

Permissive Change test report

FCC 47 CFR PART 15 SUBPART C

Test Standard	FCC Part 15.247
Product name	WiFi and Bluetooth Module
Brand Name	JORJIN
Model No.	WG7837-V0
Test Result	Pass
Statements of Conformity	Determination of compliance is based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

The test Result was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were given in ANSI C63.10: 2013 and compliance standards.

The test results of this report relate only to the tested sample (EUT) identified in this report.

The test Report of full or partial shall not copy. Without written approval of Compliance Certification Services Inc.(Wugu Laboratory)

Approved by:



Kevin Tsai
Deputy Manager

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.
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Rev.: 00

Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	July 26, 2021	Initial Issue	ALL	Doris Chu

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1. GENERAL INFORMATION

1.1 EUT INFORMATION

Applicant	Jorjin Technologies Inc. 17F.-1, NO.239, SEC. 1, DATONG RD., XIZHI DIST. New Taipei City, 22161 Taiwan
Manufacturer	Jorjin Technologies Inc. 17F.-1, NO.239, SEC. 1, DATONG RD., XIZHI DIST. New Taipei City, 22161 Taiwan
Equipment	WiFi and Bluetooth Module
Model No.	WG7837-V0
Model Discrepancy	N/A
Trade Name	JORJIN
Received Date	April 15, 2021
Date of Test	May 6 ~ June 8, 2021
Power Supply	Power from host device.
HW Version	WG7837-V1A-R01_210317-1
SW Version	FW 8.9.0.0.88
EUT Serial #	WG7837-V0 / WG7837-V1
Class II Permissive Change	1. To change the TCXO component. 2. Original TCXO component is SEIKO EPSON TG-5035CJ-12N then change to TKD TC20A026000GECN011, TKD TC20A026000GECN011 electrical specifications is compatible SEIKO EPSON TG-5035CJ-12N.

Remark:

1. For more details, please refer to the User's manual of the EUT.
2. Disclaimer: Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.
3. The EUT (model: WG7837-V0) had been tested under operating condition.

1.2 INFORMATION ABOUT THE FHSS CHARACTERISTICS

1.2.1 Pseudorandom Frequency Hopping Sequence

The channel is represented by a pseudo-random hopping sequence hopping through the 79 RF channels. The hopping sequence is unique for the piconet and is determined by the Bluetooth device address of the master; the phase in the hopping sequence is determined by the Bluetooth clock of the master. The channel is divided into time slots where each slot corresponds to an RF hop frequency. Consecutive hops correspond to different RF hop frequencies. The nominal hop rate is 1 600 hops/s.

1.2.2 Equal Hopping Frequency Use

The channels of this system will be used equally over the long-term distribution of the hopsets.

1.2.3 Example of a 79 hopping sequence in data mode:

02, 05, 31, 24, 20, 10, 43, 36, 30, 23, 40, 06, 21, 50, 44, 09, 71, 78, 01, 13, 73, 07, 70, 72, 35, 62, 42, 11, 41, 08, 16, 29, 60, 15, 34, 61, 58, 04, 67, 12, 22, 53, 57, 18, 27, 76, 39, 32, 17, 77, 52, 33, 56, 46, 37, 47, 64, 49, 45, 38, 69, 14, 51, 26, 79, 19, 28, 65, 75, 54, 48, 03, 25, 66, 05, 16, 68, 74, 59, 63, 55

1.2.4 System Receiver Input Bandwidth

Each channel bandwidth is 1MHz.

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

1.2.5 Equipment Description

RSS-247, 5.1 (a): The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudo randomly ordered list of hopping frequencies. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

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1.3 EUT CHANNEL INFORMATION

Frequency Range	2402MHz-2480MHz
Modulation Type	1. GFSK for BDR-1Mbps 2. $\pi/4$ -DQPSK for EDR-2Mbps 3. 8DPSK for EDR-3Mbps
Number of channel	79 Channels

Remark:

Refer as ANSI C63.10: 2013 clause 5.6.1 Table 4 for test channels

Number of frequencies to be tested		
Frequency range in which device operates	Number of frequencies	Location in frequency range of operation
<input type="checkbox"/> 1 MHz or less	1	Middle
<input type="checkbox"/> 1 MHz to 10 MHz	2	1 near top and 1 near bottom
<input checked="" type="checkbox"/> More than 10 MHz	3	1 near top, 1 near middle, and 1 near bottom

1.4 ANTENNA INFORMATION

Antenna Type	Brand	Antenna Gain
PCB	Ethertronics	-0.6 dBi
Dipole	LSR	2 dBi
PCB	Laird	2 dBi
Chip	Pulse	3.2 dBi (Worst)
PIFA	LSR	2 dBi
Chip	TDK	2.4 dBi

Remark:

1.The antenna(s) of the EUT are permanently attached and there are no provisions for connection to an external antenna. So the EUT complies with the requirements of §15.203.

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1.5 MEASUREMENT UNCERTAINTY

PARAMETER	UNCERTAINTY
AC Powerline Conducted Emission	+/- 1.2575
Emission bandwidth, 20dB bandwidth	+/- 0.0014
RF output power, conducted	+/- 1.14
Power density, conducted	+/- 1.40
3M Semi Anechoic Chamber / 30M~200M	+/- 4.12
3M Semi Anechoic Chamber / 200M~1000M	+/- 4.68
3M Semi Anechoic Chamber / 1G~8G	+/- 5.18
3M Semi Anechoic Chamber / 8G~18G	+/- 5.47
3M Semi Anechoic Chamber / 18G~26G	+/- 3.81
3M Semi Anechoic Chamber / 26G~40G	+/- 3.87

Remark:

- 1.This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2
2. ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report.

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1.6 FACILITIES AND TEST LOCATION

All measurement facilities used to collect the measurement data are located at No.11, Wugong 6th Rd., Wugu Dist., New Taipei City, Taiwan. (R.O.C.)
CAB identifier: TW1309

Test site	Test Engineer	Remark
Radiation	Ray Li	-
RF Conducted	Jerry Chang	-

Remark: The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC public Access Link (PAL) database, FCC Registration No. :444940, the FCC Designation No.:TW1309”

1.7 INSTRUMENT CALIBRATION

RF Conducted Test Site					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Signal Analyzer	R&S	FSV 40	101073	09/17/2020	09/16/2021
Power Meter	Anritsu	ML2487A	6K00003260	05/24/2021	05/23/2022
Power Sensor	Anritsu	MA2490A	032910	05/24/2021	05/23/2022
Software	N/A				

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3M 966 Chamber Test Site					
Equipment	Manufacturer	Model	Serial Number	Cal Date	Cal Due
Band Reject Filters	MICRO TRONICS	BRM 50702	120	02/08/2021	02/07/2022
Bilog Antenna	Sunol Sciences	JB3	A030105	07/24/2020	07/23/2021
Horn Antenna	ETS LINDGREN	3116	00026370	12/11/2020	12/10/2021
Coaxial Cable	HUBER SUHNER	SUCOFLEX 104PEA	20995	02/24/2021	02/23/2022
Coaxial Cable	EMCI	EMC105	190914+327109/4	09/19/2020	09/18/2021
K Type Cable	Huber+Suhner	SUCOFLEX 102	29406/2	12/09/2020	12/08/2021
K Type Cable	Huber+Suhner	SUCOFLEX 102	22470/2	12/09/2020	12/08/2021
Digital Thermo-Hygro Meter	WISEWIND	1206	D07	01/06/2021	01/05/2022
double Ridged Guide Horn Antenna	ETC	MCTD 1209	DRH13M02003	09/30/2020	09/29/2021
Loop Ant	COM-POWER	AL-130	121051	04/07/2021	04/06/2022
Pre-Amplifier	EMEC	EM330	060609	02/24/2021	02/23/2022
Pre-Amplifier	HP	8449B	3008A00965	12/25/2020	12/24/2021
Pre-Amplifier	MITEQ	AMF-6F-18004000-37-8P	985646	09/02/2020	09/01/2021
PSA Series Spectrum Analyzer	Agilent	E4446A	MY46180323	07/24/2020	07/23/2021
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R	N.C.R
Controller	CCS	CC-C-1F	N/A	N.C.R	N.C.R
Turn Table	CCS	CC-T-1F	N/A	N.C.R	N.C.R
Software	e3 6.11-20180413				

Remark: Each piece of equipment is scheduled for calibration once a year.

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1.8 SUPPORT AND EUT ACCESSORIES EQUIPMENT

EUT Accessories Equipment					
No.	Equipment	Brand	Model	Series No.	FCC ID
	N/A				

Support Equipment						
No.	Equipment	Brand	Model	Series No.	FCC ID	IC
1	NB(L)	Toshiba	PORTEGE R30-A	N/A	PD97260H	N/A

1.9 TEST METHODOLOGY AND APPLIED STANDARDS

The test methodology, setups and results comply with all requirements in accordance with ANSI C63.10:2013, FCC Part 2, FCC Part 15.247.

2. TEST SUMMARY

FCC Standard Section	Report Section	Test Item	Result
15.203	1.3	Antenna Requirement	Pass
15.247(b)(1)	4.1	Output Power Measurement	Pass
15.247(d)	4.2	Radiation Spurious Emission	Pass

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3. DESCRIPTION OF TEST MODES

3.1 THE WORST MODE OF OPERATING CONDITION

Operation mode	GFSK for BDR-1Mbps (DH5) $\pi/4$ -DQPSK for EDR-2Mbps (2DH5) 8DPSK for EDR-3Mbps (3DH5)
Test Channel Frequencies	<p>GFSK for BDR-1Mbps: 1.Lowest Channel: 2402MHz 2.Middle Channel: 2441MHz 3.Highest Channel: 2480MHz</p> <p>$\pi/4$-DQPSK for EDR-2Mbps 1.Lowest Channel: 2402MHz 2.Middle Channel: 2441MHz 3.Highest Channel: 2480MHz</p> <p>8DPSK for EDR-3Mbps: 1.Lowest Channel: 2402MHz 2.Middle Channel: 2441MHz 3.Highest Channel: 2480MHz</p>

Remark:

1. EUT pre-scanned data rate of output power for each mode, the worst data rate were recorded in this report.

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3.2 THE WORST MODE OF MEASUREMENT

Radiated Emission Measurement Above 1G	
Test Condition	Radiated Emission Above 1G
Power supply Mode	Mode 1: EUT power by Host System
Worst Mode	<input checked="" type="checkbox"/> Mode 1 <input type="checkbox"/> Mode 2 <input type="checkbox"/> Mode 3 <input type="checkbox"/> Mode 4
Worst Position	<input type="checkbox"/> Placed in fixed position. <input type="checkbox"/> Placed in fixed position at X-Plane (E2-Plane) <input checked="" type="checkbox"/> Placed in fixed position at Y-Plane (E1-Plane) <input type="checkbox"/> Placed in fixed position at Z-Plane (H-Plane)

Radiated Emission Measurement Below 1G	
Test Condition	Radiated Emission Below 1G
Power supply Mode	Mode 1: EUT power by Host System
Worst Mode	<input checked="" type="checkbox"/> Mode 1 <input type="checkbox"/> Mode 2 <input type="checkbox"/> Mode 3 <input type="checkbox"/> Mode 4

Remark:

- 1. The worst mode was record in this test report.*
- 2. EUT pre-scanned in three axis ,X,Y, Z and two polarity, for radiated measurement. The worst case(Y-Plane) were recorded in this report*

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4. TEST RESULT

4.1 OUTPUT POWER MEASUREMENT

4.1.1 Test Limit

According to §15.247(a)(1)

Peak output power :

FCC

Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

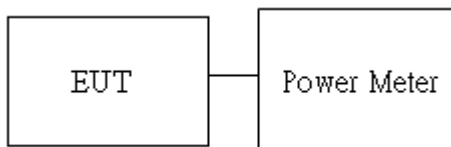
Limit	<input checked="" type="checkbox"/> Antenna not exceed 6 dBi : 21dBm <input type="checkbox"/> Antenna with DG greater than 6 dBi : 21dBm [Limit = 30 – (DG – 6)]
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Average output power : For reporting purposes only.

4.1.2 Test Procedure

1. The EUT RF output connected to the power meter by RF cable.
2. Setting maximum power transmit of EUT.
3. The path loss was compensated to the results for each measurement.
4. Measure and record the result of Peak output power and Average output power. in the test report.

4.1.3 Test Setup



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4.1.4 Test Result

Temperature: 24.9°C Humidity: 54.7% RH
Tested by: Jerry Chang Test date: May 6, 2021

Peak output power :

BT							
Config.	CH	Freq. (MHz)	Power Setting	PK Power (dBm)	PK Power (W)	FCC Limit (dBm)	Antenna Gain (dBi)
GFSK BR-1Mbps (DH5)	0	2402	7	11.2600	0.0134	21	3.2
	39	2441	7	11.1800	0.0131		
	78	2480	7	11.0600	0.0128		
8DPSK EDR- 3Mbps (3DH5)	0	2402	7	9.6900	0.0093		
	39	2441	7	9.4000	0.0087		
	78	2480	7	9.1000	0.0081		

Average output power :

BT				
Config.	CH	Freq. (MHz)	Power set	AV Power (dBm)
GFSK BR-1Mbps (DH5)	0	2402	7	11.0900
	39	2441	7	11.0300
	78	2480	7	10.0900
8DPSK EDR- 3Mbps (3DH5)	0	2402	7	6.6000
	39	2441	7	6.7400
	78	2480	7	6.4300

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4.2 RADIATION SPURIOUS EMISSION

4.2.1 Test Limit

FCC according to §15.247(d), §15.209 and §15.205,

In any 100 kHz bandwidth outside the authorized frequency band, all harmonic and spurious must be least 20 dB below the highest emission level with the authorized frequency band. Radiation emission which fall in the restricted bands must also follow the FCC section 15.209 as below limit in table.

Below 30 MHz

Frequency	Field Strength (microvolts/m)	Magnetic H-Field (microamperes/m)	Measurement Distance (metres)
9-490 kHz	2,400/F (F in kHz)	2,400/F (F in kHz)	300
490-1,705 kHz	24,000/F (F in kHz)	24,000/F (F in kHz)	30
1.705-30 MHz	30	N/A	30

Above 30 MHz

Frequency (MHz)	Field Strength microvolts/m at 3 metres (watts, e.i.r.p.)	
	Transmitters	Receivers
30-88	100 (3 nW)	100 (3 nW)
88-216	150 (6.8 nW)	150 (6.8 nW)
216-960	200 (12 nW)	200 (12 nW)
Above 960	500 (75 nW)	500 (75 nW)

Remark:

Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 m open are test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

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4.2.2 Test Procedure

1. The EUT is placed on a turntable, Above 1 GHz is 1.5m and below 1 GHz is 0.8m above ground plane. The EUT Configured un accordance with ANSI C63.10: 2013, and the EUT set in a continuous mode.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level. And EUT is set 3m away from the receiving antenna, which is scanned from 1m to 4m above the ground plane to find out the highest emissions. Measurement are made polarized in both the vertical and the horizontal positions with antenna.
3. Span shall wide enough to full capture the emission measured. The SA from 9kHz to 26.5GHz set to the low, Mid and High channels with the EUT transmit.

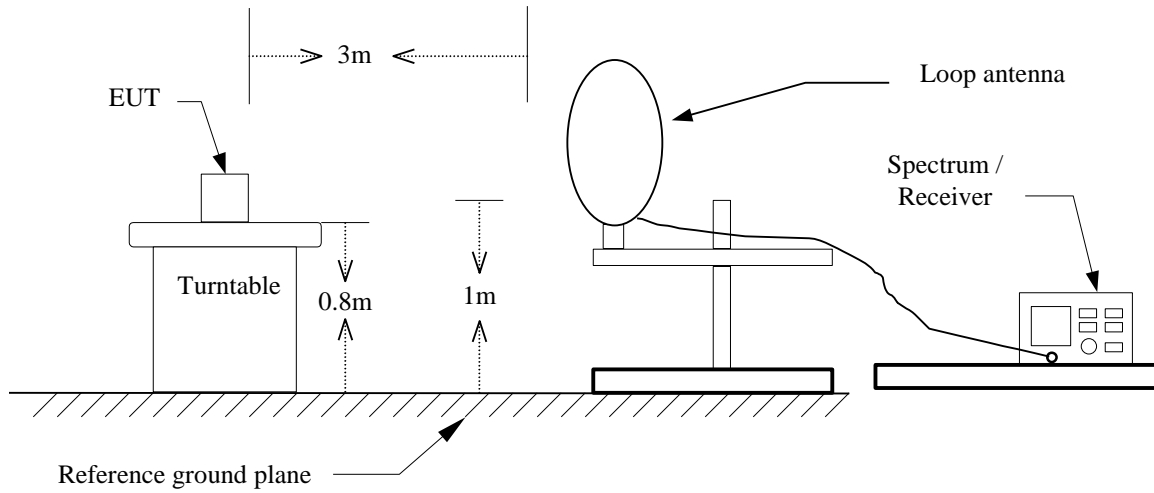
Note: No emission found between lowest internal used/generated frequency to 30MHz(9KHz~30MHz)

4. For harmonic, the worst case of output power was BDR-1Mbps. Therefore only BDR-1Mbps record in the report.
5. The SA setting following :
 - (1) Below 1G : RBW = 100kHz, VBW \geq 3 RBW, Sweep = Auto, Detector = Peak, Trace = Max hold.
 - (2) Above 1G :
 - (2.1) For Peak measurement : RBW = 1MHz, VBW \geq 3 RBW, Sweep = Auto, Detector = Peak, Trace = Max hold.
 - (2.2) For Average measurement : RBW = 1MHz, VBW
 - 'If Duty Cycle \geq 98%, VBW=10Hz.
 - 'If Duty Cycle < 98%, VBW \geq 1/T.

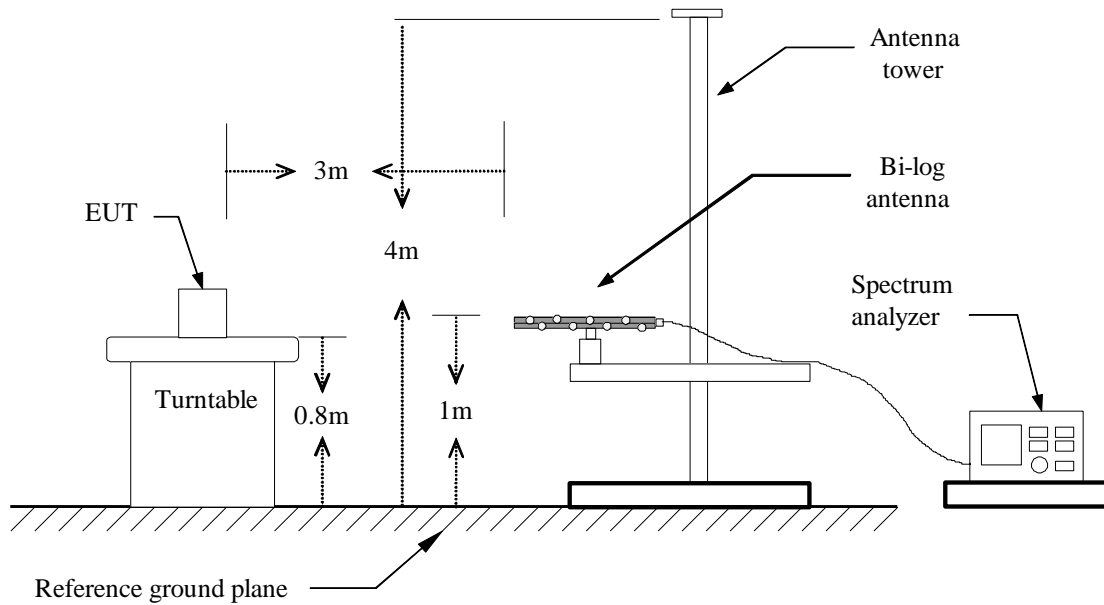
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4.2.3 Test Setup

9kHz ~ 30MHz

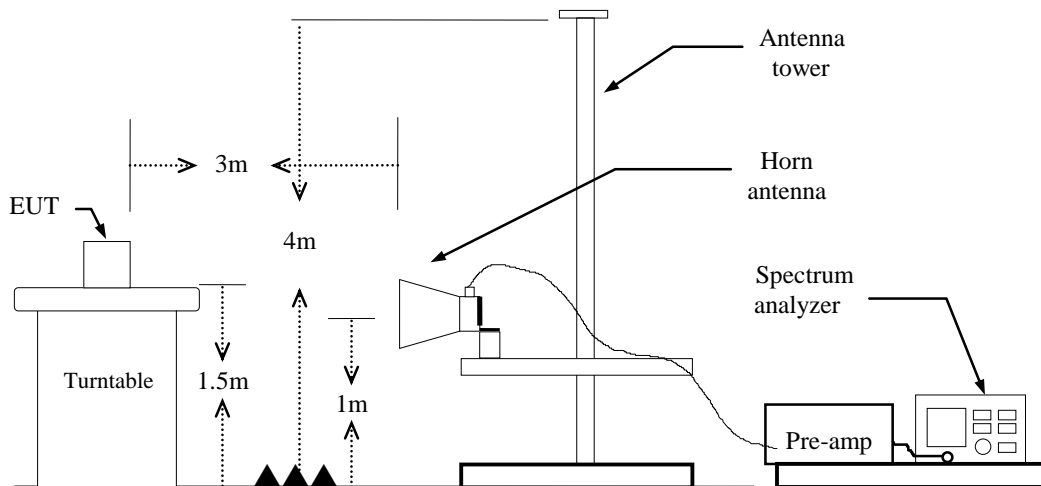


30MHz ~ 1GHz



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Above 1 GHz

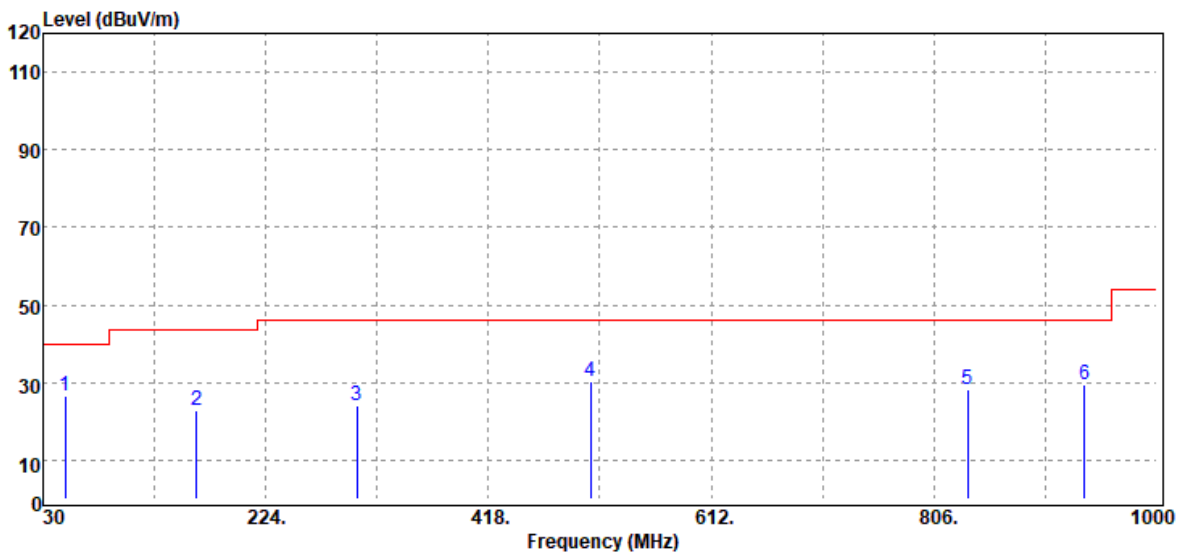


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4.2.4 Test Result

Below 1G Test Data

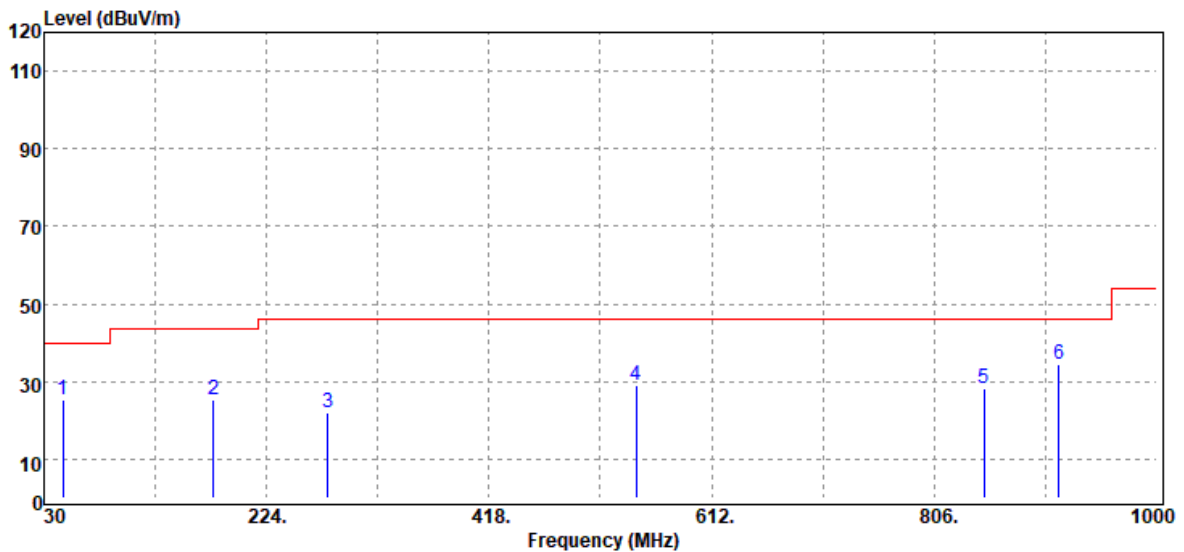
Test Mode:	BT Mode	Temp/Hum	23.4(°C)/ 51%RH
Test Item	30MHz-1GHz	Test Date	June 8, 2021
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit @3m dB μ V/m	Margin dB
49.40	Peak	41.68	-15.12	26.56	40.00	-13.44
163.86	Peak	33.20	-10.51	22.69	43.50	-20.81
303.54	Peak	32.70	-8.50	24.20	46.00	-21.80
507.24	Peak	33.58	-3.28	30.30	46.00	-15.70
835.10	Peak	25.93	2.13	28.06	46.00	-17.94
936.95	Peak	25.81	3.57	29.38	46.00	-16.62

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Test Mode:	BT Mode	Temp/Hum	23.4(°C)/ 51%RH
Test Item	30MHz-1GHz	Test Date	June 8, 2021
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak		

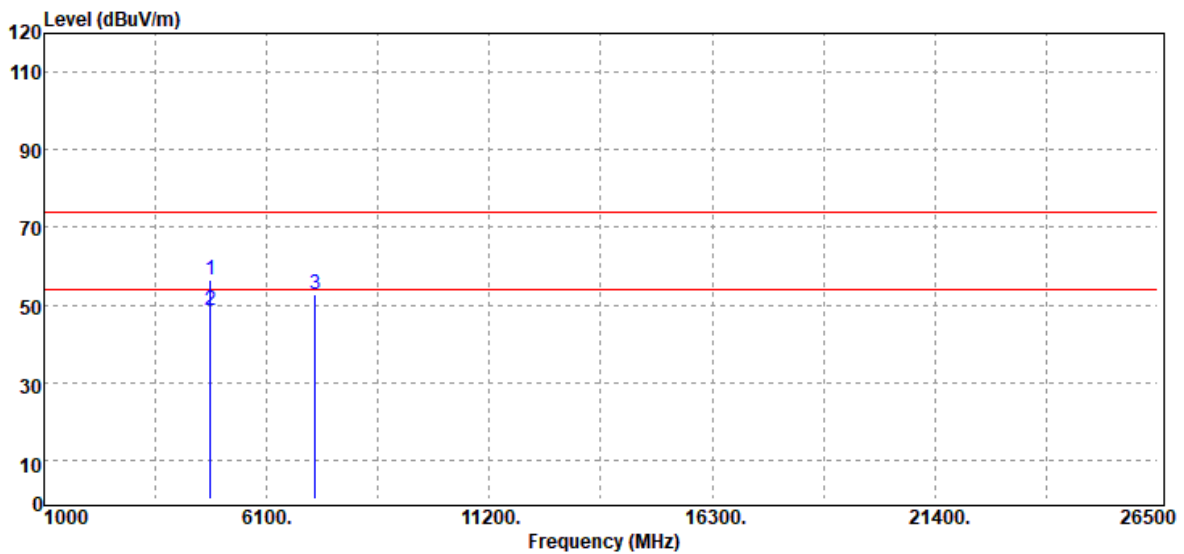


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBµV	Factor dB	Actual FS dBµV/m	Limit @3m dBµV/m	Margin dB
46.49	Peak	39.08	-13.90	25.18	40.00	-14.82
177.44	Peak	36.77	-11.28	25.49	43.50	-18.01
277.35	Peak	30.88	-8.74	22.14	46.00	-23.86
546.04	Peak	31.58	-2.41	29.17	46.00	-16.83
849.65	Peak	25.62	2.52	28.14	46.00	-17.86
914.64	Peak	31.38	3.26	34.64	46.00	-11.36

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Above 1G Test Data

Test Mode:	GFSK_BDR-1Mbps Low CH	Temp/Hum	23.4(°C)/ 51%RH
Test Item	Harmonic	Test Date	June 8, 2021
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak		



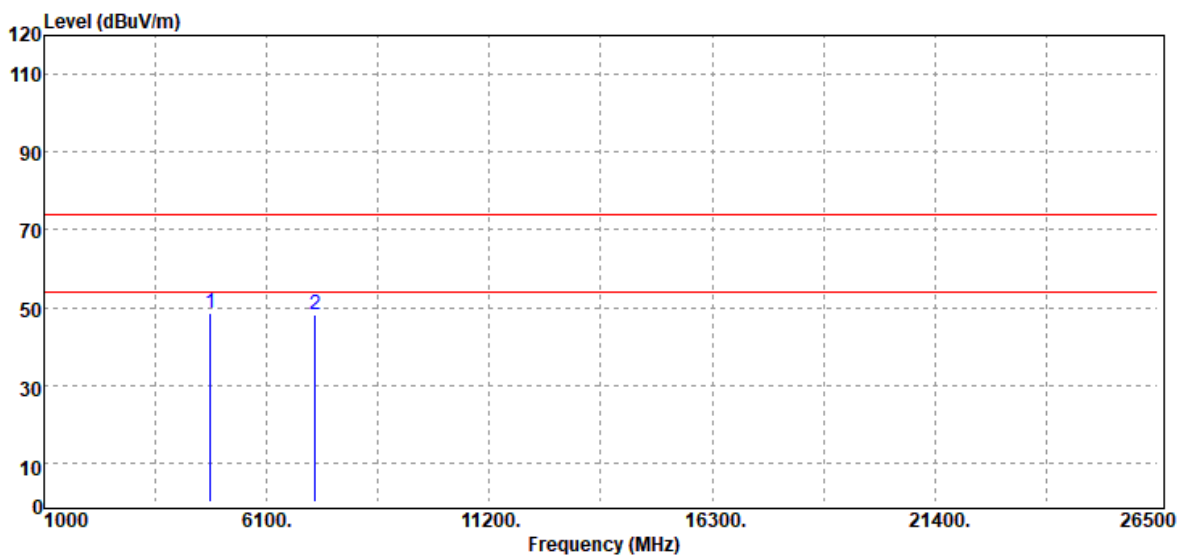
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBµV	Factor dB	Actual FS dBµV/m	Limit @3m dBµV/m	Margin dB
4804.00	Peak	50.68	5.62	56.30	74.00	-17.70
4804.00	Average	43.08	5.62	48.70	54.00	-5.30
7206.00	Peak	39.60	13.13	52.73	74.00	-21.27
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

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Test Mode:	GFSK_BDR-1Mbps Low CH	Temp/Hum	23.4(°C)/ 51%RH
Test Item	Harmonic	Test Date	June 8, 2021
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak		



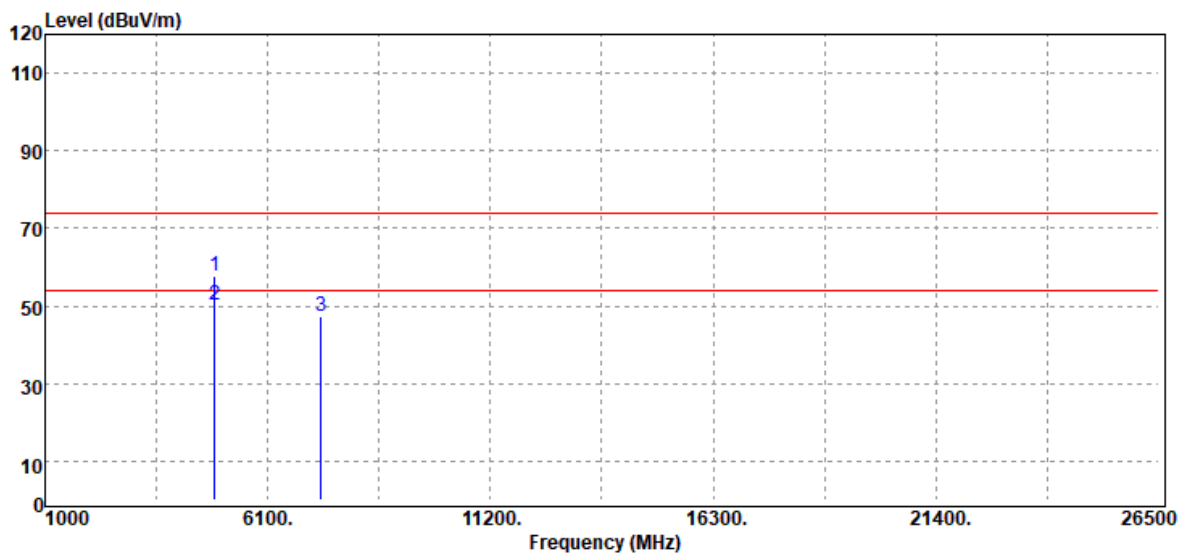
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit @3m dB μ V/m	Margin dB
4804.00	Peak	43.07	5.62	48.69	74.00	-25.31
7206.00	Peak	35.04	13.13	48.17	74.00	-25.83
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

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Test Mode:	GFSK_BDR-1Mbps Mid CH	Temp/Hum	23.4(°C)/ 51%RH
Test Item	Harmonic	Test Date	June 8, 2021
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak		



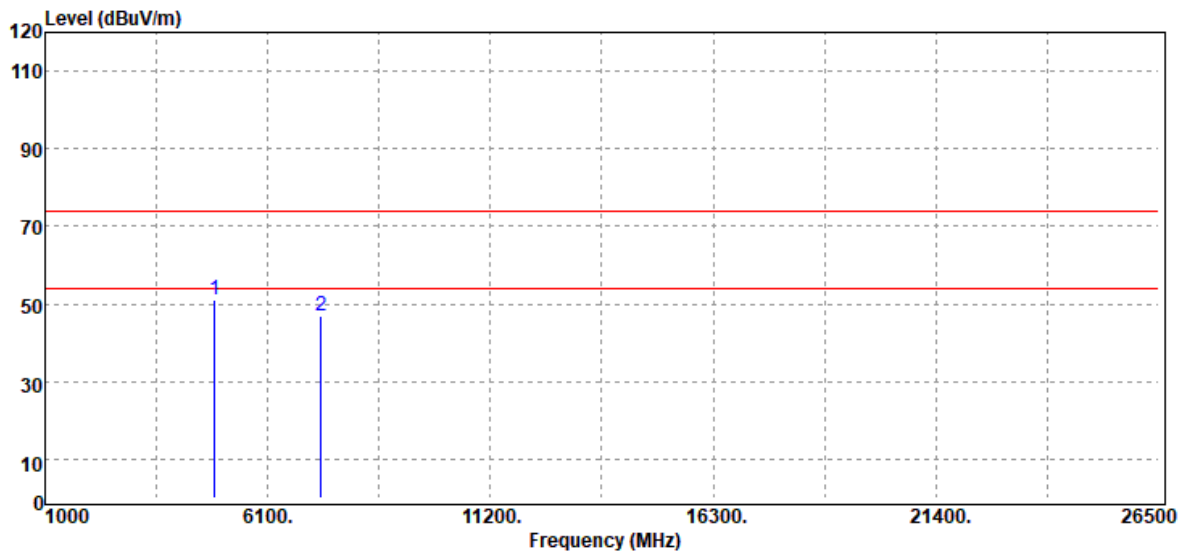
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit @3m dB μ V/m	Margin dB
4882.00	Peak	51.61	5.99	57.60	74.00	-16.40
4882.00	Average	44.28	5.99	50.27	54.00	-3.73
7323.00	Peak	34.00	13.20	47.20	74.00	-26.80
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

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Test Mode:	GFSK_BDR-1Mbps Mid CH	Temp/Hum	23.4(°C)/ 51%RH
Test Item	Harmonic	Test Date	June 8, 2021
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak		



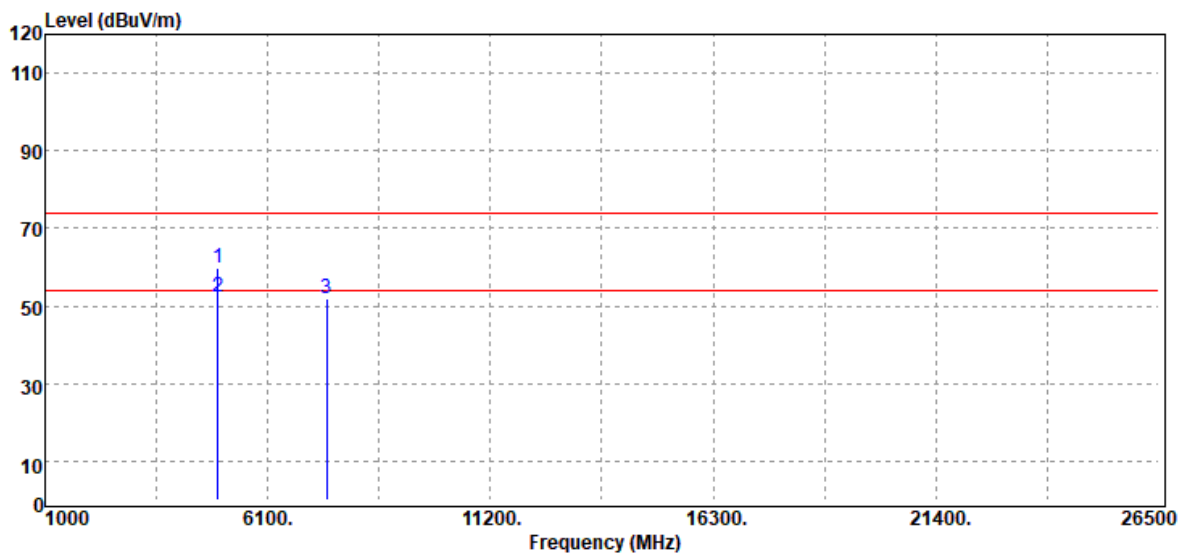
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit @3m dB μ V/m	Margin dB
4882.00	Peak	45.20	5.99	51.19	74.00	-22.81
7323.00	Peak	33.64	13.20	46.84	74.00	-27.16
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Report No.: T210415W07-RP1

Test Mode:	GFSK_BDR-1Mbps High CH	Temp/Hum	23.4(°C)/ 51%RH
Test Item	Harmonic	Test Date	June 8, 2021
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak		



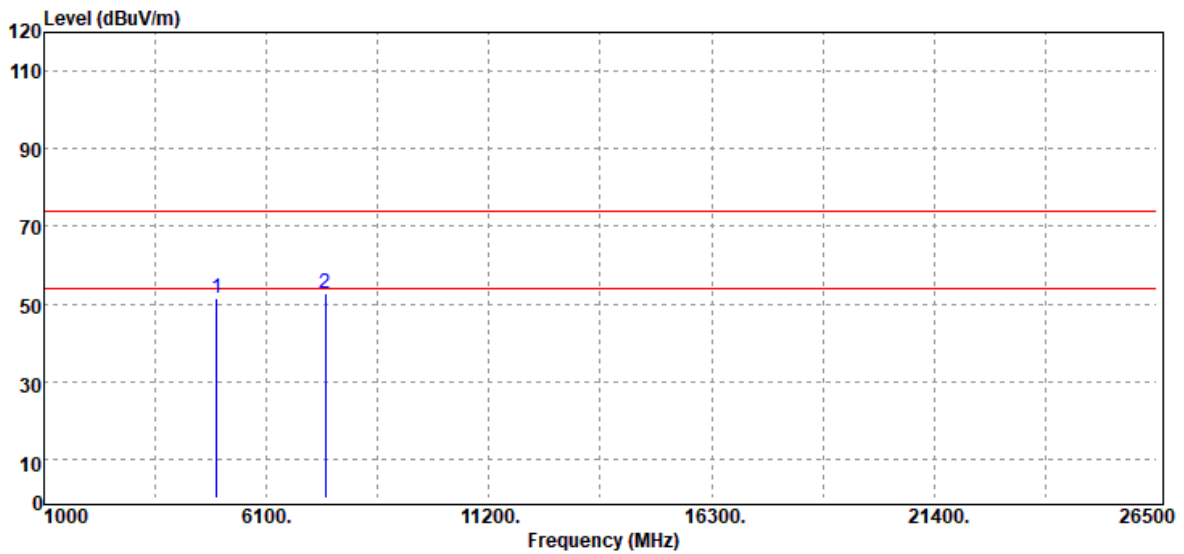
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit @3m dB μ V/m	Margin dB
4960.00	Peak	53.14	6.73	59.87	74.00	-14.13
4960.00	Average	45.64	6.73	52.37	54.00	-1.63
7440.00	Peak	38.86	13.13	51.99	74.00	-22.01
N/A						

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Report No.: T210415W07-RP1

Test Mode:	GFSK_BDR-1Mbps High CH	Temp/Hum	23.4(°C)/ 51%RH
Test Item	Harmonic	Test Date	June 8, 2021
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak		



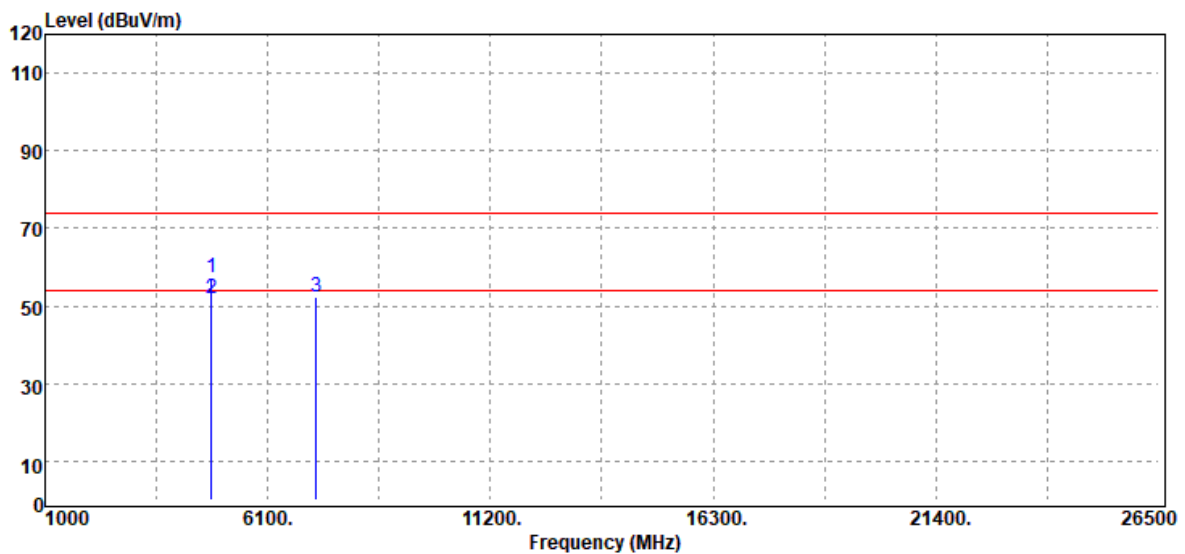
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit @3m dB μ V/m	Margin dB
4960.00	Peak	44.76	6.73	51.49	74.00	-22.51
7440.00	Peak	39.48	13.13	52.61	74.00	-21.39
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Report No.: T210415W07-RP1

Test Mode	8DPSK_EDR-3Mbps Low CH	Temp/Hum	23.4(°C)/ 51%RH
Test Item	Harmonic	Test Date	June 8, 2021
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak		



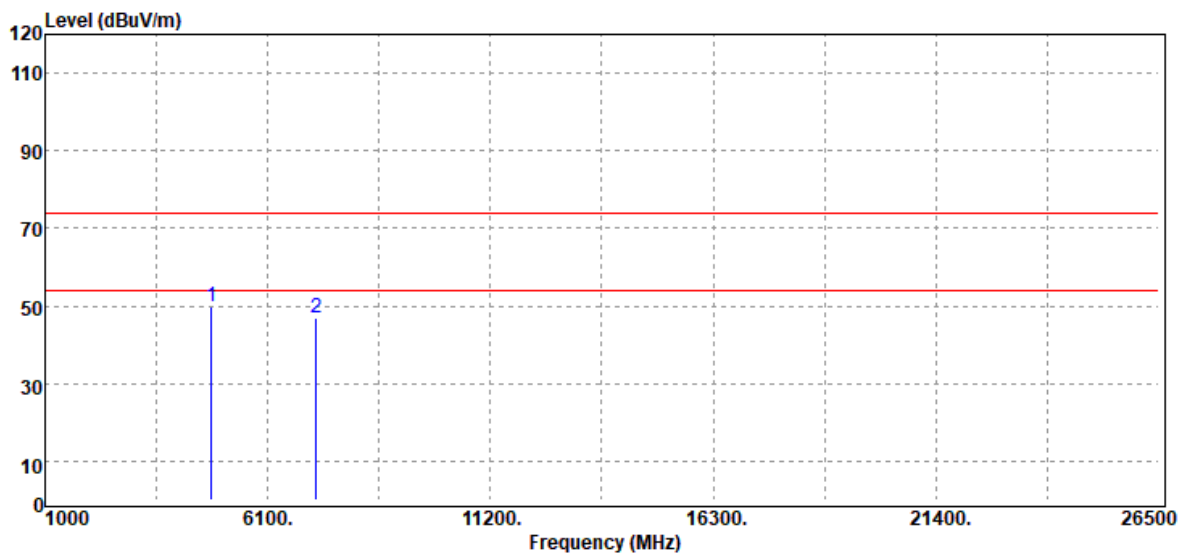
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit @3m dB μ V/m	Margin dB
4804.00	Peak	51.62	5.62	57.24	74.00	-16.76
4804.00	Average	46.15	5.62	51.77	54.00	-2.23
7206.00	Peak	39.26	13.13	52.39	74.00	-21.61
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Report No.: T210415W07-RP1

Test Mode	8DPSK_EDR-3Mbps Low CH	Temp/Hum	23.4(°C)/ 51%RH
Test Item	Harmonic	Test Date	June 8, 2021
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak		



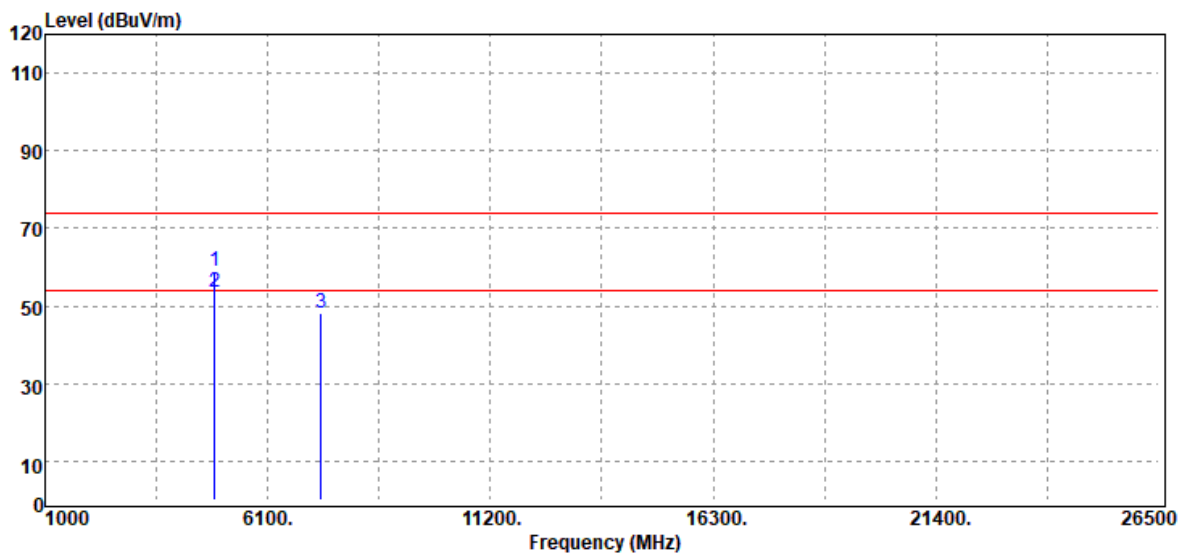
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit @3m dB μ V/m	Margin dB
4804.00	Peak	44.30	5.62	49.92	74.00	-24.08
7206.00	Peak	33.91	13.13	47.04	74.00	-26.96
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Report No.: T210415W07-RP1

Test Mode	8DPSK_EDR-3Mbps Mid CH	Temp/Hum	23.4(°C)/ 51%RH
Test Item	Harmonic	Test Date	June 8, 2021
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak		



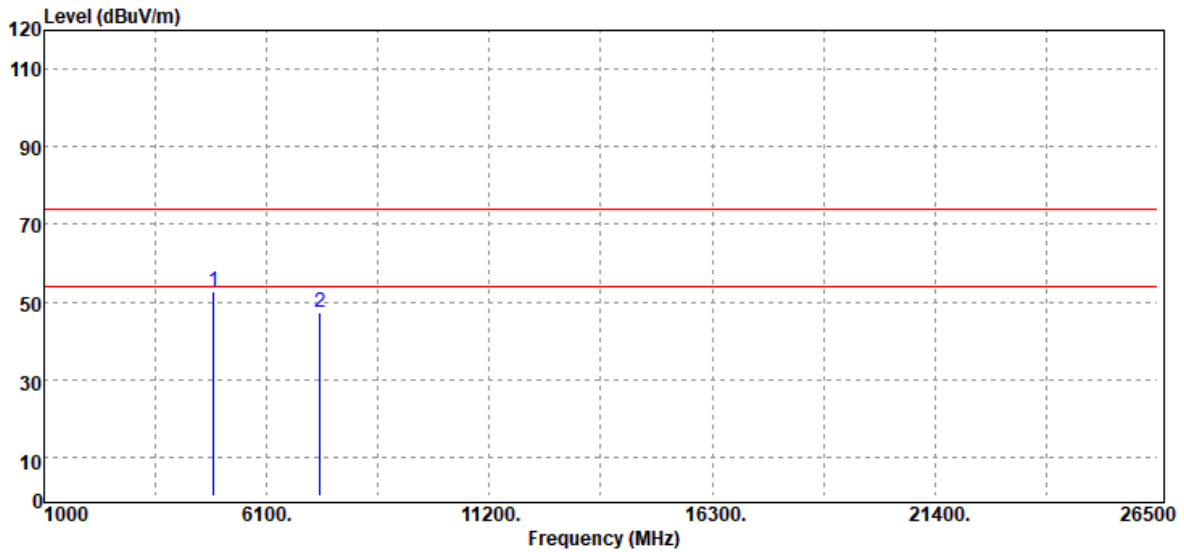
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit @3m dB μ V/m	Margin dB
4882.00	Peak	52.86	5.99	58.85	74.00	-15.15
4882.00	Average	47.56	5.99	53.55	54.00	-0.45
7323.00	Peak	35.00	13.20	48.20	74.00	-25.80
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

Report No.: T210415W07-RP1

Test Mode	8DPSK_EDR-3Mbps Mid CH	Temp/Hum	23.4(°C)/ 51%RH
Test Item	Harmonic	Test Date	June 8, 2021
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak		



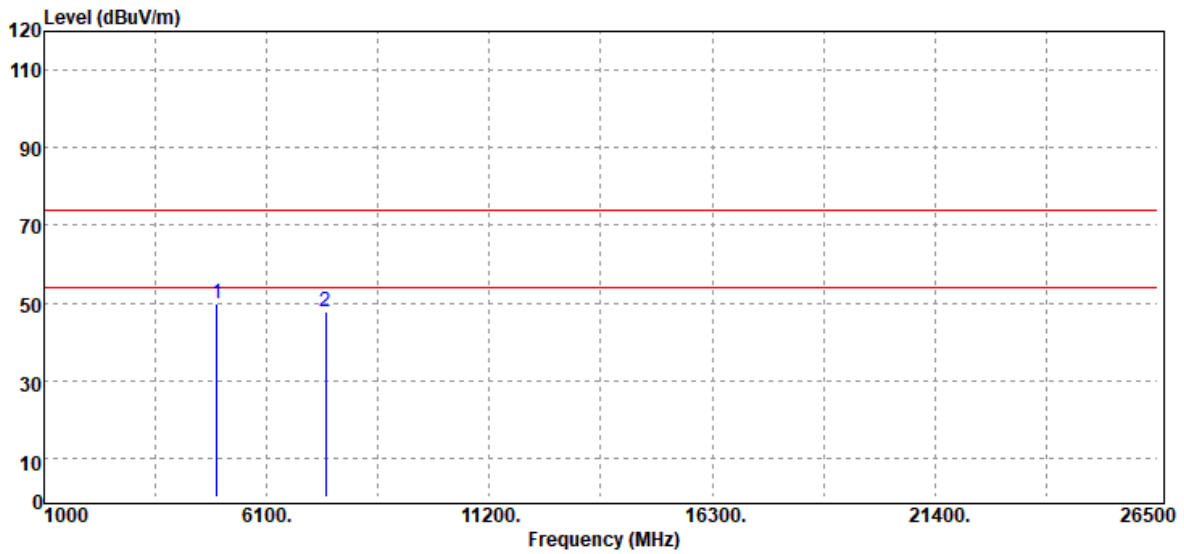
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit @3m dB μ V/m	Margin dB
4882.00	Peak	46.54	5.99	52.53	74.00	-21.47
7323.00	Peak	34.29	13.20	47.49	74.00	-26.51
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Report No.: T210415W07-RP1

Test Mode	8DPSK_EDR-3Mbps High CH	Temp/Hum	23.4(°C)/ 51%RH
Test Item	Harmonic	Test Date	June 8, 2021
Polarize	Vertical	Test Engineer	Ray Li
Detector	Peak		



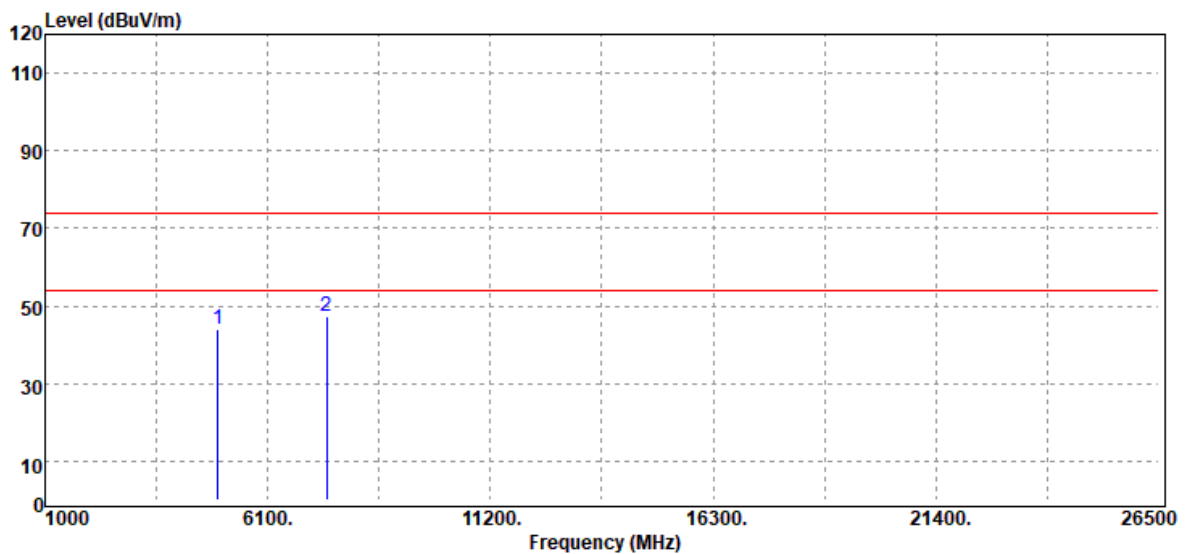
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit @3m dB μ V/m	Margin dB
4960.00	Peak	42.92	6.73	49.65	74.00	-24.35
7440.00	Peak	34.80	13.13	47.93	74.00	-26.07
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Report No.: T210415W07-RP1

Test Mode	8DPSK_EDR-3Mbps High CH	Temp/Hum	23.4(°C)/ 51%RH
Test Item	Harmonic	Test Date	June 8, 2021
Polarize	Horizontal	Test Engineer	Ray Li
Detector	Peak		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBµV	Factor dB	Actual FS dBµV/m	Limit @3m dBµV/m	Margin dB
4960.00	Peak	37.29	6.73	44.02	74.00	-29.98
7440.00	Peak	34.38	13.13	47.51	74.00	-26.49
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

- End of Test Report -