

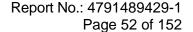


Report No.: 4791489429-1 Page 51 of 152

## **PART 2: CONDUCTED BANDEDGE**

# **TEST RESULTS TABLE**

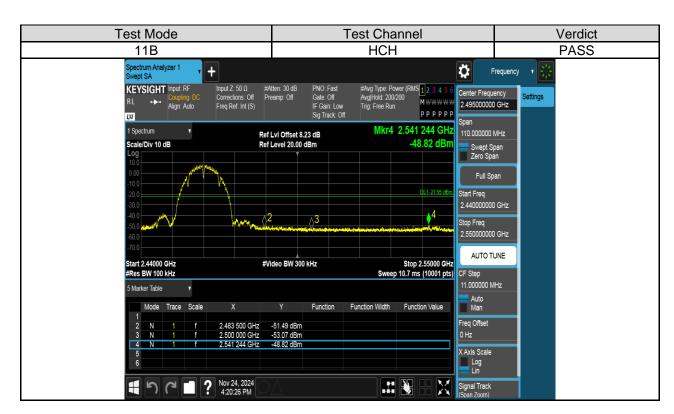
Test Mode	Test Channel	Result	Verdict
11B	LCH	Refer to the Test Graph	PASS
ПБ	HCH	Refer to the Test Graph	PASS
11G	LCH	Refer to the Test Graph	PASS
IIG	HCH	Refer to the Test Graph	PASS
11N HT20	LCH	Refer to the Test Graph	PASS
	HCH	Refer to the Test Graph	PASS
11N HT40	LCH	Refer to the Test Graph	PASS
	HCH	Refer to the Test Graph	PASS

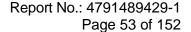




#### **TEST GRAPHS**

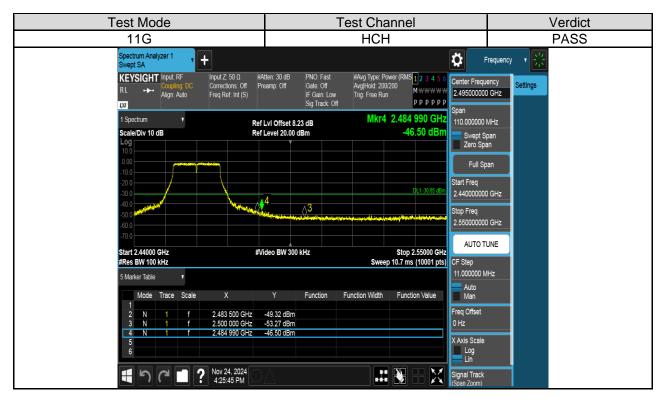


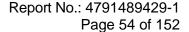




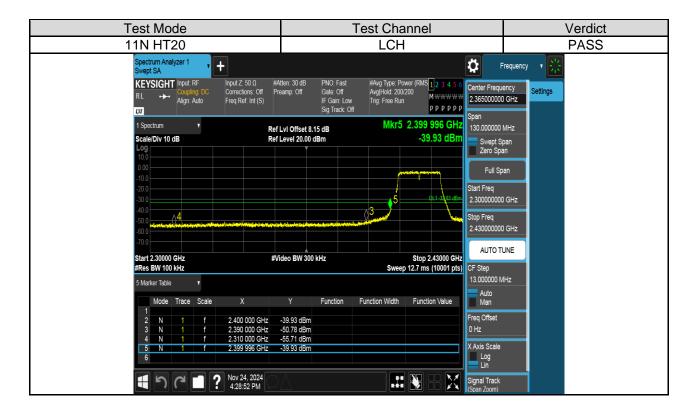


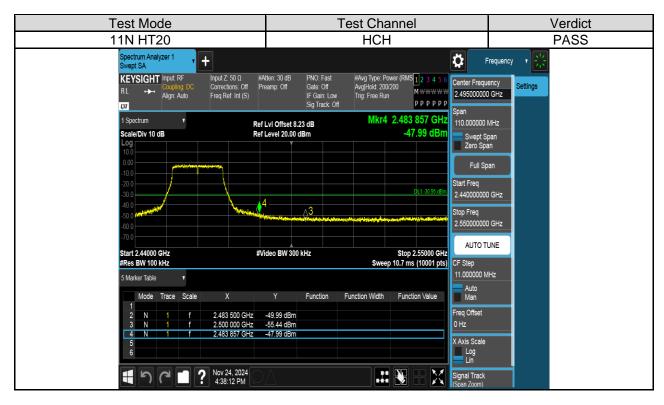


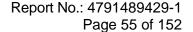




















Report No.: 4791489429-1 Page 56 of 152

## **PART 3: CONDUCTED SPURIOUS EMISSION**

# **TEST RESULTS TABLE**

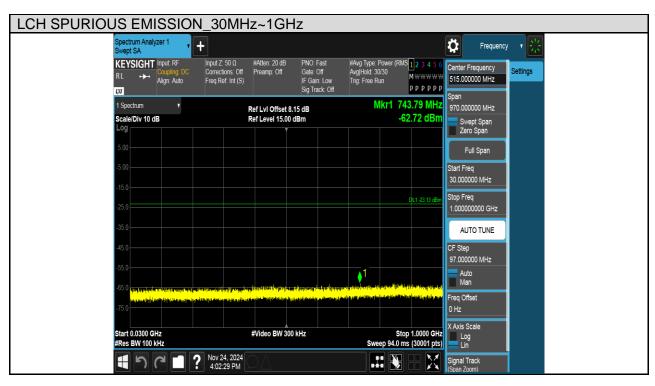
Test Mode	Test Channel	Result	Verdict
	LCH	Refer to the Test Graph	PASS
11B	MCH	Refer to the Test Graph	PASS
	HCH	Refer to the Test Graph	PASS
	LCH	Refer to the Test Graph	PASS
11G	MCH	Refer to the Test Graph	PASS
	HCH	Refer to the Test Graph	PASS
	LCH	Refer to the Test Graph	PASS
11N HT20	MCH	Refer to the Test Graph	PASS
	HCH	Refer to the Test Graph	PASS
	LCH	Refer to the Test Graph	PASS
11N HT40	MCH	Refer to the Test Graph	PASS
	HCH	Refer to the Test Graph	PASS



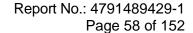


#### **TEST GRAPHS**

Test Mode	Channel	Verdict
11B	LCH	PASS

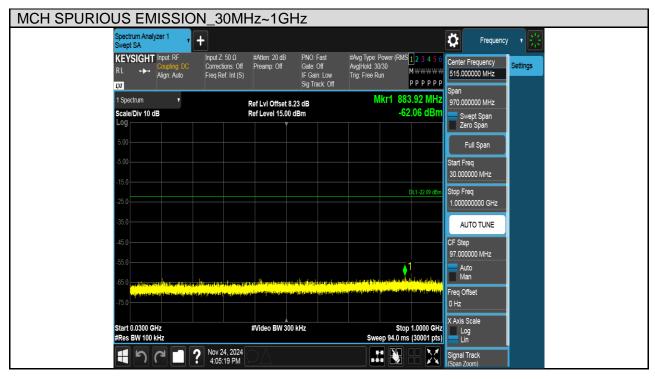




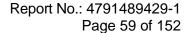




Test Mode	Channel	Verdict
11B	MCH	PASS

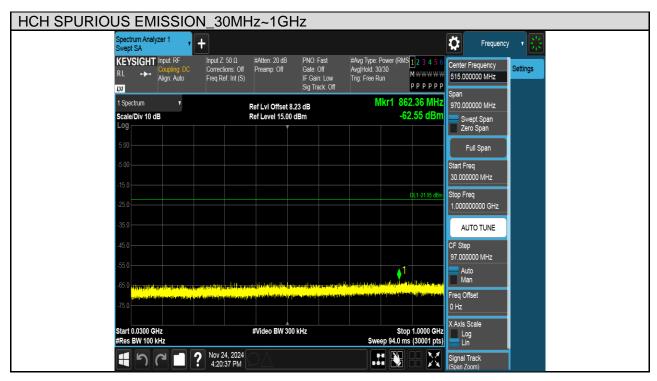




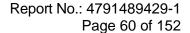




Test Mode	Channel	Verdict
11B	HCH	PASS

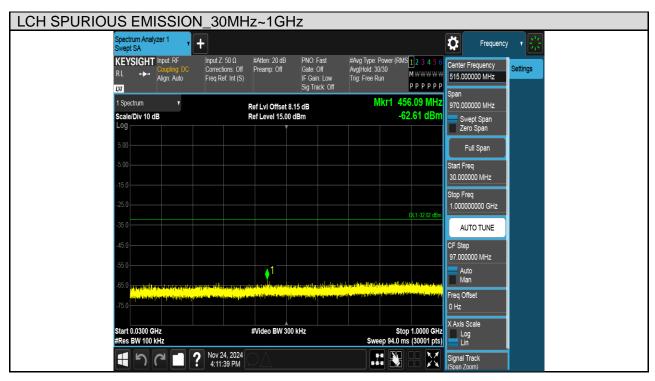








Test Mode	Channel	Verdict
11G	LCH	PASS

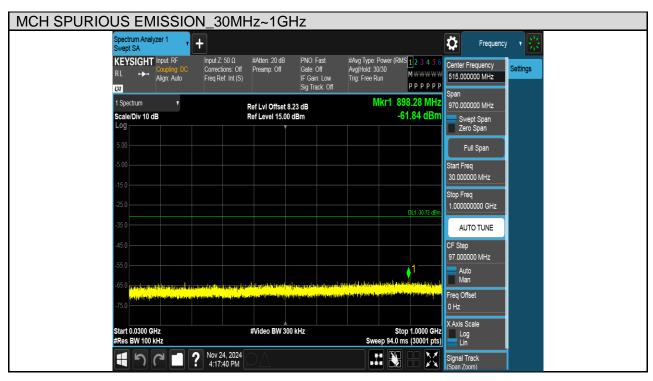


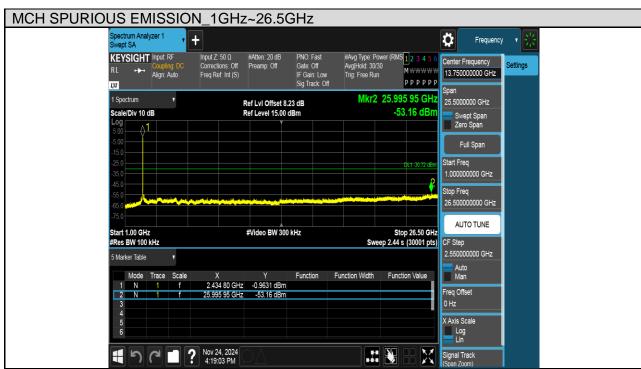


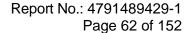




Test Mode	Channel	Verdict
11G	MCH	PASS

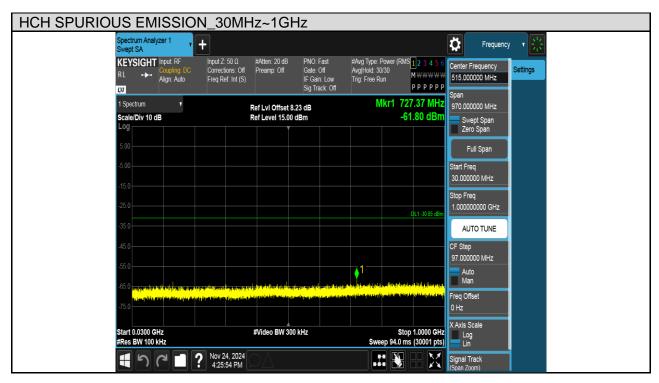




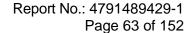




Test Mode	Channel	Verdict
11G	HCH	PASS

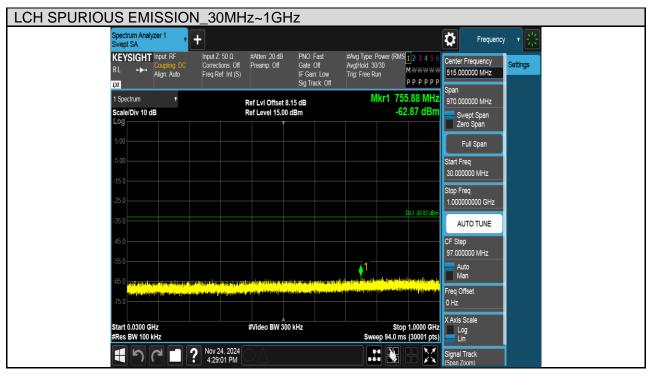




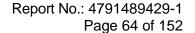




Test Mode	Channel	Verdict
11N HT20	LCH	PASS

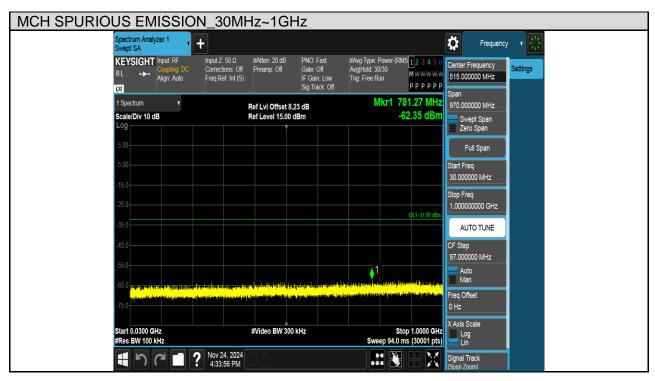


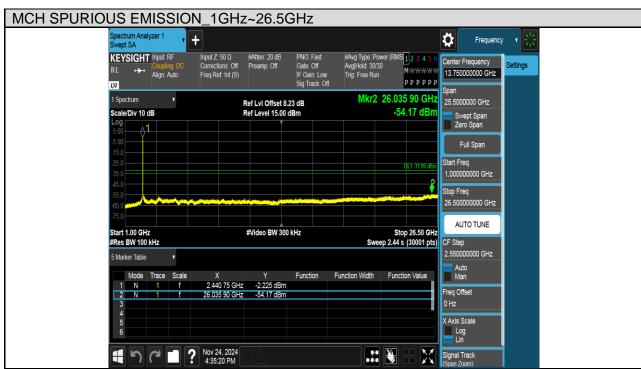


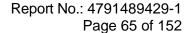




Test Mode	Channel	Verdict
11N HT20	MCH	PASS

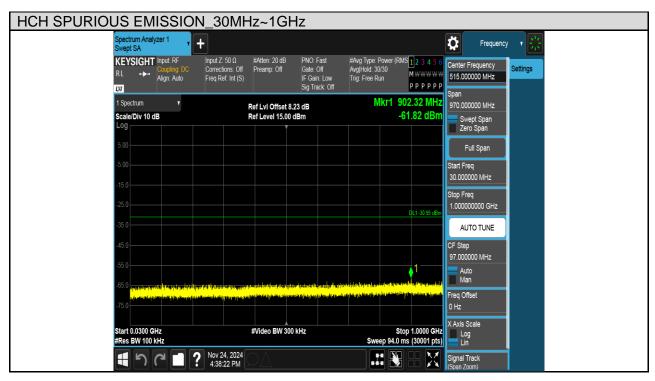




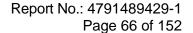




Test Mode	Channel	Verdict
11N HT20	HCH	PASS

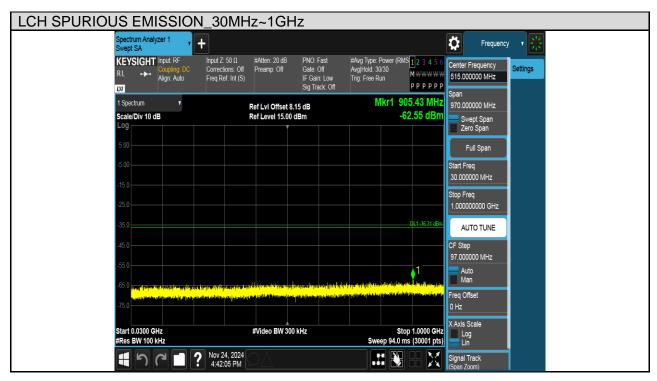








Test Mode	Channel	Verdict
11N HT40	LCH	PASS

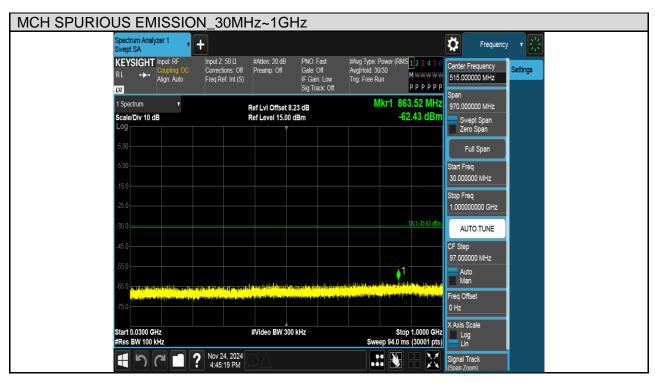




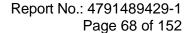




Test Mode	Channel	Verdict
11N HT40	MCH	PASS

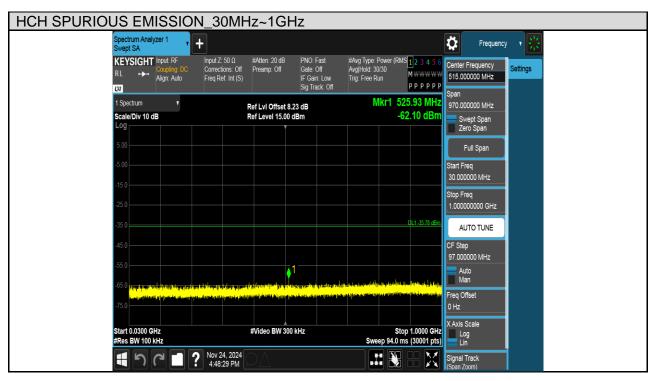








Test Mode	Channel	Verdict
11N HT40	HCH	PASS







Page 69 of 152

## 8. RADIATED TEST RESULTS

## 8.1. LIMITS AND PROCEDURE

### **LIMITS**

Please refer to FCC §15.205 and §15.209, ISED RSS-247 Clause 5.5, ISED RSS-GEN Clause 8.9&6.13 (Transmitter)

Radiation Disturbance Test Limit for ISED (9kHz-1GHz)

Except where otherwise indicated in the applicable RSS, radiated emissions shall comply with the field strength limits shown in table 5 and table 6. Additionally, the level of any transmitter unwanted emission shall not exceed the level of the transmitter's fundamental emission.

Table 5 – General field strength limits at frequencies above 30 MHz		
Frequency (MHz)	Field strength (μV/m at 3 m)	
30 - 88	100	
88 - 216	150	
216 - 960	200	
Above 960	500	

Table 6 – General field strength limits at frequencies below 30 MHz			
Frequency Magnetic field strength (H-Field) (µA/m) Measurement distance (m)			
9 - 490 kHz <sup>Note 1</sup>	6.37/F (F in kHz)	300	
490 - 1705 kHz	63.7/F (F in kHz)	30	
1.705 - 30 MHz	0.08	30	

**Note 1:** The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.



Page 70 of 152

#### Please refer to FCC KDB 558074

Radiation Disturbance Test Limit for FCC (Class B) (9kHz-1GHz)

Frequency	Field Strength	Measurement Distance
(MHz)	(microvolts/meter)	(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
960~1000	500	3

Note: 1) At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

(2) At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). This paragraph (f) shall not apply to Access BPL devices operating below 30 MHz.



Page 71 of 152

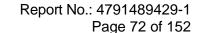
# Radiation Disturbance Test Limit for FCC (Above 1G)

Frequency (MHz)	dB(uV/m) (at 3 meters)	
Frequency (Minz)	Peak	Average
Above 1000	74	54

## Restricted bands of operation

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
<sup>1</sup> 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	( <sup>2</sup> )
13.36-13.41			

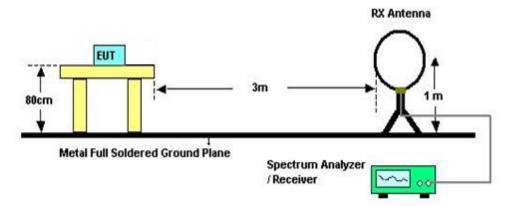
Note:  $^1$ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.





#### TEST SETUP AND PROCEDURE

### Below 30MHz



### The setting of the spectrum analyser

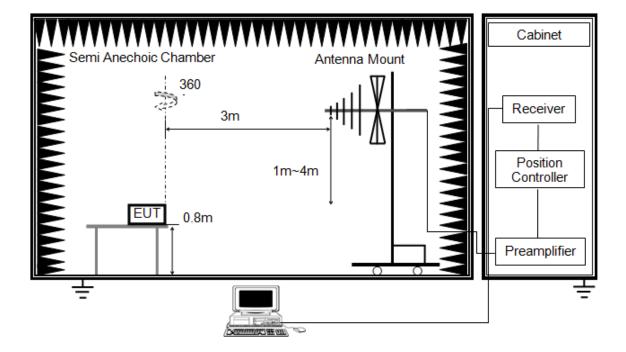
RBW	200 Hz (From 9kHz to 0.15MHz) / 9kHz (From 0.15MHz to 30MHz)
VBW	200 Hz (From 9kHz to 0.15MHz) / 9kHz (From 0.15MHz to 30MHz)
Sweep	Auto
Detector	Peak/QP/Average
Trace	Max hold

- 1. The testing follows the guidelines in ANSI C63.10-2013
- 2. The EUT was arranged to its worst case and then 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. Both Horizontal, Face-on and Face-off polarizations of the antenna are set to make the measurement.
- 3. The EUT was placed on a turntable with 0.8 meter above ground.
- 4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a 1m height antenna tower.
- 5. The radiated emission limits are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector
- 6. For measurement below 1GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. 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.
- 7. For the actual test configuration, please refer to the related item in this test report (Photographs of the Test Configuration)
- 8. The limits in FCC 47 CFR, Part 15, Subpart C, paragraph 15.209 (a), are identical to those in RSS-GEN Section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table) using the free space impedance of 377  $\Omega$ . For example, the measurement frequency X kHz resulted in a level of Y dBuV/m, which is equivalent to Y-51.5 = Z dBuA/m, which has the same margin, W dB, to the corresponding RSS-GEN Table 6 limit as it has to be 15.209(a) limit.

Form-ULID-008536-9 V4.0





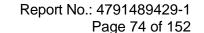


The setting of the spectrum analyser

RBW	120 kHz
VBW	300 kHz
Sweep	Auto
Detector	Peak/QP
Trace	Max hold

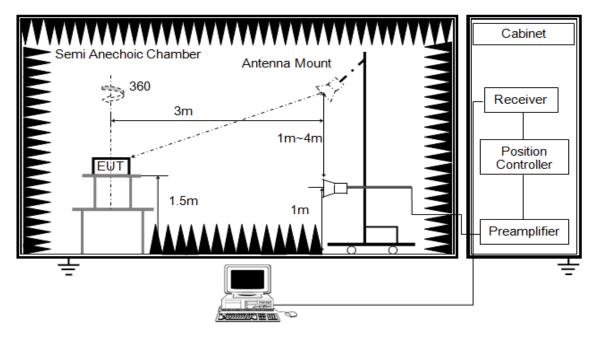
- 1. The testing follows the guidelines in ANSI C63.10-2013.
- 2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- 3. The EUT was placed on a turntable with 0.8 meter above ground.
- 4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
- 5. For measurement below 1GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. 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.
- 6. For the actual test configuration, please refer to the related item in this test report (Photographs of the Test Configuration)

Form-ULID-008536-9 V4.0





Above 1G

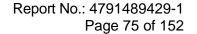


The setting of the spectrum analyser

RBW	1 MHz
IV/RW	PEAK: 3 MHz AVG: See note 6
Sweep	Auto
Detector	Peak
Trace	Max hold

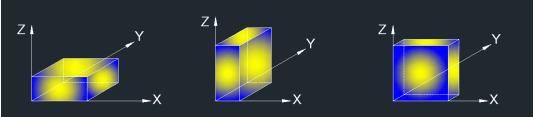
- 1. The testing follows the guidelines in ANSI C63.10-2013.
- 2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- 3. The EUT was placed on a turntable with 1.5m above ground.
- 4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
- 5. For measurement above 1GHz, the emission measurement will be measured by the peak detector. This peak level, once corrected, must comply with the limit specified in Section 15.209.
- 6. For measurements above 1 GHz, the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements; and 1 MHz resolution bandwidth with video bandwidth ≥1/T but not less than the setting list in section 7.1 when use peak detector, max hold to be run for at least [50\*(1/Duty Cycle)] traces for average measurements. For the Duty Cycle need to refer the results in section 7.1.
- 7. For the actual test configuration, please refer to the related item in this test report (Photographs of the Test Configuration)

Form-ULID-008536-9 V4.0





X axis, Y axis, Z axis positions:



Note 1: For all radiated test, EUT in one orthogonal axis (X axis) emissions had been tested and recorded in the report.

Note 2: The EUT can transmit with/without the dock, both the two conditions have been tested, the condition without dock was the worse case and recorded in this test report.



Page 76 of 152

# 8.2. TEST ENVIRONMENT

Temperature	22°C	Relative Humidity	56%
Atmosphere Pressure	101kPa	Test Voltage	AC 120V

## 8.3. RESTRICTED BANDEDGE

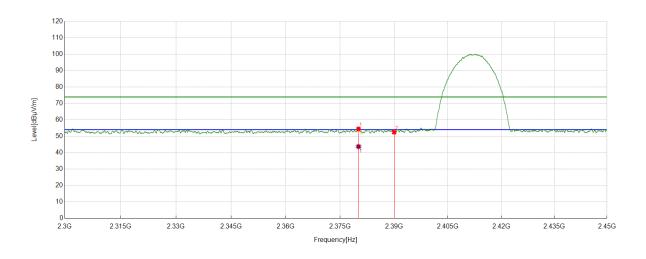
# **TEST RESULT TABLE**

Test Mode	Channel	Puw(dBm)	Verdict
	LCH	<limit< td=""><td>PASS</td></limit<>	PASS
11B	MCH	<limit< td=""><td>PASS</td></limit<>	PASS
	HCH	<limit< td=""><td>PASS</td></limit<>	PASS
	LCH	<limit< td=""><td>PASS</td></limit<>	PASS
11G	MCH	<limit< td=""><td>PASS</td></limit<>	PASS
	HCH	<limit< td=""><td>PASS</td></limit<>	PASS
	LCH	<limit< td=""><td>PASS</td></limit<>	PASS
11N HT20	MCH	<limit< td=""><td>PASS</td></limit<>	PASS
	HCH	<limit< td=""><td>PASS</td></limit<>	PASS
11N HT40	LCH	<limit< td=""><td>PASS</td></limit<>	PASS
	MCH	<limit< td=""><td>PASS</td></limit<>	PASS
	HCH	<limit< td=""><td>PASS</td></limit<>	PASS



### **TEST GRAPHS**

Test Mode	Channel	Polarization	Verdict
11B	LCH	Horizontal	PASS



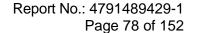
### PK Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2380.1100	40.87	13.60	54.47	74.00	-19.53	Horizontal
2	2390.0000	39.00	13.48	52.48	74.00	-21.52	Horizontal

#### AV Result:

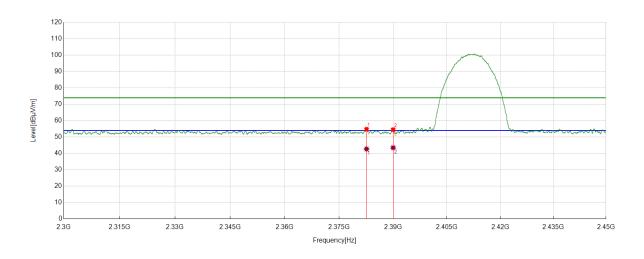
No.	lo. Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2380.1100	30.12	13.60	43.72	54.00	-10.28	Horizontal

- 2. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
- 3. Measurement = Reading Level + Correct Factor, Correct Factor = Antenna Factor + Loss (Cable + Attenuator) - Amplifier Gain.
- 4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.





Test Mode	Channel	Polarization	Verdict	
11B	LCH	Vertical	PASS	

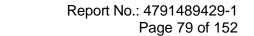


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2382.6041	41.17	13.56	54.73	74.00	-19.27	Vertical
2	2390.0000	41.01	13.48	54.49	74.00	-19.51	Vertical

## AV Result:

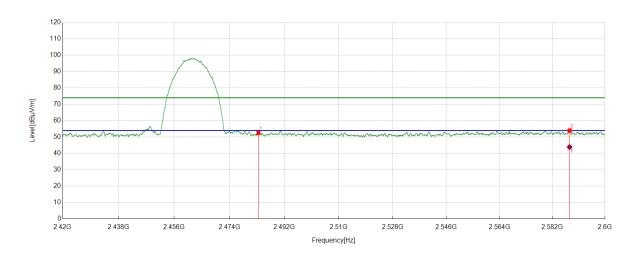
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2382.6041	29.14	13.56	42.70	54.00	-11.30	Vertical
2	2390.0000	30.01	13.48	43.49	54.00	-10.51	Vertical

- 2. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
- 3. Measurement = Reading Level + Correct Factor, Correct Factor = Antenna Factor + Loss (Cable + Attenuator) – Amplifier Gain.
- 4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.





Test Mode	Channel	Polarization	Verdict	
11B	HCH	Horizontal	PASS	

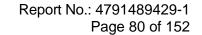


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2483.5000	38.28	14.25	52.53	74.00	-21.47	Horizontal
2	2587.8485	39.02	14.83	53.85	74.00	-20.15	Horizontal

### AV Result:

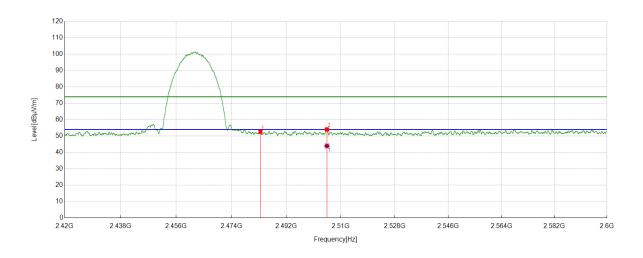
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2587.8485	29.02	14.83	43.85	54.00	-10.15	Horizontal

- 2. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
- 3. Measurement = Reading Level + Correct Factor, Correct Factor = Antenna Factor + Loss (Cable + Attenuator) – Amplifier Gain.
- 4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.





Test Mode	Channel	Polarization	Verdict	
11B	HCH	Vertical	PASS	



No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2483.5000	38.35	14.25	52.60	74.00	-21.40	Vertical
2	2505.4432	39.65	14.38	54.03	74.00	-19.97	Vertical

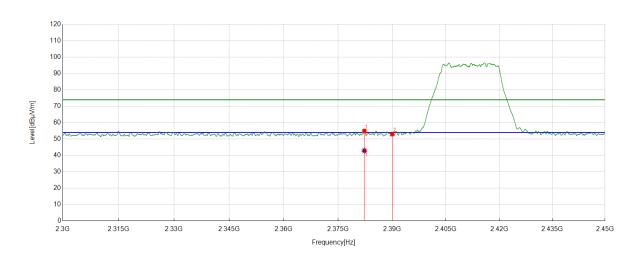
## AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2505.4432	29.58	14.38	43.96	54.00	-10.04	Vertical

- 2. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
- 3. Measurement = Reading Level + Correct Factor, Correct Factor = Antenna Factor + Loss (Cable + Attenuator) – Amplifier Gain.
- 4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



Test Mode	Channel	Polarization	Verdict
11G	LCH	Horizontal	PASS

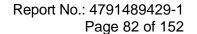


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2382.2853	41.32	13.58	54.90	74.00	-19.10	Horizontal
2	2390.0000	39.50	13.48	52.98	74.00	-21.02	Horizontal

## AV Result:

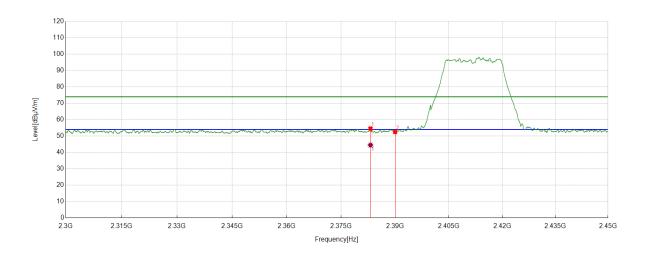
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2382.2853	29.30	13.58	42.88	54.00	-11.12	Horizontal

- 2. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
- 3. Measurement = Reading Level + Correct Factor, Correct Factor = Antenna Factor + Loss (Cable + Attenuator) – Amplifier Gain.
- 4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.





Test Mode	Channel	Polarization	Verdict
11G	LCH	Vertical	PASS

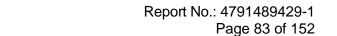


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2383.1479	40.96	13.56	54.52	74.00	-19.48	Vertical
2	2390.0000	38.99	13.48	52.47	74.00	-21.53	Vertical

## AV Result:

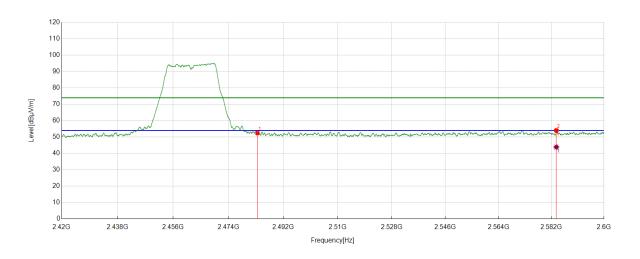
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2383.1479	30.90	13.56	44.46	54.00	-9.54	Vertical

- 2. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
- 3. Measurement = Reading Level + Correct Factor, Correct Factor = Antenna Factor + Loss (Cable + Attenuator) – Amplifier Gain.
- 4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.





Test Mode	Channel	Polarization	Verdict
11G	HCH	Horizontal	PASS

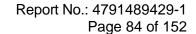


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2483.5000	38.20	14.25	52.45	74.00	-21.55	Horizontal
2	2583.6630	39.22	14.79	54.01	74.00	-19.99	Horizontal

### AV Result:

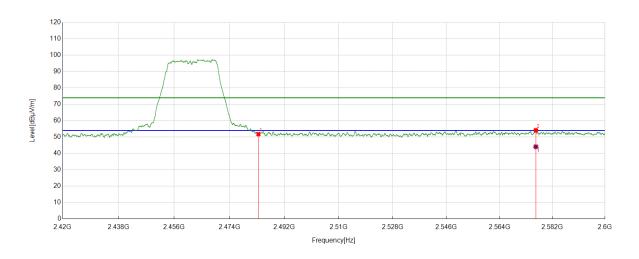
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2583.6630	29.07	14.79	43.86	54.00	-10.14	Horizontal

- 2. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
- 3. Measurement = Reading Level + Correct Factor, Correct Factor = Antenna Factor + Loss (Cable + Attenuator) – Amplifier Gain.
- 4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.





Test Mode	Test Mode Channel		Verdict	
11G	HCH	Vertical	PASS	

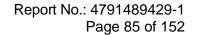


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2483.5000	37.52	14.25	51.77	74.00	-22.23	Vertical
2	2576.3270	39.37	14.73	54.10	74.00	-19.90	Vertical

## AV Result:

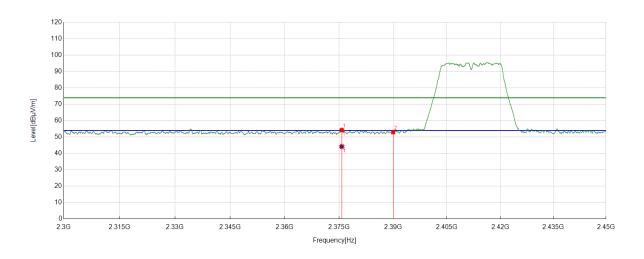
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2576.3270	29.34	14.73	44.07	54.00	-9.93	Vertical

- 2. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
- 3. Measurement = Reading Level + Correct Factor, Correct Factor = Antenna Factor + Loss (Cable + Attenuator) – Amplifier Gain.
- 4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.





Test Mode	Channel	Polarization	Verdict
11N HT20	LCH	Horizontal	PASS

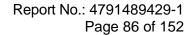


	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark	
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]		
1	2375.7407	40.67	13.58	54.25	74.00	-19.75	Horizontal	
2	2390.0000	39.48	13.48	52.96	74.00	-21.04	Horizontal	

# **AV Result:**

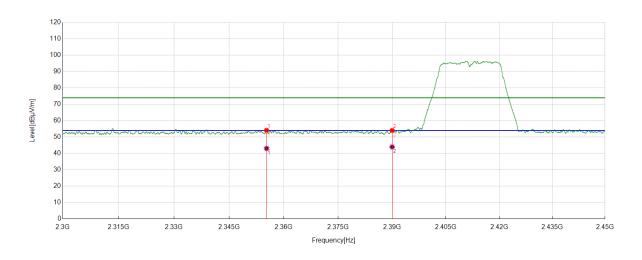
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2375.7407	30.59	13.58	44.17	54.00	-9.83	Horizontal

- 2. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
- 3. Measurement = Reading Level + Correct Factor, Correct Factor = Antenna Factor + Loss (Cable + Attenuator) – Amplifier Gain.
- 4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.





Test Mode	Channel	Polarization	Verdict	
11N HT20	LCH	Vertical	PASS	

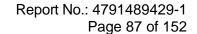


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2355.3007	40.58	13.50	54.08	74.00	-19.92	Vertical
2	2390.0000	40.54	13.48	54.02	74.00	-19.98	Vertical

# **AV Result:**

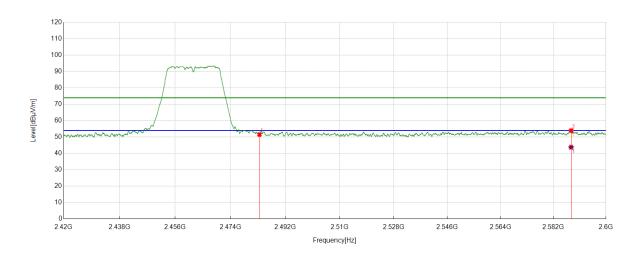
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2355.3007	29.52	13.50	43.02	54.00	-10.98	Vertical
2	2390.0000	30.47	13.48	43.95	54.00	-10.05	Vertical

- 2. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
- 3. Measurement = Reading Level + Correct Factor, Correct Factor = Antenna Factor + Loss (Cable + Attenuator) – Amplifier Gain.
- 4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.





Test Mode	Channel	Polarization	Verdict	
11N HT20	HCH	Horizontal	PASS	

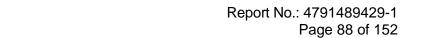


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2483.5000	37.24	14.25	51.49	74.00	-22.51	Horizontal
2	2588.0285	39.04	14.83	53.87	74.00	-20.13	Horizontal

## AV Result:

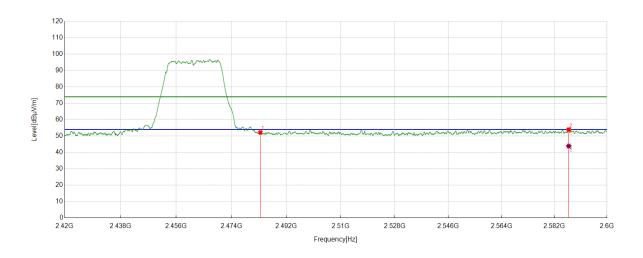
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2588.0285	28.95	14.83	43.78	54.00	-10.22	Horizontal

- 2. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
- 3. Measurement = Reading Level + Correct Factor, Correct Factor = Antenna Factor + Loss (Cable + Attenuator) – Amplifier Gain.
- 4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.





Test Mode	Channel	Polarization	Verdict	
11N HT20	HCH	Vertical	PASS	

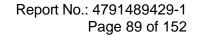


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2483.5000	37.94	14.25	52.19	74.00	-21.81	Vertical
2	2586.8809	39.08	14.81	53.89	74.00	-20.11	Vertical

# **AV Result:**

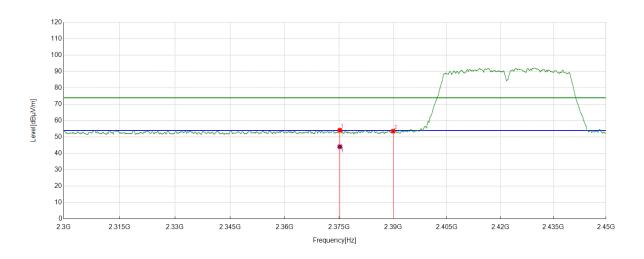
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2586.8809	29.05	14.81	43.86	54.00	-10.14	Vertical

- 2. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
- 3. Measurement = Reading Level + Correct Factor, Correct Factor = Antenna Factor + Loss (Cable + Attenuator) – Amplifier Gain.
- 4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.





Test Mode	Channel	Polarization	Verdict	
11N HT40	LCH	Horizontal	PASS	

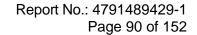


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2375.2157	40.57	13.58	54.15	74.00	-19.85	Horizontal
2	2390.0000	40.13	13.48	53.61	74.00	-20.39	Horizontal

## AV Result:

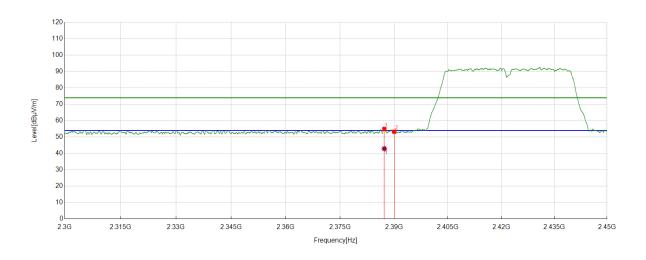
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2375.2157	30.49	13.58	44.07	54.00	-9.93	Horizontal

- 2. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
- 3. Measurement = Reading Level + Correct Factor, Correct Factor = Antenna Factor + Loss (Cable + Attenuator) – Amplifier Gain.
- 4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.





Test Mode	Test Mode Channel		Verdict	
11N HT40	LCH	Vertical	PASS	

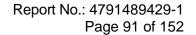


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2387.2734	41.39	13.52	54.91	74.00	-19.09	Vertical
2	2390.0000	39.79	13.48	53.27	74.00	-20.73	Vertical

# **AV Result:**

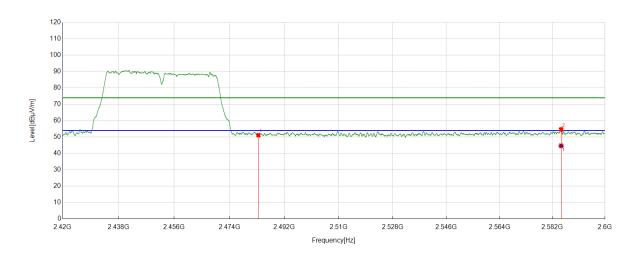
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2387.2734	29.36	13.52	42.88	54.00	-11.12	Vertical

- 2. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
- 3. Measurement = Reading Level + Correct Factor, Correct Factor = Antenna Factor + Loss (Cable + Attenuator) – Amplifier Gain.
- 4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.





Test Mode	Test Mode Channel		Verdict
11N HT40	HCH	Horizontal	PASS

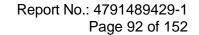


	oodit.						
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2483.5000	36.91	14.25	51.16	74.00	-22.84	Horizontal
2	2584.9681	39.89	14.80	54.69	74.00	-19.31	Horizontal

## AV Result:

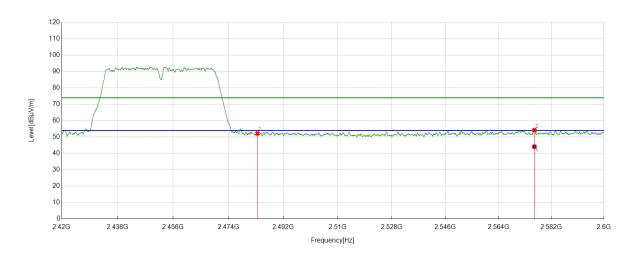
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2584.9681	29.83	14.80	44.63	54.00	-9.37	Horizontal

- 2. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
- 3. Measurement = Reading Level + Correct Factor, Correct Factor = Antenna Factor + Loss (Cable + Attenuator) – Amplifier Gain.
- 4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.





Test Mode	Channel	Polarization	Verdict	
11N HT40	HCH	Vertical	PASS	



11(1(000))							
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2483.5000	37.96	14.25	52.21	74.00	-21.79	Vertical
2	2576.1695	39.43	14.73	54.16	74.00	-19.84	Vertical

## AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	2576.1695	29.37	14.73	44.10	54.00	-9.90	Vertical

- 2. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
- 3. Measurement = Reading Level + Correct Factor, Correct Factor = Antenna Factor + Loss (Cable + Attenuator) – Amplifier Gain.
- 4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



Report No.: 4791489429-1

Page 93 of 152

# 8.4. SPURIOUS EMISSIONS

## **TEST RESULTS TABLE**

### 1) For 1GHz~18GHz

Test Mode	Channel Puw(dBm)		Verdict
	LCH	<limit< td=""><td>PASS</td></limit<>	PASS
11B	MCH	<limit< td=""><td>PASS</td></limit<>	PASS
	HCH	<limit< td=""><td>PASS</td></limit<>	PASS
	LCH	<limit< td=""><td>PASS</td></limit<>	PASS
11G	MCH	<limit< td=""><td>PASS</td></limit<>	PASS
	HCH	<limit< td=""><td>PASS</td></limit<>	PASS
	LCH	<limit< td=""><td>PASS</td></limit<>	PASS
11N HT20	MCH	<limit< td=""><td>PASS</td></limit<>	PASS
	HCH	<limit< td=""><td>PASS</td></limit<>	PASS
	LCH	<limit< td=""><td>PASS</td></limit<>	PASS
11N HT40	MCH	<limit< td=""><td>PASS</td></limit<>	PASS
	HCH	<limit< td=""><td>PASS</td></limit<>	PASS

# 2) For 9kHz~30MHz

Test Mode	Test Mode Channel		Verdict	
11B	MCH	<limit< th=""><th>PASS</th></limit<>	PASS	

#### Remark:

1) Through pre-testing all the test modes and test channels, but only the data of the worst case is included in this test report.

# 3) For 30MHz~1GHz

Test Mode	Channel	Puw(dBm)	Verdict	
11B	MCH	<limit< th=""><th>PASS</th></limit<>	PASS	

### Remark:

1) Through pre-testing all the test modes and test channels, but only the data of the worst case is included in this test report.

# 4) For 18GHz~26.5GHz

Test Mode Channel		Puw(dBm)	Verdict	
11B	MCH	<limit< th=""><th>PASS</th></limit<>	PASS	

# Remark:

1) Through pre-testing all the test modes and test channels, but only the data of the worst case is included in this test report.



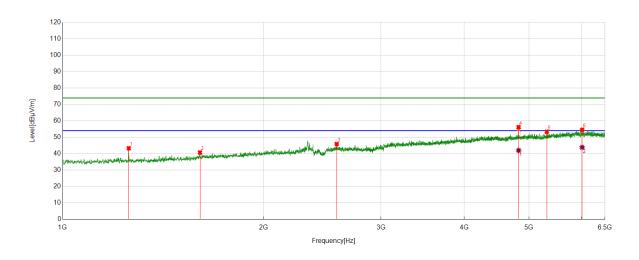
Report No.: 4791489429-1

Page 94 of 152

# Part 1: 1GHz~6.5GHz

# **HARMONICS AND SPURIOUS EMISSIONS**

Test Mode Channel		Polarization	Verdict	
11B	LCH	Horizontal	PASS	



#### PK Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	1256.4696	44.89	-1.58	43.31	74.00	-30.69	Horizontal
2	1606.4508	39.93	0.79	40.72	74.00	-33.28	Horizontal
3	2575.2594	40.02	5.86	45.88	74.00	-28.12	Horizontal
4	4824.3530	40.55	15.67	56.22	74.00	-17.78	Horizontal
5	5317.3522	37.35	16.02	53.37	74.00	-20.63	Horizontal
6	6007.0009	36.36	18.17	54.53	74.00	-19.47	Horizontal

## AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	4824.3530	26.30	15.67	41.97	54.00	-12.03	Horizontal
2	6007.0009	25.68	18.17	43.85	54.00	-10.15	Horizontal

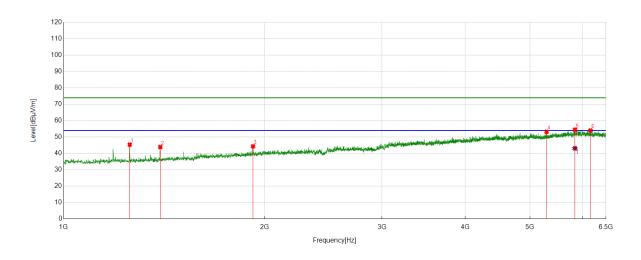
Note: 1. Measurement = Reading Level + Correct Factor,

Correct Factor = Antenna Factor + Loss (Cable + Filter) – Amplifier Gain.

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses.
- 6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



Test Mode Channel		Polarization	Verdict	
11B	LCH	Vertical	PASS	



No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
1	1256.4696	46.95	-1.58	45.37	74.00	-28.63	Vertical
2	1396.0495	45.24	-1.36	43.88	74.00	-30.12	Vertical
3	1922.7403	41.26	3.06	44.32	74.00	-29.68	Vertical
4	5294.6618	37.46	15.72	53.18	74.00	-20.82	Vertical
5	5839.9175	36.36	18.07	54.43	74.00	-19.57	Vertical
6	6161.7077	35.37	18.60	53.97	74.00	-20.03	Vertical

## **AV Result:**

	No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
		[MHz]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dB]	
	1	5839.9175	25.03	18.07	43.10	54.00	-10.90	Vertical

Note: 1. Measurement = Reading Level + Correct Factor, Correct Factor = Antenna Factor + Loss (Cable + Filter) – Amplifier Gain.

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses.
- 6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.