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ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT





Applicant: Murata Manufacturing Co., Ltd.

1-10-1, Higashikotari, Nagaokakyo-shi, Kyoto 617-8555 Ja-

pan

Manufacturer: Murata Manufacturing Co., Ltd.

1-10-1, Higashikotari, Nagaokakyo-shi, Kyoto 617-8555 Ja-

Product Name: Communication Module

Brand Name: muRata

Model No.: LBEE5ZZ1XL, LBEE5ZZ2XS

Model Difference: Refer to section 1.10 **Report Number:** TERF2305001165E2

FCC ID VPYLBEE5ZZ1XL

Date of EUT Received: N/A, the test results are fully leveraged from test report num-

ber: TERF2211002151E2

Date of Test: N/A, the test results are fully leveraged from test report num-

ber: TERF2211002151E2

May 04, 2023 Issue Date:

Approved By

Jav Lin

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 §15.407.

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

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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Revision History							
Report Number	Revision	Description	Issue Date	Revised By	Remark		
TERF2305001165E2	00	Initial	May 04, 2023	Yami Kuo			

Note:

- 1 . The remark "*" indicates modification of the report upon requests from certification
- 2 · Variant information of model numbers is provided by the applicant, please refer to section 1.10 of this report for details.
 - Test results of this report are applicable to the sample EUT(s) received and variant models are assessed as electrically identical, no further tests are required for the variant.

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GENERAL INFORMATION

1.1 **Product Description**

Product Name:	Communication Module
Brand Name:	muRata
Model No.:	LBEE5ZZ1XL, LBEE5ZZ2XS
Model Difference:	Refer to section 1.10
Hardware Version:	1
Firmware Version:	1.1.1.1
EUT Series No.:	1XL: Sample. No2
Power Supply:	3.3Vdc, 1.8Vdc
Test Software (Name/Version)	Tera Term V4.105 / Dut labtool v2.0.0.85

1.2 **Modulation & Data Rate**

	64QAM, 16QAM, QPSK, BPSK for OFDM
Modulation type:	256QAM for OFDM in 802.11ac
	256QAM,1024QAM for OFDMA in 802.11ax
	802.11 a: 6 - 54 Mbps
	802.11 n_20MHz: up to 144.4 Mbps
	802.11 n_40MHz: up to 300 Mbps
Transition Rate:	802.11 ac_20MHz: up to 173.4 Mbps
Hansillon Nate.	802.11 ac_40MHz: up to 400 Mbps
	802.11 ax_20MHz: up to 286.8 Mbps
	802.11 ax_40MHz: up to 573.6 Mbps
	802.11 ax_80MHz: up to 1201 Mbps

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Antenna Designation

Antenna Type	Freq. (MHz)	Peak Antenna Gain (dBi)	Directional Gain (dBi)
	5150~5250	4.25	7.26
Dinala	5250~5350	4.25	7.26
Dipole	5475~5725	4.25	7.26
	5725~5850	4.25	7.26

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.

FCC 1.4

Wi-Fi	Frequency Range	Channels	Rated Power(Avg) (dBm) (Worst Case)	Modulation Technology
a/ n_HT/	5180~5240	4	19.94 dBm	OFDMA
ac_VHT/ ax_HE	5260~5320	4	21.94 dBm	OFDM
20M	5500~5720	12	19.42 dBm	OFDM
n_HT	5190~5230	2	14.82 dBm	OFDMA
ac_VHT/ ax_HE	5270~5310	2	18.90 dBm	OFDM
40M	5510~5710	6	18.92 dBm	OFDM
ac_VHT/ ax_HE	5530~5690	3	19.90 dBm	OFDMA
80M	5775	1	18.90 dBm	OFDM

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1.5 Test Methodology of Applied Standards

FCC Part 15, Subpart E §15.407

FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

FCC KDB 291074 D02 EMC Measurement v01

ANSI C63.10:2013

1.6 Test Facility

Laboratory	Test Site Address	Test Site Name	FCC Designa- tion number	IC CAB identifier
		SAC 1		
		SAC 2		
		SAC 3		
	No 124 Wu Kung Bood New Toingi	Conduction 1		
	No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New	Conducted 1	TW0027	TW3702
	Taipei City, Taiwan.	Conducted 2	1 440021	
		Conducted 3	-	
		Conducted 4		
		Conducted 5		
SGS Taiwan Ltd.		Conducted 6		
Central RF Lab.		Conduction C	TW0028	
(TAF code 3702)		SAC C		
		SAC D		
		SAC G		
	No.2, Keji 1st Rd., Guishan District,	Conducted A		
	Taoyuan City, Taiwan 333	Conducted B		
	ladydaii Oity, Taiwaii 333	Conducted C		
		Conducted D		
		Conducted E		
		Conducted F		
		Conducted G		

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.

1.7 Special Accessories

There are no special accessories used while test was conducted.

1.8 Equipment Modifications

There was no modification incorporated into the EUT.

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1.9 Model difference

LBEE5ZZ1XL has a dedicated antenna port for BT.

LBEE5ZZ2XS BT shares same antenna port with WLAN.

Some passive components are different between models as below

LBEE5ZZ1XL	LBEE5ZZ2XS
C 336 No mounted	C336 mounted
C337 mounted	C337 No mounted
L310 mounted	L310 Nomounted

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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 Emissions

The EUT is a placed on a table which is 0.8 m above ground plane. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz. The CISPR Quasi-Peak and Average detector mode is employed. The two LISNs provide 50uH/50 ohm of coupling impedance for the measuring instrument. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

2.3.2 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.

2.3.3 Radiated Emissions

The EUT is a 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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Measurement Results Explanation Example

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

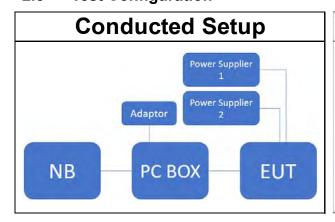
Radiated emission below 30MHz is measured in a 9m*6m*6m semi-anechoic chamber, the measurements correspond to those obtained at an open-field

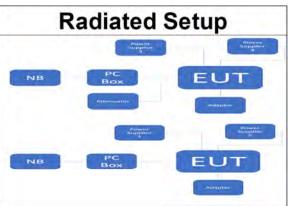
There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

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.

2.5 **Test Configuration**





2.6 Control Unit(s)

Conducted Emission Test Site: Conducted D						
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.	
Notebook	Lenovo	T420	S0012599	N/A	N/A	
Notebook	Lenovo	L420	S0011721	N/A	N/A	

Radiated Emission Test Site: SAC D							
EQUIPMENT TYPE MFR MODEL NUMBER SERIAL NUMBER LAST CAL. CAL DUE.							
LAN Cable	向聯	VPH-02	1500021123	N.C.R	N.C.R		
LAN Cable	INVAX	IVX011	N/A	N.C.R	N.C.R		
Notebook	Lenovo	T470	P0001293	N/A	N/A		
Notebook	Lenovo	T420	S0012599	N/A	N/A		
Adapter	APD	NB-65B19	N/A	N/A	N/A		
Adapter	FSP	FSP065-REBN2	H6081012364	N.C.R	N.C.R		

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SUMMARY OF TEST RESULT

FCC Rules	Description Of Test	Result	Note
§15.407(a)	Maximum Conducted Output Power	Compliant	
§15.407(a)	Power Spectral Density	Compliant	
§15.205 §15.209 §15.407(b)	Undesirable Radiated Emissions	Compliant	

Note

- N/S Indicates whether item(s) being newly tested [N] or spot checked [S].
- Items other than newly tested [N] are leveraged from test report TERF2211002151E2.

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DESCRIPTION OF TEST MODES

4.1 **Operating Frequencies**

Operated hand in 5150 MHz ~5250 MHz

Ohei	Operated band in 5150 wirtz ~5250 wirtz.						
20 M		20 M 40 M		80 M			
СН	Freq (MHz)		СН	Freq (MHz)	СН	Freq (MHz)	
36	5180		38	5190	42	5210	
40	5200		46	5230			
44	5220						
48	5240						

Operated band in 5250 MHz ~5350 MHz:

Operated ba						
20 M						
СН	Freq (MHz)					
52	5260					
56	5280					
60	5300					
64	5320					

4	0 M	8	0 M
СН	Freq (MHz)	СН	Freq (MHz)
54	5270	58	5290
62	5310		

Operated band in 5470 MHz ~5725 M								
	20 M		4	0 M	80 M			
СН	Freq (MHz)		СН	Freq (MHz)	СН	Freq (MHz)		
100	5500		102	5510	106	5530		
104	5520		110	5550	122	5610		
108	5540		118	5590	138	5690		
112	5560		126	5630				
116	5580		134	5670				
120	5600		142	5710				
124	5620							
128	5640							
132	5660							

Operated band in 5725 MHz ~5850 MHz:

- 6	-								
• •	20 M		4	(
СН	Freq (MHz)		СН						
149	5745		151						
153	5765		159						
157	5785								
161	5805								
165	5825								

111 3	/ ZJ IVII IZ	_ 303	O IVII IZ.
4	0 M	8	0 M
СН	Freq (MHz)	СН	Freq (MHz)
151	5755	155	5775
159	5795		

5680

5720

5850~5895 MHz is not available for operation in Canada.

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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 mode is programmed.
- 3. Investigation has been done on all the possible configurations for searching the worst case. The given UE is pre-scanned among below modes.

١	Modulation		Transmission Chain						Tra	Single ansmission Spatial	Multiple Transmission Spatial		
V	802.11 a	٧	Ch0	٧	Ch1		Ch2		Ch3		1TX	٧	2TX
V	802.11 n	٧	Ch0	٧	Ch1		Ch2		Ch3		SISO	٧	MIMO
V	802.11 ac	٧	Ch0	٧	Ch1		Ch2		Ch3		SISO	٧	MIMO
V	802.11 ax	٧	Ch0	٧	Ch1		Ch2		Ch3		SISO	٧	MIMO

4. Therefore, below summary is the modes of test configuration that yield the highest reading and generate the highest emission chosen to carry out the relevantly mandatory test items.

RADIATED EMISSION TEST (ABOVE 1 GHz)										
MODE FREQUENCY AVAILABLE TESTED MODULATION DATA RATE A BAND (MHz) CHANNEL CHANNEL (Mbps)										
802.11a	5500~5720	100 to 144	116	OFDM	6	2TX				
802.11n_HT20	5180~5240 5500~5720	36 to 48 100 to 144	40 116	OFDM	MCS0	2TX				
802.11n_HT40	5270~5310 5510~5710	54 to 62 102 to 142	54 110,134	OFDM	MCS0	2TX				

	RADIATED EMISSION TEST (ABOVE 1 GHz)										
MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	RU CONFIGURATIO	DATA RATE (Mbps)	ANTENNA PORT				
	5180~5240	36 to 48	36,40		FULL RU						
802.11ax_HE20	5260~5320	52 to 64	64	OFDMA	26/0,26/8 52/37,52/40	MCS0	2TX				
	5500~5720	100 to 144	116,140		106/53						
802.11ax_HE40	5510~5710	102 to 142	110	OFDMA	Full RU	MCS0	2TX				
802.11ax_HE80	5775	155	155	OFDMA	484/66	MCS0	2TX				

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	CONDUCTED TEST										
MODE	FREQUENC	AVAILABLE	TESTED	MODULATIO	DATA RATE	ANTENNA					
WIODE	Y BAND	CHANNEL	CHANNEL	N	(Mbps)	PORT					
802.11a	5500~5720	100 to 144	116	OFDM	6	2TX					
802.11n_HT20	5180~5240	36 to 48	40	OFDM	MCS0	9TV					
002.11h_H120	5500~5720	100 to 144	116	OFDINI	MCSU	2TX					
802.11n_HT40	5270~5310	54 to 62	54	OFDM	MCS0	2TX					
002.11ff_F140	5510~5670	102 to 142	110,134	1 OFDINI	MCOU	ZIX					

CONDUCTED TEST										
MODE	FREQUENC	AVAILABLE	TESTED	MODULATIO	RU	DATA RATE	ANTENNA			
MODE	Y BAND	CHANNEL	CHANNEL	N	CONFIGURA	(Mbps)	PORT			
	5180~5240	36 to 48	36,40		FULL RU 26/0,26/8					
802.11ax_HE20	5260~5320	52 to 64	64	OFDMA	52/37,52/40	MCS0	2TX			
	5500~5720	100 to 144	116,140		106/53					
802.11ax_HE40	5510~5710	102 to 142	110	OFDMA	FULL RU	MCS0	2TX			
802.11ax_HE80	5775	155	155	OFDMA	484/66	MCS0	2TX			

Note:

The field strength of radiated emission was measured as the EUT positioned in different orthogonal planes (E1/E2/H) based on actual usage of the EUT to pre-scan the emissions for determining the worst case scenario.

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5 MEASUREMENT UNCERTAINTY

Test Items	Un	certain	ty
AC Power Line Conducted Emission	+/-	2.34	dB
Output Power measurement	+/-	1	dB
Emission Bandwidth	+/-	1.53	Hz
Undesignable radiated emission measure- ment	+/-	1.68	dB
Peak Power Density	+/-	1.62	dB
Temperature	+/-	0.4	°C
Humidity	+/-	3.5	%
DC / AC Power Source	+/-	1	%

Radiated Spurious Emission Measurement Uncertainty						
	+/-	2.57	dB	9kHz~30MHz		
Polarization: Vertical	+/-	4.85	dB	30MHz - 1000MHz		
Polarization. Vertical	+/-	4.45	dB	1GHz - 18GHz		
	+/-	4.24	dB	18GHz - 40GHz		
	+/-	2.57	dB	9kHz~30MHz		
Polarization: Horizontal	+/-	4.37	dB	30MHz - 1000MHz		
Polarization: Horizontal	+/-	4.45	dB	1GHz - 18GHz		
	+/-	4.24	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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MEASUREMENT EQUIPMENT USED

6.1 **Condcuted Measurement**

	Со	nducted Emission Test S	Site: Conducted D		
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	KEYSIGHT	N9010B	MY59071574	06/20/2022	06/19/2023
Power Meter	Anritsu	ML2496A	1512003	07/26/2022	07/25/2023
Power Sensor	Anritsu	MA2411B	1339378	07/26/2022	07/25/2023
Power Sensor	Anritsu	MA2411B	1339379	07/26/2022	07/25/2023
DC Power Supply	Agilent	E3640A	MY53130054	09/29/2022	09/28/2023
DC Power Supply	Agilent	E3640A	MY53140006	05/16/2022	05/15/2023
DC Power Supply	HOLA	DP-3003	D7070035	06/09/2022	06/08/2023
DC Power Supply	Gwinstek	SPS-3610	GEV856767	09/29/2022	09/28/2023
Test Software	SGS Taiwan	Radio Test Software	Ver.21	N.C.R	N.C.R
Attenuator	Marvelous	MVE2213-10	RF13 11/16/2022		11/15/2023
Attenuator	Woken	WATT-218FS-10	RF15	11/16/2022	11/15/2023
Attenuator	KEYSIGHT	11716C	8494B TH60075424+8496B TH6075262	11/16/2022	11/15/2023
Coupler	MIDISCO52335	MDC2044-20	RF36	11/16/2022	11/15/2023
DC Block	PASTERNACK	PE8210	RF158	11/16/2022	11/15/2023
Splitter	Marvelous	MVE8576	RF256	11/16/2022	11/15/2023
Switch E-Channel	E-Channel	ETF-1801 RF Switch	EC2100175	11/16/2022	11/15/2023
Coaxial Cables	Woken	00100A1F2A196C	RF62	11/16/2022	11/15/2023
Coaxial Cables	Woken	00100A1F2A196C	RF64	11/16/2022	11/15/2023
Coaxial Cables	Woken	00100A1F1A185C	RF71	11/16/2022	11/15/2023

6.2 **Radiated Measurement**

		Radiated Emission Te	st Site: SAC D		
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Broadband Antenna	Broadband Antenna SCHWARZBECK		9168-300	11/11/2022	11/10/2023
Horn Antenna	Schwarzbeck	BBHA9170	185	08/22/2022	08/21/2023
Horn Antenna	Schwarzbeck	BBHA9120D	1341	05/31/2022	05/30/2023
Loop Antenna	ETS.LINDGREN	6502	143303	05/14/2022	05/13/2023
3m Site NSA	SGS	966 chamber D	N/A	04/30/2022	04/29/2023
Spectrum Analyzer	KEYSIGHT	N9010A	MY57120200	03/24/2022	03/23/2023
Test Software	audix	e3	E3 20923 SGS Ver.9 (C)	N.C.R	N.C.R
DC Power Supply	Agilent	E3640A	MY53130054	09/29/2022	09/28/2023
DC Power Supply	Agilent	E3640A	MY53140006	05/16/2022	05/15/2023
DC Power Supply	Gwinstek	SPS-3610	GEV856769	09/29/2022	09/28/2023
DC Power Supply	Gwinstek	SPS-3610	GEV856767	09/29/2022	09/28/2023
Pre-Amplifier	EMC Instruments	EM26400	971576	10/02/2022	10/01/2023
Pre-Amplifier	EMC Instruments	EMC9135	980234	11/16/2022	11/15/2023
Pre-Amplifier	EMC Instruments	EMC12630SE	980273	11/16/2022	11/15/2023
Attenuator	Woken	WATT-218FS-10	RF17	11/16/2022	11/15/2023
Coaxial Cable	Huber+Suhner	RG 214/U	W21.01	11/16/2022	11/15/2023
Coaxial Cable	Huber Suhner	EMC106-SM-SM-7200	150703	11/16/2022	11/15/2023
Coaxial Cable	Huber Suhner	SUCOFLEX 104	MY17413/4	11/16/2022	11/15/2023

NOTE: N.C.R refers to Not Calibrated Required.

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7 MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

7.1 Standard Applicable

7.1.1 Duty Cycle

Pre-analysis Check: While conducting average power measurement, duty cycle of each mode shall be checked to ensure its duty cycle in order to compensate for the loss due to insufficient ratio of duty cycle.

All duty cycle is pre-scanned, and result as obtained below shows only the most representative ones where duty cycle is conducted as the given transmission with given virtual operation that expresses the percentage.

7.1.2 Output Power

7.1.2		itput i olioi				
				e-CRF Title	47 §15.407	
Band	(EUT CATEGORY	Conducted Output Power	EIRP	TPC	Antenna Directional Gain Requirements
		Fixed point-to- point	1 Watt(30dBm)	Not required	Not required	23dBi
U-NII-1		Out door AP	1 Watt(30dBm)	Elevation angle above 30 degrees 125mW (21dBm)	Not required	6dBi
U-INII- I		Indoor AP	1 Watt(30dBm)	Not required	Not required	6dBi
	٧	Other	250mW(23.98dBm)	Not required	Not required	6dBi
U-NII-2A	٧	Other	250mW(23.98dBm) or 11dBm+10 log B	Not required	When EIRP >500mW At least 6dB below EIRP 1W (30dBm)	6dBi
U-NII-2C	٧	Other	250mW(23.98dBm) or 11dBm+10 log B	Not required	1 W (30dBill)	6dBi
	V	Other	1 Watt(30dBm)	Not required	Not required	6dBi
U-NII-3		Fixed point-to-point	1 Watt(30dBm)	Not required	Not required	Not required

^{1.} If transmitting antennas of directional gain greater than the antenna requirements column, the Maximum transmit power shall be reduced by the amount in dB that the direction-al gain of the antenna.

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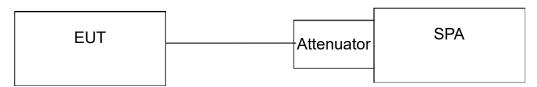
^{2.} For the 10 log B, B is the 26 dB emission bandwidth.



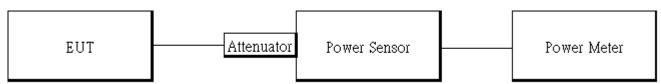
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7.2 Test Setup

7.2.1 Duty Cycle



7.2.2 Output Power



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Measurement Procedure

7.3.1 **Duty Cycle Measurements**

- 1. Set span = Zero
- 2. RBW = 8MHz
- VBW = 8MHz.
- 4. Detector = Peak

7.3.2 **Output Power Measurements**

- 1 Place the EUT on the table and set it in transmitting mode.
- The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules. 2.
- Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the power meter
- Power Meter is used as the auxiliary test equipment to conduct the output power meas-4.
- Record the max. reading and add 10 log(1/duty cycle).
- Repeat above procedures until all frequency (low, middle, and high channel) measured were complete.
- 7. MIMO mode: offset is set with "measure and add 10 Log (N)" to measurement for MIMO mode. Offset = cable loss + 10 log (N), where N is number of transmitting antenna, cable loss is specified below.

Note:

As per section F. 2). e). (ii) of FCC KDB 662911 D01

If antenna gains are not equal and each transmit antenna is driven by only one spatial stream, directional gain may be calculated by either of the following formulas.

• Directional Gain =
$$10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^{2}}{N_{ANT}} \right]$$

where

Each antenna is driven by no more than one spatial stream;

NSS = the number of independent spatial streams of data;

NANT = the total number of antennas

 $g_{i,k} = /20$ 10Gk if the kth antenna is being fed by spatial stream i, or zero if it is not; \hat{G}_k is the gain in dBi of the kth antenna.

The antenna gain is grater than 6 dBi in MIMO mode, therefore the the power density limit autenuation has been applied in the test results.

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7.4 Duty Cycle Measurement Result

Mode	Duty Cycle (%) =Ton / (Ton+Toff)	Duty Factor (dB) =10*log (1/Duty Cycle)	1/T (kHz)	VBW setting (kHz)
802.11a	98.90	0.05	0.70	0.01
802.11n_20	98.02	0.09	1.45	0.01
802.11ac_20	98.04	0.09	1.43	0.01
802.11n_40	96.22	0.17	2.81	3.00
802.11ac_40	96.26	0.17	2.78	3.00
802.11ac_80	92.31	0.35	5.21	6.00
802.11ax_20	97.54	0.11	1.80	2.00
802.11ax_40	95.63	0.19	3.27	4.00
802.11ax_80	92.71	0.33	5.62	6.00

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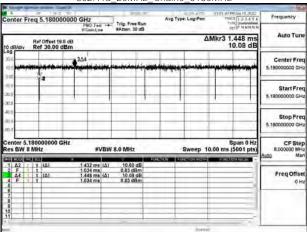
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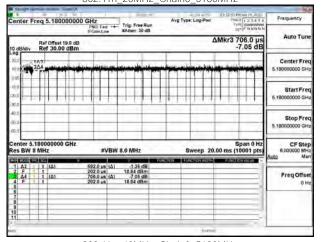


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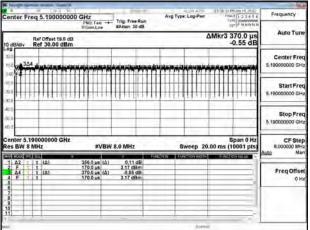
802.11a_20MHz_Chain0_5180MHz



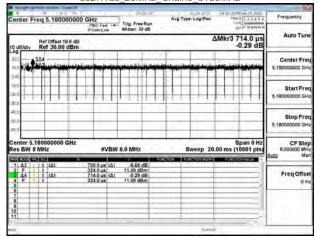
802.11n 20MHz Chain0 5180MHz



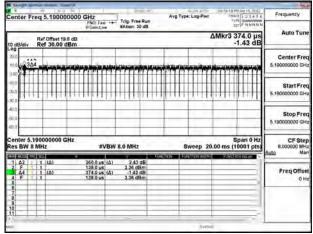
802.11n_40MHz_Chain0_5190MHz



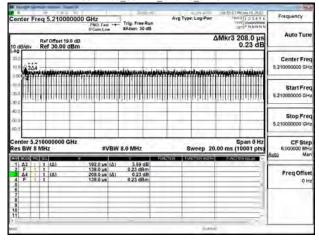
802.11ac_20MHz_Chain0_5180MHz



802.11ac_40MHz_Chain0_5190MHz



802.11ac 80MHz Chain0 5210MHz



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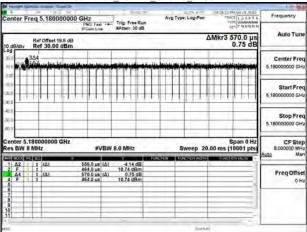
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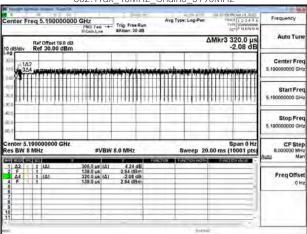


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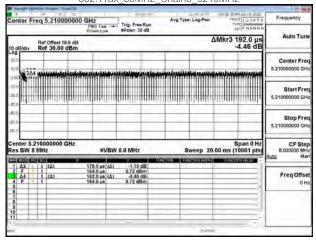




802.11ax 40MHz Chain0 5190MHz



802.11ax_80MHz_Chain0_5210MHz



7.5 **Output Power Measurement Result**

7.5.1 **FCC Output power**

802.11a Ch0

СН	Frequency (MHz)	Data Rate	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
116	5580	6	15.5	15.84	38.353	23.94	PASS

802.11a Ch1

СН	Frequency (MHz)	Data Rate	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
116	5580	6	15.5	15.78	37.827	23.84	PASS

802.11a 2TX

СН	Frequency	Data	Power	Avg. POWER (dBm)		TOTAL POWER	TOTAL POWER	REQUIRED LIMIT	RESULT
CIT	(MHz)	Rate	set	Ch0 Ch	Ch1	(dBm)	(mW)	(dBm)	RESULT
116	5580	6	17	15.96	15.85	18.91	77.870	22.72	PASS

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BUZ.	. 1 1 1	1 H	IZU	Ch0

СН	Frequency (MHz)	Data Rate	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
40	5200	MCS0	16.5	16.83	48.160	23.98	PASS
116	5580	MCS0	15.5	15.84	38.343	23.98	PASS

802.11n_HT20_Ch1

СН	Frequency (MHz)	Data Rate	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
40	5200	MCS0	16.5	16.78	47.609	23.98	PASS
116	5580	MCS0	15.5	15.78	37.817	23.98	PASS

802.11n_HT20_2TX

СН	Frequency	Data	Power	Avg. POW	Avg. POWER (dBm)		TOTAL POWER	REQUIRED LIMIT	RESULT
CII	(MHz)	Rate	set	Ch0		POWER (dBm)	(mW)	(dBm)	RESULT
40	5200	MCS0	17	16.94	16.79	19.87	97.114	22.72	PASS
116	5580	MCS0	17.5	15.92	15.82	18.88	77.223	22.72	PASS

802.11ac VHT20 Ch0

СН	Frequency (MHz)	Data Rate	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
40	5200	MCS0	17	16.75	47.271	23.98	PASS
116	5580	MCS0	16	15.79	37.896	23.98	PASS

802.11ac_VHT20_Ch1

СН	Frequency (MHz)	Data Rate	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
40	5200	MCS0	17	16.70	46.730	23.98	PASS
116	5580	MCS0	16	15.73	37.376	23.98	PASS

802.11ac VHT20 2TX

СН	Frequency			Avg. POWER (dBm)		TOTAL POWER	TOTAL POWER	REQUIRED LIMIT	RESULT
5 11	(MHz)	Rate	set	Ch0	Ch1	(dBm)	(mW)	(dBm)	KEGGET
40	5200	MCS0	17	16.89	16.75	19.83	96.091	22.72	PASS
116	5580	MCS0	15.5	15.87	15.77	18.83	76.323	22.72	PASS

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802.11ax HE20 Ch0

СН	Frequency (MHz)	Data Rate	RU config.	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
		MCS0	full	13.75	13.88	24.424	23.98	PASS
36	5180	MCS0	26/0	10.75	10.78	11.962	23.98	PASS
		MCS0	106/53	16.25	13.89	24.480	23.98	PASS
40	5200	MCS0	full	16	16.86	48.508	23.98	PASS
64	5320	MCS0	26/8	9.25	9.79	9.524	23.98	PASS
04	3320	MCS0	52/40	11.25	11.76	14.991	23.98	PASS
116	5580	MCS0	full	15.5	15.88	38.709	23.98	PASS
140	5700	MCS0	full	13.75	13.90	24.537	23.98	PASS
140	3700	MCS0	52/40	13.5	10.86	12.185	23.98	PASS

802.11ax_HE20_Ch1

СН	Frequency (MHz)	Data Rate	RU config.	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
		MCS0	full	13.75	13.82	24.089	23.98	PASS
36	5180	MCS0	26/0	11	10.76	11.907	23.98	PASS
		MCS0	106/53	17	13.81	24.034	23.98	PASS
40	5200	MCS0	full	16	16.77	47.514	23.98	PASS
64	5320	MCS0	26/8	9.5	9.77	9.480	23.98	PASS
04	5520	MCS0	52/40	11.5	11.73	14.887	23.98	PASS
116	5580	MCS0	full	15.5	15.83	38.266	23.98	PASS
140	5700	MCS0	full	15.5	13.84	24.200	23.98	PASS
140	5/00	MCS0	52/40	13.5	10.79	11.990	23.98	PASS

802.11ax HE20 2TX

СН	Frequency	Data	RU config.	Power	Avg. POWER (dBm)		TOTAL POWER	TOTAL POWER	REQUIRED LIMIT	RESULT
CH	(MHz)	Rate	Ko comig.	set	Ch0	Ch1	(dBm)	(mW)	(dBm)	RESULT
		MCS0	full	14.25	14.01	13.78	16.90	49.034	22.72	PASS
36	5180	MCS0	26/0	12.5	10.86	10.73	13.80	24.010	22.72	PASS
		MCS0	106/53	15.75	13.96	13.85	16.91	49.134	22.72	PASS
40	5200	MCS0	full	16.5	16.97	16.90	19.94	98.710	22.72	PASS
64	5320	MCS0	26/8	12.5	9.88	9.73	12.81	19.117	22.72	PASS
04	5520	MCS0	52/40	14.5	11.84	11.70	14.78	30.054	22.72	PASS
116	5580	MCS0	full	15.5	15.97	15.81	18.90	77.611	22.72	PASS
140	5700	MCS0	full	13.75	14.01	13.86	16.94	49.478	22.72	PASS
140	5700	MCS0	52/40	13	10.96	10.87	13.92	24.681	22.72	PASS

802.11n_HT40_Ch0

СН	Frequency (MHz)	Data Rate	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
54	5270	MCS0	15.5	15.90	38.881	23.98	PASS
110	5550	MCS0	14.5	14.88	30.742	23.98	PASS
134	5670	MCS0	15.75	15.90	38.881	23.98	PASS

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802.11n HT40 Ch1

	_						
СН	Frequency (MHz)	Data Rate	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
54	5270	MCS0	15.5	15.84	38.347	23.98	PASS
110	5550	MCS0	14.5	14.82	30.320	23.98	PASS
134	5670	MCS0	15.75	15.84	38.347	23.98	PASS

802.11n HT40 2TX

<u>-</u>									
сн	Frequency	Data	Power	Avg. POWER (dBm)		TOTAL	TOTAL POWER	REQUIRED LIMIT	RESULT
CII	(MHz)	Rate	set	Ch0	Ch1	(dBm)	(mW)		
54	5270	MCS0	16	16.02	15.77	18.90	77.704	22.72	PASS
110	5550	MCS0	15	15.05	14.79	17.93	62.081	22.72	PASS
134	5670	MCS0	16	15.97	15.86	18.92	78.037	22.72	PASS

802.11ac VHT40 Ch0

СН	Frequency (MHz)	Data Rate	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
54	5270	MCS0	16	15.84	38.333	23.98	PASS
110	5550	MCS0	14.5	14.84	30.449	23.98	PASS
134	5670	MCS0	16.25	15.84	38.333	23.98	PASS

802.11ac VHT40 Ch1

СН	Frequency (MHz)	Data Rate	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
54	5270	MCS0	16	15.60	36.272	23.98	PASS
110	5550	MCS0	14.5	14.62	28.945	23.98	PASS
134	5670	MCS0	16.25	15.61	36.355	23.98	PASS

802.11ac_VHT40_2TX

СН	Frequency	Data	Power	Avg. POW	VER (dBm)	TOTAL POWER	TOTAL POWER	REQUIRED LIMIT	RESULT
	(MHz)	Rate	set	Ch0	Ch1	(dBm)	(mW)	(dBm)	
54	5270	MCS0	16.75	15.97	15.76	18.87	77.131	22.72	PASS
110	5550	MCS0	15	14.99	14.80	17.90	61.688	22.72	PASS
134	5670	MCS0	16	16.03	15.80	18.92	78.028	22.72	PASS

802.11ax HE40 Ch0

СН	Frequency (MHz)	Data Rate	RU config.	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
110	5550	MCS0	full	15	14.87	30.719	23.98	PASS

802.11ax HE40 Ch1

	СН	Frequency (MHz)	Data Rate	RU config.	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
l	110	5550	MCS0	full	15	14.82	30.367	23.98	PASS

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802.11ax HE40 2TX

Ch	Frequency	Data	RU config. Power set	Power	Avg. POWER (dBm)		Avg. POWER (dBm)		Avg. POWER (dBm)		ver Avg. POWER (dBm)		TOTAL POWER	TOTAL POWER	REQUIRED LIMIT	RESULT
СН	(MHz)	Rate		set	Ch0	Ch1	(dBm)	(mW)	(dBm)	RESULI						
110	5550	MCS0	full	14.5	14.92	14.82	17.88	49.431	22.72	PASS						

802.11ax_HE80_Ch0

СН	Frequency (MHz)	Data Rate	RU config.	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
155	5775	MCS0	484/66	17.75	15.84	38.360	30	PASS

802.11ax_HE80_Ch1

СН	Frequency (MHz)	Data Rate	RU config.	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
155	5775	MCS0	484/66	18.5	15.77	37.746	30	PASS

802.11ax HE80 2TX

СН	Frequency (MHz)	, i IRI	PH config	RU config. Power set	Avg. POWER (dBm)		TOTAL POWER	TOTAL POWER	REQUIRED LIMIT	RESULT
CII			ico comig.		Ch0	Ch1	(dBm)	(mW)	(dBm)	KLJULI
155	5775	MCS0	484/66	17.25	15.96	15.82	18.90	77.618	28.74	PASS

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UNDESIRABLE RADIATED EMISSION MEASUREMENT

8.1 Standard Applicable

 $EIRP = ((E*d)^2) / 30$, where E is the field strength in V/m, d is the measurement distance (3m), EIRP is the equivalent isotropically radiated power in Watts.

8.1.1 5150~5850 MHz

Applicable	Operation	EIRP		Field
Applicable to	Freq. (MHz)	Freq. (MHz)	Limits (dBm/MHz)	Strength @ 3m (dBµV/m)
15.407(b)(1)	5150~5250	f ≤ 5150		
15.407(b)(2)	5250~5350	f ≥ 5350	PK: -27	PK: 68.2
15.407(b)(3)	5475~5725	f ≤ 5470 f ≥ 5725	110. 27	111.00.2
		at 75 MHz or more above or be- low the band edge	PK:-27	PK: 68.2
15.407(b)(4)(i)	5725~5850	increasing linearly from 75~25MHz above or below the band edge		PK: 68.2~105.2
		increasing linearly from 25~5MHz above or below the band edge	PK:10~15.6	PK: 105.2~110.8
		increasing linearly from 5~0 MHz above or below the band edge	PK: 15.6~27	PK:110.8~122.2

8.1.2 **Spurious Emission**

Unwanted spurious emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table:

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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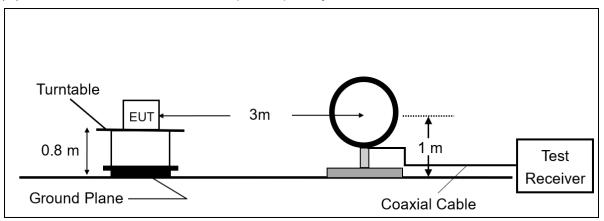


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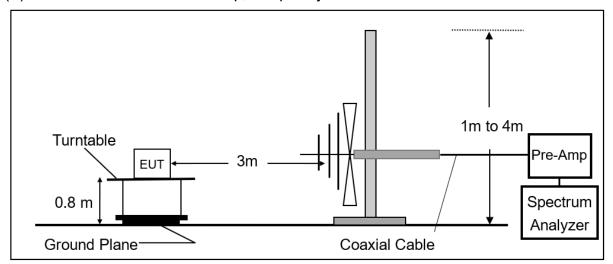


8.2 Test Setup

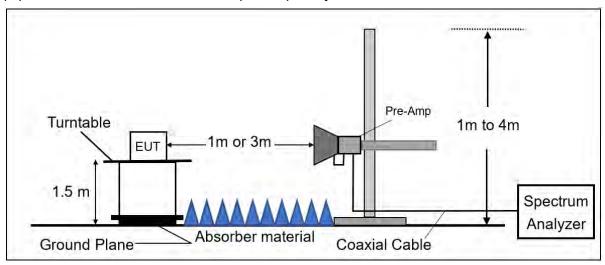
(A) Radiated Emission Test Set-Up, Frequency Below 30MHz.



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



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



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Measurement Procedure

- The testing follows FCC KDB 789033 D02. 1.
- The EUT was placed on a turn table with 0.8m for frequency< 1GHz and 1.5m for frequency> 1GHz above ground plane.
- The turn table shall rotate 360 degrees to determine the position of maximum emission
- EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emissions.
- Set the spectrum analyzer as RBW=100 kHz and VBW=300 kHz for Peak Detector (PK) at frequency between 30MHz and 1 GHz
- Use receiver mode as RBW=120 kHz for Quasi-peak (QP) at frequency between 30MHz and 1 GHz.
- Set the spectrum analyzer as RBW=1 MHz, VBW=3 MHz for Maximum Emission Measurements at frequency above 1 GHz.
- Set the spectrum analyzer as RBW=1 MHz, VBW=10 Hz (Duty cycle > 98%) or VBW ≥ 1/T 8. (Duty cycle < 98%) for Average Emission Measurements at frequency above 1 GHz.
- 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.
- 10. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 11. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
- **12.** Repeat above procedures until all frequency measured were complete.

8.4 **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

CL = Cable Attenuation Factor (Cable Loss)

RA = Reading Amplitude

AG = Amplifier Gain

AF = Antenna Factor

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

Actual $FS(dB\mu V/m) = SPA$. Reading level $(dB\mu V) + Factor(dB)$

 $Factor(dB) = Antenna\ Factor(dB\mu V/m) + Cable\ Loss(dB) - Pre_Amplifier\ Gain(dB)$

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8.5 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.

Radiated Spurious Emission Measurement Result 8.6

8.6.1 **Spurious Emission**

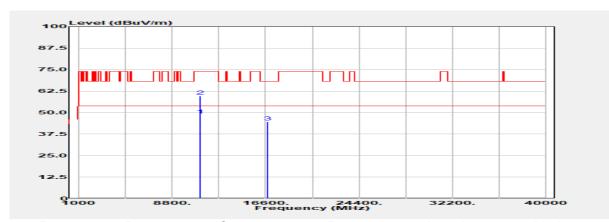
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode: 802.11a Test Date :2022-12-13

Test Frequency :5580 MHz Temp./Humi. :22.7/52

Test Mode :Tx Antenna Pol. :VERTICAL

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11160.000	Average	38.84	9.90	48.74	54.00	-5.26
11160.000	Peak	49.84	9.90	59.74	74.00	-14.26
16740.000	Peak	34.88	9.80	44.69	68.20	-23.51

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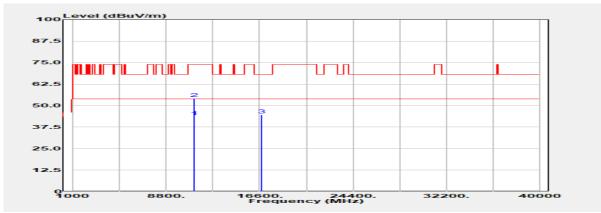
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Operation Mode :802.11a Test Date :2022-12-13

Test Frequency :5580 MHz Temp./Humi. :22.7/52

Test Mode :Tx Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11160.000	Average	33.65	9.90	43.55	54.00	-10.45
11160.000	Peak	44.17	9.90	54.08	74.00	-19.92
16740.000	Peak	34.70	9.80	44.50	68.20	-23.70

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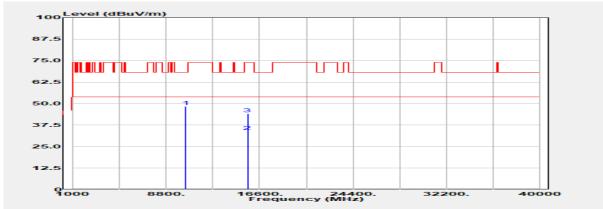
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode: 802.11n20 Test Date :2023-02-03

Test Frequency :5200 MHz Temp./Humi. :23.1/53

:Tx Test Mode Antenna Pol. :Vertical

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
10400.000	Peak	38.57	9.91	48.48	68.20	-19.72
15600.000	Average	26.11	7.76	33.87	54.00	-20.13
15600.000	Peak	36.40	7.76	44.16	74.00	-29.84

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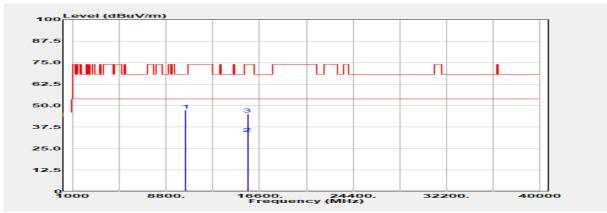
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode: 802.11n20 Test Date :2023-02-03

Test Frequency :5200 MHz Temp./Humi. :23.1/53

:Tx Test Mode Antenna Pol. :Horizontal

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
10400.000	Peak	37.55	9.91	47.46	68.20	-20.74
15600.000	Average	26.19	7.76	33.95	54.00	-20.05
15600.000	Peak	37.44	7.76	45.19	74.00	-28.81

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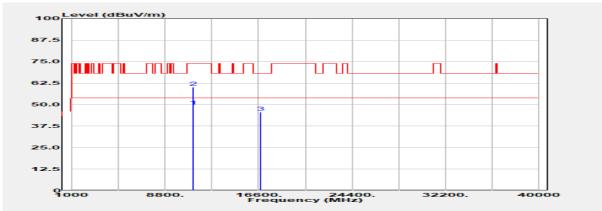
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Operation Mode: 802.11n20 Test Date :2022-12-13

Test Frequency :5580 MHz Temp./Humi. :22.7/52

:Tx Test Mode Antenna Pol. :VERTICAL

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11160.000	Average	39.28	9.90	49.18	54.00	-4.82
11160.000	Peak	50.24	9.90	60.14	74.00	-13.86
16740.000	Peak	35.89	9.80	45.70	68.20	-22.50

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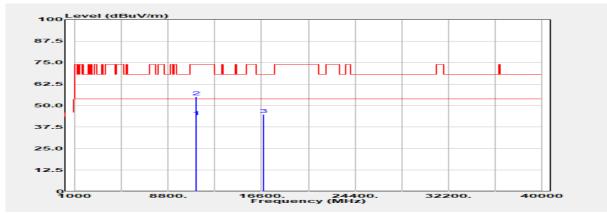
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode: 802.11n20 Test Date :2022-12-13

Test Frequency :5580 MHz Temp./Humi. :22.7/52

:Tx Test Mode Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11160.000	Average	33.62	9.90	43.52	54.00	-10.48
11160.000	Peak	45.21	9.90	55.11	74.00	-18.89
16740.000	Peak	35.00	9.80	44.81	68.20	-23.39

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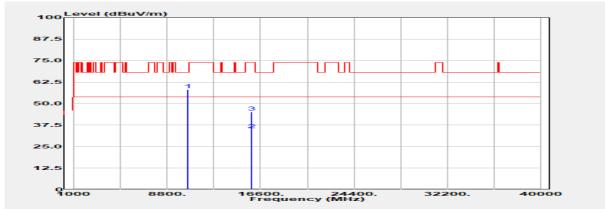
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode: 802.11n40 Test Date :2023-02-01

Test Frequency :5270 MHz Temp./Humi. :22.8/56

:Tx Test Mode Antenna Pol. :Vertical

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
10540.000	Peak	47.79	10.38	58.17	68.20	-10.03
15810.000	Average	26.57	8.16	34.74	54.00	-19.26
15810.000	Peak	37.00	8.16	45.17	74.00	-28.83

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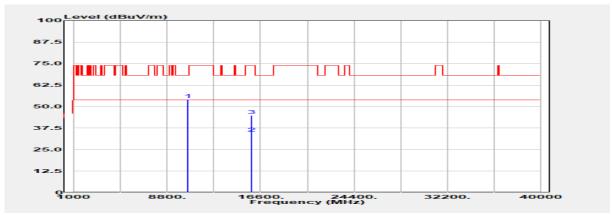
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode :802.11n40 Test Date :2023-02-01

Test Frequency :5270 MHz Temp./Humi. :22.8/56

Test Mode :Tx Antenna Pol. :Horizontal

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
10540.000	Peak	43.66	10.38	54.04	68.20	-14.16
15810.000	Average	26.51	8.16	34.67	54.00	-19.33
15810.000	Peak	36.70	8.16	44.87	74.00	-29.13

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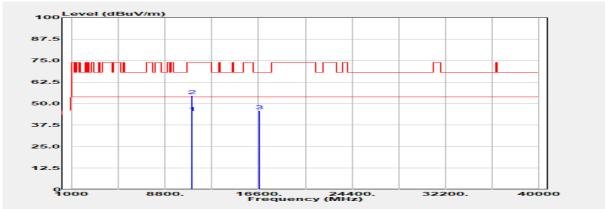
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode: 802.11n40 Test Date :2023-02-01

Test Frequency :5550 MHz Temp./Humi. :22.8/56

:Tx Test Mode Antenna Pol. :Vertical

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11100.000	Average	34.91	9.91	44.82	54.00	-9.18
11100.000	Peak	44.81	9.91	54.72	74.00	-19.28
16650.000	Peak	36.70	9.04	45.74	68.20	-22.46

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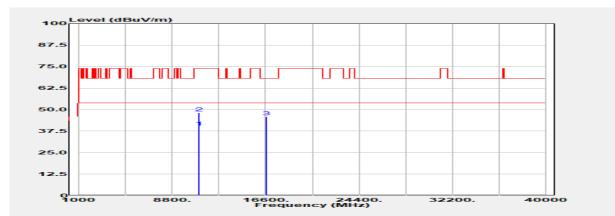
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode: 802.11n40 Test Date :2023-02-01

Test Frequency :5550 MHz Temp./Humi. :22.8/56

:Tx Test Mode Antenna Pol. :Horizontal

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11100.000	Average	29.90	9.91	39.81	54.00	-14.19
11100.000	Peak	38.23	9.91	48.14	74.00	-25.86
16650.000	Peak	36.79	9.04	45.83	68.20	-22.37

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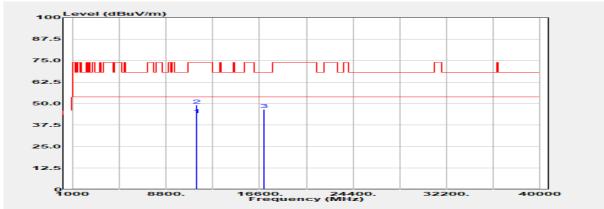
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode: 802.11n40 Test Date: 2023-02-01

Test Frequency :5670 MHz Temp./Humi. :22.8/56

Test Mode :Tx Antenna Pol. :Vertical

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11340.000	Average	34.11	9.60	43.71	54.00	-10.29
11340.000	Peak	39.43	9.60	49.03	74.00	-24.97
17010.000	Peak	35.85	10.85	46.70	68.20	-21.50

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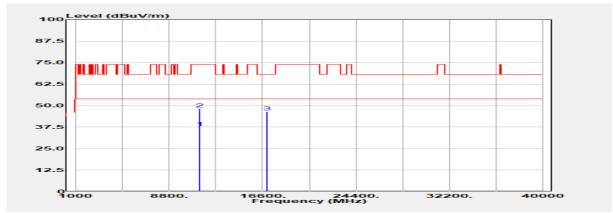
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode: 802.11n40 Test Date :2023-02-01

Test Frequency :5670 MHz Temp./Humi. :22.8/56

:Tx Test Mode Antenna Pol. :Horizontal

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11340.000	Average	27.78	9.60	37.38	54.00	-16.62
11340.000	Peak	38.62	9.60	48.22	74.00	-25.78
17010.000	Peak	35.53	10.85	46.38	68.20	-21.82

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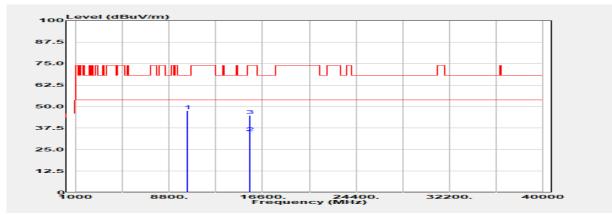
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode: 802.11ax20 Test Date :2023-02-03

Test Frequency :5180 MHz Temp./Humi. :23.1/53

Test Mode :Tx Full RU Antenna Pol. :Vertical

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
10360.000	Peak	38.60	8.96	47.56	68.20	-20.64
15540.000	Average	26.57	8.24	34.81	54.00	-19.19
15540.000	Peak	36.66	8.24	44.90	74.00	-29.10

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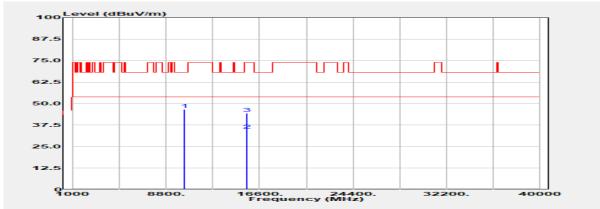
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode: 802.11ax20 Test Date :2023-02-03

Test Frequency :5180 MHz Temp./Humi. :23.1/53

Test Mode :Tx Full RU Antenna Pol. :Horizontal

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
10360.000	Peak	37.60	8.96	46.56	68.20	-21.64
15540.000	Average	26.33	8.24	34.57	54.00	-19.43
15540.000	Peak	36.12	8.24	44.36	74.00	-29.64

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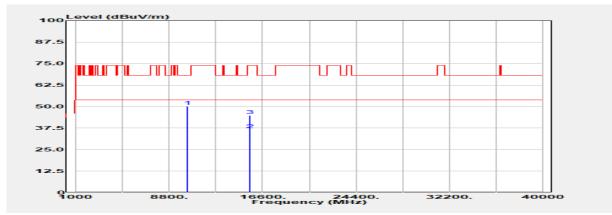
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode :802.11ax20 Test Date :2023-02-02

Test Frequency :5180 MHz Temp./Humi. :22.6/52

Test Mode :Tx RU 106/53 Antenna Pol. :Vertical

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
10360.000	Peak	41.11	8.96	50.06	68.20	-18.14
15540.000	Average	28.37	8.24	36.61	54.00	-17.39
15540.000	Peak	36.65	8.24	44.89	74.00	-29.11

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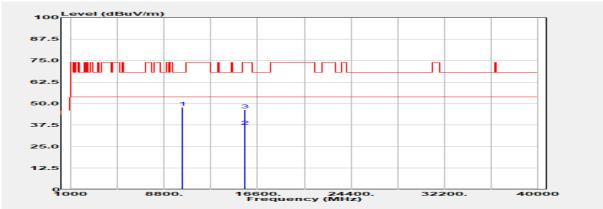
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode: 802.11ax20 Test Date :2023-02-02

Test Frequency :5180 MHz Temp./Humi. :22.6/52

Test Mode :Tx RU 106/53 Antenna Pol. :Horizontal

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
10360.000	Peak	38.87	8.96	47.83	68.20	-20.37
15540.000	Average	28.66	8.24	36.90	54.00	-17.10
15540.000	Peak	38.17	8.24	46.41	74.00	-27.60

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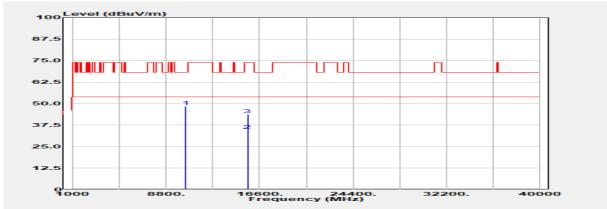
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode: 802.11ax20 Test Date :2023-02-03

Test Frequency :5200 MHz Temp./Humi. :23.1/53

Test Mode :Tx Full RU Antenna Pol. :Vertical

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
10400.000	Peak	38.58	9.91	48.49	68.20	-19.71
15600.000	Average	26.53	7.76	34.29	54.00	-19.71
15600.000	Peak	35.89	7.76	43.65	74.00	-30.35

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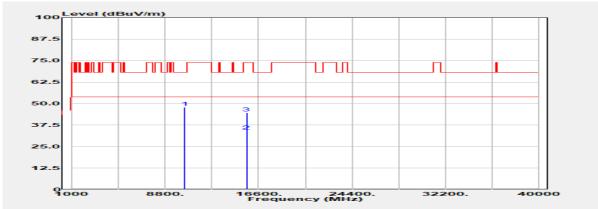
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode: 802.11ax20 Test Date :2023-02-03

Test Frequency :5200 MHz Temp./Humi. :23.1/53

Test Mode :Tx Full RU Antenna Pol. :Horizontal

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
10400.000	Peak	38.01	9.91	47.92	68.20	-20.28
15600.000	Average	26.27	7.76	34.03	54.00	-19.97
15600.000	Peak	36.95	7.76	44.71	74.00	-29.29

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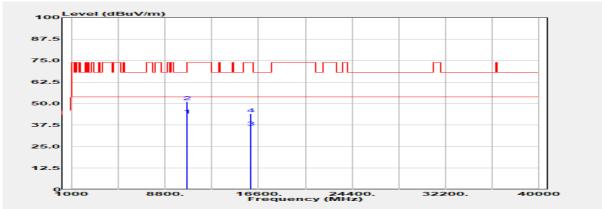
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode :802.11ax20 Test Date :2023-02-02

Test Frequency :5320 MHz Temp./Humi. :22.6/52

Test Mode :Tx RU 52/40 Antenna Pol. :Vertical

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
10640.000	Average	33.65	9.77	43.42	54.00	-10.58
10640.000	Peak	41.38	9.77	51.15	74.00	-22.85
15960.000	Average	28.60	7.80	36.40	54.00	-17.60
15960.000	Peak	36.32	7.80	44.13	74.00	-29.87

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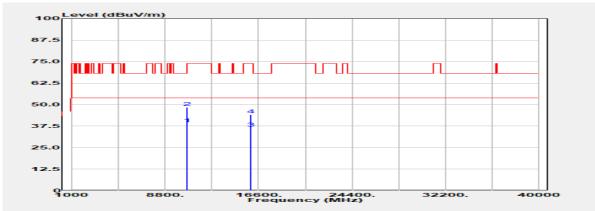
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode: 802.11ax20 Test Date :2023-02-02

Test Frequency :5320 MHz Temp./Humi. :22.6/52

:Tx RU 52/40 Test Mode Antenna Pol. :Horizontal

Engineer **EUT Pol** :E2 Plane :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
10640.000	Average	29.20	9.77	38.97	54.00	-15.03
10640.000	Peak	38.50	9.77	48.28	74.00	-25.72
15960.000	Average	28.66	7.80	36.46	54.00	-17.54
15960.000	Peak	36.38	7.80	44.18	74.00	-29.82

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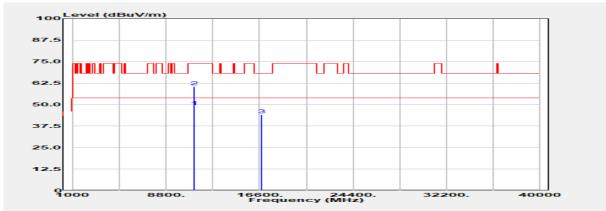
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode: 802.11ax20 Test Date :2022-12-13

Test Frequency :5580 MHz Temp./Humi. :22.7/52

Test Mode :Tx Full RU Antenna Pol. :VERTICAL

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11160.000	Average	39.05	9.90	48.95	54.00	-5.05
11160.000	Peak	50.44	9.90	60.35	74.00	-13.65
16740.000	Peak	34.23	9.80	44.03	68.20	-24.17

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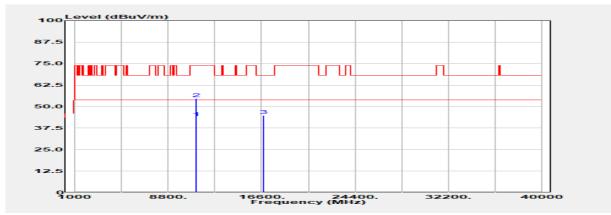
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Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode :802.11ax20 Test Date :2022-12-13

Test Frequency :5580 MHz Temp./Humi. :22.7/52

Test Mode :Tx Full RU Antenna Pol. :HORIZONTAL EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11160.000	Average	33.78	9.90	43.68	54.00	-10.32
11160.000	Peak	44.63	9.90	54.54	74.00	-19.46
16740.000	Peak	35.08	9.80	44.88	68.20	-23.32

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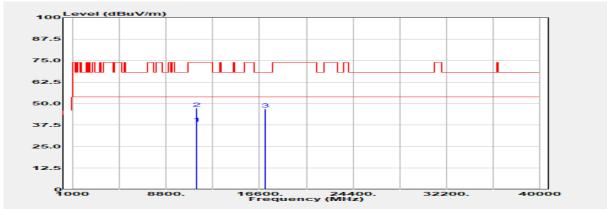
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode :802.11ax20 Test Date :2023-02-02

Test Frequency :5700 MHz Temp./Humi. :22.6/52

Test Mode :Tx Full RU Antenna Pol. :Vertical

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11400.000	Average	29.15	9.43	38.58	54.00	-15.42
11400.000	Peak	37.83	9.43	47.25	74.00	-26.75
17100.000	Peak	37.31	9.61	46.91	68.20	-21.29

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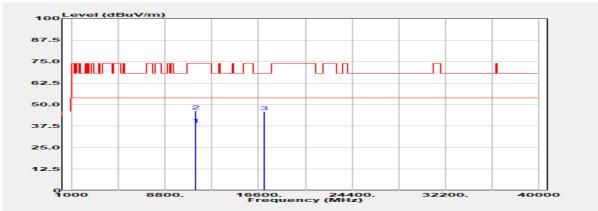
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode: 802.11ax20 Test Date :2023-02-02

Test Frequency :5700 MHz Temp./Humi. :22.6/52

Test Mode :Tx Full RU Antenna Pol. :Horizontal

EUT Pol :E2 Plane Engineer :Howard Huang



	Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
	11400.000	Average	29.11	9.43	38.53	54.00	-15.47
	11400.000	Peak	36.95	9.43	46.38	74.00	-27.62
	17100.000	Peak	36.28	9.61	45.88	68.20	-22.32

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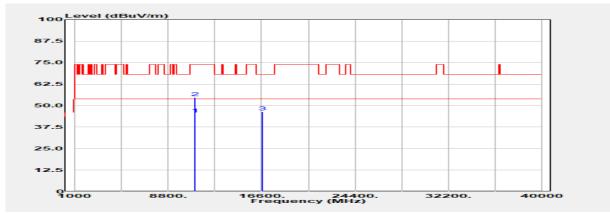
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode: 802.11ax40 Test Date :2023-02-02

Test Frequency :5550 MHz Temp./Humi. :22.6/52

Test Mode :Tx Full RU Antenna Pol. :Vertical

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11100.000	Average	35.31	9.91	45.22	54.00	-8.78
11100.000	Peak	44.80	9.91	54.71	74.00	-19.29
16650.000	Peak	37.41	9.04	46.46	68.20	-21.74

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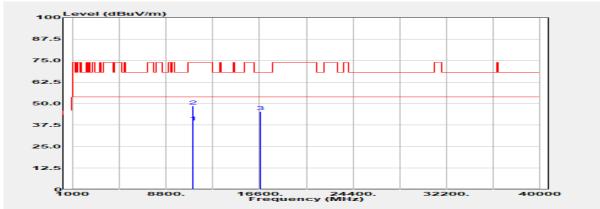
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode :802.11ax40 Test Date :2023-02-02

Test Frequency :5550 MHz Temp./Humi. :22.6/52

Test Mode :Tx Full RU Antenna Pol. :Horizontal

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11100.000	Average	29.37	9.91	39.28	54.00	-14.72
11100.000	Peak	38.78	9.91	48.69	74.00	-25.31
16650.000	Peak	36.25	9.04	45.29	68.20	-22.91

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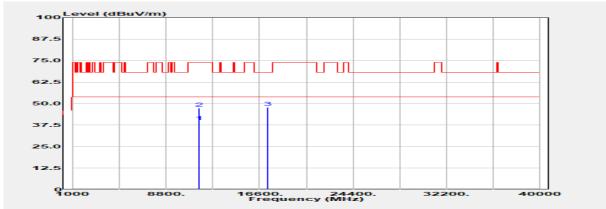
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode :802.11ax80 Test Date :2023-02-02

Test Frequency :5775 MHz Temp./Humi. :22.6/52

Test Mode :Tx RU 484/66 Antenna Pol. :Vertical

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11550.000	Average	30.59	9.11	39.70	54.00	-14.30
11550.000	Peak	38.34	9.11	47.45	74.00	-26.55
17325.000	Peak	36.14	11.85	47.99	68.20	-20.21

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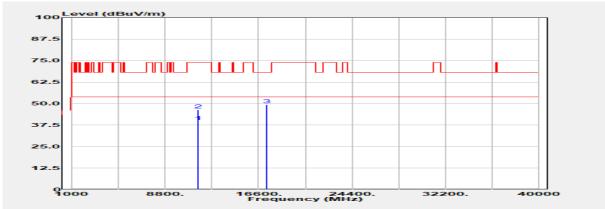
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode :802.11ax80 Test Date :2023-02-02

Test Frequency :5775 MHz Temp./Humi. :22.6/52

Test Mode :Tx RU 484/66 Antenna Pol. :Horizontal

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11550.000	Average	30.46	9.11	39.57	54.00	-14.43
11550.000	Peak	37.35	9.11	46.46	74.00	-27.54
17325.000	Peak	37.53	11.85	49.38	68.20	-18.82

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8.6.2 Band edge falling to restricted band

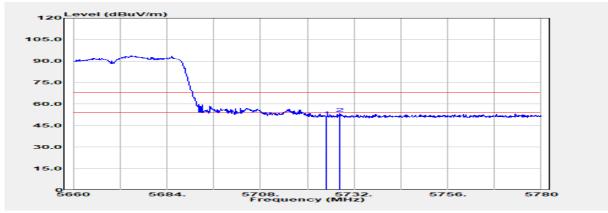
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode :802.11n40 Test Date :2023-02-04

Test Frequency :5670 MHz Temp./Humi. :24.4/40

Test Mode :Bandedge Antenna Pol. :Vertical

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5725.000	Peak	51.79	-0.74	51.05	68.20	-17.15
5728.280	Peak	54.22	-0.68	53.54	68.20	-14.66

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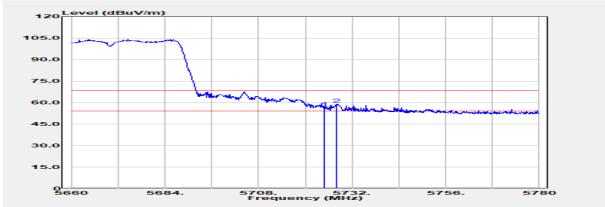
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode: 802.11n40 Test Date :2023-02-04

Test Frequency :5670 MHz Temp./Humi. :24.4/40

Test Mode :Bandedge Antenna Pol. :Horizontal

EUT Pol :E2 Plane Engineer :Howard Huang



	Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
57	25.000	Peak	57.24	-0.74	56.50	68.20	-11.70
57	27.920	Peak	59.56	-0.69	58.87	68.20	-9.33

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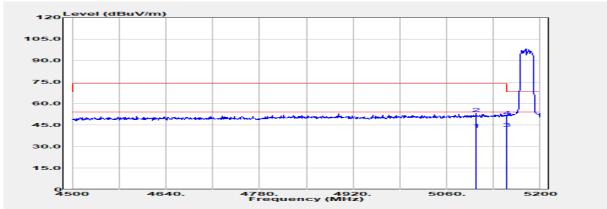
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode: 802.11ax20 Test Date :2023-02-04

Test Frequency :5180 MHz Temp./Humi. :24.4/40

Test Mode :Bandedge Full RU Antenna Pol. :Vertical

EUT Pol :E2 Plane :Howard Huang Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5104.100	Average	43.36	-1.34	42.02	54.00	-11.98
5104.100	Peak	54.67	-1.34	53.33	74.00	-20.67
5150.000	Average	43.34	-0.67	42.67	54.00	-11.33
5150.000	Peak	51.82	-0.67	51.15	74.00	-22.85

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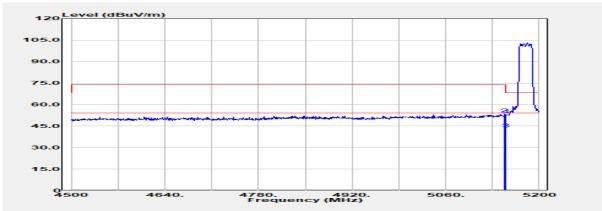
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode :802.11ax20 Test Date :2023-02-04

Test Frequency :5180 MHz Temp./Humi. :24.4/40

Test Mode :Bandedge Full RU Antenna Pol. :Horizontal

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5148.900	Average	43.90	-0.69	43.22	54.00	-10.78
5148.900	Peak	54.21	-0.69	53.53	74.00	-20.47
5150.000	Average	43.82	-0.67	43.15	54.00	-10.85
5150.000	Peak	53.72	-0.67	53.05	74.00	-20.95

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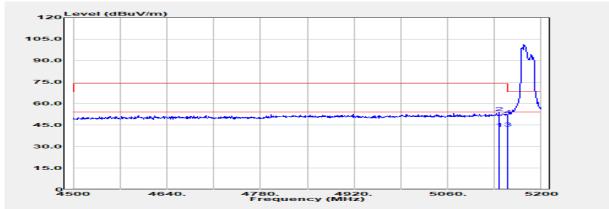
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode: 802.11ax20 Test Date: 2023-02-04

Test Frequency :5180 MHz Temp./Humi. :24.4/40

Test Mode :Bandedge RU 26/0 Antenna Pol. :Vertical

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5137.000	Average	43.68	-0.86	42.81	54.00	-11.19
5137.000	Peak	54.63	-0.86	53.77	74.00	-20.23
5150.000	Average	43.73	-0.67	43.05	54.00	-10.95
5150.000	Peak	52.47	-0.67	51.80	74.00	-22.20

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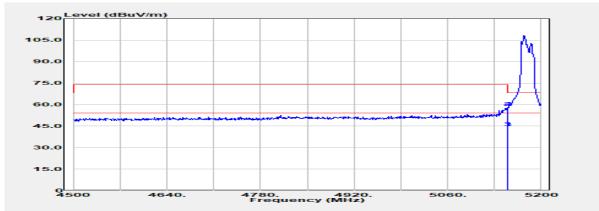
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode: 802.11ax20 Test Date :2023-02-04

Test Frequency :5180 MHz Temp./Humi. :24.4/40

Test Mode :Bandedge RU 26/0 Antenna Pol. :Horizontal

EUT Pol :E2 Plane :Howard Huang Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5149.600	Average	44.60	-0.68	43.92	54.00	-10.08
5149.600	Peak	58.70	-0.68	58.02	74.00	-15.98
5150.000	Average	44.64	-0.67	43.96	54.00	-10.04
5150.000	Peak	58.79	-0.67	58.12	74.00	-15.88

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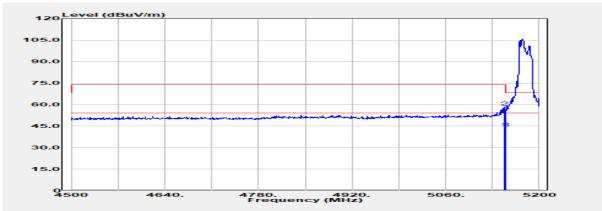
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode :802.11ax20 Test Date :2023-02-04

Test Frequency :5180 MHz Temp./Humi. :24.4/40

Test Mode :Bandedge RU 106/53 Antenna Pol. :Vertical

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5148.900	Average	43.91	-0.69	43.22	54.00	-10.78
5148.900	Peak	58.97	-0.69	58.28	74.00	-15.72
5150.000	Average	44.33	-0.67	43.66	54.00	-10.34
5150.000	Peak	56.04	-0.67	55.37	74.00	-18.63

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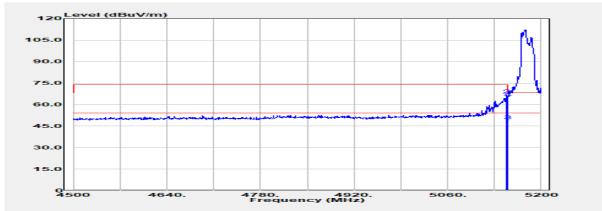
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode: 802.11ax20 Test Date :2023-02-04

Test Frequency :5180 MHz Temp./Humi. :24.4/40

Test Mode :Bandedge RU 106/53 Antenna Pol. :Horizontal

EUT Pol :E2 Plane :Howard Huang Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5148.200	Average	47.88	-0.70	47.18	54.00	-6.82
5148.200	Peak	67.60	-0.70	66.90	74.00	-7.10
5150.000	Average	49.50	-0.67	48.83	54.00	-5.17
5150.000	Peak	65.38	-0.67	64.71	74.00	-9.29

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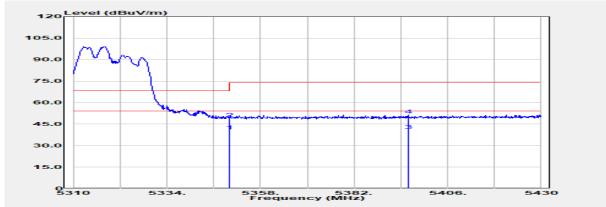
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode: 802.11ax20 Test Date :2023-02-04

Test Frequency :5320 MHz Temp./Humi. :24.4/40

Test Mode :Bandedge RU 26/8 Antenna Pol. :Vertical

EUT Pol :E2 Plane :Howard Huang Engineer



	Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
_	MHz	PK/QP/AV	dBμV	dB	dBμV/m	dBμV/m	dB
	5350.000	Average	42.02	-1.78	40.24	54.00	-13.76
	5350.000	Peak	50.92	-1.78	49.14	74.00	-24.86
	5395.800	Average	41.97	-1.37	40.60	54.00	-13.40
	5395.800	Peak	52.95	-1.37	51.58	74.00	-22.42

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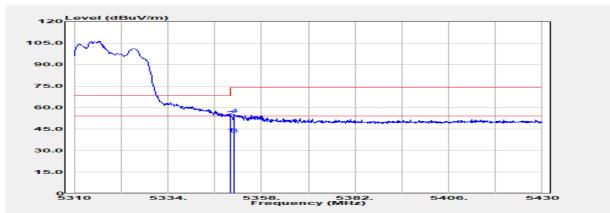
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode :802.11ax20 Test Date :2023-02-04

Test Frequency :5320 MHz Temp./Humi. :24.4/40

Test Mode :Bandedge RU 26/8 Antenna Pol. :Horizontal

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5350.000	Average	43.51	-1.78	41.73	54.00	-12.27
5350.000	Peak	55.61	-1.78	53.83	74.00	-20.17
5350.920	Average	43.15	-1.77	41.38	54.00	-12.62
5350.920	Peak	57.05	-1.77	55.27	74.00	-18.73

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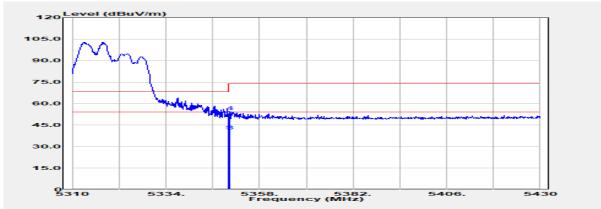
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode: 802.11ax20 Test Date: 2023-02-04

Test Frequency :5320 MHz Temp./Humi. :24.4/40

Test Mode :Bandedge RU 52/40 Antenna Pol. :Vertical

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5350.000	Average	42.27	-1.78	40.49	54.00	-13.51
5350.000	Peak	52.62	-1.78	50.84	74.00	-23.16
5350.320	Average	42.64	-1.78	40.86	54.00	-13.14
5350.320	Peak	56.34	-1.78	54.56	74.00	-19.44

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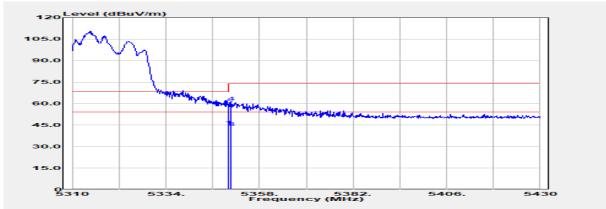
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode: 802.11ax20 Test Date :2023-02-04

Test Frequency :5320 MHz Temp./Humi. :24.4/40

Test Mode :Bandedge RU 52/40 Antenna Pol. :Horizontal

EUT Pol :E2 Plane :Howard Huang Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5350.000	Average	45.95	-1.78	44.17	54.00	-9.83
5350.000	Peak	60.03	-1.78	58.25	74.00	-15.75
5350.680	Average	45.16	-1.77	43.38	54.00	-10.62
5350.680	Peak	62.85	-1.77	61.07	74.00	-12.93

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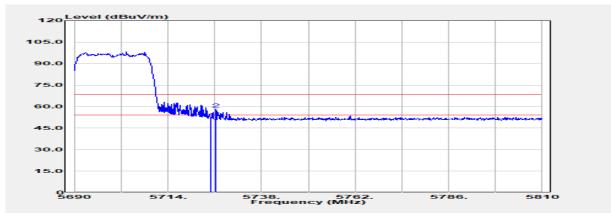
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode :802.11ax20 Test Date :2023-02-04

Test Frequency :5700 MHz Temp./Humi. :24.4/40

Test Mode :Bandedge Full RU Antenna Pol. :Vertical

EUT Pol :E2 Plane Engineer :Howard Huang



	Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
	5725.000	Peak	52.61	-0.74	51.86	68.20	-16.34
	5726.240	Peak	59.00	-0.72	58.28	68.20	-9.92

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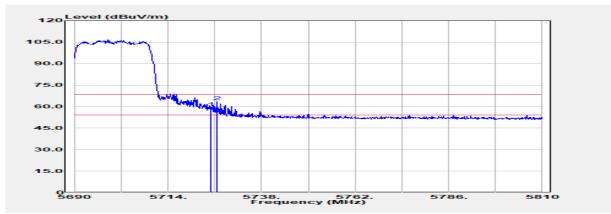
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode: 802.11ax20 Test Date :2023-02-04

Test Frequency :5700 MHz Temp./Humi. :24.4/40

Test Mode :Bandedge Full RU Antenna Pol. :Horizontal

EUT Pol :E2 Plane :Howard Huang Engineer



	Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
	5725.000	Peak	60.13	-0.74	59.39	68.20	-8.81
	5726.600	Peak	64.16	-0.71	63.45	68.20	-4.75

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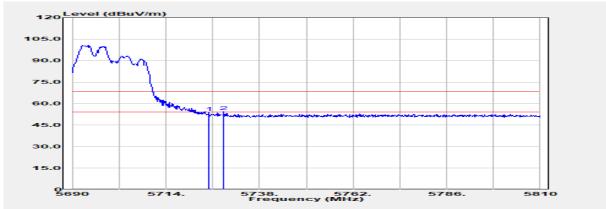
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Operation Mode: 802.11ax20 Test Date :2023-02-04

Test Frequency :5700 MHz Temp./Humi. :24.4/40

Test Mode :Bandedge RU 52/40 Antenna Pol. :Vertical

EUT Pol :E2 Plane :Howard Huang Engineer



	Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
	5725.000	Peak	54.59	-0.74	53.85	68.20	-14.35
	5728.880	Peak	55.23	-0.67	54.57	68.20	-13.63

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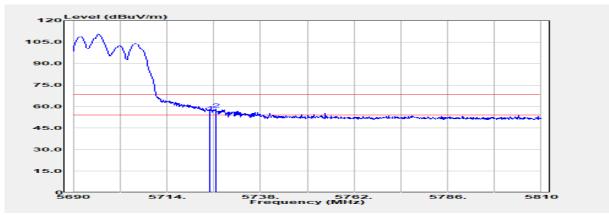
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode :802.11ax20 Test Date :2023-02-04

Test Frequency :5700 MHz Temp./Humi. :24.4/40

Test Mode :Bandedge RU 52/40 Antenna Pol. :Horizontal

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5725.000	Peak	57.32	-0.74	56.57	68.20	-11.63
5726.480	Peak	58.96	-0.71	58.24	68.20	-9.96

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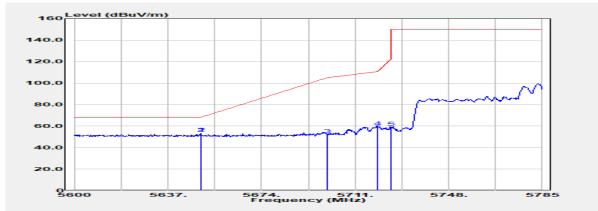
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Operation Mode: 802.11ax80 Test Date :2023-02-04

Test Frequency :5775 MHz Temp./Humi. :24.4/40

Test Mode :Bandedge RU 484/66 Antenna Pol. :Vertical

EUT Pol :E2 Plane :Howard Huang Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5649.950	Peak	54.33	-0.92	53.41	68.20	-14.79
5650.000	Peak	54.33	-0.92	53.41	68.20	-14.79
5700.000	Peak	53.44	-1.25	52.19	105.20	-53.01
5720.000	Peak	60.05	-0.84	59.21	110.80	-51.59
5725.000	Peak	59.66	-0.74	58.91	122.20	-63.29

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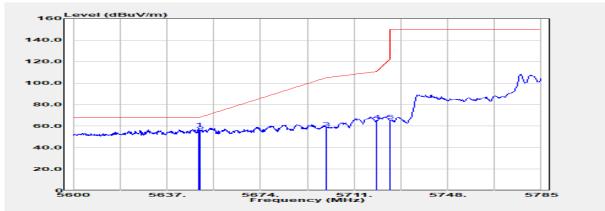
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode: 802.11ax80 Test Date :2023-02-04

Test Frequency :5775 MHz Temp./Humi. :24.4/40

Test Mode :Bandedge RU 484/66 Antenna Pol. :Horizontal

EUT Pol :E2 Plane :Howard Huang Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5649.395	Peak	58.90	-0.91	57.99	68.20	-10.21
5650.000	Peak	55.56	-0.92	54.65	68.20	-13.55
5700.000	Peak	59.83	-1.25	58.58	105.20	-46.62
5720.000	Peak	66.28	-0.84	65.43	110.80	-45.37
5725.000	Peak	66.30	-0.74	65.55	122.20	-56.65

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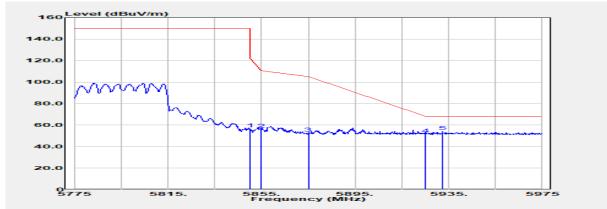
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode: 802.11ax80 Test Date :2023-02-04

Test Frequency :5775 MHz Temp./Humi. :24.4/40

Test Mode :Bandedge RU 484/66 Antenna Pol. :Vertical

:E2 Plane **EUT Pol** Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5850.000	Peak	57.35	-0.65	56.69	122.20	-65.51
5855.000	Peak	56.67	-0.57	56.10	110.80	-54.70
5875.000	Peak	52.58	-0.24	52.34	105.20	-52.86
5925.000	Peak	51.55	0.22	51.76	68.20	-16.44
5932.400	Peak	53.90	0.23	54.13	68.20	-14.07

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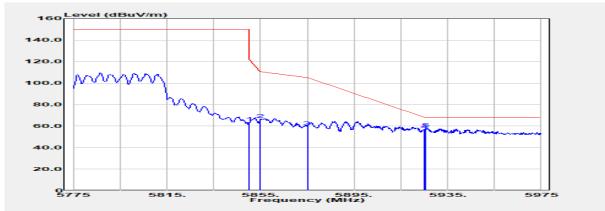
Report Number :TERF2211002151E2 Test Site :SAC D

Operation Mode: 802.11ax80 Test Date :2023-02-04

Test Frequency :5775 MHz Temp./Humi. :24.4/40

Test Mode :Bandedge RU 484/66 Antenna Pol. :Horizontal

EUT Pol :E2 Plane Engineer :Howard Huang



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5850.000	Peak	64.09	-0.65	63.44	122.20	-58.76
5855.000	Peak	66.77	-0.57	66.20	110.80	-44.60
5875.000	Peak	59.52	-0.24	59.28	105.20	-45.92
5925.000	Peak	56.52	0.22	56.74	68.20	-11.46
5925.400	Peak	57.52	0.22	57.74	68.20	-10.46

~ End of Report ~

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