

FCC Test Report

FCC ID : MXF-WLTGG1334846
Equipment : Cat 12/13 LTE TDD CBRS+B46 HE Outdoor CPE
Model No. : WLTGG-133
Brand Name : Gemtek
Applicant : Gemtek Technology Co., Ltd.
Address : No. 15-1 Zhonghua Road, Hsinchu Industrial Park, Hukou, Hsinchu, Taiwan, 30352
Standard : 47 CFR FCC Part 15.407
Received Date : Jun. 15, 2021
Tested Date : Jun. 19 ~ Jul. 21, 2021

We, International Certification Corporation, 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
FG161505-1	Rev. 01	Initial issue	Aug. 09, 2021

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 22.775MHz 42.54 (Margin -7.46dB) - AV	Pass
15.407(b) 15.209	Radiated Emissions	[dBuV/m at 3m]: 61.04MHz 38.98 (Margin -1.02dB) – QP [dBuV/m at 3m]: 5150.00MHz 52.98 (Margin -1.02dB) - AV	Pass
15.407(a)	Emission Bandwidth	Meet the requirement of limit	Pass
15.407(e)	6dB bandwidth	Meet the requirement of limit	Pass
15.407(a)	RF Output Power	Max Power [dBm]: 5150~5250MHz: 19.03 5725~5850MHz: 19.36	Pass
15.407(a)	Peak Power Spectral Density	Meet the requirement of limit	Pass
15.407(g)	Frequency Stability	Meet the requirement of limit	Pass
15.203	Antenna Requirement	Meet the requirement of limit	Pass

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

1 General Description

1.1 Information

1.1.1 Specification of the Equipment under Test (EUT)

Operating Band	Band 46 5150 MHz ~ 5925 MHz
Modulation Type	QPSK, 16QAM, 64QAM (Uplink) QPSK, 16QAM, 64QAM, 256QAM (Downlink)
Duplex Mode	TDD
UE Category	Cat. 12
Release	12
TX/RX function	2TX / 4RX
HW Version	MB:V01, RF:V01
SW Version	01.02.01.039

1.1.2 Antenna Details

Ant.	Type	Connector	Gain (dBi)	Antenna Polarization	Remark
ANT7 (Orange)	Patch	UFL	15.94	+45 degree	TX / RX
ANT8 (Yellow)	Patch	UFL	15.82	-45 degree	TX / RX
ANT9 (Blue)	Patch	UFL	14.71	+45 degree	RX
ANT10 (White)	Patch	UFL	14.94	-45 degree	RX

1.1.3 EUT Operational Condition

Supply Voltage	56Vdc from POE		
Operational Climatic	<input checked="" type="checkbox"/> Tnom (20°C)	<input checked="" type="checkbox"/> Tmax (55°C)	<input checked="" type="checkbox"/> Tmin (-40°C)

1.1.4 Accessories

Accessories		
No.	Equipment	Description
1	PoE	Brand: FRECOM Model: PGOC24D01-560027 I/P: 100-240V~ 50/60Hz, 0.7A O/P: 56V=0.27A 3 prong mickey mouse power cord: 0.72m non-shielded without core
2	PoE	Brand: PHIHONG Model: POE15M-560E I/P: 100-240V~ 0.8A, 50-60Hz O/P: 56V=0.275A 3 prong mickey mouse power cord: 0.72m non-shielded without core
3	RJ45 (NB to POE)	1.45m non-shielded without core

1.1.5 Operating Channel List

CDD Mode	
Channel Bandwidth (MHz)	Frequency (MHz)
5.15-5.25GHz	
10	5180
10	5200
10	5245
20	5180
20	5200
20	5240
5.725-5.85GHz	
10	5730
10	5800
10	5845
20	5745
20	5785
20	5825

1.1.6 Duty Cycle and Duty Factor

Test Tool	By Radio Communication Analyzer (Brand: Anritsu, Model: MT8821C)		
Duty Cycle and Duty Factor	Mode	Duty Cycle (%)	Duty Factor (dB)
	QPSK	41.32%	3.84
	16QAM	41.32%	3.84
	64QAM	41.32%	3.84

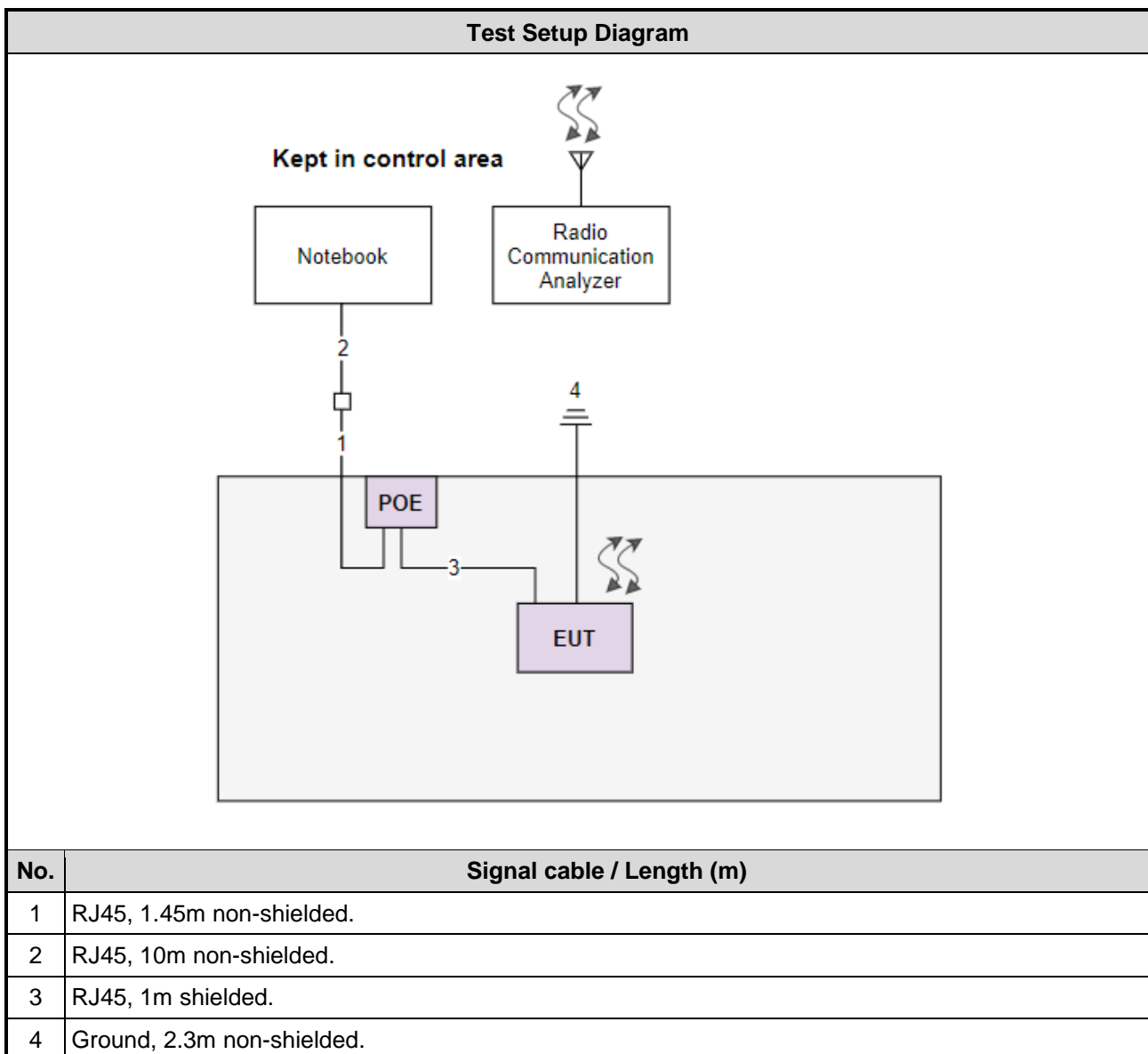
1.1.7 Power Index of Test Tool

Test Frequency (MHz)	Modulation Mode	Channel Bandwidth (MHz)	Power Index
5180	QPSK / 16QAM / 64QAM	10	19
5200	QPSK / 16QAM / 64QAM	10	19
5245	QPSK / 16QAM / 64QAM	10	19
5730	QPSK / 16QAM / 64QAM	10	19
5800	QPSK / 16QAM / 64QAM	10	19
5845	QPSK / 16QAM / 64QAM	10	19
5180	QPSK / 16QAM / 64QAM	20	19
5200	QPSK / 16QAM / 64QAM	20	19
5240	QPSK / 16QAM / 64QAM	20	19
5745	QPSK / 16QAM / 64QAM	20	19
5785	QPSK / 16QAM / 64QAM	20	19
5825	QPSK / 16QAM / 64QAM	20	19

1.2 Local Support Equipment List

Support Equipment List					
No.	Equipment	Brand	Model	FCC ID	Remarks
1	Notebook	DELL	Latitude E5470	DoC	---

1.3 Test Setup Chart



1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Test Date	Jul. 21, 2021				
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until
Receiver	R&S	ESR3	101658	Feb. 08, 2021	Feb. 07, 2022
LISN	R&S	ENV216	101579	Mar. 17, 2021	Mar. 16, 2022
LISN (Support Unit)	SCHWARZBECK	Schwarzbeck 8127	8127-666	Dec. 29, 2020	Dec. 28, 2021
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Oct. 21, 2020	Oct. 20, 2021
50 ohm terminal (Support Unit)	NA	50	04	May 25, 2021	May 24, 2022
Measurement Software	AUDIX	e3	6.120210k	NA	NA

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

Test Item	Radiated Emission below 1GHz				
Test Site	966 chamber1 / (03CH01-WS)				
Test Date	Jul. 05, 2021				
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until
Radio Communication Analyzer	Anritsu	MT8821C	6262149999	Aug. 28, 2020	Aug. 27, 2021
Receiver	R&S	ESR3	101657	Mar. 12, 2021	Mar. 11, 2022
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 17, 2020	Nov. 16, 2021
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Jun. 30, 2021	Jun. 29, 2022
Preamplifier	EMC	EMC02325	980225	Jun. 29, 2021	Jun. 28, 2022
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Oct. 06, 2020	Oct. 05, 2021
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Oct. 06, 2020	Oct. 05, 2021
LF cable 11M	EMC	EMCCFD400-NW-N W-11000	200801	Oct. 06, 2020	Oct. 05, 2021
LF cable 1M	EMC	EMCCFD400-NM-N M-1000	160502	Oct. 06, 2020	Oct. 05, 2021
Measurement Software	AUDIX	e3	6.120210g	NA	NA

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

Test Item	Radiated Emission above 1GHz				
Test Site	966 chamber1 / (03CH01-WS)				
Test Date	Jun. 19, 2021				
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until
Radio Communication Analyzer	Anritsu	MT8821C	6262149999	Aug. 28, 2020	Aug. 27, 2021
Spectrum Analyzer	R&S	FSV40	101498	Dec. 04, 2020	Dec. 03, 2021
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Dec. 11, 2020	Dec. 10, 2021
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Nov. 06, 2020	Nov. 05, 2021
Preamplifier	Agilent	83017A	MY39501308	Sep. 26, 2020	Sep. 25, 2021
Preamplifier	EMC	EMC184045B	980192	Jul. 21, 2020	Jul. 20, 2021
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16019/4	Oct. 06, 2020	Oct. 05, 2021
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16014/4	Oct. 06, 2020	Oct. 05, 2021
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)				
Test Date	Jul. 16, 2021				
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until
Radio Communication Analyzer	Anritsu	MT8821C	6262149999	Aug. 28, 2020	Aug. 27, 2021
Spectrum Analyzer	Keysight	N9010A	MY54510374	Aug. 19, 2020	Aug. 18, 2021
Power Meter	Anritsu	ML2495A	1241002	Nov. 04, 2020	Nov. 03, 2021
Power Sensor	Anritsu	MA2411B	1207366	Nov. 04, 2020	Nov. 03, 2021
AC POWER SOURCE	APC	AFC-500W	F312060012	Dec. 04, 2020	Dec. 03, 2021
TEMP&HUMIDITY CHAMBER	GIANT FORCE	GTH-150-40-CP-AR-T	MAA1407-012	Sep. 10, 2020	Sep. 09, 2021
Measurement Software	-	SENSE-FCC_2G-4G	V5.10.5.4	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

1.5 Test Standards

47 CFR FCC Part 15.407

ANSI C63.10-2013

1.6 Reference Guidance

FCC KDB 412172 D01 Determining ERP and EIRP v01r01
 FCC KDB 662911 D01 Multiple Transmitter Output v02r01
 FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01

1.7 Deviation from Test Standard and Measurement Procedure

None

1.8 Measurement Uncertainty

The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor ($k=2$)).

Measurement Uncertainty	
Parameters	Uncertainty
Bandwidth	± 34.130 Hz
Conducted power	± 0.808 dB
Frequency error	$\pm 1 \times 10^{-9}$
Power density	± 0.583 dB
Conducted emission	± 2.715 dB
AC conducted emission	± 2.92 dB
Radiated emission ≤ 1 GHz	± 3.41 dB
Radiated emission > 1 GHz	± 4.59 dB
Time	$\pm 0.1\%$
Temperature	± 0.4 °C

2 Test Configuration

2.1 Testing Facility

Test Laboratory	International Certification Corporation
Test Site	CO01-WS, 03CH01-WS, TH01-WS
Address of Test Site	No.3-1, Lane 6, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 33381, Taiwan (R.O.C.)

- FCC Designation No.: TW2732
- FCC site registration No.: 181692
- ISED#: 10807A
- CAB identifier: TW2732

2.2 The Worst Test Modes and Channel Details

CDD Mode			
Test item	Channel Bandwidth	Modulation	Test channel (MHz)
5.15-5.25GHz			
Conducted Emissions Radiated Emissions ≤ 1 GHz	10MHz	64QAM	5245
Radiated Emissions > 1 GHz	10MHz 20MHz	64QAM 64QAM	5180 / 5200 / 5245 5180 / 5200 / 5240
RF Output Power Emission Bandwidth Peak Power Spectral Density	10MHz 20MHz	QPSK / 16QAM / 64QAM QPSK / 16QAM / 64QAM	5180 / 5200 / 5245 5180 / 5200 / 5240
Frequency Stability	10MHz	Un-modulation	5200
5.725-5.85GHz			
Conducted Emissions Radiated Emissions ≤ 1 GHz	10MHz	64QAM	5730
Radiated Emissions > 1 GHz	10MHz 20MHz	64QAM 64QAM	5730 / 5800 / 5845 5745 / 5785 / 5825
RF Output Power Emission Bandwidth Peak Power Spectral Density	10MHz 20MHz	QPSK / 16QAM / 64QAM QPSK / 16QAM / 64QAM	5730 / 5800 / 5845 5745 / 5785 / 5825
Frequency Stability	10MHz	Un-modulation	5785
NOTE:			
1. Two PoEs (FRECOM & PHIHONG) had been covered during the pretest and found that PHIHONG PoE was the worst case and was selected for final testing.			

3 Transmitter Test Results

3.1 Conducted Emissions

3.1.1 Limit of Conducted Emissions

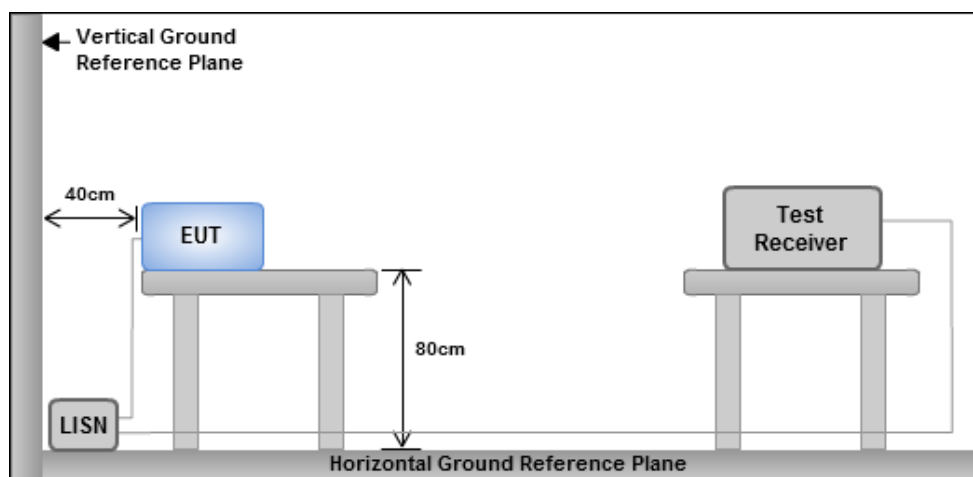
Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

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

3.1.2 Test Procedures

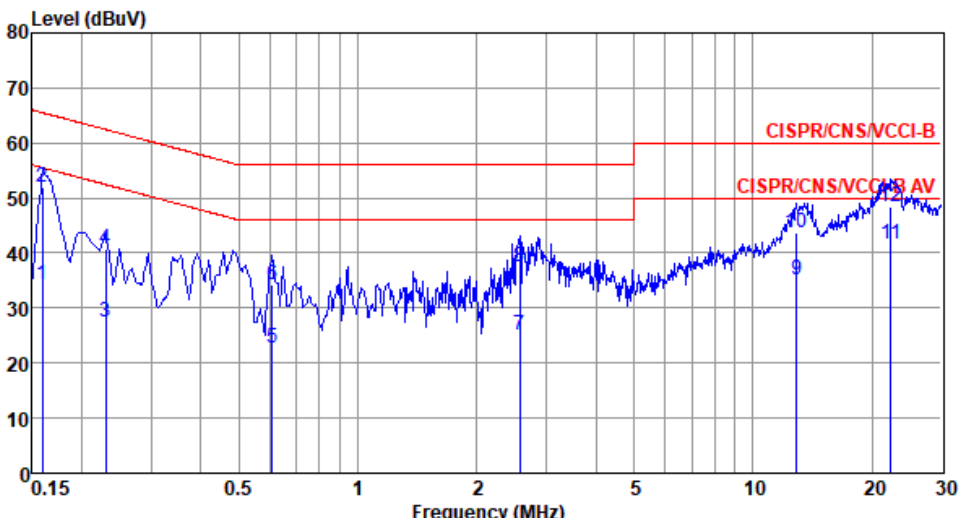
1. The device is placed on a test table, raised 80 cm above the reference ground plane. The vertical conducting plane is located 40 cm to the rear of the device.
2. The device is connected to line impedance stabilization network (LISN) and other accessories are connected to other LISN. Measured levels 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



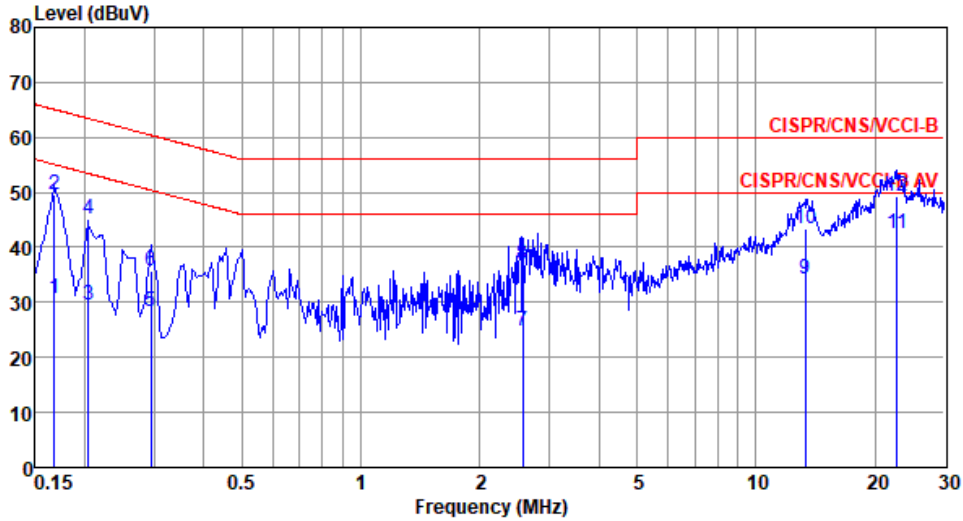
- Note: 1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.1.4 Test Result of Conducted Emissions

Channel Bandwidth	10MHz	Test Freq. (MHz)	5245																																																																																																																					
Power Phase	Line	Modulation	64QAM																																																																																																																					
<p>Test by : Joe Liao Temperature: 24°C Humidity: 63%</p>																																																																																																																								
																																																																																																																								
<table border="1"> <thead> <tr> <th></th> <th>Freq MHz</th> <th>Level dBuV</th> <th>Limit Line dBuV</th> <th>Over Limit dB</th> <th>Read Level dBuV</th> <th>Factor dB</th> <th>Cable loss dB</th> <th>Remark</th> </tr> </thead> <tbody> <tr><td>1</td><td>0.159</td><td>34.22</td><td>55.52</td><td>-21.30</td><td>24.34</td><td>9.83</td><td>0.05</td><td>Average</td></tr> <tr><td>2</td><td>0.159</td><td>51.92</td><td>65.52</td><td>-13.60</td><td>42.04</td><td>9.83</td><td>0.05</td><td>QP</td></tr> <tr><td>3</td><td>0.230</td><td>27.54</td><td>52.44</td><td>-24.90</td><td>17.63</td><td>9.85</td><td>0.06</td><td>Average</td></tr> <tr><td>4</td><td>0.230</td><td>40.74</td><td>62.44</td><td>-21.70</td><td>30.83</td><td>9.85</td><td>0.06</td><td>QP</td></tr> <tr><td>5</td><td>0.608</td><td>22.68</td><td>46.00</td><td>-23.32</td><td>12.64</td><td>9.94</td><td>0.10</td><td>Average</td></tr> <tr><td>6</td><td>0.608</td><td>34.10</td><td>56.00</td><td>-21.90</td><td>24.06</td><td>9.94</td><td>0.10</td><td>QP</td></tr> <tr><td>7</td><td>2.567</td><td>25.12</td><td>46.00</td><td>-20.88</td><td>14.89</td><td>10.01</td><td>0.22</td><td>Average</td></tr> <tr><td>8</td><td>2.567</td><td>37.43</td><td>56.00</td><td>-18.57</td><td>27.20</td><td>10.01</td><td>0.22</td><td>QP</td></tr> <tr><td>9</td><td>12.920</td><td>35.05</td><td>50.00</td><td>-14.95</td><td>24.35</td><td>10.17</td><td>0.53</td><td>Average</td></tr> <tr><td>10</td><td>12.920</td><td>43.69</td><td>60.00</td><td>-16.31</td><td>32.99</td><td>10.17</td><td>0.53</td><td>QP</td></tr> <tr><td>11*</td><td>22.298</td><td>41.71</td><td>50.00</td><td>-8.29</td><td>30.70</td><td>10.33</td><td>0.68</td><td>Average</td></tr> <tr><td>12</td><td>22.298</td><td>48.35</td><td>60.00</td><td>-11.65</td><td>37.34</td><td>10.33</td><td>0.68</td><td>QP</td></tr> </tbody> </table>					Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	Factor dB	Cable loss dB	Remark	1	0.159	34.22	55.52	-21.30	24.34	9.83	0.05	Average	2	0.159	51.92	65.52	-13.60	42.04	9.83	0.05	QP	3	0.230	27.54	52.44	-24.90	17.63	9.85	0.06	Average	4	0.230	40.74	62.44	-21.70	30.83	9.85	0.06	QP	5	0.608	22.68	46.00	-23.32	12.64	9.94	0.10	Average	6	0.608	34.10	56.00	-21.90	24.06	9.94	0.10	QP	7	2.567	25.12	46.00	-20.88	14.89	10.01	0.22	Average	8	2.567	37.43	56.00	-18.57	27.20	10.01	0.22	QP	9	12.920	35.05	50.00	-14.95	24.35	10.17	0.53	Average	10	12.920	43.69	60.00	-16.31	32.99	10.17	0.53	QP	11*	22.298	41.71	50.00	-8.29	30.70	10.33	0.68	Average	12	22.298	48.35	60.00	-11.65	37.34	10.33	0.68	QP
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Channel Bandwidth	10MHz	Test Freq. (MHz)	5245
Power Phase	Neutral	Modulation	64QAM

Test by : Joe Liao Temperature: 24°C Humidity: 63%

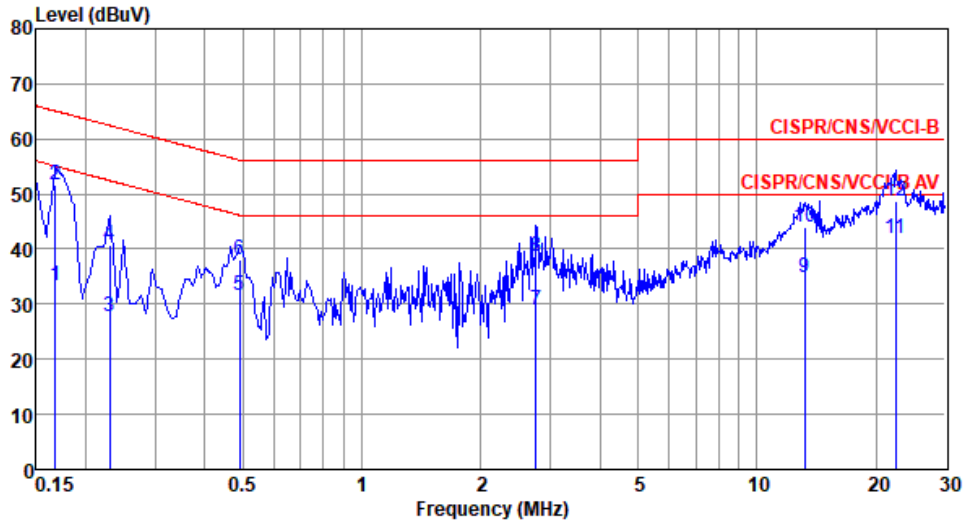


	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	Factor dB	Cable loss dB	Remark
1	0.168	30.74	55.08	-24.34	20.87	9.82	0.05	Average
2	0.168	49.65	65.08	-15.43	39.78	9.82	0.05	QP
3	0.204	29.64	53.45	-23.81	19.75	9.83	0.06	Average
4	0.204	45.13	63.45	-18.32	35.24	9.83	0.06	QP
5	0.294	28.39	50.41	-22.02	18.48	9.84	0.07	Average
6	0.294	35.71	60.41	-24.70	25.80	9.84	0.07	QP
7	2.567	24.72	46.00	-21.28	14.55	9.95	0.22	Average
8	2.567	36.91	56.00	-19.09	26.74	9.95	0.22	QP
9	13.337	34.26	50.00	-15.74	23.53	10.19	0.54	Average
10	13.337	43.52	60.00	-16.48	32.79	10.19	0.54	QP
11*	22.775	42.54	50.00	-7.46	31.45	10.40	0.69	Average
12	22.775	49.20	60.00	-10.80	38.11	10.40	0.69	QP

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

Channel Bandwidth	10MHz	Test Freq. (MHz)	5730
Power Phase	Line	Modulation	64QAM

Test by : Joe Liao Temperature: 24°C Humidity: 63%

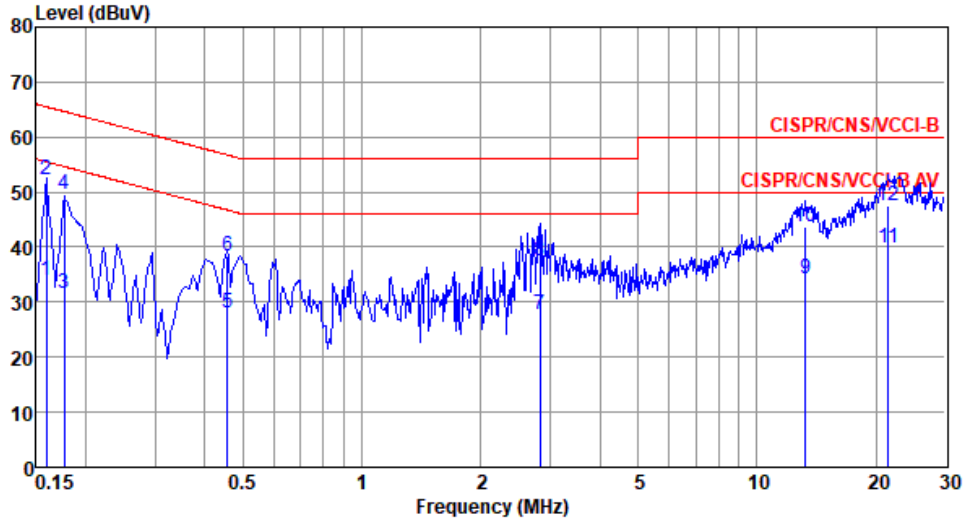


	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	Factor dB	Cable loss dB	Remark
1	0.168	33.34	55.08	-21.74	23.46	9.83	0.05	Average
2	0.168	51.77	65.08	-13.31	41.89	9.83	0.05	QP
3	0.230	27.74	52.44	-24.70	17.83	9.85	0.06	Average
4	0.230	40.71	62.44	-21.73	30.80	9.85	0.06	QP
5	0.491	31.54	46.14	-14.60	21.54	9.91	0.09	Average
6	0.491	38.23	56.14	-17.91	28.23	9.91	0.09	QP
7	2.765	29.03	46.00	-16.97	18.78	10.02	0.23	Average
8	2.765	38.65	56.00	-17.35	28.40	10.02	0.23	QP
9	13.197	34.79	50.00	-15.21	24.08	10.17	0.54	Average
10	13.197	44.03	60.00	-15.97	33.32	10.17	0.54	QP
11*	22.416	41.93	50.00	-8.07	30.91	10.33	0.69	Average
12	22.416	48.58	60.00	-11.42	37.56	10.33	0.69	QP

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

Channel Bandwidth	10MHz	Test Freq. (MHz)	5730
Power Phase	Neutral	Modulation	64QAM

Test by : Joe Liao Temperature: 24°C Humidity: 63%



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	Factor dB	Cable loss dB	Remark
1	0.159	33.82	55.52	-21.70	23.95	9.82	0.05	Average
2	0.159	52.35	65.52	-13.17	42.48	9.82	0.05	QP
3	0.177	31.53	54.64	-23.11	21.64	9.83	0.06	Average
4	0.177	49.66	64.64	-14.98	39.77	9.83	0.06	QP
5	0.456	28.18	46.76	-18.58	18.24	9.85	0.09	Average
6	0.456	38.24	56.76	-18.52	28.30	9.85	0.09	QP
7	2.824	27.87	46.00	-18.13	17.69	9.95	0.23	Average
8	2.824	37.39	56.00	-18.61	27.21	9.95	0.23	QP
9	13.267	34.31	50.00	-15.69	23.59	10.18	0.54	Average
10	13.267	43.64	60.00	-16.36	32.92	10.18	0.54	QP
11*	21.486	39.99	50.00	-10.01	28.94	10.37	0.68	Average
12	21.486	47.57	60.00	-12.43	36.52	10.37	0.68	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 Emission Bandwidth

3.2.1 Limit of Emission bandwidth

Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

3.2.2 Test Procedures

26dB Bandwidth

1. Set RBW = approximately 1% of the emission bandwidth.
2. Set the VBW > RBW, Detector = Peak.
3. Trace mode = max hold.
4. Measure the maximum width of the emission that is 26 dB down from the peak of the emission.

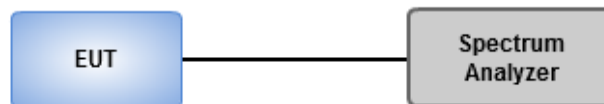
Occupied Bandwidth

1. Set RBW = 1 % to 5 % of the OBW.
2. Set VBW \geq 3 RBW.
3. Sample detection and single sweep mode shall be used.
4. Use the 99 % power bandwidth function of the instrument.

6dB Bandwidth

1. Set RBW = 100kHz, VBW = 300kHz.
2. Detector = Peak, Trace mode = max hold.
3. 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 frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

3.2.3 Test Setup



3.2.4 Test Result of Emission Bandwidth

Ambient Condition	24°C / 66%	Tested By	Aska Huang
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Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
LTE (BW 10MHz)-QPSK_Nss1,(MCS0)_2TX	9.601M	8.936M	8M94G7D	9.275M	8.864M
LTE (BW 10MHz)-16QAM_Nss1,(MCS0)_2TX	9.674M	8.936M	8M94W7D	9.348M	8.864M
LTE (BW 10MHz)-64QAM_Nss1,(MCS0)_2TX	9.638M	8.936M	8M94D9W	9.384M	8.828M
LTE (BW 20MHz)-QPSK_Nss1,(MCS0)_2TX	18.913M	17.8M	17M8G7D	18.478M	17.728M
LTE (BW 20MHz)-16QAM_Nss1,(MCS0)_2TX	18.841M	17.8M	17M8W7D	18.406M	17.728M
LTE (BW 20MHz)-64QAM_Nss1,(MCS0)_2TX	18.768M	17.873M	17M9D9W	18.551M	17.728M
5.725-5.85GHz	-	-	-	-	-
LTE (BW 10MHz)-QPSK_Nss1,(MCS0)_2TX	8.986M	8.9M	8M90G7D	8.696M	8.864M
LTE (BW 10MHz)-16QAM_Nss1,(MCS0)_2TX	8.986M	8.936M	8M94W7D	8.768M	8.828M
LTE (BW 10MHz)-64QAM_Nss1,(MCS0)_2TX	9.022M	8.936M	8M94D9W	7.428M	8.9M
LTE (BW 20MHz)-QPSK_Nss1,(MCS0)_2TX	17.899M	17.8M	17M8G7D	17.681M	17.728M
LTE (BW 20MHz)-16QAM_Nss1,(MCS0)_2TX	17.971M	17.8M	17M8W7D	17.609M	17.728M
LTE (BW 20MHz)-64QAM_Nss1,(MCS0)_2TX	17.971M	17.873M	17M9D9W	17.826M	17.8M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;

Max-OBW = Maximum 99% occupied bandwidth;

Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;

Min-OBW = Minimum 99% occupied bandwidth;

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
LTE (BW 10MHz)-QPSK_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	9.529M	8.9M	9.601M	8.9M
5200MHz	Pass	Inf	9.457M	8.936M	9.565M	8.9M
5245MHz	Pass	Inf	9.529M	8.9M	9.275M	8.864M
LTE (BW 10MHz)-16QAM_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	9.674M	8.9M	9.529M	8.864M
5200MHz	Pass	Inf	9.348M	8.864M	9.529M	8.936M
5245MHz	Pass	Inf	9.638M	8.936M	9.457M	8.9M
LTE (BW 10MHz)-64QAM_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	9.565M	8.936M	9.638M	8.936M
5200MHz	Pass	Inf	9.601M	8.9M	9.565M	8.9M
5245MHz	Pass	Inf	9.638M	8.936M	9.384M	8.828M
LTE (BW 10MHz)-QPSK_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5730MHz	Pass	500k	8.913M	8.9M	8.986M	8.9M
5800MHz	Pass	500k	8.949M	8.9M	8.986M	8.9M
5845MHz	Pass	500k	8.841M	8.9M	8.696M	8.864M
LTE (BW 10MHz)-16QAM_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5730MHz	Pass	500k	8.986M	8.9M	8.986M	8.9M
5800MHz	Pass	500k	8.986M	8.9M	8.986M	8.936M
5845MHz	Pass	500k	8.949M	8.9M	8.768M	8.828M
LTE (BW 10MHz)-64QAM_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5730MHz	Pass	500k	8.949M	8.9M	9.022M	8.9M
5800MHz	Pass	500k	9.022M	8.9M	9.022M	8.936M
5845MHz	Pass	500k	8.913M	8.936M	7.428M	8.9M
LTE (BW 20MHz)-QPSK_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	18.696M	17.8M	18.478M	17.8M
5200MHz	Pass	Inf	18.696M	17.8M	18.913M	17.8M
5240MHz	Pass	Inf	18.696M	17.728M	18.696M	17.8M
LTE (BW 20MHz)-16QAM_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	18.696M	17.8M	18.623M	17.8M
5200MHz	Pass	Inf	18.406M	17.728M	18.841M	17.8M
5240MHz	Pass	Inf	18.768M	17.8M	18.551M	17.8M
LTE (BW 20MHz)-64QAM_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	18.623M	17.8M	18.551M	17.728M
5200MHz	Pass	Inf	18.696M	17.8M	18.551M	17.8M
5240MHz	Pass	Inf	18.768M	17.873M	18.696M	17.8M
LTE (BW 20MHz)-QPSK_Nss1,(MCS0)_2TX	-	-	-	-	-	-

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
5745MHz	Pass	500k	17.899M	17.728M	17.899M	17.728M
5785MHz	Pass	500k	17.899M	17.8M	17.681M	17.728M
5825MHz	Pass	500k	17.899M	17.8M	17.826M	17.8M
LTE (BW 20MHz)-16QAM_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5745MHz	Pass	500k	17.826M	17.728M	17.971M	17.8M
5785MHz	Pass	500k	17.609M	17.8M	17.754M	17.728M
5825MHz	Pass	500k	17.899M	17.8M	17.899M	17.8M
LTE (BW 20MHz)-64QAM_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5745MHz	Pass	500k	17.899M	17.8M	17.971M	17.873M
5785MHz	Pass	500k	17.971M	17.8M	17.899M	17.8M
5825MHz	Pass	500k	17.971M	17.873M	17.826M	17.8M

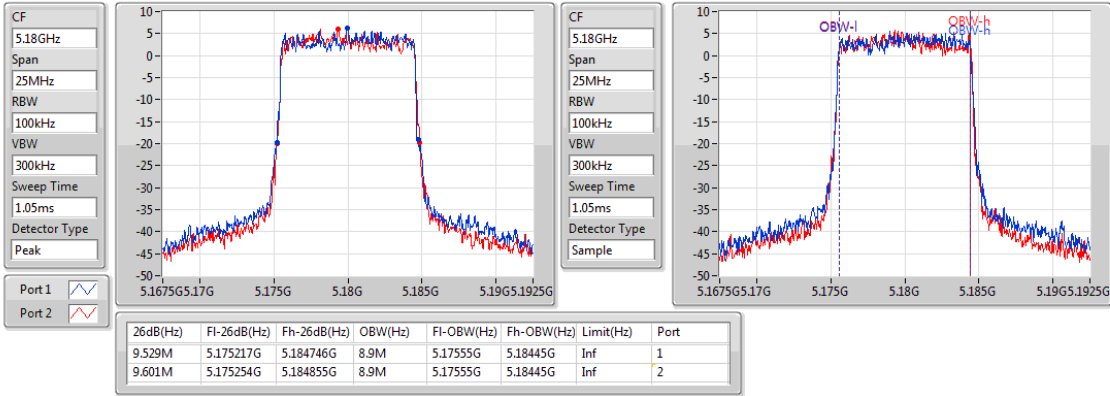
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band

Port X-OBW = Port X 99% occupied bandwidth;

LTE (BW 10MHz)-QPSK_Nss1,(MCS0)_2TX

EBW

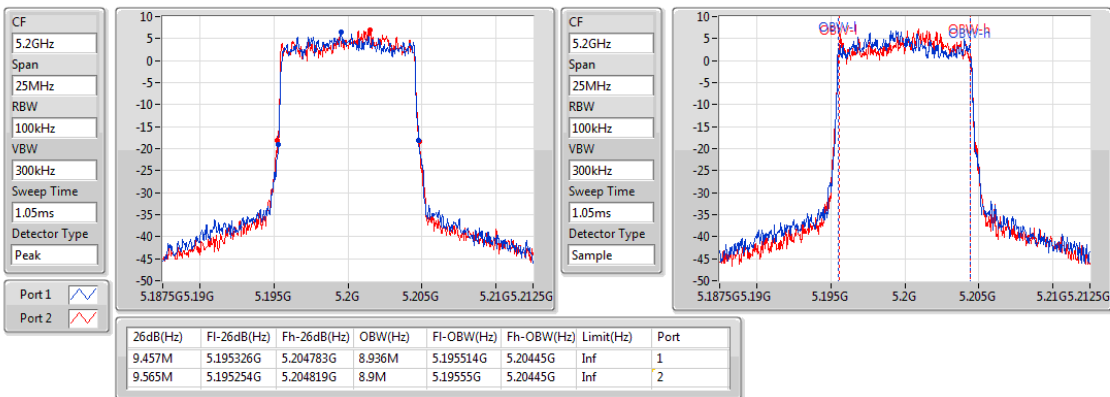
5180MHz



LTE (BW 10MHz)-QPSK_Nss1,(MCS0)_2TX

EBW

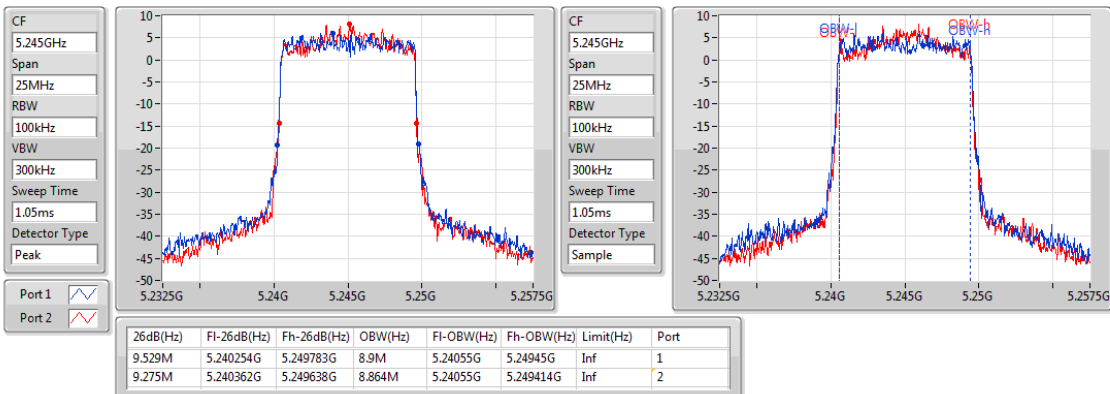
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LTE (BW 10MHz)-QPSK_Nss1,(MCS0)_2TX

EBW

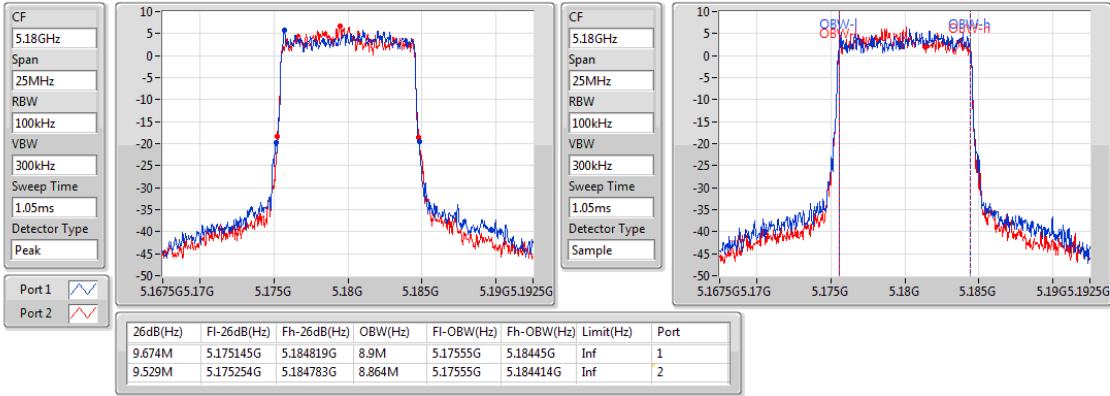
5245MHz



LTE (BW 10MHz)-16QAM_Nss1,(MCS0)_2TX

EBW

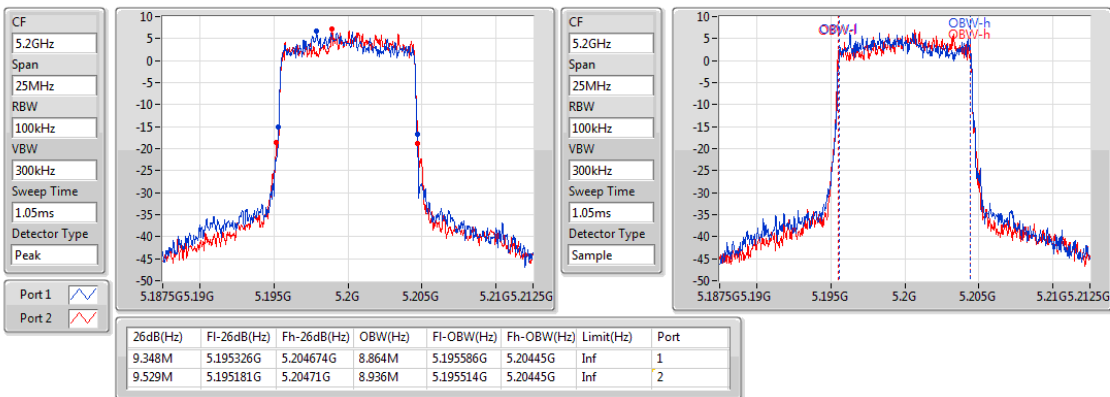
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LTE (BW 10MHz)-16QAM_Nss1,(MCS0)_2TX

EBW

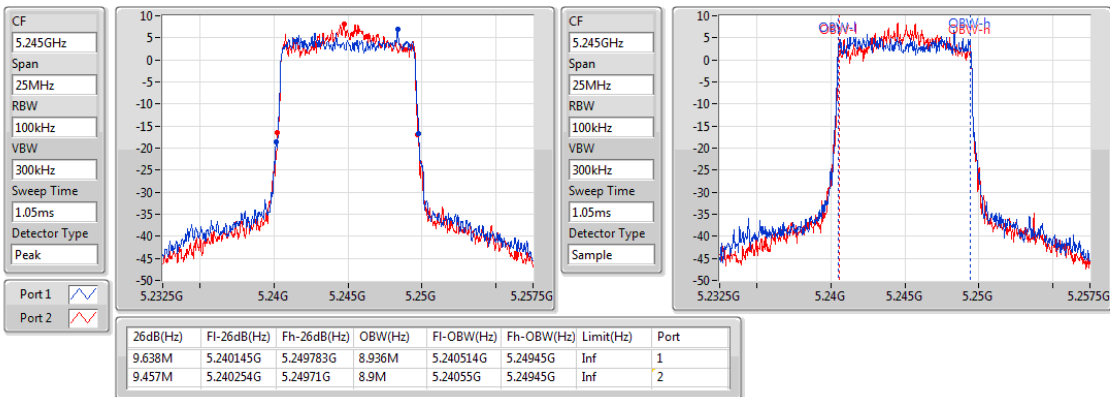
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LTE (BW 10MHz)-16QAM_Nss1,(MCS0)_2TX

EBW

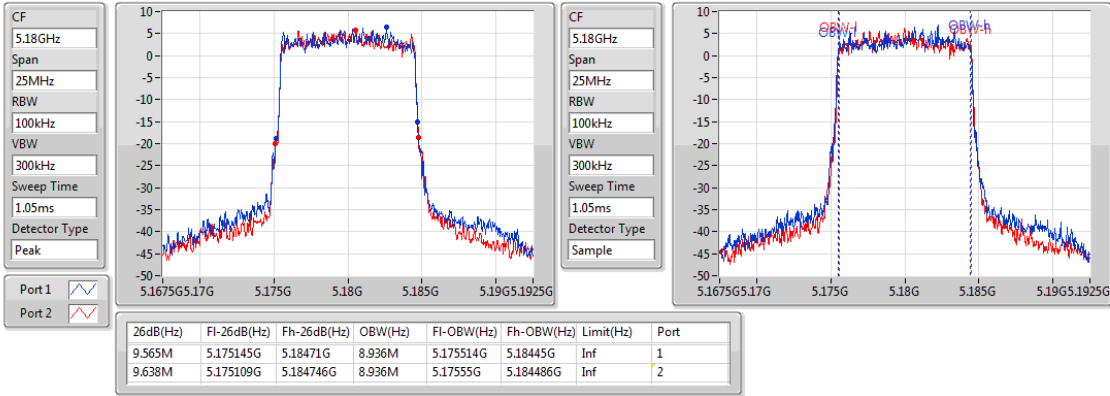
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LTE (BW 10MHz)-64QAM_Nss1,(MCS0)_2TX

EBW

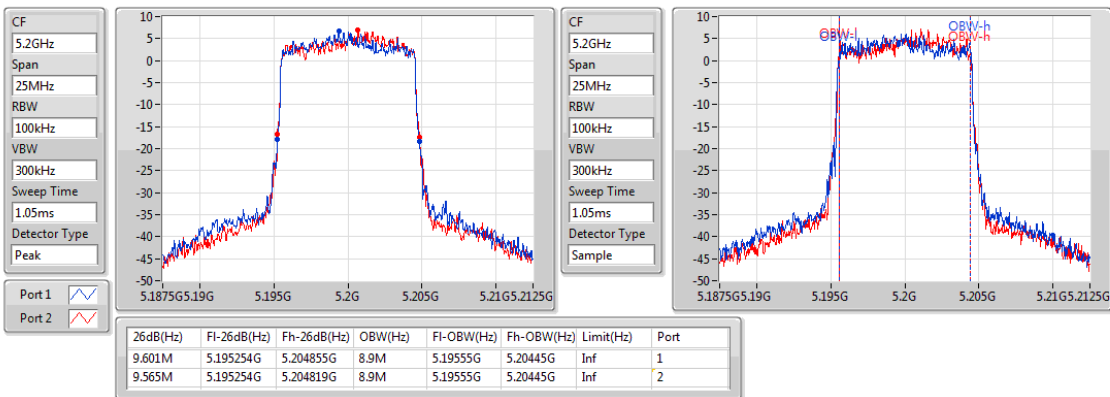
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LTE (BW 10MHz)-64QAM_Nss1,(MCS0)_2TX

EBW

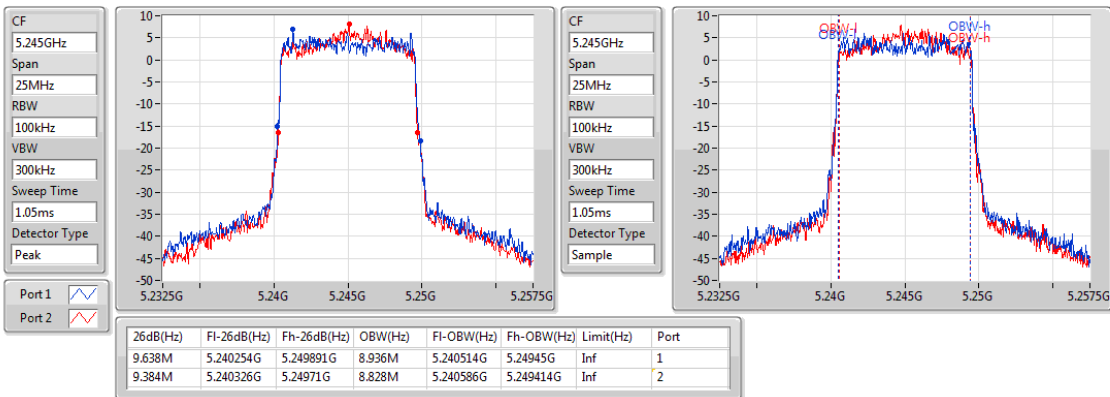
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LTE (BW 10MHz)-64QAM_Nss1,(MCS0)_2TX

EBW

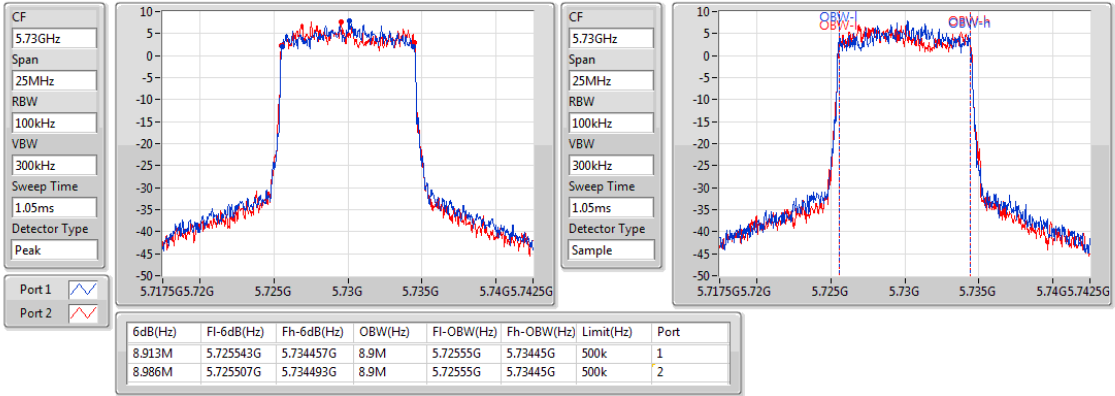
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LTE (BW 10MHz)-QPSK_Nss1,(MCS0)_2TX

EBW

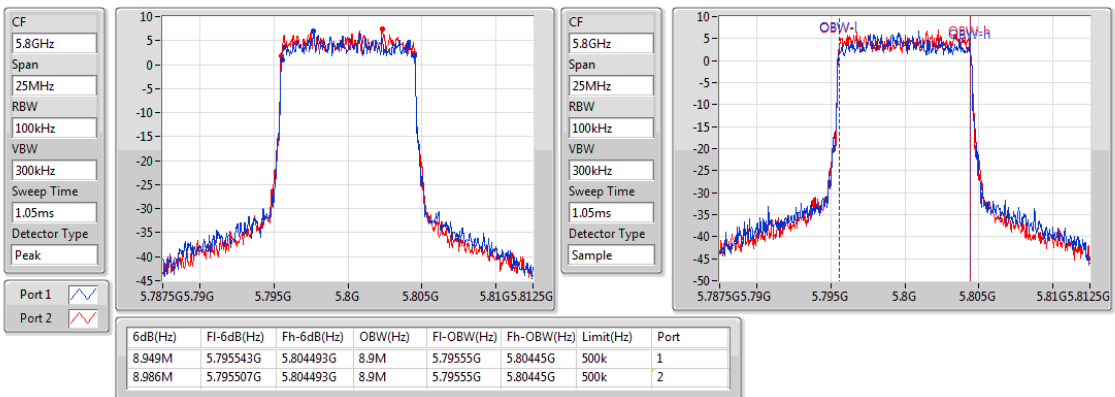
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LTE (BW 10MHz)-QPSK_Nss1,(MCS0)_2TX

EBW

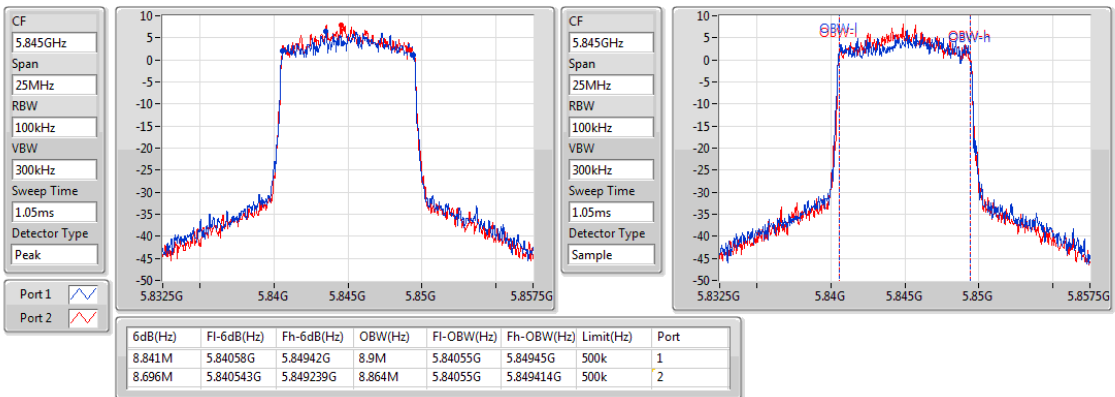
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LTE (BW 10MHz)-QPSK_Nss1,(MCS0)_2TX

EBW

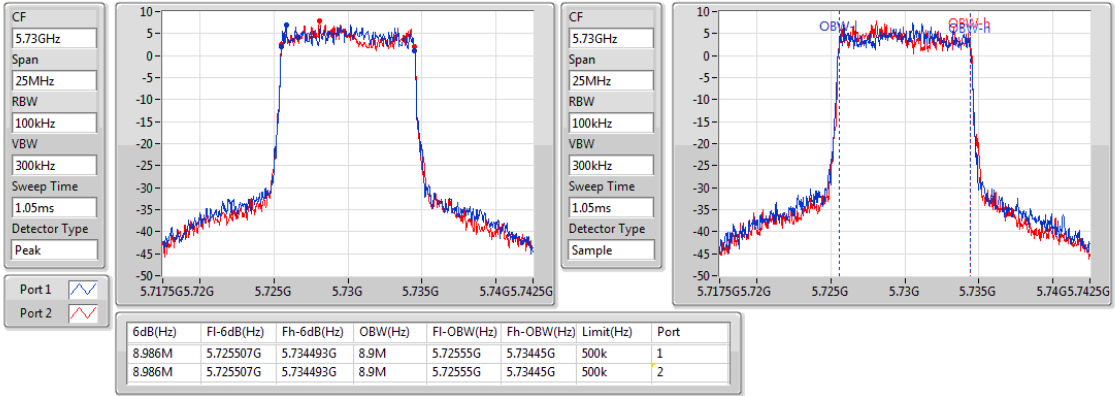
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LTE (BW 10MHz)-16QAM_Nss1,(MCS0)_2TX

EBW

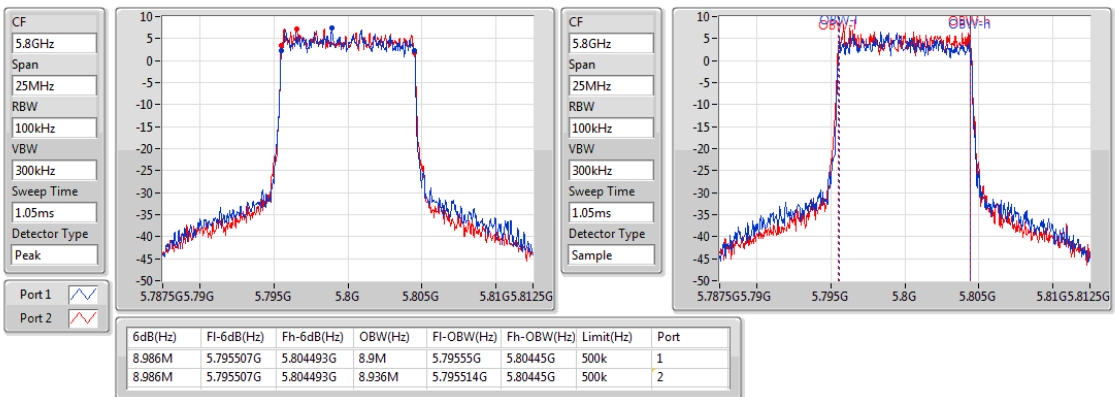
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LTE (BW 10MHz)-16QAM_Nss1,(MCS0)_2TX

EBW

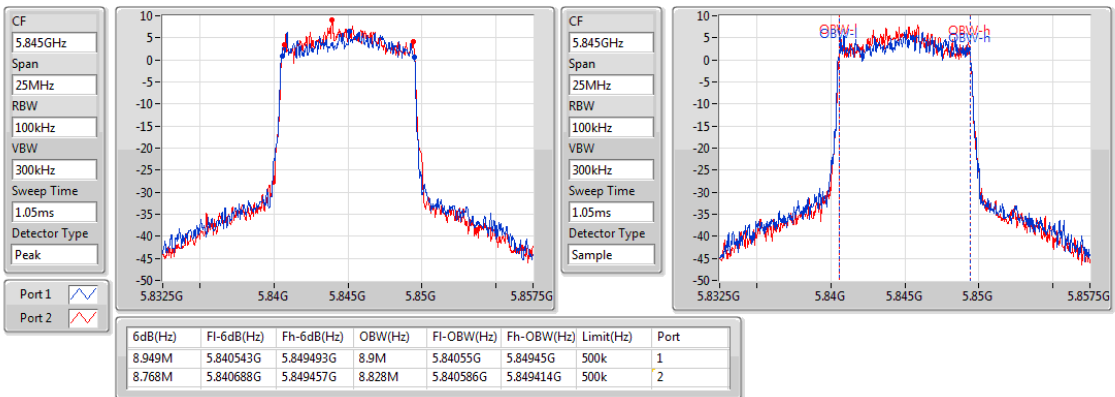
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LTE (BW 10MHz)-16QAM_Nss1,(MCS0)_2TX

EBW

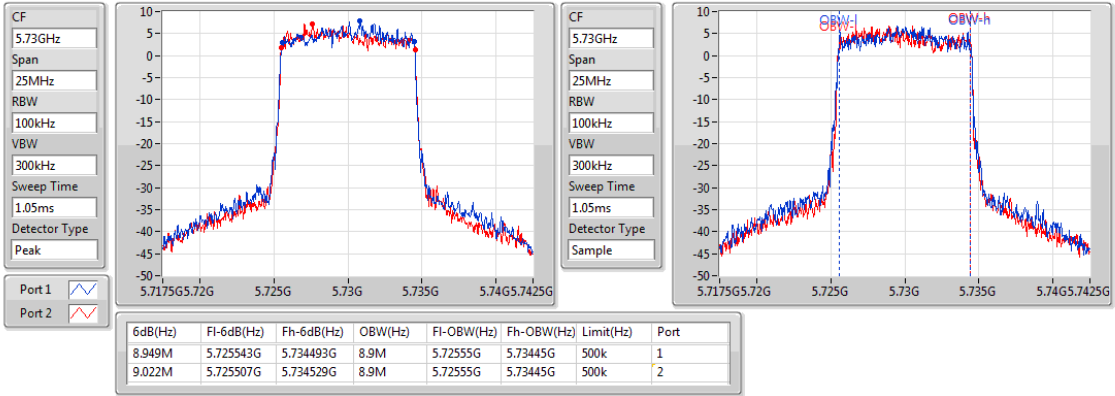
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LTE (BW 10MHz)-64QAM_Nss1,(MCS0)_2TX

EBW

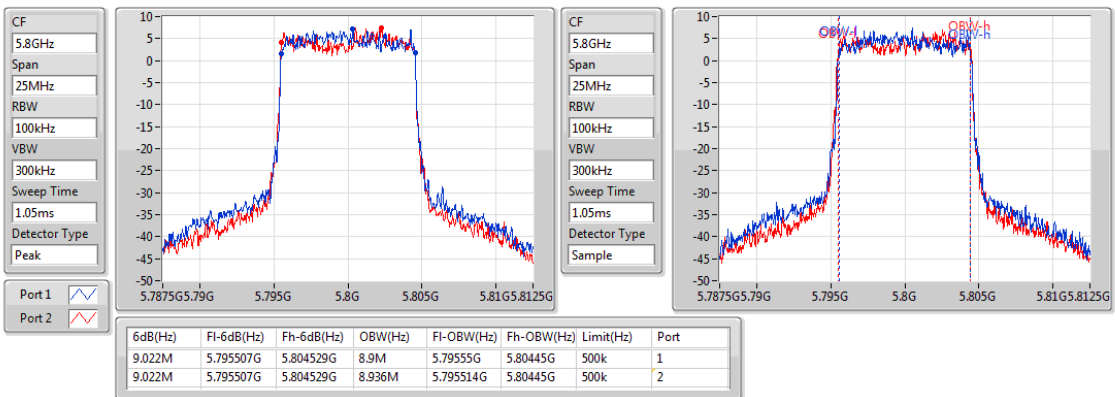
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LTE (BW 10MHz)-64QAM_Nss1,(MCS0)_2TX

EBW

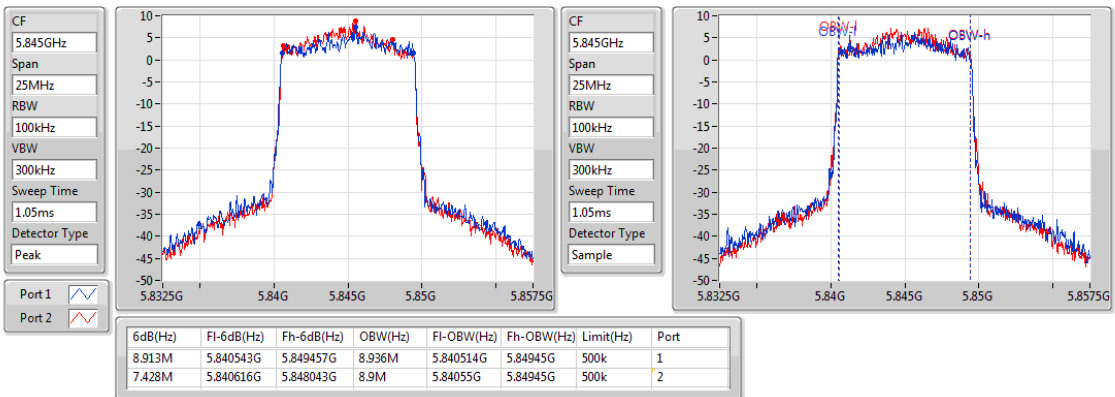
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LTE (BW 10MHz)-64QAM_Nss1,(MCS0)_2TX

EBW

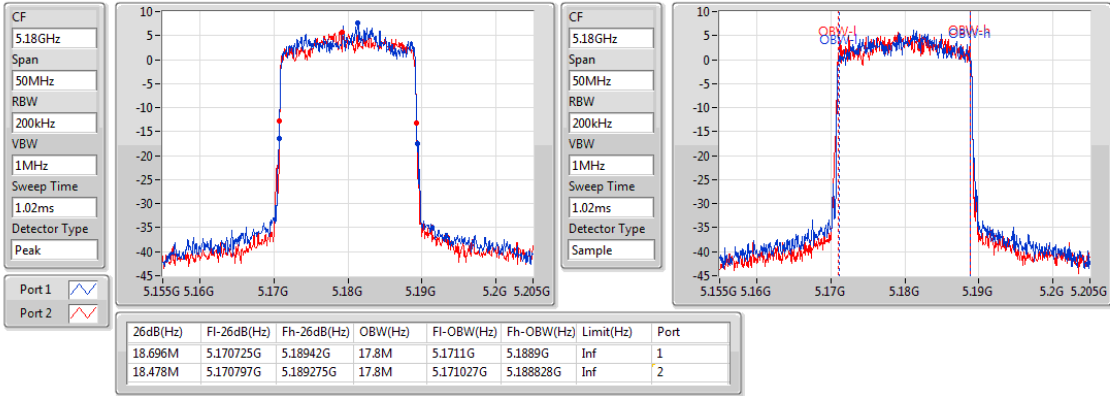
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LTE (BW 20MHz)-QPSK_Nss1,(MCS0)_2TX

EBW

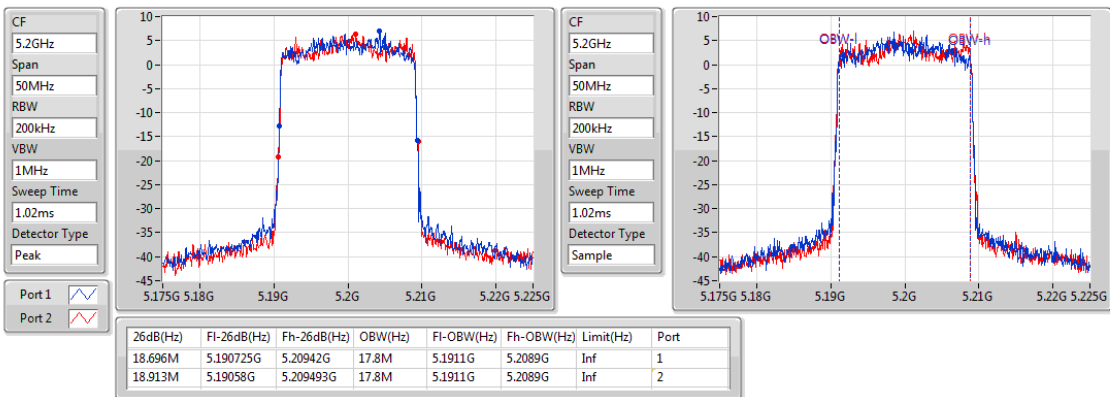
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LTE (BW 20MHz)-QPSK_Nss1,(MCS0)_2TX

EBW

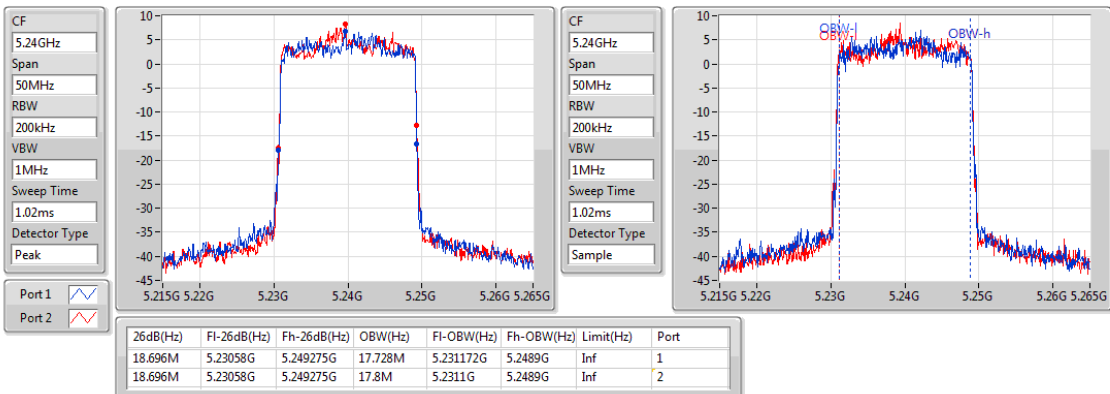
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LTE (BW 20MHz)-QPSK_Nss1,(MCS0)_2TX

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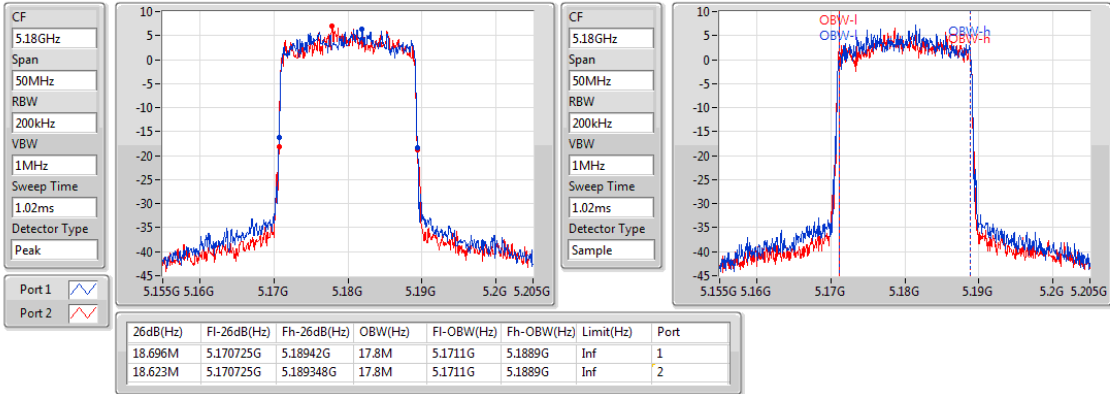
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LTE (BW 20MHz)-16QAM_Nss1,(MCS0)_2TX

EBW

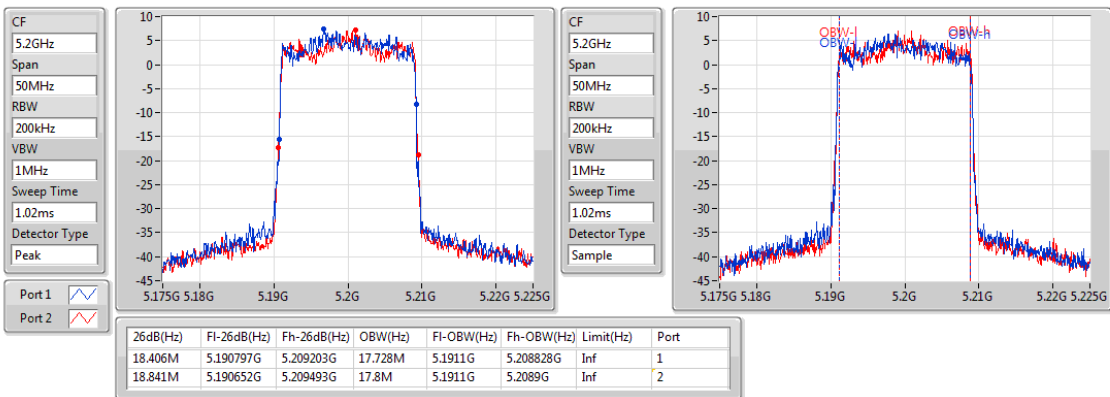
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LTE (BW 20MHz)-16QAM_Nss1,(MCS0)_2TX

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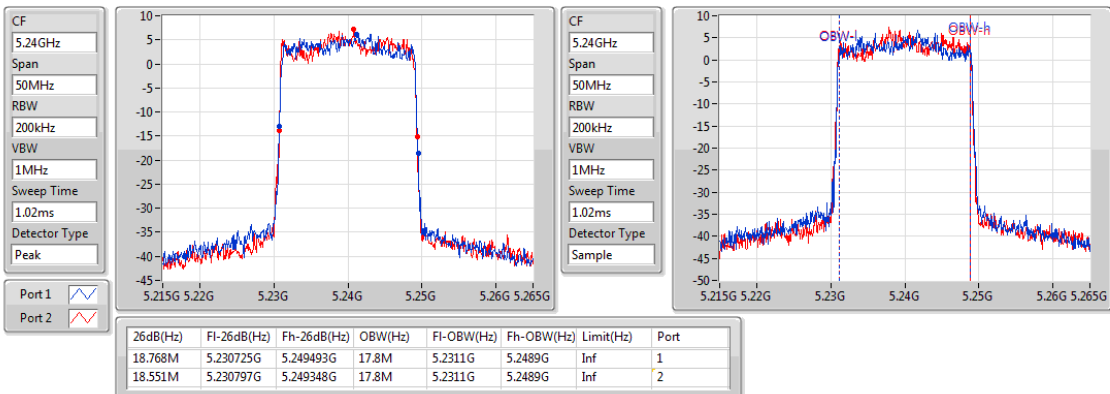
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LTE (BW 20MHz)-16QAM_Nss1,(MCS0)_2TX

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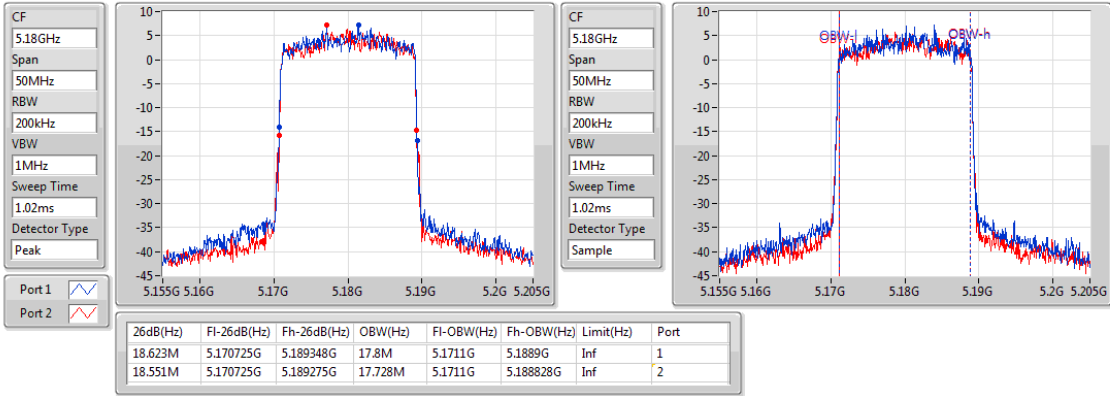
5240MHz



LTE (BW 20MHz)-64QAM_Nss1,(MCS0)_2TX

EBW

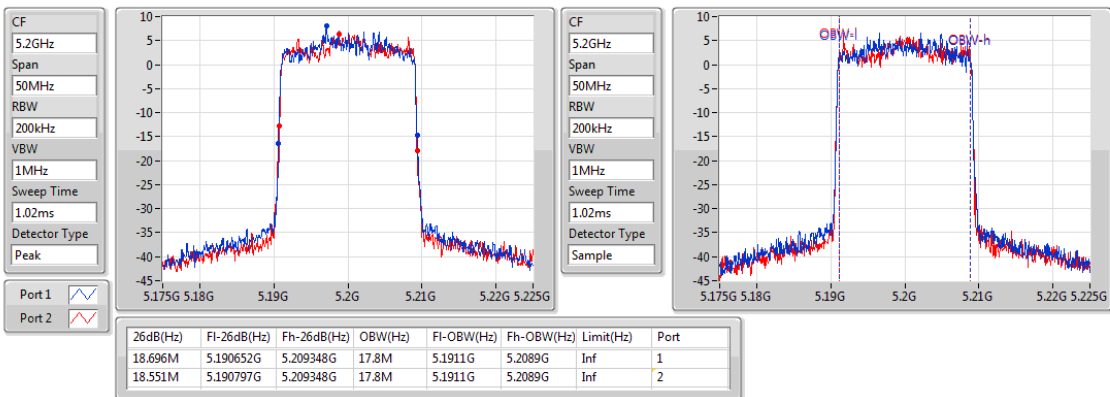
5180MHz



LTE (BW 20MHz)-64QAM_Nss1,(MCS0)_2TX

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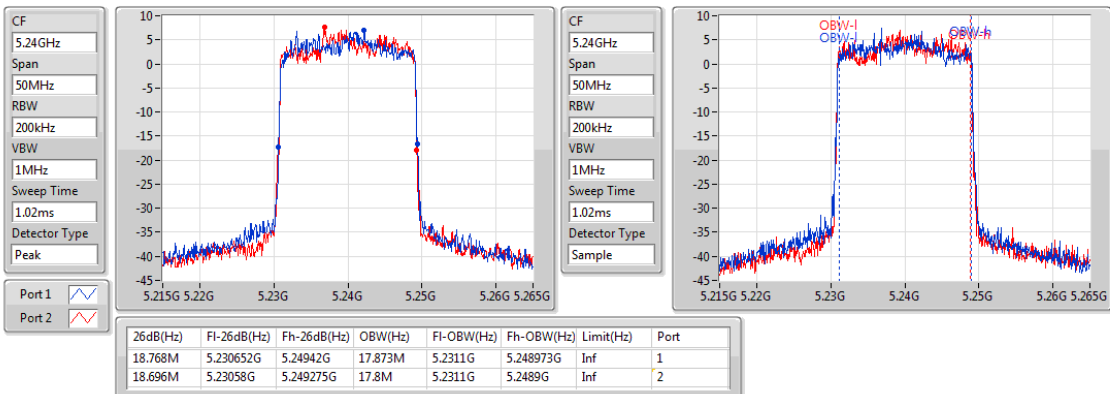
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LTE (BW 20MHz)-64QAM_Nss1,(MCS0)_2TX

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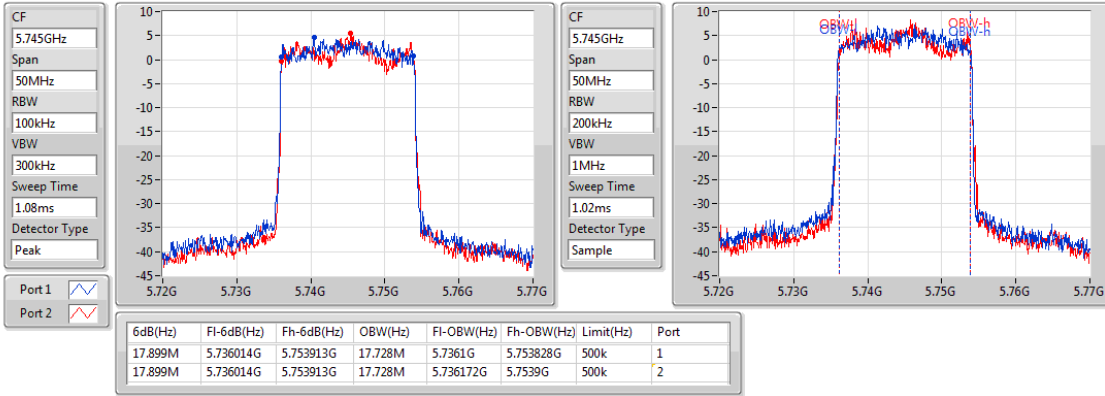
5240MHz



LTE (BW 20MHz)-QPSK_Nss1,(MCS0)_2TX

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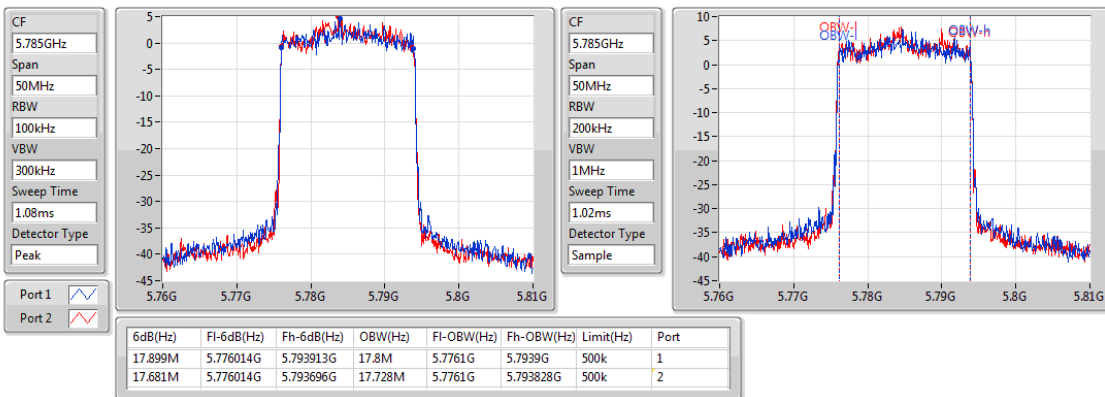
5745MHz



LTE (BW 20MHz)-QPSK_Nss1,(MCS0)_2TX

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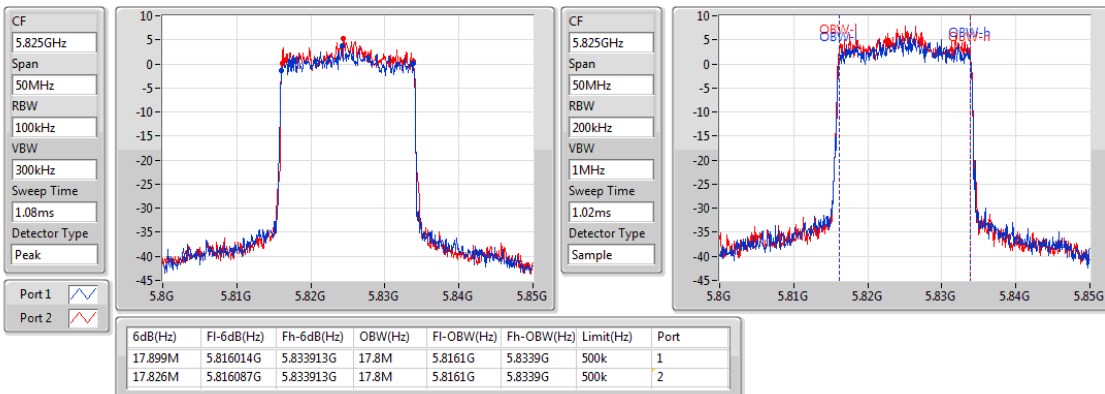
5785MHz



LTE (BW 20MHz)-QPSK_Nss1,(MCS0)_2TX

EBW

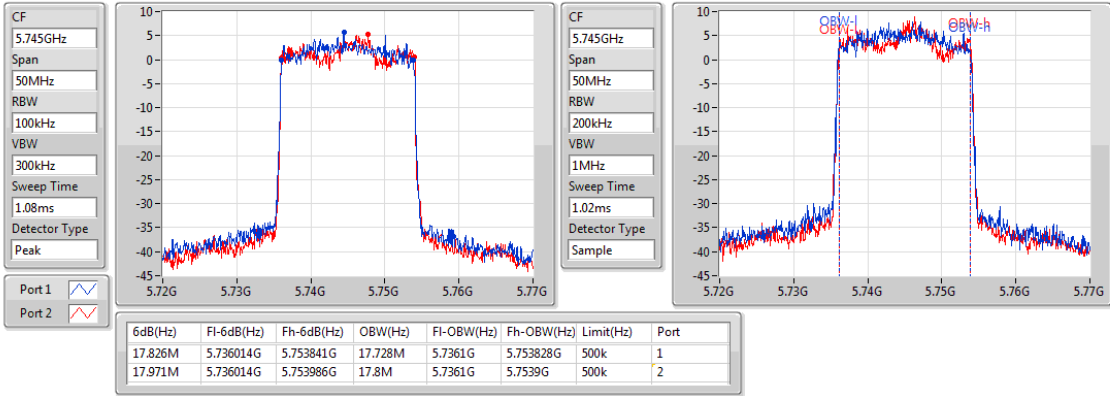
5825MHz



LTE (BW 20MHz)-16QAM_Nss1,(MCS0)_2TX

EBW

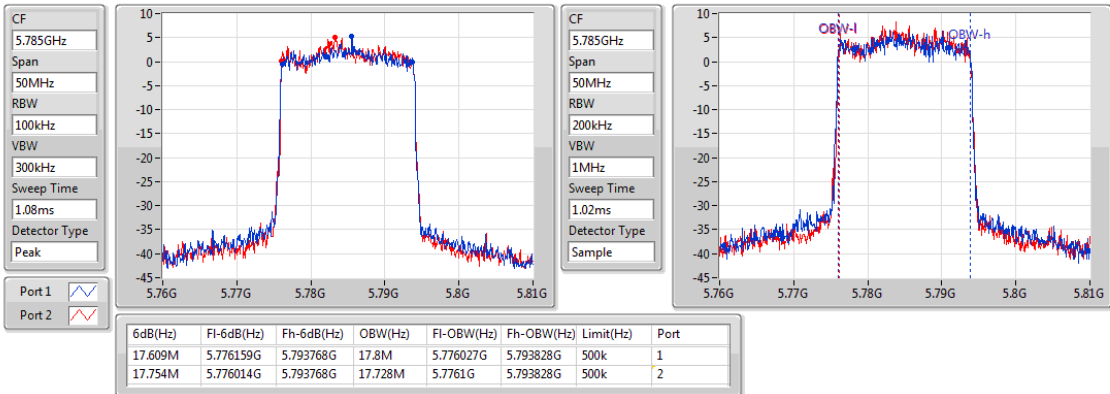
5745MHz



LTE (BW 20MHz)-16QAM_Nss1,(MCS0)_2TX

EBW

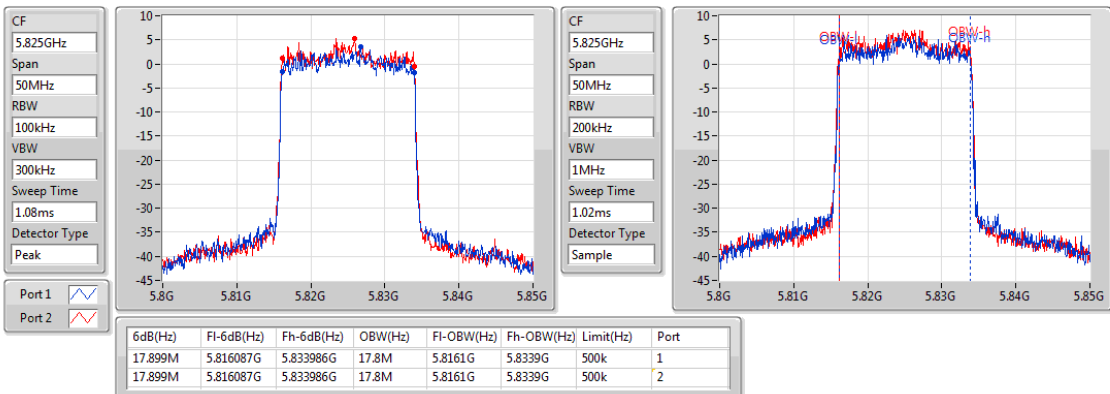
5785MHz



LTE (BW 20MHz)-16QAM_Nss1,(MCS0)_2TX

EBW

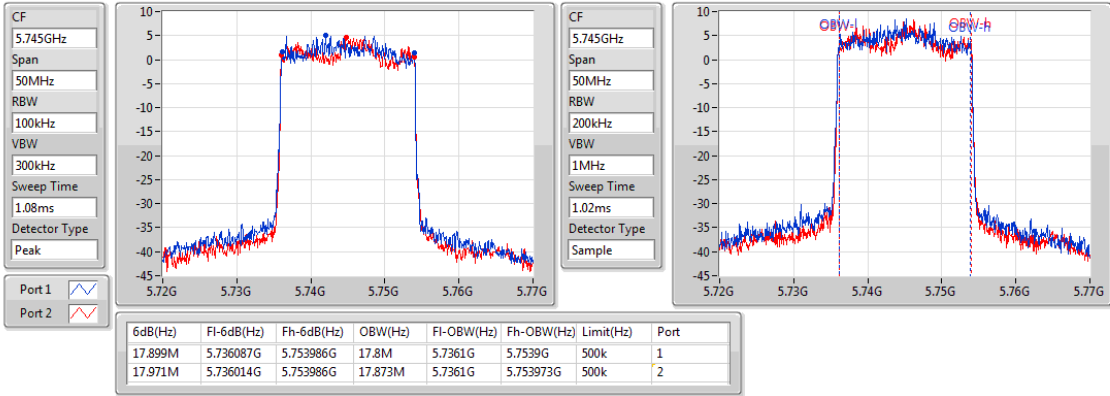
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LTE (BW 20MHz)-64QAM_Nss1,(MCS0)_2TX

EBW

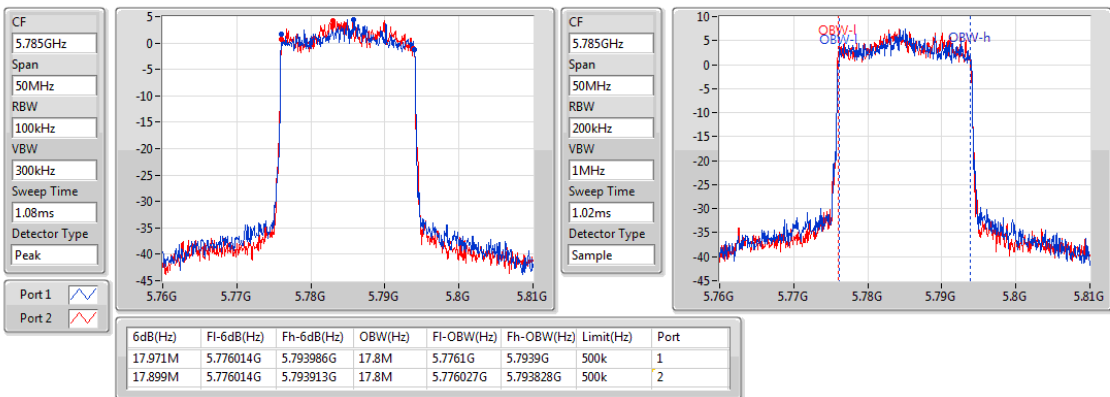
5745MHz



LTE (BW 20MHz)-64QAM_Nss1,(MCS0)_2TX

EBW

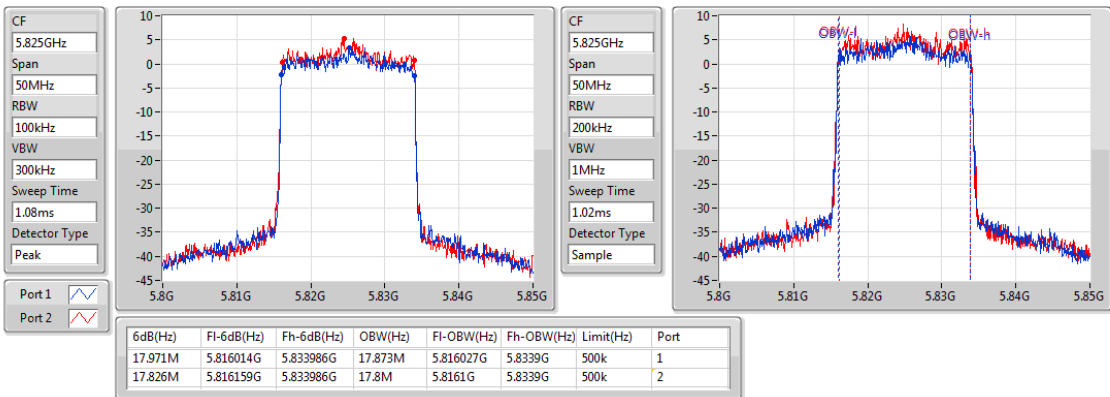
5785MHz



LTE (BW 20MHz)-64QAM_Nss1,(MCS0)_2TX

EBW

5825MHz



3.3 RF Output Power

3.3.1 Limit of RF Output Power

Frequency band 5150-5250 MHz		
Operating Mode		Limit
<input type="checkbox"/>	Outdoor access point	Conducted Power: 1 W The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm)
<input type="checkbox"/>	Indoor access point	Conducted Power: 1 W
<input checked="" type="checkbox"/>	Fixed point-to-point access points	Conducted Power: 1 W
<input type="checkbox"/>	Client devices	Conducted Power: 250 mW

Frequency Band (MHz)	Limit
<input checked="" type="checkbox"/> 5725 ~ 5850	Conducted Power: 1 W

3.3.2 Test Procedures

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

Measurements is performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

3.3.3 Test Setup



3.3.4 Test Result of Maximum Conducted Output Power

Ambient Condition	24°C / 66%	Tested By	Aska Huang
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Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.15-5.25GHz	-	-	-	-
LTE (BW 10MHz)-QPSK_Nss1,(MCS0)_2TX	18.96	0.07870	34.90	3.09030
LTE (BW 10MHz)-16QAM_Nss1,(MCS0)_2TX	18.99	0.07925	34.93	3.11172
LTE (BW 10MHz)-64QAM_Nss1,(MCS0)_2TX	19.03	0.07998	34.97	3.14051
LTE (BW 20MHz)-QPSK_Nss1,(MCS0)_2TX	18.49	0.07063	34.43	2.77332
LTE (BW 20MHz)-16QAM_Nss1,(MCS0)_2TX	18.45	0.06998	34.39	2.74789
LTE (BW 20MHz)-64QAM_Nss1,(MCS0)_2TX	18.44	0.06982	34.38	2.74157
5.725-5.85GHz	-	-	-	-
LTE (BW 10MHz)-QPSK_Nss1,(MCS0)_2TX	19.36	0.08630	35.30	3.38844
LTE (BW 10MHz)-16QAM_Nss1,(MCS0)_2TX	19.34	0.08590	35.28	3.37287
LTE (BW 10MHz)-64QAM_Nss1,(MCS0)_2TX	19.36	0.08630	35.30	3.38844
LTE (BW 20MHz)-QPSK_Nss1,(MCS0)_2TX	19.19	0.08299	35.13	3.25837
LTE (BW 20MHz)-16QAM_Nss1,(MCS0)_2TX	19.14	0.08204	35.08	3.22107
LTE (BW 20MHz)-64QAM_Nss1,(MCS0)_2TX	19.16	0.08241	35.10	3.23594

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
LTE (BW 10MHz)-QPSK_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	15.94	15.61	15.13	18.39	30.00	34.33	53.00
5200MHz	Pass	15.94	15.77	15.64	18.72	30.00	34.66	53.00
5245MHz	Pass	15.94	15.54	16.32	18.96	30.00	34.90	53.00
LTE (BW 10MHz)-16QAM_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	15.94	15.58	15.15	18.38	30.00	34.32	53.00
5200MHz	Pass	15.94	15.73	15.62	18.69	30.00	34.63	53.00
5245MHz	Pass	15.94	15.53	16.38	18.99	30.00	34.93	53.00
LTE (BW 10MHz)-64QAM_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	15.94	15.57	15.34	18.47	30.00	34.41	53.00
5200MHz	Pass	15.94	15.75	15.62	18.70	30.00	34.64	53.00
5245MHz	Pass	15.94	15.63	16.37	19.03	30.00	34.97	53.00
LTE (BW 10MHz)-QPSK_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5730MHz	Pass	15.94	16.19	16.51	19.36	30.00	35.30	Inf
5800MHz	Pass	15.94	15.77	16.55	19.19	30.00	35.13	Inf
5845MHz	Pass	15.94	15.18	16.65	18.99	30.00	34.93	Inf
LTE (BW 10MHz)-16QAM_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5730MHz	Pass	15.94	16.21	16.45	19.34	30.00	35.28	Inf
5800MHz	Pass	15.94	15.75	16.53	19.17	30.00	35.11	Inf
5845MHz	Pass	15.94	15.15	16.62	18.96	30.00	34.90	Inf
LTE (BW 10MHz)-64QAM_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5730MHz	Pass	15.94	16.15	16.54	19.36	30.00	35.30	Inf
5800MHz	Pass	15.94	15.75	16.52	19.16	30.00	35.10	Inf
5845MHz	Pass	15.94	15.13	16.67	18.98	30.00	34.92	Inf
LTE (BW 20MHz)-QPSK_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	15.94	15.3	15.03	18.18	30.00	34.12	53.00
5200MHz	Pass	15.94	15.36	15.33	18.36	30.00	34.30	53.00
5240MHz	Pass	15.94	15.35	15.61	18.49	30.00	34.43	53.00
LTE (BW 20MHz)-16QAM_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	15.94	15.25	15.02	18.15	30.00	34.09	53.00
5200MHz	Pass	15.94	15.36	15.32	18.35	30.00	34.29	53.00
5240MHz	Pass	15.94	15.31	15.56	18.45	30.00	34.39	53.00
LTE (BW 20MHz)-64QAM_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	15.94	15.27	15.03	18.16	30.00	34.10	53.00
5200MHz	Pass	15.94	15.3	15.28	18.30	30.00	34.24	53.00
5240MHz	Pass	15.94	15.28	15.57	18.44	30.00	34.38	53.00
LTE (BW 20MHz)-QPSK_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5745MHz	Pass	15.94	16.03	16.33	19.19	30.00	35.13	Inf
5785MHz	Pass	15.94	15.67	16.22	18.96	30.00	34.90	Inf
5825MHz	Pass	15.94	15.05	16.36	18.76	30.00	34.70	Inf

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
LTE (BW 20MHz)-16QAM_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5745MHz	Pass	15.94	16.01	16.25	19.14	30.00	35.08	Inf
5785MHz	Pass	15.94	15.61	16.18	18.91	30.00	34.85	Inf
5825MHz	Pass	15.94	15.03	16.32	18.73	30.00	34.67	Inf
LTE (BW 20MHz)-64QAM_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5745MHz	Pass	15.94	16.03	16.26	19.16	30.00	35.10	Inf
5785MHz	Pass	15.94	15.61	16.17	18.91	30.00	34.85	Inf
5825MHz	Pass	15.94	15.02	16.26	18.69	30.00	34.63	Inf

DG = Directional Gain; **Port X** = Port X output power

3.4 Peak Power Spectral Density

3.4.1 Limit of Peak Power Spectral Density

Frequency band 5150-5250 MHz		
Operating Mode		Limit
<input type="checkbox"/>	Outdoor access point	17 dBm / MHz
<input type="checkbox"/>	Indoor access point	17 dBm / MHz
<input checked="" type="checkbox"/>	Fixed point-to-point access points	17 dBm / MHz
<input type="checkbox"/>	Client devices	11 dBm / MHz

Frequency Band (MHz)	Limit
<input checked="" type="checkbox"/> 5725 ~ 5850	30 dBm /500 kHz

3.4.2 Test Procedures

For 5150 ~ 5250 MHz

Duty cycle \geq 98 %

1. Set RBW = 1 MHz, VBW = 3 MHz, Sweep time = auto, Detector = RMS.
2. Trace average 100 traces.
3. Use the peak marker function to determine the maximum amplitude level.

Duty cycle $<$ 98 %

1. Set RBW = 1 MHz, VBW = 3 MHz, Detector = RMS.
2. Set sweep time $\geq 10 * (\text{number of points in sweep}) * (\text{total on/off period of the transmitted signal})$.
3. Perform a single sweep.
4. Use the peak marker function to determine the maximum amplitude level.
5. Add $10 \log(1/x)$, where x is the duty cycle.

For 5725 ~ 5850 MHz

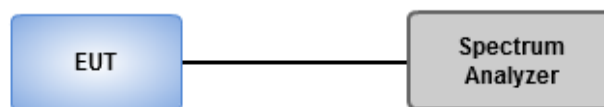
Duty cycle \geq 98 %

1. Set RBW = 500 kHz, VBW = 3 MHz, Sweep time = auto, Detector = RMS.
2. Trace average 100 traces.
3. Use the peak marker function to determine the maximum amplitude level.

Duty cycle $<$ 98 %

1. Set RBW = 500 kHz, VBW = 3 MHz, Detector = RMS.
2. Set sweep time $\geq 10 * (\text{number of points in sweep}) * (\text{total on/off period of the transmitted signal})$.
3. Perform a single sweep.
4. Use the peak marker function to determine the maximum amplitude level.
5. Add $10 \log(1/x)$, where x is the duty cycle.

3.4.3 Test Setup



3.4.4 Test Result of Peak Power Spectral Density

Ambient Condition	24°C / 66%	Tested By	Aska Huang
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Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.15-5.25GHz	-	-
LTE (BW 10MHz)-QPSK_Nss1,(MCS0)_2TX	9.36	25.30
LTE (BW 10MHz)-16QAM_Nss1,(MCS0)_2TX	9.30	25.24
LTE (BW 10MHz)-64QAM_Nss1,(MCS0)_2TX	9.33	25.27
LTE (BW 20MHz)-QPSK_Nss1,(MCS0)_2TX	6.32	22.26
LTE (BW 20MHz)-16QAM_Nss1,(MCS0)_2TX	6.18	22.12
LTE (BW 20MHz)-64QAM_Nss1,(MCS0)_2TX	6.35	22.29
5.725-5.85GHz	-	-
LTE (BW 10MHz)-QPSK_Nss1,(MCS0)_2TX	8.40	24.34
LTE (BW 10MHz)-16QAM_Nss1,(MCS0)_2TX	8.32	24.26
LTE (BW 10MHz)-64QAM_Nss1,(MCS0)_2TX	8.15	24.09
LTE (BW 20MHz)-QPSK_Nss1,(MCS0)_2TX	5.77	21.71
LTE (BW 20MHz)-16QAM_Nss1,(MCS0)_2TX	6.25	22.19
LTE (BW 20MHz)-64QAM_Nss1,(MCS0)_2TX	5.96	21.90

RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
LTE (BW 10MHz)-QPSK_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	15.94	5.61	5.72	8.41	17.00	24.35	40.00
5200MHz	Pass	15.94	6.17	6.36	9.05	17.00	24.99	40.00
5245MHz	Pass	15.94	5.53	7.54	9.36	17.00	25.30	40.00
LTE (BW 10MHz)-16QAM_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	15.94	5.77	5.80	8.47	17.00	24.41	40.00
5200MHz	Pass	15.94	6.40	6.27	9.04	17.00	24.98	40.00
5245MHz	Pass	15.94	5.51	7.55	9.30	17.00	25.24	40.00
LTE (BW 10MHz)-64QAM_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	15.94	6.03	5.78	8.49	17.00	24.43	40.00
5200MHz	Pass	15.94	6.39	6.39	9.19	17.00	25.13	40.00
5245MHz	Pass	15.94	5.61	7.61	9.33	17.00	25.27	40.00
LTE (BW 10MHz)-QPSK_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5730MHz	Pass	15.94	5.43	5.52	8.40	30.00	24.34	Inf
5800MHz	Pass	15.94	4.75	4.77	7.49	30.00	23.43	Inf
5845MHz	Pass	15.94	4.42	5.88	7.98	30.00	23.92	Inf
LTE (BW 10MHz)-16QAM_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5730MHz	Pass	15.94	5.50	5.70	8.32	30.00	24.26	Inf
5800MHz	Pass	15.94	4.74	5.01	7.28	30.00	23.22	Inf
5845MHz	Pass	15.94	4.55	5.76	8.15	30.00	24.09	Inf
LTE (BW 10MHz)-64QAM_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5730MHz	Pass	15.94	5.52	5.40	8.14	30.00	24.08	Inf
5800MHz	Pass	15.94	5.35	5.11	7.60	30.00	23.54	Inf
5845MHz	Pass	15.94	4.63	5.83	8.15	30.00	24.09	Inf
LTE (BW 20MHz)-QPSK_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	15.94	3.06	3.22	5.68	17.00	21.62	40.00
5200MHz	Pass	15.94	3.17	3.80	6.20	17.00	22.14	40.00
5240MHz	Pass	15.94	3.43	4.18	6.32	17.00	22.26	40.00
LTE (BW 20MHz)-16QAM_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	15.94	3.52	3.07	5.86	17.00	21.80	40.00
5200MHz	Pass	15.94	3.11	3.62	6.02	17.00	21.96	40.00
5240MHz	Pass	15.94	3.38	4.13	6.18	17.00	22.12	40.00
LTE (BW 20MHz)-64QAM_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	15.94	3.26	3.20	5.86	17.00	21.80	40.00
5200MHz	Pass	15.94	3.11	3.59	6.10	17.00	22.04	40.00
5240MHz	Pass	15.94	3.31	4.13	6.35	17.00	22.29	40.00
LTE (BW 20MHz)-QPSK_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5745MHz	Pass	15.94	2.54	3.35	5.77	30.00	21.71	Inf
5785MHz	Pass	15.94	2.44	3.32	5.62	30.00	21.56	Inf
5825MHz	Pass	15.94	1.40	3.15	5.28	30.00	21.22	Inf

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
LTE (BW 20MHz)-16QAM_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5745MHz	Pass	15.94	2.56	3.95	6.25	30.00	22.19	Inf
5785MHz	Pass	15.94	2.20	3.30	5.57	30.00	21.51	Inf
5825MHz	Pass	15.94	1.52	3.27	5.38	30.00	21.32	Inf
LTE (BW 20MHz)-64QAM_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5745MHz	Pass	15.94	2.52	3.63	5.96	30.00	21.90	Inf
5785MHz	Pass	15.94	2.24	3.08	5.64	30.00	21.58	Inf
5825MHz	Pass	15.94	1.55	3.18	5.40	30.00	21.34	Inf

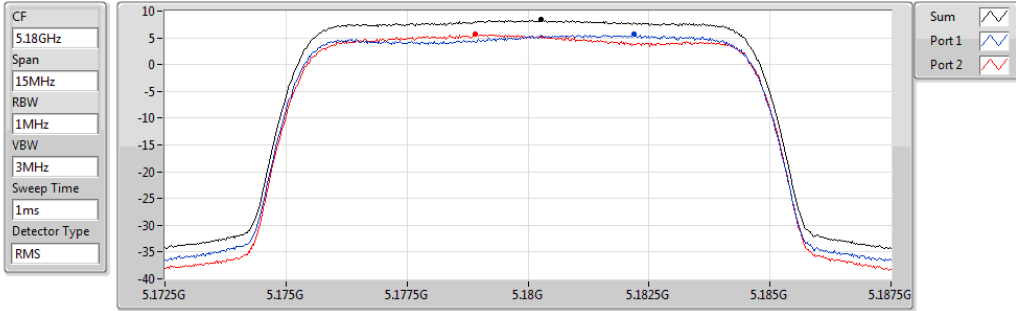
DG = Directional Gain; **RBW** = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

LTE (BW 10MHz)-QPSK_Nss1,(MCS0)_2TX

PSD

5180MHz

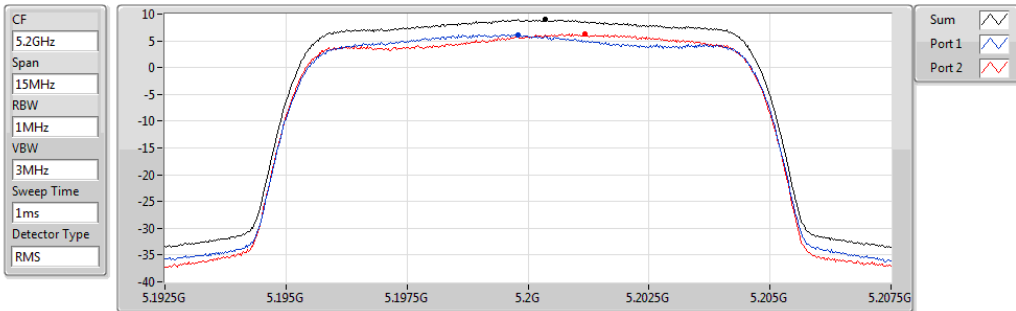


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.41	8.41	5.61	5.72

LTE (BW 10MHz)-QPSK_Nss1,(MCS0)_2TX

PSD

5200MHz

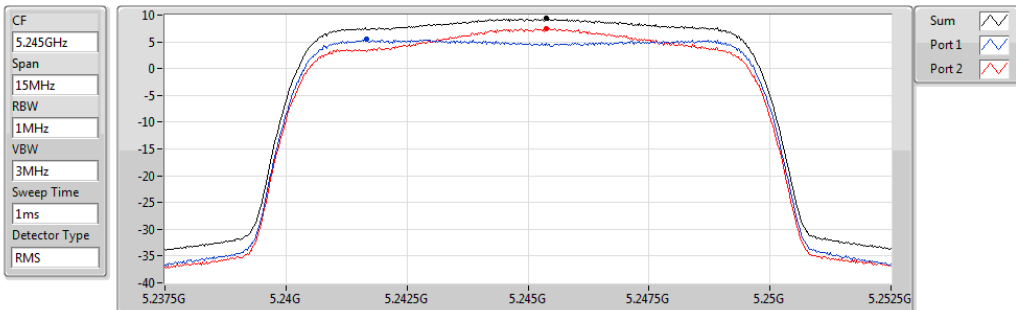


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.05	9.05	6.17	6.36

LTE (BW 10MHz)-QPSK_Nss1,(MCS0)_2TX

PSD

5245MHz

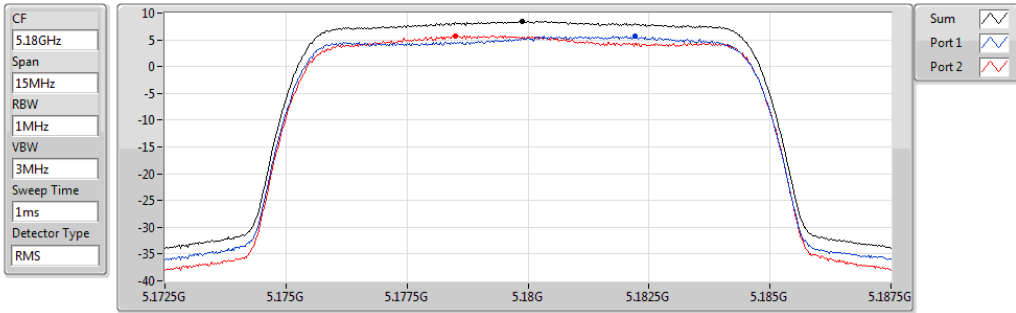


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.36	9.36	5.53	7.54

LTE (BW 10MHz)-16QAM_Nss1,(MCS0)_2TX

PSD

5180MHz

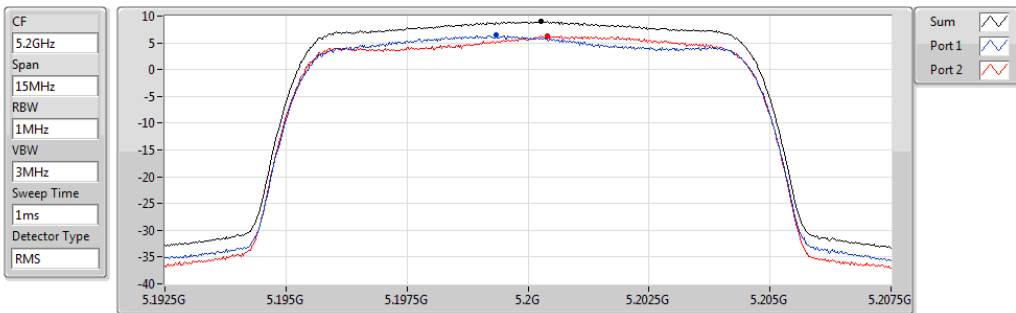


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.47	8.47	5.77	5.80

LTE (BW 10MHz)-16QAM_Nss1,(MCS0)_2TX

PSD

5200MHz

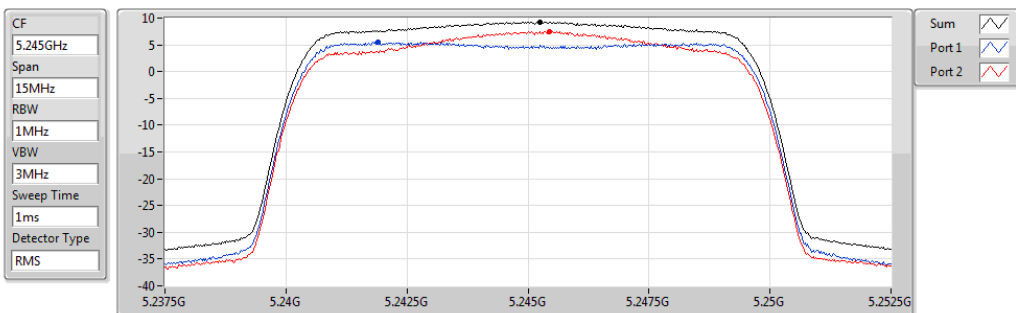


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.04	9.04	6.40	6.27

LTE (BW 10MHz)-16QAM_Nss1,(MCS0)_2TX

PSD

5245MHz

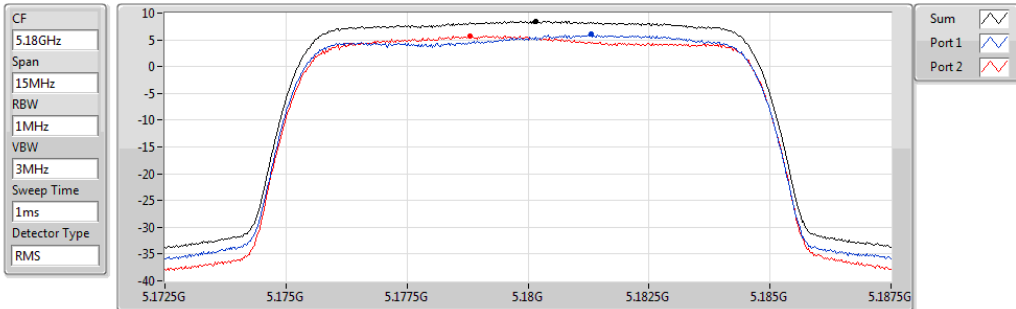


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.30	9.30	5.51	7.55

LTE (BW 10MHz)-64QAM_Nss1,(MCS0)_2TX

PSD

5180MHz

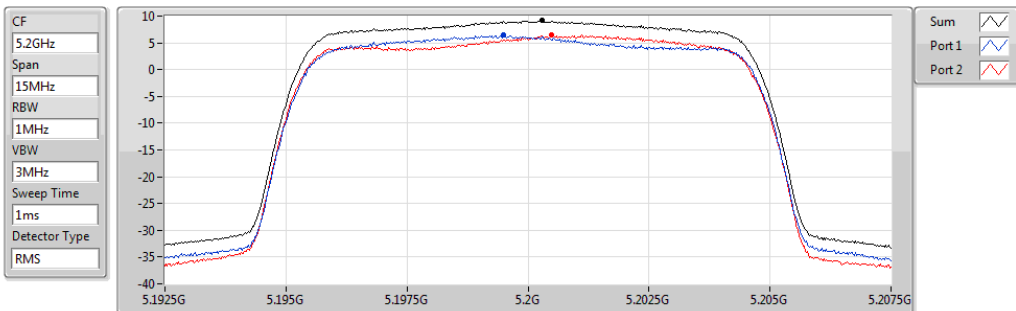


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.49	8.49	6.03	5.78

LTE (BW 10MHz)-64QAM_Nss1,(MCS0)_2TX

PSD

5200MHz

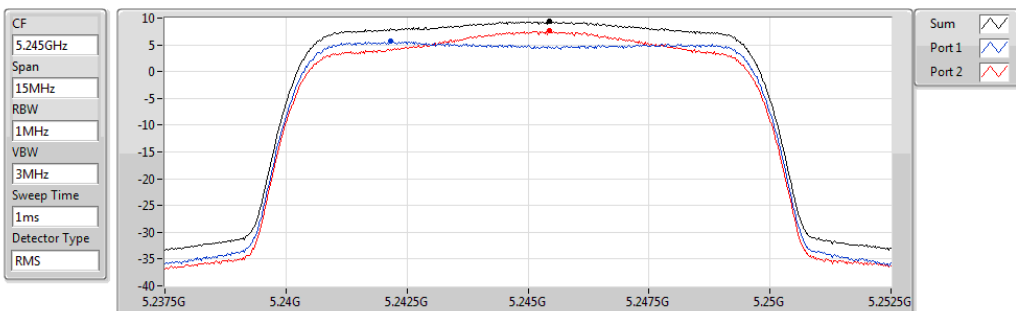


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.19	9.19	6.39	6.39

LTE (BW 10MHz)-64QAM_Nss1,(MCS0)_2TX

PSD

5245MHz

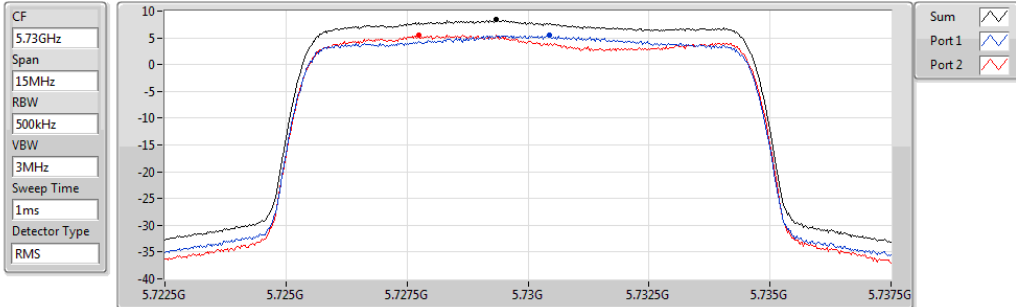


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.33	9.33	5.61	7.61

LTE (BW 10MHz)-QPSK_Nss1,(MCS0)_2TX

PSD

5730MHz

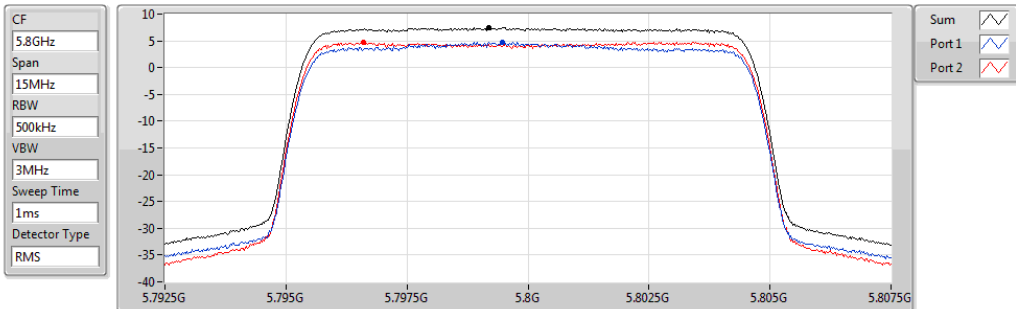


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.40	8.40	5.43	5.52

LTE (BW 10MHz)-QPSK_Nss1,(MCS0)_2TX

PSD

5800MHz

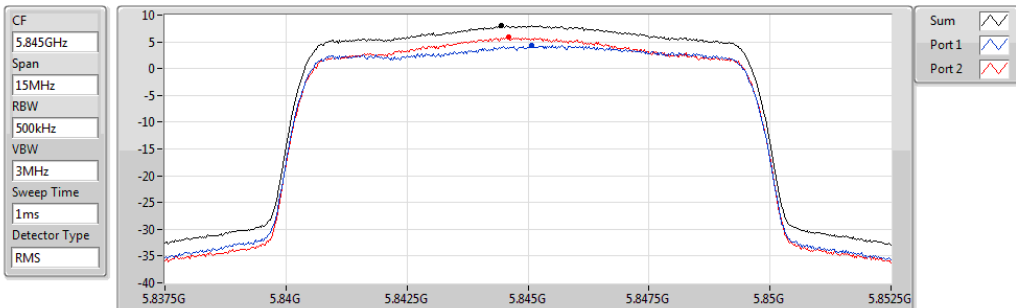


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.49	7.49	4.75	4.77

LTE (BW 10MHz)-QPSK_Nss1,(MCS0)_2TX

PSD

5845MHz

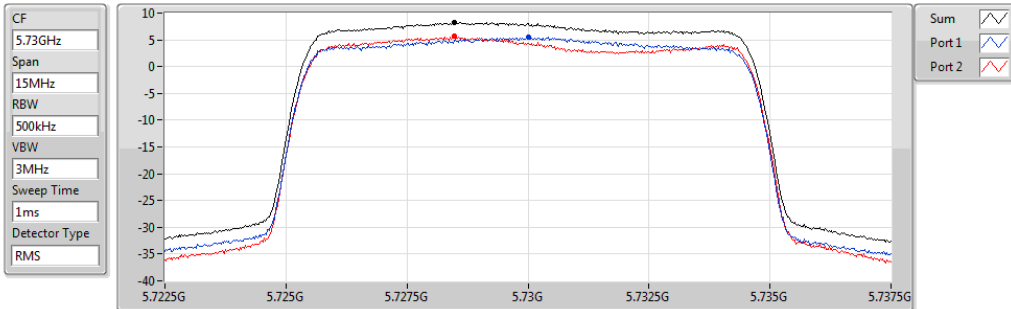


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.98	7.98	4.42	5.88

LTE (BW 10MHz)-16QAM_Nss1,(MCS0)_2TX

PSD

5730MHz

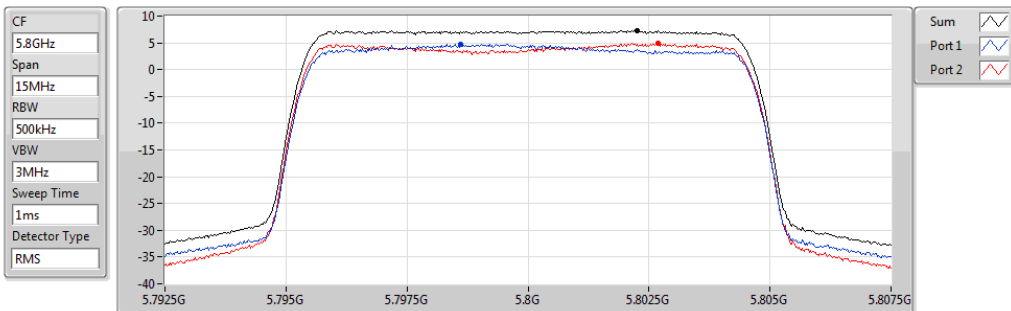


Sum (dBm/RBW)	PD (dBm/RBW)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)
8.32	8.32	5.50	5.70

LTE (BW 10MHz)-16QAM_Nss1,(MCS0)_2TX

PSD

5800MHz

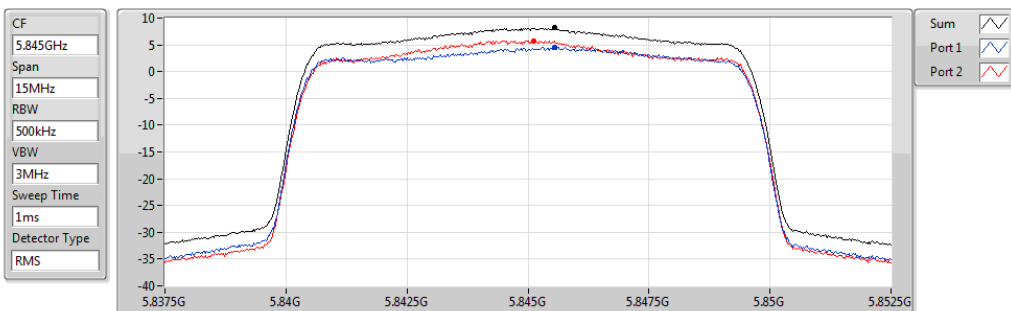


Sum (dBm/RBW)	PD (dBm/RBW)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)
7.28	7.28	4.74	5.01

LTE (BW 10MHz)-16QAM_Nss1,(MCS0)_2TX

PSD

5845MHz

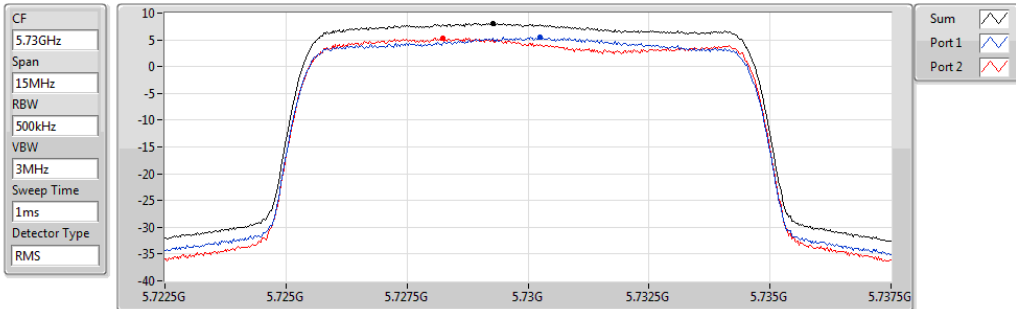


Sum (dBm/RBW)	PD (dBm/RBW)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)
8.15	8.15	4.55	5.76

LTE (BW 10MHz)-64QAM_Nss1,(MCS0)_2TX

PSD

5730MHz

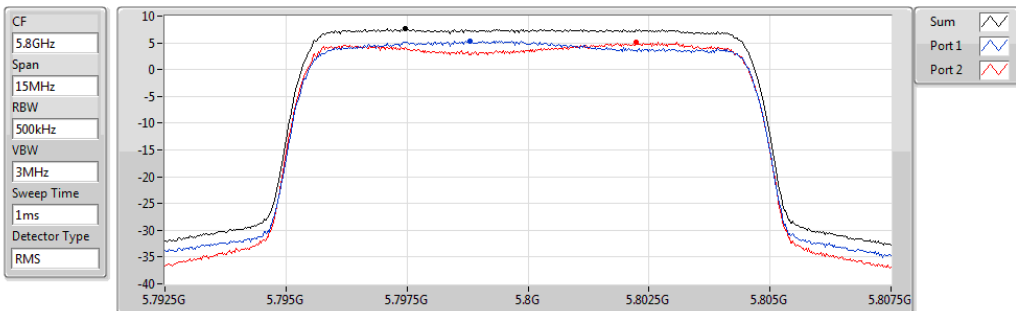


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.14	8.14	5.52	5.40

LTE (BW 10MHz)-64QAM_Nss1,(MCS0)_2TX

PSD

5800MHz

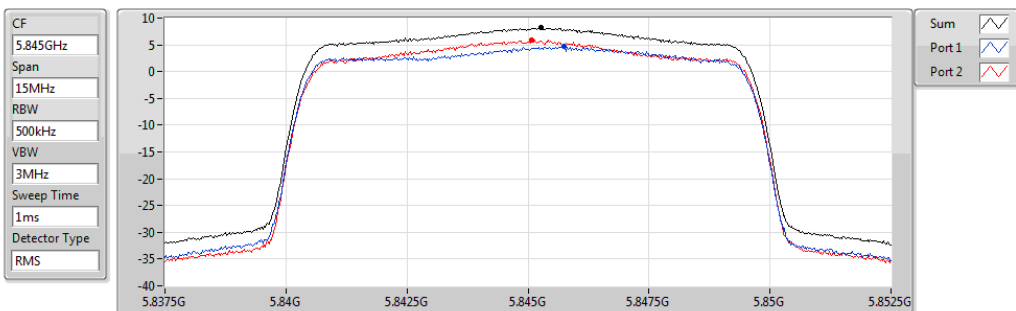


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.60	7.60	5.35	5.11

LTE (BW 10MHz)-64QAM_Nss1,(MCS0)_2TX

PSD

5845MHz

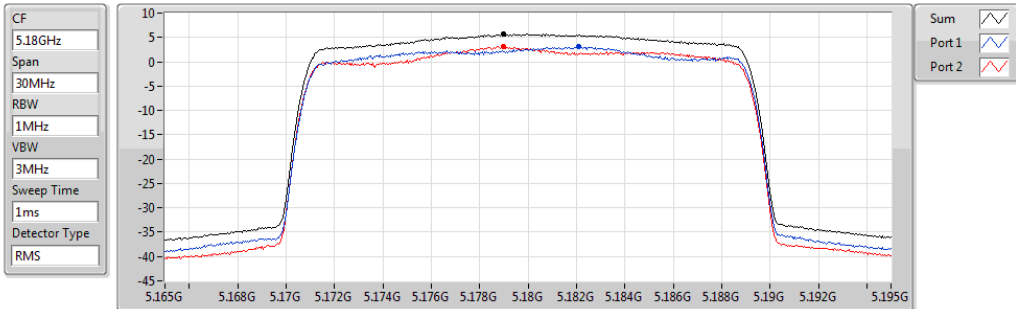


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.15	8.15	4.63	5.83

LTE (BW 20MHz)-QPSK_Nss1,(MCS0)_2TX

PSD

5180MHz

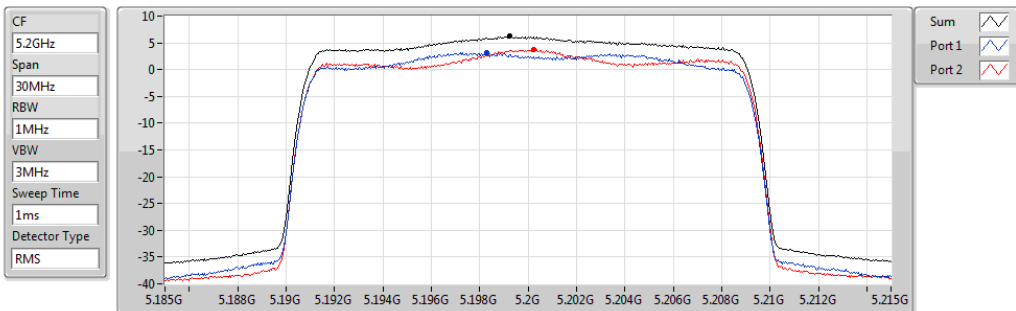


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.68	5.68	3.06	3.22

LTE (BW 20MHz)-QPSK_Nss1,(MCS0)_2TX

PSD

5200MHz

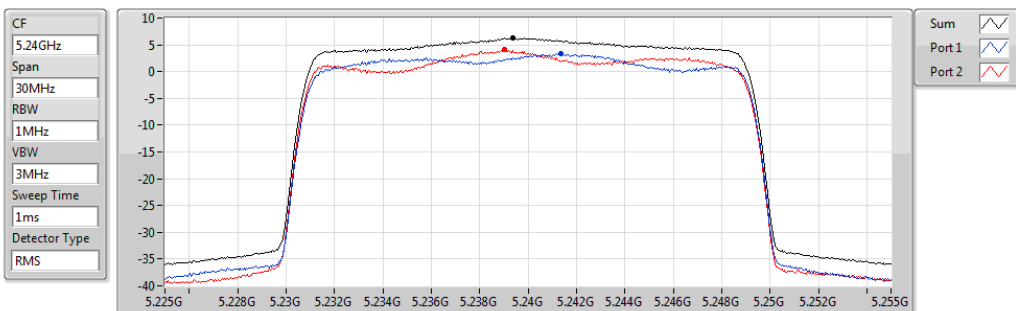


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.20	6.20	3.17	3.80

LTE (BW 20MHz)-QPSK_Nss1,(MCS0)_2TX

PSD

5240MHz

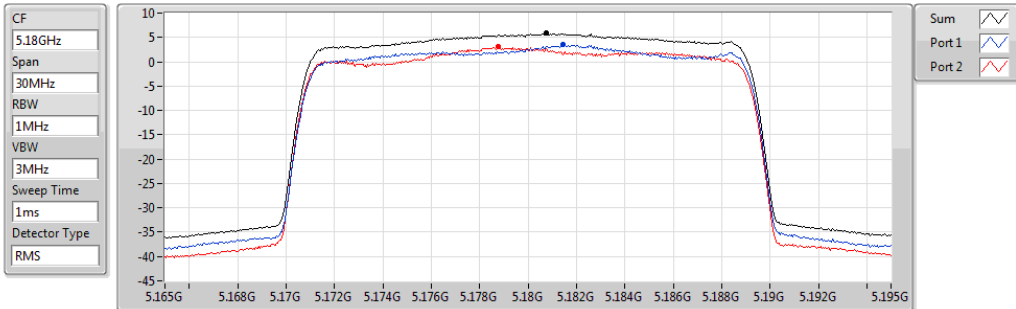


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.32	6.32	3.43	4.18

LTE (BW 20MHz)-16QAM_Nss1,(MCS0)_2TX

PSD

5180MHz

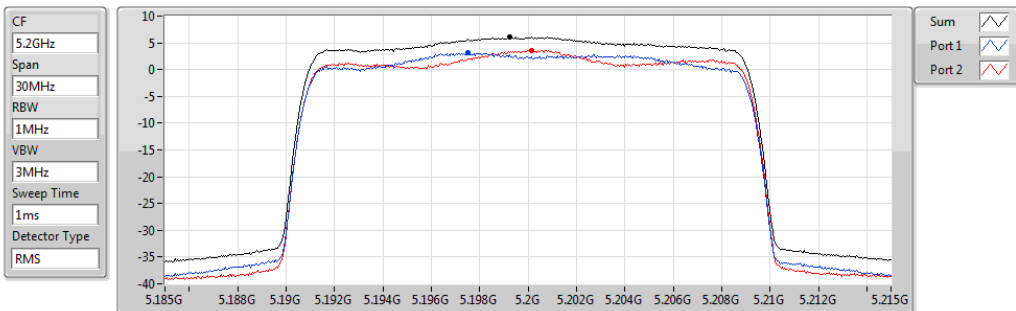


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.86	5.86	3.52	3.07

LTE (BW 20MHz)-16QAM_Nss1,(MCS0)_2TX

PSD

5200MHz

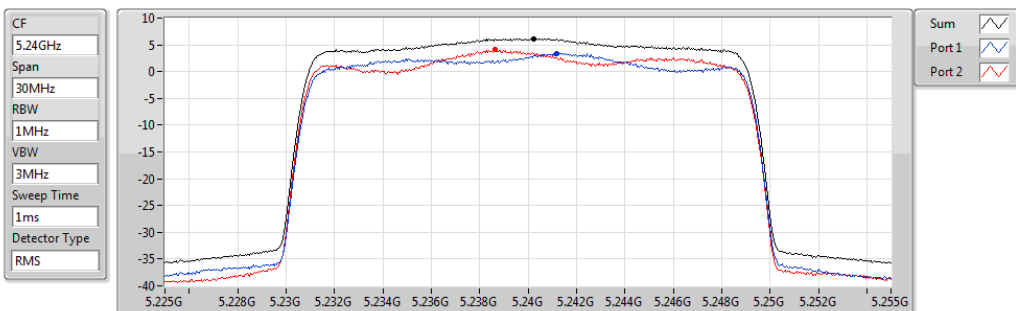


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.02	6.02	3.11	3.62

LTE (BW 20MHz)-16QAM_Nss1,(MCS0)_2TX

PSD

5240MHz

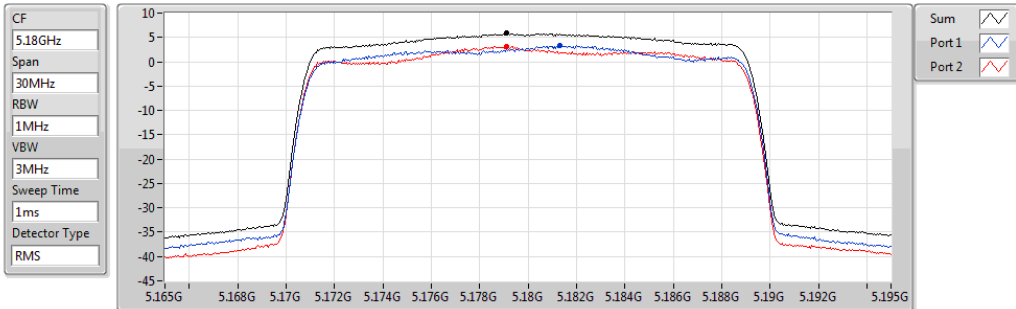


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.18	6.18	3.38	4.13

LTE (BW 20MHz)-64QAM_Nss1,(MCS0)_2TX

PSD

5180MHz

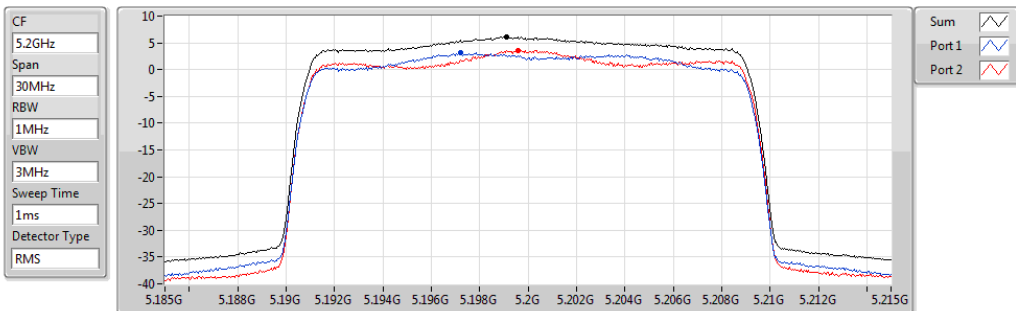


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.86	5.86	3.26	3.20

LTE (BW 20MHz)-64QAM_Nss1,(MCS0)_2TX

PSD

5200MHz

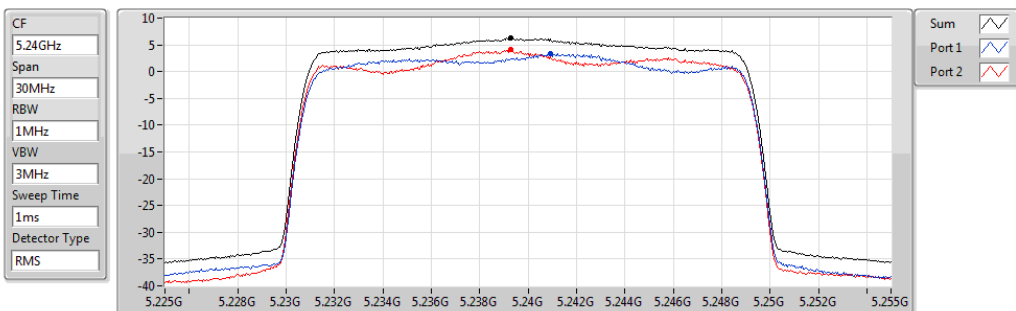


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.10	6.10	3.11	3.59

LTE (BW 20MHz)-64QAM_Nss1,(MCS0)_2TX

PSD

5240MHz

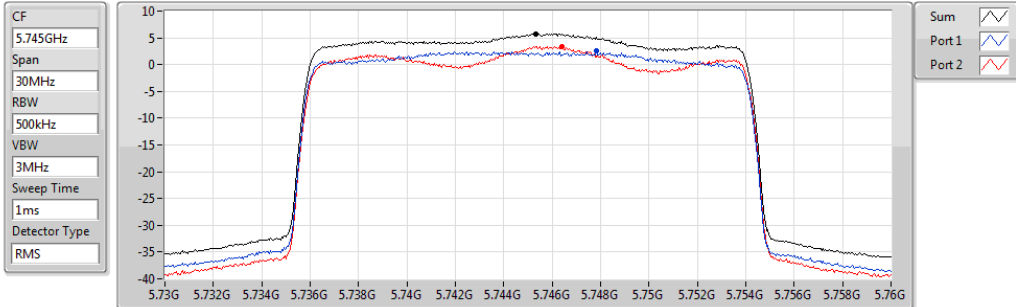


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.35	6.35	3.31	4.13

LTE (BW 20MHz)-QPSK_Nss1,(MCS0)_2TX

PSD

5745MHz

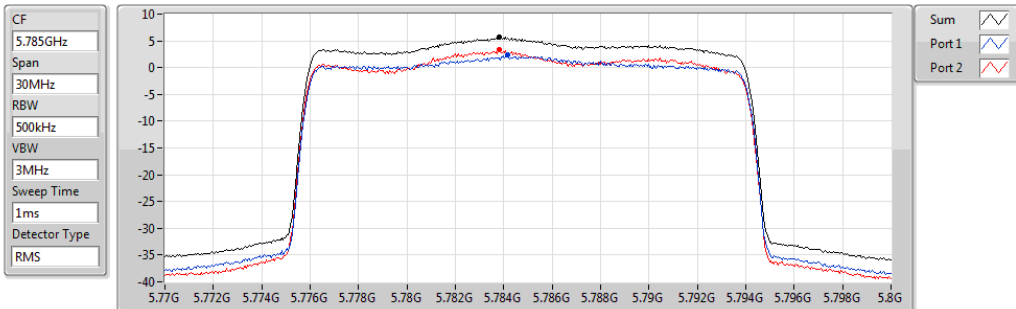


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.77	5.77	2.54	3.35

LTE (BW 20MHz)-QPSK_Nss1,(MCS0)_2TX

PSD

5785MHz

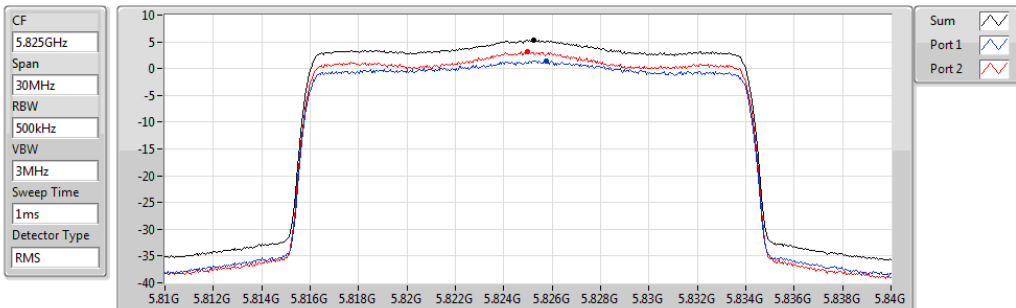


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.62	5.62	2.44	3.32

LTE (BW 20MHz)-QPSK_Nss1,(MCS0)_2TX

PSD

5825MHz

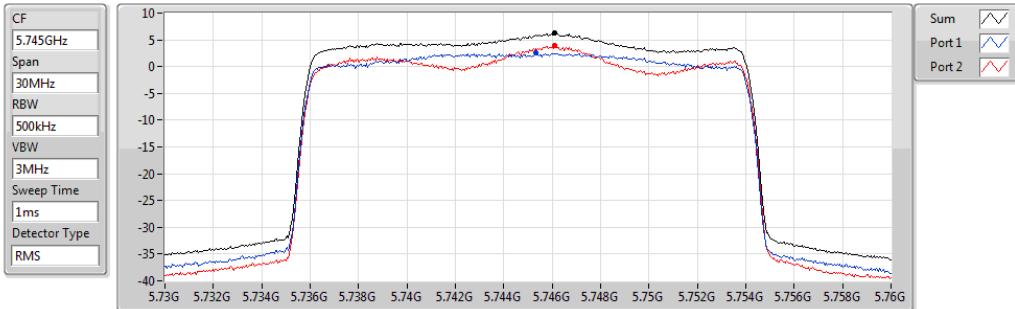


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.28	5.28	1.40	3.15

LTE (BW 20MHz)-16QAM_Nss1,(MCS0)_2TX

PSD

5745MHz

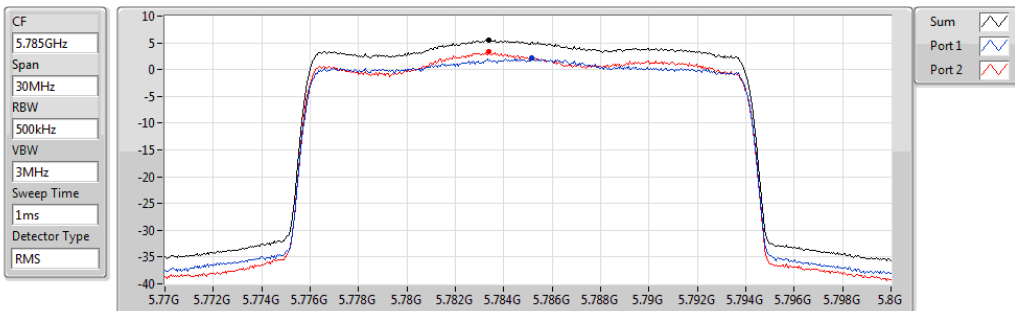


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.25	6.25	2.56	3.95

LTE (BW 20MHz)-16QAM_Nss1,(MCS0)_2TX

PSD

5785MHz

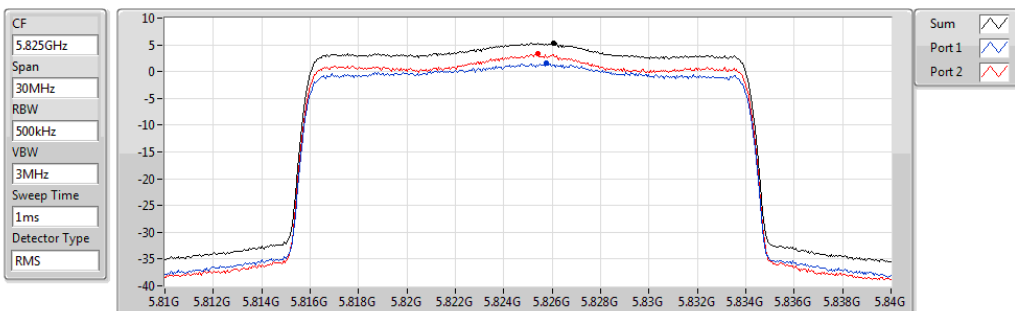


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.57	5.57	2.20	3.30

LTE (BW 20MHz)-16QAM_Nss1,(MCS0)_2TX

PSD

5825MHz

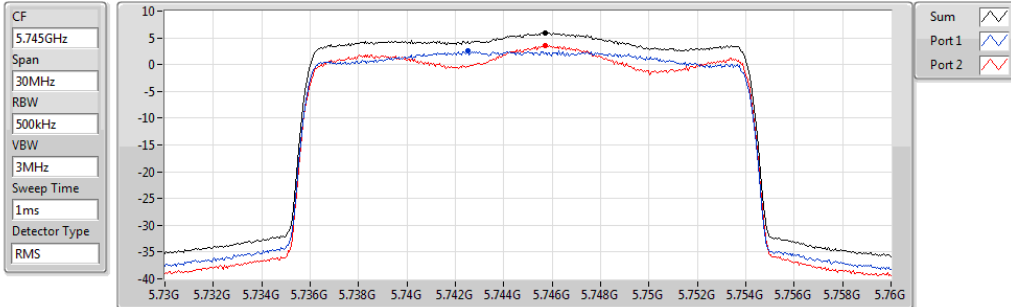


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.38	5.38	1.52	3.27

LTE (BW 20MHz)-64QAM_Nss1,(MCS0)_2TX

PSD

5745MHz

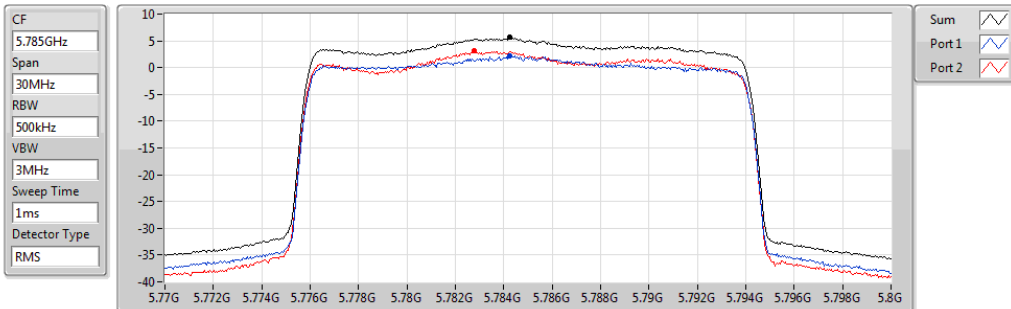


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.96	5.96	2.52	3.63

LTE (BW 20MHz)-64QAM_Nss1,(MCS0)_2TX

PSD

5785MHz

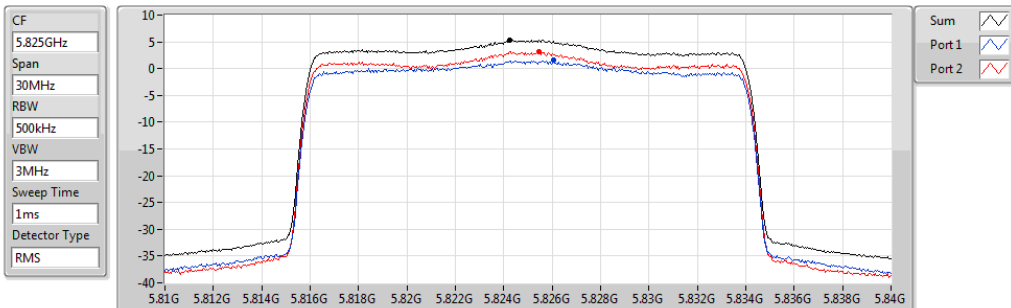


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.64	5.64	2.24	3.08

LTE (BW 20MHz)-64QAM_Nss1,(MCS0)_2TX

PSD

5825MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.40	5.40	1.55	3.18

3.5 Transmitter Radiated and Band Edge Emissions

3.5.1 Limit of Transmitter Radiated and Band Edge Emissions

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:
Qusai-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.

Un-restricted band emissions above 1GHz Limit	
Operating Band	Limit
5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.725 - 5.850 GHz	All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Note 1: Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. 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 of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

3.5.2 Test Procedures

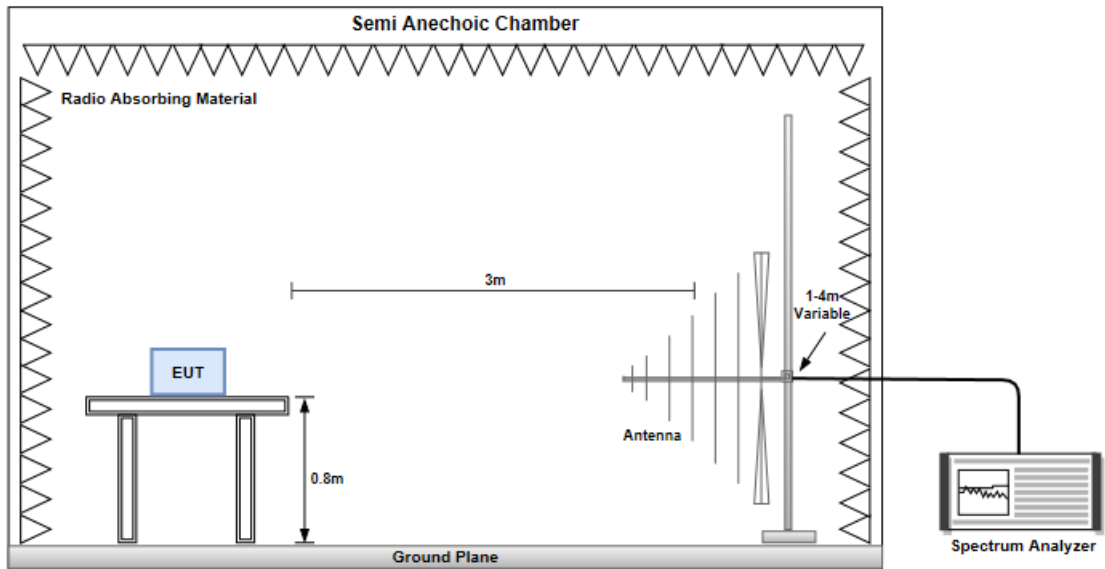
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission 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:

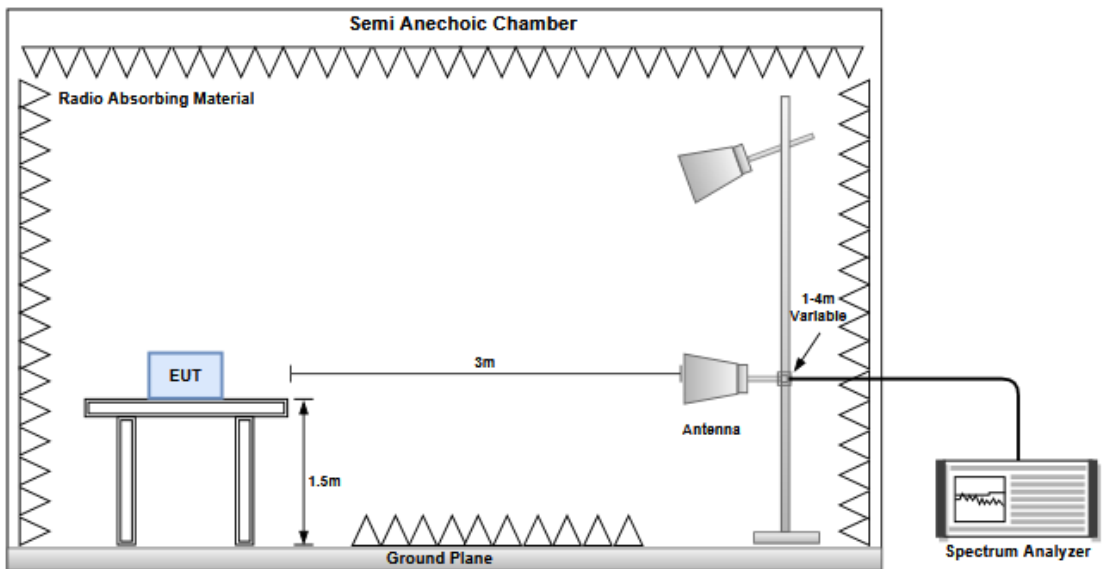
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above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

3.5.3 Test Setup

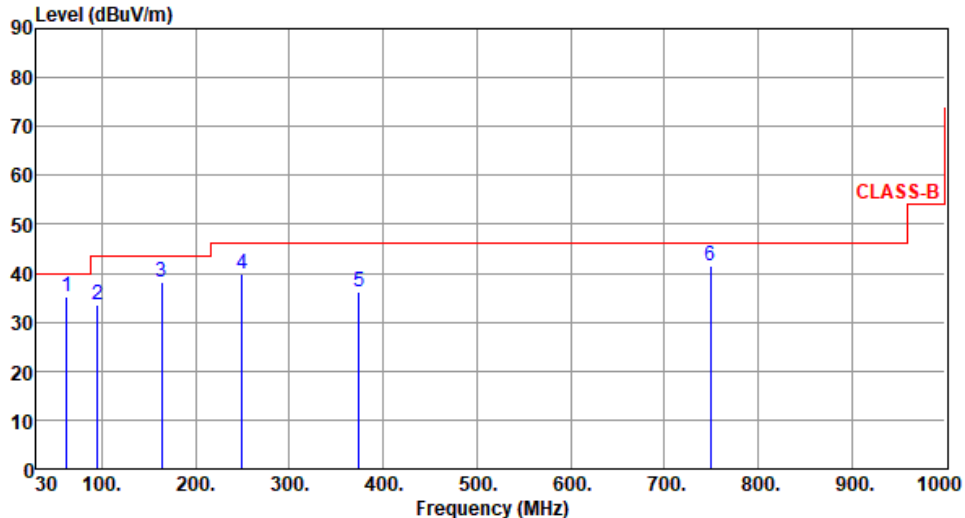
Radiated Emissions below 1 GHz



Radiated Emissions above 1 GHz

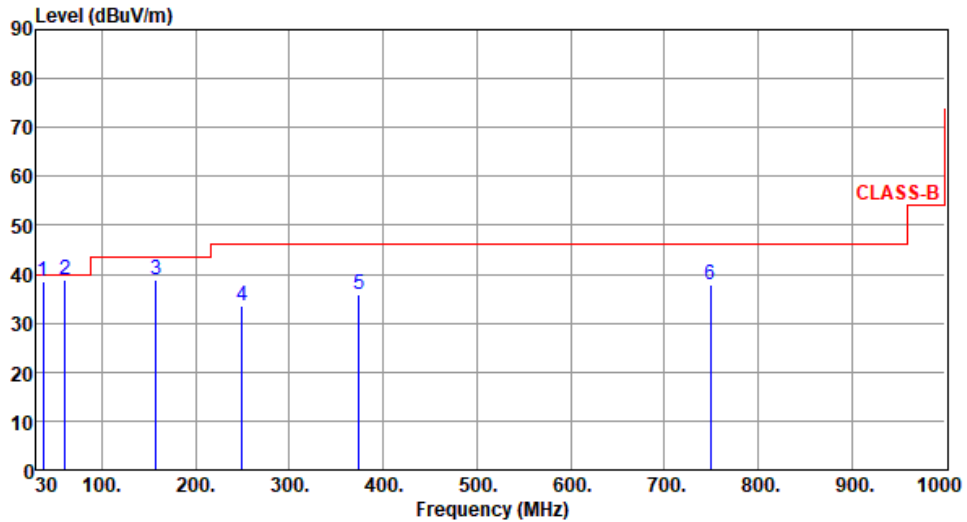


3.5.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

Channel Bandwidth	10MHz	Test Freq. (MHz)	5245																																																																																																																																			
Polarization	Horizontal	Modulation	64QAM																																																																																																																																			
Test By :Aska Huang Temperature(°C):24 Humidity(%):65																																																																																																																																						
																																																																																																																																						
	<table border="1"> <thead> <tr> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> </tr> </thead> <tbody> <tr> <td>62.01</td> <td>94.99</td> <td>163.86</td> <td>249.22</td> <td>374.35</td> <td>749.74</td> </tr> <tr> <td>35.31</td> <td>33.58</td> <td>38.32</td> <td>39.92</td> <td>36.22</td> <td>41.38</td> </tr> <tr> <td>40.00</td> <td>43.50</td> <td>43.50</td> <td>46.00</td> <td>46.00</td> <td>46.00</td> </tr> <tr> <td>-4.69</td> <td>-9.92</td> <td>-5.18</td> <td>-6.08</td> <td>-9.78</td> <td>-4.62</td> </tr> <tr> <td>45.12</td> <td>48.25</td> <td>47.22</td> <td>50.15</td> <td>42.89</td> <td>39.76</td> </tr> <tr> <td>-9.81</td> <td>-14.67</td> <td>-8.90</td> <td>-10.23</td> <td>-6.67</td> <td>1.62</td> </tr> <tr> <td>Peak</td> <td>Peak</td> <td>Peak</td> <td>Peak</td> <td>Peak</td> <td>Peak</td> </tr> <tr> <td>---</td> <td>---</td> <td>---</td> <td>---</td> <td>---</td> <td>---</td> </tr> <tr> <td>---</td> <td>---</td> <td>---</td> <td>---</td> <td>---</td> <td>---</td> </tr> </tbody> </table>	1	2	3	4	5	6	62.01	94.99	163.86	249.22	374.35	749.74	35.31	33.58	38.32	39.92	36.22	41.38	40.00	43.50	43.50	46.00	46.00	46.00	-4.69	-9.92	-5.18	-6.08	-9.78	-4.62	45.12	48.25	47.22	50.15	42.89	39.76	-9.81	-14.67	-8.90	-10.23	-6.67	1.62	Peak	Peak	Peak	Peak	Peak	Peak	---	---	---	---	---	---	---	---	---	---	---	---	<table border="1"> <thead> <tr> <th>Freq.</th> <th>Emission level</th> <th>Limit</th> <th>Margin</th> <th>SA reading</th> <th>Factor</th> <th>Remark</th> <th>ANT High cm</th> <th>Turn Table deg</th> </tr> <tr> <th>MHz</th> <th>dBuV/m</th> <th>dBuV/m</th> <th>dB</th> <th>dBuV</th> <th>dB/m</th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>62.01</td> <td>35.31</td> <td>40.00</td> <td>-4.69</td> <td>45.12</td> <td>-9.81</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> <tr> <td>94.99</td> <td>33.58</td> <td>43.50</td> <td>-9.92</td> <td>48.25</td> <td>-14.67</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> <tr> <td>163.86</td> <td>38.32</td> <td>43.50</td> <td>-5.18</td> <td>47.22</td> <td>-8.90</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> <tr> <td>249.22</td> <td>39.92</td> <td>46.00</td> <td>-6.08</td> <td>50.15</td> <td>-10.23</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> <tr> <td>374.35</td> <td>36.22</td> <td>46.00</td> <td>-9.78</td> <td>42.89</td> <td>-6.67</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> <tr> <td>749.74</td> <td>41.38</td> <td>46.00</td> <td>-4.62</td> <td>39.76</td> <td>1.62</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> </tbody> </table>	Freq.	Emission level	Limit	Margin	SA reading	Factor	Remark	ANT High cm	Turn Table deg	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m				62.01	35.31	40.00	-4.69	45.12	-9.81	Peak	---	---	94.99	33.58	43.50	-9.92	48.25	-14.67	Peak	---	---	163.86	38.32	43.50	-5.18	47.22	-8.90	Peak	---	---	249.22	39.92	46.00	-6.08	50.15	-10.23	Peak	---	---	374.35	36.22	46.00	-9.78	42.89	-6.67	Peak	---	---	749.74	41.38	46.00	-4.62	39.76	1.62	Peak	---	---
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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.																																																																																																																																						

Channel Bandwidth	10MHz	Test Freq. (MHz)	5245
Polarization	Vertical	Modulation	64QAM

Test By :Aska Huang Temperature(°C):24 Humidity(%):65



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	37.16	38.62	40.00	-1.38	48.13	-9.51	QP	100	57
2	61.04	38.98	40.00	-1.02	48.51	-9.53	QP	100	228
3	158.04	39.02	43.50	-4.48	47.83	-8.81	Peak	---	---
4	249.22	33.54	46.00	-12.46	43.77	-10.23	Peak	---	---
5	374.35	35.93	46.00	-10.07	42.60	-6.67	Peak	---	---
6	749.74	37.85	46.00	-8.15	36.23	1.62	Peak	---	---

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

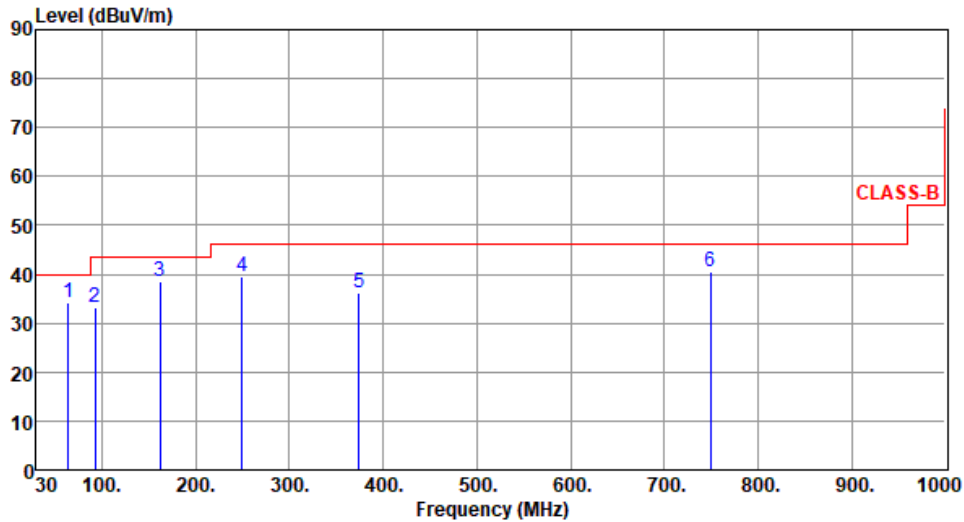
*Factor includes antenna factor , cable loss and amplifier gain

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.

Channel Bandwidth	10MHz	Test Freq. (MHz)	5730
Polarization	Horizontal	Modulation	64QAM

Test By :Aska Huang Temperature(°C):24 Humidity(%):65



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	63.95	34.18	40.00	-5.82	43.99	-9.81	Peak	---	---
2	93.05	33.17	43.50	-10.33	47.92	-14.75	Peak	---	---
3	161.92	38.38	43.50	-5.12	47.20	-8.82	Peak	---	---
4	249.22	39.65	46.00	-6.35	49.88	-10.23	Peak	---	---
5	374.35	36.10	46.00	-9.90	42.77	-6.67	Peak	---	---
6	749.74	40.53	46.00	-5.47	38.91	1.62	Peak	---	---

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

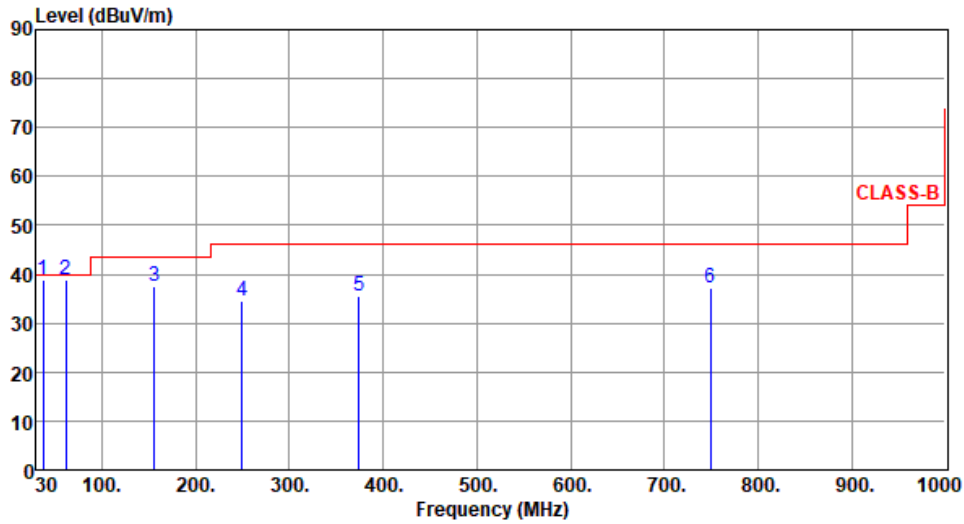
*Factor includes antenna factor , cable loss and amplifier gain

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.

Channel Bandwidth	10MHz	Test Freq. (MHz)	5730
Polarization	Vertical	Modulation	64QAM

Test By :Aska Huang Temperature(°C):24 Humidity(%):65



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	37.11	38.85	40.00	-1.15	48.37	-9.52	QP	100	56
2	61.25	38.95	40.00	-1.05	48.54	-9.59	QP	100	226
3	156.10	37.54	43.50	-5.96	46.35	-8.81	Peak	---	---
4	249.22	34.58	46.00	-11.42	44.81	-10.23	Peak	---	---
5	374.35	35.46	46.00	-10.54	42.13	-6.67	Peak	---	---
6	749.74	37.32	46.00	-8.68	35.70	1.62	Peak	---	---

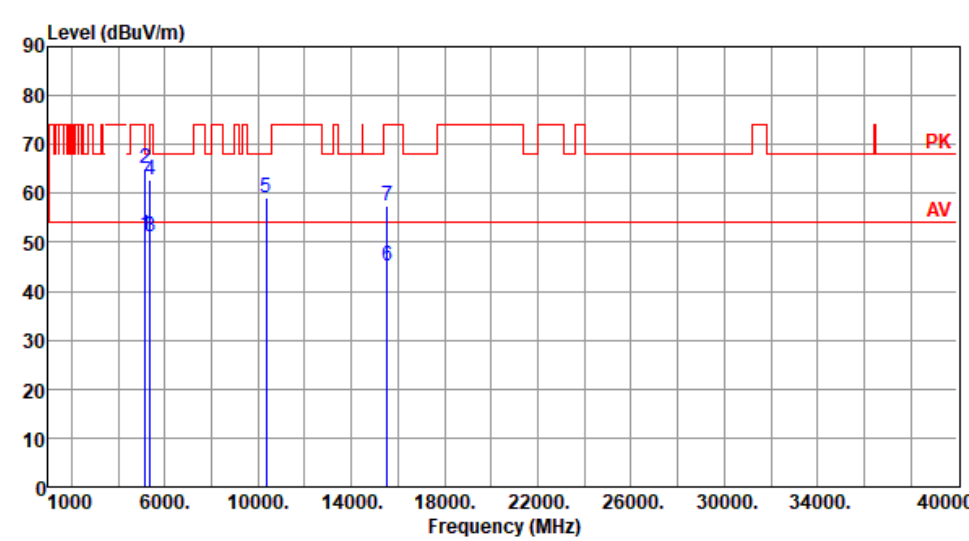
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*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)_CB 10MHz

Channel Bandwidth	10MHz	Test Freq. (MHz)	5180						
Polarization	Horizontal	Modulation	64QAM						
Test By :Akun Chung Temperature(°C):23 Humidity(%):63									
									
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	51.61	54.00	-2.39	47.23	4.38	Average	200	179
2	5150.00	65.07	74.00	-8.93	60.69	4.38	Peak	200	179
3	5350.00	50.99	54.00	-3.01	47.02	3.97	Average	173	178
4	5350.00	62.68	74.00	-11.32	58.71	3.97	Peak	173	178
5	10360.00	59.27	68.20	-8.93	44.85	14.42	Peak	100	22
6	15540.00	45.31	54.00	-8.69	30.66	14.65	Average	100	23
7	15540.00	57.31	74.00	-16.69	42.66	14.65	Peak	100	23

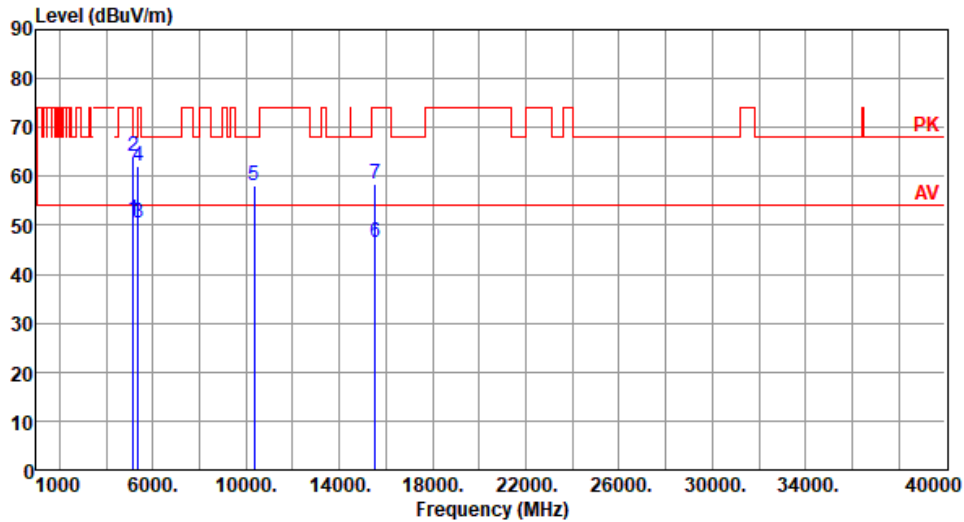
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Channel Bandwidth	10MHz	Test Freq. (MHz)	5180
Polarization	Vertical	Modulation	64QAM

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	51.23	54.00	-2.77	46.85	4.38	Average	177	180
2	5150.00	64.04	74.00	-9.96	59.66	4.38	Peak	177	180
3	5350.00	50.52	54.00	-3.48	46.55	3.97	Average	177	180
4	5350.00	61.97	74.00	-12.03	58.00	3.97	Peak	177	180
5	10360.00	58.19	68.20	-10.01	43.77	14.42	Peak	100	58
6	15540.00	46.35	54.00	-7.65	31.70	14.65	Average	100	60
7	15540.00	58.34	74.00	-15.66	43.69	14.65	Peak	100	60

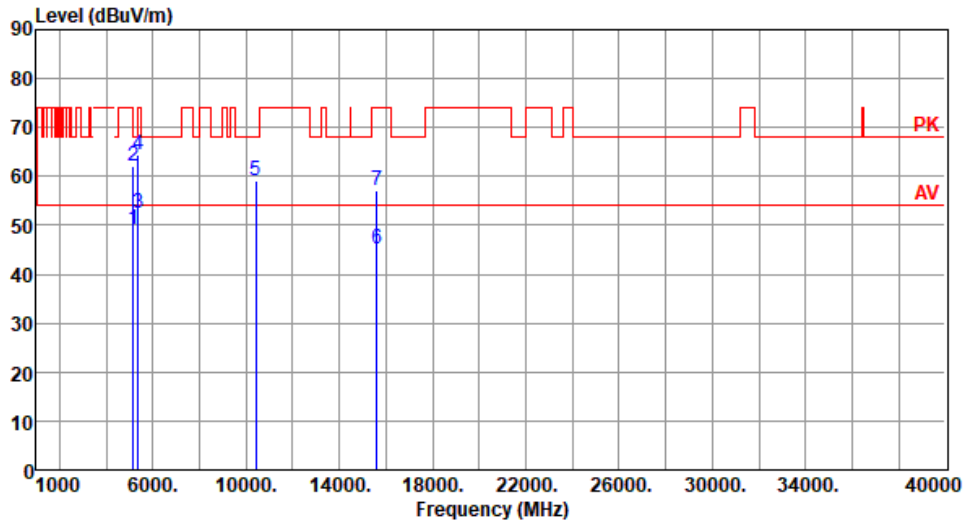
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Channel Bandwidth	10MHz	Test Freq. (MHz)	5200
Polarization	Horizontal	Modulation	64QAM

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	49.23	54.00	-4.77	44.85	4.38	Average	168	179
2	5150.00	61.96	74.00	-12.04	57.58	4.38	Peak	168	179
3	5350.00	52.61	54.00	-1.39	48.64	3.97	Average	168	179
4	5350.00	64.49	74.00	-9.51	60.52	3.97	Peak	168	179
5	10400.00	59.06	68.20	-9.14	44.57	14.49	Peak	100	27
6	15600.00	45.10	54.00	-8.90	30.58	14.52	Average	100	24
7	15600.00	57.13	74.00	-16.87	42.61	14.52	Peak	100	24

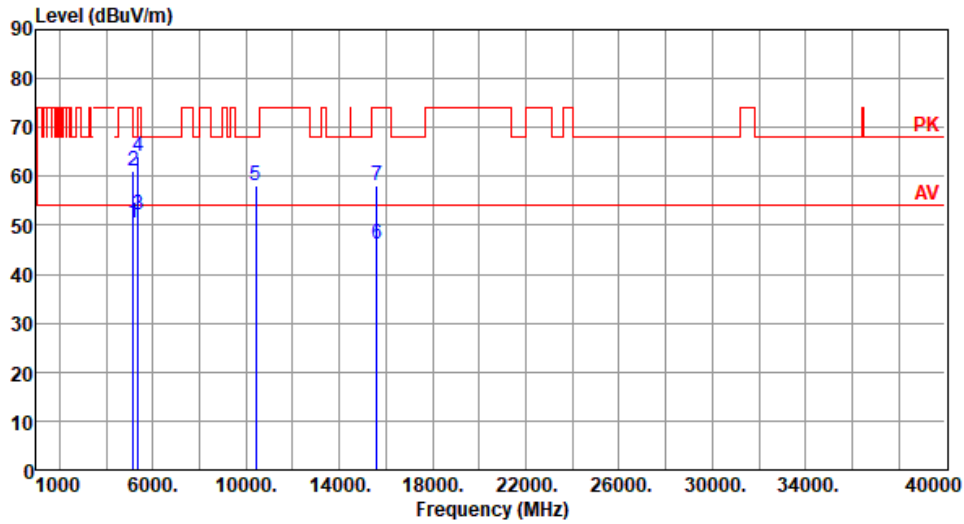
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Channel Bandwidth	10MHz	Test Freq. (MHz)	5200
Polarization	Vertical	Modulation	64QAM

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	50.63	54.00	-3.37	46.25	4.38	Average	186	182
2	5150.00	61.26	74.00	-12.74	56.88	4.38	Peak	186	182
3	5350.00	52.02	54.00	-1.98	48.05	3.97	Average	186	182
4	5350.00	64.02	74.00	-9.98	60.05	3.97	Peak	186	182
5	10400.00	58.18	68.20	-10.02	43.69	14.49	Peak	100	52
6	15600.00	46.20	54.00	-7.80	31.68	14.52	Average	100	57
7	15600.00	58.11	74.00	-15.89	43.59	14.52	Peak	100	57

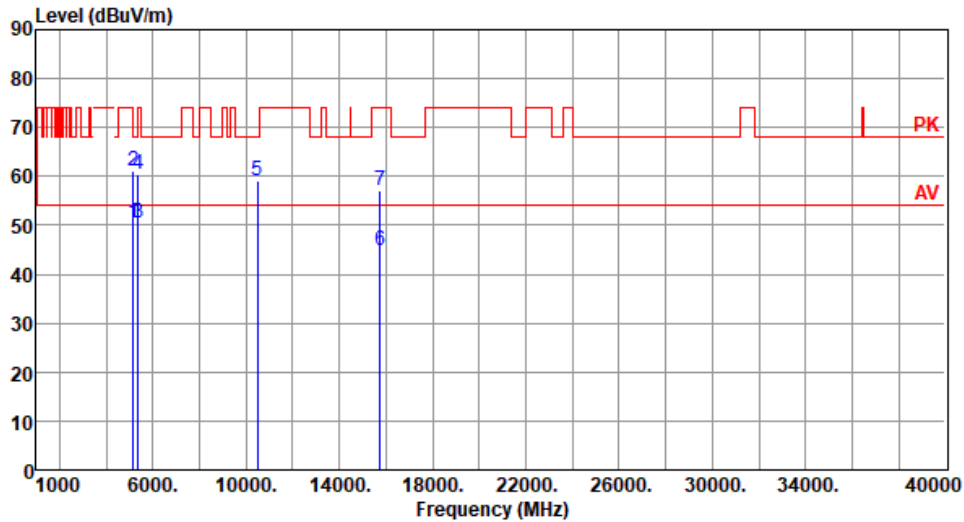
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Channel Bandwidth	10MHz	Test Freq. (MHz)	5245
Polarization	Horizontal	Modulation	64QAM

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	50.38	54.00	-3.62	46.00	4.38	Average	178	179
2	5150.00	61.26	74.00	-12.74	56.88	4.38	Peak	178	179
3	5350.00	50.37	54.00	-3.63	46.40	3.97	Average	178	179
4	5350.00	60.40	74.00	-13.60	56.43	3.97	Peak	178	179
5	10490.00	59.26	68.20	-8.94	44.69	14.57	Peak	100	24
6	15735.00	44.80	54.00	-9.20	30.48	14.32	Average	100	29
7	15735.00	56.98	74.00	-17.02	42.66	14.32	Peak	100	29

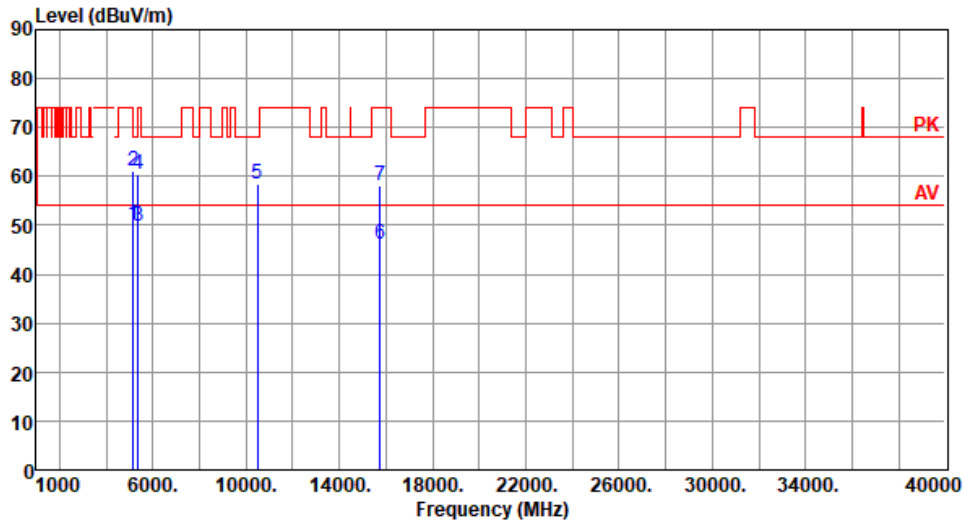
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor, cable loss and amplifier gain

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

Channel Bandwidth	10MHz	Test Freq. (MHz)	5245
Polarization	Vertical	Modulation	64QAM

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	50.25	54.00	-3.75	45.87	4.38	Average	185	182
2	5150.00	61.15	74.00	-12.85	56.77	4.38	Peak	185	182
3	5350.00	49.95	54.00	-4.05	45.98	3.97	Average	185	182
4	5350.00	60.30	74.00	-13.70	56.33	3.97	Peak	185	182
5	10490.00	58.38	68.20	-9.82	43.81	14.57	Peak	100	54
6	15735.00	46.02	54.00	-7.98	31.70	14.32	Average	100	52
7	15735.00	58.06	74.00	-15.94	43.74	14.32	Peak	100	52

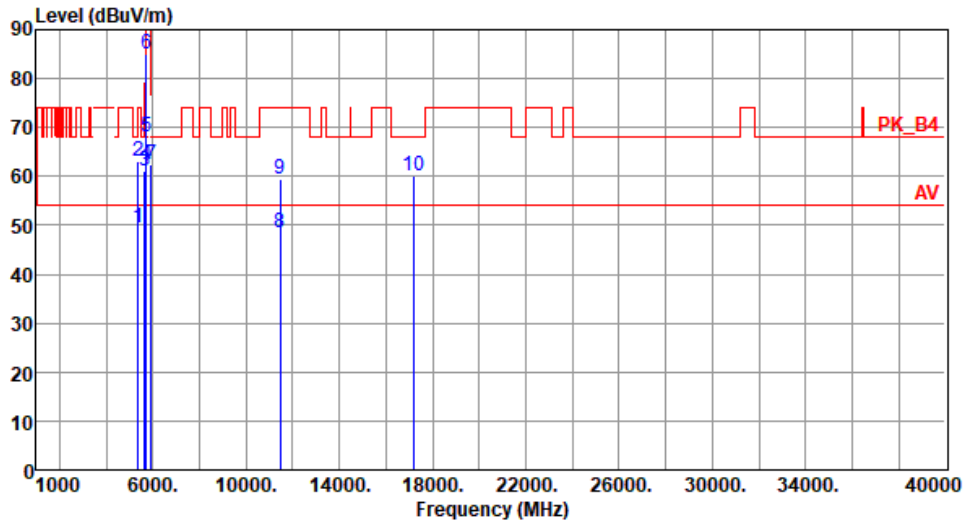
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Channel Bandwidth	10MHz	Test Freq. (MHz)	5730
Polarization	Horizontal	Modulation	64QAM

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5350.00	49.64	54.00	-4.36	45.67	3.97	Average	181	181
2	5350.00	63.08	74.00	-10.92	59.11	3.97	Peak	181	181
3	5650.00	61.25	68.20	-6.95	56.80	4.45	Peak	181	181
4	5700.00	62.30	105.20	-42.90	57.61	4.69	Peak	181	181
5	5720.00	68.21	110.80	-42.59	63.42	4.79	Peak	181	181
6	5725.00	85.11	122.20	-37.09	80.30	4.81	Peak	181	181
7	5925.00	62.36	68.20	-5.84	56.98	5.38	Peak	181	181
8	11460.00	48.37	54.00	-5.63	33.57	14.80	Average	100	25
9	11460.00	59.47	74.00	-14.53	44.67	14.80	Peak	100	25
10	17190.00	60.03	68.20	-8.17	42.59	17.44	Peak	100	21

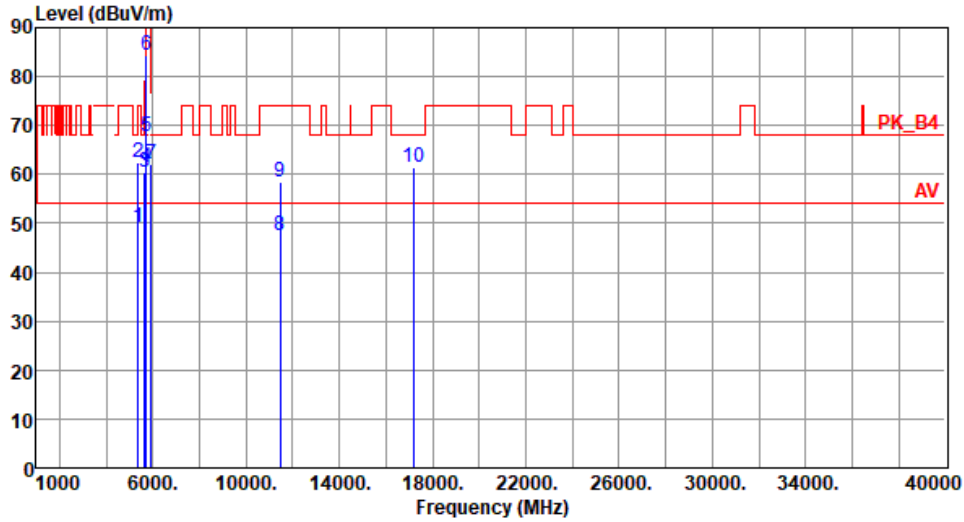
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor, cable loss and amplifier gain

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

Channel Bandwidth	10MHz	Test Freq. (MHz)	5730
Polarization	Vertical	Modulation	64QAM

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5350.00	49.24	54.00	-4.76	45.27	3.97	Average	198	180
2	5350.00	62.35	74.00	-11.65	58.38	3.97	Peak	198	180
3	5650.00	60.41	68.20	-7.79	55.96	4.45	Peak	198	180
4	5700.00	61.54	105.20	-43.66	56.85	4.69	Peak	198	180
5	5720.00	67.64	110.80	-43.16	62.85	4.79	Peak	198	180
6	5725.00	84.44	122.20	-37.76	79.63	4.81	Peak	198	180
7	5925.00	62.20	68.20	-6.00	56.82	5.38	Peak	198	180
8	11460.00	47.42	54.00	-6.58	32.62	14.80	Average	100	57
9	11460.00	58.48	74.00	-15.52	43.68	14.80	Peak	100	57
10	17190.00	61.28	68.20	-6.92	43.84	17.44	Peak	100	54

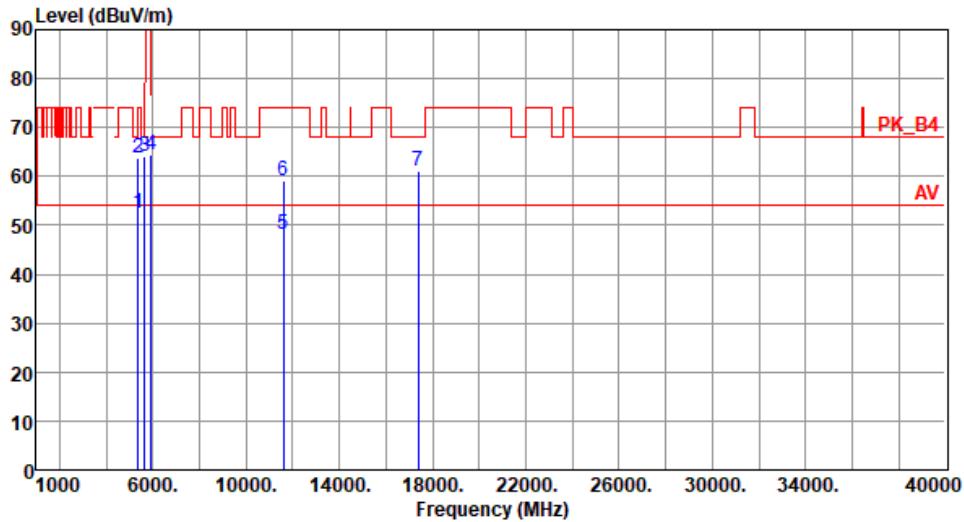
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Channel Bandwidth	10MHz	Test Freq. (MHz)	5800
Polarization	Horizontal	Modulation	64QAM

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5350.00	52.51	54.00	-1.49	48.54	3.97	Average	186	181
2	5350.00	63.83	74.00	-10.17	59.86	3.97	Peak	186	181
3	5650.00	63.96	68.20	-4.24	59.51	4.45	Peak	186	181
4	5925.00	64.47	68.20	-3.73	59.09	5.38	Peak	186	181
5	11600.00	48.24	54.00	-5.76	33.59	14.65	Average	100	22
6	11600.00	59.10	74.00	-14.90	44.45	14.65	Peak	100	22
7	17400.00	61.04	68.20	-7.16	42.62	18.42	Peak	100	29

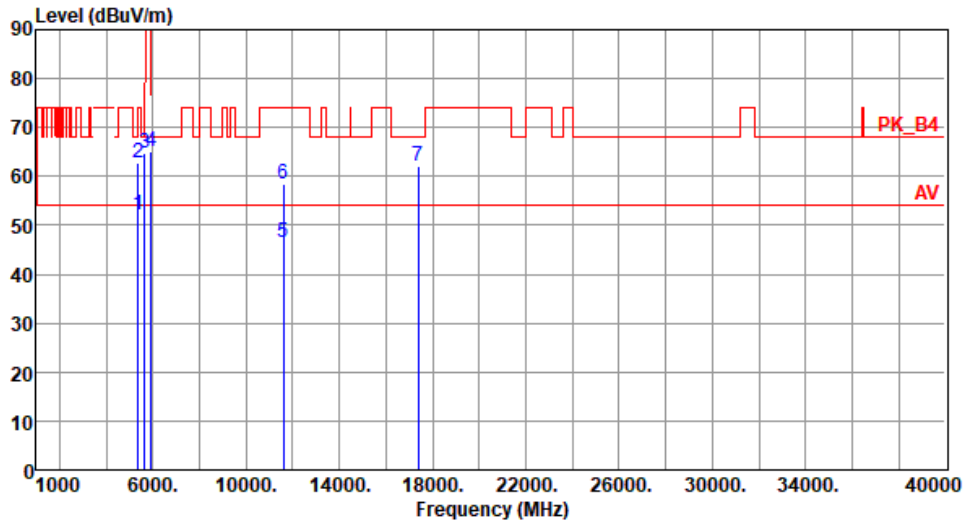
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Channel Bandwidth	10MHz	Test Freq. (MHz)	5800
Polarization	Vertical	Modulation	64QAM

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5350.00	52.08	54.00	-1.92	48.11	3.97	Average	193	179
2	5350.00	62.62	74.00	-11.38	58.65	3.97	Peak	193	179
3	5650.00	64.68	68.20	-3.52	60.23	4.45	Peak	193	179
4	5925.00	64.96	68.20	-3.24	59.58	5.38	Peak	193	179
5	11600.00	46.39	54.00	-7.61	31.74	14.65	Average	100	55
6	11600.00	58.30	74.00	-15.70	43.65	14.65	Peak	100	55
7	17400.00	61.99	68.20	-6.21	43.57	18.42	Peak	100	58

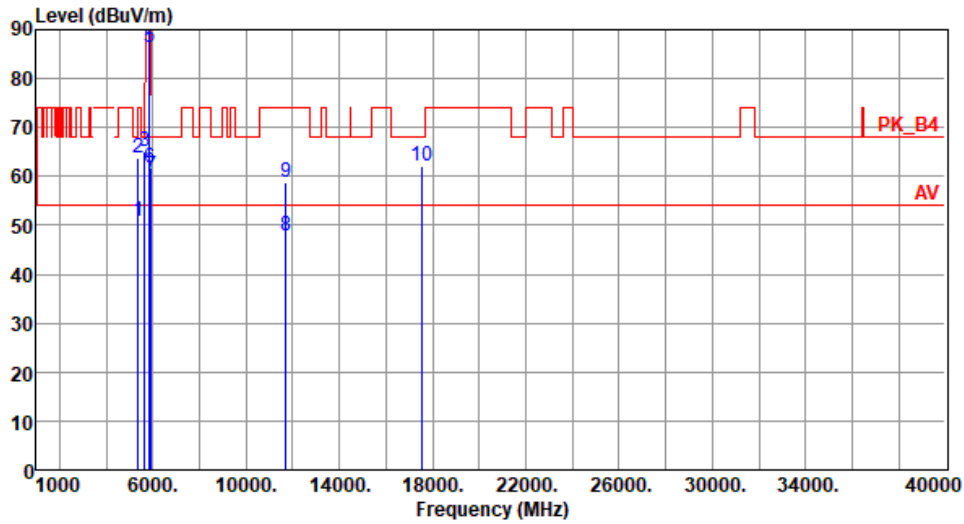
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Channel Bandwidth	10MHz	Test Freq. (MHz)	5845
Polarization	Horizontal	Modulation	64QAM

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5350.00	50.70	54.00	-3.30	46.73	3.97	Average	182	180
2	5350.00	63.80	74.00	-10.20	59.83	3.97	Peak	182	180
3	5650.00	65.12	68.20	-3.08	60.67	4.45	Peak	182	180
4	5850.00	116.75	122.20	-5.45	111.57	5.18	Peak	182	180
5	5855.00	86.29	110.80	-24.51	81.10	5.19	Peak	182	180
6	5875.00	61.82	105.20	-43.38	56.54	5.28	Peak	182	180
7	5925.00	60.01	68.20	-8.19	54.63	5.38	Peak	182	180
8	11690.00	47.87	54.00	-6.13	33.58	14.29	Average	100	21
9	11690.00	58.78	74.00	-15.22	44.49	14.29	Peak	100	21
10	17535.00	62.14	68.20	-6.06	42.88	19.26	Peak	100	22

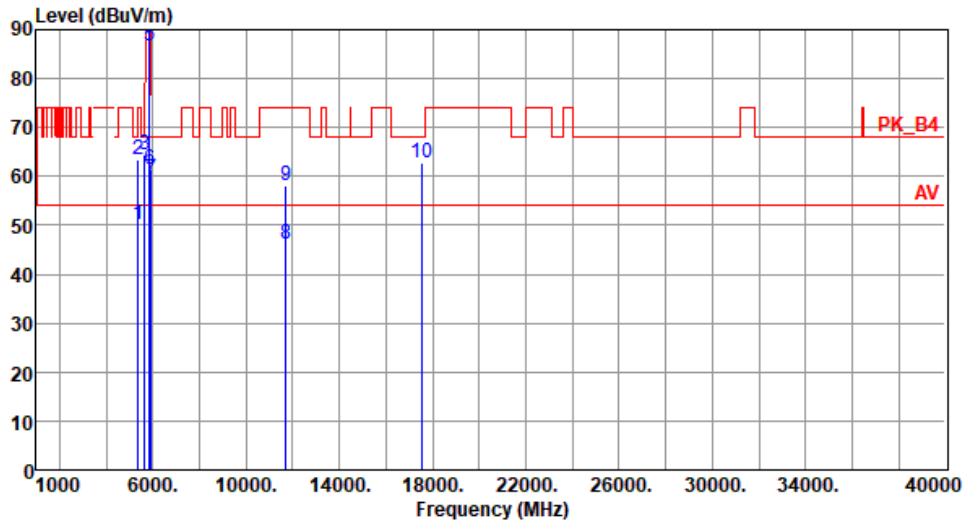
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor, cable loss and amplifier gain

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

Channel Bandwidth	10MHz	Test Freq. (MHz)	5845
Polarization	Vertical	Modulation	64QAM

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 63



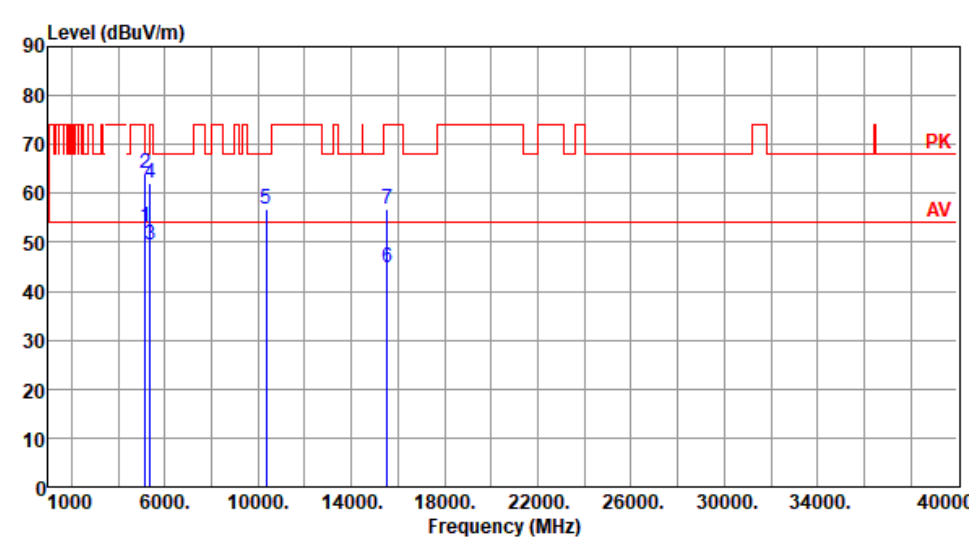
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5350.00	50.15	54.00	-3.85	46.18	3.97	Average	195	179
2	5350.00	63.41	74.00	-10.59	59.44	3.97	Peak	195	179
3	5650.00	64.33	68.20	-3.87	59.88	4.45	Peak	195	179
4	5850.00	117.12	122.20	-5.08	111.94	5.18	Peak	195	179
5	5855.00	86.52	110.80	-24.28	81.33	5.19	Peak	195	179
6	5875.00	61.43	105.20	-43.77	56.15	5.28	Peak	195	179
7	5925.00	59.53	68.20	-8.67	54.15	5.38	Peak	195	179
8	11690.00	46.09	54.00	-7.91	31.80	14.29	Average	100	57
9	11690.00	57.98	74.00	-16.02	43.69	14.29	Peak	100	57
10	17535.00	62.91	68.20	-5.29	43.65	19.26	Peak	100	60

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

*Factor includes antenna factor , cable loss and amplifier gain

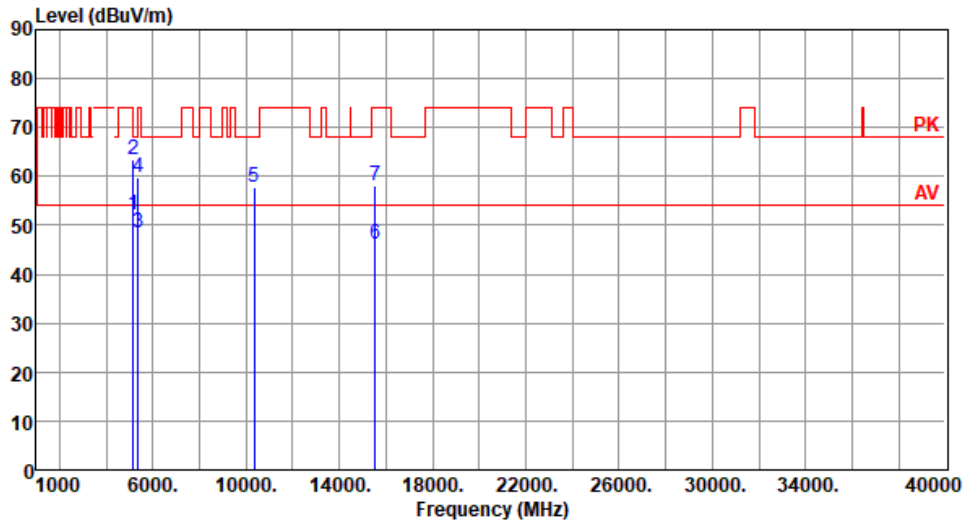
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

3.5.6 Transmitter Radiated Unwanted Emissions (Above 1GHz)_CB 20MHz

Channel Bandwidth	20MHz	Test Freq. (MHz)	5180						
Polarization	Horizontal	Modulation	64QAM						
Test By : Akun Chung Temperature(°C):23 Humidity(%):63									
 <p>The graph displays the radiated unwanted emission levels in dBuV/m across a frequency range from 1000 MHz to 40000 MHz. A red line represents the Average Value (AV) limit at approximately 54 dBuV/m, and a higher red line represents the Peak Value (PK) limit at approximately 74 dBuV/m. Seven specific measurement points are marked with blue vertical lines and numbered 1 through 7. The emission levels at these points are: 1 (52.98 dBuV/m), 2 (63.95 dBuV/m), 3 (49.64 dBuV/m), 4 (62.02 dBuV/m), 5 (56.81 dBuV/m), 6 (44.95 dBuV/m), and 7 (56.93 dBuV/m). The corresponding SA readings and factors are also provided in the table below.</p>									
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	52.98	54.00	-1.02	48.60	4.38	Average	208	180
2	5150.00	63.95	74.00	-10.05	59.57	4.38	Peak	208	180
3	5350.00	49.64	54.00	-4.36	45.67	3.97	Average	168	178
4	5350.00	62.02	74.00	-11.98	58.05	3.97	Peak	168	178
5	10360.00	56.81	68.20	-11.39	42.39	14.42	Peak	100	20
6	15540.00	44.95	54.00	-9.05	30.30	14.65	Average	100	25
7	15540.00	56.93	74.00	-17.07	42.28	14.65	Peak	100	25
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).									

Channel Bandwidth	20MHz	Test Freq. (MHz)	5180
Polarization	Vertical	Modulation	64QAM

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	52.01	54.00	-1.99	47.63	4.38	Average	187	179
2	5150.00	63.58	74.00	-10.42	59.20	4.38	Peak	187	179
3	5350.00	48.46	54.00	-5.54	44.49	3.97	Average	187	179
4	5350.00	59.62	74.00	-14.38	55.65	3.97	Peak	187	179
5	10360.00	57.87	68.20	-10.33	43.45	14.42	Peak	100	57
6	15540.00	46.04	54.00	-7.96	31.39	14.65	Average	100	55
7	15540.00	58.15	74.00	-15.85	43.50	14.65	Peak	100	55

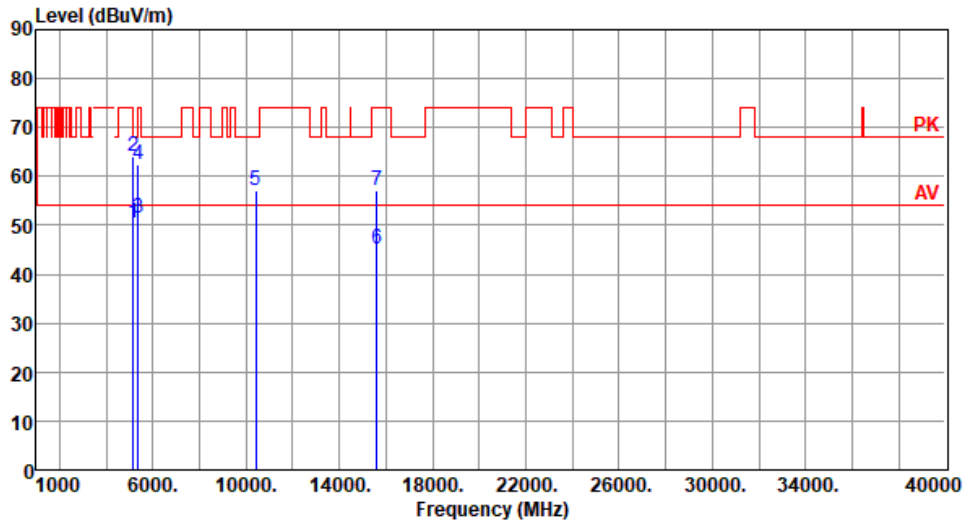
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Channel Bandwidth	20MHz	Test Freq. (MHz)	5200
Polarization	Horizontal	Modulation	64QAM

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	50.36	54.00	-3.64	45.98	4.38	Average	174	178
2	5150.00	63.95	74.00	-10.05	59.57	4.38	Peak	174	178
3	5350.00	51.49	54.00	-2.51	47.52	3.97	Average	174	178
4	5350.00	62.57	74.00	-11.43	58.60	3.97	Peak	174	178
5	10400.00	56.97	68.20	-11.23	42.48	14.49	Peak	100	21
6	15600.00	45.05	54.00	-8.95	30.53	14.52	Average	100	28
7	15600.00	57.13	74.00	-16.87	42.61	14.52	Peak	100	28

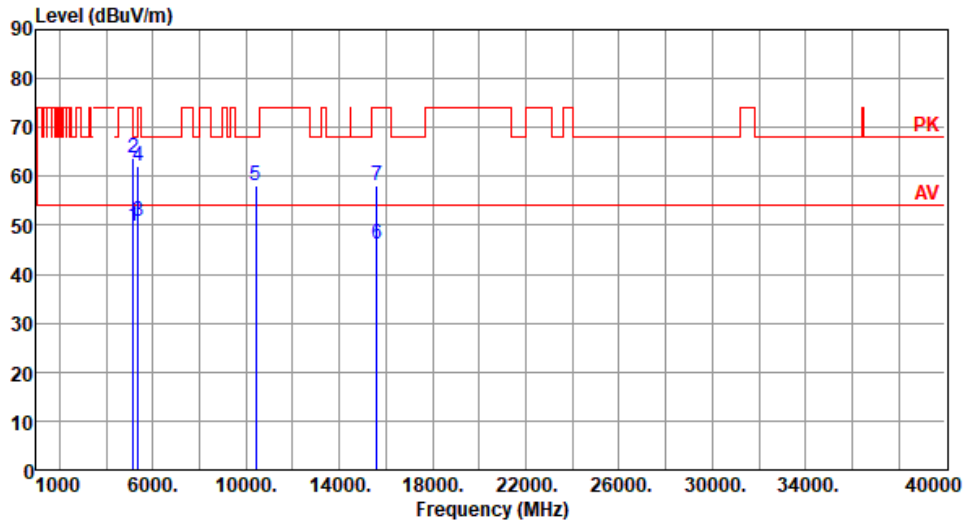
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor, cable loss and amplifier gain

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

Channel Bandwidth	20MHz	Test Freq. (MHz)	5200
Polarization	Vertical	Modulation	64QAM

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	49.66	54.00	-4.34	45.28	4.38	Average	177	182
2	5150.00	63.69	74.00	-10.31	59.31	4.38	Peak	177	182
3	5350.00	50.95	54.00	-3.05	46.98	3.97	Average	177	182
4	5350.00	62.08	74.00	-11.92	58.11	3.97	Peak	177	182
5	10400.00	58.12	68.20	-10.08	43.63	14.49	Peak	100	56
6	15600.00	46.00	54.00	-8.00	31.48	14.52	Average	100	53
7	15600.00	57.98	74.00	-16.02	43.46	14.52	Peak	100	53

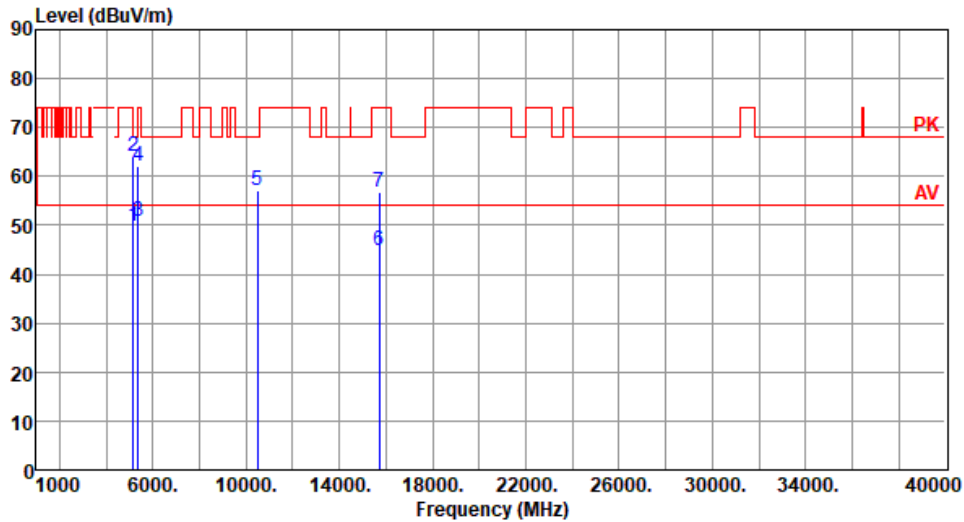
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Channel Bandwidth	20MHz	Test Freq. (MHz)	5240
Polarization	Horizontal	Modulation	64QAM

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	49.92	54.00	-4.08	45.54	4.38	Average	176	179
2	5150.00	64.26	74.00	-9.74	59.88	4.38	Peak	176	179
3	5350.00	50.92	54.00	-3.08	46.95	3.97	Average	181	181
4	5350.00	62.22	74.00	-11.78	58.25	3.97	Peak	181	181
5	10480.00	57.13	68.20	-11.07	42.58	14.55	Peak	100	23
6	15720.00	44.81	54.00	-9.19	30.45	14.36	Average	100	21
7	15720.00	56.86	74.00	-17.14	42.50	14.36	Peak	100	21

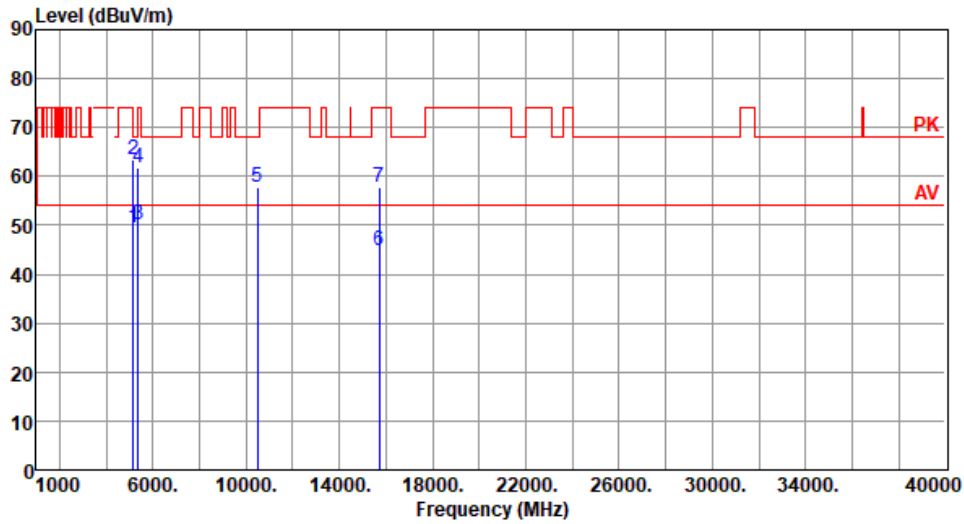
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Channel Bandwidth	20MHz	Test Freq. (MHz)	5240
Polarization	Vertical	Modulation	64QAM

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5150.00	49.56	54.00	-4.44	45.18	4.38	Average	163	180
2	5150.00	63.53	74.00	-10.47	59.15	4.38	Peak	163	180
3	5350.00	50.12	54.00	-3.88	46.15	3.97	Average	163	180
4	5350.00	61.66	74.00	-12.34	57.69	3.97	Peak	163	180
5	10480.00	57.94	68.20	-10.26	43.39	14.55	Peak	100	57
6	15720.00	44.70	54.00	-9.30	30.34	14.36	Average	100	53
7	15720.00	57.85	74.00	-16.15	43.49	14.36	Peak	100	53

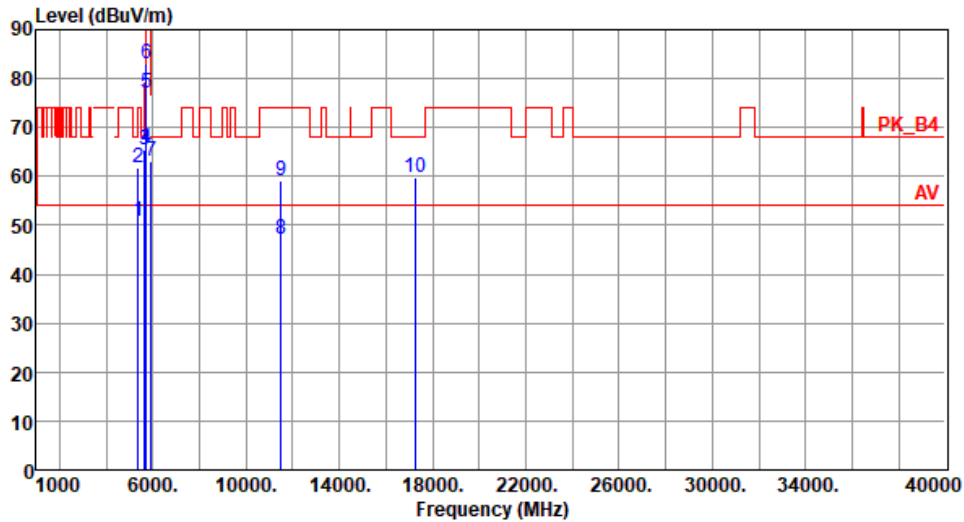
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Channel Bandwidth	20MHz	Test Freq. (MHz)	5745
Polarization	Horizontal	Modulation	64QAM

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5350.00	50.69	54.00	-3.31	46.72	3.97	Average	178	179
2	5350.00	61.82	74.00	-12.18	57.85	3.97	Peak	178	179
3	5650.00	65.34	68.20	-2.86	60.89	4.45	Peak	178	179
4	5700.00	65.79	105.20	-39.41	61.10	4.69	Peak	178	179
5	5720.00	77.20	110.80	-33.60	72.41	4.79	Peak	178	179
6	5725.00	83.00	122.20	-39.20	78.19	4.81	Peak	178	179
7	5925.00	63.23	68.20	-4.97	57.85	5.38	Peak	178	179
8	11490.00	47.20	54.00	-6.80	32.44	14.76	Average	100	26
9	11490.00	59.18	74.00	-14.82	44.42	14.76	Peak	100	26
10	17235.00	59.91	68.20	-8.29	42.36	17.55	Peak	100	30

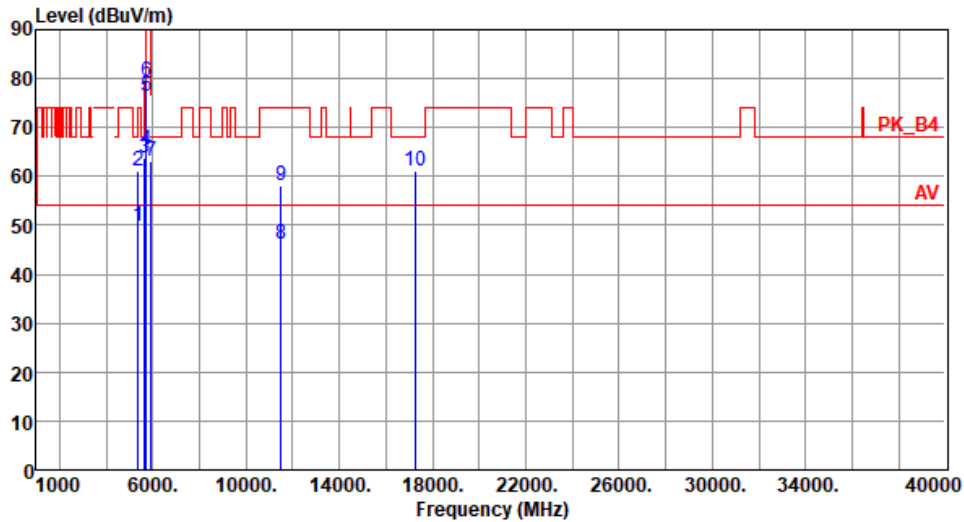
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor, cable loss and amplifier gain

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

Channel Bandwidth	20MHz	Test Freq. (MHz)	5745
Polarization	Vertical	Modulation	64QAM

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5350.00	49.86	54.00	-4.14	45.89	3.97	Average	182	180
2	5350.00	61.18	74.00	-12.82	57.21	3.97	Peak	182	180
3	5650.00	63.91	68.20	-4.29	59.46	4.45	Peak	182	180
4	5700.00	65.54	105.20	-39.66	60.85	4.69	Peak	182	180
5	5720.00	76.31	110.80	-34.49	71.52	4.79	Peak	182	180
6	5725.00	79.36	122.20	-42.84	74.55	4.81	Peak	182	180
7	5925.00	62.96	68.20	-5.24	57.58	5.38	Peak	182	180
8	11490.00	46.20	54.00	-7.80	31.44	14.76	Average	100	54
9	11490.00	58.12	74.00	-15.88	43.36	14.76	Peak	100	54
10	17235.00	61.03	68.20	-7.17	43.48	17.55	Peak	100	57

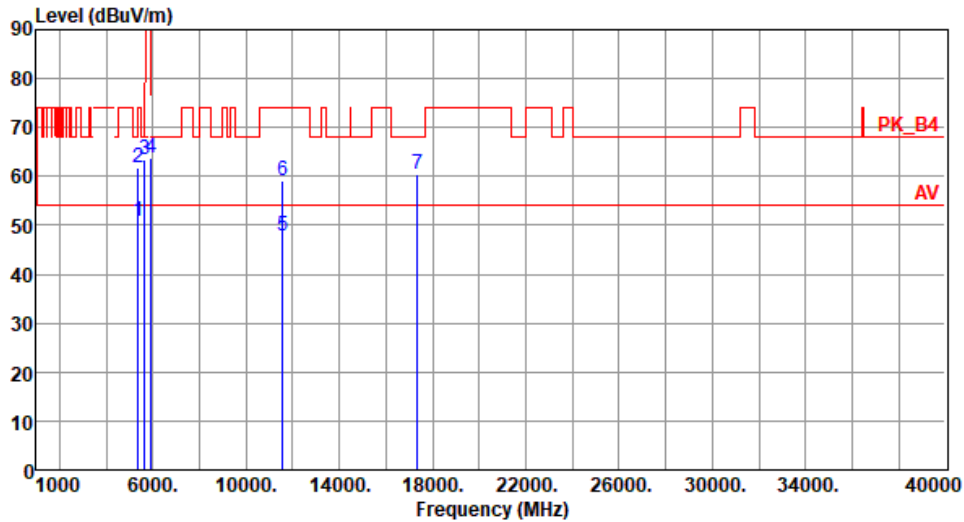
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Channel Bandwidth	20MHz	Test Freq. (MHz)	5785
Polarization	Horizontal	Modulation	64QAM

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5350.00	50.74	54.00	-3.26	46.77	3.97	Average	159	181
2	5350.00	61.82	74.00	-12.18	57.85	3.97	Peak	159	181
3	5650.00	63.40	68.20	-4.80	58.95	4.45	Peak	159	181
4	5925.00	63.74	68.20	-4.46	58.36	5.38	Peak	159	181
5	11570.00	47.96	54.00	-6.04	33.28	14.68	Average	100	24
6	11570.00	59.01	74.00	-14.99	44.33	14.68	Peak	100	24
7	17355.00	60.54	68.20	-7.66	42.43	18.11	Peak	100	29

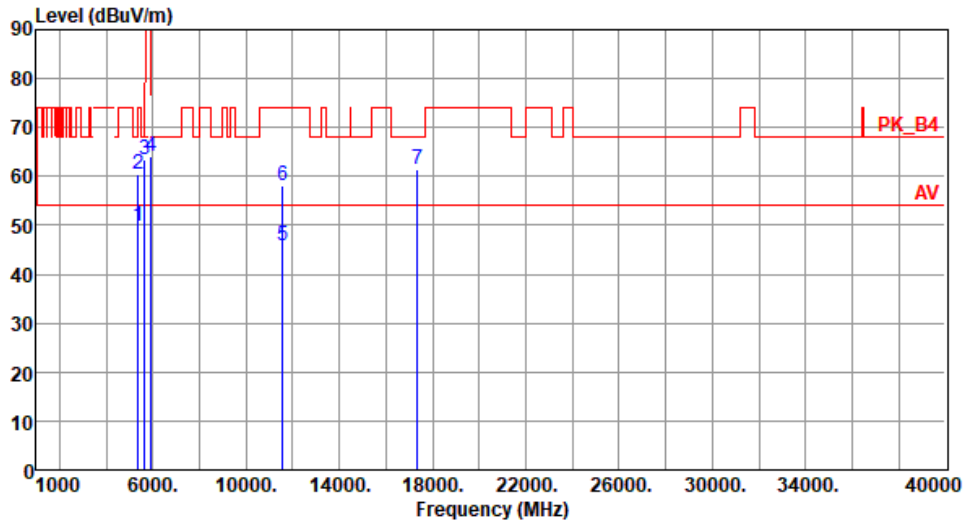
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor, cable loss and amplifier gain

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

Channel Bandwidth	20MHz	Test Freq. (MHz)	5785
Polarization	Vertical	Modulation	64QAM

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5350.00	49.65	54.00	-4.35	45.68	3.97	Average	193	180
2	5350.00	60.55	74.00	-13.45	56.58	3.97	Peak	193	180
3	5650.00	63.33	68.20	-4.87	58.88	4.45	Peak	193	180
4	5925.00	63.98	68.20	-4.22	58.60	5.38	Peak	193	180
5	11570.00	45.88	54.00	-8.12	31.20	14.68	Average	100	49
6	11570.00	58.04	74.00	-15.96	43.36	14.68	Peak	100	49
7	17355.00	61.56	68.20	-6.64	43.45	18.11	Peak	100	53

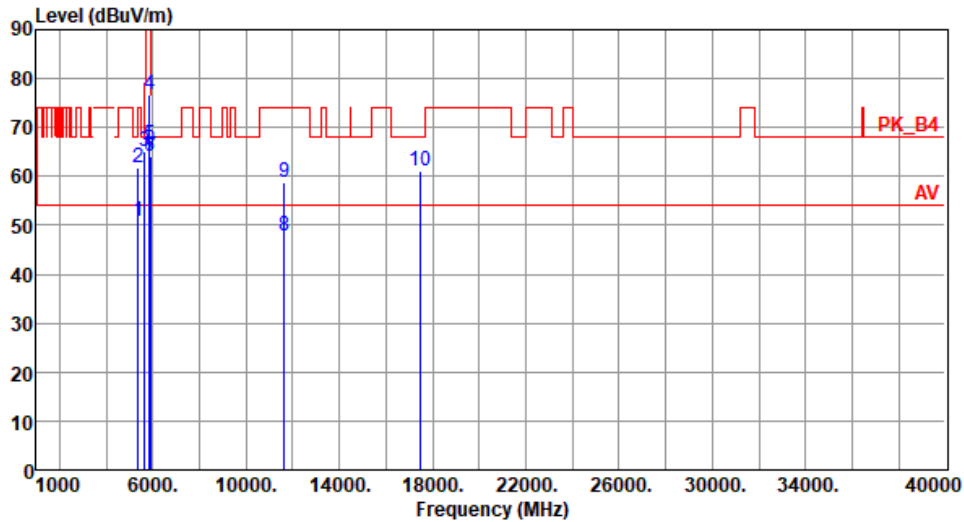
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Channel Bandwidth	20MHz	Test Freq. (MHz)	5825
Polarization	Horizontal	Modulation	64QAM

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5350.00	50.85	54.00	-3.15	46.88	3.97	Average	171	180
2	5350.00	61.92	74.00	-12.08	57.95	3.97	Peak	171	180
3	5650.00	65.09	68.20	-3.11	60.64	4.45	Peak	132	178
4	5850.00	76.71	122.20	-45.49	71.53	5.18	Peak	132	178
5	5855.00	66.50	110.80	-44.30	61.31	5.19	Peak	132	178
6	5875.00	63.94	105.20	-41.26	58.66	5.28	Peak	132	178
7	5925.00	64.08	68.20	-4.12	58.70	5.38	Peak	132	178
8	11650.00	47.73	54.00	-6.27	33.28	14.45	Average	100	26
9	11650.00	58.87	74.00	-15.13	44.42	14.45	Peak	100	26
10	17475.00	61.20	68.20	-7.00	42.36	18.84	Peak	100	29

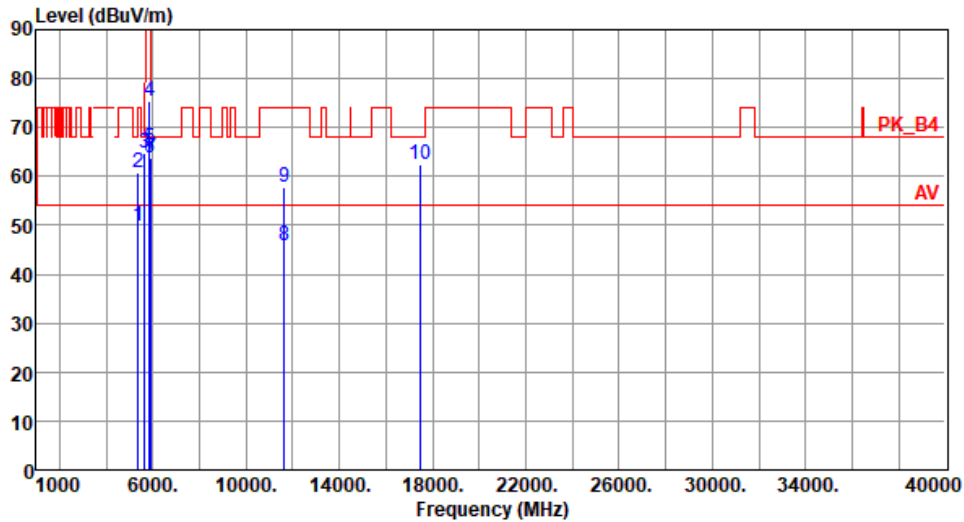
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor, cable loss and amplifier gain

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

Channel Bandwidth	20MHz	Test Freq. (MHz)	5825
Polarization	Vertical	Modulation	64QAM

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	5350.00	49.95	54.00	-4.05	45.98	3.97	Average	191	181
2	5350.00	60.85	74.00	-13.15	56.88	3.97	Peak	191	181
3	5650.00	64.70	68.20	-3.50	60.25	4.45	Peak	191	181
4	5850.00	75.28	122.20	-46.92	70.10	5.18	Peak	191	181
5	5855.00	65.78	110.80	-45.02	60.59	5.19	Peak	191	181
6	5875.00	63.73	105.20	-41.47	58.45	5.28	Peak	191	181
7	5925.00	63.83	68.20	-4.37	58.45	5.38	Peak	191	181
8	11650.00	45.92	54.00	-8.08	31.47	14.45	Average	100	52
9	11650.00	57.81	74.00	-16.19	43.36	14.45	Peak	100	52
10	17475.00	62.30	68.20	-5.90	43.46	18.84	Peak	100	54

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 Frequency Stability

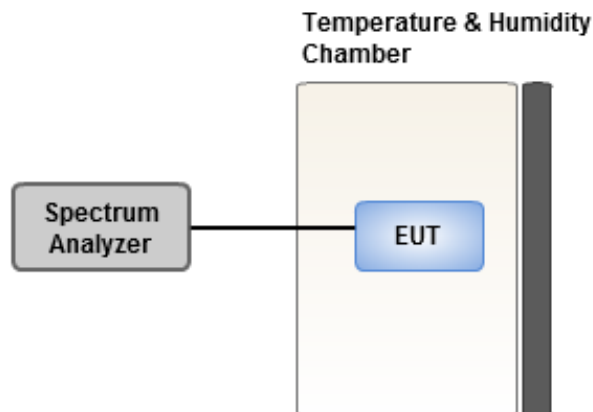
3.6.1 Limit of Frequency Stability

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

3.6.2 Test Procedures

1. The EUT is installed in an environment test chamber with external power source.
2. Set the chamber to operate at 20 centigrade and external power source to output at nominal voltage of EUT.
3. A sufficient stabilization period at each temperature is used prior to each frequency measurement.
4. When temperature is stabled, measure the frequency stability.
5. The test shall be performed under normal and extreme condition for temperature and voltage.

3.6.3 Test Setup



3.6.4 Test Result of Frequency Stability

Ambient Condition	24°C / 66%	Tested By	Aska Huang
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Frequency: 5200 MHz	Frequency Drift (ppm)			
	0 minute	2 minutes	5 minutes	10 minutes
Temperature (°C)				
T20°C _{Vmax}	-0.01	0.02	0.02	0.01
T20°C _{Vmin}	0.02	-0.01	-0.02	0.02
T55°C _{Vnom}	0.01	-0.02	0.01	0.02
T50°C _{Vnom}	0.03	0.02	-0.03	0.02
T40°C _{Vnom}	-0.01	0.02	0.01	-0.01
T30°C _{Vnom}	0.02	0.01	0.02	0.02
T20°C _{Vnom}	0.02	-0.02	0.02	-0.02
T10°C _{Vnom}	0.01	0.02	-0.01	0.01
T0°C _{Vnom}	0.02	0.01	0.02	0.03
T-10°C _{Vnom}	-0.01	0.02	0.01	0.01
T-20°C _{Vnom}	0.01	0.03	-0.02	-0.02
T-30°C _{Vnom}	0.01	-0.02	0.01	0.03
T-40°C _{Vnom}	0.02	-0.03	0.01	0.02
Vnom [V]: 120		Vmax [V]: 138		Vmin [V]: 102
Tnom [°C]: 20		Tmax [°C]: 50		Tmin [°C]: -30

Frequency: 5785 MHz	Frequency Drift (ppm)			
	0 minute	2 minutes	5 minutes	10 minutes
T20°C Vmax	0.02	0.02	0.01	0.01
T20°C Vmin	0.01	-0.02	0.01	0.02
T55°C Vnom	-0.03	0.01	-0.02	0.02
T50°C Vnom	0.02	-0.03	0.01	0.02
T40°C Vnom	0.02	0.01	0.02	0.01
T30°C Vnom	0.01	0.02	0.01	0.02
T20°C Vnom	0.02	-0.02	0.02	0.01
T10°C Vnom	-0.01	0.01	0.03	0.01
T0°C Vnom	0.01	0.03	-0.01	0.02
T-10°C Vnom	-0.02	-0.03	-0.02	0.02
T-20°C Vnom	0.02	0.01	0.01	-0.02
T-30°C Vnom	0.03	-0.01	0.02	0.01
T-40°C Vnom	0.02	0.01	0.03	0.02
Vnom [V]: 120		Vmax [V]: 138		Vmin [V]: 102
Tnom [°C]: 20		Tmax [°C]: 50		Tmin [°C]: -30

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 Corporation (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

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Kwei Shan

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No.2-1, Lane 6, Wen San 3rd
St., Kwei Shan Dist., Tao Yuan
City 33381, Taiwan (R.O.C.)

Kwei Shan Site II

Tel: 886-3-271-8640

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

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

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Email: ICC_Service@icertifi.com.tw

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