

TEST REPORT

Product : Razor Silencer Bluetooth
Trade mark : Walker's
Model/Type reference : GWP-SLCR-BT, GWP-SLCRFDECMO-BT,
GWP-SLCRXXXXXX-BT - (Where X= 0-9 or A-Z)
Serial Number : N/A
Report Number : EED32K00238702
FCC ID : MV3-GWPSLCRBT
Date of Issue : Sep. 20, 2018
Test Standards : 47 CFR Part 15 Subpart C
Test result : PASS

Prepared for:

Country Mate Technology Ltd
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Prepared by:

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Date:

Sep. 20, 2018

Check No.:3096346882



2 Version

Version No.	Date	Description
00	Sep. 20, 2018	Original

3 Test Summary

Test Item	Test Requirement	Test method	Result
Antenna Requirement	47 CFR Part 15 Subpart C Section 15.203/15.247 (c)	ANSI C63.10-2013	PASS
AC Power Line Conducted Emission	47 CFR Part 15 Subpart C Section 15.207	ANSI C63.10-2013	PASS
Conducted Peak Output Power	47 CFR Part 15 Subpart C Section 15.247 (b)(1)	ANSI C63.10-2013	PASS
20dB Occupied Bandwidth	47 CFR Part 15 Subpart C Section 15.247 (a)(1)	ANSI C63.10-2013	PASS
Carrier Frequencies Separation	47 CFR Part 15 Subpart C Section 15.247 (a)(1)	ANSI C63.10-2013	PASS
Hopping Channel Number	47 CFR Part 15 Subpart C Section 15.247 (b)	ANSI C63.10-2013	PASS
Dwell Time	47 CFR Part 15 Subpart C Section 15.247 (a)(1)	ANSI C63.10-2013	PASS
Pseudorandom Frequency Hopping Sequence	47 CFR Part 15 Subpart C Section 15.247(b)(4)&TCB Exclusion List (7 July 2002)	ANSI C63.10-2013	PASS
RF Conducted Spurious Emissions	47 CFR Part 15 Subpart C Section 15.247(d)	ANSI C63.10-2013	PASS
Radiated Spurious emissions	47 CFR Part 15 Subpart C Section 15.205/15.209	ANSI C63.10-2013	PASS

Remark:

Test according to ANSI C63.4-2014 & ANSI C63.10-2013.

The tested samples and the sample information are provided by the client.

Model No.:GWP-SLCR-BT, GWP-SLCRFDECMO-BT, GWP-SLCRXXXXXX-BT - (Where X= 0-9 or A-Z)

Only the left Ear buds was tested, the model is GWP-SLCR-BT, since Their electrical circuit design, layout, components used and internal wiring are identical, Only the Color and enclosure is different.

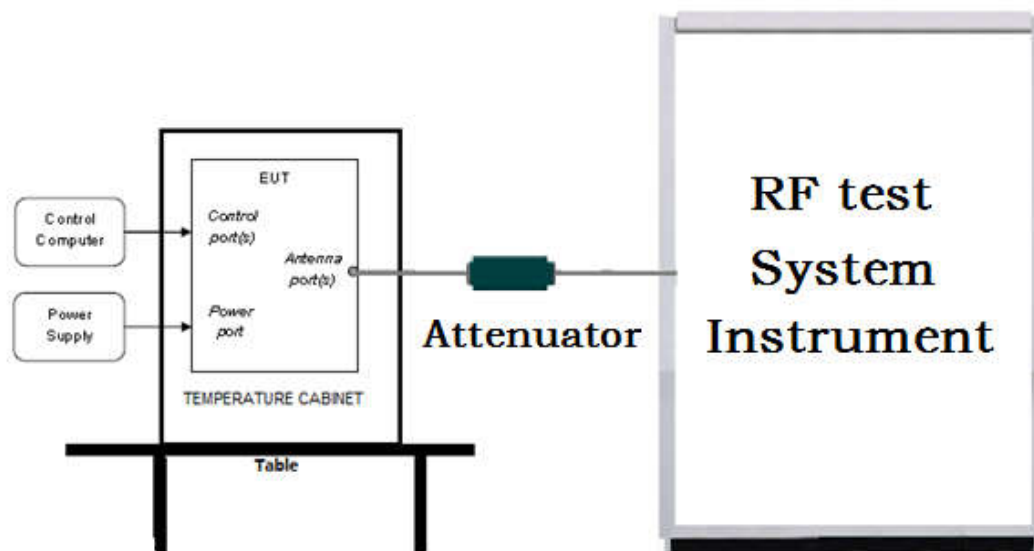
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5 Test Requirement

5.1 Test setup

5.1.1 For Conducted test setup



5.1.2 For Radiated Emissions test setup

Radiated Emissions setup:

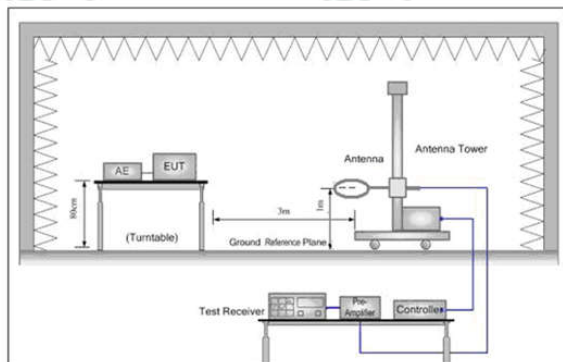


Figure 1. Below 30MHz

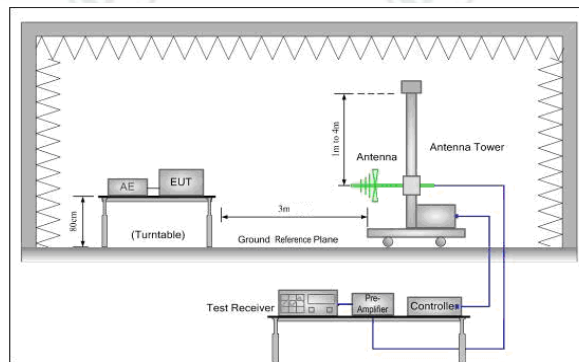


Figure 2. 30MHz to 1GHz

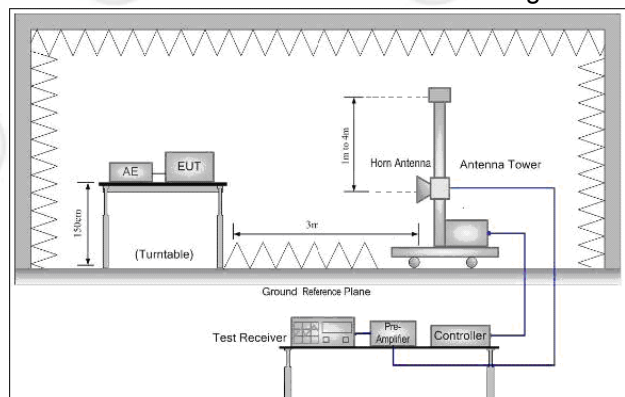
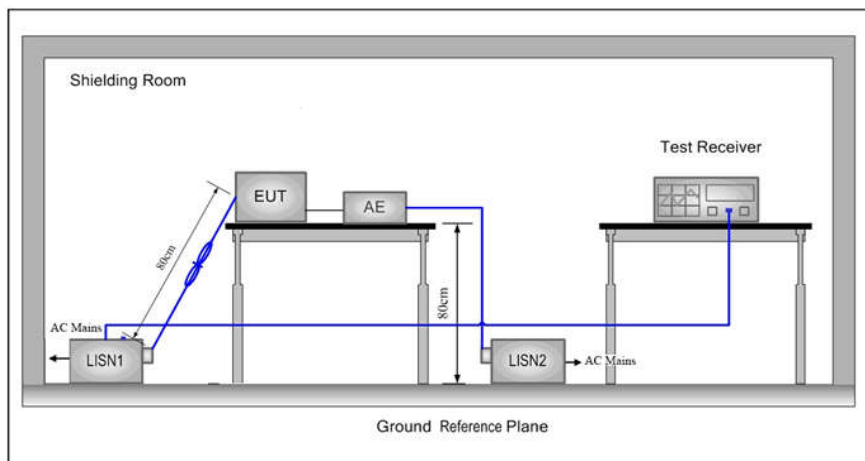


Figure 3. Above 1GHz

5.1.3 For Conducted Emissions test setup

Conducted Emissions setup



5.2 Test Environment

Operating Environment:

Temperature:	23.4 °C
Humidity:	64 % RH
Atmospheric Pressure:	1010mbar

5.3 Test Condition

Test Mode	Tx	RF Channel		
		Low(L)	Middle(M)	High(H)
GFSK/ π /4DQPSK/ 8DPSK(DH1,DH3, DH5)	2402MHz ~2480 MHz	Channel 1	Channel 40	Channel79
		2402MHz	2441MHz	2480MHz

TX mode: The EUT transmitted the continuous modulation test signal at the specific channel(s)

Test mode:

Pre-scan under all rate at Lowest channel 1

Mode	GFSK		
packets	1-DH1	1-DH3	1-DH5
Power(dBm)	-8.270	-7.890	-7.500

Mode	π /4DQPSK		
packets	2-DH1	2-DH3	2-DH5
Power(dBm)	-9.258	-8.674	-8.419
Mode	8DPSK		
packets	3-DH1	3-DH3	3-DH5
Power(dBm)	-9.478	-8.872	-8.417

Through Pre-scan, 1-DH5 packet the power is the worst case of GFSK, 2-DH5 packet the power is the worst case of π /4DQPSK, 3-DH5 packet the power is the worst case of 8DPSK.

6 General Information

6.1 Client Information

Applicant:	Country Mate Technology Ltd
Address of Applicant:	5/F, Blk E, Hing Yip Center. 31 Hing Yip Street, Kwun Tong, Kln, Hong Kong
Manufacturer:	Country Mate Technology Ltd
Address of Manufacturer:	5/F, Blk E, Hing Yip Center. 31 Hing Yip Street, Kwun Tong, Kln, Hong Kong
Factory:	Concord Electronic (Huizhou) Ltd.
Address of Factory:	21, Ping An Rd, Shuikou Street, Hui Cheng District, Huizhou City, Guangdong Province, China

6.2 General Description of EUT

Product Name:	Razor Silencer Bluetooth
Model No.(EUT):	GWP-SLCR-BT, GWP-SLCRFDECMO-BT, GWP-SLCRXXXXXX-BT - (Where X= 0-9 or A-Z)
Test Model No.:	GWP-SLCR-BT
Trade mark:	Walker's
EUT Supports Radios application:	BT4.2 BT Dual mode, 2402-2480MHz
Power Supply:	Battery: 3.7V, 85mAh
Sample Received Date:	Aug. 30, 2018
Sample tested Date:	Aug. 30, 2018 to Sep. 17, 2018

6.3 Product Specification subjective to this standard

Operation Frequency:	2402MHz~2480MHz
Bluetooth Version:	3.0+EDR
Modulation Technique:	Frequency Hopping Spread Spectrum(FHSS)
Modulation Type:	GFSK, $\pi/4$ DQPSK, 8DPSK
Number of Channel:	79
Hopping Channel Type:	Adaptive Frequency Hopping systems
Firmware version of the sample:	V0.5(manufacturer declare)
Hardware version of the sample:	V0.3(manufacturer declare)
Test Power Grade:	N/A
Test Software of EUT:	CSR BlueTest3(manufacturer declare)
Antenna Type:	PCB Antenna
Antenna Gain:	0.8dBi
Test Voltage:	DC 5V

Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2402MHz	21	2422MHz	41	2442MHz	61	2462MHz
2	2403MHz	22	2423MHz	42	2443MHz	62	2463MHz
3	2404MHz	23	2424MHz	43	2444MHz	63	2464MHz
4	2405MHz	24	2425MHz	44	2445MHz	64	2465MHz
5	2406MHz	25	2426MHz	45	2446MHz	65	2466MHz
6	2407MHz	26	2427MHz	46	2447MHz	66	2467MHz
7	2408MHz	27	2428MHz	47	2448MHz	67	2468MHz
8	2409MHz	28	2429MHz	48	2449MHz	68	2469MHz
9	2410MHz	29	2430MHz	49	2450MHz	69	2470MHz
10	2411MHz	30	2431MHz	50	2451MHz	70	2471MHz
11	2412MHz	31	2432MHz	51	2452MHz	71	2472MHz
12	2413MHz	32	2433MHz	52	2453MHz	72	2473MHz
13	2414MHz	33	2434MHz	53	2454MHz	73	2474MHz
14	2415MHz	34	2435MHz	54	2455MHz	74	2475MHz
15	2416MHz	35	2436MHz	55	2456MHz	75	2476MHz
16	2417MHz	36	2437MHz	56	2457MHz	76	2477MHz
17	2418MHz	37	2438MHz	57	2458MHz	77	2478MHz
18	2419MHz	38	2439MHz	58	2459MHz	78	2479MHz
19	2420MHz	39	2440MHz	59	2460MHz	79	2480MHz
20	2421MHz	40	2441MHz	60	2461MHz		

6.4 Description of Support Units

The EUT has been tested with associated equipment below.

Associated equipment name		Manufacture	model	serial number	Supplied by	Type
AE1	adapter	Shenzhen yiboyuan technology company	QC01	N/A	CTI	FCC

6.5 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax: +86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

6.6 Deviation from Standards

None.

6.7 Abnormalities from Standard Conditions

None.

6.8 Other Information Requested by the Customer

None.

6.9 Measurement Uncertainty (95% confidence levels, k=2)

No.	Item	Measurement Uncertainty
1	Radio Frequency	7.9×10^{-8}
2	RF power, conducted	0.31dB (30MHz-1GHz)
		0.57dB (1GHz-18GHz)
3	Radiated Spurious emission test	4.5dB (30MHz-1GHz)
		4.8dB (1GHz-12.75GHz)
4	Conduction emission	3.6dB (9kHz to 150kHz)
		3.2dB (150kHz to 30MHz)
5	Temperature test	0.64°C
6	Humidity test	2.8%
7	DC power voltages	0.025%

7 Equipment List

RF test system					
Equipment	Manufacturer	Model No.	Serial Number	Cal. Date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
Signal Generator	Keysight	E8257D	MY53401106	03-13-2018	03-12-2019
Spectrum Analyzer	Keysight	N9010A	MY54510339	03-13-2018	03-12-2019
Signal Generator	Keysight	N5182B	MY53051549	03-13-2018	03-12-2019
High-pass filter	Sinoscite	FL3CX03WG1 8NM12-0398-002	---	01-10-2018	01-09-2019
High-pass filter	MICRO-TRONICS	SPA-F-63029-4	---	01-10-2018	01-09-2019
DC Power	Keysight	E3642A	MY54426035	03-13-2018	03-12-2019
PC-1	Lenovo	R4960d	---	03-13-2018	03-12-2019
power meter & power sensor	R&S	OSP120	101374	04-11-2018	04-10-2019
RF control unit	JS Tonscend	JS0806-2	15860006	03-13-2018	03-12-2019
BT&WI-FI Automatic test software	JS Tonscend	JS1120-2	---	03-13-2018	03-12-2019

Conducted disturbance Test					
Equipment	Manufacturer	Model No.	Serial Number	Cal. date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
Receiver	R&S	ESCI	100435	05-25-2018	05-24-2019
Temperature/ Humidity Indicator	Defu	TH128	/	07-02-2018	07-01-2019
LISN	R&S	ENV216	100098	05-10-2018	05-10-2019
LISN	schwarzbeck	NNLK8121	8121-529	05-10-2018	05-10-2019
Voltage Probe	R&S	ESH2-Z3 0299.7810.5 6	100042	06-13-2017	06-11-2020
Current Probe	R&S	EZ-17 816.2063.03	100106	05-30-2018	05-29-2019
ISN	TESEQ	ISN T800	30297	02-06-2018	02-05-2019

3M Semi/full-anechoic Chamber					
Equipment	Manufacturer	Model No.	Serial Number	Cal. date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
3M Chamber & Accessory Equipment	TDK	SAC-3	---	06-04-2016	06-03-2019
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	9163-618	07-30-2018	07-29-2019
Microwave Preamplifier	Agilent	8449B	3008A02425	08-21-2018	08-20-2019
Microwave Preamplifier	Tonscend	EMC051845 SE	980380	01-19-2018	01-18-2019
Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-1869	04-25-2018	04-23-2021
Double ridge horn antenna	A.H.SYSTEM S	SAS-574	6042	06-05-2018	06-04-2021
Pre-amplifier	A.H.SYSTEM S	PAP-1840-60	6041	06-05-2018	06-04-2021
Loop Antenna	ETS	6502	00071730	06-22-2017	06-21-2019
Spectrum Analyzer	R&S	FSP40	100416	05-11-2018	05-10-2019
Receiver	R&S	ESCI	100435	05-25-2018	05-24-2019
Multi device Controller	maturo	NCD/070/107 11112	---	01-10-2018	01-09-2019
LISN	schwarzbeck	NNBM8125	81251547	05-11-2018	05-10-2019
LISN	schwarzbeck	NNBM8125	81251548	05-11-2018	05-10-2019
Signal Generator	Agilent	E4438C	MY45095744	03-13-2018	03-12-2019
Signal Generator	Keysight	E8257D	MY53401106	03-13-2018	03-12-2019
Temperature/ Humidity Indicator	TAYLOR	1451	1905	05-02-2018	05-01-2019
Communication test set	Agilent	E5515C	GB47050534	03-16-2018	03-15-2019
Cable line	Fulai(7M)	SF106	5219/6A	01-10-2018	01-09-2019
Cable line	Fulai(6M)	SF106	5220/6A	01-10-2018	01-09-2019
Cable line	Fulai(3M)	SF106	5216/6A	01-10-2018	01-09-2019
Cable line	Fulai(3M)	SF106	5217/6A	01-10-2018	01-09-2019
Communication test set	R&S	CMW500	104466	02-05-2018	02-04-2019
High-pass filter	Sinoscite	FL3CX03WG 18NM12-0398-002	---	01-10-2018	01-09-2019
High-pass filter	MICRO-TRONICS	SPA-F-63029-4	---	01-10-2018	01-09-2019
band rejection filter	Sinoscite	FL5CX01CA0 9CL12-0395-001	---	01-10-2018	01-09-2019
band rejection filter	Sinoscite	FL5CX01CA0 8CL12-0393-001	---	01-10-2018	01-09-2019
band rejection filter	Sinoscite	FL5CX02CA0 4CL12-0396-002	---	01-10-2018	01-09-2019
band rejection filter	Sinoscite	FL5CX02CA0 3CL12-0394-001	---	01-10-2018	01-09-2019

8 Radio Technical Requirements Specification

Reference documents for testing:

No.	Identity	Document Title
1	FCC Part15C	Subpart C-Intentional Radiators
2	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices

Test Results List:

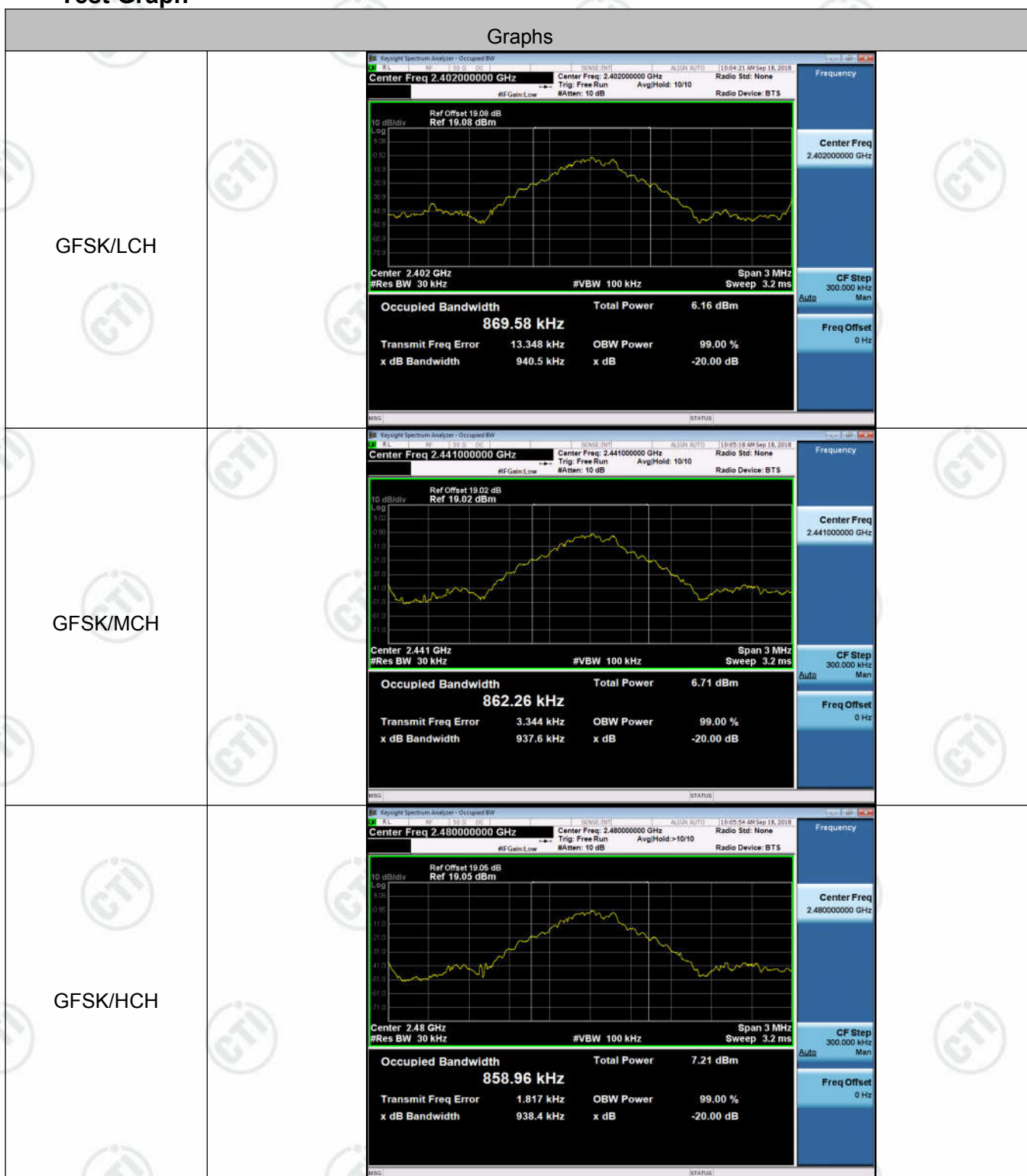
Test requirement	Test method	Test item	Verdict	Note
Part15C Section 15.247 (a)(1)	ANSI 63.10	20dB Occupied Bandwidth	PASS	Appendix A)
Part15C Section 15.247 (a)(1)	ANSI 63.10	Carrier Frequencies Separation	PASS	Appendix B)
Part15C Section 15.247 (a)(1)	ANSI 63.10	Dwell Time	PASS	Appendix C)
Part15C Section 15.247 (b)	ANSI 63.10	Hopping Channel Number	PASS	Appendix D)
Part15C Section 15.247 (b)(1)	ANSI 63.10	Conducted Peak Output Power	PASS	Appendix E)
Part15C Section 15.247(d)	ANSI 63.10	Band-edge for RF Conducted Emissions	PASS	Appendix F)
Part15C Section 15.247(d)	ANSI 63.10	RF Conducted Spurious Emissions	PASS	Appendix G)
Part15C Section 15.247 (a)(1)	ANSI 63.10	Pseudorandom Frequency Hopping Sequence	PASS	Appendix H)
Part15C Section 15.203/15.247 (c)	ANSI 63.10	Antenna Requirement	PASS	Appendix I)
Part15C Section 15.207	ANSI 63.10	AC Power Line Conducted Emission	PASS	Appendix J)
Part15C Section 15.205/15.209	ANSI 63.10	Restricted bands around fundamental frequency (Radiated) Emission)	PASS	Appendix K)
Part15C Section 15.205/15.209	ANSI 63.10	Radiated Spurious Emissions	PASS	Appendix L)

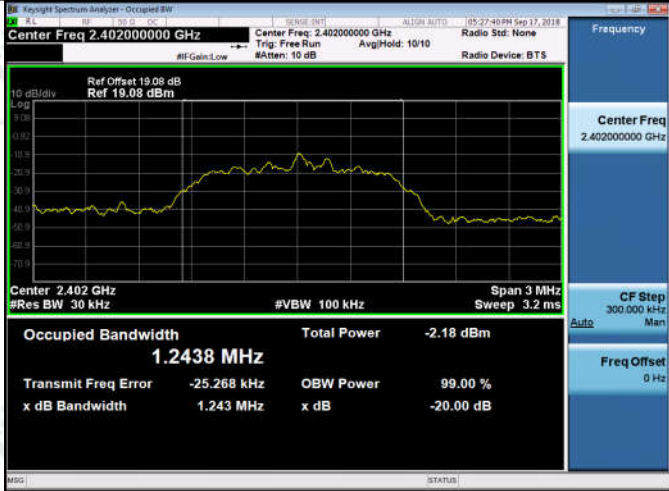
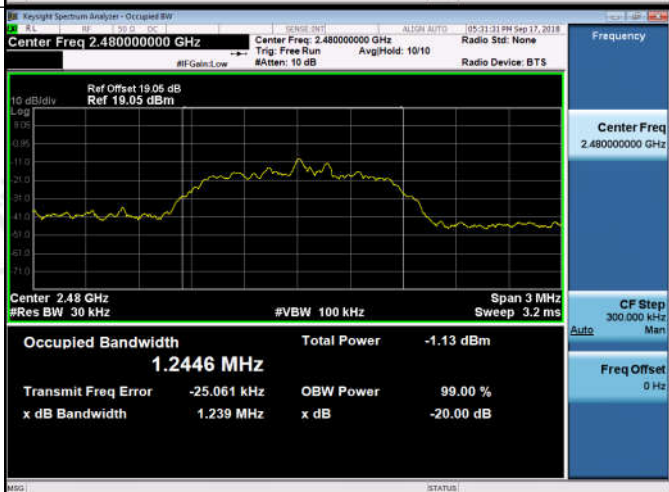
Appendix A): 20dB Occupied Bandwidth

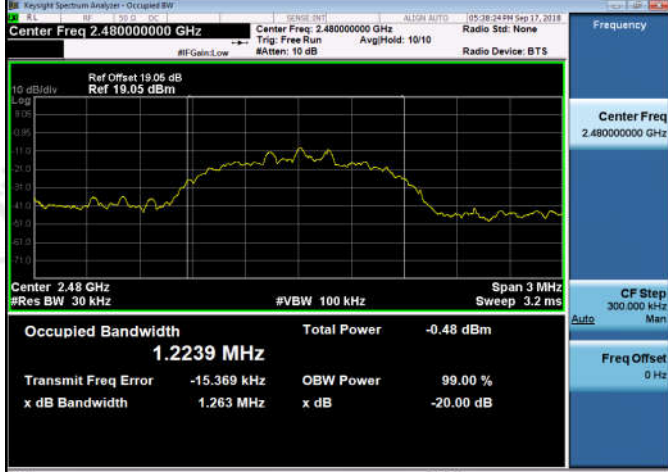
Test Result

Mode	Channel.	20dB Bandwidth [MHz]	99% OBW [MHz]	Verdict	Remark
GFSK	LCH	0.9405	0.86958	PASS	Peak detector
GFSK	MCH	0.9376	0.86226	PASS	
GFSK	HCH	0.9384	0.85896	PASS	
$\pi/4$ DQPSK	LCH	1.243	1.2438	PASS	
$\pi/4$ DQPSK	MCH	1.265	1.2503	PASS	
$\pi/4$ DQPSK	HCH	1.239	1.2446	PASS	
8DPSK	LCH	1.262	1.2229	PASS	
8DPSK	MCH	1.263	1.2228	PASS	
8DPSK	HCH	1.263	1.2239	PASS	

Test Graph



<p>$\pi/4$DQPSK/LCH</p>	
<p>$\pi/4$DQPSK/MCH</p>	
<p>$\pi/4$DQPSK/HCH</p>	

8DPSK/LCH	 <p>Center Freq 2.402000000 GHz</p> <p>Ref Offset 19.08 dB Ref 19.08 dBm</p> <p>Center 2.402 GHz #Res BW 30 kHz #VBW 100 kHz Span 3 MHz Sweep 3.2 ms</p> <p>Occupied Bandwidth 1.2229 MHz Total Power -1.63 dBm</p> <p>Transmit Freq Error -17.121 kHz OBW Power 99.00 % x dB Bandwidth 1.262 MHz x dB -20.00 dB</p>
8DPSK/MCH	 <p>Center Freq 2.441000000 GHz</p> <p>Ref Offset 19.02 dB Ref 19.02 dBm</p> <p>Center 2.441 GHz #Res BW 30 kHz #VBW 100 kHz Span 3 MHz Sweep 3.2 ms</p> <p>Occupied Bandwidth 1.2228 MHz Total Power -0.90 dBm</p> <p>Transmit Freq Error -18.063 kHz OBW Power 99.00 % x dB Bandwidth 1.263 MHz x dB -20.00 dB</p>
8DPSK/HCH	 <p>Center Freq 2.480000000 GHz</p> <p>Ref Offset 19.05 dB Ref 19.05 dBm</p> <p>Center 2.48 GHz #Res BW 30 kHz #VBW 100 kHz Span 3 MHz Sweep 3.2 ms</p> <p>Occupied Bandwidth 1.2239 MHz Total Power -0.48 dBm</p> <p>Transmit Freq Error -15.369 kHz OBW Power 99.00 % x dB Bandwidth 1.263 MHz x dB -20.00 dB</p>

Appendix B): Carrier Frequency Separation


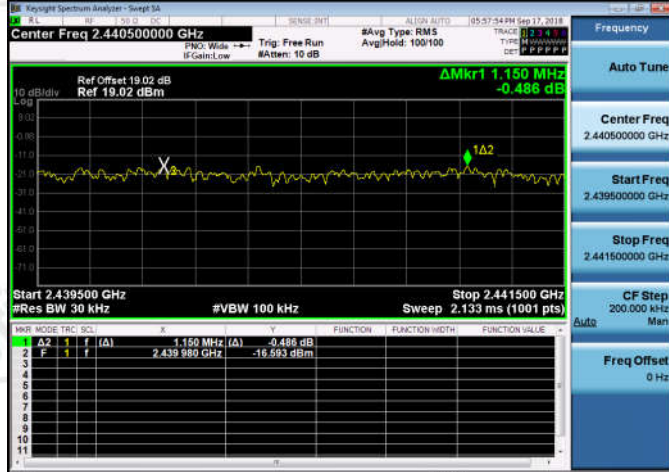
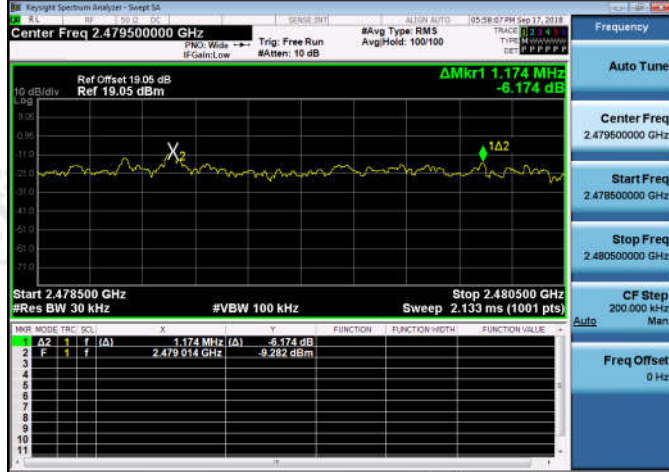
Result Table

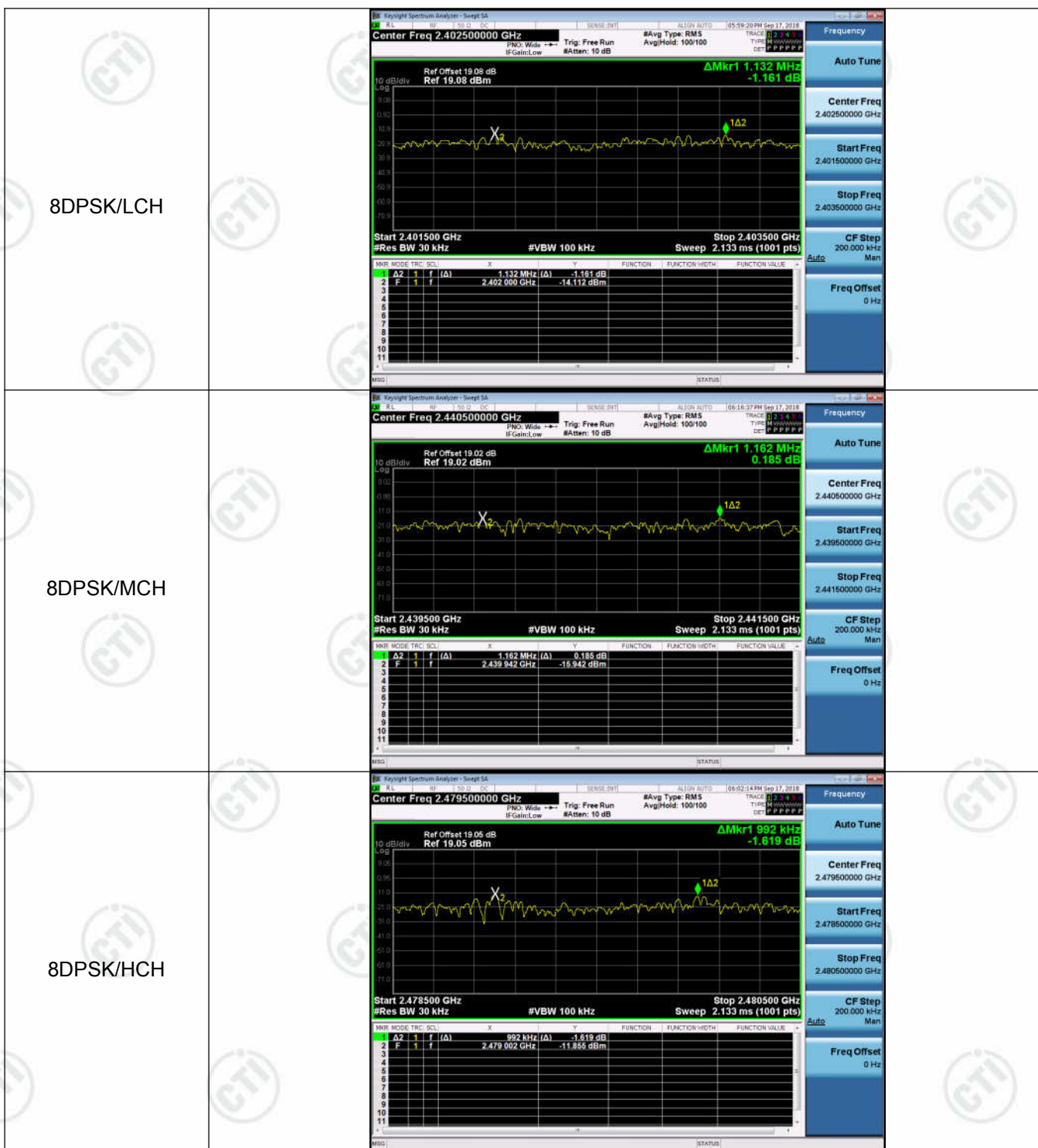
Mode	Channel.	Carrier Frequency Separation [MHz]	Verdict
GFSK	LCH	1.022	PASS
GFSK	MCH	1.004	PASS
GFSK	HCH	0.962	PASS
$\pi/4$ DQPSK	LCH	1.162	PASS
$\pi/4$ DQPSK	MCH	1.150	PASS
$\pi/4$ DQPSK	HCH	1.174	PASS
8DPSK	LCH	1.132	PASS
8DPSK	MCH	1.162	PASS
8DPSK	HCH	0.992	PASS

Test Graph

Graphs



$\pi/4$ DQPSK/LCH	 <table><tr><th>MARK</th><th>MODE</th><th>TRIG</th><th>SCL</th><th>X</th><th>Y</th><th>FUNCTION</th><th>FUNCTION-METH</th><th>FUNCTION-VALUE</th></tr><tr><td>1</td><td>A2</td><td>1</td><td>f</td><td>(A)</td><td>1.162 MHz</td><td>(A)</td><td></td><td>2.895 dB</td></tr><tr><td>2</td><td>F</td><td>1</td><td>f</td><td>(A)</td><td>2.402 008 GHz</td><td></td><td></td><td>-14.293 dBm</td></tr></table>	MARK	MODE	TRIG	SCL	X	Y	FUNCTION	FUNCTION-METH	FUNCTION-VALUE	1	A2	1	f	(A)	1.162 MHz	(A)		2.895 dB	2	F	1	f	(A)	2.402 008 GHz			-14.293 dBm
MARK	MODE	TRIG	SCL	X	Y	FUNCTION	FUNCTION-METH	FUNCTION-VALUE																				
1	A2	1	f	(A)	1.162 MHz	(A)		2.895 dB																				
2	F	1	f	(A)	2.402 008 GHz			-14.293 dBm																				
$\pi/4$ DQPSK/MCH	 <table><tr><th>MARK</th><th>MODE</th><th>TRIG</th><th>SCL</th><th>X</th><th>Y</th><th>FUNCTION</th><th>FUNCTION-METH</th><th>FUNCTION-VALUE</th></tr><tr><td>1</td><td>A2</td><td>1</td><td>f</td><td>(A)</td><td>1.150 MHz</td><td>(A)</td><td></td><td>-0.486 dB</td></tr><tr><td>2</td><td>F</td><td>1</td><td>f</td><td>(A)</td><td>2.439 989 GHz</td><td></td><td></td><td>-16.593 dBm</td></tr></table>	MARK	MODE	TRIG	SCL	X	Y	FUNCTION	FUNCTION-METH	FUNCTION-VALUE	1	A2	1	f	(A)	1.150 MHz	(A)		-0.486 dB	2	F	1	f	(A)	2.439 989 GHz			-16.593 dBm
MARK	MODE	TRIG	SCL	X	Y	FUNCTION	FUNCTION-METH	FUNCTION-VALUE																				
1	A2	1	f	(A)	1.150 MHz	(A)		-0.486 dB																				
2	F	1	f	(A)	2.439 989 GHz			-16.593 dBm																				
$\pi/4$ DQPSK/HCH	 <table><tr><th>MARK</th><th>MODE</th><th>TRIG</th><th>SCL</th><th>X</th><th>Y</th><th>FUNCTION</th><th>FUNCTION-METH</th><th>FUNCTION-VALUE</th></tr><tr><td>1</td><td>A2</td><td>1</td><td>f</td><td>(A)</td><td>1.174 MHz</td><td>(A)</td><td></td><td>-6.174 dB</td></tr><tr><td>2</td><td>F</td><td>1</td><td>f</td><td>(A)</td><td>2.479 914 GHz</td><td></td><td></td><td>-9.282 dBm</td></tr></table>	MARK	MODE	TRIG	SCL	X	Y	FUNCTION	FUNCTION-METH	FUNCTION-VALUE	1	A2	1	f	(A)	1.174 MHz	(A)		-6.174 dB	2	F	1	f	(A)	2.479 914 GHz			-9.282 dBm
MARK	MODE	TRIG	SCL	X	Y	FUNCTION	FUNCTION-METH	FUNCTION-VALUE																				
1	A2	1	f	(A)	1.174 MHz	(A)		-6.174 dB																				
2	F	1	f	(A)	2.479 914 GHz			-9.282 dBm																				



Appendix C): Dwell Time

Result Table

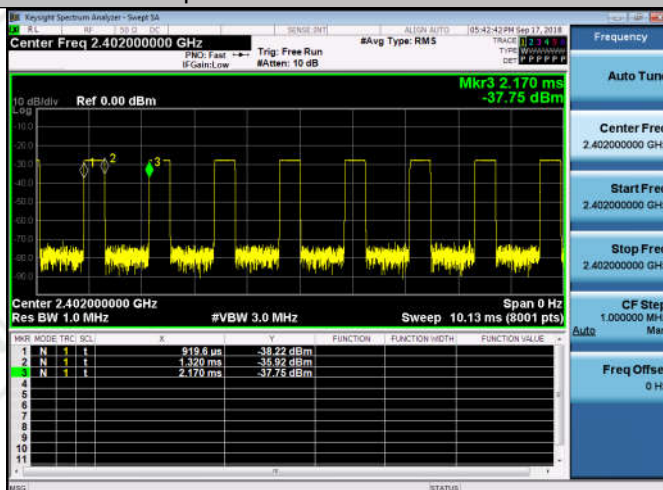
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Duty Cycle [%]	Verdict
GFSK	DH1	LCH	0.40027	320	0.128	0.32	PASS
GFSK	DH1	MCH	0.400267	320	0.128	0.32	PASS
GFSK	DH1	HCH	0.40027	320	0.128	0.32	PASS
GFSK	DH3	LCH	1.655537	160	0.265	0.66	PASS
GFSK	DH3	MCH	1.65553	160	0.265	0.66	PASS
GFSK	DH3	HCH	1.65554	160	0.265	0.66	PASS
GFSK	DH5	LCH	2.8888	106.7	0.308	0.77	PASS
GFSK	DH5	MCH	2.8888	106.7	0.308	0.77	PASS
GFSK	DH5	HCH	2.8888	106.7	0.308	0.77	PASS

Remark : All modes are tested, only the worst mode GFSK is reported.

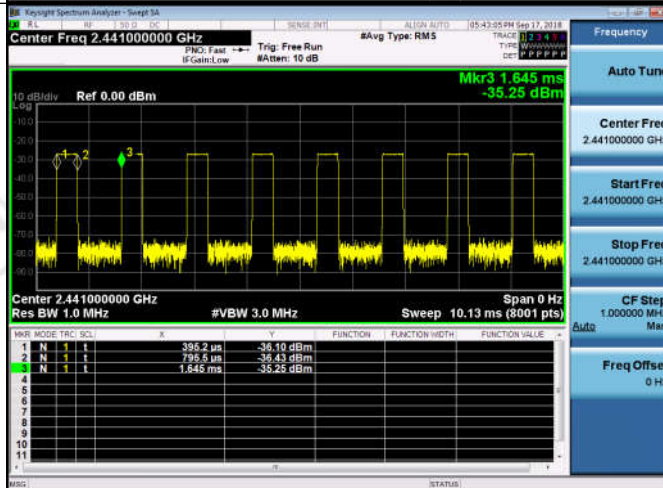
Test Graph

Graphs

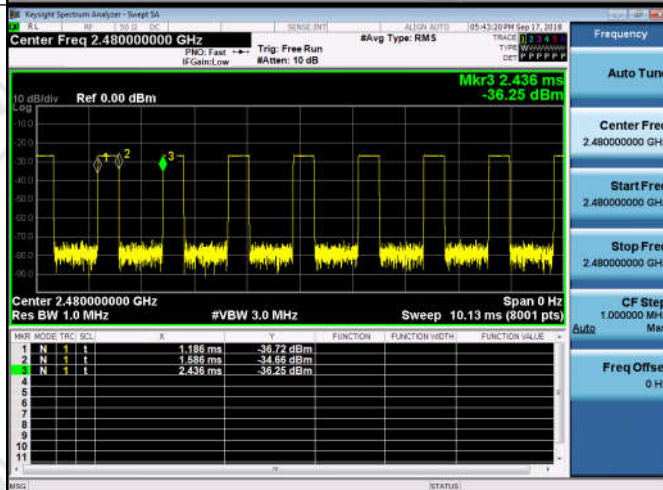
GFSK_DH1/LCH

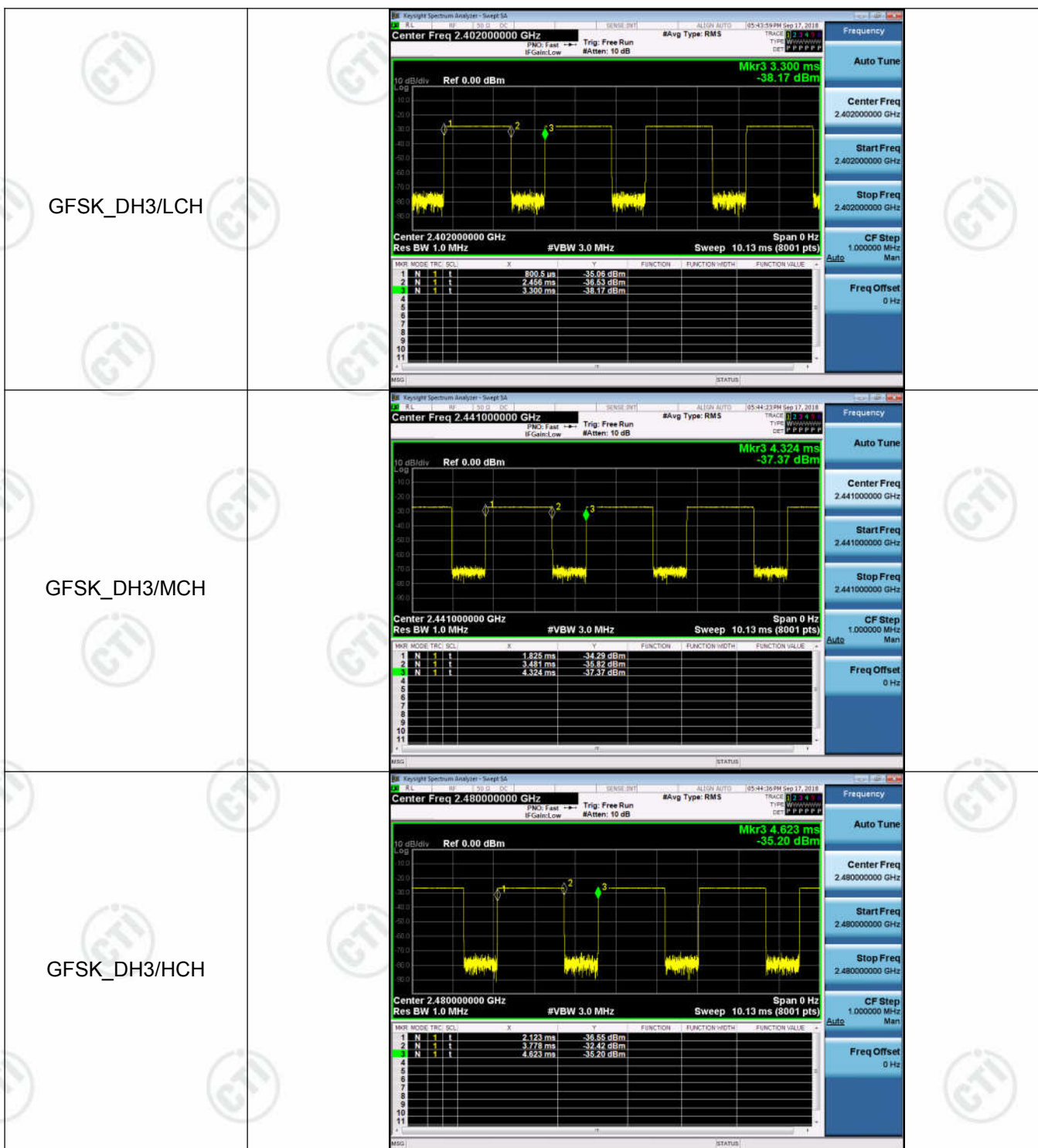


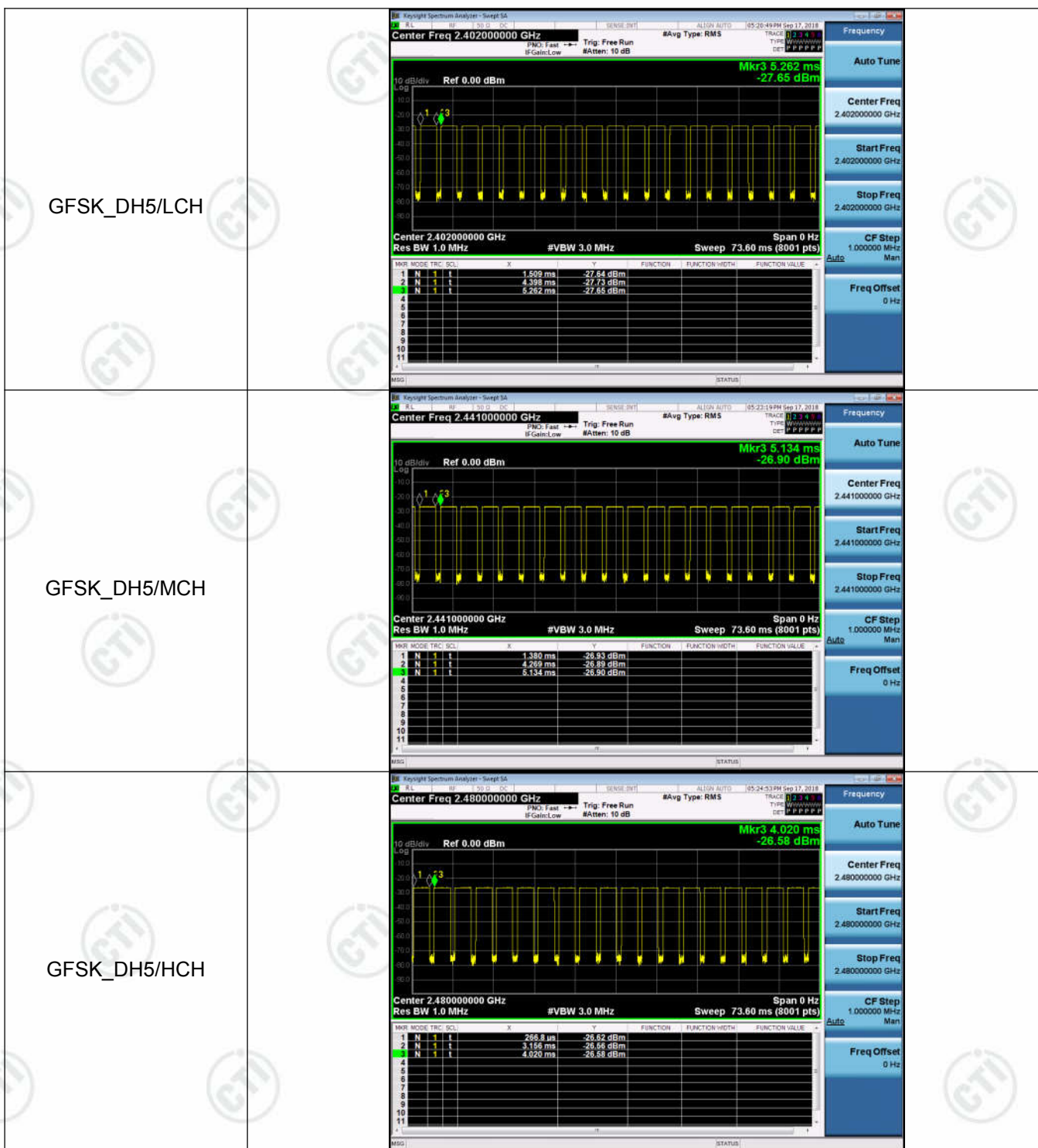
GFSK_DH1/MCH



GFSK_DH1/HCH







Appendix D): Hopping Channel Number

Result Table

Mode	Channel.	Number of Hopping Channel	Verdict
GFSK	Hop	79	PASS
$\pi/4$ DQPSK	Hop	79	PASS
8DPSK	Hop	79	PASS

Test Graph

Graphs	
GFSK/Hop	
$\pi/4$ DQPSK/Hop	
8DPSK/Hop	

Appendix E): Conducted Peak Output Power

Result Table

Mode	Channel.	Maximum Peak Output Power [dBm]	Verdict
GFSK	LCH	-7.500	PASS
GFSK	MCH	-6.736	PASS
GFSK	HCH	-6.407	PASS
$\pi/4$ DQPSK	LCH	-8.419	PASS
$\pi/4$ DQPSK	MCH	-7.563	PASS
$\pi/4$ DQPSK	HCH	-7.208	PASS
8DPSK	LCH	-8.417	PASS
8DPSK	MCH	-7.547	PASS
8DPSK	HCH	-7.163	PASS

Test Graph

Graphs	
GFSK/LCH	
GFSK/MCH	
GFSK/HCH	

<p>$\pi/4$DQPSK/LCH</p>	
<p>$\pi/4$DQPSK/MCH</p>	
<p>$\pi/4$DQPSK/HCH</p>	



Appendix F): Band-edge for RF Conducted Emissions

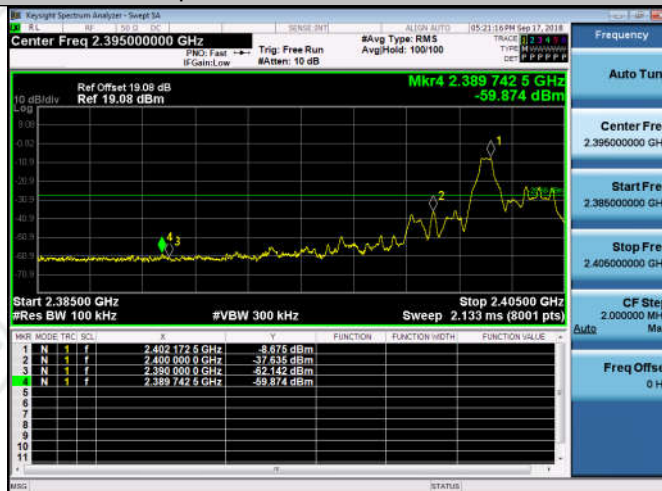
Result Table

Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	-8.675	Off	-59.874	-28.68	PASS
			-7.462	On	-60.355	-27.46	PASS
GFSK	HCH	2480	-7.659	Off	-45.267	-27.66	PASS
			-7.722	On	-45.622	-27.72	PASS
$\pi/4$ DQPSK	LCH	2402	-9.710	Off	-60.315	-29.71	PASS
			-8.598	On	-60.262	-28.6	PASS
$\pi/4$ DQPSK	HCH	2480	-8.608	Off	-55.620	-28.61	PASS
			-8.688	On	-57.668	-28.69	PASS
8DPSK	LCH	2402	-9.688	Off	-60.892	-29.69	PASS
			-8.515	On	-60.009	-28.52	PASS
8DPSK	HCH	2480	-8.481	Off	-53.987	-28.48	PASS
			-8.613	On	-56.472	-28.61	PASS

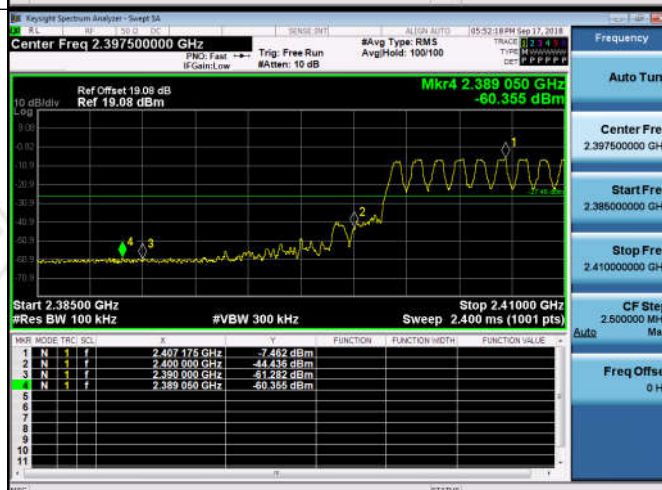
Test Graph

Graphs

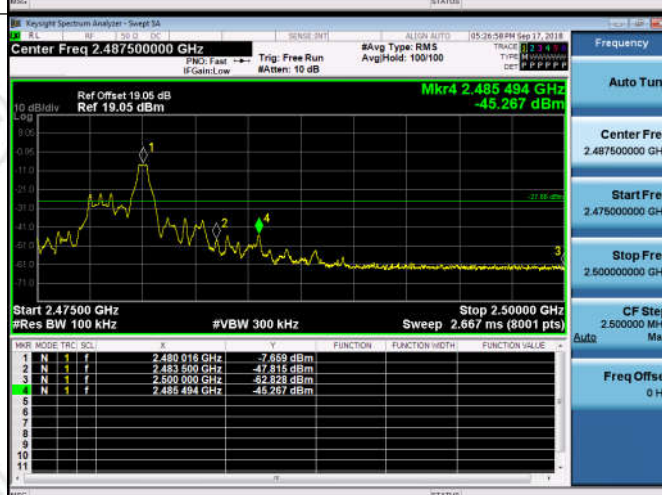
GFSK/LCH/No Hop

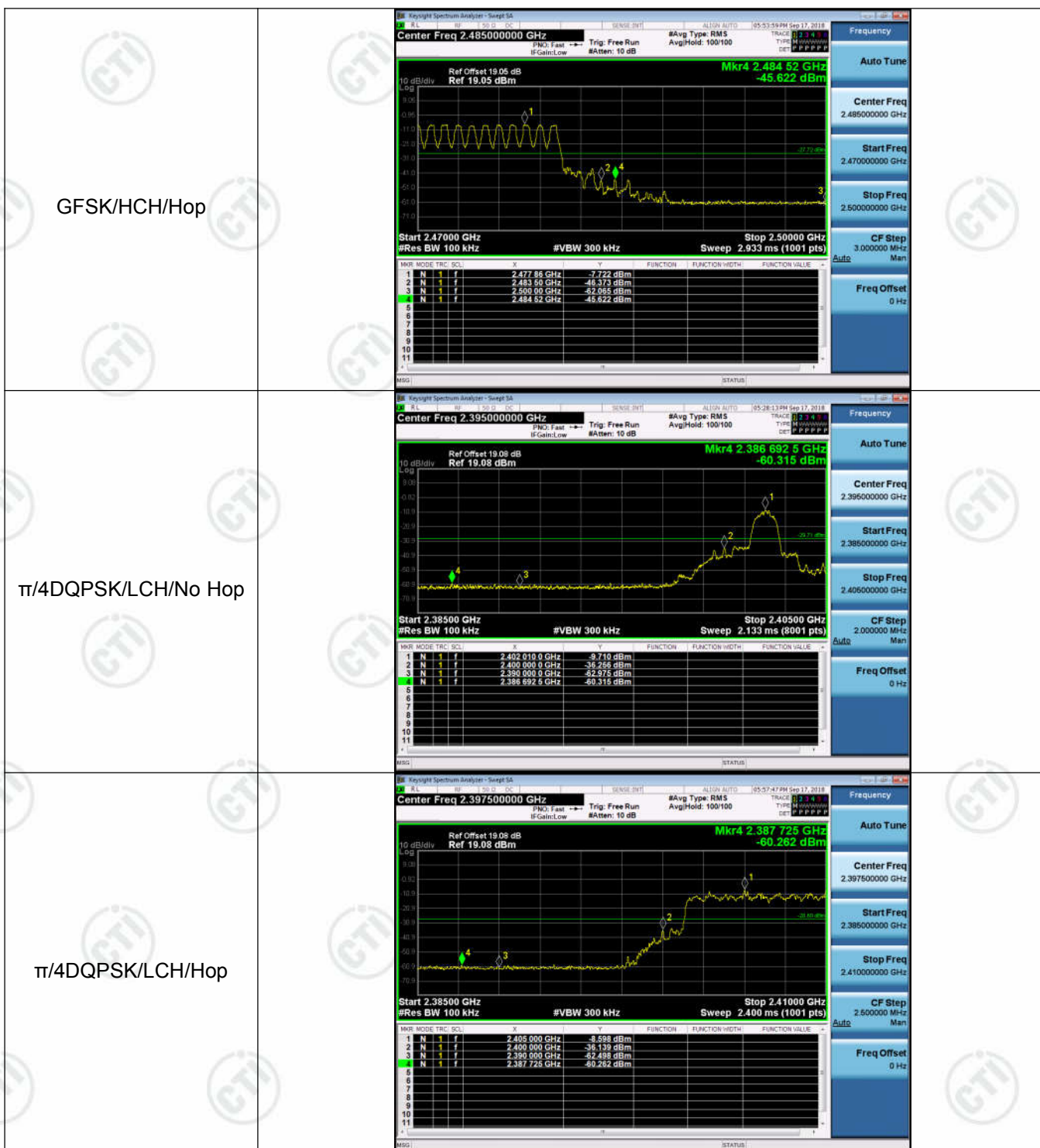


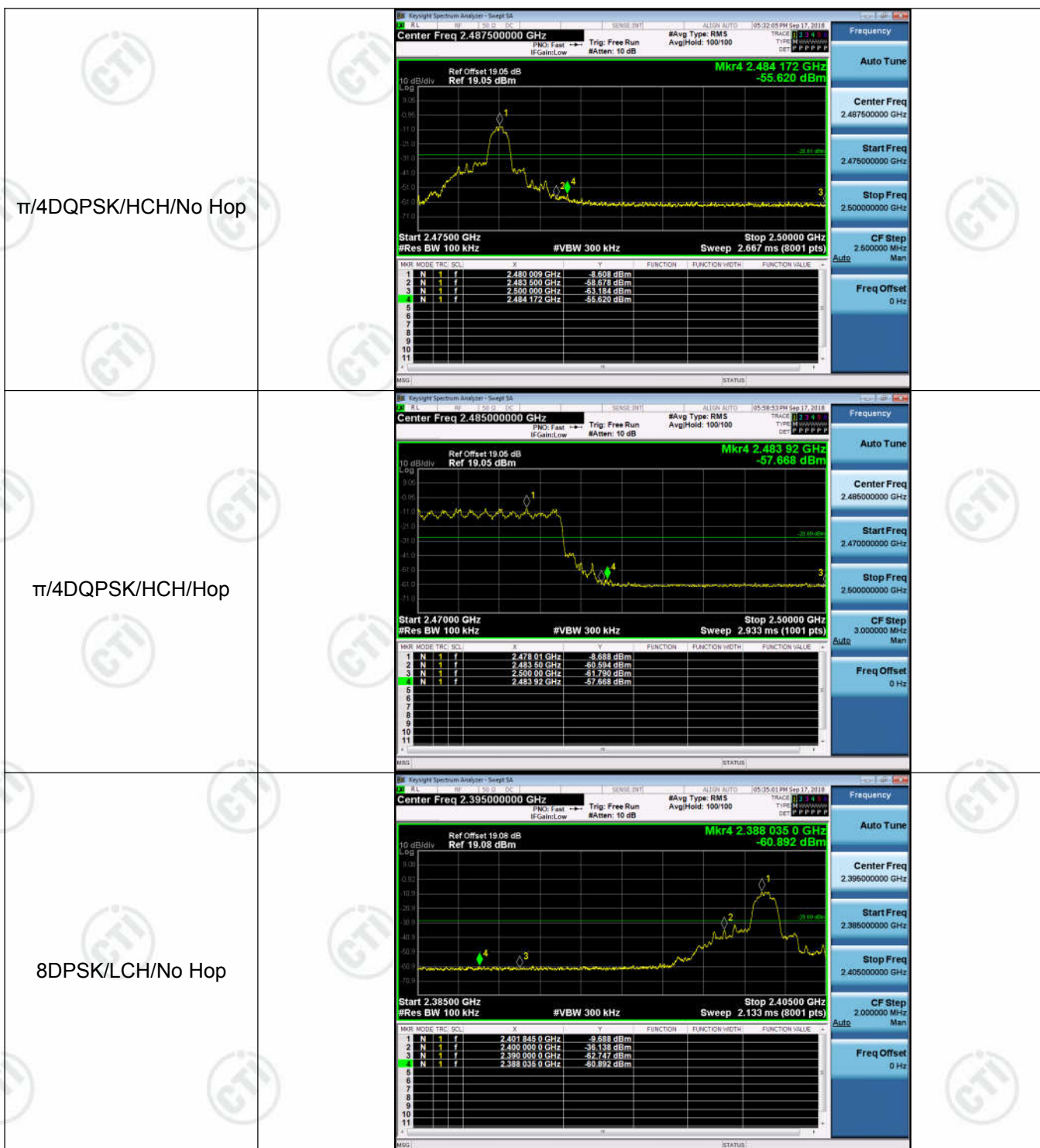
GFSK/LCH/Hop

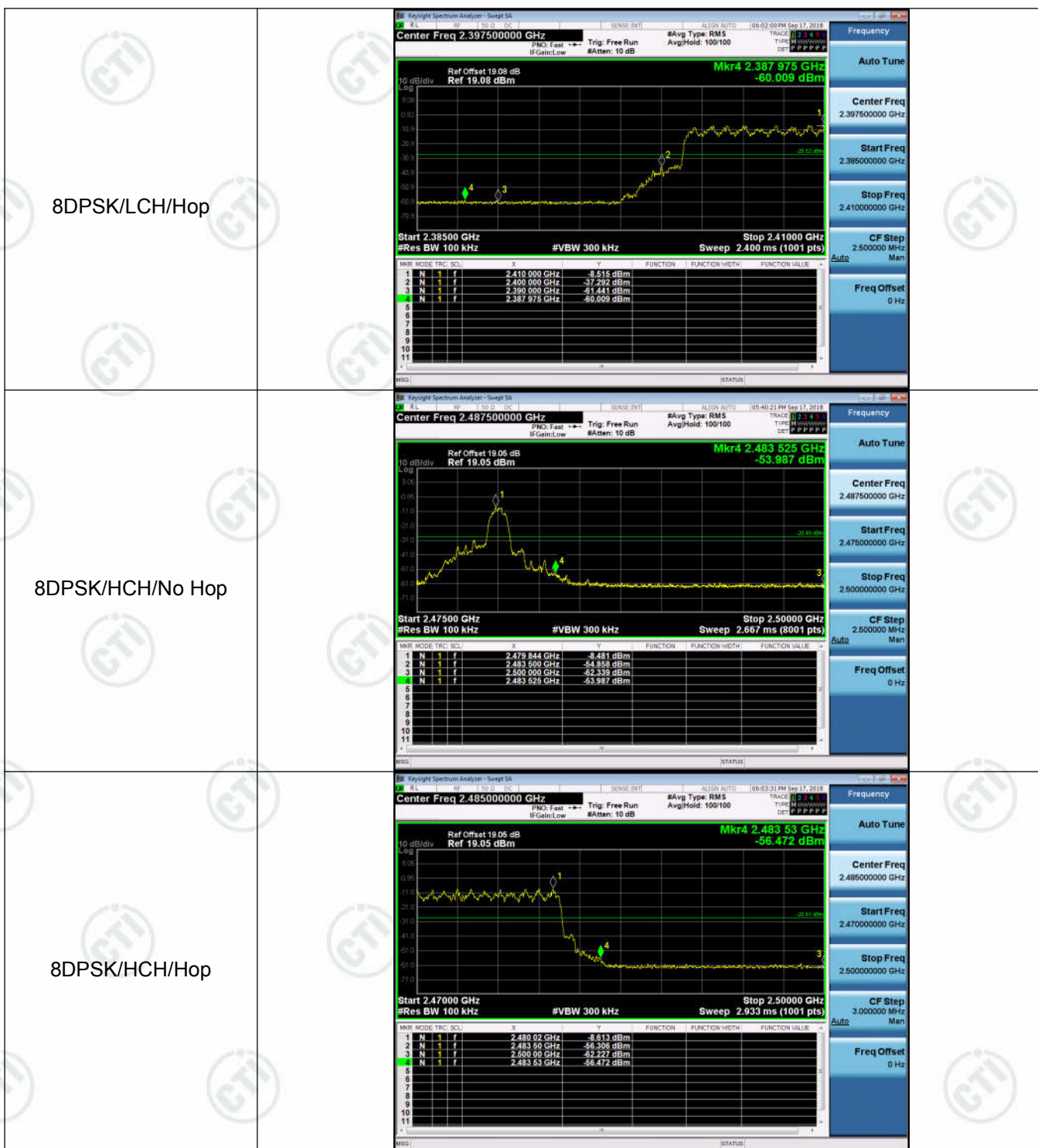


GFSK/HCH/No Hop







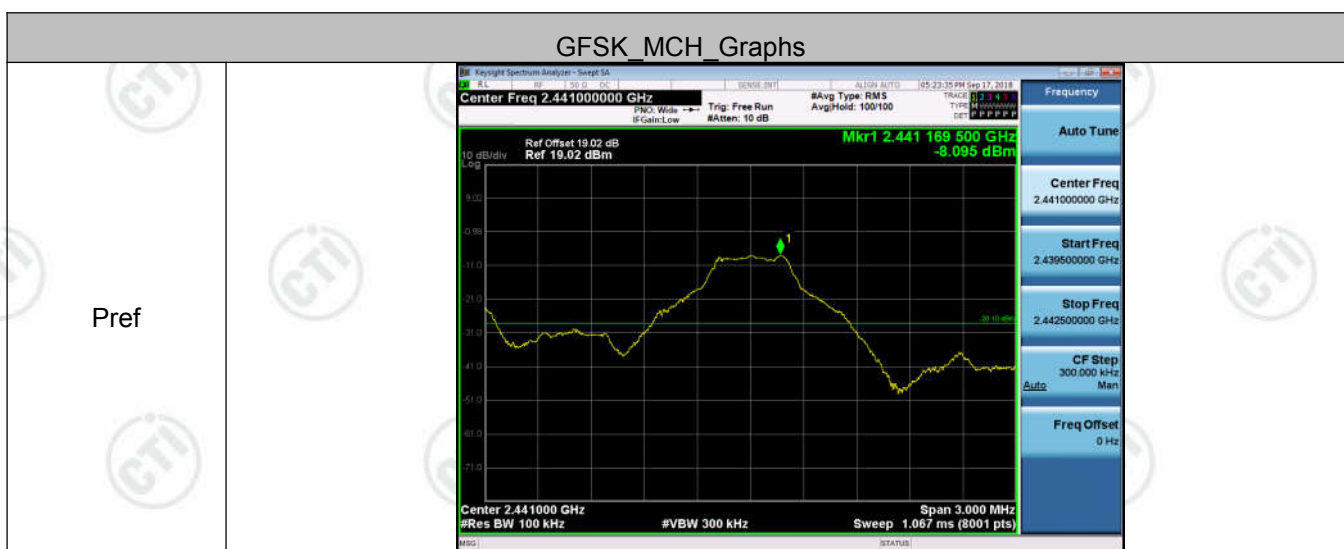
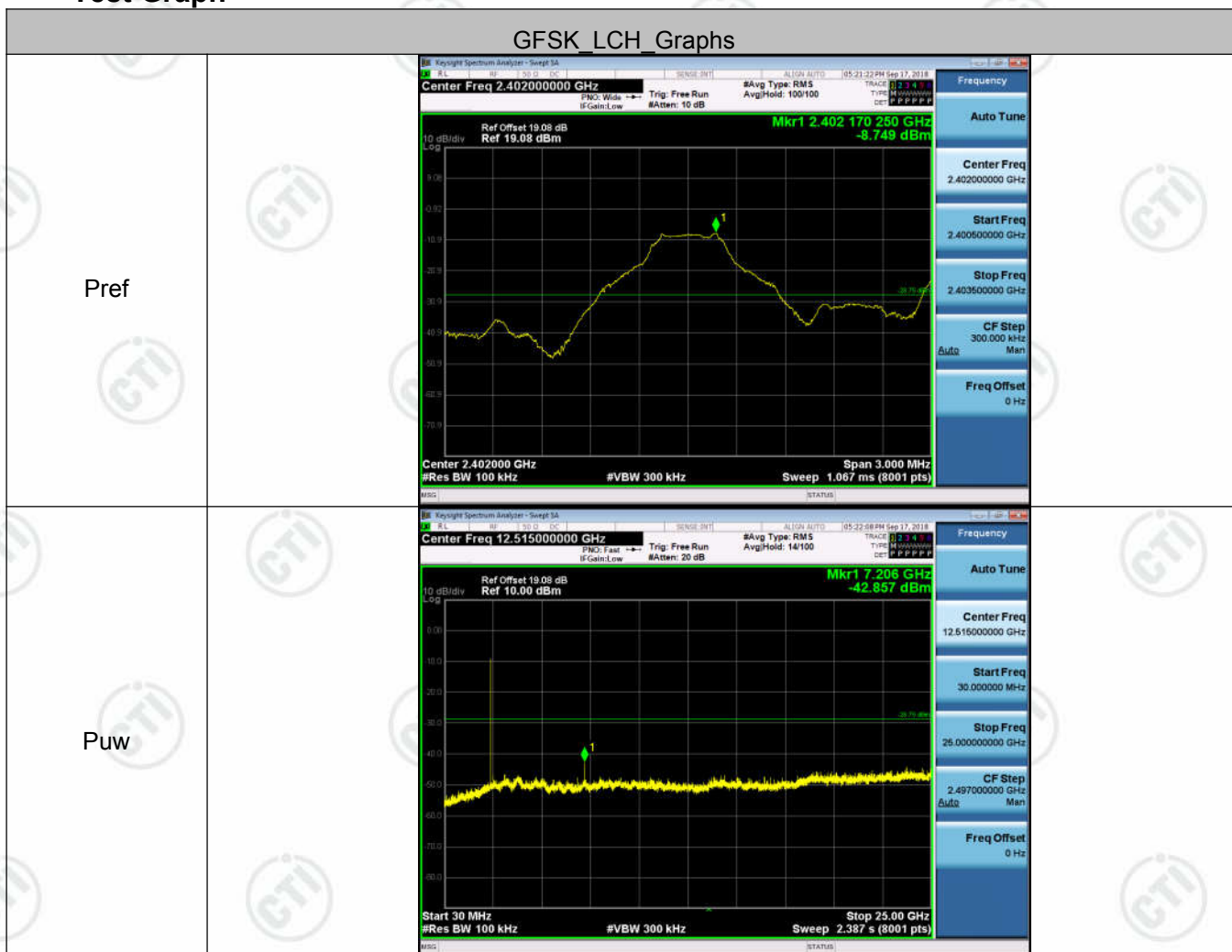


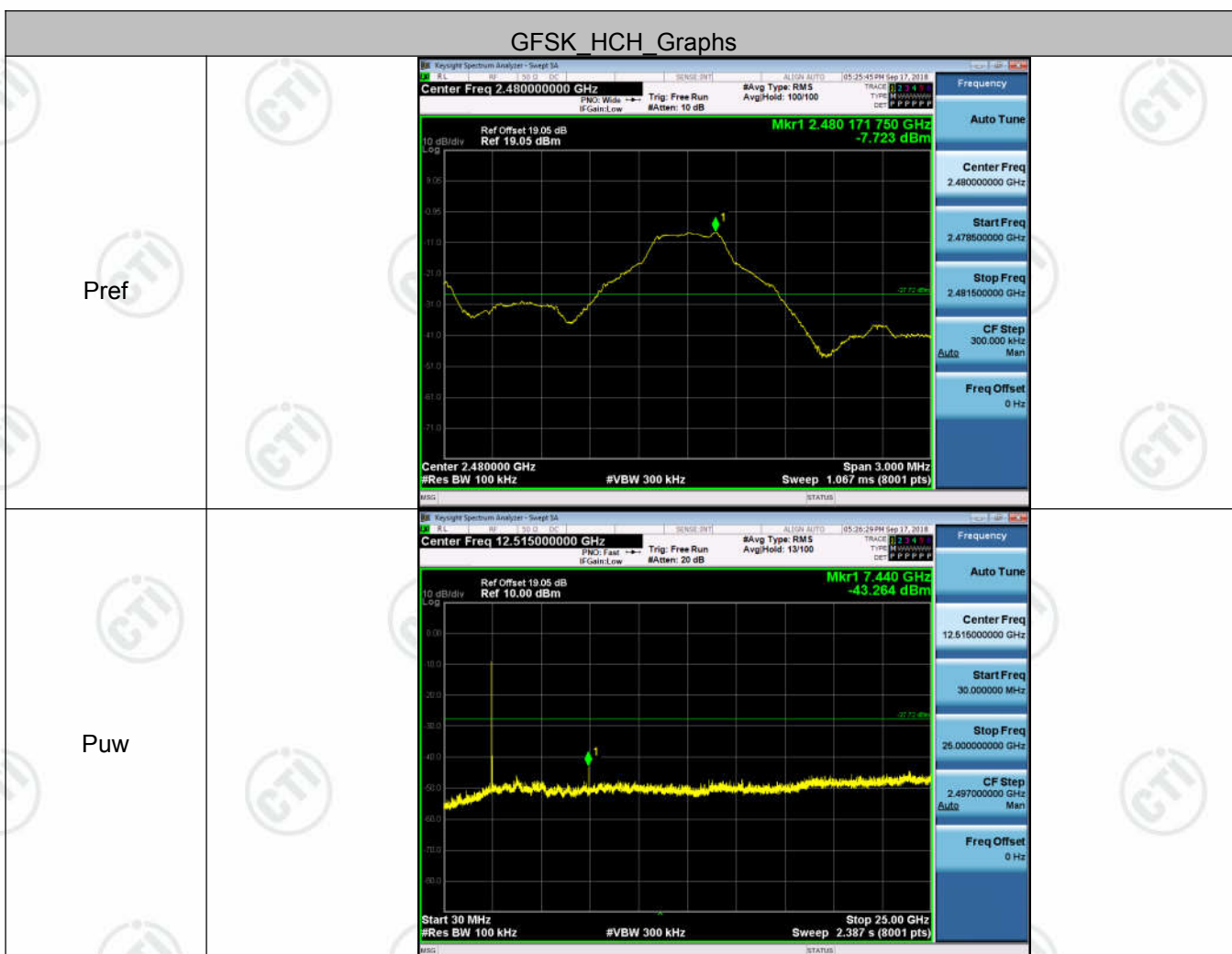
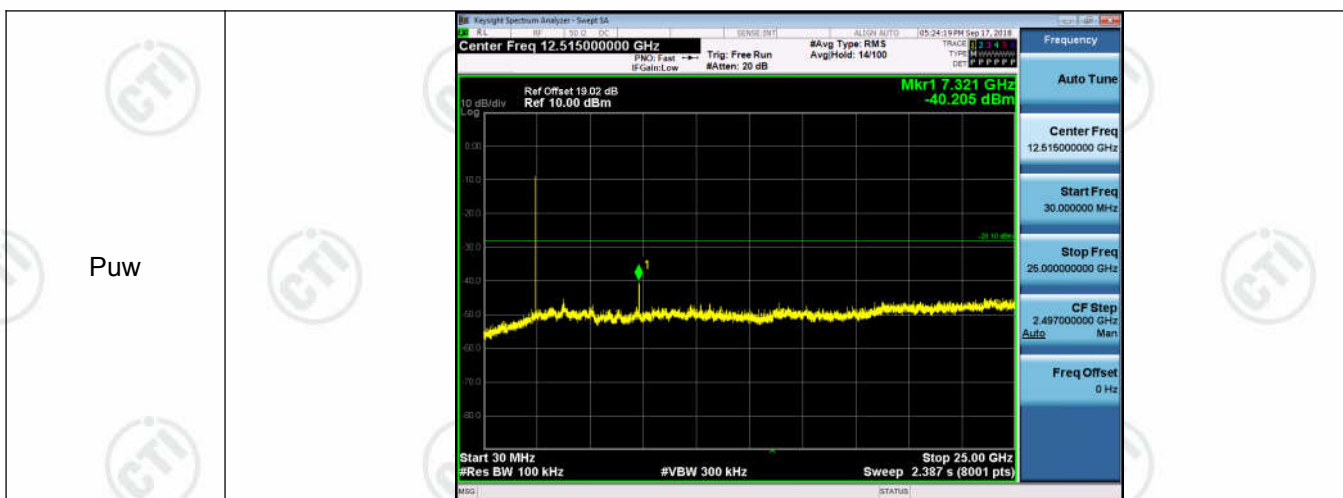
Appendix G): RF Conducted Spurious Emissions

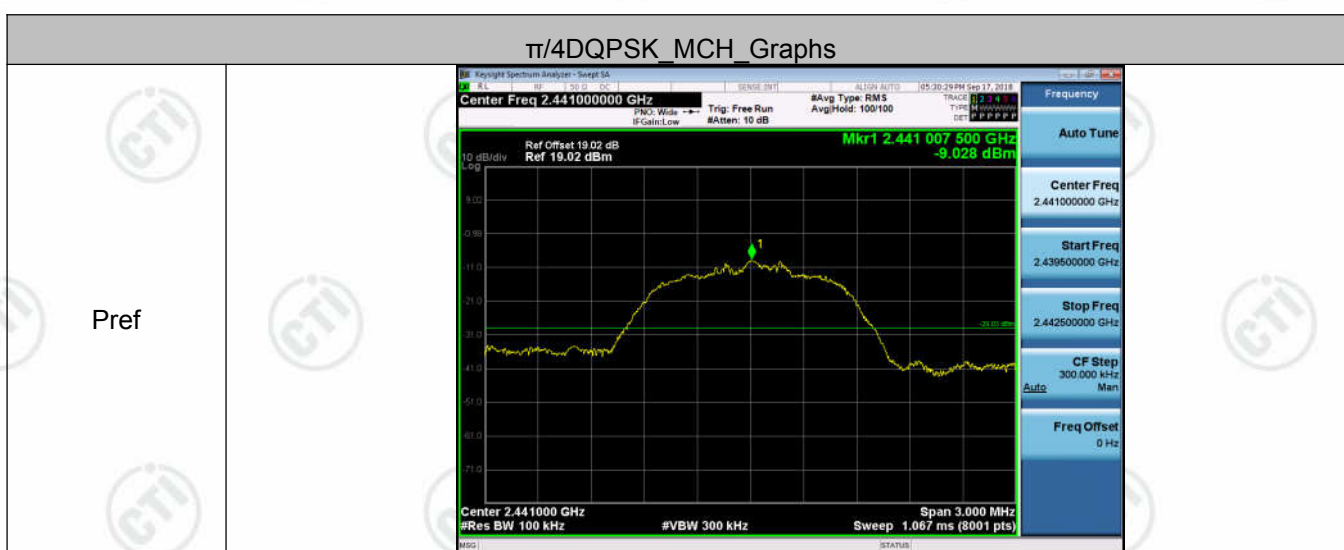
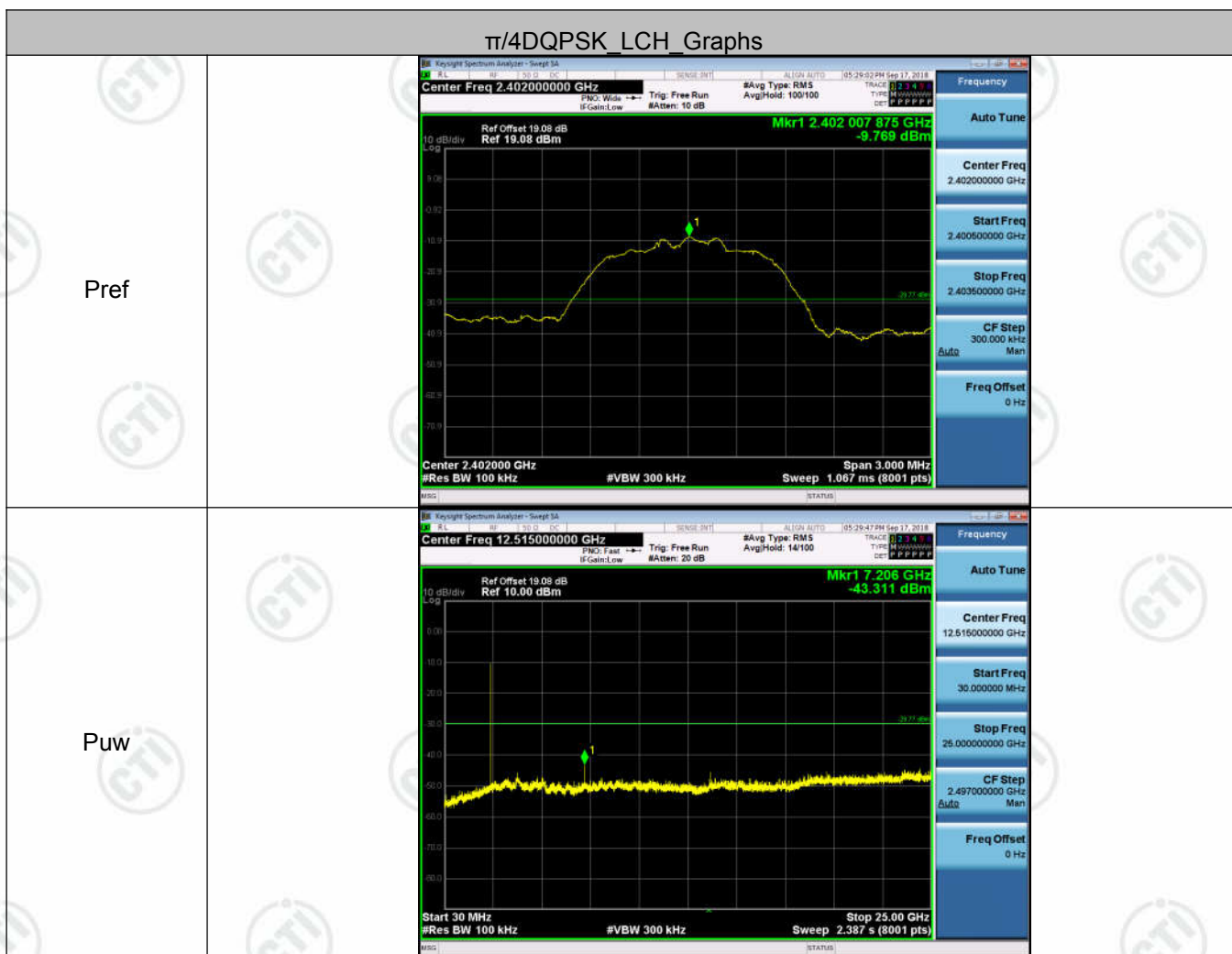
Result Table

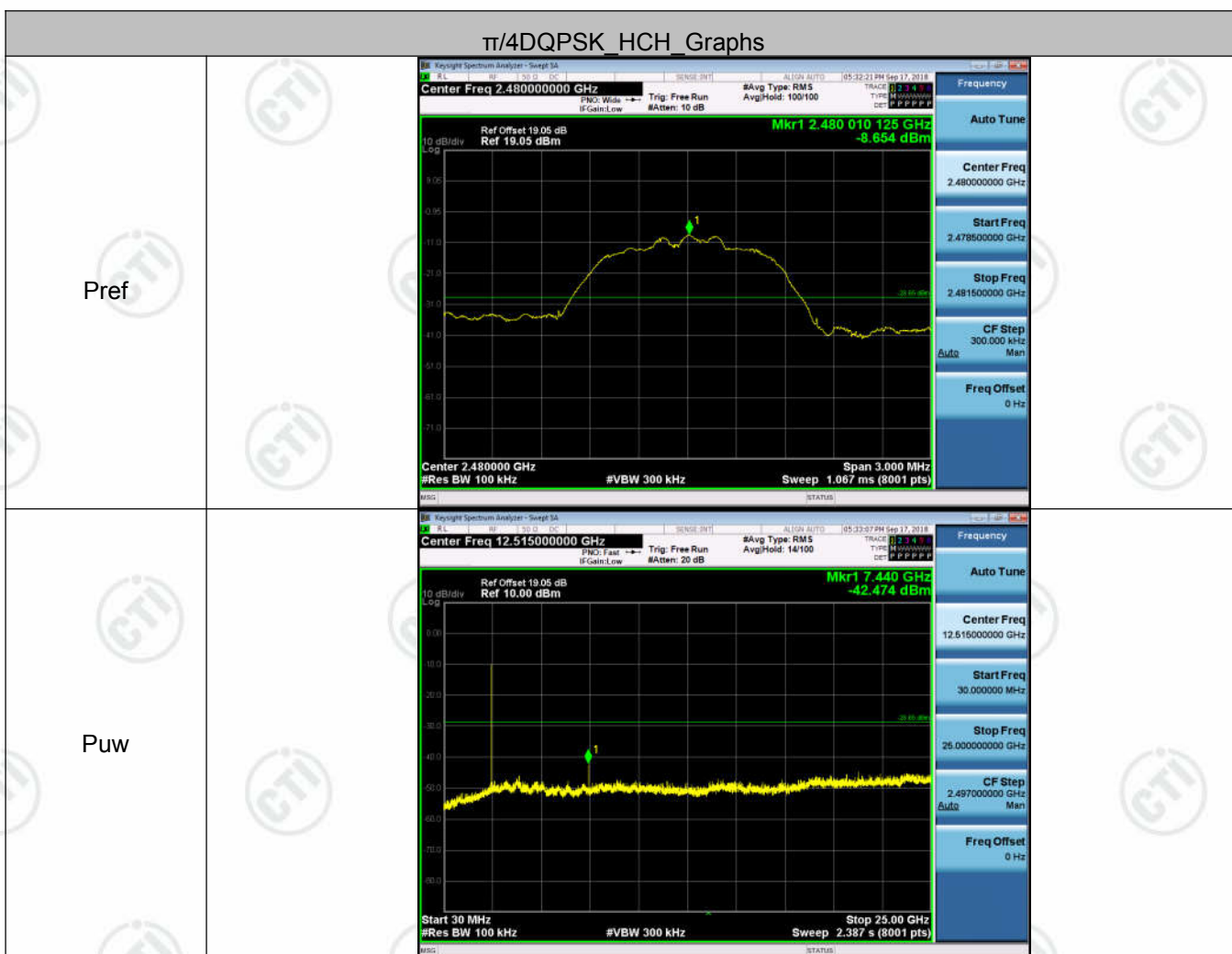
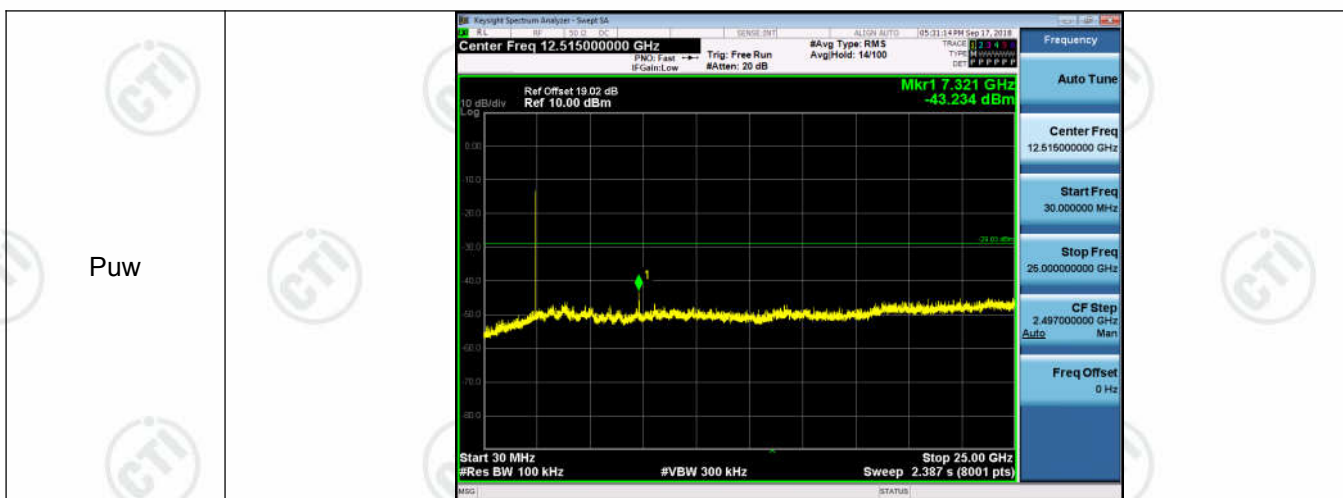
Mode	Channel	Pref [dBm]	Puw[dBm]	Verdict
GFSK	LCH	-8.749	<Limit	PASS
GFSK	MCH	-8.095	<Limit	PASS
GFSK	HCH	-7.723	<Limit	PASS
$\pi/4$ DQPSK	LCH	-9.769	<Limit	PASS
$\pi/4$ DQPSK	MCH	-9.028	<Limit	PASS
$\pi/4$ DQPSK	HCH	-8.654	<Limit	PASS
8DPSK	LCH	-9.774	<Limit	PASS
8DPSK	MCH	-8.951	<Limit	PASS
8DPSK	HCH	-8.649	<Limit	PASS

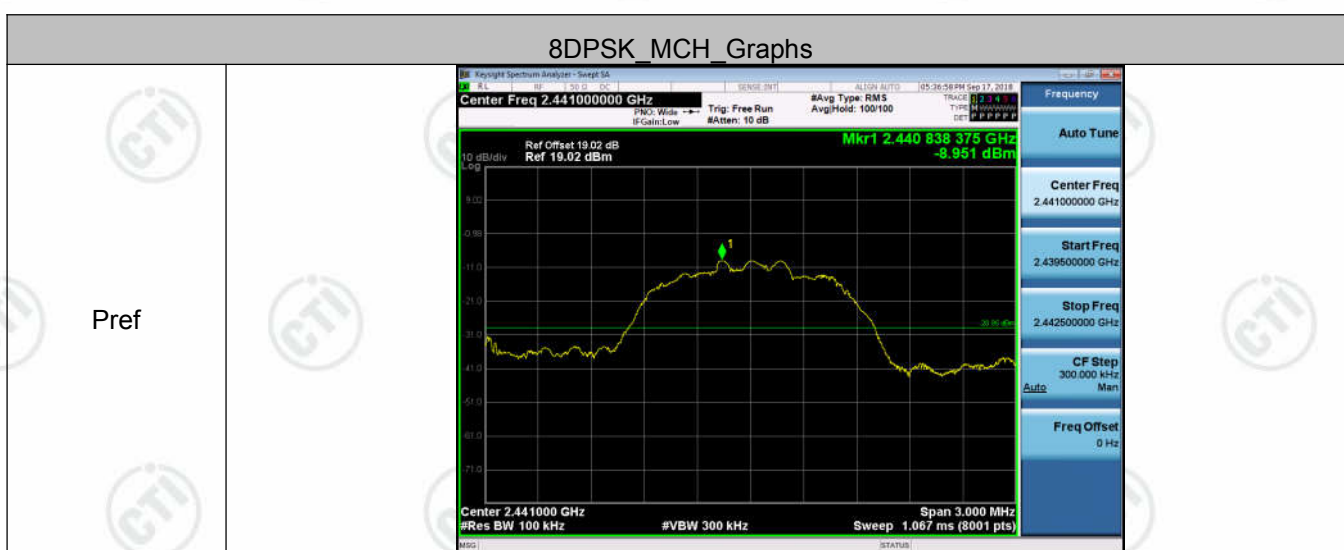
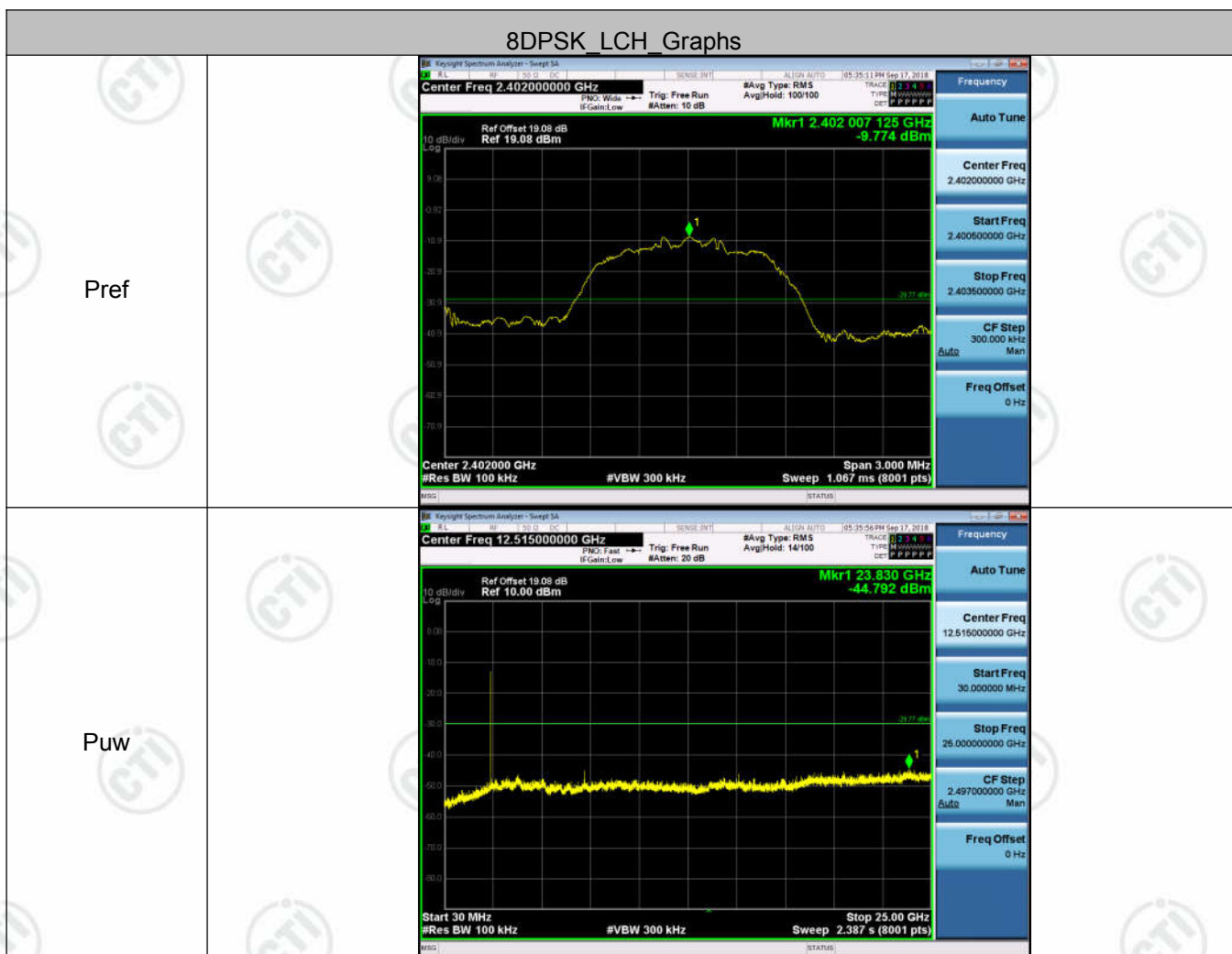
Test Graph

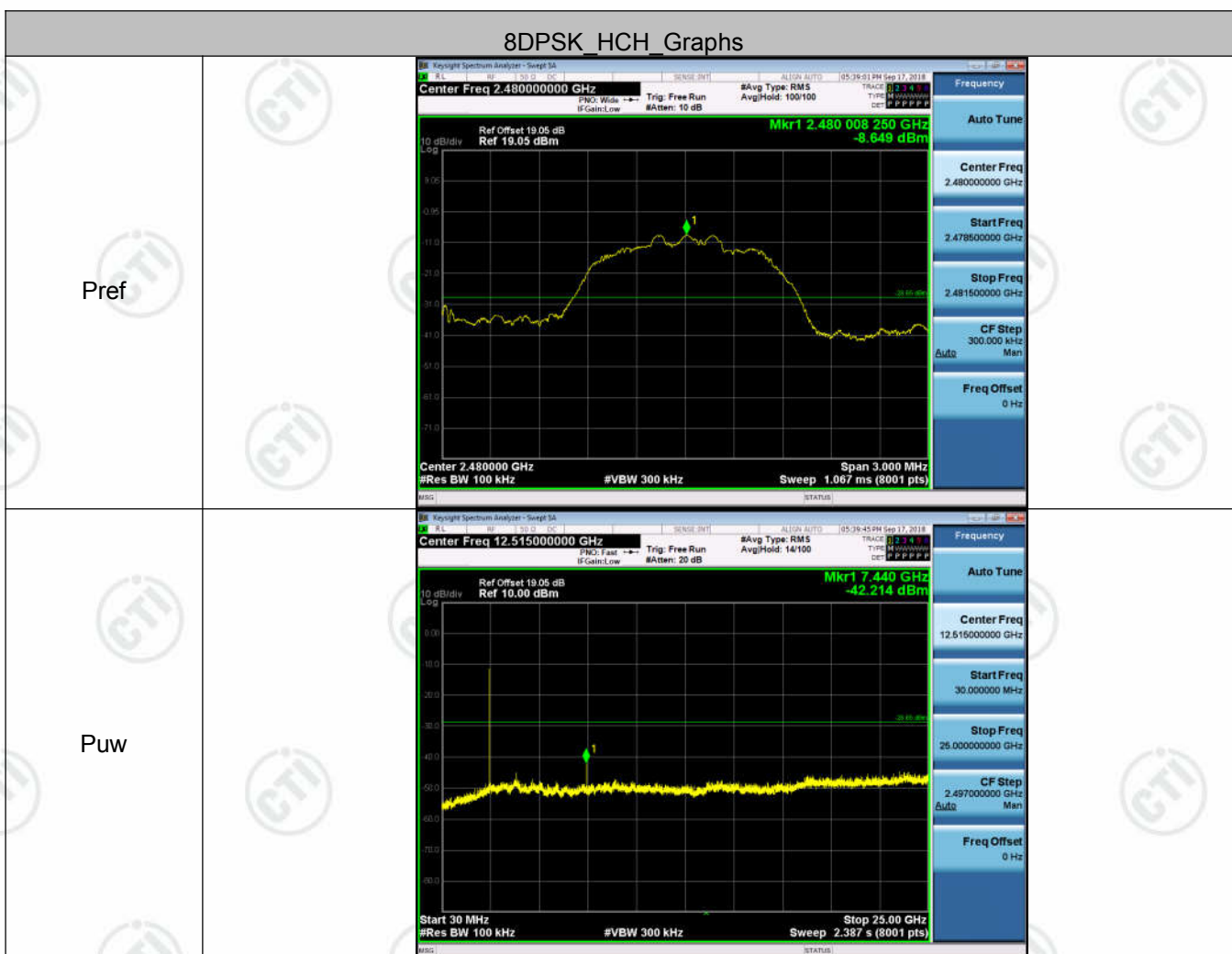
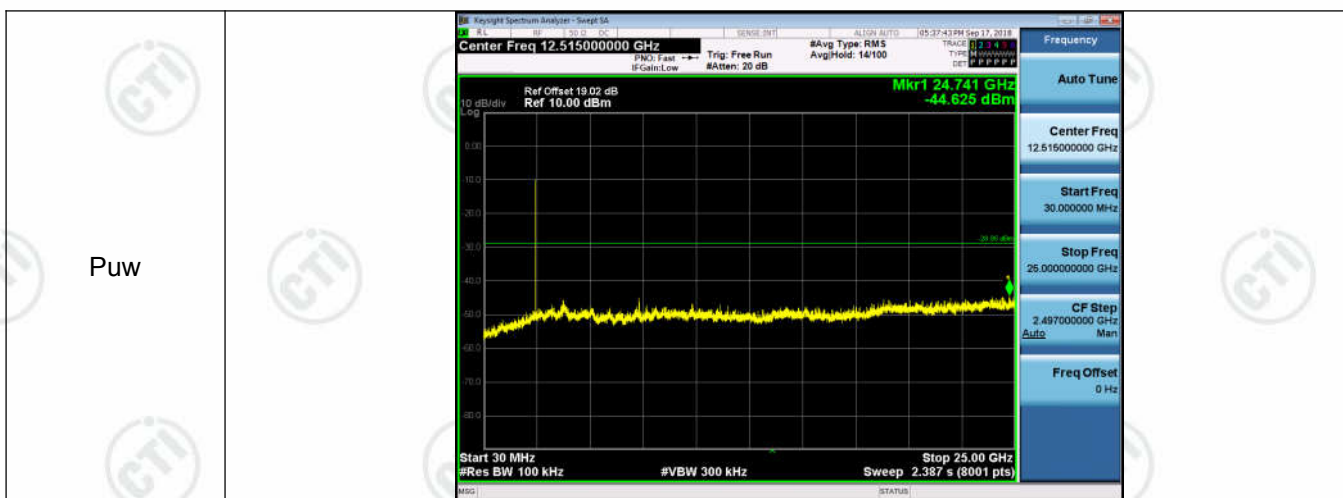












Appendix H): Pseudorandom Frequency Hopping Sequence

Test Requirement:	47 CFR Part 15C Section 15.247 (a)(1) requirement:
<p>Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.</p> <p>Alternatively. 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 Pseudorandom 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 hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.</p>	
EUT Pseudorandom Frequency Hopping Sequence	
<p>The pseudorandom sequence may be generated in a nine-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 first stage. The sequence begins with the first ONE of 9 consecutive ONES; i.e. the shift register is initialized with nine ones.</p> <ul style="list-style-type: none"> • Number of shift register stages: 9 • Length of pseudo-random sequence: $2^9 - 1 = 511$ bits • Longest sequence of zeros: 8 (non-inverted signal) <div data-bbox="316 999 1370 1149"> </div> <p><i>Linear Feedback Shift Register for Generation of the PRBS sequence</i></p> <p>An example of Pseudorandom Frequency Hopping Sequence as follow:</p> <div data-bbox="288 1245 1275 1395"> </div> <p>Each frequency used equally on the average by each transmitter.</p> <p>The system receivers have input bandwidths that match the hopping channel bandwidths of their Corresponding transmitters and shift frequencies in synchronization with the transmitted signals.</p>	
<p>The device does not have the ability to be coordinated with other FHSS systems in an effort to avoid the simultaneous occupancy of individual hopping frequencies by multiple transmitters.</p>	

Appendix I): Antenna Requirement

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.

15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

EUT Antenna:

The antenna is PIFA Antenna and no consideration of replacement. The best case gain of the antenna is 0.8dBi.



Appendix J): AC Power Line Conducted Emission

Test Procedure:	<p>Test frequency range :150KHz-30MHz</p> <p>1)The mains terminal disturbance voltage test was conducted in a shielded room.</p> <p>2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50Ω/50μH + 5Ω linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.</p> <p>3)The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane,</p> <p>4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.</p> <p>5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.</p>														
Limit:	<table><tr><th rowspan="2">Frequency range (MHz)</th><th colspan="2">Limit (dBμV)</th></tr><tr><th>Quasi-peak</th><th>Average</th></tr><tr><td>0.15-0.5</td><td>66 to 56*</td><td>56 to 46*</td></tr><tr><td>0.5-5</td><td>56</td><td>46</td></tr><tr><td>5-30</td><td>60</td><td>50</td></tr></table> <p>* The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.</p> <p>NOTE : The lower limit is applicable at the transition frequency</p>	Frequency range (MHz)	Limit (dBμV)		Quasi-peak	Average	0.15-0.5	66 to 56*	56 to 46*	0.5-5	56	46	5-30	60	50
Frequency range (MHz)	Limit (dBμV)														
	Quasi-peak	Average													
0.15-0.5	66 to 56*	56 to 46*													
0.5-5	56	46													
5-30	60	50													

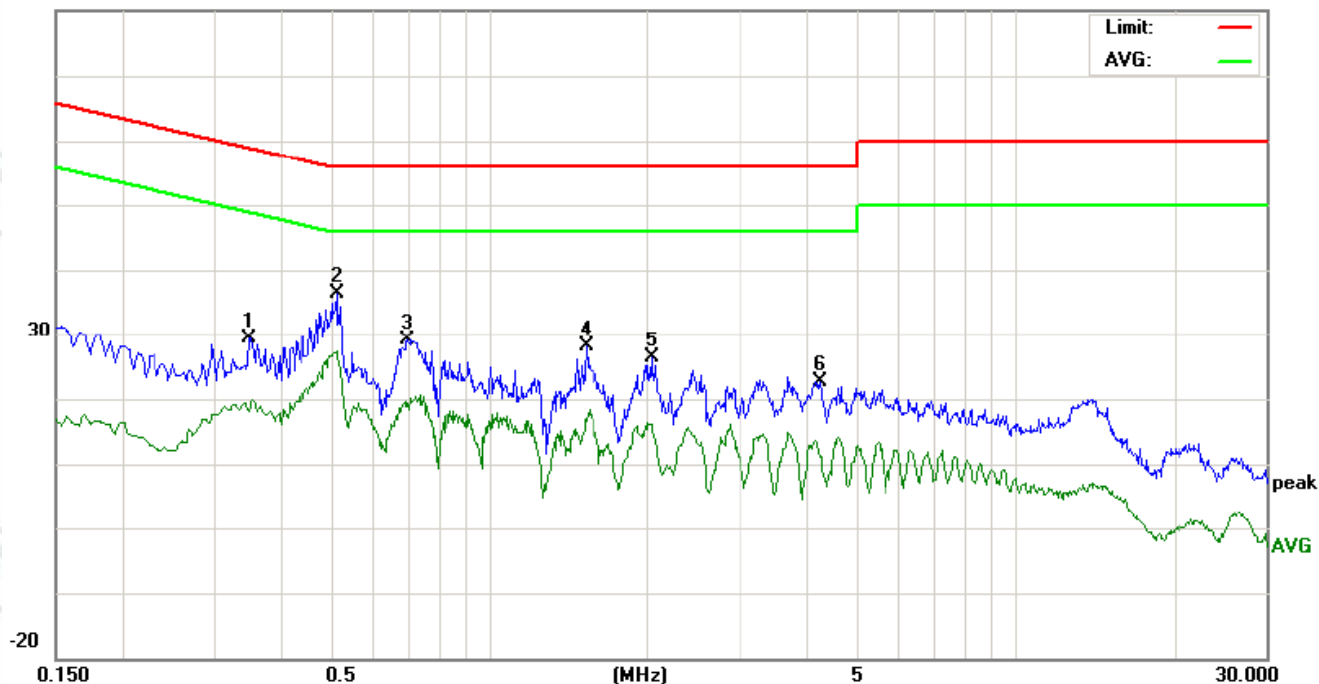
Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

Live line:

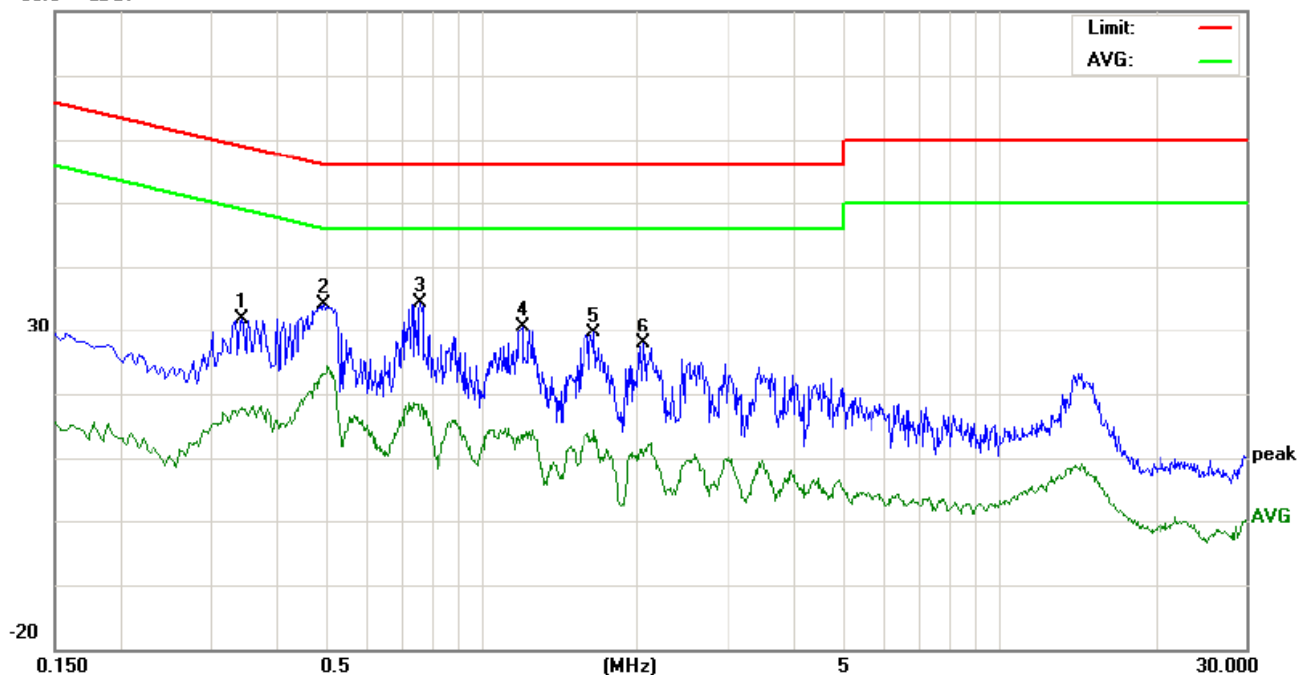
80.0 dBuV



No.	Freq. MHz	Reading_Level (dBuV)			Correct Factor dB	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	AVG		peak	QP	AVG	QP	AVG	QP	AVG		
1	0.3481	19.68	16.38	8.27	9.77	29.45	26.15	18.04	59.01	49.01	-32.86	-30.97	P	
2	0.5121	26.67	23.22	17.64	9.71	36.38	32.93	27.35	56.00	46.00	-23.07	-18.65	P	
3	0.6965	19.42	16.74	9.55	9.75	29.17	26.49	19.30	56.00	46.00	-29.51	-26.70	P	
4	1.5264	18.46	15.46	7.01	9.72	28.18	25.18	16.73	56.00	46.00	-30.82	-29.27	P	
5	2.0325	16.76	12.54	6.38	9.72	26.48	22.26	16.10	56.00	46.00	-33.74	-29.90	P	
6	4.2454	12.99	9.69	1.37	9.64	22.63	19.33	11.01	56.00	46.00	-36.67	-34.99	P	

Neutral line:

80.0 dBuV



No.	Freq. MHz	Reading_Level (dBuV)			Correct Factor dB	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	AVG		peak	QP	AVG	QP	AVG	QP	AVG		
1	0.3441	19.53	16.33	5.84	9.77	29.30	26.10	15.61	59.10	49.10	-33.00	-33.49	P	
2	0.4964	24.46	21.58	13.42	9.71	34.17	31.29	23.13	56.06	46.06	-24.77	-22.93	P	
3	0.7586	24.75	21.47	6.96	9.74	34.49	31.21	16.70	56.00	46.00	-24.79	-29.30	P	
4	1.1962	20.89	17.65	3.20	9.72	30.61	27.37	12.92	56.00	46.00	-28.63	-33.08	P	
5	1.6531	19.94	16.32	4.64	9.72	29.66	26.04	14.36	56.00	46.00	-29.96	-31.64	P	
6	2.0543	18.17	15.41	0.76	9.72	27.89	25.13	10.48	56.00	46.00	-30.87	-35.52	P	

Notes:

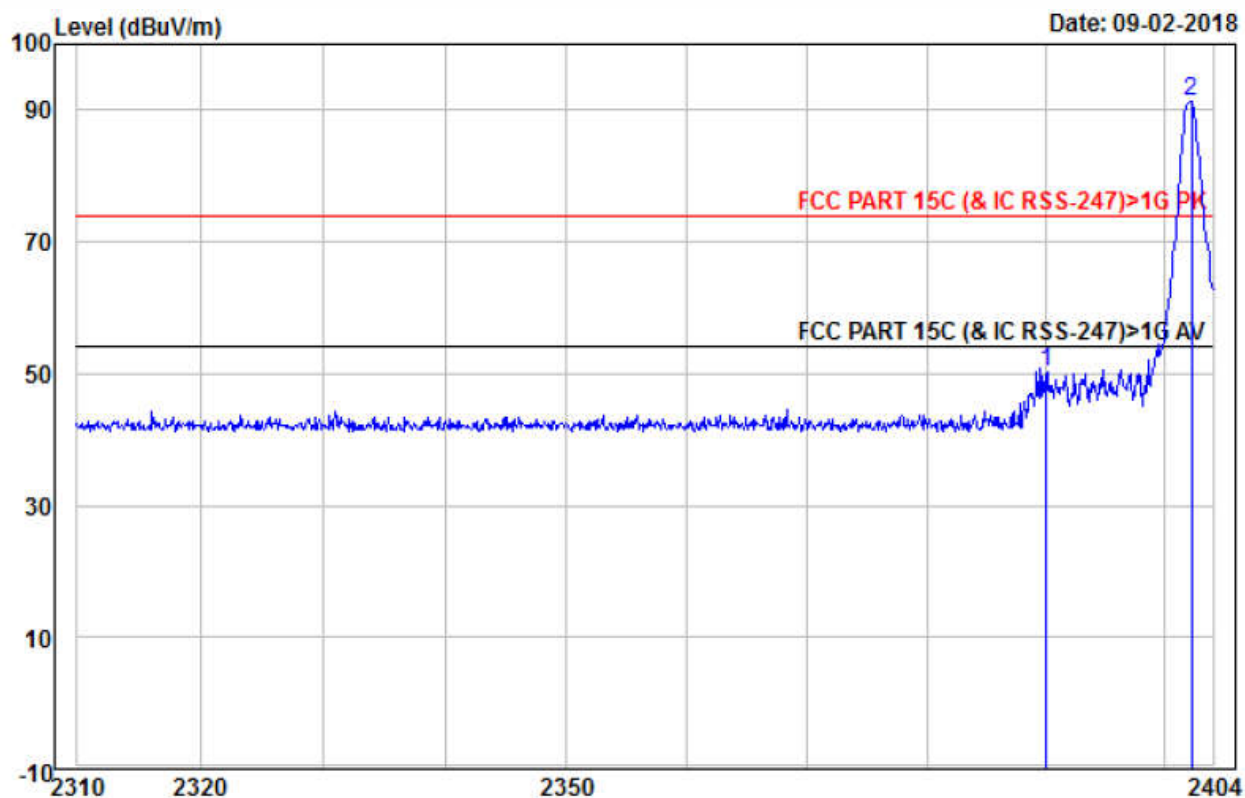
1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level = Receiver Reading + LISN Factor + Cable Loss.

Appendix K): Restricted bands around fundamental frequency (Radiated)

Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Peak	1MHz	10Hz	Average
Test Procedure:	<p>Below 1GHz test procedure as below:</p> <p>The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.</p> <p>The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</p> <p>The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.</p> <p>For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.</p> <p>The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</p> <p>Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands. Save the spectrum analyzer plot. Repeat for each power and modulation for lowest and highest channel</p> <p>Above 1GHz test procedure as below:</p> <p>Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 meter to 1.5 meter(Above 18GHz the distance is 1 meter and table is 1.5 meter).</p> <p>b. Test the EUT in the lowest channel , the Highest channel</p> <p>The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case. Repeat above procedures until all frequencies measured was complete.</p>				
Limit:	Frequency	Limit (dBμV/m @3m)		Remark	
	30MHz-88MHz	40.0		Quasi-peak Value	
	88MHz-216MHz	43.5		Quasi-peak Value	
	216MHz-960MHz	46.0		Quasi-peak Value	
	960MHz-1GHz	54.0		Quasi-peak Value	
	Above 1GHz	54.0		Average Value	
		74.0		Peak Value	

Test plot as follows:

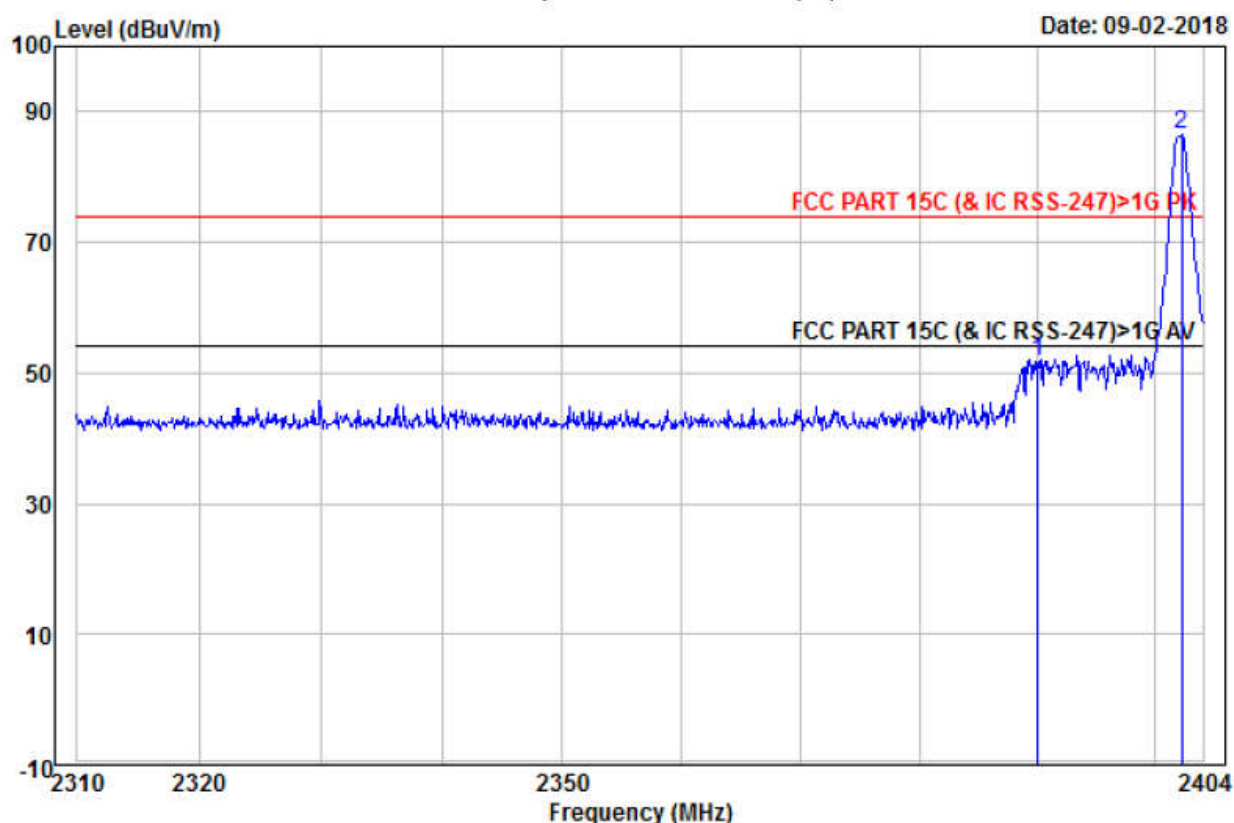
Worse case mode:	GFSK(1-DH5)		
	Test channel: Lowest	Polarization: Horizontal	Remark: Peak



	Ant	Cable	Read		Limit	Over		
Freq	Factor	Loss	Level	Level	Line	Limit	Pol/Phase	Remark
MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		

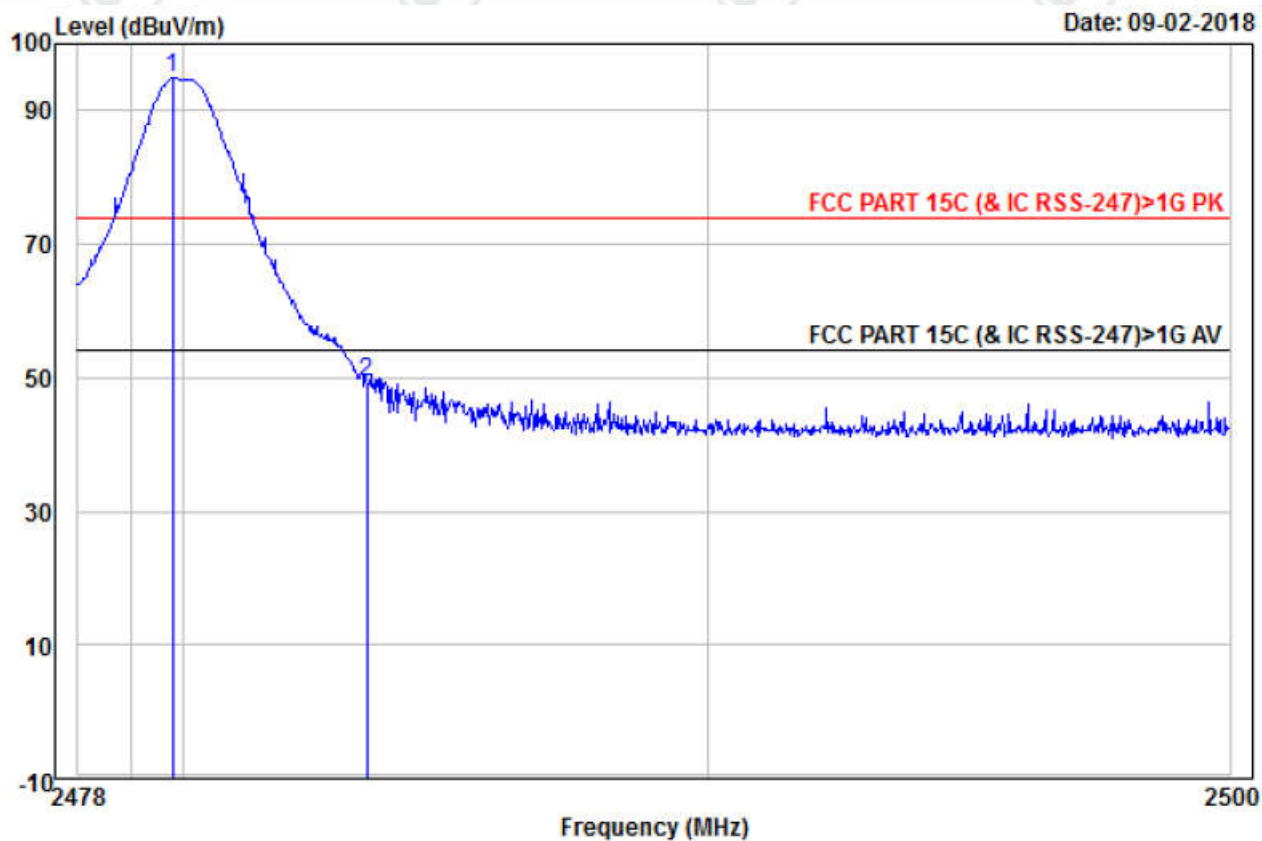
1	2390.000	27.64	3.07	19.45	50.16	74.00	-23.84	Horizontal Peak
2 p	2402.179	27.62	3.07	60.61	91.30	74.00	17.30	Horizontal Peak

Worse case mode:	GFSK(1-DH5)		
	Test channel: Lowest	Polarization: Vertical	Remark: Peak



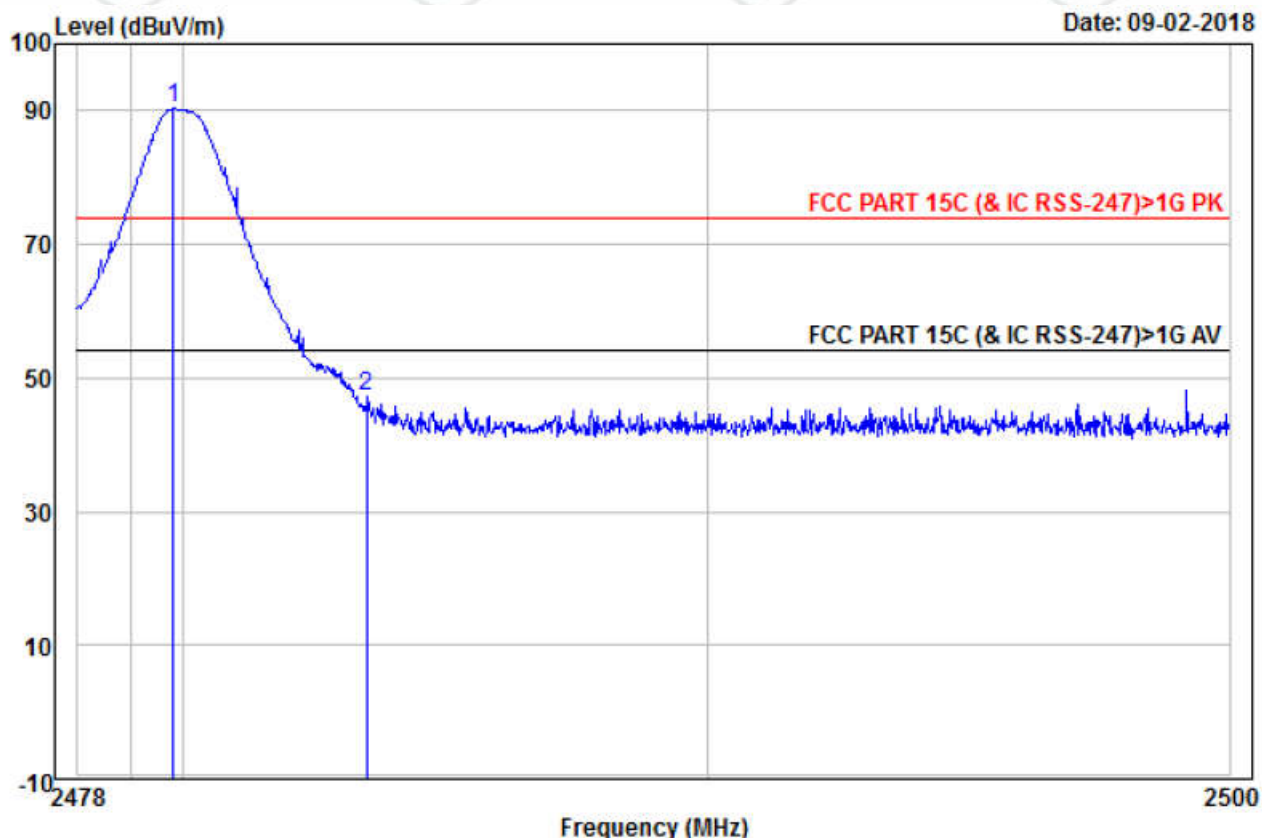
	Freq	Ant Factor	Cable Loss	Read Level	Limit Level	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dB		
1	2390.000	35.86	3.07	12.85	51.78	-22.22	Vertical	Peak
2 p	2402.179	35.68	3.07	47.78	86.53	12.53	Vertical	Peak

Worse case mode:	GFSK(1-DH5)		
	Test channel: Highest	Polarization: Horizontal	Remark: Peak



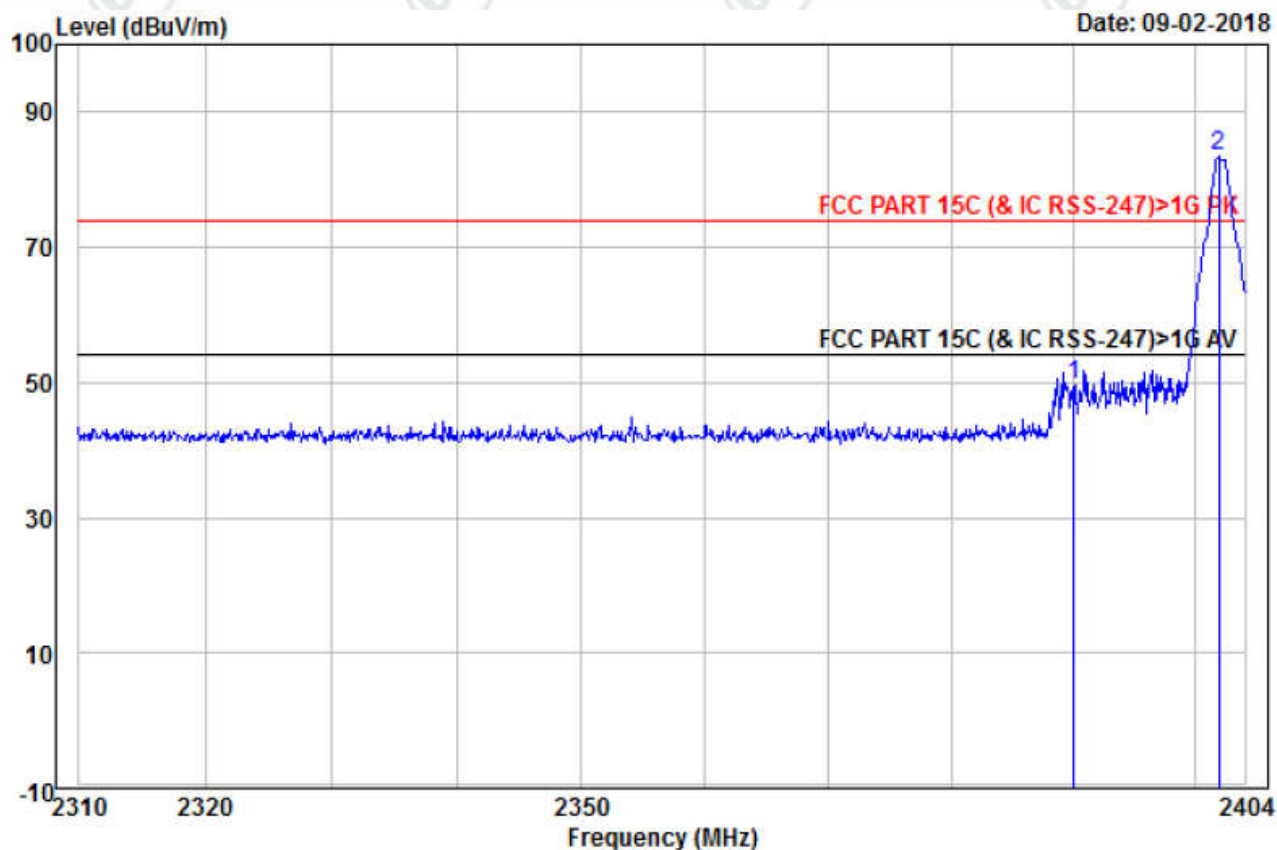
	Ant Freq	Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 p	2479.797	27.59	3.12	64.15	94.86	74.00	20.86	Horizontal	Peak
2	2483.500	27.59	3.12	18.50	49.21	74.00	-24.79	Horizontal	Peak

Worse case mode:	GFSK(1-DH5)		
	Test channel: Highest	Polarization: Vertical	Remark: Peak



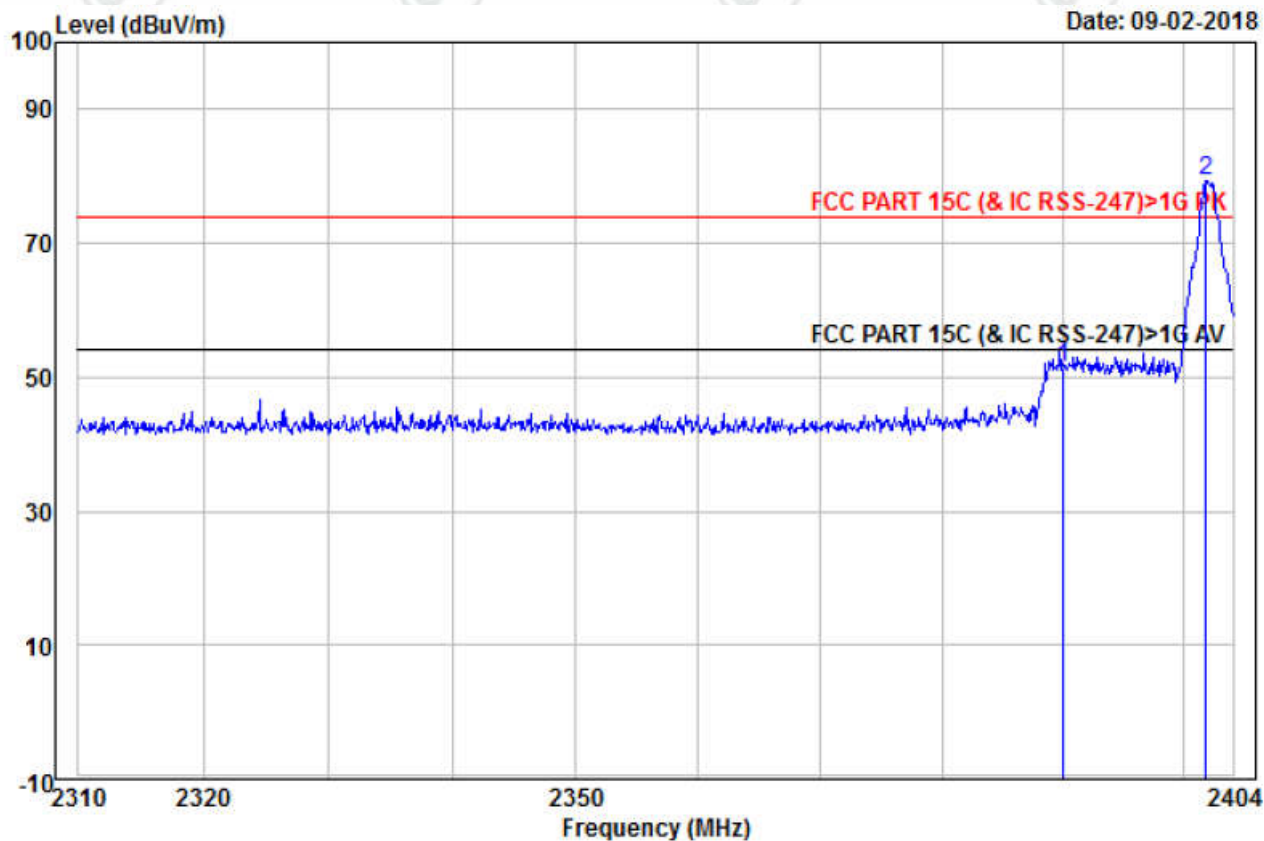
		Ant	Cable	Read		Limit	Over		
	Freq	Factor	Loss	Level	Level	Line	Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 p	2479.819	42.64	3.12	44.53	90.29	74.00	16.29	Vertical	Peak
2	2483.500	34.47	3.12	9.55	47.14	74.00	-26.86	Vertical	Peak

Worse case mode:	$\pi/4$ DQPSK(2-DH5)		
	Test channel: Lowest	Polarization: Horizontal	Remark: Peak



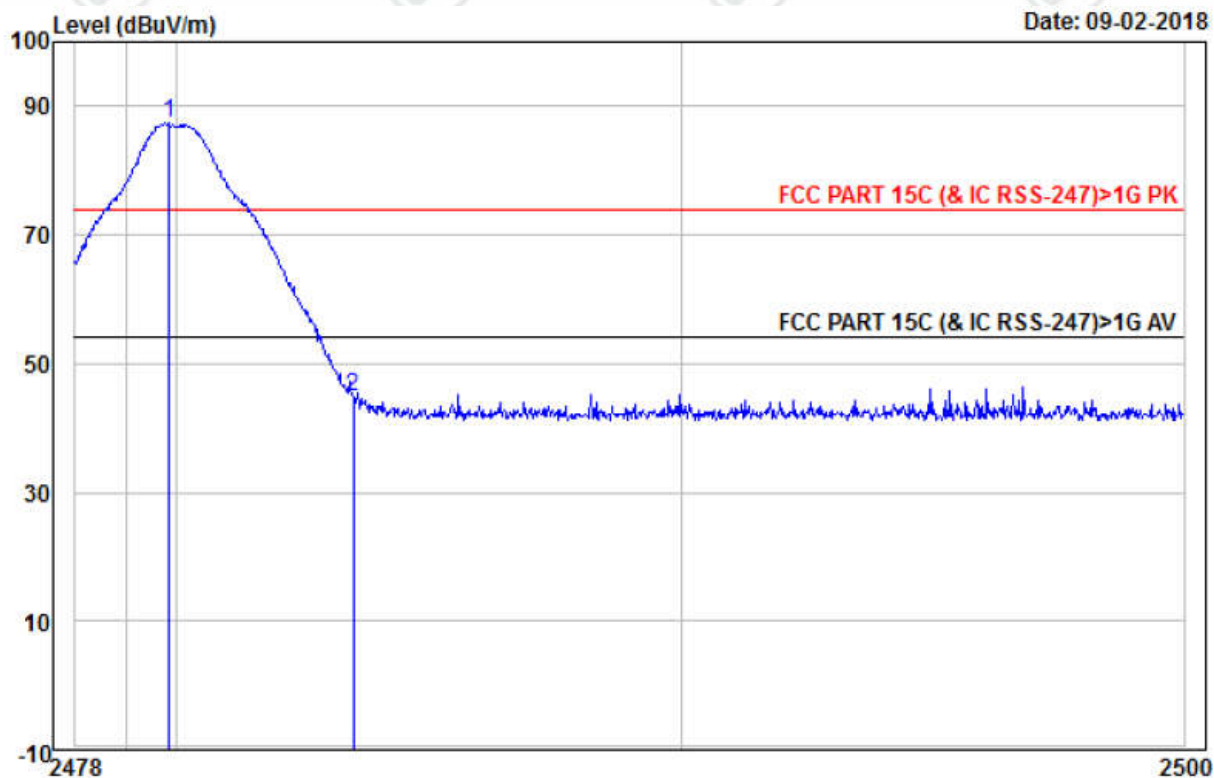
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	27.64	3.07	18.84	49.55	74.00	-24.45	Horizontal	Peak
2 p	2401.891	27.62	3.07	52.71	83.40	74.00	9.40	Horizontal	Peak

Worse case mode:	$\pi/4$ DQPSK(2-DH5)		
	Test channel: Lowest	Polarization: Vertical	Remark: Peak



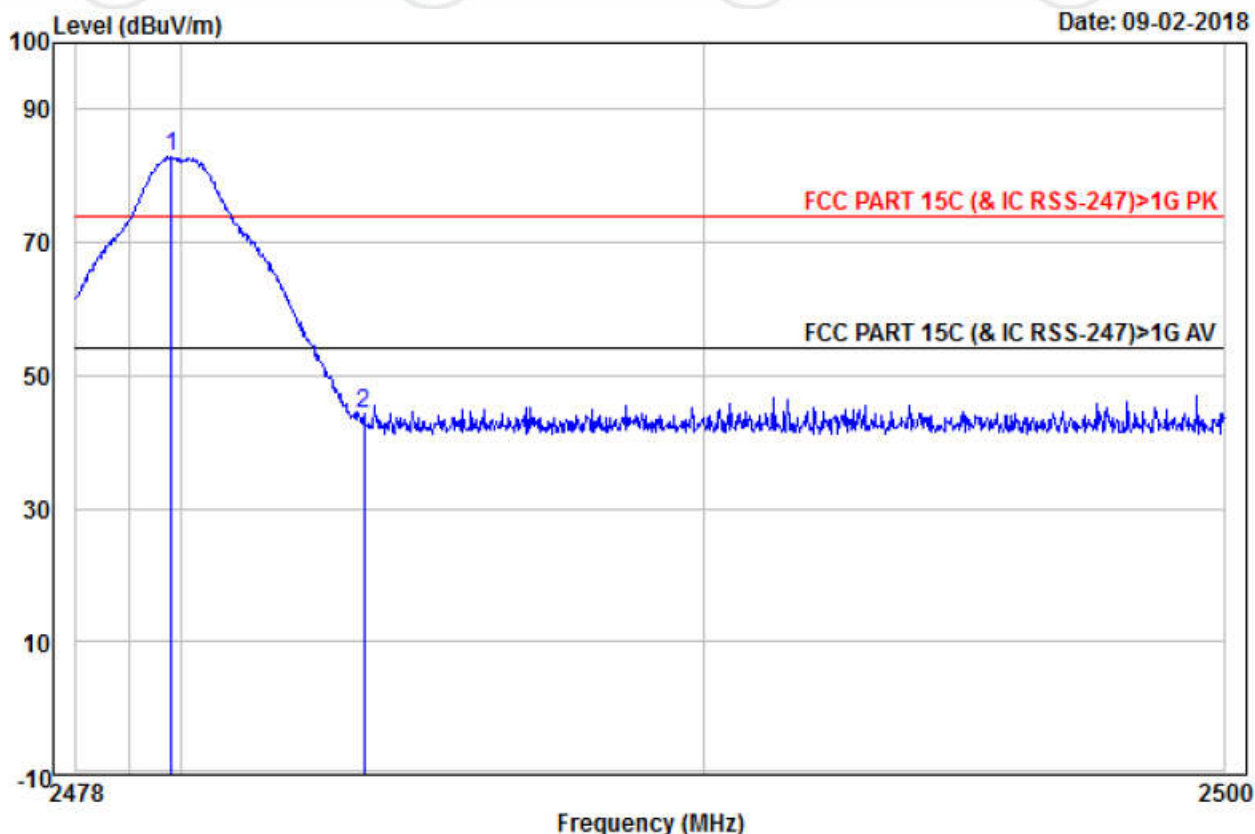
	Ant Freq	Cable Factor	Read Level	Limit Level	Over Line	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dB	
1	2390.000	35.86	3.07	12.40	51.33	74.00	-22.67 Vertical Peak
2 p	2401.796	35.68	3.07	40.64	79.39	74.00	5.39 Vertical Peak

Worse case mode:	$\pi/4$ DQPSK(2-DH5)		
	Test channel: Highest	Polarization: Horizontal	Remark: Peak



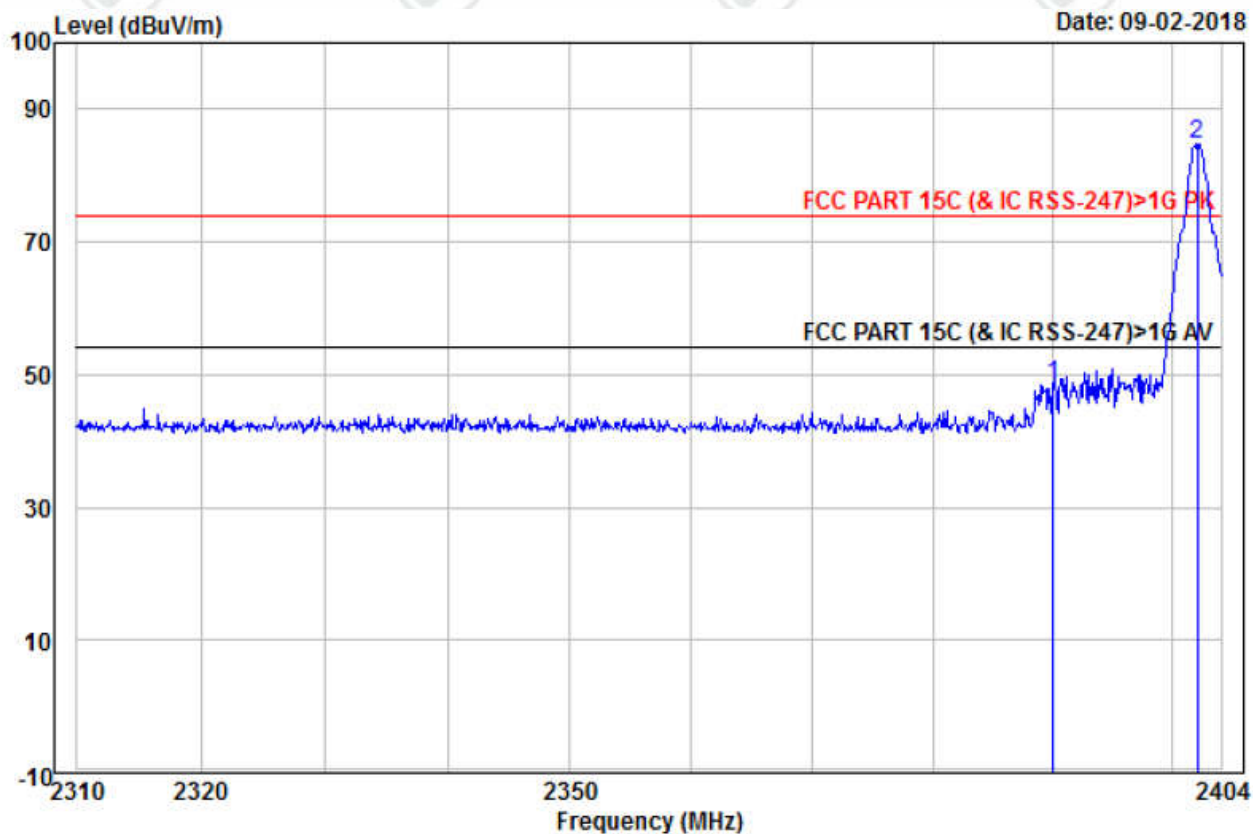
Frequency (MHz)									
	Ant Freq	Cable Factor	Read Level	Limit Level	Over Limit	Pol/Phase	Remark		
	MHz	dB/m	dB	dBuV	dBuV/m	dB			
1 p	2479.863	27.59	3.12	56.70	87.41	74.00	13.41	Horizontal	Peak
2	2483.500	27.59	3.12	14.13	44.84	74.00	-29.16	Horizontal	Peak

Worse case mode:	$\pi/4$ DQPSK(2-DH5)		
	Test channel: Highest	Polarization: Vertical	Remark: Peak



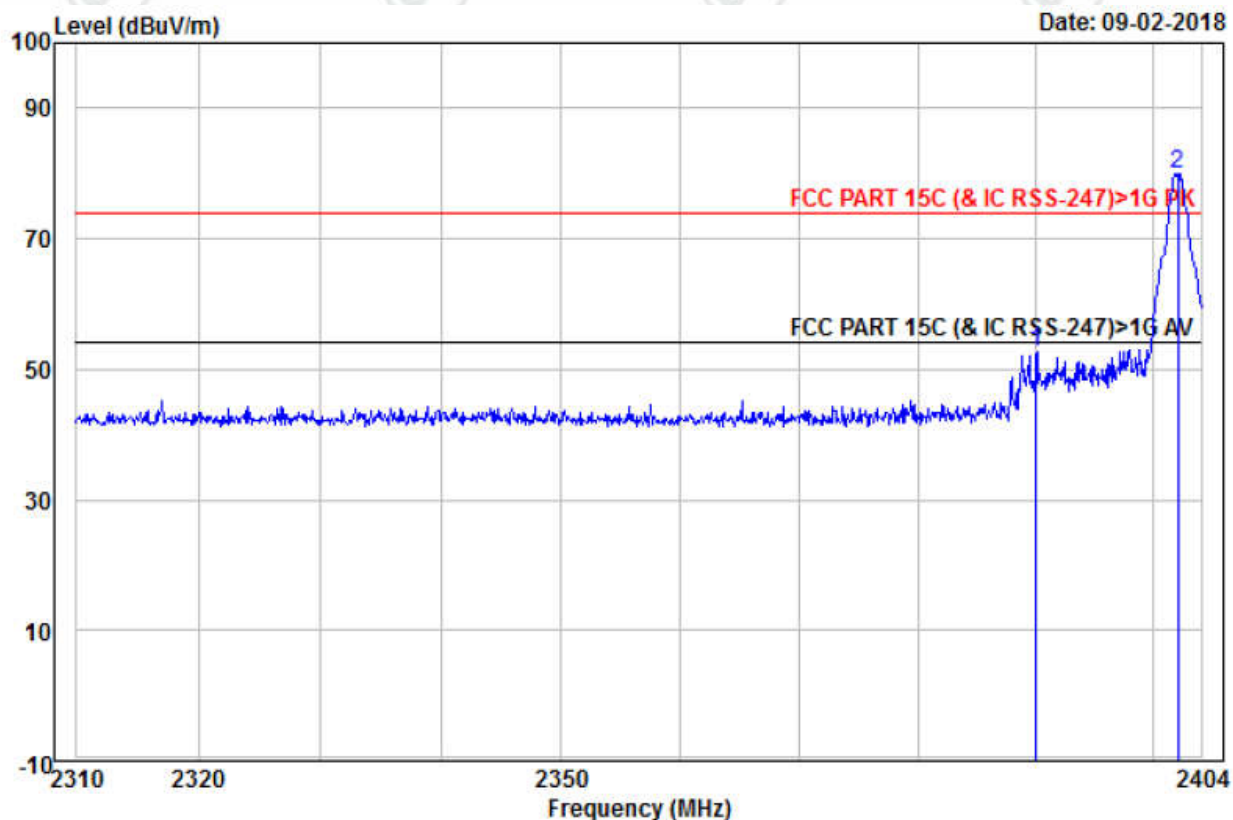
	Ant Freq	Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 p	2479.819	42.64	3.12	37.07	82.83	74.00	8.83	Vertical	Peak
2	2483.500	34.47	3.12	6.65	44.24	74.00	-29.76	Vertical	Peak

Worse case mode:	8DPSK(3-DH5)		
	Test channel: Lowest	Polarization: Horizontal	Remark: Peak



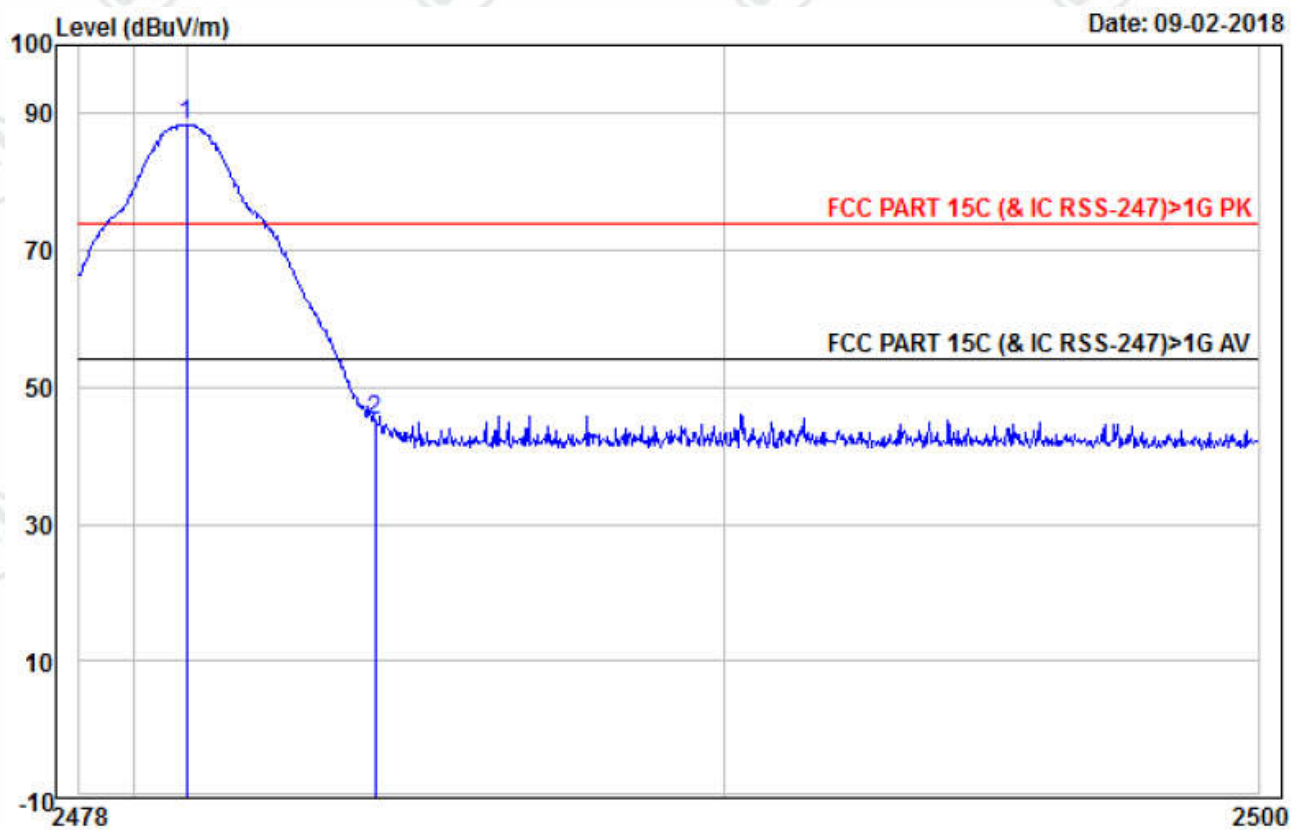
	Freq	Ant Factor	Cable Loss	Read Level	Limit Level	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dB		
1	2390.000	27.64	3.07	17.81	48.52	74.00	-25.48	Horizontal Peak
2 p	2402.083	27.62	3.07	54.10	84.79	74.00	10.79	Horizontal Peak

Worse case mode:	8DPSK(3-DH5)		
	Test channel: Lowest	Polarization: Vertical	Remark: Peak



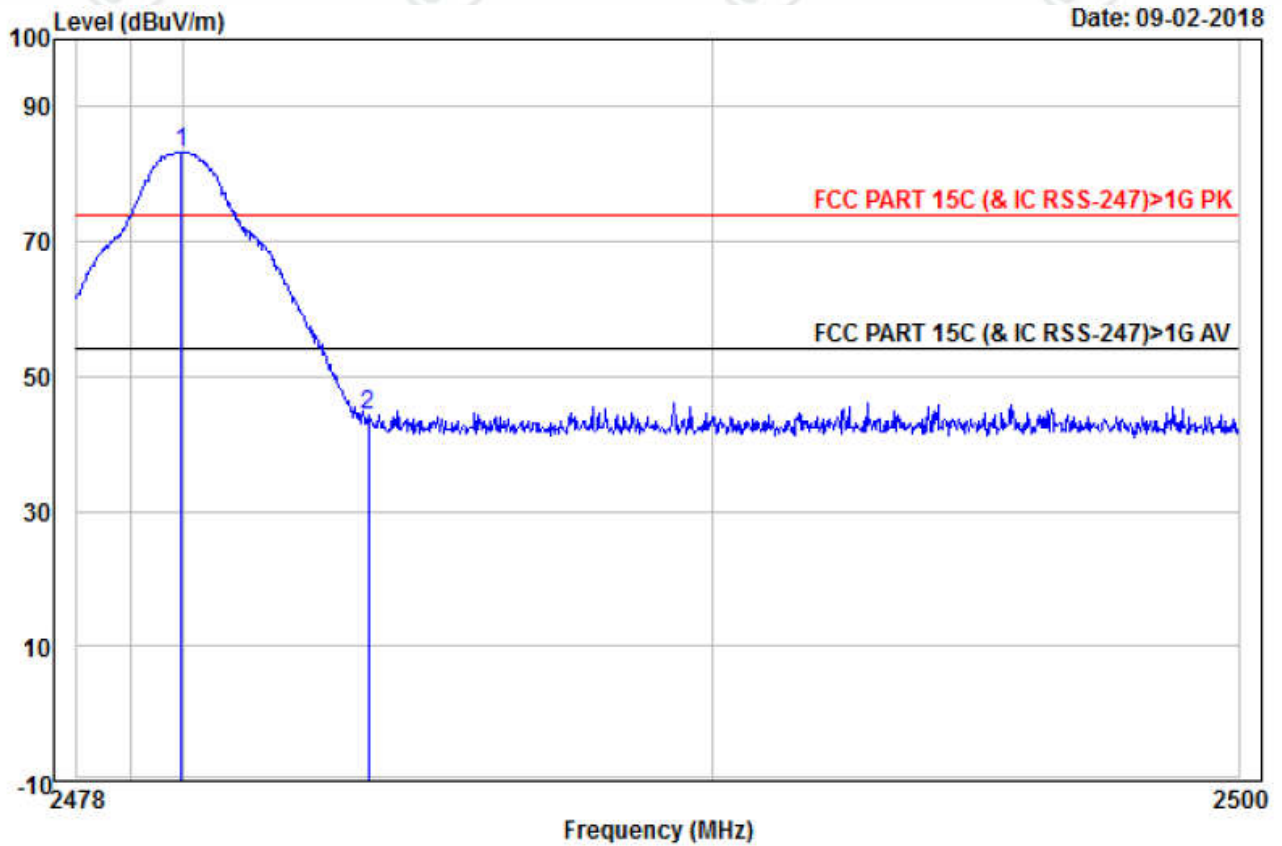
	Ant	Cable	Read		Limit	Over		
Freq	Factor	Loss	Level	Level	Line	Limit	Pol/Phase	Remark
MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 2390.000	35.86	3.07	13.79	52.72	74.00	-21.28	Vertical	Peak
2 p 2402.083	35.68	3.07	41.21	79.96	74.00	5.96	Vertical	Peak

Worse case mode:	8DPSK(3-DH5)		
	Test channel: Highest	Polarization: Horizontal	Remark: Peak



Frequency (MHz)									
	Ant Freq	Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 p	2479.994	27.59	3.12	57.74	88.45	74.00	14.45	Horizontal	Peak
2	2483.500	27.59	3.12	14.39	45.10	74.00	-28.90	Horizontal	Peak

Worse case mode:	8DPSK(3-DH5)		
	Test channel: Highest	Polarization: Vertical	Remark: Peak



	Ant	Cable	Read		Limit	Over		
Freq	Factor	Loss	Level	Level	Line	Limit	Pol/Phase	Remark
MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 p 2479.972	42.64	3.12	37.58	83.34	74.00	9.34	Vertical	Peak
2 2483.500	34.47	3.12	6.64	44.23	74.00	-29.77	Vertical	Peak

Note:

1) Through Pre-scan transmitter mode with all kind of modulation and all kind of data type, find the 1-DH5 of data type is the worse case of GFSK modulation type, the 2-DH5 of data type is the worse case of $\pi/4$ DQPSK modulation type, the 3-DH5 of data type is the worse case of 8DPSK modulation type in charge + transmitter mode.

2) As shown in this section, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. So, only the peak values are measured.

3) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading - Correct Factor

Correct Factor = Preamplifier Factor - Antenna Factor - Cable Factor

Appendix L): Radiated Spurious Emissions

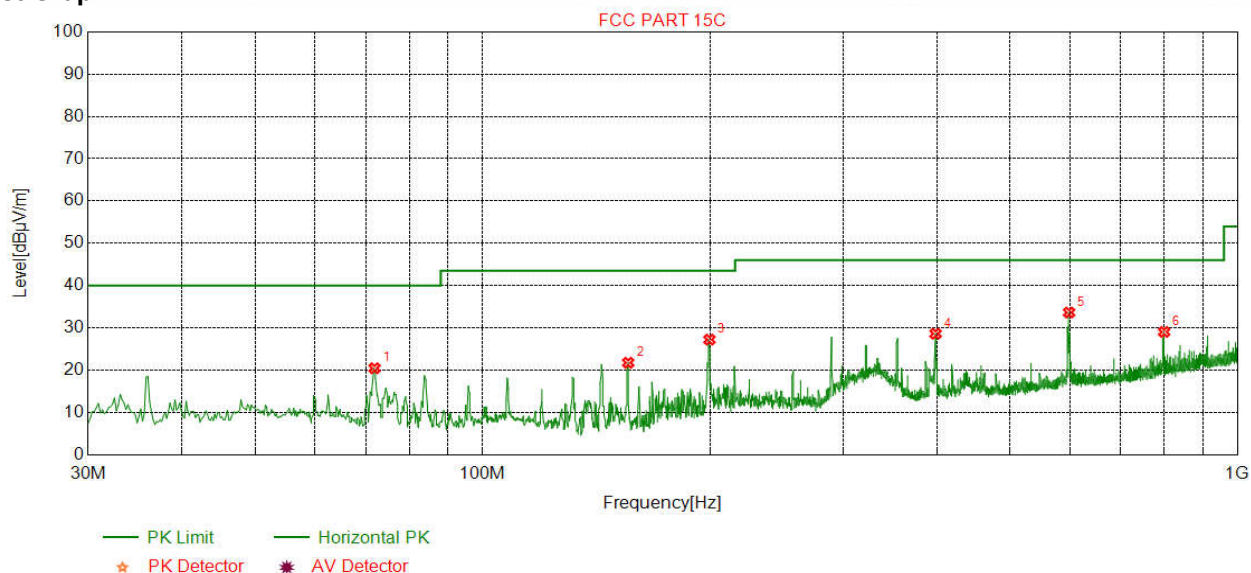
Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	0.009MHz-0.090MHz	Peak	10kHz	30kHz	Peak
	0.009MHz-0.090MHz	Average	10kHz	30kHz	Average
	0.090MHz-0.110MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
	0.110MHz-0.490MHz	Peak	10kHz	30kHz	Peak
	0.110MHz-0.490MHz	Average	10kHz	30kHz	Average
	0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
	30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Peak	1MHz	10Hz	Average
Test Procedure:					
Below 1GHz test procedure as below: The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.					
Above 1GHz test procedure as below: Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 meter to 1.5 meter(Above 18GHz the distance is 1 meter and table is 1.5 meter). Test the EUT in the lowest channel ,the middle channel ,the Highest channel The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case. Repeat above procedures until all frequencies measured was complete.					
Limit:	Frequency	Field strength (microvolt/meter)	Limit (dBµV/m)	Remark	Measurement distance (m)
	0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
	0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
	1.705MHz-30MHz	30	-	-	30
	30MHz-88MHz	100	40.0	Quasi-peak	3
	88MHz-216MHz	150	43.5	Quasi-peak	3
	216MHz-960MHz	200	46.0	Quasi-peak	3
	960MHz-1GHz	500	54.0	Quasi-peak	3
	Above 1GHz	500	54.0	Average	3
	Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.				

Radiated Spurious Emissions test Data:

Radiated Emission below 1GHz

Mode:	GFSK Transmitting	Channel:	2480
Remark:	QP		

Test Graph

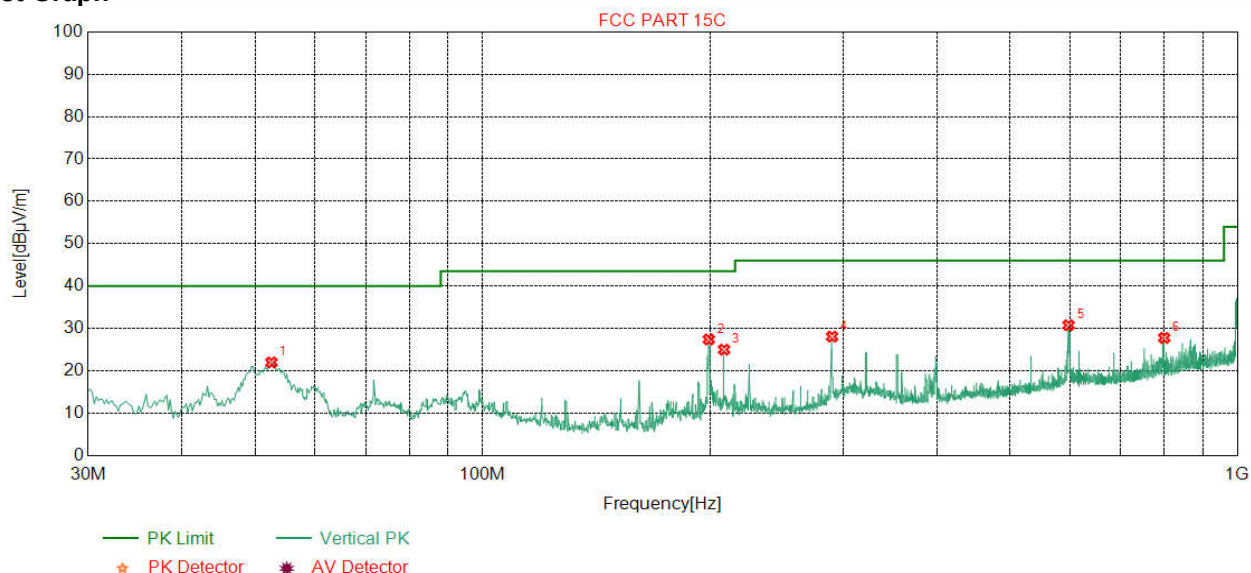


Suspected List

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Magin [dB]	Result	Polarity
1	71.9124	8.64	0.97	-32.05	42.87	20.43	40.00	19.57	Pass	Horizontal
2	155.9312	7.76	1.46	-31.99	44.50	21.73	43.50	21.77	Pass	Horizontal
3	199.7840	10.88	1.67	-31.94	46.60	27.21	43.50	16.29	Pass	Horizontal
4	398.2857	15.36	2.37	-31.76	42.64	28.61	46.00	17.39	Pass	Horizontal
5	598.5337	18.97	2.95	-31.98	43.68	33.62	46.00	12.38	Pass	Horizontal
6	799.7520	20.90	3.39	-32.03	36.76	29.02	46.00	16.98	Pass	Horizontal

Mode:	GFSK Transmitting	Channel:	2480
Remark:	QP		

Test Graph

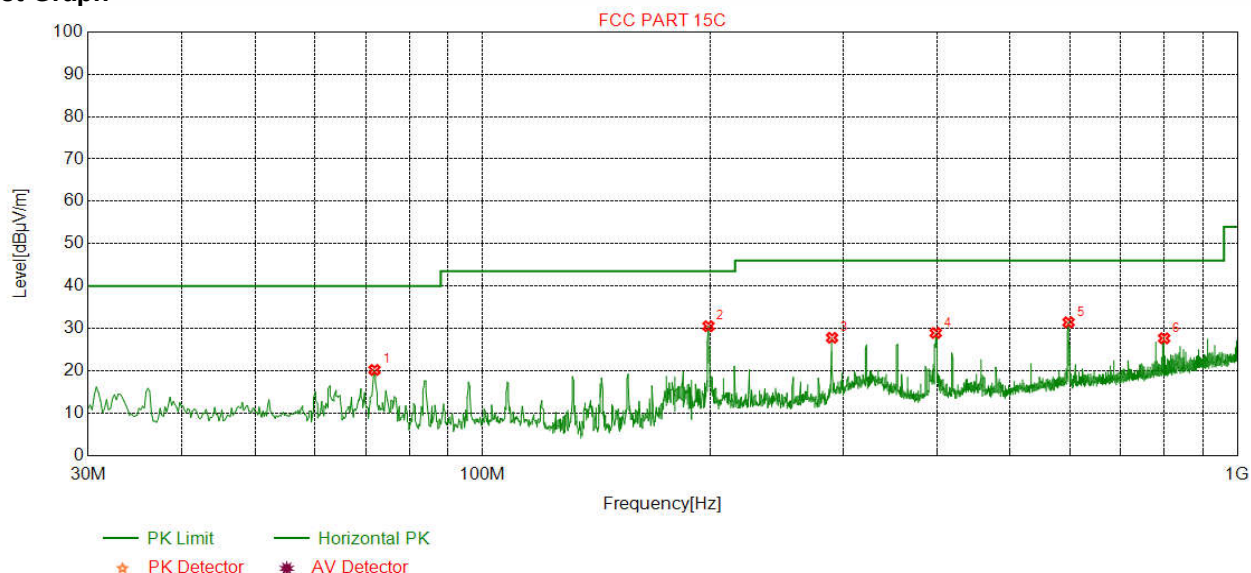


Suspected List

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	52.5085	12.80	0.82	-32.10	40.43	21.95	40.00	18.05	Pass	Vertical
2	199.3959	10.84	1.67	-31.94	46.81	27.38	43.50	16.12	Pass	Vertical
3	208.9038	11.13	1.71	-31.94	44.08	24.98	43.50	18.52	Pass	Vertical
4	290.4001	13.01	2.03	-31.88	44.90	28.06	46.00	17.94	Pass	Vertical
5	597.5635	18.95	2.94	-31.97	40.81	30.73	46.00	15.27	Pass	Vertical
6	799.9460	20.90	3.39	-32.03	35.49	27.75	46.00	18.25	Pass	Vertical

Mode:	$\pi/4$ DQPSK Transmitting	Channel:	2402
Remark:	QP		

Test Graph

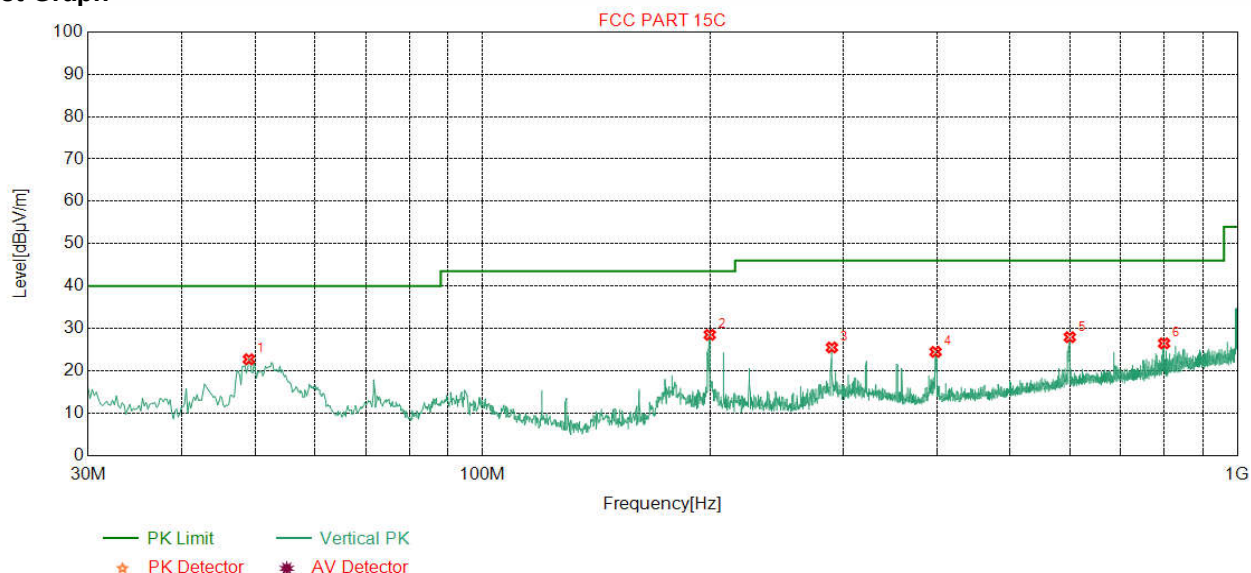


Suspected List

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Magin [dB]	Result	Polarity
1	71.9124	8.64	0.97	-32.05	42.62	20.18	40.00	19.82	Pass	Horizontal
2	199.2018	10.82	1.67	-31.94	49.96	30.51	43.50	12.99	Pass	Horizontal
3	290.4001	13.01	2.03	-31.88	44.62	27.78	46.00	18.22	Pass	Horizontal
4	398.4797	15.37	2.38	-31.78	42.94	28.91	46.00	17.09	Pass	Horizontal
5	597.5635	18.95	2.94	-31.97	41.51	31.43	46.00	14.57	Pass	Horizontal
6	799.7520	20.90	3.39	-32.03	35.39	27.65	46.00	18.35	Pass	Horizontal

Mode:	$\pi/4$ DQPSK Transmitting	Channel:	2402
Remark:	QP		

Test Graph

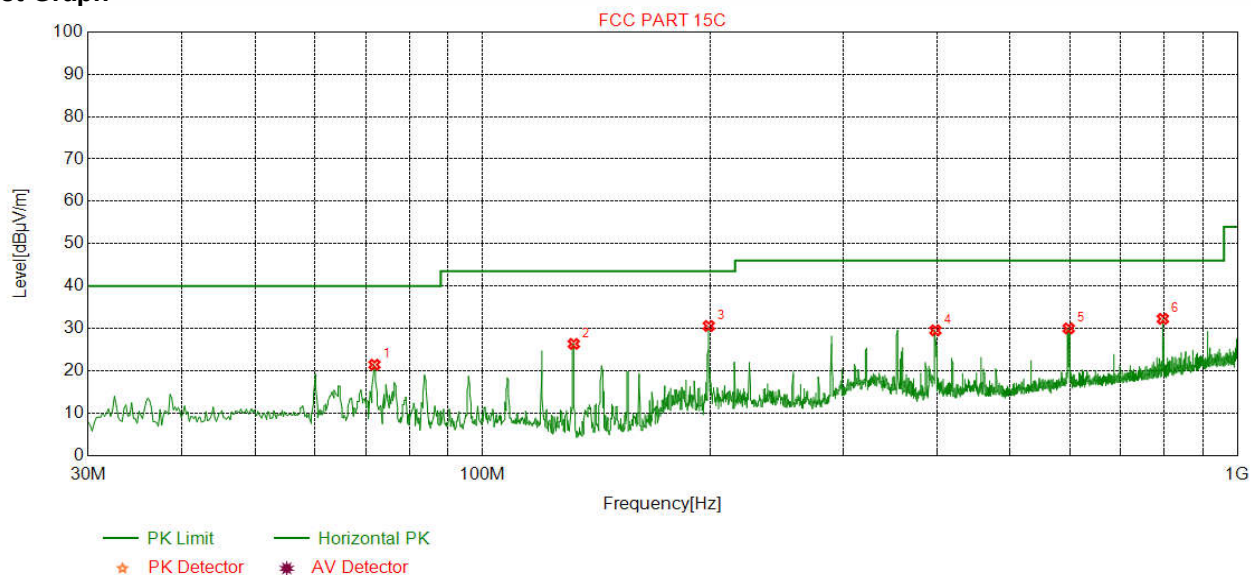


Suspected List

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	49.0158	13.20	0.79	-32.12	40.82	22.69	40.00	17.31	Pass	Vertical
2	199.9780	10.90	1.67	-31.94	47.84	28.47	43.50	15.03	Pass	Vertical
3	290.2060	13.00	2.03	-31.87	42.32	25.48	46.00	20.52	Pass	Vertical
4	398.2857	15.36	2.37	-31.76	38.47	24.44	46.00	21.56	Pass	Vertical
5	599.8920	19.00	2.96	-31.99	37.94	27.91	46.00	18.09	Pass	Vertical
6	799.5579	20.90	3.39	-32.03	34.19	26.45	46.00	19.55	Pass	Vertical

Mode:	8DPSK Transmitting	Channel:	2402
Remark:	QP		

Test Graph

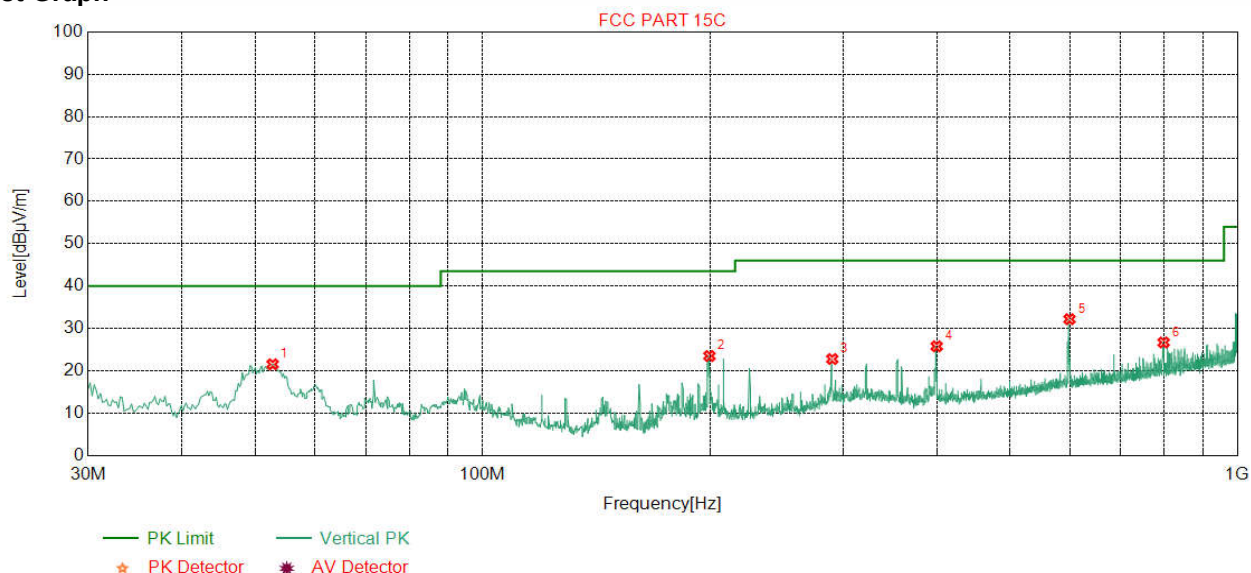


Suspected List

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Magin [dB]	Result	Polarity
1	71.9124	8.64	0.97	-32.05	43.86	21.42	40.00	18.58	Pass	Horizontal
2	132.0644	7.60	1.34	-32.01	49.40	26.33	43.50	17.17	Pass	Horizontal
3	199.3959	10.84	1.67	-31.94	49.99	30.56	43.50	12.94	Pass	Horizontal
4	398.0916	15.36	2.37	-31.77	43.56	29.52	46.00	16.48	Pass	Horizontal
5	597.7576	18.96	2.94	-31.97	40.06	29.99	46.00	16.01	Pass	Horizontal
6	796.6473	20.86	3.38	-32.01	40.00	32.23	46.00	13.77	Pass	Horizontal

Mode:	8DPSK Transmitting	Channel:	2402
Remark:	QP		

Test Graph



Suspected List

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	52.7025	12.77	0.82	-32.10	40.02	21.51	40.00	18.49	Pass	Vertical
2	199.7840	10.88	1.67	-31.94	42.86	23.47	43.50	20.03	Pass	Vertical
3	290.5941	13.01	2.03	-31.87	39.58	22.75	46.00	23.25	Pass	Vertical
4	399.6439	15.39	2.38	-31.76	39.75	25.76	46.00	20.24	Pass	Vertical
5	599.3099	18.99	2.96	-31.99	42.20	32.16	46.00	13.84	Pass	Vertical
6	798.5877	20.88	3.39	-32.02	34.42	26.67	46.00	19.33	Pass	Vertical

Remark : All modes are tested, only the worst data is reported.

Transmitter Emission above 1GHz

Mode:	GFSK Transmitting	Channel:	2402
Remark:	/		

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Magin [dB]	Result	Polarity	Remark
1	3027.3027	33.21	4.88	-36.81	46.09	47.37	74.00	26.63	Pass	H	Peak
2	4804.0000	34.50	4.55	-36.15	49.44	52.34	74.00	21.66	Pass	H	Peak
3	6248.0498	35.85	5.34	-36.29	42.70	47.60	74.00	26.40	Pass	H	Peak
4	7206.0000	36.31	5.81	-36.43	46.38	52.07	74.00	21.93	Pass	H	Peak
5	9169.4419	37.67	6.45	-36.74	43.55	50.93	74.00	23.07	Pass	H	Peak
6	9608.0000	37.64	6.63	-36.79	41.18	48.66	74.00	25.34	Pass	H	Peak

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Magin [dB]	Result	Polarity	Remark
1	4804.0000	34.50	4.55	-36.15	31.63	34.53	54.00	19.47	Pass	H	Average
2	7206.0000	36.31	5.82	-36.43	37.23	42.93	54.00	11.07	Pass	H	Average

Mode:	GFSK Transmitting	Channel:	2402
Remark:	/		

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Magin [dB]	Result	Polarity	Remark
1	3576.2826	33.46	4.39	-36.52	45.19	46.52	74.00	27.48	Pass	V	Peak
2	4804.0000	34.50	4.55	-36.15	46.85	49.75	74.00	24.25	Pass	V	Peak
3	6289.9790	35.86	5.44	-36.25	42.48	47.53	74.00	26.47	Pass	V	Peak
4	7206.0000	36.31	5.81	-36.43	45.20	50.89	74.00	23.11	Pass	V	Peak
5	8522.9523	36.65	6.41	-36.39	43.32	49.99	74.00	24.01	Pass	V	Peak
6	9608.0000	37.64	6.63	-36.79	40.67	48.15	74.00	25.85	Pass	V	Peak

Mode:	GFSK Transmitting	Channel:	2441
Remark:	/		

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Magin [dB]	Result	Polarity	Remark
1	2834.7670	32.94	4.23	-36.91	47.03	47.29	74.00	26.71	Pass	H	Peak
2	4882.0000	34.50	4.81	-36.10	49.85	53.06	74.00	20.94	Pass	H	Peak
3	6159.3159	35.83	5.24	-36.20	43.33	48.20	74.00	25.80	Pass	H	Peak
4	7323.0000	36.42	5.85	-36.41	45.90	51.76	74.00	22.24	Pass	H	Peak
5	8430.3180	36.57	6.37	-36.35	43.64	50.23	74.00	23.77	Pass	H	Peak
6	9764.0000	37.71	6.71	-36.83	41.82	49.41	74.00	24.59	Pass	H	Peak

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Magin [dB]	Result	Polarity	Remark
1	4882.0000	34.50	4.81	-36.10	35.73	38.94	54.00	15.06	Pass	H	Average
2	7323.0000	36.42	5.85	-36.40	37.78	43.65	54.00	10.35	Pass	H	Average

Mode:	GFSK Transmitting	Channel:	2441
Remark:	/		

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Magin [dB]	Result	Polarity	Remark
1	2907.1814	33.05	4.38	-36.64	46.30	47.09	74.00	26.91	Pass	V	Peak
2	4882.0000	34.50	4.81	-36.10	47.69	50.90	74.00	23.10	Pass	V	Peak
3	5806.3306	35.49	4.99	-36.02	42.94	47.40	74.00	26.60	Pass	V	Peak
4	7323.0000	36.42	5.85	-36.41	45.09	50.95	74.00	23.05	Pass	V	Peak
5	8415.6916	36.57	6.35	-36.31	43.39	50.00	74.00	24.00	Pass	V	Peak
6	9764.0000	37.71	6.71	-36.83	41.14	48.73	74.00	25.27	Pass	V	Peak

Mode:	GFSK Transmitting	Channel:	2480
Remark:	/		

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Magin [dB]	Result	Polarity	Remark
1	3175.5176	33.27	4.61	-36.82	47.53	48.59	74.00	25.41	Pass	H	Peak
2	4960.0000	34.50	4.82	-36.20	49.83	52.95	74.00	21.05	Pass	H	Peak
3	6392.3642	35.88	5.33	-36.31	43.50	48.40	74.00	25.60	Pass	H	Peak
4	7440.0000	36.54	5.85	-36.34	43.98	50.03	74.00	23.97	Pass	H	Peak
5	8398.1398	36.56	6.32	-36.27	44.04	50.65	74.00	23.35	Pass	H	Peak
6	9920.0000	37.77	6.79	-36.82	39.59	47.33	74.00	26.67	Pass	H	Peak

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Magin [dB]	Result	Polarity	Remark
1	4960.0000	34.50	4.82	-36.21	43.72	46.83	54.00	7.17	Pass	H	Average

Mode:	GFSK Transmitting	Channel:	2480
Remark:	/		

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Magin [dB]	Result	Polarity	Remark
1	3123.8374	33.25	4.65	-36.88	46.67	47.69	74.00	26.31	Pass	V	Peak
2	4960.0000	34.50	4.82	-36.20	48.43	51.55	74.00	22.45	Pass	V	Peak
3	6269.5020	35.85	5.39	-36.26	43.13	48.11	74.00	25.89	Pass	V	Peak
4	7440.0000	36.54	5.85	-36.34	43.47	49.52	74.00	24.48	Pass	V	Peak
5	8434.2184	36.57	6.38	-36.37	44.38	50.96	74.00	23.04	Pass	V	Peak
6	9920.0000	37.77	6.79	-36.82	39.95	47.69	74.00	26.31	Pass	V	Peak

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Magin [dB]	Result	Polarity	Remark
1	4960.0000	34.50	4.82	-36.21	42.53	45.64	54.00	8.36	Pass	V	Average

Mode:	$\pi/4$ DQPSK Transmitting	Channel:	2402
Remark:	/		

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity	Remark
1	3288.6289	33.32	4.55	-36.80	46.42	47.49	74.00	26.51	Pass	H	Peak
2	4804.0000	34.50	4.55	-36.15	46.62	49.52	74.00	24.48	Pass	H	Peak
3	5526.4776	35.04	5.16	-36.09	43.31	47.42	74.00	26.58	Pass	H	Peak
4	7206.0000	36.31	5.81	-36.43	44.95	50.64	74.00	23.36	Pass	H	Peak
5	8418.6169	36.57	6.36	-36.33	43.58	50.18	74.00	23.82	Pass	H	Peak
6	9608.0000	37.64	6.63	-36.79	41.39	48.87	74.00	25.13	Pass	H	Peak

Mode:	$\pi/4$ DQPSK Transmitting	Channel:	2402
Remark:	/		

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity	Remark
1	3017.5518	33.21	4.89	-36.77	45.88	47.21	74.00	26.79	Pass	V	Peak
2	4804.0000	34.50	4.55	-36.15	47.78	50.68	74.00	23.32	Pass	V	Peak
3	5511.8512	35.02	5.16	-36.12	42.79	46.85	74.00	27.15	Pass	V	Peak
4	7206.0000	36.31	5.81	-36.43	45.54	51.23	74.00	22.77	Pass	V	Peak
5	8207.9958	36.48	6.34	-36.83	43.73	49.72	74.00	24.28	Pass	V	Peak
6	9608.0000	37.64	6.63	-36.79	42.52	50.00	74.00	24.00	Pass	V	Peak

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity	Remark
1	7206.0000	36.31	5.82	-36.43	34.70	40.40	54.00	13.60	Pass	V	Average

Mode:	$\pi/4$ DQPSK Transmitting	Channel:	2441
Remark:	/		

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity	Remark
1	2987.9976	33.18	4.51	-36.73	46.90	47.86	74.00	26.14	Pass	H	Peak
2	4882.0000	34.50	4.81	-36.10	47.74	50.95	74.00	23.05	Pass	H	Peak
3	5517.7018	35.03	5.16	-36.11	43.71	47.79	74.00	26.21	Pass	H	Peak
4	6806.7807	36.02	5.63	-36.14	43.35	48.86	74.00	25.14	Pass	H	Peak
5	7323.0000	36.42	5.85	-36.41	43.52	49.38	74.00	24.62	Pass	H	Peak
6	9764.0000	37.71	6.71	-36.83	41.36	48.95	74.00	25.05	Pass	H	Peak

Mode:	$\pi/4$ DQPSK Transmitting	Channel:	2441
Remark:	/		

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity	Remark
1	3022.4272	33.21	4.89	-36.79	47.40	48.71	74.00	25.29	Pass	V	Peak
2	4882.0000	34.50	4.81	-36.10	49.27	52.48	74.00	21.52	Pass	V	Peak
3	6361.1611	35.87	5.43	-36.18	42.41	47.53	74.00	26.47	Pass	V	Peak
4	7323.0000	36.42	5.85	-36.41	44.55	50.41	74.00	23.59	Pass	V	Peak
5	8437.1437	36.57	6.38	-36.37	43.82	50.40	74.00	23.60	Pass	V	Peak
6	9764.0000	37.71	6.71	-36.83	41.72	49.31	74.00	24.69	Pass	V	Peak

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity	Remark
1	4882.0000	34.50	4.81	-36.10	39.65	42.86	54.00	11.14	Pass	V	Average

Mode:	$\pi/4$ DQPSK Transmitting	Channel:	2480
Remark:	/		

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity	Remark
1	3686.4686	33.55	4.27	-36.24	45.41	46.99	74.00	27.01	Pass	H	Peak
2	4960.0000	34.50	4.82	-36.20	48.48	51.60	74.00	22.40	Pass	H	Peak
3	5535.2535	35.06	5.16	-36.08	43.66	47.80	74.00	26.20	Pass	H	Peak
4	7440.0000	36.54	5.85	-36.34	43.49	49.54	74.00	24.46	Pass	H	Peak
5	8546.3546	36.70	6.33	-36.33	43.35	50.05	74.00	23.95	Pass	H	Peak
6	9920.0000	37.77	6.79	-36.82	40.70	48.44	74.00	25.56	Pass	H	Peak

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity	Remark
1	4960.0000	34.50	4.82	-36.21	39.26	42.37	54.00	11.63	Pass	H	Average

Mode:	$\pi/4$ DQPSK Transmitting	Channel:	2480
Remark:	/		

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity	Remark
1	3009.7510	33.20	4.91	-36.74	46.15	47.52	74.00	26.48	Pass	V	Peak
2	4960.0000	34.50	4.82	-36.20	48.77	51.89	74.00	22.11	Pass	V	Peak
3	6394.3144	35.88	5.33	-36.32	43.58	48.47	74.00	25.53	Pass	V	Peak
4	7440.0000	36.54	5.85	-36.34	44.47	50.52	74.00	23.48	Pass	V	Peak
5	8392.2892	36.56	6.31	-36.33	44.20	50.74	74.00	23.26	Pass	V	Peak
6	9920.0000	37.77	6.79	-36.82	40.95	48.69	74.00	25.31	Pass	V	Peak

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity	Remark
1	4960.0000	34.50	4.82	-36.21	40.60	43.71	54.00	10.29	Pass	V	Average

Mode:	8DPSK Transmitting	Channel:	2402
Remark:	/		

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	3021.4521	33.21	4.89	-36.79	46.26	47.57	74.00	26.43	Pass	H	Peak
2	4804.0000	34.50	4.55	-36.15	50.80	53.70	74.00	20.30	Pass	H	Peak
3	5858.0108	35.57	5.08	-36.05	43.21	47.81	74.00	26.19	Pass	H	Peak
4	7206.0000	36.31	5.81	-36.43	45.09	50.78	74.00	23.22	Pass	H	Peak
5	7653.1653	36.54	6.16	-36.60	44.22	50.32	74.00	23.68	Pass	H	Peak
6	9608.0000	37.64	6.63	-36.79	42.79	50.27	74.00	23.73	Pass	H	Peak

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	4804.0000	34.50	4.55	-36.15	30.88	33.78	54.00	20.22	Pass	H	Average

Mode:	8DPSK Transmitting	Channel:	2402
Remark:	/		

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	3193.0693	33.28	4.64	-36.73	46.43	47.62	74.00	26.38	Pass	V	Peak
2	3901.9652	33.72	4.34	-36.06	44.78	46.78	74.00	27.22	Pass	V	Peak
3	4804.0000	34.50	4.55	-36.15	50.77	53.67	74.00	20.33	Pass	V	Peak
4	5690.2940	35.30	5.01	-36.10	43.34	47.55	74.00	26.45	Pass	V	Peak
5	7206.0000	36.31	5.81	-36.43	45.21	50.90	74.00	23.10	Pass	V	Peak
6	9608.0000	37.64	6.63	-36.79	42.62	50.10	74.00	23.90	Pass	V	Peak

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	4804.0000	34.50	4.55	-36.15	42.06	44.96	54.00	9.04	Pass	V	Average

Mode:	8DPSK Transmitting	Channel:	2441
Remark:	/		

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Magin [dB]	Result	Polarity	Remark
1	1916.9834	31.15	3.42	-36.80	47.93	45.70	74.00	28.30	Pass	H	Peak
2	3899.0399	33.72	4.34	-36.06	44.27	46.27	74.00	27.73	Pass	H	Peak
3	4882.0000	34.50	4.81	-36.10	52.14	55.35	74.00	18.65	Pass	H	Peak
4	6154.4404	35.83	5.25	-36.20	43.33	48.21	74.00	25.79	Pass	H	Peak
5	7323.0000	36.42	5.85	-36.41	42.73	48.59	74.00	25.41	Pass	H	Peak
6	9764.0000	37.71	6.71	-36.83	41.88	49.47	74.00	24.53	Pass	H	Peak

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Magin [dB]	Result	Polarity	Remark
1	4882.0000	34.50	4.81	-36.10	38.95	42.16	54.00	11.84	Pass	H	Average

Mode:	8DPSK Transmitting	Channel:	2441
Remark:	/		

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Magin [dB]	Result	Polarity	Remark
1	2701.5403	32.72	4.12	-36.72	47.73	47.85	74.00	26.15	Pass	V	Peak
2	4882.0000	34.50	4.81	-36.10	51.16	54.37	74.00	19.63	Pass	V	Peak
3	6342.6343	35.87	5.46	-36.15	42.66	47.84	74.00	26.16	Pass	V	Peak
4	7323.0000	36.42	5.85	-36.41	43.56	49.42	74.00	24.58	Pass	V	Peak
5	8415.6916	36.57	6.35	-36.31	43.75	50.36	74.00	23.64	Pass	V	Peak
6	9764.0000	37.71	6.71	-36.83	41.42	49.01	74.00	24.99	Pass	V	Peak

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Magin [dB]	Result	Polarity	Remark
1	4882.0000	34.50	4.81	-36.10	42.65	45.86	54.00	8.14	Pass	V	Average

Mode:	8DPSK Transmitting	Channel:	2480
Remark:	/		

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Magin [dB]	Result	Polarity	Remark
1	3213.5464	33.29	4.60	-36.73	47.42	48.58	74.00	25.42	Pass	H	Peak
2	4960.0000	34.50	4.82	-36.20	51.16	54.28	74.00	19.72	Pass	H	Peak
3	5980.8731	35.77	5.33	-36.25	42.69	47.54	74.00	26.46	Pass	H	Peak
4	7440.0000	36.54	5.85	-36.34	41.75	47.80	74.00	26.20	Pass	H	Peak
5	8153.3903	36.46	6.42	-36.45	43.71	50.14	74.00	23.86	Pass	H	Peak
6	9920.0000	37.77	6.79	-36.82	39.57	47.31	74.00	26.69	Pass	H	Peak

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Magin [dB]	Result	Polarity	Remark
1	4960.0000	34.50	4.82	-36.21	43.22	46.33	54.00	7.67	Pass	H	Average

Mode:	8DPSK Transmitting	Channel:	2480
Remark:	/		

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Magin [dB]	Result	Polarity	Remark
1	3192.0942	33.28	4.64	-36.74	48.24	49.42	74.00	24.58	Pass	V	Peak
2	4263.7264	34.17	4.48	-36.26	43.58	45.97	74.00	28.03	Pass	V	Peak
3	4960.0000	34.50	4.82	-36.20	50.13	53.25	74.00	20.75	Pass	V	Peak
4	6387.4887	35.88	5.35	-36.29	43.93	48.87	74.00	25.13	Pass	V	Peak
5	7440.0000	36.54	5.85	-36.34	42.14	48.19	74.00	25.81	Pass	V	Peak
6	9920.0000	37.77	6.79	-36.82	40.19	47.93	74.00	26.07	Pass	V	Peak

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Magin [dB]	Result	Polarity	Remark
1	4960.0000	34.50	4.82	-36.21	41.50	44.61	54.00	9.39	Pass	V	Average

Note:

1) Through Pre-scan transmitter mode with all kind of modulation and all kind of data type, find the 1-DH5 of data type is the worse case of GFSK modulation type, the 2-DH5 of data type is the worse case of $\pi/4$ DQPSK modulation type, the 3-DH5 of data type is the worse case of 8DPSK modulation type in transmitter mode.

2) As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. So, only the peak values are measured.

3) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading - Correct Factor

Correct Factor = Preamplifier Factor - Antenna Factor - Cable Factor

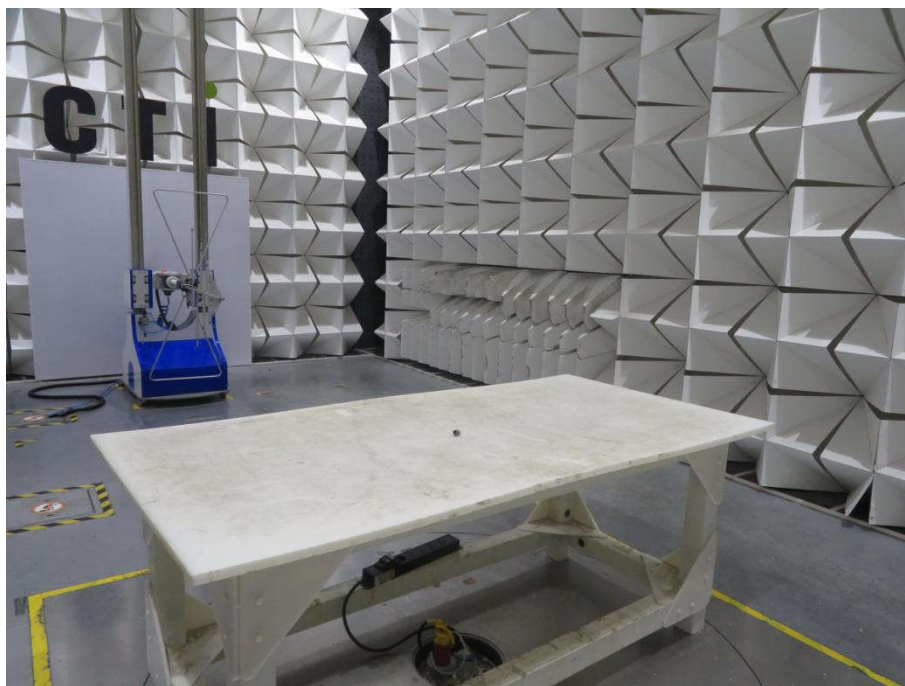
4) Scan from 9kHz to 25GHz, the disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

PHOTOGRAPHS OF TEST SETUP

Test model No.: GWP-SLCR-BT



Radiated spurious emission Test Setup-1(Below 30MHz)



Radiated spurious emission Test Setup-2(Below 1GHz)



Radiated spurious emission Test Setup-3(Above 1GHz)



Radiated spurious emission Test Setup for Close-up



Conducted Emissions Test Setup

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No.EED32K00238701 for EUT external and internal photos.

*** End of Report ***

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