# **FCC TEST REPORT**

Report No.: SEFB1908102

### According to

CFR47 §15.247

Applicant : Mitek Corp

Address : 1 Mitek Plaza Winslow IL 61089, United States

Manufacturer: Sonic Devices Electronics Co., Ltd

Address : Block 2 Huake Doctor Pioneer Park, Shida Road, Dalingshan, Dongguan

Equipment : Audio Processor Model No. : WTSD-MIX31

Brand : AtlasIED or Atlas Sound FCC ID : 2AAOY-WTSD-MIX31

Test Period : Jul. 24, 2019~ Aug. 15, 2019

- The test result refers exclusively to the test presented test model / sample.
- Without written approval of *Cerpass Technology (Suzhou) Co., Ltd.*, the test report shall not be reproduced exc- ept in full.
- The test report must not be used by the clients to claim product certification approval by any agency of the Government.

#### I HEREBY CERTIFY THAT:

The measurements shown in this test report were made in accordance with the procedures given in **ANSI C63.10 – 2013& FCC Part15.247** and the energy emitted by this equipment was *passed.* 

Approved by:	Laboratory Accreditation:	
	Cerpass Technology Corpo	ration Test Laboratory
	TAF LAB Code:	1439
Mr A	 Cerpass Technology (SuZh	ou) Co., Ltd.
Miro Chueh EMC/RF Manager	A2LA LAB Code:	4981.01

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# **History of this Test Report**

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Report No.	Version	Issue Date	Description
SEFB1908102	Rev 01	Aug. 15, 2019	Original

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# 1. Report of Measurements and Examinations

FCC Rule	. Description of Test	Result
§ 15.203	. Antenna Requirement	Pass
§ 15.207(a)	. Conducted Emission	Pass
§ 15.209(a)	. Radiated Emission	Pass
§ 15.247(a)(1)	. Channel Carrier Frequencies Separation	Pass
§ 15.247(a)(1)	. 20dB Bandwidth Measurement	Pass
§ 15.247(a)(1)	. Dwell Time	Pass
§ 15.247(b)	. Number of Hopping Channels	Pass
§ 15.247(b)	. Peak Output Power Measurement Data	Pass
§ 15.247(d)	. Band Edges Measurement Data	Pass

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### 2. General Info

### 2.1 Description of EUT

Product name	Audio Processor
Model No.	WTSD-MIX31
Model Discrepancy	N/A
Power supply	DC24V supplied by adapter
Adapter Spec.	Model:CB24-240100WA
1 ' '	Input: AC 100-240V 50/60Hz 1.2A
	Output: DC 24V, 1.0A
Frequency Range	2402~2480MHz
Number of Channels	79
Modulation	GFSK (1Mbps), Π/4 DQPSK (2Mbps) and 8DPSK (3Mbps)
Data Rates	Bluetooth: 1, 2, 3Mbps,
Antenna Spec.	PCB Antenna with 1.927dBi

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

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### 2.2 Carrier Frequency of Channels

2.2 Carrier Frequency of Charmers							
Bluetooth Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
00	2402 MHz	01	2403 MHz	02	2404 MHz	03	2405 MHz
04	2406 MHz	05	2407 MHz	06	2408 MHz	07	2409 MHz
08	2410 MHz	09	2411 MHz	10	2412 MHz	11	2413 MHz
12	2414 MHz	13	2415 MHz	14	2416 MHz	15	2417 MHz
16	2418 MHz	17	2419 MHz	18	2420 MHz	19	2421 MHz
20	2422 MHz	21	2423 MHz	22	2424 MHz	23	2425 MHz
24	2426 MHz	25	2427 MHz	26	2428 MHz	27	2429 MHz
28	2430 MHz	29	2431 MHz	30	2432 MHz	31	2433 MHz
32	2434 MHz	33	2435 MHz	34	2436 MHz	35	2437 MHz
36	2438 MHz	37	2439 MHz	38	2440 MHz	39	2441 MHz
40	2442 MHz	41	2443 MHz	42	2444 MHz	43	2445 MHz
44	2446 MHz	45	2447 MHz	46	2448 MHz	47	2449 MHz
48	2450 MHz	49	2451 MHz	50	2452 MHz	51	2453 MHz
52	2454 MHz	53	2455 MHz	54	2456 MHz	55	2457 MHz
56	2458 MHz	57	2459 MHz	58	2460 MHz	59	2461 MHz
60	2462 MHz	61	2463 MHz	62	2464 MHz	63	2465 MHz
64	2466 MHz	65	2467 MHz	66	2468 MHz	67	2469 MHz
68	2470 MHz	69	2471 MHz	70	2472 MHz	71	2473 MHz
72	2474 MHz	73	2475 MHz	74	2476 MHz	75	2477 MHz
76	2478 MHz	77	2479 MHz	78	2480 MHz	N/A	N/A

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### 2.3 The Worst Case Configuration

### **Data rate Configuration:**

Test Mode	
DH5	√
2DH5	√
3DH5	√

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#### 2.4 Test Mode & Test Software

During testing, the interface cables and equipment positions were varied according to ANSI C63.10

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- b. The complete test system included support units and EUT for RF test.
- Run the test software "ISRT.exe".
- d. The following test mode was performed for conduction and radiation test:

Test Mode 1: GFSK: CH 00: 2402MHz, CH 39: 2441MHz, CH 78: 2480MHz.

Test Mode 2:  $\pi/4$  DQPSK : CH 00: 2402MHz, CH 39: 2441MHz, CH 78: 2480MHz.

Test Mode 3: 8DPSK: CH 00: 2402MHz, CH 39: 2441MHz, CH 78: 2480MHz.

### 2.5 Description of Test System

No	Device	Manufacturer	Model No.	Description
1	Notebook	SONY	PCG-71811P	R33021

#### Use Cable:

No.	Cable	Quantity	Description
1	USB Cable	1	1.0m Shielding
2	DC Cable	1	1.5m Non Shielding
3	RJ45 Cable	1	0.2m Non Shielding

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### 3. General Information of Test Site

### 3.1 Information of Test Site

		Company Took along Company tion Took Laborates
	Test Site	Cerpass Technology Corporation Test Laboratory Address: No.10, Ln. 2, Lianfu St., Luzhu Dist., Taoyuan City 33848, Taiwan (R.O.C.) Tel:+886-3-3226-888 Fax:+886-3-3226-881
	TAF	1439
	FCC	TW1079, TW1061
	IC	4934E-1, 4934E-2
	VCCI	T-2205 for Telecommunication Test C-4663 for Conducted emission test R-4399, R-4218 for Radiated emission test G-812, G-813 for radiated disturbance above 1GHz
$\boxtimes$	Test Site	Cerpass Technology (Suzhou) Co.,Ltd Address: No.66,Tangzhuang Road, Suzhou Industrial Park, Jiangsu 215006, China Tel: +86-512-6917-5888 Fax: +86-512-6917-5666
	CNAS	L5515
	FCC	CN1243
	A2LA	4981.01
	IC	7290A-1, 7290A-2
	VCCI	T-11945 for Telecommunication Test C-12919 for Conducted emission test R-12670 for Radiated emission test G-10227 for radiated disturbance above 1GHz

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### 3.2 Measuring Equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
EMI Receiver	R&S	ESCI3	100563	2019.06.21	2020.06.20
LISN	Schwarzbeck	NSLK 8127	8127-920	2018.09.25	2019.09.24
Pulse Limiter	R&S	ESH3-Z2	100529	2019.03.11	2020.03.10
Software	Farad	Ez-EMC	ver.ct3a1	N/A	N/A

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Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.	
Bilog Antenna	Sunol	JB1	A072414-2 -2	2019.07.13	2020.07.13	
EMI Receiver	R&S	ESCI3	101183	2019.06.28	2020.06.27	
EMI Receiver	R&S	ESCI7	100968	2019.07.28	2020.07.27	
Preamplifier	EM Electronics corp.	EM330	60618	2019.03.11	2020.03.10	
Horn Antenna	Schwarzbeck	BBHA9120 D	9120D-619 2019.07.13		2020.07.13	
Horn Antenna	Schwarzbeck	BBHA9170	9170-348	2019.06.23	2020.06.22	
Spectrum Analyzer	R&S	FSP40	100324	2019.07.13	2020.07.12	
Preamplifier	EMCI	EMCI 030-00-3230	SN016723	2019.03.11	2020.03.10	
Preamplifier	Preamplifier EM Electronics corp.		SN060714	2019.03.23	2020.03.22	
Spectrum Analyzer	KEYSIGHT	N9010A	MY53400169	2018.08.25	2019.08.24	
Software	E3	AUDIX	Version: 8.14.806b	N/A	N/A	

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### 3.3 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2).

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#### **RF Conducted Measurement**

Test Item		Uncertainty	Limit
Radio Frequency		±8.7X10 <sup>-7</sup>	±1X10 <sup>-5</sup>
RF output power, condu	cted	$\pm$ 0.63dB	$\pm$ 1.5dB
Power density, conducted	ed	±1.21dB	$\pm 3$ dB
Unwanted emissions,	30-1000MHz	$\pm$ 0.51dB	$\pm 3$ dB
conducted	1-12.75GHz	$\pm$ 0.67dB	$\pm 3$ dB
All emissions, radiated	30-1000MHz	$\pm$ 2.28dB	$\pm$ 6dB
	1-12.75GHz	$\pm$ 2.59dB	$\pm$ 6dB
Temperature		±0.8℃	±1°C
Humidity		±3%	$\pm 5\%$
DC and low frequency v	oltages	±3%	$\pm 3\%$

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### **AC Conducted Measurement**

Measurement	Frequency	Uncertainty		
Conducted emissions(LINE)	9KHz-30MHz	+/- 0.7738 dB		
Conducted emissions(NEUTRAL)	9KHz-30MHz	+/- 0.7886 dB		
Conducted emissions(10Mbps)	150KHz-30MHz	+/- 1.3013dB		
Conducted emissions(100Mbps)	150KHz-30MHz	+/- 1.3197 dB		
Conducted emissions(1000Mbps)	150KHz-30MHz	+/- 1.2987 dB		

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### Radiated Measurement

Measurement	Polarity	Frequency	Uncertainty
	Horizontal	below 1GHz	+/- 3.8936 dB
Radiated	Vertical	below 1GHz	+/- 3.8928 dB
emissions	Horizontal	above 1GHz	+/- 5.18858dB
	Vertical	above 1GHz	+/- 5.18928 dB

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### 4. AC Conducted Emission Measurement

#### 4.1 Test Limit

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz on the 120 VAC power and return leads of the EUT according to the methods defined in ANSI C63.10-2013 Section 6.2. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in section 6.2.2. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

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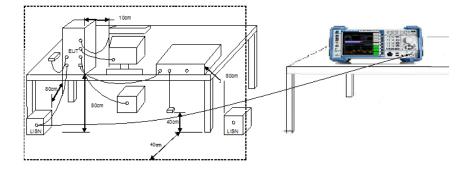
Frequency (MHz)	Quasi Peak (dB μ V)	Average (dB μ V)
0.15 – 0.5	66-56*	56-46*
0.5 - 5.0	56	46
5.0 - 30.0	60	50

<sup>\*</sup>Decreases with the logarithm of the frequency.

#### 4.2 Test Procedures

- a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- b. Connect EUT to the power mains through a line impedance stabilization network (LISN).
- c. All the support units are connecting to the other LISN.
- d. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- e. The FCC states that a 50 ohm, 50 micro-Henry LISN should be used.
- f. Both sides of AC line were checked for maximum conducted interference.
- g. The frequency range from 150 kHz to 30 MHz was searched.
- h. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

### 4.3 Typical Test Setup

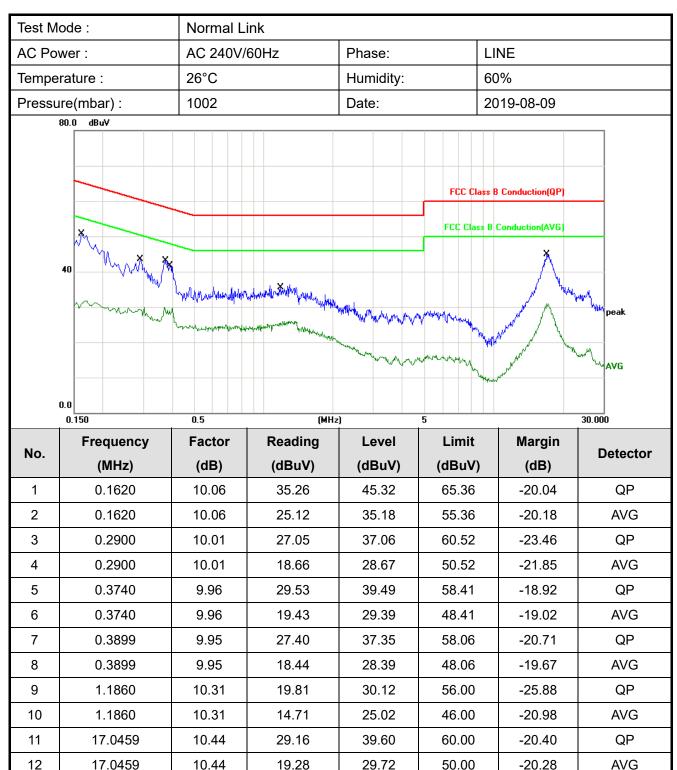


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#### 4.4 Test Result and Data



Note: Measurement Level = Reading Level + Correct Factor

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Test M	lode :	Normal L	Normal Link					
AC Po	wer:	AC 240V/	60Hz	Phase: NE		EUTRAL		
Tempe	erature :	26°C	26°C		60	1%		
Pressu	ure(mbar) :	1002		Date:	20	19-08-09		
80.0	dBuV					<u> </u>		
40 .	Manager and the second	Mary forth or the formation of the contract of	Market Ma	and the same of th	FCC Class	B Conduction(QF		
0.0 0.1	150	0.5	(MHz	1	5		30.000	
	Frequency	Factor	Reading	Level	Limit Margin		05.505	
No.	(MHz)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dB)	Detector	
1	0.1700	10.06	35.92	45.98	64.96	-18.98	QP	
2	0.1700	10.06	25.16	35.22	54.96	-19.74	AVG	
3	0.3780	9.96	28.18	38.14	58.32	-20.18	QP	
4	0.3780	9.96	18.34	28.30	48.32	-20.02	AVG	
5	0.3940	9.95	26.76	36.71	57.98	-21.27	QP	
6	0.3940	9.95	17.86	27.81	47.98	-20.17	AVG	
7	1.0100	10.13	19.09	29.22	56.00	-26.78	QP	
8	1.0100	10.13	13.93	24.06	46.00	-21.94	AVG	
9	1.2260	10.14	19.78	29.92	56.00	-26.08	QP	
10	1.2260	10.14	14.73	24.87	46.00	-21.13	AVG	
11	17.2740	10.46	27.68	38.14	60.00	-21.86	QP	

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Note: Measurement Level = Reading Level + Correct Factor

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Test M	ode :	Normal L	Normal Link						
AC Po	wer:	AC 120V/60Hz		Phase: LI		INE			
Tempe	rature :	26°C	26°C		60	)%			
Pressu	ıre(mbar) :	1002		Date:	20	19-08-09			
	80.0 dBuV								
					FCC Class B	Conduction(QP)			
	*				FCC Class B	Conduction(AVG)			
	40					×			
	40 WWWWWW	Waterwall	AND THE PROPERTY OF THE PROPER			A Andrew	∕∕∕√peak		
	MANAMINAMI	Now Welling works	was the state of t	<sup>186</sup> 164418144444444444444444444444444444	2 Mary Mary Mary Company Compa				
			wood washing to be for showing the standard of	hadarahalarahalarahan ana hada	of the property of the second	Market State of State	AVG		
				* * * * * * * * * * * * * * * * * * * *	Way And	p p p p p p p p p p p p p p p p p p p			
	0.0								
	0.150 Frequency	0.5 Factor	Reading	Level	5 Limit	Margin	30.000		
No.	(MHz)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dB)	Detector		
1	0.1500	10.06	34.65	44.71	65.99	-21.28	QP		
2	0.1500	10.06	26.38	36.44	55.99	-19.55	AVG		
3	0.3673	9.97	30.05	40.02	58.56	-18.54	QP		
4	0.3673	9.97	23.40	33.37	48.56	-15.19	AVG		
5	0.3740	9.96	30.91	40.87	58.41	-17.54	QP		
6	0.3740	9.96	22.90	32.86	48.41	-15.55	AVG		
7	0.3940	9.95	30.57	40.52	57.98	-17.46	QP		
8	0.3940	9.95	24.44	34.39	47.98	-13.59	AVG		
9	1.1620	10.28	19.63	29.91	56.00	-26.09	QP		
10	1.1620	10.28	14.55	24.83	46.00	-21.17	AVG		
11	17.2660	10.46	27.00	37.46	60.00	-22.54	QP		
12	17.2660	10.46	22.13	32.59	50.00	-17.41	AVG		

Note: Measurement Level = Reading Level + Correct Factor

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Test M	ode :	Normal Link					
AC Po	wer:	AC 120V/60Hz		Phase: N		IEUTRAL	
Tempe	rature :	26°C	26°C		60	60%	
Pressu	ıre(mbar) :	1002		Date:	20	19-08-09	
	80.0 dBuV						
					ECC Class F	Conduction(QP)	
					TCC Class I	Conduction(QF)	
					FCC Class B	Conduction(AVG)	
	Mark. &				-		
		X . 6	**			Λ	
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	0.0						
	0.150 Frequency	0.5 (MH: Factor Reading		z) 5  Level Limit		Margin	30.000
No.	(MHz)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dB)	Detector
1	0.1514	10.06	31.26	41.32	65.92	-24.60	QP
2	0.1514	10.06	22.63	32.69	55.92	-23.23	AVG
3	0.2220	10.05	31.01	41.06	62.74	-21.68	QP
4	0.2220	10.05	20.85	30.90	52.74	-21.84	AVG
5	0.3740	9.96	29.61	39.57	58.41	-18.84	QP
6	0.3740	9.96	21.17	31.13	48.41	-17.28	AVG
7	0.3914	9.95	29.91	39.86	58.03	-18.17	QP
8	0.3914	9.95	21.95	31.90	48.03	-16.13	AVG
9	1.2300	10.14	19.68	29.82	56.00	-26.18	QP
10	1.2300	10.14	14.63	24.77	46.00	-21.23	AVG
11	1.3340	10.14	19.86	30.00	56.00	-26.00	QP
12	1.3340	10.14	14.77	24.91	46.00	-21.09	AVG

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Note: Measurement Level = Reading Level + Correct Factor

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#### 5. Radiated Emission Measurement

#### 5.1 Test Limit

In any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. If the transmitter measurement is based on the maximum conducted output power, the attenuation required under this paragraph shall be 30dB instead of 20dB. In addition, radiated emissions which fall in section 15.205(a) the restricted bands must also comply with the radiated emission limit specified in section 15.209(a).

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FREQUENCIES (MHz)	FIELD STRENGTH (micro volts/meter)	MEASUREMENT DISTANCE (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

For unintentional device, according to CISPR PUB.22, for Class B digital devices, the general requirement of field strength of radiated emissions from intentional radiators at a distance of 10 meters shall not exceed the above table.

Frequency (MHz)	Distance Meters	Radiated (dB µV/ M)		
30-230	10	30		
230-1000	10	37		

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#### 5.2 Test Standard

ANSI C63.10-2013-Section 6.10.5

#### 5.3 Test Procedures

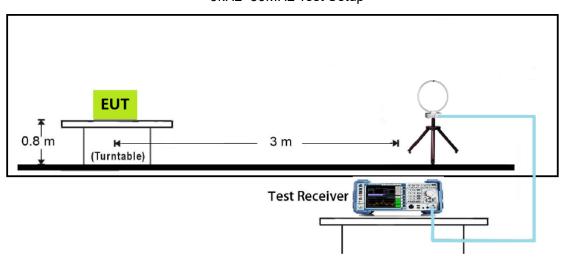
a. The EUT was placed on a rotatable table top 0.8 meter for frequency below 1GHz and 1.5meter for frequency above 1GHz above ground.

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- b. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
- c. The table was rotated 360 degrees to determine the position of the highest radiation.
- d. The antenna is a broadband antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
- e. 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 turn table (from 0 degree to 360 degrees) to find the maximum reading.
- f. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method and reported.
- h. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

### 5.4 Typical Test Setup

9kHz~30MHz Test Setup



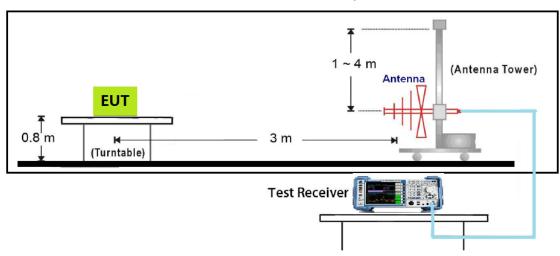
Cerpass Technology (Suzhou) Co., Ltd. Issued Date : Aug. 15, 2019

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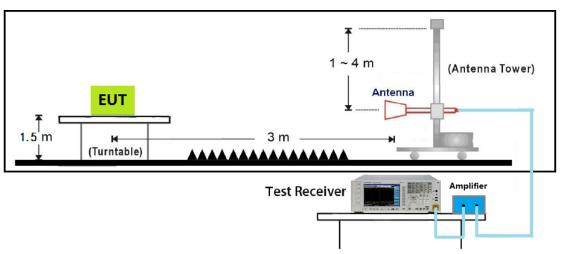


### Below 1GHz Test Setup

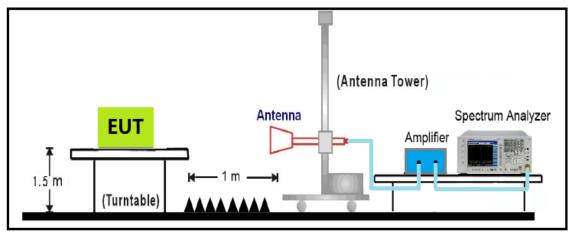
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1GHz~18GHz Test Setup



18GHz~40GHz Test Setup



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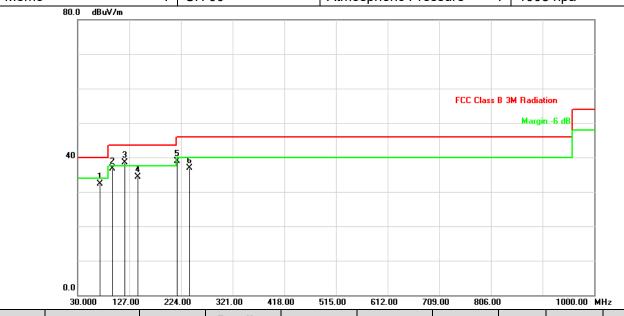
### 5.5 Test Result and Data

### The 9kHz-30MHz spurious emission is under limit 20dB more.

#### **Below 1GHz**

Power :	120V/60Hz	Pol/Phase :	HORIZONTAL
Test Mode :	Mode 1	Temperature :	18 °C
Test Date :	Jul. 21, 2019	Humidity :	49 %
Memo :	CH 00	Atmospheric Pressure :	1008 hpa

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No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	71.7099	-17.20	49.52	32.32	40.00	-7.68	peak	100	63
2	95.9599	-12.44	49.14	36.70	43.50	-6.80	peak	200	204
3	119.2399	-10.36	48.92	38.56	43.50	-4.94	QP	174	159
4	143.4900	-12.97	47.22	34.25	43.50	-9.25	peak	100	87
5	216.2400	-9.04	47.85	38.81	46.00	-7.19	peak	200	144
6	239.5200	-7.03	43.99	36.96	46.00	-9.04	peak	100	25

Note: Level = Reading + Factor Margin = Level – Limit

Factor = Antenna Factor + Cable Loss - Amplifier Factor

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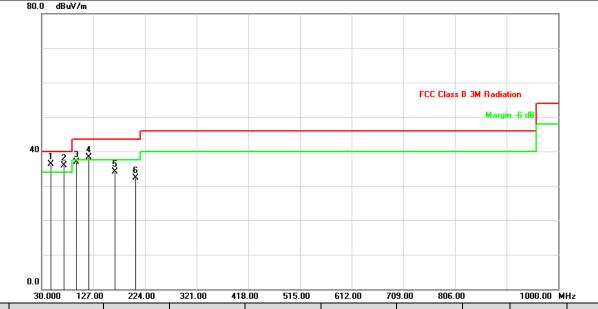
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Power	:	120V/60H	·lz	Pol/Phase	<del>)</del>		:	VEF	RTICAL	
Test Mode		Mode 1		Temperat	ure		:	18 °	С	
Test Date		Jul. 21, 20	019	Humidity			:	49 %	6	
Memo		CH 00		Atmosphe	eric Pres	sure	:	1008	8 hpa	
80.0 dBuV/m										
										7



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	47.4600	-15.26	51.52	36.26	40.00	-3.74	QP	124	72
2	71.7099	-17.20	53.12	35.92	40.00	-4.08	QP	135	103
3	95.9599	-12.44	49.39	36.95	43.50	-6.55	peak	100	54
4	119.2399	-10.36	48.70	38.34	43.50	-5.16	QP	144	210
5	167.7400	-14.14	48.23	34.09	43.50	-9.41	peak	100	78
6	206.5399	-8.63	40.84	32.21	43.50	-11.29	peak	100	119

Note: Level = Reading + Factor Margin = Level – Limit

Factor = Antenna Factor + Cable Loss - Amplifier Factor

Cerpass Technology (Suzhou) Co., Ltd. S-FD-501V1.0

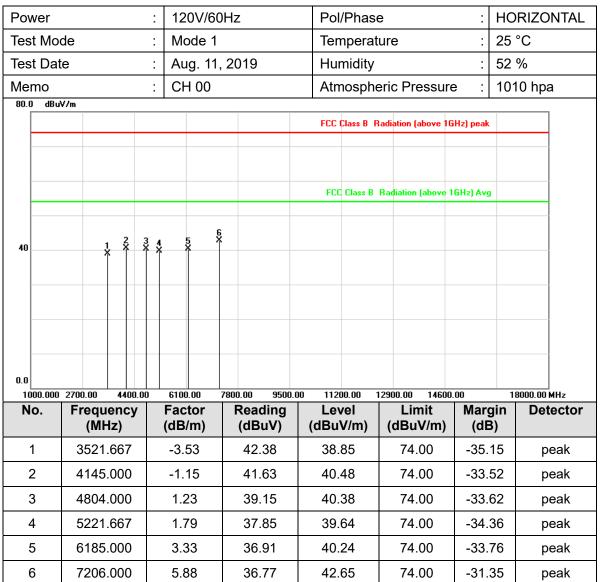
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#### Radiated Emission above 1GHz:



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Note: Level = Reading + Factor Margin = Level - Limit

Factor = Antenna Factor + Cable Loss - Amplifier Factor

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Power		: 120V/60	)Hz	Pol/Phase	<u></u> е	: \	/ERTICAL
Test Mo	ode	: Mode 1		Temperat	ure	: 2	25 °C
Test Da	nte	: Aug. 11,	2019	Humidity		: 5	52 %
Memo		: CH 00		Atmosphe	eric Pressure	e : 1	010 hpa
80.0 dB	uV/m			ECC Class P. P.	ladiation (above 1G	Uz) noak	
				rec class b 11	ladiadon (above 14	112j peak	
				FCC Class B	Radiation (above 1	GHz) Ava	
						,	
	1 2 3	4 5 6					
40	1 2 3	4 3 7	•				
0.0							
	0 2700.00 4400.00		7800.00 9500.0		12900.00 14600.		18000.00 MHz
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margir (dB)	n Detector
1	3351.667	-4.38	44.03	39.65	74.00	-34.35	5 peak
2	4286.667	-0.43	40.60	40.17	74.00	-33.83	B peak
3	4804.000	1.23	39.51	40.74	74.00	-33.26	5 peak
4	5816.667	2.81	37.09	39.90	74.00	-34.10	) peak
5	6440.000	3.44	37.40	40.84	74.00	-33.16	6 peak
6	7206.000	5.88	36.01	41.89	74.00	-32.11	peak

Report No.: SEFB1908102

Note: Level = Reading + Factor Margin = Level – Limit

Factor = Antenna Factor + Cable Loss - Amplifier Factor

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Power		:	120V/60	Hz	Pol/F	hase	;	:	НО	RIZONTAL
Test Mo	ode	:	Mode 1		Temp	perati	ure	:	25	°C
Test Da	te	: .	Aug. 11,	2019	Hum	idity		:	52 %	
Memo		:	CH 39		Atmo	sphe	ric Pressu	re :	101	0 hpa
80.0 dB	uV/m				ECC CI-	D. D.	adiation (above 1	CU-) posk		
					rec cia	188 D TO	aulaulon (above l	ингу реак		
					FCC C	lace R. F	Radiation (above	1GHz) Ava		
					1000		Todata (above	runz, ritg		
	2	2	4 5 8	i						
40	1 2	3   	4 5 5	<b>`</b>						
0.0										
	) 2700.00 <b>44</b> 00.00	) 6	\$100.00 7	7800.00 9500.0	0 11200.	.00 1:	2900.00 1460	0.00	18	8000.00 MHz
No.	Frequency (MHz)		actor dB/m)	Reading (dBuV)	Leve (dBuV		Limit (dBuV/m)	Marq (dB		Detector
1	3181.667	-	-5.27	44.02	38.7	5	74.00	-35.2	25	peak
2	4371.667		0.01	41.17	41.18	8	74.00	-32.8	32	peak
3	4882.000		1.38	38.67	40.0	5	74.00	-33.9	95	peak
4	5816.667		2.81	37.13	39.9	4	74.00	-34.0	06	peak
5	6808.333		4.46	36.41	40.8	7	74.00	-33.	13	peak
6	7323.000		6.34	35.67	42.0	1	74.00	-31.9	99	peak

Note: Level = Reading + Factor Margin = Level – Limit

Factor = Antenna Factor + Cable Loss - Amplifier Factor

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Power		:	120V/60	Hz	Pol	/Phas	e	:	VE	RTICAL	
Test Mo	de	:	Mode 1		Ter	nperat	ure	:	25	°C	
Test Da	te	:	Aug. 11,	2019	Hu	Humidity :				52 %	
Memo		:	CH 39		Atn	nosphe	eric Pressu	re :	101	I0 hpa	
80.0 dBu	iV/m				FCC	CI D. D		CII.) I			
<del>                                   </del>					FLL	Llass B H	ladiation (above 1	ынzj peak			
							B 0 0 11	4011.3.4			
					FUL	, Class B	Radiation (above	TGHZJ AVG			
			, 5 ×								
40	1 2	3	4 × × ×	•							
1000 000	2700.00 4400.0	<u> </u>	6100.00 7	7800.00 9500.0	10 112	00.00 1	12900.00 1460	n nn	15	3000.00 MHz	
No.	Frequency	F	actor	Reading	Le	vel	Limit	Març	gin	Detector	
	(MHz)	•	dB/m)	(dBuV)	(dBu	•	(dBuV/m)	•	•		
1	3408.333		-4.08	42.83	38.	75	74.00	-35.2	25	peak	
2	4456.667		0.44	40.39	40.	83	74.00	-33.	17	peak	
3	4882.000		1.38	38.72	40.	10	74.00	-33.	90	peak	
4	5675.000		2.45	37.09	39.	54	74.00	-34.4	46	peak	
5	6610.000		3.82	37.66	41.	48	74.00	-32.	52	peak	
6	7323.000		6.34	36.70	43.	04	74.00	-30.9	96	peak	

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Note: Level = Reading + Factor Margin = Level – Limit

Factor = Antenna Factor + Cable Loss - Amplifier Factor

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Power		: 120V/60	)Hz	Pol/Phase	e	:	HORIZO	ONTAL
Test Mo	de	: Mode 1		Temperat	ure	:	25 °C	
Test Da	te	: Aug. 11	, 2019	Humidity		:	52 %	
Memo		: CH 78		Atmosphe	eric Pressure	e :	1010 hp	a
80.0 dBu	V/m			FCC Class D. D	ladiation (above 16	11-1		1
				FLL Class B H	radiation (above 10	інгі реак		-
				FCC Class D	D - Ji-ii - f-b 1	CU-X A		
				FCC Class B	Radiation (above 1	unz) Avg		-
		_	6 X					
40	1 2	3 <b>4</b> 5	X					
0.0	2700.00 4400.00	0 6100.00	7800.00 9500.0	00 11200.00 1	12900.00 14600.	nn	18000.00	J MU-
No.	Frequency	Factor	Reading	Level	Limit	Marg		tector
	(MHz)	(dB/m)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	)	
1	3351.667	-4.38	43.35	38.97	74.00	-35.0	)3 p	oeak
2	4400.000	0.15	40.05	40.20	74.00	-33.8	80 r	oeak
3	4960.000	1.52	38.97	40.49	74.00	-33.5	51 p	eak
4	5646.667	2.38	37.29	39.67	74.00	-34.3	3 r	eak
5	6241.667	3.36	36.85	40.21	74.00	-33.7	'9 r	eak
6	7440.000	6.80	35.83	42.63	74.00	-31.3	37 p	peak

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Note: Level = Reading + Factor Margin = Level – Limit

Factor = Antenna Factor + Cable Loss - Amplifier Factor

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Power		: 120V/60	)Hz	Pol/Phas	e	: VE	RTICAL	
Test Mo	de	: Mode 1		Temperat	ture	: 25	25 °C	
Test Dat	te	: Aug. 11,	2019	Humidity		: 52	%	
Memo		: CH 78		Atmosphe	eric Pressure	e : 10°	10 hpa	
80.0 dBu	V/m			FCC Class D. F	Radiation (above 1G	11-2		
				FLL Class B	radiation (above 16	нгу реак		
				FCC Class D	Dadistica (about 1)	CH=) A		
				FCC Class B	Radiation (above 1	ангу жүд		
			6 *					
40	1 2	3 4 5 7 7 7	X					
1000.000	2700.00 4400.00	0 6100.00	7800.00 9500.0	0 11200.00 1	12900.00 14600.	00 1	8000.00 MHz	
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	
1	3181.667	-5.27	43.93	38.66	74.00	-35.34	peak	
2	4428.333	0.29	39.63	39.92	74.00	-34.08	peak	
3	4960.000	1.52	38.75	40.27	74.00	-33.73	peak	
4	5391.667	1.93	37.01	38.94	74.00	-35.06	peak	
5	6298.333	3.38	36.63	40.01	74.00	-33.99	peak	
					10			

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Note: Level = Reading + Factor Margin = Level – Limit

Factor = Antenna Factor + Cable Loss - Amplifier Factor

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Power		: 120V	7/60Hz	Pol/Phas	e	:	HORIZ	ZONTAL
Test Mo	de	: Mode	2	Temperat	ture	:	25 °C	
Test Da	te	: Aug.	11, 2019	Humidity			52 %	
Memo		: CH 0	0	Atmosphe	eric Pressur	e :	1010 h	пра
80.0 dBu	V/m			FCC Class B. D.	Radiation (above 16	SII_3I		$\neg$
				FLC Class B F	radiation (above 10	інгі реак		
				ECC Class P	Radiation (above 1	CU-) Au-		
				LCC CIG22 D	naulation (above	unz) Avy		
	2 3		6					
40	1 2 3 X 1	<b>4</b> 5	*					_
								_
0.0 1000.000	2700.00 4400.00	6100.00	7800.00 9500.0	00 11200.00 1	12900.00 14600	.00	18000.	 00 MHz
No.	Frequency (MHz)	Factor (dB/m		Level (dBuV/m)	Limit (dBuV/m)	Marg (dB		etector
1	3266.667	-4.83	43.31	38.48	74.00	-35.5	52	peak
2	4400.000	0.15	40.41	40.56	74.00	-33.4	14	peak
3	4804.000	1.23	39.99	41.22	74.00	-32.7	78	peak
4	5675.000	2.45	37.32	39.77	74.00	-34.2	23	peak
5	6213.333	3.35	36.77	40.12	74.00	-33.8	38	peak
6	7206.000	5.88	36.42	42.30	74.00	-31.7	70	peak

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Note: Level = Reading + Factor Margin = Level – Limit

Factor = Antenna Factor + Cable Loss - Amplifier Factor

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Power		: 120V/60	)Hz	Pol/Phase	e	: \	VERTICAL
Test Mo	ode	: Mode 2		Temperat	ure	: 2	25 °C
Test Da	ıte	: Aug. 11,	2019	Humidity	:	52 %	
Memo		: CH 00		Atmosphe	eric Pressure	e : '	1010 hpa
80.0 dB	uV/m			FCC Class R. P.	ladiation (above 1G	Hz) neak	
				TCC Class B TI	ladiadon (above 14	nzj peak	
				FCC Class R	Radiation (above 1	GHz) Ava	
				T C C Class B	Tradiation (above 1	unz, r. rg	
	2 3	4 5 X					
40	1 2 3 Y	<b>4</b> 5 ×					
0.0 1000.000	D 2700.00 4400.00	6100.00	7800.00 9500.0	00 11200.00 1	12900.00 14600.	00	18000.00 MHz
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margi (dB)	
1	3408.333	-4.08	42.69	38.61	74.00	-35.39	9 peak
2	4371.667	0.01	40.62	40.63	74.00	-33.3	7 peak
3	4804.000	1.23	39.71	40.94	74.00	-33.00	6 peak
4	5476.667	2.00	37.42	39.42	74.00	-34.58	8 peak
5	6355.000	3.40	36.61	40.01	74.00	-33.99	9 peak
6	7206.000	5.88	36.39	42.27	74.00	-31.73	3 peak

Note: Level = Reading + Factor Margin = Level – Limit

Factor = Antenna Factor + Cable Loss - Amplifier Factor

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Power		: 120V/60	)Hz	Pol/Phase	e	: H	IORIZONTAL
Test Mo	de	: Mode	2	Temperat	ure	: 2	5 °C
Test Da	te	: Aug. 11,	2019	Humidity		: 5	2 %
Memo		: CH 39		Atmosphe	eric Pressure	e : 1	010 hpa
80.0 dBu	iV/m			FCC CL D. F			
				FLL Class B H	ladiation (above 1G	нгј реак	
				ECC Class P	Radiation (above 1	CUa) Aug	
				LCC Class B	naulation (above 1	unzj Avg	
		- 4 5	6				
40	1 2 X X	3 <b>4</b> 5 5	<b>X</b>				
0.0 1000.000	2700.00 4400.00	0 6100.00	7800.00 9500.0	00 11200.00 1	12900.00 14600.	00	18000.00 MHz
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margir (dB)	Detector
1	3946.667	-2.07	42.27	40.20	74.00	-33.80	peak
2	4400.000	0.15	40.53	40.68	74.00	-33.32	peak
3	4882.000	1.38	38.75	40.13	74.00	-33.87	peak
4	5958.333	3.16	37.96	41.12	74.00	-32.88	peak
5	6581.667	3.72	37.41	41.13	74.00	-32.87	peak
6	7323.000	6.34	36.15	42.49	74.00	-31.51	peak

Note: Level = Reading + Factor
Margin = Level – Limit

Factor = Antenna Factor + Cable Loss - Amplifier Factor

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Power		:	120V/60	Hz	Pol	/Phas	е	:	VE	RTICAL
Test Mo	de	:	Mode 2	2	Ten	nperat	ure	:	25	°C
Test Da	te	:	Aug. 11, 2019 Humidity				:	52	%	
Memo		:	CH 39		Atn	nosphe	eric Pressu	re :	101	0 hpa
80.0 dBu	V/m				FCC (	CI D. D	adiation (above 1	CU-)k		
					FLL	LIASS B H	adiation (above	ингј реак		
					FCC	Cl D	Radiation (above	1011-3-4		
					FUL	Class B	nadiation (above	Tunz) Avg		
	2		4 5 5	<u> </u>						
40	1 2 3	3 	4 5 ×	`						
0.0 1000.000	2700.00 4400.00		6100.00	7800.00 9500.0	00 1120	00.00 1	2900.00 1460	0.00	18	3000.00 MHz
No.	Frequency (MHz)		Factor dB/m)	Reading (dBuV)	Lev (dBu		Limit (dBuV/m)	Marq (dE		Detector
1	3748.333		-2.75	42.01	39.	26	74.00	-34.	74	peak
2	4230.000		-0.72	41.36	40.	64	74.00	-33.	36	peak
3	4882.000		1.38	38.71	40.	09	74.00	-33.	91	peak
4	5618.333		2.31	38.92	41.	23	74.00	-32.	77	peak
5	6355.000		3.40	38.54	41.	94	74.00	-32.0	06	peak
6	7323.000		6.34	36.58	42.	92	74.00	-31.0	30	peak

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Note: Level = Reading + Factor Margin = Level – Limit

Factor = Antenna Factor + Cable Loss - Amplifier Factor

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Power		: 120V/60	)Hz	Pol/Phas	e	:	HORIZONTAL
Test Mo	de	: Mode 2		Temperat	ture	: :	25 °C
Test Da	te	: Aug. 11	, 2019	Humidity		:	52 %
Memo		: CH 78		Atmosphe	eric Pressure	e :	1010 hpa
80.0 dBu	W/m			ECC Class P. E	ladiation (above 1G	Uz) posk	
				TCC Class B T	iaulation (above 10	пгу реак	
				FCC Class B	Radiation (above 1	GHzì Ava	
		3 4 5 * * *	6 X				
40	1 2 * *						
0.0							
1000.000	2700.00 4400.00		7800.00 9500.0		12900.00 14600.		18000.00 MHz
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margi (dB)	
1	3805.000	-2.56	42.27	39.71	74.00	-34.2	9 peak
2	4428.333	0.29	38.52	38.81	74.00	-35.1	9 peak
3	4960.000	1.52	39.10	40.62	74.00	-33.3	8 peak
4	6440.000	3.44	37.39	40.83	74.00	-33.1	7 peak
5	6780.000	4.37	37.55	41.92	74.00	-32.0	8 peak
6	7440.000	6.80	35.89	42.69	74.00	-31.3	1 peak

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Note: Level = Reading + Factor Margin = Level – Limit

Factor = Antenna Factor + Cable Loss - Amplifier Factor

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Power		: 120V/60	120V/60Hz		Pol/Phase :		
Test Mo	ode	: Mode 2	Mode 2		Temperature :		
Test Da	te	: Aug. 11	Aug. 11, 2019		Humidity :		
Memo		: CH 78		Atmosphe	Atmospheric Pressure :		
80.0 dBu	ıV/m			FCC Class D. F	)	U-3 I:	
				FLL Class B H	Radiation (above 1G	нгј реак	
				FCC Class D	D - 1 - 1 1	CH-) A	
				FLU Class B	Radiation (above 1	GHZJ AVG	
			6 ×				
40	1 2 X X	3 <b>4</b> 5	X				
1000 000	2700.00 4400.00	0 6100.00	7800.00 9500.0	0 11200.00 1	12900.00 14600.	nn 1	8000.00 MHz
No.	Frequency	Factor	Reading	Level	Limit	Margin	Detector
	(MHz)	(dB/m)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	3748.333	-2.75	41.54	38.79	74.00	-35.21	peak
2	4116.667	-1.29	40.26	38.97	74.00	-35.03	peak
3	4960.000	1.52	38.86	40.38	74.00	-33.62	peak
4	5958.333	3.16	37.31	40.47	74.00	-33.53	peak
5	6581.667	3.72	36.20	39.92	74.00	-34.08	peak
6	7440.000	6.80	35.84	42.64	74.00	-31.36	peak

Note: Level = Reading + Factor Margin = Level – Limit

Factor = Antenna Factor + Cable Loss - Amplifier Factor

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Power		: 120V/60	120V/60Hz		Pol/Phase :			
Test Mo	ode	: Mode 3	Mode 3		Temperature :			
Test Da	te	: Aug. 11	Aug. 11, 2019		Humidity :			
Memo		: CH 00		Atmospheric Pressure :			1010 hpa	
80.0 dBu	uV/m			ECC Class D. E	Radiation (above 1G	Ua) acak		
				FLL Class B F	radiation (above 16	нгј реак		
				FCC Class D	D. J.	CII-) 4		
				rcc class b	Radiation (above 1	инг) Ауд		
		4 5	5					
40	1 2 3	4 5 >	ζ					
1000 000	2700.00 4400.00	6100.00	7800.00 9500.0	00 11200.00	12900.00 14600.	nn ·	18000.00 MHz	
No.	Frequency	Factor	Reading	Level	Limit	Margin	Detector	
	(MHz)	(dB/m)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
1	3748.333	-2.75	42.74	39.99	74.00	-34.01	peak	
2	4456.667	0.44	40.26	40.70	74.00	-33.30	peak	
3	4804.000	1.23	40.13	41.36	74.00	-32.64	peak	
4	5930.000	3.09	37.85	40.94	74.00	-33.06	peak	
5	6525.000	3.54	37.07	40.61	74.00	-33.39	peak	
6	7206.000	5.88	36.58	42.46	74.00	-31.54	peak	

Note: Level = Reading + Factor Margin = Level – Limit

Factor = Antenna Factor + Cable Loss - Amplifier Factor

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Power		: 120V/60	120V/60Hz		Pol/Phase :			
Test Mo	de	: Mode 3	Mode 3		ure	: 2	25 °C	
Test Da	te	: Aug. 11	Aug. 11, 2019			: 5	52 %	
Memo		: CH 00	CH 00		eric Pressur	e : 1	1010 hpa	
80.0 dBu	V/m			ECC CL D D				
				FLL Class B H	ladiation (above 16	інгу реак		
				FCC Class D	Radiation (above 1	CH-) A		
				FCC Class B	nadiadon (aboye i	unzj Avg		
	. 2 3	4.5	6					
40	1 2 3 X X X	4 5	\$					
0.0 1000.000	2700.00 4400.00	6100.00	7800.00 9500.0	0 11200.00 1	12900.00 14600	.00	18000.00 MHz	
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margir (dB)		
1	3748.333	-2.75	43.34	40.59	74.00	-33.41	peak	
2	4201.667	-0.86	42.31	41.45	74.00	-32.55	peak	
3	4804.000	1.23	39.81	41.04	74.00	-32.96	peak	
4	5703.333	2.52	38.94	41.46	74.00	-32.54	peak	
5	6213.333	3.35	38.40	41.75	74.00	-32.25	peak	
6	7206.000	5.88	36.43	42.31	74.00	-31.69	peak	

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Note: Level = Reading + Factor Margin = Level – Limit

Factor = Antenna Factor + Cable Loss - Amplifier Factor

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Power		: 1	20V/60	Hz	Pol/F	Phase	)	: HORIZONTAL		
Test Mo	ode	: N	/lode 3		Tem	Temperature :			25 °C	
Test Da	te	: A	ug. 11,	2019	Hum	idity		:	52	%
Memo	Memo : CH 39			Atmo	osphe	ric Pressu	re :	101	0 hpa	
80.0 dBu	ıV/m									
					FUU Ula	ass B H	adiation (above 1	tiHz] peak		
					FCC C	Jass B	Radiation (above	1GHz) Avg		
40	12 **	3 4	5 5	<b>{</b>						
0.0 1000 000	2700.00 4400.00	61	00.00	7800.00 9500.0	00 11200.	NN 1	2900.00 1460	n nn	18	:000.00 MHz
No.	Frequency (MHz)	Fa	ctor B/m)	Reading (dBuV)	Leve (dBuV	el	Limit (dBuV/m)	Març	gin	Detector
1	3578.333	-3	3.33	42.19	38.8	6	74.00	-35.	14	peak
2	3833.333	-2	2.46	41.68	39.2	2	74.00	-34.	78	peak
3	4882.000	1	.38	39.51	40.8	9	74.00	-33.	11	peak
4	5788.333	2	.74	37.70	40.4	4	74.00	-33.	56	peak
5	6411.667	3	.42	37.57	40.9	9	74.00	-33.0	01	peak
6	7323.000	6	.34	35.81	42.1	5	74.00	-31.8	85	peak

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Note: Level = Reading + Factor Margin = Level – Limit

Factor = Antenna Factor + Cable Loss - Amplifier Factor

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Powe	er	: 120V/60	)Hz	Pol/Phas	e	: VE	RTICAL
Test I	Mode	: Mode 3		Temperature : 25 °C		°C	
Test [	Date	: Aug. 11	, 2019	Humidity		: 52	%
Memo				10 hpa			
80.0	dBuV/m			FCC Class B F	ladiation (above 1G	Hz) peak	
				FCC Class B	Radiation (above 1	GHz) Avg	
			c				
40	1 2 * *	3 <b>4</b> 5	6 X				
0.0							
1000.	.000 2700.00 4400.00		7800.00 9500.0		12900.00 14600.		8000.00 MHz
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	3578.333	-3.33	42.77	39.44	74.00	-34.56	peak
2	3861.667	-2.36	42.24	39.88	74.00	-34.12	peak
3	4882.000	1.38	38.77	40.15	74.00	-33.85	peak
4	5901.667	3.02	37.71	40.73	74.00	-33.27	peak
5	6440.000	3.44	36.68	40.12	74.00	-33.88	peak
6	7323.000	6.34	36.64	42.98	74.00	-31.02	peak

Note: Level = Reading + Factor Margin = Level – Limit

Factor = Antenna Factor + Cable Loss - Amplifier Factor

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Power		: 120V/60	)Hz	Pol/Phase	е	:	HORIZ	ONTAL
Test Mo	de	: Mode 3		Temperat	Temperature : 25 °C			
Test Dat	te	: Aug. 11	, 2019	Humidity		:	52 %	
Memo	Memo : CH 78			Atmosphe	eric Pressur	e :	1010 իլ	ра
80.0 dBu	V/m			FCC Class B. F	ladiation (above 16	11-1		٦
				FLL Class B H	radiation (above 16	інгі реак		-
				FCC Class D	D - Ji-ii - f - h	CU-) A		-
				FCC Class B	Radiation (above 1	unzj Avg		-
			ě					
40	1 <sup>2</sup>	34 5 *	<u>^</u>					-
								-
0.0 1000.000	2700.00 4400.00	0 6100.00	7800.00 9500.0	0 11200.00 1	12900.00 14600	nn	18000.00	] D MHz
No.	Frequency	Factor	Reading	Level	Limit	Marg	in De	etector
	(MHz)	(dB/m)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	)	
1	3946.667	-2.07	40.90	38.83	74.00	-35.1	7	peak
2	4428.333	0.29	40.00	40.29	74.00	-33.7	1	peak
3	4960.000	1.52	39.10	40.62	74.00	-33.3	8	peak
4	5165.000	1.74	37.99	39.73	74.00	-34.2	.7	peak
5	6695.000	4.09	36.84	40.93	74.00	-33.0	7	peak
6	7440.000	6.80	36.19	42.99	74.00	-31.0	1	peak

Note: Level = Reading + Factor Margin = Level – Limit

Factor = Antenna Factor + Cable Loss - Amplifier Factor

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Power		: 120V/60	)Hz	Pol/Phase	e	:	VERTIC	AL
Test Mo	ode	: Mode 3		Temperature : 2		25 °C		
Test Da	te	: Aug. 11,	2019	Humidity		:	52 %	
Memo		: CH 78		Atmosphe	eric Pressure	e :	1010 hp	а
80.0 dBu	uV/m			FCC CL D F	ladiation (above 1G			1
				FLL Class B H	radiation (above 16	нгј реак		
				ECC Class P	Radiation (above 1	GUa) Ava		
				TCC Class B	Tradiation (above 1	ulizj A <del>t</del> g		
		5	6 X					
40	1 2	3 4 5						
0.0 1000.000	) 2700.00 <b>44</b> 00.00	6100.00	7800.00 9500.0	0 11200.00 1	12900.00 14600.	00	18000.00	 MHz
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Marg (dB)		tector
1	3578.333	-3.33	42.56	39.23	74.00	-34.7	77 p	eak
2	4428.333	0.29	39.82	40.11	74.00	-33.8	39 p	eak
3	4960.000	1.52	38.79	40.31	74.00	-33.6	69 p	eak
4	6043.333	3.28	37.03	40.31	74.00	-33.6	69 p	eak
5	6893.333	4.73	36.28	41.01	74.00	-32.9	9 p	eak
6	7440.000	6.80	35.76	42.56	74.00	-31.4	4 r	eak

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Note: Level = Reading + Factor Margin = Level – Limit

Factor = Antenna Factor + Cable Loss - Amplifier Factor

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#### 6. 20dB Bandwidth Measurement

#### 6.1 Test Limit

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 125mW.

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#### 6.2 Test Standard

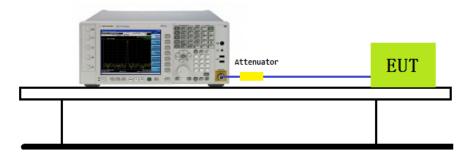
ANSI C63.10-2013- Section 7.8.7

#### 6.3 Test Setup

- 1. Set RBW ≥ 1% of the 20dB bandwidth
- 2. VBW ≥ 3 ×RBW
- 3. Span = approximately 2 to 3 times the 20dB bandwidth, centered on a hopping channel
- 4. Detector = Peak
- 5. Trace mode = max hold
- 6. Sweep = auto couple
- 7. Allow the trace to stabilize
- 8. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 20dB relative to the maximum level measured in the fundamental emission

#### 6.4 Test Setup Layout

### Spectrum Analyzer



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#### 6.5 Test Result and Data

Test Item	Occupied Bandwidth
Test Mode	Mode 1: Transmitter DH5

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Channel No.	Frequency(MHz)	20dB Bandwidth(kHz)
00	2402	938.0
39	2441	946.3
78	2480	942.3



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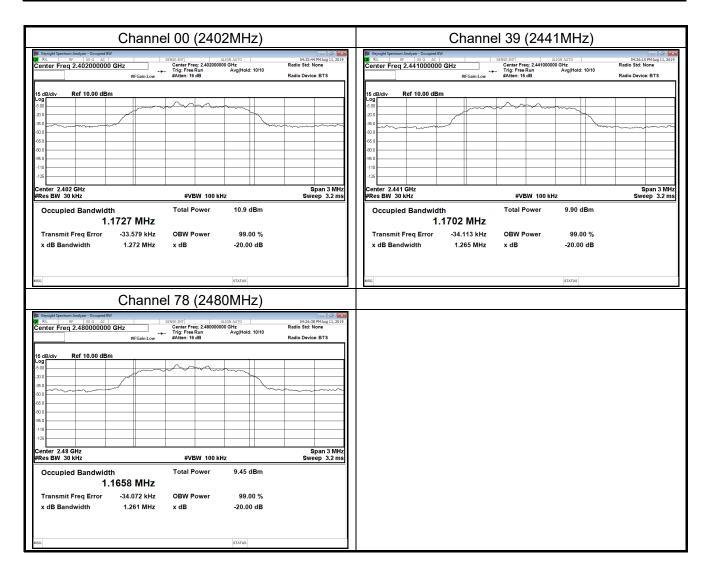


Test Item	Occupied Bandwidth
Test Mode	Mode 2: Transmitter 2DH5

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Channel No.	Frequency(MHz)	20dB Bandwidth(kHz)
00	2402	1272.0
39	2441	1265.0
78	2480	1261.0



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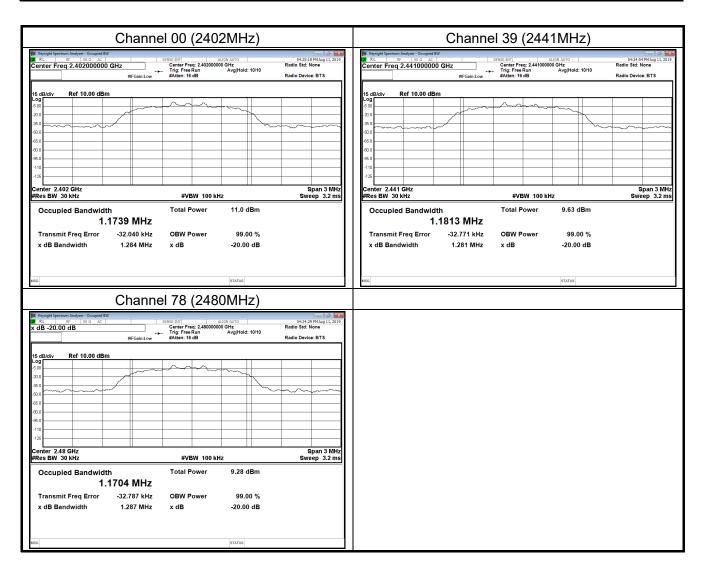


Test Item	Occupied Bandwidth
Test Mode	Mode 3: Transmitter 3DH5

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Channel No.	Frequency(MHz)	20dB Bandwidth(kHz)
00	2402	1284.0
39	2441	1281.0
78	2480	1287.0



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### 7. Channel Carrier Frequencies Separation Measurement

#### 7.1 Test Limit

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.

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#### 7.2 Test Standard

ANSI C63.10-2013- Section 7.8.2

#### 7.3 Test Setup

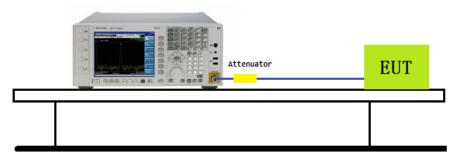
The EUT shall have its hopping function enabled. Use the following spectrum analyzer settings:

- a) Span: Wide enough to capture the peaks of two adjacent channels.
- b) RBW: Start with the RBW set to approximately 30% of the channel spacing; adjust as necessary to best identify the center of each individual channel.
- c) Video (or average) bandwidth (VBW) ≥ RBW
- d) Sweep: Auto
- e) Detector function: Peak
- Trace: Max hold f)
- g) Allow the trace to stabilize

Use the marker-delta function to determine the separation between the peaks of the adjacent channels. Compliance of an EUT with the appropriate regulatory limit shall be determined. A plot of the data shall be included in the test report.

## 7.4 Test Setup Layout

### Spectrum Analyzer



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## 7.5 Test Result and Data

Test Item	:	Channel Carrier Frequency Separation
Test Mode	• •	Mode 1: Transmitter DH5

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Channel No.	Frequency (MHz)	Carrier Frequency Separation (kHz)	Limit (kHz)	Result
00	2402	1000	>25 kHz or 2/3 of 20 dB BW	Pass
39	2441	1000	>25 kHz or	Pass
			2/3 of 20 dB BW >25 kHz or	. 0.00
78	2480	1000	2/3 of 20 dB BW	Pass

Test Item	• •	Carrier Frequency Separation
Test Mode	•	Mode 2: Transmitter 2DH5

Channel No.	Frequency (MHz)	Carrier Frequency Separation(kHz)	Limit (kHz)	Result
00	2402	1000	>25 kHz or 2/3 of 20 dB BW	Pass
39	2441	1000	>25 kHz or 2/3 of 20 dB BW	Pass
78	2480	1000	>25 kHz or 2/3 of 20 dB BW	Pass

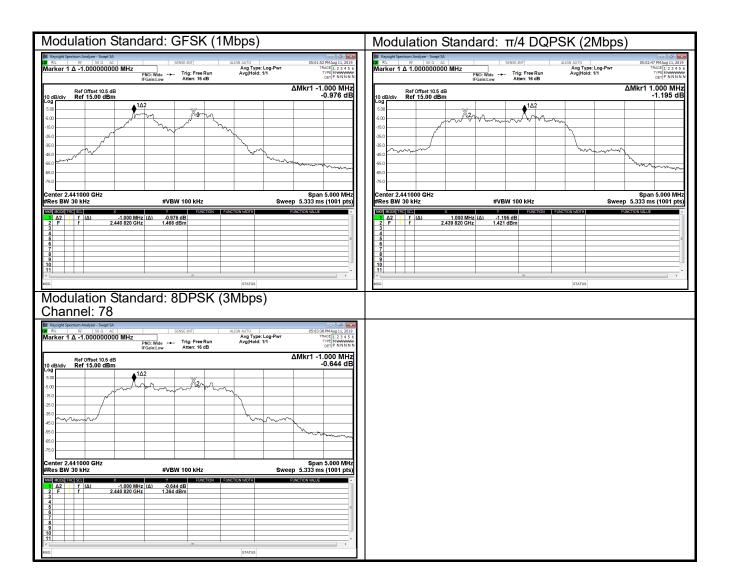
Test Item	• •	Carrier Frequency Separation
Test Mode	•	Mode 3: Transmitter 3DH5

Channel No.	Frequency (MHz)	Carrier Frequency Separation(kHz)	Limit (kHz)	Result
00	2402	1000	>25 kHz or 2/3 of 20 dB BW	Pass
39	2441	1000	>25 kHz or 2/3 of 20 dB BW	Pass
78	2480	1000	>25 kHz or 2/3 of 20 dB BW	Pass

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### 8. Dwell Time Measurement

#### 8.1 Test Limit

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

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#### 8.2 Test Standard

ANSI C63.10-2013- Section 7.8.3

#### 8.3 Test Setup

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

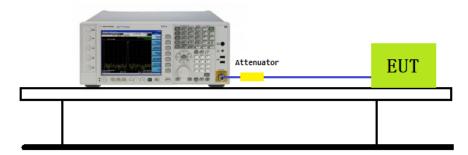
- a) Span: Zero span, centered on a hopping channel.
- b) RBW shall be ≤ channel spacing and where possible RBW should be set >> 1 / T, where T is the expected dwell time per channel.
- c) Sweep: As necessary to capture the entire dwell time per hopping channel; where possible use a video trigger and trigger delay so that the transmitted signal starts a little to the right of the start of the plot. The trigger level might need slight adjustment to prevent triggering when the system hops on an adjacent channel; a second plot might be needed with a longer sweep time to show two successive hops on a channel.

d) Detector function: Peak

e) Trace: Max hold

### 8.4 Test Setup Layout

### Spectrum Analyzer



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#### 8.5 Test Result and Data

Test Date : Aug. 11, 2019 Temperature : 22C Atmospheric pressure : 1017 hPa Humidity : 60 %

Test Period = 0.4 (second/ channel) x 79 Channel = 31.6 sec

Modulation Standard: GFSK(1Mbps)

DH 1

Pulse Time	Total of Dwell	Period Time	Limit	
(ms)	(ms)	(s)	(ms)	Result
0.408	130.56	31.6	400	PASS

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Remark:Total of Dwell =pulse Time\*(1600/2)/79\*Period Time DH 3

Pulse Time	Total of Dwell	Period Time	Limit	
(ms)	(ms)	(s)	(ms)	Result
1.665	266.40	31.6	400	PASS

Remark:Total of Dwell =pulse Time\*(1600/4)/79\*Period Time DH 5

Pulse Time	Total of Dwell	Period Time	Limit	
(ms)	(ms)	(s)	(ms)	Result
2.905	309.87	31.6	400	PASS

Remark:Total of Dwell =pulse Time\*(1600/6)/79\*Period Time

Modulation Standard: π /4 DQPSK(2Mbps)

DH 1

Pulse Time	Total of Dwell	Period Time	Limit	
(ms)	(ms)	(s)	(ms)	Result
0.414	132.48	31.6	400	PASS

Remark:Total of Dwell =pulse Time\*(1600/2)/79\*Period Time DH 3

Pulse Time	Total of Dwell	Period Time	Limit	
(ms)	(ms)	(s)	(ms)	Result
1.665	266.40	31.6	400	PASS

Remark:Total of Dwell =pulse Time\*(1600/4)/79\*Period Time DH 5

Pulse Time	Total of Dwell	Period Time	Limit	
(ms)	(ms)	(s)	(ms)	Result
2.92	311.47	31.6	400	PASS

Remark:Total of Dwell =pulse Time\*(1600/6)/79\*Period Time

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Modulation Standard: 8DPSK(3Mbps)

DH 1

Pulse Time	Total of Dwell	Period Time	Limit	
(ms)	(ms)	(s)	(ms)	Result
0.417	133.44	31.6	400	PASS

Remark:Total of Dwell =pulse Time\*(1600/2)/79\*Period Time DH 3

Pulse Time	Total of Dwell	Period Time	Limit	
(ms)	(ms)	(s)	(ms)	Result
1.665	266.40	31.6	400	PASS

Remark:Total of Dwell =pulse Time\*(1600/4)/79\*Period Time DH 5

Pulse Time	Total of Dwell	Period Time	Limit	
(ms)	(ms)	(s)	(ms)	Result
2.92	311.47	31.6	400	PASS

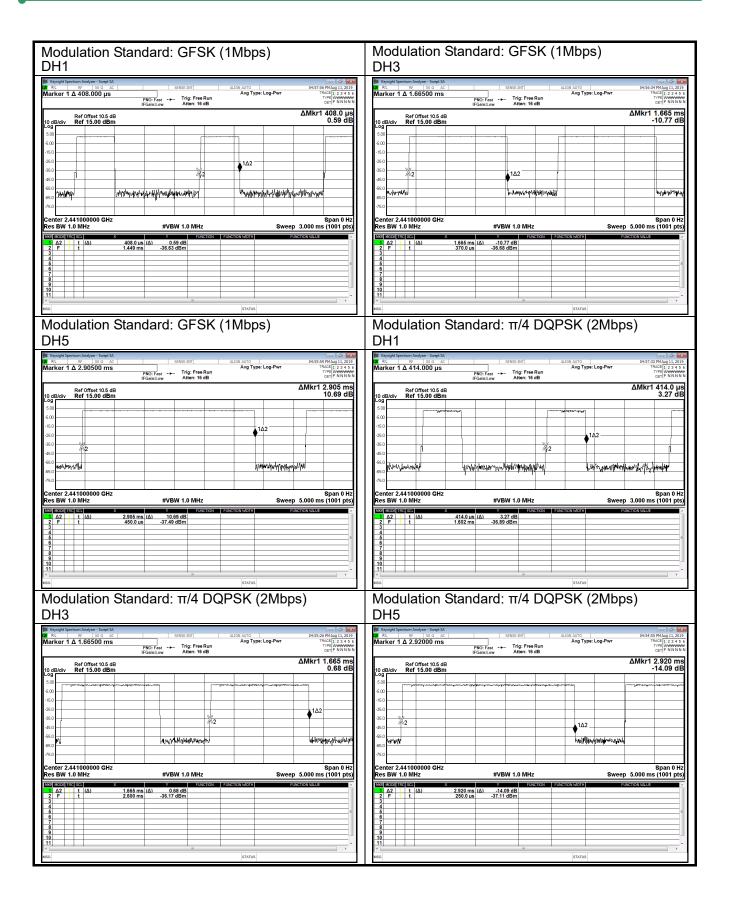
Remark: Total of Dwell =pulse Time\*(1600/6)/79\*Period Time

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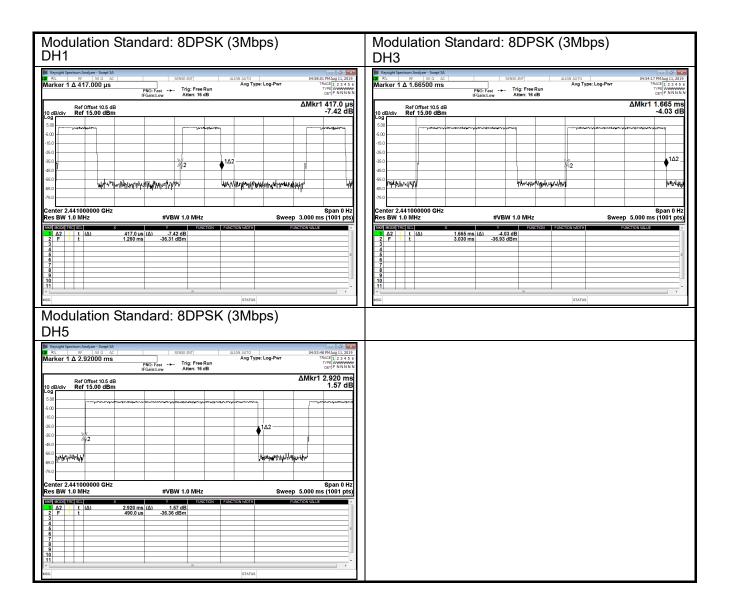
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Test Period = 0.4 (second/ channel) x 20 Channel = 8 sec

	Frequency	Length of	Dwell Time	Limit	
Modulation Type	Frequency (MHz)	transmission transmission in		, ,	
		time (ms)	(20 Hopping*0.4)	(ms)	(ms)
AFH (DH1)	2402-2421	0.417	160	66.72	400
AFH (DH3)	2402-2421	1.675	80	134.00	400
AFH (DH5)	2402-2421	2.925	53.33	155.99	400

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## 9. Number of Hopping Channels Measurement

### 9.1 Test Limit

Frequency hopping systems in the 2400 ~ 2483.5 MHz band shall use at least 15 channels.

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#### 9.2 Test Standard

ANSI C63.10-2013- Section 7.8.3

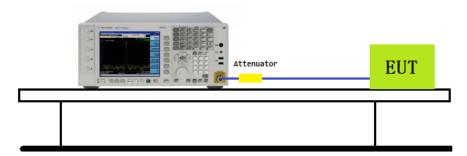
#### 9.3 Test Setup

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

- a) Span: The frequency band of operation. Depending on the number of channels the device supports, it may be necessary to divide the frequency range of operation across multiple spans, to allow the individual channels to be clearly seen.
- b) RBW: To identify clearly the individual channels, set the RBW to less than 30% of the channel spacing or the 20 dB bandwidth, whichever is smaller.
- c) VBW ≥ RBW
- d) Sweep: Auto
- e) Detector function: Peak
- f) Trace: Max hold
- g) Allow the trace to stabilize

### 9.4 Test Setup Layout

### Spectrum Analyzer



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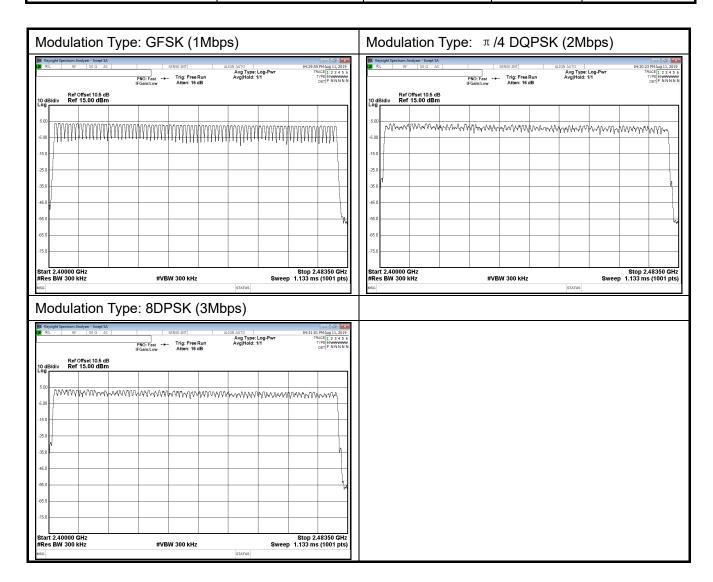
#### 9.5 Test Result and Data

Test Item : Number of Hopping Frequencies

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Test Mode	Frequency Band	Number of Hopping	Limit	Result
	(MHz)	Frequencies		
Mode 1: Transmitter DH5	2400 - 2483.5	79	>15	Pass
Mode 2: Transmitter DH5	2400 - 2483.5	79	>15	Pass
Mode 3: Transmitter DH5	2400 - 2483.5	79	>15	Pass



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### 10. Peak Output Power Measurement

#### 10.1 Test Limit

The Maximum Peak Output Power Measurement is 125mW (20.97dBm).

#### 10.2 Test Standard

ANSI C63.10-2013- Section 7.8.5

#### 10.3 Test Setup

#### Spectrum analyzer method

- a) Use the following spectrum analyzer settings:
- 1) Span: Approximately five times the 20 dB bandwidth, centered on a hopping channel.
- 2) RBW > 20 dB bandwidth of the emission being measured.
- 3) VBW ≥ RBW.
- 4) Sweep: Auto.
- 5) Detector function: Peak.
- 6) Trace: Max hold.
- b) Allow trace to stabilize.
- c) Use the marker-to-peak function to set the marker to the peak of the emission.
- d) The indicated level is the peak output power, after any corrections for external attenuators and cables.
- e) A plot of the test results and setup description shall be included in the test report

#### Peak power meter method

The antenna port ( RF output ) of the EUT was connected to the input ( RF input ) of a power meter. Power was read directly from the meter and cable loss connection was added to the reading to obtain power at the EUT antenna terminal. The EUT Output Power was set to maximum to produce the worse case test result.

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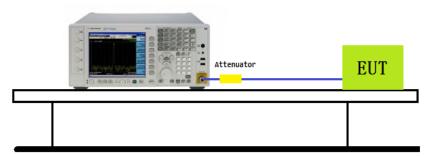
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## 10.4 Test Setup Layout

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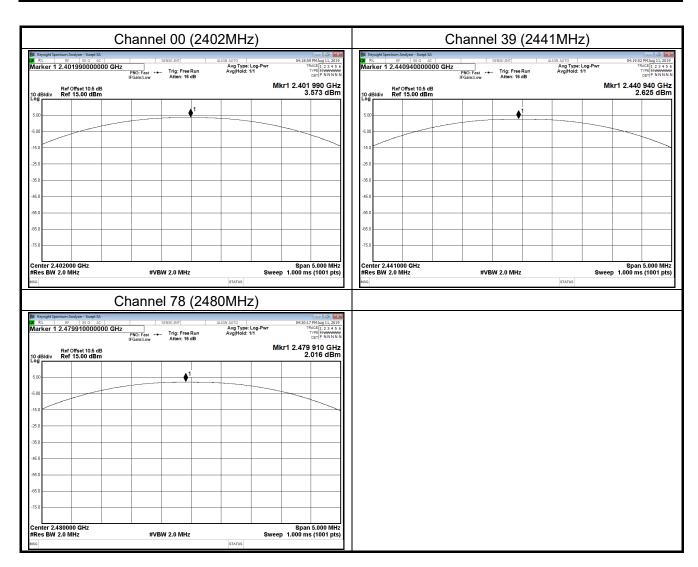
#### 10.5 Test Result and Data

Test Item	:	Peak Output Power
Test Mode		Mode 1: Transmitter DH5

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Channel No.	Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
0	2402	3.57	20.97	Pass
39	2441	2.63	20.97	Pass
78	2480	2.02	20.97	Pass



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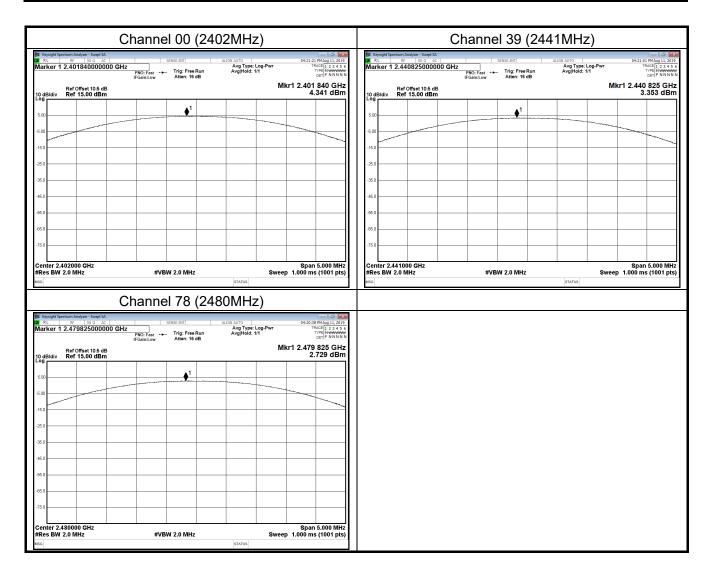


Test Item	:	Peak Output Power
Test Mode	:	Mode 2: Transmitter 2DH5

Report No.: SEFB1908102

Issued Date : Aug. 15, 2019

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
0	2402	4.34	20.97	Pass
39	2441	3.35	20.97	Pass
78	2480	2.73	20.97	Pass

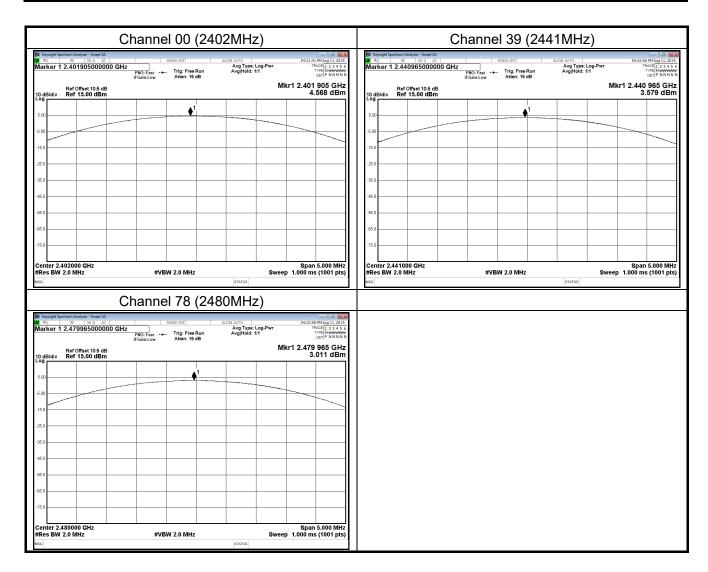


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Test Item	:	Peak Output Power
Test Mode	:	Mode 3: Transmitter 3DH5

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
0	2402	4.57	20.97	Pass
39	2441	3.58	20.97	Pass
78	2480	3.01	20.97	Pass



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### 11. Conducted Spurious Emissions Measurement

#### **11.1** Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated 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, provided the transmitter demonstrates compliance with the peak conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) of FCC part 15 is not required.

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#### 11.2 Test Procedure

According to ANSI C63.10: 2013.

Use the following spectrum analyzer settings:

Span = wide enough to capture the peak level of the in-band emission and all spurious emissions (e.g., harmonics) from the lowest frequency generated in the EUT up through the 10th harmonic. Typically, several plots are required to cover this entire span.

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RBW = 100 kHz

VBW ≧ RBW

Sweep = auto

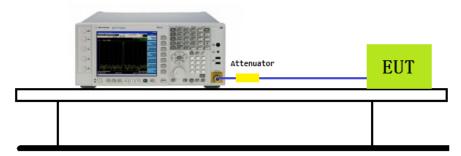
Detector function = peak

Trace = max hold

Allow the trace to stabilize. Set the marker on the peak of any spurious emission recorded. The level displayed must comply with the limit specified in this section.

#### 11.3 Test Setup

Spectrum Analyzer



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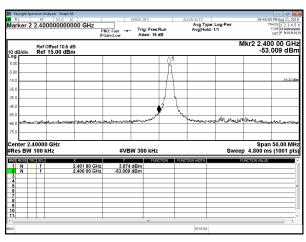
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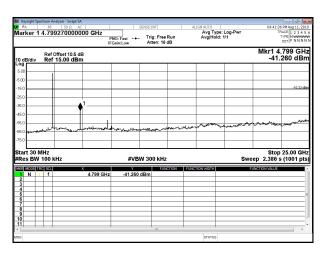
### 11.4 Test Result

#### Single test

Modulation Standard: GFSK (1Mbps)

Channel: 00

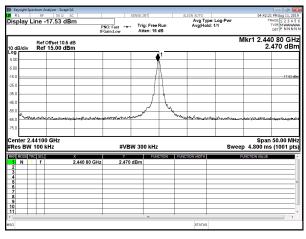


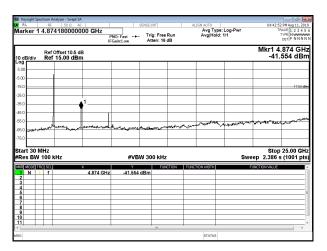


Report No.: SEFB1908102

Modulation Standard: GFSK (1Mbps)

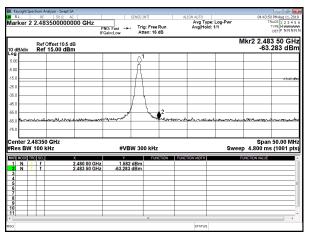
Channel: 39

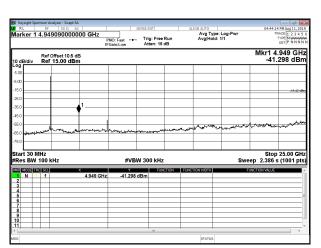




Modulation Standard: GFSK (1Mbps)

Channel: 78





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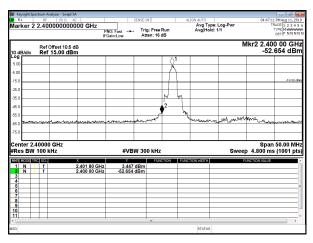
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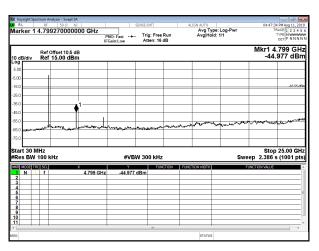
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Modulation Standard: π/4 DQPSK (2Mbps)

Channel: 00

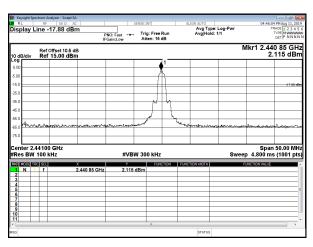


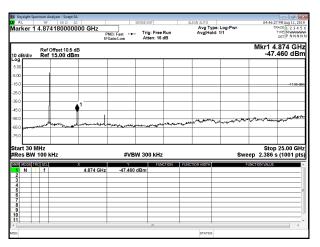


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Modulation Standard: π/4 DQPSK (2Mbps)

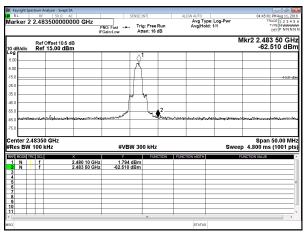
Channel: 39

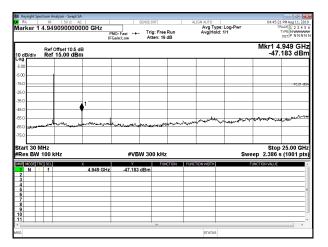




Modulation Standard: π/4 DQPSK (2Mbps)

Channel: 78





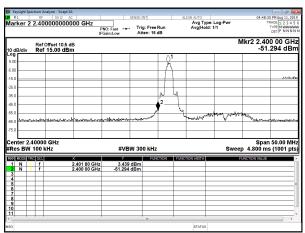
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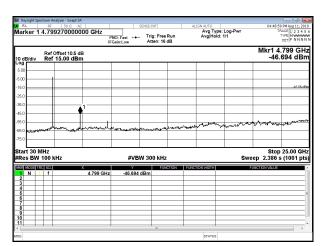


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Modulation Standard: 8DPSK (3Mbps)

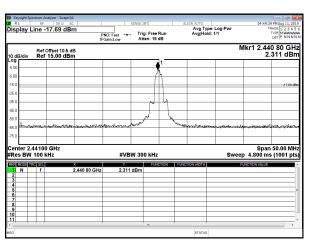
Channel: 00

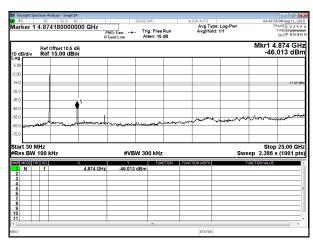




Modulation Standard: 8DPSK (3Mbps)

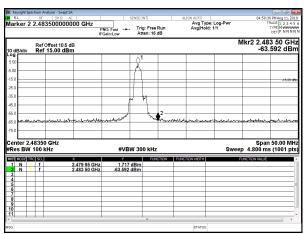
Channel: 39

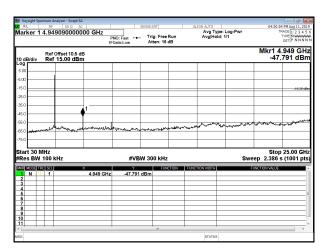




Modulation Standard: 8DPSK (3Mbps)

Channel: 78





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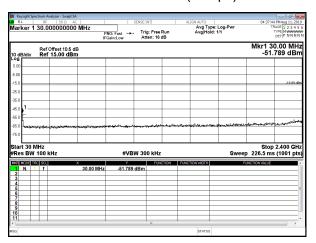
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## Modulation Standard: GFSK (1Mbps)

**Hopping test**Modulation Standard: GFSK (1Mbps)

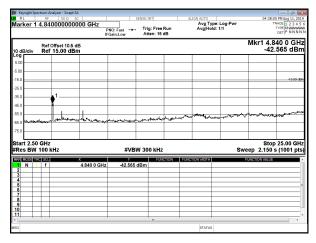


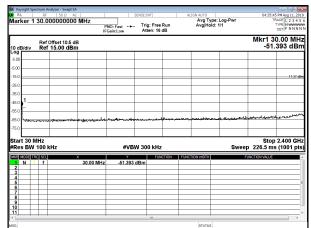
| Reproduct | State |

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Modulation Standard: GFSK (1Mbps)

Modulation Standard: π/4 DQPSK (2Mbps)



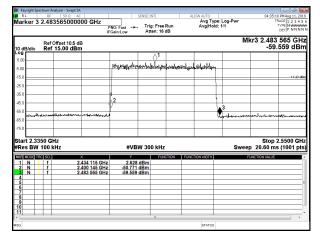


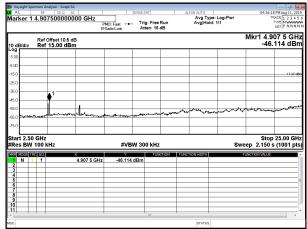
Modulation Standard:  $\pi/4$  DQPSK (2Mbps)

Modulation Standard:  $\pi/4$  DQPSK (2Mbps)

Channel: 39

Channel: 78



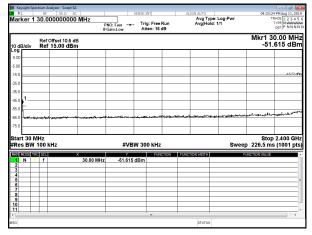




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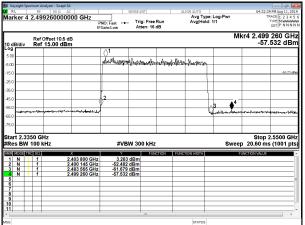
Modulation Standard: 8DPSK (3Mbps)

Channel: 00



Channel: 39 Marker 4 2.499260000000 GHz Avg Type: Log-Pwr Avg|Hold: 1/1 PNO: Fast Trig: Free Run

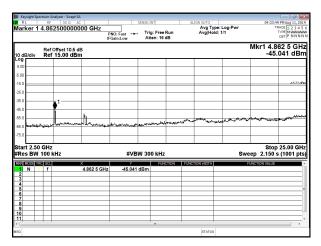
Modulation Standard: 8DPSK (3Mbps)



Modulation Standard: 8DPSK (3Mbps)

Channel: 78

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### 12. Radiated Emission Band Edge Measurement

#### **12.1 Limit**

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a) of FCC part 15.

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#### 12.2 Test Procedure

According to ANSI C63.10: 2013.

This test is required for any spurious emission or modulation product that falls in a Restricted Band, as defined in Section 15.205 of FCC part 15. It must be performed with the highest gain of each type of antenna proposed for use with the EUT. Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for  $f \ge 1$  GHz, 100 kHz for f < 1GHz

VBW ≧ RBW

Sweep = auto

Detector function = peak

Trace = max hold

Follow the guidelines in ANSI C63.10 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization, etc. A pre-amp and a high pass filter are required for this test, in order to provide the measuring system with sufficient sensitivity. Allow the trace to stabilize. The peak reading of the emission, after being corrected by the antenna factor, cable loss, pre-amp gain, etc., is the peak field strength, which must comply with the limit specified in Section 15.35(b) of FCC part 15.

Now set the VBW to 10 Hz, while maintaining all of the other instrument settings. This peak level, once corrected, must comply with the limit specified in Section 15.209 of FCC Part 15. If the dwell time per channel of the hopping signal is less than 100 ms, then the reading obtained with the 10 Hz VBW may be further adjusted by a "duty cycle correction factor", derived from 20log (dwell time/100 ms), in an effort to demonstrate compliance with the 15.209 limit of FCC part 15.

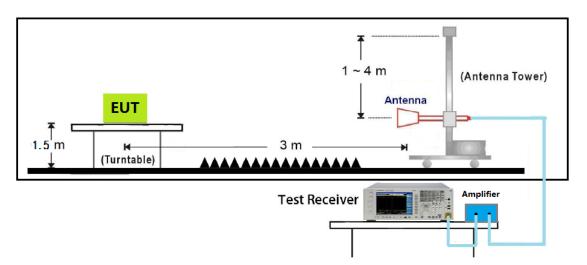
If the emission on which a radiated measurement must be made is located at the edge of the authorized band of operation, then the alternative "marker-delta" method may be employed.

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## 12.3 Test Setup



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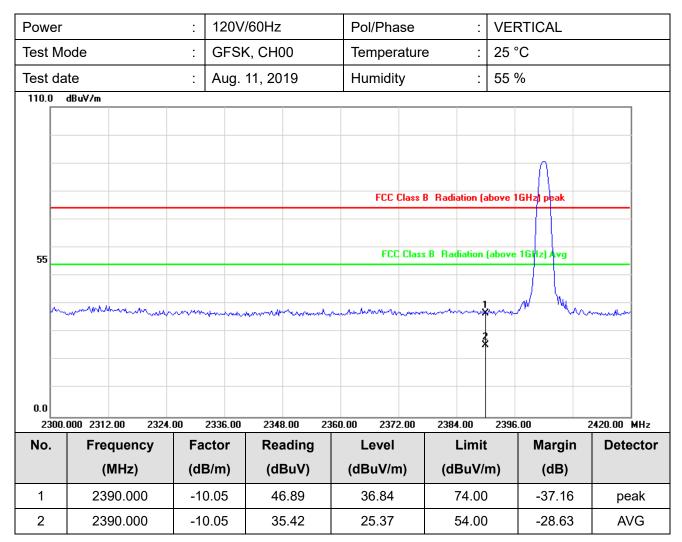
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#### 12.4 Test Result



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**Note:** Level=Reading +Factor.

Margin=Level-Limit.

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Power		•	120V	/60Hz	F	Pol/Pha	se	:	НОІ	RIZONTAL	-	
Test Mo	ode	:	GFSk	K, CH00	7	Temper	ature	e :	25 °	,C		
Test da	ate	:	Aug.	11, 2019	ŀ	Humidit	y	:	55 9	%		
110.0	dBuV/m											1
55			Marin	yhten mande		FCC	Class	B Radiation (a		1GHz) Avg		
0.0 2300. <b>No.</b>	000 2312.00 2324. Frequency (MHz)	Fa	2336.00 ctor 3/m)	2348.00 Reading (dBuV)		2372 Level		2384.00 Limit (dBuV/		.00 Margin (dB)	2420.00 Dete	MHz ector
1	2390.000	-10	0.05	48.60		38.55		74.00	)	-35.45	ре	eak
2	2390.000	-10	0.05	35.48		25.43		54.00	)	-28.57	A\	√G

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**Note:** Level=Reading +Factor. Margin=Level-Limit.

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Powe	r		:	120V	/60Hz			Pol/Ph	ase		:	VEF	RTICAL		
Test N	/lode		:	GFSk	GFSK, CH78				Temperature : 25 °			,C			
Test d	late			Aug.	11, 20	19		Humid	ity		:	55 °	%		
110.0	dBuV/m														1
		Λ													
								FCC	Class I	B Radi	ation (a	bove 1	GHz) peak		
55								FC	C Class	B Rac	liation	(above	1GHz) Avg		
	mhormanaum	الملاسمة	1		Mariaha	~~~	·	-markey	~~~~~	Modern	سس		moun	alana ana	
<u> </u>			2								,				
			*												
0.0															
245	0.000 2465.00	2480.0	00	2495.00	2510	0.00	2525.0	0 25	40.00	2555	5.00	2570	.00	2600.00	MHz
No.	Freque	ncy	Fa	ctor	Rea	ading		Leve	I		Limit		Margin	Det	ector
	(MHz	<u>z</u> )	(dE	3/m)	(di	BuV)	(	dBuV/	m)	(dl	BuV/ı	n)	(dB)		
1	2483.5	500	-9	.65	47	7.15		37.50	)	•	74.00		-36.50	ре	eak
2	2483.5	500	-9	.65	35	5.43		25.78	3		54.00		-28.22	A	VG

Report No.: SEFB1908102



Power		:	120V	/60Hz		Pol/Pha	ise		: НО	HORIZONTAL		
Test Mo	ode	:	GFS	K, CH7	78	Temper	Temperature : 25			°C		
Test da	ate	:	Aug.	11, 20	19	Humidit	:y		: 55	%		
110.0	dBuV/m											
						FCC	Class B	Radiatio	n (above	1GHz) peak		
55						FCC	Class	B Radiati	on (above	1GHz) Avg		
33												
~~	unany manufactured	1	hahardorn	-www	an white	mmm	whowe	mmm	whomp	-emmande	Marchany	
		*										
0.0	.000 2465.00 2480.	00	2495.00	2510	1 00 25	25.00 254	0.00	2555.00	2570	1 00	2600.00 MHz	
No.	Frequency		ctor		ading	Level		Lir		Margin	Detector	
	(MHz)	(di	3/m)	(dE	BuV)	(dBuV/n	n)	(dBu	V/m)	(dB)		
1	2483.500	-9	.65	46	6.70	37.05		74.	00	-36.95	peak	
2	2483.500	-9	.65	35	5.16	25.51		54.	00	-28.49	AVG	

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Power		:	120V	/60Hz	Pol/Phase	e :	VERTICAL	
Test M	ode	:	π/4 D	QPSK, CHO	00 Temperat	ure :	25 °C	
Test da	ate	•••	Aug.	11, 2019	Humidity	:	55 %	
55	dBuV/m	day. www.			FCC Cla		above 1GHz) peak (above 1GHz) Avg	
0.0	000 2312.00 2324.	nn	2336.00	2348.00	2360.00 2372.0	0 2384.00	2396.00	2420.00 MHz
No.	Frequency		ctor	Reading	Level	Limit		Detector
	(MHz) (d		B/m) (dBuV)		(dBuV/m)	(dBuV/	m) (dB)	
1	2390.000	-10	0.05	47.39	37.34	74.00	-36.66	peak
2	2390.000	-10	10.05 35.72		25.67	54.00	-28.33	AVG

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Power		:	120V/60Hz Pol/Phase :							НС	RIZ	ZO	NTA	λL		
Test M	ode	:	π/4 DQPSK, CH00 Temperature :							:	25	°C				
Test da	ate	:	Aug.	g. 11, 2019 Humidity : 55 %												
110.0	dBuV/m															7
													0			
							FCC	Class E	Radi	ation (a	above	1GH:	z) p	eak		
55							FCC	Class	B Rad	diation	(abov	e 1GI	lz)	Avg		
~	manne	handreen	marke	dinam	Manhagan	~~~~	Mayo	~~~~	nama		-	کہیں		m	haman markan	4
										2	<u> </u>					
										,						
0.0																
	.000 2312.00 2324		2336.00	234		60.00		2.00	2384			6.00			2420.00	
No.	Frequency		ctor		ading	_	evel			Limit				ırgiı	n Det	ector
	(MHz)	(dl	B/m) (dBuV)		(dB	uV/n	n)	(d	BuV/	m)		(0	dB)			
1	2390.000	-10	0.05	47	7.76	37	37.71 74.00			)		-3	6.29	) р	eak	
2	2390.000	0.000 -10.05		3	5.41	2	5.36			54.00	)		-2	8.64	1 A	VG

**Note:** Level=Reading +Factor. Margin=Level-Limit.

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Power		:	120V/	/60Hz		Pol/Pha	se		: \	/ERTICAL		
Test Mo	ode	:	π/4 D	QPSK, CH	78	Temper	ature	е	: 2	25 °C		
Test da	ite	:	Aug.	11, 2019		Humidit	У		: 5	55 %		
110.0	dBuV/m											7
55	-amananah	*			**************************************	FCC	Class	s B Radia	ition (ab	ove 1GHz) peak	Mariana	
0.0	000 2465.00 2486	1.00	2495.00	2510.00	2525	5.00 254	000	2555.0	10 3	2570.00	2600.00	MU
No.	Frequency		ctor	Reading		Level	5.00		mit	Margii		ector
	(MHz)		B/m)	(dBuV)		(dBuV/n	1)		u <b>V</b> /m)	_		
1	2483.500	-6	9.65	49.38		39.73		74	1.00	-34.27	' pe	eak
2	2483.500	-9	9.65	35.39		25.74		54	1.00	-28.26	S A	VG

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Power		:	120V	/60Hz		Pol/Pha	se		:	HOI	RIZONTAL				
Test M	ode	:	π/4 D	QPSk	K, CH78	Temper	ature	;	:	25 °	C				
Test da	ate		Aug.	11, 20	19	Humidit	.y		:	55 <sup>9</sup>	%				
110.0	dBuV/m					FCC	Class B	Radiati	ion (ab	ove 1	GHz) peak				
55											1GHz) Avg				
- MO	was of the open of	**************************************	AW/14-0 COP	· · · · · · · · · · · · · · · · · · ·		A Armondon	on de		www.	~,~			-		
0.0	.000 2465.00 2480.	 NN	2495.00	2510	1 00 25	25.00 254	n nn	2555.0	nn	2570	nn	2600.00	MHz		
No.	Frequency		ctor		ading	Level			imit		Margin		ector		
	(MHz) (d		3/m)	(di	BuV)	(dBuV/n	n)	(dB	uV/m	n) (dB)					
1	2483.500	-9	.65	46	6.15	36.50		74	4.00		-37.50	ре	eak		
2	2483.500	-9	.65	35	5.22	25.57		54	4.00		-28.43	A\	/G		

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**Note:** Level=Reading +Factor. Margin=Level-Limit.

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Power		:	120V	/60Hz	Pol/Phase	:	VERTICAL	
Test Mo	ode	:	8DPS	SK, CH00	Temperatur	e :	25 °C	
Test da	te	:	Aug.	11, 2019	Humidity	:	55 %	
110.0	dBuV/m							
55	man	e de Arramago		d	FCC Class		above 1GHz) peak (above 1GHz) Avg	
0.0 2300.	000 2312.00 2324.	00	2336.00	2348.00 23	860.00 2372.00	2384.00	2396,00	2420.00 MHz
No.	Frequency	Fa	ctor	Reading	Level	Limit	Margin	Detector
	(MHz)	(di	3/m)	(dBuV)	(dBuV/m)	(dBuV/ı	m) (dB)	
1	2390.000	-10	0.05	46.98	36.93	74.00	-37.07	peak
2	2390.000	-10	0.05	35.71	25.66	54.00	-28.34	AVG

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**Note:** Level=Reading +Factor. Margin=Level-Limit.

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Powe	r		:	120V	/60Hz		Р	ol/Pha	ase		:	НО	RIZON	ITAL	ΓAL				
Test N	Лode		:	8DPS	K, C⊦	100	Te	emper	ature	9	:	25 °	,C						
Test o	late		:	Aug.	11, 20	19	Н	umidi	ty		:	55 °							
110.0	dBuV/m															]			
								FCC Class B Radiation (				bove 1	GHz) pe	ak					
55								FC	Class	B Rac	liation	(above	1GHz) /	vg					
											1								
ļ.,	was the same of th		L	alway was	_^	hadra de la composition della	······································	made	A	**********	www	s.	and .	hour	up-durante-				
											Ś								
0.0																			
230 No.	0.000 2312.00 Erogue	2324.0	o z	336.00	2348 Bos		2360.00	237 Level	2.00	2384	.00 Limit	2396			2420.00	MHz ector			
NO.	Freque	_				ading BuV)								rgin B\	Dete	ector			
1	(MHz	-	(dB	•	•		·	BuV/r	'')	•	<b>3uV</b> /1	-		B)		n al c			
1	2390.0		-10			7.84		37.79			74.00		-36		<u> </u>	eak			
2	2390.0	UU	-10	.05	35	5.76		25.71			54.00	)	-28	.29	A\	√G			

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**Note:** Level=Reading +Factor. Margin=Level-Limit.

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Power		:	120V	/60Hz	Pol/Pha	se		: VE	RTICAL		
Test Mo	ode	:	8DPS	SK, CH78	Tempera	ature	9	: 25	°C		
Test da	ite	:	Aug.	11, 2019	Humidit	у		: 55	%		
110.0	dBuV/m										1
55		*	~~~~		FCC	Class	B Radiatio	n (abov	1GHz) peak	or the state of th	
No.	000 2465.00 2480 Frequency (MHz)	Fa (dl	2495.00 ctor B/m)	2510.00 Reading (dBuV)	Level (dBuV/m		2555.00 Lim (dBu\	iit //m)	Margin		ector
1	2483.500		9.65	47.99	38.34 74.0			0 -35.66		eak	
2	2483.500	-6	9.65	35.34	25.69		54.0	00	-28.31	A۱	/G

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Power	٢	:	120V/60Hz				Pol/Ph	ase		:	НО	RIZONTA	IZONTAL			
Test M	lode	:	8DPS	SK, CH	178		Tempe	rature	;	:	25 °	25 °C				
Test da	ate	:	Aug.	11, 20	19		Humidi	ty		:	55 (	%				
110.0	dBuV/m															
	<u> </u>	1					FCC	Class B	Radia	ation (a	bove 1	IGHz) peak				
55							FC	C Class	B Rad	liation	(above	: 1GHz) Avg				
	mana mana	1 ************************************	ranametrico.	modulyon	~~~~	unun	made of the second	maha	-mp		N <sub>W</sub> AAN	************	and a second second			
0.0																
2450 No.	0.000 2465.00 2480.		2495.00 ctor	2510 Box		2525.0	0 254 Level	10.00	2555	i.00 Limit	2570		2600.00	MHz ector		
NO.	Frequency (MHz)		B/m)		ading BuV)	(	dBuV/ı			SuV/ı		Margin (dB)	Deto	ector		
1	2483.500	-6	9.65 46.79			37.14 74			74.00		-36.86	ре	eak			
2	2483.500	-6	9.65	35	5.23		25.58		5	54.00		-28.42	A	VG		

**Note:** Level=Reading +Factor. Margin=Level-Limit.

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