



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2310.000	60.38	-15.49	44.89	74.00	-29.11	peak			
2		2310.000	46.98	-15.49	31.49	54.00	-22.51	AVG			
3	*	2390.000	83.51	-15.18	68.33	74.00	-5.67	peak			
4		2390.000	63.29	-15.18	48.11	54.00	-5.89	AVG			

\*:Maximum data x:Over limit !:over margin

(Reference Only





No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	2483.500	77.51	-14.79	62.72	74.00	-11.28	peak			
2		2483.500	52.08	-14.79	37.29	54.00	-16.71	AVG			
3		2493.238	77.27	-14.75	62.52	74.00	-11.48	peak			
4		2493.238	49.29	-14.75	34.54	54.00	-19.46	AVG			
5		2500.000	67.27	-14.72	52.55	74.00	-21.45	peak			
6		2500.000	46.44	-14.72	31.72	54.00	-22.28	AVG			

\*:Maximum data x:Over limit !:over margin

(Reference Only





No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2483.500	71.01	-14.79	56.22	74.00	-17.78	peak			
2		2483.500	52.44	-14.79	37.65	54.00	-16.35	AVG			
3	*	2486.224	74.23	-14.78	59.45	74.00	-14.55	peak			
4		2486.224	51.06	-14.78	36.28	54.00	-17.72	AVG			
5		2500.000	63.71	-14.72	48.99	74.00	-25.01	peak			
6		2500.000	45.91	-14.72	31.19	54.00	-22.81	AVG			

\*:Maximum data x:Over limit !:over margin

(Reference Only



## 4 CONDUCTED SPURIOUS EMISSIONS

Test Standard	47 CFR Part 15, Subpart C 15.247					
Test Method	ANSI C63.10 (2013) Section 7.8.6 & Section 11.11					
Test Mode (Pre-Scan)	ТХ					
Test Mode (Final Test)	ТХ					
Tester	Jozu					
Temperature	<b>25</b> ℃					
Humidity	60%					

#### 4.1 LIMITS

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.209(a) (see §15.205(c)).

## 4.2 BLOCK DIAGRAM OF TEST SETUP



#### 4.3 TEST DATA

## Pass: Please Refer To Appendix: For Details



Test Standard	47 CFR Part 15, Subpart C 15.247					
Test Method	ANSI C63.10 (2013) Section 7.8.8 & Section 11.13.3.2					
Test Mode (Pre-Scan)	ТХ					
Test Mode (Final Test)	ТХ					
Tester	Jozu					
Temperature	25°C					
Humidity	60%					

# 5 CONDUCTED BAND EDGES MEASUREMENT

#### 5.1 LIMITS

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.209(a) (see §15.205(c)).

## 5.2 BLOCK DIAGRAM OF TEST SETUP



#### 5.3 TEST DATA

#### Pass: Please Refer To Appendix: Appendix1 For Details



### 6 MINIMUM 6DB BANDWIDTH

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 11.8.1
Test Mode (Pre-Scan)	ТХ
Test Mode (Final Test)	ТХ
Tester	Jozu
Temperature	<b>25</b> ℃
Humidity	60%

#### 6.1 LIMITS

**Limit:**  $\geq$  500 kHz

### 6.2 BLOCK DIAGRAM OF TEST SETUP



6.3 TEST DATA

Pass: Please Refer To Appendix: Appendix1 For Details



# 7 CONDUCTED EMISSIONS AT AC POWER LINE (150KHZ-30MHZ)

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 6.2
Test Mode (Pre-Scan)	ТХ
Test Mode (Final Test)	ТХ
Tester	Jozu
Temperature	<b>25</b> ℃
Humidity	60%

#### 7.1 LIMITS

Frequency of	Conducted limit(dBµV)						
emission(MHz)	Quasi-peak	Average					
0.15-0.5	66 to 56*	56 to 46*					
0.5-5	56	46					
5-30	60	50					

\*Decreases with the logarithm of the frequency.

## 7.2 BLOCK DIAGRAM OF TEST SETUP



#### 7.3 PROCEDURE

1) The mains terminal disturbance voltage test was conducted in a shielded room.

2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50ohm/50?H + 5ohm linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.



3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane,

4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.

5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

Remark: LISN=Read Level+ Cable Loss+ LISN Factor



## 7.4 TEST DATA





No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2060	32.79	9.75	42.54	63.37	-20.83	QP	
2		0.2060	25.26	9.75	35.01	53.37	-18.36	AVG	
3		0.3420	33.28	9.77	43.05	59.15	-16.10	QP	
4		0.3420	28.01	9.77	37.78	49.15	-11.37	AVG	
5		1.3660	27.82	9.85	37.67	56.00	-18.33	QP	
6		1.3660	24.83	9.85	34.68	46.00	-11.32	AVG	
7		2.7340	27.93	9.89	37.82	56.00	-18.18	QP	
8		2.7340	26.58	9.89	36.47	46.00	-9.53	AVG	
9		6.2060	28.78	9.99	38.77	60.00	-21.23	QP	
10		6.2060	10.28	9.99	20.27	50.00	-29.73	AVG	
11		13.3580	36.05	10.24	46.29	60.00	-13.71	QP	
12	*	13.3580	32.42	10.24	42.66	50.00	-7.34	AVG	

\*:Maximum data x:Over limit !:over margin

(Reference Only



# [TestMode: TX]; [Line: Line] Power:AC120V60Hz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2060	32.05	9.83	41.88	63.37	-21.49	QP	
2	1	0.2060	25.64	9.83	35.47	53.37	-17.90	AVG	
3		0.4100	29.66	9.85	39.51	57.65	-18.14	QP	
4		0.4100	22.24	9.85	32.09	47.65	-15.56	AVG	
5		1.2980	28.98	9.93	38.91	56.00	-17.09	QP	
6	*	1.2980	27.14	9.93	37.07	46.00	-8.93	AVG	
7		2.6660	27.32	9.96	37.28	56.00	-18.72	QP	
8		2.6660	25.56	9.96	35.52	46.00	-10.48	AVG	
9		6.4820	27.83	10.07	37.90	60.00	-22.10	QP	
10		6.4820	16.43	10.07	26.50	50.00	-23.50	AVG	
11		14.0300	33.95	10.32	44.27	60.00	-15.73	QP	
12		14.0300	29.38	10.32	39.70	50.00	-10.30	AVG	
		11.0000	20.00	10.02	00.10	00.00	10.00	1.00	

\*:Maximum data x:Over limit !:over margin

(Reference Only



# 8 POWER SPECTRUM DENSITY

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 11.10.2
Test Mode (Pre-Scan)	ТХ
Test Mode (Final Test)	ТХ
Tester	Jozu
Temperature	<b>25</b> ℃
Humidity	60%

### 8.1 LIMITS

**Limit:** ≤8dBm in any 3 kHz band during any time interval of continuous transmission

## 8.2 BLOCK DIAGRAM OF TEST SETUP



8.3 TEST DATA

## Pass: Please Refer To Appendix: Appendix1 For Details



# 9 ANTENNA REQUIREMENT

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	N/A

#### 9.1 CONCLUSION

Standard Requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit permanently attached antenna or of an so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

# EUT Antenna:

The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 1.2dBi.





# **11 APPENDIX**

### 11.1 APPENDIX : DTS BANDWIDTH

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
		2412	9.600	2406.960	2416.560	>=0.5	PASS
11B	Ant1	2437	10.120	2431.960	2442.080	>=0.5	PASS
		2462	9.200	2457.400	2466.600	>=0.5	PASS
11G	Ant1	2412	16.400	2403.800	2420.200	>=0.5	PASS
		2437	16.360	2428.840	2445.200	>=0.5	PASS
		2462	16.200	2454.000	2470.200	>=0.5	PASS
	Ant1	2412	17.560	2403.200	2420.760	>=0.5	PASS
11N20SISO		2437	17.360	2428.440	2445.800	>=0.5	PASS
		2462	17.360	2453.200	2470.560	>=0.5	PASS
11N40SISO		2422	35.200	2404.400	2439.600	>=0.5	PASS
	Ant1	2437	35.360	2419.320	2454.680	>=0.5	PASS
		2452	34.320	2435.280	2469.600	>=0.5	PASS







	11G	Ant1 2412			
Agilent Spectrum /	nalyzer - Swept SA				
Center Freq	F 50 0 AC 58 2.412000000 GHz PN0: Fast → Trig: Fre IF Colinc1.ew #Atten: 4	ALIGNAUTO #Avg Type: RMS e Run Avg[Hold: 100/100 0 dB	07:15:29 PMFeb 28, 2021 TRACE 1 3 3 4 5 6 TYPE M WWWWW DET P P P P P	Frequency	
10 dB/div R	of Offset 1.89 dB ef 30.00 dBm	Δ	Mkr3 16.40 MHz -0.194 dB	Auto Tune	
20.0	^2			Center Freq 2.412000000 GHz	
-33.0	gi matin	prover the danshed and a start	425.00	Start Freq	
-20.0	and the second second	~	~	2.392000000 GHz	
40.0			- handware	Stop Freq 2.432000000 GHz	
Center 2.412 #Res BW 10	00 GHz ) kHz #VBW 300 kHz	Sweep	Span 40.00 MHz 3.867 ms (1001 pts)	CF Step 4.000000 MHz	
	2.403 80 GHz -7.011 d 2.408 24 GHz -0.245 d (A) 0.245 d 0.412 (A) 0.245 d	RUNCTION RUNCTION WOTH Bm are	FUNCTION VALUE	Auto Man	
4 5 6	(Δ) 16,40 MHZ (Δ) -0,194	dB		0 Hz	
8 9 10					
11 • • • •		STAT	3		
	11G	_Ant1_2437			
Agitent Spectrum / 3 R. Center Freq	ndyzer Swept SA F S0 P AC 555 2.437000000 GHz Tala: Fite	ALIGNAUTO #Avg Type: RMS	07:19:26 FMFeb 28, 2021 TRACE 1 3 4 5 6	Frequency	
R	PN0: Fast ++ Ing.rre IFGain1.ow #Atten: 4		Mkr3 16.36 MHz	Auto Tune	
to diBidiv R Log	ef 30.00 dBm		-1.040 dB	Center Freq	
	ginner and the second	341	-4 10 259	2.437000000 GHz	
-20.0		- ×		Start Freq 2.417000000 GHz	
-40.0 -40.0 -40.0	handers harders		and a farmer	Stop Freq 2.457000000 GHz	
Center 2.437 #Res BW 10	00 GHz ) kHz #VBW 300 kHz	Sweep	Span 40.00 MHz 3.867 ms (1001 pts)	CF Step	
	2,428 84 GHz 4,124 d 2,440 76 GHz 1985 d	FUNCTION FUNCTION WOTH Bm	FUNCTION VALUE	<u>Auto</u> Man	
<b>a</b> <u>A</u> <del>i</del> <del>i</del> <del>i</del>	(Δ) 16.36 MHz (Δ) -1.040	dB		Freq Offset 0 Hz	
7 8 9 10					
11 € M90		STAT	s *		
	11G	_Ant1_2462			
Agilent Spectrum /	nalyzer Swept SA F SD D AC SE	ALISNAU70	07.22:30 PMFeb 28, 2021	Erecuer	
Center Freq	2.462000000 GHz PN0: Fast Trig: Fre #Atten: 4	#Avg Type: RMS e Run Avg[Hold: 100/100 0 dB	TRACE U 3 4 5 6 TYPE MUMUMUMU DET P P P P P P	Auto Tune	
10 dB/div R	of Offset 1.92 dB ef 30.00 dBm		-1.068 dB		
	0 <sup>1</sup>			Center Freq 2.462000000 GHz	
-10.0				Start Freq 2.442000000 GHz	
and the second s	www.ww		march hope and head	Stop Freq	
40.0				2.482000000 GHz	
#Res BW 10	) kHz #VBW 300 kHz	Sweep	3.867 ms (1001 pts)	CF Step 4.000000 MHz Auto Man	
1 N 1 2 N 1 4 1 1	2.454 00 GHz 5.283 d 2.467 00 GHz 1.059 d (Δ) 16.20 MHz (Δ) -1.068	Bm dB		Freq Offset	
5 6 7 8					
9 10 11					
MSG		STAT	15		



	111	V20SISO	Ant1_2412	2		
	Agilent Spectrum Analyzer - Swept SA	SENSE:DVT	ALIGNAUTO	07:27:06 FMFeb 28, 2021	Eraguandu	
	Center Freq 2.412000000 GHz PN0: Fast	Trig: Free Run	#Avg Type: RMS Avg[Hold: 100/100	TYPE M WWWWWW DET P P P P P	Prequency	
	Ref Offset 1.89 dB		ΔM	kr3 17.56 MHz	Auto Tune	
	10 dB/div Ref 30.00 dBm			0.415 08	Contro From	
	10.0	0 <sup>2</sup>			2.412000000 GHz	
	10.00	the man from the	when the	-430.09	Ctart Eran	
	-20.0		- X		2.392000000 GHz	
	40.0			None-		
	-900 -900				2.432000000 GHz	
	Center 2.41200 GHz			Span 40.00 MHz	CE Step	
	#Res BW 100 kHz #VBW	300 kHz	Sweep 3.	867 ms (1001 pts)	4.000000 MHz Auto Man	
	1 N f 2.403 20 GHz 2 N f 2.414 52 GHz	-6.353 dBm 0.074 dBm	Fortunary way in	ACTIVITION VALUE		
	3 Δ1 1 f (Δ) 17.56 MHz (Δ) 4 5	0.415 dB			Freq Offset 0 Hz	
	6 7 8					
	9					
	4 Mag	1000	STATIA			
L	111	V20SISO	Ant1 2437	7		
	Agilent Spectrum Analyzer Swept SA	SENSE:INT	OTUARDLA	07:31:32 PMFeb 28, 2021		
	Center Freq 2.437000000 GHz	Trig: Free Run	#Avg Type: RMS Avg[Hold: 100/100	TYPE MUMUUUUU DEE P P P P P	Frequency	
	Ref Offset 1.92 dB		ΔΜ	kr3 17.36 MHz	Auto Tune	
					Center Freq	
	10.0	\$ <sup>2</sup>	3∆1		2.437000000 GHz	
	-10.0	and the second se	Ann Density of the second		Start Freq	
	33.0		14	With the second	2.417000000 GHz	
	-40.0 Hours have have have have have have have have			and the second	Stop Freq	
	40.0				2.457000000 GHz	
	Center 2.43700 GHz #Res BW 100 kHz #VBW	300 kHz	Sweep 3.	Span 40.00 MHz 867 ms (1001 pts)	CF Step 4.000000 MHz	
	1 N 1 f 2.428 44 GHz	-3.513 dBm	TION FUNCTION WOTH		<u>Auto</u> Man	
	2 N f f 2.438 28 GHz 3 Δ1 f (Δ) 17.36 MHz (Δ)	2.911 dBm 0.149 dB			Freq Offset	
	5 67				0 Hz	
	8					
	10					
	MSG	1000100	STATUS			
	Agilent Spectrum Analyzer Swept SA	1205150	Ant1_2462			
	Center Freq 2.462000000 GHz	SENSE.INT	#Avg Type: RMS Avg[Hold: 100/100	07:34:25 FMFeb 28, 2021 TRACE 1 2 3 4 5 6 TyPE Moderation	Frequency	
	IFGainLow	#Atten: 40 dB	ΔΜ	kr3 17.36 MHz	Auto Tune	
	10 dB/div Ref 30.00 dBm			-0.770 dB		
	20.0	n2			Center Freq 2.45200000 GHz	
	0.00 Q	materia patridan	301_	417.05		
	-20.0				Start Freq 2.442000000 GHz	
	40.0	1	-			
	-00.0			-man-handlife	Stop Freq 2.482000000 GHz	
	Center 2.46200 GHz			Span 40.00 MHz	05.01/2	
	#Res BW 100 kHz #VBW	300 kHz	Sweep 3.	867 ms (1001 pts)	4.000000 MHz Auto Man	
	1 N f 2.453 20 GHz 2 N f 2.463 28 GHz	-5.251 dBm 1.133 dBm			Eren Offers	
	4 Δ1 1 7 (Δ) 17.36 MHz (Δ)	-0.770 dB			0 Hz	
	8					
	10					
	l≪ ₩50	A REAL PROPERTY AND A REAL	STATUS			



111	N40SISO	Ant1_2422	1		
Agilent Spectrum Analyzer - Swept SA	SENSE: INT	ALIGNAUTO	07:38:25 PMFeb 26, 2021		
Center Freq 2.422000000 GHz PN0: Fast -+	Trig: Free Run	#Avg Type: RMS Avg[Hold: 100/100	TYPE MULLION	Frequency	
Ref Offset 1.89 dB	Prister, to do	ΔM	kr3 35.20 MHz	Auto Tune	
Log			-0.100 015	Center Freq	
10.0	0 <sup>2</sup>	• 301		2.422000000 GHz	
-10.0	and when produces	hele of the state	405.004	Start Freq	
30.0				2.382000000 GHz	
-47.0 -10.0		Never	and the state of t	Stop Freq	
400			Coop 00 00 Milia	2.40200000 0112	
#Res BW 100 kHz #VBW	/ 300 kHz	Sweep 7.	567 ms (1001 pts)	CF Step 8.000000 MHz Auto Man	
1 N f 2.404 40 GHz 2 N f 2.416 96 GHz	-9.474 dBm -2.352 dBm	ICTION FUNCTION WIDTH	FUNCTION VALUE		
Δ1 F (Δ) 35.20 MHz (Δ)	-0.105 dB			0 Hz	
* 7 8					
10					
 MSG	1400-00	STATUS			
Arillent Spectrum Analyzer - Sweet SA	N40SISO	Ant1_2437			
Center Freq 2.437000000 GHz	SENSE INT	ALIGNAUTO #Avg Type: RMS AvgiHeld: 100100	07:43:08 FM Feb 28, 2021 TRACE 3 + 5.6	Frequency	
PNO: Fast IFGain:Low	#Atten: 40 dB		kr3 35 36 MHz	Auto Tune	
10 dB/div Ref 30.00 dBm			1.087 dB		
20.0 10.0	^2			Center Freq 2.437000000 GHz	
10.00 -10.0	was ely aliet	14-ULLIA 301-	4.55.40	Start Fren	
-20.0				2.397000000 GHz	
100 martines and and and		Auropa Auropa	allentoperaneur	Stop Freq	
-60.0				2.477000000 GHz	
Center 2.43700 GHz #Res BW 100 kHz #VBW	/ 300 kHz	Sweep 7.0	Span 80.00 MHz 667 ms (1001 pts)	CF Step 8.000000 MHz	
Mile Male         Mile         Mile	-10.426 dBm	CTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Man	
Δ1 f (Δ) 35.36 MHz (Δ)	1.087 dB			Freq Offset 0 Hz	
6 7 8					
9 10 11					
K SG		STATUS	8		
111	N40SISO	Ant1_2452			
Agilinit Spectrum Analyzer - Swept SA	SENSE INT	ALIGNAUTO SAvg Type: RMS	07:46:44 PMFeb 28, 2021 TRACE	Frequency	
PNO: Fast ++ IFGain:Low	#Atten: 40 dB	Avg Hold: 100/100	DET PPPPP	Auto Tune	
10 dB/div Ref 30.00 dBm		ΔM	-0.204 dB		
20.0 10.0				Center Freq 2.452000000 GHz	
0.00 June 100	and a mar		2.02.00		
-20.0	V			Start Freq 2.412000000 GHz	
430 mildente diverse soller		have	homological and a second as	Stop Fred	
40.0				2.492000000 GHz	
Center 2.45200 GHz #Res BW 100 kHz #VBW	/ 300 kHz	Sweep 7.0	Span 80.00 MHz 67 ms (1001 pts)	CF Step	
1 N 1 f 2.435 28 GHz	-8.430 dBm	ETION EDINETIEN WEDTH	FUNCTION VALUE	Auto Man	
2 N 1 f 2.449 52 GHz 3 Δ1 f (Δ) 34.32 MHz (Δ) 4	-1.623 dBm -0.204 dB			Freq Offset	
5 6 7					
9					
.€ Msg	100	STATUS			



# 11.2 APPENDIX B: OCCUPIED CHANNEL BANDWIDTH

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
		2412	14.575	2404.733	2419.308		PASS
11B	Ant1	2437	14.641	2429.750	2444.391		PASS
		2462	14.616	2454.672	2469.288		PASS
11G	Ant1	2412	17.062	2403.421	2420.483		PASS
		2437	17.092	2428.488	2445.580		PASS
		2462	17.026	2453.427	2470.453		PASS
	Ant1	2412	18.044	2402.968	2421.012		PASS
11N20SISO		2437	18.113	2427.992	2446.105		PASS
		2462	18.038	2452.942	2470.980		PASS
11N40SISO		2422	35.936	2404.064	2440.000		PASS
	Ant1	2437	35.931	2419.079	2455.010		PASS
		2452	35.851	2434.106	2469.957		PASS



















# **11.3 APPENDIX C: MAXIMUM CONDUCTED OUTPUT POWER**

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
		2412	15.15	<=30	PASS
11B	Ant1	2437	14.84	<=30	PASS
		2462	15.63	<=30	PASS
11G	Ant1	2412	11.71	<=30	PASS
		2437	12.79	<=30	PASS
		2462	16.37	<=30	PASS
	Ant1	2412	11.49	<=30	PASS
11N20SISO		2437	13.82	<=30	PASS
		2462	11.70	<=30	PASS
11N40SISO	Ant1	2422	11.07	<=30	PASS
		2437	11.21	<=30	PASS
		2452	12.12	<=30	PASS



















# 11.4 APPENDIX : MAXIMUM POWER SPECTRAL DENSITY

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
		2412	-11.31	<=8	PASS
11B	Ant1	2437	-11.8	<=8	PASS
		2462	-10.46	<=8	PASS
11G	Ant1	2412	-17.18	<=8	PASS
		2437	-15.67	<=8	PASS
		2462	-12.55	<=8	PASS
	Ant1	2412	-17.46	<=8	PASS
11N20SISO		2437	-14.43	<=8	PASS
		2462	-17.33	<=8	PASS
11N40SISO	Ant1	2422	-19.42	<=8	PASS
		2437	-19.57	<=8	PASS
		2452	-18.1	<=8	PASS







#### Report No.: BLA-EMC-202102-A4204 Page 70 of93





#### Report No.: BLA-EMC-202102-A4204 Page 71 of93





#### Report No.: BLA-EMC-202102-A4204 Page 72 of93





## **11.5APPENDIX E: BAND EDGE MEASUREMENTS**

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11D	Apt1	Low	2412	6.16	-52.12	<=-23.84	PASS
TIB	Anti	High	2462	6.91	-53.33	<=-23.09	PASS
44.0	Ant1	Low	2412	0.63	-47.94	<=-29.37	PASS
ПG		High	2462	0.94	-53.34	<=-29.06	PASS
11N20SISO	Ant1	Low	2412	0.08	-47.09	<=-29.93	PASS
		High	2462	0.89	-52.13	<=-29.11	PASS
11N40SISO	Ant1	Low	2422	-2.22	-37.25	<=-32.22	PASS
		High	2452	-1.69	-48.19	<=-31.69	PASS







11G_Ant1_High_2462	
Agitent Spectrum Analyzer / Swept SA         81/07.011         07/22.244 PM/6b/20, 2021           # R4         PP         SD (2 - 2C)         SD (2 - 2C)         81/07.011         07/22.244 PM/6b/20, 2021	Frequency
Center Freq 2.495000000 GHz PN0; Fast ++- IfG; Free Run Avg Held: 300000 trethwww.ww IfGaint.tww #Atten: 30 dB	
Ref Offset 192 dB         Mkr4 2.500 17 GHz           10 dBidity         Ref 20.00 dBm         -53.343 dBm	Auto Tune
100 0 co	Center Freq 2.49500000 GHz
000 000 1.12	Start Freq 2.440000000 GHz
	Stop Freq 2.55000000 GHz
Start 2.44000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10.53 ms (1001 pts)	CF Step 11.00000 MHz
Image         Control         Control <thcontrol< th=""> <thcontrol< th=""> <thcon< td=""><td>Auto Man Freq Offset</td></thcon<></thcontrol<></thcontrol<>	Auto Man Freq Offset
N 1 f 2.500 17 GHz -63.343 dBm 6 7 9	0 Hz
11N20SISO Ant1 Low 2412	
Altert Spectrum Analyzer - Serget SA	
Center Freq 2.365000000 GHz FR0: Fast - Freq Prese Run AvgBread 300000 reget - Freq 2.36500000 reget - Freq 2.365000000 reget - Freq 2.3650000000 reget - Freq 2.3650000000 reget - Freq 2.365000000000 reget - Freq 2.3650000000000000 reget - Freq 2.365000000000000000000000000000000000000	Frequency Auto Tune
Bef offset 189 dB         Mkr5 2,389 96 GHz           10 dBiddiv         Ref 20.00 dBm         -47.092 dBm           10 g         -47.092 dBm         -47.092 dBm	CenterFree
100 100	2.36500000 GHz
	Start Freq 2.30000000 GHz
100 million and the second strand a manufactor and the second strands	Stop Freq 2.43000000 GHz
Start 2.30000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 12.47 ms (1001 pts)	CF Step 13.000000 MHz Auto Man
1 N 1 f 2406 99 GHz 0.075 dBm 2 N 1 f 2400 00 GHz 34.509 dBm 3 N 1 f 2.390 00 GHz 47.022 dBm 4 N 1 f 2.3100 0GHz 49.02 dBm	Freq Offset
6 2.00 90 UFL2 47.002 UDFF 7 8 9 9	
11 11 12 13 14 15 15 15 15 15 15 15 15 15 15 15 15 15	
11N20SISO_Ant1_High_2462	
Additent Spektrum Analyzer / Swept SA R 1 197 50 0 – 40 51 51 50 52 45 PM Adv 20, 2021	Frequency
Center Freq 2.495000000 GHz PRO: Fast +++ If Gree Run Avg Type: RNS Avg Type:	Auto Tune
10 dBldv Ref 20.00 dBm 10 dBldv Ref 20.00 dBm 10 dBldv Ref 20.00 dBm	Center Freq
	Start Freq
	2.44000000 GHz
40.0 /70 0	Stop Freq 2.55000000 GHz
Start 2,44000 GHz Stop 2,55000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10.53 ms (1001 pts) CVX M200 HER BCOL X V FUNCTION	CF Step 11.00000 MHz Auto Man
2 N 1 f 2248350 44 45 614 45 m 3 N 1 f 22500 00 GHz 45 629 45 m N 1 f 22502 81 GHz 52:131 dBm 6 7 8	Freq Offset 0 Hz



#### Report No.: BLA-EMC-202102-A4204 Page 76 of93

Addent Spectrum Analyzer - Swept SA	_
RL 11F 50.0 AC SERVER ALIGNALIZATION (07-40.28 PM-46-02, 2021)     Franciscovy	
Center Freq 2.365000000 GHz PN0: Fast Trig: Free Run Avg Hold: 300000 Tright Automation #Atten: 30 dB	
Ref Offset 1.99 dB Mkr5 2.389 44 GHz 10 dB/div Ref 20.00 dBm -37.245 dBm	
100 Center Freq	
2.365000000 GHz	
300 Start Freq 300 2 302 4 2 3000000 GHz	
Stop Freq 2.43000000 GHz	
Start 2.30000 GHz CF Step	
#Res BW 100 kHz         #VBW 300 kHz         Sweep         12.47 ms (1001 pts)         13.000000 MHz           Exat (MXR) First State         X         Y         Roteinon         Roteinon         Roteinon         Auto         Man	
1 N 1 f 2.419 47 GHz - 2.223 dBm 2 N 1 f 2.400 00 GHz - 38.897 dBm 3 N 1 f 2.390 00 GHz - 44.570 dBm Freq Offset	
4 N f 2.310 00 GHz 58.910 dBm 0 Hz 6 1 f 2.389 44 GHz 37 245 dBm 0 Hz	
	_
11N40SISO_Ant1_Hign_2452	
#         #         ISD (# acc)         ISD/(E / B / B / B / B / B / B / B / B / B /	
PRO: Feat Ing: Free Kun Avginete: 000000 Ing: PPP PP P IFGainLow #Atten: 30 dB Mutra 2 503 38 CUrr Auto Tune	
Ref 00fiset 192 dB 448.191 dBm 48.191 dBm	
10/1 Center Freq 2.45500000 GHz	
300 301 30 30 30 30 30 30 30 30 30 30 30 30 30	
500 Stop Fred	
40.0 70.0	
Start 2.44000 GHz #VBW 300 kHz Stop 2.55000 GHz CF Step #Res BW 100 kHz #VBW 300 kHz Sweep 10.53 ms (1001 pts) 11.000000 MHz	
DEFINED TREE TO X X RANCED BENETION WORK RANCED WALKE AND MAN	
2 N 1 f 2.463 50 GHz - 43.605 dBm Freq Offset 3 N 1 f 2.500 00 GHz - 51.995 dBm 0 Hz 1 X 1 f 2.503 36 GHz - 48.191 dBm 0 Hz	
6 7	
8 9 10	
NSG STATUS	



#### **11.6 APPENDIX : CONDUCTED SPURIOUS EMISSION**

TestMode	Antenna	Channel	FreqRange	RefLevel	Result	Limit	Verdict
Testivioue	Antenna	Channel	[Mhz]	[dBm]	[dBm]	[dBm]	veruici
			Reference	5.79	5.79		PASS
		2412	30~1000	30~1000	-49.174	<=-24.208	PASS
			1000~26500	1000~26500	-37.535	<=-24.208	PASS
			Reference	5.85	5.85		PASS
11B	Ant1	2437	30~1000	30~1000	-48.904	<=-24.146	PASS
			1000~26500	1000~26500	-40.212	<=-24.146	PASS
			Reference	6.39	6.39		PASS
		2462	30~1000	30~1000	-49.503	<=-23.606	PASS
			1000~26500	1000~26500	-40.148	<=-23.606	PASS
			Reference	0.01	0.01		PASS
		2412	30~1000	30~1000	-51.022	<=-29.989	PASS
			1000~26500	1000~26500	-45.495	<=-29.989	PASS
			Reference	1.67	1.67		PASS
11G	Ant1	2437	30~1000	30~1000	-50.533	<=-28.335	PASS
			1000~26500	1000~26500	-46.471	<=-28.335	PASS
		2462	Reference	0.72	0.72		PASS
			30~1000	30~1000	-50.775	<=-29.279	PASS
			1000~26500	1000~26500	-48.719	<=-29.279	PASS
	Ant1	2412	Reference	0.10	0.10		PASS
			30~1000	30~1000	-51.204	<=-29.898	PASS
			1000~26500	1000~26500	-46.305	<=-29.898	PASS
		2437	Reference	2.26	2.26		PASS
11N20SISO			30~1000	30~1000	-51.088	<=-27.737	PASS
			1000~26500	1000~26500	-46.549	<=-27.737	PASS
			Reference	0.42	0.42		PASS
		2462	30~1000	30~1000	-51.045	<=-29.581	PASS
			1000~26500	1000~26500	-49.73	<=-29.581	PASS
			Reference	-2.52	-2.52		PASS
		2422	30~1000	30~1000	-51.079	<=-32.519	PASS
		<u>_</u>	1000~26500	1000~26500	-45.67	<=-32.519	PASS
11N40SISO			Reference	-2.87	-2.87		PASS
	Ant1	2437	30~1000	30~1000	-50.666	<=-32.865	PASS
			1000~26500	1000~26500	-48.93	<=-32.865	PASS
			Reference	-1.75	-1.75		PASS
		2452	30~1000	30~1000	-50.966	<=-31.745	PASS
			1000~26500	1000~26500	-47.607	<=-31.745	PASS











#### Report No.: BLA-EMC-202102-A4204 Page 80 of93

