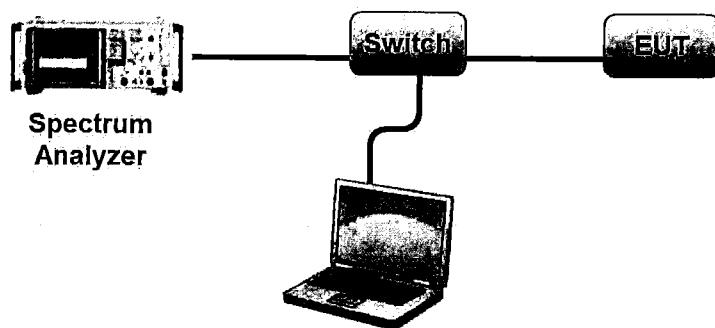


4.5.3. Test Procedures

1. The transmitter output (antenna port) was connected RF switch to the spectrum analyzer.
2. Test was performed in accordance with KDB789033 D02 v01r04 for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - section (F) Maximum Power Spectral Density (PSD).
3. Multiple antenna systems was performed in accordance KDB662911 D01 v02r01 in-Band Power Spectral Density (PSD) Measurements and sum the spectra across the outputs.
4. For 5.725~5.85 GHz, the measured result of PSD level must add $10\log(500\text{kHz}/\text{RBW})$ and the final result should $\leq 30 \text{ dBm}$.

4.5.4. Test Setup Layout



4.5.5. Test Deviation

There is no deviation with the original standard.

4.5.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.



4.5.7. Test Result of Power Spectral Density

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang		

For Antenna 1:

Configuration QPSK, 20 M / Port 1 + Port 2

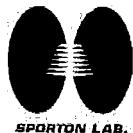
Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
1	5180 MHz	11.09	17.00	Complies
5	5200 MHz	13.06	17.00	Complies
13	5240 MHz	13.85	17.00	Complies

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
1	5745 MHz	12.96	-3.01	9.95	30.00	Complies
9	5785 MHz	13.65	-3.01	10.64	30.00	Complies
17	5825 MHz	12.94	-3.01	9.93	30.00	Complies

Configuration QPSK, 80 M / Port 1 + Port 2

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
1	5190 MHz	-5.37	17.00	Complies
3	5200 MHz	-0.78	17.00	Complies
5	5210 MHz	-0.17	17.00	Complies

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
1	5765 MHz	1.95	-3.01	-1.06	30.00	Complies
5	5785 MHz	2.67	-3.01	-0.34	30.00	Complies
13	5805 MHz	1.91	-3.01	-1.10	30.00	Complies

**For Antenna 2:****Configuration QPSK, 20 M / Port 1 + Port 2**

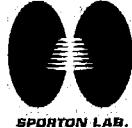
Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
1	5180 MHz	2.22	17.00	Complies
5	5200 MHz	6.47	17.00	Complies
13	5240 MHz	4.55	17.00	Complies

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
1	5745 MHz	-2.46	-3.01	-5.47	30.00	Complies
9	5785 MHz	-5.06	-3.01	-8.07	30.00	Complies
17	5825 MHz	-8.44	-3.01	-11.45	30.00	Complies

Configuration QPSK, 80 M / Port 1 + Port 2

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
3	5200 MHz	-10.17	17.00	Complies
5	5210 MHz	-10.04	17.00	Complies

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
1	5765 MHz	-12.49	-3.01	-15.50	30.00	Complies
5	5785 MHz	-13.92	-3.01	-16.93	30.00	Complies
13	5805 MHz	-18.39	-3.01	-21.40	30.00	Complies

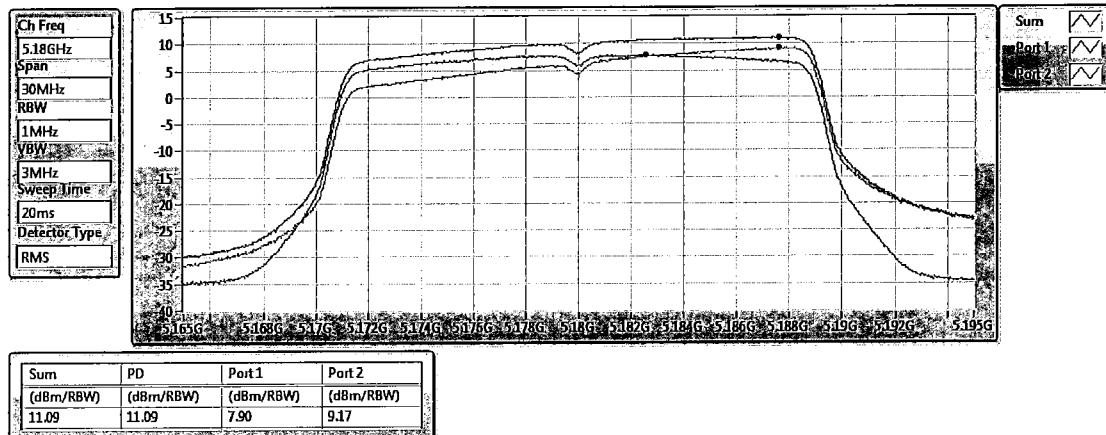


For Antenna 1:

Power Density Plot on Configuration QPSK, 20M / Port 1 + Port 2 / 5180 MHz

802.11ac VHT20_Nss1,(MCS0)_2TX PSD

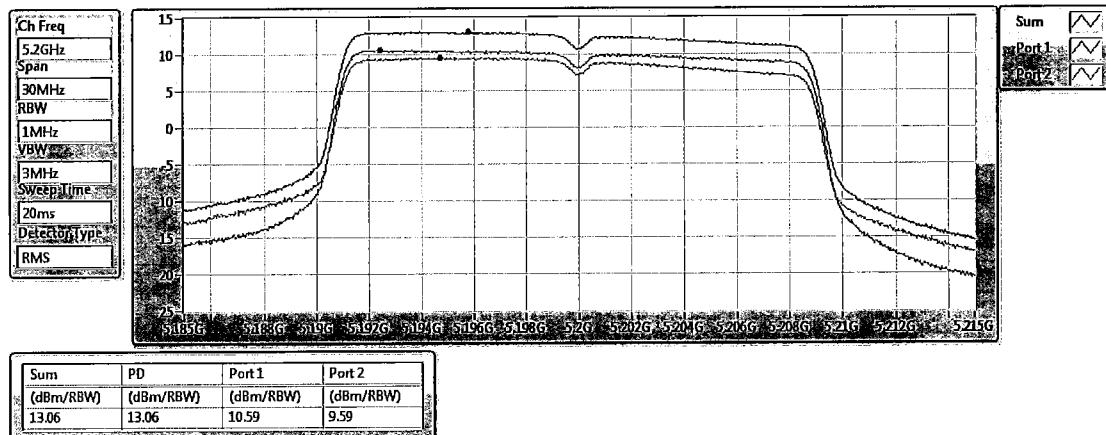
5180MHz



Power Density Plot on Configuration QPSK, 20M / Port 1 + Port 2 / 5200 MHz

802.11ac VHT20_Nss1,(MCS0)_2TX PSD

5200MHz



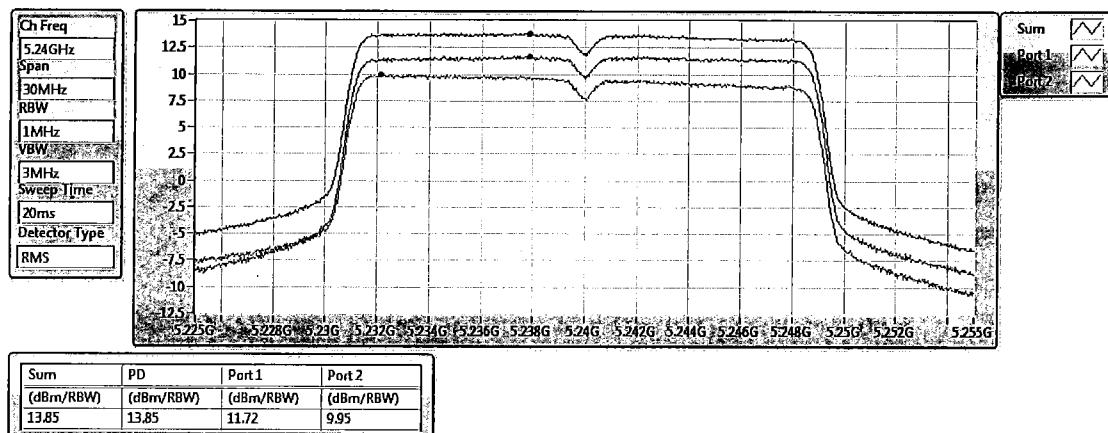


Power Density Plot on Configuration QPSK, 20M / Port 1 + Port 2 / 5240 MHz

802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

5240MHz

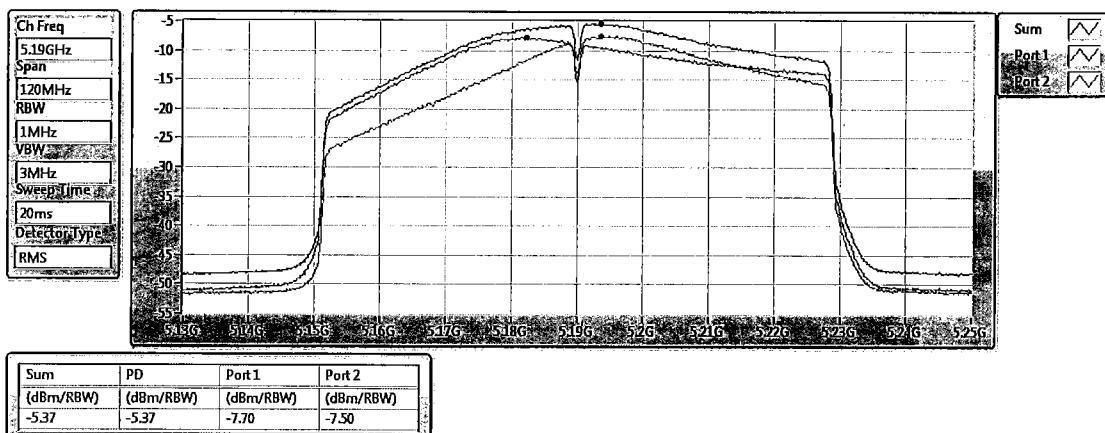


Power Density Plot on Configuration QPSK, 80M / Port 1 + Port 2 / 5190 MHz

802.11ac VHT80_Nss1,(MCS0)_2TX

PSD

5190MHz



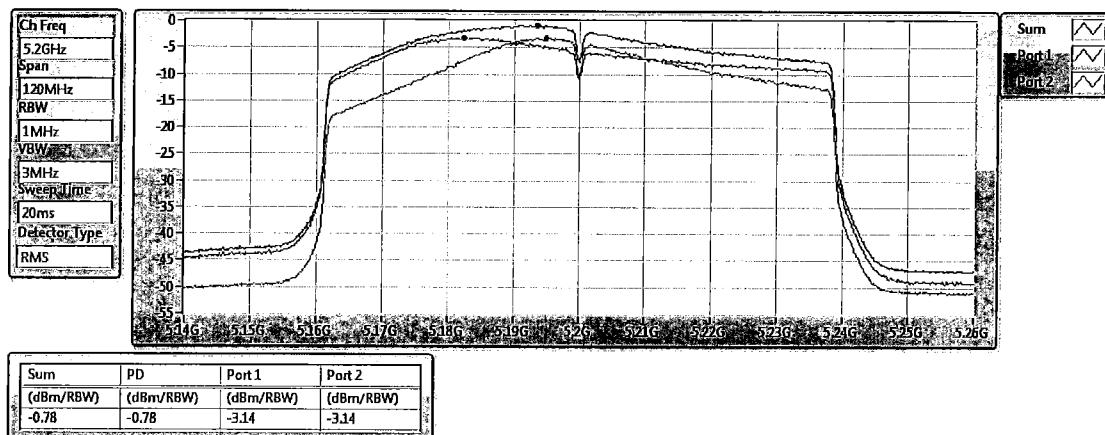


Power Density Plot on Configuration QPSK, 80M / Port 1 + Port 2 / 5200 MHz

802.11ac VHT80_Nss1,(MCS0)_2TX

PSD

5200MHz

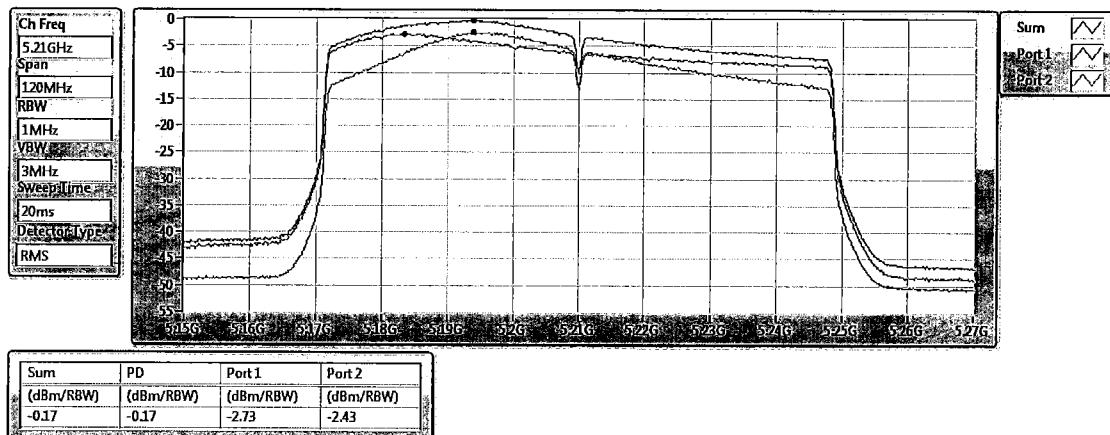


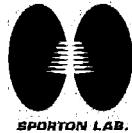
Power Density Plot on Configuration QPSK, 80M / Port 1 + Port 2 / 5210 MHz

802.11ac VHT80_Nss1,(MCS0)_2TX

PSD

5210MHz

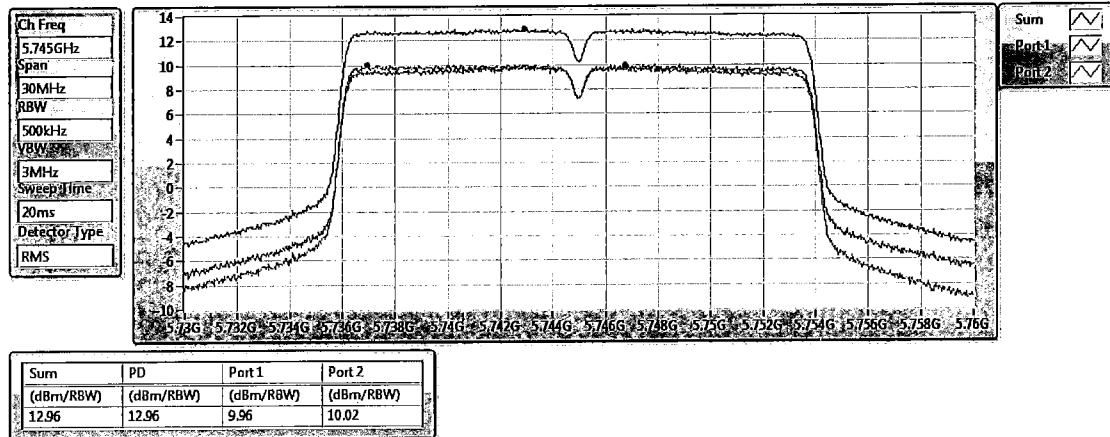




Power Density Plot on Configuration QPSK, 20M / Port 1 + Port 2 / 5745 MHz

802.11ac VHT20_Nss1,(MCS0)_2TX PSD

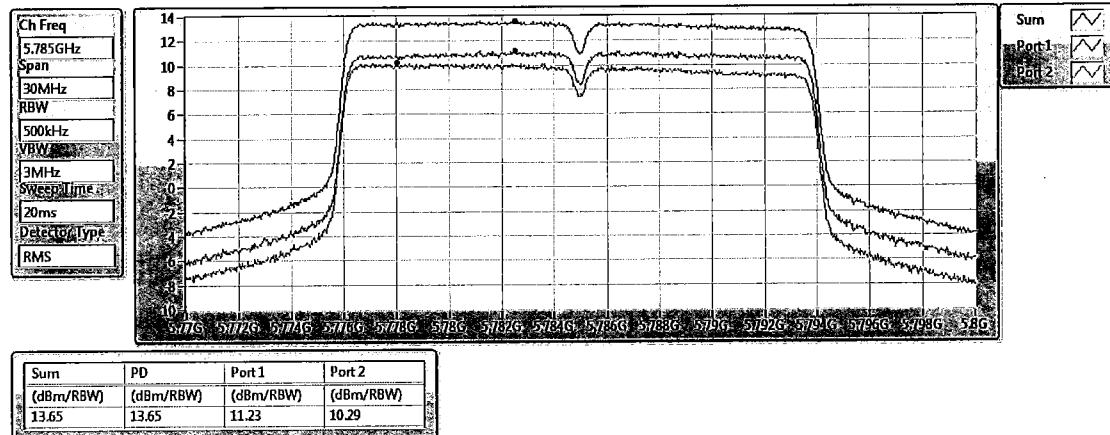
5745MHz

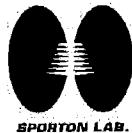


Power Density Plot on Configuration QPSK, 20M / Port 1 + Port 2 / 5785 MHz

802.11ac VHT20_Nss1,(MCS0)_2TX PSD

5785MHz

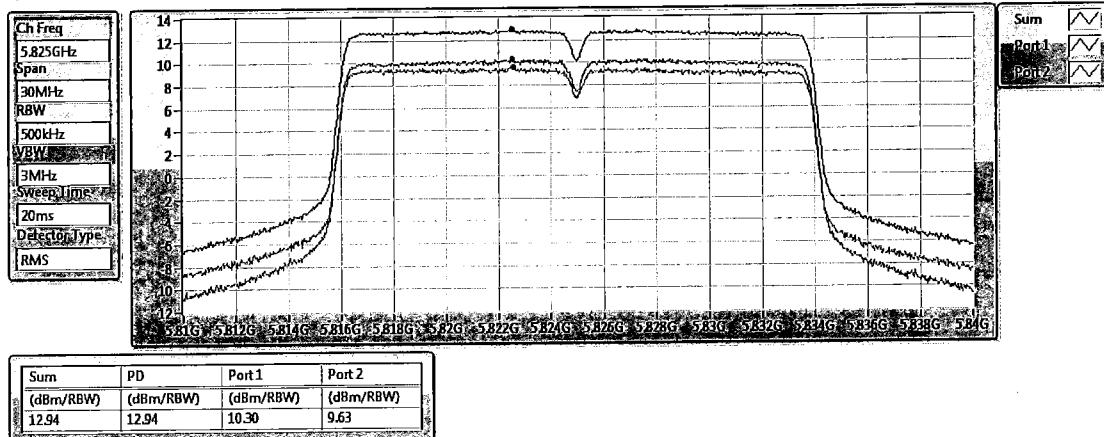




Power Density Plot on Configuration QPSK, 20M / Port 1 + Port 2 / 5825 MHz

802.11ac VHT20_Nss1,(MCS0)_2TX PSD

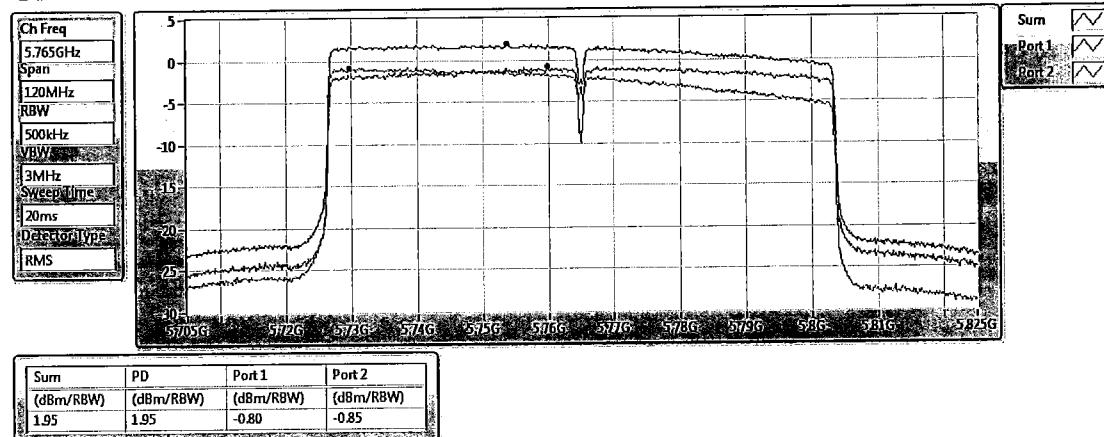
5825MHz



Power Density Plot on Configuration QPSK, 80M / Port 1 + Port 2 / 5765 MHz

802.11ac VHT80_Nss1,(MCS0)_2TX PSD

5765MHz



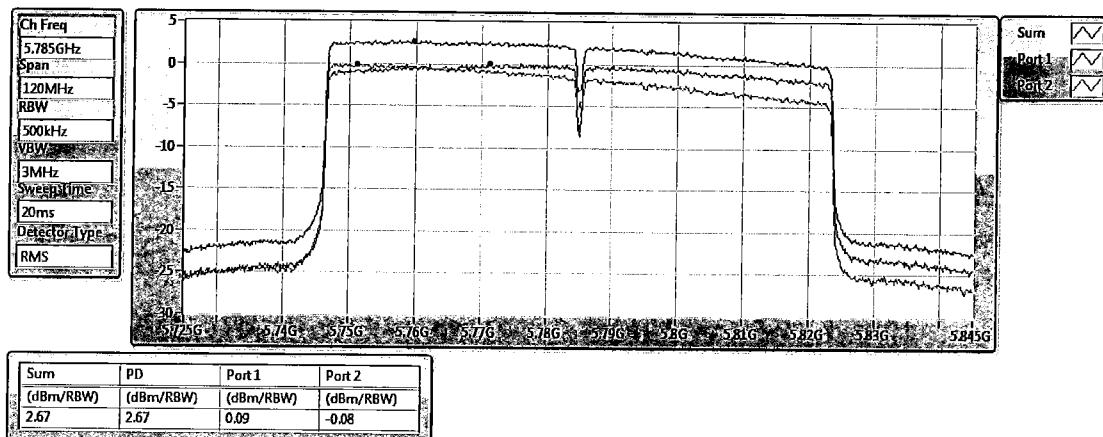


Power Density Plot on Configuration QPSK, 80M / Port 1 + Port 2 / 5785 MHz

802.11ac VHT80_Nss1,(MCS0)_2TX

PSD

5785MHz

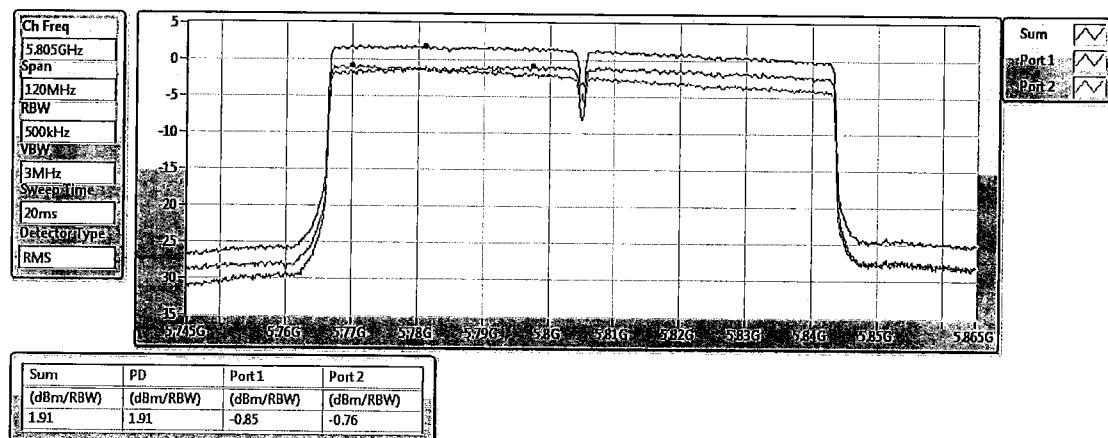


Power Density Plot on Configuration QPSK, 80M / Port 1 + Port 2 / 5805 MHz

802.11ac VHT80_Nss1,(MCS0)_2TX

PSD

5805MHz





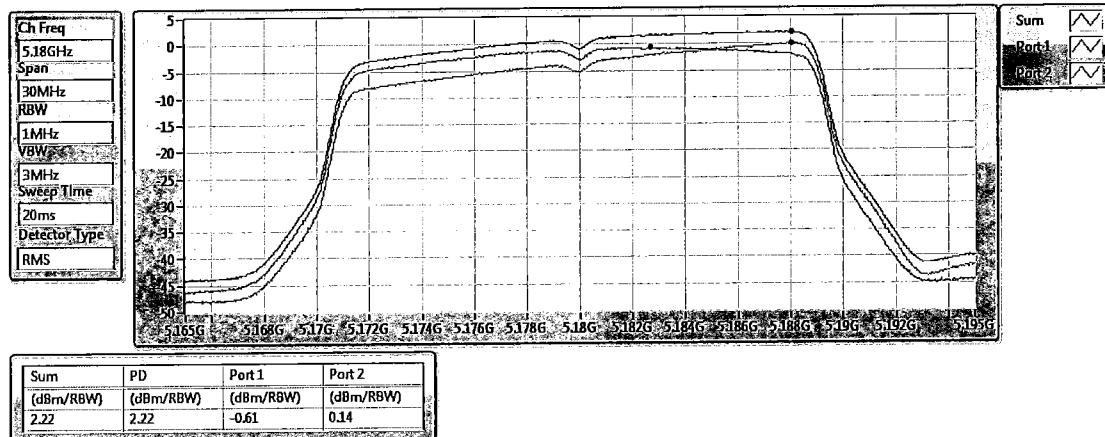
For Antenna 2:

Power Density Plot on Configuration QPSK, 20M / Port 1 + Port 2 / 5180 MHz

802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

5180MHz

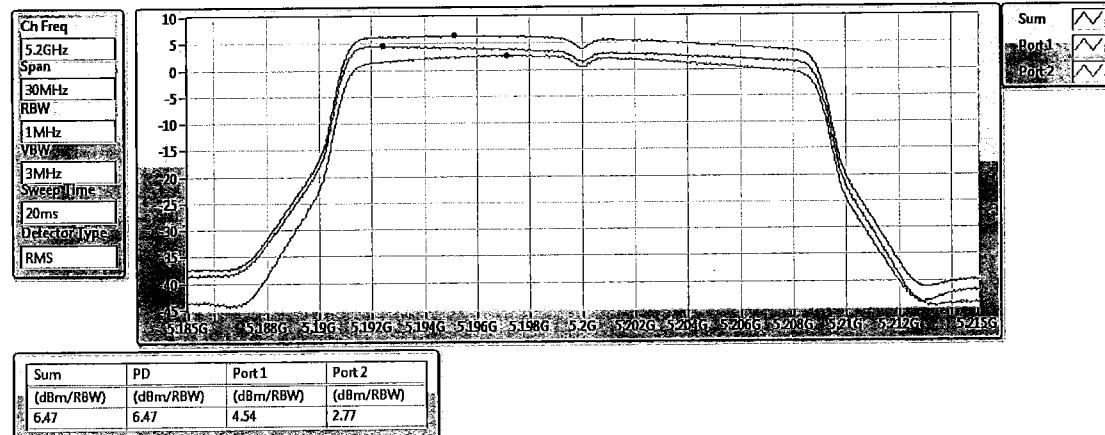


Power Density Plot on Configuration QPSK, 20M / Port 1 + Port 2 / 5200 MHz

802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

5200MHz



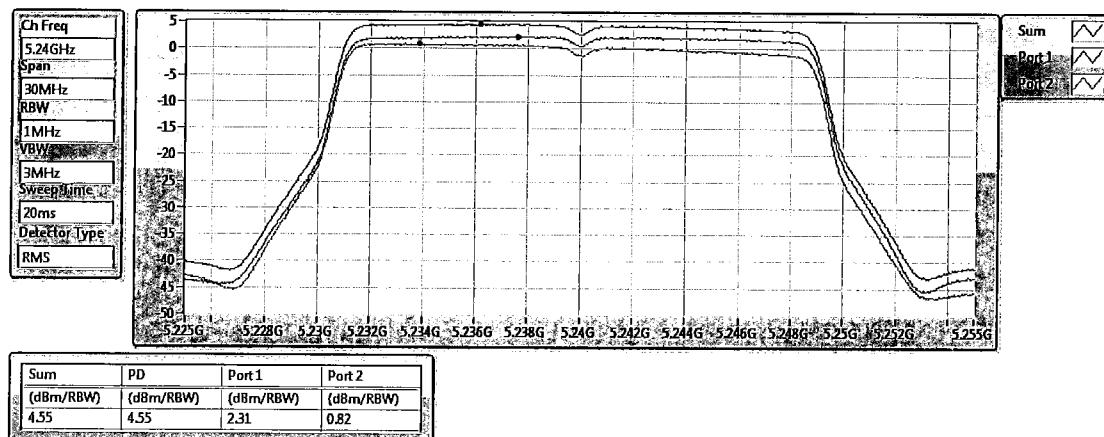


Power Density Plot on Configuration QPSK, 20M / Port 1 + Port 2 / 5240 MHz

802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

5240MHz

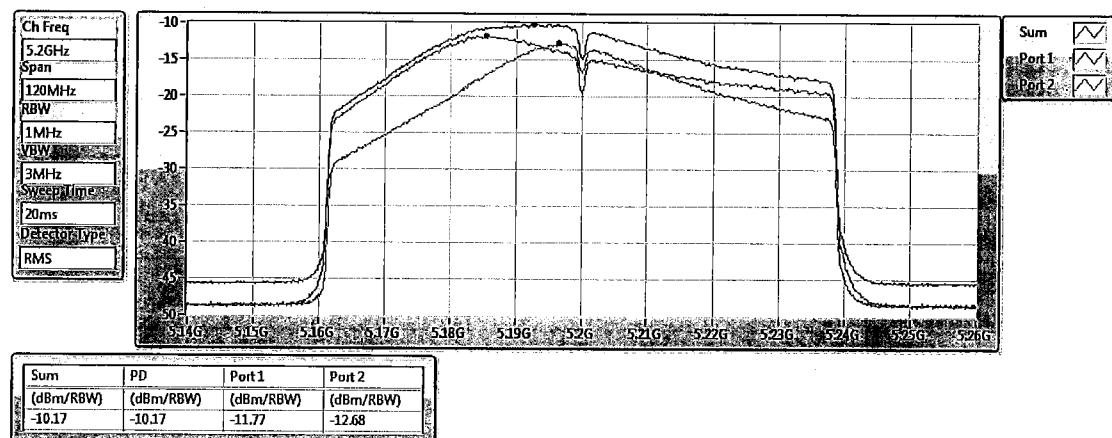


Power Density Plot on Configuration QPSK, 80M / Port 1 + Port 2 / 5200 MHz

802.11ac VHT80_Nss1,(MCS0)_2TX

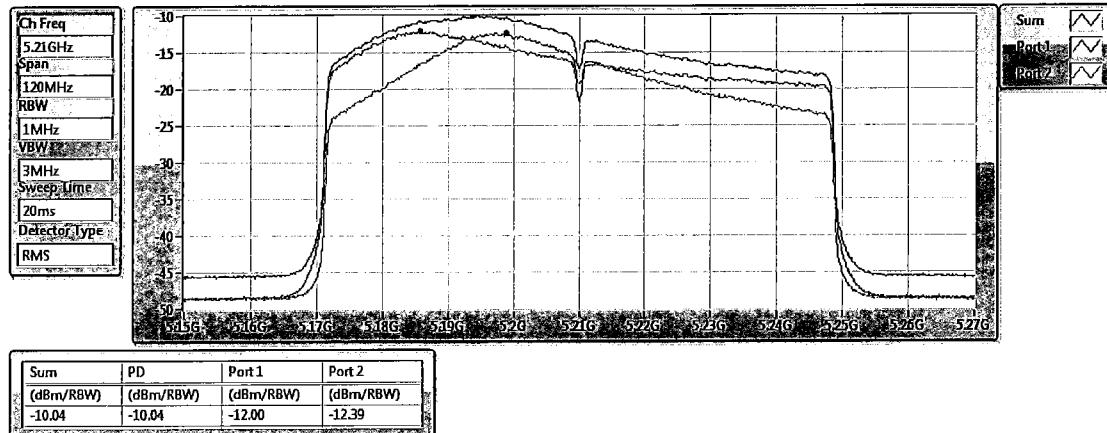
PSD

5200MHz

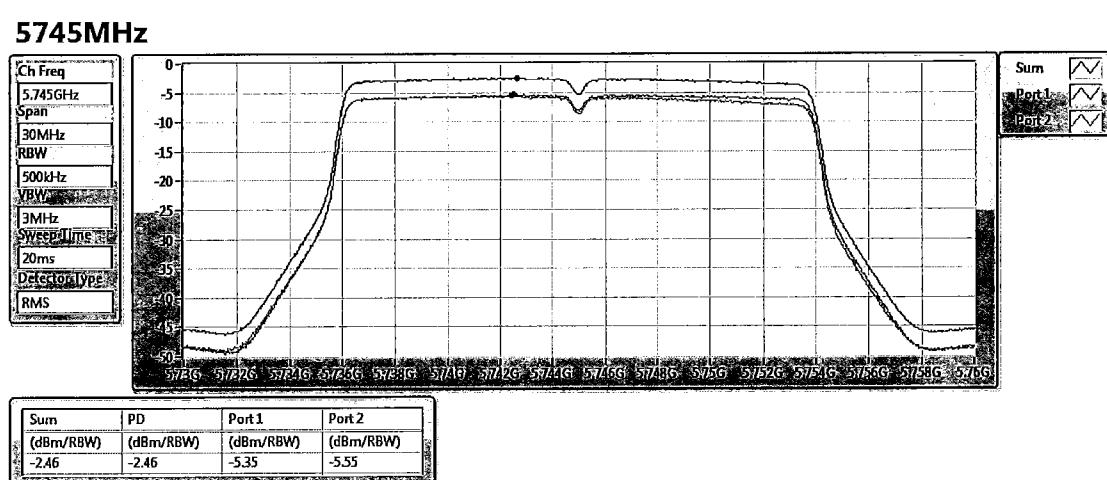




Power Density Plot on Configuration QPSK, 80M / Port 1 + Port 2 / 5210 MHz

802.11ac VHT80_Nss1,(MCS0)_2TX PSD
5210MHz

Power Density Plot on Configuration QPSK, 20M / Port 1 + Port 2 / 5745 MHz

802.11ac VHT20_Nss1,(MCS0)_2TX PSD
5745MHz

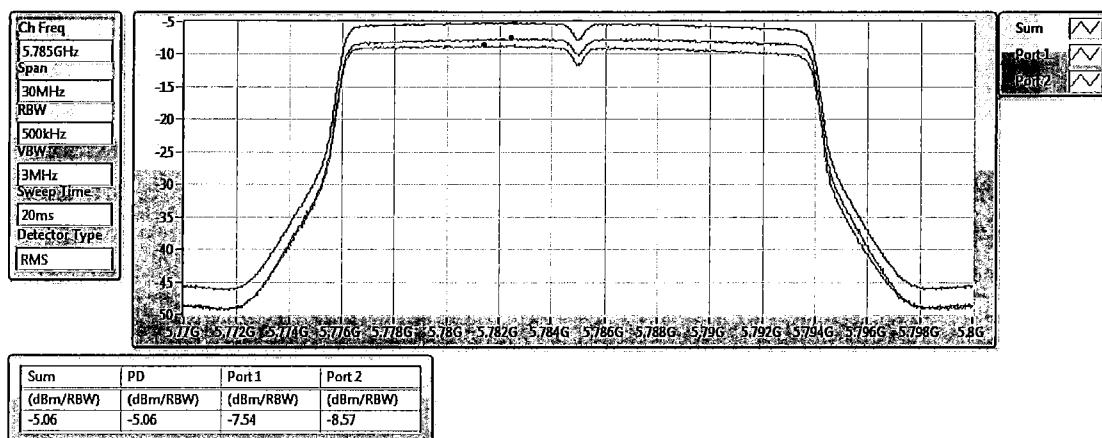


Power Density Plot on Configuration QPSK, 20M / Port 1 + Port 2 / 5785 MHz

802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

5785MHz

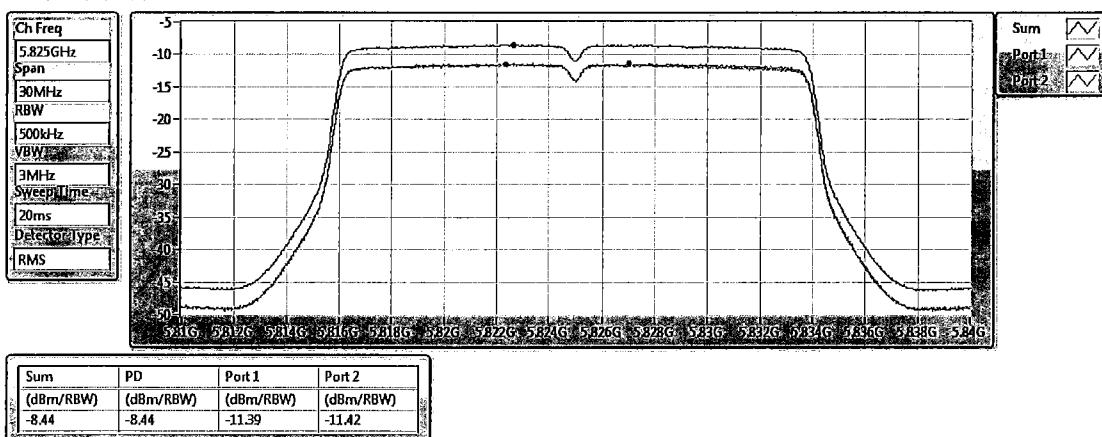


Power Density Plot on Configuration QPSK, 20M / Port 1 + Port 2 / 5825 MHz

802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

5825MHz

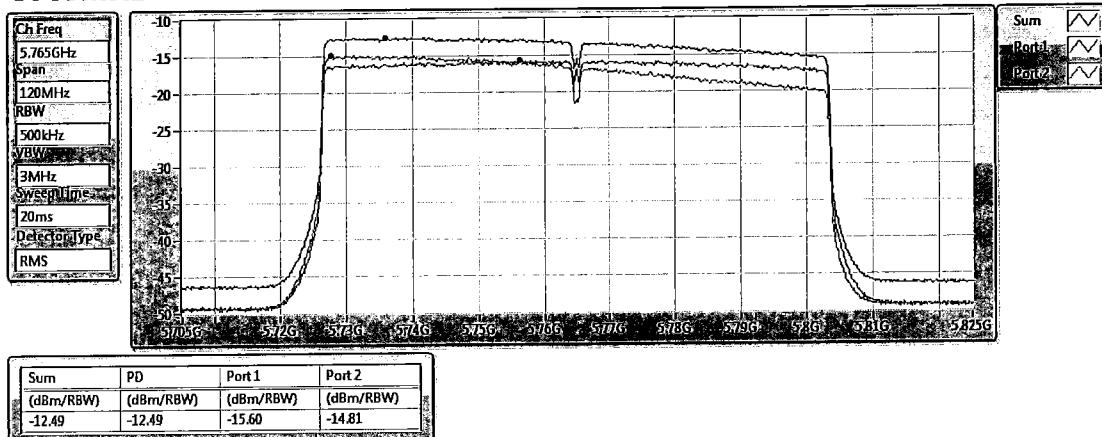




Power Density Plot on Configuration QPSK, 80M / Port 1 + Port 2 / 5765 MHz

802.11ac VHT80_Nss1,(MCS0)_2TX PSD

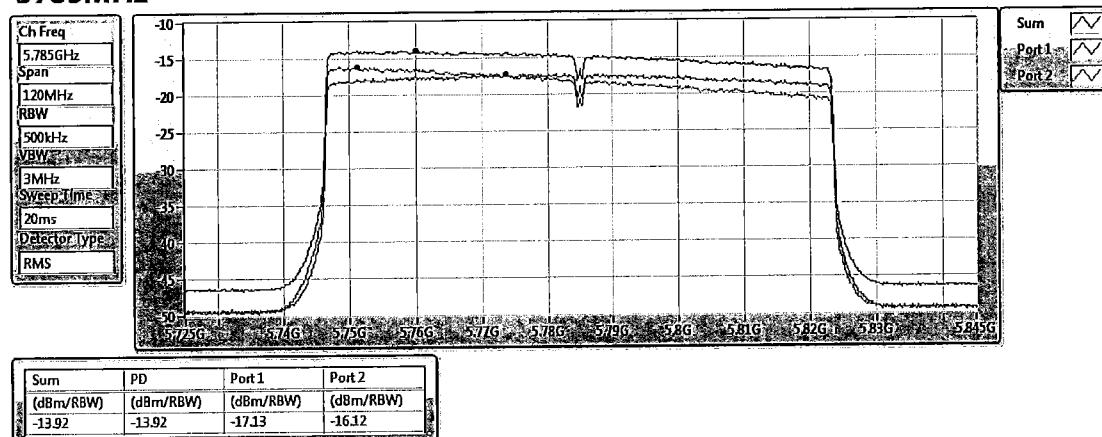
5765MHz

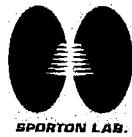


Power Density Plot on Configuration QPSK, 80M / Port 1 + Port 2 / 5785 MHz

802.11ac VHT80_Nss1,(MCS0)_2TX PSD

5785MHz



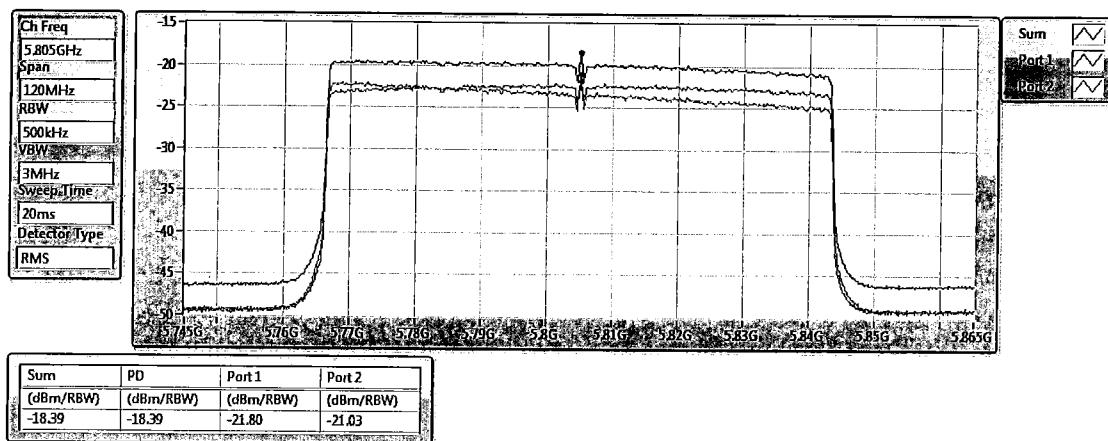


Power Density Plot on Configuration QPSK, 80M / Port 1 + Port 2 / 5805 MHz

802.11ac VHT80_Nss1,(MCS0)_2TX

PSD

5805MHz





4.6. Radiated Emissions Measurement

4.6.1. Limit

For transmitters operating in the 5.15-5.25 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.725-5.85 GHz band: 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.

In addition, In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

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

4.6.2. Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	40 GHz
RBW / VBW (Emission in restricted band)	1MHz / 3MHz for Peak, 1MHz / 1/T for Average
RBW / VBW (Emission in non-restricted band)	1MHz / 3MHz for peak

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RBW 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RBW 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RBW 120kHz for QP



4.6.3. Test Procedures

For Radiated measurement:

1. Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 1m & 3m far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz VBW and 3MHz RBW for peak reading. Then 1MHz RBW and 1/T VBW for average reading in spectrum analyzer.
7. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
8. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
9. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High – Low scan is not required in this case.

For Conducted measurement:

The EUT was perform conducted measurement and measurement level added antenna gain shall be comply to section 4.5.3.



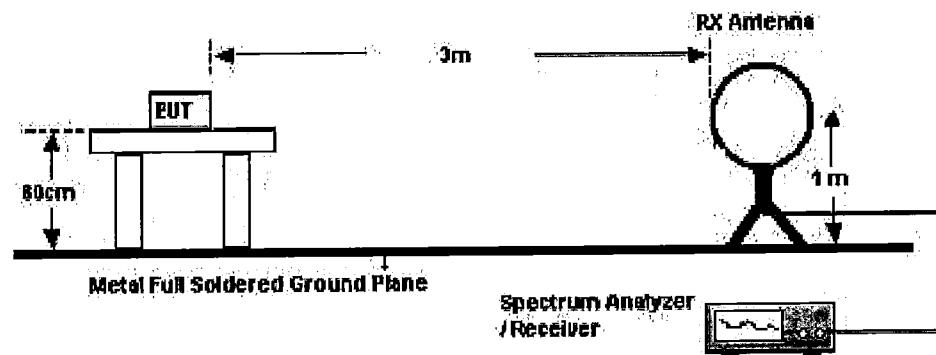
SPARTON LAB.

Report No.: FR7O1623

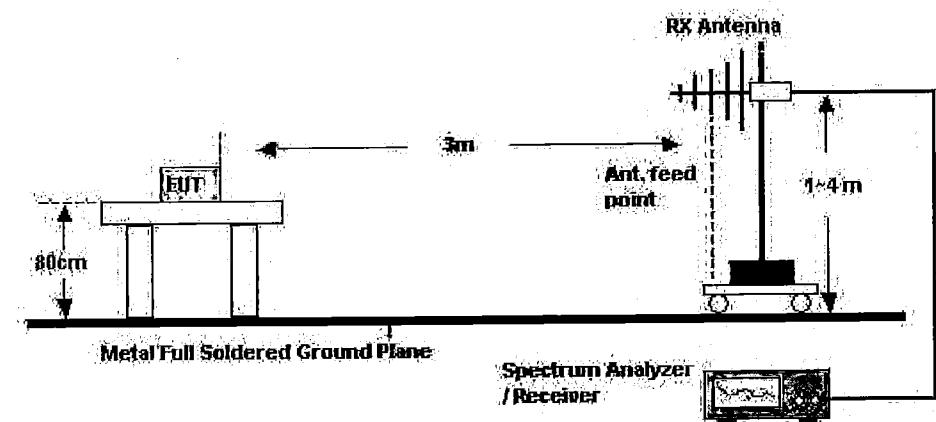
4.6.4. Test Setup Layout

For Radiated test:

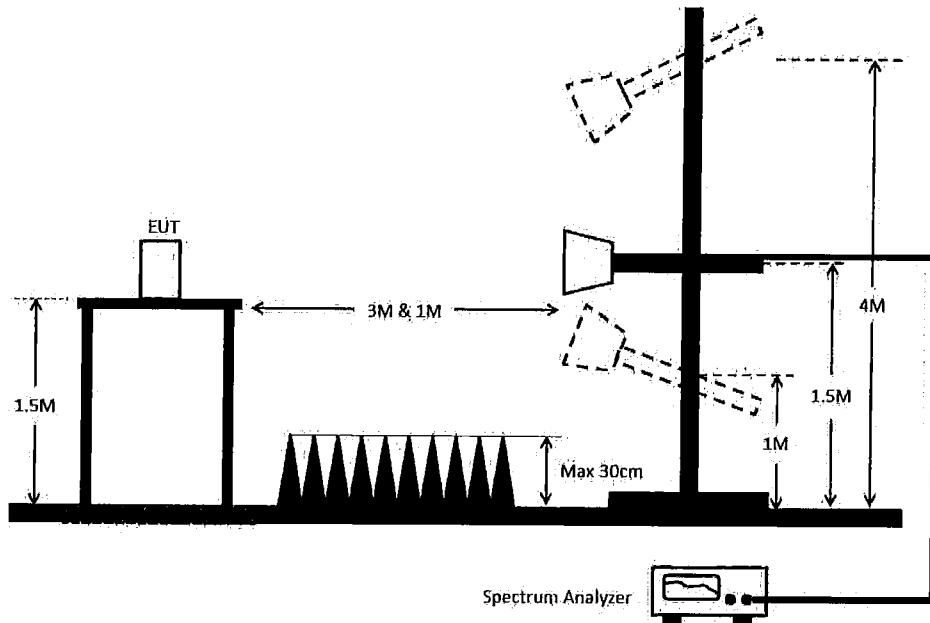
9kHz ~30MHz



30MHz~1GHz

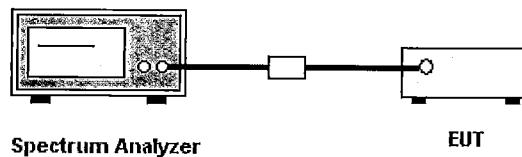


Above 1GHz



For Conducted measurement:

For Above 1GHz only:

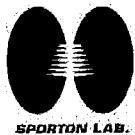


4.6.5. Test Deviation

There is no deviation with the original standard.

4.6.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.



SPARTON LAB.

Report No.: FR7O1623

4.6.7. Results of Radiated Emissions (9kHz~30MHz)

Temperature	22°C	Humidity	56%
Test Engineer	Justin Lin	Configurations	CTX
Test Date	Oct. 15, 2017		

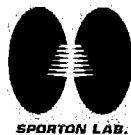
Freq. (MHz)	Level (dBuV)	Over Limit (dB)	Limit Line (dBuV)	Remark
-	-	-	-	See Note

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor = $40 \log (\text{specific distance} / \text{test distance})$ (dB);

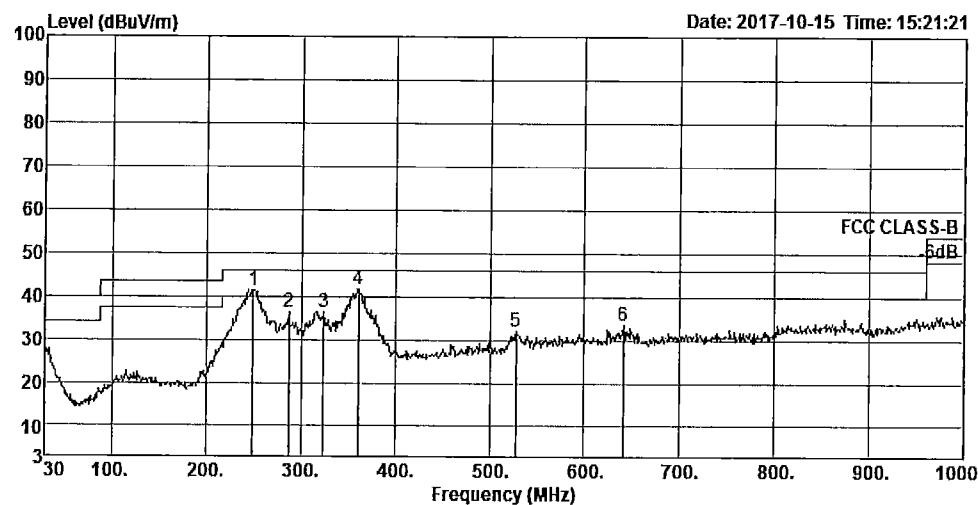
Limit line = specific limits (dBuV) + distance extrapolation factor.



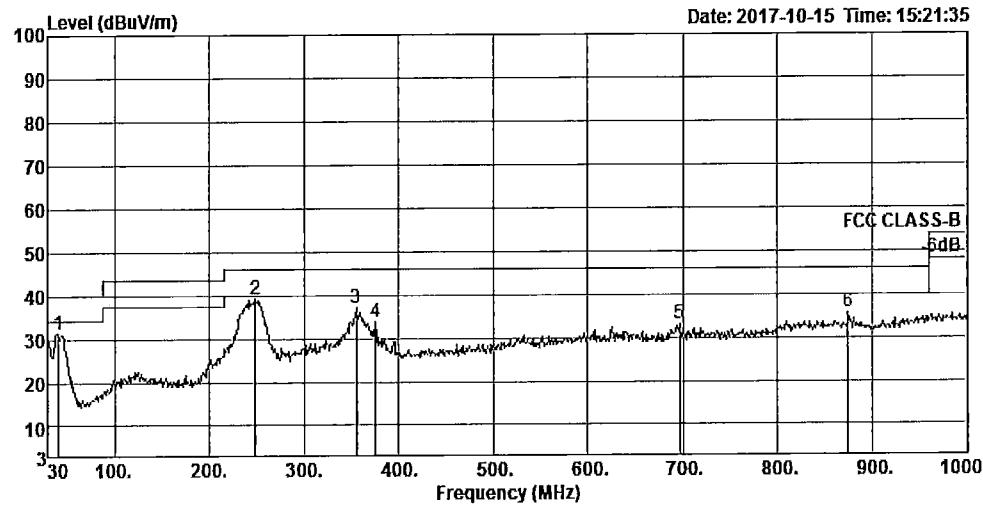
4.6.8. Results of Radiated Emissions (30MHz~1GHz)

Temperature	22°C	Humidity	56%
Test Engineer	Justin Lin	Configurations	CTX

Horizontal



Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
		Line	Limit	Level	Loss	Factor	Factor	cm	deg		
1	249.22	41.41	46.00	-4.59	53.14	1.83	18.73	32.29	100	125 Peak	HORIZONTAL
2	287.05	36.32	46.00	-9.68	47.19	1.96	19.44	32.27	100	122 Peak	HORIZONTAL
3	323.91	36.24	46.00	-9.76	46.03	2.09	20.40	32.28	100	180 Peak	HORIZONTAL
4	359.80	41.75	46.00	-4.25	50.49	2.20	21.34	32.28	100	160 Peak	HORIZONTAL
5	527.61	31.95	46.00	-14.05	37.44	2.66	24.20	32.35	150	187 Peak	HORIZONTAL
6	641.10	33.35	46.00	-12.65	37.48	2.93	25.31	32.37	150	208 Peak	HORIZONTAL

**Vertical**

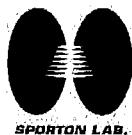
Freq	Level	Limit		Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	40.67	31.33	40.00	-8.67	43.64	0.73	19.39	32.43	100	316	Peak	VERTICAL
2	249.22	39.19	46.00	-6.81	50.92	1.83	18.73	32.29	200	203	Peak	VERTICAL
3	354.95	36.90	46.00	-9.10	45.75	2.19	21.24	32.28	150	0	Peak	VERTICAL
4	375.32	33.94	46.00	-12.06	42.20	2.25	21.78	32.29	150	360	Peak	VERTICAL
5	696.39	33.03	46.00	-12.97	36.82	3.06	25.50	32.35	100	168	Peak	VERTICAL
6	874.87	35.56	46.00	-10.44	36.51	3.45	27.35	31.75	100	172	Peak	VERTICAL

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.



4.6.9. Results for Radiated Emissions (1GHz~40GHz)

For Conducted test:

For Antenna 1:

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 20M / Average / Port 1 + Port 2 / 1GHz~3GHz

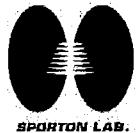
Frequency(MHz)	Chain 1 (RX1) Spurious Level (dBm)	Chain 2 (RX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit(dBm)	Margin (dB)
5180	-89.34	-89.62	-84.47	-41.25	43.22
5200	-89.20	-89.21	-84.19	-41.25	42.94
5240	-89.33	-89.23	-84.27	-41.25	43.02

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 20M / Peak / Port 1 + Port 2 / 1GHz~3GHz

Frequency(MHz)	Chain 1 (RX1) Spurious Level (dBm)	Chain 2 (RX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit(dBm)	Margin (dB)
5180	-79.60	-75.41	-72.01	-21.25	50.76
5200	-76.55	-76.51	-71.52	-21.25	50.27
5240	-77.23	-76.64	-71.91	-21.25	50.66

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 80M / Average / Port 1 + Port 2 / 1GHz~3GHz

Frequency(MHz)	Chain 1 (RX1) Spurious Level (dBm)	Chain 2 (RX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit(dBm)	Margin (dB)
5190	-89.18	-89.23	-84.19	-41.25	42.94
5200	-89.35	-88.69	-84.00	-41.25	42.75
5210	-89.41	-89.35	-84.37	-41.25	43.12



Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 80M / Peak / Port 1 + Port 2 / 1GHz~3GHz

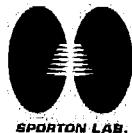
Frequency(MHz)	Chain 1 (RX1) Spurious Level (dBm)	Chain 2 (RX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dB)
5190	-73.48	-76.95	-69.87	-21.25	48.62
5200	-76.88	-76.85	-71.85	-21.25	50.60
5210	-73.67	-76.14	-69.72	-21.25	48.47

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 20M / Average / Port 1 + Port 2 / 1GHz~3GHz

Frequency(MHz)	Chain 1 (RX1) Spurious Level (dBm)	Chain 2 (RX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dB)
5745	-88.94	-89.15	-84.03	-41.25	42.78
5785	-89.07	-89.27	-84.16	-41.25	42.91
5825	-89.10	-89.12	-84.10	-41.25	42.85

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 20M / Peak / Port 1 + Port 2 / 1GHz~3GHz

Frequency(MHz)	Chain 1 (RX1) Spurious Level (dBm)	Chain 2 (RX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dB)
5745	-76.67	-76.58	-71.61	-21.25	50.36
5785	-75.77	-76.45	-71.09	-21.25	49.84
5825	-75.96	-76.38	-71.15	-21.25	49.90



Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 80M / Average / Port 1 + Port 2 / 1GHz~3GHz

Frequency(MHz)	Chain 1 (PX1) Spurious Level (dBm)	Chain 2 (PX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit(dBm)	Margin(dB)
5765	-89.04	-89.04	-84.03	-41.25	42.78
5785	-89.12	-89.19	-84.14	-41.25	42.89
5825	-89.19	-89.11	-84.14	-41.25	42.89

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 80M / Peak / Port 1 + Port 2 / 1GHz~3GHz

Frequency(MHz)	Chain 1 (PX1) Spurious Level (dBm)	Chain 2 (PX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit(dBm)	Margin(dB)
5765	-76.49	-76.45	-71.46	-21.25	50.21
5785	-75.88	-75.96	-70.91	-21.25	49.66
5825	-76.79	-76.12	-71.43	-21.25	50.18

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 20M / Average / Port 1 + Port 2 / 3GHz~6GHz

Frequency(MHz)	Chain 1 (PX1) Spurious Level (dBm)	Chain 2 (PX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit(dBm)	Margin(dB)
5180	-64.14	-61.63	-57.70	-41.25	16.45
5200	-63.32	-62.84	-58.06	-41.25	16.81
5240	-63.47	-52.27	-49.95	-41.25	8.70



Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 20M / Peak / Port 1 + Port 2 / 3GHz~6GHz

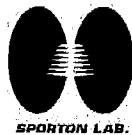
Frequency(MHz)	Chain 1 (PX1) Spurious Level (dBm)	Chain 2 (PX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dB)
5180	-49.84	-45.82	-42.37	-21.25	21.12
5200	-48.66	-49.36	-43.99	-21.25	22.74
5240	-51.24	-39.46	-37.18	-21.25	15.93

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 80M / Average / Port 1 + Port 2 / 3GHz~6GHz

Frequency(MHz)	Chain 1 (PX1) Spurious Level (dBm)	Chain 2 (PX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dB)
5190	-61.54	-69.25	-58.86	-41.25	17.61
5200	-49.55	-60.00	-47.18	-41.25	5.93
5210	-48.57	-58.23	-46.12	-41.25	4.87

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 80M / Peak / Port 1 + Port 2 / 3GHz~6GHz

Frequency(MHz)	Chain 1 (PX1) Spurious Level (dBm)	Chain 2 (PX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dB)
5190	-48.51	-57.35	-45.98	-21.25	24.73
5200	-35.57	-48.10	-33.33	-21.25	12.08
5210	-35.33	-46.53	-33.01	-21.25	11.76



Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 20M / Average / Port 1 + Port 2 / 3GHz~6GHz

Frequency(MHz)	Chain 1 (PX1) Spurious Level (dBm)	Chain 2 (PX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dB)
5745	-74.05	-83.15	-71.55	-41.25	30.30
5785	-75.99	-83.49	-73.28	-41.25	32.03
5825	-75.66	-83.43	-72.99	-41.25	31.74

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 20M / Peak / Port 1 + Port 2 / 3GHz~6GHz

Frequency(MHz)	Chain 1 (PX1) Spurious Level (dBm)	Chain 2 (PX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dB)
5745	-66.12	-71.22	-62.95	-21.25	41.70
5785	-67.91	-71.45	-64.32	-21.25	43.07
5825	-66.53	-70.96	-63.19	-21.25	41.94

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 80M / Average / Port 1 + Port 2 / 3GHz~6GHz

Frequency(MHz)	Chain 1 (PX1) Spurious Level (dBm)	Chain 2 (PX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dB)
5765	-74.24	-81.52	-71.50	-41.25	30.25
5785	-73.54	-81.62	-70.91	-41.25	29.66
5825	-73.54	-81.15	-70.85	-41.25	29.60



Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 80M / Peak / Port 1 + Port 2 / 3GHz~6GHz

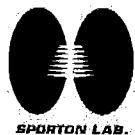
Frequency(MHz)	Chain 1 (RX1) Spurious Level (dBm)	Chain 2 (RX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dB)
5765	-65.05	-69.70	-61.77	-21.25	40.52
5785	-66.81	-67.22	-62.00	-21.25	40.75
5825	-65.87	-68.52	-61.99	-21.25	40.74

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 20M / Average / Port 1 + Port 2 / 6GHz~9GHz

Frequency(MHz)	Chain 1 (RX1) Spurious Level (dBm)	Chain 2 (RX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dB)
5180	-84.83	-84.92	-79.86	-41.25	38.61
5200	-84.70	-85.04	-79.86	-41.25	38.61
5240	-84.97	-84.86	-79.90	-41.25	38.65

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 20M / Peak / Port 1 + Port 2 / 6GHz~9GHz

Frequency(MHz)	Chain 1 (RX1) Spurious Level (dBm)	Chain 2 (RX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dB)
5180	-72.02	-72.62	-67.30	-21.25	46.05
5200	-72.67	-72.00	-67.31	-21.25	46.06
5240	-72.51	-73.11	-67.79	-21.25	46.54



Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 80M / Average / Port 1 + Port 2 / 6GHz~9GHz

Frequency(MHz)	Chain 1 (PX1) Spurious Level (dBm)	Chain 2 (PX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit(dBm)	M Margin (dB)
5190	-84.89	-84.84	-79.85	-41.25	38.60
5200	-84.86	-84.70	-79.77	-41.25	38.52
5210	-84.89	-84.63	-79.75	-41.25	38.50

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 80M / Peak / Port 1 + Port 2 / 6GHz~9GHz

Frequency(MHz)	Chain 1 (PX1) Spurious Level (dBm)	Chain 2 (PX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit(dBm)	M Margin (dB)
5190	-72.48	-72.97	-67.71	-21.25	46.46
5200	-72.31	-71.91	-67.10	-21.25	45.85
5210	-72.10	-72.33	-67.20	-21.25	45.95

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 20M / Average / Port 1 + Port 2 / 6GHz~9GHz

Frequency(MHz)	Chain 1 (PX1) Spurious Level (dBm)	Chain 2 (PX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit(dBm)	M Margin (dB)
5745	-84.58	-84.66	-79.61	-41.25	38.36
5785	-84.58	-84.64	-79.60	-41.25	38.35
5825	-84.50	-84.83	-79.65	-41.25	38.40



Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 20M / Peak / Port 1 + Port 2 / 6GHz~9GHz

Frequency(MHz)	Chain 1 (Rx1) Spurious Level (dBm)	Chain 2 (Rx2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit(dBm)	Margin(dB)
5745	-72.59	-72.78	-67.67	-21.25	46.42
5785	-72.40	-72.53	-67.45	-21.25	46.20
5825	-72.51	-72.61	-67.55	-21.25	46.30

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 80M / Average / Port 1 + Port 2 / 6GHz~9GHz

Frequency(MHz)	Chain 1 (Rx1) Spurious Level (dBm)	Chain 2 (Rx2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit(dBm)	Margin(dB)
5765	-84.75	-84.58	-79.65	-41.25	38.40
5785	-84.75	-84.76	-79.74	-41.25	38.49
5825	-84.60	-85.84	-80.17	-41.25	38.92

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 80M / Peak / Port 1 + Port 2 / 6GHz~9GHz

Frequency(MHz)	Chain 1 (Rx1) Spurious Level (dBm)	Chain 2 (Rx2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit(dBm)	Margin(dB)
5765	-72.31	-72.63	-44.96	-21.25	23.71
5785	-72.19	-72.19	-67.18	-21.25	45.93
5825	-72.58	-72.19	-67.37	-21.25	46.12



Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 20M / Average / Port 1 + Port 2 / 9GHz~18GHz

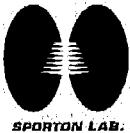
Frequency(MHz)	Chain 1 (PX1) Spurious Level (dBm)	Chain 2 (PX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dB)
5180	-80.51	-80.48	-75.48	-41.25	34.23
5200	-80.41	-80.43	-75.41	-41.25	34.16
5240	-80.56	-80.51	-75.52	-41.25	34.27

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 20M / Peak / Port 1 + Port 2 / 9GHz~18GHz

Frequency(MHz)	Chain 1 (PX1) Spurious Level (dBm)	Chain 2 (PX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dB)
5180	-68.82	-68.93	-63.86	-21.25	42.61
5200	-69.28	-68.25	-63.72	-21.25	42.47
5240	-68.44	-68.75	-63.58	-21.25	42.33

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 80M / Average / Port 1 + Port 2 / 9GHz~18GHz

Frequency(MHz)	Chain 1 (PX1) Spurious Level (dBm)	Chain 2 (PX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dB)
5190	-80.68	-80.80	-75.73	-41.25	34.48
5200	-80.65	-80.51	-75.57	-41.25	34.32
5210	-80.46	-80.29	-75.36	-41.25	34.11



Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 80M / Peak / Port 1 + Port 2 / 9GHz~18GHz

Frequency(MHz)	Chain 1 (RX1) Spurious Level (dBm)	Chain 2 (RX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dB)
5190	-68.45	-68.38	-63.40	-21.25	42.15
5200	-68.54	-68.71	-63.61	-21.25	42.36
5210	-68.28	-68.85	-63.55	-21.25	42.30

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 20M / Average / Port 1 + Port 2 / 9GHz~18GHz

Frequency(MHz)	Chain 1 (RX1) Spurious Level (dBm)	Chain 2 (RX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dB)
5745	-80.67	-80.59	-75.62	-41.25	34.37
5785	-80.74	-80.67	-75.69	-41.25	34.44
5825	-80.72	-80.72	-75.71	-41.25	34.46

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 20M / Peak / Port 1 + Port 2 / 9GHz~18GHz

Frequency(MHz)	Chain 1 (RX1) Spurious Level (dBm)	Chain 2 (RX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dB)
5745	-68.70	-67.60	-63.10	-21.25	41.85
5785	-68.22	-68.43	-63.31	-21.25	42.06
5825	-68.15	-68.65	-63.38	-21.25	42.13



Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 80M / Average / Port 1 + Port 2 / 9GHz~18GHz

Frequency(MHz)	Chain 1 (PX1) Spurious Level (dBm)	Chain 2 (PX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit(dBm)	Margin(dB)
5765	-80.60	-80.67	-75.62	-41.25	34.37
5785	-80.61	-80.78	-75.68	-41.25	34.43
5825	-80.67	-80.65	-75.65	-41.25	34.40

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 80M / Peak / Port 1 + Port 2 / 9GHz~18GHz

Frequency(MHz)	Chain 1 (PX1) Spurious Level (dBm)	Chain 2 (PX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit(dBm)	Margin(dB)
5765	-67.10	-66.33	-39.19	-21.25	17.94
5785	-67.66	-68.38	-62.99	-21.25	41.74
5825	-68.13	-68.76	-63.42	-21.25	42.17

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 20M / Average / Port 1 + Port 2 / 18GHz~40GHz

Frequency(MHz)	Chain 1 (PX1) Spurious Level (dBm)	Chain 2 (PX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit(dBm)	M Margin(dB)
5180	-75.27	-75.14	-70.19	-41.25	28.94
5200	-75.20	-75.30	-70.24	-41.25	28.99
5240	-75.23	-75.41	-70.31	-41.25	29.06



Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 20M / Peak / Port 1 + Port 2 / 18GHz~40GHz

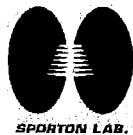
Frequency(MHz)	Chain 1 (PX1) Spurious Level (dBm)	Chain 2 (PX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit(dBm)	Margin(dB)
5180	-62.88	-62.72	-57.79	-21.25	36.54
5200	-63.39	-63.03	-58.20	-21.25	36.95
5240	-63.20	-63.50	-58.34	-21.25	37.09

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 80M / Average / Port 1 + Port 2 / 18GHz~40GHz

Frequency(MHz)	Chain 1 (PX1) Spurious Level (dBm)	Chain 2 (PX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit(dBm)	Margin(dB)
5190	-75.14	-75.08	-70.10	-41.25	28.85
5200	-75.18	-75.24	-70.20	-41.25	28.95
5210	-75.20	-75.08	-70.13	-41.25	28.88

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 80M / Peak / Port 1 + Port 2 / 18GHz~40GHz

Frequency(MHz)	Chain 1 (PX1) Spurious Level (dBm)	Chain 2 (PX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit(dBm)	Margin(dB)
5190	-63.25	-63.46	-58.34	-21.25	37.09
5200	-63.44	-62.87	-58.14	-21.25	36.89
5210	-62.34	-62.82	-57.56	-21.25	36.31



Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 20M / Average / Port 1 + Port 2 / 18GHz~40GHz

Frequency(MHz)	Chain 1 (RX1) Spurious Level (dBm)	Chain 2 (RX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit(dBm)	Margin(dB)
5745	-75.13	-75.04	-70.07	-41.25	28.82
5785	-75.15	-75.13	-70.13	-41.25	28.88
5825	-75.05	-75.00	-70.01	-41.25	28.76

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 20M / Peak / Port 1 + Port 2 / 18GHz~40GHz

Frequency(MHz)	Chain 1 (RX1) Spurious Level (dBm)	Chain 2 (RX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit(dBm)	Margin(dB)
5745	-62.55	-62.57	-57.55	-21.25	36.30
5785	-63.67	-62.43	-58.00	-21.25	36.75
5825	-63.24	-62.50	-57.84	-21.25	36.59

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 80M / Average / Port 1 + Port 2 / 18GHz~40GHz

Frequency(MHz)	Chain 1 (RX1) Spurious Level (dBm)	Chain 2 (RX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit(dBm)	Margin(dB)
5765	-75.20	-75.20	-70.19	-41.25	28.94
5785	-75.22	-75.21	-70.20	-41.25	28.95
5825	-75.05	-75.19	-70.11	-41.25	28.86



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Report No.: FR701623

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 80M / Peak / Port 1 + Port 2 / 18GHz~40GHz

Frequency(MHz)	Chain 1 (PX1) Spurious Level (dBm)	Chain 2 (PX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Margin (dB)	
5765	-63.22	-62.84	-58.02	-21.25	36.77
5785	-62.10	-62.56	-57.31	-21.25	36.06
5825	-61.97	-63.06	-57.47	-21.25	36.22



For Antenna 2:

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 20M / Average / Port 1 + Port 2 / 1GHz~3GHz

Frequency(MHz)	Chain 1 (TX1) Spurious Level (dBm)	Chain 2 (TX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dB)
5180	-89.68	-89.55	-64.60	-41.25	23.35
5200	-89.50	-89.69	-64.58	-41.25	23.33
5240	-89.48	-89.47	-64.46	-41.25	23.21

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 20M / Peak / Port 1 + Port 2 / 1GHz~3GHz

Frequency(MHz)	Chain 1 (TX1) Spurious Level (dBm)	Chain 2 (TX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dB)
5180	-76.89	-77.42	-52.14	-21.25	30.89
5200	-77.16	-76.49	-51.80	-21.25	30.55
5240	-76.83	-77.61	-52.19	-21.25	30.94

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 80M / Average / Port 1 + Port 2 / 1GHz~3GHz

Frequency(MHz)	Chain 1 (TX1) Spurious Level (dBm)	Chain 2 (TX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dB)
5200	-89.52	-89.59	-64.54	-41.25	23.29
5210	-89.54	-89.65	-64.58	-41.25	23.33



Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 80M / Peak / Port 1 + Port 2 / 1GHz~3GHz

Frequency(MHz)	Chain 1 (Tx1) Spurious Level (dBm)	Chain 2 (Tx2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dB)
5200	-76.91	-76.32	-51.59	-21.25	30.34
5210	-76.93	-76.87	-51.89	-21.25	30.64

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 20M / Average / Port 1 + Port 2 / 1GHz~3GHz

Frequency(MHz)	Chain 1 (Tx1) Spurious Level (dBm)	Chain 2 (Tx2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dB)
5745	-89.02	-89.07	-64.03	-41.25	22.78
5785	-89.05	-88.99	-64.01	-41.25	22.76
5825	-89.20	-89.01	-64.09	-41.25	22.84

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 20M / Peak / Port 1 + Port 2 / 1GHz~3GHz

Frequency(MHz)	Chain 1 (Tx1) Spurious Level (dBm)	Chain 2 (Tx2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dB)
5745	-75.42	-76.60	-50.96	-21.25	29.71
5785	-76.71	-76.73	-51.71	-21.25	30.46
5825	-76.38	-76.18	-51.27	-21.25	30.02



Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 80M / Average / Port 1 + Port 2 / 1GHz~3GHz

Frequency(MHz)	Chain 1 (PX1) Spurious Level (dBm)	Chain 2 (PX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit(dBm)	Margin(dB)
5765	-89.51	-89.53	-64.51	-41.25	23.26
5785	-89.58	-89.57	-64.56	-41.25	23.31
5825	-89.71	-89.57	-64.63	-41.25	23.38

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 80M / Peak / Port 1 + Port 2 / 1GHz~3GHz

Frequency(MHz)	Chain 1 (PX1) Spurious Level (dBm)	Chain 2 (PX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit(dBm)	Margin(dB)
5765	-76.47	-76.50	-51.47	-21.25	30.22
5785	-76.79	-76.65	-51.71	-21.25	30.46
5825	-76.64	-76.38	-51.50	-21.25	30.25

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 20M / Average / Port 1 + Port 2 / 3GHz~6GHz

Frequency(MHz)	Chain 1 (PX1) Spurious Level (dBm)	Chain 2 (PX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit(dBm)	Margin(dB)
5180	-70.73	-75.22	-47.41	-41.25	6.16
5200	-67.42	-72.24	-44.18	-41.25	2.93
5240	-66.94	-71.21	-43.56	-41.25	2.31



Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 20M / Peak / Port 1 + Port 2 / 3GHz~6GHz

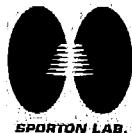
Frequency(MHz)	Chain 1 (Tx1) Spurious Level (dBm)	Chain 2 (Tx2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dB)
5180	-59.69	-62.11	-35.72	-21.25	14.47
5200	-56.01	-59.63	-32.44	-21.25	11.19
5240	-54.34	-59.68	-31.23	-21.25	9.98

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 80M / Average / Port 1 + Port 2 / 3GHz~6GHz

Frequency(MHz)	Chain 1 (Tx1) Spurious Level (dBm)	Chain 2 (Tx2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dB)
5200	-69.75	-76.53	-46.92	-41.25	5.67
5210	-71.18	-76.42	-48.04	-41.25	6.79

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 80M / Peak / Port 1 + Port 2 / 3GHz~6GHz

Frequency(MHz)	Chain 1 (Tx1) Spurious Level (dBm)	Chain 2 (Tx2) Spurious Level (dBm)	Total Spurious Level (dBm)	Limit (dBm)	Margin (dB)
5200	-58.37	-64.18	-35.36	-21.25	14.11
5210	-57.65	-64.00	-34.74	-21.25	13.49



Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 20M / Average / Port 1 + Port 2 / 3GHz~6GHz

Frequency(MHz)	Chain 1 (PX1) Spurious Level (dBm)	Chain 2 (PX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Margin (dBm)	Margin (dB)
5745	-73.66	-80.64	-50.87	-41.25	9.62
5785	-73.06	-81.23	-50.44	-41.25	9.19
5825	-72.21	-81.05	-49.68	-41.25	8.43

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 20M / Peak / Port 1 + Port 2 / 3GHz~6GHz

Frequency(MHz)	Chain 1 (PX1) Spurious Level (dBm)	Chain 2 (PX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Margin (dBm)	Margin (dB)
5745	-66.57	-69.88	-42.91	-21.25	21.66
5785	-65.88	-69.14	-42.20	-21.25	20.95
5825	-64.79	-70.29	-41.71	-21.25	20.46

Temperature	27.1°C	Humidity	79%
Test Engineer	Ron Huang	Configurations	QPSK, 80M / Average / Port 1 + Port 2 / 3GHz~6GHz

Frequency(MHz)	Chain 1 (PX1) Spurious Level (dBm)	Chain 2 (PX2) Spurious Level (dBm)	Total Spurious Level (dBm)	Margin (dBm)	Margin (dB)
5765	-72.44	-81.19	-49.90	-41.25	8.65
5785	-72.24	-80.80	-49.67	-41.25	8.42
5825	-71.28	-81.12	-48.85	-41.25	7.60