FCC TEST REPORT

Report No.: SEFB1908144

According to

CFR47 §15.247

Applicant : Protop International Inc.

10F-8, No.237, Sec.,1, Datong Rd., Xizhi Dist., New Taipei City 22161,

Address

Taiwan, R.O.C.

Manufacturer: Protop International Inc.

10F-8, No.237, Sec.,1, Datong Rd., Xizhi Dist., New Taipei City 22161,

Address

: Taiwan, R.O.C.

: 2-in-1 Bluetooth Transmitter/Receiver Adapter Equipment

Model No. : B07TVPVC7N **Brand** : AmazonBasics

FCC ID : 2AAYXB07TVPVC7N

Test Period : Aug. 07, 2019~ Jan. 17, 2020

Approved by

Miro Chueh(EMC/RF Manager)

- 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 except 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.

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Report No.	Version	Issue Date	Description
SEFB1908144	Rev 01	Jan. 17, 2020	Original

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1. Report of Measurements and Examinations

FCC Rule	FCC Rule . Description of Test	
§ 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)	§ 15.247(b) . Number of Hopping Channels	
§ 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	2-in-1 Bluetooth Transmitter/Receiver Adapter
Model No.	B07TVPVC7N
Model Discrepancy	N/A
Power supply	Input: 5VDC, 0.12A Capacity:180mAh, 0.666Wh
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 0dBi

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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 requertey or 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 "Blue Test3.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	Micro USB Cable	1	1.0m Non Shielding	
2	DC Cable	1	1.7m Non Shielding	
3	USB Cable	1	1.0m Shielding	

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3. General Information of Test Site

3.1 Information of Test Site

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 Address: No.68-1, Shihbachongsi, Shihding Township, New Taipei City 223, Taiwan, R.O.C. Tel: +886-2-2663-8582
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
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
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	2019.08.22	2020.08.21
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	EM Electronics corp.	EM01G18G	SN060714	2019.03.23	2020.03.22
Spectrum Analyzer	KEYSIGHT	N9010A	MY53400169	2019.08.22	2020.08.21
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 ⁻⁷	±1X10 ⁻⁵
RF output power, condu	cted	\pm 0.63dB	\pm 1.5dB
Power density, conducted	ed	±1.21dB	± 3 dB
Unwanted emissions,	30-1000MHz	\pm 0.51dB	± 3 dB
conducted	1-12.75GHz	\pm 0.67dB	± 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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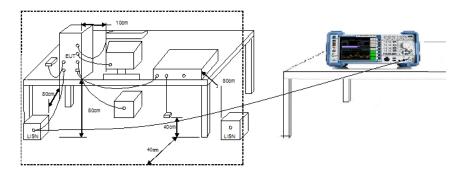
Frequency (MHz)	Quasi Peak (dB μ V)	Average (dB µ V)
0.15 – 0.5	66-56*	56-46*
0.5 - 5.0	56	46
5.0 - 30.0	60	50

^{*}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.

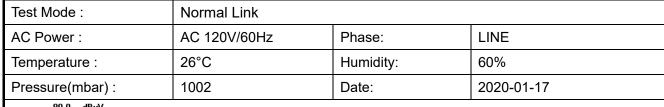
4.3 Typical Test Setup



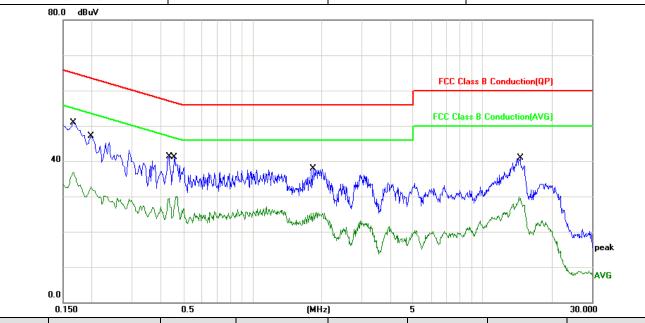
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4.4 Test Result and Data



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No.	Frequency	Factor	Reading	Level	Limit	Margin	Detector
NO.	(MHz)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dB)	Detector
1	0.1660	10.06	35.01	45.07	65.15	-20.08	QP
2	0.1660	10.06	23.17	33.23	55.15	-21.92	AVG
3	0.1980	10.06	30.12	40.18	63.69	-23.51	QP
4	0.1980	10.06	20.18	30.24	53.69	-23.45	AVG
5	0.4340	9.93	28.03	37.96	57.18	-19.22	QP
6	0.4340	9.93	18.86	28.79	47.18	-18.39	AVG
7	0.4580	9.91	28.34	38.25	56.73	-18.48	QP
8	0.4580	9.91	17.96	27.87	46.73	-18.86	AVG
9	1.8380	10.91	21.68	32.59	56.00	-23.41	QP
10	1.8380	10.91	14.18	25.09	46.00	-20.91	AVG
11	14.6260	10.37	24.95	35.32	60.00	-24.68	QP
12	14.6260	10.37	18.00	28.37	50.00	-21.63	AVG

Note: Measurement Level = Reading Level + Correct Factor

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Test M	lode :	Normal L	ink					
AC Po	wer:	AC 120V/	/60Hz	Phase:	N	EUTRAL		
Tempe	erature :				Humidity: 60		60%	
Pressu	ıre(mbar) :	1002		Date:	20	2020-01-17		
80.0	dBuV							
40	N MANNAMAN A	Mayoraphagiphy	X VM/ph//ph/ph/ m/m/m/m/m/m/m/m/m/m/m/m/m/m/m/m/m/m/m			B Conduction(QF		
				, h, M			AVG	
0.0				" W W			AVG	
0.0 0.1		0.5 Easter	(MHz		5	Morgin	\	
L	Frequency	Factor	Reading	Level	Limit	Margin (dB)	AVG	
0.1 No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	(dB)	30.000 Detector	
0.1	Frequency (MHz) 0.1660	Factor (dB) 10.06	Reading (dBuV) 27.18	Level (dBuV) 37.24	Limit (dBuV) 65.15		30.000 Detector QP	
0.1 No .	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	(dB) -27.91	30.000 Detector	
No. 1	Frequency (MHz) 0.1660 0.1660	Factor (dB) 10.06 10.06	Reading (dBuV) 27.18 19.22	Level (dBuV) 37.24 29.28	Limit (dBuV) 65.15 55.15	(dB) -27.91 -25.87	30.000 Detector QP AVG	
0.1 No.	Frequency (MHz) 0.1660 0.1660 0.1980	Factor (dB) 10.06 10.06 10.06	Reading (dBuV) 27.18 19.22 24.93	Level (dBuV) 37.24 29.28 34.99	Limit (dBuV) 65.15 55.15 63.69	(dB) -27.91 -25.87 -28.70	30.000 Detector QP AVG QP	
0.1 No. 1 2 3 4	Frequency (MHz) 0.1660 0.1660 0.1980 0.1980	Factor (dB) 10.06 10.06 10.06	Reading (dBuV) 27.18 19.22 24.93 18.13	Level (dBuV) 37.24 29.28 34.99 28.19	Limit (dBuV) 65.15 55.15 63.69 53.69	(dB) -27.91 -25.87 -28.70 -25.50	30.000 Detector QP AVG QP AVG	
0.1 No. 1 2 3 4 5	Frequency (MHz) 0.1660 0.1660 0.1980 0.1980 0.4300	Factor (dB) 10.06 10.06 10.06 10.06 9.93	Reading (dBuV) 27.18 19.22 24.93 18.13 32.84	Level (dBuV) 37.24 29.28 34.99 28.19 42.77	Limit (dBuV) 65.15 55.15 63.69 53.69 57.25	(dB) -27.91 -25.87 -28.70 -25.50 -14.48	30.000 Detector QP AVG QP AVG QP	
0.1 No. 1 2 3 4 5	Frequency (MHz) 0.1660 0.1660 0.1980 0.1980 0.4300 0.4300	Factor (dB) 10.06 10.06 10.06 10.06 9.93 9.93	Reading (dBuV) 27.18 19.22 24.93 18.13 32.84 22.44	Level (dBuV) 37.24 29.28 34.99 28.19 42.77 32.37	Limit (dBuV) 65.15 55.15 63.69 53.69 57.25 47.25	(dB) -27.91 -25.87 -28.70 -25.50 -14.48 -14.88	30.000 Detector QP AVG QP AVG QP AVG	
0.1 No. 1 2 3 4 5 6 7	Frequency (MHz) 0.1660 0.1660 0.1980 0.1980 0.4300 0.4300 0.4700	Factor (dB) 10.06 10.06 10.06 10.06 9.93 9.93 9.91	Reading (dBuV) 27.18 19.22 24.93 18.13 32.84 22.44 27.33	Level (dBuV) 37.24 29.28 34.99 28.19 42.77 32.37 37.24	Limit (dBuV) 65.15 55.15 63.69 53.69 57.25 47.25 56.51	(dB) -27.91 -25.87 -28.70 -25.50 -14.48 -14.88 -19.27	30.000 Detector QP AVG QP AVG QP AVG QP AVG	
0.1 No. 1 2 3 4 5 6 7 8	Frequency (MHz) 0.1660 0.1660 0.1980 0.1980 0.4300 0.4300 0.4700 0.4700	Factor (dB) 10.06 10.06 10.06 10.06 9.93 9.93 9.91 9.91	Reading (dBuV) 27.18 19.22 24.93 18.13 32.84 22.44 27.33 20.14	Level (dBuV) 37.24 29.28 34.99 28.19 42.77 32.37 37.24 30.05	Limit (dBuV) 65.15 55.15 63.69 53.69 57.25 47.25 56.51 46.51	(dB) -27.91 -25.87 -28.70 -25.50 -14.48 -14.88 -19.27 -16.46	30.000 Detector QP AVG QP AVG QP AVG QP AVG	
0.1 No. 1 2 3 4 5 6 7 8 9	Frequency (MHz) 0.1660 0.1660 0.1980 0.1980 0.4300 0.4300 0.4700 0.4700 1.0180	Factor (dB) 10.06 10.06 10.06 10.06 9.93 9.93 9.91 9.91 10.13	Reading (dBuV) 27.18 19.22 24.93 18.13 32.84 22.44 27.33 20.14 23.70	Level (dBuV) 37.24 29.28 34.99 28.19 42.77 32.37 37.24 30.05 33.83	Limit (dBuV) 65.15 55.15 63.69 53.69 57.25 47.25 56.51 46.51 56.00	(dB) -27.91 -25.87 -28.70 -25.50 -14.48 -14.88 -19.27 -16.46 -22.17	30.000 Detector QP AVG QP AVG QP AVG QP AVG QP 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

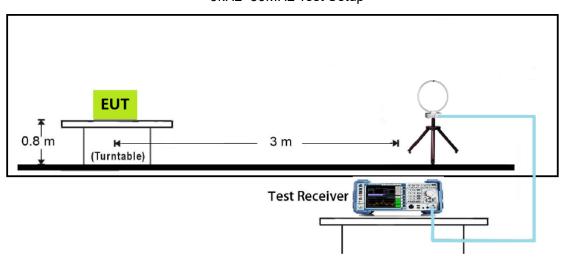
a. The EUT was placed on a rotatable table top 0.8 meter for frequency below 1GHz and 1.5meter for frequency above 1GHz above ground.

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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 guasi-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

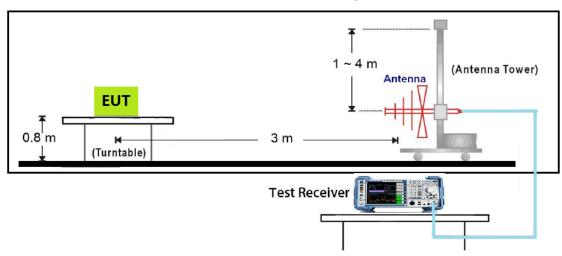


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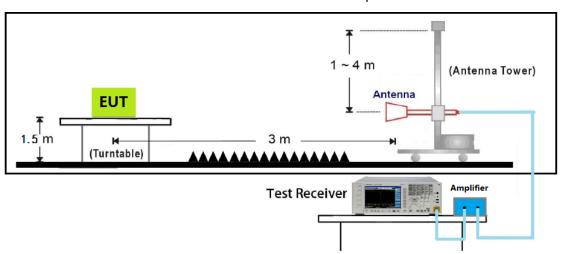


Below 1GHz Test Setup

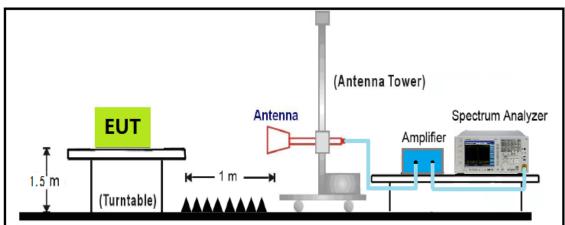
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1GHz~18GHz Test Setup



18GHz~40GHz Test Setup



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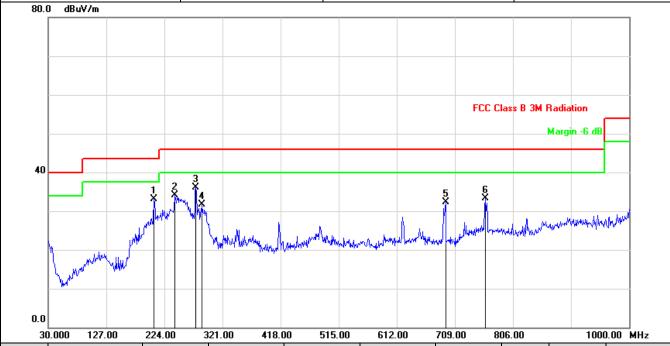


5.5 **Test Result and Data**

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 :	Jan. 15, 2020	Humidity :	49 %
Memo :	CH 00	Atmospheric Pressure :	1008 hpa



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	206.5399	-9.63	42.74	33.11	43.50	-10.39	peak	100	16
2	241.4600	-6.93	40.94	34.01	46.00	-11.99	peak	200	343
3	276.3798	-6.63	42.74	36.11	46.00	-9.89	peak	100	228
4	287.0500	-6.42	38.06	31.64	46.00	-14.36	peak	100	49
5	693.4800	-2.22	34.47	32.25	46.00	-13.75	peak	300	341
6	759.4400	1.01	32.20	33.21	46.00	-12.79	peak	200	12

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

Factor = Antenna Factor + Cable Loss - Amplifier Factor

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Power	r	: 120V/60Hz			Pol/Phase :			VERTICAL 18 °C		
Test M	Лode	: Mo	de 1	Tem	Temperature :					
Test D	Date	: Jan	n. 15, 2020	Hum	Humidity :			49 %		
Memo 80.		: CH	00	Atmo	spheric Pre	ssure	e : 1008 hpa			
40		3 4			5	FCC C	lass B 3M I	Radiation Margin -6 dB		
0.0 31	30.000 127.00		21.00 418.0			709.00 8	06.00		.00 MHz	
			21.00 418.0 Reading (dBuV)	00 515.00 Level (dBuV/m)	612.00 Limit (dBuV/m)					
3	30.000 127.00 Frequency	224.00 3 Factor	Reading	Level	Limit	709.00 80 Margin	06.00	1000 Height	.00 MHz	
No.	80.000 127.00 Frequency (MHz)	224.00 3 Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	709.00 80 Margin (dB)	06.00 Det.	Height (cm)	0.00 MHz Azimuth (deg)	
No.	Frequency (MHz) 51.3400	224.00 3 Factor (dB/m) -16.74	Reading (dBuV) 44.85	Level (dBuV/m) 28.11	Limit (dBuV/m) 40.00	709.00 80 Margin (dB) -11.89	Det.	1000 Height (cm)	Azimuth (deg)	
No. 1 2	Frequency (MHz) 51.3400 191.9900	224.00 3 Factor (dB/m) -16.74 -10.11	Reading (dBuV) 44.85 41.13	Level (dBuV/m) 28.11 31.02	Limit (dBuV/m) 40.00 43.50	709.00 81 Margin (dB) -11.89 -12.48	Det. peak peak	1000 Height (cm) 100	Azimuth (deg) 9	
No. 1 2 3	Frequency (MHz) 51.3400 191.9900 207.5099	224.00 3 Factor (dB/m) -16.74 -10.11 -8.62	Reading (dBuV) 44.85 41.13 42.00	Level (dBuV/m) 28.11 31.02 33.38	Limit (dBuV/m) 40.00 43.50 43.50	709.00 80 Margin (dB) -11.89 -12.48 -10.12	Det. peak peak peak	1000 Height (cm) 100 100 100	Azimuth (deg) 9 56	

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

Factor = Antenna Factor + Cable Loss - Amplifier Factor

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Radiated Emission above 1GHz:

Power		: 120V/60)Hz	Pol/Phase	<u> </u>	:	HOR	IZONTAL
Test Mo	de	: Mode 1		Temperat	Temperature :			
Test Da	te	: Aug. 11	2019	Humidity	Humidity :			
Memo		: CH 00		Atmosphe	eric Pressure	e :	1010	hpa
80.0 dBu	iV/m			ECC Class B. E	Radiation (above 16	U-) noch		
				FCC Class B T	raulauun (auuve 10	пгу реак		
				FCC Class R	Radiation (above 1	GHz) Ava		
	3			T CC Class B	Tradiation (above 1	u112,777g		
		Į Š						
40	1 2 1 X	4 3						
								_
0.0								
	2700.00 4400.00	6100.00	7800.00 9500.0	00 11200.00 1	12900.00 14600.	00	1800	0.00 MHz
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Marg (dB		Detector
1	3096.667	-5.72	45.95	40.23	74.00	-33.7	77	peak
2	4201.667	-0.86	41.74	40.88	74.00	-33.1	12	peak
3	4804.000	1.23	47.54	48.77	74.00	-25.2	23	peak
4	5590.000	2.24	38.40	40.64	74.00	-33.3	36	peak
5	6100.000	3.30	38.30	41.60	74.00	-32.4	10	peak
6	7206.000	5.88	39.44	45.32	74.00	-28.6	88	peak

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Issued Date : Jan. 17, 2020

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 1		Temperat	ure	: 2	25 °C		
Test Da	nte	: Aug. 11	, 2019	Humidity		: :	52 %		
Memo		: CH 00		Atmosphe	eric Pressur	e :	1010 hpa		
80.0 dB	uV/m			ECC Class B. E	ladiation (above 16	11-1 1-			
				FLL Class B H	radiation (above 16	інгі реак			
				FCC Class D	Radiation (above 1	CU-) A			
	3			FCC Class B	nadiadon (aboye i	unzj Avg			
	3	- 6							
40	1 2 X	4 5 5							
-									
0.0	0 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)	Margi (dB)	in Det	ector	
1	3351.667	-4.38	44.89	40.51	74.00	-33.4	9 р	eak	
2	4201.667	-0.86	42.26	41.40	74.00	-32.6	0 р	eak	
3	4804.000	1.23	47.18	48.41	74.00	-25.5	9 р	eak	
4	5675.000	2.45	38.07	40.52	74.00	-33.4	8 p	eak	
5	6156.667	3.32	38.30	41.62	74.00	-32.3	8 p	eak	
6	7206.000	5.88	36.72	42.60	74.00	-31.4	0 р	eak	

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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	:	HORIZONTAL
Test Mo	ode	: Mode 1		Temperat	ure	: :	25 °C
Test Da	ite	: Aug. 11,	2019	Humidity		:	52 %
Memo		: CH 39		Atmosphe	eric Pressure	e :	1010 hpa
80.0 dB	uV/m			FCC Class R. F	ladiation (above 1G	Hz) naak	
				TCC Class D T	ladiadoli (above 14	пгу реак	
				FCC Class B	Radiation (above 1	GHz) Avg	
	Š	3	5		-		
	1. *	4 5 * *	1				
40	1						
0.0							
	0 2700.00 4400.00		7800.00 9500.0		2900.00 14600. Limit		18000.00 MHz
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	(dBuV/m)	Margi (dB)	
1	3550.000	-3.43	43.10	39.67	74.00	-34.3	3 peak
2	4541.667	0.74	40.92	41.66	74.00	-32.3	4 peak
3	4882.000	1.38	48.47	49.85	74.00	-24.1	5 peak
4	6241.667	3.36	38.78	42.14	74.00	-31.8	6 peak
5	6666.667	4.00	38.28	42.28	74.00	-31.7	2 peak
6	7323.000	6.34	40.54	46.88	74.00	-27.1	2 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	: V	'ERTICAL
Test Mo	de	: Mode 1		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	N/m			ECC Class B. B	ladiation (above 16	Ua) aoak	
				FCC Cldss B II	Taulation (above 10	пгу реак	
				FCC Class R	Radiation (above 1	GHz) Ava	
		3 X		TCC Class B	Tradiation (above 1	ulizjavy	
		[]_ !	6 \$				
40	1 2 X X	4 3					
0.0 1000.000	2700.00 4400.00	0 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)	Margin (dB)	Detector
1	3068.333	-5.87	45.96	40.09	74.00	-33.91	peak
2	4145.000	-1.15	41.94	40.79	74.00	-33.21	peak
3	4882.000	1.38	47.59	48.97	74.00	-25.03	peak
4	5958.333	3.16	37.97	41.13	74.00	-32.87	peak
5	6468.333	3.45	38.47	41.92	74.00	-32.08	peak
6	7323.000	6.34	37.94	44.28	74.00	-29.72	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	NTAL
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	а
80.0 dBu	ıV/m			ECC Class P. E	ladiation (above 1G	Uz) nosk		1
				TCC Class B T	ladiadon (above 14	пиј реак		
				FCC Class R	Radiation (above 1	GHz) Ava]
		3 X		700 01000 0				
			\$					
40	1 2 X	4 5 * *						<u> </u>
]
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)	Marg (dB)		tector
1	3181.667	-5.27	43.42	38.15	74.00	-35.8	35 p	eak
2	4258.333	-0.57	40.57	40.00	74.00	-34.0	0 p	eak
3	4960.000	1.52	46.80	48.32	74.00	-25.6	58 p	eak
4	6185.000	3.33	37.06	40.39	74.00	-33.6	51 p	eak
5	6581.667	3.72	37.10	40.82	74.00	-33.1	8 p	eak
6	7440.000	6.80	39.98	46.78	74.00	-27.2)2 r	eak

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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	: '	VERTIC	٩L
Test Mo	ode	: Mode 1		Temperat	ure	: 2	25 °C	
Test Da	te	: Aug. 11	2019	Humidity		: :	52 %	
Memo		: CH 78		Atmosphe	eric Pressur	e :	1010 hpa	3
80.0 dBu	ıV/m			ECC Class B. B	ladiation (above 16	tus) soak		
				FLL Class B H	radiadon (above 10	інгі реак		
				ECC Class P	Radiation (above 1	CU-) Aug		
		_		TCC Class B	Tradiation (above	ulizj Atg		
		3 X . 5	6 *					
40	1 2	4 5						
0.0 1000.000	2700.00 4400.00	0 6100.00	7800.00 9500.0	0 11200.00 1	12900.00 14600	.00	18000.00 1	4Hz
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margi (dB)		ector
1	3125.000	-5.57	45.03	39.46	74.00	-34.5	4 p	eak
2	4230.000	-0.72	41.02	40.30	74.00	-33.7	0 р	eak
3	4960.000	1.52	45.27	46.79	74.00	-27.2	1 p	eak
4	5845.000	2.88	37.27	40.15	74.00	-33.8	5 p	
ı	00.000							eak
5	6298.333	3.38	38.04	41.42	74.00	-32.5	8 p	eak eak

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

Factor = Antenna Factor + Cable Loss - Amplifier Factor



Power		: 120V/6	60Hz	Pol/Phase	e	: 1	HORIZONTAL		
Test Mo	de	: Mode 2	2	Temperat	ure	: 2	25 °C		
Test Da	te	: Aug. 1	1, 2019	Humidity		:	52 %		
Memo		: CH 00		Atmosphe	eric Pressure	e : '	1010 hpa		
80.0 dBu	V/m			FCC Class D. F	Radiation (above 1G	11-3 1			
				FLC Class B F	radiation (above 10	нгу реак			
				ECC Class B	Radiation (above 1	CU-) Aug			
				rcc class b	naulation (above 1	апг) жүү			
	1 2	4 ×	6 *						
40	1 2 7								
0.0 1000.000	2700.00 4400.0	0 6100.00	7800.00 9500.0	00 11200.00	12900.00 14600.	00	18000.00 MHz		
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margi (dB)			
1	3380.000	-4.23	44.50	40.27	74.00	-33.7	3 peak		
2	4201.667	-0.86	41.61	40.75	74.00	-33.2	5 peak		
3	4804.000	1.23	42.52	43.75	74.00	-30.2	5 peak		
4	6071.667	3.29	38.06	41.35	74.00	-32.6	5 peak		
5	6666.667	4.00	38.63	42.63	74.00	-31.3°	7 peak		
6	7206.000	5.88	36.77	42.65	74.00	-31.3	5 peak		

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

Factor = Antenna Factor + Cable Loss - Amplifier Factor

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Pow	er			:	12	0V/60)Hz	Po	ol/Phas	se	:	VE	RTIC	٩L
Test	Mod	е		:	Mo	ode 2		Te	mpera	ture	:	25	°C	
Test	Date)		:	Au	g. 11,	2019	H	umidity	1	:	52	%	
Men				:	CH	100		At	mosph	eric Pressur	e :	101	10 hpa	3
80.0	dBuV.	/m						FC	C Class B	Radiation (above 10	GHz) peak			
								F	CC Class B	Radiation (above	1GHz) Avg			
				2		- 6								
40_			1 ²	X	4 ×	5 8								
0.0														
		2700.00	4400		6100		7800.00 9500			12900.00 14600			8000.00	
No).	Frequ (Mł		'	Fac (dB/		Reading (dBuV)		evel uV/m)	Limit (dBuV/m)	Marq (dE		Det	ector
1		3578	.333		-3.3	33	43.46	40	0.13	74.00	-33.	87	p	eak
2		4258	.333		-0.	57	41.79	4	1.22	74.00	-32.	78	p	eak
3		4804	.000		1.2	23	41.48	42	2.71	74.00	-31.	29	p	eak
4		5590	.000		2.2	24	38.41	40	0.65	74.00	-33.	35	p	eak
5		6581	.667		3.7	'2	38.20	4	1.92	74.00	-32.0	80	р	eak
6		7206	.000		5.8	88	36.94	42	2.82	74.00	-31.	18	р	eak

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

Factor = Antenna Factor + Cable Loss - Amplifier Factor

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Power			:	120	0V/60)Hz			Pol/Pha	ase		:	НО	RIZO	NTAL
Test Mo	de		:	Мо	de	2			Tempe	ratu	ire	:	25	°C	
Test Da	te		:	Au	g. 11	, 201	9		Humidi	ty		:	52	%	
Memo			:	CH	ł 39				Atmosp	ohe	ric Pressu	re :	101	10 hpa	3
80.0 dBu	V/m								Fee el	n n-	diation (above	ICU-) l			
									FUL Class	в на	diation (above	і ынгі реак			
									ECC Class		adiation (above	1CU-) Aug			
									rcc class	6 B R	adiation (above	Tunzj Avg			
	_	_	3 X	4	5 X	6 *									
40	1	2 X		*	Ž.	X									
0.0 1000.000	27NN NN	4400.	nn	6100.	nn	7800.00	9500.	nn	11200.00	12	900.00 1460	0.00	1:	8000.00	MH2
No.	Freque	ency		Fact	tor	Re	ading		Level		Limit	Marg	gin		ector
	(MH			(dB/		•	BuV)	•	BuV/m)	(dBuV/m)	•			
1	3578.	333		-3.3	33	4	3.75		40.42		74.00	-33.	58	р	eak
2	4230.	000		-0.7	72	4	1.32		40.60		74.00	-33.4	40	р	eak
3	4882.	000		1.3	88	4	4.52		45.90		74.00	-28.	10	р	eak
4	6071.	667		3.2	9	3	8.92		42.21		74.00	-31.	79	р	eak
5	6893.	333		4.7	'3	3	7.15		41.88		74.00	-32.	12	р	eak
6	7323.	000		6.3	34	3	6.41		42.75		74.00	-31.2	25	р	eak

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

Factor = Antenna Factor + Cable Loss - Amplifier Factor

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Pow	er				: 12	20V/60)Hz		Pol	/Phas	е	:	VE	RTIC	AL
Test	Мо	de			: M	ode	2		Ten	npera	ture	:	25	°C	
Test	Dat	e			: Aı	ıg. 11,	2019		Hui	midity		:	52	%	
Men					: CI	Ⅎ 39			Atn	nosph	eric Pressu	ıre :	101	10 hpa	Э
80.0	dBu\	V/m							FCC	Class B	Radiation (above	1GHz) peak			
											-				
									FCC	Class B	Radiation (above	1GHz) Avg			
				4	·										
40		;	1 ²	3 Î	,	;	6 								
-															
0.0															
100		2700.00		0.00				500.00				00.00		8000.00	
No).	Freq (M	uenc Hz)	У		tor /m)	Readin (dBuV	_	Lev (dBu)		Limit (dBuV/m	Marq (dE		Det	ector
1		335	1.667		-4.	38	44.20		39.	82	74.00	-34.	18	р	eak
2		4173	3.333		-1.	01	42.05		41.	04	74.00	-32.	96	р	eak
3		448	5.000		0.	58	41.22		41.	80	74.00	-32.	20	р	eak
4		4882	2.000		1.	38	44.27		45.	65	74.00	-28.	35	р	eak
5		607	1.667		3	29	37.75		41.	04	74.00	-32.	96	р	eak
6		7323	3.000		6.	34	35.84		42.	18	74.00	-31.	82	р	eak

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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	:	HORIZONTAL
Test Mo	ode	: Mode 2		Temperat	ure	:	25 °C
Test Da	ite	: Aug. 11,	2019	Humidity		:	52 %
Memo		: CH 78		Atmosphe	eric Pressure	e :	1010 hpa
80.0 dB	uV/m			ECC Class B. E	ladiation (above 1G	Ua) aaak	
				TCC Class B T	raulation (above 10	пгу реак	
				FCC Class B	Radiation (above 1	GHz) Ava	
				100 01000 0			
	1 2 * *	3 4 5 * X	6 X				
40	1 2 2						
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)	Margi (dB)	
1	3238.333	-4.98	45.96	40.98	74.00	-33.0	2 peak
2	4230.000	-0.72	42.30	41.58	74.00	-32.4	2 peak
3	4960.000	1.52	42.89	44.41	74.00	-29.5	9 peak
4	6071.667	3.29	38.96	42.25	74.00	-31.7	5 peak
5	6836.667	4.55	37.23	41.78	74.00	-32.2	2 peak
6	7440.000	6.80	35.48	42.28	74.00	-31.7	2 peak

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

Factor = Antenna Factor + Cable Loss - Amplifier Factor

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Power			: 12	0V/60	Hz	Po	/Phas	e	:	VE	RTICAL	
Test Mo	de		: M	ode 2		Ter	nperat	ture	:	25	°C	
Test Da	te		: Au	ıg. 11,	2019	Hu	midity		:	52	%	
Memo			: Cl	1 78		Atr	nosph	eric Pressur	e :	101	I0 hpa	
80.0 dBu	N/m					ECC	Class B. F	Radiation (above 1	CU-) posk			
						FCC	Class B F	sadiation (above 1)	энгу реак			
						ECI	Class P	Radiation (above	IGUa) Ava			
						ru	Class D	nadiation (above	runz) Avy			
		,	3 * 4	5 X	6 *							
40	*	2 :	* 4									
0.0 1000.000	2700.00 44	00.00	6100	0.00 7	7800.00 9500.1	00 112	00.00	12900.00 14600	1.00	1:	3000.00 MHz	
No.	Frequence (MHz)	су	Fac (dB		Reading (dBuV)	Le		Limit (dBuV/m)	Marq (dE		Detector	
1	3521.66	7	-3.	53	43.87	40.	.34	74.00	-33.0	66	peak	
2	4400.00	0	0.	15	40.88	41.	.03	74.00	-32.	97	peak	
3	4960.00	0	1.	52	40.97	42	.49	74.00	-31.	51	peak	
4	5901.66	7	3.0)2	37.35	40	.37	74.00	-33.0	63	peak	
5	7006.66	7	5.	11	37.59	42.	.70	74.00	-31.3	30	peak	
6	7440.00	0	6.8	30	36.03	42.	.83	74.00	-31.	17	peak	

Report No.: SEFB1908144

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

Factor = Antenna Factor + Cable Loss - Amplifier Factor

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Powe	er	: 120V/6	60Hz	Pol/Phase	e	: H	ORIZONTAL
Test I	Mode	: Mode	3	Temperat	ure	: 25	5 °C
Test [Date	: Aug. 1	1, 2019	Humidity		: 52	2 %
Mem		: CH 00		Atmosphe	eric Pressure	e : 10)10 hpa
80.0	dBuV/m			FCC Class B F	ladiation (above 1G	Hz) peak	
				FCC Class B	Radiation (above 1	GHz) Avg	
		3					
40	1 2 * *	3 4 5	\$				
0.0							
1000.	.000 2700.00 4400.0		7800.00 9500.0		12900.00 14600.		18000.00 MHz
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	3125.000	-5.57	44.81	39.24	74.00	-34.76	peak
2	3975.000	-1.98	40.77	38.79	74.00	-35.21	peak
3	4804.000	1.23	42.61	43.84	74.00	-30.16	peak
4	5731.667	2.59	36.32	38.91	74.00	-35.09	peak
5	6355.000	3.40	38.16	41.56	74.00	-32.44	peak
6	7206.000	5.88	36.78	42.66	74.00	-31.34	peak

Report No.: SEFB1908144

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	Test Mode : Mode 3			Temperature :			25 °C	
Test Date : Aug. 11			2019	2019 Humidity :			52 %	
Memo : CH			Atmospheric Pressure		e : 1	: 1010 hpa		
80.0 dB	.0 dBuV/m FCC Class B Radiation (above 1GHz) peak							
				TCC Class D	radiation (above 14	112) peak		
				FCC Class B	Radiation (above 1	GHz) Avg		
40	1 2 3	4 5						
40	* * *	* *						
0.0								
1000.000 No.	700.00 4400.00 Frequency	Factor	7800.00 9500.0 Reading	00 11200.00 1 Level	12900.00 14600. Limit	00 Margir	18000.00 MHz	
	(MHz)	(dB/m)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
1	3351.667	-4.38	44.55	40.17	74.00	-33.83	B peak	
2	3918.333	-2.17	42.14	39.97	74.00	-34.03	B peak	
3	4804.000	1.23	41.56	42.79	74.00	-31.21	peak	
4	5901.667	3.02	37.12	40.14	74.00	-33.86) peak	
5	6411.667	3.42	36.20	39.62	74.00	-34.38	B peak	
6	7206.000	5.88	36.97	42.85	74.00	-31.15	5 peak	

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

Factor = Antenna Factor + Cable Loss - Amplifier Factor

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Power		: 120	V/60Hz	Pol/Phase	Pol/Phase :			HORIZONTAL	
Test Mode :			de 3	Temperat	Temperature :			25 °C	
Test Da	te	: Aug	. 11, 2019	Humidity	Humidity :			52 %	
Memo		: CH	39	Atmosphe	Atmospheric Pressure :			1010 hpa	
80.0 dBu	80.0 dBuV/m								
			FCC Class B Radiation (above 1GHz)			нгј реак			
				ECC Class B	Radiation (above 1	CU-) Aug			
				rcc class b	naulation (above 1	unzj Avg			
		3	6 X						
40	1 2 X X	4 5 X X	Î						
0.0 1000.000	2700.00 4400.00	6100.0	0 7800.00 9500.0	00 11200.00	12900.00 14600.	.00	18000).00 MHz	
No.	Frequency (MHz)	Facto (dB/n	or Reading	Level (dBuV/m)	Limit (dBuV/m)	Marg (dB	jin l	Detector	
4	, ,	•	, , ,	,	,	-	-		
1	3380.000	-4.23		40.99	74.00	-33.0		peak	
2	3975.000	-1.98		40.97	74.00	-33.0		peak	
3	4882.000	1.38	3 44.63	46.01	74.00	-27.9	99	peak	
4	5901.667	3.02	38.03	41.05	74.00	-32.9	95	peak	
5	6270.000	3.37	37.65	41.02	74.00	-32.9	98	peak	
6	7323.000	6.34	36.49	42.83	74.00	-31.1	17	peak	

Report No.: SEFB1908144

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

Factor = Antenna Factor + Cable Loss - Amplifier Factor

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Power		: 120V	/60Hz	Pol/Phas	e	: V	VERTICAL		
Test Mo	de	: Mode	3	Temperat	ture	: 2	25 °C		
Test Da	te	: Aug.	11, 2019	Humidity		: 5	52 %		
Memo		: CH 39	CH 39		eric Pressure	e : 1	1010 hpa		
80.0 dBu	80.0 dBuV/m FCC Class B Radiation (above 1GHz) peak								
					radiation (above 16	нгу реак			
				FCC CL D	D - C - C - C - C - C - C - C - C - C -	CII-) A			
				FCC Class B	Radiation (above 1	инг) Ауд			
	1	3 X	6 X						
40	1 2 X 2	4 5 × ×	×						
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			
	(MHz)	(dB/m)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)			
1	3521.667	-3.53	44.88	41.35	74.00	-32.65	peak		
2	4088.333	-1.44	40.79	39.35	74.00	-34.65	peak		
3	4882.000	1.38	44.39	45.77	74.00	-28.23	peak		
4	5816.667	2.81	37.94	40.75	74.00	-33.25	peak		
5	6411.667	3.42	37.50	40.92	74.00	-33.08	peak		
6	7323.000	6.34	35.91	42.25	74.00	-31.75	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	е	: 1	HORIZONTAL
Test Mode : Mode 3			Temperature :		: 2	: 25 °C	
Test Date : Aug. 11,		2019	Humidity		: !	52 %	
Memo		: CH 78		Atmosphe	eric Pressure	e : ′	1010 hpa
80.0 dBuV/m FCC Class B Radiation (above 1GHz) peak							
				FCC Class B F	Ta seous) nonsinsi	пгу реак	
				FCC Class R	Radiation (above 1	GHz) Ava	
				100 01033 B	Tradiation (above 1	JIIZ) A T	
	1 2	3 4	6 ×				
40	1 2	4 ×					
0.0							
1000.000	0 2700.00 4400.00		7800.00 9500.0	0 11200.00 1	2900.00 14600.	00	18000.00 MHz
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margi (dB)	
1	3465.000	-3.78	44.67	40.89	74.00	-33.1	1 peak
2	4286.667	-0.43	40.75	40.32	74.00	-33.68	8 peak
3	4960.000	1.52	43.05	44.57	74.00	-29.43	3 peak
4	5561.667	2.17	38.37	40.54	74.00	-33.40	6 peak
5	6355.000	3.40	38.50	41.90	74.00	-32.10	O peak
6	7440.000	6.80	36.54	43.34	74.00	-30.66	6 peak

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

Factor = Antenna Factor + Cable Loss - Amplifier Factor



Powe	er	:	120V/6	0Hz	Pol/Phas	se	: VE	RTICAL
Test Mode : Mode 3		3	Temperature :		: 25	25 °C		
Test Date : Aug. 11, 20		1, 2019	Humidity	/	: 52	%		
Mem		:	CH 78		Atmosph	neric Pressure	e : 10°	10 hpa
80.0	0 dBuV/m FCC Class B Radiation (above 1GHz) peak					Hz) peak		
						,		
					FCC Class B	Radiation (above 1	GHz) Avg	
		2	5	6				
40	1 5	3 X	4 × ×	8				
- 1								
0.0								
1000		400.00	6100.00	7800.00 9500.		12900.00 14600.		8000.00 MHz
		су	Factor (dB/m)	7800.00 9500. Reading (dBuV)	00 11200.00 Level (dBuV/m)	12900.00 14600. Limit (dBuV/m)	00 1 Margin (dB)	8000.00 MHz Detector
1000	. Frequen	су	Factor	Reading	Level	Limit	Margin	
1000 No	o. Frequen (MHz) 3550.00	00	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1000 No	o. Frequen (MHz) 3550.00	00 00	Factor (dB/m)	Reading (dBuV) 43.80	Level (dBuV/m) 40.37	Limit (dBuV/m) 74.00	Margin (dB) -33.63	Detector peak
No 1 2	3550.00 3975.00	00 00 00	Factor (dB/m) -3.43 -1.98	Reading (dBuV) 43.80 42.86	Level (dBuV/m) 40.37 40.88	Limit (dBuV/m) 74.00 74.00	Margin (dB) -33.63 -33.12	Detector peak peak
1000 No 1 2	3550.00 3975.00 4960.00 5816.66	00 00 00 00 57	Factor (dB/m) -3.43 -1.98 1.52	Reading (dBuV) 43.80 42.86 41.23	Level (dBuV/m) 40.37 40.88 42.75	Limit (dBuV/m) 74.00 74.00 74.00	Margin (dB) -33.63 -33.12 -31.25	peak peak peak

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

Factor = Antenna Factor + Cable Loss - Amplifier Factor

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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

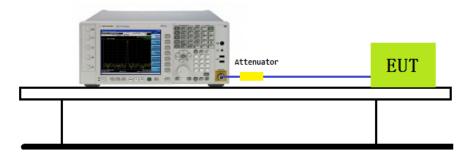
ANSI C63.10-2013- Section 7.8.7

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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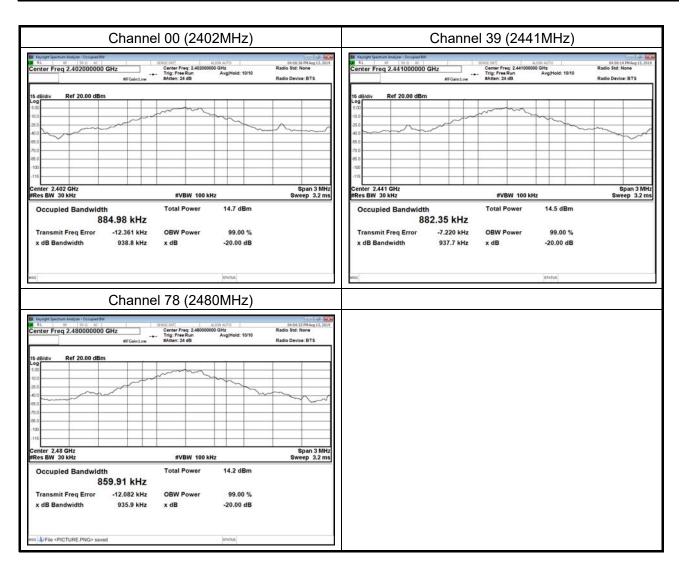


6.5 Test Result and Data

Test Item	Occupied Bandwidth
Test Mode	Mode 1: Transmitter DH5

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Channel No.	Frequency(MHz)	20dB Bandwidth(kHz)
00	2402	938.8
39	2441	937.7
78	2480	935.9



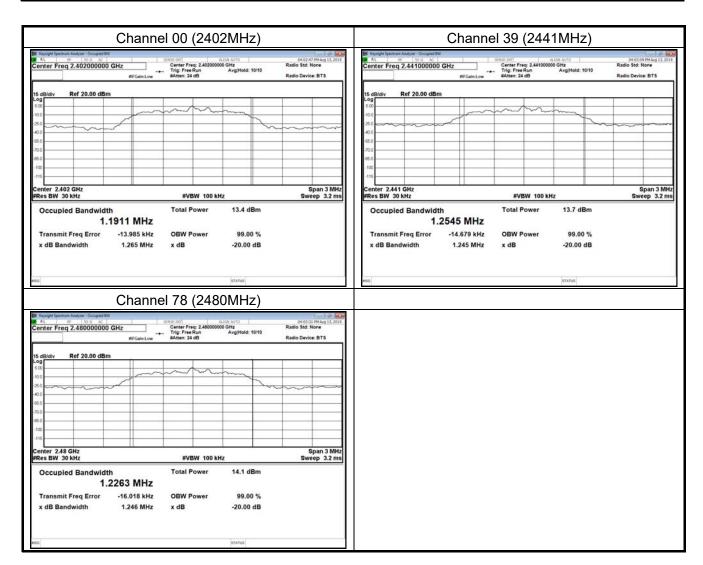


Test Item	Occupied Bandwidth
Test Mode	Mode 2: Transmitter 2DH5

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Channel No.	Frequency(MHz)	20dB Bandwidth(kHz)
00	2402	1265.0
39	2441	1245.0
78	2480	1246.0



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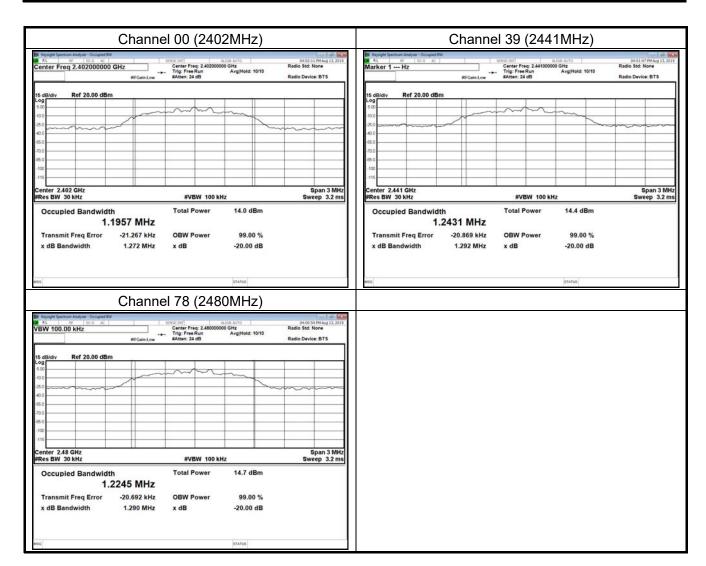


Test Item	Occupied Bandwidth
Test Mode	Mode 3: Transmitter 3DH5

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Channel No.	Frequency(MHz)	20dB Bandwidth(kHz)
00	2402	1272.0
39	2441	1292.0
78	2480	1290.0



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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

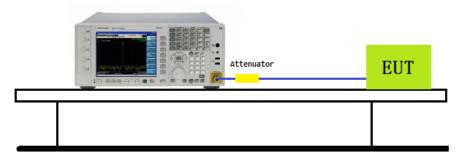
The EUT shall have its hopping function enabled. Use the following spectrum analyzer settings:

- 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
- f) Trace: Max hold
- 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

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 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

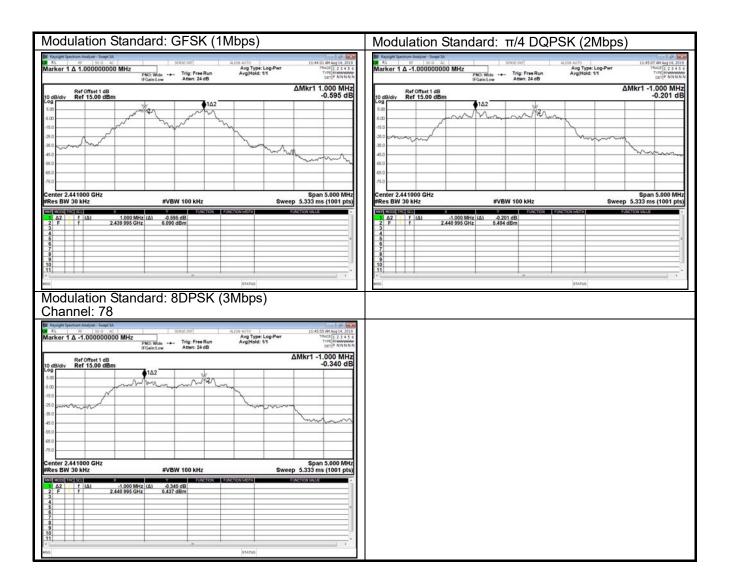
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Dwell Time Measurement

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.

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:

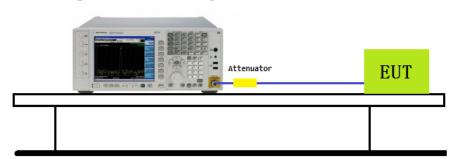
- Span: Zero span, centered on a hopping channel.
- b) RBW shall be \leq channel spacing and where possible RBW should be set >> 1 / T, where T is the expected dwell time per channel.
- c) Sweep: As necessary to capture the entire dwell time per hopping channel; where possible use a video trigger and 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. 14, 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
0.423	135.36	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
1.68	268.80	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
2.925	312.00	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
0.435	139.2	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
1.69	270.40	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
2.935	313.07	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
0.435	139.2	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
1.685	269.60	31.6	400	PASS

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

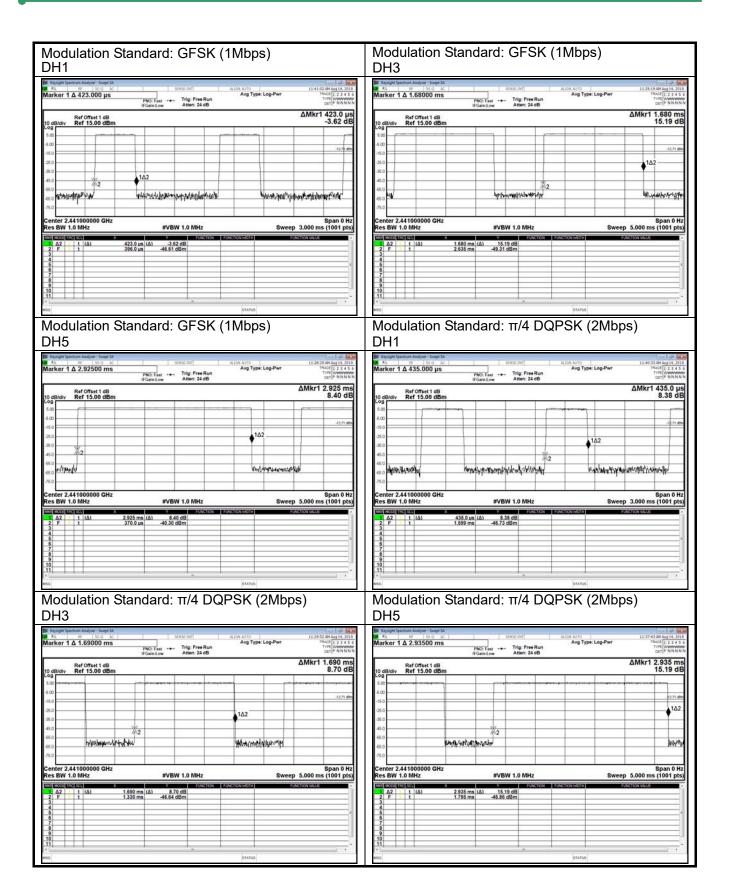
Pulse Time	Total of Dwell	Period Time	Limit	
(ms)	(ms)	(s)	(ms)	Result
2.935	313.07	31.6	400	PASS

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

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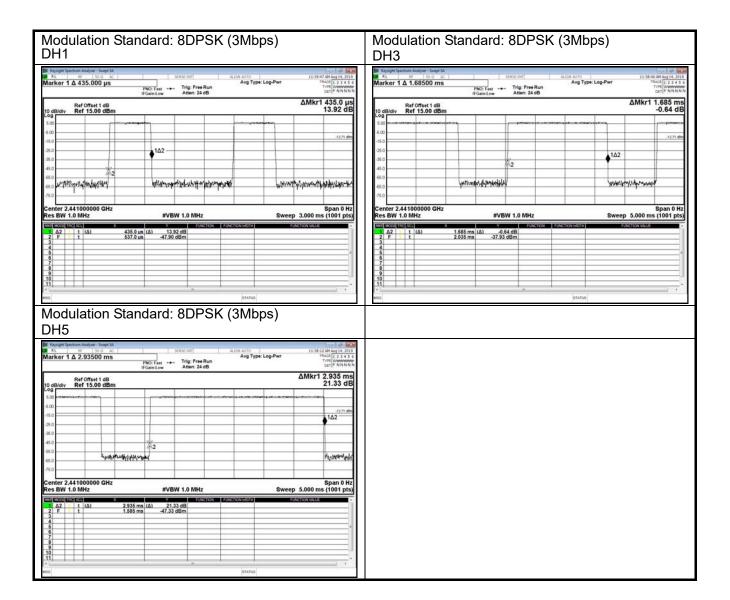
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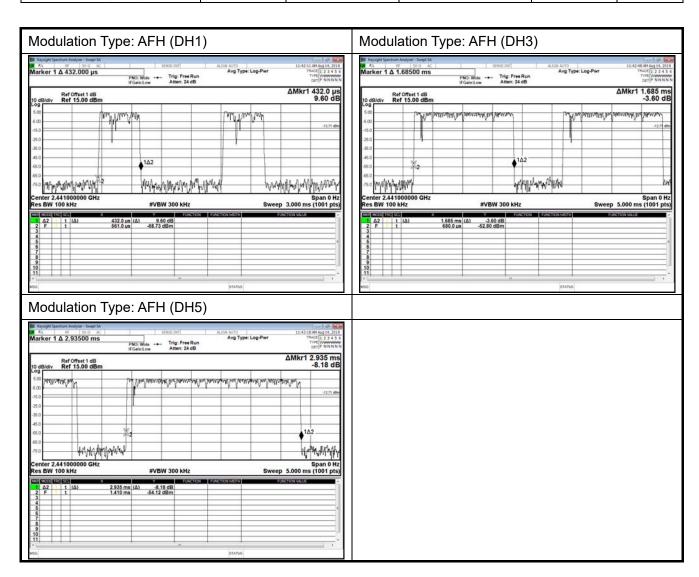
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Test Period = 0.4 (second/ channel) x 20 Channel = 8 sec

Modulation Type	Frequency (MHz)	Length of transmission time (ms)	Number of transmission in a 8 (20 Hopping*0.4)	Dwell Time (ms)	Limit (ms)
AFH (DH1)	2402-2421	0.432	160	69.12	400
AFH (DH3)	2402-2421	1.685	80	134.80	400
AFH (DH5)	2402-2421	2.935	53.33	156.52	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.

9.2 Test Standard

ANSI C63.10-2013- Section 7.8.3

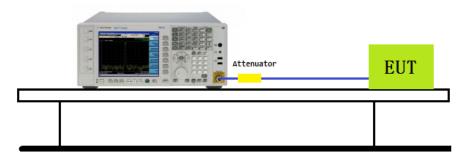
9.3 Test Setup

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

1 Tool North	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.

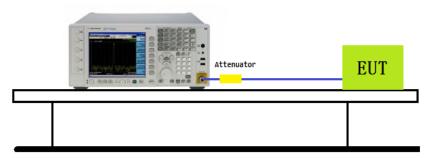
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10.4 Test Setup Layout

Spectrum Analyzer



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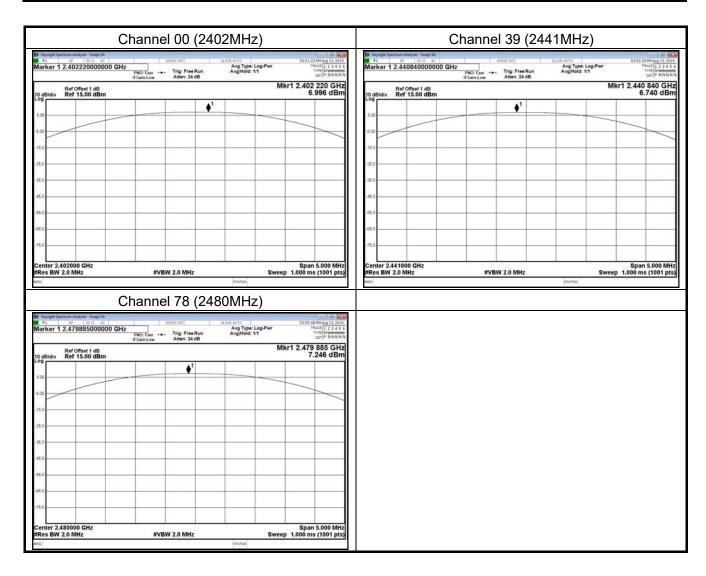
10.5 Test Result and Data

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	7.00	20.97	Pass
39	2441	6.74	20.97	Pass
78	2480	7.25	20.97	Pass



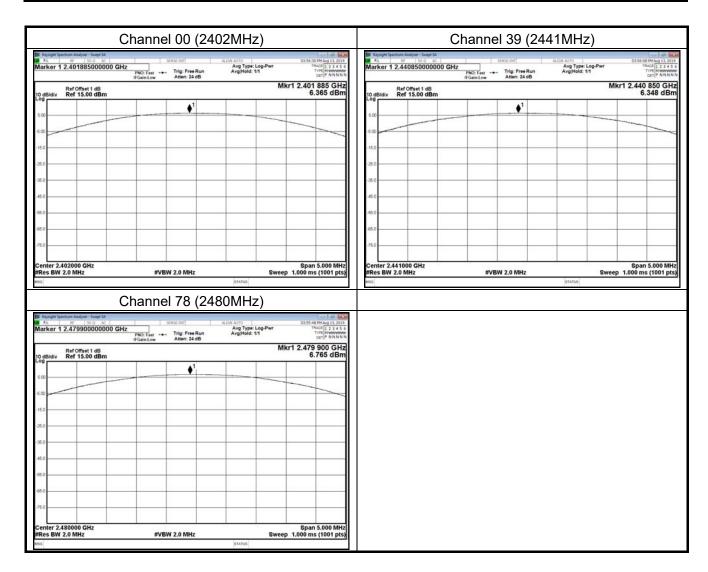
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Test Item	:	Peak Output Power
Test Mode	:	Mode 2: Transmitter 2DH5

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Channel No.	Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
0	2402	6.37	20.97	Pass
39	2441	6.35	20.97	Pass
78	2480	6.77	20.97	Pass



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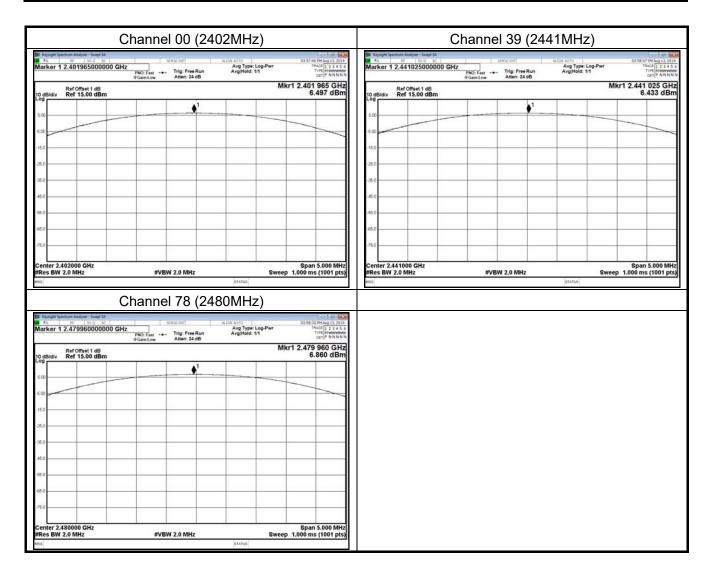
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Test Item	:	Peak Output Power
Test Mode	:	Mode 3: Transmitter 3DH5

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Channel No.	Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
0	2402	6.50	20.97	Pass
39	2441	6.43	20.97	Pass
78	2480	6.86	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

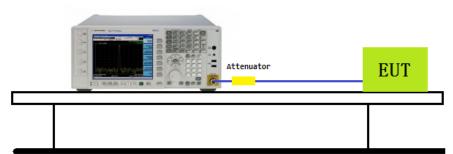
Detector function = peak

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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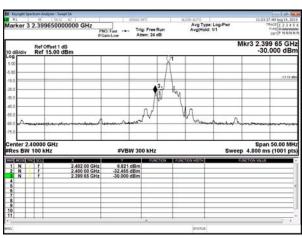
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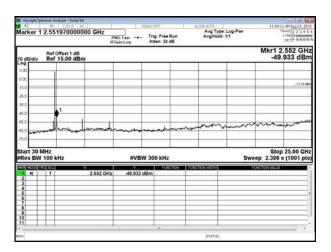
11.4 Test Result

Single test

Modulation Standard: GFSK (1Mbps)

Channel: 00

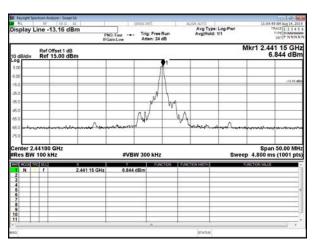


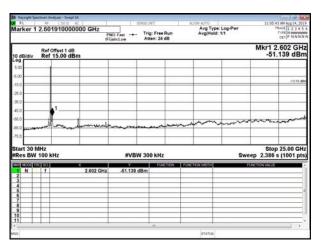


Report No.: SEFB1908144

Modulation Standard: GFSK (1Mbps)

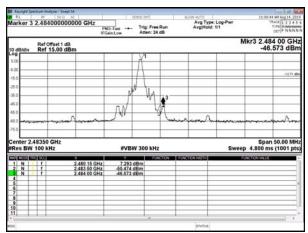
Channel: 39

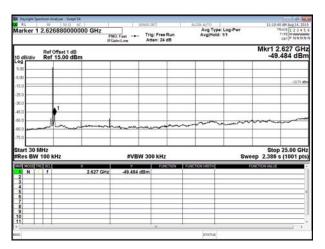




Modulation Standard: GFSK (1Mbps)

Channel: 78





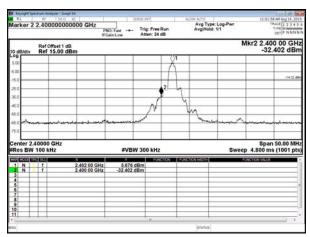
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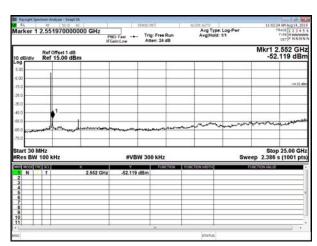
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Modulation Standard: π/4 DQPSK (2Mbps)

Channel: 00

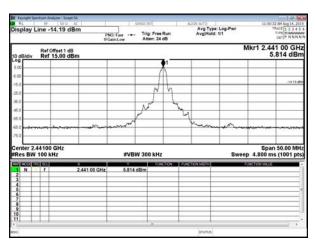


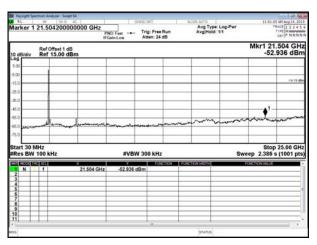


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Modulation Standard: π/4 DQPSK (2Mbps)

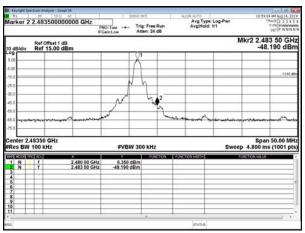
Channel: 39

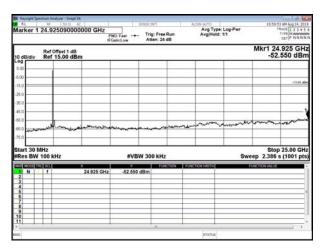




Modulation Standard: $\pi/4$ DQPSK (2Mbps)

Channel: 78

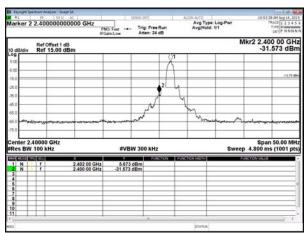


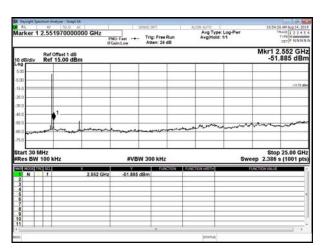




Modulation Standard: 8DPSK (3Mbps)

Channel: 00

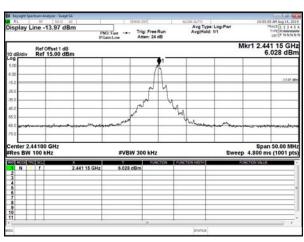


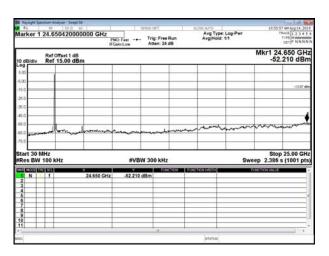


Report No.: SEFB1908144

Modulation Standard: 8DPSK (3Mbps)

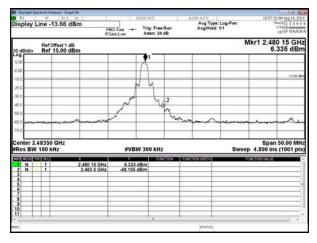
Channel: 39

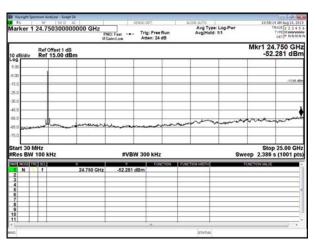




Modulation Standard: 8DPSK (3Mbps)

Channel: 78





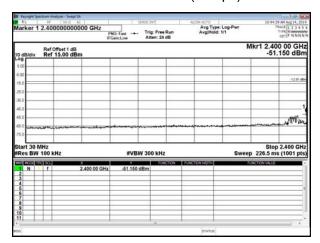
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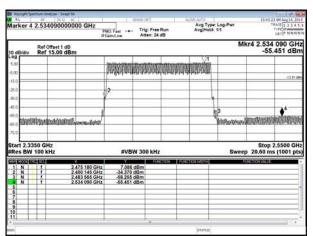
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Hopping test

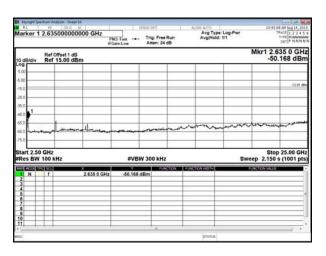
Modulation Standard: GFSK (1Mbps)

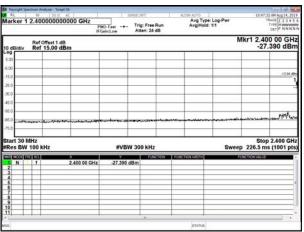


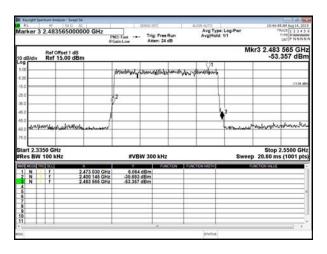


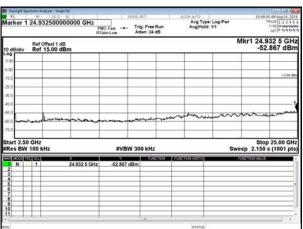
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Modulation Standard: $\pi/4$ DQPSK (2Mbps)





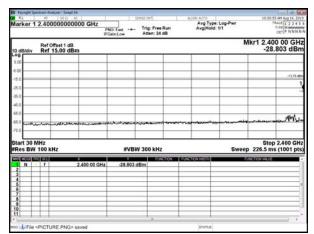


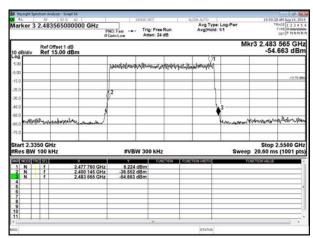


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Modulation Standard: 8DPSK (3Mbps)

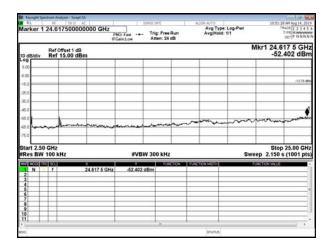




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12. Radiated Emission Band Edge Measurement

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.

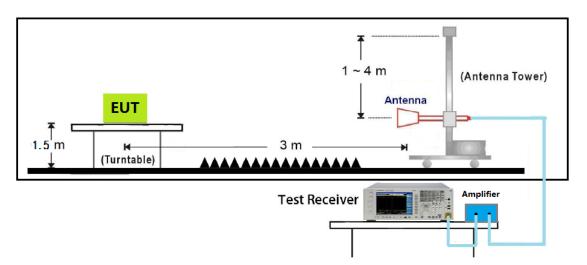
If the emission on which a radiated measurement must be made is located at the edge of the authorized band of operation, then the alternative "marker-delta" method may be employed.

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12.3 Test Setup



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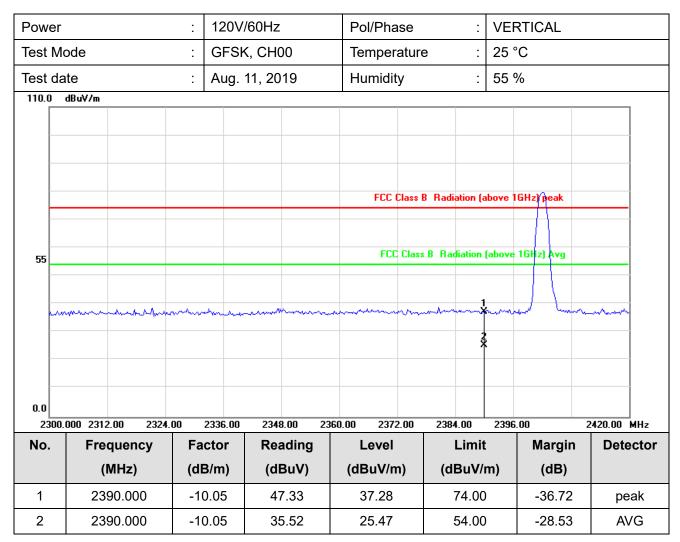
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12.4 Test Result



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Note: Level=Reading +Factor.

Margin=Level-Limit.

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Power :		120V	//60Hz	Pol/Phase	:	HORIZONTAL					
Test Mo	ode	• •	GFS	K, CH00	Temperatur	e :	25 °C				
Test da	te	:	Aug.	11, 2019	Humidity	:	55 %				
110.0	dBuV/m										
55		Managhan	~~~~		FCC Clas		above 1GHz) peak				
	000 2312.00 2324.		2336.00		860.00 2372.00	2384.00		2420.00 MHz			
No.	Frequency		ctor	Reading	Level	Limit		Detector			
	(MHz)	(dE	3/m)	(dBuV)	(dBuV/m)	(dBuV/	m) (dB)				
1	2390.000	-10	0.05 47.47		37.42	74.00	-36.58	peak			
2	2390.000	-10	0.05	35.62	25.57	54.00	-28.43	AVG			

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

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Power :			120V	/60Hz	Po	ol/Phas	se	:	VERTICAL			
Test N	Mode	GFSk	K, CH78	Te	mpera	ture	•	25°	С			
Test o	late	Aug.	11, 2019	Hu	umidity	/	••	55 %	6			
110.0	dBuV/m]
		A -				FCC CI	lass B	Radiation (a	bove 1	GHz) peak		
55						FCC (Class B	Radiation	above	1GHz) Avg		
4	ann Munama		mary	maketin maketi	man, man	adribution	mark	the work of the same of the sa	mm	and the state of t	e sharen any	
		*										
0.0												
		2480.00	2495.00	2510.00	2525.00	2540.	00	2555.00	2570.		2600.00	
No.	Frequency		actor	Reading		_evel		Limit		Margin	Dete	ector
	(MHz)	(0	IB/m)	(dBuV)	(di	BuV/m)	(dBuV/ı	n)	(dB)		
1	2483.500	_	9.65	9.65 46.15		36.50	74.00		-37.50		eak	
2	2483.500	_	9.65	35.12	2	25.47		54.00		-28.53	A۱	VG

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Power :			120V	/60Hz	Pol/Pha	se	:	HORIZONTAL				
Test Mo	ode	:	GFSł	K, CH78	Tempera	ature	:	25 °C				
Test da	te	:	Aug.	11, 2019	Humidit	y	:	55 %				
110.0	dBuV/m											
	\wedge											
					FCC (Class B Radi	iation (a	bove 1G	Hz) peak			
55					FCC	Class B Rac	diation	(above 10	GHz) Avg			
		1.										
~	namanan	X	m	myssalvania		Lymphyn w	wy	~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	more		
		3										
0.0 2450.	000 2465.00 2480.	00	2495.00	2510.00	2525.00 2540).00 255!	5.00	2570.0	0	2600.00 MI	Hz	
No.	Frequency	Fa	ctor	Reading	Level		Limit		Margin	Detec	tor	
	(MHz)	(di	3/m)	(dBuV)	(dBuV/m	1) (d	BuV/ı	m)	(dB)			
1	2483.500	-9	9.65 51.98		42.33		74.00)	-31.67 p		k	
2	2483.500	0	.65	35.28	25.63		54.00		-28.37	AVG		

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Power :		120V/60Hz				Pol/Phase :					VERTICAL						
Test Mode :			π/4 DQPSK, CH00				Temperature : 25					25 °C					
Test date :			:	Aug.	11, 20	19	ı	Humidity : 5					%				
110.0	dBuV.	/m															
									FC(C Class I	3 Radio	ation (a	above 1	GHz) p	eak		
55									F	CC Class	B Rac	liation	(above	1GHz)	Avg		
	-phosphodol	man	Manham	an and a second	Maha	~~~~	***************************************	eden de	ad-Mf hamad			\$		<i>l</i>	l	-www.	
0.0																	
	00.000		2324.0		2336.00	2348		2360.00		72.00	2384		2396		!	2420.00	
No.	'	reque	J		ctor		ading		Leve			Limit			argir	Det	ector
		(MH	•	,	3/m)	•	BuV)	(dBuV/	•	•	BuV/		•	dB)		
1	-	2390.0			0.05 47.15			37.10 74.00			-36.90				eak		
2		2390.0	000	-10).05	35	5.51		25.46	3		54.00)	-2	8.54	A	VG

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Power :				/60Hz		Pol/Pha	ase	:	HORIZONTAL					
Test M	ode	π/4 D	QPSK	, CH00	Temper	ature	e :	25 °	25 °C					
Test da	ate	Aug.	11, 20 <i>°</i>	19	Humidi	ty	:	55 9	%					
55	dBuV/m			Monto			Class	B Radiation (Avg	pMmmm		
0.0 2300.	000 2312.00 2324.	00	2336.00	2348	.00 23	60.00 237	2.00	2384.00	2396	.00		2420.00	MHz	
No.	Frequency	Fa	ctor	Rea	ding	Level		Limi	t	M	argin	Dete	ector	
	(MHz) (di		B/m) (dBuV)		(dBuV/r	n)	(dBuV/	m)	(dB)				
1	2390.000	-10	0.05 47.23		37.18		74.00	-3	86.82	ре	eak			
2	2390.000	-10	0.05 35.67		25.62		54.00)	-2	28.38	A\	/G		

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

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Power	:	120V	/60Hz		Pol/Pha	se		:	VERTICAL						
Test M	lode	:	π/4 D	QPSk	K, CH78	Temper	Temperature : 25					25 °C			
Test da	:	Aug.	11, 20	19	Humidit	.y		:	55 9	%					
110.0	dBuV/m					FCC	Class B	Radial	tion (a	bove 1	(GHz) peak				
55 		1 ************************************	***************************************	daga sasara		FCC		B Radi			1GHz) Avg	, market de la company			
	.000 2465.00 2480.		2495.00	2510		25.00 254	0.00	2555.		2570		2600.00			
No.	Frequency (MHz)		ctor 3/m)		ading BuV)	Level (dBuV/n	2)		.imit 8uV/r	n)	Margir	Det	ector		
1	, ,	•	.65	•	•		'')	•	4.00		(dB) -36.97	, ,	ook		
				46.68		37.03						<u> </u>	eak		
2	2483.500	-9.	.65	35	5.12	25.47		5	4.00		-28.53	5 P	VG		

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

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Power		:	120V	/60Hz		Pol/Pha	ise		: HC	RIZONTAL	_	
Test Mode)	:	π/4 D	QPSk	K, CH78	Temper	ature		: 25	°C		
Test date		:	Aug.	11, 20	19	Humidit	:у		: 55	%		
110.0 dBuV	V/m								<u>'</u>			
55		*			butana		Class I		ion (abov	1GHz) peak	Wandanian .	
0.0 2450.000 No.	2465.00 2480.0 Frequency		2495.00 ctor	2510 Re a	0.00 25. ading	25.00 2540 Level	0.00	2555.00 Lir) 257 mit	0.00 Margin	2600.00 I	
	(MHz)	(dE	3/m)	(di	BuV)	(dBuV/n	n)	(dBu	ıV/m)	(dB)		
1	2483.500	-9	.65	50	0.53	40.88		74	.00	-33.12	pe	ak
2	2483.500	-9	.65	35	5.29	25.64		54	.00	-28.36	AV	′G

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Power :				/60Hz		Pol/Pha	ase	:	VERTICAL				
Test M	ode	8DPS	SK, CH	00	Temper	ature	e :	25	25 °C				
Test da	ate	:	Aug.	11, 20	19	Humidi	ty	:	55	%			
110.0	dBuV/m												
						FCC	Class E	3 Radiation (above	1GHz)	peak		
55	55					FC	FCC Class		(above	1GHz	Avg		
~~	an man	A CONTRACTOR OF THE STATE OF TH	and a		Maranas	mane Marie Mar	man	man	1 ******** 2 *	~	-	wanta	
0.0													
	000 2312.00 2324	.00	2336.00	2348	.00 23	60.00 237	2.00	2384.00	2390	6.00		2420.00	MHz
No.	Frequency	Fa	ctor	Rea	ding	Level		Limi	t	M	argin	Dete	ector
	(MHz)	(dE	3/m)	(dE	BuV)	(dBuV/n	n)	(dBuV	/m)	((dB)		
1	2390.000	-10	0.05	.05 46.74		36.69		74.00		-37.31		ре	eak
2	2390.000	-10	0.05	35	.44	25.39		54.0	0	-2	28.61	A۱	/G

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

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Power :				120V/60Hz			se	:	HORIZONTAL				
Test M	8DPS	SK, CH	00	Temper	ature	e :	25 °	25 °C					
Test da	ate	Aug.	Aug. 11, 2019			у	:	55 %	%				
110.0	dBuV/m					FCC (Class E	3 Radiation (a	above 1	GHz) p	eak		
55	55		man	and when	maketan makan mengan menga Pengan pengan		Class	B Radiation	(above	1GHz)			
0.0			2000 00	2010		00.00		2001.00	2000			0.100.00	
No.	.000 2312.00 2324. Frequency		2336.00 ctor	2348.1 Read		60.00 2372 Level	2.00	2384.00 Limit	2396.		argin	2420.00 Dete	ector
	(MHz)		3/m)	(dB	_	(dBuV/n	1)	(dBuV/			dB)		
1	2390.000	-10	0.05	47.48		37.43		74.00		-36.57		ре	ak
2	2390.000	-10	0.05	35.	64	25.59		54.00)	-2	8.41	A۱	/G

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

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Power :				/60Hz		Pol/Pha	ase		: \	VERTICAL				
Test M	8DPSK, CH78			Tempe	ature	9	: 2	25 °C						
Test da	Aug. 11, 2019			Humidi	ty		: !	55 %	6					
110.0	dBuV/m					Ecc	Class) D.J.	f-b-		GHz) peak			
55	55						FCC Class		s B Radiation (abo					
****	www.www.	2 X		Welly-or-ender	annah dagan daga	an and a second		mandana	maran		an-de-vertical	n and an alternative of the second		
0.0														
2450 No.	0.000 2465.00 2480. Frequency		2495.00 ctor	2510 Re 2	0.00 25 ading	25.00 254 Level	0.00	2555.0 Li	imit	2570.	00 Margin	2600.00 Dete	MHz ector	
110.	(MHz)		3/m)		BuV)	(dBuV/r			uV/m)	(dB)	200	33101	
1	2483.500	-9	.65	35 46.53		36.88	74	4.00		-37.12	ре	eak		
2	2483.500	-9	.65	35	5.08	25.43		54	4.00		-28.57	A)	VG	

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

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Power :				/60Hz		Po	l/Pha	ase		:	HORIZONTAL				
Test Mo	ode	:	8DPS	SK, CH	178	Те	mper	ature	Э	:	25	°C			
Test da	ate	:	Aug.	11, 20	19	Нι	ımidit	ty		:	55	%			
110.0	dBu∀/m													1	
							FCC	Class E	3 Radi	ation (a	bove	1GHz) peak			
55							FCC	Class	B Rac	liation	(above	1GHz) Avg		-	
		*													
~~	man hannend	3	a / a disa	~~	alapator———	***************************************	~~~~	400-201	Mr. Jan Jan	manned	,Plante-war	mana	and the second and a		
0.0															
	000 2465.00 2480		2495.00	2510		2525.00	2540	0.00	2555		2570		2600.00		
No.	Frequency		ctor		ding		_evel			Limit		Margin	Det	ector	
	(MHz)	•	3/m)	•	BuV)	(dE	3uV/n	n)	-	BuV/ı	-	(dB)			
1	2483.500	-6	0.65	50).22	4	10.57			74.00)	-33.43	ре	eak	
2	2483.500	-6	0.65	35	5.27	2	25.62		;	54.00)	-28.38	A'	VG	

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

The End

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