Appendix A

RF Test Data for BT(BDR/EDR) (Conducted Measurement)

Product Name: Folding Bluetooth keyboard with touchpad

Trade Mark: N/A

Test Model: B033

Environmental Conditions

Temperature:	25.1℃
Relative Humidity:	52.6%
ATM Pressure:	101Kpa
Test Engineer:	Emiya lin
Supervised by:	Simba Haung

Contents

Page

COVER PAGE

1 Duty Cycle 3
1.1 Test Result 3
1.2 Test Graphs 4
2 Maximum Conducted Peak Output Power 6
2.1 Test Result 6
2.2 Test Graphs 7
3 20dB Bandwidth 9
3.1 Test Result 9
3.2 Test Graphs 10
4 Carrier Frequency Separation 12
4.1 Test Result 12
4.2 Test Graphs 13
5 Hopping Channel Number 14
5.1 Test Result 14
5.2 Test Graphs 15
6 Dwell Time 16
6.1 Test Result 16
6.2 Test Graphs 17
7 RF Conducted Spurious Emissions 18
7.1 Test Result 18
7.2 Test Graphs 19
8 Band-edge for RF Conducted Emissions 22
8.1 Test Result 22
8.2 Test Graphs 23
9 Restrict-band band-edge measurements 27
9.1 Test Result 27
9.2 Test Graphs 28

1 Duty Cycle

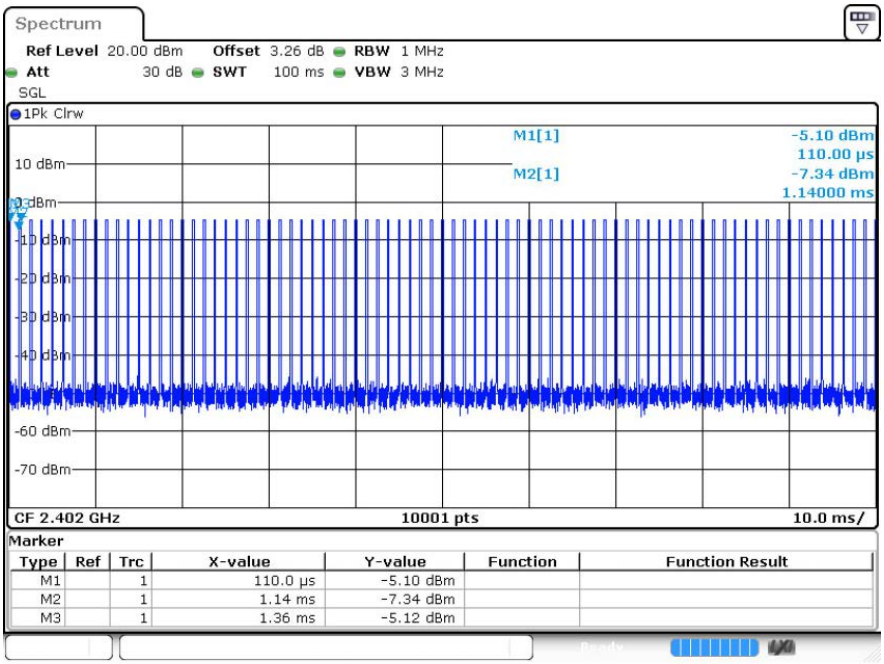
1.1 Test Result

Mode	Frequency (MHz)	Duty Cycle (%)	Correction Factor	1/T (kHz)
1-DH1	2402	18.41	7.35	4.55
1-DH1	2441	18.4	7.35	4.55
1-DH1	2480	18.4	7.35	4.55

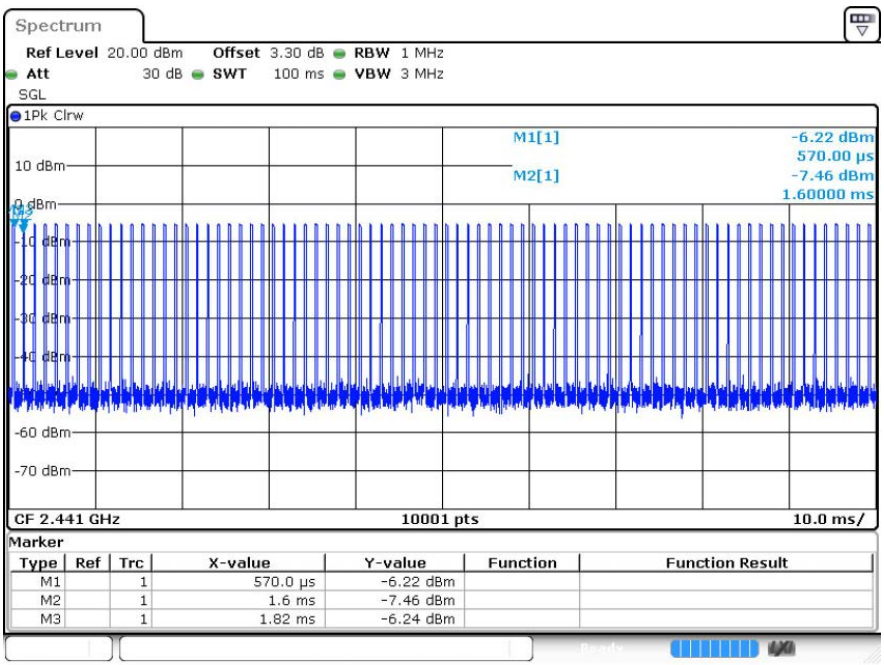
1.2 Test Graphs

Test Graphs

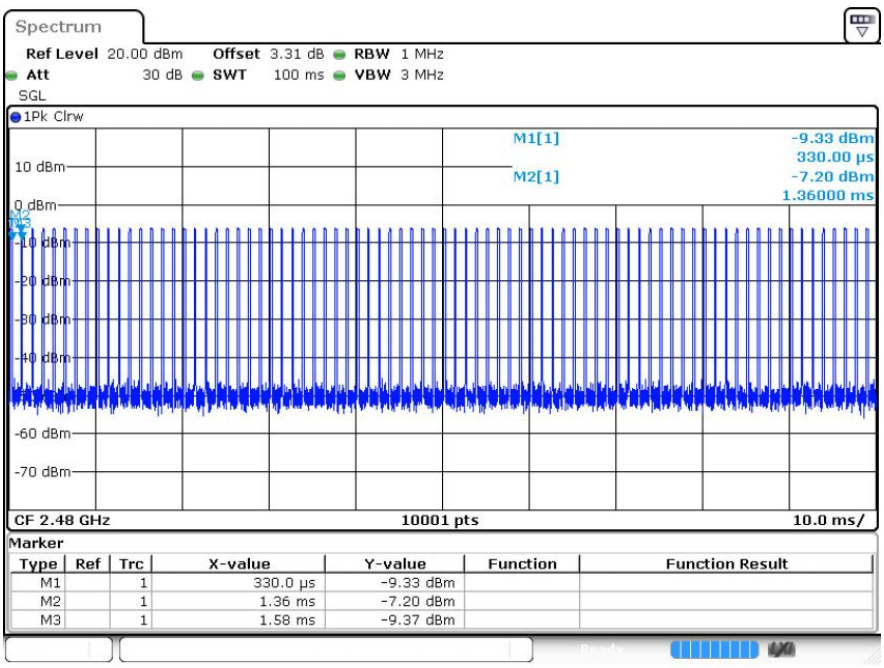
1-DH1 2402MHz



1-DH1 2441MHz



1-DH1 2480MHz

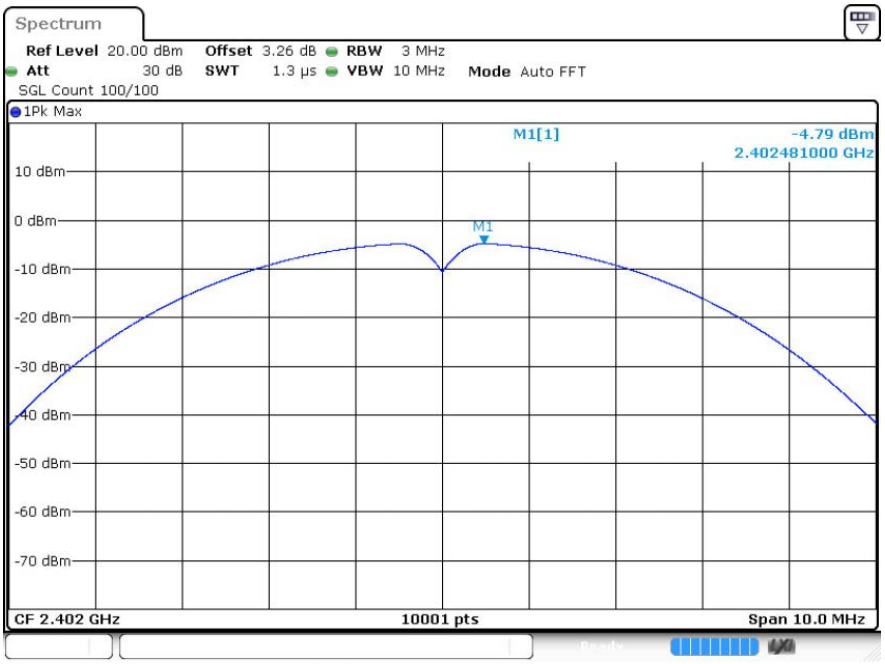
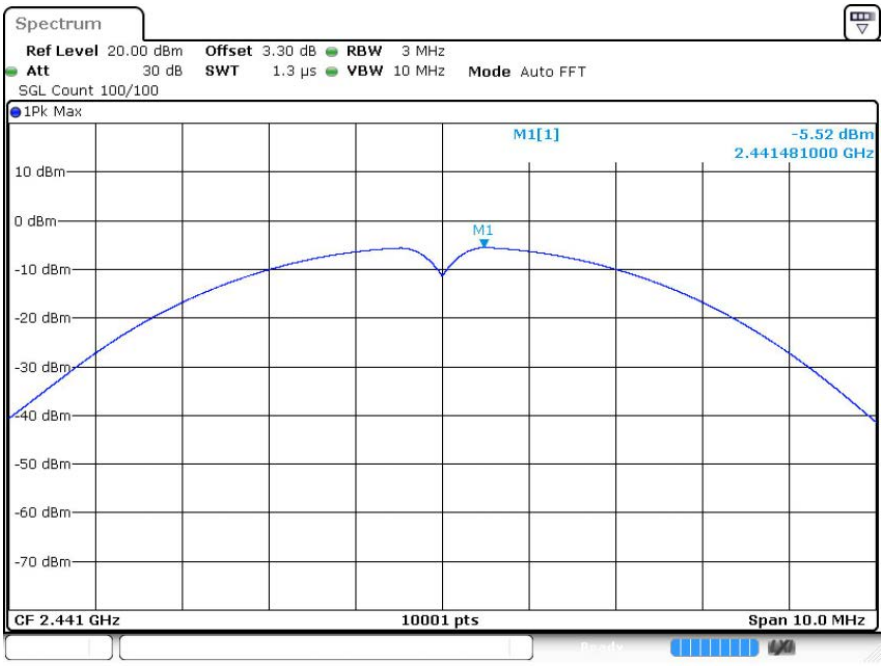


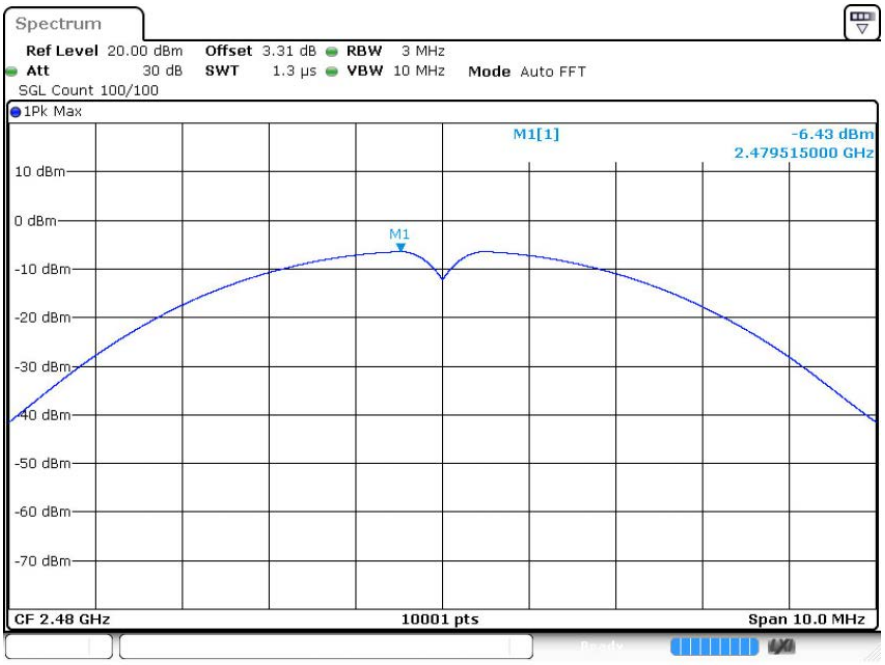
2 Maximum Conducted Peak Output Power

2.1 Test Result

Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-4.79	21	Pass
	MCH	-5.52	21	Pass
	HCH	-6.43	21	Pass

2.2 Test Graphs

Test Graphs	
GFSK/LCH	
GFSK/MCH	

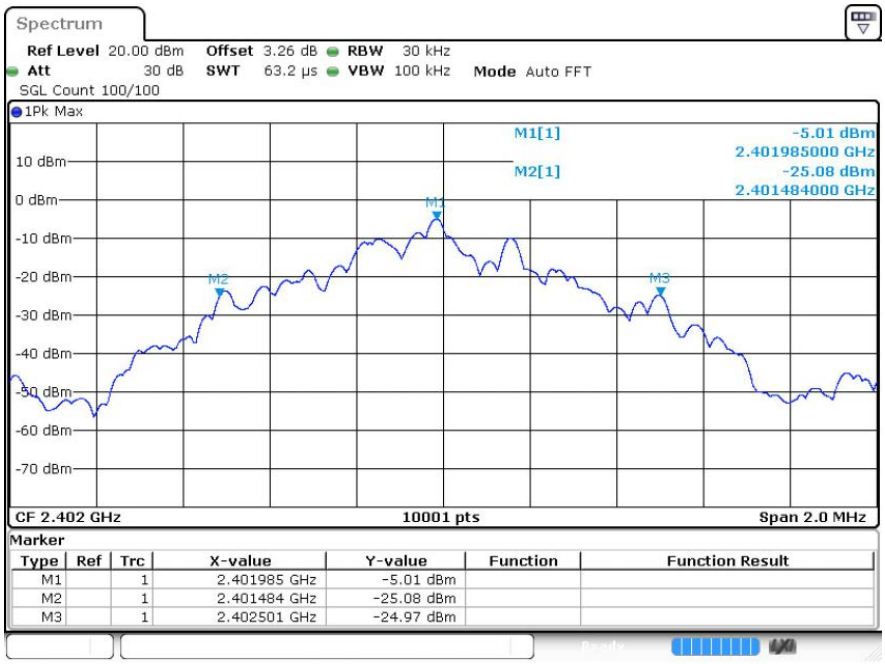
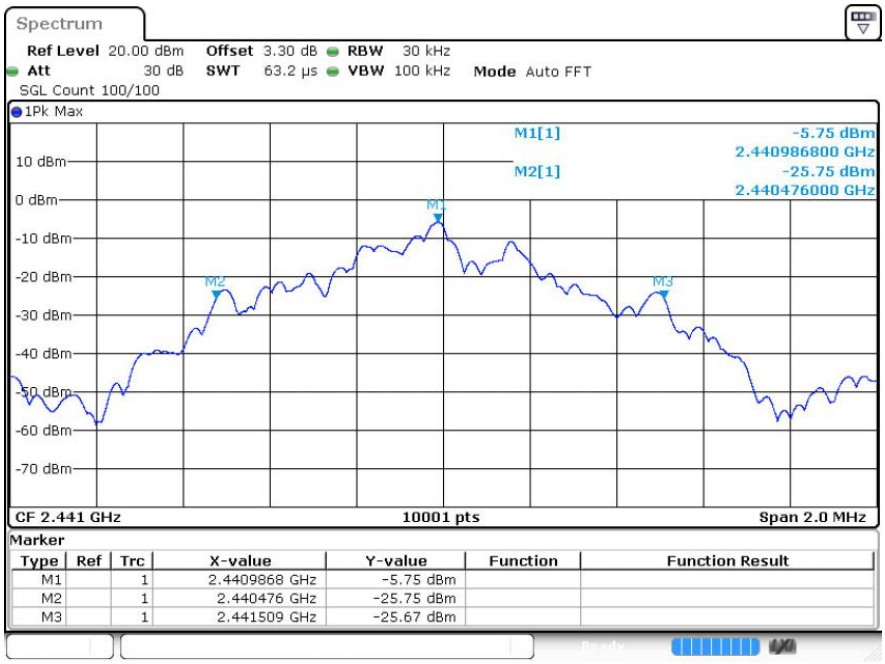
GFSK/HCH	 Spectrum Ref Level 20.00 dBm Offset 3.31 dB RBW 3 MHz Att 30 dB SWT 1.3 µs VBW 10 MHz Mode Auto FFT SGL Count 100/100 1Pk Max M1[1] -6.43 dBm 2.479515000 GHz M1 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 2.48 GHz 10001 pts Span 10.0 MHz

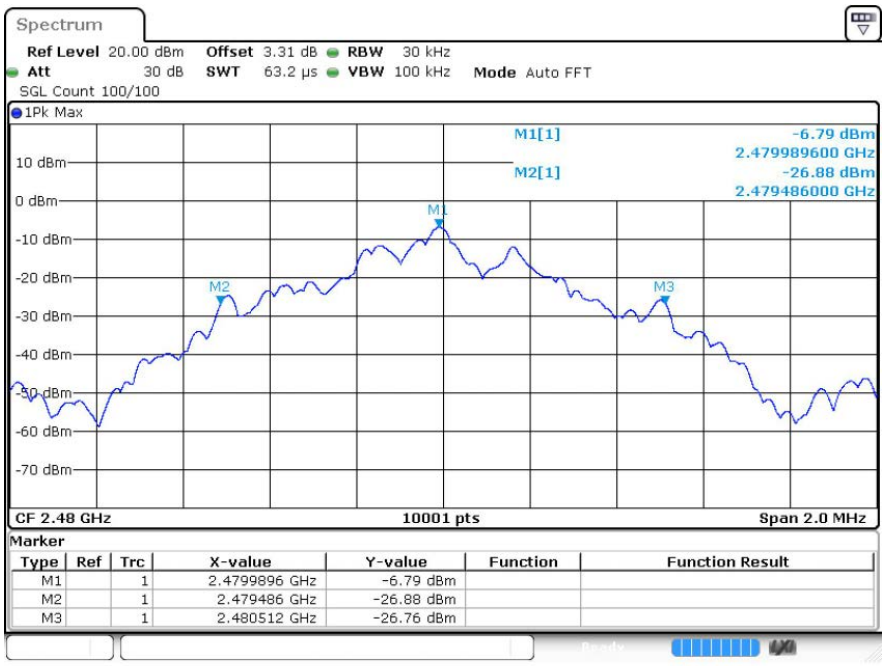
3 20dB Bandwidth

3.1 Test Result

Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.017	Not Specified	Pass
	MCH	1.033	Not Specified	Pass
	HCH	1.026	Not Specified	Pass

3.2 Test Graphs

Test Graphs	
GFSK/LCH	
GFSK/MCH	

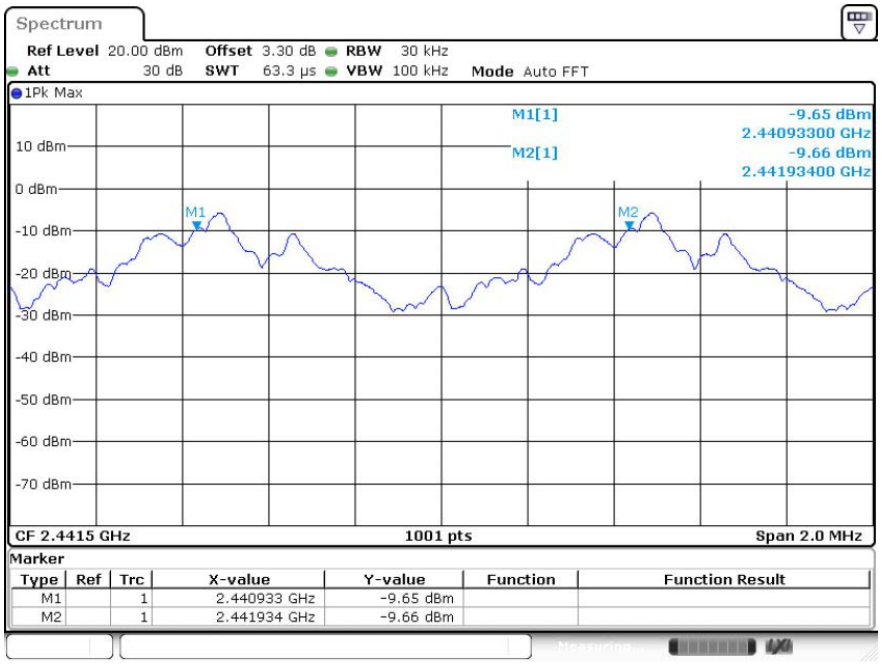
GFSK/HCH	 Spectrum Ref Level 20.00 dBm Offset 3.31 dB RBW 30 kHz Att 30 dB SWT 63.2 µs VBW 100 kHz Mode Auto FFT SGL Count 100/100 1Pk Max M1[1] -6.79 dBm 2.479989600 GHz M2[1] -26.88 dBm 2.479486000 GHz 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm M1 M2 M3 CF 2.48 GHz 10001 pts Span 2.0 MHz Marker Type Ref Trc X-value Y-value Function Function Result M1 1 2.4799896 GHz -6.79 dBm M2 1 2.479486 GHz -26.88 dBm M3 1 2.480512 GHz -26.76 dBm

4 Carrier Frequency Separation

4.1 Test Result

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	MCH	1.001	0.689	Pass

4.2 Test Graphs

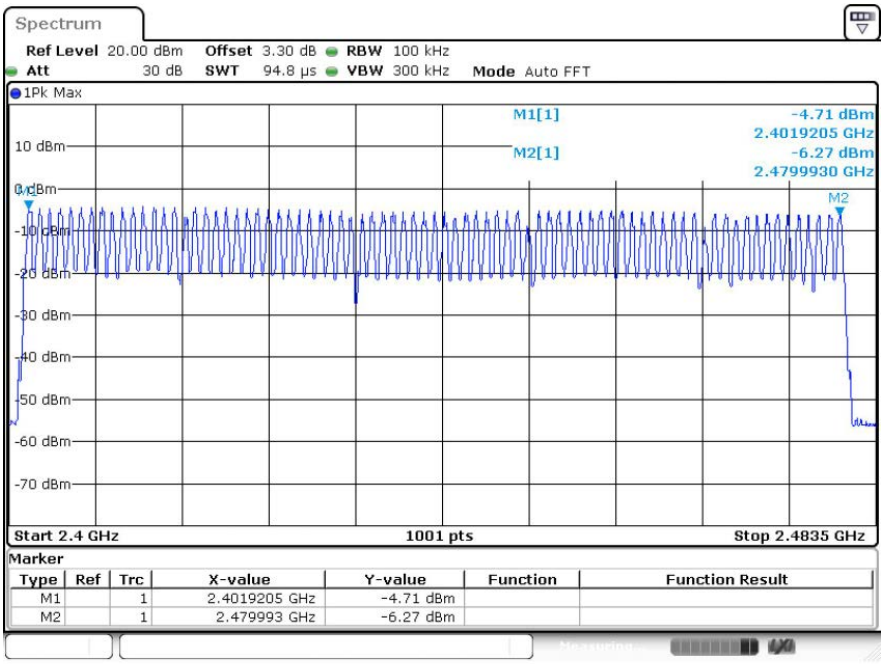
Test Graphs	
GFSK/MCH	

5 Hopping Channel Number

5.1 Test Result

Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	>=15	PASS

5.2 Test Graphs

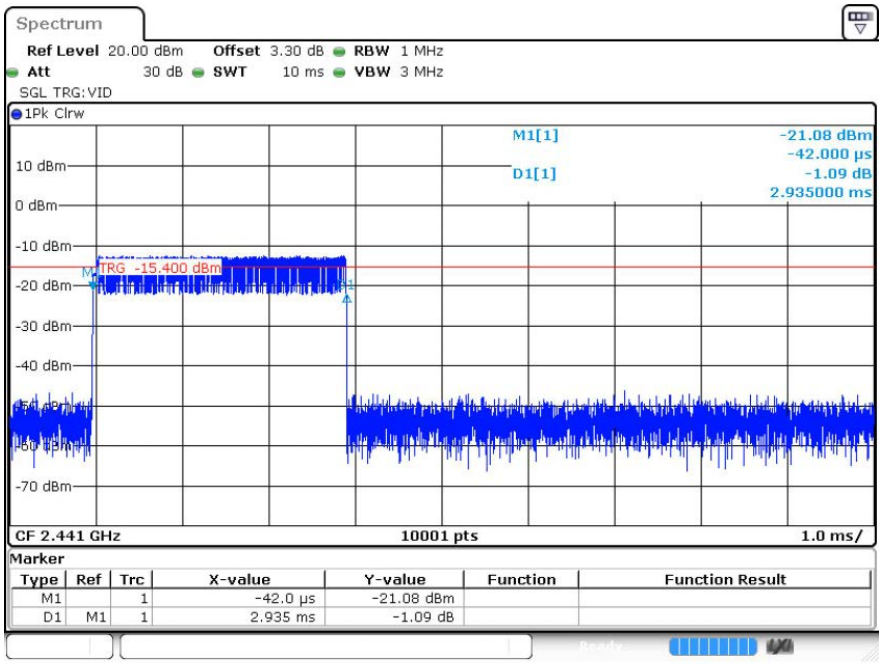
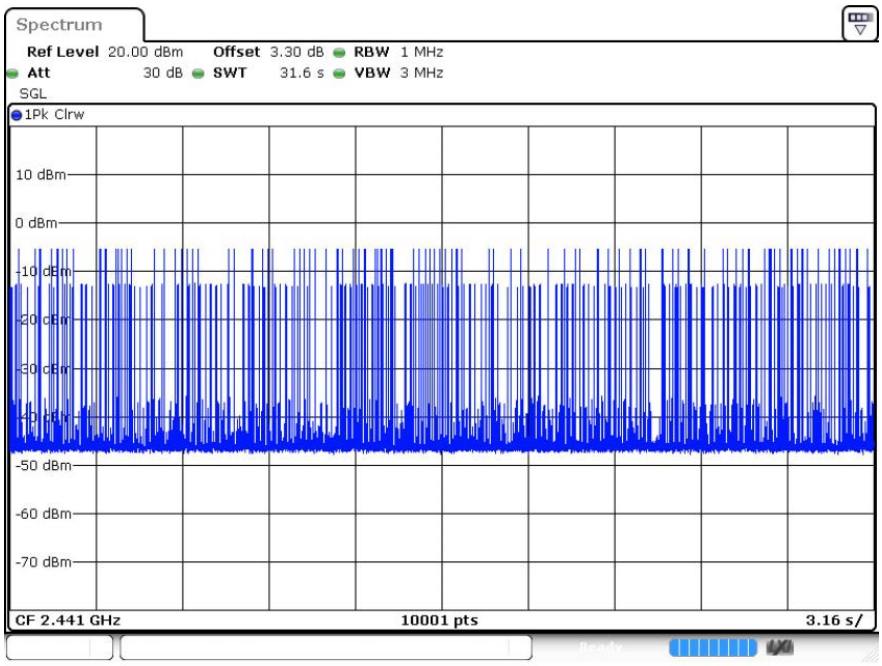
Test Graphs	
GFSK/Hop	

6 Dwell Time

6.1 Test Result

Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[ms]	Limit [s]	Verdict
GFSK	DH5	MCH	2.935	110	322.85	0.4	Pass

6.2 Test Graphs

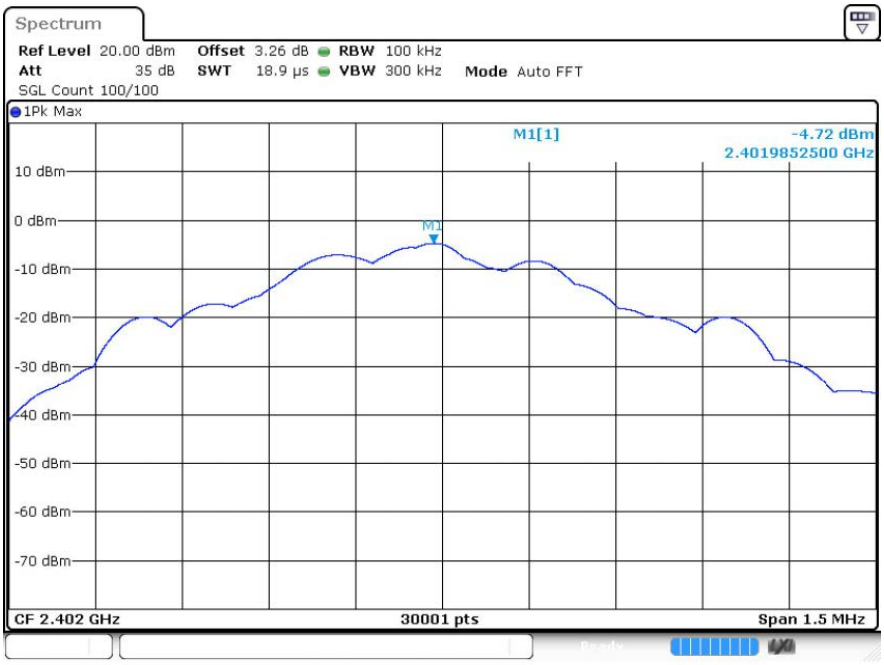
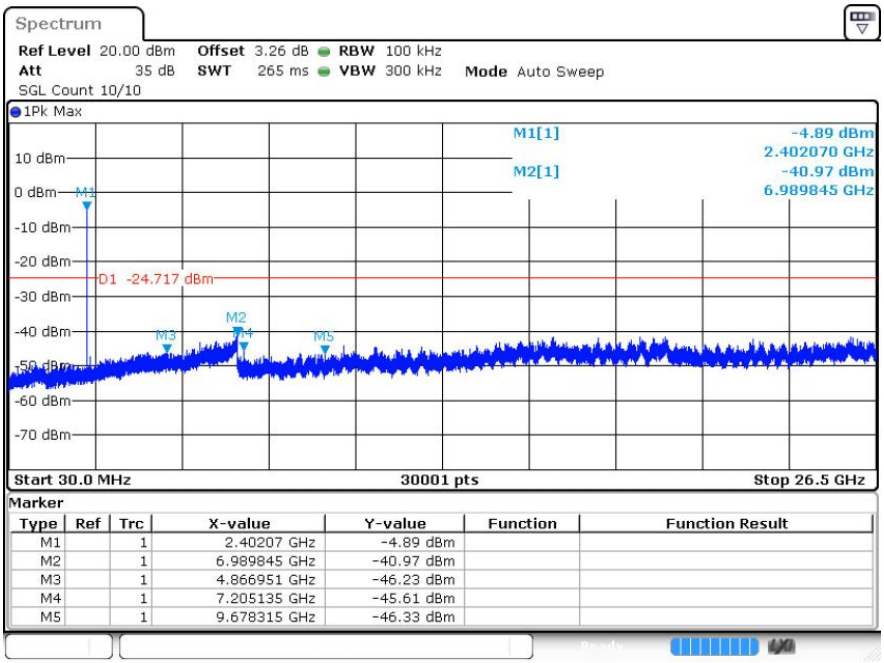
Test Graphs	
GFSK_DH5/MCH	 

7 RF Conducted Spurious Emissions

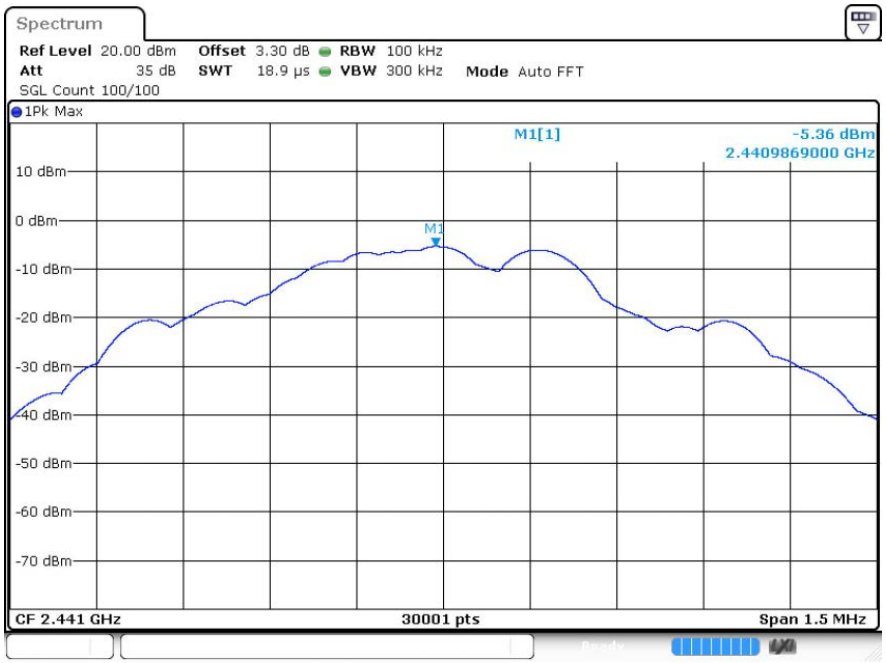
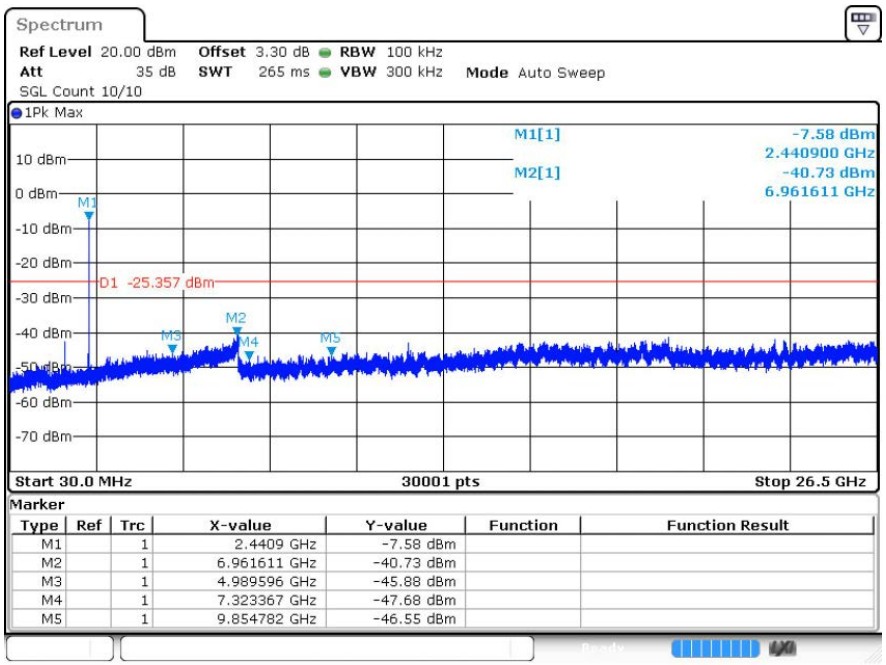
7.1 Test Result

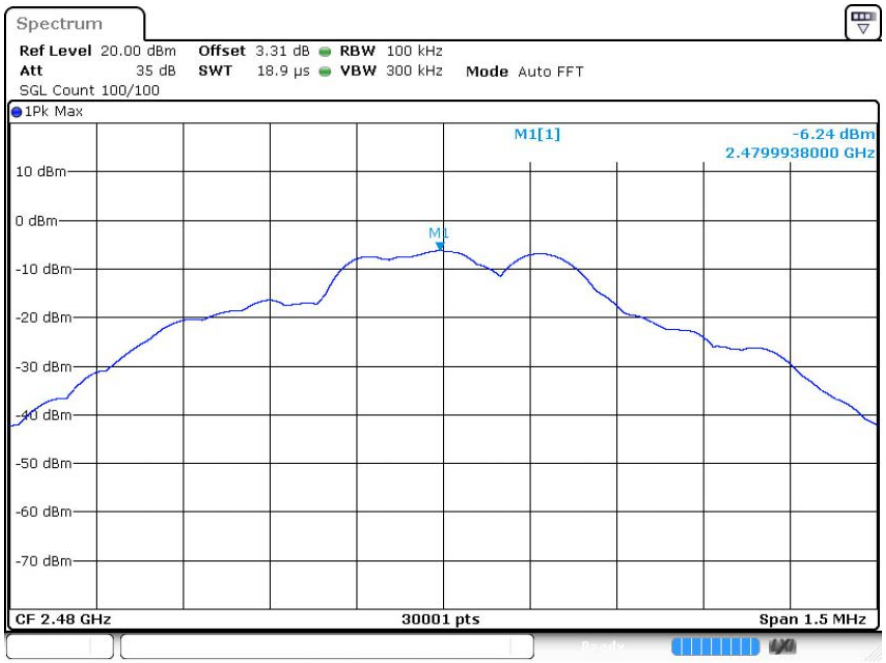
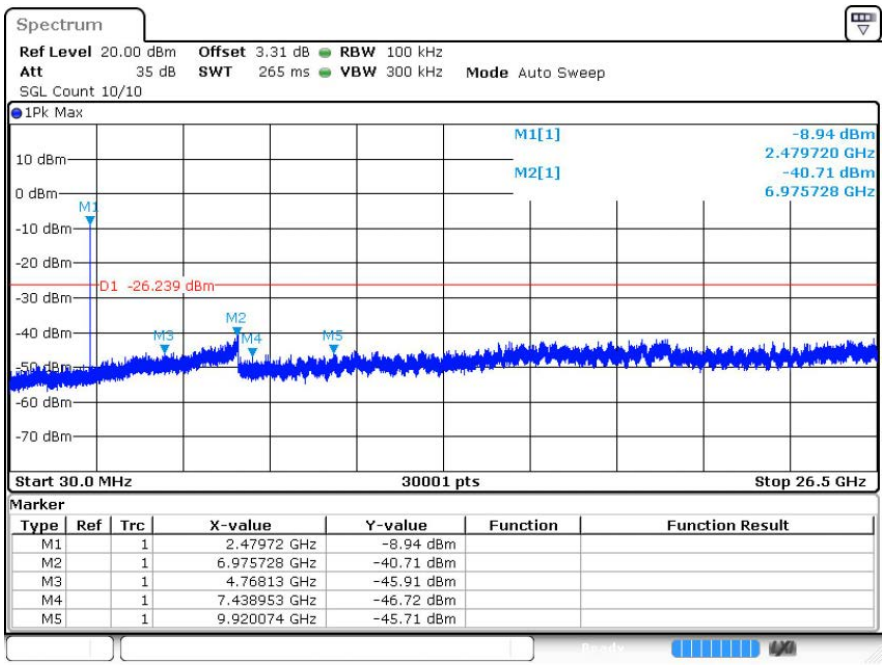
Mode	Channel	Max. Level [dBc]	Limit [dBc]	Verdict
GFSK	LCH	-36.24	-20	Pass
	MCH	-35.36	-20	Pass
	HCH	-34.47	-20	Pass

7.2 Test Graphs

GFSK_LCH_Graphs	
Pref	
Puw	

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.40207 GHz	-4.89 dBm		
M2		1	6.989845 GHz	-40.97 dBm		
M3		1	4.866951 GHz	-46.23 dBm		
M4		1	7.205135 GHz	-45.61 dBm		
M5		1	9.678315 GHz	-46.33 dBm		

GFSK_MCH_Graphs	
Pref	
Puw	

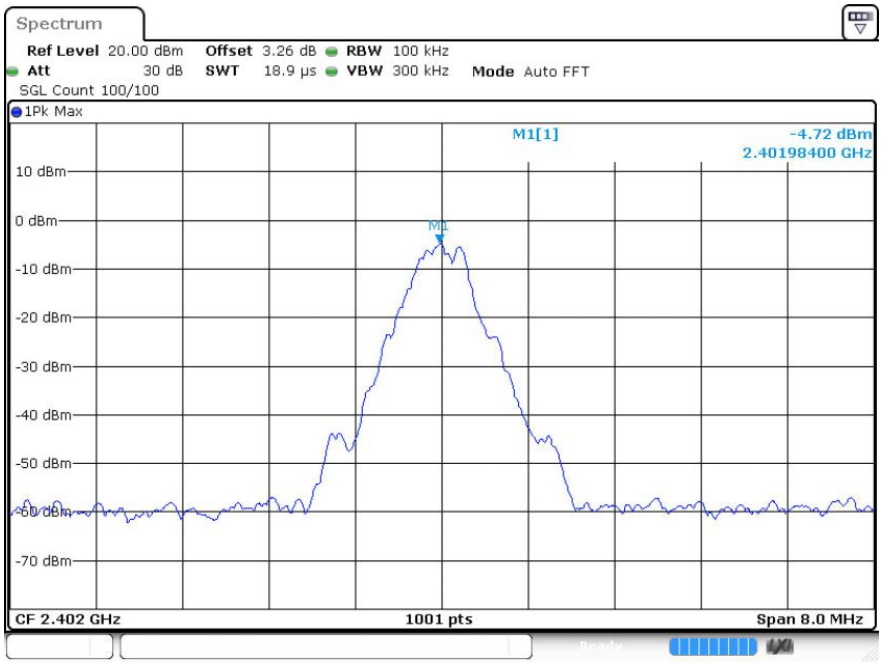
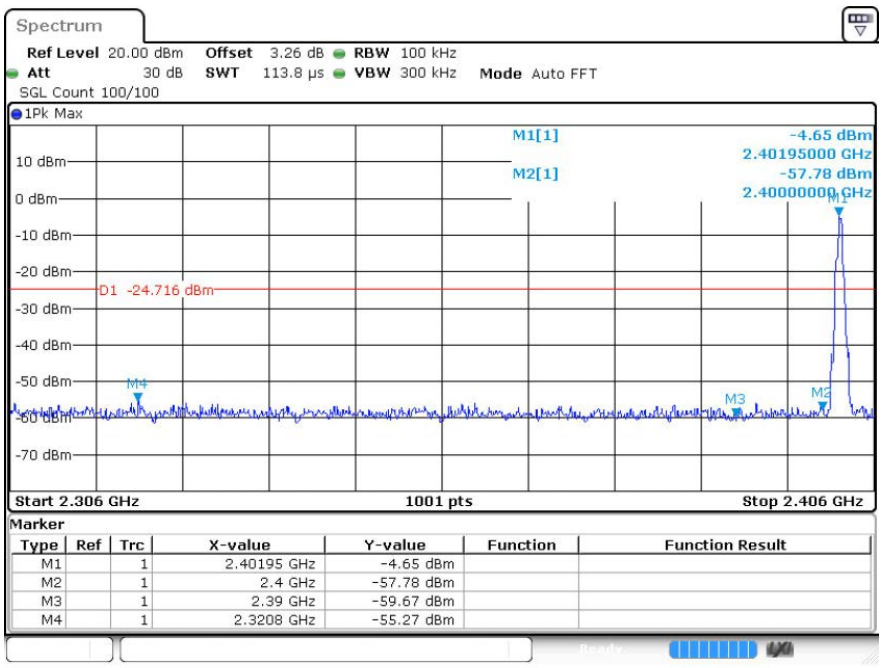
GFSK_HCH_Graphs	
Pref	
Puw	

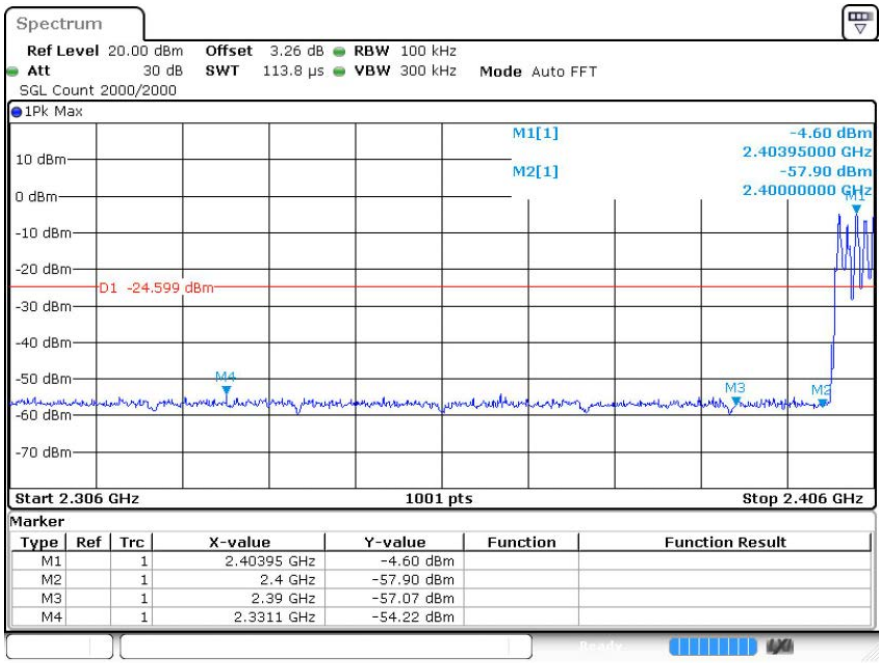
8 Band-edge for RF Conducted Emissions

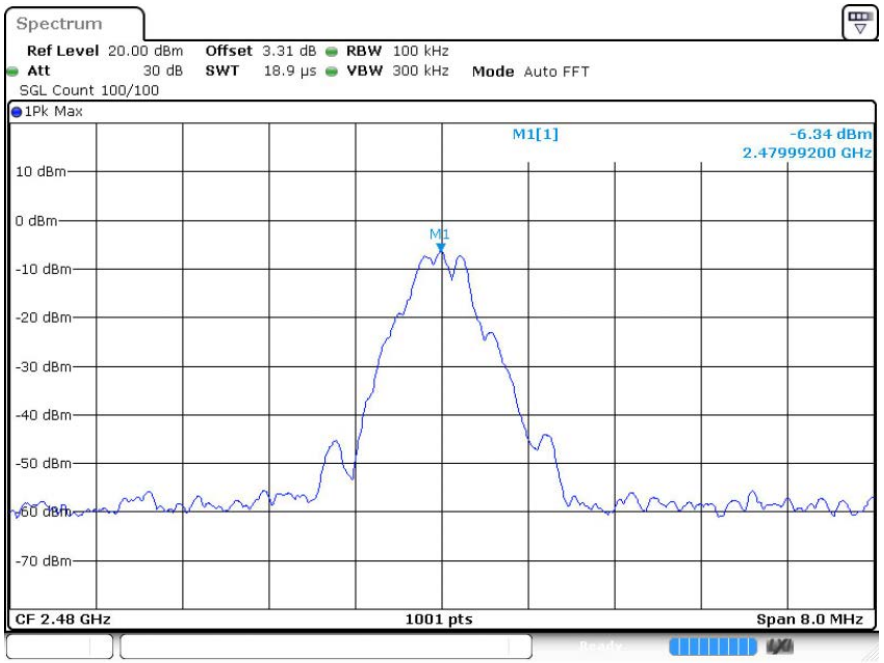
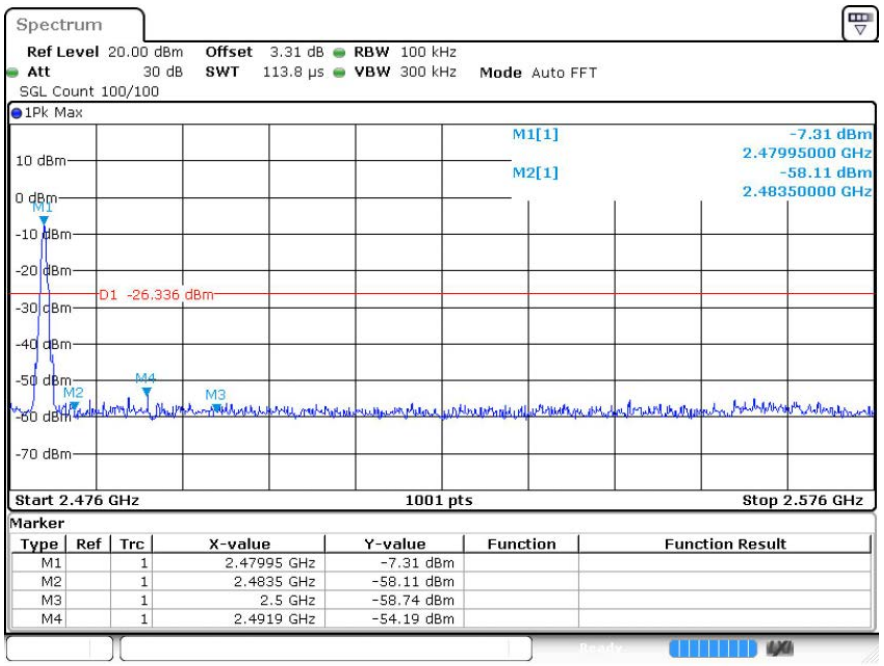
8.1 Test Result

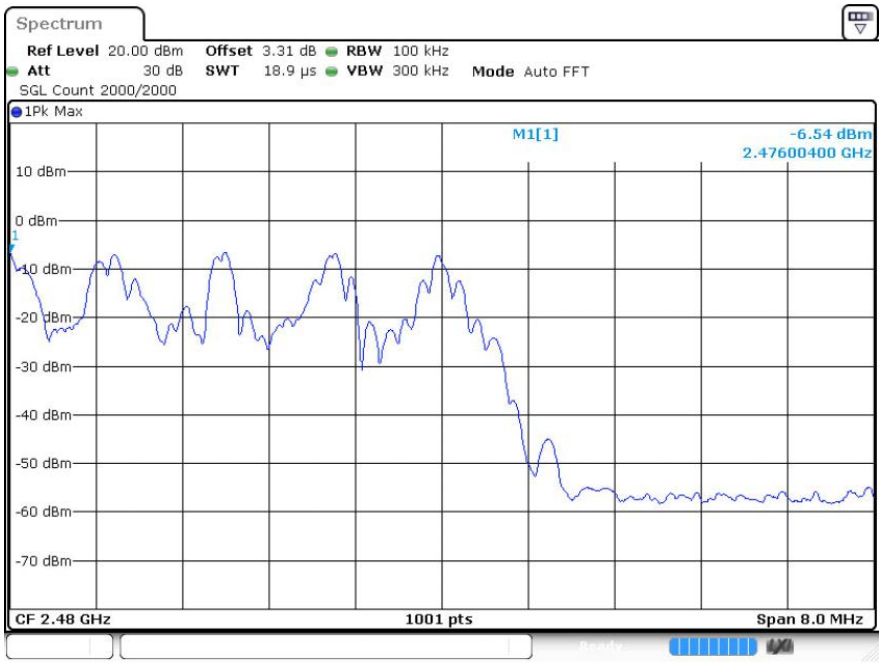
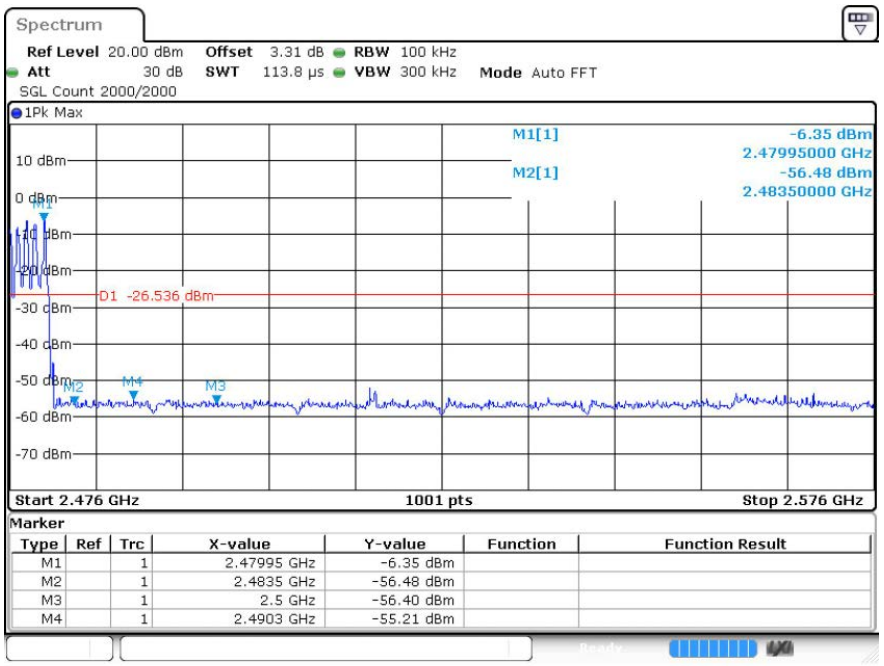
Mode	Channel	Carrier Frequency [MHz]	Frequency Hopping	Max Spurious Level [dBc]	Limit [dBc]	Verdict
GFSK	LCH	2402	Off	-50.54	-20	Pass
			On	-49.62	-20	Pass
	HCH	2480	Off	-47.85	-20	Pass
			On	-48.66	-20	Pass

8.2 Test Graphs

Test Graphs	
Pref	
GFSK/LCH/No Hop	

Ref	
GFSK/LCH/Hop	

Ref	
GFSK/HCH/No Hop	

Ref.	
GFSK/HCH/Hop	

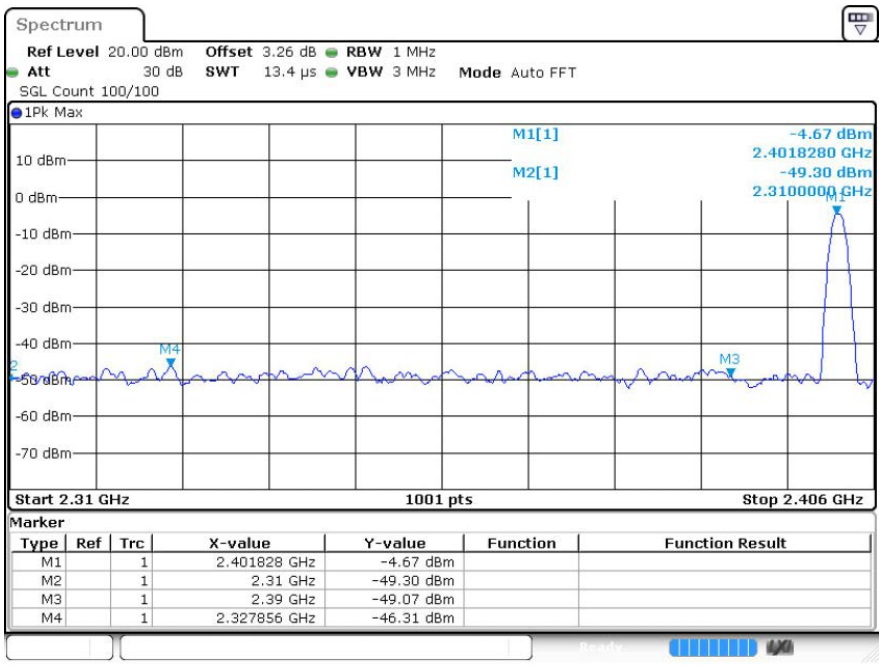
9 Restrict-band band-edge measurements

9.1 Test Result

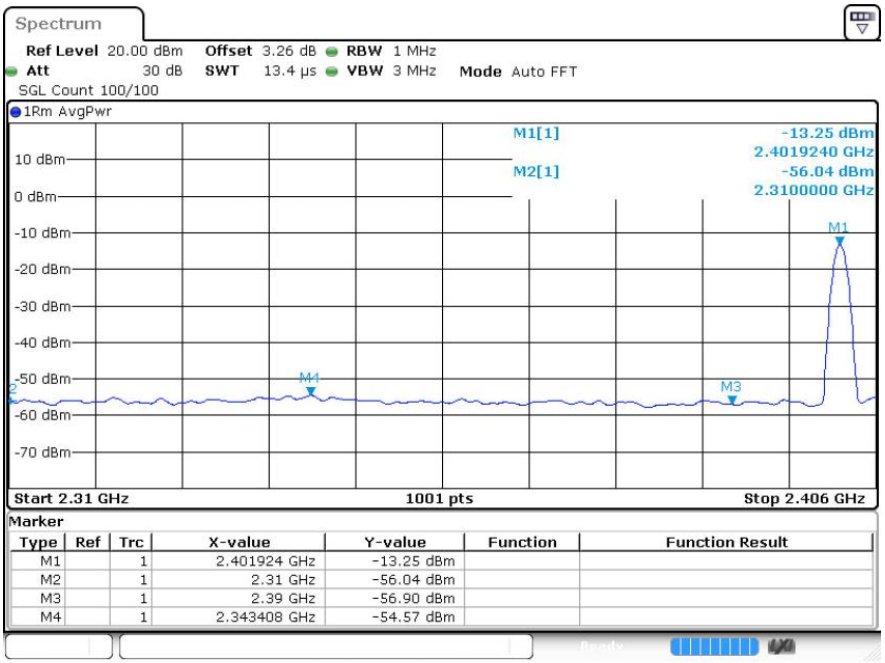
Test Mode	Hopping	Freq.	Power [dBm]	Gain	Duty Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-49.3	2	-	47.96	PEAK	74	Pass
	Off	2310.0	-56.04	2	7.35	48.57	AV	54	Pass
	Off	2327.856	-46.31	2	-	50.95	PEAK	74	Pass
	Off	2343.408	-54.57	2	7.35	50.04	AV	54	Pass
	Off	2390.0	-49.07	2	-	48.19	PEAK	74	Pass
	Off	2390.0	-56.9	2	7.35	47.71	AV	54	Pass
	Off	2483.5	-50.33	2	-	46.93	PEAK	74	Pass
	Off	2483.5	-55.31	2	7.35	49.3	AV	54	Pass
	Off	2487.136	-47	2	-	50.26	PEAK	74	Pass
	Off	2483.704	-55.23	2	7.35	49.38	AV	54	Pass
	Off	2500.0	-48.21	2	-	49.05	PEAK	74	Pass
	Off	2500.0	-55.94	2	7.35	48.67	AV	54	Pass

9.2 Test Graphs

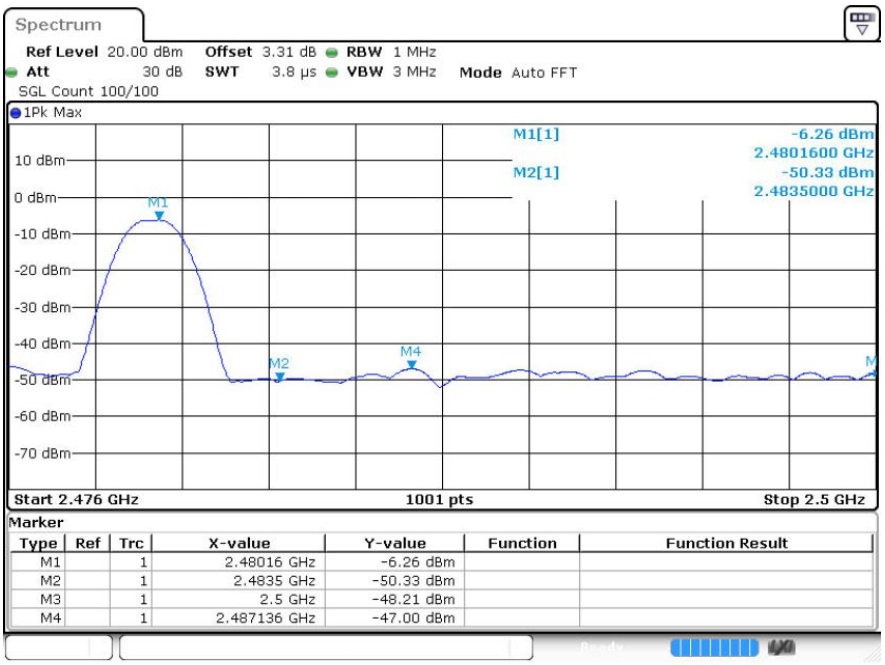
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (Low Channel)



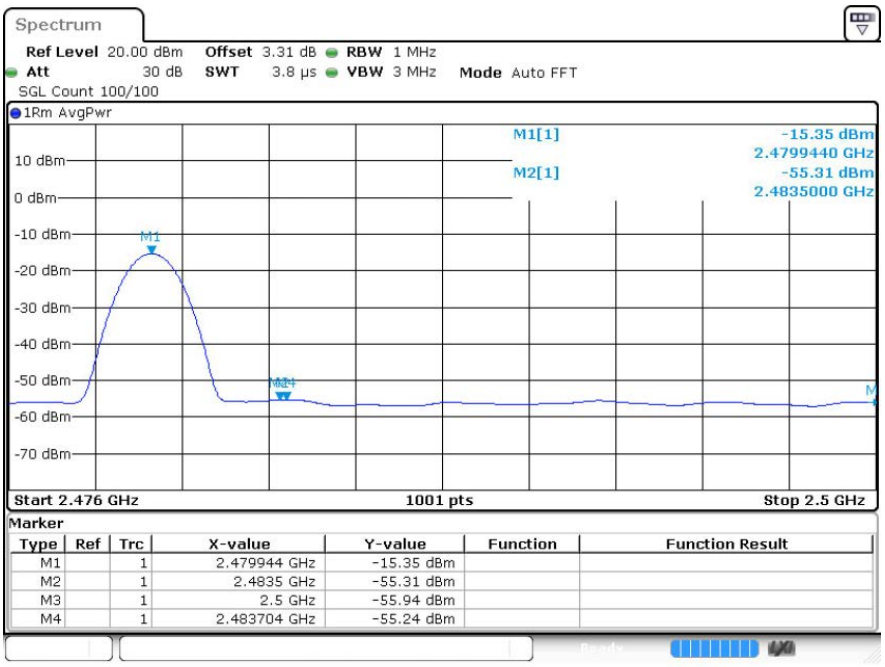
Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (Low Channel)



Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (High Channel)



Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (High Channel)



---The End---