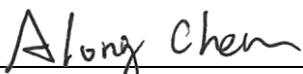


FCC Test Report

FCC ID : P27RC8326
Equipment : Wireless Network Camera
Model No. : RC8326
Brand Name : ADT
Applicant : Sercomm Corporation
Address : 8F, No. 3-1, YuanQu St., NanKang, Taipei 115,
Taiwan, R.O.C.
Standard : 47 CFR FCC Part 15.247
Received Date : Feb. 13, 2017
Tested Date : Feb. 15 ~ Mar. 06, 2017

We, International Certification Corp., would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It may be duplicated completely for legal use with the approval of the applicant. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by:


Along Chen / Assistant Manager

Approved by:


Gary Chang / Manager



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Release Record

Report No.	Version	Description	Issued Date
FR721303	Rev. 01	Initial issue	Mar. 27, 2017

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 4.549MHz 43.31 (Margin -12.69dB) - QP	Pass
15.247(d) 15.209	Radiated Emissions	[dBuV/m at 3m]: 2390.00MHz 52.97 (Margin -1.03B) - AV [dBuV/m at 3m]: 2483.50MHz 72.97 (Margin -1.03B) - PK	Pass
15.247(b)(3)	Maximum Output Power	Max Power [dBm]: 25.43	Pass
15.247(a)(2)	6dB Bandwidth	Meet the requirement of limit	Pass
15.247(e)	Power Spectral Density	Meet the requirement of limit	Pass
15.203	Antenna Requirement	Meet the requirement of limit	Pass

1 General Description

1.1 Information

1.1.1 Specification of the Equipment under Test (EUT)

RF General Information					
Frequency Range (MHz)	IEEE Std. 802.11	Ch. Freq. (MHz)	Channel Number	Transmit Chains (N _{TX})	Data Rate / MCS
2400-2483.5	b	2412-2462	1-11 [11]	1	1-11 Mbps
2400-2483.5	g	2412-2462	1-11 [11]	1	6-54 Mbps
2400-2483.5	n (HT20)	2412-2462	1-11 [11]	2	MCS 0-15
2400-2483.5	n (HT40)	2422-2452	3-9 [7]	2	MCS 0-15

Note 1: RF output power specifies that Maximum Conducted (Average) Output Power.
 Note 2: 802.11b uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
 Note 3: 802.11g/n uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.

1.1.2 Antenna Details

Ant. No.	Type	Connector	Gain (dBi)	Remark
1	Dipole	UFL	3.5	---
2	Dipole	UFL	3.4	---

1.1.3 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	12Vdc from adapter
--------------------------	--------------------

1.1.4 Accessories

Accessories		
No.	Equipment	Description
1	Adapter	Brand: APD Model: WA-12M12FU I/P: 100-240Vac, 50-60Hz, 0.5A Max O/P: 12Vdc, 1A Power line: 2.9m non-shielded w/o core.

1.1.5 Channel List

Frequency band (MHz)		2400~2483.5	
802.11 b / g / n HT20		802.11n HT40	
Channel	Frequency(MHz)	Channel	Frequency(MHz)
1	2412	3	2422
2	2417	4	2427
3	2422	5	2432
4	2427	6	2437
5	2432	7	2442
6	2437	8	2447
7	2442	9	2452
8	2447	---	---
9	2452	---	---
10	2457	---	---
11	2462	---	---

1.1.6 Test Tool and Duty Cycle

Test Tool	Telnet		
Duty Cycle and Duty Factor	Mode	Duty cycle (%)	Duty factor (dB)
	11b	99.05%	0.04
	11g	94.77%	0.23
	HT20	93.24%	0.30
	HT40	89.58%	0.48

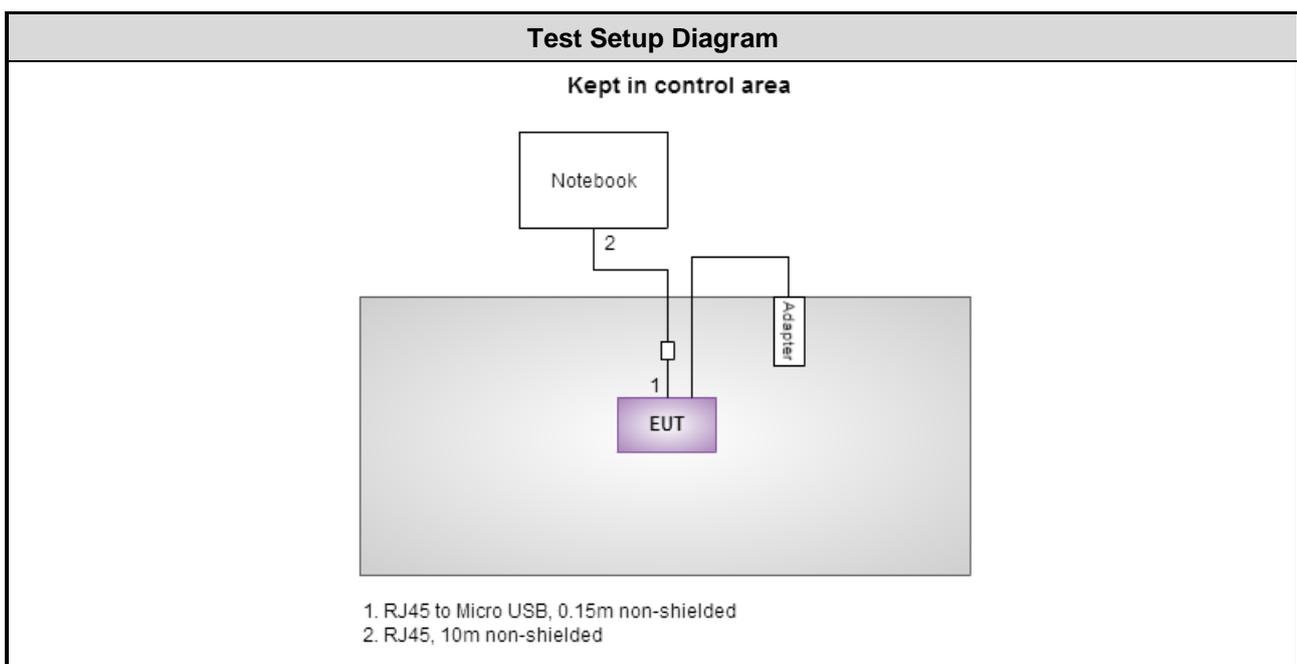
1.1.7 Power Setting

Modulation Mode	Test Frequency (MHz)	Power Set
11b	2412	51
11b	2437	49
11b	2462	50
11g	2412	50
11g	2437	62
11g	2462	51
HT20	2412	50/50
HT20	2437	62/61
HT20	2462	46/44
HT40	2422	47/47
HT40	2437	52/52
HT40	2452	49/47

1.2 Local Support Equipment List

Support Equipment List					
No.	Equipment	Brand	Model	FCC ID	Signal cable / Length (m)
1	Notebook	DELL	Latitude E6440	DoC	RJ45, 10m non-shielded.

1.3 Test Setup Chart



1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Receiver	R&S	ESR3	101657	Dec. 21, 2016	Dec. 20, 2017
LISN	SCHWARZBECK	Schwarzbeck 8127	8127-667	Nov. 08, 2016	Nov. 07, 2017
RF Cable-CON	EMC	EMCCFD300-BM-BM-6000	50821	Dec. 20, 2016	Dec. 19, 2017
Measurement Software	AUDIX	e3	6.120210k	NA	NA

Note: Calibration Interval of instruments listed above is one year.

Test Item	Radiated Emission				
Test Site	966 chamber 3 / (03CH03-WS)				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	Agilent	N9010A	MY53400091	Sep. 09, 2016	Sep. 08, 2017
Receiver	Agilent	N9038A	MY53290044	Oct. 06, 2016	Oct. 05, 2017
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-685	Apr. 26, 2016	Apr. 25, 2017
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1206	Feb. 09, 2017	Feb. 08, 2018
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Oct. 25, 2016	Oct. 24, 2017
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 10, 2016	Nov. 09, 2017
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Dec. 09, 2016	Dec. 08, 2017
Preamplifier	EMC	EMC02325	980187	Sep. 08, 2016	Sep. 07, 2017
Preamplifier	Agilent	83017A	MY53270014	Aug. 22, 2016	Aug. 21, 2017
Preamplifier	EMC	EMC184045B	980192	Aug. 24, 2016	Aug. 23, 2017
RF cable-3M	HUBER+SUHNER	SUCOFLEX104	MY22620/4	Feb. 04, 2017	Feb. 03, 2018
RF cable-8M	HUBER+SUHNER	SUCOFLEX104	MY22600/4	Feb. 04, 2017	Feb. 03, 2018
RF cable-1M	HUBER+SUHNER	SUCOFLEX104	MY22624/4	Feb. 04, 2017	Feb. 03, 2018
LF cable-0.8M	EMC	EMC8D-NM-NM-800	EMC8D-NM-NM-800-001	Feb. 04, 2017	Feb. 03, 2018
LF cable-3M	EMC	EMC8D-NM-NM-3000	131103	Feb. 04, 2017	Feb. 03, 2018
LF cable-13M	EMC	EMC8D-NM-NM-13000	131104	Feb. 04, 2017	Feb. 03, 2018
Measurement Software	AUDIX	e3	6.120210g	NA	NA

Note: Calibration Interval of instruments listed above is one year.

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101498	Nov. 25, 2016	Nov. 24, 2017
Power Meter	Anritsu	ML2495A	1241002	Oct. 06, 2016	Oct. 05, 2017
Power Sensor	Anritsu	MA2411B	1207366	Oct. 06, 2016	Oct. 05, 2017
AC POWER SOURCE	APC	AFC-500W	F312060012	Oct. 28, 2016	Oct. 27, 2017
Measurement Software	Sporton	Sporton_1	1.3.30	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

1.5 Test Standards

According to the specification of EUT, the EUT must comply with following standards and KDB documents.

47 CFR FCC Part 15.247

ANSI C63.10-2013

FCC KDB 558074 D01 DTS Meas Guidance v03r05

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

1.6 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

Measurement Uncertainty	
Parameters	Uncertainty
Bandwidth	±34.134 Hz
Conducted power	±0.808 dB
Power density	±0.463 dB
Conducted emission	±2.670 dB
AC conducted emission	±2.90 dB
Radiated emission ≤ 1GHz	±3.66 dB
Radiated emission > 1GHz	±5.37 dB

2 Test Configuration

2.1 Testing Condition

Test Item	Test Site	Ambient Condition	Tested By
AC Conduction	CO01-WS	22°C / 57%	Howard Huang
Radiated Emissions	03CH03-WS	22°C / 62%	Aska Huang
RF Conducted	TH01-WS	20°C / 65%	Brad Wu

- FCC Designation No.: TW0009
- FCC site registration No.: 207696
- IC site registration No.: 10807C-1

2.2 The Worst Test Modes and Channel Details

Test item	Modulation Mode	Test Frequency (MHz)	Data Rate	Test Configuration
Conducted Emissions	HT20	2437	MCS 0	---
Radiated Emissions ≤1GHz	HT20	2437	MCS 0	---
Radiated Emissions >1GHz				
Maximum Output Power	11b 11g	2412 / 2437 / 2462 2412 / 2437 / 2462	1 Mbps 6 Mbps	---
6dB bandwidth	HT20	2412 / 2437 / 2462	MCS 0	
Power spectral density	HT40	2422 / 2437 / 2452	MCS 0	

NOTE:

1. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The **Y-plane** results were found as the worst case and were shown in this report.

3 Transmitter Test Results

3.1 Conducted Emissions

3.1.1 Limit of Conducted Emissions

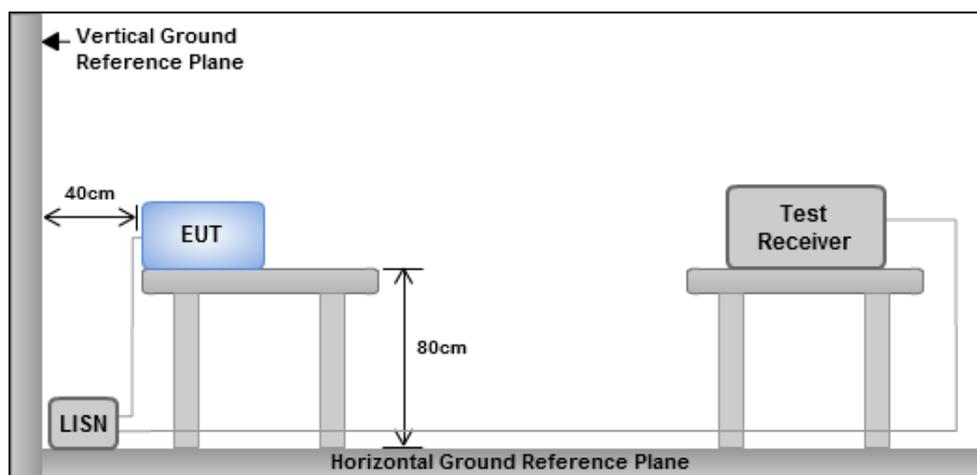
Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

Note 1: * Decreases with the logarithm of the frequency.

3.1.2 Test Procedures

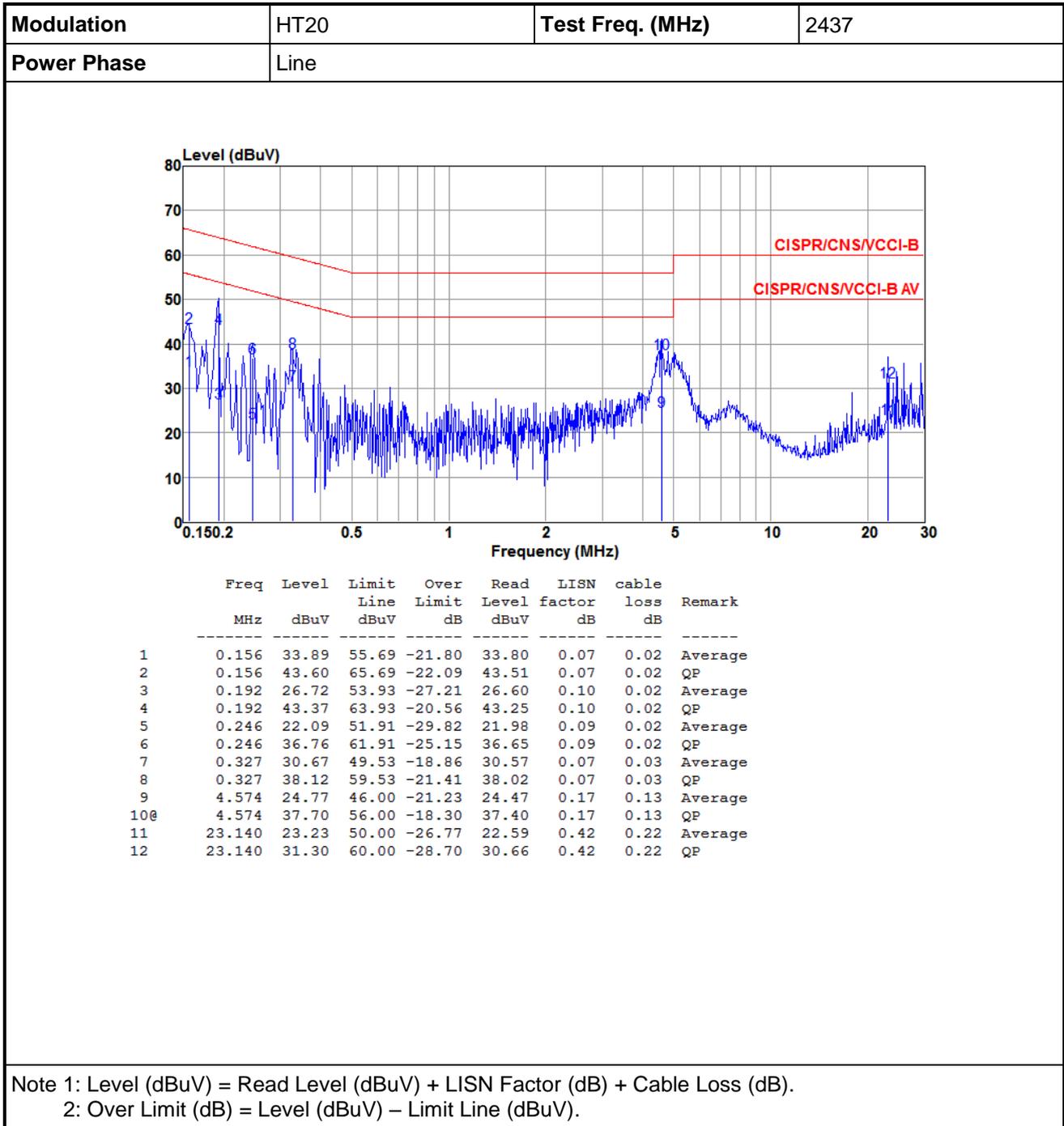
1. The device is placed on a test table, raised 80 cm above the reference ground plane. The vertical conducting plane is located 40 cm to the rear of the device.
2. The device is connected to line impedance stabilization network (LISN) and other accessories are connected to other LISN. Measured levels of AC power line conducted emission are across the 50 Ω LISN port.
3. AC conducted emission measurements is made over frequency range from 150 kHz to 30 MHz.
4. This measurement was performed with AC 120V / 60Hz.

3.1.3 Test Setup

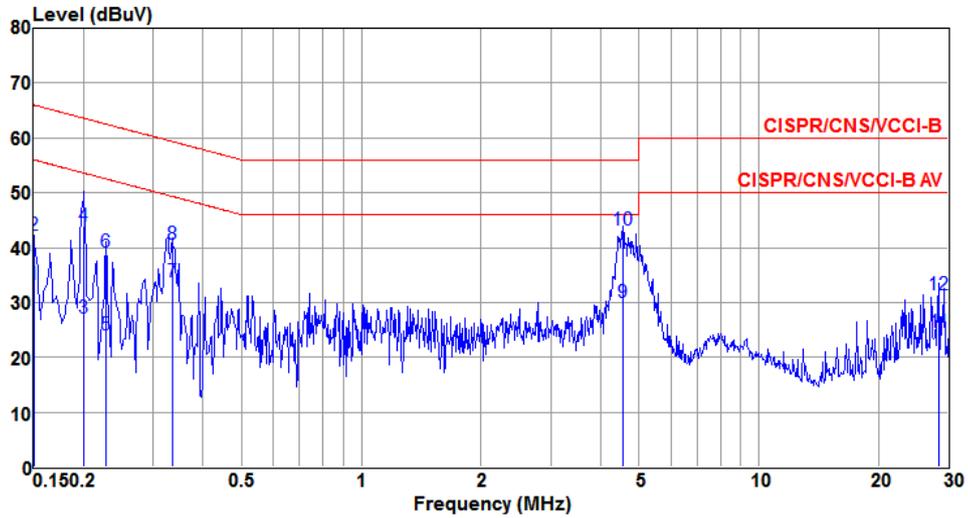


- Note: 1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.1.4 Test Result of Conducted Emissions



Modulation	HT20	Test Freq. (MHz)	2437
Power Phase	Neutral		



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.150	33.30	56.00	-22.70	33.18	0.10	0.02	Average
2	0.150	42.22	66.00	-23.78	42.10	0.10	0.02	QP
3	0.201	27.14	53.58	-26.44	27.03	0.09	0.02	Average
4	0.201	43.89	63.58	-19.69	43.78	0.09	0.02	QP
5	0.228	24.19	52.52	-28.33	24.07	0.10	0.02	Average
6	0.228	39.10	62.52	-23.42	38.98	0.10	0.02	QP
7	0.334	33.65	49.35	-15.70	33.50	0.12	0.03	Average
8	0.334	40.70	59.35	-18.65	40.55	0.12	0.03	QP
9	4.549	30.09	46.00	-15.91	29.80	0.16	0.13	Average
10@	4.549	43.31	56.00	-12.69	43.02	0.16	0.13	QP
11	28.452	24.54	50.00	-25.46	23.82	0.48	0.24	Average
12	28.452	31.48	60.00	-28.52	30.76	0.48	0.24	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).
 2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

3.2 6dB and Occupied Bandwidth

3.2.1 Limit of 6dB Bandwidth

The minimum 6dB bandwidth shall be at least 500 kHz.

3.2.2 Test Procedures

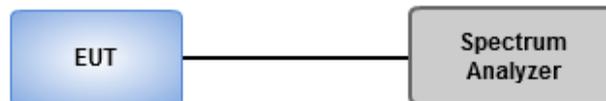
6dB Bandwidth

1. Set resolution bandwidth (RBW) = 100 kHz, Video bandwidth = 300 kHz.
2. Detector = Peak, Trace mode = max hold.
3. Sweep = auto couple, Allow the trace to stabilize.
4. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6dB relative to the maximum level measured in the fundamental emission.

Occupied Bandwidth

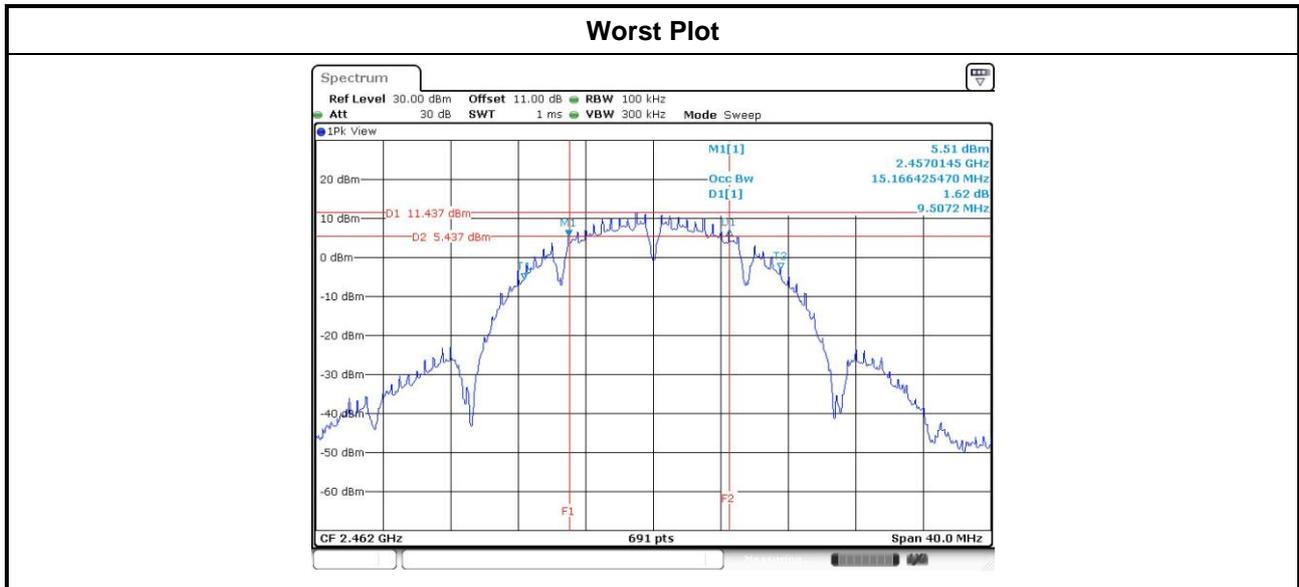
1. Set resolution bandwidth (RBW) = 1 MHz, Video bandwidth = 3 MHz.
2. Detector = Sample, Trace mode = max hold.
3. Sweep = auto couple, Allow the trace to stabilize.
4. Use the OBW measurement function of spectrum analyzer to measure the occupied bandwidth.

3.2.3 Test Setup

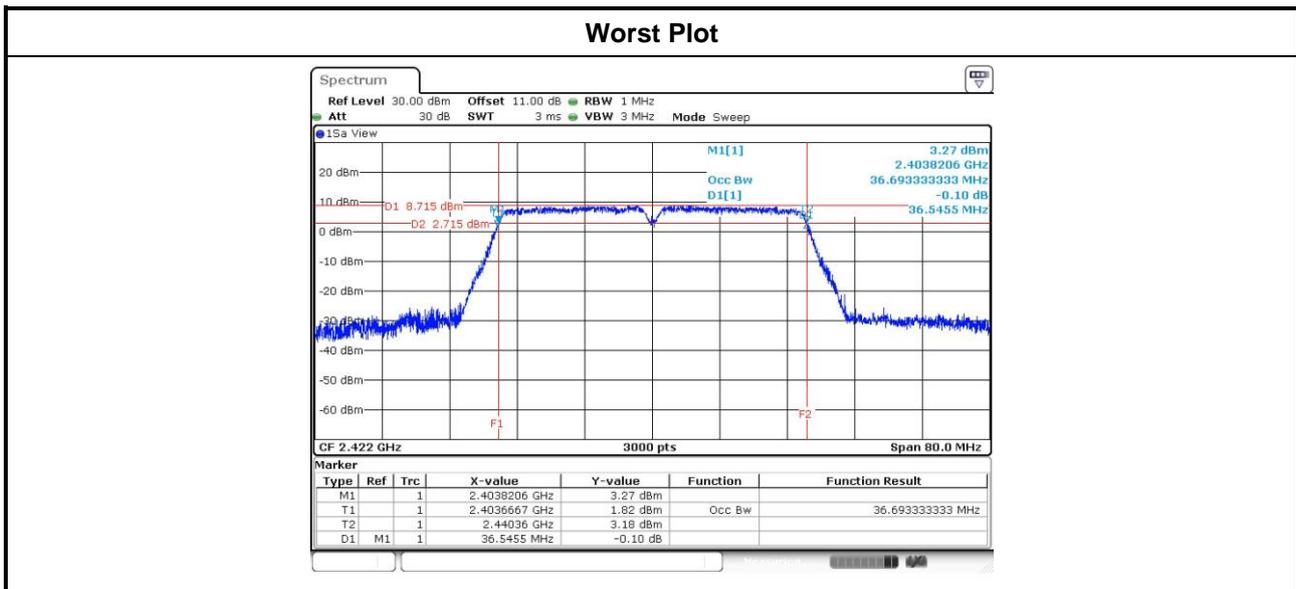


3.2.4 Test Result of 6dB and Occupied Bandwidth

Modulation Mode	N _{TX}	Freq. (MHz)	6dB Bandwidth (MHz)				Limit (kHz)
			Chain 0	Chain 1	Chain 2	Chain 3	
11b	1	2412	9.62	---	---	---	500
11b	1	2437	10.03	---	---	---	500
11b	1	2462	9.51	---	---	---	500
11g	1	2412	16.35	---	---	---	500
11g	1	2437	16.35	---	---	---	500
11g	1	2462	16.35	---	---	---	500
HT20	2	2412	17.62	17.62	---	---	500
HT20	2	2437	17.62	17.62	---	---	500
HT20	2	2462	17.62	17.62	---	---	500
HT40	2	2422	35.83	35.59	---	---	500
HT40	2	2437	35.48	35.71	---	---	500
HT40	2	2452	35.83	35.71	---	---	500



Modulation Mode	N _{TX}	Freq. (MHz)	99% Occupied Bandwidth (MHz)			
			Chain 0	Chain 1	Chain 2	Chain 3
11b	1	2412	15.17	---	---	---
11b	1	2437	15.16	---	---	---
11b	1	2462	15.19	---	---	---
11g	1	2412	17.01	---	---	---
11g	1	2437	17.91	---	---	---
11g	1	2462	17.11	---	---	---
HT20	2	2412	18.08	18.09	---	---
HT20	2	2437	18.51	18.77	---	---
HT20	2	2462	18.15	18.15	---	---
HT40	2	2422	36.61	36.69	---	---
HT40	2	2437	36.45	36.61	---	---
HT40	2	2452	36.48	36.64	---	---



3.3 RF Output Power

3.3.1 Limit of RF Output Power

Conducted power shall not exceed 1Watt.

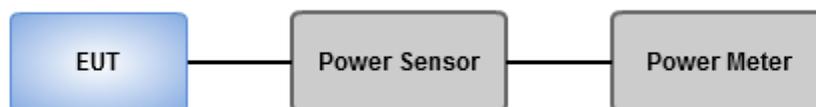
- Antenna gain \leq 6dBi, no any corresponding reduction is in output power limit.
- Antenna gain $>$ 6dBi
 - Non Fixed, point to point operations.
The conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dB
 - Fixed, point to point operations
Systems operating in the 2400–2483.5 MHz band that are used exclusively for fixed, point-to-point Operations, maximum peak output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

Systems operating in the 5725–5850 MHz band that are used exclusively for fixed, point-to-point operations ,no any corresponding reduction is in transmitter peak output power

3.3.2 Test Procedures

- Maximum Peak Conducted Output Power
 - Spectrum analyzer**
 1. Set RBW = 1MHz, VBW = 3MHz, Detector = Peak.
 2. Sweep time = auto, Trace mode = max hold, Allow trace to fully stabilize.
 3. Use the spectrum analyzer channel power measurement function with the band limits set equal to the DTS bandwidth edges.
 - Power meter**
 1. A broadband Peak RF power meter is used for output power measurement. The video bandwidth of power meter is greater than DTS bandwidth of EUT. If duty cycle of test signal is not 100 %, trigger and gating function of power meter will be enabled to capture transmission burst for measuring output power.
- Maximum Conducted Output Power (For reference only)
 - Power meter**
 1. A broadband Average RF power meter is used for output power measurement. The video bandwidth of power meter is greater than DTS bandwidth of EUT. If duty cycle of test signal is not 100 %, trigger and gating function of power meter will be enabled to capture transmission burst for measuring output power.

3.3.3 Test Setup



3.3.4 Test Result of Maximum Output Power

Modulation Mode	N _{TX}	Freq. (MHz)	Conducted (Average) Output Power (dBm)							Ant. Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)
			Chain 0	Chain 1	Chain 2	Chain 3	Total Power (mW)	Total Power (dBm)	Limit (dBm)			
11b	1	2412	22.89	---	---	---	194.536	22.89	30.00	3.50	26.39	36.00
11b	1	2437	21.72	---	---	---	148.594	21.72	30.00	3.50	25.22	36.00
11b	1	2462	21.5	---	---	---	141.254	21.50	30.00	3.50	25.00	36.00
11g	1	2412	18.74	---	---	---	74.817	18.74	30.00	3.50	22.24	36.00
11g	1	2437	23.38	---	---	---	217.771	23.38	30.00	3.50	26.88	36.00
11g	1	2462	18.23	---	---	---	66.527	18.23	30.00	3.50	21.73	36.00
HT20	2	2412	17.55	17.89	---	---	118.403	20.73	30.00	3.50	24.23	36.00
HT20	2	2437	22.33	22.5	---	---	348.829	25.43	30.00	3.50	28.93	36.00
HT20	2	2462	15.11	15.44	---	---	67.428	18.29	30.00	3.50	21.79	36.00
HT40	2	2422	15.45	15.85	---	---	73.534	18.66	30.00	3.50	22.16	36.00
HT40	2	2437	17.73	18.32	---	---	127.213	21.05	30.00	3.50	24.55	36.00
HT40	2	2452	15.76	15.91	---	---	76.665	18.85	30.00	3.50	22.35	36.00

3.4 Power Spectral Density

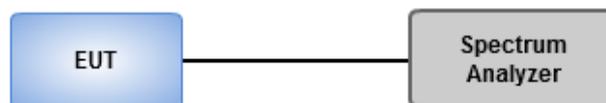
3.4.1 Limit of Power Spectral Density

Power spectral density shall not be greater than 8 dBm in any 3 kHz band.

3.4.2 Test Procedures

- Maximum peak conducted output power was used to demonstrate compliance to the fundamental output power limit.
 1. Set the RBW = 3kHz, VBW = 10kHz.
 2. Detector = Peak, Sweep time = auto couple.
 3. Trace mode = max hold, allow trace to fully stabilize.
 4. Use the peak marker function to determine the maximum amplitude level.
- Maximum (average) conducted output power was used to demonstrate compliance to the fundamental output power limit.
 1. Set the RBW = 30kHz, VBW = 100 kHz.
 2. Detector = RMS, Sweep time = auto couple.
 3. Set the sweep time to: $\geq 10 \times (\text{number of measurement points in sweep}) \times (\text{maximum data rate per stream})$.
 4. Perform the measurement over a single sweep.
 5. Use the peak marker function to determine the maximum amplitude level.

3.4.3 Test Setup

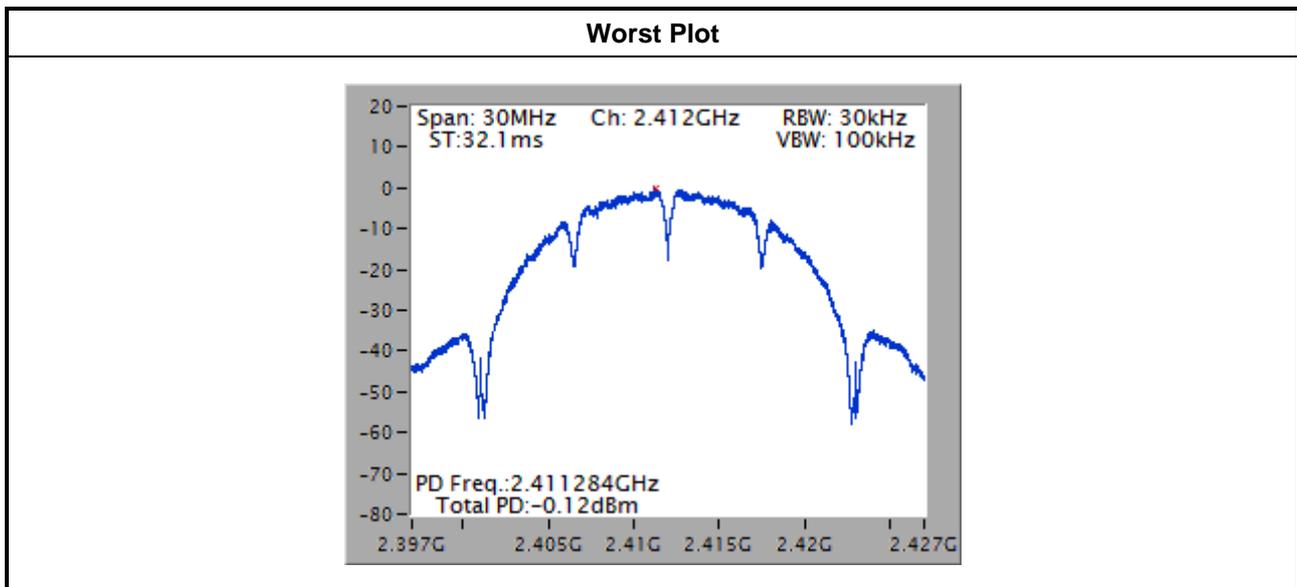


3.4.4 Test Result of Power Spectral Density

Modulation Mode	N _{TX}	Freq. (MHz)	Total Power Spectral Density (dBm/30kHz)	Limit (dBm/3kHz)
11b	1	2412	-0.12	8.00
11b	1	2437	-1.08	8.00
11b	1	2462	-0.88	8.00
11g	1	2412	-6.80	8.00
11g	1	2437	-2.05	8.00
11g	1	2462	-7.35	8.00
HT20	2	2412	-5.24	7.54
HT20	2	2437	-0.75	7.54
HT20	2	2462	-7.69	7.54
HT40	2	2422	-9.48	7.54
HT40	2	2437	-6.81	7.54
HT40	2	2452	-9.77	7.54

Note:

1. Test results of HT20/HT40 are bin-by-bin summing measured value of each TX port.
2. For 2TX mode, directional gain = $10 * \log((10^{3.5/20} + 10^{3.4/20})^2 / 2) = 6.46 \text{ dBi} > 6 \text{ dBi}$
Limit shall be reduced to $8 \text{ dBm} - (6.46 \text{ dBi} - 6 \text{ dBi}) = 7.54 \text{ dBm}$.



3.5 Unwanted Emissions into Restricted Frequency Bands

3.5.1 Limit of Unwanted Emissions into Restricted Frequency Bands

Restricted Band Emissions Limit			
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1:
Quasi-Peak value is measured for frequency below 1GHz except for 9–90 kHz, 110–490 kHz frequency band. Peak and average value are measured for frequency above 1GHz. The limit on average radio frequency emission is as above table. The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit

Note 2:
Measurements may be performed at a distance other than what is specified provided. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor as below, Frequency at or above 30 MHz: 20 dB/decade Frequency below 30 MHz: 40 dB/decade.

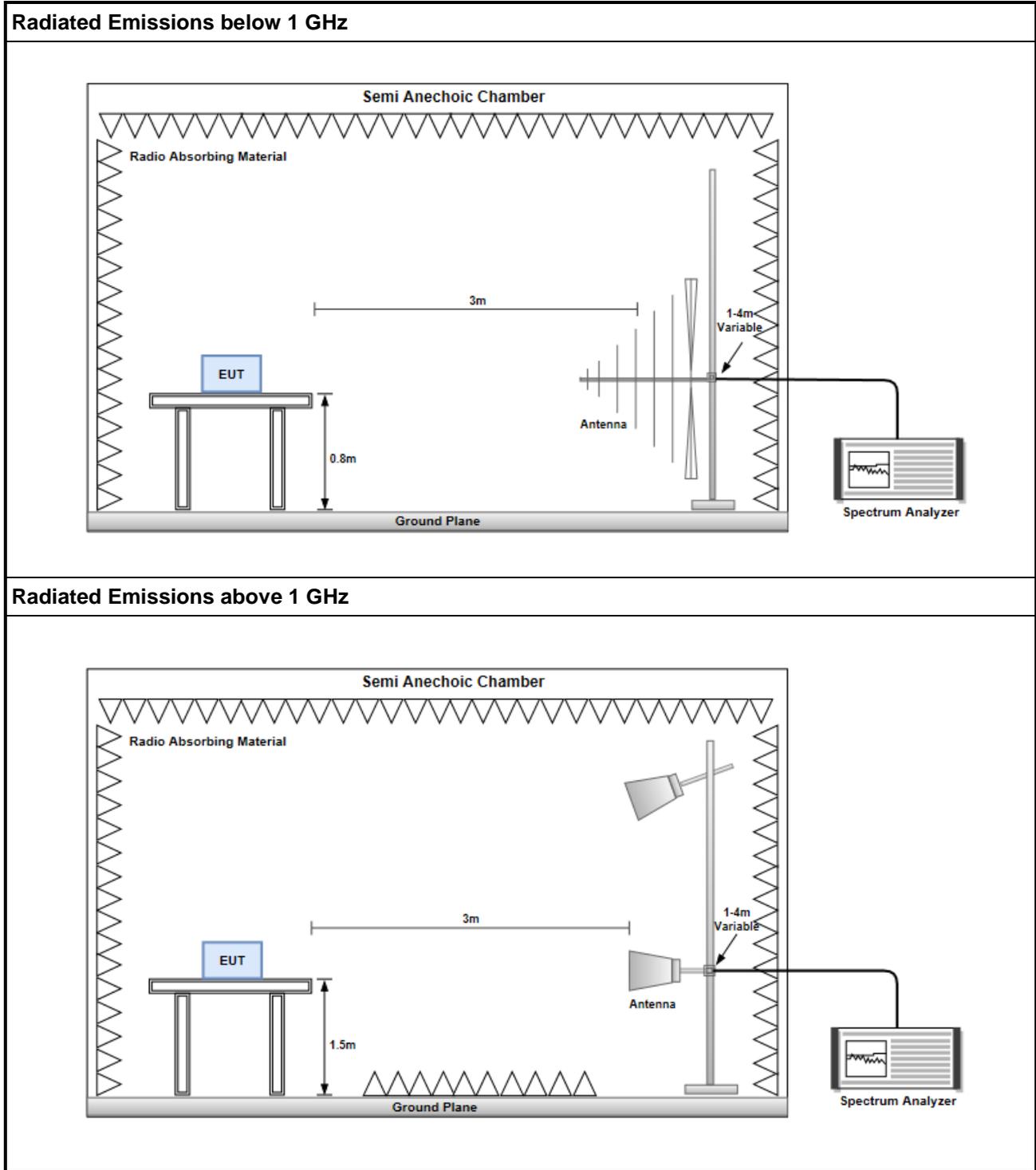
3.5.2 Test Procedures

1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. The EUT is placed at test table. For emissions testing at or below 1 GHz, the table height is 80 cm above the reference ground plane. For emission measurements above 1 GHz, the table height is 1.5 m
2. Measurement is made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna is varied in height (1m ~ 4m) above the reference ground plane to obtain the maximum signal strength. Distance between EUT and antenna is 3 m.
3. This investigation is performed with the EUT rotated 360°, the antenna height scanned between 1 m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations.

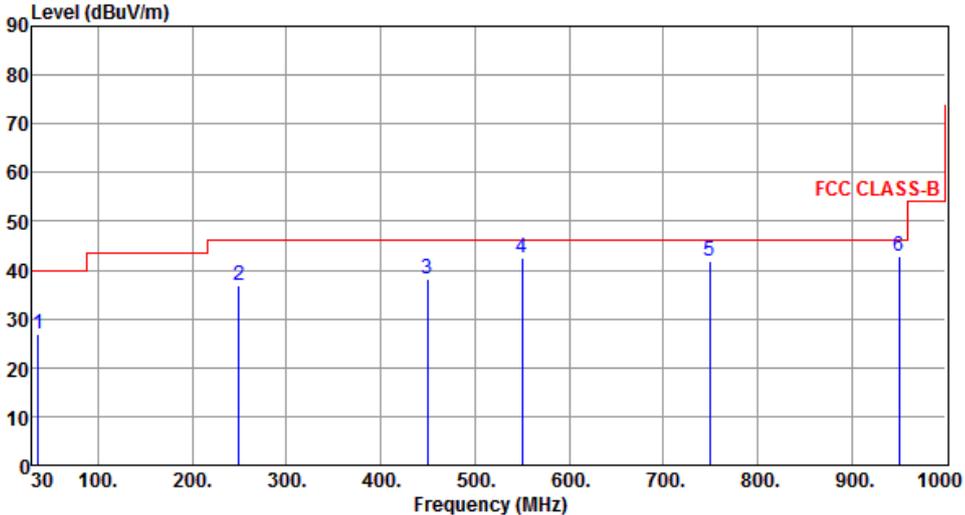
Note:

1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above 1GHz.

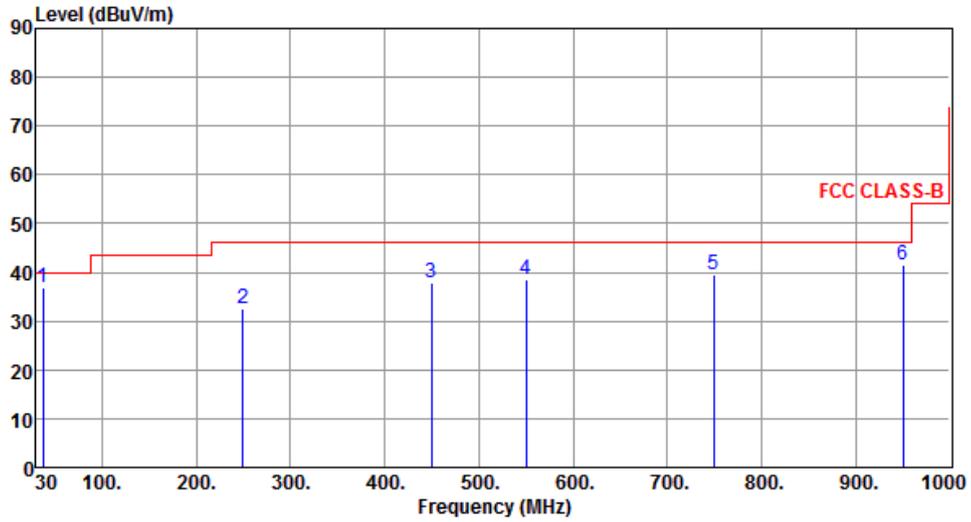
3.5.3 Test Setup



3.5.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

Modulation	HT20	Test Freq. (MHz)	2437						
Polarization	Horizontal								
									
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	36.79	26.81	40.00	-13.19	35.86	-9.05	Peak	---	---
2	249.22	36.83	46.00	-9.17	46.46	-9.63	Peak	---	---
3	450.01	38.26	46.00	-7.74	42.11	-3.85	Peak	---	---
4	550.00	42.54	46.00	-3.46	44.76	-2.22	QP	150	165
5	749.74	41.74	46.00	-4.26	39.85	1.89	Peak	---	---
6	950.00	42.93	46.00	-3.07	37.82	5.11	QP	100	196
<p>Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB) *Factor includes antenna factor , cable loss and amplifier gain Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m). Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.</p>									

Modulation	HT20	Test Freq. (MHz)	2437
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	37.12	36.80	40.00	-3.20	45.82	-9.02	QP	100	148
2	249.22	32.47	46.00	-13.53	42.10	-9.63	Peak	---	---
3	450.01	37.81	46.00	-8.19	41.66	-3.85	Peak	---	---
4	549.92	38.42	46.00	-7.58	40.64	-2.22	Peak	---	---
5	749.74	39.58	46.00	-6.42	37.69	1.89	Peak	---	---
6	950.53	41.56	46.00	-4.44	36.45	5.11	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

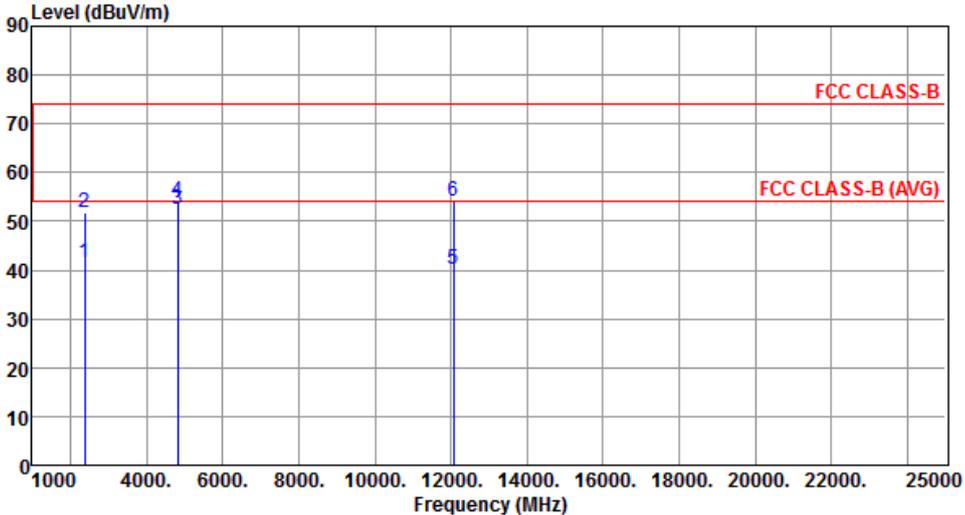
*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

3.5.5 Transmitter Radiated Unwanted Emissions (Above 1GHz) for 11b

Modulation	11b	Test Freq. (MHz)	2412
Polarization	Horizontal		

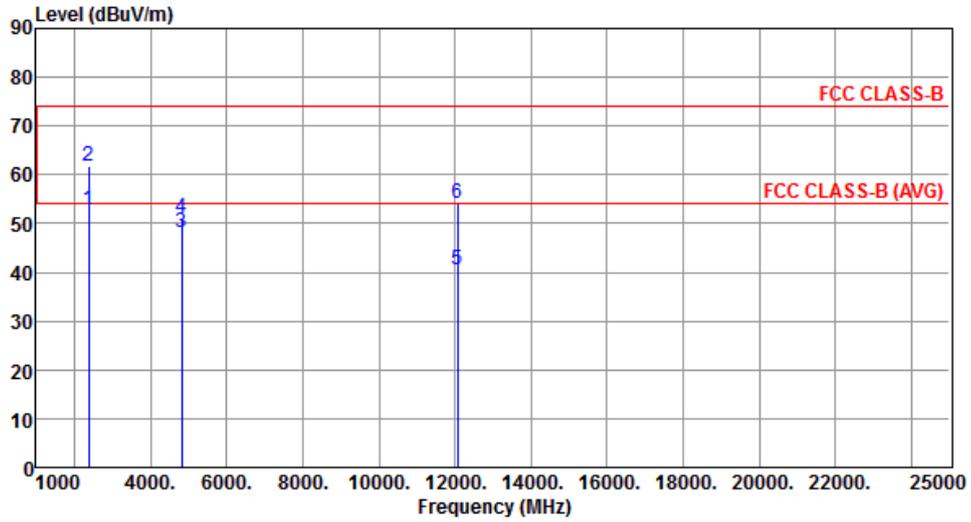


The graph plots Level (dBuV/m) on the y-axis (0 to 90) against Frequency (MHz) on the x-axis (1000 to 25000). Two horizontal red lines represent the FCC CLASS-B limit at approximately 74 dBuV/m and the FCC CLASS-B (AVG) limit at approximately 54 dBuV/m. Six vertical blue lines represent individual test points, labeled 1 through 6, with their emission levels and margins indicated by the numbers at the top and bottom of the lines.

	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	41.58	54.00	-12.42	43.70	-2.12	Average	102	52
2	2390.00	51.91	74.00	-22.09	54.03	-2.12	Peak	102	52
3	4824.00	52.43	54.00	-1.57	47.95	4.48	Average	228	343
4	4824.00	54.23	74.00	-19.77	49.75	4.48	Peak	228	343
5	12060.00	40.16	54.00	-13.84	26.50	13.66	Average	100	216
6	12060.00	54.05	74.00	-19.95	40.39	13.66	Peak	100	216

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11b	Test Freq. (MHz)	2412
Polarization	Vertical		



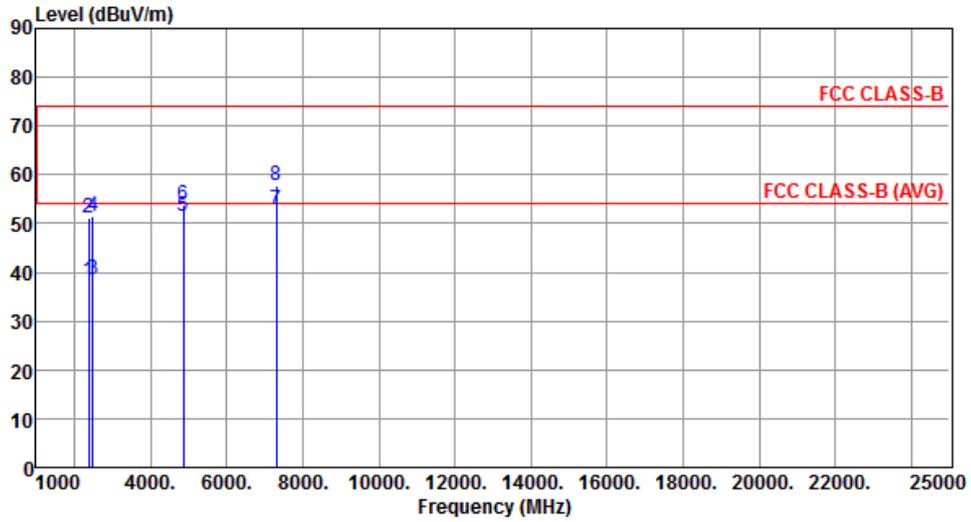
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	52.94	54.00	-1.06	55.06	-2.12	Average	219	324
2	2390.00	61.92	74.00	-12.08	64.04	-2.12	Peak	219	324
3	4824.00	48.00	54.00	-6.00	43.52	4.48	Average	247	348
4	4824.00	51.09	74.00	-22.91	46.61	4.48	Peak	247	348
5	12060.00	40.50	54.00	-13.50	26.84	13.66	Average	100	165
6	12060.00	54.20	74.00	-19.80	40.54	13.66	Peak	100	165

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11b	Test Freq. (MHz)	2437
Polarization	Horizontal		



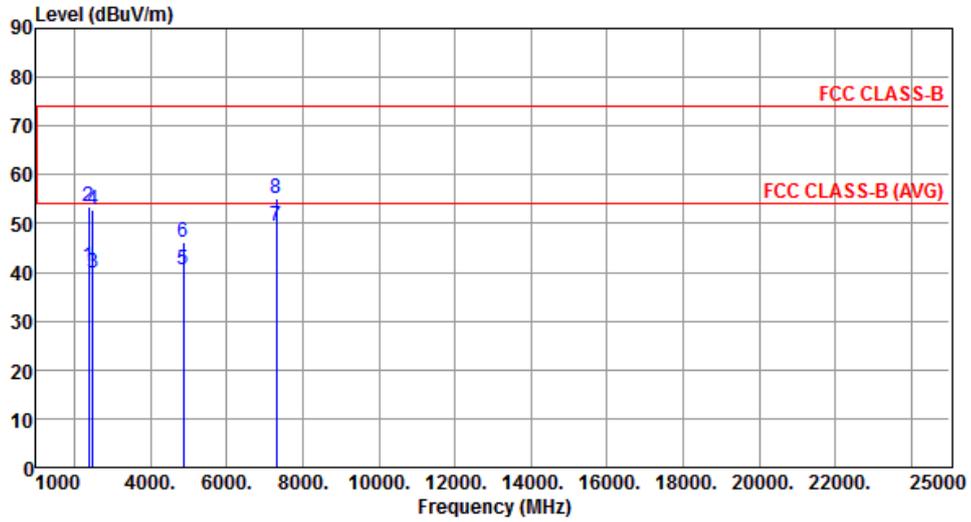
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	38.13	54.00	-15.87	40.25	-2.12	Average	100	0
2	2390.00	51.22	74.00	-22.78	53.34	-2.12	Peak	100	0
3	2483.50	38.38	54.00	-15.62	40.15	-1.77	Average	100	0
4	2483.50	51.51	74.00	-22.49	53.28	-1.77	Peak	100	0
5	4874.00	51.58	54.00	-2.42	47.00	4.58	Average	235	342
6	4874.00	53.83	74.00	-20.17	49.25	4.58	Peak	235	342
7	7311.00	52.67	54.00	-1.33	43.54	9.13	Average	100	317
8	7311.00	57.63	74.00	-16.37	48.50	9.13	Peak	100	317

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11b	Test Freq. (MHz)	2437
Polarization	Vertical		



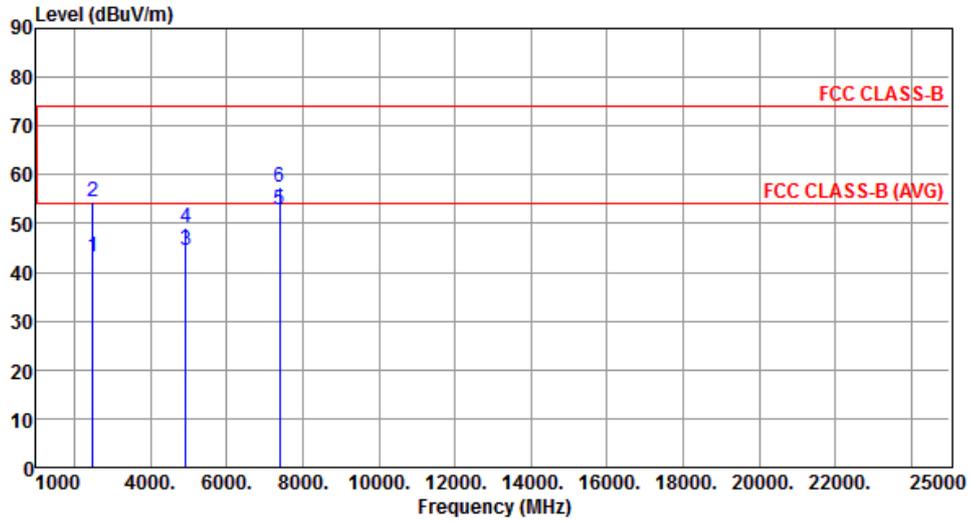
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	41.34	54.00	-12.66	43.46	-2.12	Average	260	306
2	2390.00	53.32	74.00	-20.68	55.44	-2.12	Peak	260	306
3	2483.50	39.88	54.00	-14.12	41.65	-1.77	Average	260	306
4	2483.50	52.88	74.00	-21.12	54.65	-1.77	Peak	260	306
5	4874.00	40.47	54.00	-13.53	35.89	4.58	Average	100	351
6	4874.00	46.20	74.00	-27.80	41.62	4.58	Peak	100	351
7	7311.00	49.60	54.00	-4.40	40.47	9.13	Average	100	322
8	7311.00	55.03	74.00	-18.97	45.90	9.13	Peak	100	322

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11b	Test Freq. (MHz)	2462
Polarization	Horizontal		



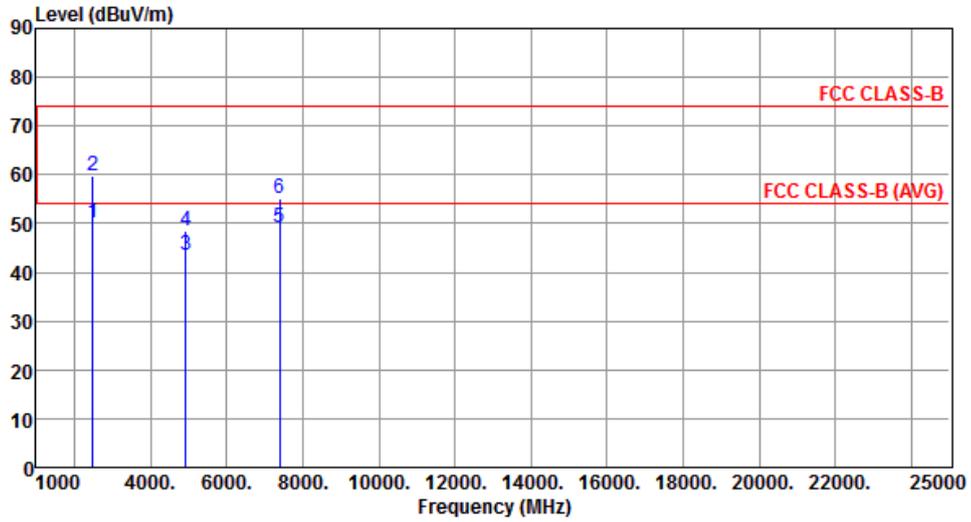
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	43.19	54.00	-10.81	44.96	-1.77	Average	100	33
2	2483.50	54.51	74.00	-19.49	56.28	-1.77	Peak	100	33
3	4924.00	44.46	54.00	-9.54	39.79	4.67	Average	227	347
4	4924.00	49.31	74.00	-24.69	44.64	4.67	Peak	227	347
5	7386.00	52.72	54.00	-1.28	43.32	9.40	Average	100	317
6	7386.00	57.41	74.00	-16.59	48.01	9.40	Peak	100	317

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11b	Test Freq. (MHz)	2462
Polarization	Vertical		



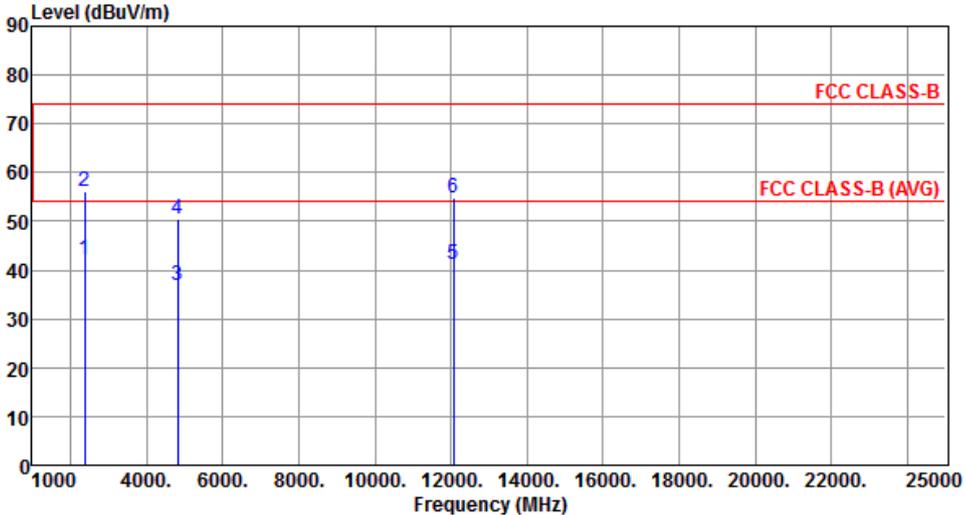
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	50.13	54.00	-3.87	51.90	-1.77	Average	100	302
2	2483.50	59.68	74.00	-14.32	61.45	-1.77	Peak	100	302
3	4924.00	43.49	54.00	-10.51	38.82	4.67	Average	193	261
4	4924.00	48.57	74.00	-25.43	43.90	4.67	Peak	193	261
5	7386.00	49.19	54.00	-4.81	39.79	9.40	Average	195	319
6	7386.00	55.08	74.00	-18.92	45.68	9.40	Peak	195	319

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

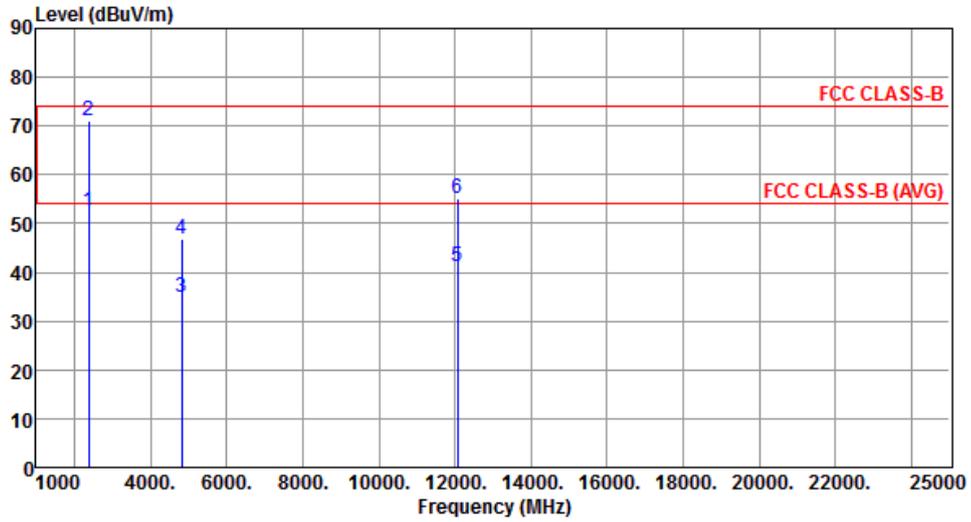
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

3.5.6 Transmitter Radiated Unwanted Emissions (Above 1GHz) for 11g

Modulation	11g	Test Freq. (MHz)	2412						
Polarization	Horizontal								
									
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	42.18	54.00	-11.82	44.30	-2.12	Average	102	52
2	2390.00	55.97	74.00	-18.03	58.09	-2.12	Peak	102	52
3	4824.00	36.86	54.00	-17.14	32.38	4.48	Average	100	168
4	4824.00	50.44	74.00	-23.56	45.96	4.48	Peak	100	168
5	12060.00	41.31	54.00	-12.69	27.65	13.66	Average	100	196
6	12060.00	54.88	74.00	-19.12	41.22	13.66	Peak	100	196

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11g	Test Freq. (MHz)	2412
Polarization	Vertical		



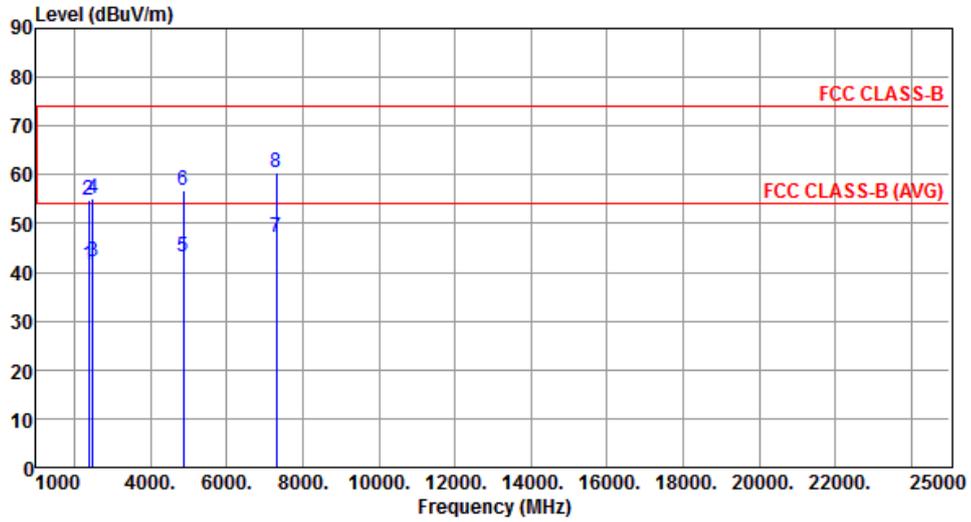
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	52.64	54.00	-1.36	54.76	-2.12	Average	195	340
2	2390.00	71.13	74.00	-2.87	73.25	-2.12	Peak	195	340
3	4824.00	34.83	54.00	-19.17	30.35	4.48	Average	100	156
4	4824.00	46.83	74.00	-27.17	42.35	4.48	Peak	100	156
5	12060.00	41.22	54.00	-12.78	27.56	13.66	Average	100	138
6	12060.00	55.05	74.00	-18.95	41.39	13.66	Peak	100	138

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11g	Test Freq. (MHz)	2437
Polarization	Horizontal		



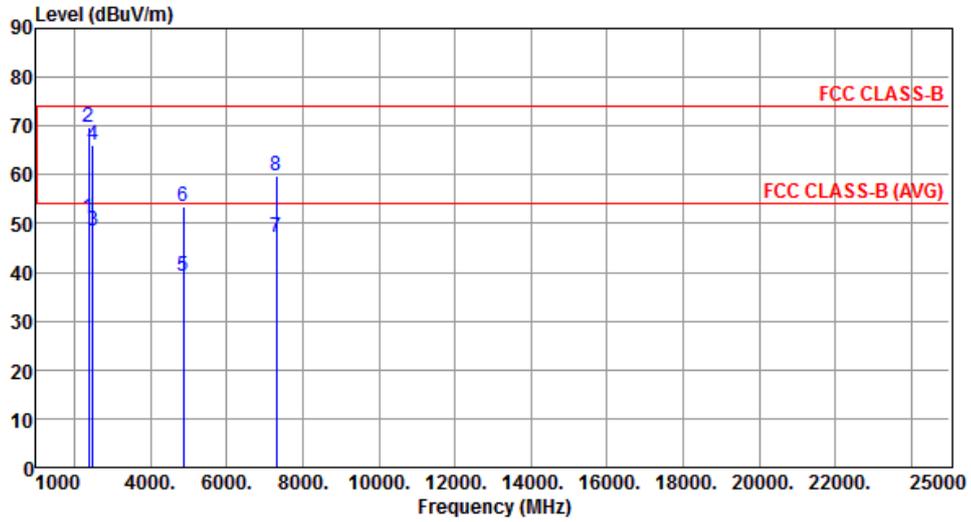
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	41.68	54.00	-12.32	43.80	-2.12	Average	322	0
2	2390.00	54.71	74.00	-19.29	56.83	-2.12	Peak	322	0
3	2483.50	42.14	54.00	-11.86	43.91	-1.77	Average	322	0
4	2483.50	55.26	74.00	-18.74	57.03	-1.77	Peak	322	0
5	4874.00	43.12	54.00	-10.88	38.54	4.58	Average	219	343
6	4874.00	56.75	74.00	-17.25	52.17	4.58	Peak	219	343
7	7311.00	47.12	54.00	-6.88	37.99	9.13	Average	100	316
8	7311.00	60.45	74.00	-13.55	51.32	9.13	Peak	100	316

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11g	Test Freq. (MHz)	2437
Polarization	Vertical		



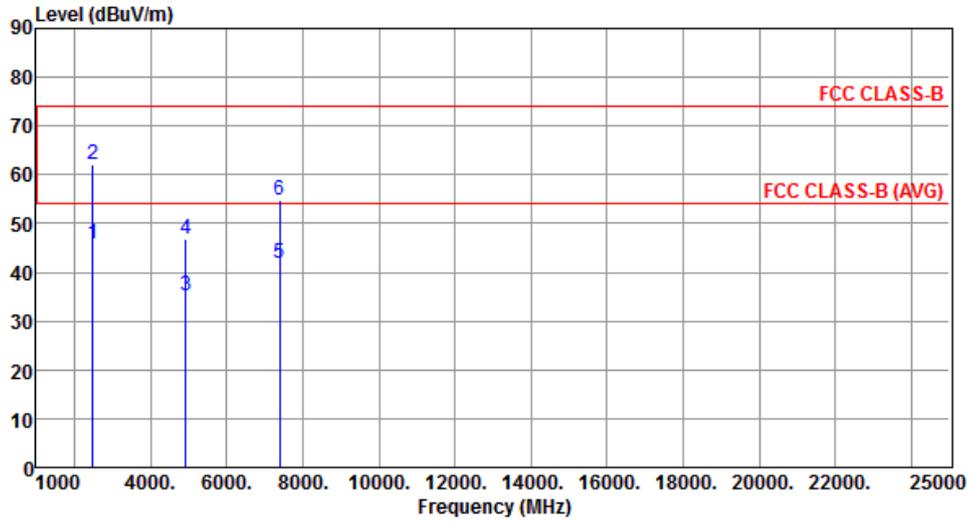
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	51.04	54.00	-2.96	53.16	-2.12	Average	191	341
2	2390.00	69.74	74.00	-4.26	71.86	-2.12	Peak	191	341
3	2483.50	48.35	54.00	-5.65	50.12	-1.77	Average	191	341
4	2483.50	66.19	74.00	-7.81	67.96	-1.77	Peak	191	341
5	4874.00	39.25	54.00	-14.75	34.67	4.58	Average	100	351
6	4874.00	53.42	74.00	-20.58	48.84	4.58	Peak	100	351
7	7311.00	47.14	54.00	-6.86	38.01	9.13	Average	100	318
8	7311.00	59.85	74.00	-14.15	50.72	9.13	Peak	100	318

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11g	Test Freq. (MHz)	2462
Polarization	Horizontal		



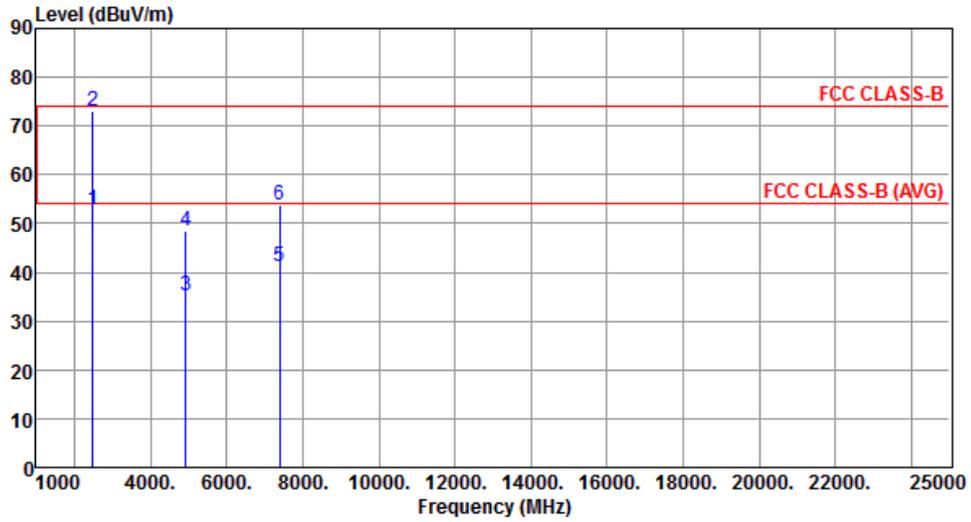
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	45.76	54.00	-8.24	47.53	-1.77	Average	100	34
2	2483.50	61.97	74.00	-12.03	63.74	-1.77	Peak	100	34
3	4924.00	35.08	54.00	-18.92	30.41	4.67	Average	100	165
4	4924.00	46.95	74.00	-27.05	42.28	4.67	Peak	100	165
5	7386.00	41.71	54.00	-12.29	32.31	9.40	Average	100	333
6	7386.00	54.93	74.00	-19.07	45.53	9.40	Peak	100	333

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11g	Test Freq. (MHz)	2462
Polarization	Vertical		



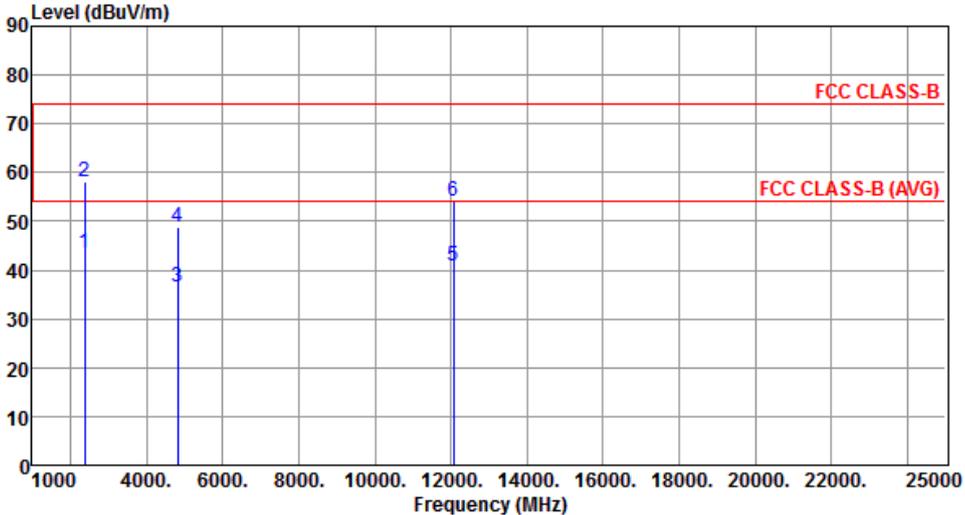
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	52.85	54.00	-1.15	54.62	-1.77	Average	100	316
2	2483.50	72.97	74.00	-1.03	74.74	-1.77	Peak	100	316
3	4924.00	35.21	54.00	-18.79	30.54	4.67	Average	100	320
4	4924.00	48.42	74.00	-25.58	43.75	4.67	Peak	100	320
5	7386.00	41.08	54.00	-12.92	31.68	9.40	Average	100	343
6	7386.00	53.91	74.00	-20.09	44.51	9.40	Peak	100	343

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

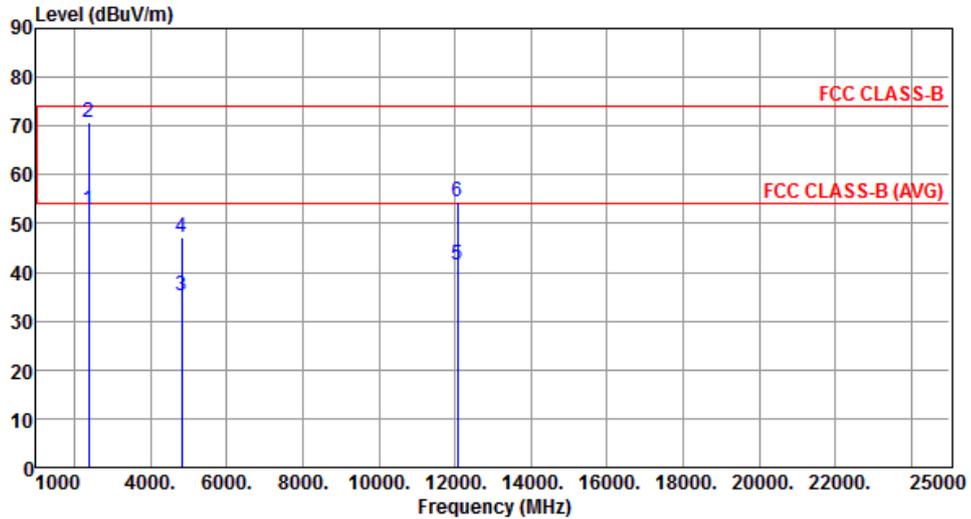
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

3.5.7 Transmitter Radiated Unwanted Emissions (Above 1GHz) for HT20

Modulation	HT20	Test Freq. (MHz)	2412						
Polarization	Horizontal								
									
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	43.52	54.00	-10.48	45.64	-2.12	Average	136	327
2	2390.00	58.07	74.00	-15.93	60.19	-2.12	Peak	136	327
3	4824.00	36.44	54.00	-17.56	31.96	4.48	Average	196	335
4	4824.00	48.70	74.00	-25.30	44.22	4.48	Peak	196	335
5	12060.00	40.96	54.00	-13.04	27.30	13.66	Average	200	138
6	12060.00	54.15	74.00	-19.85	40.49	13.66	Peak	200	138

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	HT20	Test Freq. (MHz)	2412
Polarization	Vertical		



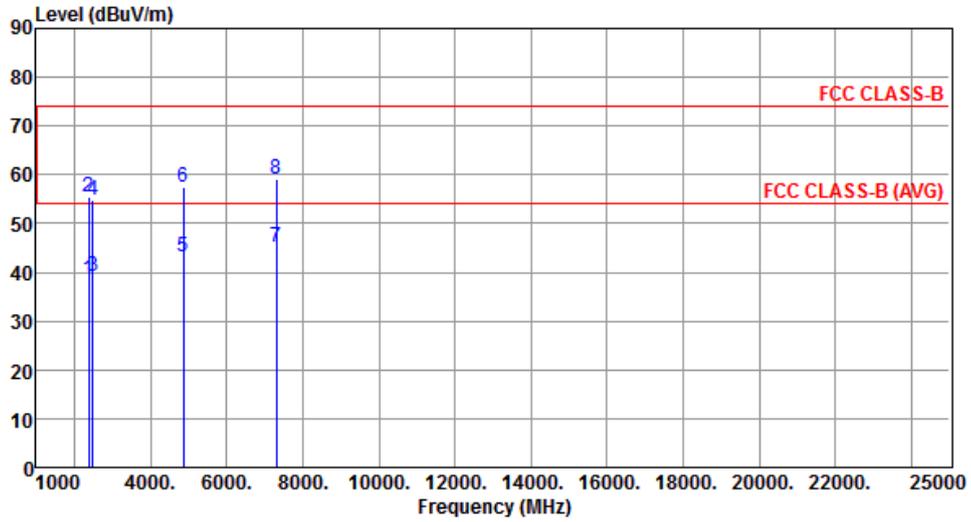
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	52.97	54.00	-1.03	55.09	-2.12	Average	133	5
2	2390.00	70.59	74.00	-3.41	72.71	-2.12	Peak	133	5
3	4824.00	35.18	54.00	-18.82	30.70	4.48	Average	259	342
4	4824.00	47.09	74.00	-26.91	42.61	4.48	Peak	259	342
5	12060.00	41.35	54.00	-12.65	27.69	13.66	Average	156	138
6	12060.00	54.39	74.00	-19.61	40.73	13.66	Peak	156	138

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	HT20	Test Freq. (MHz)	2437
Polarization	Horizontal		



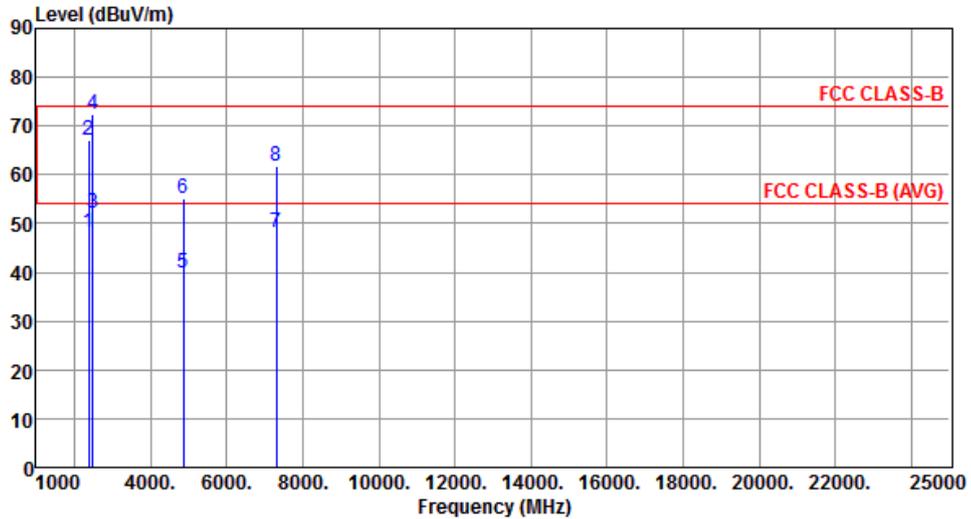
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	38.54	54.00	-15.46	40.66	-2.12	Average	113	349
2	2390.00	55.30	74.00	-18.70	57.42	-2.12	Peak	113	349
3	2483.50	39.07	54.00	-14.93	40.84	-1.77	Average	113	349
4	2483.50	54.95	74.00	-19.05	56.72	-1.77	Peak	113	349
5	4874.00	43.21	54.00	-10.79	38.63	4.58	Average	223	330
6	4874.00	57.44	74.00	-16.56	52.86	4.58	Peak	223	330
7	7311.00	45.07	54.00	-8.93	35.94	9.13	Average	100	318
8	7311.00	59.00	74.00	-15.00	49.87	9.13	Peak	100	318

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	HT20	Test Freq. (MHz)	2437
Polarization	Vertical		



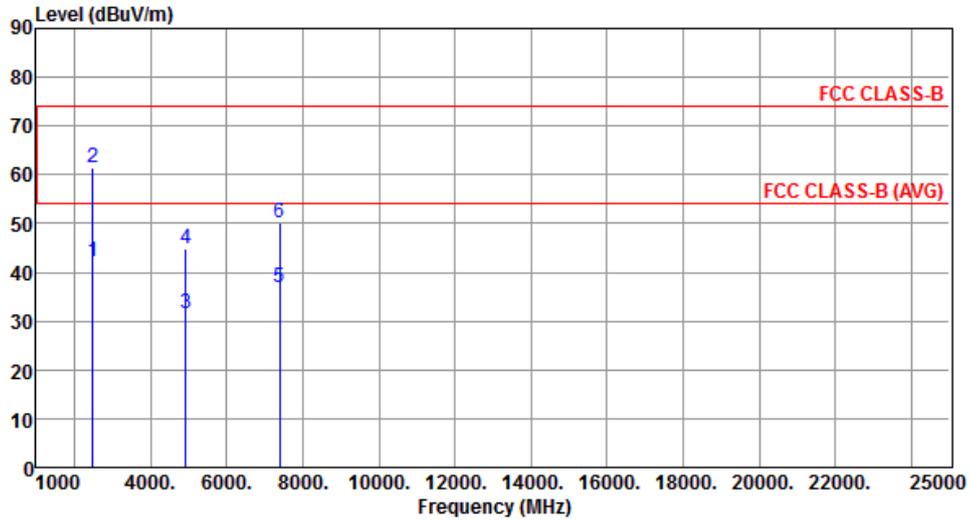
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	48.17	54.00	-5.83	50.29	-2.12	Average	163	4
2	2390.00	66.98	74.00	-7.02	69.10	-2.12	Peak	163	4
3	2483.50	52.04	54.00	-1.96	53.81	-1.77	Average	163	4
4	2483.50	72.51	74.00	-1.49	74.28	-1.77	Peak	163	4
5	4874.00	39.71	54.00	-14.29	35.13	4.58	Average	255	346
6	4874.00	55.16	74.00	-18.84	50.58	4.58	Peak	255	346
7	7311.00	48.24	54.00	-5.76	39.11	9.13	Average	107	316
8	7311.00	61.70	74.00	-12.30	52.57	9.13	Peak	107	316

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	HT20	Test Freq. (MHz)	2462
Polarization	Horizontal		



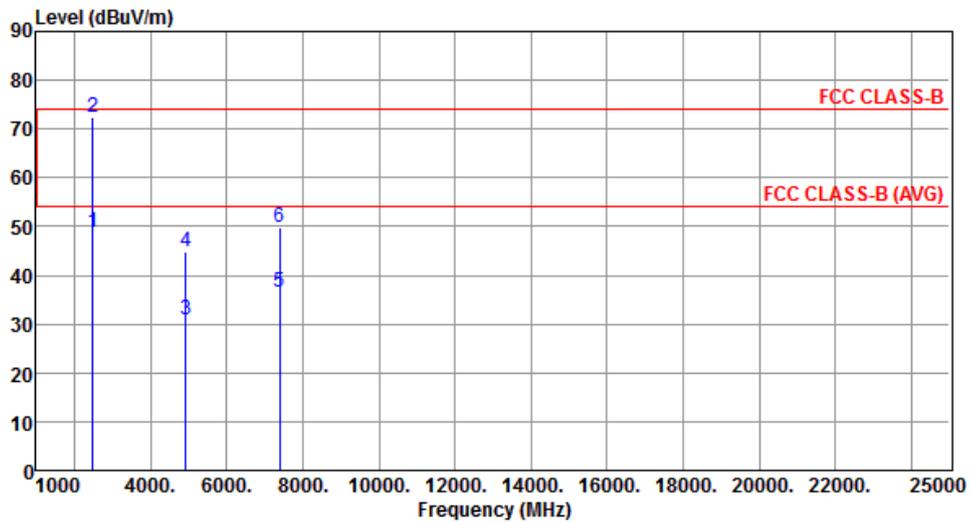
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	42.24	54.00	-11.76	44.01	-1.77	Average	162	320
2	2483.50	61.44	74.00	-12.56	63.21	-1.77	Peak	162	320
3	4924.00	31.55	54.00	-22.45	26.88	4.67	Average	165	329
4	4924.00	44.80	74.00	-29.20	40.13	4.67	Peak	165	329
5	7386.00	36.93	54.00	-17.07	27.53	9.40	Average	100	316
6	7386.00	50.05	74.00	-23.95	40.65	9.40	Peak	100	316

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	HT20	Test Freq. (MHz)	2462
Polarization	Vertical		



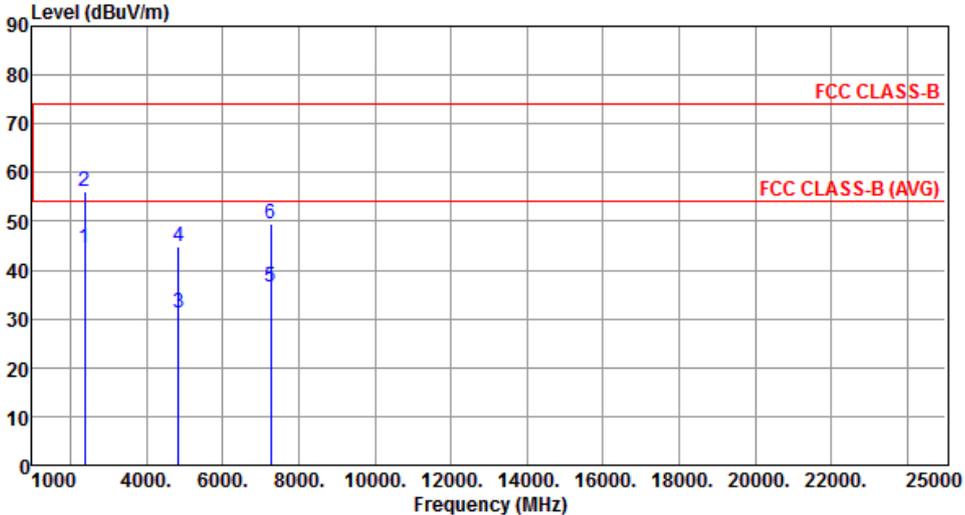
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	48.87	54.00	-5.13	50.64	-1.77	Average	166	1
2	2483.50	72.39	74.00	-1.61	74.16	-1.77	Peak	166	1
3	4924.00	30.77	54.00	-23.23	26.10	4.67	Average	202	349
4	4924.00	44.80	74.00	-29.20	40.13	4.67	Peak	202	349
5	7386.00	36.67	54.00	-17.33	27.27	9.40	Average	105	314
6	7386.00	49.85	74.00	-24.15	40.45	9.40	Peak	105	314

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

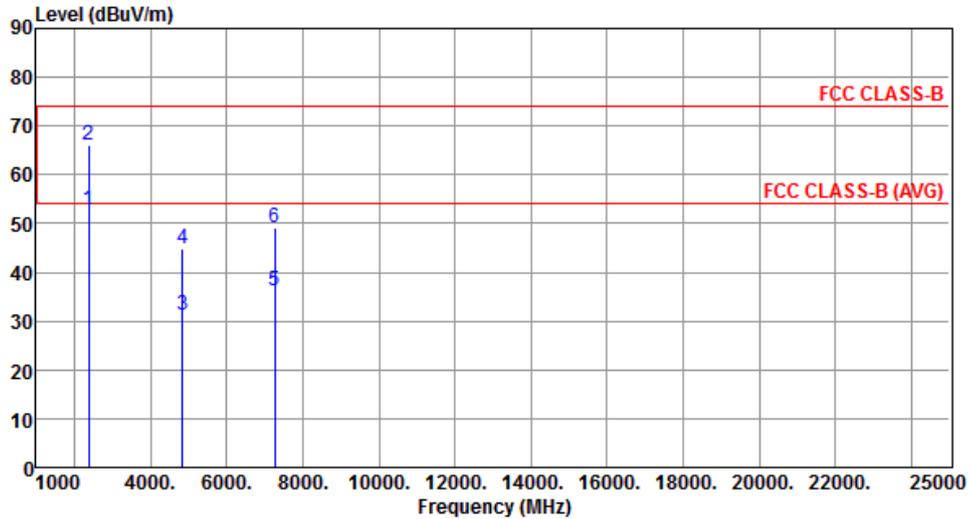
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

3.5.8 Transmitter Radiated Unwanted Emissions (Above 1GHz) for HT40

Modulation	HT40	Test Freq. (MHz)	2422						
Polarization	Horizontal								
									
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	44.66	54.00	-9.34	46.78	-2.12	Average	212	337
2	2390.00	55.99	74.00	-18.01	58.11	-2.12	Peak	212	337
3	4844.00	31.17	54.00	-22.83	26.66	4.51	Average	100	156
4	4844.00	44.82	74.00	-29.18	40.31	4.51	Peak	100	156
5	7266.00	36.50	54.00	-17.50	27.53	8.97	Average	100	196
6	7266.00	49.35	74.00	-24.65	40.38	8.97	Peak	100	196

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	HT40	Test Freq. (MHz)	2422
Polarization	Vertical		



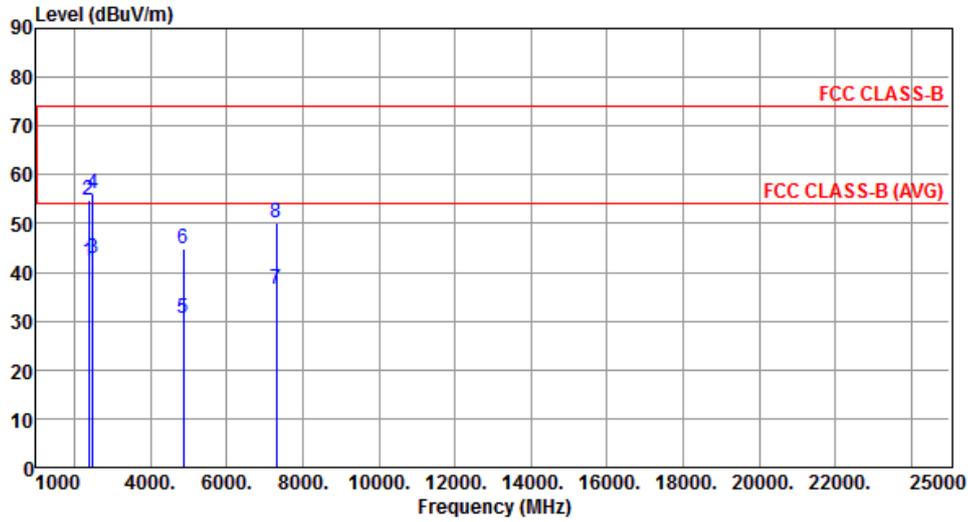
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	52.80	54.00	-1.20	54.92	-2.12	Average	174	0
2	2390.00	66.08	74.00	-7.92	68.20	-2.12	Peak	174	0
3	4844.00	31.19	54.00	-22.81	26.68	4.51	Average	100	153
4	4844.00	44.80	74.00	-29.20	40.29	4.51	Peak	100	153
5	7266.00	36.28	54.00	-17.72	27.31	8.97	Average	100	172
6	7266.00	49.11	74.00	-24.89	40.14	8.97	Peak	100	172

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	HT40	Test Freq. (MHz)	2437
Polarization	Horizontal		



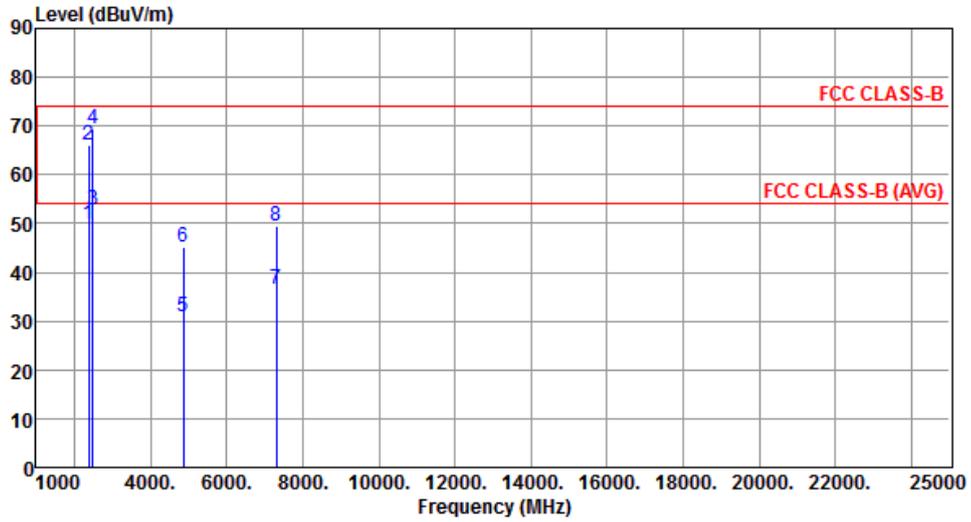
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	42.30	54.00	-11.70	44.42	-2.12	Average	114	349
2	2390.00	54.64	74.00	-19.36	56.76	-2.12	Peak	114	349
3	2483.50	42.98	54.00	-11.02	44.75	-1.77	Average	114	349
4	2483.50	55.96	74.00	-18.04	57.73	-1.77	Peak	114	349
5	4874.00	30.63	54.00	-23.37	26.05	4.58	Average	100	172
6	4874.00	44.96	74.00	-29.04	40.38	4.58	Peak	100	172
7	7311.00	36.67	54.00	-17.33	27.54	9.13	Average	100	172
8	7311.00	50.06	74.00	-23.94	40.93	9.13	Peak	100	172

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	HT40	Test Freq. (MHz)	2437
Polarization	Vertical		



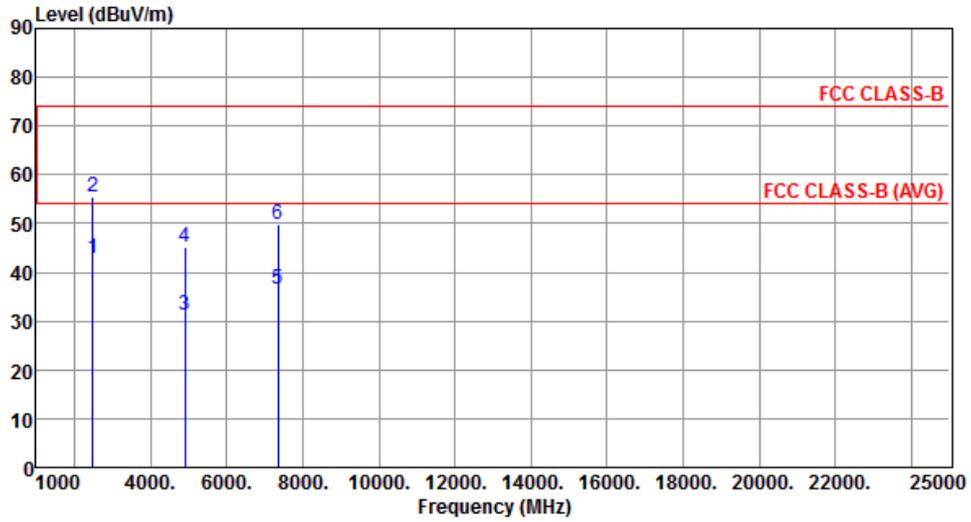
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	49.67	54.00	-4.33	51.79	-2.12	Average	163	0
2	2390.00	66.10	74.00	-7.90	68.22	-2.12	Peak	163	0
3	2483.50	52.79	54.00	-1.21	54.56	-1.77	Average	163	0
4	2483.50	69.42	74.00	-4.58	71.19	-1.77	Peak	163	0
5	4874.00	30.83	54.00	-23.17	26.25	4.58	Average	100	165
6	4874.00	45.15	74.00	-28.85	40.57	4.58	Peak	100	165
7	7311.00	36.57	54.00	-17.43	27.44	9.13	Average	100	185
8	7311.00	49.61	74.00	-24.39	40.48	9.13	Peak	100	185

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	HT40	Test Freq. (MHz)	2452
Polarization	Horizontal		



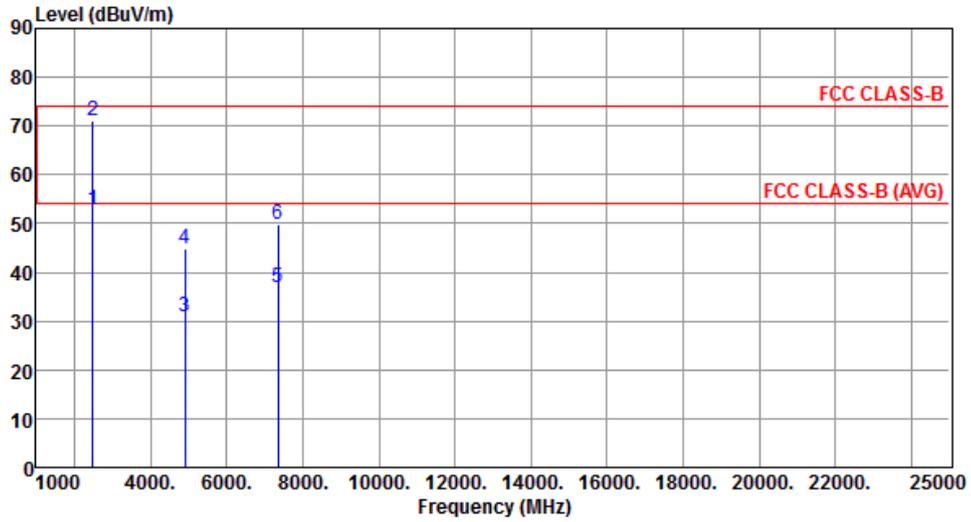
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	42.90	54.00	-11.10	44.67	-1.77	Average	146	336
2	2483.50	55.36	74.00	-18.64	57.13	-1.77	Peak	146	336
3	4904.00	31.16	54.00	-22.84	26.53	4.63	Average	125	133
4	4904.00	45.01	74.00	-28.99	40.38	4.63	Peak	125	133
5	7356.00	36.67	54.00	-17.33	27.38	9.29	Average	100	199
6	7356.00	49.80	74.00	-24.20	40.51	9.29	Peak	100	199

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	HT40	Test Freq. (MHz)	2452
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	52.92	54.00	-1.08	54.69	-1.77	Average	148	1
2	2483.50	70.94	74.00	-3.06	72.71	-1.77	Peak	148	1
3	4904.00	30.79	54.00	-23.21	26.16	4.63	Average	100	177
4	4904.00	44.93	74.00	-29.07	40.30	4.63	Peak	100	177
5	7356.00	36.72	54.00	-17.28	27.43	9.29	Average	100	333
6	7356.00	49.83	74.00	-24.17	40.54	9.29	Peak	100	333

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

3.6 Emissions in Non-Restricted Frequency Bands

3.6.1 Emissions in Non-Restricted Frequency Bands Limit

Peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz

3.6.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.6.3 Test Procedures

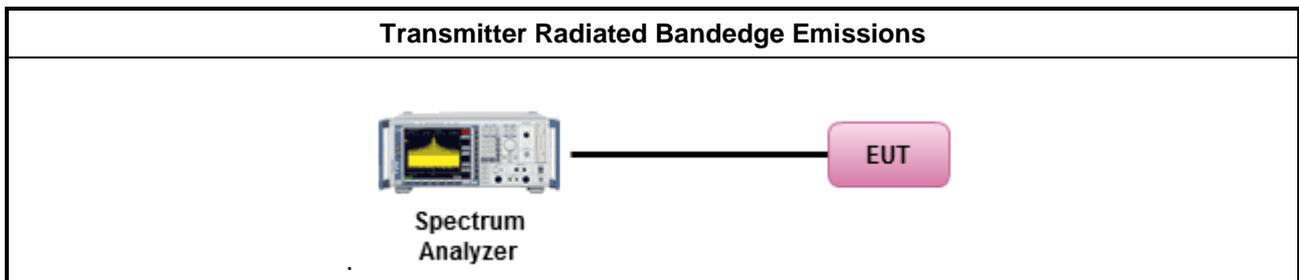
Reference level measurement

1. Set RBW=100kHz, VBW = 300kHz , Detector = Peak, Sweep time = Auto
2. Trace = max hold , Allow Trace to fully stabilize
3. Use the peak marker function to determine the maximum PSD level

Emission level measurement

1. Set RBW=100kHz, VBW = 300kHz , Detector = Peak, Sweep time = Auto
2. Trace = max hold , Allow Trace to fully stabilize
3. Scan Frequency range is up to 25GHz
4. Use the peak marker function to determine the maximum amplitude level

3.6.4 Test Setup

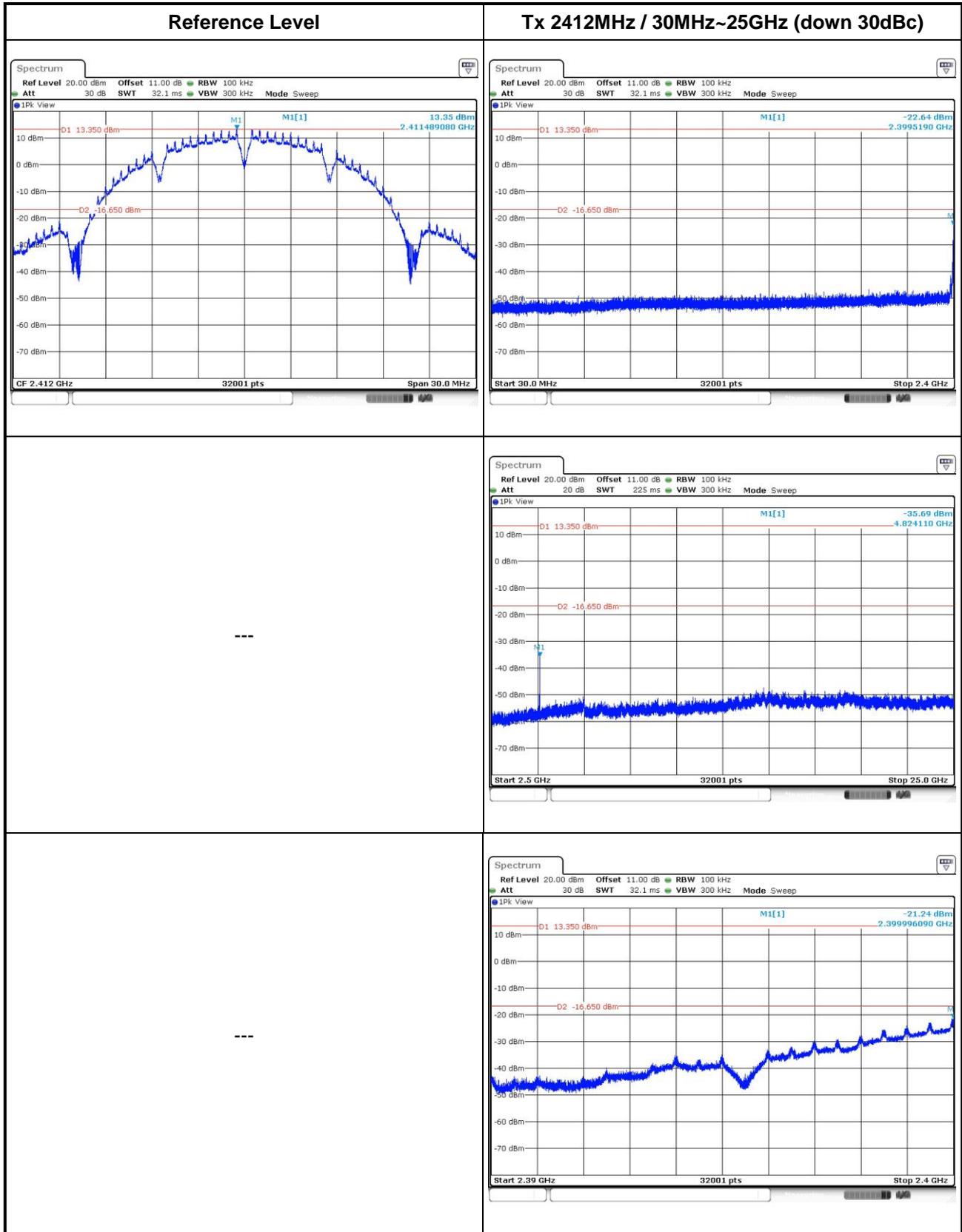


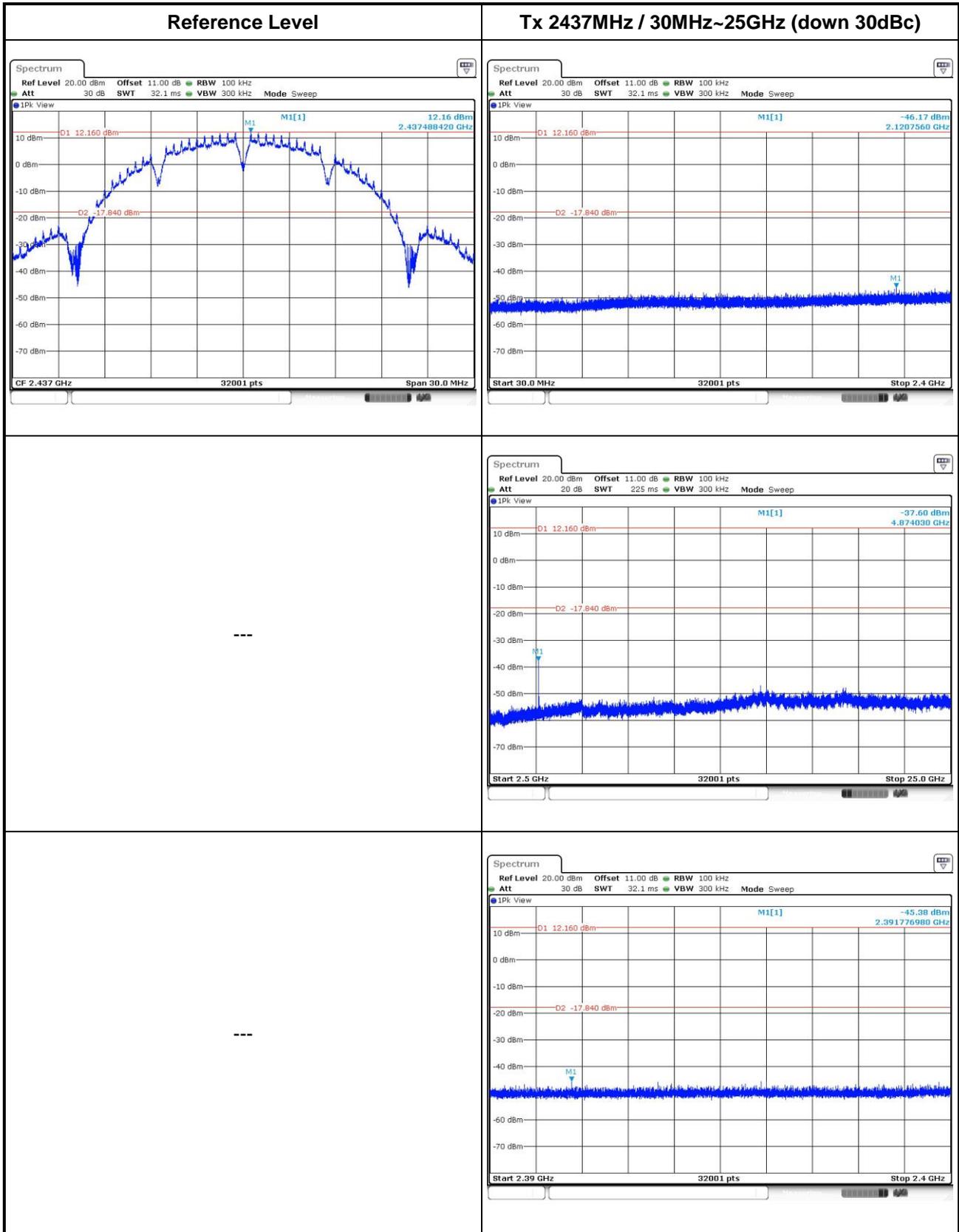
3.6.5 Test Result of Emissions in non-restricted frequency bands

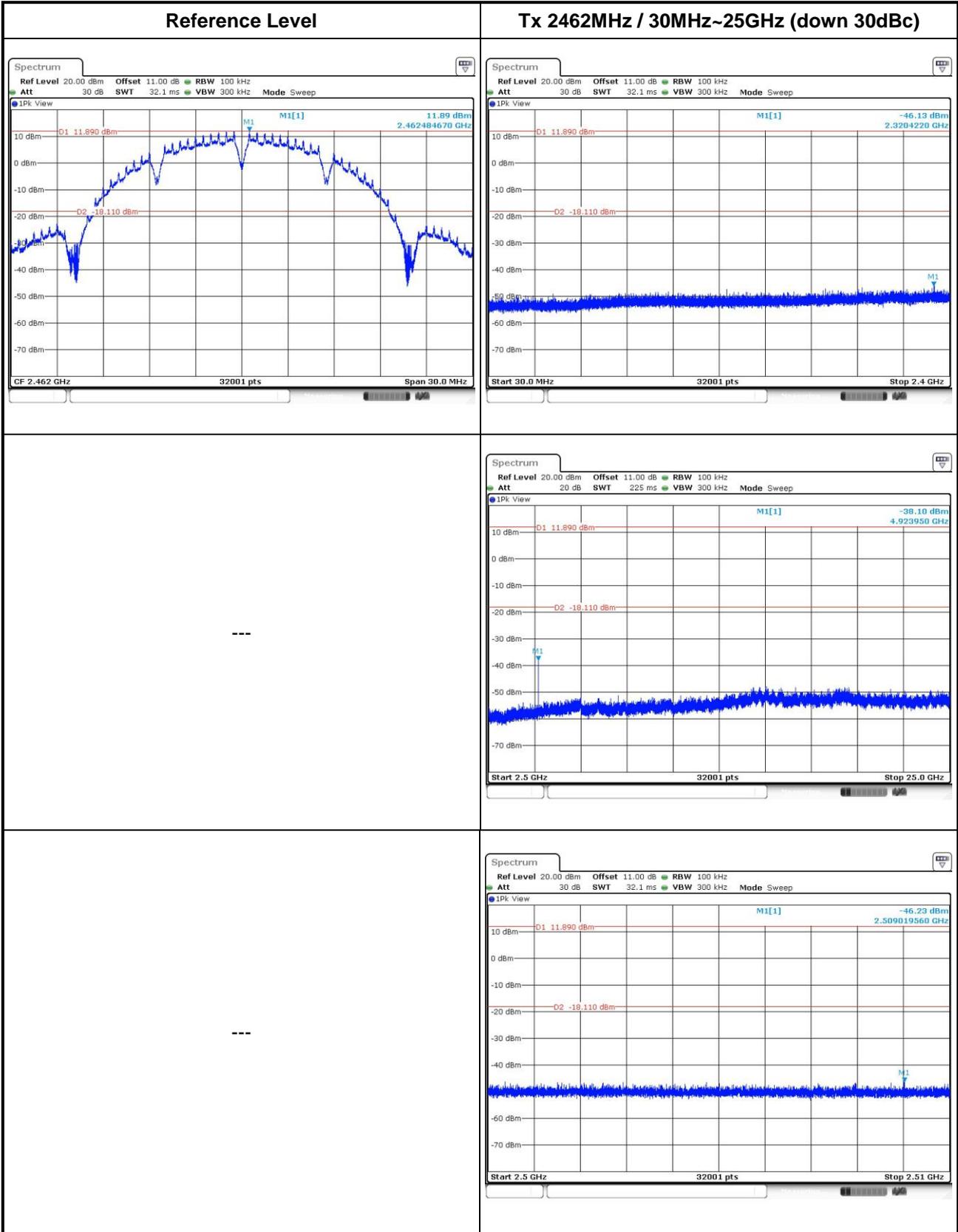
This test item is performed on each TX output individually without summing or adding $10 \log(N_{ANT})$ since measurements are made relative to the in-band emissions on the individual outputs. Only worst test result of each operating mode is presented.

3.6.6 Unwanted Emissions into Non-Restricted Frequency Bands

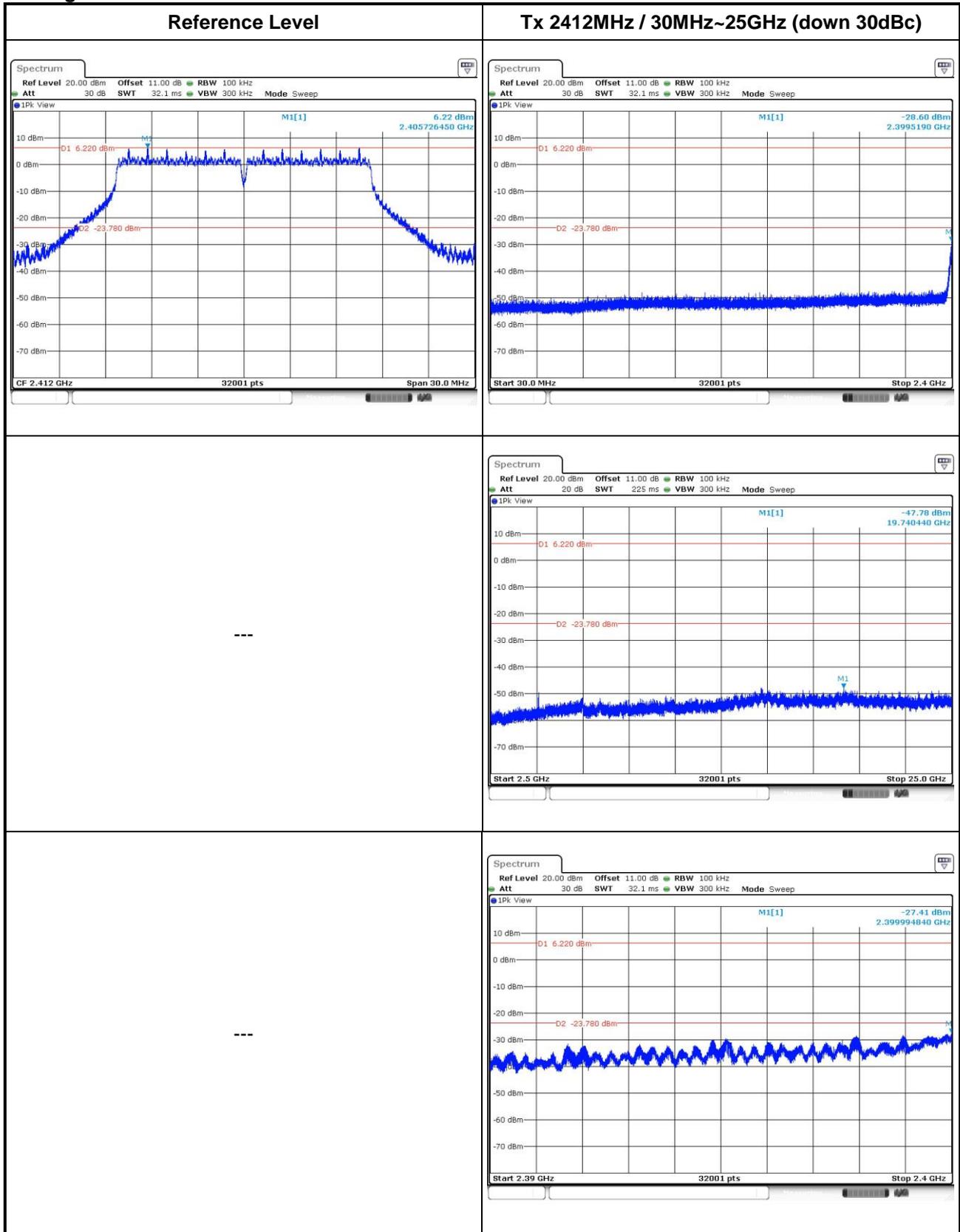
802.11b

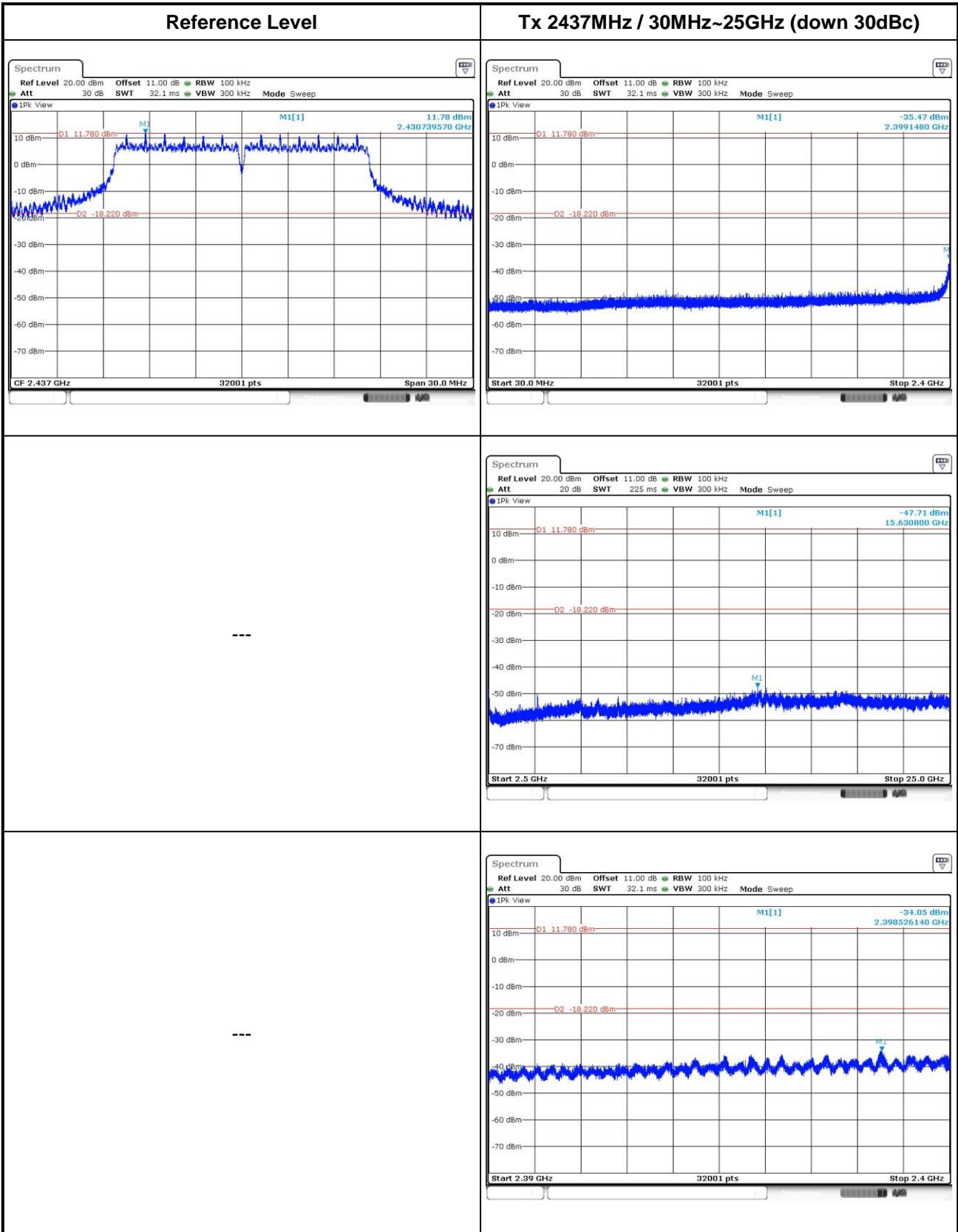


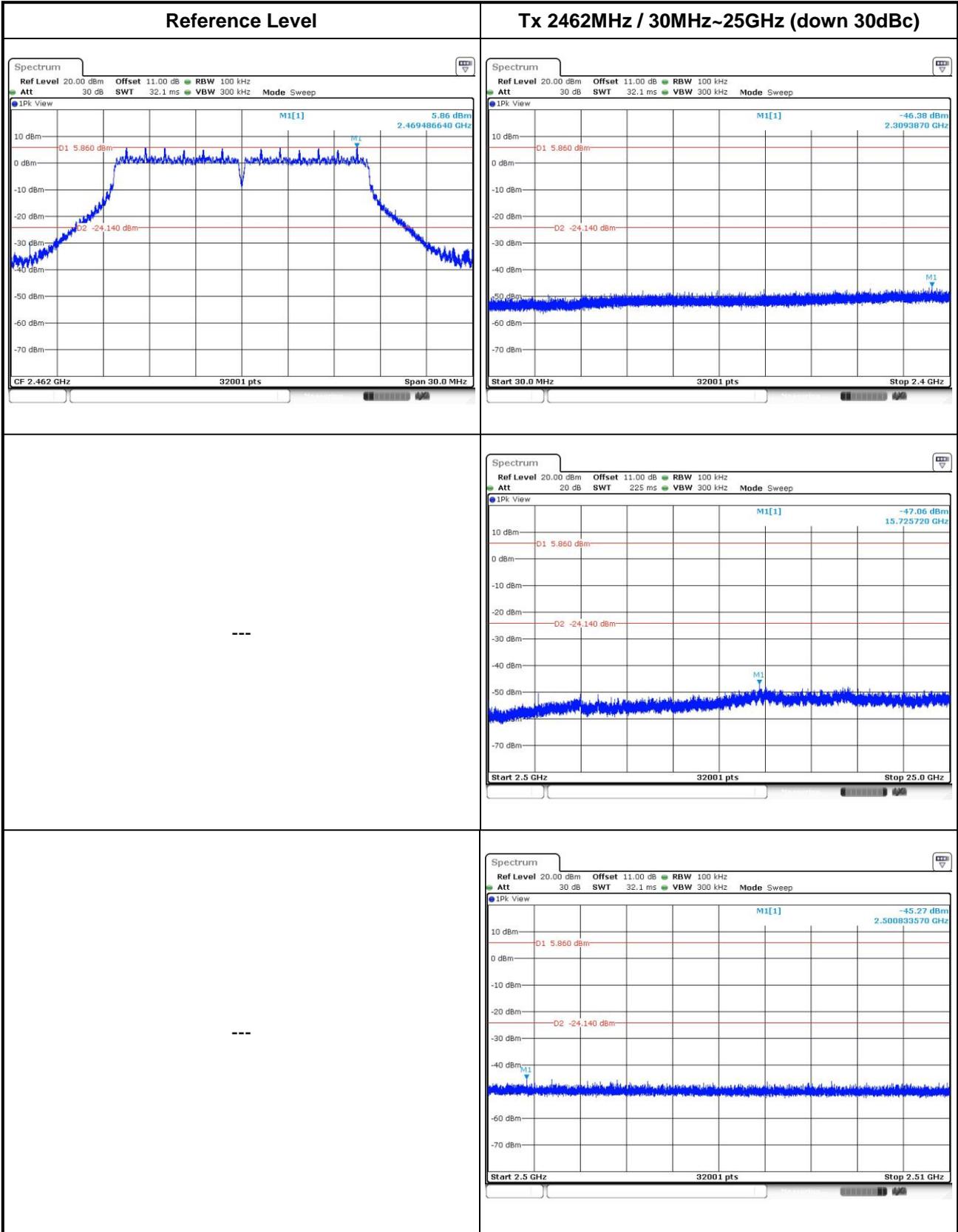




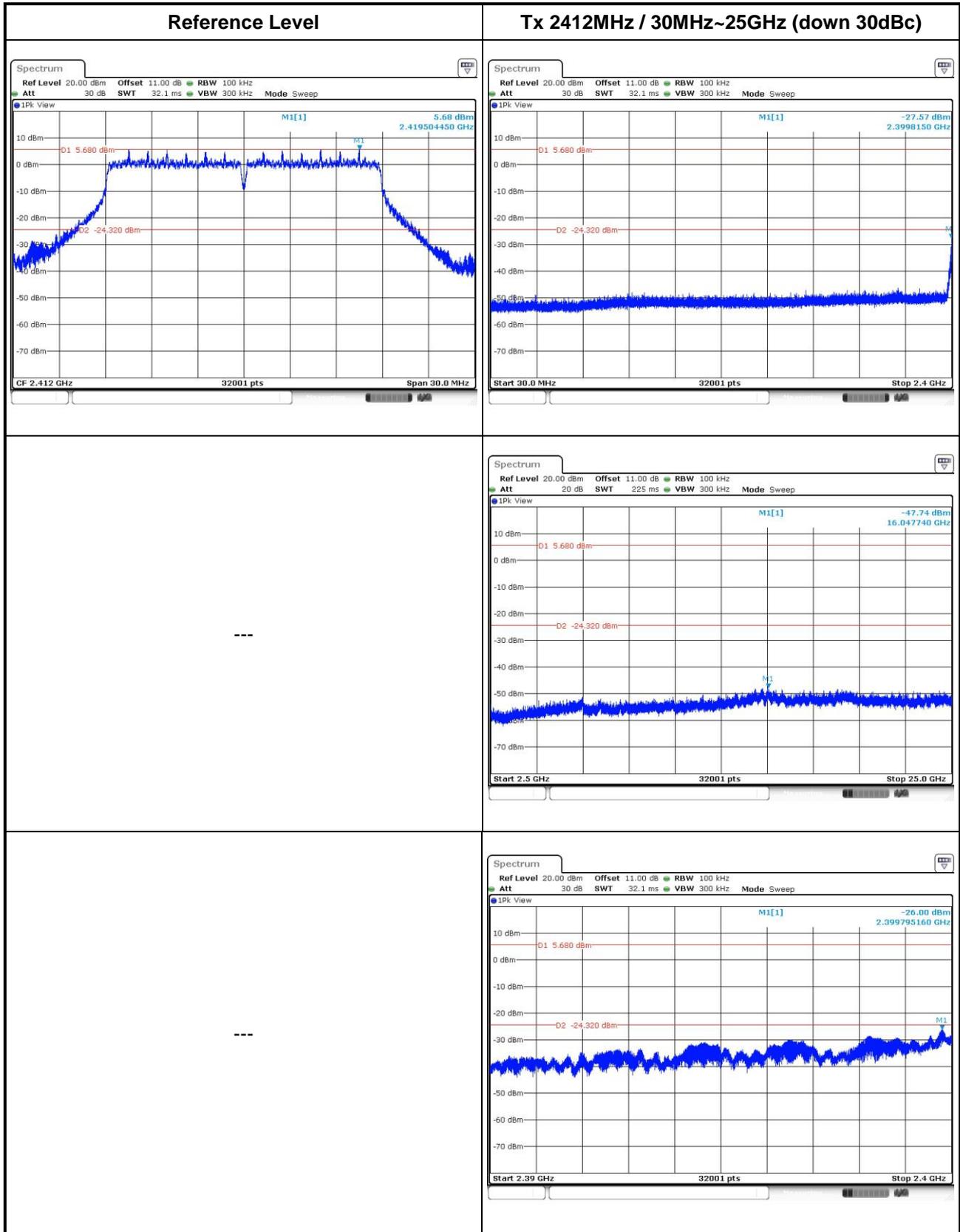
802.11g

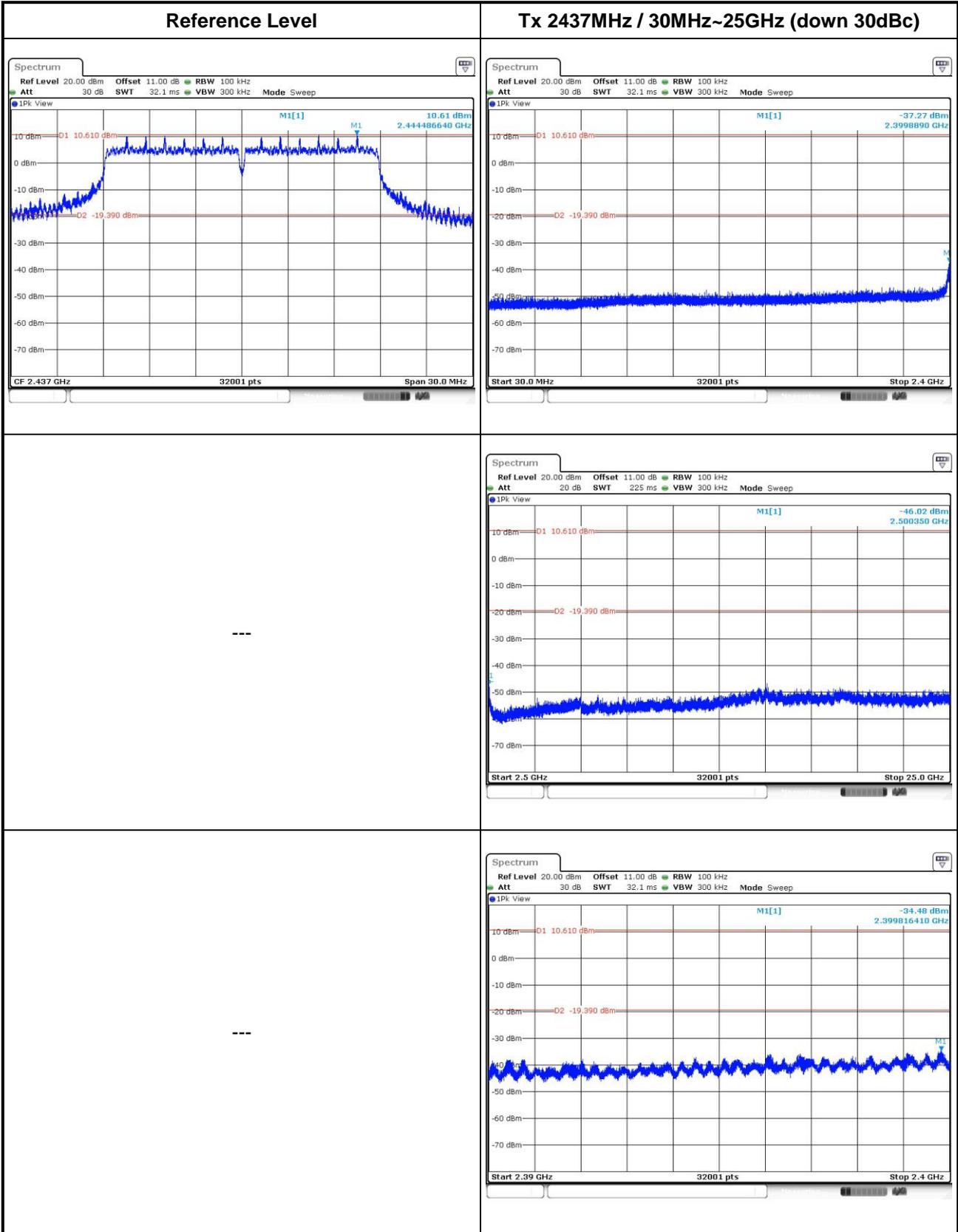


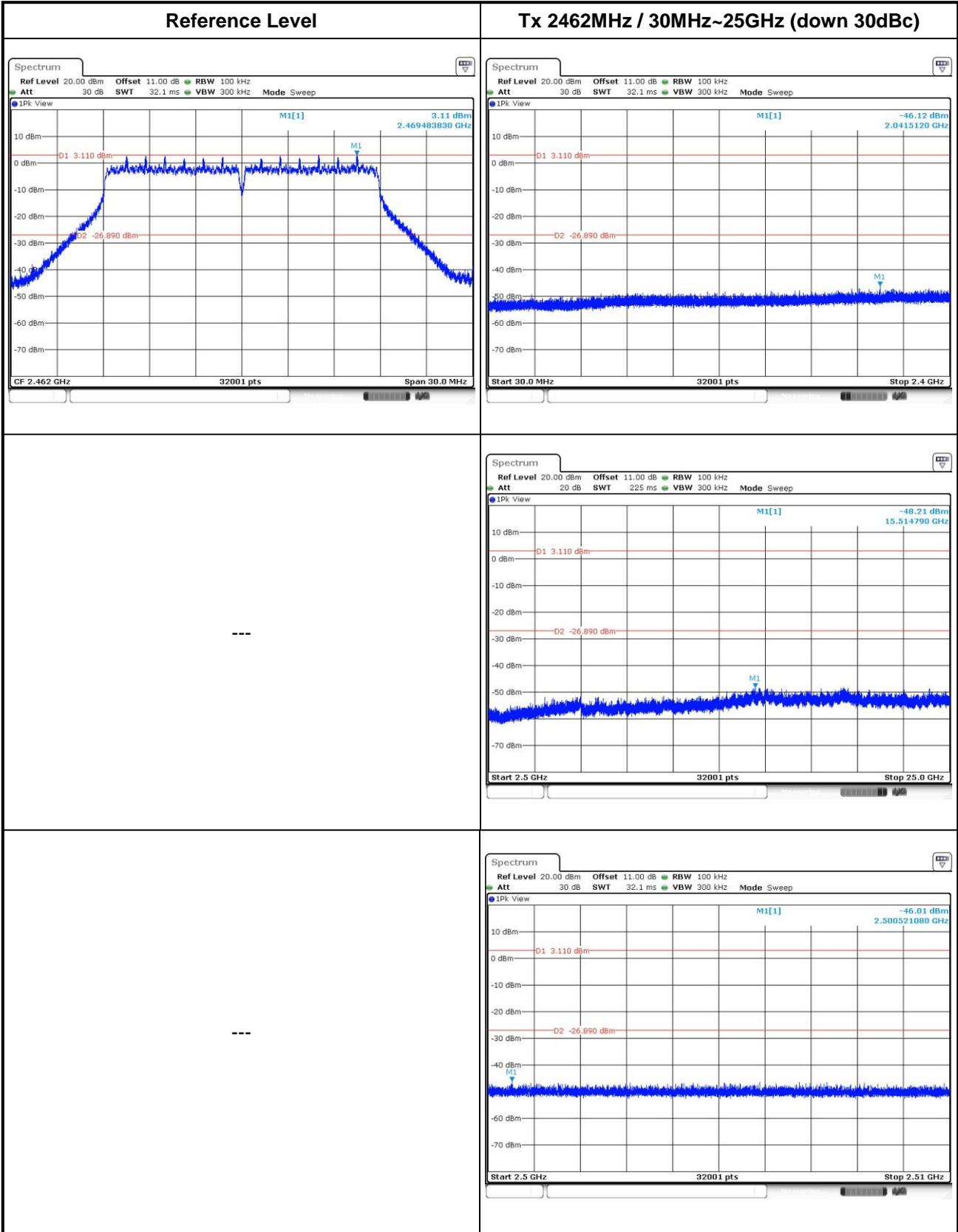




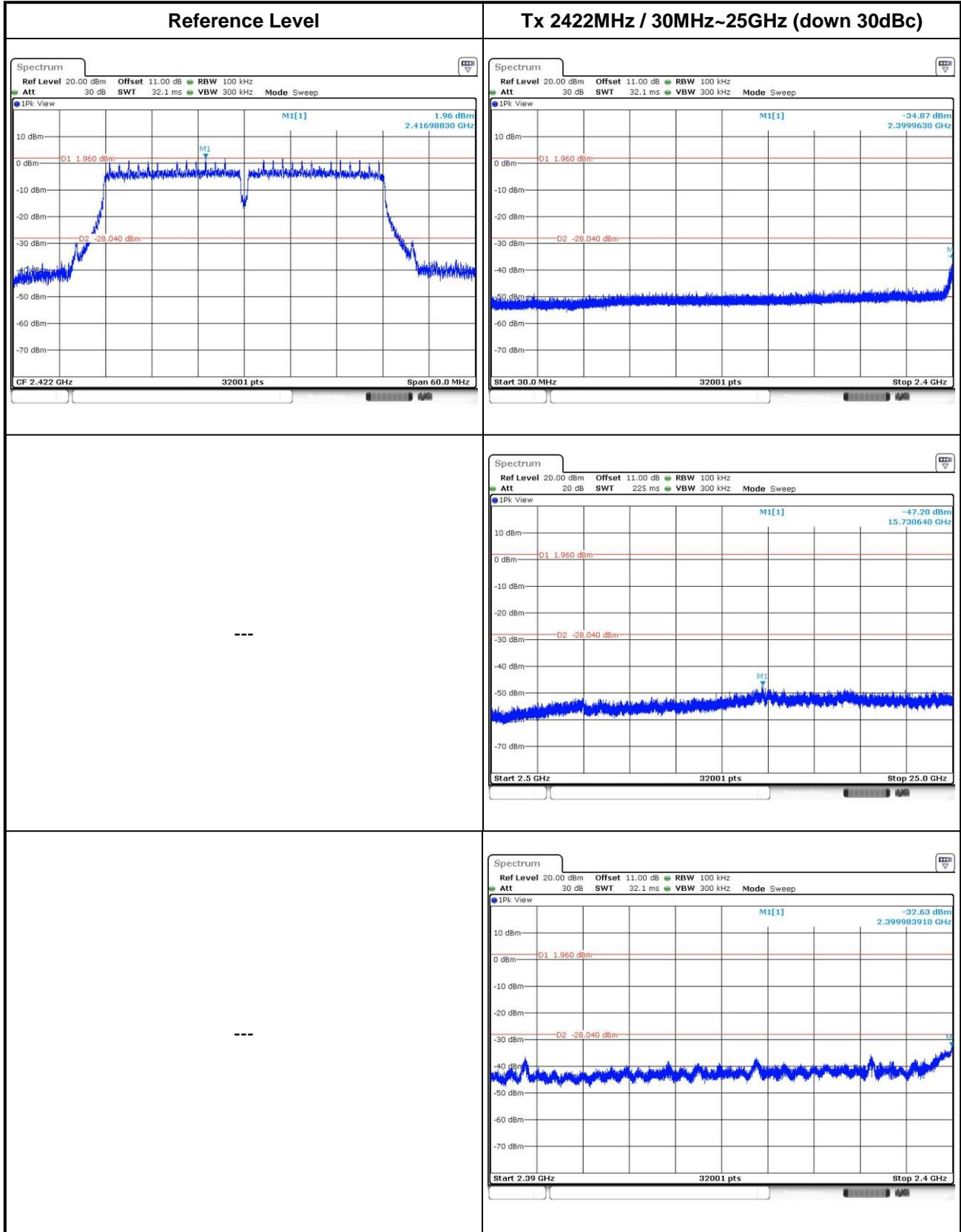
802.11n HT20

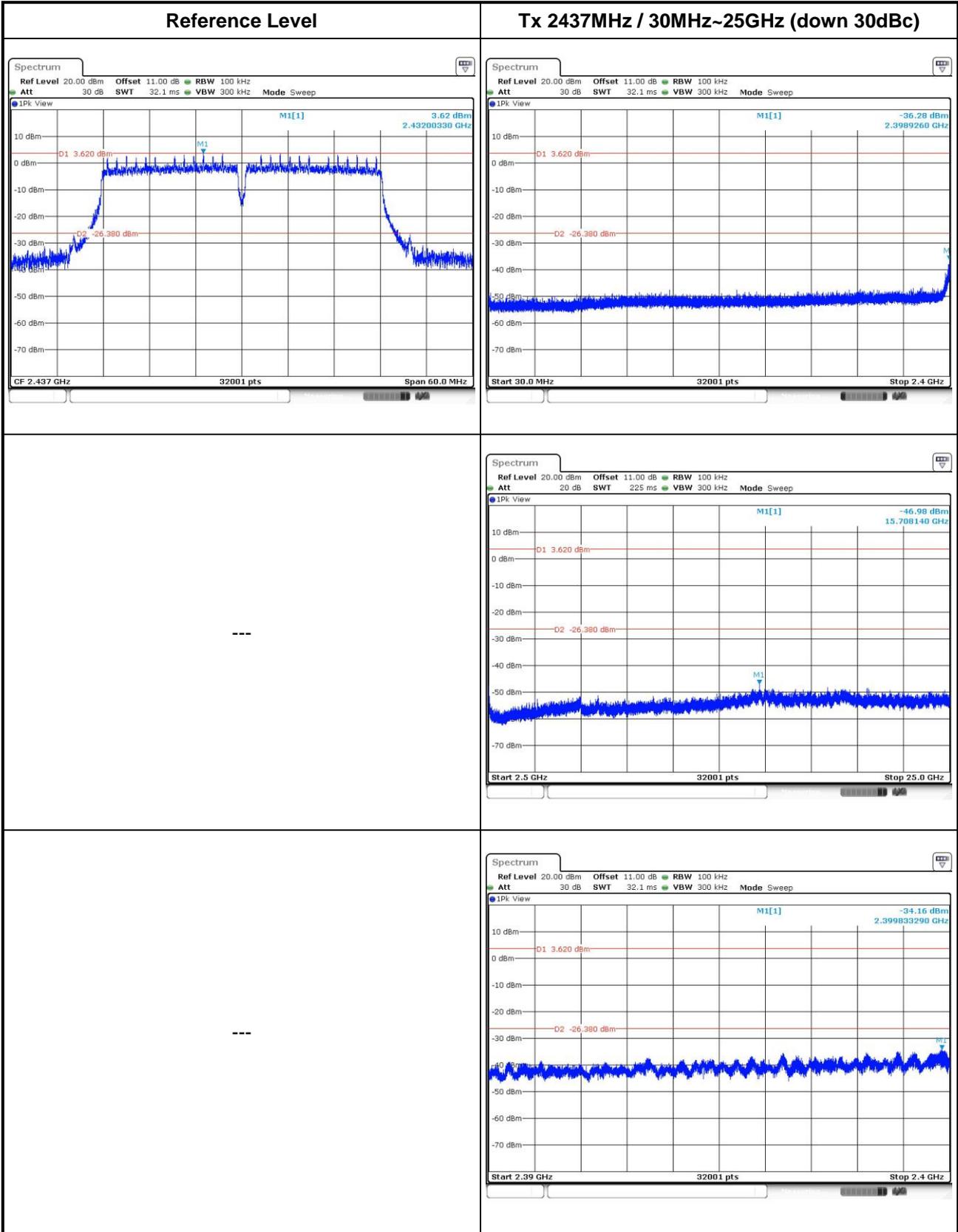


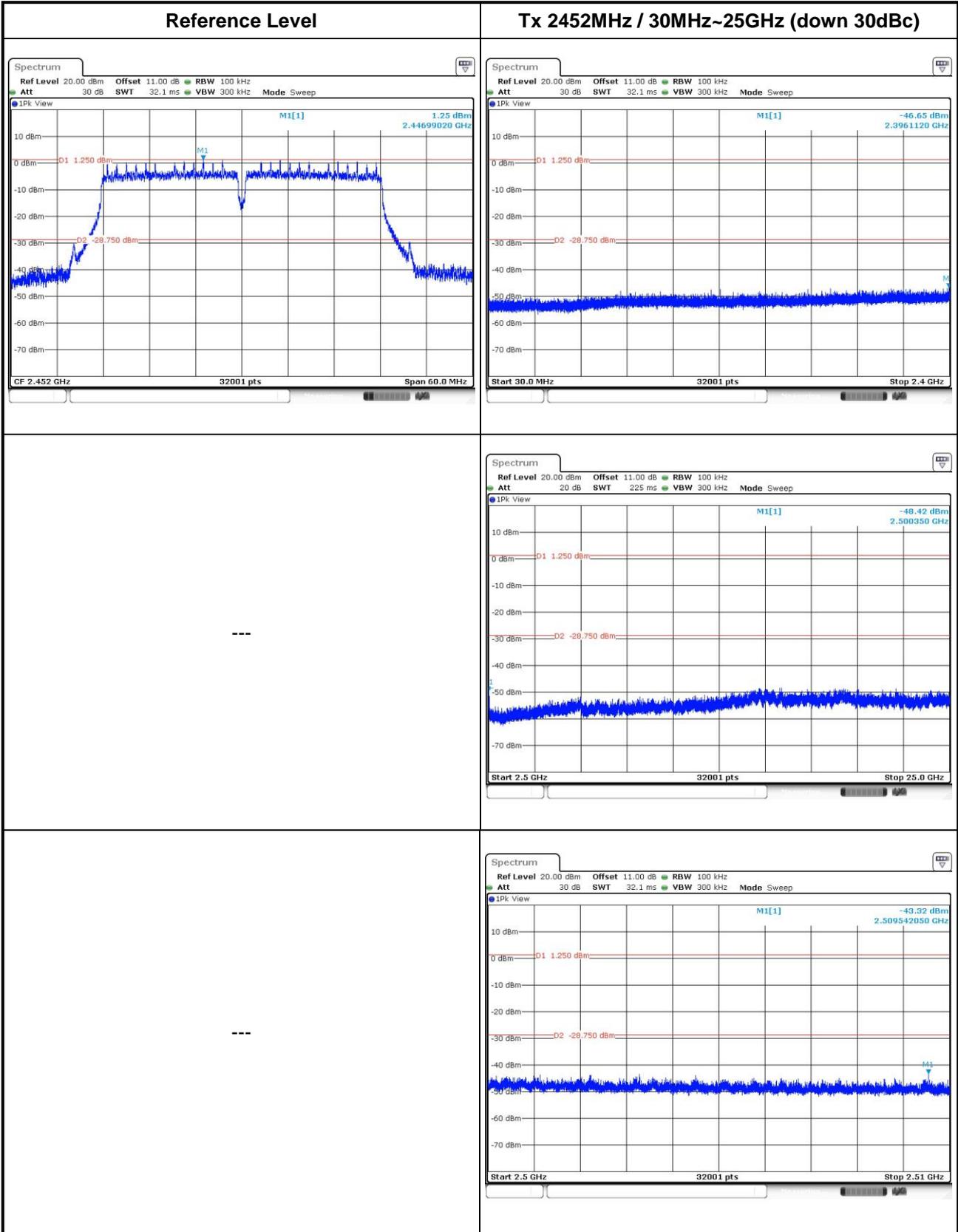




802.11n HT40







4 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corp (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan District. Location map can be found on our website <http://www.icertifi.com.tw>.

Linkou

Tel: 886-2-2601-1640

No. 30-2, Ding Fwu Tsuen, Lin
Kou District, New Taipei City,
Taiwan, R.O.C.

Kwei Shan

Tel: 886-3-271-8666

No. 3-1, Lane 6, Wen San 3rd St.,
Kwei Shan District, Tao Yuan City
333, Taiwan, R.O.C.

Kwei Shan Site II

Tel: 886-3-271-8640

No. 14-1, Lane 19, Wen San 3rd
St., Kwei Shan District, Tao Yuan
City 333, Taiwan, R.O.C.

If you have any suggestion, please feel free to contact us as below information.

Tel: 886-3-271-8666

Fax: 886-3-318-0155

Email: ICC_Service@icertifi.com.tw

==END==