

ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

CLASS II & IV PC REPORT



Applicant: Acer Incorporated
8F., No. 88, Sec. 1, Xintai 5th Rd., Xizhi, New Taipei City
22181, Taiwan (R.O.C)

Product Name: 2x2 802.11A/B/G/N/AC WiFi + Bluetooth Module

Brand Name: acer

Model No.: QCNFA324

Model Difference: N/A

Report Number: E2/2021/60034

FCC ID HLZ-QCNFA324

IC: 1754F-QCNFA324

Issue Date: Jul. 26, 2021

Date of Test: Jun. 16, 2021 ~ Jul. 16, 2021

Date of EUT Received: Jun. 11, 2021

Approved By

Arno Hsieh

Arno Hsieh

We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd. Central RF Lab The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10:2013 and the energy emitted by the sample EUT comply with FCC rule part §15.247, ISED RSS-247.

The results of this report relate only to the sample identified in this report.

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Revision History

Report Number	Revision	Description	Issue Date	Revised By
E2/2021/60034	Rev.00	Original.	Jul. 26, 2021	Yi-Shan Tsai

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1 GENERAL INFORMATION

1.1 Product description

Product Name:	2x2 802.11A/B/G/N/AC WiFi + Bluetooth Module
Brand Name:	acer
Model No.:	QCNFA324
Model Difference:	N/A
Hardware Version:	N/A
Firmware Version:	N/A
EUT Series No.:	N8AWGWW00111180F6AF (Conducted) N8AWGWW0011180F6AF7600 (Radiated)
Power Supply:	11.25Vdc from Rechargeable Lithium Ion Battery Pack 5 / 9 / 12 / 15 / 20Vdc from AC/DC Adapter

1.2 RF Specification

Radio Technology:	BT BR+EDR
Channel number:	79 channels
Modulation type:	GFSK + $\pi/4$ DQPSK + 8DPSK
Transmit Power:	11.6 dBm
Frequency Range:	2.402GHz – 2.480GHz
Dwell Time:	\leq 0.4s

1.3 Antenna Designation

Antenna Type	Main / Aux	Freq. (MHz)	Peak Antenna Gain (dBi)	Worst Antenna Gain
PIFA	Aux	2402~2480	0.44	V

Note:

1. Pre-scanned was done on the above antennas, measurements were demonstrated by using the antenna with the highest gain as the worst case scenarios.
2. Antenna information is provided by the applicant.

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1.4 Test Methodology of Applied Standards

FCC Part 15, Subpart C §15.247
 KDB 558074 D01 v05r02 DSS Meas. Guidance
 RSS-247 issue 2 Feb. 2017
 RSS-Gen Issue 5
 ANSI C63.10:2013

1.5 Test Facility

Laboratory	Test Site Address	Test Site Name	FCC Designation number	IC CAB identifier
SGS Taiwan Ltd. Central RF Lab. (TAF code 3702)	No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan.	SAC 1	TW0027	TW3702
		SAC 3		
		Conduction 1		
		Conducted 1		
		Conducted 2		
		Conducted 3		
		Conducted 4		
		Conducted 5		
		Conducted 6		
		Conducted 7		
	Conducted 8			
	Conducted 9			
	Conducted 10			
	No.2, Keji 1st Rd., Guishan District, Taoyuan City, Taiwan 333	Conduction A	TW0028	
		SAC C		
		SAC D		
		SAC E		
		Conducted A		
		Conducted B		
		Conducted C		
Conducted D				
Conducted E				
Conducted F				
Conducted G				
Conducted H				
Conducted I				
Conducted J				
Conducted TS8997				

Note: Test site name is remarked on the equipment list in each section of this report as an indication where measurements occurred in specific test site and address.

1.6 Special Accessories

There is no special accessory used while test was conducted.

1.7 Equipment Modifications

There was no modification incorporated into the EUT.

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2 SYSTEM TEST CONFIGURATION

2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

2.2 EUT Exercise

An engineering test mode (software/firmware) that applicant provided was utilized to manipulate the EUT into transmit, selection of the test channel, and modulation scheme.

2.3 Test Procedure

2.3.1 Conducted Test (RF)

The active antenna port of the unlicensed wireless device is connected to the spectrum analyzer with attenuator to protect the instrumentation. If a second antenna port is available, it is tested at one operating frequency, with other port(s) appropriately terminated, to verify it has similar output characteristics as the fully tested port.

2.3.2 Radiated Emissions

The EUT is placed on a turn table. For emissions testing at or below 1 GHz, the table height shall be 0.8 m above the reference ground plane. For emission measurements above 1 GHz, the table height shall be 1.5 m. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this transmitter (EUT) was rotated through three orthogonal axes and measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made "while keeping the antenna in the 'cone of radiation' from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response." is still within the 3dB illumination BW of the measurement antenna.

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2.4 Measurement Results Explanation Example

2.4.1 Radiated Emission Test Sites For Measurements From 9 kHz To 30 MHz

Radiated emission below 30MHz is measured in a 9m*9m*6m semi-anechoic chamber, the measurements correspond to those obtained at an open-field test site.

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

2.4.2 For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuation factor between EUT conducted port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly EUT RF output level.

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2.5 Configuration of Tested System

Fig. 2-1 Radiated Emission



Fig. 2-2 Conducted (Antenna Port) Configuration



Table 2-1 Equipment Used in Tested System

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Data Cable	Power Cord
1	Bluetooth Test Software	N/A	N/A	N/A	N/A	N/A
2	Adapter	Chicony	A18-045N1A	N/A	N/A	N/A
3	Notebook	Lenovo	L420	S0011721	N/A	N/A

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3 SUMMARY OF TEST RESULTS

FCC Rules	IC Rules	Description Of Test	Result
§15.247(b)(1)	RSS-247 §5.4 b	Peak Output Power	Compliant
§15.247(d) §15.209	RSS-247 §5.5 RSS-Gen §8.9	Radiated Spurious Emission	Compliant

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4 DESCRIPTION OF TEST MODES

4.1 Operated in 2400 ~ 2483.5MHz Band

79 channels are provided for Bluetooth

ITEM	FREQUENCY	ITEM	FREQUENCY	ITEM	FREQUENCY	ITEM	FREQUENCY
1	2402 MHz	21	2422 MHz	41	2442 MHz	71	2462 MHz
2	2403 MHz	22	2423 MHz	42	2443 MHz	72	2463 MHz
3	2404 MHz	23	2424 MHz	43	2444 MHz	73	2464 MHz
4	2405 MHz	24	2425 MHz	44	2445 MHz	74	2465 MHz
5	2406 MHz	25	2426 MHz	45	2446 MHz	75	2466 MHz
6	2407 MHz	26	2427 MHz	46	2447 MHz	76	2467 MHz
7	2408 MHz	27	2428 MHz	47	2448 MHz	77	2468 MHz
8	2409 MHz	28	2429 MHz	48	2449 MHz	78	2469 MHz
9	2410 MHz	29	2430 MHz	49	2450 MHz	79	2470 MHz
10	2411 MHz	30	2431 MHz	50	2451 MHz	70	2471 MHz
11	2412 MHz	31	2432 MHz	51	2452 MHz	71	2472 MHz
12	2413 MHz	32	2433 MHz	52	2453 MHz	72	2473 MHz
13	2414 MHz	33	2434 MHz	53	2454 MHz	73	2474 MHz
14	2415 MHz	34	2435 MHz	54	2455 MHz	74	2475 MHz
15	2416 MHz	35	2436 MHz	55	2456 MHz	75	2476 MHz
16	2417 MHz	36	2437 MHz	56	2457 MHz	76	2477 MHz
17	2418 MHz	37	2438 MHz	57	2458 MHz	77	2478 MHz
18	2419 MHz	38	2439 MHz	58	2459 MHz	78	2479 MHz
19	2420 MHz	39	2440 MHz	59	2460 MHz	79	2480 MHz
20	2421 MHz	40	2441 MHz	60	2461 MHz		

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4.2 The Worst Test Modes and Channel Details

- 1 The EUT has been tested under operating condition.
- 2 Test program used to control the EUT for staying in continuous transmitting and receiving mode is programmed.
- 3 Investigation has been done on all the possible configurations for searching the worst case.

MODE	AVAILABLE FREQUENCY (MHz)	TESTED FREQUENCY (MHz)	MODULATION	PACKET TYPE
RADIATED EMISSION TEST (ABOVE 1 GHz)				
Bluetooth	2402 to 2480	2402, 2441, 2480	GFSK	DH5

ANTENNA PORT CONDUCTED TEST				
MODE	AVAILABLE FREQUENCY (MHz)	TESTED FREQUENCY (MHz)	MODULATION	PACKET TYPE
Peak Output Power,				
Bluetooth	2402 to 2480	2402, 2441, 2480	GFSK, $\pi/4$ -DQPSK, 8-DQPK	DH1/DH3/DH5

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5 MEASUREMENT UNCERTAINTY

Test Items	Uncertainty
AC Power Line Conducted Emission	+/- 2.34 dB
Peak Output Power	+/- 1 dB
Emission Bandwidth	+/- 1.53 Hz
100 kHz Bandwidth Of Frequency Band Edges	+/- 1.69 dB
Frequency Separation	+/- 1.53 Hz
Number of hopping frequency	+/- 1.53 Hz
Time of Occupancy	+/- 1.53 Hz
Temperature	+/- 0.4 °C
Humidity	+/- 3.5 %
DC / AC Power Source	+/- 1 %

Radiated Spurious Emission Measurement Uncertainty		
Polarization: Vertical	+/- 2.64 dB	9kHz~30MHz
	+/- 4.93 dB	30MHz - 1000MHz
	+/- 4.81 dB	1GHz - 18GHz
	+/- 4.52 dB	18GHz - 40GHz
Polarization: Horizontal	+/- 2.64 dB	9kHz~30MHz
	+/- 4.45 dB	30MHz - 1000MHz
	+/- 4.81 dB	1GHz - 18GHz
	+/- 4.52 dB	18GHz - 40GHz

Note:

1. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.
2. The conformity assessment statement in this report is based solely on the test results, measurement uncertainty is excluded.

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6 PEAK OUTPUT POWER MEASUREMENT

6.1 Standard Applicable

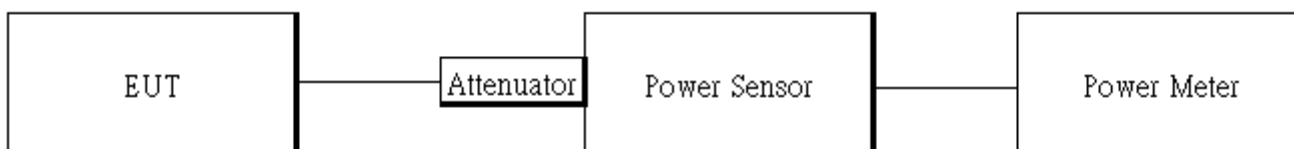
For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 hopping channels, The Limit: 1Watt. For all other frequency hopping systems in the 2400 – 2483.5MHz band: The Limit: 0.125 Watts. The power limit for 1Mbps is 1watt, and 2Mbps, 3Mbps and AFH mode are 0.125 watts.

The e.i.r.p. shall not exceed 4 W.

6.2 Measurement Equipment Used

Conducted Emission Test Site: Conducted G					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Power Meter	Anritsu	ML2496A	1326001	08/05/2020	08/04/2021
Power Sensor	Anritsu	MA2411B	1315048	08/05/2020	08/04/2021
Power Sensor	Anritsu	MA2411B	1315049	08/05/2020	08/04/2021
Attenuator	Marvelous	MVE2213-10	RF12	11/19/2020	11/18/2021
Attenuator	Marvelous	WATT-218FS-10	RF18	11/19/2020	11/18/2021

6.3 Test Set-up:



6.4 Measurement Procedure:

1. Place the EUT on the table and set it in transmitting mode.
2. The testing follows ANSI C63.10 Measurement Guidelines.
3. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the power meter or spectrum. (Max Hold, Detector = Peak, RBW >=20dB bandwidth)
4. Record the max. reading.
5. Repeat above procedures until all default test channel is completed.

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6.5 Peak & Average Power Measurement Result

1M BR mode (Peak):

CH	Freq. (MHz)	Power set	Peak Output Power (dBm)	Output Power (mW)	Limit (mW)
Low	2402	default	10.33	10.789	1000
Mid	2441	default	11.20	13.183	1000
High	2480	default	11.60	14.454	1000

1M BR mode (Average):

CH	Freq. (MHz)	Power set	Max. Avg. Output include tune up tolerance Power (dBm)	Output Power (mW)	Limit (mW)
Low	2402	default	10.26	10.605	1000
Mid	2441	default	11.07	12.779	1000
High	2480	default	11.49	14.077	1000

2M EDR mode (Peak):

CH	Freq. (MHz)	Power set	Peak Output Power (dBm)	Output Power (mW)	Limit (mW)
Low	2402	default	10.63	11.561	125
Mid	2441	default	10.41	10.990	125
High	2480	default	9.70	9.333	125

2M EDR mode (Average):

CH	Freq. (MHz)	Power set	Max. Avg. Output include tune up tolerance Power (dBm)	Output Power (mW)	Limit (mW)
Low	2402	default	8.01	6.317	125
Mid	2441	default	8.09	6.434	125
High	2480	default	7.88	6.131	125

3M EDR mode (Peak):

CH	Freq. (MHz)	Power set	Peak Output Power (dBm)	Output Power (mW)	Limit (mW)
Low	2402	default	10.66	11.641	125
Mid	2441	default	10.43	11.041	125
High	2480	default	9.80	9.550	125

3M EDR mode (Average):

CH	Freq. (MHz)	Power set	Max. Avg. Output include tune up tolerance Power (dBm)	Output Power (mW)	Limit (mW)
Low	2402	default	9.00	7.934	125
Mid	2441	default	8.96	7.862	125
High	2480	default	8.03	6.346	125

NOTE: cable loss as 0dB that offsets in the spectrum

*Note: Max. Output include tune up tolerance Power measured by using average detector.

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6.6 EIRP Measurement Result

1M BR mode EIRP

Channel	Frequency (MHz)	Power set	Max. Avg. Output include tune up tolerance Power (dBm)	Antenna Gain (dBi)	EIRP (mW)	Limit (mW)
Low	2402	default	10.26	0.44	11.736	4000
Mid	2441	default	11.07	0.44	14.142	4000
High	2480	default	11.49	0.44	15.578	4000

2M EDR mode EIRP

Channel	Frequency (MHz)	Power set	Max. Avg. Output include tune up tolerance Power (dBm)	Antenna Gain (dBi)	EIRP (mW)	Limit (mW)
Low	2402	default	8.01	0.44	6.991	4000
Mid	2441	default	8.09	0.44	7.120	4000
High	2480	default	7.88	0.44	6.784	4000

3M EDR mode EIRP

Channel	Frequency (MHz)	Power set	Max. Avg. Output include tune up tolerance Power (dBm)	Antenna Gain (dBi)	EIRP (mW)	Limit (mW)
Low	2402	default	9.00	0.44	8.780	4000
Mid	2441	default	8.96	0.44	8.700	4000
High	2480	default	8.03	0.44	7.023	4000

* **Note:** EIRP = Average Power + Gain

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7 RADIATED BANDEDGE AND SPURIOUS EMISSION MEASUREMENT

7.1 Standard Applicable

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 power limits. In addition, radiated emissions which fall in the restricted bands must also comply with the §15.209 limit as below.

And according to §15.33(a) (1), for an intentional radiator operates below 10GHz, the frequency range of measurements: to the tenth harmonic of the highest fundamental frequency or to 40GHz, whichever is lower.

Frequency (MHz)	Field strength (microvolts/meter)	Distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Note:

1. The lower limit shall apply at the transition frequencies.

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7.2 Measurement Equipment Used

Radiated Emission Test Site: SAC D					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Broadband Antenna	TESEQ	CBL 6112D	35240	09/08/2020	09/07/2021
Horn Antenna	Schwarzbeck	BBHA9120D	1341	06/22/2020	06/21/2021
Horn Antenna	Schwarzbeck	BBHA9170	185	07/30/2020	07/29/2021
Loop Antenna	ETS.LIND-GREN	6502	143303	05/07/2021	05/06/2022
3m Site NSA	SGS	966 chamber D	N/A	07/12/2020	07/11/2021
Spectrum Analyzer	KEYSIGHT	N9010A	MY54510568	07/08/2020	07/07/2021
Pre-Amplifier	EMC Instruments	EMC184045B	980135	10/27/2020	10/26/2021
Pre-Amplifier	EMC Instruments	EMC9135	980234	11/19/2020	11/18/2021
Pre-Amplifier	EMC Instruments	EMC12630SE	980271	11/19/2020	11/18/2021
Attenuator	Marvelous	WATT-218FS-10	RF25	11/19/2020	11/18/2021
High Pass Filter	R&S	F13 HPF 3GHz	RF175	11/19/2020	11/18/2021
Lowpass Filter	Woken	EWT-56-0019	RF173	11/19/2020	11/18/2021
Notch Filter	Woken	EWT-54-0038	RF178	11/19/2020	11/18/2021
Coaxial Cable	Huber Suhner	EMC106-SM-SM-7200	150703	11/19/2020	11/18/2021
Coaxial Cable	Huber+Suhner	RG 214/U	W21.01	11/19/2020	11/18/2021
Coaxial Cable	Huber Suhner	SUCOFLEX 104	MY17413/4	11/19/2020	11/18/2021

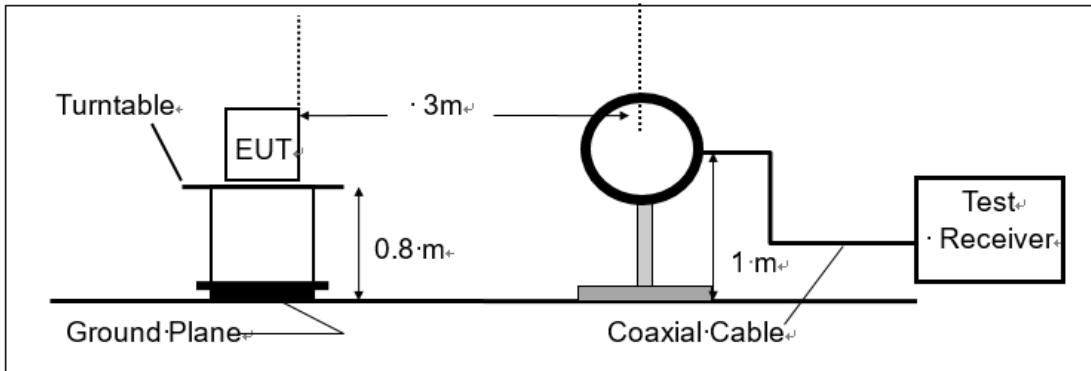
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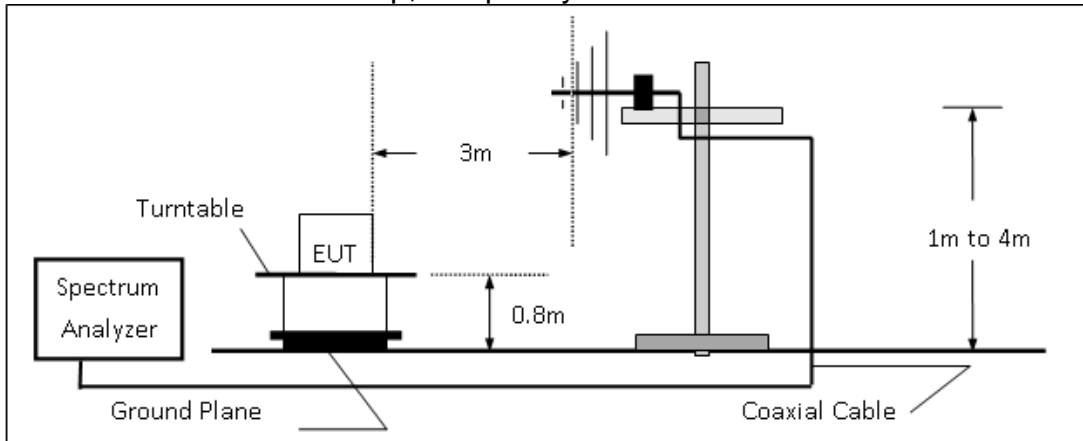
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7.3 Test SET-UP

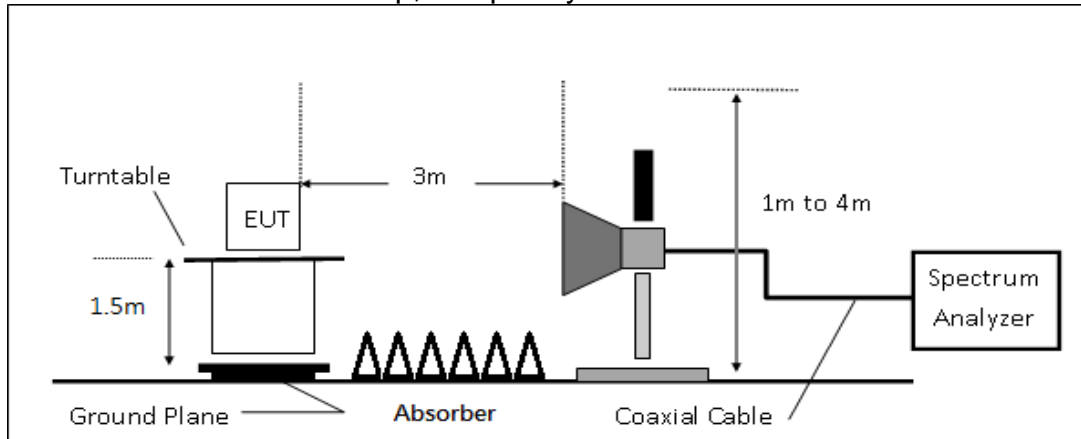
(A) Radiated Emission Test Set-Up, Frequency Below 30MHz.



(B) Radiated Emission Test Set-Up, Frequency From 30MHz to 1000MHz



(C) Radiated Emission Test Set-Up, Frequency Above 1GHz



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7.4 Measurement Procedure

7.4.1 Radiated Emission

1. The testing follows the Measurement Procedure of ANSI C63.10:2013.
2. The EUT was placed on a turn table with 0.8m for frequency < 1GHz and 1.5m for frequency > 1GHz above ground plane.
3. The turn table shall rotate 360 degrees to determine the position of maximum emission level.
4. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emissions.
5. Set the spectrum analyzer as RBW=100 kHz and VBW=300 kHz for Peak Detector (PK) at frequency between 30MHz and 1 GHz.
6. Use receiver mode as RBW=120 kHz for Quasi-peak (QP) at frequency between 30MHz and 1 GHz.
7. Set the spectrum analyzer as RBW=1 MHz, VBW=3 MHz for Peak Detector at frequency above 1 GHz.
8. When measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made "while keeping the antenna in the 'cone of radiation' from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response." is still within the 3dB illumination BW of the measurement antenna.
9. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
10. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
11. Repeat above procedures until all default test channel measured were complete.

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7.5 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

Where *FS* = Field Strength

RA = Reading Amplitude

AF = Antenna Factor

CL = Cable Attenuation Factor (Cable Loss)

AG = Amplifier Gain

The limit of the emission level is expressed in dBuV/m, which converts $20 \cdot \log(uV/m)$

Actual FS(dBμV/m) = SPA. Reading level(dBμV) + Factor(dB)

Factor(dB) = Antenna Factor(dBμV/m) + Cable Loss(dB) – Pre_Amplifier Gain(dB)

7.6 Test Results of Radiated Spurious Emissions from 9 kHz to 30 MHz

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit per 15.31(o) & RSS-GEN §6.13.2 was not reported.

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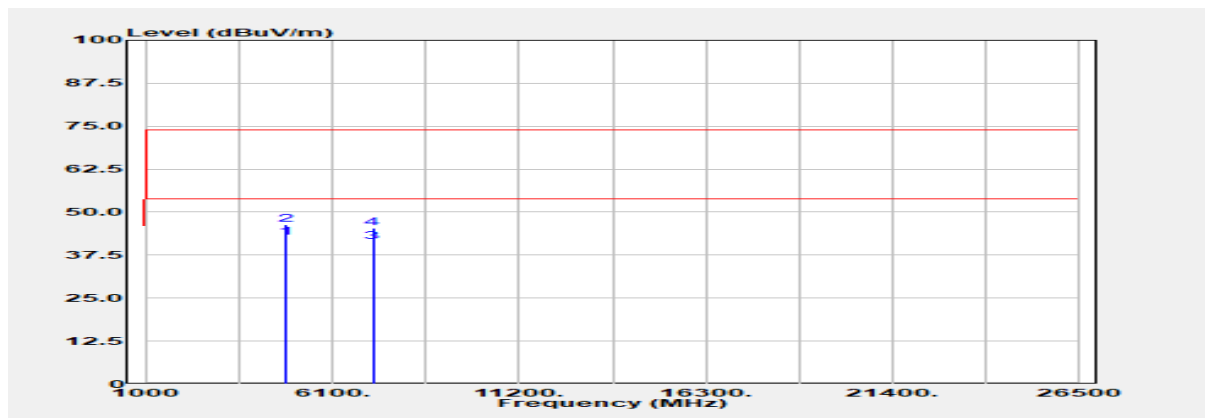
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7.7 Measurement Result:

7.7.1 Radiated Spurious Emission above 1 GHz:

Report Number	:E2/2021/60034	Test Site	:966 Chamber D
Operation Mode	:BT BR	Test Date	:2021-06-16
Test Frequency	:2402 MHz	Temp./Humi.	:22.4/64
Test Mode	:TX CH LOW	Antenna Pol.	:Vertical
EUT Pol	:NB Plane	Engineer	:Andy Wang



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
4804.000	Average	45.66	-3.03	42.63	54.00	-11.37
4804.000	Peak	49.48	-3.03	46.45	74.00	-27.55
7206.000	Average	38.46	2.98	41.44	54.00	-12.56
7206.000	Peak	42.35	2.98	45.33	74.00	-28.67

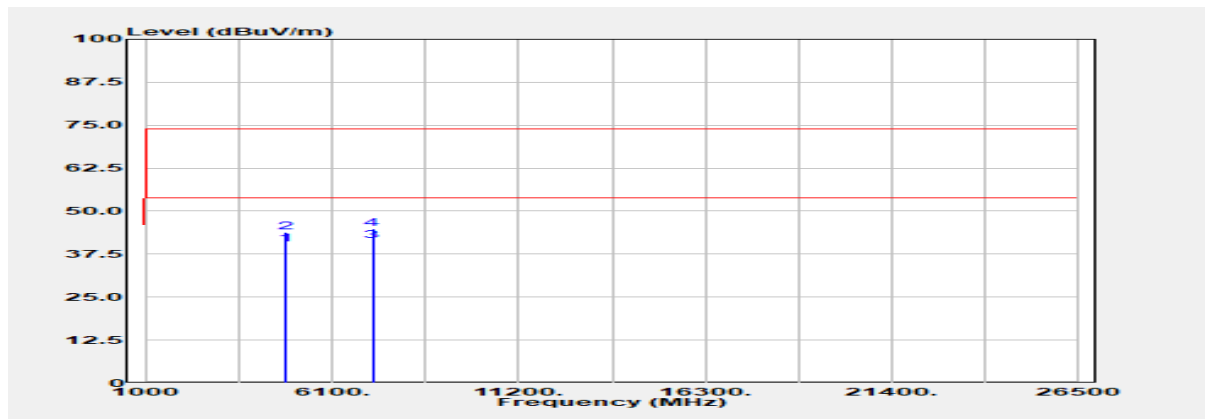
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Report Number :E2/2021/60034
 Operation Mode :BT BR
 Test Frequency :2402 MHz
 Test Mode :TX CH LOW
 EUT Pol :NB Plane

Test Site :966 Chamber D
 Test Date :2021-06-16
 Temp./Humi. :22.4/64
 Antenna Pol. :Horizontal
 Engineer :Andy Wang



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
4804.000	Average	43.48	-3.03	40.45	54.00	-13.55
4804.000	Peak	46.80	-3.03	43.77	74.00	-30.23
7206.000	Average	38.36	2.98	41.34	54.00	-12.66
7206.000	Peak	41.85	2.98	44.83	74.00	-29.17

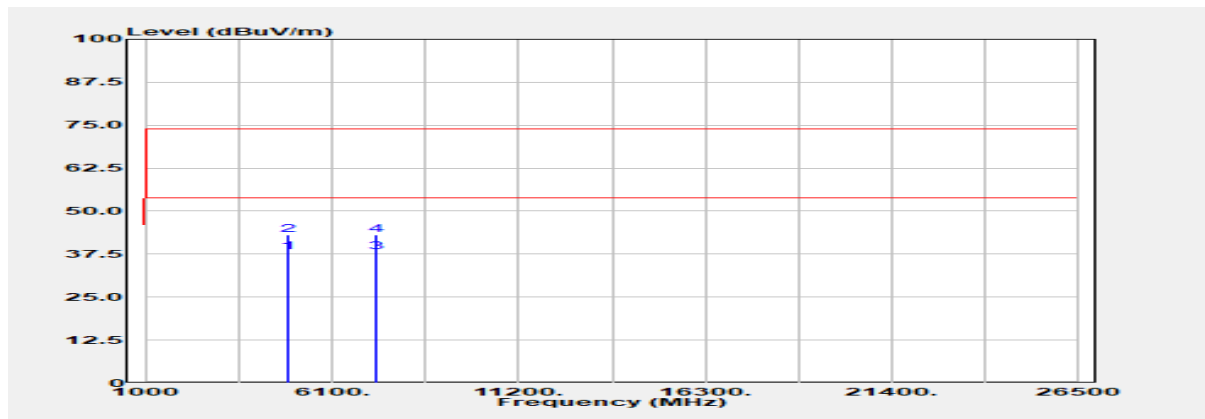
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Report Number :E2/2021/60034
 Operation Mode :BT BR
 Test Frequency :2441 MHz
 Test Mode :TX CH MID
 EUT Pol :NB Plane

Test Site :966 Chamber D
 Test Date :2021-06-16
 Temp./Humi. :22.4/64
 Antenna Pol. :Vertical
 Engineer :Andy Wang



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
4882.000	Average	41.04	-3.02	38.02	54.00	-15.98
4882.000	Peak	46.06	-3.02	43.04	74.00	-30.96
7323.000	Average	34.79	3.28	38.07	54.00	-15.93
7323.000	Peak	39.78	3.28	43.05	74.00	-30.95

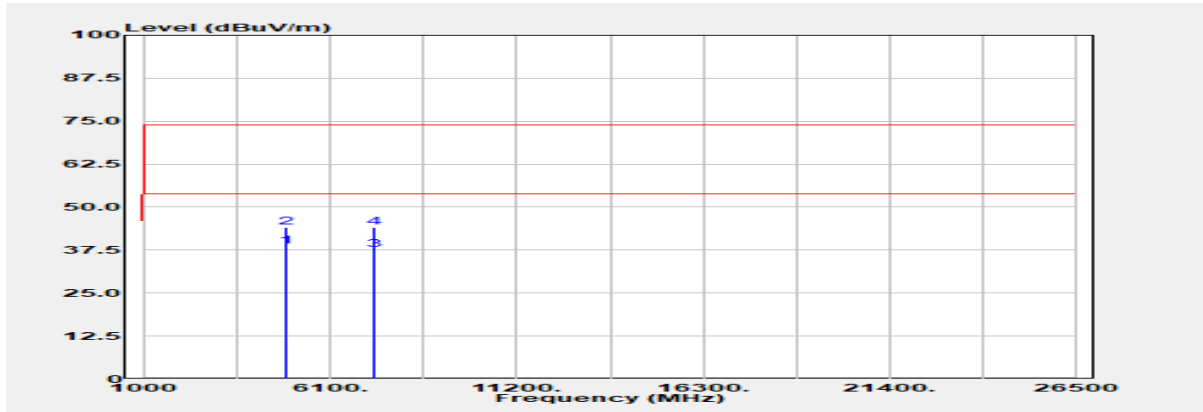
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Report Number :E2/2021/60034
 Operation Mode :BT BR
 Test Frequency :2441 MHz
 Test Mode :TX CH MID
 EUT Pol :NB Plane

Test Site :966 Chamber D
 Test Date :2021-06-16
 Temp./Humi. :22.4/64
 Antenna Pol. :Horizontal
 Engineer :Andy Wang



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
4882.000	Average	41.53	-3.02	38.51	54.00	-15.49
4882.000	Peak	47.07	-3.02	44.05	74.00	-29.95
7323.000	Average	34.43	3.28	37.71	54.00	-16.29
7323.000	Peak	40.79	3.28	44.06	74.00	-29.94

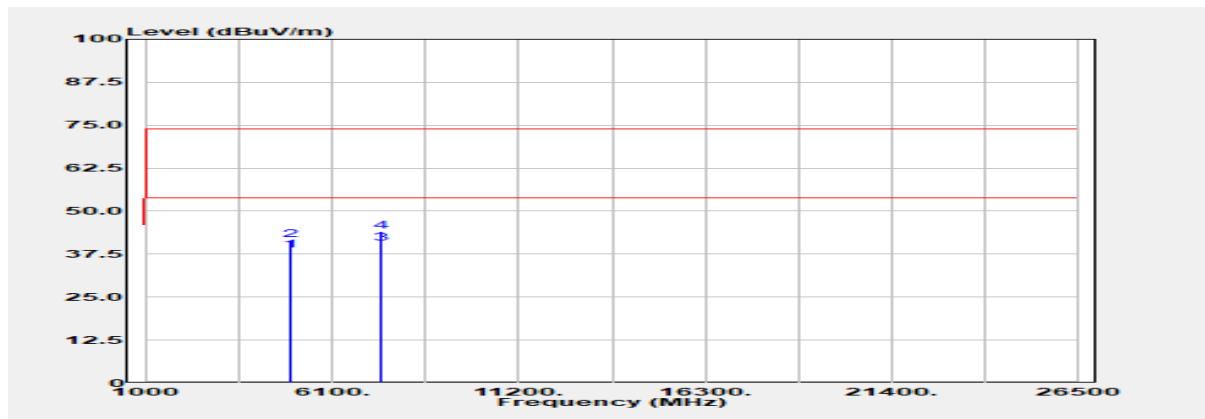
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Report Number :E2/2021/60034
 Operation Mode :BT BR
 Test Frequency :2480 MHz
 Test Mode :TX CH HIGH
 EUT Pol :NB Plane

Test Site :966 Chamber D
 Test Date :2021-06-16
 Temp./Humi. :22.4/64
 Antenna Pol. :Vertical
 Engineer :Andy Wang



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
4960.000	Average	41.53	-2.89	38.63	54.00	-15.37
4960.000	Peak	44.62	-2.89	41.73	74.00	-32.27
7440.000	Average	36.94	3.65	40.59	54.00	-13.41
7440.000	Peak	40.42	3.65	44.06	74.00	-29.94

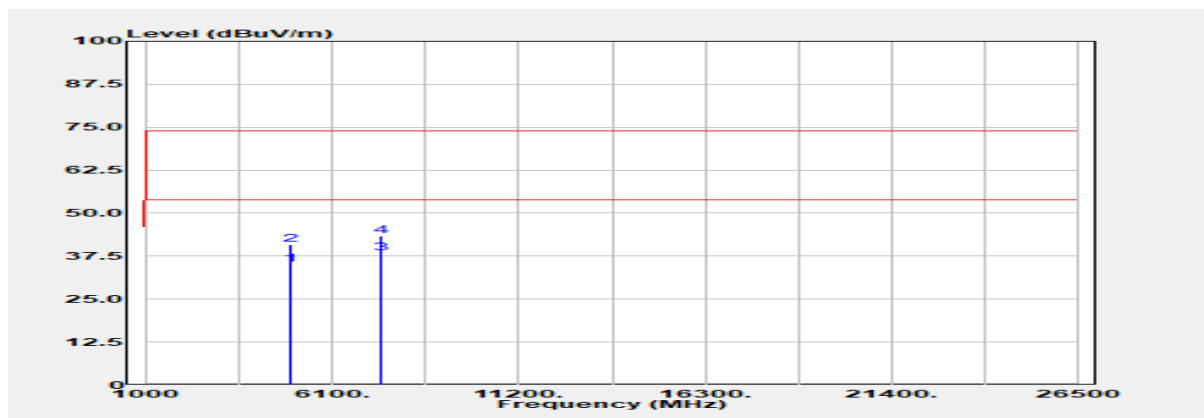
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Report Number :E2/2021/60034
 Operation Mode :BT BR
 Test Frequency :2480 MHz
 Test Mode :TX CH HIGH
 EUT Pol :NB Plane

Test Site :966 Chamber D
 Test Date :2021-06-16
 Temp./Humi. :22.4/64
 Antenna Pol. :Horizontal
 Engineer :Andy Wang



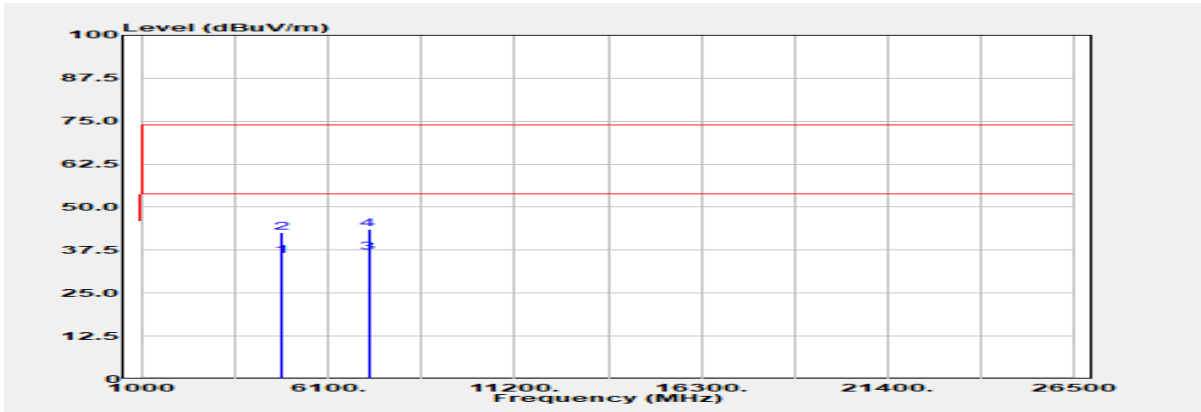
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit @3m dB μ V/m	Margin dB
4960.000	Average	38.07	-2.89	35.18	54.00	-18.82
4960.000	Peak	43.65	-2.89	40.76	74.00	-33.24
7440.000	Average	34.65	3.65	38.30	54.00	-15.70
7440.000	Peak	39.75	3.65	43.40	74.00	-30.60

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Report Number :E2/2021/60034
 Operation Mode :BT EDR
 Test Frequency :2402 MHz
 Test Mode :TX CH LOW
 EUT Pol :NB Plane

Test Site :966 Chamber D
 Test Date :2021-06-16
 Temp./Humi. :22.4/64
 Antenna Pol. :Vertical
 Engineer :Andy Wang



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
4804.000	Average	38.89	-3.03	35.85	54.00	-18.15
4804.000	Peak	45.75	-3.03	42.71	74.00	-31.29
7206.000	Average	33.87	2.98	36.85	54.00	-17.15
7206.000	Peak	40.59	2.98	43.57	74.00	-30.43

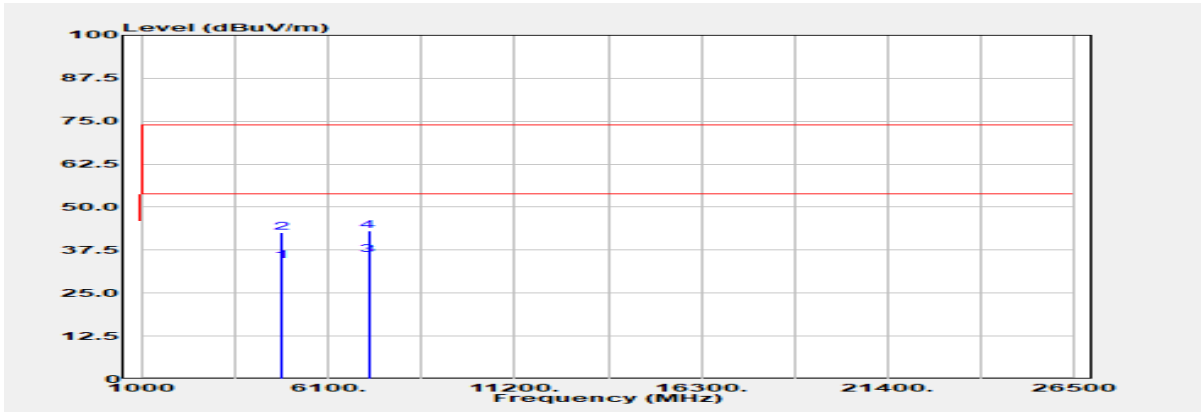
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Report Number :E2/2021/60034
 Operation Mode :BT EDR
 Test Frequency :2402 MHz
 Test Mode :TX CH LOW
 EUT Pol :NB Plane

Test Site :966 Chamber D
 Test Date :2021-06-16
 Temp./Humi. :22.4/64
 Antenna Pol. :Horizontal
 Engineer :Andy Wang



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
4804.000	Average	37.34	-3.03	34.30	54.00	-19.70
4804.000	Peak	45.61	-3.03	42.57	74.00	-31.43
7206.000	Average	33.21	2.98	36.19	54.00	-17.81
7206.000	Peak	40.18	2.98	43.16	74.00	-30.84

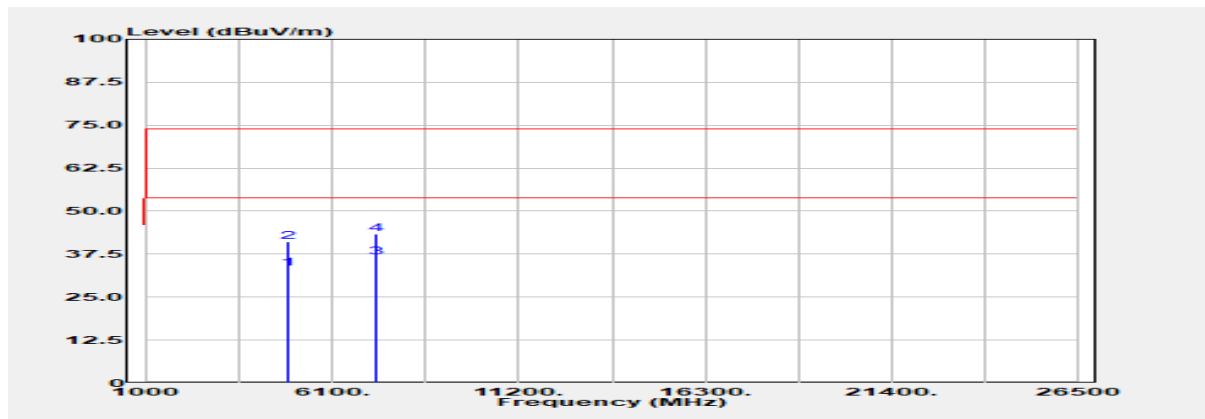
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Report Number :E2/2021/60034
 Operation Mode :BT EDR
 Test Frequency :2441 MHz
 Test Mode :TX CH MID
 EUT Pol :NB Plane

Test Site :966 Chamber D
 Test Date :2021-06-16
 Temp./Humi. :22.4/64
 Antenna Pol. :Vertical
 Engineer :Andy Wang



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBUV	Factor dB	Actual FS dBUV/m	Limit @3m dBUV/m	Margin dB
4882.000	Average	36.28	-3.02	33.26	54.00	-20.74
4882.000	Peak	44.25	-3.02	41.23	74.00	-32.77
7323.000	Average	33.43	3.28	36.71	54.00	-17.29
7323.000	Peak	40.06	3.28	43.33	74.00	-30.67

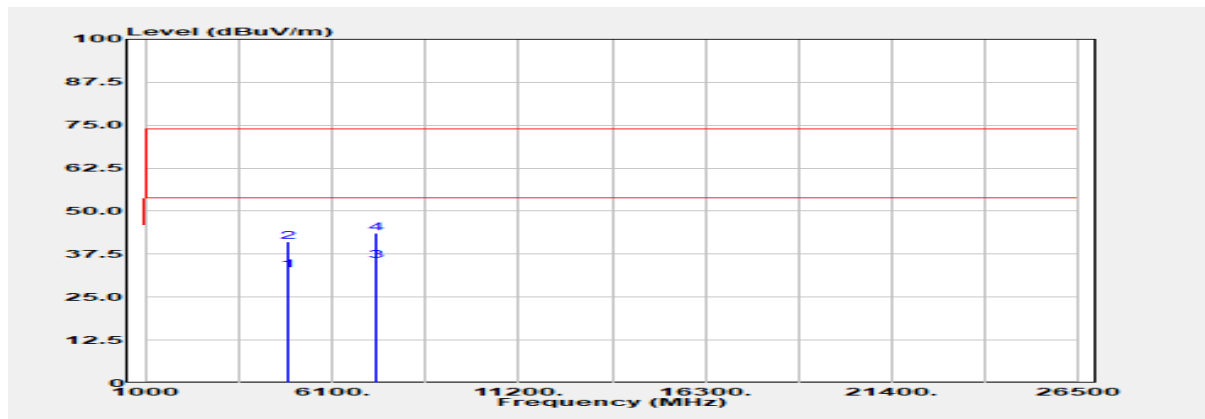
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Report Number :E2/2021/60034
 Operation Mode :BT EDR
 Test Frequency :2441 MHz
 Test Mode :TX CH MID
 EUT Pol :NB Plane

Test Site :966 Chamber D
 Test Date :2021-06-16
 Temp./Humi. :22.4/64
 Antenna Pol. :Horizontal
 Engineer :Andy Wang



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
4882.000	Average	35.73	-3.02	32.71	54.00	-21.29
4882.000	Peak	44.01	-3.02	40.99	74.00	-33.01
7323.000	Average	32.32	3.28	35.60	54.00	-18.40
7323.000	Peak	40.24	3.28	43.52	74.00	-30.48

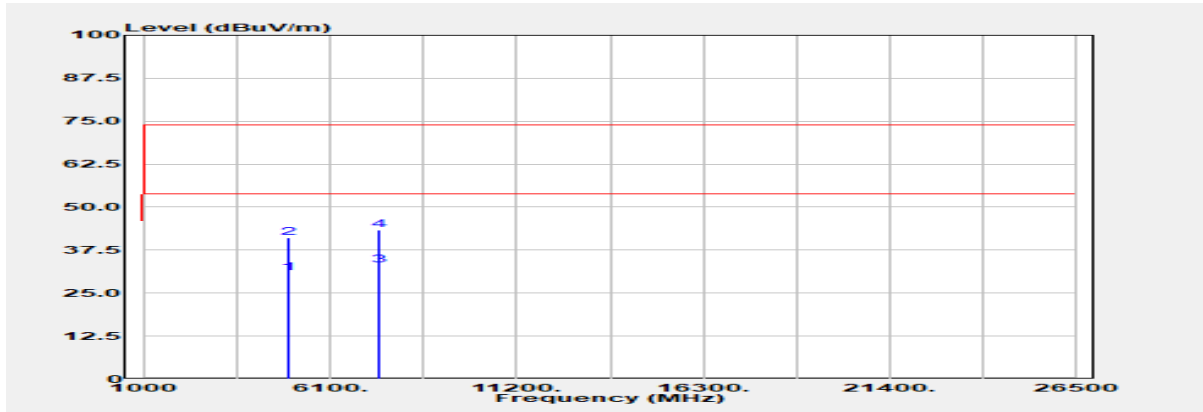
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Report Number :E2/2021/60034
 Operation Mode :BT EDR
 Test Frequency :2480 MHz
 Test Mode :TX CH HIGH
 EUT Pol :NB Plane

Test Site :966 Chamber D
 Test Date :2021-06-16
 Temp./Humi. :22.4/64
 Antenna Pol. :Vertical
 Engineer :Andy Wang



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBµV	Factor dB	Actual FS dBUV/m	Limit @3m dBUV/m	Margin dB
4960.000	Average	33.62	-2.89	30.72	54.00	-23.28
4960.000	Peak	44.07	-2.89	41.17	74.00	-32.83
7440.000	Average	29.34	3.65	32.99	54.00	-21.01
7440.000	Peak	39.75	3.65	43.40	74.00	-30.60

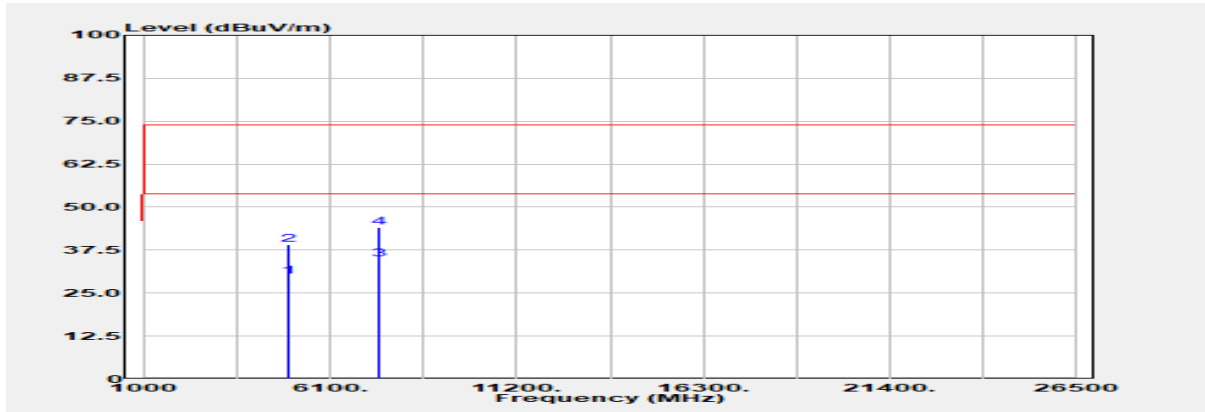
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Report Number :E2/2021/60034
 Operation Mode :BT EDR
 Test Frequency :2480 MHz
 Test Mode :TX CH HIGH
 EUT Pol :NB Plane

Test Site :966 Chamber D
 Test Date :2021-06-16
 Temp./Humi. :22.4/64
 Antenna Pol. :Horizontal
 Engineer :Andy Wang



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
4960.000	Average	32.79	-2.89	29.89	54.00	-24.11
4960.000	Peak	42.02	-2.89	39.12	74.00	-34.88
7440.000	Average	31.12	3.65	34.77	54.00	-19.23
7440.000	Peak	40.50	3.65	44.15	74.00	-29.85

~ End of Report ~

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