



TE	EST REPORT
Report Reference No:	TRE1712019102 R/C: 72398
FCC ID:	ZSW-10-013
Applicant's name:	b mobile HK Limited
Address:	Flat 18; 14/F Block 1; Golden Industrial Building;16-26 Kwai Tak Street; Kwai Chung; New Territories; Hong Kong.
Manufacturer	b mobile HK Limited
Address	Flat 18; 14/F Block 1; Golden Industrial Building;16-26 Kwai Tak Street; Kwai Chung; New Territories; Hong Kong.
Test item description:	Mobile Phone
Trade Mark	Bmobile
Model/Type reference:	C210
Listed Model(s):	-
Standard:	FCC CFR Title 47 Part 15 Subpart C Section 15.247
Date of receipt of test sample:	Dec.20,2017
Date of testing	Dec.21,2017 - Jan.21,2018
Date of issue	Jan.22,2018
Result	PASS
Compiled by (position+printedname+signature):	File administrators Candy Liu
Supervised by (position+printed name+signature):	Project Engineer Cary Luo
Approved by (Position+Printed name+Signature):	RF Manager Hans Hu
Testing Laboratory Name:	Shenzhen Huatongwei International Inspection Co., Ltd.
Address	1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China

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The test report merely correspond to the test sample.

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1. TEST STANDARDS AND REPORT VERSION

1.1. Test Standards

The tests were performed according to following standards:

<u>FCC Rules Part 15.247:</u> Frequency Hopping, Direct Spread Spectrum and Hybrid Systems that are in operation within the bands of 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz

ANSI C63.10-2013: American National Standard for Testing Unlicensed Wireless Devicese

1.2. Report version

Version No.	Date of issue	Description
00	Jan.22,2018	Original

2. TEST DESCRIPTION

Test Item	Section in CFR 47	Result	Test Engineer
Antenna Requirement	15.203/15.247 (c)	Pass	Zhaohui.Ouyang
AC Power Line Conducted Emissions	15.207	Pass	Zhaohui.Ouyang
Conducted Peak Output Power	15.247 (b)(1)	Pass	Zhaohui.Ouyang
20 dB Bandwidth	15.247 (a)(1)	Pass	Zhaohui.Ouyang
Carrier Frequencies Separation	15.247 (a)(1)	Pass	Zhaohui.Ouyang
Hopping Channel Number	15.247 (a)(1)	Pass	Zhaohui.Ouyang
Dwell Time	15.247 (a)(1)	Pass	Zhaohui.Ouyang
Pseudorandom Frequency Hopping Sequence	15.247(b)(4)	Pass	Zhaohui.Ouyang
Restricted band	15.247(d)/15.205	Pass	Zhaohui.Ouyang
Radiated Emissions	15.247(d)/15.209	Pass	Zhaohui.Ouyang

Note: The measurement uncertainty is not included in the test result.

3. <u>SUMMARY</u>

3.1. Client Information

Applicant:	b mobile HK Limited
Address:Flat 18; 14/F Block 1; Golden Industrial Building;16-26 Kwai Tak St Kwai Chung; New Territories; Hong Kong.	
Manufacturer:	b mobile HK Limited
Address:	Flat 18; 14/F Block 1; Golden Industrial Building;16-26 Kwai Tak Street; Kwai Chung; New Territories; Hong Kong.

3.2. Product Description

Name of EUT:	Mobile Phone	
Trade Mark:	Bmobile	
Model No.:	C210	
Listed Model(s):	-	
IMEI:	353185089995288	
Power supply:	DC 3.7V	
Adapter information:	Input:100-240Va.c.,50/60Hz,0.15A Output: 5Vd.c.,500mA	
Hardware version:	Z675-MB-V1.0	
Software version:	Bmobile_C210_V001	
Bluetooth		
Version:	Supported BT2.1+EDR	
Modulation:	GFSK, π/4DQPSK, 8DPSK	
Operation frequency:	2402MHz~2480MHz	
Channel number:	79	
Channel separation:	1MHz	
Antenna type:	Integral Antenna	
Antenna gain:	1.0dBi	

3.3. Operation state

Test frequency list

According to section 15.31(m), regards to the operating frequency range over 10 MHz, must select three channel which were tested. the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, please see the above gray bottom.

Channel	Frequency (MHz)
00	2402
01	2403
:	:
39	2441
:	:
77	2479
78	2480

> <u>TEST MODE</u>

For RF test items:

The engineering test program was provided and enabled to make EUT continuous transmit

For AC power line conducted emissions:

The EUT was set to connect with the Bluetooth instrument under large package sizes transmission.

For Radiated suprious emissions test item:

The engineering test program was provided and enabled to make EUT continuous transmit. The EUT in each of three orthogonal axis emissions had been tested ,but only the worst case (X axis) data recorded in the report.

3.4. EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

- supplied by the manufacturer
- supplied by the lab

	Manufacturer:	/
	Model No.:	/
	Manufacturer:	/
7	Model No.:	/

3.5. Modifications

No modifications were implemented to meet testing criteria.

4. TEST ENVIRONMENT

4.1. Address of the test laboratory

Laboratory: Shenzhen Huatongwei International Inspection Co., Ltd. Address: 1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China

4.2. Test Facility

CNAS-Lab Code: L1225

Shenzhen Huatongwei International Inspection Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories.

A2LA-Lab Cert. No.: 3902.01

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

FCC-Registration No.: 762235

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files.

IC-Registration No.:5377B-1

Two 3m Alternate Test Site of Shenzhen Huatongwei International Inspection Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No.: 5377B-1.

ACA

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our A2LA accreditation.

4.3. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15~35°C
Relative Humidity:	30~60 %
Air Pressure:	950~1050mba

4.4. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors in calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report according to TR-100028-01 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 1" and TR-100028-02 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 2" and is documented in the Shenzhen Huatongwei International Inspection Co., Ltd. quality system according to ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Here after the best measurement capability for Shenzhen Huatongwei International Inspection Co., Ltd. is reported:

Test Items	Measurement Uncertainty	Notes
Transmitter power conducted	0.57 dB	(1)
Transmitter power Radiated	2.20 dB	(1)
Conducted spurious emissions 9kHz~40GHz	1.60 dB	(1)
Radiated spurious emissions 9kHz~40GHz	2.20 dB	(1)
Conducted Emissions 9kHz~30MHz	3.39 dB	(1)
Radiated Emissions 30~1000MHz	4.24 dB	(1)
Radiated Emissions 1~18GHz	5.16 dB	(1)
Radiated Emissions 18~40GHz	5.54 dB	(1)
Occupied Bandwidth		(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

4.5. Equipments Used during the Test

Condu	cted Emissions					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. (mm-dd-yy)	Next Cal. (mm-dd-yy)
1	EMI Test Receiver	R&S	ESCI	101247	11/11/2017	11/10/2018
2	Artificial Mains	SCHWARZBECK	NNLK 8121	573	11/11/2017	11/10/2018
3	2-Line V- Network	R&S	ESH3-Z5	100049	11/11/2017	11/10/2018
4	Pulse Limiter	R&S	ESH3-Z2	101488	11/11/2017	11/10/2018
5	RF Connection Cable	HUBER+SUHNER	EF400	N/A	11/21/2017	11/20/2018
6	Test Software	R&S	ES-K1	N/A	N/A	N/A
Padiat	ed Emissions					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. (mm-dd-yy)	Next Cal. (mm-dd-yy)
1	EMI Test Receiver	R&S	ESCI	101247	11/11/2017	11/10/2018
2	Loop Antenna	R&S	HFH2-Z2	100020	11/20/2017	11/19/2018
3	Ultra- Broadband Antenna	SCHWARZBECK	VULB9163	538	4/5/2017	4/4/2018
4	Preamplifier	SCHWARZBECK	BBV 9743	9743-0022	10/18/2017	10/17/2018
5	RF Connection Cable	HUBER+SUHNE R	RE-7-FL	N/A	11/21/2017	11/20/2018
6	EMI Test Software	R&S	ESK1	N/A	N/A	N/A
7	Spectrum Analyzer	R&S	FSP40	100597	11/11/2017	11/10/2018
8	Horn Antenna	SCHWARZBECK	9120D	1011	3/27/2017	3/26/2018
9	Horn Antenna	SCHWARZBECK	BBHA9170	25841	3/27/2017	3/26/2018
10	Broadband Preamplifier	SCHWARZBECK	BBV 9718	9718-248	10/18/2017	10/17/2018
11	High pass filter	Compliance Direction systems	BSU-6	34202	11/11/2017	11/10/2018
12	RF Connection Cable	HUBER+SUHNE R	RE-7-FH	N/A	11/21/2017	11/20/2018
13	EMI Test Software	Audix	E3	N/A	N/A	N/A
14	Turntable	MATURO	TT2.0	/	N/A	N/A
15	Antenna Mast	MATURO	TAM-4.0-P	/	N/A	N/A

RF Con	RF Conducted Test						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. (mm-dd-yy)	Next Cal. (mm-dd-yy)	
1	Spectrum Analyzer	R&S	FSV40	100048	11/11/2017	11/10/2018	
2	EXA Signal Analyzer	Agilent	N9020A	184247	9/22/2017	9/21/2018	
3	Power Meter	Agilent	U2021XA	178231	9/22/2017	9/21/2018	
4	OSP	R&S	OSP120	101317	N/A	N/A	

5. TEST CONDITIONS AND RESULTS

5.1. Antenna requirement

<u>Requirement</u>

FCC CFR Title 47 Part 15 Subpart C Section 15.203:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of anantenna 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.

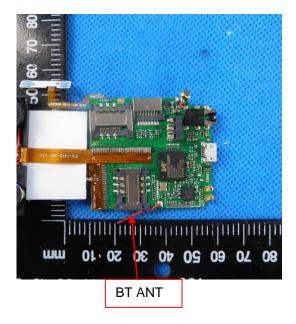
FCC CFR Title 47 Part 15 Subpart C Section 15.247(c) (1)(i):

(i) Systems operating in the 2400~2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

Test Result:

☑ Passed □ Not Applicable

The directional gain of the antenna less than 1.0 dBi, please refer to the below antenna photo.



5.2. Conducted Emissions (AC Main)

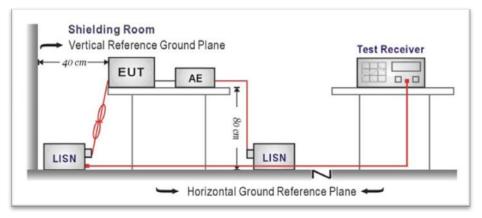
<u>LIMIT</u>

FCC CFR Title 47 Part 15 Subpart C Section 15.207

	Limit (c	lBuV)
Frequency range (MHz)	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

TEST CONFIGURATION



TEST PROCEDURE

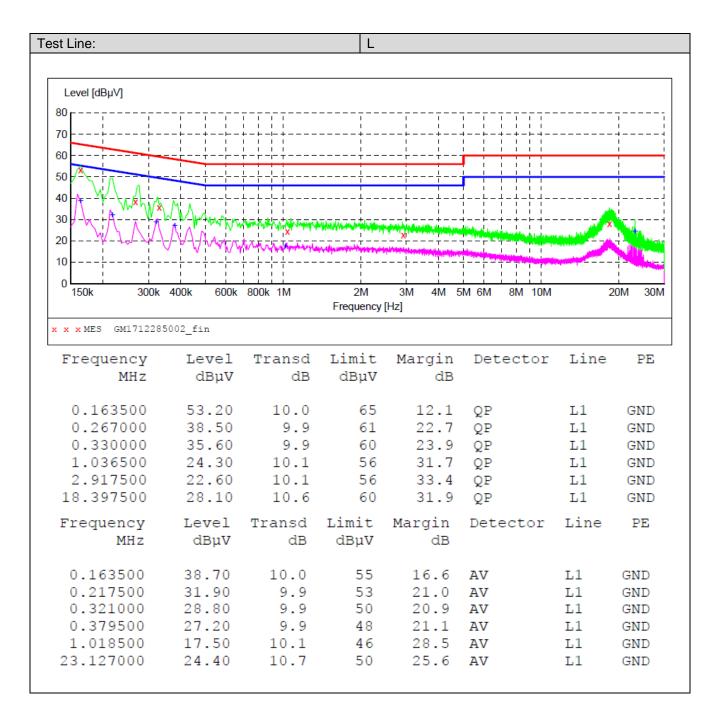
- 1. The EUT was setup according to ANSI C63.10:2013 requirements.
- 2. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface.
- 3. The EUT and simulators are connected to the main power through a line impedances stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment.
- 4. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs)
- 5. Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.
- 6. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
- 7. Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.
- 8. During the above scans, the emissions were maximized by cable manipulation.

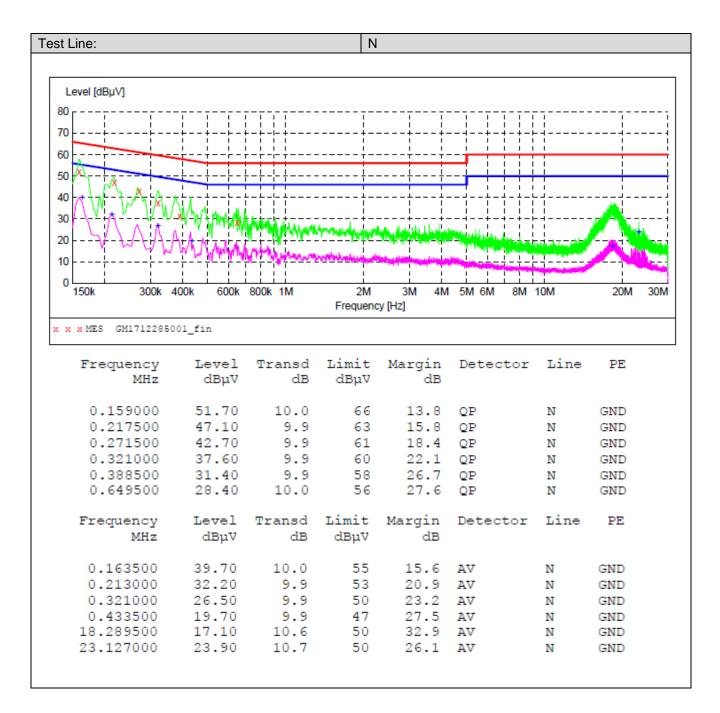
TEST RESULTS

☑ Passed □ Not Applicable

Note:

- 1) Transd= Cable lose + Pulse Limiter Factor + Artificial Mains Factor
- 2) Margin= Limit Level



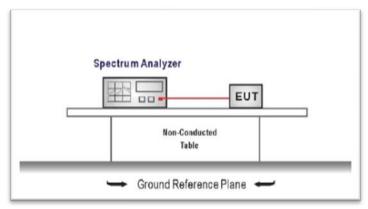


5.3. Conducted Peak Output Power

LIMIT

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (b)(1): For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 nonoverlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.

TEST CONFIGURATION



TEST PROCEDURE

- 1. The transmitter output was connected to the spectrum analyzer through an attenuator, the pathloss was compensated to the results for each measurement.
- 2. Set to the maximum power setting and enable the EUT transmit continuously
- Use the following spectrum analyzer settings:
 Span = approximately 5 times the 20 dB bandwidth, centered on a hopping channel RBW≥ the 20 dB bandwidth of the emission being measured, VBW≥RBW
 Sweep = auto, Detector function = peak, Trace = max hold
- 4. Measure and record the results in the test report.

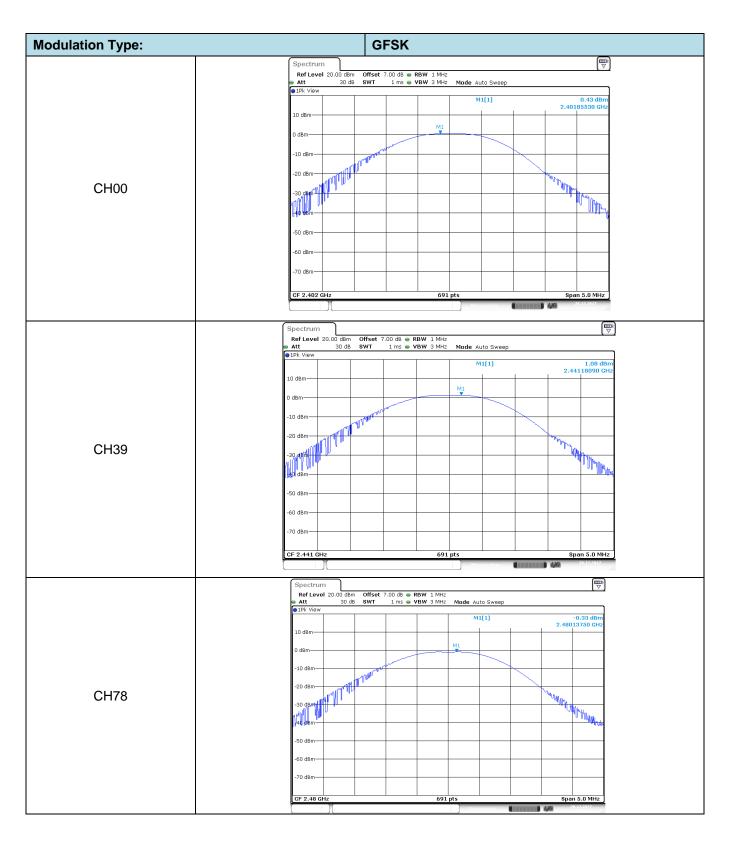
TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

☑ Passed □ Not Applicable

Modulation type	Channel	Output power (dBm)	Limit (dBm)	Result	
	00	0.43			
GFSK	39	1.08	≤ 30.00	Pass	
	78	-0.33			
	00	1.75			
π/4DQPSK	39	1.13	≤ 21.00	Pass	
	78	0.30			
	00	0.07			
8DPSK	39	-0.32	≤ 21.00	Pass	
	78	1.07]		



Modulation Type:	π/4DQPSK
	Spectrum Ref Level 20.00 dBm Offset 7.00 dB ● RBW 2 MHz
	Att 30 dB SWT 1 ms VBW 5 MHz Mode Auto Sweep
	●1Pk View M1[1] 1.75 dBm
	2.40211580 GHz
	M1
	0 dBm
	-10 dBm
01100	-20 dBm-
CH00	-30 dBm
	-40 d8m-
	-50 dBm-
	-60 dBm-
	-70 dBm-
	CF 2.402 GHz 691 pts Span 5.0 MHz
	Mexcuring. 11111 22/02/07
	Spectrum 🔽
	Ref Level 20.00 dBm Offset 7.00 dB 🖷 RBW 2 MHz
	Att 30 dB SWT 1 ms VBW 5 MHz Mode Auto Sweep
	M1[1] 1.13 dBm
	10 dBm 2.44086250 GHz
	MI
	0 dBm
	-10 dBm
	-20 d8m-
CH39	
or los	-30 d8m-
	-40 dBm-
	-50 dBm-
	-60 dBm-
	-70 dBm
	CF 2.441 GHz 691 pts Span 5.0 MHz
	Messuring United to 224,122017
	Spectrum 💭
	Ref Level 20.00 dBm Offset 7.00 dB RBW 2 MHz
	● 1Pk View
	M1[1] 0.30 dBm 2.47988420 GHz
	10 dBm
	O dBm
	-10 dgm-
	-20 dBm
CH78	-30 dBm
	-40 dBm-
	-50 dBm
	-60 dBm
	-70 dBm-
	CF 2.48 GHz 691 pts Span 5.0 MHz
	Mersuring

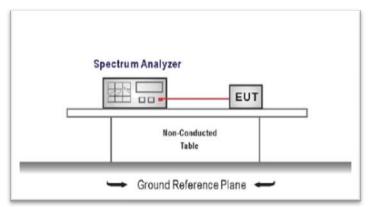
Modulation Type:	8DPSK
	Spectrum Ref Level 20.00 dBm Offset 7.00 dB RBW 2 MHz
	Att 30 dB SWT 1 ms VBW 5 MHz Mode Auto Sweep IPk View
	M1[1] 0.07 dBm
	10 dBm
	0 dBm
	-10 dBm
	-20 dBm
CH00	-30 dBm
	-40 dBm
	-50 dBm
	-60 dBm-
	-70 dBm
	CF 2.402 GHz 691 pts Span 5.0 MHz
	Neasuring
	Spectrum 🕎
	Ref Level 20.00 dBm Offset 7.00 dB 🖷 RBW 2 MHz
	Att 30 dB SWT 1 ms VBW 5 MHz Mode Auto Sweep () 1Pk View
	10 dBm
	0 dBm
	-10 dBm
	-20 d8m
CH39	-30 dBm-
	40.40
	-40 d8m-
	-50 dBm
	-60 dBm
	-70 dBm
	CF 2.441 GHz 691 pts Span 5.0 MHz
	Measuring 🏭 REPERT
	Spectrum 🕎
	RefLevel 20.00 dBm Offset 7.00 dB RBW 2 MHz Att 30 dB SWT 1 ms VBW 5 MHz Mode Auto Sweep
	PIPk View M1[1] 1.07 dBm
	1.0 / USM 2.47997830 GHz
	0 dBm
	-10 dBm
	-20 dBm
CH78	
	-30 dBm
	-40 dBm
	-50 dBm
	-60 dBm-
	-70 dBm-
	CF 2.48 GHz 691 pts Span 5.0 MHz

5.4. 20 dB Bandwidth

LIMIT

N/A

TEST CONFIGURATION



TEST PROCEDURE

- 1. The transmitter output was connected to the spectrum analyzer through an attenuator, the path loss was compensated to the results for each measurement.
- 2. Set to the maximum power setting and enable the EUT transmit continuously
- 3. Use the following spectrum analyzer settings:

Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a hopping channel RBW \ge 1% of the 20 dB bandwidth, VBW \ge RBW

Sweep = auto, Detector function = peak, Trace = max hold

4. Measure and record the results in the test report.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

Passed

Not Applicable

Modulation type	Channel	20 dB Bandwidth (MHz)	Limit (MHz)	Result		
	00	0.93				
GFSK	39	0.93	-	Pass		
	78	0.93				
	00	1.32				
π/4DQPSK	39	1.32	-	Pass		
	78	1.32				
	00	1.31				
8DPSK	39	1.31	-	Pass		
	78	1.31				

Modulation Type:	GFSK
	Spectrum Ref Level 20.00 dBm Offset 7.00 dB ● RBW 10 kHz
	Att 30 dB SWT 139.6 µs VBW 30 kHz Mode Auto FFT
	M1[1] -26.41 dBm 2.40155000.0Hz
	10 dBm M2[1] -5.77 dBm 2.40206000 GHz
	0 dBm
	-20 dBm
	-30 dBm
CH00	-40 d8m
	-50 dBm - A han - A ha
	-60 dBm
	-70 dBm
	CF 2.402 GHz 1001 pts Span 2.5 MHz
	Marker Type Ref Trc X-value Y-value Function Function Result
	M1 1 2.40155 GHz -26.41 dBm M2 1 2.40206 GHz -5.77 dBm
	D3 M1 1 925.0 kHz -0.33 dB
	Measuring August 28.12.2117
	Spectrum 🕎
	RefLevel 20.00 dBm Offset 7.00 dB ● RBW 10 kHz ● Att 30 dB SWT 189.6 µs ● VBW 30 kHz Mode Auto FFT
	PIPk View M1[1] -24.76 dBm
	10 dBm M2[1] -4.19 dBm
	0 dBm M2 2.44106000 GHz
	-10 d8m
	01 -24.190 dBm
CH39	-50 UBIN
01100	50, d80mm from the second seco
	-60 dBm
	-70 dBm
	CF 2.441 GHz 1001 pts Span 2.5 MHz Marker
	Type Ref Trc X-value Y-value Function Function Result M1 1 2.44055 GHz -24.76 dBm
	M2 1 2.44106 GHz -4.19 dBm D3 M1 1 925.0 kHz -0.24 dB
	Mercurine
	Spectrum Image: Constraint of the sector of t
	● Att 30 dB SWT 189.6 µs ● VBW 30 kHz Mode Auto FFT ● 1Pk View
	M1[1] -29.37 dBm 2.47955000 GHz
	10 dBm M2[1] -8.83 dBm 24.06000 GHz
	0 dBm M2
	-10 dBm
	Ma on N V V Why A so
01170	-30 dBm D1 -28.830 dBm AV
CH78	
	-50 d8m
	-60 dBm
	-70 dBm-
	CF 2.48 GHz 1001 pts Span 2.5 MHz
	Marker Type Ref Trc X-value Y-value Function Function Result
	M1 1 2.47955 GHz -29.37 dBm M2 1 2.48006 GHz -8.83 dBm
	D3 M1 1 925.0 kHz -0.37 dB Measuring 20.122017
	Measuring.

dulation Type:	π/4DQPSK
	Spectrum 👻
	RefLevel 20.00 dBm Offset 7.00 dB ● RBW 30 kHz ● Att 30 dB SWT 63.1 µs ● VBW 100 kHz Mode Auto FFT
	●1Pk View M1[1] -23.43 dBm
	10 dBm 2.40134250 GHz M2[1] -3.35 dBm
	2.40190000 GHz
	-20 dBm
	01 -23.350 dBm
CH00	40_d8m
	-50 dBm
	-60 dBm
	-70 dBm
	CF 2.402 GHz 1001 pts Span 2.5 MHz Marker
	Type Ref Trc X-value Y-value Function Function Result M1 1 2.4013425 GHz -23.43 dBm -23.43 dBm -23.43 dBm
	M2 1 2.4019 GHz -3.35 dBm D3 M1 1 1.32 MHz -0.40 dB
	Mexsuring (111111) (A) 23.12.2017
	Spectrum 🕎
	RefLevel 20.00 dBm Offset 7.00 dB ● RBW 30 kHz ● Att 30 dB SWT 63.1 µs ● VBW 100 kHz Mode Auto FFT
	PIPk View M1[1] -24.11 dBm
	10 d0-
	-20 d8m
	D1 -23.980 dBm
CH39	-40 dBm
01105	-50 dBm
	-50 dBm
	-70 dBm
	CF 2.441 GHz 1001 pts Span 2.5 MHz Marker
	Type Ref Trc X-value Y-value Function Function Result M1 1 2.4403425 GHz -24.11 dBm
	M2 1 2.4409 GHz -3.96 dBm D3 M1 1 1.32 MHz -0.31 dB
	Mexsuring 1111111 440 23.12.2017
	Spectrum 🕎
	RefLevel 20.00 dBm Offset 7.00 dB ● RBW 30 kHz ● Att 30 dB SWT 63.1 µs ● VBW 100 kHz Mode Auto FFT
	PIPk View M1[1] -25.74 dBm
	10 d8m M2[1] -5.53 d8m
	2.47990000 GHz
	-20 dBm M17
CH78	-40 dBm
	-50 dBm
	-60 dBm-
	-70 dBm
	CF 2.48 GHz 1001 pts Span 2.5 MHz Marker
	Type Ref Trc X-value Y-value Function Function Result M1 1 2.4793425 GHz -25.74 dBm
	M2 1 2.4799 GHz -5.53 dBm D3 M1 1 1.32 MHz -0.32 dB
	Measuring (Intitution) (MG) 22.122.2017

Iodulation Type:	8DPSK
	Spectrum V
	Ref Level 20.00 dBm Offset 7.00 dB RBW 30 kHz Att 30 dB SWT 63.1 µs VBW 100 kHz Mode Auto FFT
	●1Pk View M1[1] -25.35 dBm
	10 dBm 2.40135000 GHz M2[1]5.20 dBm
	0 dBm 2.40216750 GHz
	-10 d8m
	-20 dBm
	-30 dBm
CH00	-40 dBm
	-50 d8m
	-60 dBm
	-70 dBm-
	CF 2.402 GHz 1001 pts Span 2.5 MHz
	Marker Type Ref Trc X-value Y-value Function Function Result
	M1 1 2.40135 GHz -25.35 dBm M2 1 2.4021675 GHz -5.20 dBm
	D3 M1 1 1.31 MHz -0.26 dB Measuring. 27.12-217
	Spectrum Imp Ref Level 20.00 dBm Offset 7.00 dB ● RBW 30 kHz
	ALL EVER 2000 DBM OTISEL 7.00 DB KBW 30 KH2 ALL 30 dB SWT 63.1 µs VBW 100 kH2 Mode Auto FFT PIPk View
	M1[1] -26.14 dBm 2.44035000 GHz
	10 dBm 2,4403000 0472 10 dBm M2[1] -5.75 dBm 2,44116750 GH2
	-10 dBm
	-20 d8m 33 33 d8m 4 4
	-30 dBm-
CH39	-40 dBm
	-50 dBm
	-60 dBm
	-70 dBm-
	CF 2.441 GHz 1001 pts Span 2.5 MHz
	Marker Type Ref Trc X-value Y-value Function Function Result
	M1 1 2.44035 GHz -26.14 dBm M2 1 2.4411675 GHz -5.75 dBm
	D3 M1 1 1.31 MHz 0.07 dB 22.122017
	Spectrum [TTD] Ref Level 20.00 dBm Offset 7.00 dB ● RBW 30 kHz
	● Att 30 dB SWT 63.1 µs ● VBW 100 kHz Mode Auto FFT ● 1Pk View
	M1[1] -24.45 dBm 2.47935000 GHz
	10 dBm M2[1] -4.03 dBm 2.407 2.48016750 GHz
	-20 dBm 01 -24.030 dB
CH78	-30 dBm
	-50 dBm
	-60 dBm
	CF 2.48 GHz 1001 pts Span 2.5 MHz Marker
	Type Ref Trc X-value Y-value Function Function Result
	M1 1 2.47935 GHz -24.45 dBm
	M1 1 2.47935 GHz -24.45 dBm M2 1 2.4801675 GHz -4.03 dBm D3 M1 1 1.31 MHz 0.29 dB

5.5. Carrier Frequencies Separation

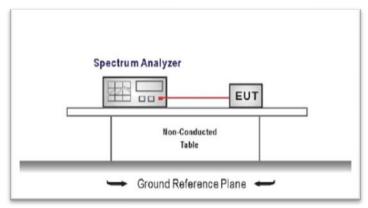
LIMIT

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

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. 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.

TEST CONFIGURATION



TEST PROCEDURE

- 1. The transmitter output was connected to the spectrum analyzer through an attenuator, the path loss was compensated to the results for each measurement.
- 2. Set to the maximum power setting and enable the EUT transmit continuously
- Use the following spectrum analyzer settings: Span = wide enough to capture the peaks of two adjacent channels RBW ≥ 1% of the span, VBW ≥ RBW Sweep = auto, Detector function = peak, Trace = max hold
- 4. Measure and record the results in the test report.

TEST MODE:

Please refer to the clause 3.3

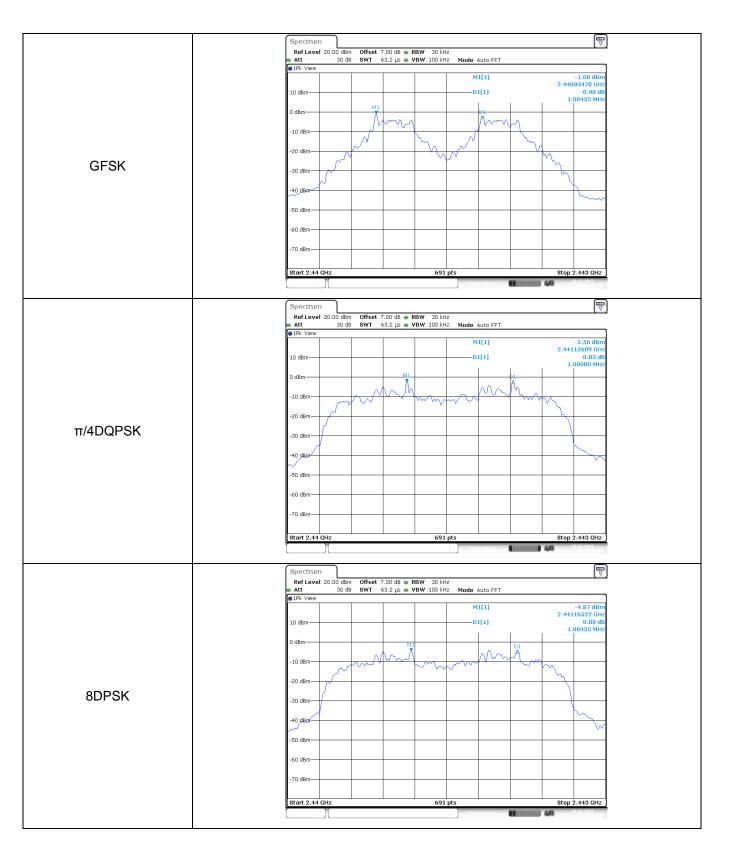
TEST RESULTS

☑ Passed □ Not Applicable

Modulation type	Channel	Carrier Frequencies Separation (MHz)	Limit (MHz) *	Result
GFSK	39	1.00	≥0.930	Pass
π/4DQPSK	39	1.00	≥0.880	Pass
8DPSK	39	1.00	≥0.873	Pass

Note:

*: GFSK limit = The maximum 20 dB Bandwidth for GFSK modulation on the section 5.4. $\pi/4DQPSK$ limit = 2/3 * The maximum 20 dB Bandwidth for $\pi/4DQPSK$ modulation on the section 5.4. 8DPSK limit = 2/3 * The maximum 20 dB Bandwidth for 8DPSK modulation on the section 5.4



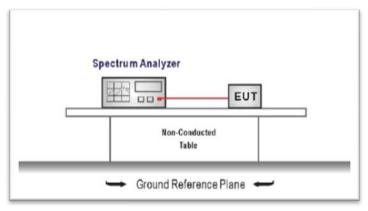
Shenzhen Huatongwei International Inspection Co., Ltd.

5.6. Hopping Channel Number

<u>LIMIT</u>

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (a)(1):Frequency hopping systems in the 2400–2483.5 MHz band shall use at least **15** channels.

TEST CONFIGURATION



TEST PROCEDURE

- 1. The transmitter output was connected to the spectrum analyzer through an attenuator, the path loss was compensated to the results for each measurement.
- 2. Set to the maximum power setting and enable the EUT transmit continuously
- Use the following spectrum analyzer settings: Span = the frequency band of operation RBW ≥ 1% of the span, VBW ≥ RBW Sweep = auto, Detector function = peak, Trace = max hold
- 4. Measure and record the results in the test report.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

☑ Passed □ Not Applicable

Modulation type	Channel number	Limit	Result
GFSK	79		
π/4DQPSK	79	79 ≥15.00	
8DPSK	79		

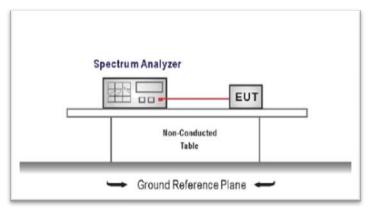
GFSK	•											_
GFSK 90 вм. т. 1 в. в. 90 вм. т. 1 в. в. 90 вм. н. 1 в. в. 90 вм. н. 1 в.				Offset 7	00 dB 👄 R	BW 100 kH:	,					∀
GFSK		👄 Att						luto Sweep				
GFSK		JEK VIGW										
GFSK		10 dBm										
GFSK		0.dBm										
GFSK		DABARA	ADADADA	ADABBAN	ADTRAAD	AAAAAAAA	1haannaa	INNTIAN	MANAN	hamman.	10408	
GFSK		-10 BBm	WWW.	i YUUW	anna a	MANN	WWW	WWW	NUM	<u>h i i i i i i i i i i i i i i i i i i i</u>	<u>aaana</u>	
л/4DQPSK			1 11									
л/4DQPSK	GFSK	-30 dBm										
л/4DQPSK												
л/4DQPSK		-#U dBm										
л/4DQPSK		, <mark>5</mark> 0 dBm										b
Image: A code Objective		-60 dBm										
Image: A GAV Bits 2.4 GAV		-70 dBm										
П/4DQPSK При и 2000 види со		-70 dbm										
виделя водания водания <t< td=""><td></td><td>Start 2.4 G</td><td>Hz</td><td></td><td></td><td>691</td><td>pts</td><td></td><td></td><td></td><td>4835 G</td><td>Hz</td></t<>		Start 2.4 G	Hz			691	pts				4835 G	Hz
воб вече 200 обе обруга 1 лик • VSW 200 Hz Mode Auto Sweep 0 dia 1 лик • VSW 200 Hz Mode Auto Sweep 0 dia 1 лик • VSW 200 Hz Mode Auto Sweep 10 dia 1 лик • VSW 200 Hz Mode Auto Sweep 0 dia 1 лик • VSW 200 Hz Mode Auto Sweep 10 dia 1 лик • VSW 200 Hz Mode Auto Sweep 10 dia 1 лик • VSW 200 Hz 1 лик • VSW 200 Hz 10 dia 1 лик • VSW 200 Hz 1 лик • VSW 200 Hz 10 dia 1 лик • VSW 200 Hz 1 лик • VSW 200 Hz 10 dia 1 лик • VSW 200 Hz 1 лик • VSW 200 Hz 10 dia 1 лик • VSW 200 Hz Mode Auto Sweep 10 dia 1 лик • VSW 200 Hz Mode Auto Sweep 10 dia 1 лик • VSW 200 Hz Mode Auto Sweep 10 dia 1 лик • VSW 200 Hz Mode Auto Sweep 10 dia 1 лик • VSW 200 Hz Mode Auto Sweep 10 dia 1 лик • VSW 200 Hz Mode Auto Sweep 10 dia 1 лик • VSW 200 Hz Mode Auto Sweep 10 dia 1 лик • VSW 200 Hz Mode Auto Sweep <							Mea	suring		4,44	0/17/2019	
виб цене) 20.0 айт 1 ли в КМУ 20.0 к/с 9 / 49 / 20.0 к/с 1 ли в КМУ 20.0 к/с 9 / 40 / 20.0 к/с 1 ли в КМУ 20.0 к/с 9 / 40 / 20.0 к/с 1 ли в КМУ 20.0 к/с 9 / 40 / 20.0 к/с 1 ли в КМУ 20.0 к/с 9 / 40 / 20.0 к/с 1 ли в КМУ 20.0 к/с 9 / 40 / 20.0 к/с 1 ли в КМУ 20.0 к/с 9 / 40 / 20.0 к/с 1 ли в КМУ 20.0 к/с 9 / 40 / 20.0 k/c 1 ли в КМУ 20.0 к/с 9 / 40 / 20.0 k/c 1 ли в КМУ 20.0 k/c 9 / 40 / 20.0 k/c 1 ли в КМУ 20.0 k/c 9 / 40 / 20.0 k/c 1 ли в КМУ 20.0 k/c 9 / 40 / 20.0 k/c 1 ли в КМУ 20.0 k/c 9 / 40 / 20.0 k/c 1 ли в КМУ 20.0 k/c 9 / 40 / 20.0 k/c 1 ли в КМУ 20.0 k/c 9 / 40 / 20.0 k/c 1 ли в КМУ 20.0 k/c 9 / 40 / 20.0 k/c 1 ли в КМУ 20.0 k/c 9 / 40 / 20.0 k/c 1 ли в КМУ 20.0 k/c 9 / 40 / 20.0 k/c 1 ли в КМУ 20.0 k/c 9 / 40 / 20.0 k/c 1 ли в КМУ 20.0 k/c 9 / 40 / 20.0 k/c 1 ли в КМУ 20.0 k/c 9 / 40 / 20.0 k/c 1 ли в К/c 1 ли в К/c		Spectrum										
ял/4DQPSK		Ref Level	20.00 dBm	Offset 7 SWT	.00 dB 👄 RI 1 ms 🚔 Y	BW 100 kHz BW 300 kHz	z Mode *	uto Sween				
л/4DQPSK					- Y	555 KHz	node A			1		
л/4DQPSK		10 10-										
π/4DQPSK ¹⁰ dem												
π/4DQPSK ¹⁰ 0 dm		0 dBm	ANANAAAA	INNAAAA	KKRAKARA	лалланы	WWWW	MMAMM	MMMM	MMM	ww	\ \
л/4DQPSK во авторити		-10 dBm		41401400		DORRADA						
л/4DQPSK во авторити		-20 dBm										
BDPSK Stop 2.4035 CHz 8DPSK 00 dm	π/4DOPSK											
SD d8m Go d8m<		-30 dBm										
8DPSK 60 d8m 60 d8m </td <td></td> <td>-40 dBm</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>9</td>		-40 dBm										9
Spectrum		-50 dBm										6
Spectrum		-60 dBm										
Stort 2.4 GHz 691 pts Stor 2.4835 GHz Versioner Versioner <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>												
Spectrum Provide Note Auto Sweep Ref Level 20.00 dBm Offset 7.00 dB PBW 100 Hz Mode Auto Sweep Image: Spectrum		-70 aBm										
Spectrum Image: Spectrum </td <td></td> <td>Start 2.4 G</td> <td>Hz</td> <td></td> <td></td> <td>691</td> <td>pts</td> <td></td> <td></td> <td></td> <td>4835 G</td> <td>Hz</td>		Start 2.4 G	Hz			691	pts				4835 G	Hz
Ref Level 20.00 dBm RBW 100 Hz Mode Auto Sweep • At 30 dB SWT 1 ms • VBW Mode Auto Sweep • ID dBm							Mea	suring		4,44	8122017	//
Ref Level 20.00 dBm Offset 7.00 dB RBW 100 kHz At 30 dB SWT 1 ms VBW 300 kHz Mode Auto Sweep FIP: View 0 dBm 0 dBm 0 dBm 0 dBm 0 dBm 0 dBm 0 dBm		Spectrum										₩
8DPSK 0 dBm 0 dBm <td< td=""><td></td><td>Ref Level</td><td>20.00 dBm</td><td></td><td>.00 dB 👄 R</td><td>BW 100 kHz</td><td>Z Modo i</td><td>uto Swoon</td><td></td><td></td><td></td><td></td></td<>		Ref Level	20.00 dBm		.00 dB 👄 R	BW 100 kHz	Z Modo i	uto Swoon				
8DPSK 0 dBm 0 dBm <td< td=""><td></td><td></td><td>50 UB</td><td>511</td><td>2 1115 - V</td><td>577 500 KH2</td><td>. moue A</td><td>varo aweep</td><td></td><td>1</td><td></td><td></td></td<>			50 UB	511	2 1115 - V	577 500 KH2	. moue A	varo aweep		1		
8DPSK 0 dBm 0 dBm <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>												
8DPSK												
8DPSK		0 dBm ДлААААА	AAAAAAAA	ARAMARA	AMAAAAA	ланалала	และเกม	www	MMMA	mmm	www	
8DPSK -0 dsm -10 dsm -				-10-00000		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	-14-		- u ~	· •		
8DPSK -0 dsm -10 dsm -		Do dem										
40 dBm -40 dBm -50 dBm -50 dBm -50 dBm -70 dBm -70 dBm -70 dBm Start 2.4 GHz 691 pts Stap 2.4835 GHz	8DPSK											
-50 dBm	OUFON	-30 dBm										
-60 dBm		-40 dBm										1
-60 dBm		-50 dBm										
-70 dBm												~
Start 2.4 GHz 691 pts Stop 2.4835 GHz		-60 dBm										
Start 2.4 GHz 691 pts Stop 2.4835 GHz		-70 dBm										
Nesturino (12/10/2/10/2/10/2/10/2/10/2/10/2/10/2/1		Start 9.4.0	Hz			601	nts			Stop 9	4835.0	H7
		Listart 2.4 G	TT TT			091	PLS Mea	suring		atup 2.	-rodð G 8.12.2017	172

5.7. Dwell Time

<u>LIMIT</u>

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (a)(1):The average time of occupancy on any channel shall not be greater than 0.4 seconds within a pe-riod of 0.4 seconds multiplied by the number of hopping channels employed.

TEST CONFIGURATION



TEST PROCEDURE

- 1. The transmitter output was connected to the spectrum analyzer through an attenuator, the path loss was compensated to the results for each measurement.
- 2. Set to the maximum power setting and enable the EUT transmit continuously
- Use the following spectrum analyzer settings: Span = zero span, centered on a hopping channel, RBW= 1 MHz, VBW ≥ RBW Sweep = as necessary to capture the entire dwell time per hopping channel, Detector function = peak, Trace = max hold
- 4. Measure and record the results in the test report.

TEST MODE:

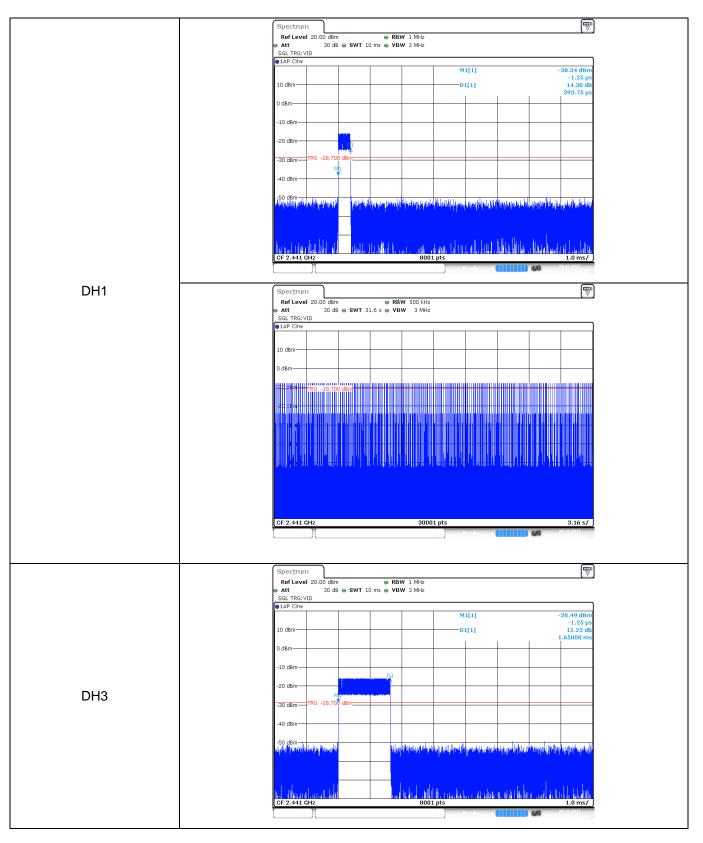
Please refer to the clause 3.3

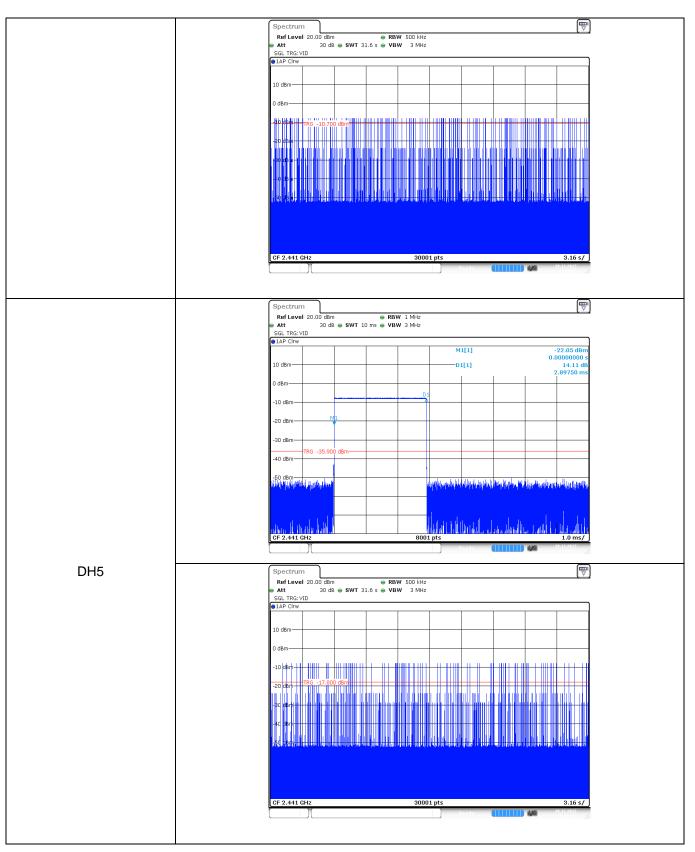
TEST RESULTS

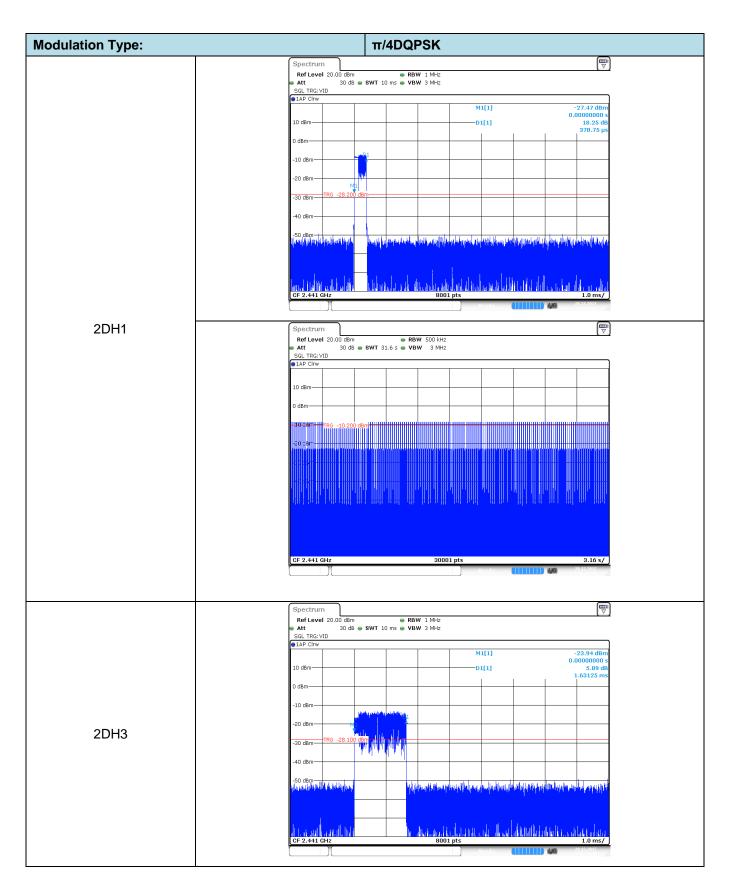
☑ Passed □ Not Applicable

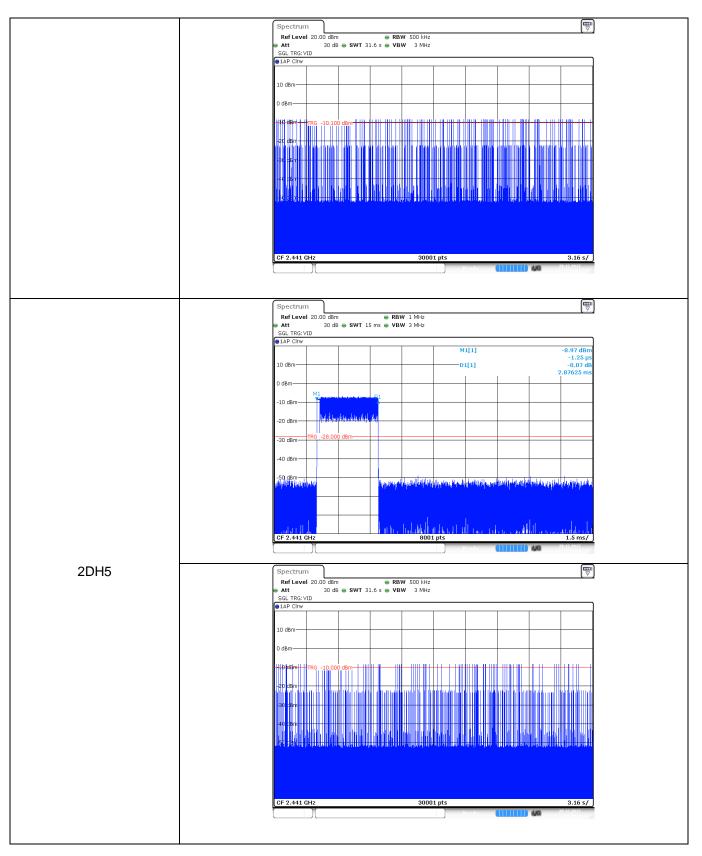
Modulation type	Channel	Burst Width [ms/hop/ch]	TotalDwell timeHops[hop*ch](Second)		Limit (Second)	Result
	DH1	0.39	320.00	0.13		
GFSK	DH3	1.65	157.00	0.26	≤ 0.40	Pass
	DH5	2.90	102.00	0.30		
	2DH1	0.38	319.00	0.12		
π/4DQPSK	K 2DH3	1.63	154.00	0.25	≤ 0.40	Pass
	2DH5	2.88	104.00	0.30		
	3DH1	0.38	317.00	0.12		
8DPSK	3DH3	1.63	162.00	0.26	0.26 ≤ 0.40	
	3DH5	2.88	119.00	0.34	1	

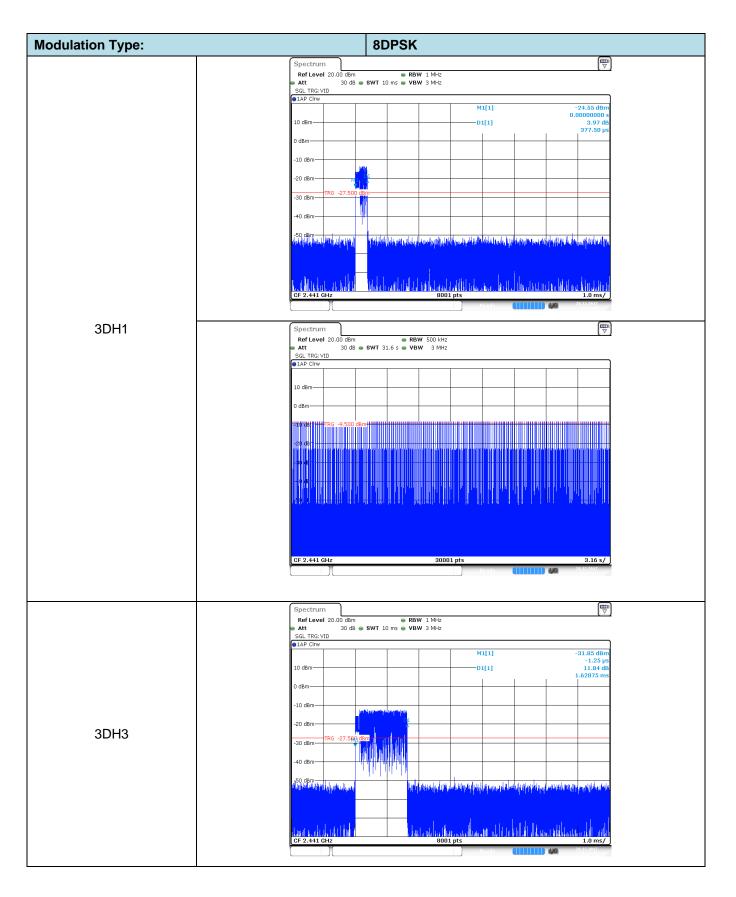
Modulation Type:	GFSK
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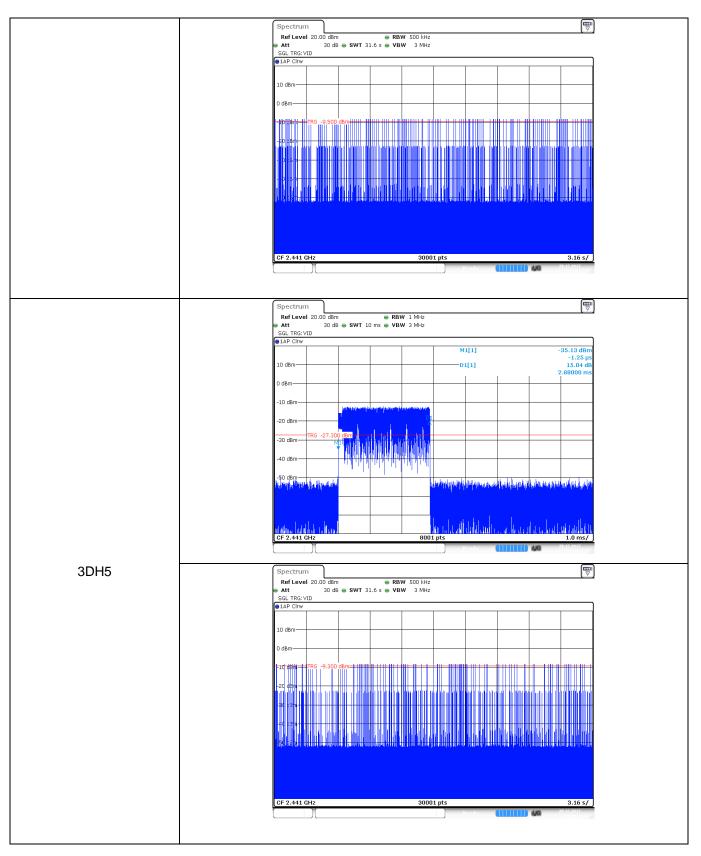












5.8. Pseudorandom Frequency Hopping Sequence

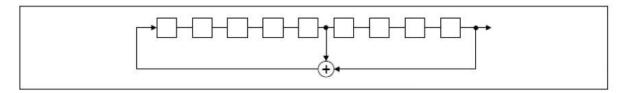
<u>LIMIT</u>

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (a)(1):Frequency hopping systems shall have hopping channel carrier fre-quencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hop-ping channel, whichever is greater. Al-ternatively, frequency hopping systems operating in the 2400–2483.5 MHz band may have hopping channel carrier fre-quencies 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 chan-nel frequencies that are selected at the system hopping rate from a pseudo ran-domly ordered list of hopping fre-quencies. Each frequency must be used equally on the average by each trans-mitter. The system receivers shall have input bandwidths that match the hop-ping channel bandwidths of their cor-responding transmitters and shall shift frequencies in synchronization with the transmitted signals.

TEST RESULTS

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

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



Linear Feedback Shift Register for Generation of the PRBS sequence

An explame of pseudorandom frequency hopping sequence as follows:

0	2	4	6	62	64	78	1	73 75 7
٦				 				
				1		1		
				1				

Each frequency used equally one the average by each transmitter.

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

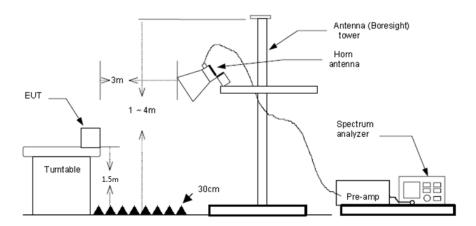
5.9. Restricted band (radiated)

<u>LIMIT</u>

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

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, Radiated Emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the Radiated Emissions limits specified in §15.209(a) (see §15.205(c)).

TEST CONFIGURATION



TEST PROCEDURE

- 1. The EUT was setup and tested according to ANSI C63.10:2013 for compliance to FCC 47CFR 15.247 requirements.
- 2. The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
- 3. The EUT waspositioned such that the distance from antenna to the EUT was 3 meters.
- 4. The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2013 on radiated measurement.
- The receiver set as follow: RBW=1 MHz, VBW=3 MHz Peak detector for Peak value RBW=1 MHz, VBW=10 Hz Peak detector for Average value.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

☑ Passed □ Not Applicable

Note:

- 1) Final level= Read level + Antenna Factor+ Cable Loss- Preamp Factor
- 2) Have pre-scan all modulation mode, found the GFSK modulation which it was worst case, so only the worst case's data on the test report.
- 3) The peak level is lower than average limit(54 dBuV/m), this data is the too weak instrument of signal is unable to test.

Report No.: TRE1712019102

Issued: 2018-01-22

					CH00				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
2310.00	35.34	28.05	6.62	37.65	32.36	74.00	-41.64	Vertical	Peak
2390.03	37.20	27.65	6.75	37.87	33.73	74.00	-40.27	Vertical	Peak
2310.00	34.29	28.05	6.62	37.65	31.31	74.00	-42.69	Horizontal	Peak
2390.03	37.59	27.65	6.75	37.87	34.12	74.00	-39.88	Horizontal	Peak
2310.00	23.09	28.05	6.62	37.65	20.11	54.00	-33.89	Vertical	Average
2390.03	22.90	27.65	6.75	37.87	19.43	54.00	-34.57	Vertical	Average
2310.00	22.38	28.05	6.62	37.65	19.40	54.00	-34.60	Horizontal	Average
2390.03	22.07	27.65	6.75	37.87	18.60	54.00	-35.40	Horizontal	Average

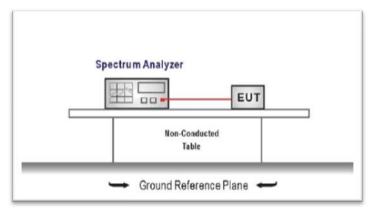
CH78									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
2483.50	46.94	27.26	6.83	37.87	43.16	74.00	-30.84	Vertical	Peak
2500.00	43.74	27.20	6.84	37.87	39.91	74.00	-34.09	Vertical	Peak
2483.50	43.49	27.26	6.83	37.87	39.71	74.00	-34.29	Horizontal	Peak
2500.00	34.98	27.20	6.84	37.87	31.15	74.00	-42.85	Horizontal	Peak
2483.50	33.38	27.26	6.83	37.87	29.60	54.00	-24.40	Vertical	Average
2500.00	22.94	27.20	6.84	37.87	19.11	54.00	-34.89	Vertical	Average
2483.50	31.43	27.26	6.83	37.87	27.65	54.00	-26.35	Horizontal	Average
2500.00	22.86	27.20	6.84	37.87	19.03	54.00	-34.97	Horizontal	Average

5.10. Band edge and Spurious Emissions (conducted)

<u>LIMIT</u>

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (d):In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

TEST CONFIGURATION



TEST PROCEDURE

- 1. The transmitter output was connected to the spectrum analyzer through an attenuator, the path loss was compensated to the results for each measurement.
- 2. Set to the maximum power setting and enable the EUT transmit continuously
- Use the following spectrum analyzer settings: RBW = 100 kHz, VBW ≥ RBW, scan up through 10th harmonic. Sweep = auto, Detector function = peak, Trace = max hold
- 4. Measure and record the results in the test report.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

☑ Passed □ Not Applicable

Test Item:	Band edge	Modulation type:	GFSK
	Spectrum		
	Ref Level 20.00 Att)dBm Offset 7.00 dB	p
		M1[1]	0.71 dBm 2.402180 GHz
	10 dBm	M2[1]	-51.93 ABm 2.400000 GHz
	0 dBm		
		9.390 dBm	
01100	-30 dBm		
CH00	-40 dBm		
No hopping mode		M5	M3 M2
No hopping mode	-60 dBm		
	-70 dBm		
	Start 2.31 GHz Marker	691 pts	Stop 2.405 GHz
	Type Ref Trc M1 1		Function Result
	M2 1 M3 1	2.39 GHz -53.13 dBm	
	M4 1 M5 1		
		Steasuring	
	Spectrum		
	Ref Level 20.00 Att) dBm Offset 7.00 dB ● RBW 100 kHz 30 dB SWT 1.1 ms ● VBW 300 kHz Mode Auto Swee	
	● 1Pk Max	M1[1]	-1.50 dBm
	10 dBm		2.404240 GHz -54.05 dBm
	0 dBm		2.400000 GH2
	-10 dBm		
		L.500 dBm	
CH00	-30 dBm		
	45 450 dBm		M3 M2
Hopping mode	-60 dBm		when we wanted a start of the second of the second of the second of the second
	-70 dBm		
	Start 2.31 GHz	691 pts	Stop 2.405 GHz
	Marker Type Ref Trc	X-value Y-value Function	Function Result
	M1 1 M2 1	2.40424 GHz -1.50 dBm 2.4 GHz -54.05 dBm	
	M3 1 M4 1 M5 1	2.31 GHz -52.23 dBm	
	M51	Neasuring	22.12.2017
	(
	Spectrum Ref Level 20.00		
	Att IPk Max	30 dB SWT 56.9 µs ⊜ VBW 300 kHz Mode Auto FFT	
	10 dBm	M1[1]	-0.81 dBm 2.4798310 GHz
	0 dBm	M2[1]	-53.21 dBm 2.4835000 GHz
	-10 dBm		
		0.810 dBm	
CH78	-30 dßm		
0170	-40 dBm		
No hopping mode	-50 dBm	M2 M4	-
	-60 dBm		
	-70 dBm		
	Start 2.478 GHz	691 pts	Stop 2.5 GHz
	Marker Type Ref Trc	X-value Y-value Function	Function Result
	M1 1 M2 1	2.479831 GHz -0.81 dBm 2.4835 GHz -53.21 dBm	
	M3 1 M4 1		
			28.12.2017

	Att 30 dB	Offset 7.00 dB ● SWT 56.9 µs ●		Mode Auto FFT		
	10 dBm 0 dBm 10 dBm 10 dBm			M1[1] M2[1]		-0.64 dBn 2.4790350 GH -54.10 dBn 2.4835000 GH
CH78	-20 dBm 01 -20.640 -30 dBm -40 dBm	dBm		N		
opping mode	-60 dBm -70 dBm Start 2.478 GHz	mitin m	691 pts		Sum Mar	Stop 2.5 GHz
	Start 2.478 GHZ Marker		691 pts			Stop 2.5 GHz
	Type Ref Trc M1 1	X-value 2.479035 GHz	Y-value -0.64 dBm	Function	Fund	ction Result
	M2 1 M3 1 M4 1	2.4835 GHz 2.5 GHz 2.4930174 GHz	-54.10 dBm -54.51 dBm -51.79 dBm			

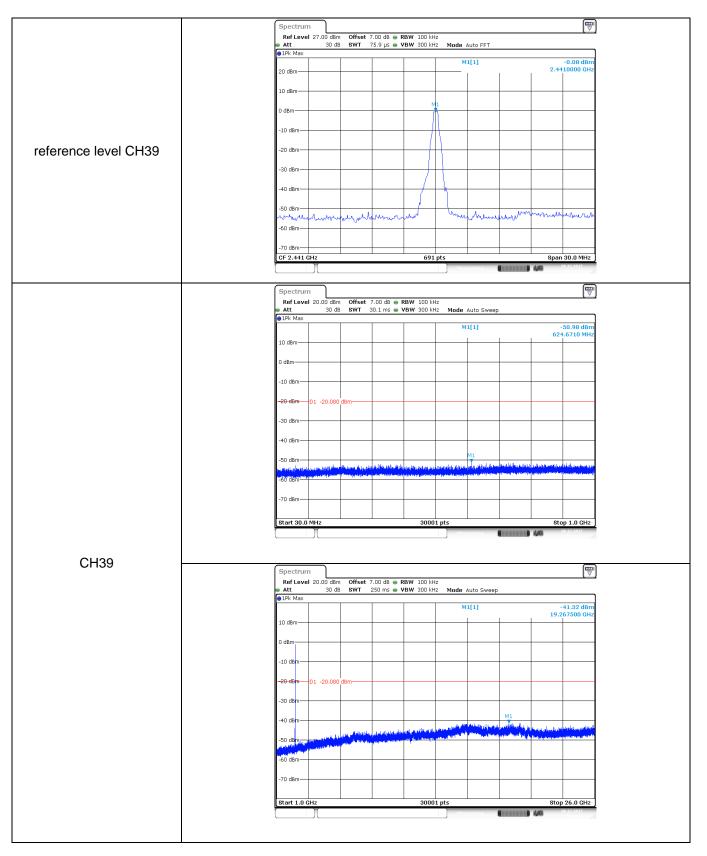
st Item:	Band edge		Modula	ation type:		π/4D	QPSK
		Spectrum	Offcet 7 00 dp 🔿	PBW 100 kH-			⊞ ⊽
		Ref Level 20.00 dBm Att 30 dB 1Pk Max	Offset 7.00 dB SWT 1.1 ms	VBW 300 kHz Mode	Auto Sweep		
				1	41[1]	2.	-0.49 dBm Ю2180 GHz
		10 dBm			12[1]		-50.49 dBm 100000 GHz
		0 dBm					
		-20 dBm D1 -20.490 d	Bm				
01100		-30 dBm					
CH00		-40 dBm					P 4
Nie beweinen weede		450 dBm	warman	Lannumenne	mathe	M3	with h
No hopping mode		-60 dBm					
		-70 dBm					
		Start 2.31 GHz Marker		691 pts		Stop	2.405 GHz
		Type Ref Trc M1 1	X-value 2.40218 GHz	Y-value Fun -0.49 dBm	ction	Function Resul	:]
		M2 1 M3 1	2.4 GHz 2.39 GHz	-50.49 dBm -53.18 dBm			
		M4 1 M5 1	2.31 GHz 2.39963 GHz	-52.97 dBm -50.44 dBm			
				Nie Chief	aswring	4/0	28.12.2017
		Spectrum					₽
		Ref Level 20.00 dBm Att 30 dB	Offset 7.00 dB ● SWT 1.1 ms ●		Auto Sweep		(v.)
		IPk Max	3W1 1.1 IIIS -				0.50.15
		10 dBm			41[1] 42[1]		-3.50 dBm 103010 GHz -52.75 dBm
		0 dBm		'	12[1]	2.4	00000 GHz
		-10 dBm					pro
		-20 dBmD1 -23.500 c	Bm				
CH00		-30 dBm					
01100		-40 dBm				ма М	\$ MD
Hopping mode		450 dBm -60 dBm	and the second sec	washing and the second	and the second second second		ronun
511 5 555		-70 dBm					
				601 ata		Ohan	2.405 GHz
		Start 2.31 GHz Marker		691 pts			
		Type Ref Trc M1 1 M2 1	X-value 2.40301 GHz 2.4 GHz	Y-value Fun -3.50 dBm -52.75 dBm	ction	Function Resul	<u> </u>
		M3 1 M4 1	2.39 GHz 2.31 GHz	-53.53 dBm -52.29 dBm			
		M5 1	2.394812 GHz	-51.51 dBm	-	AMA	28.12.2017
				Me		1944	16:13:16
		Spectrum	04	BBW 100 km			E
			UTTSET 7.00 dB SWT 56.9 μs	RBW 100 kHz VBW 300 kHz Mode	Auto FFT		
		●1Pk Max		r	41[1]		-1.42 dBm
		10 dBm		+ + + - +	12[1]		301810 GHz -53.28 dBm
		0 dBm				2.46	335000 GHz
		-10 dBm					
		-20 dBm-D1 -21.420 c	Bm				
CH78		-30 døm					
		-40 dBm	M2 M4				
hopping mode		-60 dBm	moutin	mmm	manu	Munhaman	imm
		-50 dBm					
		Start 2.478 GHz Marker		691 pts			op 2.5 GHz
		Type Ref Trc M1 1	X-value 2.480181 GHz	-1.42 dBm	ction	Function Resul	t
		M2 1 M3 1	2.4835 GHz 2.5 GHz	-53.28 dBm -54.83 dBm			
		M4 1	2.4848551 GHz	-51.16 dBm	asuring		28.12.2017

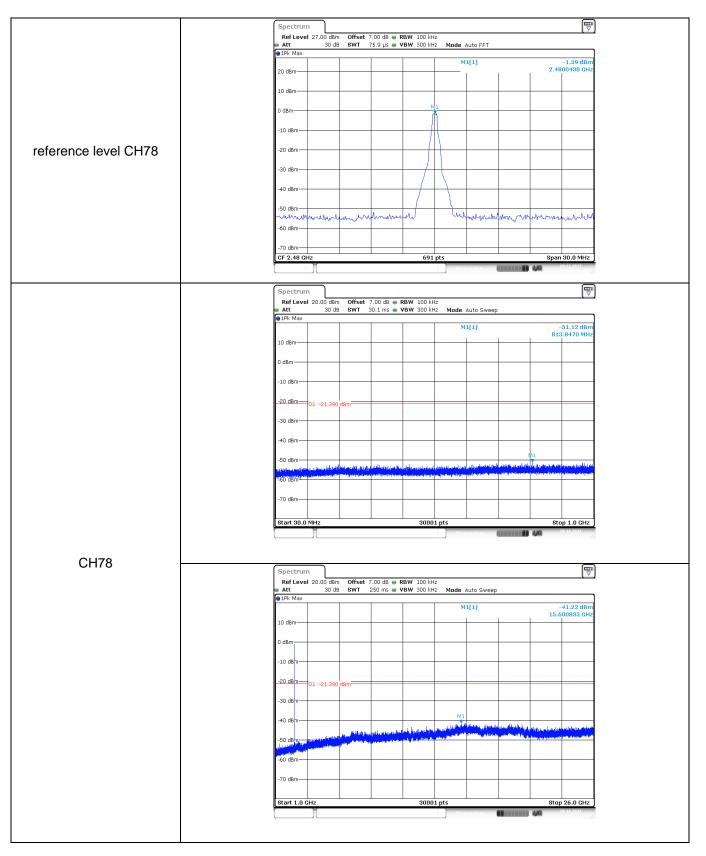
CH78 Hopping mode	19k Max 10 dBm 0 dBm 0 dBm -10 dBm -20 dBm -20 dBm -30 dBm -30 dBm -40 dBm -50 dBm -50 dBm	VBW 300 kHz Mode Auto FFT M1[1] M2[1] M2[1] M4	-3.17 dBm 2.4801170 GHz -54.34 dBm 2.4805000 GHz
	-60 dBm -70	-3.17 dBm -54.34 dBm	Stop 2.5 GHz
	M3 1 2.5 GHz M4 1 2.4868319 GHz	-54.11 dBm -51.29 dBm	28.12.2017

Test Item: Band edge Modulation type: 8DPSK Spectrum Interface 200 dim other 700 dim 80% 100 http:/// 000 dim 100 http:/// 000 http://// 000 http:/// 000 http://// 000 h	
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No hopping mode Image: Character and the second former and the s	
No hopping mode States Answer House Hou	4
CH00 Hopping mode	-t
CH00 Hopping mode	
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Type Ref Tr X-value Y-value Function Function <td>ΗZ</td>	ΗZ
M2 1 2.4 0 dz -5.4 0 dzm M5 1 2.39 0 dz -5.4 0 dzm Spectrum Spectrum Spectrum M111 -9.4 0 dz M8 1 0 db SWT 1.1 ms W W0 300 ktz Made 0 db SWT 1.1 ms W WW -9.4 0 dz -9.4 0 dz 0 dbm 1 0 db SWT 1.1 ms W WW -9.4 0 dz 0 dbm 10 dbm 1 -9.4 0 dz -9.4 0 dz -9.4 0 dz -9.4 0 dz 30 dbm 10 dbm 10 dbm 10 dbm 10 dz -9.4 0 dz -9.4 0 dz -9.4 dz 30 dbm 10 dz 10 dz 10 dz 10 dz -9.4 dz<	
CH00 MS 1 2.3993 GHz -50.10 dbm 0 dbm 0 dbm 0 dbm 0 dbm MI[1] -2.40000 0 dbm 0 dbm MI[1] -2.40000 -300 dbm MI[1] -3.200 10 dbm	
CH00 Spectrum Kerl Level 20.00 dbm Offset 7.00 db = RBW 100 Hz Mode Auto Sweep 0 dbm 0 dbm 11 ms = VBW 300 Hz Mode Auto Sweep -3.83 0 dbm 10 dbm 123.830 dbm 11 ms = VBW 300 Hz Mode Auto Sweep 10 dbm 10 dbm 123.830 dbm 10 dbm 10 dbm 10 dbm -20 dbm 11 -23.830 dbm 10 dbm 10 dbm 10 dbm 10 dbm -30 dbm 123.830 dbm 10 dbm 10 dbm 10 dbm 10 dbm -20 dbm 11 -23.830 dbm 11 -23.830 dbm 10 dbm 10 dbm 10 dbm -30 dbm 12 -29.90 dbm 10 dbm 10 dbm 10 dbm 10 dbm 10 dbm -30 dbm 12 -29.90 dbm 10 dbm 12 -29.90 dbm 10 dbm 10 dbm 10 dbm -30 dbm 12 -29.90 dbm 12 -29.90 dbm 10 dbm 10 dbm 10 dbm -30 dbm 12 -29.90 dbm 12 -29.90 dbm 10 dbm 10 dbm 10 dbm -30 dbm 12 -29.90 dbm 10 dbm <	
CH00 MI[1] 2.490000 0 db 9.00 <	
CH00 Math 1 ms VBW 300 Hit Made Auto Sweep 0 dBm	₩
CH00 M[1] -3.3 -0.dbm	_
CH00 Mg(1) s-2.40000 10 dBm 1	Bm
CH00 Hopping mode M3 M4 M3 M4 M4 M3 M4 M3 M4	Bm
CH00 Hopping mode M3 M4	anasi MAN
CH00 Hopping mode M3	
Hopping mode M3 M4 M3 M4 M3 M4 M3 M4 M3 M4 M3 M4	_
Hopping mode Hopping mode<	
You dam You dam Function Function Result Marker Type Ref Trc X-value Y-value Function Function Result M1 1 2.4041 CH2 -52.09 CHB C	
Btart 2.31 GHz 691 pts Stop 2.405 G Marker Y-value Function Function Result M1 1 2.4041 GHz -3.83 dBm Function Result M1 1 2.4041 GHz -3.83 dBm Function Result M1 1 2.4041 GHz -3.83 dBm Function Result M2 1 2.4041 GHz -52.97 dBm Function Result M3 1 2.30 GHz -52.97 dBm Function Result M4 1 2.31 GHz -53.64 dBm Function Result M5 1 2.33079 GHz -50.62 dBm Function Result Function Result M5 1 2.33079 GHz -50.62 dBm Function Result Function Result Function Result M6 1 2.30079 GHz -50.62 dBm Function Result	
Marker Yurker Function Function Result M1 1 2.40411 GHz -3.83 dBm -3.83 dBm M2 1 2.40411 GHz -5.00 dBm -5.07 dBm M3 1 2.39 GHZ -52.97 dBm -5.07 dBm M4 1 2.33079 GHZ -50.62 dBm -5.05 dBm M5 1 2.33079 GHZ -50.62 dBm -5.05 dBm Spectrum Ref Level 20.00 dBm Offset 7.00 dB RBW 100 kHz Att 30 dB SWT 56.9 µs VBW 300 kHz Mode Auto FFT @1Pk Max -1.20 2.401810 -4.001810 -4.001810 0 dBm 0 dBm M2[1] -53.52 gB 0.24001810	
M1 1 2.40+11.6Hz -3.83 dBm M2 1 2.4.6Hz -52.08 dBm M3 1 2.39 GHz -52.09 dBm M4 1 2.31 GHz -53.64 dBm M5 1 2.30079 GHz -50.62 dBm M4 1 2.33079 GHz -50.62 dBm M5 1 2.30079 GHz -50.62 dBm Spectrum Ref Level 20.00 dBm Offset 7.00 dB • RBW 100 kHz Att 30 dB • WT 50.9 µs • VBW 300 kHz M1[1] 2.4001810 • 10 dBm M2[1] -53.63 GB 0 dBm M2 M2[1] -53.63 SP 0 dBm M2 M2[1] 2.4003000	+z
M3 1 2.39 GHz -52.07 dBm M4 1 2.33 GHz -53.64 dBm M5 1 2.33079 GHz -50.62 dBm Spectrum Ref Level 20.00 dBm Offset 7.00 dB • RBW 100 kHz 400 2712211 Ref Level 20.00 dBm Offset 7.00 dB • RBW 100 kHz 100 dBm -1.20 0 dBm M1[1] 2.4001810 -1.20 0 dBm M1 M1[1] 2.4001810 0 dBm M1 M2[1] -53.63 SE 0 dBm M1 M2[1] 2.4035000	
MS 1 2.33079 GHz -50.62 dBm Spectrum Ref Level 20.00 dBm Offset 7.00 dB RBW 100 kHz Att 30 dB SWT 56.9 µs VBW 300 kHz M1[1] 2.401810 0 dBm M1[1] 2.401810 10 dBm M2[1] -53.52 0 dBm M1 M2[1]	_
Spectrum RefLevel 20.00 dbm Offset 7.00 db RBW 100 kHz Att 30 db SWT 56.9 µs VBW 300 kHz Mode Auto FFT In dbm M1[1] -1.20 2.4801810 2.4801810 0 dbm M1[1] -53.52 0 dbm 2.4835000	
Ref Level 20.00 dBm Offset 7.00 dB RBW 100 kHz Att 30 dB SWT 56.9 µS VBW 300 kHz Mode Auto FFT IPk Max M1[1] -1.20 -1.20 2.4801810 10 dBm M1 M2[1] -53.52 0.4835000 2.4835000	
Att 30 dB SWT 56.9 µs ● VBW 300 kHz Mode Auto FFT ●1Pk Max 10 dBm M1[1] -1.20 0 dBm M2[1] -53.52 0 dBm 7	$\overline{\nabla}$
10 dBm M1[1] -1.20 10 dBm 2.4601810 2.460310 0 dBm M2[1] -53.52 0 dBm 2.483300 2.483300	
0 dBm MI 2.4835000	
	Bm SHz
_201_dBn0121.200_dBm	
	_
40 dam	_
No hopping mode	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
-60 dBm-	—
-70 dBm	
Start 2.478 GHz 691 pts Stop 2.5 G Marker	HZ
Type Ref Trc X-value Y-value Function Function Result M1 1 2.400181 GHz -1.20 dBm	
M2 1 2.4835 GHz -53.52 dBm M3 1 2.5 GHz -54.25 dBm	
M4 1 2.4857478 GHz -51.40 dBm	_

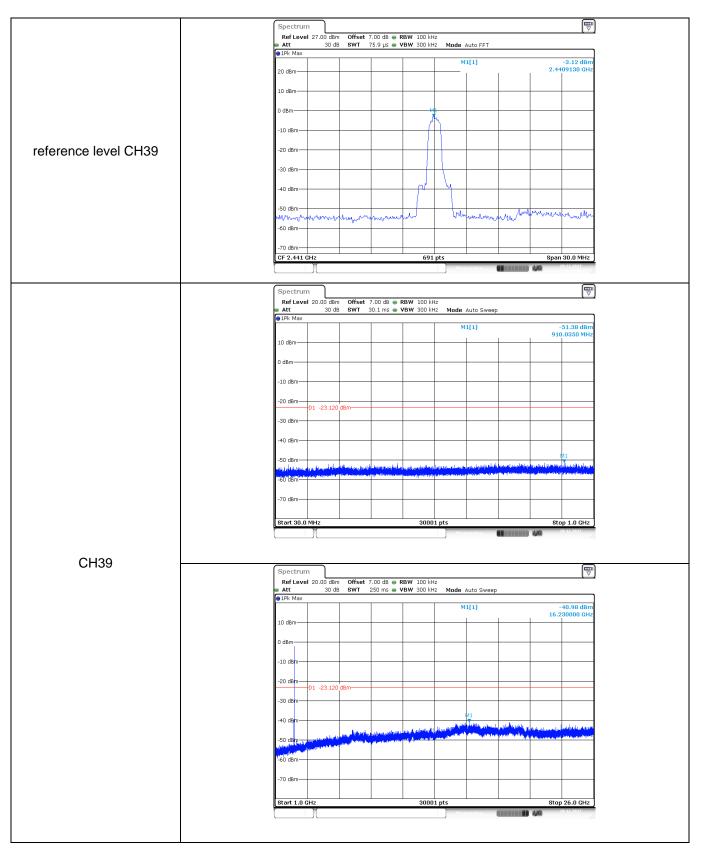
CH78 Hoppig mode	● Att ● 1Pk Max 10 dBm 11 0 dBm	0.00 dBm Offset 30 dB SWT			Mode Auto FF1 M1[1] M2[1]	r	-	0.28 dBm /81750 GHz /54.08 dBm /35000 GHz
-70 dBm	-10 dBm 01 -30 dBm 01 -30 dBm			M4	mandeller			
Type Ref Trc X-value Y-value Function Function Result M1 1 2.478175 GHz 0.28 dBm	-70 dBm	Hz		691 pt	5		Sto	pp 2.5 GHz
	Type Ref T M1 M2	1 2.478 1 2.4 1	8175 GHz #835 GHz 2.5 GHz	0.28 dBm -54.08 dBm -54.32 dBm	Function	Func	ction Result	

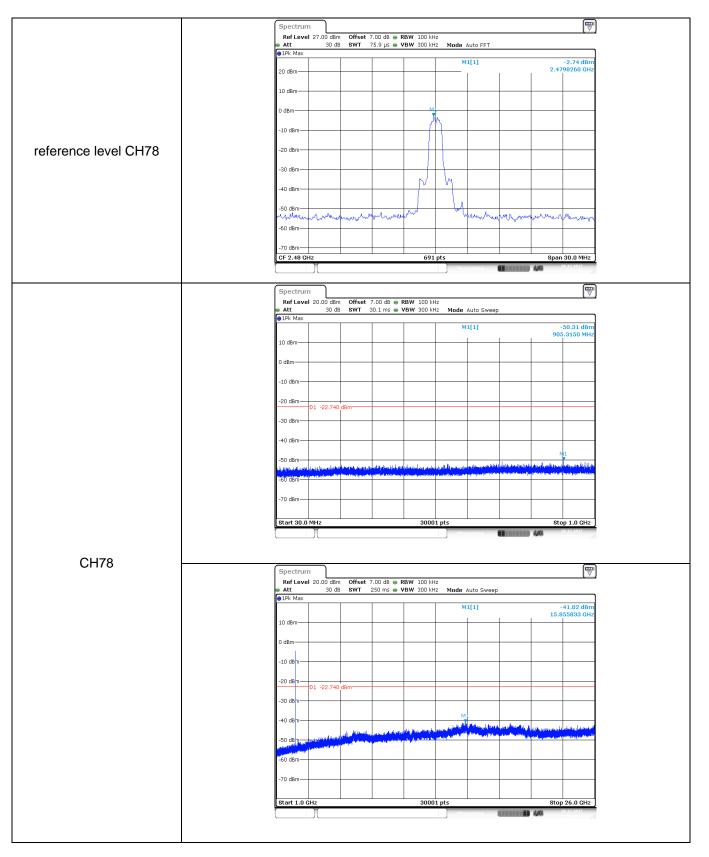
st Item:	SE		Modul	ation ty	ype:		GFS	(
		Spectrum						
		Ref Level 27.00 dB Att 30 c 1Pk Max	m Offset 7.00 dB 👄 iB SWT 75.9 µs 👄	VBW 300 kHz	Mode Auto	FFT		
		20 dBm-			M1[1]		2.4	0.29 dBm 021740 GHz
		10 dBm			1			
		0 dBm		T A				
		-10 dBm		+ //				
rence level CH00		-20 dBm						
		-30 dBm						
		-40 dBm			\rightarrow			
		-50 dBm						
		-60 dBm	m mander and	mina	hurrow	mont	munn	mann
		-70 dBm CF 2.402 GHz		691 p	ots			n 30.0 MHz
					Measurin		1 494	28.12.2017
		Spectrum						
		■ Att 30 c	m Offset 7.00 dB 🖷 iB SWT 30.1 ms 🖷			Sweep		
		●1Pk Max			M1[1]			-50.42 dBm
		10 dBm					88	9.8930 MHz
		0 dBm						
		-10 dBm					_	
		-20 dBm D 1 -19.71	0 dBm					
		-30 dBm						
		-40 dBm					M	
		-50 dBm	والمرابعة والمرابع والمرابع والمرابع	والمتحد المرتم بمرتجع بلوتك	adasti da di decem	ni (leilo i ater obleca)		Maladana di k
		-60 dBm	and the second	and the first of the local sector of the local	a hin a h	inter automatic		
		-70 dBm					-	
		Start 30.0 MHz		30001	pts		St	op 1.0 GHz
					Measurin		144	28.12.2017
01100								
CH00		Spectrum						
		👄 Att 30 d	m Offset 7.00 dB 👄 iB SWT 250 ms 👄	RBW 100 kHz VBW 300 kHz	Mode Auto	Sweep		
		1Pk Max			M1[1]		10.1	-41.00 dBm 395833 GHz
		10 dBm					19.3	
		0 dBm						
		-10 dBm						
		-20 dBm - D1 -19.71	0.dBm					
		-30 dBm						
						M1		
		-40 dBm	المعديد الربطاني المالية المعنى إلى	مريد الاسترقاق المراقع		LIA	la la managemente	and the forelite
		-50 dBm		in the second			a de la fragma de la como	A CONTRACTOR OF A
		-60 dBm					-	
		-70 dBm		+ +				
		Start 1.0 GHz		30001	pts		Sto	p 26.0 GHz



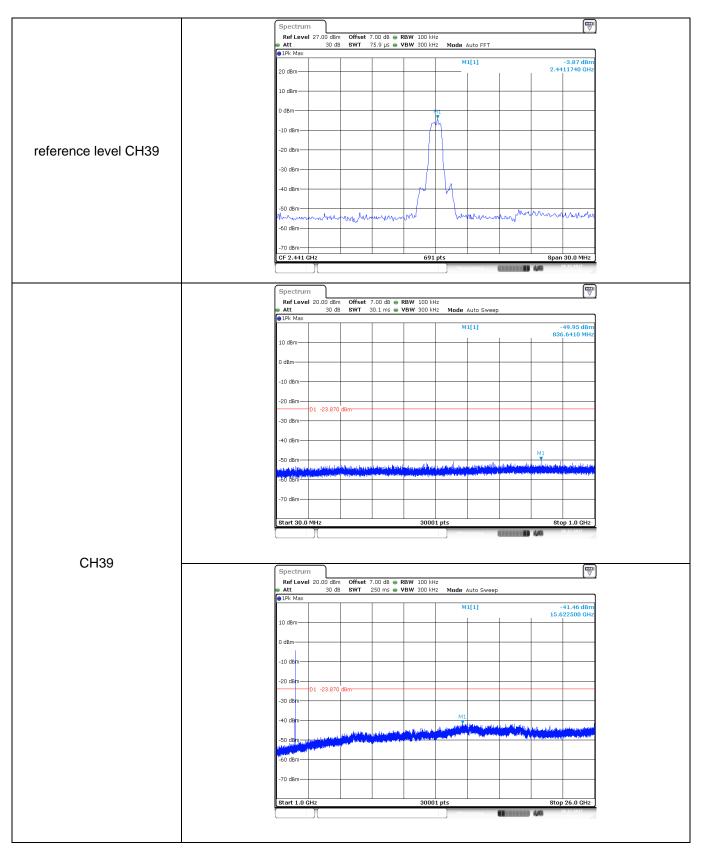


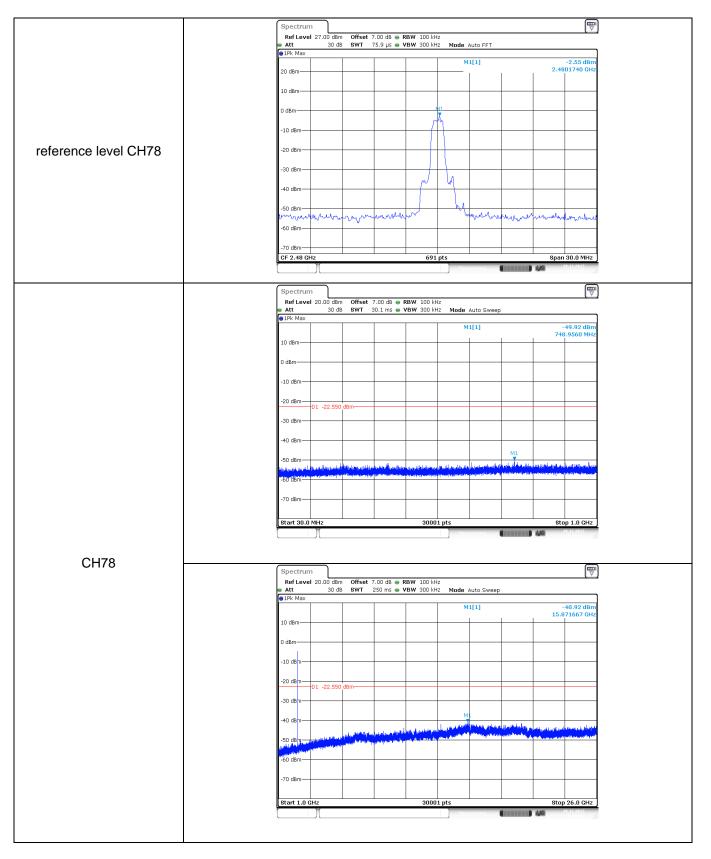
st Item:	SE		Modula	ation (type:		1	т/4D0	QPSK
		Spectrum							
		Ref Level 27.00 dBm Att 30 dB	Offset 7.00 dB ● SWT 75.9 µs ●			Auto FFT			
		● 1Pk Max			м	1[1]		2.40	-0.95 dBm 118260 GHz
		20 dBm						2.40	
		10 dBm		M					
		0 dBm		Ĵ	h,				
		-10 dBm							
reference level CH00		-20 dBm							
		-30 dBm		+	\square				
		-40 dBm		+	H				
		-50 dBm		m		www.		k	
		-60 dBm	www.halar	~~~			www.ww	mander.	rown-out, or .
		-70 dBm							
		CF 2.402 GHz		691	pts Mea	suring		Span M	30.0 MHz
		Con a abur							
		Spectrum Ref Level 20.00 dBm	Offset 7.00 dB	RBW 100 kH	lz				
		Att 30 dB IPk Max	SWT 30.1 ms 🖷	VBW 300 kH					-50.95 dBm
		10 dBm			M	1[1]		809	9.9350 MHz
		0 dBm							
		-10 dBm							
		20.dBm	IBm						
		-30 dBm							
		-40 dBm							
		-50 dBm	haline of filles deals, and the best statistics of	he have he will be a fight	and the second second	والمقاط المقاطع الم	وا مەلل <mark>ارلىل</mark> ەلمامەس	ut Maghagisadala	alan mada ar
		-60 dBm	ally of plane periods and a second strategy and of	httyperioden and her and		and and the second s		links and shorts	an a
		-70 dBm							
		Start 30.0 MHz		3000	1 pts			Sto	p 1.0 GHz
					Mea	suring		4,49	28.12.2017
CH00									
01100		Spectrum Ref Level 20.00 dBm	Offcot 7 00 dB	PRW 100 ku	17				
		Att 30 dB IPk Max	SWT 250 ms	VBW 300 kH	iz Mode /	Auto Sweep			
					м	1[1]		16.8	40.72 dBm 34167 GHz
		10 dBm		1					
		0 dBm							
		-10 dBm							
		20.dBm	IBm						
		-30 dBm							
		-40 dBm			فلليس ان	M1	ر. بىلىر ياشارى	lan er er	المراجع
		-50 dBm	والمالك المرجم بالإخراق في المالك المرجم المرجم المرجم	a da ang kanalasi da da sa	al an		THE PARTY OF	د به به به به به به به المراجع (ماریخته) هم المراجع به	n han na shi ya ku ya ƙafa ta ƙafa
		-60 dBm							
		-70 dBm							
		Start 1.0 GHz		3000					26.0 GHz





est Item:	SE		Mod	lulation	type:		8	BDPS	ĸ
		Spectrum							
		Ref Level 27.00 df Att 30 PPK Max	8m Offset 7.00 dB SWT 75.9	dB e RBW 100 μs e VBW 300	kHz kHz Mode	Auto FFT			
						M1[1]		2 40	-3.21 dBm 021740 GHz
		20 dBm						2.10	
		10 dBm							
		0 dBm			M.				
		-10 dBm			fft—				
erence level CH00		-20 dBm			\square				
		-30 dBm							
		-40 dBm		M	4				
		-50 dBm							
		-60 dBm	monor	randena	he	nururum	www	muun	urunu
		-70 dBm CF 2.402 GHz		6	91 pts				n 30.0 MHz
					Me	easuring		4)41	28.12.2017 16:02:19
		Spectrum							
			Bm Offset 7.00 dB SWT 30.1			Auto Sweep			
		●1Pk Max			1	M1[1]			-51.29 dBm
		10 dBm						804	4.9230 MHz
		0 dBm							
		-10 dBm							
		-20 dBm							
		-30 dBm	40 dBm						
		-40 dBm					м	1	
		-50 dBm	and the property of a first state	and the second second	h., is and pull	edi. Healisadid	adaqutaquta	n Antonelly Association production production	alean la korrentiz
		-60 dBm	allow and an and all a located by a second	and a second standard in	Performance of the second	and the second			
		-70 dBm							
		Start 30.0 MHz		30	001 pts			Sto	op 1.0 GHz
					Me	easuring		4,49	28.12.2017
CH00									
CH00		Spectrum							
		Ref Level 20.00 d8 Att 30	8m Offset 7.00 dB SWT 250	dB 👄 RBW 100 ms 👄 VBW 300	KHZ KHZ Mode	Auto Sweep			
		● 1Pk Max				M1[1]		10.5	-39.88 dBm 367500 GHz
		10 dBm						19.3	557300 GH2
		0 dBm							
		-10 dem							
		-20 dBm							
		-30 dBm	40 dBm						
							M1		
		-40 dBm		and a strategy and	المحافظ والمحافظ				hit on a shake of
		-50 dBm		and the second					And a second
		-60 dBm	+ +		_				
		-70 dBm							
		Start 1.0 GHz		30	001 pts	1		Stor	p 26.0 GHz
	1	<u> </u>		50		asuring			28.12.2017





5.11. Spurious Emissions (radiated)

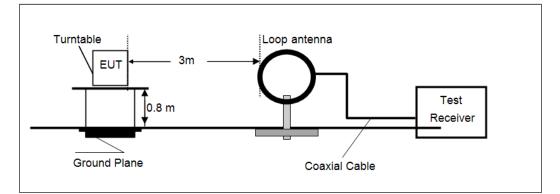
<u>LIMIT</u>

FCC CFR Title 47 Part 15 Subpart C Section 15.209

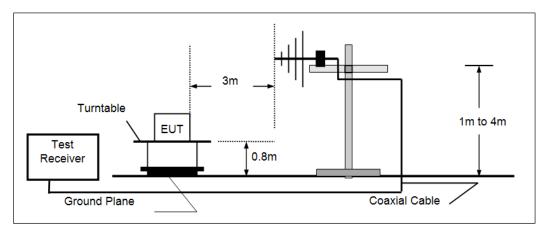
Frequency	Limit (dBuV/m @3m)	Value
30 MHz ~ 88 MHz	40.00	Quasi-peak
88 MHz ~ 216 MHz	43.50	Quasi-peak
216 MHz ~ 960 MHz	46.00	Quasi-peak
960 MHz ~ 1 GHz	54.00	Quasi-peak
Above 1 GHz	54.00	Average
	74.00	Peak

TEST CONFIGURATION

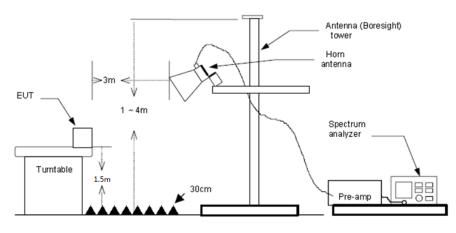
Below 30 MHz



> 30 MHz ~1000 MHz



> Above 1 GHz



TEST PROCEDURE

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

RBW=120 kHz, VBW=300 kHz, Sweep=auto, Detector function=peak, Trace=max hold; If the emission level of the EUT measured by the peak detectoris 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

 (3) From 1 GHz to 10th harmonic: RBW=1 MHz, VBW=3 MHz Peak detector for Peak value RBW=1 MHz, VBW=10 Hz Peak detector for Average value.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

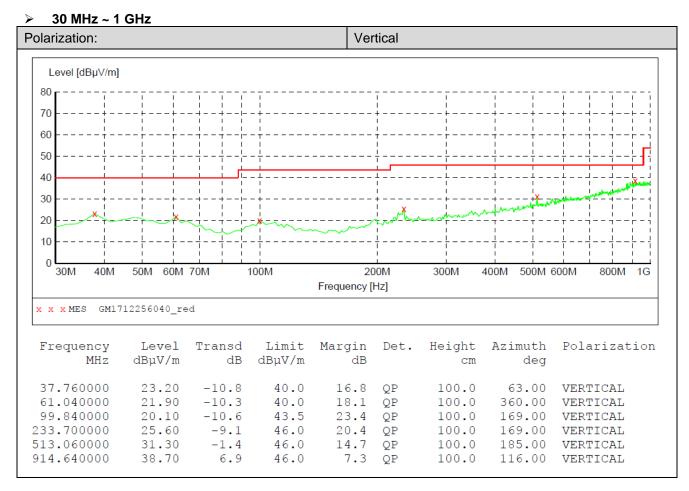
☑ Passed □ Not Applicable

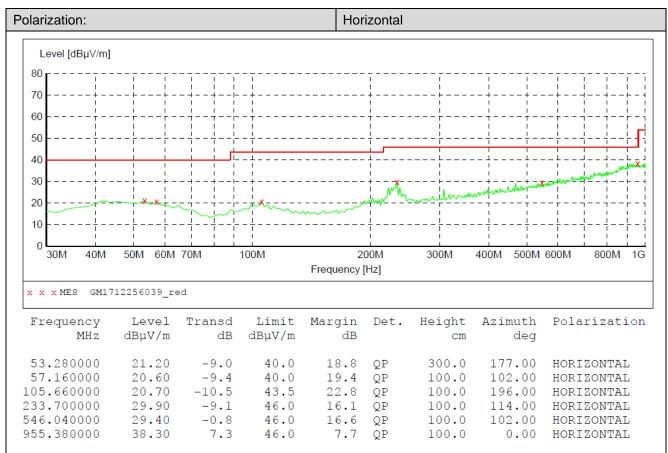
Note:

- 1) Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor
- 2) The emission levels of other frequencies are very lower than the limit and not show in test report.
- 3) Below 1 GHz, Have pre-scan all modulation mode, found the GFSK modulation High channel which it was worst case, so only the worst case's data on the test report.
- 4) Above 1 GHz, Have pre-scan all modulation mode, found the GFSK modulation which it was worst case, so only the worst case's data on the test report
- 5) The peak level is lower than average limit(54 dBuV/m), this data is the too weak instrument of signal is unable to test.

➢ 9 kHz ~ 30 MHz

The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.





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> 1 GHz ~ 25 GHz

	CH00												
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value				
1495.10	48.06	25.80	5.27	36.58	42.55	74.00	-31.45	Vertical	Peak				
2097.51	50.32	26.69	6.35	37.32	46.04	74.00	-27.96	Vertical	Peak				
3192.37	41.27	28.80	7.71	38.20	39.58	74.00	-34.42	Vertical	Peak				
7209.02	35.57	36.21	11.87	35.07	48.58	74.00	-25.42	Vertical	Peak				
1439.09	39.24	25.86	5.11	36.51	33.70	74.00	-40.30	Horizontal	Peak				
2972.75	37.88	28.57	7.47	38.25	35.67	74.00	-38.33	Horizontal	Peak				
4809.50	36.33	31.58	9.55	36.93	40.53	74.00	-33.47	Horizontal	Peak				
5112.49	33.88	31.85	9.76	36.29	39.20	74.00	-34.80	Horizontal	Peak				

CH39										
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value	
1464.96	37.99	25.83	5.19	36.54	32.47	74.00	-41.53	Vertical	Peak	
3428.21	38.16	28.43	8.00	38.51	36.08	74.00	-37.92	Vertical	Peak	
4629.32	33.30	30.99	9.47	37.19	36.57	74.00	-37.43	Vertical	Peak	
6251.26	31.95	33.00	11.00	35.30	40.65	74.00	-33.35	Vertical	Peak	
1724.17	46.13	25.25	5.81	36.98	40.21	74.00	-33.79	Horizontal	Peak	
3844.28	35.39	29.64	8.56	38.20	35.39	74.00	-38.61	Horizontal	Peak	
4883.52	38.05	31.43	9.59	36.73	42.34	74.00	-31.66	Horizontal	Peak	
7319.96	32.63	36.30	11.99	34.92	46.00	74.00	-28.00	Horizontal	Peak	

CH78										
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value	
1786.72	44.66	25.37	5.93	37.11	38.85	74.00	-35.15	Vertical	Peak	
3266.35	44.09	28.40	7.80	38.32	41.97	74.00	-32.03	Vertical	Peak	
4958.68	39.68	31.46	9.64	36.52	44.26	74.00	-29.74	Vertical	Peak	
7451.57	35.58	36.20	12.24	34.86	49.16	74.00	-24.84	Vertical	Peak	
1046.89	47.76	25.34	4.32	36.65	40.77	74.00	-33.23	Horizontal	Peak	
1724.17	50.31	25.25	5.81	36.98	44.39	74.00	-29.61	Horizontal	Peak	
4958.68	35.79	31.46	9.64	36.52	40.37	74.00	-33.63	Horizontal	Peak	
8549.59	33.55	37.10	12.88	34.45	49.08	74.00	-24.92	Horizontal	Peak	

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor

2. The peak level is lower than average limit(54 dBuV/m), this data is the too weak instrument of signal is unable to test.

3. The emission levels of other frequencies are very lower than the limit and not show in test report.

6. TEST SETUP PHOTOS

Conducted Emissions (AC Mains)



Radiated Emissions





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7. EXTERANAL AND INTERNAL PHOTOS

Reference to the test report No.: TRE1712019101.

-----End of Report------