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TEST REPORT

FCC PART 15 SUBPART C 15.247 & RSS 247

Report Reference No. : CTL1708188063-WF12

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Product Name : Vehicle Communicator

Model/Type reference : UV350

List Model(s)..... : N/A

Trade Mark..... : Uniden

FCC ID..... : 2AOCX-UV350

IC..... : 23378-UV350

Applicant's name : Siyata Mobile Inc.

Address of applicant..... : 1001 Lenoir St Suite A, Montreal, Quebec H4C 2Z6 Canada

Test Firm..... : Shenzhen CTL Testing Technology Co., Ltd.

Address of Test Firm : Floor 1-A, Baisha Technology Park, No.3011, Shahe Xi Road,
Nanshan District, Shenzhen, China 518055

Test specification :

Standard : 47 CFR FCC Part 15 Subpart C 15.247 &
RSS 247 Issue 2, February 2017

TRF Originator : Shenzhen CTL Testing Technology Co., Ltd.

Master TRF..... : Dated 2011-01

Date of Receipt..... : Sep. 27, 2017

Date of Test Date..... : Sep. 28, 2017 –Nov. 24, 2017

Data of Issue..... : Nov. 25, 2017

Result..... : Pass

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TEST REPORT

Test Report No. :	CTL1708188063-WF12	Nov. 25, 2017
		Date of issue

Equipment under Test : Vehicle Communicator

Model /Type : UV350

Listed Models : N/A

Applicant : **Siyata Mobile Inc.**

Address : 1001 Lenoir St Suite A, Montreal, Quebec H4C 2Z6 Canada

Manufacturer : **Siyata Mobile Inc.**

Address : 1001 Lenoir St Suite A, Montreal, Quebec H4C 2Z6 Canada

Test result	Pass *
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* In the configuration tested, the EUT complied with the standards specified page 5.

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

**** Modified History ****

Revisions	Description	Issued Data	Report No.	Remark
Version 1.0	Initial Test Report Release	2017-11-25	CTL1708188063-WF12	Tracy Qi



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1. SUMMARY

1.1. TEST STANDARDS

The tests were performed according to following standards:

FCC Rules Part 15.247: 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

RSS-247-Issue 2: Digital Transmission Systems (DTSS), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices.

RSS-Gen Issue 4: — General Requirements for Compliance of Radio Apparatus

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

ANSI C63.4: 2014: –American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40GHz

1.2. Test Description

FCC PART 15.247 & RSS 247		
FCC Part 15.207 RSS-Gen 8.8	AC Power Conducted Emission	N/A
FCC Part 15.247(a)(1)(i) RSS 247 5.1 (a) RSS-Gen 4.6	20dB Bandwidth& 99% Bandwidth	PASS
FCC Part 15.247(d) RSS 247 5.5	Spurious RF Conducted Emission	PASS
FCC Part 15.247(b) RSS 247 5.4 (b)	Maximum Peak Output Power	PASS
FCC Part 15.247(b) RSS 247 5.1 (a)	Pseudorandom Frequency Hopping Sequence	PASS
FCC Part 15.247(a)(1)(iii) RSS 247 5.1 (d)	Number of hopping frequency& Time of Occupancy	PASS
FCC Part 15.247(a)(1) RSS 247 5.1 (b)	Frequency Separation	PASS
FCC Part 15.205/15.209 RSS-Gen 8.9	Radiated Emissions	PASS
FCC Part 15.247(d) RSS-Gen 8.10	Band Edge Compliance of RF Emission	PASS

1.3. Test Facility

1.3.1 Address of the test laboratory

Shenzhen CTL Testing Technology Co., Ltd.

Floor 1-A, Baisha Technology Park, No. 3011, Shahexi Road, Nanshan, Shenzhen 518055 China

There is one 3m semi-anechoic chamber and two line conducted labs for final test. The Test Sites meet the requirements in documents ANSI C63.4 and CISPR 32/EN 55032 requirements.

1.3.2 Laboratory accreditation

The test facility is recognized, certified, or accredited by the following organizations:

IC Registration No.: 9618B

The 3m alternate test site of Shenzhen CTL Testing Technology Co., Ltd. EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration No.: 9618B on November 13, 2013.

FCC-Registration No.: 970318

Shenzhen CTL Testing Technology 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. Registration 970318, December 19, 2013.

1.4. 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 within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 "Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements" and is documented in the Shenzhen CTL Testing Technology Co., Ltd. quality system acc. to DIN EN 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.

Hereafter the best measurement capability for CTL laboratory is reported:

Test	Measurement Uncertainty	Notes
Transmitter power conducted	±0.57 dB	(1)
Transmitter power Radiated	±2.20 dB	(1)
Conducted spurious emission 9KHz-40 GHz	±2.20 dB	(1)
Occupied Bandwidth	±0.01ppm	(1)
Radiated Emission 30~1000MHz	±4.10dB	(1)
Radiated Emission Above 1GHz	±4.32dB	(1)
Conducted Disturbance0.15~30MHz	±3.20dB	(1)

- (1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

2. GENERAL INFORMATION

2.1. Environmental conditions

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

Normal Temperature:	25°C
Relative Humidity:	55 %
Air Pressure:	101 kPa

2.2. General Description of EUT

Product Name:	Vehicle Communicator
Model/Type reference:	UV350
Power supply:	DC 12V form battery
Bluetooth :	
Version:	Supported BT3.0
Modulation:	GFSK, $\pi/4$ DQPSK, 8DPSK
Operation frequency:	2402MHz~2480MHz
Channel number:	79
Channel separation:	1MHz
Antenna type:	FPC Antenna
Antenna gain:	1.65dBi

Note: For more details, please refer to the user's manual of the EUT.

2.3. Description of Test Modes and Test Frequency

The Applicant provides communication tools software to control the EUT for staying in continuous transmitting (Duty Cycle more than 98%) and receiving mode for testing .There are 79 channels provided to the EUT and Channel 00/39/78 were selected to test.

Operation Frequency :

Channel	Frequency (MHz)
00	2402
01	2403
:	:
38	2440
39	2441
40	2442
:	:
77	2479
78	2480

Preliminary tests were performed in each mode and packet length of BT, and found worst case as bellow, finally test were conducted at those mode and recorded in this report.

Test Items	Worst case
Conducted Emissions	DH5 Middle channel
Radiated Emissions and Band Edge	DH5
Maximum Conducted Output Power	DH5/2DH5/3DH5
20dB Bandwidth	DH5/2DH5/3DH5
Frequency Separation	DH5/2DH5/3DH5 Middle channel
Number of hopping frequency	DH5/2DH5/3DH5
Time of Occupancy (Dwell Time)	DH1/DH3/DH5 Middle channel 2DH1/2DH3/2DH5 Middle channel 3DH1/3DH3/3DH5 Middle channel
Out-of-band Emissions	DH5/2DH5/3DH5

2.4. Equipments Used during the Test

Test Equipment	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Due Date
LISN	R&S	ENV216	3560.6550.12	2017/06/02	2018/06/01
LISN	R&S	ESH2-Z5	860014/010	2017/06/02	2018/06/01
Bilog Antenna	Sunol Sciences Corp.	JB1	A061713	2017/06/02	2018/06/01
EMI Test Receiver	R&S	ESCI	103710	2017/06/02	2018/06/01
Spectrum Analyzer	Agilent	E4407B	MY41440676	2017/05/21	2018/05/20
Spectrum Analyzer	Agilent	N9020	US46220290	2017/01/16	2018/01/15
Controller	EM Electronics	Controller EM 1000	N/A	2017/05/21	2018/05/20
Horn Antenna	Sunol Sciences Corp.	DRH-118	A062013	2017/05/19	2018/05/18
Active Loop Antenna	SCHWARZBECK	FMZB1519	1519-037	2017/05/19	2018/05/18
Amplifier	Agilent	8349B	3008A02306	2017/05/19	2018/05/18
Amplifier	Agilent	8447D	2944A10176	2017/05/19	2018/05/18
Temperature/Humidity Meter	Gangxing	CTH-608	02	2017/05/20	2018/05/19
High-Pass Filter	K&L	9SH10-2700/X 12750-O/O	N/A	2017/05/20	2018/05/19
High-Pass Filter	K&L	41H10-1375/U 12750-O/O	N/A	2017/05/20	2018/05/19
Coaxial Cables	HUBER+SUHNER	SUCOFLEX 104PEA-10M	10m	2017/06/02	2018/06/01
Coaxial Cables	HUBER+SUHNER	SUCOFLEX 104PEA-3M	3m	2017/06/02	2018/06/01
Coaxial Cables	HUBER+SUHNER	SUCOFLEX 104PEA-3M	3m	2017/06/02	2018/06/01
RF Cable	Megalon	RF-A303	N/A	2017/06/02	2018/06/01

The calibration interval was one year

2.5. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended to comply with Section 15.247 of the FCC Part 15, Subpart C Rules, RSS Gen and RSS 247 Rules.

2.6. Modifications

No modifications were implemented to meet testing criteria.



3. TEST CONDITIONS AND RESULTS

3.1. Conducted Emissions Test

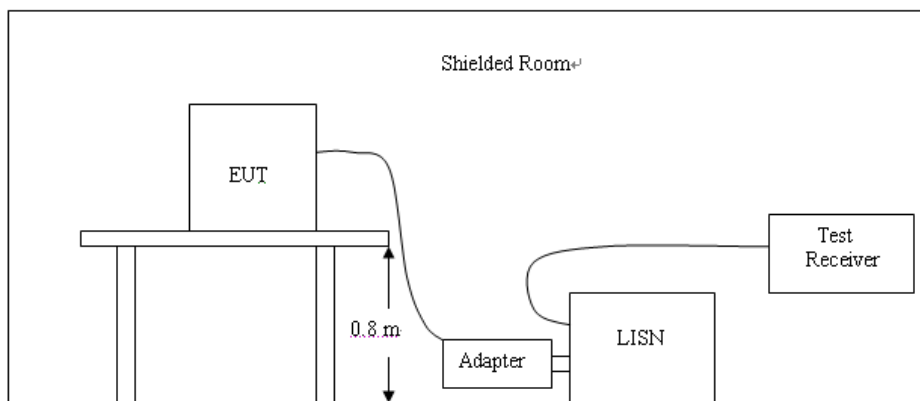
LIMIT

According to FCC CFR Title 47 Part 15 Subpart C Section 15.207 and RSS Gen 8.8, AC Power Line Conducted Emissions Limits for Licence-Exempt Radio Apparatus as below:

Frequency range (MHz)	Limit (dBuV)	
	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 equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system; a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10:2013.
2. Support equipment, if needed, was placed as per ANSI C63.10:2013.
3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10:2013.
4. The adapter received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
5. All support equipments received AC power from a second LISN, if any.
6. The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7. Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.
8. During the above scans, the emissions were maximized by cable manipulation.

TEST RESULTS

Not applicable to this device, which is powered by battery.

3.2. Radiated Emissions and Band Edge

Limit

For intentional device, according to § 15.209(a), the general requirement of field strength of radiated emission out of authorized band shall not exceed the following table at a 3 meters measurement distance.

In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a)

Except when the requirements applicable to a given device state otherwise, emissions from licence-exempt transmitters shall comply with the field strength limits shown in table below. Additionally, the level of any transmitter emission shall not exceed the level of the transmitter's fundamental emission

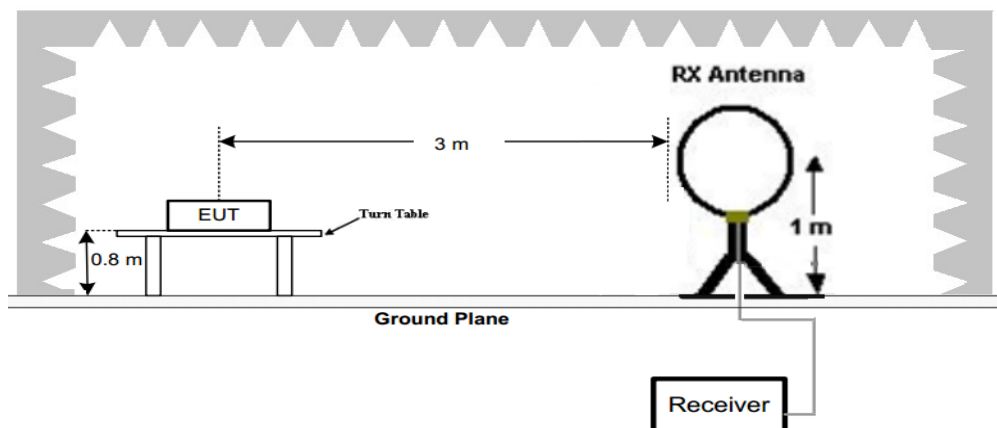
Unwanted emissions that fall into restricted bands shall comply with the limits specified in RSS-Gen; and Unwanted emissions that do not fall within the restricted frequency bands shall comply either with the limits specified in the applicable RSS or with those specified in this RSS-Gen.

Radiated emission limits

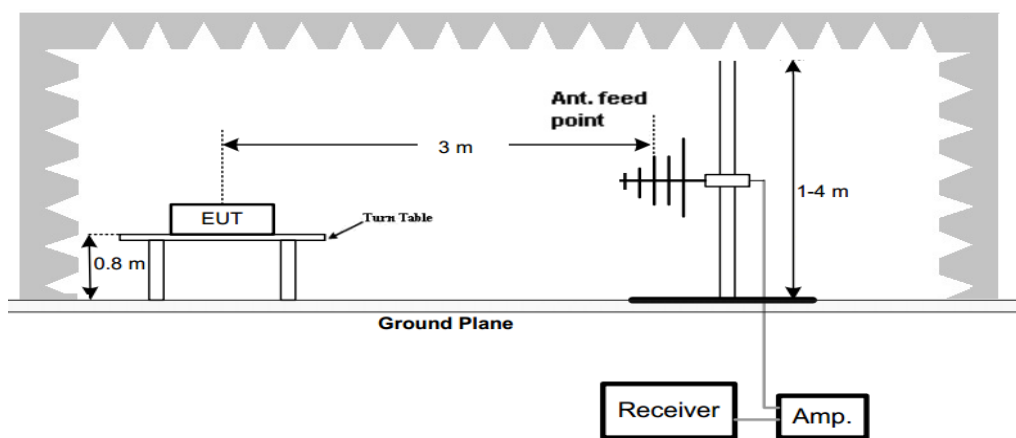
Frequency (MHz)	Distance (Meters)	Radiated (dBμV/m)	Radiated (μV/m)
0.009-0.49	3	$20\log(2400/F(\text{KHz}))+40\log(300/3)$	$2400/F(\text{KHz})$
0.49-1.705	3	$20\log(24000/F(\text{KHz}))+40\log(30/3)$	$24000/F(\text{KHz})$
1.705-30	3	$20\log(30)+40\log(30/3)$	30
30-88	3	40.0	100
88-216	3	43.5	150
216-960	3	46.0	200
Above 960	3	54.0	500

TEST CONFIGURATION

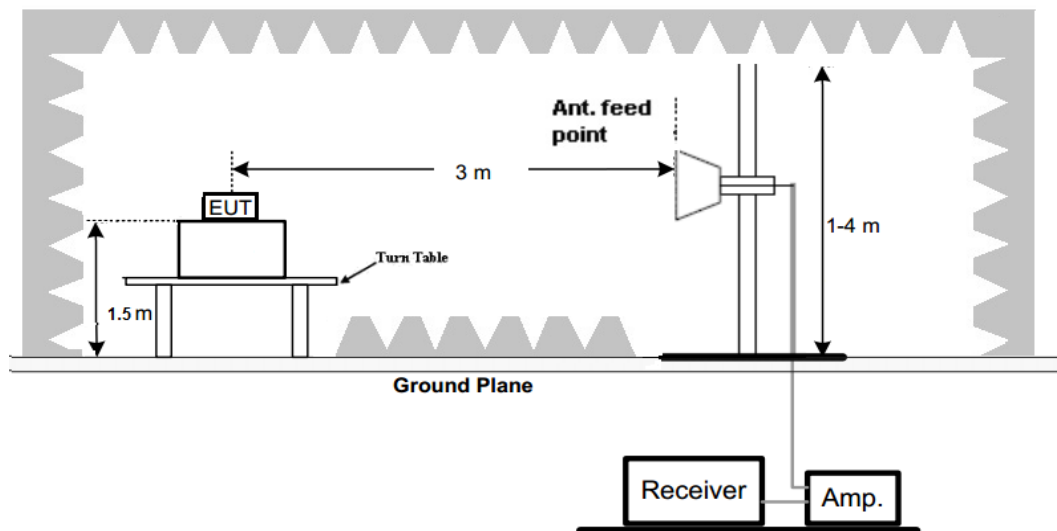
(A) Radiated Emission Test Set-Up, Frequency Below 30MHz



(B) Radiated Emission Test Set-Up, Frequency below 1000MHz



(C) Radiated Emission Test Set-Up, Frequency above 1000MHz

**Test Procedure**

1. Below 1GHz measurement the EUT is placed on a turntable which is 0.8m above ground plane, and above 1GHz measurement EUT was placed on a low permittivity and low loss tangent turn table which is 1.5m above ground plane.
2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
4. The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.
5. Maximum procedure was performed by raising the receiving antenna from 1m to 4m and rotating the turn table from 0° to 360° to acquire the highest emissions from EUT
6. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
7. Repeat above procedures until all frequency measurements have been completed.

TEST RESULTS**Remark:**

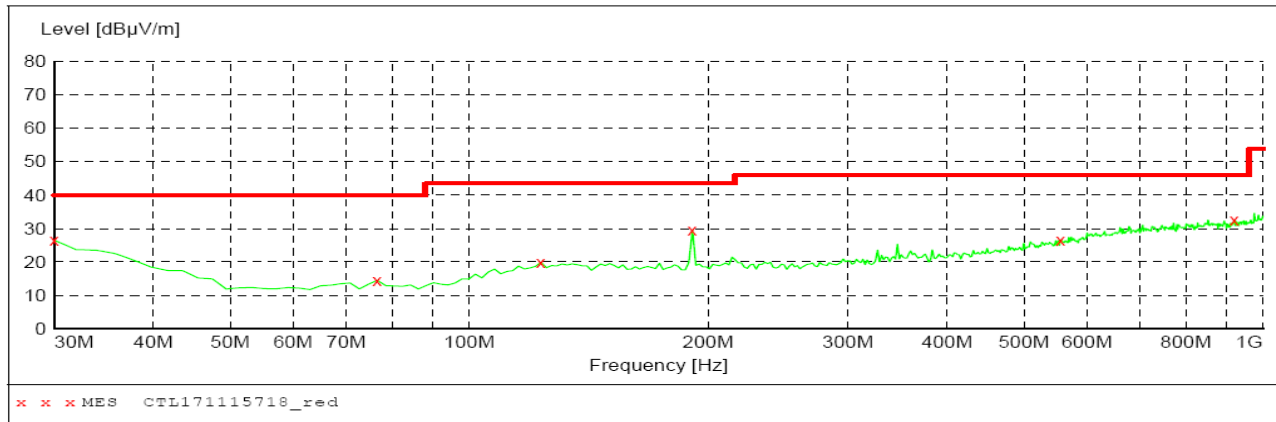
1. We measured Radiated Emission at GFSK, $\pi/4$ DQPSK and 8DPSK mode from 9 KHz to 25GHz and recorded worst case at GFSK DH5 mode.
2. For below 1GHz testing recorded worst at GFSK DH5 low channel.
3. Radiated emission test from 9 KHz to 10th harmonic of fundamental was verified, and no emission found except system noise floor in 9 KHz to 30MHz and not recorded in this report.

For 30MHz-1GHz

Horizontal

SWEEP TABLE: "test (30M-1G)"

Short Description:		Field Strength			
Start	Stop	Detector	Meas. Time	IF Bandw.	Transducer
Frequency 30.0 MHz	Frequency 1.0 GHz	MaxPeak	300.0 ms	120 kHz	JB1

**MEASUREMENT RESULT: "CTL171115718_red"**

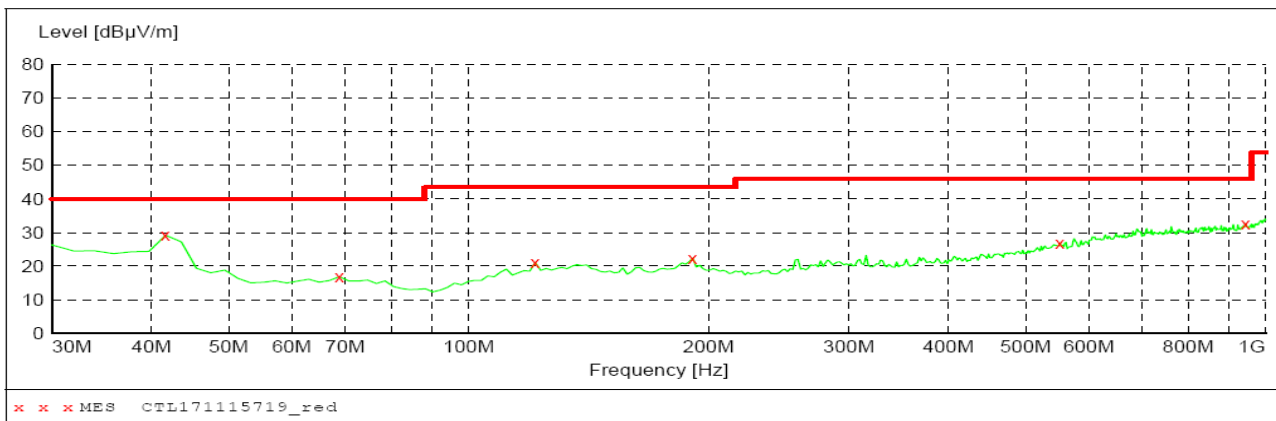
11/15/2017 3:04PM

Frequency MHz	Level dBuV/m	Transd dB	Limit dBuV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
30.000000	26.50	22.1	40.0	13.5	---	0.0	0.00	HORIZONTAL
76.560000	14.50	9.0	40.0	25.5	---	0.0	0.00	HORIZONTAL
123.120000	19.90	15.2	43.5	23.6	---	0.0	0.00	HORIZONTAL
191.020000	29.60	14.6	43.5	13.9	---	0.0	0.00	HORIZONTAL
555.740000	26.60	22.0	46.0	19.4	---	0.0	0.00	HORIZONTAL
920.460000	32.60	26.7	46.0	13.4	---	0.0	0.00	HORIZONTAL

Vertical

SWEEP TABLE: "test (30M-1G)"

Short Description:		Field Strength			
Start	Stop	Detector	Meas. Time	IF Bandw.	Transducer
Frequency 30.0 MHz	Frequency 1.0 GHz	MaxPeak	300.0 ms	120 kHz	JB1

**MEASUREMENT RESULT: "CTL171115719_red"**

11/15/2017 3:06PM

Frequency MHz	Level dBuV/m	Transd dB	Limit dBuV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
41.640000	29.20	13.8	40.0	10.8	---	0.0	0.00	VERTICAL
68.800000	16.80	8.9	40.0	23.2	---	0.0	0.00	VERTICAL
121.180000	21.10	15.2	43.5	22.4	---	0.0	0.00	VERTICAL
191.020000	22.40	14.6	43.5	21.1	---	0.0	0.00	VERTICAL
551.860000	26.90	21.9	46.0	19.1	---	0.0	0.00	VERTICAL
943.740000	32.70	27.1	46.0	13.3	---	0.0	0.00	VERTICAL

For 1GHz to 25GHz

Note: GFSK, Pi/4 DQPSK and 8DPSK all have been tested, only worse case GFSK is reported.

GFSK (above 1GHz)

Frequency(MHz):			2402		Polarity:			HORIZONTAL	
Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
4804.00	47.25	PK	74	26.75	42.74	33.49	6.91	35.89	4.51
4804.00	--	AV	54	--	--	--	--	--	--
5155.75	43.25	PK	74	30.75	35.97	34.45	7.12	34.29	7.28
5155.75	--	AV	54	--	--	--	--	--	--
7206.00	44.26	PK	74	29.74	33.15	36.95	9.18	35.03	11.11
7206.00	--	AV	54	--	--	--	--	--	--

Frequency(MHz):			2402		Polarity:			VERTICAL	
Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
4804.00	48.25	PK	74	25.75	43.74	33.49	6.91	35.89	4.51
4804.00	--	AV	54	--	--	--	--	--	--
5155.75	44.11	PK	74	29.89	36.83	34.45	7.12	34.29	7.28
5155.75	--	AV	54	--	--	--	--	--	--
7206.00	45.39	PK	74	28.61	34.28	36.95	9.18	35.03	11.11
7206.00	--	AV	54	--	--	--	--	--	--

Frequency(MHz):			2441		Polarity:			HORIZONTAL	
Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
4882.00	46.25	PK	74	27.75	41.60	33.60	6.95	35.90	4.65
4882.00	--	AV	54	--	--	--	--	--	--
5250.75	43.12	PK	74	30.88	35.68	34.59	7.17	34.32	7.44
5250.75	--	AV	54	--	--	--	--	--	--
7323.00	44.63	PK	74	29.37	32.93	37.46	9.23	35.00	11.70
7323.00	--	AV	54	--	--	--	--	--	--

Frequency(MHz):			2441		Polarity:			VERTICAL	
Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
4882.00	47.65	PK	74	26.35	43.00	33.60	6.95	35.90	4.65
4882.00	--	AV	54	--	--	--	--	--	--
5250.75	44.37	PK	74	29.63	36.93	34.59	7.17	34.32	7.44
5250.75	--	AV	54	--	--	--	--	--	--
7323.00	45.29	PK	74	28.71	33.59	37.46	9.23	35.00	11.70
7323.00	--	AV	54	--	--	--	--	--	--

Frequency(MHz):			2480		Polarity:			HORIZONTAL	
Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
4960.00	45.23	PK	74	28.77	40.31	33.84	7.00	35.92	4.92
4960.00	--	AV	54	--	--	--	--	--	--
5257.25	43.05	PK	74	30.95	35.60	34.60	7.17	34.32	7.45
5257.25	--	AV	54	--	--	--	--	--	--
7440.00	44.52	PK	74	29.48	32.57	37.64	9.28	34.97	11.95
7440.00	--	AV	54	--	--	--	--	--	--

Frequency(MHz):			2480		Polarity:			VERTICAL	
Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
4960.00	46.11	PK	74	27.89	41.19	33.84	7.00	35.92	4.92
4960.00	--	AV	54	--	--	--	--	--	--
5257.25	43.25	PK	74	30.75	35.80	34.60	7.17	34.32	7.45
5257.25	--	AV	54	--	--	--	--	--	--
7440.00	44.98	PK	74	29.02	33.03	37.64	9.28	34.97	11.95
7440.00	--	AV	54	--	--	--	--	--	--

REMARKS:

1. Emission level (dBuV/m) =Raw Value (dBuV)+Correction Factor (dB/m)
2. Correction Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
3. Margin value = Limit value- Emission level.
4. -- Mean the PK detector measured value is below average limit.
5. The other emission levels were very low against the limit.
6. RBW1MHz VBW3MHz Peak detector is for PK value; RBW 1MHz VBW10Hz Peak detector is for AV value.

Results of Band Edges Test (Radiated)

Note: GFSK, Pi/4 DQPSK and 8DPSK all have been tested, only worse case GFSK is reported.

Frequency(MHz):			2402		Polarity:			HORIZONTAL	
Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
2402.00	94.26	PK	--	--	60.86	28.78	4.61	0.00	33.40
2402.00	87.89	AV	--	--	54.49	28.78	4.61	0.00	33.40
2357.75	43.25	PK	74	30.75	10.17	28.52	4.56	0.00	33.08
2357.75	--	AV	54	--	--	--	--	--	--
2390.00	44.86	PK	74	29.14	11.54	28.72	4.60	0.00	33.32
2390.00	--	AV	54	--	--	--	--	--	--
2400.00	47.69	PK	74	26.31	14.30	28.78	4.61	0.00	33.39
2400.00	--	AV	54	--	--	--	--	--	--

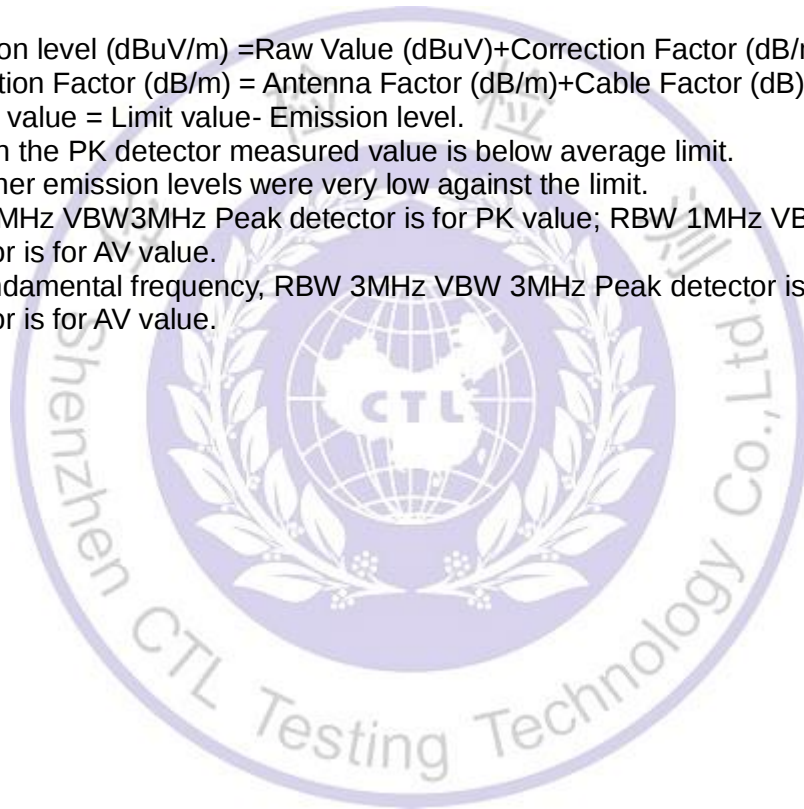
Frequency(MHz):			2402		Polarity:			VERTICAL	
Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
2402.00	94.74	PK	--	--	61.34	28.78	4.61	0.00	33.40
2402.00	88.25	AV	--	--	54.85	28.78	4.61	0.00	33.40
2357.75	43.69	PK	74	30.31	10.61	28.52	4.56	0.00	33.08
2357.75	--	AV	54	--	--	--	--	--	--
2390.00	45.26	PK	74	28.74	11.94	28.72	4.60	0.00	33.32
2390.00	--	AV	54	--	--	--	--	--	--
2400.00	48.95	PK	74	25.05	15.56	28.78	4.61	0.00	33.39
2400.00	--	AV	54	--	--	--	--	--	--

Frequency(MHz):			2480		Polarity:			HORIZONTAL	
Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
2480.00	92.15	PK	--	--	58.53	28.92	4.70	0.00	33.62
2480.00	86.12	AV	--	--	52.50	28.92	4.70	0.00	33.62
2483.50	47.87	PK	74	26.13	14.24	28.93	4.70	0.00	33.63
2483.50	--	AV	54	--	--	--	--	--	--
2492.75	42.42	PK	74	31.58	8.76	28.95	4.71	0.00	33.66
2492.75	--	AV	54	--	--	--	--	--	--
2500.00	40.36	PK	74	33.64	6.68	28.96	4.72	0.00	33.68
2500.00	--	AV	54	--	--	--	--	--	--

Frequency(MHz):			2480		Polarity:			VERTICAL	
Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
2480.00	92.86	PK	--	--	28.92	4.70	0.00	33.62	59.24
2480.00	86.32	AV	--	--	28.92	4.70	0.00	33.62	52.70
2483.50	47.41	PK	74	13.78	28.93	4.70	0.00	33.63	13.78
2483.50	--	AV	54	--	--	--	--	--	--
2492.75	42.52	PK	74	8.86	28.95	4.71	0.00	33.66	8.86
2492.75	--	AV	54	--	--	--	--	--	--
2500.00	40.49	PK	74	6.81	28.96	4.72	0.00	33.68	6.81
2500.00	--	AV	54	--	--	--	--	--	--

REMARKS:

1. Emission level (dBuV/m) =Raw Value (dBuV)+Correction Factor (dB/m)
2. Correction Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
3. Margin value = Limit value- Emission level.
4. -- Mean the PK detector measured value is below average limit.
5. The other emission levels were very low against the limit.
6. RBW1MHz VBW3MHz Peak detector is for PK value; RBW 1MHz VBW10Hz Peak detector is for AV value.
7. For fundamental frequency, RBW 3MHz VBW 3MHz Peak detector is for PK Value; RMS detector is for AV value.



3.3. Maximum Peak Output Power

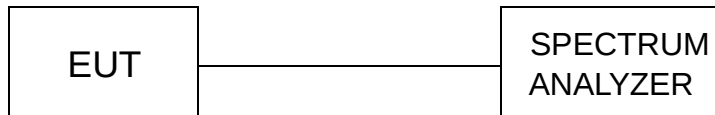
Limit

The Maximum Peak Output Power Measurement is 30dBm.

Test Procedure

Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum.

Test Configuration



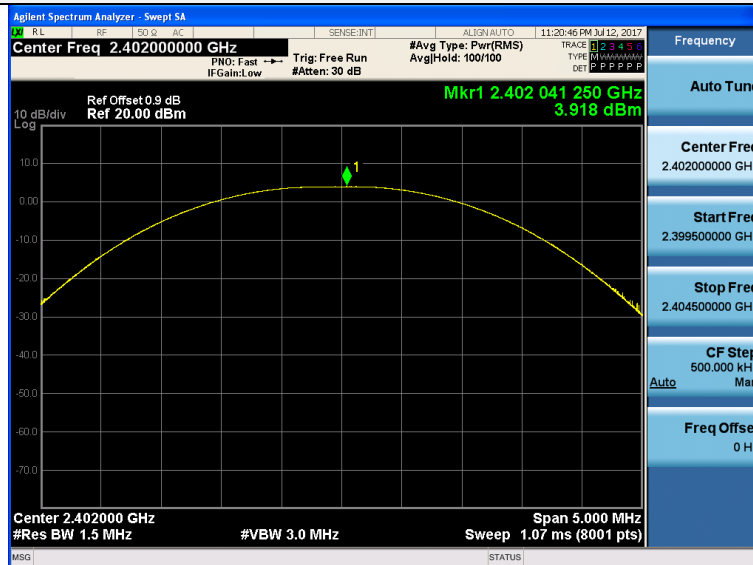
Test Results

Type	Channel	Output power (dBm)	Limit (dBm)	Result
GFSK	00	3.918	20.97	Pass
	39	4.578		
	78	-2.290		
$\pi/4$ DQPSK	00	3.906	20.97	Pass
	39	4.385		
	78	-2.367		
8DPSK	00	4.054	20.97	Pass
	39	4.703		
	78	-2.014		

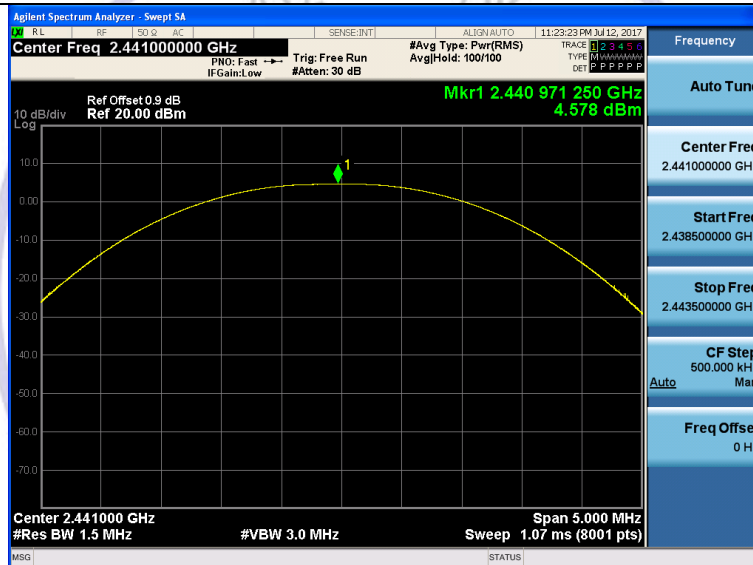
Note: 1.The test results including the cable lose.

Test plot as follows:

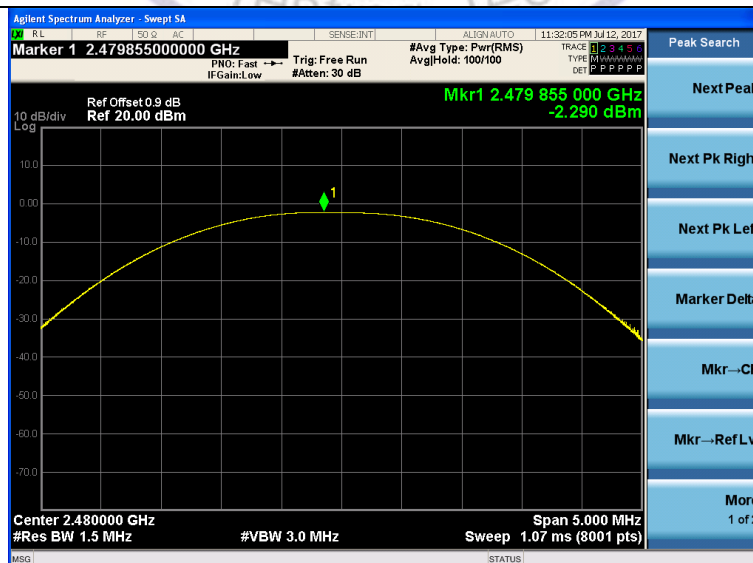
GFSK Modulation



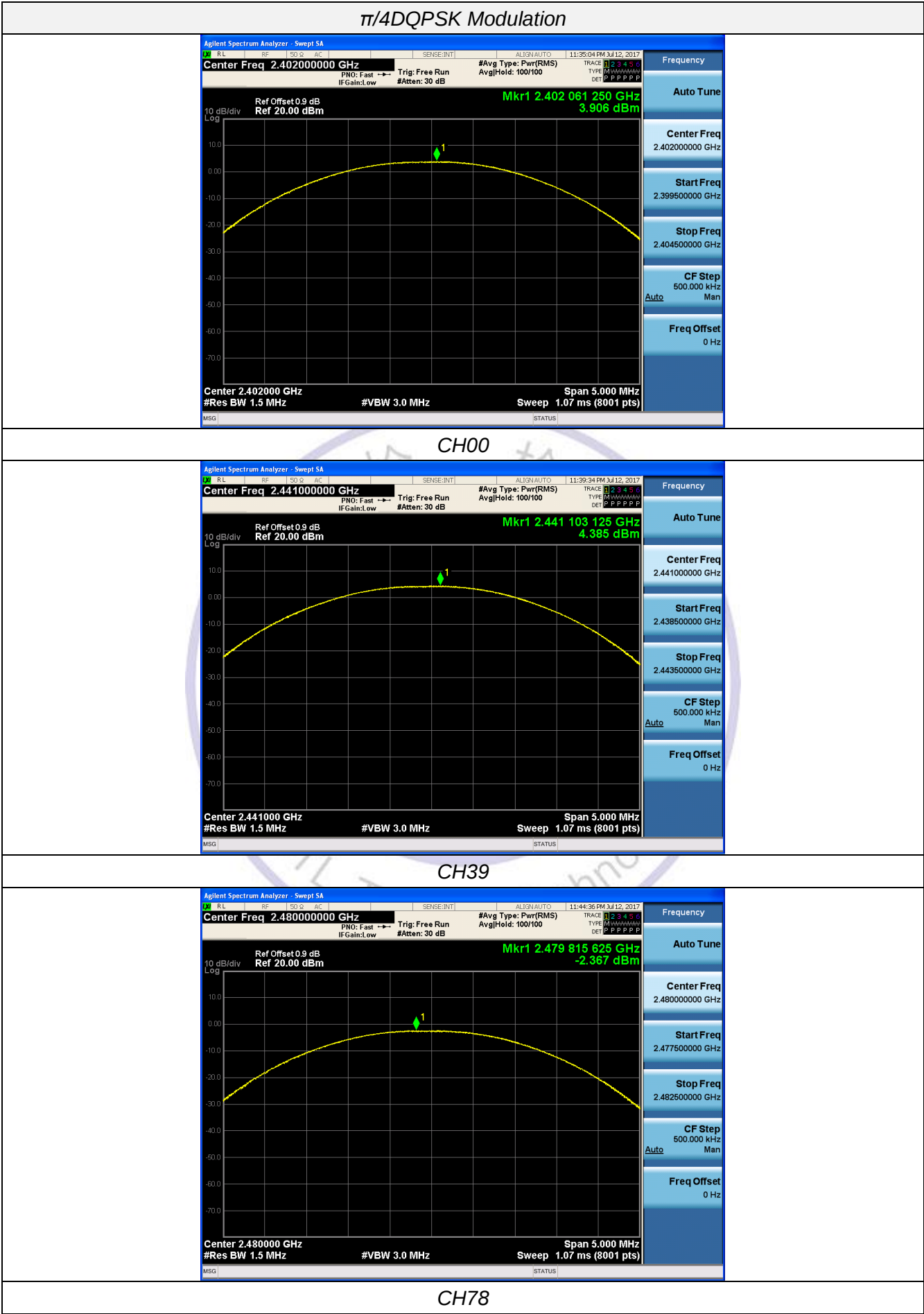
CH00



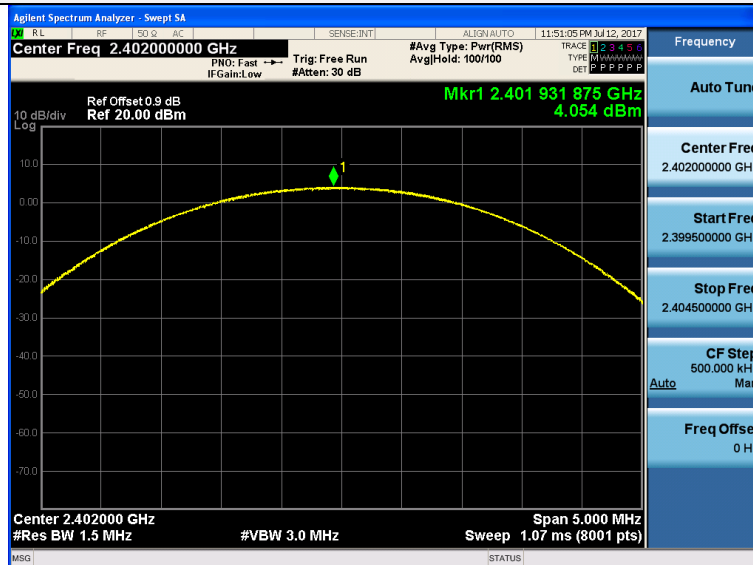
CH39



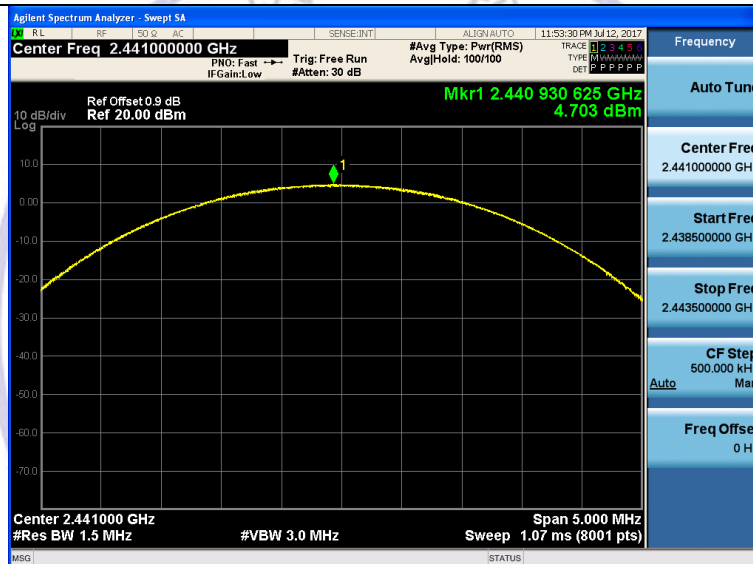
CH78



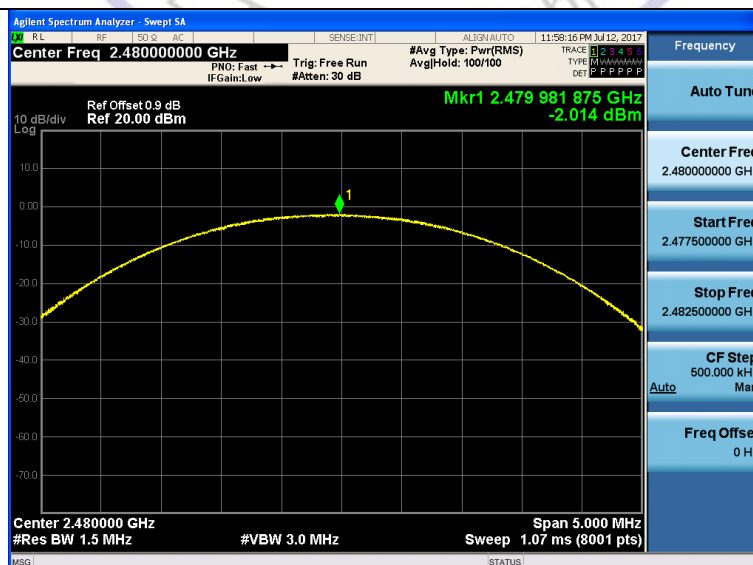
8DPSK Modulation



CH00



CH39



CH78

3.4. 20dB and 99% Bandwidth

Limit

For frequency hopping systems operating in the 2400MHz-2483.5MHz no limit for 20dB bandwidth.

Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 30 KHz RBW and 100 KHz VBW.

The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. The following procedure shall be used for measuring 99% power bandwidth:

RBW=1% to 5% of the OBW

VBW=approximately 3 X RBW

Detector=Peak

Trace Mode: Max Hold

Use the 99% power bandwidth function of the instrument to measure the Occupied Bandwidth and recorded.

Test Configuration



Test Results

Modulation	Channel	20dB bandwidth (MHz)	99% OBW(MHz)	Result
GFSK	CH00	0.9481	0.89854	Pass
	CH39	0.9487	0.89533	
	CH78	0.9689	0.90746	
$\pi/4$ DQPSK	CH00	1.278	1.1731	
	CH39	1.278	1.1689	
	CH78	1.279	1.1741	
8DPSK	CH00	1.290	1.1769	
	CH39	1.289	1.1741	
	CH78	1.289	1.1772	

Test plot as follows: