LTE B17 10M 64QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	Lmit (W)
23780	709	22.23	-5.6	14.48	28.05	3
23790	710	22.2	-5.6	14.45	27.86	3
23800	711	22.22	-5.6	14.47	27.99	3

REMARKS: ERP Output Power (dBm) = EIRP (dBm) -2.15(dB).

ANT1(DOWN):

WCDMA IV						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
1312	1712.4	23.78	1.3	25.08	322.11	1
1413	1732.6	24.04	1.3	25.34	341.98	1
1513	1752.6	23.8	1.3	25.1	323.59	1

LTE B7 5M QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
20775	2502.5	23.91	-0.6	23.31	214.29	2
21100	2535	23.92	-0.6	23.32	214.78	2
21425	2567.5	23.76	-0.6	23.16	207.01	2

LTE B7 5M 16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
20775	2502.5	23.17	-0.6	22.57	180.72	2
21100	2535	23.13	-0.6	22.53	179.06	2
21425	2567.5	22.89	-0.6	22.29	169.43	2

LTE B7 5M 64QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
20775	2502.5	22.03	-0.6	21.43	139	2
21100	2535	22.11	-0.6	21.51	141.58	2
21425	2567.5	21.82	-0.6	21.22	132.43	2

LTE B7 10M QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
20800	2505	23.95	-0.6	23.35	216.27	2
21100	2535	23.91	-0.6	23.31	214.29	2
21400	2565	23.71	-0.6	23.11	204.64	2

LTE B7 10M 16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
20800	2505	23.13	-0.6	22.53	179.06	2
21100	2535	23.1	-0.6	22.5	177.83	2
21400	2565	22.81	-0.6	22.21	166.34	2

LTE B7 10M 64QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
20800	2505	22.03	-0.6	21.43	139	2
21100	2535	22.11	-0.6	21.51	141.58	2
21400	2565	21.88	-0.6	21.28	134.28	2

LTE B7 15M QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
20825	2507.5	23.84	-0.6	23.24	210.86	2
21100	2535	23.98	-0.6	23.38	217.77	2
21375	2562.5	23.66	-0.6	23.06	202.3	2

LTE B7 15M 16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
20825	2507.5	23.16	-0.6	22.56	180.3	2
21100	2535	22.99	-0.6	22.39	173.38	2
21375	2562.5	22.85	-0.6	22.25	167.88	2

LTE B7 15M 64QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
20825	2507.5	22.03	-0.6	21.43	139	2
21100	2535	22.07	-0.6	21.47	140.28	2
21375	2562.5	21.82	-0.6	21.22	132.43	2

LTE B7 20M QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
20850	2510	23.98	-0.6	23.38	217.77	2
21100	2535	24.01	-0.6	23.41	219.28	2
21350	2560	23.77	-0.6	23.17	207.49	2

LTE B7 20M16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
20850	2510	23.23	-0.6	22.63	183.23	2
21100	2535	23.14	-0.6	22.54	179.47	2
21350	2560	22.95	-0.6	22.35	171.79	2

LTE B7 20M64QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
20850	2510	22.17	-0.6	21.57	143.55	2
21100	2535	22.14	-0.6	21.54	142.56	2
21350	2560	21.91	-0.6	21.31	135.21	2

LTE B12 1.4M QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	Lmit (W)
23017	699.7	24.5	-3.1	19.25	84.14	3
23095	707.5	24.41	-3.1	19.16	82.41	3
23173	715.3	24.37	-3.1	19.12	81.66	3

LTE B12 1.4M 16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	Lmit (W)
23017	699.7	23.72	-3.1	18.47	70.31	3
23095	707.5	23.57	-3.1	18.32	67.92	3
23173	715.3	23.63	-3.1	18.38	68.87	3

LTE B12 1.4M 64QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	Lmit (W)
23017	699.7	22.65	-3.1	17.4	54.95	3
23095	707.5	22.52	-3.1	17.27	53.33	3
23173	715.3	22.44	-3.1	17.19	52.36	3

LTE B12 3M QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	Lmit (W)
23025	700.5	24.45	-3.1	19.2	83.18	3
23095	707.5	24.38	-3.1	19.13	81.85	3
23165	714.5	24.36	-3.1	19.11	81.47	3

LTE B12 3M 16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	Lmit (W)
23025	700.5	23.65	-3.1	18.4	69.18	3
23095	707.5	23.66	-3.1	18.41	69.34	3
23165	714.5	23.6	-3.1	18.35	68.39	3

LTE B12 3M 64QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	Lmit (W)
23025	700.5	22.62	-3.1	17.37	54.58	3
23095	707.5	22.58	-3.1	17.33	54.08	3
23165	714.5	22.5	-3.1	17.25	53.09	3

LTE B12 5M QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	Lmit (W)
23035	701.5	24.42	-3.1	19.17	82.6	3
23095	707.5	24.45	-3.1	19.2	83.18	3
23155	713.5	24.38	-3.1	19.13	81.85	3

LTE B12 5M 16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	Lmit (W)
23035	701.5	23.69	-3.1	18.44	69.82	3
23095	707.5	23.64	-3.1	18.39	69.02	3
23155	713.5	23.69	-3.1	18.44	69.82	3

LTE B12 5M 64QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	Lmit (W)
23035	701.5	22.61	-3.1	17.36	54.45	3
23095	707.5	22.6	-3.1	17.35	54.33	3
23155	713.5	22.51	-3.1	17.26	53.21	3

LTE B12 10M QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	Lmit (W)
23060	704	24.51	-3.1	19.26	84.33	3
23095	707.5	24.47	-3.1	19.22	83.56	3
23130	711	24.42	-3.1	19.17	82.6	3

LTE B12 10M 16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	Lmit (W)
23060	704	23.74	-3.1	18.49	70.63	3
23095	707.5	23.71	-3.1	18.46	70.15	3
23130	711	23.72	-3.1	18.47	70.31	3

LTE B12 10M 64QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	Lmit (W)
23060	704	22.71	-3.1	17.46	55.72	3
23095	707.5	22.64	-3.1	17.39	54.83	3
23130	711	22.53	-3.1	17.28	53.46	3

LTE B13 5M QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	Lmit (W)
23205	779.5	24.37	-4.4	17.82	60.53	3
23230	782	24.39	-4.4	17.84	60.81	3
23255	784.5	24.48	-4.4	17.93	62.09	3

LTE B13 5M 16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	Lmit (W)
23205	779.5	23.77	-4.4	17.22	52.72	3
23230	782	23.79	-4.4	17.24	52.97	3
23255	784.5	23.91	-4.4	17.36	54.45	3

LTE B13 5M 64QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	Lmit (W)
23205	779.5	22.7	-4.4	16.15	41.21	3
23230	782	22.74	-4.4	16.19	41.59	3
23255	784.5	22.82	-4.4	16.27	42.36	3

LTE B13 10M QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	Lmit (W)
23230	782	24.53	-4.4	17.98	62.81	3

LTE B13 10M 16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	Lmit (W)
23230	782	23.7	-4.4	17.15	51.88	3

LTE B13 10M 64QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	Lmit (W)
23230	782	22.66	-4.4	16.11	40.83	3

LTE B17 5M QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	Lmit (W)
23755	706.5	24.33	-3.1	19.08	80.91	3
23790	710	24.42	-3.1	19.17	82.6	3
23825	713.5	24.26	-3.1	19.01	79.62	3

LTE B17 5M 16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	Lmit (W)
23755	706.5	23.46	-3.1	18.21	66.22	3
23790	710	23.59	-3.1	18.34	68.23	3
23825	713.5	23.63	-3.1	18.38	68.87	3

LTE B17 5M 64QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	Lmit (W)
23755	706.5	22.49	-3.1	17.24	52.97	3
23790	710	22.51	-3.1	17.26	53.21	3
23825	713.5	22.52	-3.1	17.27	53.33	3

LTE B17 10M QPSK						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	Lmit (W)
23780	709	24.36	-3.1	19.11	81.47	3
23790	710	24.46	-3.1	19.21	83.37	3
23800	711	24.41	-3.1	19.16	82.41	3

LTE B17 10M 16QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	Lmit (W)
23780	709	23.56	-3.1	18.31	67.76	3
23790	710	23.68	-3.1	18.43	69.66	3
23800	711	23.67	-3.1	18.42	69.5	3

LTE B17 10M 64QAM						
Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	ERP (dBm)	ERP (mW)	Lmit (W)
23780	709	22.54	-3.1	17.29	53.58	3
23790	710	22.55	-3.1	17.3	53.7	3
23800	711	22.59	-3.1	17.34	54.2	3

REMARKS: ERP Output Power (dBm) = EIRP (dBm) -2.15(dB).

3.2 FREQUENCY STABILITY MEASUREMENT

3.2.1 LIMITS OF FREQUENCY STABILIITY MEASUREMENT

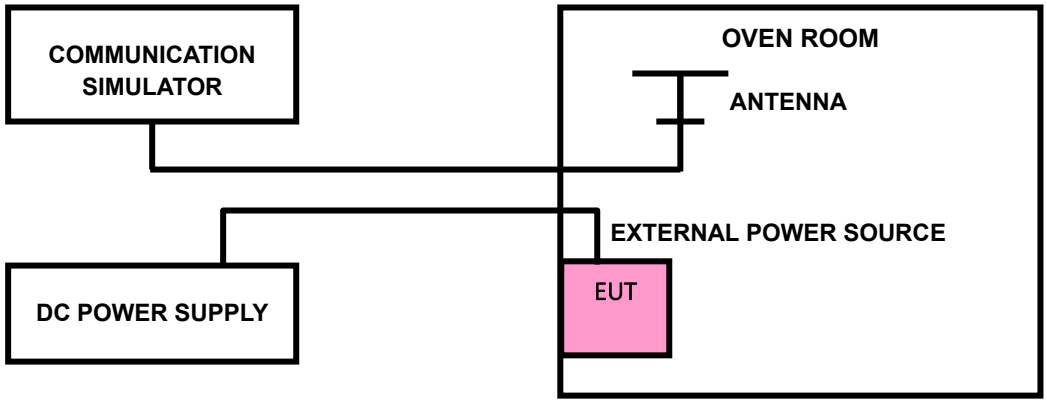
The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

3.2.2 TEST PROCEDURE

a. Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.
b. EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.
c. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the ±0.5℃ during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

NOTE: The frequency error was recorded frequency error from the communication simulator.

3.2.3 TEST SETUP



3.2.4 TEST RESULTS

Please Refer to Appendix Of this test report.

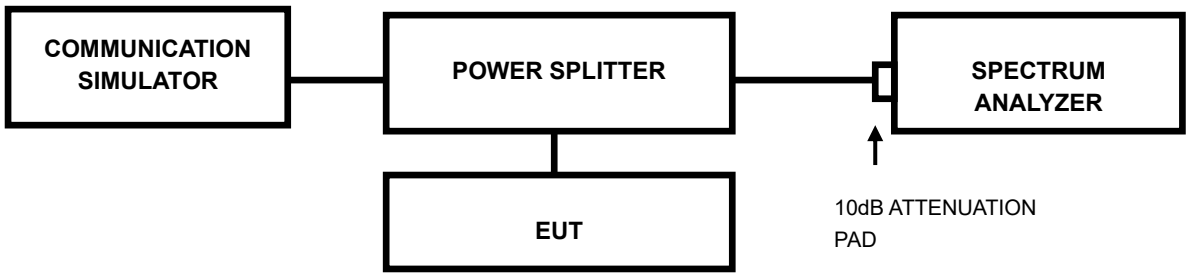
Note: VL = Low voltage(3.7V); VN/NV = Normal voltage(3.91V); VH = High voltage(4.3V);
NT = Normal temperature (25℃)

3.3 OCCUPIED BANDWIDTH MEASUREMENT

3.3.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT

The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 %of the total mean power of a given emission.

3.3.2 TEST SETUP



3.3.3 TEST PROCEDURES

a. The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
b. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

3.3.4 TEST RESULTS

Please Refer to Appendix Of this test report.

3.4 BAND EDGE MEASUREMENT

3.4.1 LIMITS OF BAND EDGE MEASUREMENT

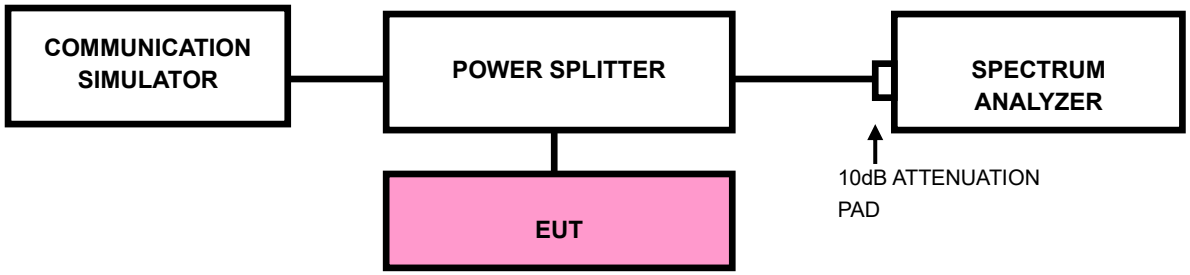
According to FCC 27.53(c) specified that For operations in the 746-758 MHz band and the 776-788 MHz band , the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.In addition, the power of any unwanted emission in an 6.25kHz bandwidth for all frequencies between 763-775 MHz and 793-806 MHz shall be attenuated below the transmitter power,P(dBW),by at least 65 +10log10p(P),dB,for mobile and portable equipment.

According to FCC 27.53(h) specified that For operations in the 1710-1755 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. However, in the 1-megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

According to FCC 27.53(g) specified that For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

According to FCC 27.53(m)(4) specified that For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees. For mobile digital stations, in the 1 megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed.

3.4.2 TEST SETUP



3.4.3 TEST PROCEDURES

a) All measurements were done at low and high operational frequency range

b) Connect the transmitter to the spectrum analyzer via coaxial cable while ensuring proper impedance matching.

c) Tune the analyzer to the nominal center frequency of the emission bandwidth (EBW)

d) .Set the resolution bandwidth (RBW) ≧ 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.

e) Beyond the 1MHz band from the band edge, RBW=1MHz was used.

f) Set the video bandwidth (VBW) to ≧3 x RBW.

g) Select the average power (RMS) display detector.

h) Set the number of measurement points to ≧ 1001.

i) Use auto-coupled sweep time.

j) Perform the measurement over an interval of time when the transmission is continuous and at its maximum power level.

k) The RF fundamental frequency should be excluded against the limit line in the operating frequency band and use RBW is 10KHz or 100KHz.

l) Record the max trace plot into the test report.

3.4.4 TEST RESULTS

Please Refer to Appendix Of this test report.

3.5 CONDUCTED SPURIOUS EMISSIONS

3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to –13dBm.

For: LTE Band7/13

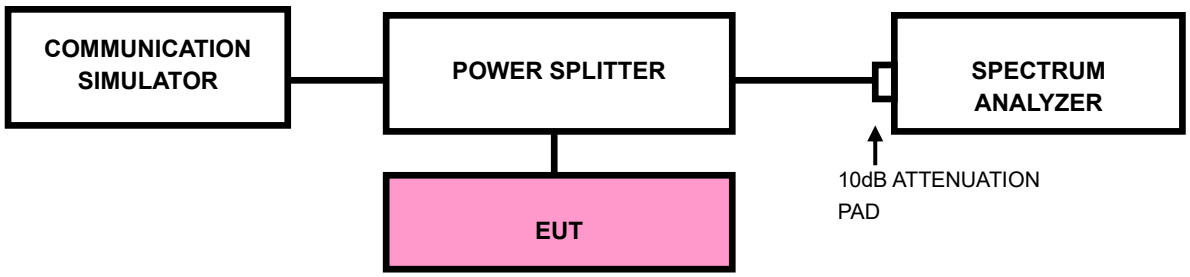
The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 55 +10 log10(P) dB. The limit of emission is equal to -25dBm.

3.5.2 TEST PROCEDURE

a. The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.

b. Measuring frequency range is from 9kHz up to a frequency including its 10th harmonic. 10dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz is used for conducted emission measurement.

3.5.3 TEST SETUP



3.5.4 TEST RESULTS

NOTE：The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

Please Refer to Appendix Of this test report.

3.6 RADIATED EMISSION MEASUREMENT

3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to –13dBm.

For: LTE Band7

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 55 +10 log10(P) dB. The limit of emission is equal to -25dBm.

. 47 CFR 27.53(f)

For operations in the 746–758 MHz, 775–788 MHz, and 805–806 MHz bands, emissions in the band 1559–1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

3.6.2 TEST PROCEDURES

a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.
b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value “ of step a. Record the power level of S.G.
c. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn.
d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.R.P power - 2.15dBi.

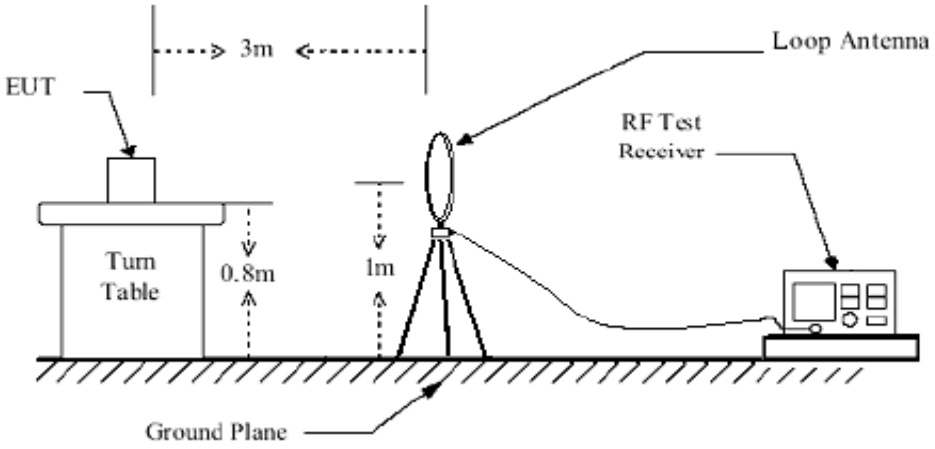
NOTE: The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

3.6.3 DEVIATION FROM TEST STANDARD

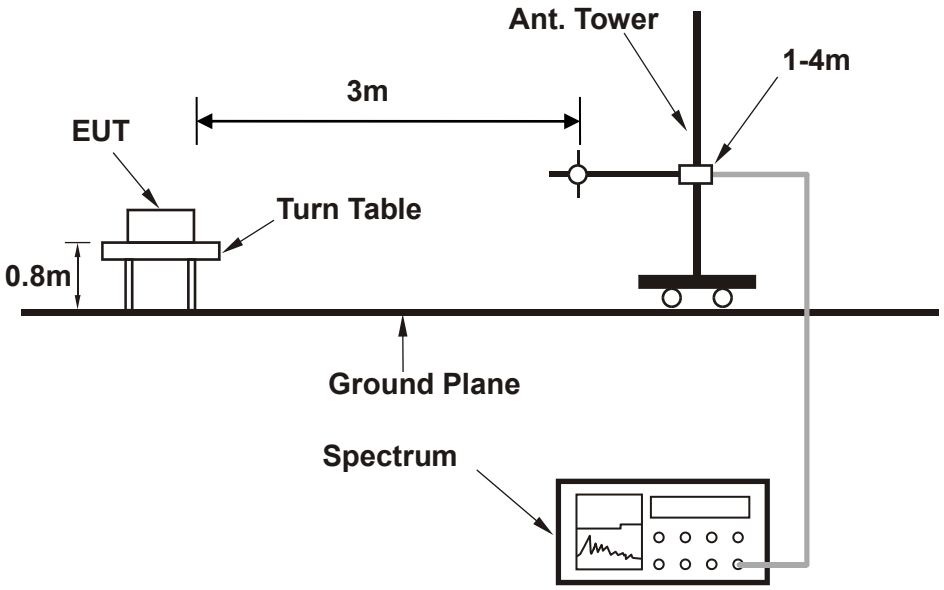
No deviation

3.6.4 TEST SETUP

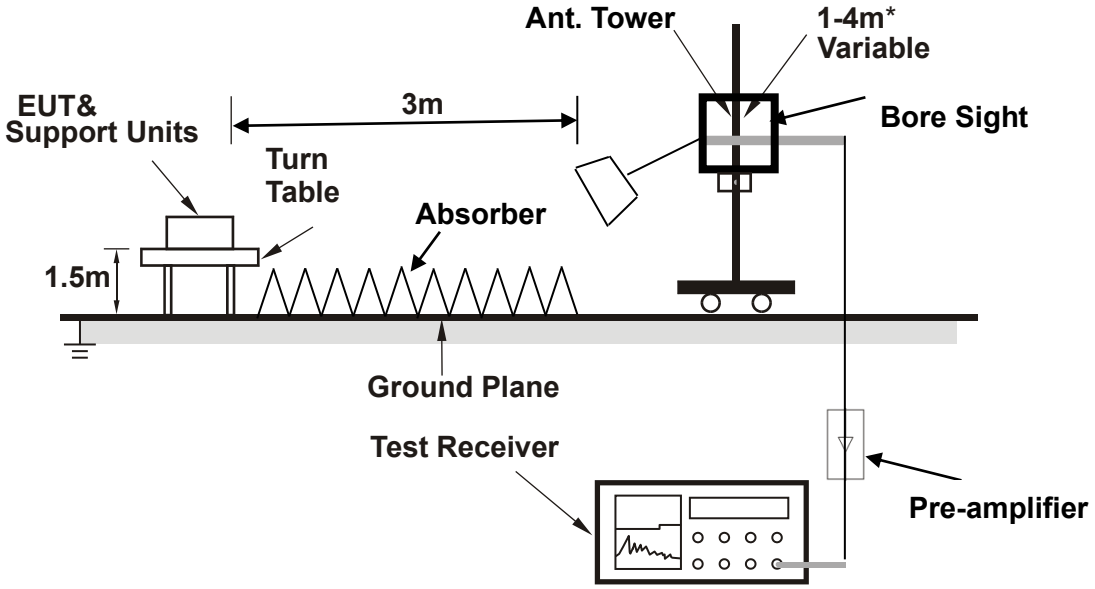
< Frequency Range below 30MHz >



< Frequency Range 30MHz~1GHz >



<Frequency Range above 1GHz>



Note: Above 1G is a directional antenna depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

For the actual test configuration, please refer to the attached file (Test Setup Photo).

3.6.5 TEST RESULTS

NOTE： The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

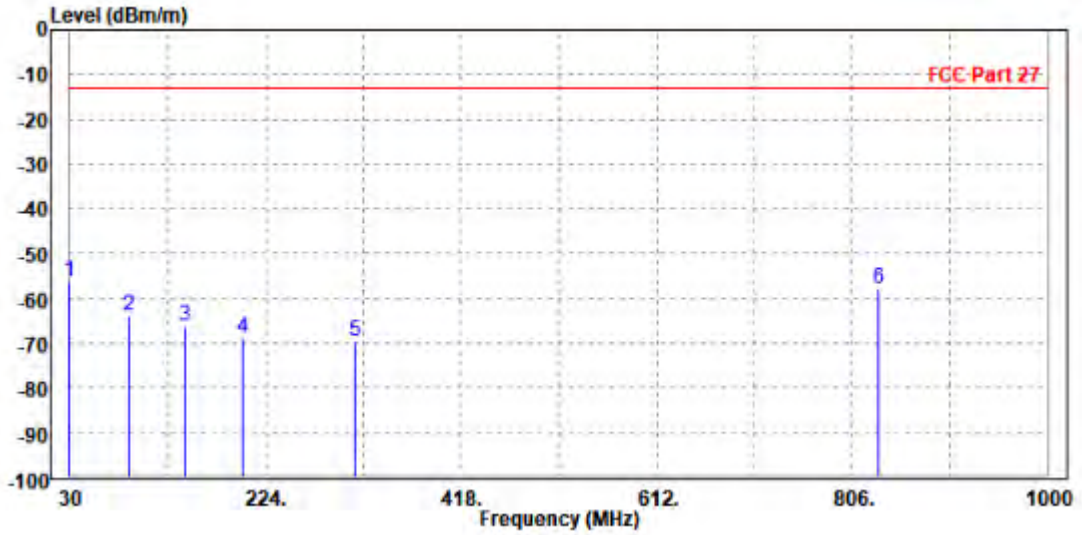
BELOW 1GHz WORST-CASE DATA

30 MHz – 1GHz data:

LTE Band 13(Ant4) (UP):
CHANNEL BANDWIDTH: 5MHz / QPSK

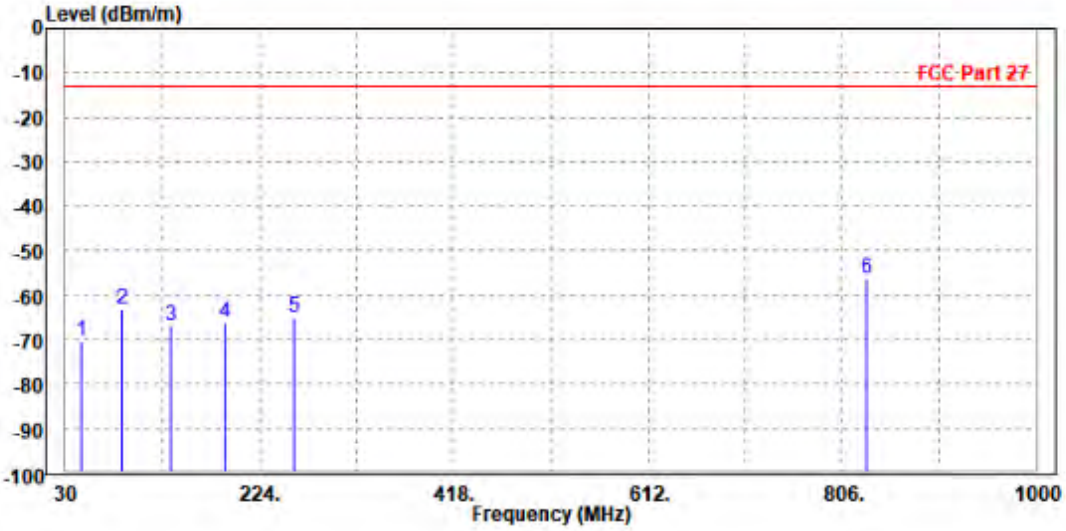
MODE	TX channel 23255	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	30.000	-56.32	-54.34	-13.00	-43.32	-1.98	Peak	Horizontal
2	88.200	-63.98	-51.25	-13.00	-50.98	-12.73	Peak	Horizontal
3	144.460	-66.27	-51.58	-13.00	-53.27	-14.69	Peak	Horizontal
4	201.690	-68.98	-53.76	-13.00	-55.98	-15.22	Peak	Horizontal
5	313.240	-69.41	-60.86	-13.00	-56.41	-8.55	Peak	Horizontal
6	832.190	-57.79	-61.48	-13.00	-44.79	3.69	Peak	Horizontal



MODE	TX channel 23255	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	45.520	-70.39	-50.00	-13.00	-57.39	-20.39	Peak	Vertical
2	87.230	-63.02	-45.20	-13.00	-50.02	-17.82	Peak	Vertical
3	135.730	-67.08	-51.30	-13.00	-54.08	-15.78	Peak	Vertical
4	190.050	-66.03	-59.50	-13.00	-53.03	-6.53	Peak	Vertical
5	258.920	-64.91	-61.23	-13.00	-51.91	-3.68	Peak	Vertical
6 PP	831.220	-56.25	-63.48	-13.00	-43.25	7.23	Peak	Vertical



ABOVE 1GHz

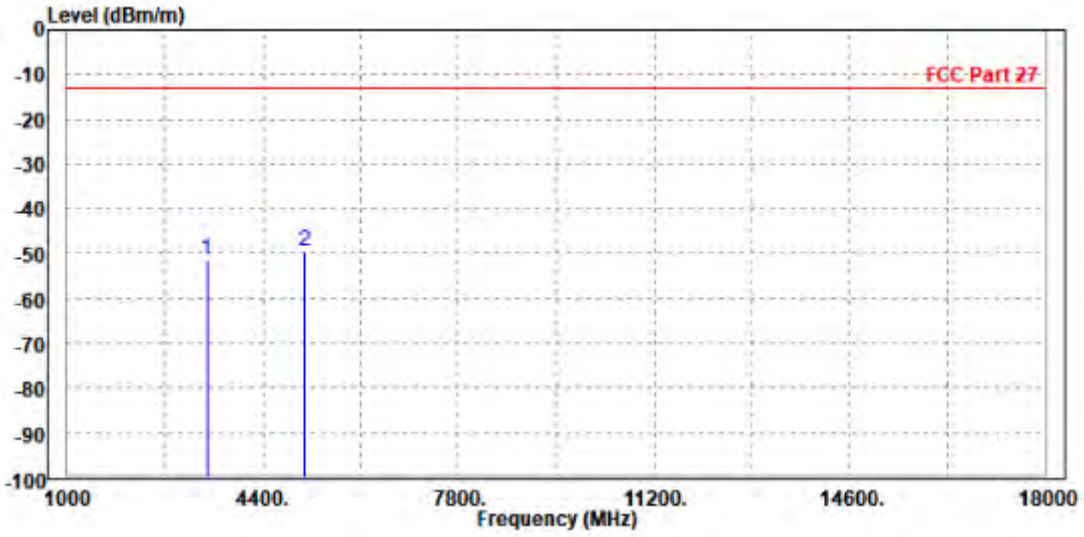
Note: For higher frequency, the emission is too low to be detected.

WCDMA Band IV(Ant1) (DOWN):

CH 1312

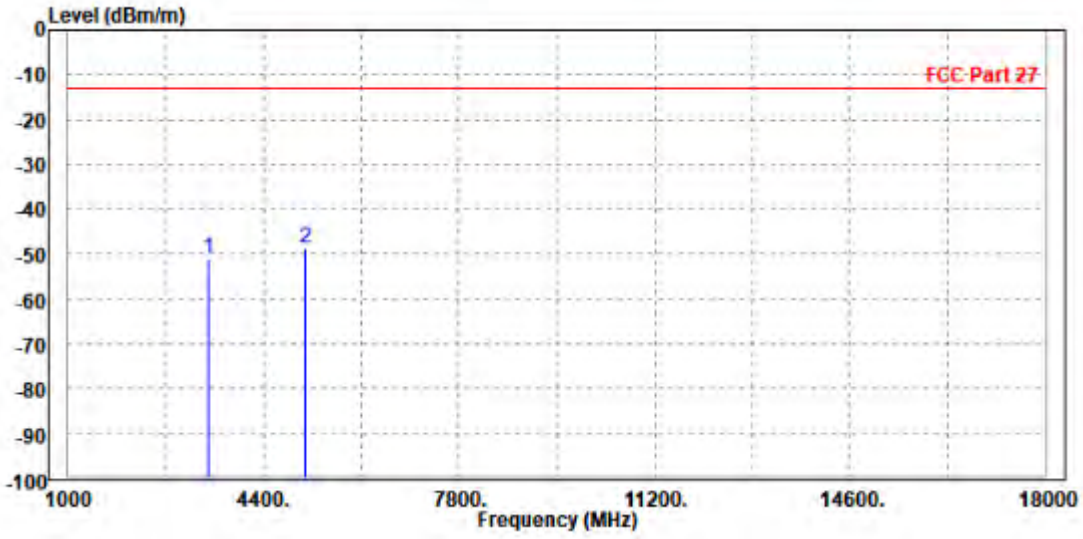
MODE	TX channel 1312	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3424.800	-51.51	-60.02	-13.00	-38.51	8.51	Peak	Horizontal
2 PP	5131.000	-49.29	-60.54	-13.00	-36.29	11.25	Peak	Horizontal



MODE	TX channel 1312	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

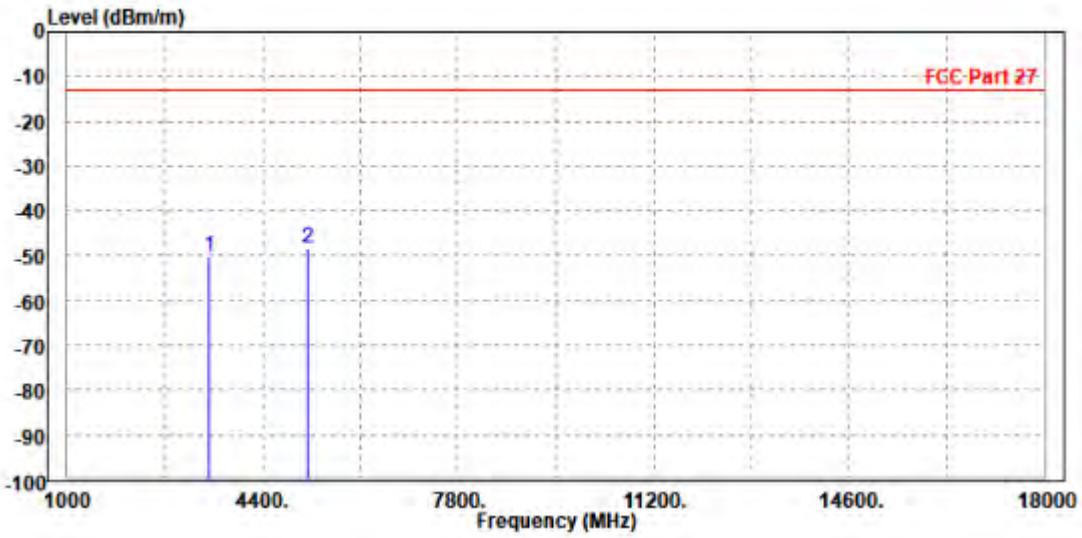
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3431.000	-50.89	-59.56	-13.00	-37.89	8.67	Peak	Vertical
2 PP	5137.200	-48.56	-60.20	-13.00	-35.56	11.64	Peak	Vertical



CH 1413

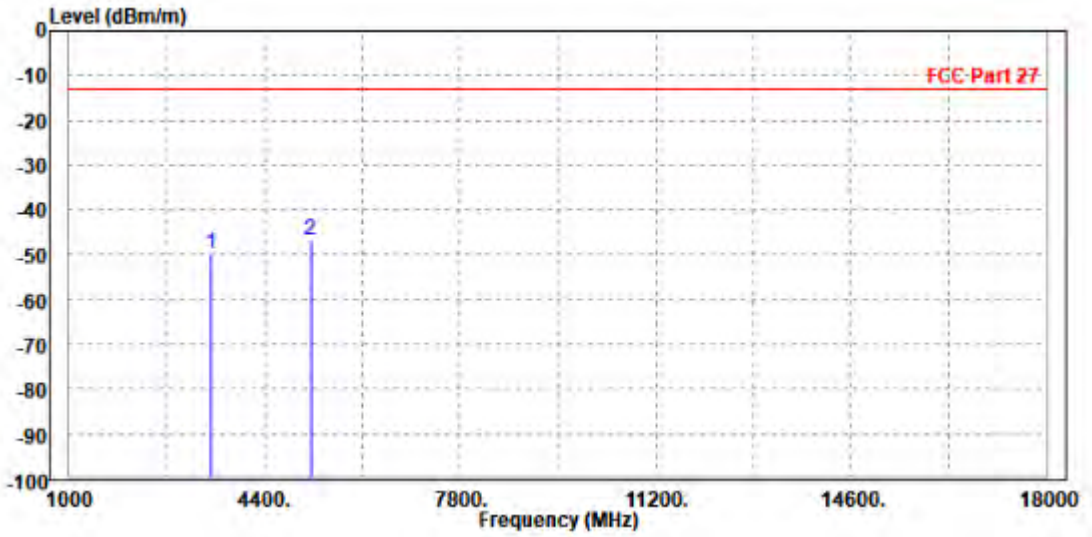
MODE	TX channel 1413	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3465.000	-50.15	-58.69	-13.00	-37.15	8.54	Peak	Horizontal
2 PP	5197.800	-48.32	-59.67	-13.00	-35.32	11.35	Peak	Horizontal



MODE	TX channel 1413	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

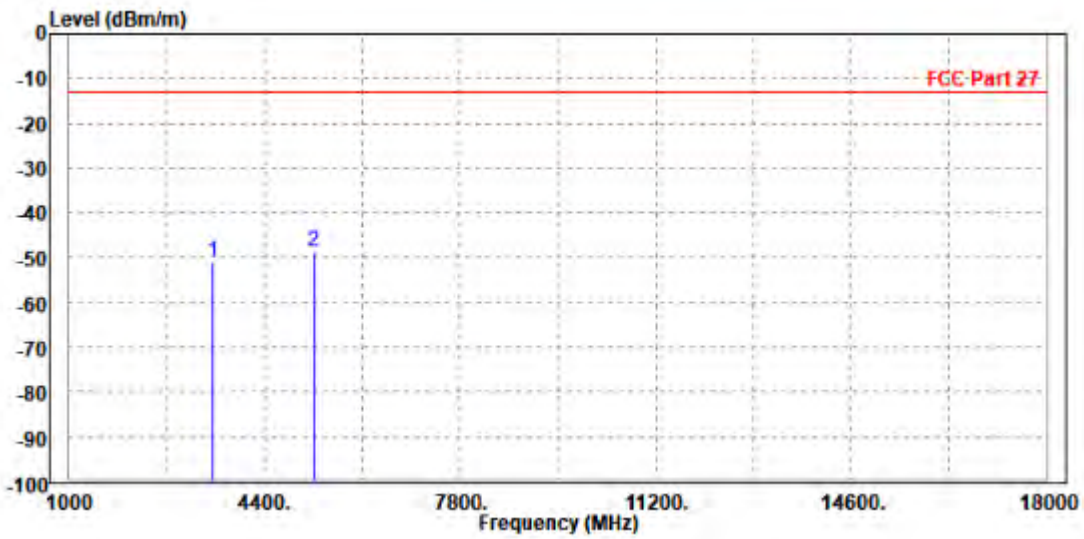
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3465.200	-49.98	-58.63	-13.00	-36.98	8.65	Peak	Vertical
2 PP	5199.000	-46.77	-58.53	-13.00	-33.77	11.76	Peak	Vertical



CH 1513

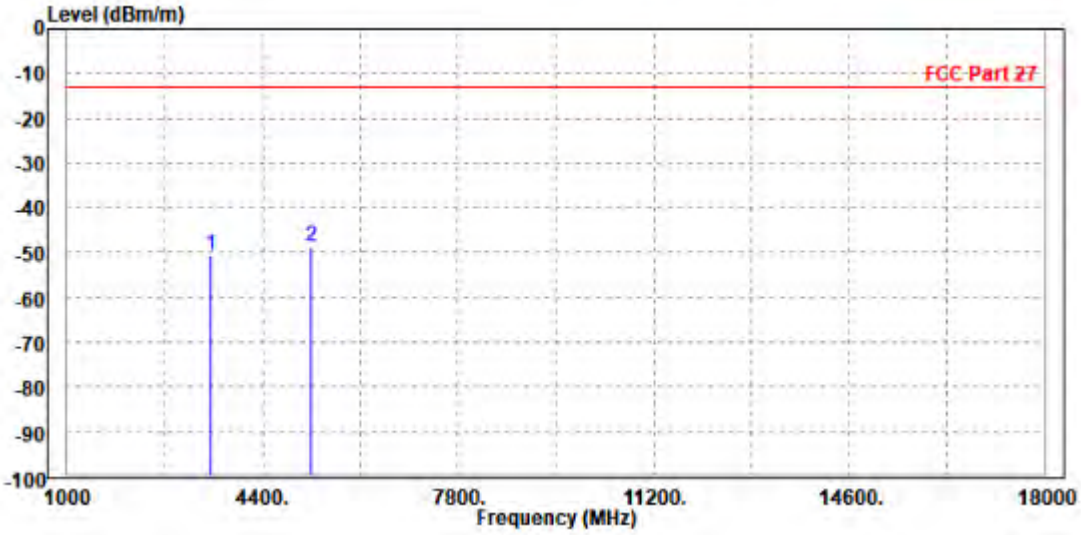
MODE	TX channel 1513	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3499.000	-51.09	-59.65	-13.00	-38.09	8.56	Peak	Horizontal
2 PP	5257.800	-48.84	-60.28	-13.00	-35.84	11.44	Peak	Horizontal



MODE	TX channel 1513	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

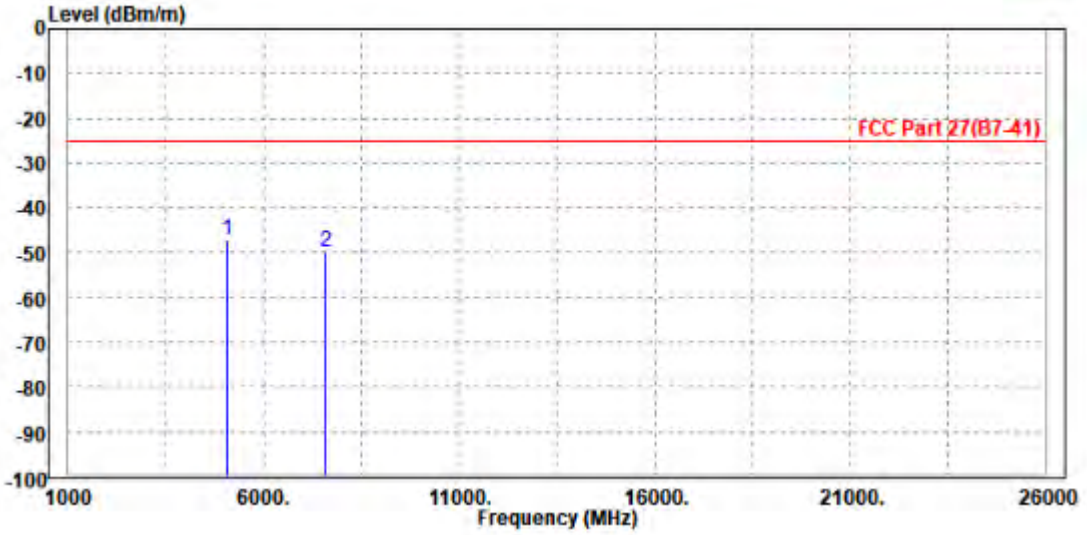
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3505.200	-50.56	-59.20	-13.00	-37.56	8.64	Peak	Vertical
2 PP	5250.000	-48.54	-60.39	-13.00	-35.54	11.85	Peak	Vertical



LTE Band 7(Ant4) (UP):
CHANNEL BANDWIDTH: 5MHz / QPSK

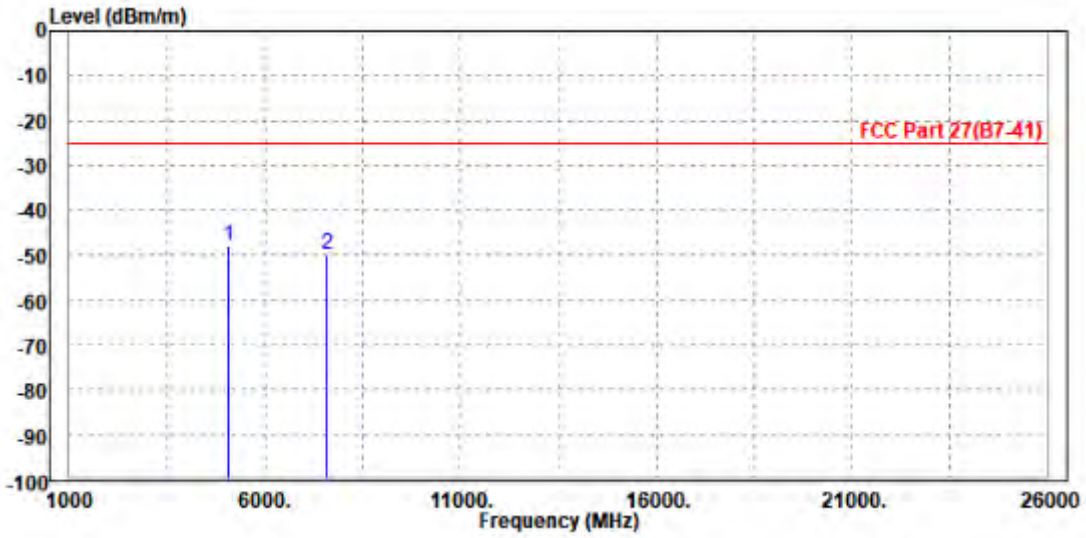
MODE	TX channel 21100	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 5075.000	-47.24	-58.41	-25.00	-22.24	11.17	Peak	Horizontal
2	7605.000	-49.62	-64.14	-25.00	-24.62	14.52	Peak	Horizontal



MODE	TX channel 21100	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	5070.000	-47.76	-59.27	-25.00	-22.76	11.51	Peak	Vertical
2	7600.000	-49.81	-63.26	-25.00	-24.81	13.45	Peak	Vertical

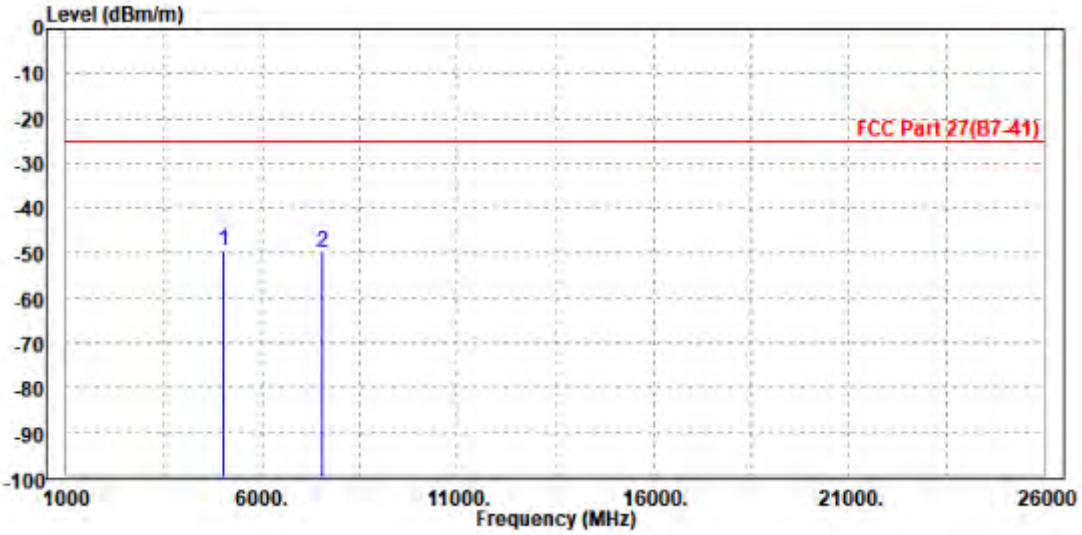


CHANNEL BANDWIDTH: 10MHz / QPSK

CH 20800

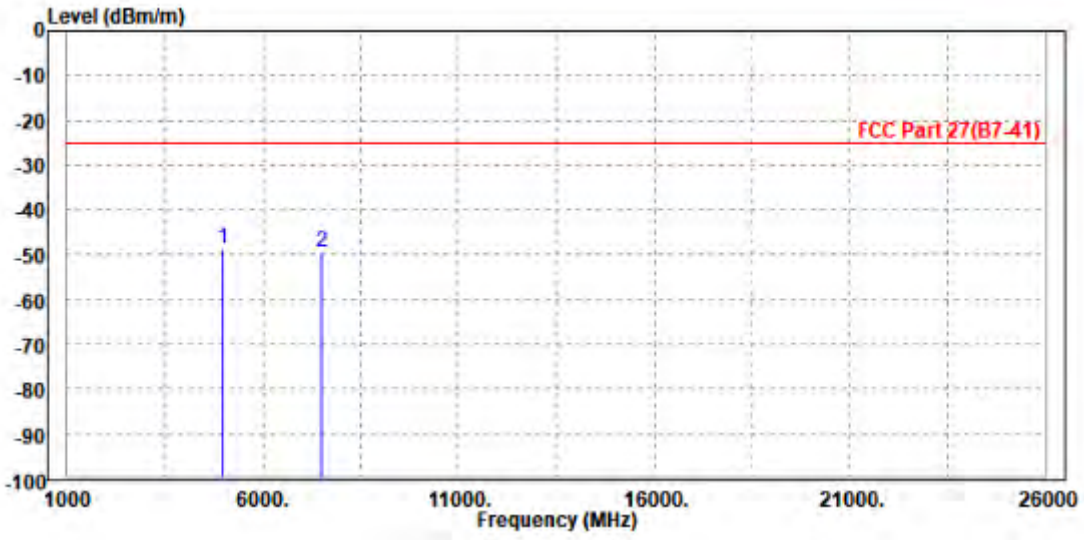
MODE	TX channel 20800	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 5010.000	-49.59	-60.66	-25.00	-24.59	11.07	Peak	Horizontal
2	7525.000	-49.63	-64.01	-25.00	-24.63	14.38	Peak	Horizontal



MODE	TX channel 20800	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

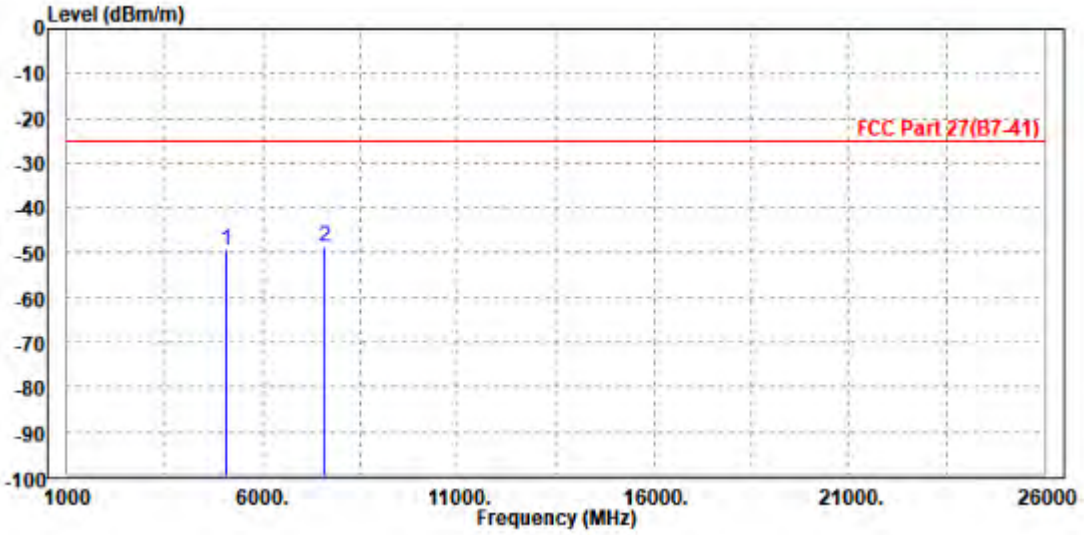
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 5000.000	-48.56	-59.93	-25.00	-23.56	11.37	Peak	Vertical
2	7515.000	-49.57	-62.66	-25.00	-24.57	13.09	Peak	Vertical



CH 21100

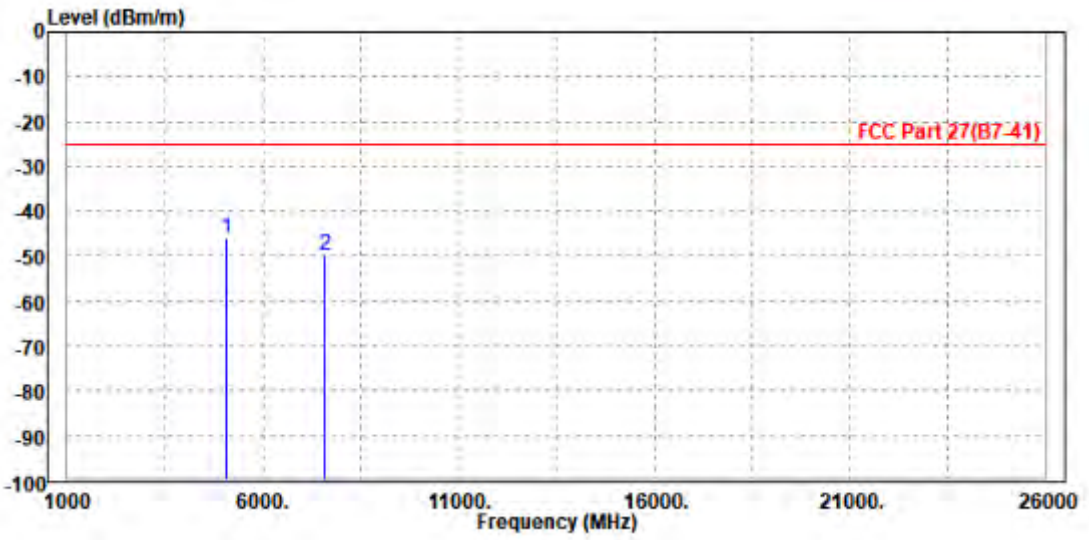
MODE	TX channel 21100	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	5075.000	-49.52	-60.69	-25.00	-24.52	11.17	Peak	Horizontal
2 PP	7605.000	-48.84	-63.36	-25.00	-23.84	14.52	Peak	Horizontal



MODE	TX channel 21100	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

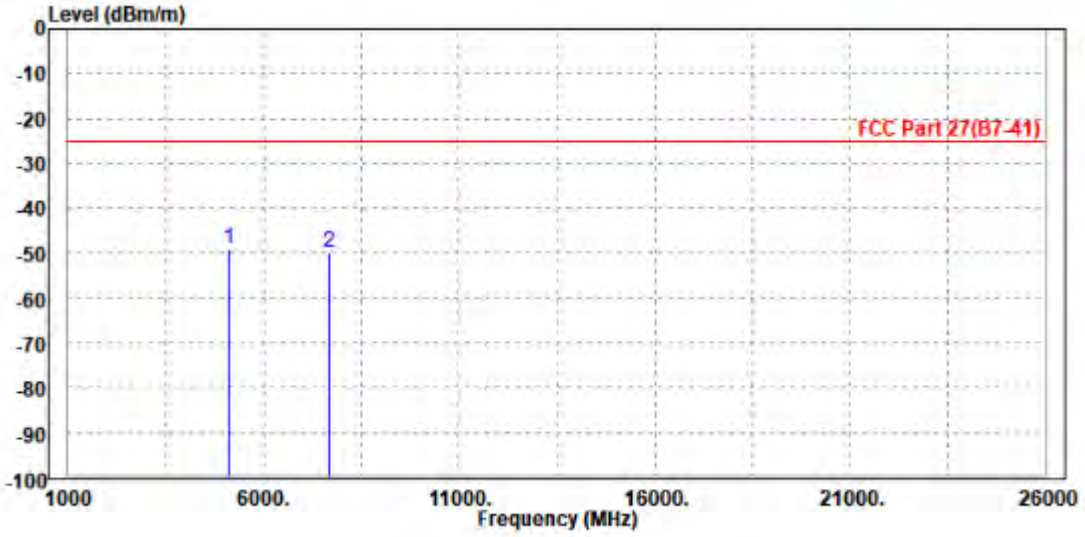
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 5070.000	-46.08	-57.59	-25.00	-21.08	11.51	Peak	Vertical
2	7600.000	-49.97	-63.42	-25.00	-24.97	13.45	Peak	Vertical



CH 21400

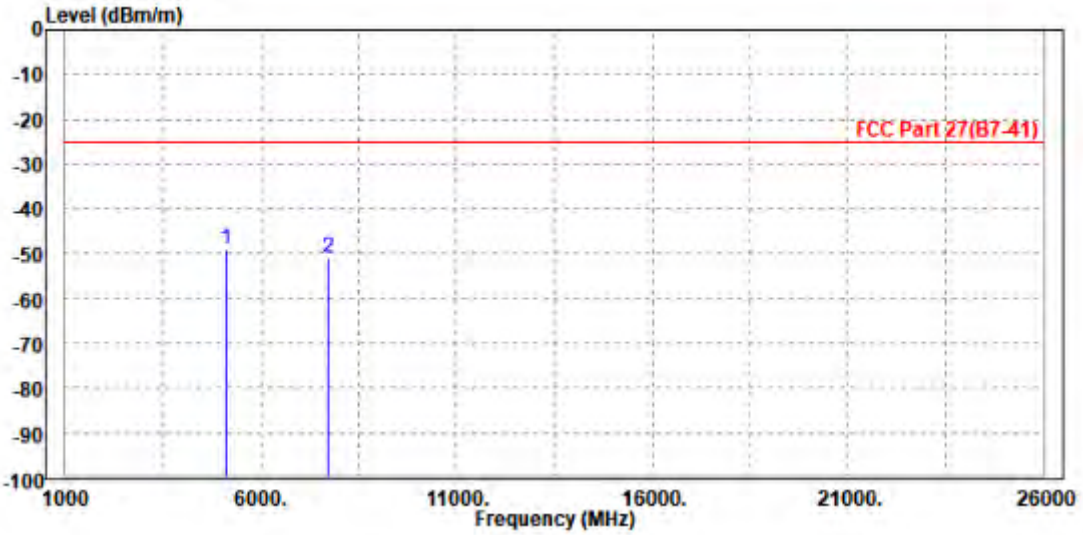
MODE	TX channel 21400	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 5125.000	-49.01	-60.26	-25.00	-24.01	11.25	Peak	Horizontal
2	7695.000	-49.76	-64.44	-25.00	-24.76	14.68	Peak	Horizontal



MODE	TX channel 21400	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

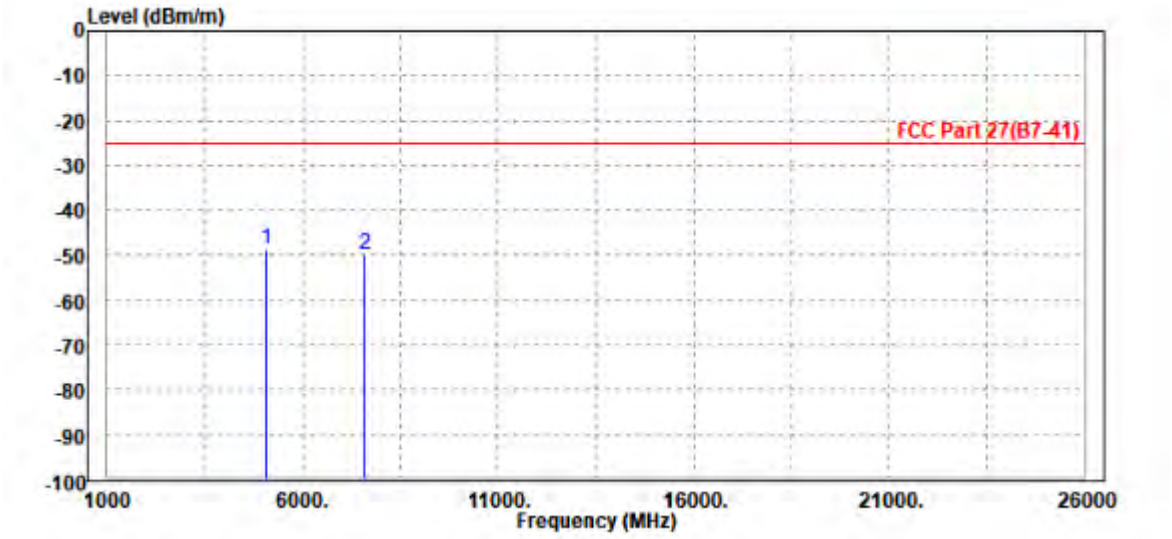
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 5130.000	-48.95	-60.57	-25.00	-23.95	11.62	Peak	Vertical
2	7700.000	-50.90	-64.79	-25.00	-25.90	13.89	Peak	Vertical



CHANNEL BANDWIDTH: 15MHz / QPSK

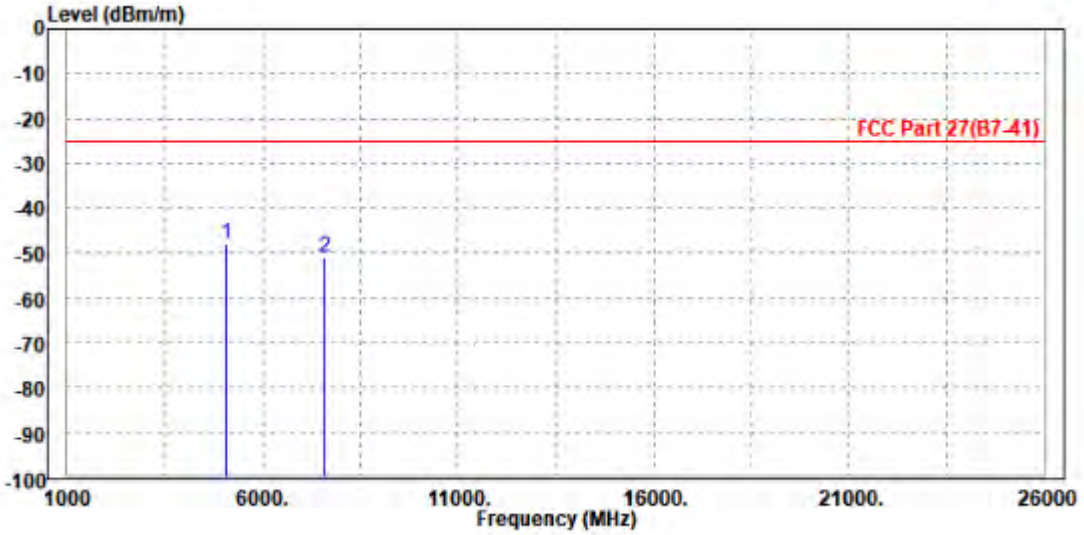
MODE	TX channel 21100	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	5070.000	-48.49	-59.65	-25.00	-23.49	11.16	Peak	Horizontal
2	7600.000	-49.84	-64.35	-25.00	-24.84	14.51	Peak	Horizontal



MODE	TX channel 21100	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

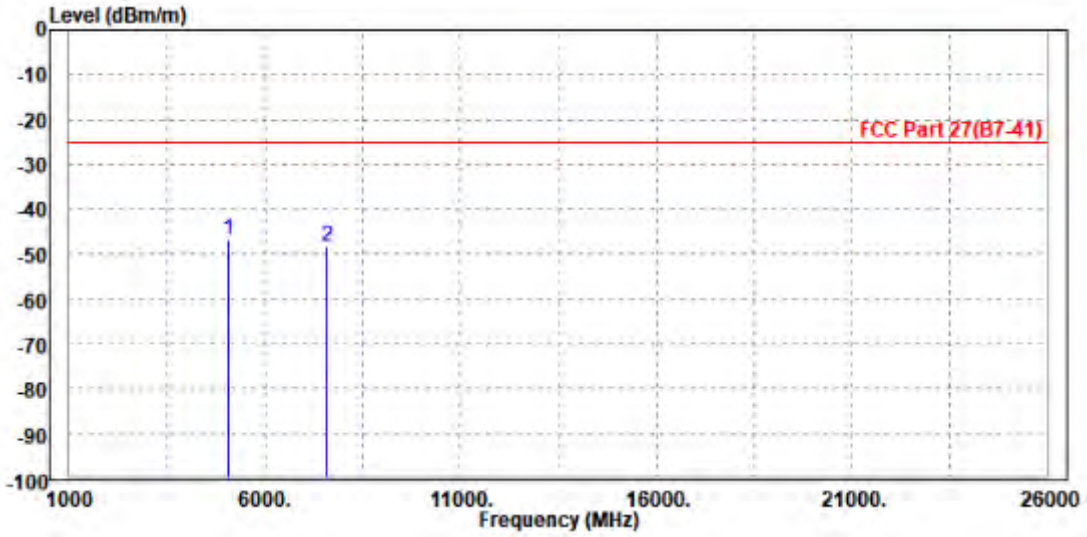
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 5075.000	-47.79	-59.31	-25.00	-22.79	11.52	Peak	Vertical
2	7605.000	-50.84	-64.32	-25.00	-25.84	13.48	Peak	Vertical



CHANNEL BANDWIDTH: 20MHz / QPSK

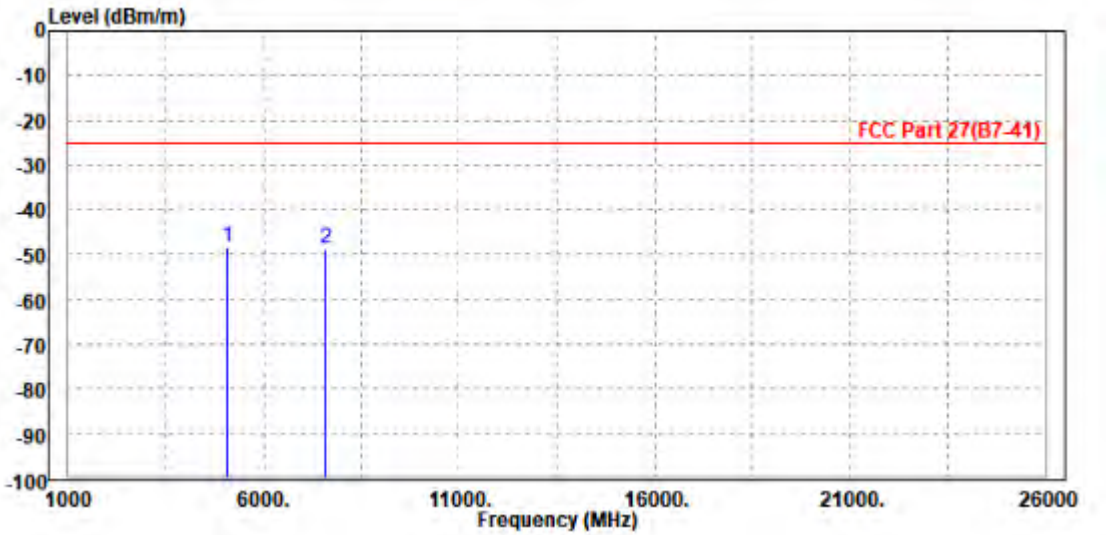
MODE	TX channel 21100	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 5075.000	-46.62	-57.79	-25.00	-21.62	11.17	Peak	Horizontal
2	7605.000	-48.43	-62.95	-25.00	-23.43	14.52	Peak	Horizontal



MODE	TX channel 21100	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 5070.000	-48.39	-59.90	-25.00	-23.39	11.51	Peak	Vertical
2	7600.000	-48.85	-62.30	-25.00	-23.85	13.45	Peak	Vertical



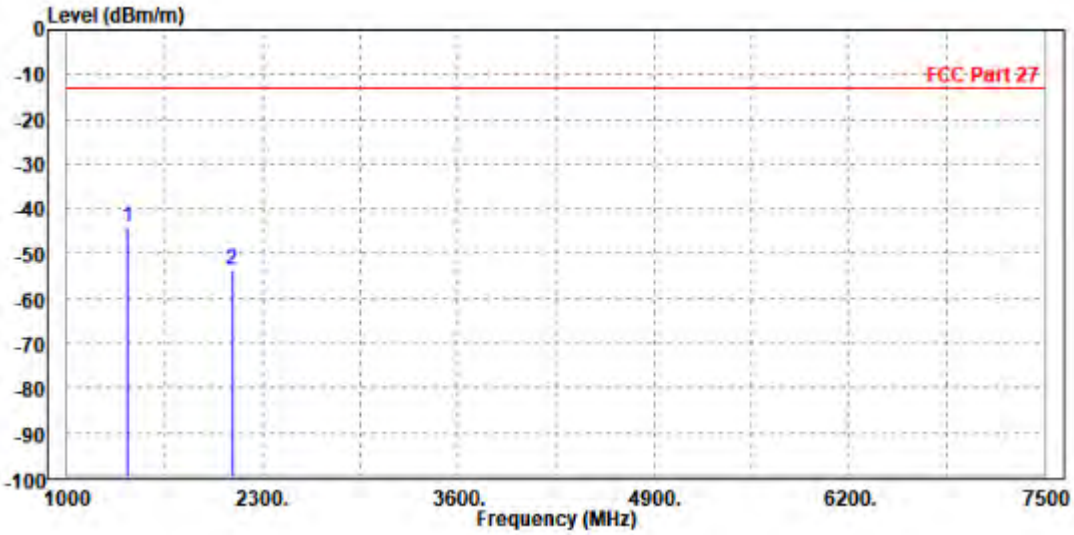
LTE BAND 12(Ant4) (UP):

CHANNEL BANDWIDTH: 1.4MHz / QPSK

CH23017

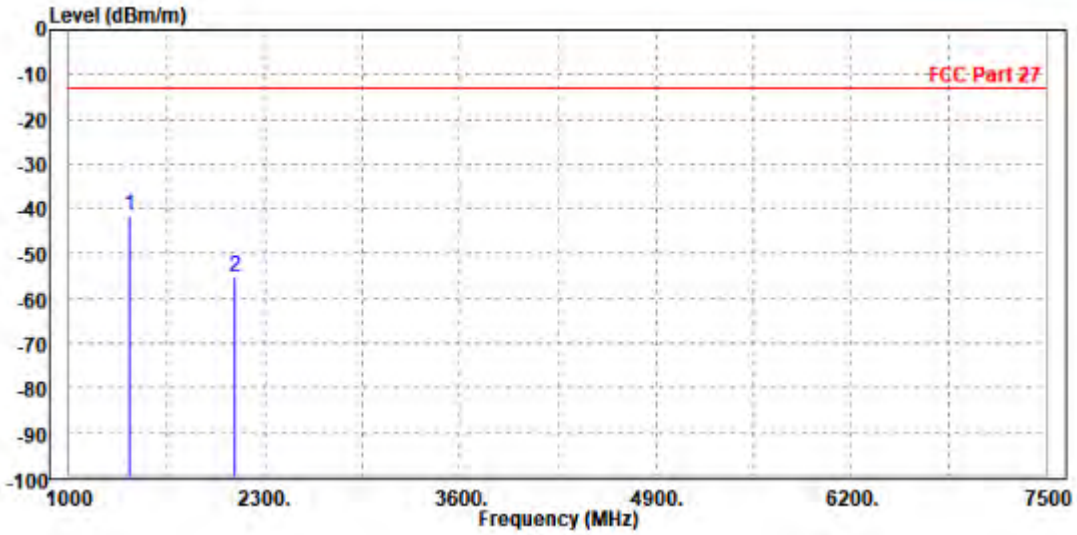
MODE	TX channel 23017	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 1396.500	-44.21	-47.09	-13.00	-31.21	2.88	Peak	Horizontal
2	2097.000	-53.65	-58.66	-13.00	-40.65	5.01	Peak	Horizontal



MODE	TX channel 23017	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

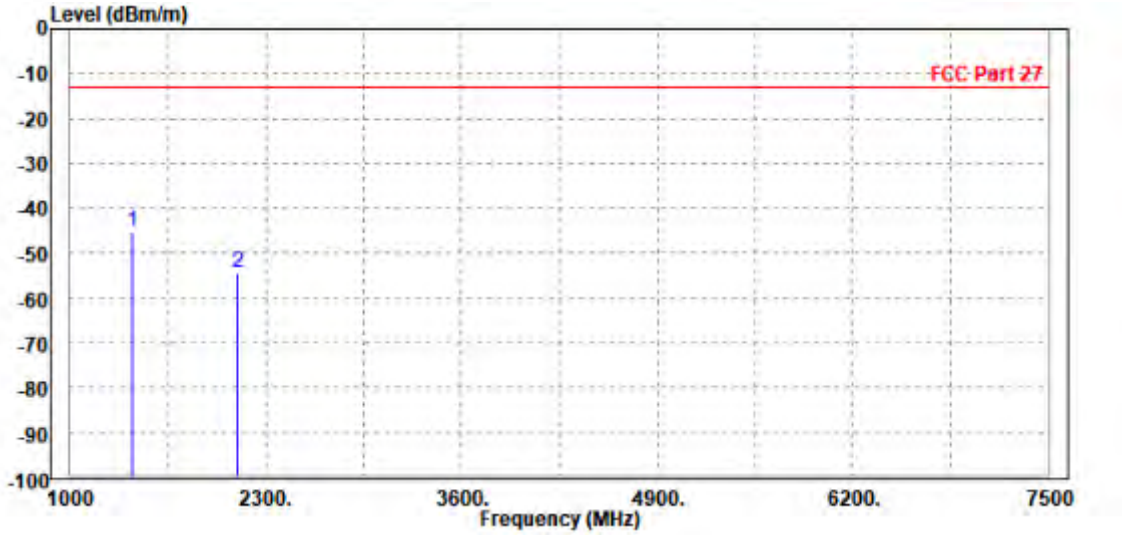
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 1398.000	-41.63	-44.51	-13.00	-28.63	2.88	Peak	Vertical
2	2098.500	-54.99	-59.34	-13.00	-41.99	4.35	Peak	Vertical



CH23095

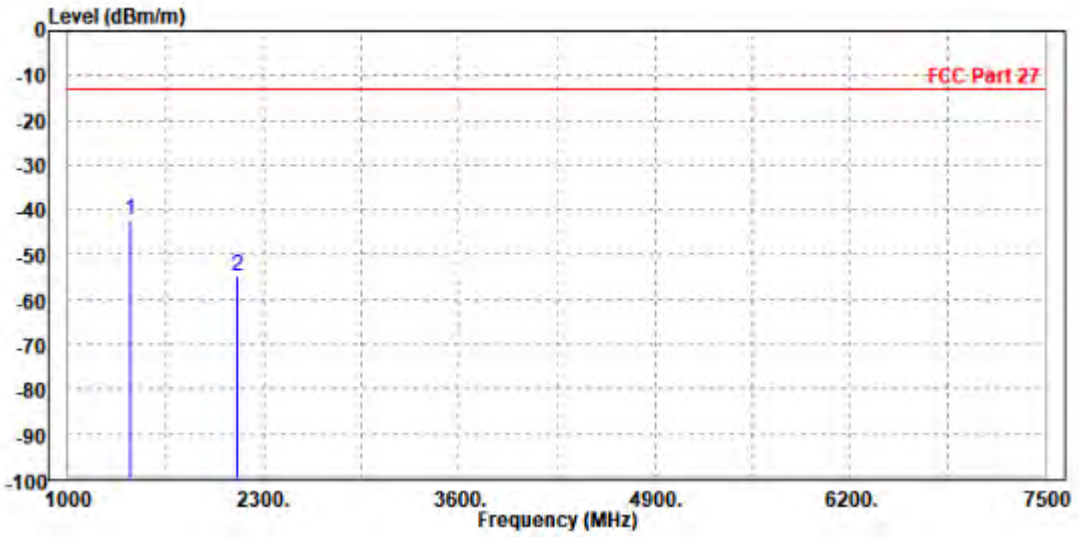
MODE	TX channel 23095	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	1414.000	-45.20	-48.14	-13.00	-32.20	2.94	Peak	Horizontal
2	2118.000	-54.52	-59.59	-13.00	-41.52	5.07	Peak	Horizontal



MODE	TX channel 23095	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

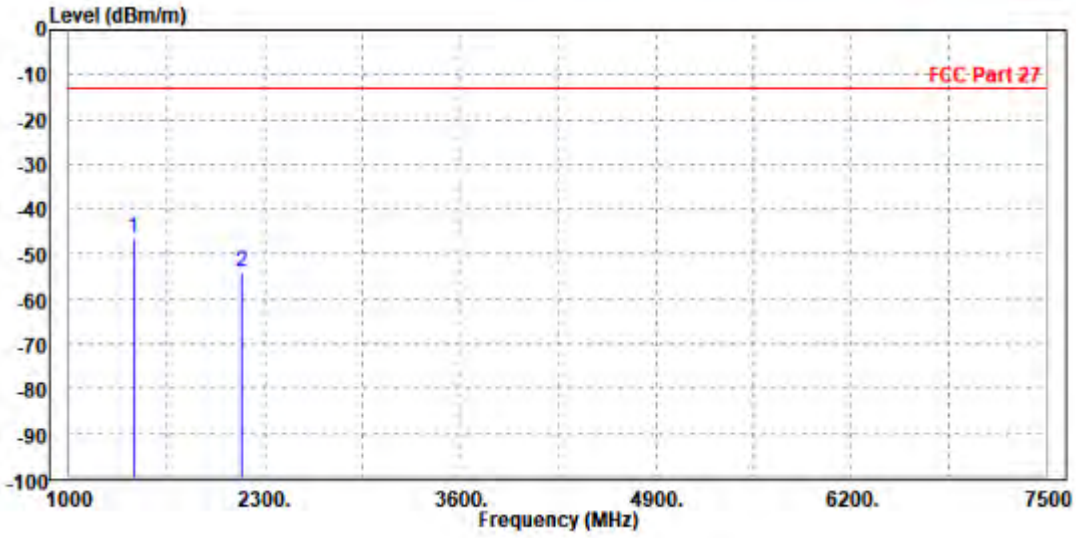
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	1416.000	-42.16	-45.09	-13.00	-29.16	2.93	Peak	Vertical
2	2121.000	-54.71	-59.14	-13.00	-41.71	4.43	Peak	Vertical



CH23173

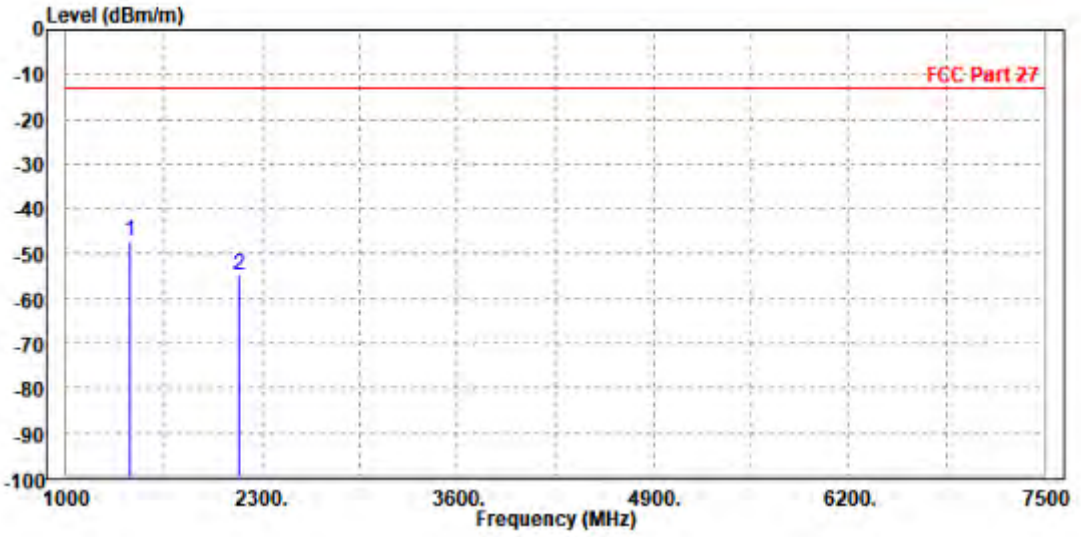
MODE	TX channel 23173	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 1430.000	-46.27	-49.25	-13.00	-33.27	2.98	Peak	Horizontal
2	2144.000	-54.04	-59.18	-13.00	-41.04	5.14	Peak	Horizontal



MODE	TX channel 23173	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

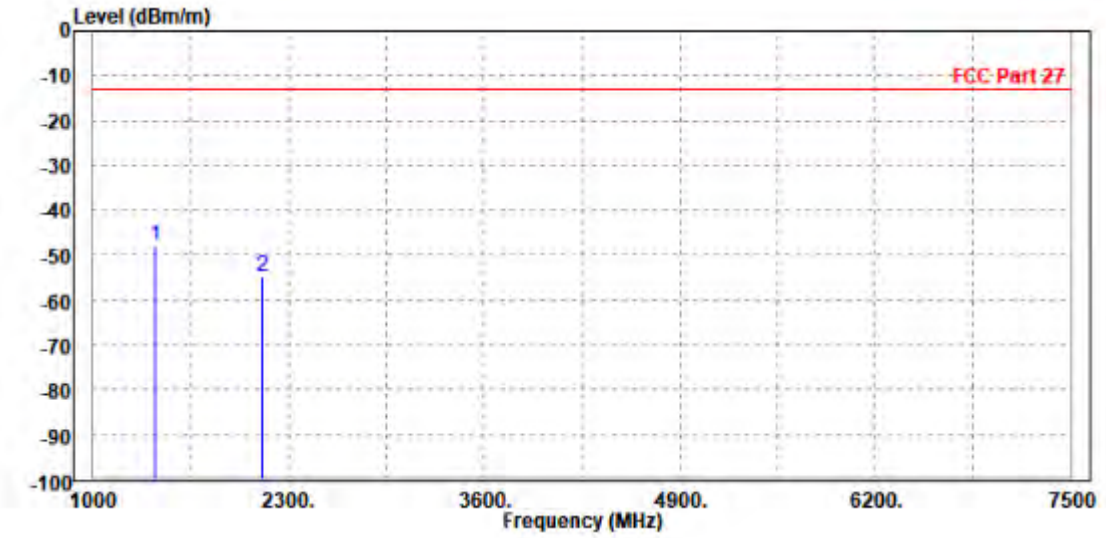
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	1429.000	-47.02	-49.98	-13.00	-34.02	2.96	Peak	Vertical
2	2145.000	-54.86	-59.38	-13.00	-41.86	4.52	Peak	Vertical



CHANNEL BANDWIDTH: 3MHz / QPSK

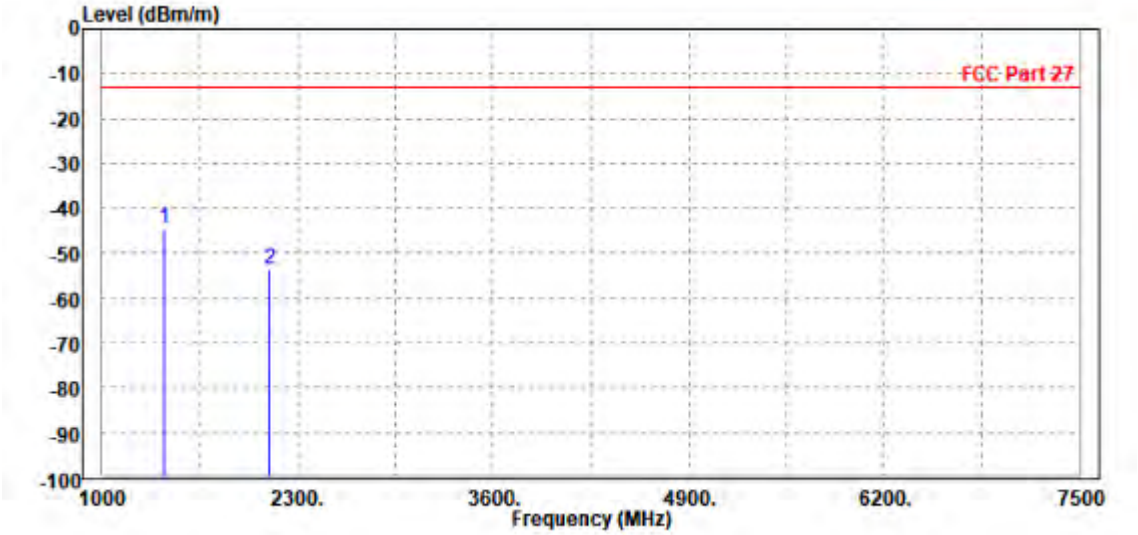
MODE	TX channel 23095	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 1416.000	-47.76	-50.70	-13.00	-34.76	2.94	Peak	Horizontal
2	2121.000	-54.78	-59.86	-13.00	-41.78	5.08	Peak	Horizontal



MODE	TX channel 23095	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

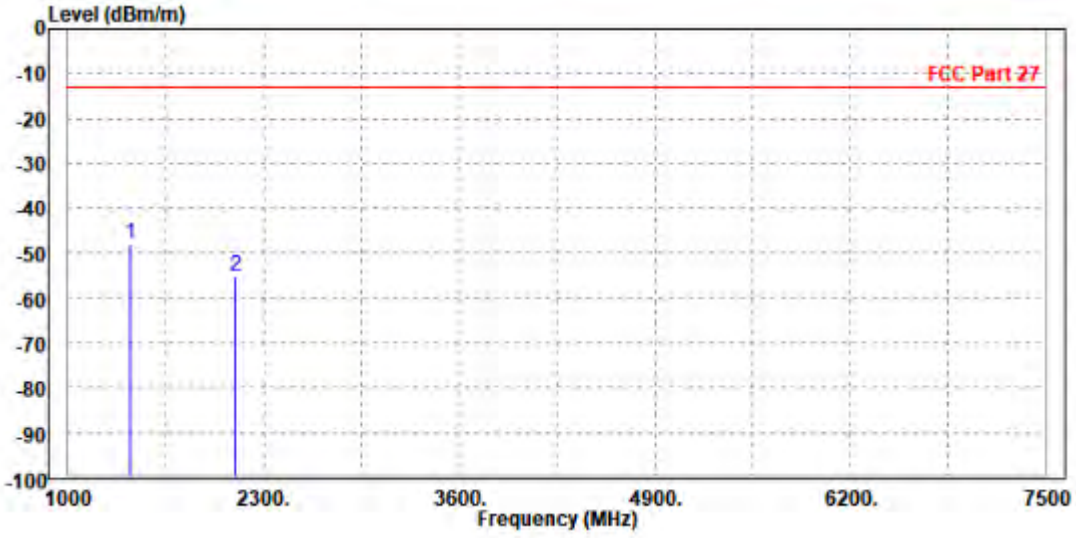
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 1414.000	-44.39	-47.31	-13.00	-31.39	2.92	Peak	Vertical
2	2118.000	-53.67	-58.09	-13.00	-40.67	4.42	Peak	Vertical



CHANNEL BANDWIDTH: 5MHz / QPSK

MODE	TX channel 23095	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	1414.000	-48.09	-51.03	-13.00	-35.09	2.94	Peak	Horizontal
2	2118.000	-55.10	-60.17	-13.00	-42.10	5.07	Peak	Horizontal



MODE	TX channel 23095	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 1416.000	-45.28	-48.21	-13.00	-32.28	2.93	Peak	Vertical
2	2121.000	-55.26	-59.69	-13.00	-42.26	4.43	Peak	Vertical