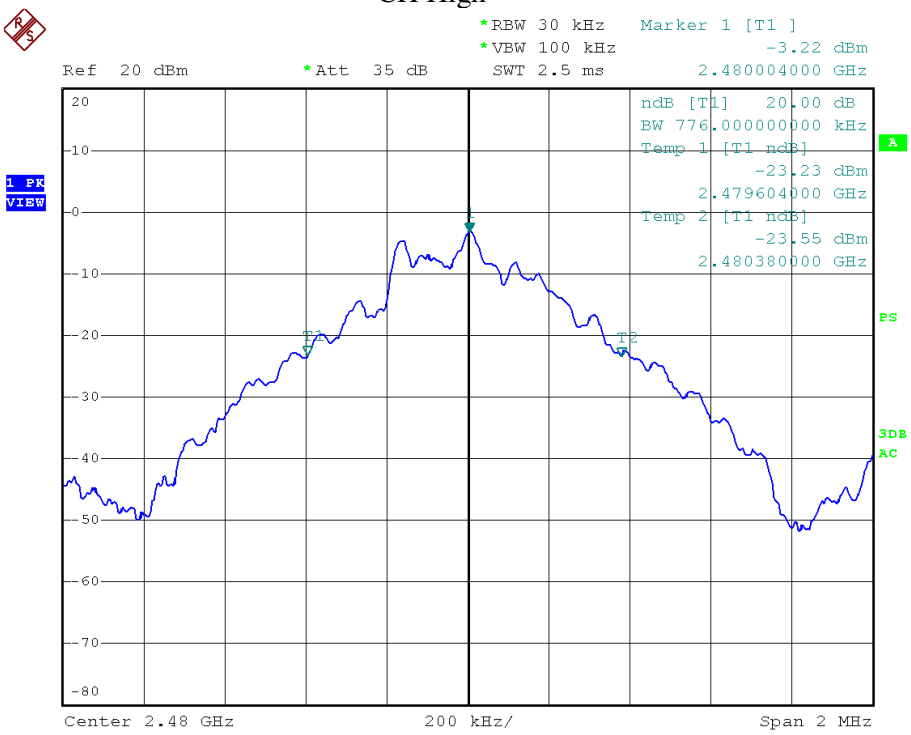
CH Low



CH Middle

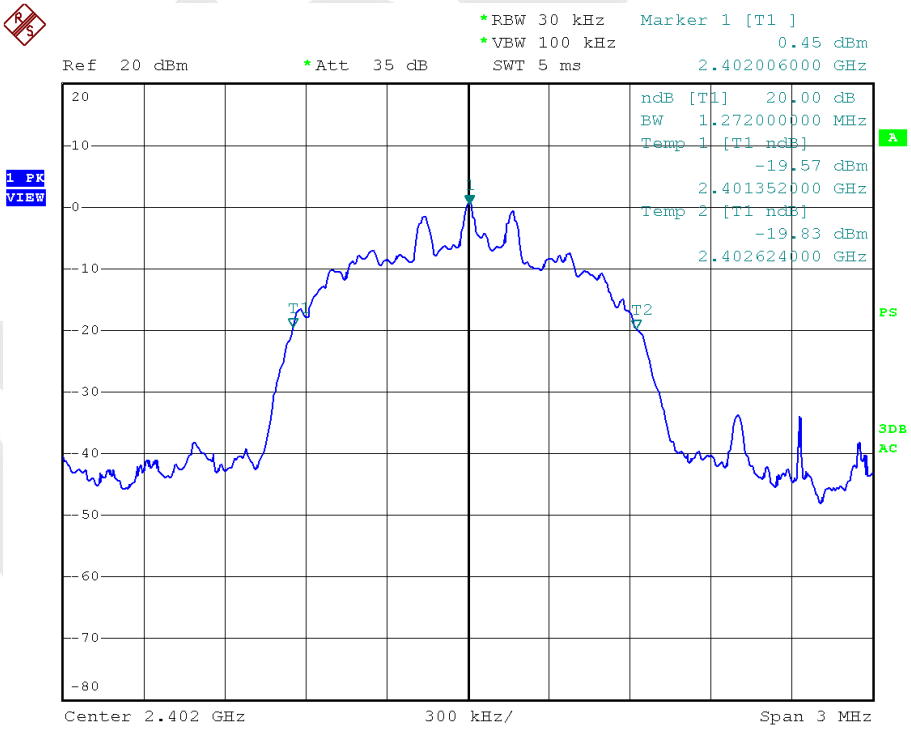


CH High

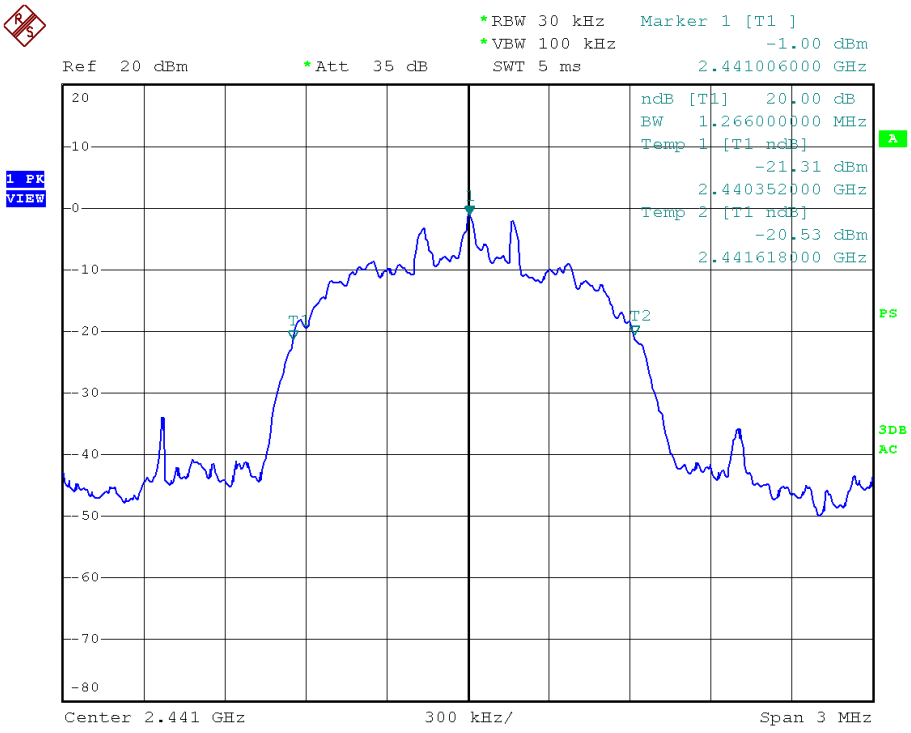


Mode: EDR

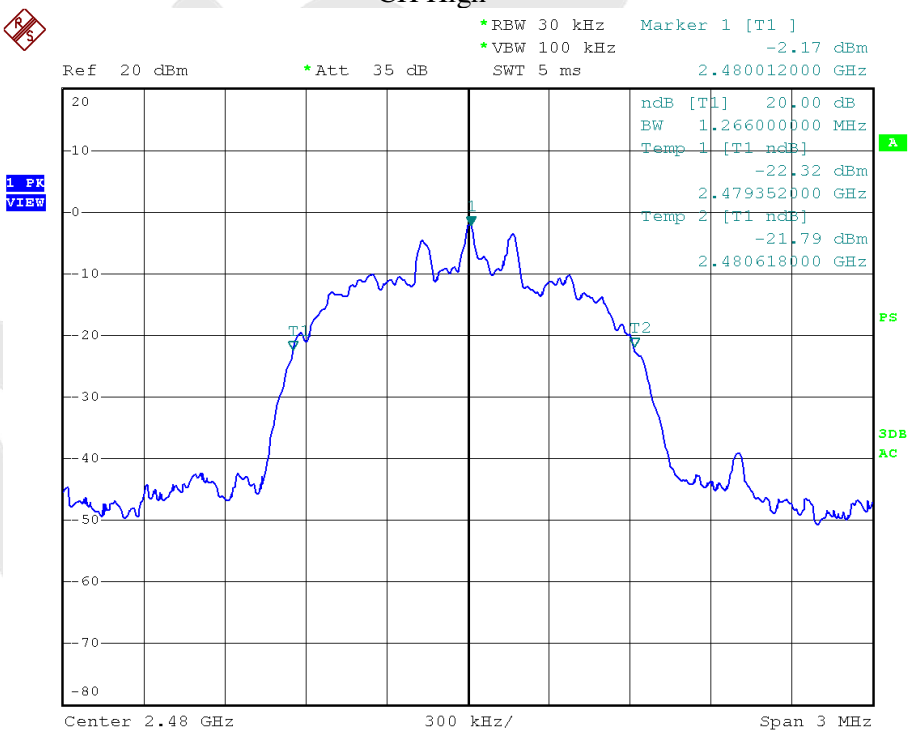
CH Low



CH Middle



CH High

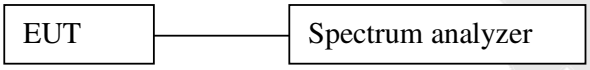


7. QUANTITY OF HOPPING CHANNEL TEST

7.1 Measurement Procedure

The EUT must have its hopping function enabled. Using the following spectrum analyzer setting:
1. Span= the frequency band of operation
2. Set the RBW = 1 MHz.
3. Set the VBW = 1 MHz.
4. Sweep time = auto couple.
5. Detector function = peak.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.

7.2 Test SET-UP



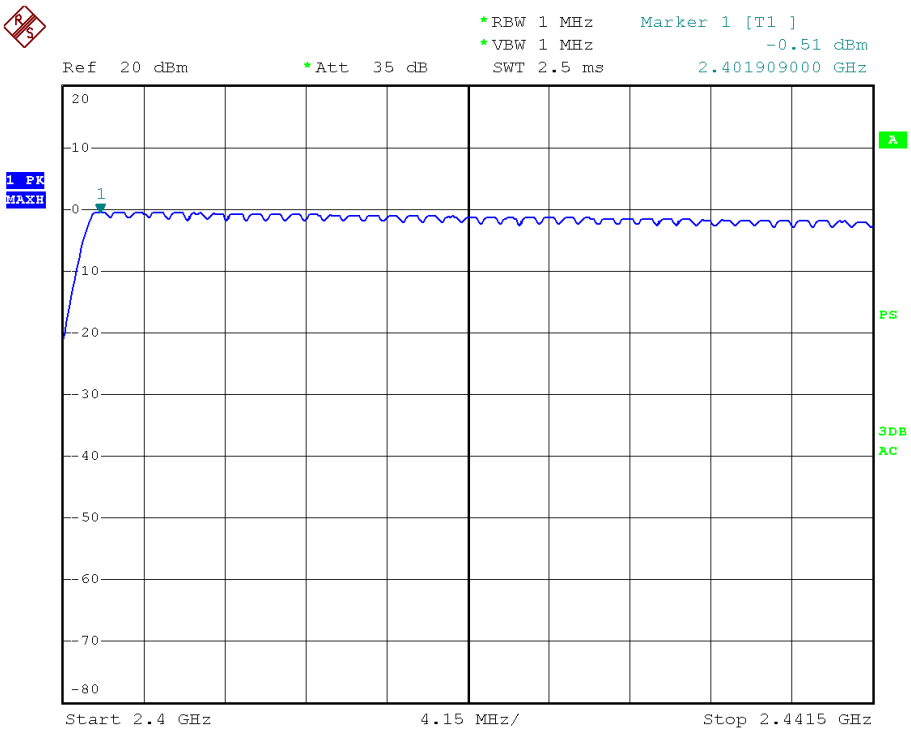
7.3 Test Equipment

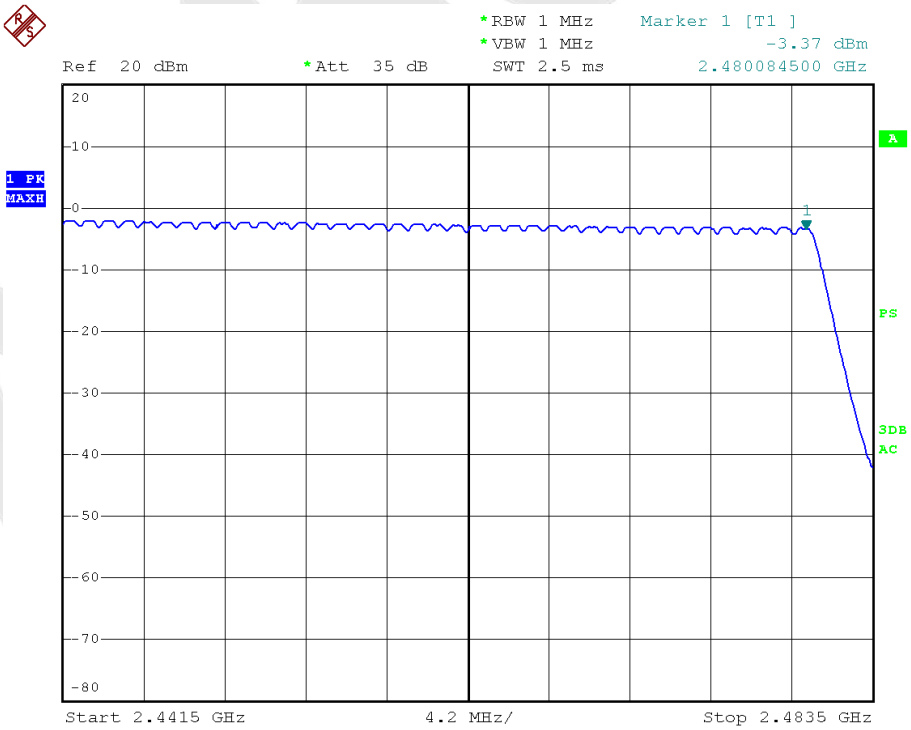
Same as the equipment listed in 5.3.

7.4 Test Results

Test Item	:	Number of Hopping Frequency	Test Mode	:	CH Low ~ CH High
Test Voltage	:	DC 3.7V	Temperature	:	24℃
Test Result	:	PASS	Humidity	:	55%RH

Hopping Channel Frequency Range	Quantity of Hopping Channel	Quantity of Hopping Channel
2402-2480	79	＞15


*RBW 1 MHz
*VBW 1 MHz
Marker 1 [T1]
-0.51 dBm
2.401909000 GHz
Ref 20 dBm
*Att 35 dB
SWT 2.5 ms
1 PK
MAXH
A
PS
3DB
AC
Start 2.4 GHz
4.15 MHz/
Stop 2.4415 GHz


*RBW 1 MHz
*VBW 1 MHz
Marker 1 [T1]
-3.37 dBm
2.480084500 GHz
Ref 20 dBm
*Att 35 dB
SWT 2.5 ms
1 PK
MAXH
A
PS
3DB
AC
Start 2.4415 GHz
4.2 MHz/
Stop 2.4835 GHz

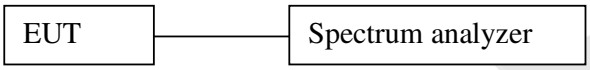
8. DWELL TIME TEST

8.1 Measurement Procedure

The EUT must have its hopping function enabled. Use the following spectrum analyzer settings:

1. Span= zero span, centered on a hopping channel
2. Set the RBW = 1 MHz.
3. Set the VBW = 1 MHz.
4. Sweep time = as necessary to capture the entire dwell time per hopping channel.
5. Detector function = peak.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.

8.2 Test SET-UP



8.3 Test Equipment

Same as the equipment listed in 5.3.

8.4 Test Results

Test Item	:	Time of Occupancy	Test Mode	:	CH Low ~ CH High
Test Voltage	:	DC 3.7V	Temperature	:	24℃
Test Result	:	PASS	Humidity	:	55%RH

Package Type	Pulse width (ms)	Time slot length(ms)	Dwell time (ms)	Limit (s)
DH1	0.536	time slot length *1600/2 /79 * 31.6	171.52	0.4
DH3	1.850	time slot length *1600/4 /79 * 31.6	296.00	0.4
DH5	3.080	time slot length *1600/6 /79 * 31.6	328.53	0.4