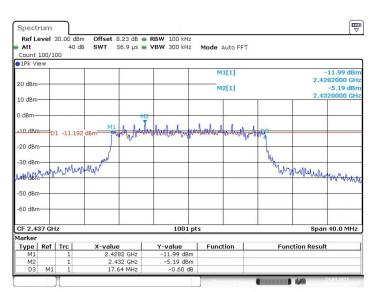


2437 MHz



Date: 24.APR.2021 17:33:45

#### 2462 MHz

Att	evel	30.00 di 40			Mada Jula Fr	-	, ,
Count			ub 3w1 30.9 hs -	<b>VBW</b> 300 KH2	Mode Auto FF		
UPK VI	ew				M1[1]		-11.31 dB
20 dBm							2.4532400 GH
20 0611					M2[1]		-4.85 dB
10 dBm	_						2.4570000 GH
0 dBm-	-		M	2			
-10 dBn		1 -10.8	M1 A A	a day buch up	hour hours	1 D3	
		1 -10.8	53 dBm	an an all and the	10000 Mary Mary 2000	a marine	
-20 dBn	n					·	
-30 dBn			and			Y.	
-30 aBh		A spart	Alban A			M.a.L	Courses and
Add den	M	annon n nd~	mmn			had	WWWWWW
							- 0° W/
-50 dBn	n						
-60 dBn							
	·						
CF 2.4	62 GH	z		1001 pt:	5		Span 40.0 MHz
Marker							
Type M1	Ref	Trc 1	2.45324 GHz	-11.31 dBm	Function	Func	tion Result
M2	_	1	2.457 GHz	-4.85 dBm			
D3	M1	1	17.56 MHz	0.45 dB			

Date: 24.APR.2021 17:37:07



# Page 27 of 59

		Mile Personal Star Person 165	
Test Mode:	802.11b Mode		
Channel frequency (MHz)	99% Bandwidth (MHz)	Limit (MHz)	
2412	12.827		
2437	12.987	>=0.5	
2462	13.187		
0.440 MU		·	

#### 2412 MHz



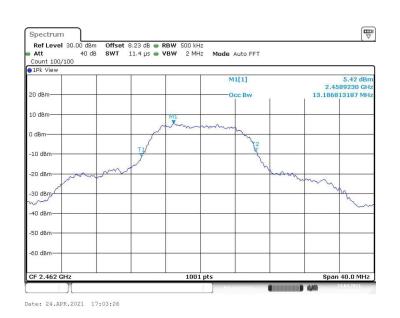


# Page 28 of 59





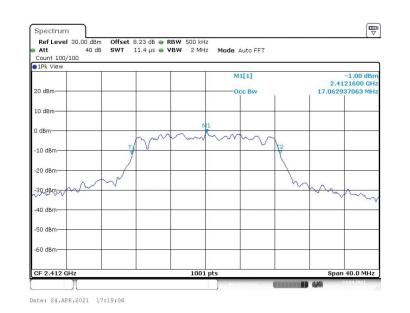
2462 MHz





	a literative and the land a start of the second	Ge / Manual State of the State of the	
Test Mode:	802.11g Mode		
Channel frequency (MHz)	99% Bandwidth (MHz)	Limit (MHz)	
2412	17.063		
2437	18.102	>=0.5	
2462	17.782		

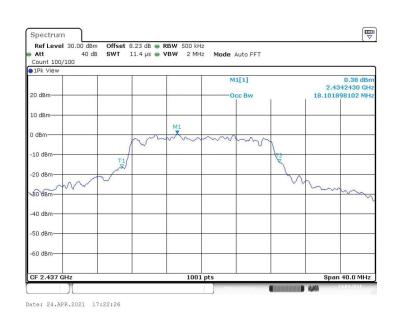
#### 2412 MHz



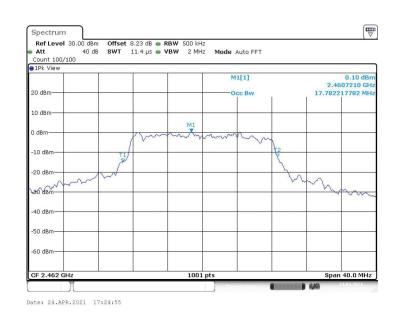


# Page 30 of 59

2437 MHz

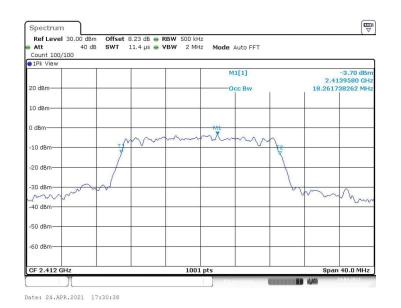


#### 2462 MHz





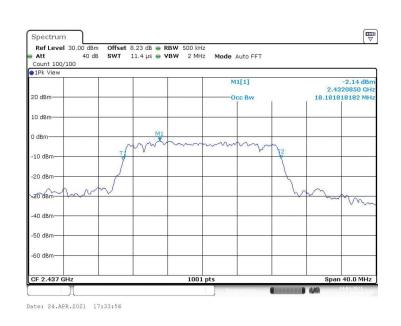
Test Mode:	802.11n(HT20) Mode			
Channel frequency (MHz)	99% Bandwidth (MHz)	Limit (MHz)		
2412	18.262			
2437	18.182	>=0.5		
2462	18.102			
	2412 MHz			





# Page 32 of 59

2437 MHz



#### 2462 MHz





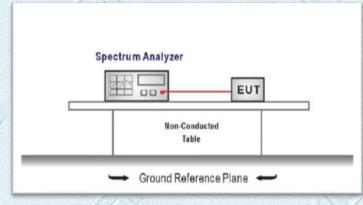
# 3.5. BAND EDGE AND SPURIOUS EMISSION (CONDUCTED)

#### Limit

#### FCC CFR Title 47 Part 15 Subpart C Section15.247 (d):

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum 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.

# **Test Configuration**



# **Test Procedure**

- 1. Connect EUT RF Output port to the Spectrum Analyzer through an RF attenuator.
- 2. Spectrum Setting:
  - RBW=100KHz
  - VBW=300KHz.

Detector function: Peak. Trace: Max hold. Sweep = Auto couple.

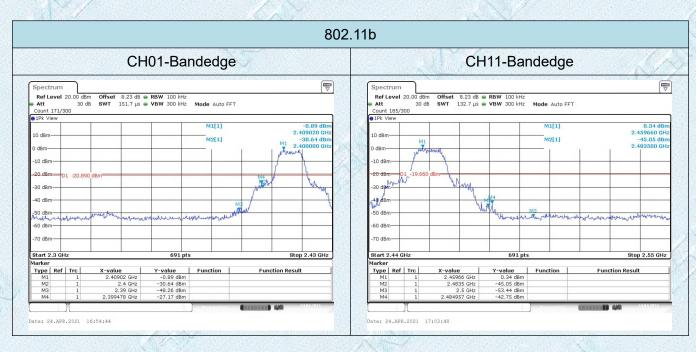
Allow the trace to stabilize.

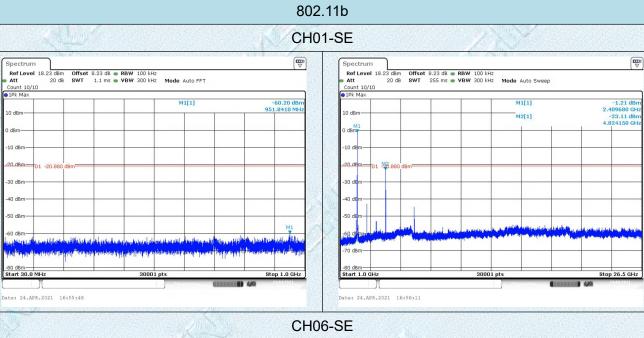
# **Test Mode**

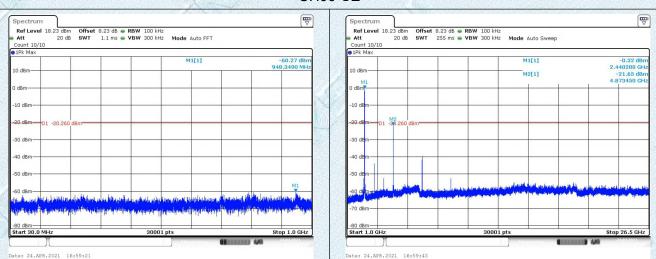
Please refer to the clause 2.2.

# **Test Results**





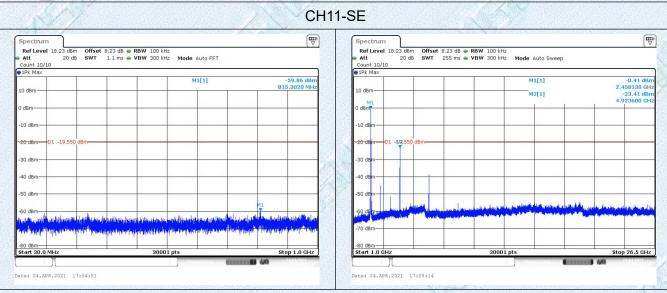


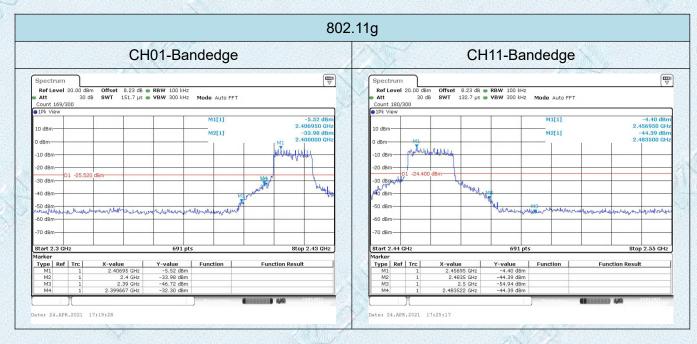


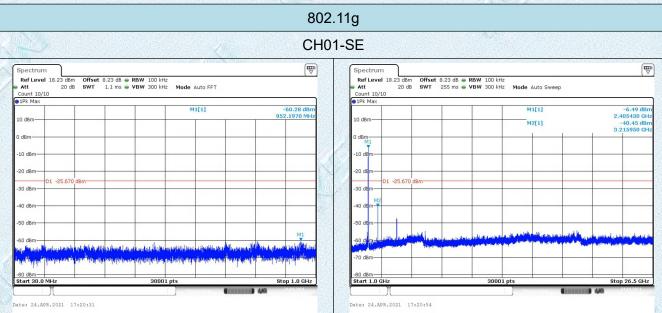


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#### Report No.: KS2104S0883E









-28.1

-30 dBm

40 dB

50 dBm

-60 dE

-70 dBn

M2 M3 M4

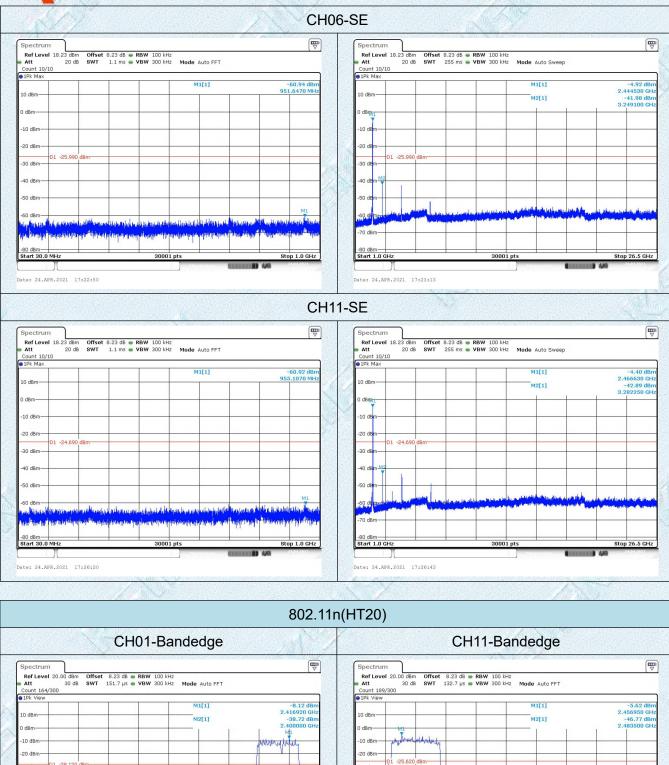
Start 2.3 GHz

Type Ref Trc

Date: 24.APR.2021 17:31:01

# Page 36 of 59

#### Report No.: KS2104S0883E



KSIGN(Guangdong) Testing Co., Ltd.

-30 dBm

Ad dism-

-50 dBm-

-60 dBm -70 dBm

M2 M3 M4

Start 2.44 GHz Marker Type Ref Trc M1 1

Date: 24.APR.2021 17:37:40

180

Stop 2.43 GHz

Function Result

MU ANY

X-value 2.45695 GHz 2.4835 GHz 2.5 GHz 2.484159 GHz

691 pts

Function

Y-value

-46.77 dBm -55.04 dBm -45.43 dBm

adawa

2.55 GHz

Stop

Function Result

MH21

Concerning and

h. Mu

Function

691 pt

Y-value -9.12 dBm

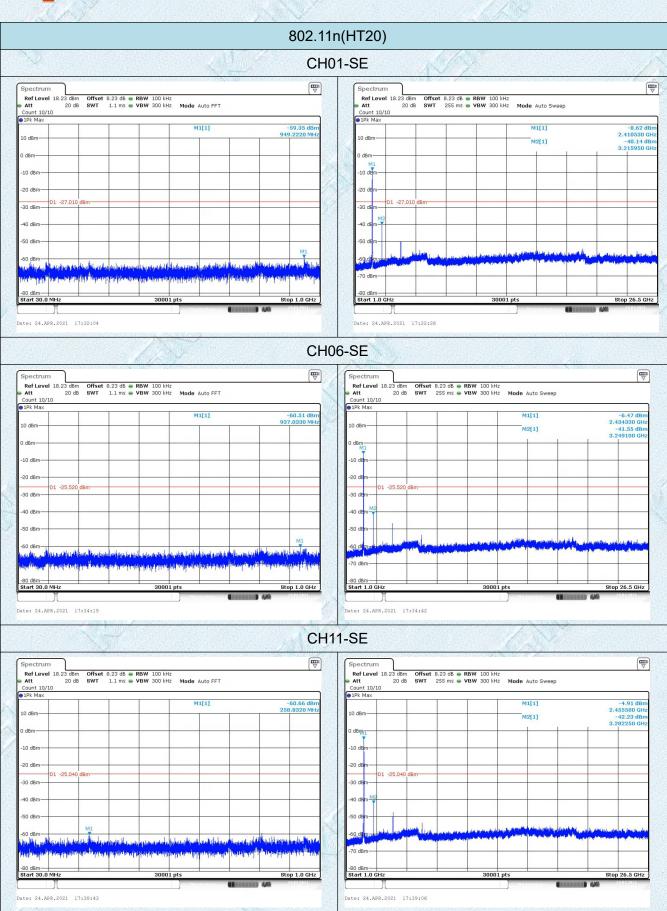
-38.72 dBm -48.96 dBm -38.39 dBm

X-value 2.41692

2.4 GHz 2.39 GHz 2.398348 GHz



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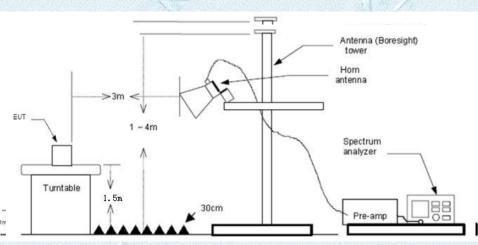
# 3.6. BAND EDGE EMISSIONS(RADIATED)

#### Limit

Restricted Frequency Band	(dBuV/m)(at 3m)			
(MHz)	Peak	Average		
2310~2390	74	54		
2483.5 ~2500	74	54		

Note: All restriction bands have been tested, only the worst case is reported.

# **Test Configuration**



# Test Procedure

- 1. The EUT was setup and tested according to ANSI C63.10:2013 requirements.
- 2. The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
- 3. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
- 4. The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2013 on radiated measurement.
- 5. The receiver set as follow:
  - RBW=1MHz, VBW=3MHz PEAK detector for Peak value.
  - RBW=1MHz, VBW=10Hz with PEAK detector for Average Value.

#### Test Mode

Please refer to the clause 2.2.

### Test Results

Note:

- 1.Measurement = Reading level + Correct Factor
- Correct Factor=Antenna Factor + Cable Loss -Preamplifier Factor
- 2.Pre-scan 802.11b, 802.11g, 802.11n(HT20) mode, and found the 802.11b mode which it is worse case, so only show the test data for worse case.

KSIGN

Test \	Voltag	e: AC	120V/60Hz		1			
Ant. F	Pol.	Hor	izontal					
Test I	Mode:	TX	802.11b Mod	e 2412MHz				
90.0 80 70 60 50	dBuV/m	madagraham A	man & S	ent the section of th	and all and the second	F	CC Part 15C (A	KJ VJ
40 30 20 10.0 2300				(MHz)				2430.0
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
_		MHz	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector
1		2329.718	63.44	-10.95	52.49	74.00	-21.51	peak
2		2343.888	61.13	-10.94	50.19	74.00	-23.81	peak
3	-	2349.699	60.75	-10.93	49.82	74.00	-24.18	peak
4		2390.000	60.01	-10.92	49.09	74.00	-24.91	peak
5	*	2400.000	81.07	-10.92	70.15	74.00	-3.85	peak
6		2400.000	56.20	-10.92	45.28	54.00	-8.72	AVG

Measurement = Reading level + Correct Factor

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Fest Voltage	. AC	120V/60Hz					
		Vertical					
Ant. Pol.							
fest Mode:	TX	802.11b Mod	e 2412 MHz				
90.0 dBuV/m							
80						moning	
					j.F	CC Part 15C (P	K)
70							1
60							Y
			-		Z	CC Part 15C (A	VI I
50			3	12	λ.W		
40	/	Mar Hall	In work have the	andershipshipstophics which a particular the particular states of the p	*		
hings matching	whether the state of the state	the set Property of					
30							
20							
			(MHz)				243
10.0			(MHz)				243
10.0 2300.000		Reading	(MH2) Correct	Measure-			243
10.0	Freq.	Reading		Measure- ment	Limit	Over	243

			LOVUI	i actor	mont			
		MHz	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector
1		2333.839	58.71	-10.93	47.78	74.00	-26.22	peak
2		2347.346	57.89	-10.93	46.96	74.00	-27.04	peak
3		2350.544	60.27	-10.94	49.33	74.00	-24.67	peak
4		2390.000	60.80	-10.92	49.88	74.00	-24.12	peak
5	*	2400.000	76.24	-10.92	65.32	74.00	-8.68	peak
6		2400.000	54.09	-10.92	43.17	54.00	-10.83	AVG
								_

Measurement = Reading level + Correct Factor

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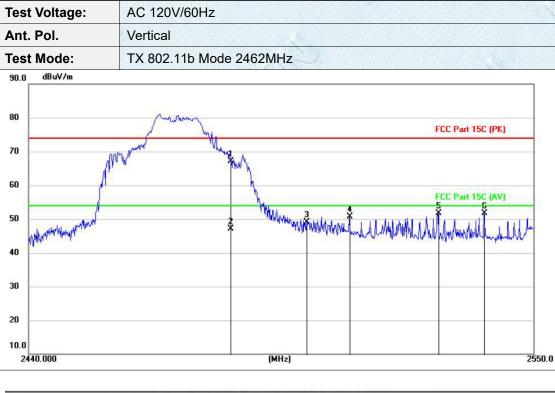
KSIGN®

lest v	oltage		120V/60Hz					
Ant. P	ol.	Hori	zontal					
Test M	ode:	TX 8	302.11b Mode	e 2462MHz				
80 70 60	phagent	pr wat	in the second se	Surry Manager	Borg garage and the state of th		C Part 15C (PK)	
20 10.0 2440.0	100			(MHz)				2550.0
10.0 2440.0	Mk.	Freq.	Reading Level	(MH2) Correct Factor	Measure- ment	Limit	Over	2550.0
10.0 2440.0		Freq. MHz		Correct		Limit (dBuV/m)	Over (dB)	
10.0 2440.0	Mk.		Level	Correct Factor	ment	Constant and	10.101	Detector
10.0 2440.0 NO.	Mk.	MHz	Level (dBuV)	Correct Factor (dB/m)	ment (dBuV/m)	(dBuV/m)	(dB)	Detector
10.0 2440.0 No.	Mk.	MHz 2483.500	Level (dBuV) 77.38	Correct Factor (dB/m) -10.88	ment (dBuV/m) 66.50	(dBuV/m) 74.00	(dB) -7.50	Detector peak AVG
10.0 2440.0 No. 1 2	Mk.	MHz 2483.500 2483.500	Level (dBuV) 77.38 56.06	Correct Factor (dB/m) -10.88 -10.88	ment (dBuV/m) 66.50 45.18	(dBuV/m) 74.00 54.00	(dB) -7.50 -8.82	Detector peak AVG peak
10.0 2440.0 No. 1 2 3	Mk. *	MHz 2483.500 2483.500 2500.000	Level (dBuV) 77.38 56.06 61.19	Correct Factor (dB/m) -10.88 -10.88 -10.88	ment (dBuV/m) 66.50 45.18 50.31	(dBuV/m) 74.00 54.00 74.00	(dB) -7.50 -8.82 -23.69	Detector peak

Measurement = Reading level + Correct Factor

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	Over	Limit	Measure- ment	Correct Factor	Reading Level	Freq.	Mk.	No.
Detector	(dB)	(dBuV/m)	(dBuV/m)	(dB/m)	(dBuV)	MHz		
peak	-6.92	74.00	67.08	-10.88	77.96	2483.500		1
AVG	-6.82	54.00	47.18	-10.88	58.06	2483.500	*	2
peak	-24.88	74.00	49.12	-10.88	60.00	2500.000		3
peak	-23.30	74.00	50.70	-10.87	61.57	2509.377		4
peak	-22.37	74.00	51.63	-10.86	62.49	2528.847		5
peak	-22.32	74.00	51.68	-10.86	62.54	2539.099		6

Measurement = Reading level + Correct Factor



# 3.7. SPURIOUS EMISSION (RADIATED)

# Limit

### Radiated Emission Limits (9 kHz~1000 MHz)

Frequency (MHz)	Field Strength (microvolt/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

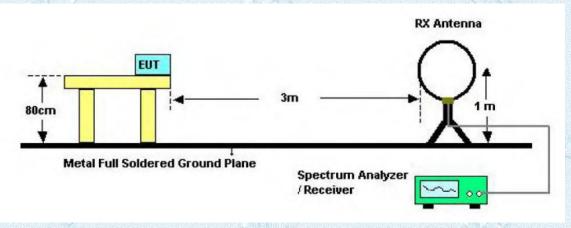
### Radiated Emission Limit (Above 1000MHz)

Frequency	Distance Meters(at 3m)				
(MHz)	Peak	Average			
Above 1000	74	54			

#### Note:

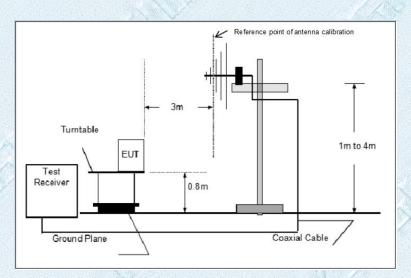
- (1) The tighter limit applies at the band edges.
- (2) Emission Level (dBuV/m)=20log Emission Level (uV/m).

# **Test Configuration**

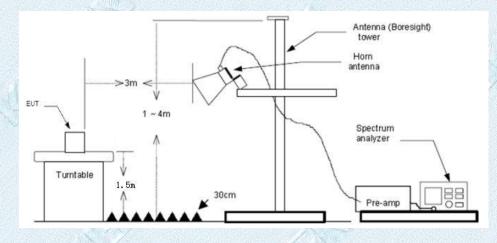


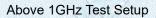
Below 30MHz Test Setup





Below 1000MHz Test Setup





# Test Procedure

- 1. The EUT was setup and tested according to ANSI C63.10:2013
- 2. The EUT is placed on a turn table which is 0.8 meter above ground for below 1 GHz, and 1.5 m for above 1 GHz. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
- 3. The EUT was set 3 meters from the receiving antenna, which was mounted on the top of a variable height antenna tower.
- 4. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.
- 5. Set to the maximum power setting and enable the EUT transmit continuously.
- 6. Use the following spectrum analyzer settings
  - (1) Span shall wide enough to fully capture the emission being measured;
  - (2) Below 1 GHz:
  - RBW=120 kHz, VBW=300 kHz, Sweep=auto, Detector function=peak, Trace=max hold;

If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

(3) From 1 GHz to 10<sup>th</sup> harmonic:

RBW=1MHz, VBW=1MHz Peak detector for Peak value.

RBW=1MHz, VBW=10Hz Peak detector for Peak value.



#### Test Mode

Please refer to the clause 2.2.

## Test Result

### 9 KHz~30 MHz and 18GHz~25GHz

From 9 KHz~30 MHz and 18GHz~25GHz: Conclusion: PASS

#### Note:

- Measurement = Reading level + Correct Factor Correct Factor=Antenna Factor + Cable Loss -Preamplifier Factor
- The peak level is lower than average limit(54 dBuV/m), this data is the too weak instrument of signal is unable to test.
- 3) The emission levels of other frequencies are very lower than the limit and not show in test report.
- 4) The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
- 5) Pre-scan 802.11b/g/n(HT20) modulation, and found the 802.11b modulation which it is worse case for above 1GHz, so only show the test data for worse case.

# **BELOW 30MHZ**

No emission found between lowest internal used/generated frequencies to 30MHz.



Test Vol	Itage:	AC 1	20V/60Hz			-1.18.35		
Ant. Pol	I.	Horiz	zontal		-			
Test Mo	de:	TX 8	02.11b Moc	le 2412MHz	20			
80.0 dBu	uV/m					11 1		
70								
60						FCC Part 150	C (30MHz-1GHz	a
50							Margin -6	
40								
30						4.5		
20				when	m Munum	TIME	utoroutelesseel	Judgerand
	and plate the man	100 E0	My wand what when	(MHz)	and the second	TIME	. tore when the	1000.1
10 ///-/h-///		60	100 Reading Level	ми (мнг) Correct Factor	Measure- ment	all and the stand and and and and and and and and and	Over	1000.1
10 ///-/h./// 0.0 30.000	1k. Fr	60	Reading	Correct	Measure-	500		1000.
10 ///-/h./// 0.0 30.000	1k. Fr	eq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
10 0.0 30.000	/k. Fr M	60 eq. Hz 997	Reading Level (dBuV)	Correct Factor (dB/m)	Measure- ment (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector
10 0.0 30.000 No. M	/lk. Fr M 137.9	60 eq. Hz 997 732	Reading Level (dBuV) 43.95	Correct Factor (dB/m) -21.32	Measure- ment (dBuV/m) 22.63	Limit (dBuV/m) 43.50	Over (dB) -20.87	Detector QP
10 0.0 30.000 No. M 1 2	/lk. Fr M 137.9 226.9	60 eq. Hz 997 732 380	Reading Level (dBuV) 43.95 33.83	Correct Factor (dB/m) -21.32 -16.77	Measure- ment (dBuV/m) 22.63 17.06	Limit (dBuV/m) 43.50 46.00	Over (dB) -20.87 -28.94	Detector QP QP
10 0.0 30.000 No. N 1 2 3	Ak. Fr M 137.9 226.9 250.0	60 eq. Hz 997 732 380 169	Reading Level (dBuV) 43.95 33.83 34.12	Correct Factor (dB/m) -21.32 -16.77 -15.73	Measure- ment (dBuV/m) 22.63 17.06 18.39	Limit (dBuV/m) 43.50 46.00 46.00	Over (dB) -20.87 -28.94 -27.61	QP QP QP

Measurement = Reading Level+ Correct Factor

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Test Volta	ge:	AC 120V/60	Hz		N/		
Ant. Pol.		Vertical		X	T		1
Test Mode	<b>;;</b>	TX 802.11b	Mode 2412MHz	<u>z</u>			
80.0 dBuV/	m						
70							
60			-		FCC Part 15C	(30MHz-1GHz)	
50						Margin -6 d	B F
40							
30		1.15	3.				
20 Marina 10	alway way	man Anna an		the Annal	Stand and the stand have	and an united the	Argun
0.0		60	100 (MHz)		500		1000.0
No. Mk.	. Fred	Readi q. Lev	•	Measure- ment	Limit	Over	
	MHz	dBu\	/) (dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector
1	47.308	89 36.2	1 -15.88	20.33	40.00	-19.67	QP
2	73.38	51 35.7	6 -20.05	15.71	40.00	-24.29	QP
3 *	124.176	65 44.9	9 -19.99	25.00	43.50	-18.50	QP
4	136.89	12 43.8	9 -21.34	22.55	43.50	-20.95	QP
5	198.03	16 33.8	2 -18.09	15.73	43.50	-27.77	QP
6	396.102	26 32.5	2 -11.04	21.48	46.00	-24.52	QP

Measurement = Reading Level+ Correct Factor



-22.20

-31.38

-23.81

-9.86

-10.09

-21.13

peak

peak

peak

peak

AVG

peak

74.00

74.00

74.00

74.00

54.00

74.00

est Volta	ge: AC	: 120V/60Hz			Seland Contraction		
Ant. Pol.	Hc	rizontal					
est Mode	e: TX	802.11b Mod	de 2412MHz				
90.0 dBuV/	m		1			Î.	
80						FCC Part 15C (F	**
70				4		FLL Part 15L (F	KJ
60				4×	6	FCC Part 15C (A	v)
50			× 3	2	<b>.</b>	atrainer what the intervention	humanit
40				adamathalating	and the set the		
30 Martine	ertailetheophyterendelige	mountersplantersplanter					
20							
10.0			(MHz)		8000		180
No. Mk	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
	MHz	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m	) (dB)	Detecto

-10.19

-9.52

-8.37

-5.87

-5.87

0.01

51.80

42.62

50.19

64.14

43.91

52.87

Measurement = Reading level + Correct Factor

61.99

52.14

58.56

70.01

49.78

52.86

3216.800

3563.600

4019.200

4823.300

4823.300

7235.600

1

2

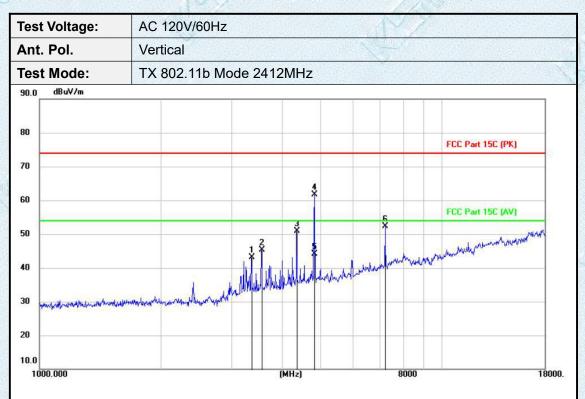
3

4

5

6

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No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
-		MHz	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector
1		3366.400	53.09	-9.93	43.16	74.00	-30.84	peak
2		3563.600	54.89	-9.52	45.37	74.00	-28.63	peak
3		4355.800	58.21	-7.24	50.97	74.00	-23.03	peak
4		4823.300	67.53	-5.87	61.66	74.00	-12.34	peak
5	*	4823.300	50.05	-5.87	44.18	54.00	-9.82	AVG
6		7235.600	52.22	0.01	52.23	74.00	-21.77	peak

Measurement = Reading level + Correct Factor

Page 50 of 59

AC 120V/60Hz

KSIGN®

Test Voltage:

Ant. Pol. Horizontal Test Mode: TX 802.11b Mode 2437MHz dBu∀/m 90.0 80 FCC Part 15C (PK) 70 60 FCC Part 15C (AV) 50 5×4× 2 X 40 30 20 10.0 1000.000 (MHz) 8000 18000 Reading Correct Measure-No. Mk. Freq. Limit Over Level Factor ment MHz (dBuV) (dB/m) (dBuV/m) (dBuV/m) (dB) Detector 1 3249.100 54.08 -10.14 43.94 74.00 -30.06 peak 2 3366.400 50.33 -9.93 40.40 74.00 -33.60 peak 3 3563.600 53.94 -9.52 44.42 74.00 -29.58 peak 4 4257.200 47.54 -7.57 39.97 74.00 -34.03 peak 4355.800 52.38 -7.24 45.14 74.00 -28.86 5 peak

Measurement = Reading level + Correct Factor

38.24

11.17

49.41

74.00

-24.59

peak

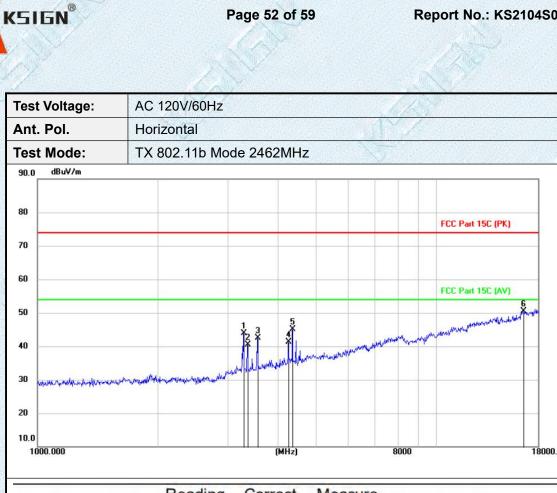
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6

KSIGN

lest \	Voltage	: AC	120V/60Hz					
Ant. I	Pol.	Ver	rtical					
lest	Mode:	ТХ	802.11b Mo	de 2437MHz	z			
90.0	dBuV/m							
80							CC Part 15C (PI	
70								
60 -						P	CC Part 15C (AV	n
50				2 3 X X			within the	whenter
				. 4	3	11 110	Charles and a second	
40 -					Mather House Proversion	or many work		
1.04	lensed britage have	hillowersen have no been and the	unon almon and	. M.	Milleline and proversioned	et Manufacture -		
30 <sub>44</sub> 4	lancest-britantsakanta	hellowersen have no approximate	www.whereastream.com/	Manalialda	Millin Vin Martin			
30 20		hdhousenhomenegesedow	on where the same of the		Million Maria Maria			
30 20		hillowskie her her species her	hteronologian established for the second	(MHz)		8000		
30 x44 20 10.0 1000		Freq.	Reading Level		Measure- ment		Over	
30 x44 20 10.0 1000	0.000		Reading	(MHz) Correct	Measure-	8000		1800
30 x44 20 10.0 1000	 Mk.	Freq.	Reading	(мн₂) Correct Factor	Measure- ment	8000 Limit	Over	1800 Detecto
30 44 20 10.0 1000	 Mk. 3	Freq. MHz	Reading Level (dBuV)	мн <sub>2</sub> ) Correct Factor (dB/m)	Measure- ment (dBuV/m)	8000 Limit (dBuV/m)	Over (dB)	Detecto
30 44 20 10.0 0 1000 NO.	 Mk. 3:	Freq. MHz 366.400	Reading Level (dBuV) 50.55	(MHz) Correct Factor (dB/m) -9.93	Measure- ment (dBuV/m) 40.62	8000 Limit (dBuV/m) 74.00	Over (dB) -33.38	Detecto peak peak
30 20 10.0 1000 No.	 Mk. 3: 3: 4:	Freq. MHz 366.400 563.600	Reading Level (dBuV) 50.55 58.68	(MHz) Correct Factor (dB/m) -9.93 -9.52	Measure- ment (dBuV/m) 40.62 49.16	8000 Limit (dBuV/m) 74.00 74.00	Over (dB) -33.38 -24.84	Detecto peak peak
20 10.0 1000 No. 1 2 3	 Mk. 3: 3: 4: 4:	Freq. MHz 366.400 563.600 355.800	Reading Level (dBuV) 50.55 58.68 56.07	(мнг) Correct Factor (dB/m) -9.93 -9.52 -7.24	Measure- ment (dBuV/m) 40.62 49.16 48.83	8000 Limit (dBuV/m) 74.00 74.00 74.00	Over (dB) -33.38 -24.84 -25.17	Detecto peak peak peak peak

Measurement = Reading level + Correct Factor



Over	Limit	Measure- ment	Correct Factor	Reading Level	Freq.	Mk	No.
(dB)	(dBuV/m)	(dBuV/m)	(dB/m)	(dBuV)	MHz		
-30.00	74.00	44.00	-10.08	54.08	3283.100		1
-33.44	74.00	40.56	-9.93	50.49	3366.400		2
-31.52	74.00	42.48	-9.52	52.00	3563.600		3
-32.65	74.00	41.35	-7.57	48.92	4257.200		4
-28.91	74.00	45.09	-7.24	52.33	4355.800		5
-23.42	74.00	50.58	13.77	36.81	16524.400	*	6
	(dB) -30.00 -33.44 -31.52 -32.65 -28.91	(dBuV/m)(dB)74.00-30.0074.00-33.4474.00-31.5274.00-32.6574.00-28.91	mentLimitOver(dBuV/m)(dBuV/m)(dB)44.0074.00-30.0040.5674.00-33.4442.4874.00-31.5241.3574.00-32.6545.0974.00-28.91	FactormentLimitOver(dB/m)(dBuV/m)(dBuV/m)(dB)-10.0844.0074.00-30.00-9.9340.5674.00-33.44-9.5242.4874.00-31.52-7.5741.3574.00-32.65-7.2445.0974.00-28.91	LevelFactormentLimitOver(dBuV)(dB/m)(dBuV/m)(dBuV/m)(dB)54.08-10.0844.0074.00-30.0050.49-9.9340.5674.00-33.4452.00-9.5242.4874.00-31.5248.92-7.5741.3574.00-32.6552.33-7.2445.0974.00-28.91	Freq.LevelFactormentLimitOverMHz(dBuV)(dB/m)(dBuV/m)(dBuV/m)(dBuV/m)(dB)3283.10054.08-10.0844.0074.00-30.003366.40050.49-9.9340.5674.00-33.443563.60052.00-9.5242.4874.00-31.524257.20048.92-7.5741.3574.00-32.654355.80052.33-7.2445.0974.00-28.91	Mk.      Freq.      Level      Factor      ment      Limit      Over        MHz      (dBuV)      (dB/m)      (dBuV/m)      (dBuV/m)      (dBuV/m)      (dB)        3283.100      54.08      -10.08      44.00      74.00      -30.00        3366.400      50.49      -9.93      40.56      74.00      -33.44        3563.600      52.00      -9.52      42.48      74.00      -31.52        4257.200      48.92      -7.57      41.35      74.00      -32.65        4355.800      52.33      -7.24      45.09      74.00      -28.91

Measurement = Reading level + Correct Factor



Test \	Volta	ue.	AC	120V/60Hz			1/183		
Ant.		90.	Vert						
Test		e:	1414 AND 141		de 2462MHz	,			
90.0	dBuV/								
80							i i i i i i i i i i i i i i i i i i i	CC Part 15C (PI	K)
70									
60							F	CC Part 15C (A)	n
50									ventrent
					1 3	E			
40						HALIMAN PARA	where here have		
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30 wh		in the state of the second	hulunada	an a		attle and			
30 wh 20	0.000 Mk.			Reading Level	(MHz)	Measure- ment	8000 Limit	Over	18000.
30 + 20	0.000		:q.	Reading	(MHz) Correct	Measure-	8000		
30 wh 20	0.000	. Fre	eq. z	Reading Level	Correct Factor	Measure- ment	8000 Limit	Over	18000.
30	0.000	. Fre	eq. z	Reading Level (dBuV)	(MHz) Correct Factor (dB/m)	Measure- ment (dBuV/m)	8000 Limit (dBuV/m)	Over (dB)	18000. Detector
30	0.000 Mk.	. Fre MH: 3366.4	z 2 2 2 00 500	Reading Level (dBuV) 52.54	(MHz) Correct Factor (dB/m) -9.93	Measure- ment (dBuV/m) 42.61	8000 Limit (dBuV/m) 74.00	Over (dB) -31.39	18000. Detector peak
30	0.000 Mk.	. Fre MH: 3366.4 3563.6	eq. z 00 600	Reading Level (dBuV) 52.54 58.87	(MHz) Correct Factor (dB/m) -9.93 -9.52	Measure- ment (dBuV/m) 42.61 49.35	8000 Limit (dBuV/m) 74.00 74.00	Over (dB) -31.39 -24.65	Detector peak peak
30 10.0 10.0 1000 No. 1 20 1000 10000	0.000 Mk.	. Fre MH: 3366.4 3563.6 4158.6	eq. z 600 600 600	Reading Level (dBuV) 52.54 58.87 50.47	(MHz) Correct Factor (dB/m) -9.93 -9.52 -7.91	Measure- ment (dBuV/m) 42.61 49.35 42.56	8000 Limit (dBuV/m) 74.00 74.00 74.00	Over (dB) -31.39 -24.65 -31.44	Detector peak peak peak

Measurement = Reading level + Correct Factor



# **3.8. CONDUCTED EMISSION**

## Limit

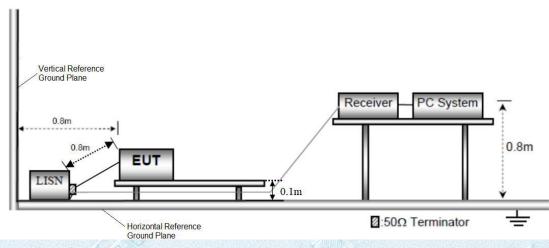
### **Conducted Emission Test Limit**

Francis	Maximum RF Line Voltage (dBµV)				
Frequency	Quasi-peak Level	Average Level			
150kHz~500kHz	66 ~ 56 *	56 ~ 46 *			
500kHz~5MHz	56	46			
5MHz~30MHz	60	50			

#### Notes:

- (1) \*Decreasing linearly with logarithm of the frequency.
- (2) The lower limit shall apply at the transition frequencies.
- (3) The limit decrease in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

### Test Configuration



#### Test Procedure

- 1. The EUT was setup according to ANSI C63.10:2013 requirements.
- 2. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 0.1m above the conducting ground plane. The vertical conducting plane was located 80 cm to the rear of the EUT. All other surfaces of EUT were at least 0.8m from any other grounded conducting surface.
- The EUT and simulators are connected to the main power through a line impedances stabilization network (LISN). The LISN provides a 50ohm /50uH coupling impedance for the measuring equipment.
  The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs)
- 4. Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.
- 5. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
- 6. Conducted Emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.
- 7. During the above scans, the emissions were maximized by cable manipulation.

#### Test Mode:

Please refer to the clause 2.2.

# **Test Results**

Pre-scan 802.11b/g/n(HT20) modulation, and found the 802.11bmodulation 2412MHz which it is worse case, so only show the test data for worse case.

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Terminal:	Line						
Test Mode:	Charg	ging+2.4G W	/IFI				
80.0 dBuV							
60					FCC Part	15 ClassB (QP)	
					FCC Part	15 ClassB (AVG)	
50 WU						, internation .	
40 M	Ville in the All	Anderstein	N. Walter Har	Allah du	4.8	WWW MAN	
30	4114	. WWWWW	while out, channelling		17° 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		14
20 Man	manu A	Mayna wata	humania	8 10		WWWWWW	1 mg
	. Mm a.	handersteinen ander Me	19 Wester	Mayner	MAAMM	MARK.	peak
10							AVG
0.0 0.150			(MHz)				30.000
No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1	0.2020	29.82	10.88	40.70	63.53	-22.83	QP
2	0.2020	10.81	10.88	21.69	53.53	-31.84	AVG
3	0.5220	27.30	10.91	38.21	56.00	-17.79	QP
4	0.5220	12.27	10.91	23.18	46.00	-22.82	AVG
5	0.9940	22.05	10.87	32.92	56.00	-23.08	QP
6	0.9940	9.04	10.87	19.91	46.00	-26.09	AVG
7	2.7500	23.02	10.91	33.93	56.00	-22.07	QP
8	2.7500	8.60	10.91	19.51	46.00	-26.49	AVG
9	4.6940	21.62	10.98	32.60	56.00	-23.40	QP
10	4.6940	7.58	10.98	18.56	46.00	-27.44	AVG
11 *	17.3940	31.45	11.14	42.59	60.00	-17.41	QP
12	17.3940	13.98	11.14	25.12	50.00	-24.88	AVG

Remarks:

KSIGN®

Test Voltage:

AC 120V/60Hz

1.Measurement = Reading Level+ Correct Factor 2.Over = Measurement -Limit

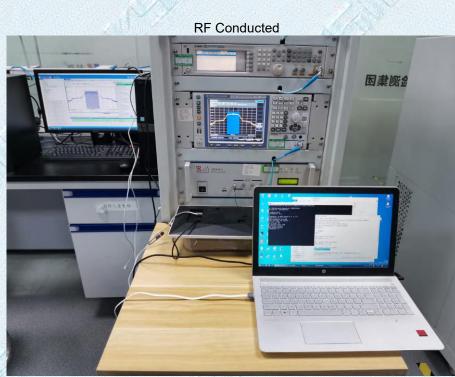
est Voltage:	AC 12	0V/60Hz			Story .		
erminal:	Neutra	al 💙					
est Mode:	Chargi	ing+WIFI					
	MMMM	Milleland				15 ClassB (QP) 5 ClassB (AVG)	
	mon A	An realization	(MHz)		myrmmnt myrmmnt	AMMY BELL	pea Ave 30.000
		Reading	Correct	Measure			
No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	D.4.4
	MHz	Level dBuV	Factor dB	ment dBuV	Limit dBuV	dB	Detecto
1 * (	MHz 0.1539	Level dBuV 41.74	Factor dB 10.83	ment dBuV 52.57	Limit dBuV 65.79	dB -13.22	QP
1 * (	MHz	Level dBuV	Factor dB	ment dBuV	Limit dBuV	dB	QP
1 * 0	MHz 0.1539	Level dBuV 41.74	Factor dB 10.83	ment dBuV 52.57	Limit dBuV 65.79	dB -13.22	QP AVC
1 * ( 2 ( 3 (	MHz 0.1539 0.1539	Level dBuV 41.74 18.45	Factor dB 10.83 10.83	ment dBuV 52.57 29.28	Limit dBuV 65.79 55.79	dB -13.22 -26.51	QP AVC QP
1 * ( 2 ( 3 ( 4 (	MHz 0.1539 0.1539 0.2020	Level dBuV 41.74 18.45 37.18	Factor dB 10.83 10.83 10.88	ment dBuV 52.57 29.28 48.06	Limit dBuV 65.79 55.79 63.53	dB -13.22 -26.51 -15.47	QP AVC QP AVC
1 * 0 2 0 3 0 4 0 5 0	MHz 0.1539 0.1539 0.2020 0.2020	Level dBuV 41.74 18.45 37.18 12.71	Factor dB 10.83 10.83 10.88 10.88	ment dBuV 52.57 29.28 48.06 23.59	Limit dBuV 65.79 55.79 63.53 53.53	dB -13.22 -26.51 -15.47 -29.94	QP AVC QP AVC
1    *      2    0      3    0      4    0      5    0      6    0	MHz 0.1539 0.1539 0.2020 0.2020 0.2020 0.5060	Level dBuV 41.74 18.45 37.18 12.71 24.43	Factor dB 10.83 10.83 10.88 10.88 10.88	ment dBuV 52.57 29.28 48.06 23.59 35.31	Limit dBuV 65.79 55.79 63.53 53.53 56.00	dB -13.22 -26.51 -15.47 -29.94 -20.69	QP AVC QP AVC QP AVC
1    *      2    0      3    0      4    0      5    0      6    0      7    3	MHz 0.1539 0.2020 0.2020 0.2020 0.5060 0.5060 3.2260	Level dBuV 41.74 18.45 37.18 12.71 24.43 14.13 18.57	Factor dB 10.83 10.83 10.88 10.88 10.88 10.88 10.88 10.93	ment dBuV 52.57 29.28 48.06 23.59 35.31 25.01 29.50	Limit dBuV 65.79 55.79 63.53 53.53 56.00 46.00 56.00	dB -13.22 -26.51 -15.47 -29.94 -20.69 -20.99 -26.50	QP AVC QP AVC QP AVC
1    *      2    0      3    0      4    0      5    0      6    0      7    3      8    3	MHz 0.1539 0.2020 0.2020 0.5060 0.5060 3.2260 3.2260	Level dBuV 41.74 18.45 37.18 12.71 24.43 14.13 18.57 5.00	Factor dB 10.83 10.83 10.88 10.88 10.88 10.88 10.88 10.93 10.93	ment dBuV 52.57 29.28 48.06 23.59 35.31 25.01 29.50 15.93	Limit dBuV 65.79 55.79 63.53 53.53 56.00 46.00 46.00	dB -13.22 -26.51 -15.47 -29.94 -20.69 -20.99 -26.50 -30.07	QP AVC QP AVC QP AVC QP
1    *      2    0      3    0      4    0      5    0      6    0      7    2      8    2      9    4	MHz 0.1539 0.1539 0.2020 0.2020 0.5060 0.5060 3.2260 3.2260 4.9340	Level dBuV 41.74 18.45 37.18 12.71 24.43 14.13 18.57 5.00 19.16	Factor dB 10.83 10.83 10.88 10.88 10.88 10.88 10.88 10.93 10.93 10.97	ment dBuV 52.57 29.28 48.06 23.59 35.31 25.01 29.50 15.93 30.13	Limit dBuV 65.79 55.79 63.53 53.53 56.00 46.00 56.00 56.00	dB -13.22 -26.51 -15.47 -29.94 -20.69 -20.99 -26.50 -30.07 -25.87	QP AVC QP AVC QP AVC QP AVC
1    *      2    0      3    0      4    0      5    0      6    0      7    2      8    2      9    4      10    4	MHz 0.1539 0.2020 0.2020 0.5060 0.5060 3.2260 3.2260	Level dBuV 41.74 18.45 37.18 12.71 24.43 14.13 18.57 5.00	Factor dB 10.83 10.83 10.88 10.88 10.88 10.88 10.88 10.93 10.93	ment dBuV 52.57 29.28 48.06 23.59 35.31 25.01 29.50 15.93	Limit dBuV 65.79 55.79 63.53 53.53 56.00 46.00 46.00	dB -13.22 -26.51 -15.47 -29.94 -20.69 -20.99 -26.50 -30.07	Detecto QP AVC QP AVC QP AVC QP AVC QP AVC

Remarks:

1.Measurement = Reading Level+ Correct Factor 2.Over = Measurement -Limit







Conducted Emission





Please refer to External Photographs and Internal Photographs