



# FCC RADIO TEST REPORT

FCC ID	:	A4RGQML3
Equipment	:	Phone
Applicant	:	Google LLC
		1600 Amphitheatre Parkway,
		Mountain View, California, 94043 USA
Standard	:	FCC Part 15 Subpart E §15.407

The product was received on Mar. 17, 2022 and testing was performed from Apr. 13, 2022 to Jul. 19, 2022. We, Sporton International Inc. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval from Sporton International Inc. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Lunis Win

Approved by: Louis Wu Sporton International Inc. EMC & Wireless Communications Laboratory No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)



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## History of this test report

Report No.	Version	Description	Issue Date
FR102843-05G	01	Initial issue of report	Jun. 10, 2022
FR1O2843-05G	02	Add 802.11a test data	Jul. 21, 2022



## **Summary of Test Result**

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.403(i) 15.407(a)(10)	26dB Emission Bandwidth	Pass	-
3.1	2.1049	99% Occupied Bandwidth	Reporting only	-
3.2	15.407(a)(8)	Fundamental Maximum EIRP	Pass	-
3.3	15.407(a)(8)	Fundamental Power Spectral Density	Pass	-
3.4	15.407(b)(6)	In-Band Emissions (Channel Mask)	Pass	-
3.5	15.407(d)(6)	Contention Based Protocol	Pass	
3.6	15.407(b)	Unwanted Emissions	Pass	11.41 dB under the limit at 14496.000 MHz
3.7	15.207	AC Conducted Emission	Pass	21.28 dB under the limit at 1.484 MHz
3.8	15.203 15.407(a)	Antenna Requirement	Pass	-

#### **Declaration of Conformity:**

 The test results (PASS/FAIL) with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers. It's means measurement values may risk exceeding the limit of regulation standards, if

It's means measurement values may risk exceeding the limit of regulation standards, if measurement uncertainty is include in test results.

2. The measurement uncertainty please refer to this report "Uncertainty of Evaluation".

#### Comments and Explanations:

The product specifications of the EUT presented in the report are declared by the manufacturer who shall take full responsibility for the authenticity.

### Reviewed by: William Chen

Report Producer: Ruby Zou

## **1 General Description**

## **1.1 Product Feature of Equipment Under Test**

Product Feature					
Equipment	Phone				
FCC ID	A4RGQML3				
EUT supports Radios application	GSM/EGPRS/WCDMA/HSPA/LTE/5G NR/NFC/GNSS/ WPC/WPT WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80/VHT160 WLAN 11ax HE20/HE40/HE80/HE160 Bluetooth BR/EDR/LE				

Remark: The above EUT's information was declared by manufacturer.

EU	EUT Information List					
S/N	Performed Test Item					
23031FDH20007N	Conducted Measurement					
23121FDH20002A	Radiated Spurious Emission					
23121FDH20005C	Conducted Emission					
23031FDH20007U	Contention Based Protocol					



## **1.2 Product Specification of Equipment Under Test**

Product Sp	ecification is subject to this standard
Tx/Rx Frequency Range         Maximum Output Power	5925 MHz ~ 6425 MHz         6425 MHz ~ 6525 MHz         6525 MHz ~ 6875 MHz         6875 MHz ~ 7125 MHz         6875 MHz ~ 6425 MHz>         802.11a: 8.08 dBm / 0.0064 W         802.11a: HE20: 9.06 dBm / 0.0081 W         802.11ax HE20: 9.06 dBm / 0.0081 W         802.11ax HE40: 12.62 dBm / 0.0183 W         802.11ax HE40: 12.62 dBm / 0.0183 W         802.11ax HE60: 17.87 dBm / 0.0612 W         <6425 MHz ~ 6525 MHz>         MIMO <ant. 4+3="">         802.11ax HE160: 17.87 dBm / 0.0612 W         &lt;6425 MHz ~ 6525 MHz&gt;         MIMO <ant. 4+3="">         802.11a: 8.37 dBm / 0.0069 W         802.11a: HE40: 12.67 dBm / 0.0094 W         802.11ax HE60: 18.01 dBm / 0.0094 W         802.11ax HE60: 18.01 dBm / 0.00324 W         802.11ax HE160: 18.01 dBm / 0.0632 W         &lt;6525 MHz ~ 6875 MHz&gt;         MIMO <ant. 4+3="">         802.11ax HE160: 18.01 dBm / 0.0063 W         802.11ax HE20: 8.96 dBm / 0.0079 W         802.11ax HE40: 11.81 dBm / 0.0152 W         802.11ax HE80: 14.51 dBm / 0.0282 W</ant.></ant.></ant.>
	802.11ax HE80: 14.51 dBm / 0.0282 W 802.11ax HE160: 16.96 dBm / 0.0497 W <6875 MHz ~ 7125 MHz> MIMO <ant. 4+3=""> 802.11a: 8.27 dBm / 0.0067 W 802.11ax HE20: 9.56 dBm / 0.0090 W 802.11ax HE40: 12.12 dBm / 0.0163 W 802.11ax HE40: 15.22 dBm / 0.0333 W 802.11ax HE80: 15.22 dBm / 0.0570 W MIMO <ant. 4=""> 802.11a: 18.03 MHz 802.11a: 18.03 MHz 802.11ax HE20: 19.23 MHz 802.11ax HE40: 38.06 MHz</ant.></ant.>
99% Occupied Bandwidth	802.11ax HE80: 77.32 MHz 802.11ax HE160: 156.80 MHz MIMO <ant. 3=""> 802.11a: 17.58 MHz 802.11ax HE20: 19.23 MHz 802.11ax HE40: 38.06 MHz 802.11ax HE80: 77.20 MHz 802.11ax HE160: 156.80 MHz</ant.>



Product Spec	ification is subject to	this standard				
	<5925 MHz ~ 6425 M	Hz>				
	<ant. 4="">: IFA Antenn</ant.>	а				
	<ant. 3="">: Loop Antenna</ant.>					
	<6425 MHz ~ 6525 MHz>					
	<ant. 4="">: IFA Antenna</ant.>					
Antonno Tomo	<ant. 3="">: Loop Anter</ant.>	nna				
Antenna Type	<6525 MHz ~ 6875 M	Hz>				
	<ant. 4="">: IFA Antenn</ant.>	a				
	<ant. 3="">: Loop Anter</ant.>	na				
	<6875 MHz ~ 7125 M	Hz>				
	<ant. 4="">: IFA Antenn</ant.>	a				
	<ant. 3="">: Loop Anter</ant.>	na				
	<5925 MHz ~ 6425 MHz>					
	<b><ant. 4="">:</ant.></b> -1.10 dBi					
	<b><ant. 3="">:</ant.></b> -2.50 dBi					
	<6425 MHz ~ 6525 MHz>					
	<b><ant. 4="">:</ant.></b> -1.10 dBi					
Antenna Gain	<b><ant. 3="">:</ant.></b> -2.80 dBi					
Antenna Gam	<6525 MHz ~ 6875 MHz>					
	<b><ant. 4="">:</ant.></b> 0.70 dBi					
	<b><ant. 3="">:</ant.></b> -2.80 dBi					
	<6875 MHz ~ 7125 MHz>					
	<b><ant. 4="">:</ant.></b> -0.80 dBi					
	<b><ant. 3="">:</ant.></b> -2.40 dBi					
	802.11a : OFDM (BPS	SK/QPSK/16QAN	1/64QAM)			
Type of Modulation	802.11ax : OFDMA					
	(BPSK/QPSK/16QAN	1/64QAM/256QAI	√/1024QAM)			
		Ant. 4	Ant. 3			
Antenna Function Description	802.11a/ax MIMO	V	V			

#### Remark:

- 1. MIMO Ant. 4+3 Directional Gain is a calculated result from MIMO Ant. 4 and MIMO Ant. 3. The formula used in calculation is documented in section 3.8.
- 2. Power of MIMO Ant. 4 + Ant. 3 is a calculated result from sum of the power MIMO Ant. 4 and MIMO Ant. 3.
- 3. The above EUT's information is declared by manufacturer. Please refer to Comments and Explanations in report summary.

## **1.3 Modification of EUT**

No modifications made to the EUT during the testing.



## 1.4 Testing Location

Test Site	Sporton International Inc. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	Sporton Site No.
1651 Sile NO.	CO05-HY, DF02-HY

Note: The test site complies with ANSI C63.4 2014 requirement.

Test Site	Sporton International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	Sporton Site No.
Test Sile No.	TH05-HY, 03CH16-HY (TAF Code: 3786)
Remark	The Conducted and Radiated Spurious Emissions test item subcontracted to Sporton International Inc. Wensan Laboratory.

**Note:** The test site complies with ANSI C63.4 2014 requirement.

FCC designation No.: TW1190 and TW3786

## 1.5 Applicable Standards

According to the specifications declared by the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart E
- FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- FCC KDB 987594 D02 U-NII 6 GHz EMC Measurement v01
- FCC KDB 414788 D01 Radiated Test Site v01r01.
- FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ANSI C63.10-2013

#### Remark:

- 1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
- 2. The TAF code is not including all the FCC KDB listed without accreditation.

## 2 Test Configuration of Equipment Under Test

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, , the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in three orthogonal axis (X: flat, Y: portrait, Z: landscape) and accessory (Adapter or Earphone), and adjusting the measurement antenna orientation, following C63.10 exploratory test procedures and find X plane with Adapter as worst plane.
- b. AC power line Conducted Emission was tested under maximum output power.

DW 20M	Channel	1	5	9	13	17	21	25	29	
BW 20M	Freq. (MHz)	5955	5975	5995	6015	6035	6055	6075	6095	
BW 40M	Channel	3	3	11		19		27		
	Freq. (MHz)	59	65	6005		6045		6085		
BW 80M	Channel		7	7			2	3		
D VV OUIVI	Freq. (MHz)		59	85			60	65		
BW 160M	Channel				1	5				
BW TOOW	Freq. (MHz)		6025							
DW 20M	Channel	33	37	41	45	49	53	57	61	
BW 20M	Freq. (MHz)	6115	6135	6155	6175	6195	6215	6235	6255	
BW 40M	Channel	3	5	43		51		59		
	Freq. (MHz)	61	25	6165		6205		6245		
BW 80M	Channel		3	9		55				
	Freq. (MHz)		61	45		6225				
BW 160M	Channel				4	7				
	Freq. (MHz)				61	85				

## 2.1 Carrier Frequency and Channel



	Channel	65	69	73	77	81	85	89	93		
BW 20M	Freq. (MHz)	6275	6295	6315	6335	6355	6375	6395	6415		
	Channel	67		75		83		91			
BW 40M	Freq. (MHz)	62	85	63	25	6365		6405			
	Channel	71					8.	7			
BW 80M	Freq. (MHz)		63	05			63	85			
DW 400M	Channel				7	9					
BW 160M	Freq. (MHz)				63	45					
	Channel	97	101	105	109	113	117	121	125		
BW 20M	Freq. (MHz)	6435	6455	6475	6495	6515	6535	6555	6575		
	Channel		9		)7		15	12			
BW 40M	Freq. (MHz)		45		85	65		65			
	Channel		1(	03			11	9			
BW 80M	Freq. (MHz)		64	65			65	45			
	Channel				11	1					
BW 160M	Freq. (MHz)				65	05					
	Channel	129	133	137	141	145	149	153	157		
BW 20M	Freq. (MHz)	6595	6615	6635	6655	6675	6695	6715	6735		
	Channel	13	31	13	39	14	7	155			
BW 40M	Freq. (MHz)	6605		6645		6685		6725			
					135			151			
	Channel		13	35			15	51			
BW 80M	Channel Freq. (MHz)		13 66				15 67				
					14	13					
BW 80M BW 160M	Freq. (MHz)				14						
BW 160M	Freq. (MHz) Channel	161	66	25	66	65	67	05	189		
	Freq. (MHz) Channel Freq. (MHz)	161 6755							189 6895		
BW 160M BW 20M	Freq. (MHz) Channel Freq. (MHz) Channel	6755	66 165	25 169 6795	66 173	65 177 6835	67) 181	05 185 6875			
BW 160M	Freq. (MHz) Channel Freq. (MHz) Channel Freq. (MHz)	6755 16	66 165 6775	25 169 6795 17	66 173 6815	65 177 6835 17	670 181 6855	05 185 6875	6895 37		
BW 160M BW 20M BW 40M	Freq. (MHz) Channel Freq. (MHz) Channel Freq. (MHz) Channel	6755 16	66 165 6775 53 65	25 169 6795 17	66 173 6815 71	65 177 6835 17	670 181 6855 79	05 185 6875 18 68	6895 37		
BW 160M BW 20M	Freq. (MHz) Channel Freq. (MHz) Channel Freq. (MHz) Channel Freq. (MHz)	6755 16	66 165 6775 63 65 10	25 169 6795 17 68	66 173 6815 71	65 177 6835 17	67( 181 6855 79 45	05 185 6875 18 68 33	6895 37		
BW 160M BW 20M BW 40M	Freq. (MHz) Channel Freq. (MHz) Channel Freq. (MHz) Channel Freq. (MHz) Channel	6755 16	66 165 6775 63 65 10	25 169 6795 17 68 67	66 173 6815 71	65 177 6835 17 68	670 181 6855 79 45 18	05 185 6875 18 68 33	6895 37		



BW 20M	Channel	193	197	201	205	209	213	217	221	
	Freq. (MHz)	6915	6935	6955	6975	6995	7015	7035	7055	
BW 40M	Channel	19	95	20	03	2	11	219		
	Freq. (MHz)	69	25	69	65	70	05	70	45	
BW 80M	Channel		19	99			2′	15		
	Freq. (MHz)		69	45				/025		
BW 160M	Channel				207					
BAA LOOIAL	Freq. (MHz)					985				
BW 20M	Channel		22	25				229		
	Freq. (MHz)		70	75 70			)95			
BW 40M	Channel			227						
	Freq. (MHz)				70	85				





## 2.2 Test Mode

This device support 26/52/106/242/484/996-tone RU but does not support 2x996-tone RU on 160MHz channel.

The PSD of partial RU is reduced to be smaller than full RU according to TCB workshop interim guidance Oct., 2018.

The 242-tone RU is covered by 20MHz channel, 484-tone RU is covered by 40MHz channel and 996-tone RU is covered by 80MHz channel.

The 802.11ax mode is investigated among different tones, full resource units (RU), partial resource units. The partial RU has no higher power than full RU's, thus the full RU is chosen as main test configuration.

The CDD mode is chosen as worst case configuration for all test cases due to higher power than SISO mode.

The power and PSD are verified that 802.11a can be covered by 802.11ax HE20 mode in the OFDM modulation family. Hence, the test cases for 20MHz bandwidth are all performed based on 802.11ax HE20 modes.

The final test modes consider the modulation and the worst data rates as shown in the table below.

#### MIMO Mode

Modulation	Data Rate
802.11a	6Mbps
802.11ax HE20	MCS0
802.11ax HE40	MCS0
802.11ax HE80	MCS0
802.11ax HE160	MCS0

Remark: The conducted power level of each chain in MIMO mode is equal or higher than SISO mode.

	Test Cases
AC Conducted	Mode 1 : GSM850 Idle + WLAN (6GHz) Link + Bluetooth Link + USB Cable 1
Emission	(Charging from AC Adapter 2)
	Fest Cases, the tests were performed with Adapter 2 and USB Cable 1. liminary test, both charging modes (Adapter mode and WPT Charging mode)

were verified. It is determined that the adaptor mode is the worst case for official test.

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: 02

: Jul. 21, 2022



Based on ANSI C63.10 clause 5.6.2.2, b) spurious emissions,

Measure the mode with the highest output power and the mode with highest output power spectral density for each modulation family.

		5.6.2.2 (b)
		Spurious Emissions
UNII-5	20MHz	Covered by 160MHz
	40MHz	Covered by 160MHz
	80MHz	Covered by 160MHz
	160MHz	Test
UNII-6	20MHz	Covered by 160MHz
	40MHz	Covered by 160MHz
	80MHz	Covered by 160MHz
	160MHz	Test
UNII-7	20MHz	Covered by 160MHz
	40MHz	Covered by 160MHz
	80MHz	Covered by 160MHz
	160MHz	Test
UNII-8	20MHz	Covered by 160MHz
	40MHz	Covered by 160MHz
	80MHz	Covered by 160MHz
	160MHz	Test



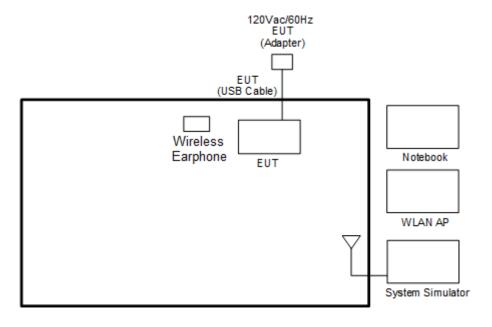
			UNII-6		
	Ch. #	UNII-5 (5925-6425 MHz)	(6425-6525 MHz)	UNII-7 (6525-6875 MHz)	UNII-8 (6875-7125 MHz)
	GII. #	802.11ax HE20	802.11ax HE20	802.11ax HE20	802.11ax HE20
	Low	001	002.1102.11220	002.1102.11220	002.1102.11220
L			-	-	-
М	Middle	-	-	-	-
Н	High	-	-	-	229
S	Straddle	-	-	-	-
		UNII-5	UNII-6	UNII-7	UNII-8
	Ch. #	(5925-6425 MHz)	(6425-6525 MHz)	(6525-6875 MHz)	(6875-7125 MHz)
	-	802.11ax HE40	802.11ax HE40	802.11ax HE40	802.11ax HE40
L	Low	003	-	-	-
М	Middle	-	-	-	-
н	High	-	-	-	227
S	Straddle	-	-	-	-
		UNII-5	UNII-6	UNII-7	UNII-8
	Ch. #	UNII-5 (5925-6425 MHz)	UNII-6 (6425-6525 MHz)	UNII-7 (6525-6875 MHz)	UNII-8 (6875-7125 MHz)
	Ch. #			-	
L	Ch. # Low	(5925-6425 MHz)	(6425-6525 MHz)	(6525-6875 MHz)	(6875-7125 MHz)
L		(5925-6425 MHz) 802.11ax HE80	(6425-6525 MHz)	(6525-6875 MHz)	(6875-7125 MHz)
	Low	(5925-6425 MHz) 802.11ax HE80 007	(6425-6525 MHz)	(6525-6875 MHz) 802.11ax HE80	(6875-7125 MHz)
M H	Low Middle	(5925-6425 MHz) 802.11ax HE80 007	(6425-6525 MHz)	(6525-6875 MHz) 802.11ax HE80	(6875-7125 MHz) 802.11ax HE80 - -
M H	Low Middle High	(5925-6425 MHz) 802.11ax HE80 007	(6425-6525 MHz)	(6525-6875 MHz) 802.11ax HE80	(6875-7125 MHz) 802.11ax HE80 - -
M H	Low Middle High	(5925-6425 MHz) 802.11ax HE80 007 - - -	(6425-6525 MHz) 802.11ax HE80 - - - - -	(6525-6875 MHz) 802.11ax HE80 - - - - -	(6875-7125 MHz) 802.11ax HE80 - - 215 -
M H	Low Middle High Straddle	(5925-6425 MHz) 802.11ax HE80 007 - - - UNII-5	(6425-6525 MHz) 802.11ax HE80 - - - - - UNII-6	(6525-6875 MHz) 802.11ax HE80 - - - - - UNII-7	(6875-7125 MHz) 802.11ax HE80 - - 215 - UNII-8
M H	Low Middle High Straddle	(5925-6425 MHz) 802.11ax HE80 007 - - - - UNII-5 (5925-6425 MHz)	(6425-6525 MHz) 802.11ax HE80 - - - - - - - UNII-6 (6425-6525 MHz)	(6525-6875 MHz) 802.11ax HE80 - - - - - - UNII-7 (6525-6875 MHz)	(6875-7125 MHz) 802.11ax HE80 - - 215 - UNII-8 (6875-7125 MHz)
H S	Low Middle High Straddle Ch. #	(5925-6425 MHz) 802.11ax HE80 007 - - - - UNII-5 (5925-6425 MHz) 802.11ax HE160	(6425-6525 MHz) 802.11ax HE80 - - - - - - - UNII-6 (6425-6525 MHz)	(6525-6875 MHz) 802.11ax HE80 - - - - - - UNII-7 (6525-6875 MHz)	(6875-7125 MHz) 802.11ax HE80 - - 215 - UNII-8 (6875-7125 MHz)
H S	Low Middle High Straddle Ch. #	(5925-6425 MHz) 802.11ax HE80 007 - - - - UNII-5 (5925-6425 MHz) 802.11ax HE160 015	(6425-6525 MHz) 802.11ax HE80 - - - - - - - UNII-6 (6425-6525 MHz)	(6525-6875 MHz) 802.11ax HE80 - - - - UNII-7 (6525-6875 MHz) 802.11ax HE160	(6875-7125 MHz) 802.11ax HE80 - 215 - 215 (6875-7125 MHz) 802.11ax HE160

Remark: For radiation spurious emission, the modulation and the data rate picked for testing are determined by the Max. RF conducted power.

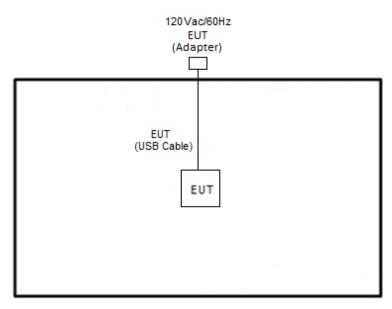


## 2.3 Connection Diagram of Test System

#### <AC Conducted Emission Mode>



#### <WLAN Tx Mode>





## 2.4 Support Unit used in test configuration and system

ltem	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	Wireless Earphone	Google	G1007/G1008	A4RG1007/ A4RG1008	N/A	N/A
3.	WLAN AP	ASUS	GT-AXE11000	MSQ-RTAXJF00	N/A	Unshielded,1.8m
4.	Notebook	Dell	Latitude 3400	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m

## 2.5 EUT Operation Test Setup

The RF test items, utility "adb Command 1.0.36" was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

## 2.6 Measurement Results Explanation Example

### For all conducted test items:

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

Example :

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.2 dB and 10dB attenuator.

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 4.2 + 10 = 14.2 (dB)



## 3 Test Result

## 3.1 26dB & 99% Occupied Bandwidth Measurement

## 3.1.1 Limit of 26dB & 99% Occupied Bandwidth

### <FCC 14-30 CFR 15.407>

(a)(10) The maximum transmitter channel bandwidth for U-NII devices in the 5.925-7.125 GHz band is 320 megahertz.

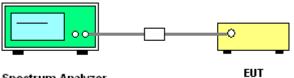
## 3.1.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

## 3.1.3 Test Procedures

- The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section C) Emission bandwidth
- 2. Set RBW = approximately 1% of the emission bandwidth.
- 3. Set the VBW > RBW.
- 4. Detector = Peak.
- 5. Trace mode = max hold
- Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.
- For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1-5% of the emission bandwidth and set the Video bandwidth (VBW) ≥ 3 \* RBW.
- 8. Measure and record the results in the test report.

## 3.1.4 Test Setup



Spectrum Analyzer

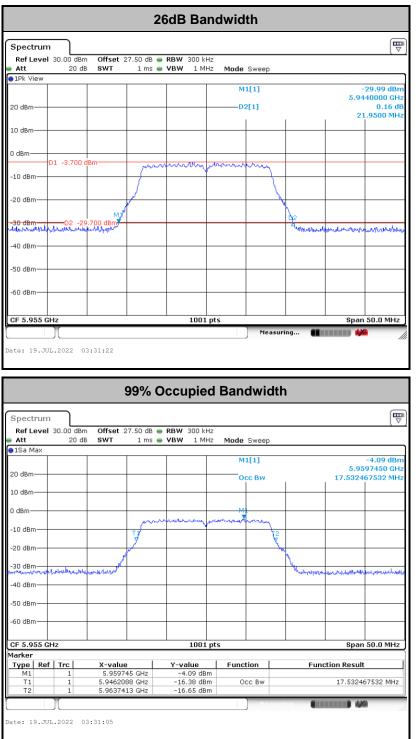
## 3.1.5 Test Result of 26dB & 99% Occupied Bandwidth

Please refer to Appendix A.



#### MIMO <Ant. 4+3>

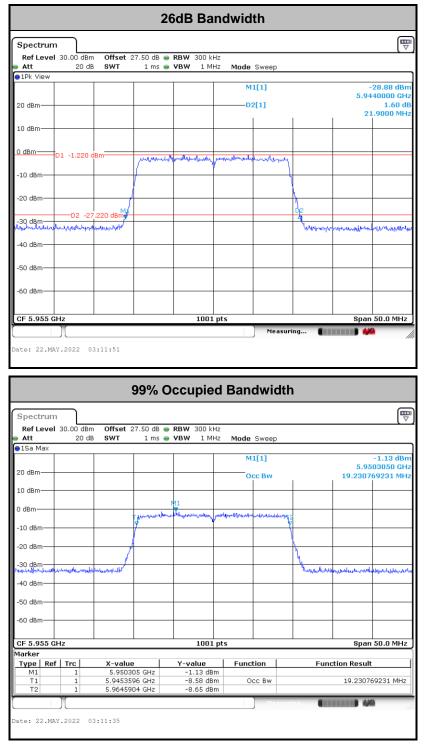




Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.



#### For 802.11ax HE20 MHz

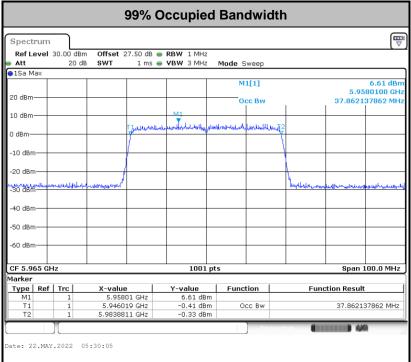


Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.



#### For 802.11ax HE40 MHz

2	26dB Band	dwidth		
Spectrum				₽
Ref Level 30.00 dBm Offset 27.50 dB (	• RBW 300 kHz			<u> </u>
	VBW 1 MHz	Mode Sweep		
●1Pk View				
20 dBm		M1[1] D2[1]		GHz 4 dB
			39.8700	MHz
10 dBm				_
0 dBm 01 0.680 dBm	Malundaryan in	Antropolismonia		
	Y T			
-10 dBm				
-20 dBmMa				
D2 -25.320 dBm			2	
-30 dBm-			helphymanican	w.M.n
-40 dBm				
-50 dBm				
-60 dBm				
CF 5.965 GHz	1001 pt	5	Span 90.0 N	4Hz
		Measuring.		
				////
Date: 22.MAY.2022 05:30:27				
				_
99% (	Occupied	Bandwidth		
Spectrum				₽
Ref Level 30.00 dBm Offset 27.50 dB (	BRBW 1 MHz			<u> </u>
Att 20 dB SWT 1 ms	BW 3 MHz	Mode Sweep		
1Sa Max				



Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.



#### For 802.11ax HE80 MHz

_			26	odB Ba	ndwid	th			
Spectrum									Ē
	I 30.00 dBm	Offset 2	27.50 dB 👄	RBW 1 MHz					( ř
Att 1Pk View	20 dB	SWT	1 ms 😑	VBW 3 MHz	Mode St	weep			
1 DK VIEW					M1	[1]			-20.85 dBm
								5	5.944040 GHz
20 dBm					D2	[1]			1.35 dB 81.920 MHz
10 dBm									
	D1 6.510 d	Bm			. DUN		N		
) dBm		phyles	Manunlindulium	unomational	alugud UC Provid	<u>Նեսկսու</u> սներեվ	unnig		
-10 dBm							+		
		M					02		
20 dBm	D2 -19	.490 Bm—					4		
montheretation	Anno-who who	لسمله					June	und all marked	manhandelapus
30 dBm									
40 dBm-									
50 dBm-									
-60 dBm							+		
CF 5.985 G	Hz	1	1	1001	pts			Spa	n 160.0 MHz
te: 22.MA	 AY.2022 0	7:24:55				Measu	ring 🔳		<b></b>
te: 22.MA	)[0		99% O	ccupie	d Bano				<b>**</b> //
			99% O	ccupie	d Band				*** <i>i</i> i
Spectrum	1			-	d Bano				<b>**</b> //
Spectrum <b>Ref Leve</b> l	1 30.00 dBm	Offset 3	27.50 dB 👄	RBW 1 MHz		dwidt			₩ //
Spectrum Ref Level Att	1	Offset 3	27.50 dB 👄	-	Mode St	dwidt			
Spectrum Ref Level Att 115a Max	1 30.00 dBm	Offset 3	27.50 dB 👄	RBW 1 MHz	Mode St	dwidt			5.43 dBm
Spectrum Ref Level Att 115a Max	1 30.00 dBm	Offset 3	27.50 dB 👄	RBW 1 MHz	Mode St	dwidt			
Spectrum Ref Level Att 11Sa Max 20 dBm	1 30.00 dBm	Offset 3	27.50 dB 👄	RBW 1 MHz	Mode St	dwidt			5.43 dBm 5.995430 GHz
Spectrum Ref Level Att 115a Max 20 dBm 10 dBm	1 1 30.00 dBm 20 dB	Offset 3 SWT	27.50 dB ● 1 ms ●	RBW 1 MHz VBW 3 MHz	Mode Si Mi	dwidt weep L[1] cc Bw		77.20	5.43 dBm 5.995430 GHz
Spectrum Ref Level Att 115a Max 20 dBm 10 dBm	1 1 30.00 dBm 20 dB	Offset 3 SWT	27.50 dB ● 1 ms ●	RBW 1 MHz VBW 3 MHz	Mode Si Mi	dwidt weep L[1] cc Bw	h	77.20	5.43 dBm 5.995430 GHz
Spectrum Ref Level Att DISa Max 20 dBm 0 dBm	1 1 30.00 dBm 20 dB	Offset 3 SWT	27.50 dB ● 1 ms ●	RBW 1 MHz VBW 3 MHz	Mode Si Mi	dwidt weep L[1] cc Bw	h	77.20	5.43 dBm 5.995430 GHz
Spectrum Ref Level Att 915a Max 20 dBm 10 dBm 	1 1 30.00 dBm 20 dB	Offset 3 SWT	27.50 dB ● 1 ms ●	RBW 1 MHz VBW 3 MHz	Mode Si Mi	dwidt weep L[1] cc Bw	h	77.20	5.43 dBm 5.995430 GHz
Spectrum Ref Level Att 115a Max 20 dBm 0 dBm -10 dBm -20 dBm	1 1 30.00 dBm 20 dB	Offset 3 SWT	27.50 dB ● 1 ms ●	RBW 1 MHz VBW 3 MHz	Mode Si Mi	dwidt weep L[1] cc Bw	h	77.20	5.43 dBm 5.995430 GHz 2797203 MHz
Spectrum Ref Level Att 115a Max 20 dBm 0 dBm -10 dBm -20 dBm	20 dB	Offset 3 SWT	27.50 dB 👄 1 ms 👄	RBW 1 MHz VBW 3 MHz	Mode Si Mi	dwidt weep L[1] cc Bw	h	77.20	5.43 dBm 5.995430 GHz
Spectrum Ref Level Att 153 Max 20 dBm 10 dBm 10 dBm 20 dBm 20 dBm 20 dBm	20 dB	Offset 3 SWT	27.50 dB 👄 1 ms 👄	RBW 1 MHz VBW 3 MHz	Mode Si Mi	dwidt weep L[1] cc Bw	h	77.20	5.43 dBm 5.995430 GHz 2797203 MHz
Spectrum Ref Level Att 91Sa Max 20 dBm 0 dBm 	20 dB	Offset 3 SWT	27.50 dB 👄 1 ms 👄	RBW 1 MHz VBW 3 MHz	Mode Si Mi	dwidt weep L[1] cc Bw	h	77.20	5.43 dBm 5.995430 GHz 2797203 MHz
Spectrum Ref Level Att JISA Max 20 dBm 10 dBm 10 dBm 10 dBm 20 dBm 40 dBm 50 dBm	20 dB	Offset 3 SWT	27.50 dB 👄 1 ms 👄	RBW 1 MHz VBW 3 MHz	Mode Si Mi	dwidt weep L[1] cc Bw	h	77.20	5.43 dBm 5.995430 GHz 2797203 MHz
Spectrum Ref Level Att JISA Max 20 dBm 10 dBm 10 dBm 10 dBm 20 dBm 40 dBm 50 dBm	20 dB	Offset 3 SWT	27.50 dB 👄 1 ms 👄	RBW 1 MHz VBW 3 MHz	Mode Si Mi	dwidt weep L[1] cc Bw	h	77.20	5.43 dBm 5.995430 GHz 2797203 MHz
Spectrum Ref Level Att )15a Max 20 dBm 10 dBm 10 dBm 20 dBm 40 dBm 40 dBm 60 dBm 60 dBm	20 dB 20 dB	Offset 3 SWT	27.50 dB 👄 1 ms 👄	RBW 1 MHz VBW 3 MHz	Mode S	dwidt weep L[1] cc Bw	h	77.20 1 1 1 1 1 1 1 1 1 1 1 1 1	5.43 dBm 5.995430 GHz 2797203 MHz
Spectrum Ref Level Att 153 Max 20 dBm 10 dBm 10 dBm -10 dBm -10 dBm -20 dBm -30 dBm -20 dBm -20 dBm -10 dBm	20 dB 20 dB	Offset 3 SWT	27.50 dB 👄 1 ms 👄	RBW 1 MHz VBW 3 MHz	Mode S	dwidt weep L[1] cc Bw	h	77.20 1 1 1 1 1 1 1 1 1 1 1 1 1	5.43 dBm 5.995430 GHz 2797203 MHz
Spectrum           Ref Level           Att           915a Max           20 dBm           10 dBm           -10 dBm           -20 dBm           -30 dBm           -40 dBm           -50 dBm           -60 dBm           -60 dBm           -60 dBm           -61 dBm           -62 dBm           -60 dBm           -70 dBm           -	The second secon	Offset : SWT در می اسالید این	27.50 db • 1 ms • 	RBW 1 MHz VBW 3 MHz	Mode S M1 OC M1 a,street, savely pts Funct	dwidt weep الالالا الالاساليريولي	h	77.20 1 1 1 1 1 1 1 1 1 1 1 1 1	5.43 dBm 5.995430 GHz 2797203 MHz
Spectrum Ref Level Att 115a Max 20 dBm 10 dBm 10 dBm 20 dBm 20 dBm 50 dBm 40 dBm 50 dBm 50 dBm 50 dBm 60 dBm CF 5.985 G Tarker	Tiu 30.00 dBm 20 dB Tiu Hz	Offset : SWT	27.50 dB • 1 ms • ututututututututututututututututututut	RBW 1 MHz VBW 3 MHz	Mode Si M3 Oc Autority Autority pts Funct	dwidt weep الالالا الالاساليريولي	h	77.20 T T T T T T T T T T T T T	5.43 dBm 5.995430 GHz 2797203 MHz

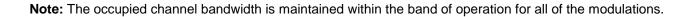
Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

ate: 22.MAY.2022 07:24:40



#### For 802.11ax HE160 MHz

			26	6dB Ba	ndwid	th			
Spectrun	n )								E
•	I 30.00 dBm	Offset 3	27.50 dB 👄	RBW 2 MH	z				(`)
e Att	20 dB	SWT	1 ms 👄	VBW 10 MH	z Mode	Sweep			
●1Pk View									
					M	1[1]			-19.75 dBm 941480 GHz
20 dBm					D	2[1]			2.04 dB 57.040 MHz
10 -10								1	
10 dBm	D1 8.480 de	3m	a formation and	fresh Albert with	pumber and added	and the second and the second	where weeks		
0 dBm		project	a to consultante o						
o abiii									
-10 dBm									
		M					02		
-20 dBm	D2 -17	. /					1	W	
limphilmedura	here had a particular	/Jacili					WW.	ulfrenstownth	haddene groups
-30 dBm									
-40 dBm									
-50 dBm									
-60 dBm									
CF 6.025 (	GHz		-	1001	pts			Span :	320.0 MHz
						Measu	ring 🚺		<b>"</b> ///
Date: 22.MJ	AY.2022 08	3:25:06							
			99% O	ccupie	d Ban	dwidtl	h		
Spectrun	2								E
	1 30.00 dBm	Offset	27.50 dB 👄	RBW 3 MH	7				(▽,
Att	20 dB	SWT		VBW 10 MH		Sweep			
●1Sa Max									
					M	1[1]		6.0	9.71 dBm 068160 GHz
20 dBm					o	cc Bw			96803 MHz
10 dBm				here the state		M1		72	
	T1 Julin	lubourborrenol	enternanie habertreen	annowith	proven Maker and	armented	dertature and we wanted way	andling	
0 dBm									
-10 dBm—									
-20 dBm									
-20 dBm	hand							"Hubber	an papelial relation all related



1001 pts

Function

Occ Bw

Y-value 9.71 dBm 4.13 dBm 5.03 dBm

30 dB 40 dBi -50 dBr -60 dBm

CF 6.025 GHz Marker

M1 T1 T2

Type | Ref | Trc

ate: 22.MAY.2022 08:24:50

X-value

6.06816 GHz 5.946838 GHz 6.103641 GHz

Span 240.0 MHz

156.803196803 MHz III 449

Function Result



## 3.2 Fundamental Maximum EIRP Measurement

### 3.2.1 Limit of Fundamental Maximum EIRP

#### <FCC 14-30 CFR 15.407>

(a)(8) For client devices operating under the control of an indoor access point in the 5.925-7.125 GHz bands, the maximum e.i.r.p. over the frequency band of operation must not exceed 24 dBm.

### 3.2.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

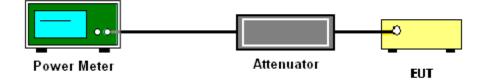
### 3.2.3 Test Procedures

The testing follows Method PM-G of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Method PM-G (Measurement using a gated RF average power meter):

- 1. Measurement is performed using a wideband RF power meter.
- 2. The EUT is configured to transmit at its maximum power control level.
- 3. Measure the average power of the transmitter.
- 4. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.
- 5. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

### 3.2.4 Test Setup



## 3.2.5 Test Result of Fundamental Maximum EIRP

Please refer to Appendix A.



## 3.3 Fundamental Power Spectral Density Measurement

## 3.3.1 Limit of Fundamental Power Spectral Density

### <FCC 14-30 CFR 15.407>

(a)(8) For client devices operating under the control of an indoor access point in the 5.925-7.125 GHz bands, the maximum power spectral density must not exceed -1 dBm e.i.r.p. in any 1-megahertz band.

## 3.3.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

## 3.3.3 Test Procedures

The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section F) Maximum power spectral density.

#### # Method SA-2 #

(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

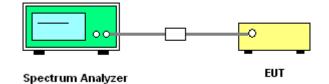
- Measure the duty cycle.
- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz.
- Set VBW ≥ 3 MHz.
- Number of points in sweep  $\geq$  2 Span / RBW.
- Sweep time = auto.
- Detector = RMS
- Trace average at least 100 traces in power averaging mode.
- Add 10 log(1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add 10 log(1/0.25) = 6 dB if the duty cycle is 25 percent.
- 1. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
- 2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.
- 3. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

Method (a): Measure and sum the spectra across the outputs.

The total final Power Spectral Density is from a device with 2 transmitter outputs. The spectrum measurements of the individual outputs are all performed with the same span and number of points; the spectrum value in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 to obtain the value for the first frequency bin of the summed spectrum.



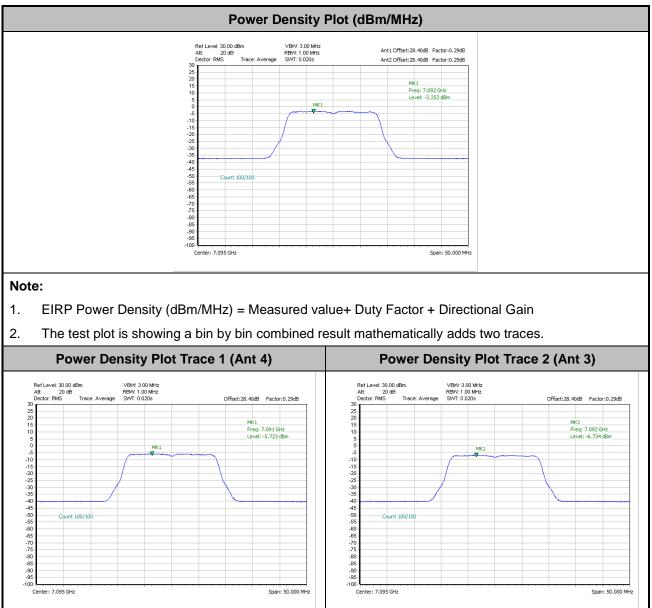
## 3.3.4 Test Setup



## 3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

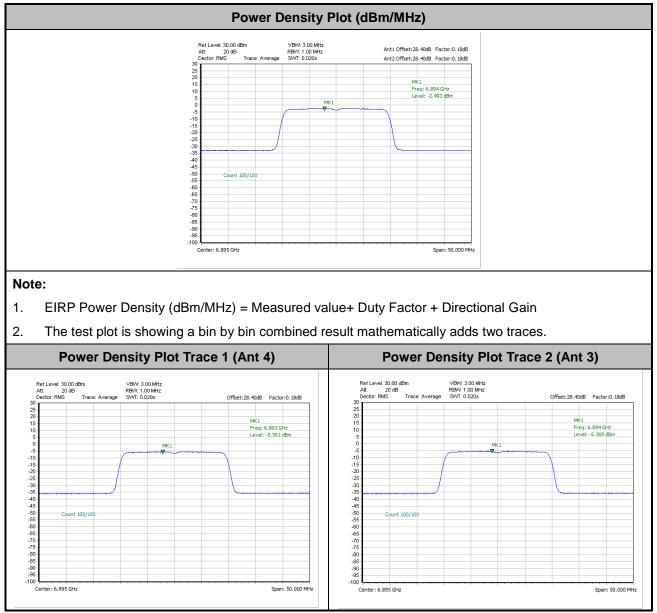




<802.11a>

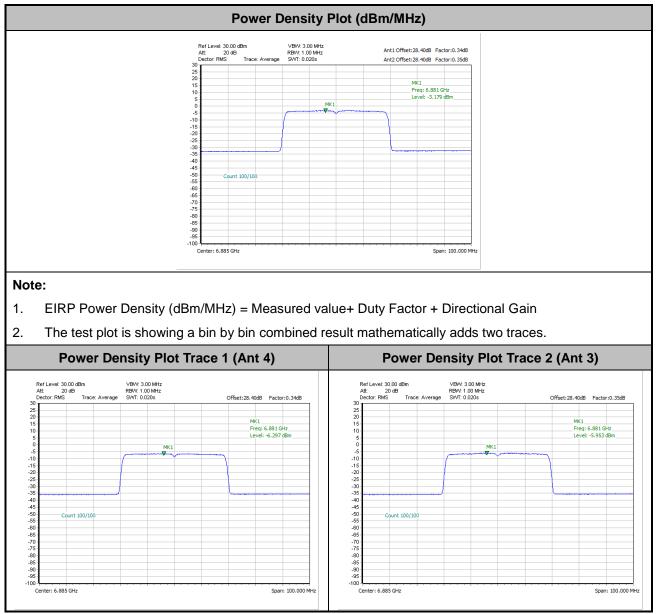


#### <802.11ax HE20>



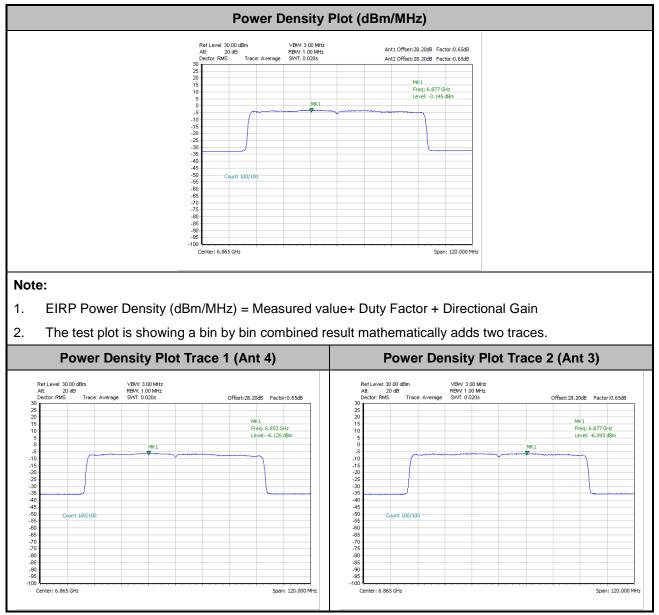


#### <802.11ax HE40>



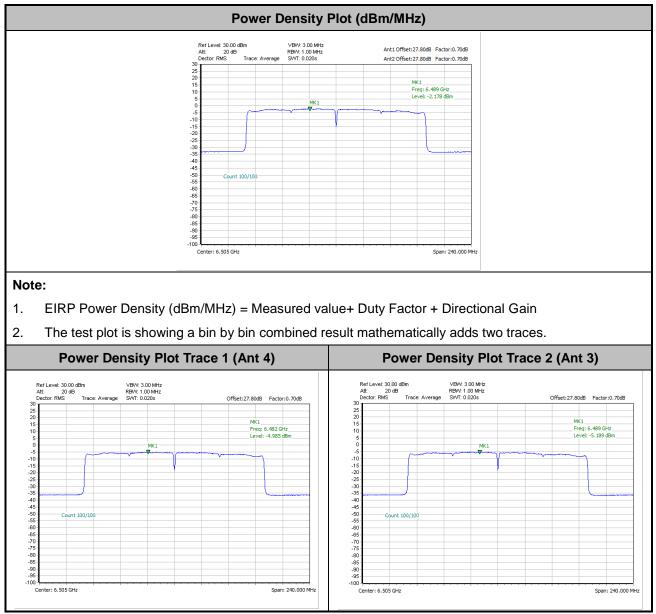


#### <802.11ax HE80>





#### <802.11ax HE160>





## 3.4 In-Band Emissions (Channel Mask)

## 3.4.1 Limit of Unwanted Emissions

### <FCC 14-30 CFR 15.407>

(a)(6) For transmitters operating within the 5.925-7.125 GHz bands: Power spectral density must be suppressed by 20 dB at 1 MHz outside of channel edge, by 28 dB at one channel bandwidth from the channel center, and by 40 dB at one- and one-half times the channel bandwidth away from channel center. At frequencies between one megahertz outside an unlicensed device's channel edge and one channel bandwidth from the center of the channel, the limits must be linearly interpolated between 20 dB and 28 dB suppression, and at frequencies between one and one- and one-half times an unlicensed device's channel bandwidth, the limits must be linearly interpolated between 28 dB and 40 dB suppression. Emissions removed from the channel center by more than one- and one-half times the channel bandwidth must be suppressed by at least 40 dB.

## 3.4.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.



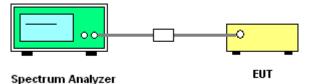
## 3.4.3 Test Procedures

The testing follows FCC KDB 987594 D02 U-NII 6GHz EMC Measurement v01.

Section J) In-Band Emissions.

- 1. Take nominal bandwidth as reference channel bandwidth provided that 26 dB emission bandwidth is always larger than nominal bandwidth
- 2. Measure the power spectral density (which will be used for emissions mask reference) using the following procedure:
  - a) Set the span to encompass the entire 26 dB EBW of the signal.
  - b) Set RBW = same RBW used for 26 dB EBW measurement.
  - c) Set VBW ≥ 3 X RBW
  - d) Number of points in sweep  $\geq$  [2 X span / RBW].
  - e) Sweep time = auto.
  - f) Detector = RMS (i.e., power averaging)
  - g) Trace average at least 100 traces in power averaging (rms) mode.
  - h) Use the peak search function on the instrument to find the peak of the spectrum.
- 3. Using the measuring equipment limit line function, develop the emissions mask based on the following requirements. The emissions power spectral density must be reduced below the peak power spectral density (in dB) as follows:
  - a. Suppressed by 20 dB at 1 MHz outside of the channel edge.
  - b. Suppressed by 28 dB at one channel bandwidth from the channel center.
  - c. Suppressed by 40 dB at one- and one-half times the channel bandwidth from the channel center.
- 4. Adjust the span to encompass the entire mask as necessary.
- 5. Clear trace.
- 6. Trace average at least 100 traces in power averaging (rms) mode.
- 7. Adjust the reference level as necessary so that the crest of the channel touches the top of the emission mask.

### 3.4.4 Test Setup



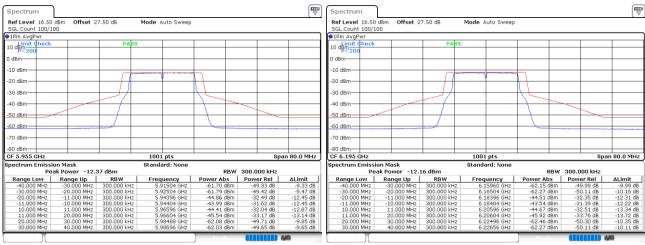


### 3.4.5 Test Result

#### MIMO <Ant. 4+3(4)>

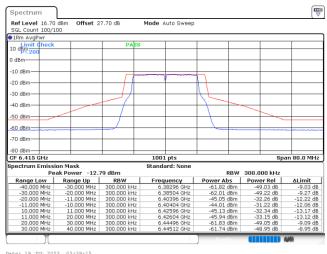
EUT Mode : 802.11a	EUT Mode	:	802.11a
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#### Plot on Channel 5955MHz



Date: 19.JUL.2022 03:32:22

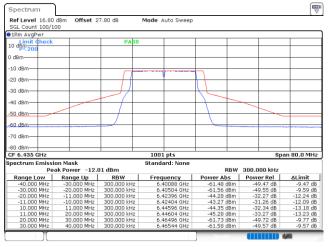
#### Plot on Channel 6415MHz



#### Plot on Channel 6435MHz

Date: 19.JUL.2022 03:35:54

Plot on Channel 6195MHz

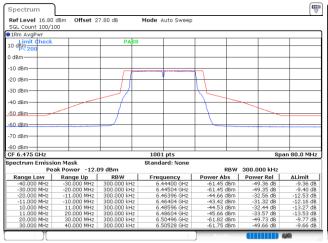


Date: 19.JUL.2022 03:39:15

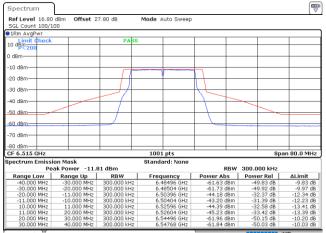
Date: 19.JUL.2022 03:42:30



#### Plot on Channel 6475MHz

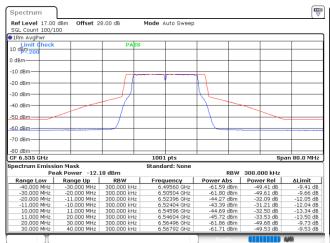


#### Plot on Channel 6515MHz



Date: 19.JUL.2022 03:46:16

#### Plot on Channel 6535MHz



#### Spectrum Ref Level 17.10 d Offset 28.10 dB Mode Auto Sweet 1Rm AvgPv 10 内内 20 dBr -10 dBn -20 dBm -30 dBm 40 dBm -50 dBm-60 dBm -70 dBm -80 dBm CF 6.695 GHz 1001 pts Span 80.0 MHz F 6.695 GHz pectrum Emission Mask Peak Power -13.02 dBm Range Low Range Up RBW -30,000 MHz 300,000 RBW 300.000 kH RBW 300.000 kHz Power Abs Power Rel 2 -61.13 dBm -44.12 dB 2 -61.19 dBm -46.17 dB 2 -61.14 dBm -32.40 dB 2 -45.42 dBm -32.40 dB 2 -45.42 dBm -32.40 dB 2 -45.42 dBm -32.40 dB 2 -46.56 dBm -33.55 dB 2 -66.127 dBm -46.46.13 dB Frequency -8.12 dB -8.31 dB 12.37 dB 12.30 dB 13.24 dB 13.51 dB -8.30 dB -8.10 dB -30.000 MHz -20.000 MHz -11.000 MHz -10.000 MHz 11.000 MHz 20.000 MHz 30.000 MHz 40.000 MHz 300.000 300.000 300.000 300.000 300.000 300.000 300.000 300.000 6.66248 GHz 6.66512 GHz 6.68396 GHz 6.68404 GHz 6.70596 GHz 6.70596 GHz 6.70604 GHz 6.72496 GHz 6.72848 GHz -40.000 MHz -30.000 MHz -20.000 MHz -11.000 MHz 10.000 MHz 11.000 MHz 20.000 MHz 30.000 MHz

Date: 19.JUL.2022 03:52:30

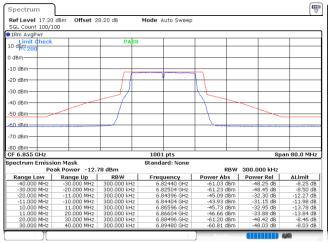
Date: 19.JUL.2022 03:55:38

Date: 19.JUL.2022 03:49:24

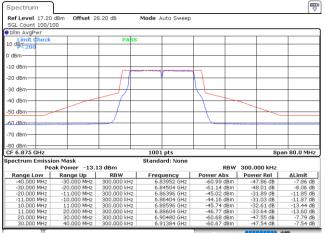
Plot on Channel 6695MHz



#### Plot on Channel 6855MHz

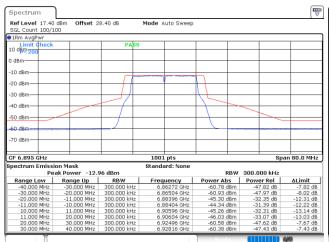


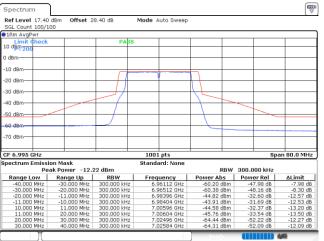
#### Plot on Channel 6875MHz



Date: 19.JUL.2022 03:58:59

#### Plot on Channel 6895MHz





Date: 19.JUL.2022 04:05:41

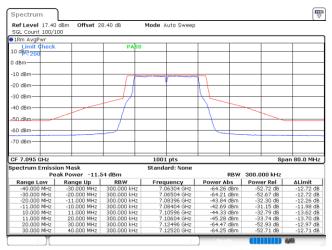
Date: 19.JUL.2022 04:08:34

Date: 19.JUL.2022 04:02:32

Plot on Channel 6995MHz



#### Plot on Channel 7095MHz

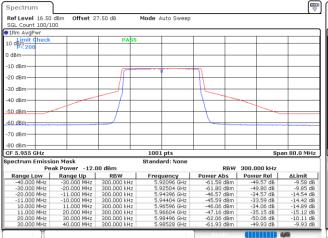


Date: 19.JUL.2022 04:11:22

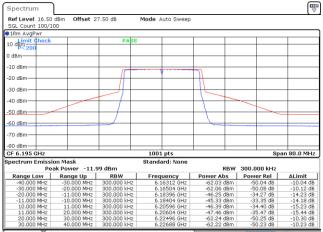


802.11ax HE20 Full RU

# Plot on Channel 5955MHz



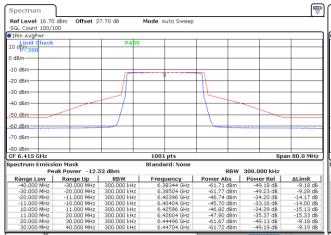
# Plot on Channel 6195MHz



Date: 22.MAY.2022 03:15:43

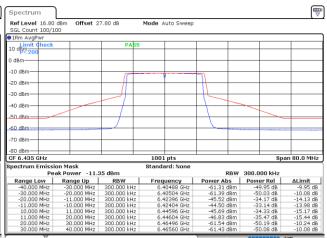
Date: 22.MAY.2022 03:21:32

#### Plot on Channel 6415MHz



Date: 22.MAY.2022 03:34:40

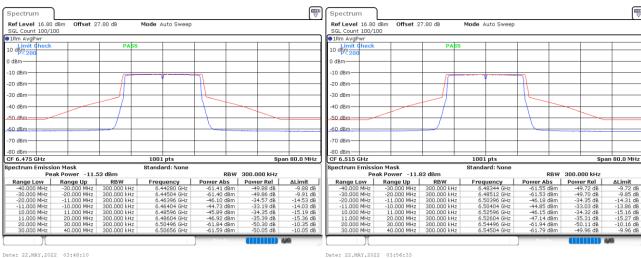
### Plot on Channel 6435MHz



Date: 22.MAY.2022 03:41:55



## Plot on Channel 6475MHz

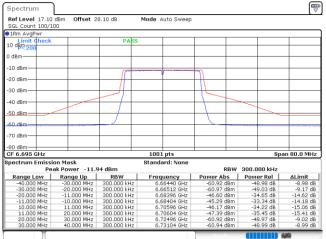


# Plot on Channel 6535MHz

#### Spectrum Spectrum Ref Level 17.00 dB SGL Count 100/100 2m Offset 28.00 dB Mode Auto Swee Ref Level 17.10 SGL Count 10 SGL Count 10 IRm AvgPwr Limit ¢he SGL Count 1Rm AvgP PASS 10 d岛四20 10 dgm20 0 dBm-) dBm--10 dBm--10 dBm -20 dBm--20 dBm -30 dBm 30 dBm -40 dBm 40 dBm -50 dBm-50 dBm--60.dBm-60.dBm 70 dBm--70 dBm--80 dBm CF 6.535 GHz -80 dBm CF 6.695 GHz 1001 pt: 80.0 MH; Spa CF 6.335 GHz Beak Power 12.13 dBm peaktrum Emission Mask peaktrum Emission Pask Power 12.13 dBm Range Low Range Low Range Low -40.000 MHz -30.000 MHz 300.000 KHz -30.000 MHz -20.000 MHz 300.000 KHz -30.000 MHz -20.000 MHz 300.000 KHz -10.000 MHz -10.000 MHz 300.000 KHz 11.000 MHz -10.000 MHz 300.000 KHz 11.000 MHz 20.000 MHz 300.000 KHz 30.000 MHz 40.000 MHz 300.000 KHz dard: No RBW\_ 300.000 kHz Power Abs Power Rel -61.52 dBm -49.40 dB ΔLimit -9.40 dB -9.50 dB -14.33 dB -13.97 dB -15.27 dB -15.44 dB -9.79 dB -9.53 dB Frequency 6,50456 GH -61.52 dBm -61.58 dBm -46.49 dBm -45.26 dBm -46.56 dBm -47.60 dBm -61.87 dBm -61.66 dBm 5.50456 5.50504 5.52396 5.52404 5.54596 5.54604 5.56496 5.56528 -49.40 dB -49.45 dB -34.37 dB -33.13 dB -34.43 dB -35.48 dB -49.74 dB -49.53 dB GHZ GHZ GHZ GHZ GHZ GHZ

# Plot on Channel 6695MHz

Plot on Channel 6515MHz

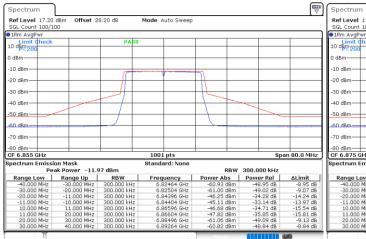


Date: 22.MAY.2022 04:02:50

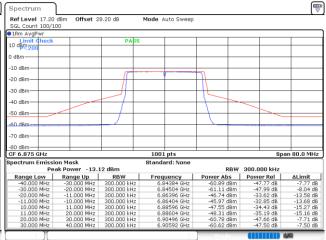
Date: 22.MAY.2022 05:56:51

TEL : 886-3-327-3456
FAX : 886-3-328-4978
Report Template No.: BU5-FR15EWL AC MA Version 2.4





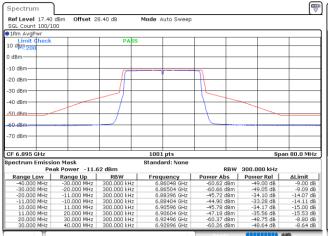
#### Plot on Channel 6875MHz



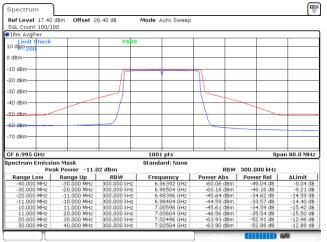
#### Date: 22.MAY.2022 04:30:04

Date: 22.MAY.2022 04:34:42

### Plot on Channel 6895MHz



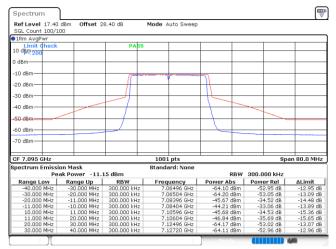
# Plot on Channel 6995MHz



Date: 22.MAY.2022 06:07:52

Date: 22.MAY.2022 06:13:30



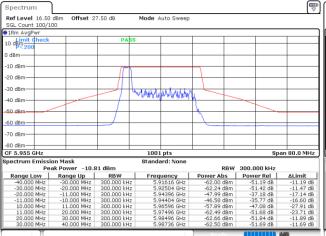


Date: 22.MAY.2022 04:50:44

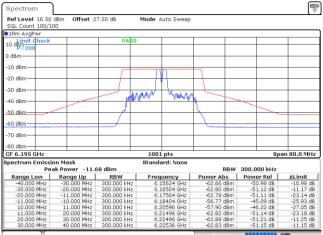


802.11ax HE20 26RU

# Plot on Channel 5955MHz



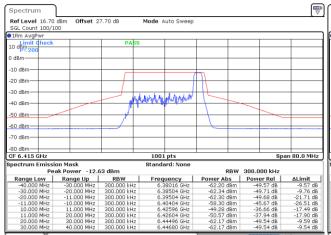
# Plot on Channel 6195MHz



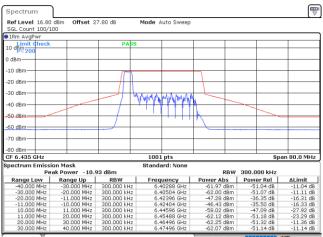
Date: 22.MAY.2022 09:50:40

Date: 22.MAY.2022 10:01:13

#### Plot on Channel 6415MHz



Plot on Channel 6435MHz

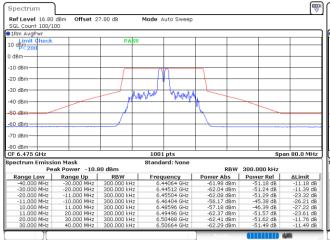


Date: 22.MAY.2022 10:12:31

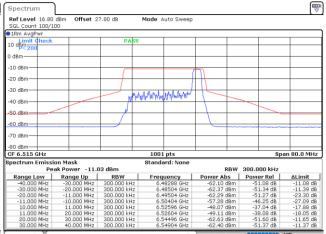
Date: 22.MAY.2022 10:22:29

Page Number: 41 of 125Issue Date: Jul. 21, 2022Report Version: 02



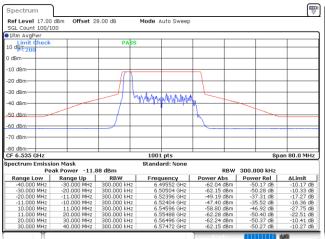


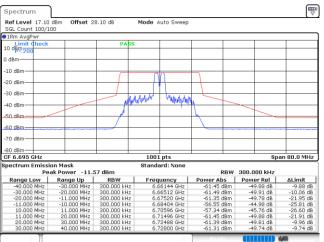
### Plot on Channel 6515MHz



Date: 22.MAY.2022 10:34:40

# Plot on Channel 6535MHz





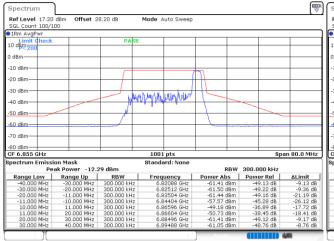
Date: 22.MAY.2022 11:00:57

Date: 22.MAY.2022 11:17:29

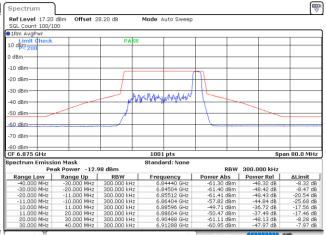
Date: 22.MAY.2022 10:47:25

Plot on Channel 6695MHz





#### Plot on Channel 6875MHz

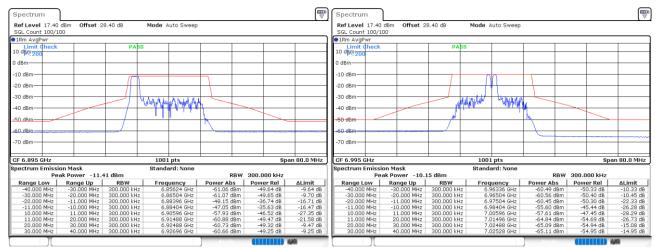


Date: 22.MAY.2022 11:29:40

# Plot on Channel 6895MHz

# Plot on Channel 6995MHz

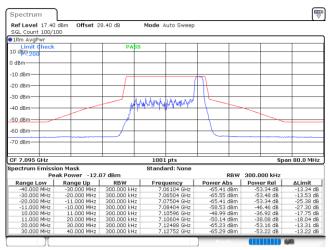
Date: 22.MAY.2022 11:46:15



Date: 22.MAY.2022 11:57:26

Date: 22.MAY.2022 12:08:01



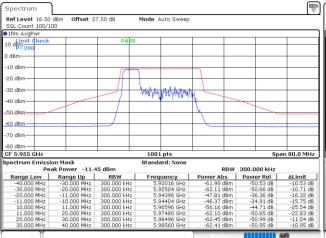


Date: 22.MAY.2022 12:22:06

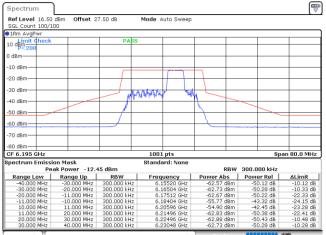


802.11ax HE20 52RU

# Plot on Channel 5955MHz



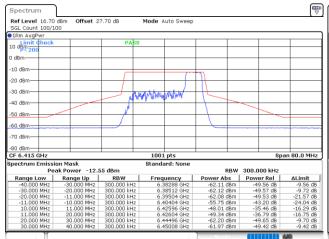
# Plot on Channel 6195MHz



Date: 22.MAY.2022 09:53:51

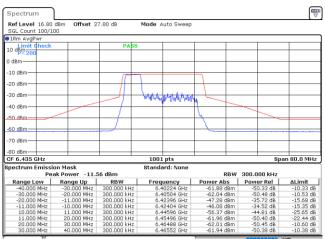
Date: 22.MAY.2022 10:04:23

#### Plot on Channel 6415MHz



Date: 22.MAY.2022 10:14:58

# Plot on Channel 6435MHz



Date: 22.MAY.2022 10:26:11

Span 80.0 MHz

-9.15 dB -9.43 dB -21.11 dB -21.68 dB -24.98 dB -21.17 dB -9.32 dB -9.09 dB

RBW 300.000 kHz

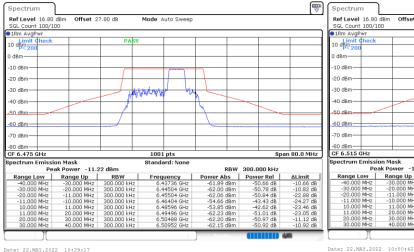
-49.15 dB -49.29 dB -49.00 dB -40.85 dB -44.14 dB -49.14 dB -49.27 dB -49.09 dB

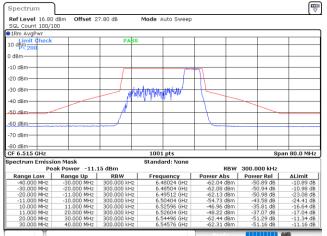
-61.31 dBm -49.15 dB

-61.31 dBm -61.45 dBm -51.16 dBm -53.01 dBm -56.31 dBm -61.30 dBm -61.43 dBm -61.25 dBm



# Plot on Channel 6475MHz





Date: 22.MAY.2022 10:39:17

# Plot on Channel 6535MHz

#### Plot on Channel 6695MHz ₽ Spectrum Spectrum Ref Level 17.00 dBm SGL Count 100/100 P1Rm AvgPwr Limit Check 10 dBm Offset 28.00 dB Mode Auto Swee Ref Level 17.10 dBm Offset 28.10 dB Mode Auto Swee SGL Count PARS PARS 10 内部 200 10 d段型20 0 dBmdBm -10 dBm 10 dBm -20 dBm--20 dBm -30 dBm--30 dBm-VYWWW Physe Physical A -40 dBm-40 dBm -50 dBm-50 dBm--60 dBm-60.dBm-70 dBm-70 dBm--80 dBm CF 6.535 GHz -80 dBm CF 6.695 GHz Span 80.0 MHz 1001 pts 1001 pts pectrum Emission Mask Peak Powe ectrum Emission Mask Peak Powe -12.09 dBm RBW 300.000 kHz -12.16 dB RBW 300.000 kHz Range Up RBW 2 -30,000 MHz 300,000 MHz 2 -20,000 MHz 300,000 kHz 2 -20,000 MHz 300,000 kHz 2 -11,000 MHz 300,000 kHz 2 -10,000 MHz 300,000 kHz 2 11,000 MHz 300,000 kHz 2 20,000 MHz 300,000 kHz 2 30,000 MHz 300,000 kHz 2 30,000 MHz 300,000 kHz 2 40,000 MHz 300,000 kHz 2 40,000 MHz 300,000 kHz Range Low Frequency Range Up -30,000 MHz Frequency -61.91 dBm -49.83 dB Range Low △Limit -9.83 dB -10.17 dB -15.49 dB -15.31 dB -25.73 dB -22.13 dB -10.19 dB -9.93 dB Limit -40.000 MHz -30.000 MHz -20.000 MHz -11.000 MHz 10.000 MHz 11.000 MHz 20.000 MHz 30.000 MHz -30.000 MHz -20.000 MHz -11.000 MHz -10.000 MHz 11.000 MHz 20.000 MHz 30.000 MHz 40.000 MHz 5.49712 GHz 5.50504 GHz 5.52396 GHz 5.52404 GHz 5.54596 GHz 5.55488 GHz 5.56496 GHz 5.56560 GHz -61.91 dBm -62.21 dBm -47.62 dBm -46.56 dBm -56.99 dBm -62.11 dBm -62.23 dBm -62.02 dBm -49.83 dB -50.12 dB -35.53 dB -34.47 dB -44.90 dB -50.02 dB -50.14 dB -49.93 dB -40.000 MHz -30.000 MHz -20.000 MHz -11.000 MHz 10.000 MHz 11.000 MHz 20.000 MHz 30.000 MHz 5.66176 GHz 5.66512 GHz 5.67512 GHz 5.68404 GHz 5.70596 GHz 5.71496 GHz 5.72496 GHz 5.73072 GHz

Date: 22.MAY.2022 11:04:40

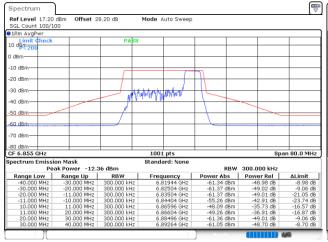
Date: 22.MAY.2022 11:21:34

TEL : 886-3-327-3456
FAX : 886-3-328-4978
Report Template No.: BU5-FR15EWL AC MA Version 2.4

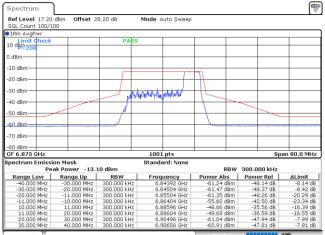
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#### Plot on Channel 6515MHz





#### Plot on Channel 6875MHz

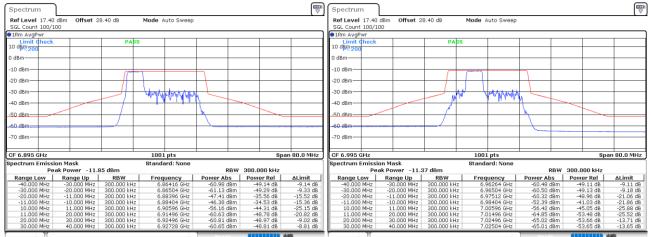


Date: 22.MAY.2022 11:34:32

# Plot on Channel 6895MHz

# Plot on Channel 6995MHz

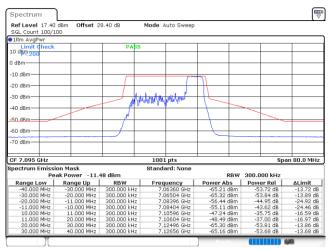
Date: 22.MAY.2022 11:48:37



Date: 22.MAY.2022 11:59:24

Date: 22.MAY.2022 12:11:18



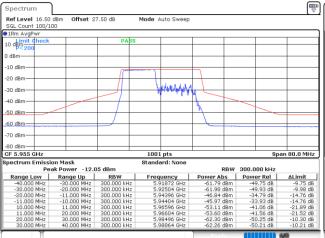


Date: 22.MAY.2022 12:24:40

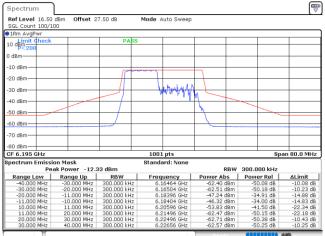


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# Plot on Channel 5955MHz



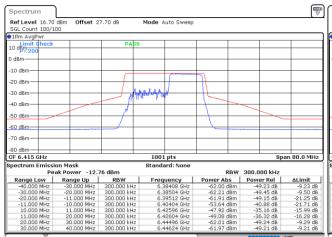
# Plot on Channel 6195MHz



Date: 22.MAY.2022 09:57:09

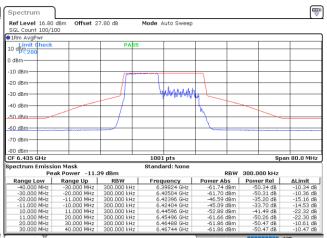
Date: 22.MAY.2022 10:08:41

#### Plot on Channel 6415MHz



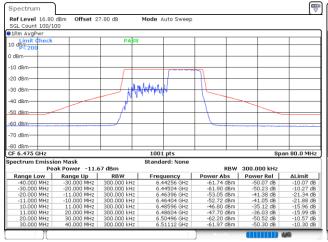
Date: 22.MAY.2022 10:17:22

# Plot on Channel 6435MHz

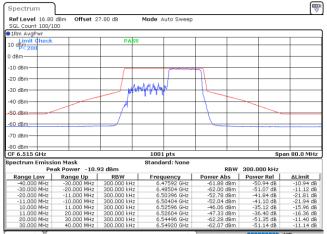


Date: 22.MAY.2022 10:30:51





#### Plot on Channel 6515MHz

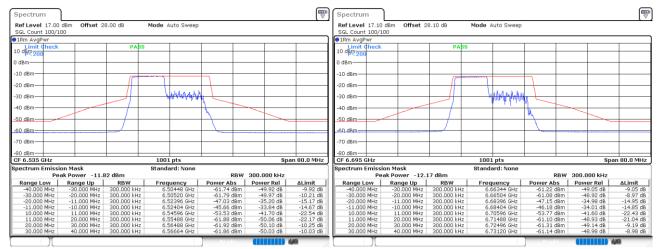


Date: 22.MAY.2022 10:43:51

# Plot on Channel 6535MHz

# Plot on Channel 6695MHz

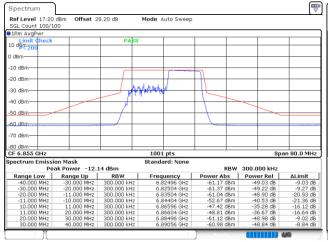
Date: 22.MAY.2022 10:55:10



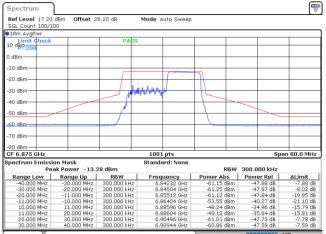
Date: 22.MAY.2022 11:09:46

Date: 22.MAY.2022 11:26:15





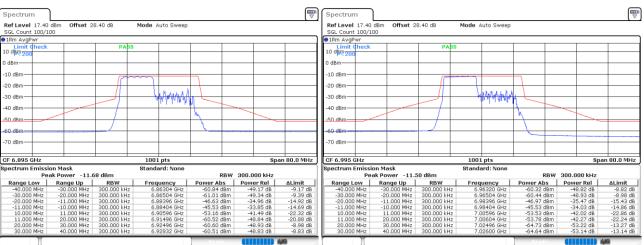
#### Plot on Channel 6875MHz



Date: 22.MAY.2022 11:38:30

# Plot on Channel 6895MHz

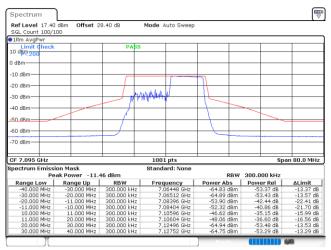
# Date: 22.40W.2022 11:51:46 Plot on Channel 6995MHz



Date: 22.MAY.2022 12:02:20

Date: 22.MAY.2022 12:16:12





Date: 22.MAY.2022 12:28:11