3.5 CONDUCTED SPURIOUS EMISSIONS

3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

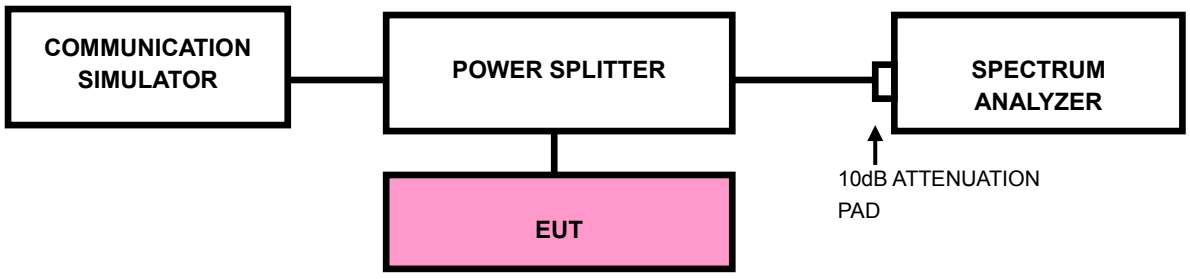
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to –13dBm.

3.5.2 TEST PROCEDURE

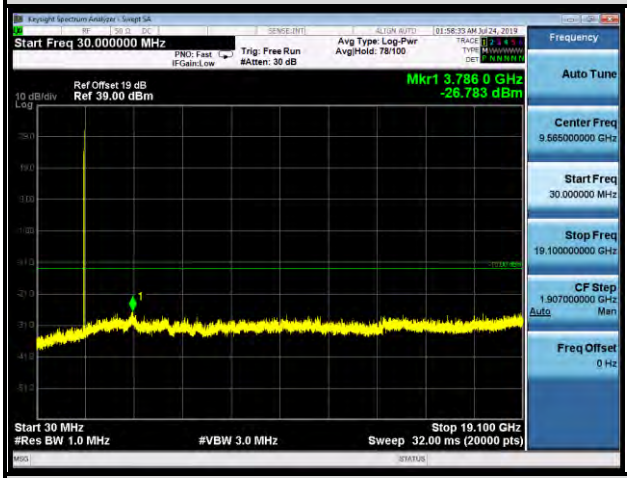
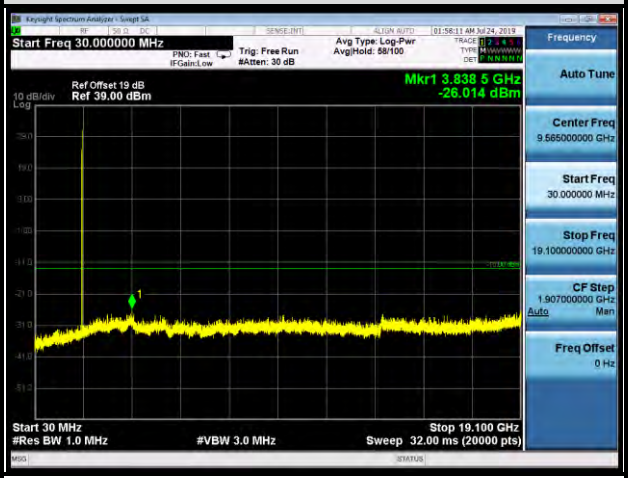
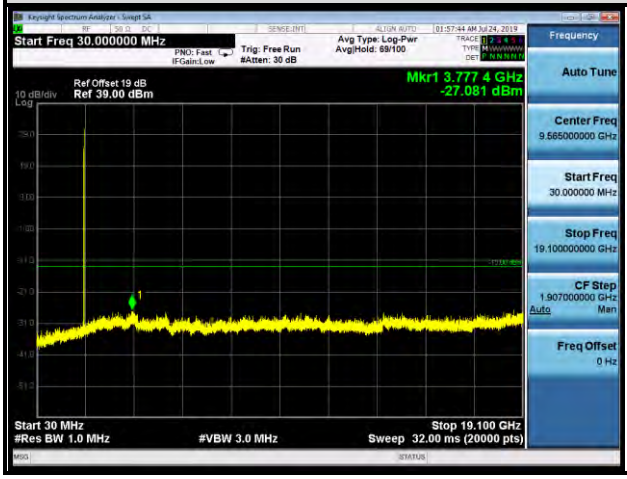
a. The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.

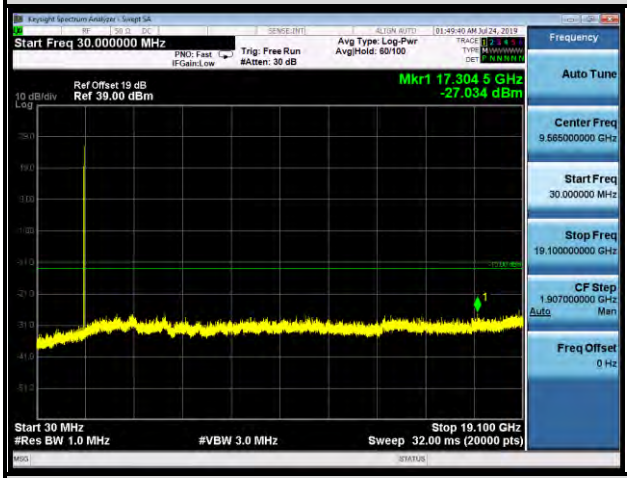
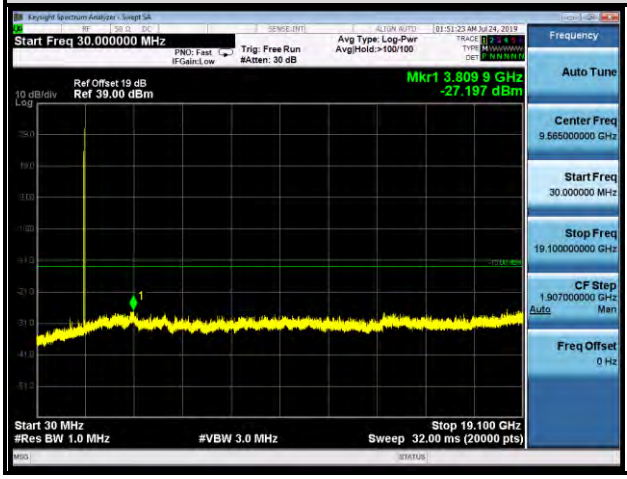
b. Measuring frequency range is from 30 MHz to 19.1GHz. 10dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz is used for conducted emission measurement.

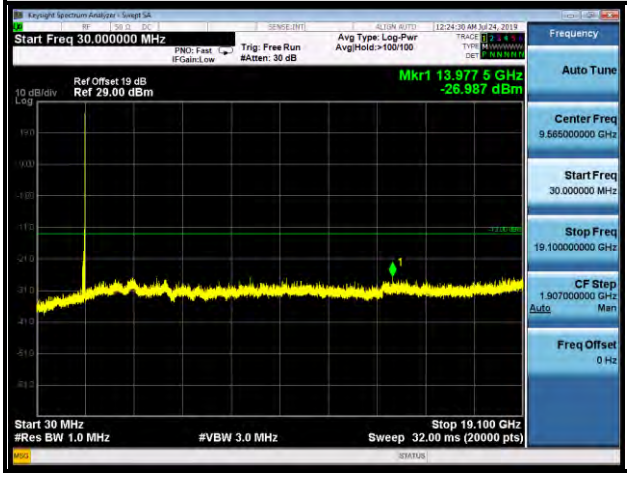
3.5.3 TEST SETUP



3.5.4 TEST RESULTS

GSM	
CHANNEL 512	**CHANNEL 661**
FREQUENCY RANGE : 30MHz~19.1GHz	**FREQUENCY RANGE : 30MHz~19.1GHz**
	
CHANNEL 810	
FREQUENCY RANGE : 30MHz~19.1GHz	
	

EDGE	
CHANNEL 512	CHANNEL 661
FREQUENCY RANGE : 30MHz~19.1GHz	FREQUENCY RANGE : 30MHz~19.1GHz
	
CHANNEL 810	
FREQUENCY RANGE : 30MHz~19.1GHz	
	

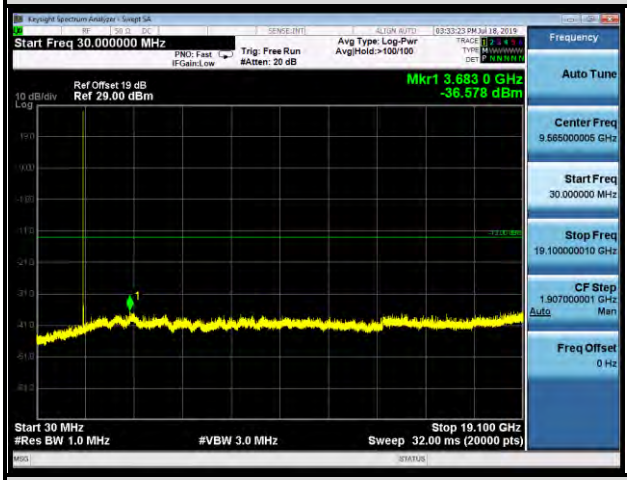
WCDMA	
CHANNEL 9262	CHANNEL 9400
FREQUENCY RANGE : 30MHz~19.1GHz	FREQUENCY RANGE : 30MHz~19.1GHz
	
CHANNEL 9538	
FREQUENCY RANGE : 30MHz~19.1GHz	
	

LTE BAND 2

1.4MHz / QPSK

CHANNEL 18607

FREQUENCY RANGE : 30MHz~19.1GHz

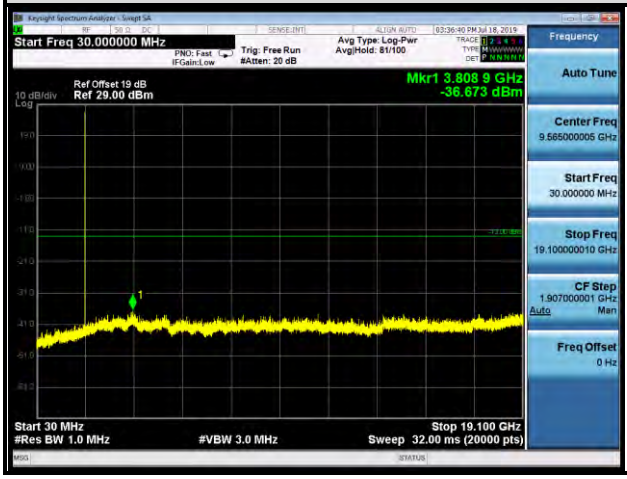


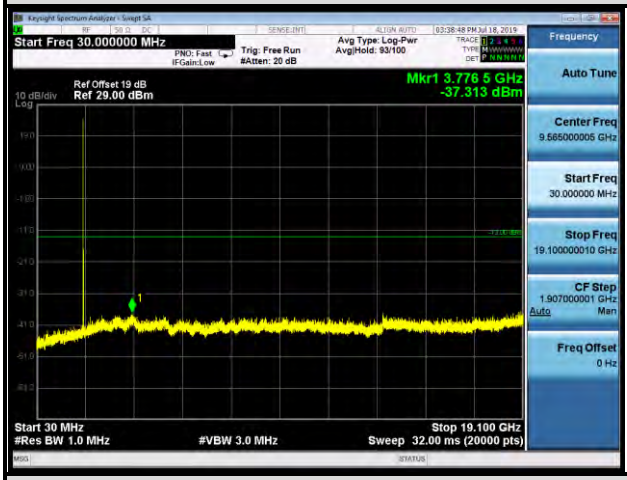
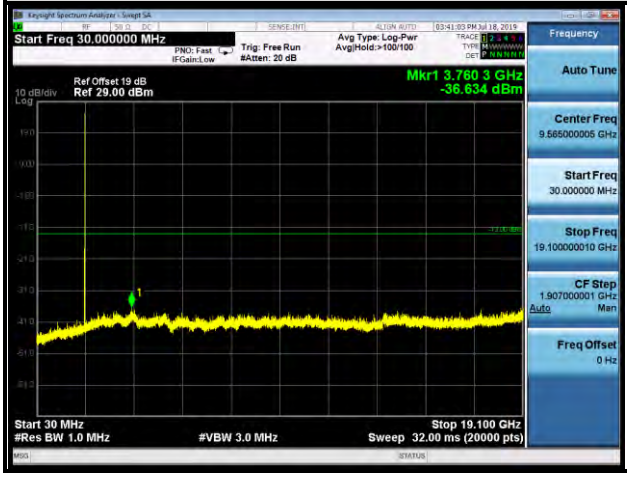
CHANNEL 18900

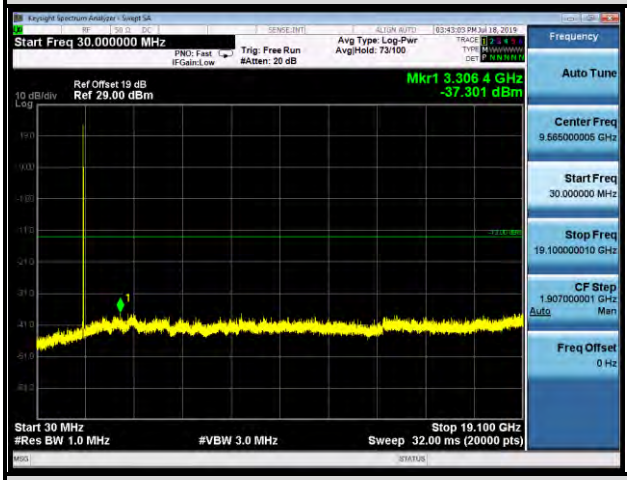
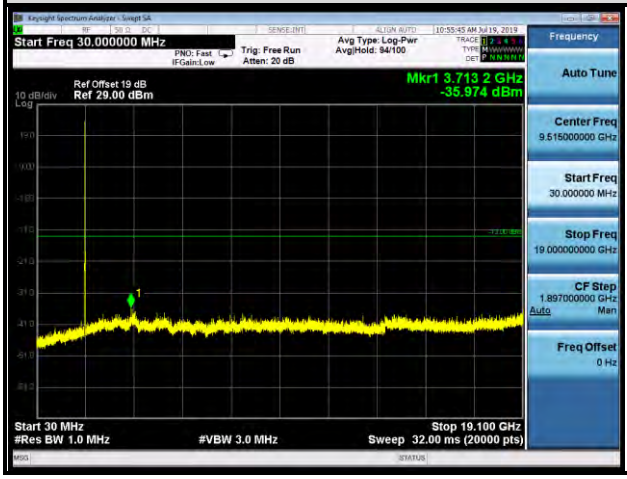
FREQUENCY RANGE : 30MHz~19.1GHz

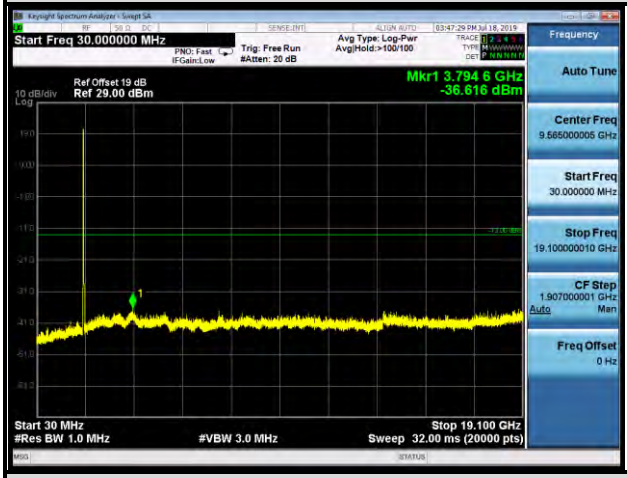
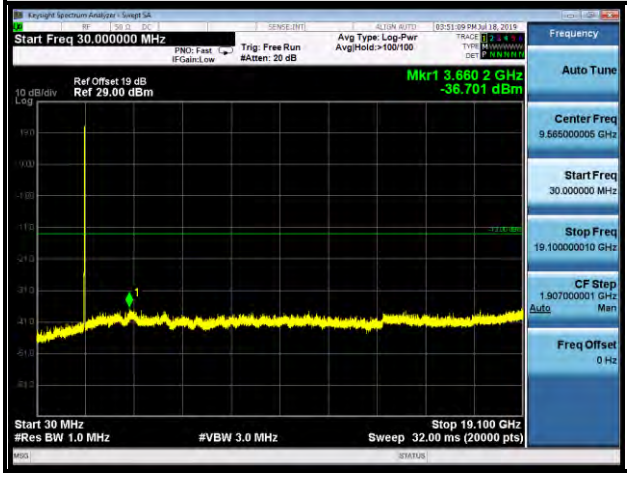
CHANNEL 19193

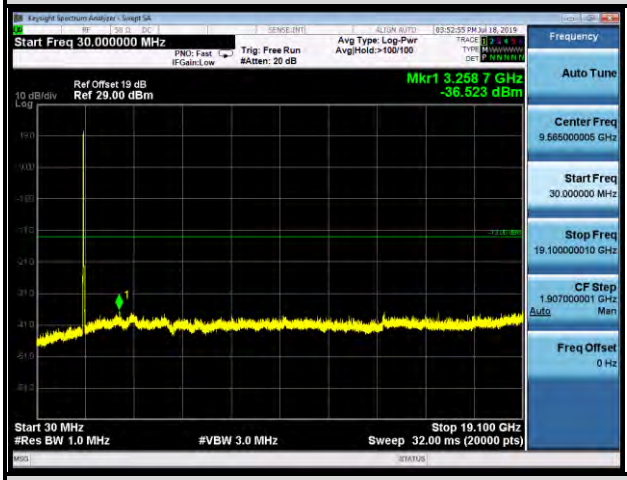
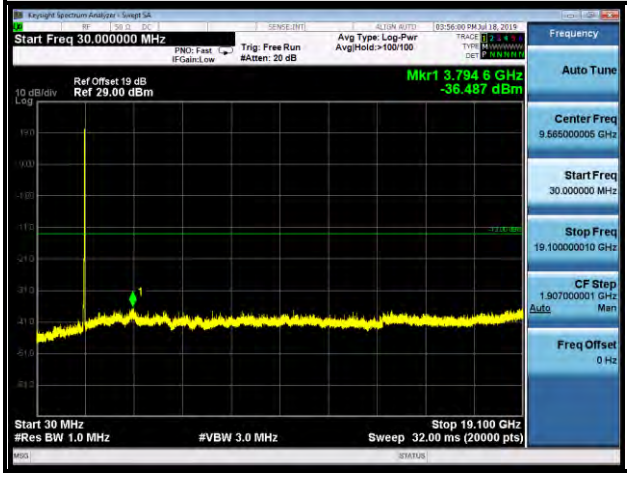
FREQUENCY RANGE : 30MHz~19.1GHz

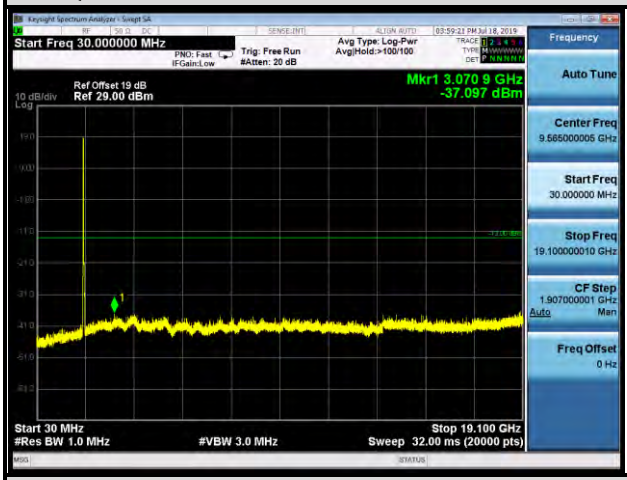
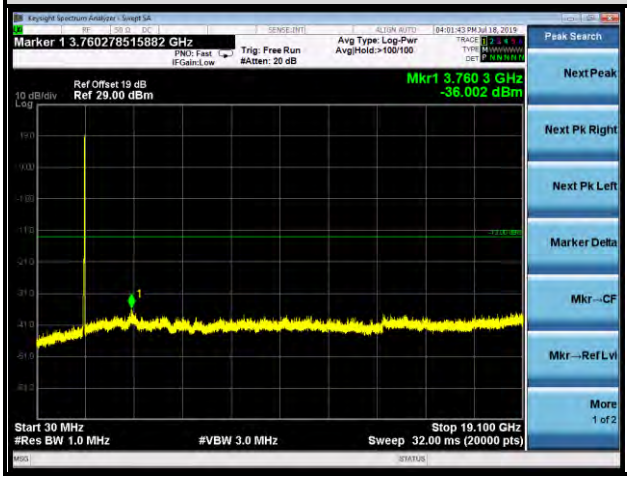


3MHz / QPSK	
CHANNEL 18615	CHANNEL 18900
FREQUENCY RANGE : 30MHz~19.1GHz	FREQUENCY RANGE : 30MHz~19.1GHz
	
CHANNEL 19185	
FREQUENCY RANGE : 30MHz~19.1GHz	
	

5MHz / QPSK	
CHANNEL 18625	CHANNEL 18900
FREQUENCY RANGE : 30MHz~19.1GHz	FREQUENCY RANGE : 30MHz~19.1GHz
	
CHANNEL 19175	
FREQUENCY RANGE : 30MHz~19.1GHz	
	

10MHz / QPSK	
CHANNEL 18650	CHANNEL 18900
FREQUENCY RANGE : 30MHz~19.1GHz	FREQUENCY RANGE : 30MHz~19.1GHz
	
CHANNEL 19150	
FREQUENCY RANGE : 30MHz~19.1GHz	
	

15MHz / QPSK	
CHANNEL 18675	CHANNEL 18900
FREQUENCY RANGE : 30MHz~19.1GHz	FREQUENCY RANGE : 30MHz~19.1GHz
	
CHANNEL 19125	
FREQUENCY RANGE : 30MHz~19.1GHz	
	

20MHz / QPSK	
CHANNEL 18700	CHANNEL 18900
FREQUENCY RANGE : 30MHz~19.1GHz	FREQUENCY RANGE : 30MHz~19.1GHz
	
CHANNEL 19100	
FREQUENCY RANGE : 30MHz~19.1GHz	
	

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.

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.

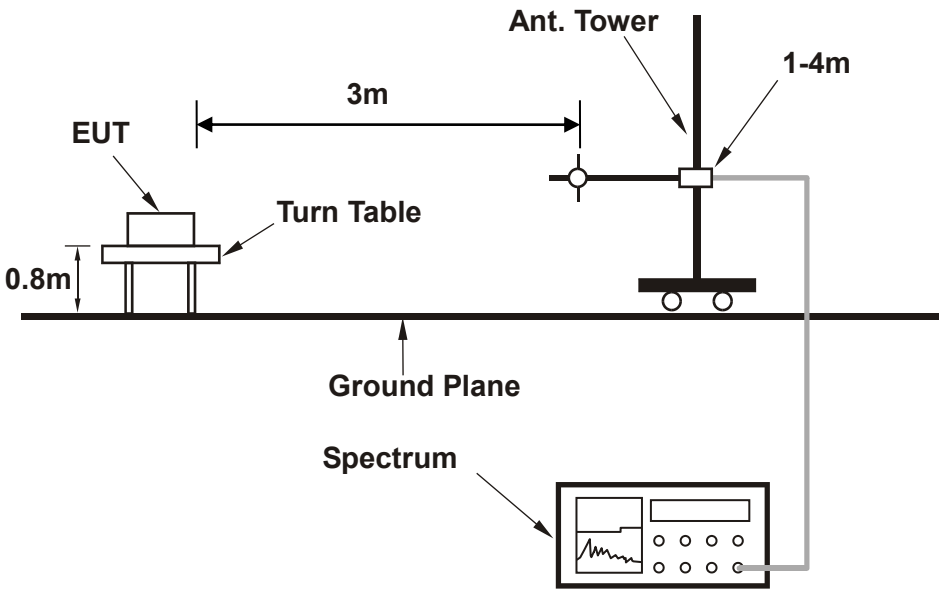
NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

3.6.3 DEVIATION FROM TEST STANDARD

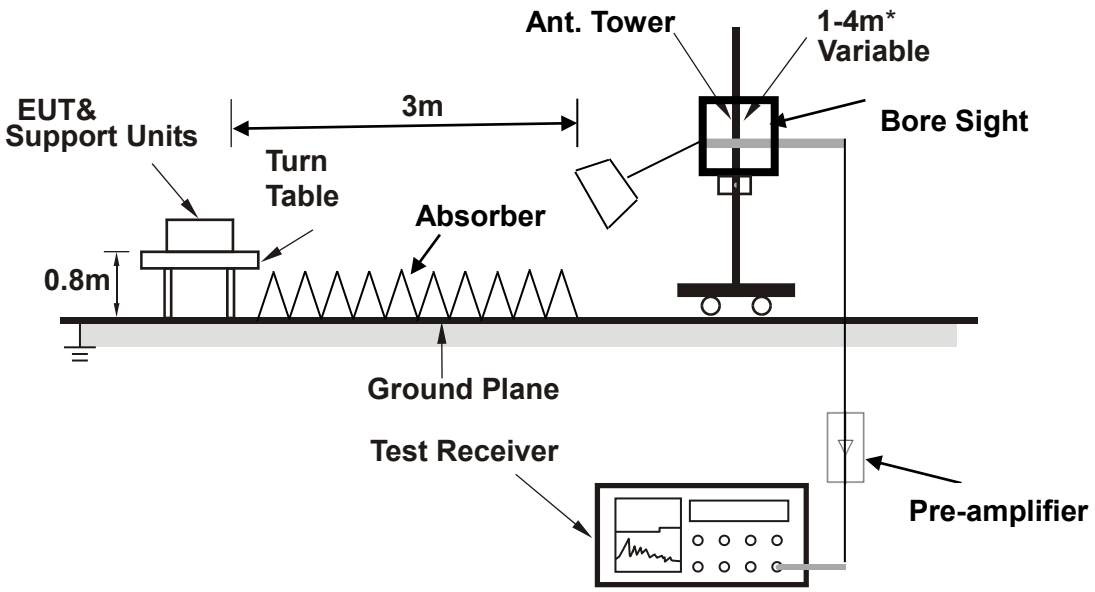
No deviation

3.6.4 TEST SETUP

< 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

WWAN-ANT-0

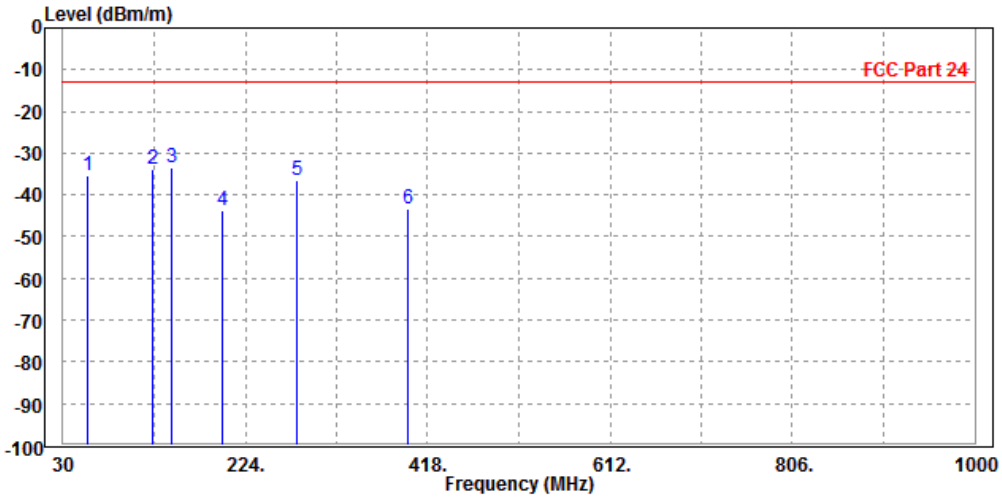
BELOW 1GHz WORST-CASE DATA

30 MHz – 1GHz data:

EDGE 1900:

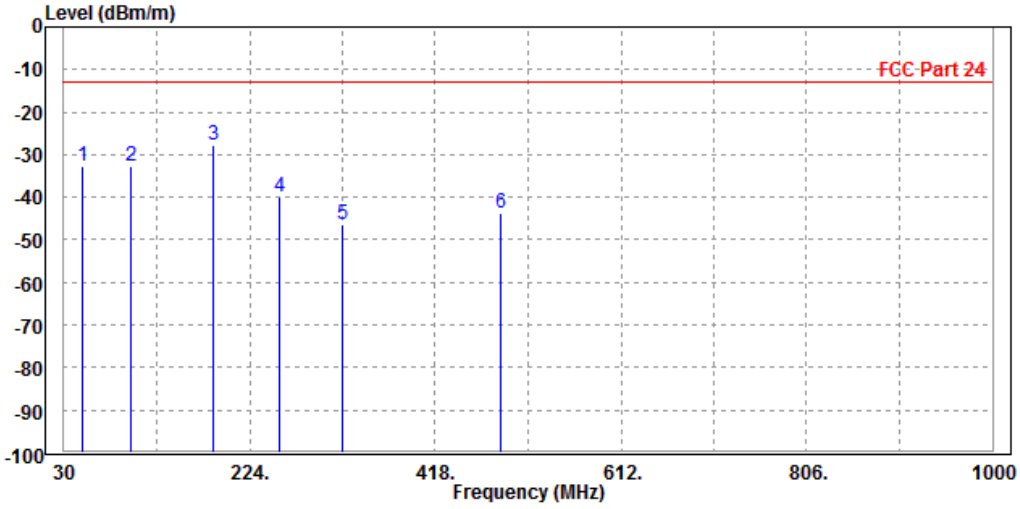
MODE	TX channel 661	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1		56.350	-35.19	-42.16	-13.00	-22.19	6.97	Peak	Horizontal
2		125.340	-33.85	-42.51	-13.00	-20.85	8.66	Peak	Horizontal
3	PP	145.230	-33.30	-42.57	-13.00	-20.30	9.27	Peak	Horizontal
4		199.520	-43.86	-54.65	-13.00	-30.86	10.79	Peak	Horizontal
5		278.610	-36.61	-50.24	-13.00	-23.61	13.63	Peak	Horizontal
6		396.850	-43.38	-60.48	-13.00	-30.38	17.10	Peak	Horizontal



MODE	TX channel 661	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
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	48.960	-32.81	-40.25	-13.00	-19.81	7.44	Peak	Vertical
2	99.560	-32.83	-42.58	-13.00	-19.83	9.75	Peak	Vertical
3 PP	185.460	-27.70	-38.21	-13.00	-14.70	10.51	Peak	Vertical
4	255.420	-39.85	-53.16	-13.00	-26.85	13.31	Peak	Vertical
5	321.150	-46.56	-61.42	-13.00	-33.56	14.86	Peak	Vertical
6	485.630	-43.78	-62.28	-13.00	-30.78	18.50	Peak	Vertical



ABOVE 1GHz DATA

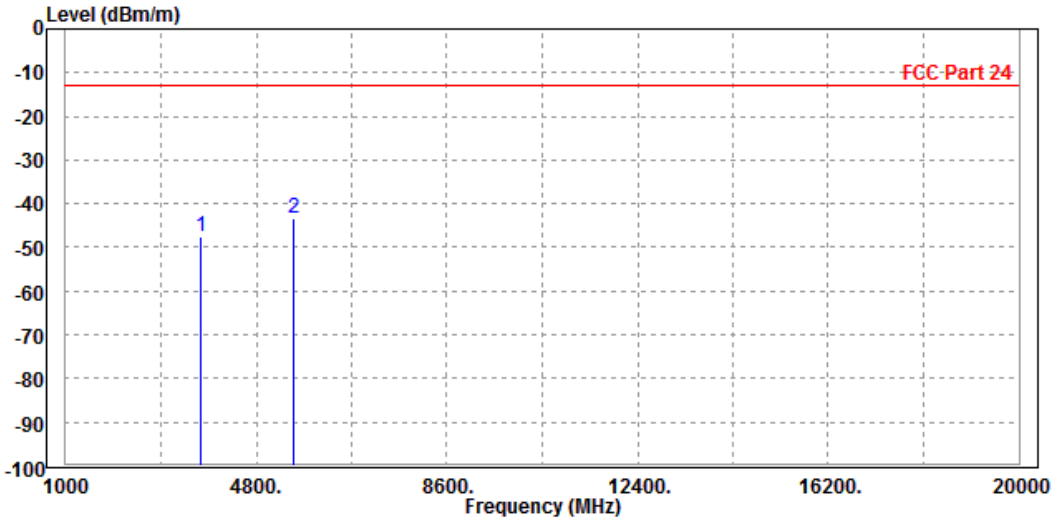
Note: For higher frequency, the emission is too low to be detected.

PCS 1900:

CH 512

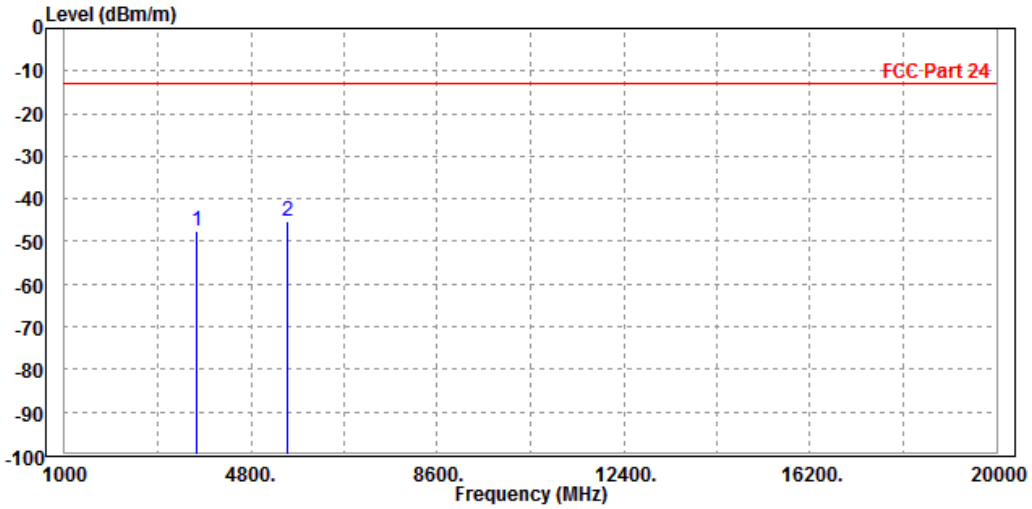
MODE	TX channel 512	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3702.000	-47.36	-50.49	-13.00	-34.36	3.13	Peak	Horizontal
2 PP	5556.000	-43.28	-52.31	-13.00	-30.28	9.03	Peak	Horizontal



MODE	TX channel 512	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

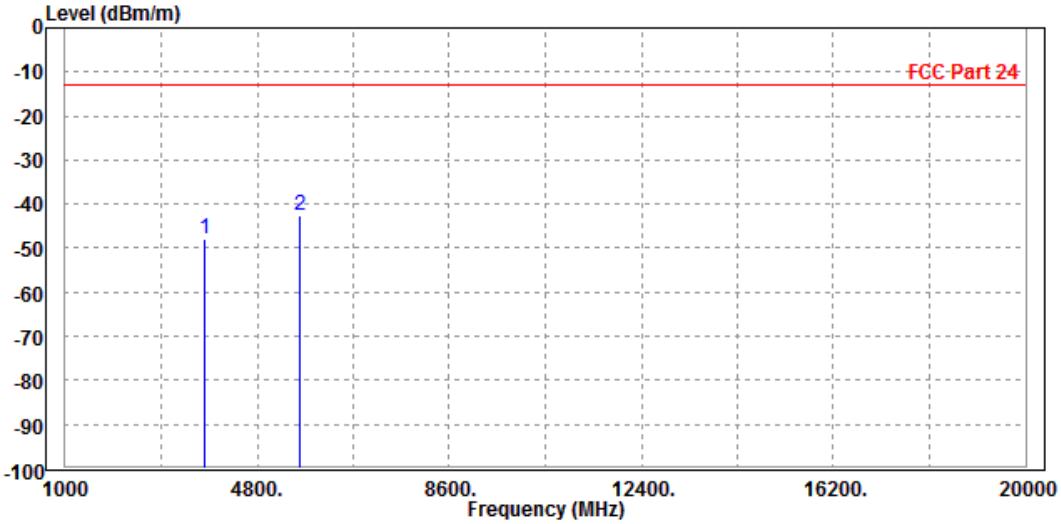
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3702.000	-47.64	-51.23	-13.00	-34.64	3.59	Peak	Vertical
2 PP	5556.000	-45.13	-53.21	-13.00	-32.13	8.08	Peak	Vertical



CH 661

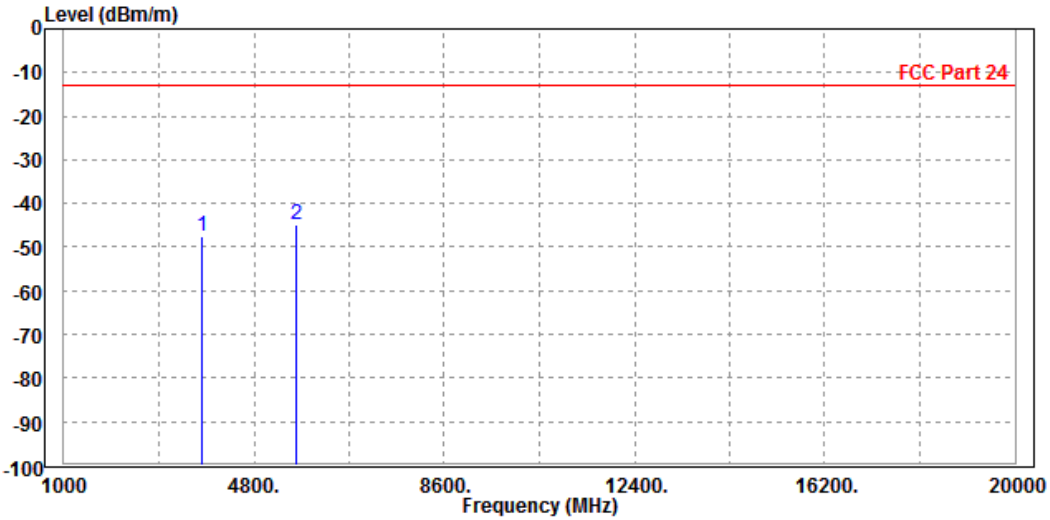
MODE	TX channel 661	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-47.88	-51.27	-13.00	-34.88	3.39	Peak	Horizontal
2 PP	5636.000	-42.57	-51.69	-13.00	-29.57	9.12	Peak	Horizontal



MODE	TX channel 661	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

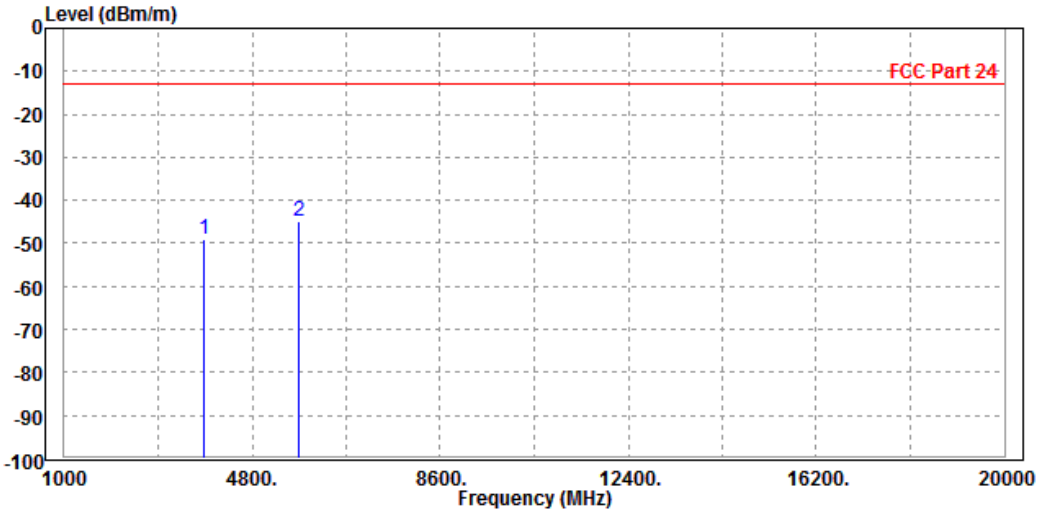
		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1		3755.000	-47.37	-51.22	-13.00	-34.37	3.85	Peak	Vertical
2	PP	5640.000	-44.90	-53.16	-13.00	-31.90	8.26	Peak	Vertical



CH 810

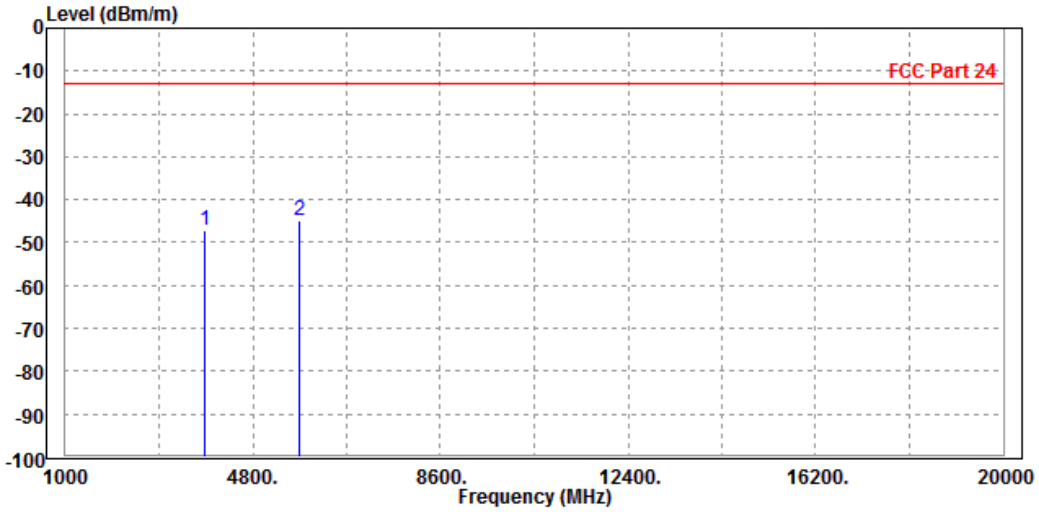
MODE	TX channel 810	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3820.000	-48.92	-52.62	-13.00	-35.92	3.70	Peak	Horizontal
2 PP	5732.000	-44.98	-54.21	-13.00	-31.98	9.23	Peak	Horizontal



MODE	TX channel 810	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
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	3820.000	-47.10	-51.28	-13.00	-34.10	4.18	Peak	Vertical
2 PP	5732.000	-44.91	-53.35	-13.00	-31.91	8.44	Peak	Vertical

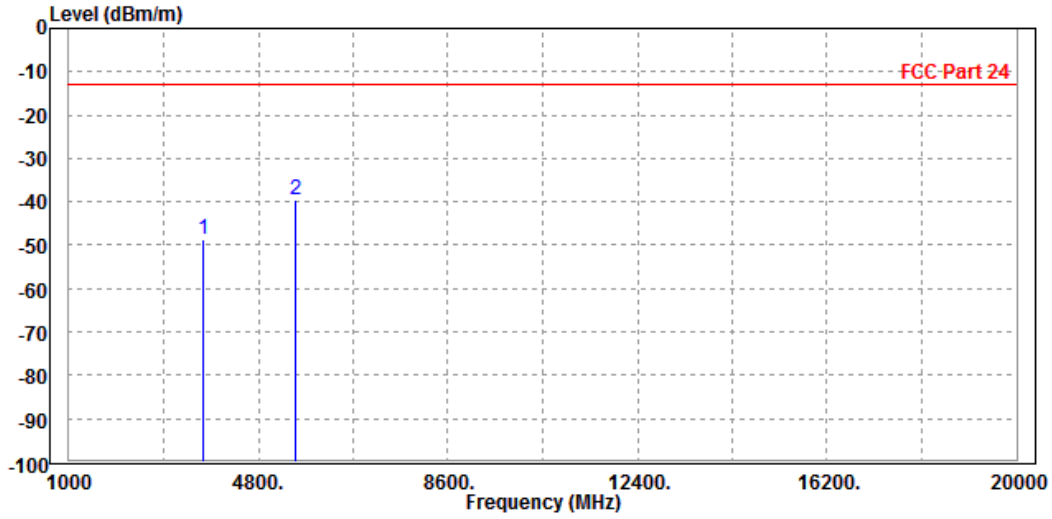


EDGE 1900:

CH 512

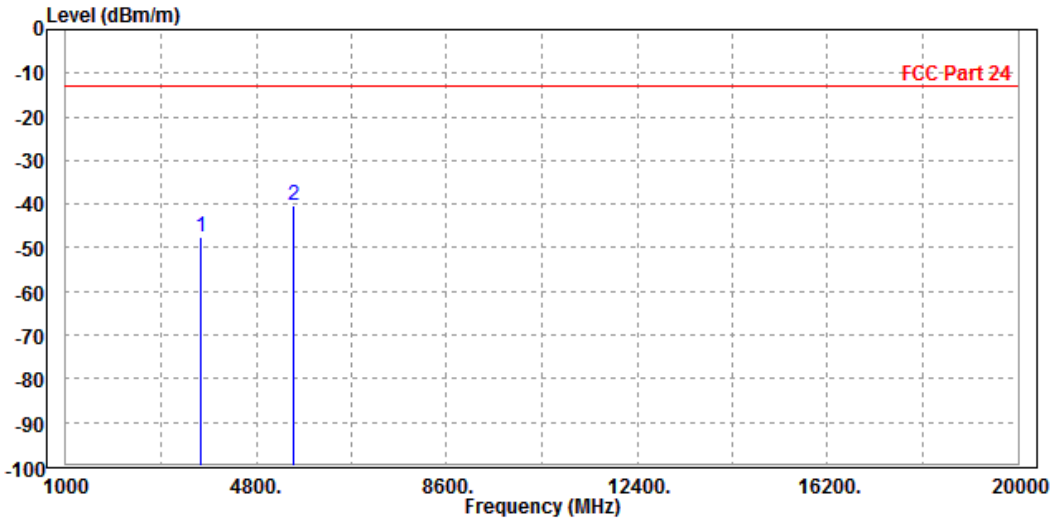
MODE	TX channel 512	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3702.000	-48.71	-51.84	-13.00	-35.71	3.13	Peak	Horizontal
2 PP	5556.000	-39.62	-48.65	-13.00	-26.62	9.03	Peak	Horizontal



MODE	TX channel 512	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

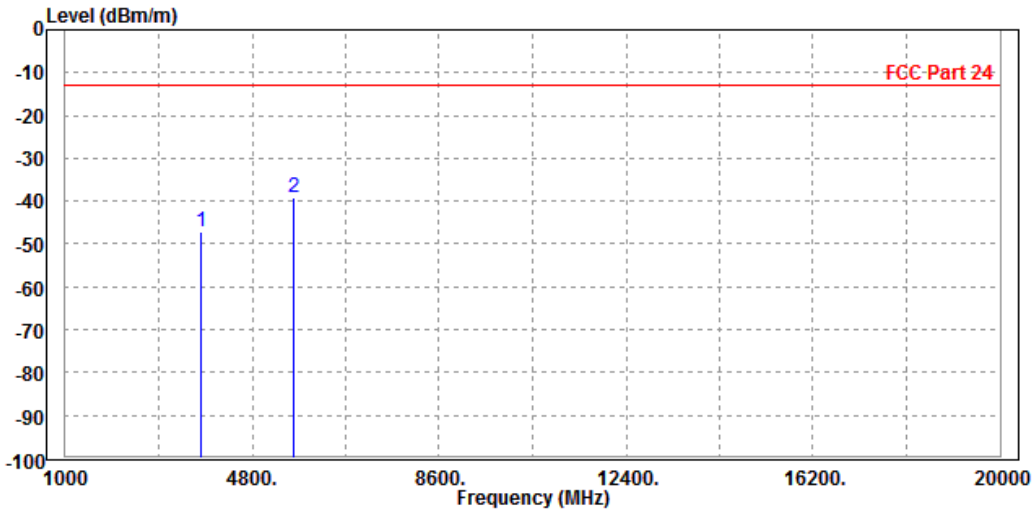
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3702.000	-47.67	-51.26	-13.00	-34.67	3.59	Peak	Vertical
2 PP	5556.000	-40.34	-48.42	-13.00	-27.34	8.08	Peak	Vertical



CH 661

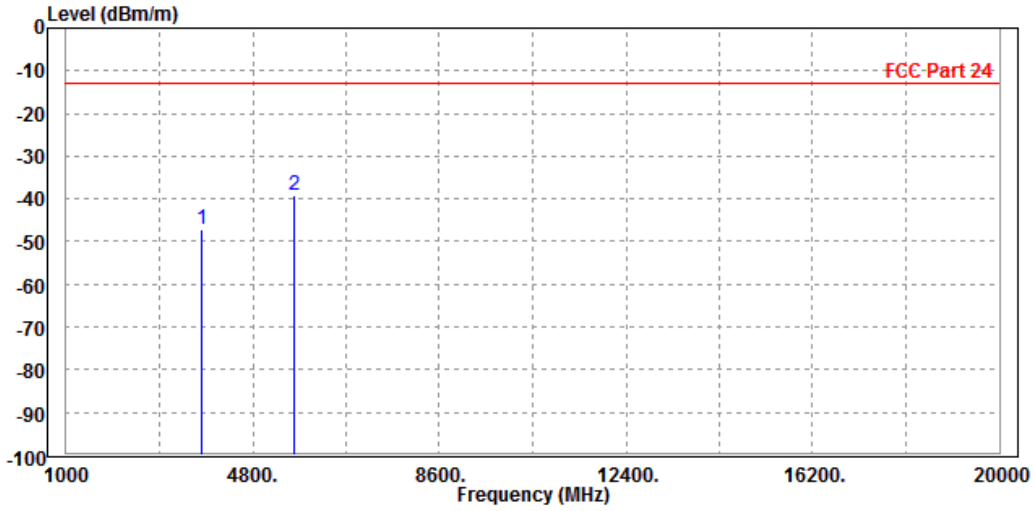
MODE	TX channel 661	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-46.97	-50.36	-13.00	-33.97	3.39	Peak	Horizontal
2 PP	5640.000	-39.09	-48.21	-13.00	-26.09	9.12	Peak	Horizontal



MODE	TX channel 661	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

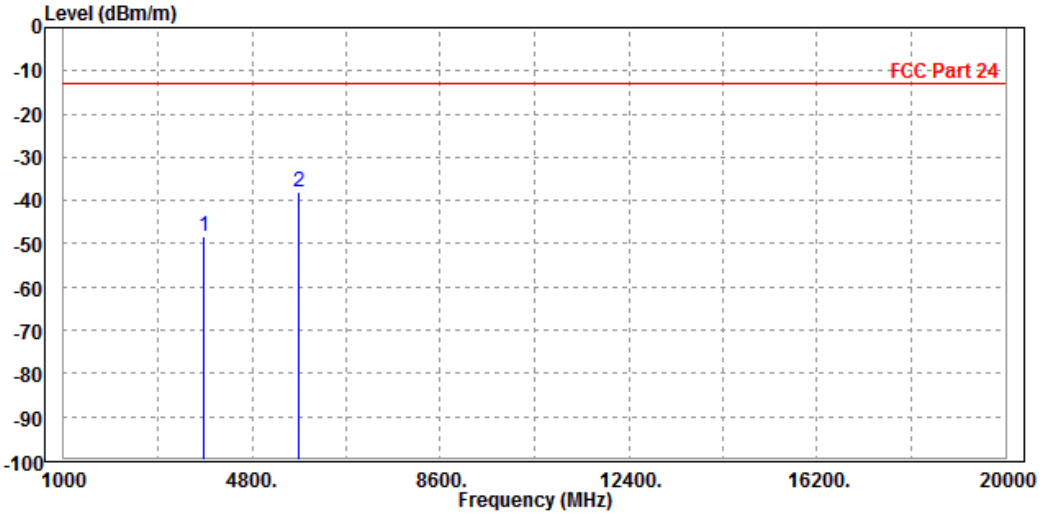
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-47.21	-51.06	-13.00	-34.21	3.85	Peak	Vertical
2 PP	5640.000	-38.99	-47.25	-13.00	-25.99	8.26	Peak	Vertical



CH 810

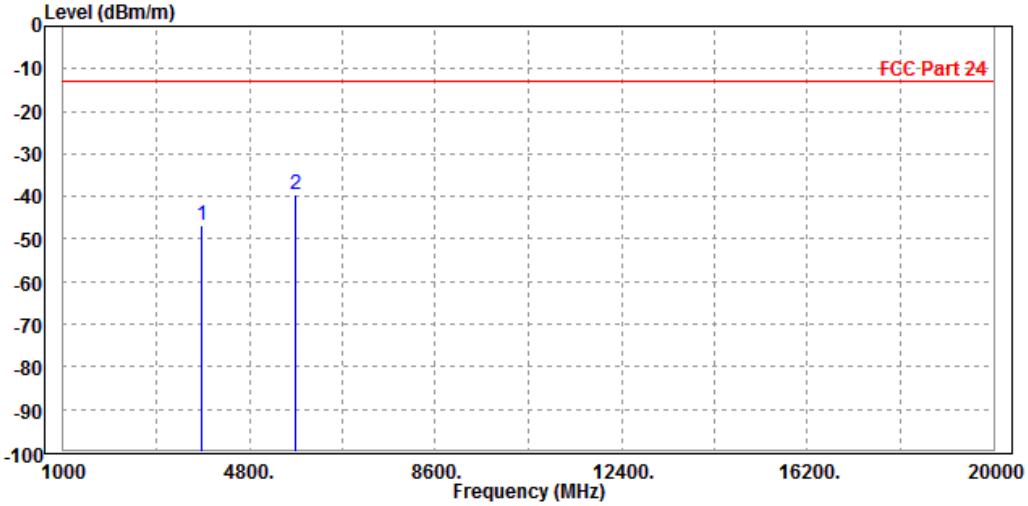
MODE	TX channel 810	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3820.000	-48.43	-52.13	-13.00	-35.43	3.70	Peak	Horizontal
2 PP	5732.000	-38.12	-47.35	-13.00	-25.12	9.23	Peak	Horizontal



MODE	TX channel 810	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
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	3820.000	-46.84	-51.02	-13.00	-33.84	4.18	Peak	Vertical
2 PP	5732.000	-39.41	-47.85	-13.00	-26.41	8.44	Peak	Vertical

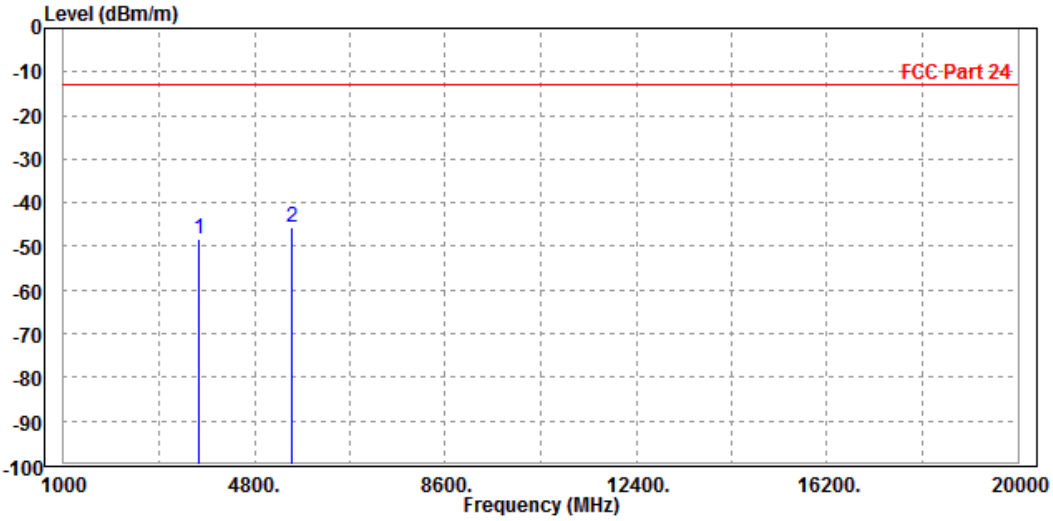


WCDMA Band II

CH 9262

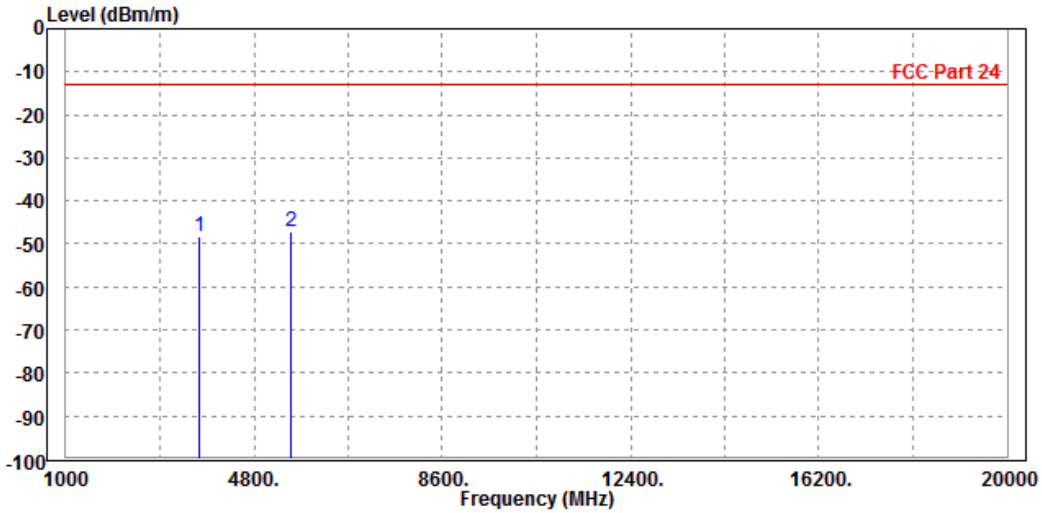
MODE	TX channel 9262	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3705.000	-48.30	-51.45	-13.00	-35.30	3.15	Peak	Horizontal
2 PP	5556.000	-45.60	-54.63	-13.00	-32.60	9.03	Peak	Horizontal



MODE	TX channel 9262	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

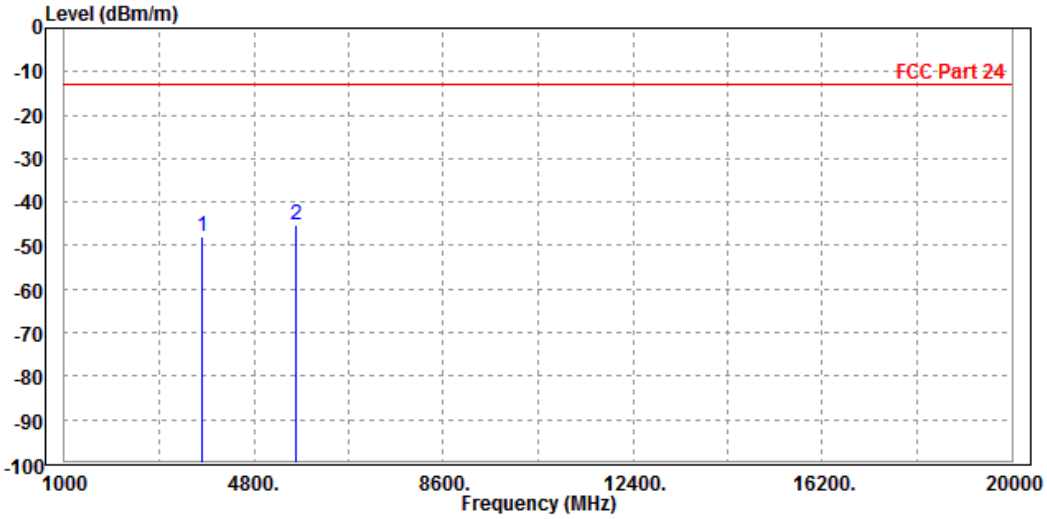
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3705.000	-48.25	-51.85	-13.00	-35.25	3.60	Peak	Vertical
2 PP	5556.000	-47.34	-55.42	-13.00	-34.34	8.08	Peak	Vertical



CH 9400

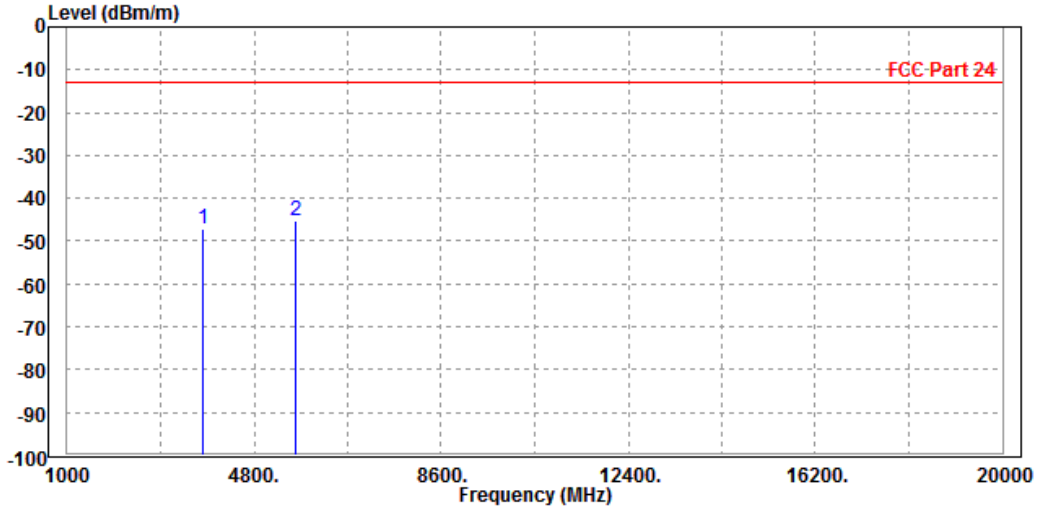
MODE	TX channel 9400	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-47.95	-51.34	-13.00	-34.95	3.39	Peak	Horizontal
2 PP	5636.000	-45.13	-54.25	-13.00	-32.13	9.12	Peak	Horizontal



MODE	TX channel 9400	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

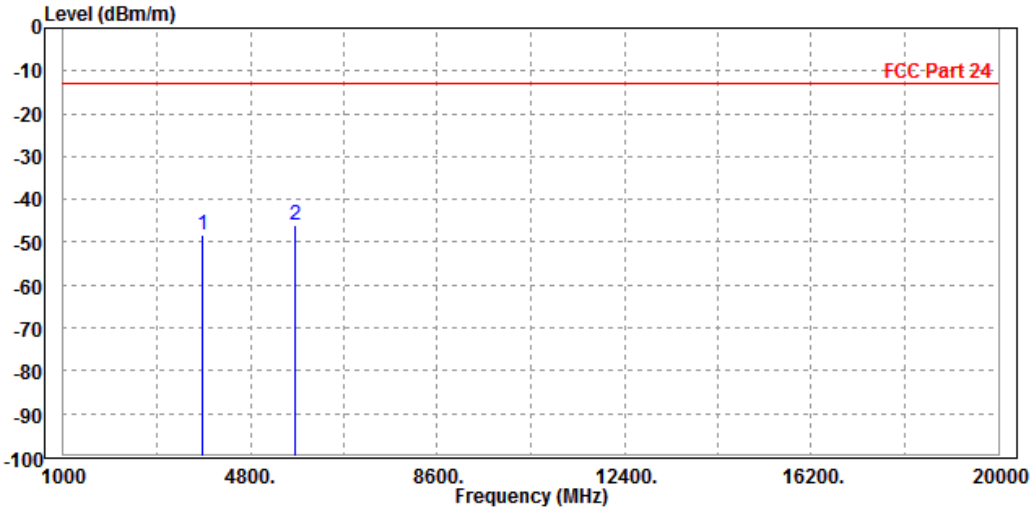
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-47.23	-51.08	-13.00	-34.23	3.85	Peak	Vertical
2 PP	5640.000	-45.43	-53.69	-13.00	-32.43	8.26	Peak	Vertical



CH 9538

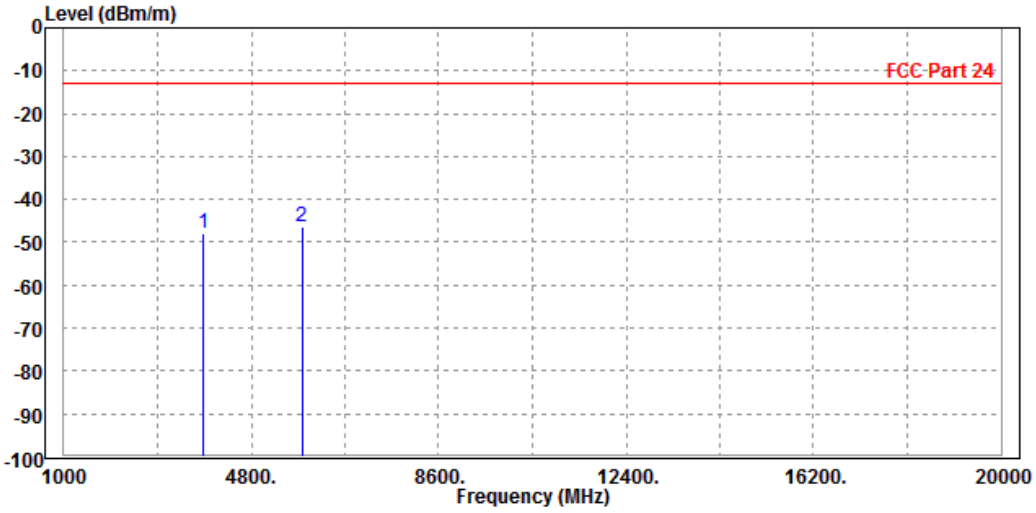
MODE	TX channel 9538	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3815.000	-48.30	-51.98	-13.00	-35.30	3.68	Peak	Horizontal
2 PP	5725.000	-46.04	-55.26	-13.00	-33.04	9.22	Peak	Horizontal



MODE	TX channel 9538	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
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	3815.000	-47.90	-52.06	-13.00	-34.90	4.16	Peak	Vertical
2 PP	5825.000	-46.25	-54.88	-13.00	-33.25	8.63	Peak	Vertical

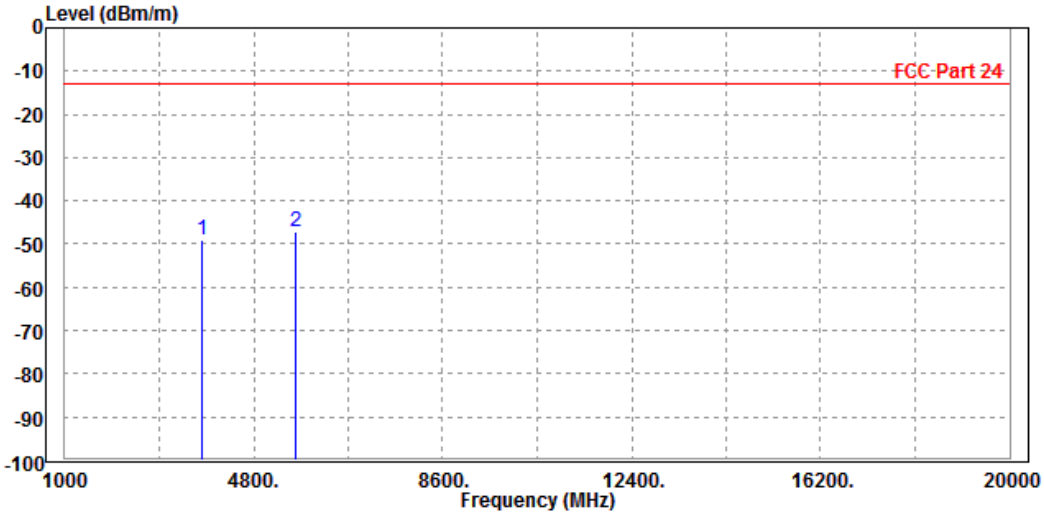


LTE Band 2

CHANNEL BANDWIDTH: 1.4MHz / QPSK

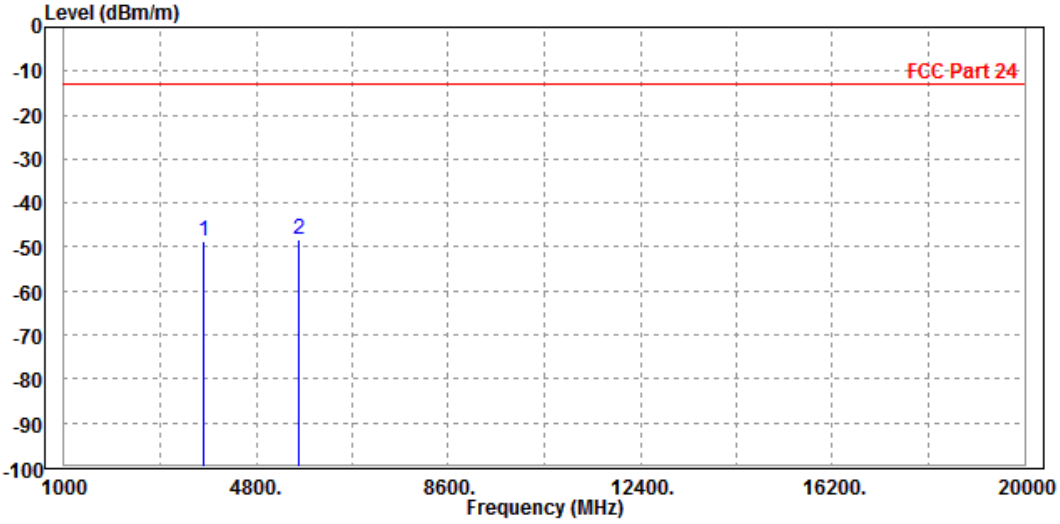
MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-49.10	-52.49	-13.00	-36.10	3.39	Peak	Horizontal
2 PP	5640.000	-47.19	-56.31	-13.00	-34.19	9.12	Peak	Horizontal



MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

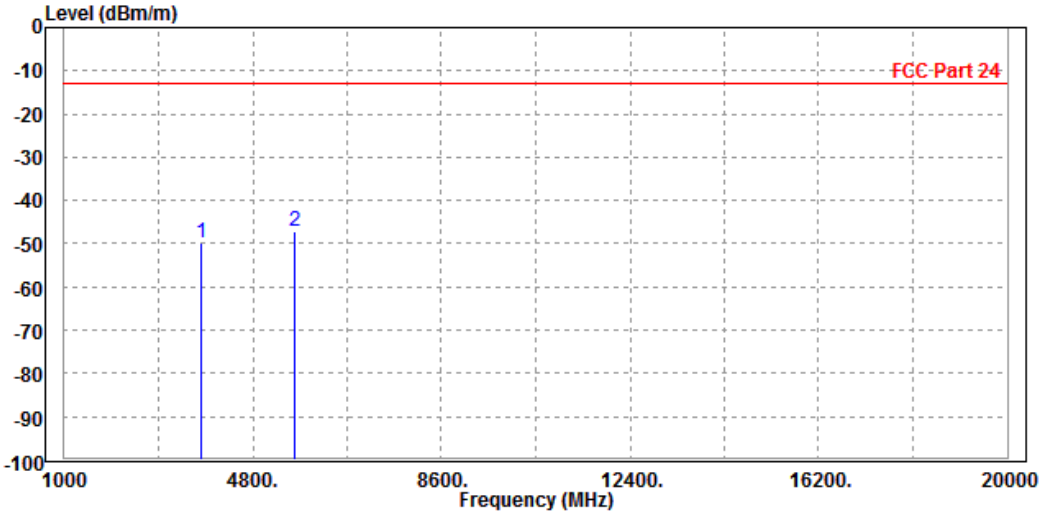
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-48.83	-52.68	-13.00	-35.83	3.85	Peak	Vertical
2 PP	5640.000	-48.46	-56.72	-13.00	-35.46	8.26	Peak	Vertical



CHANNEL BANDWIDTH: 3MHz / QPSK

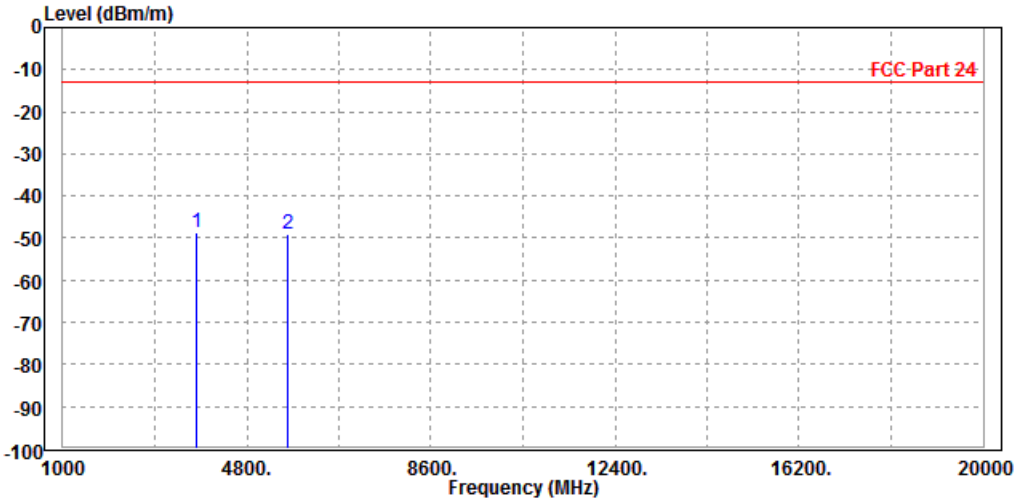
MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-49.75	-53.14	-13.00	-36.75	3.39	Peak	Horizontal
2 PP	5640.000	-47.11	-56.23	-13.00	-34.11	9.12	Peak	Horizontal



MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
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	3755.000	-48.51	-52.36	-13.00	-35.51	3.85	Peak	Vertical
2	5640.000	-48.86	-57.12	-13.00	-35.86	8.26	Peak	Vertical

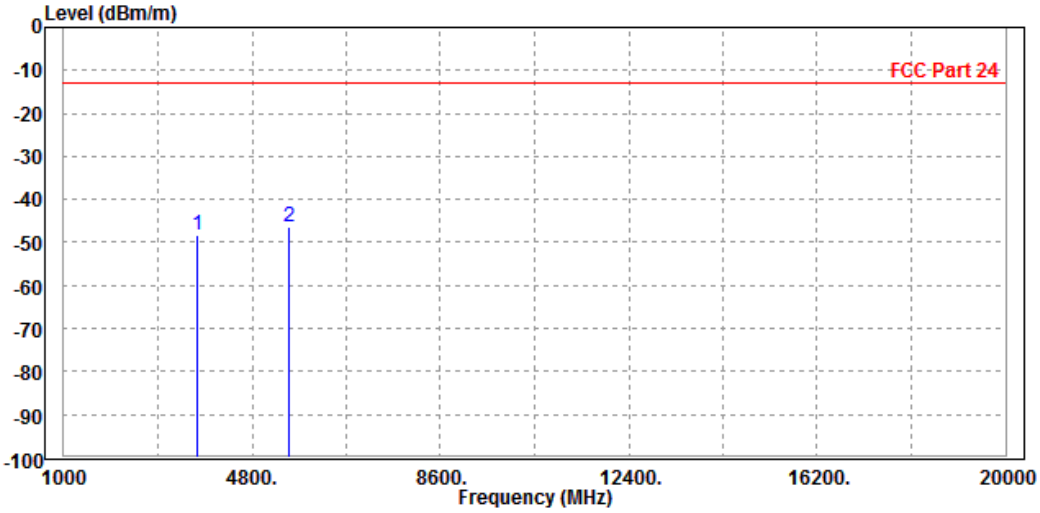


CHANNEL BANDWIDTH: 5MHz / QPSK

CH18625

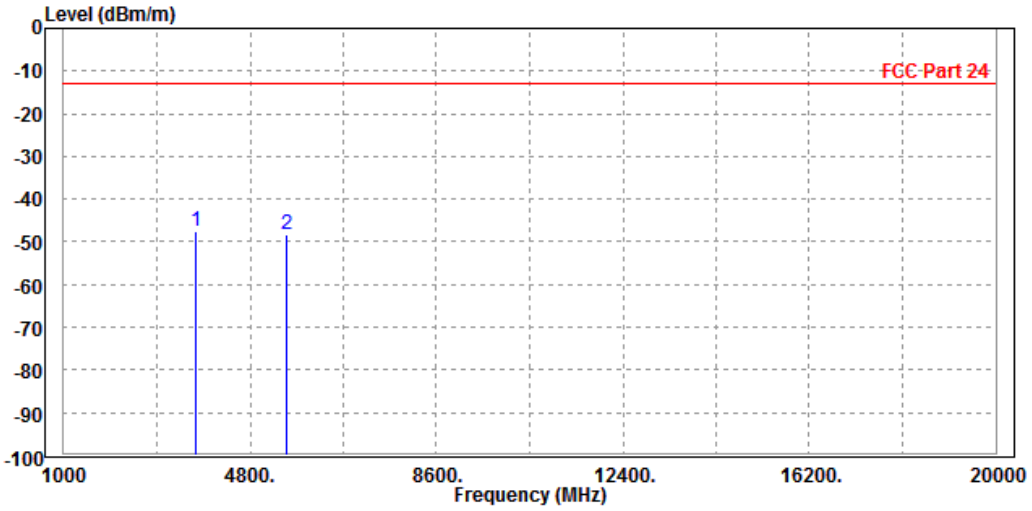
MODE	TX channel 18625	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3705.000	-48.19	-51.34	-13.00	-35.19	3.15	Peak	Horizontal
2 PP	5556.000	-46.26	-55.29	-13.00	-33.26	9.03	Peak	Horizontal



MODE	TX channel 18625	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

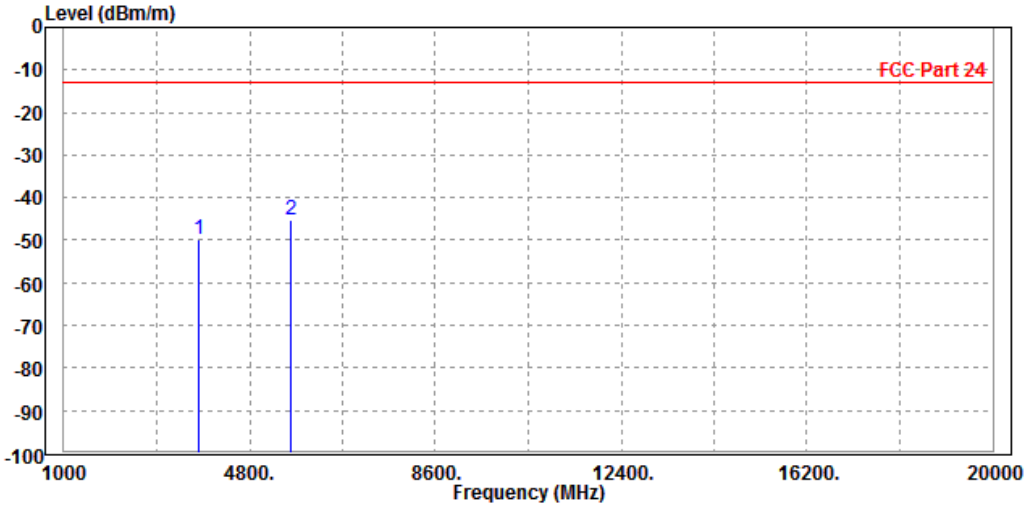
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	3705.000	-47.68	-51.28	-13.00	-34.68	3.60	Peak	Vertical
2	5556.000	-48.27	-56.35	-13.00	-35.27	8.08	Peak	Vertical



CH18900

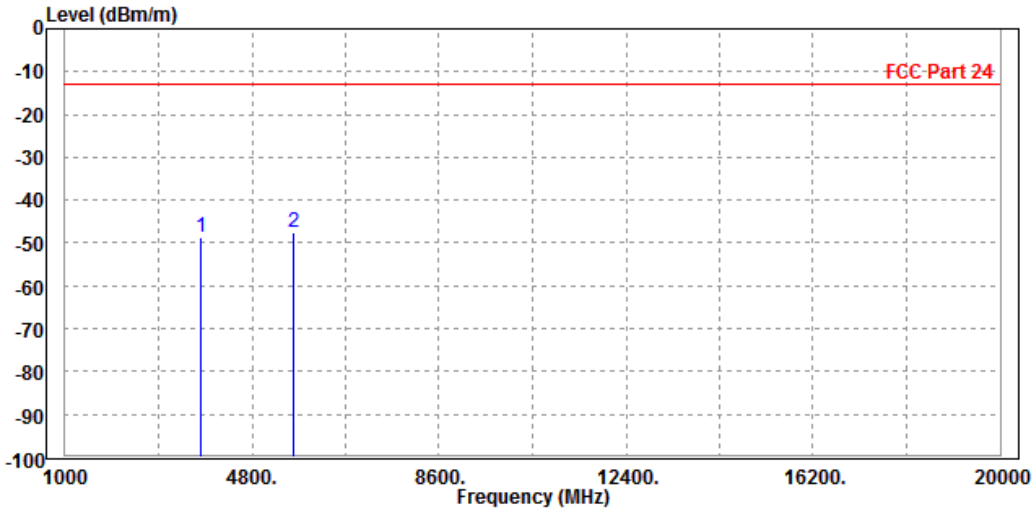
MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-49.89	-53.28	-13.00	-36.89	3.39	Peak	Horizontal
2 PP	5640.000	-45.17	-54.29	-13.00	-32.17	9.12	Peak	Horizontal



MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

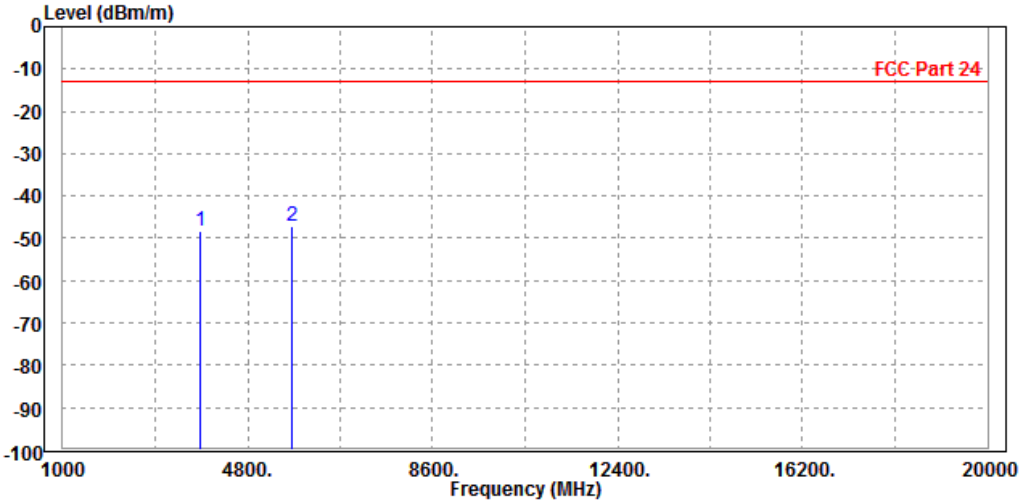
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-48.63	-52.48	-13.00	-35.63	3.85		Vertical
2 PP	5640.000	-47.63	-55.89	-13.00	-34.63	8.26		Vertical



CH19175

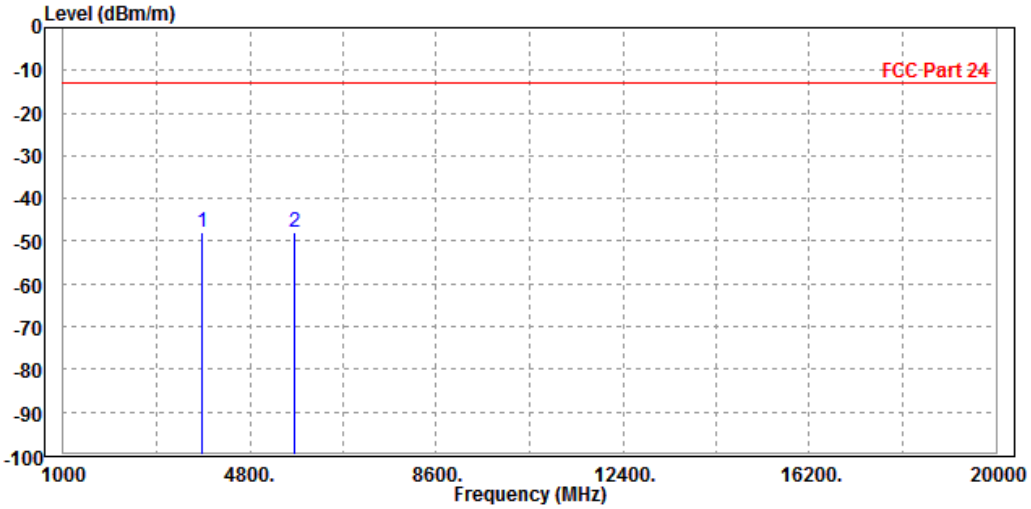
MODE	TX channel 19175	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3815.000	-48.19	-51.87	-13.00	-35.19	3.68	Peak	Horizontal
2 PP	5725.000	-47.05	-56.27	-13.00	-34.05	9.22	Peak	Horizontal



MODE	TX channel 19175	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

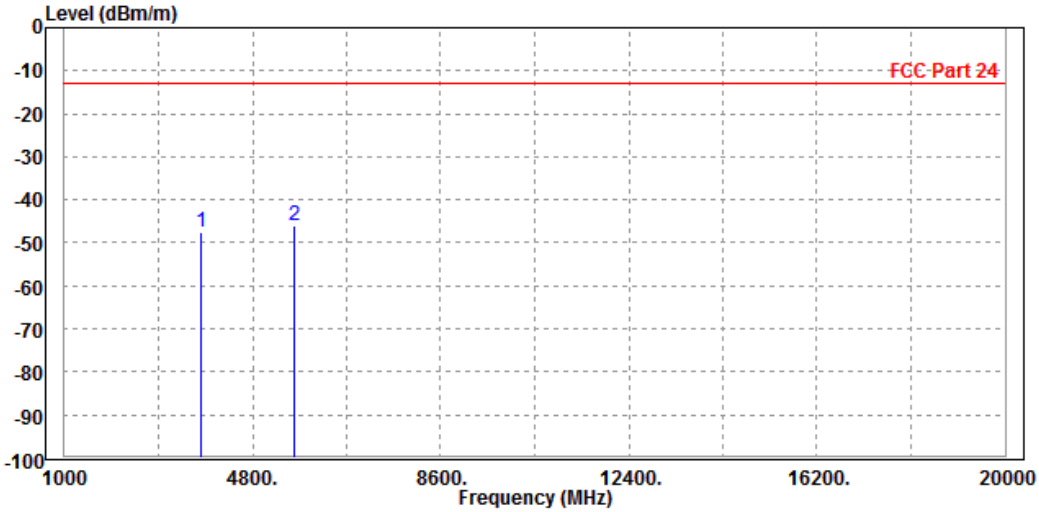
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3815.000	-48.00	-52.16	-13.00	-35.00	4.16	Peak	Vertical
2 PP	5725.000	-47.81	-56.24	-13.00	-34.81	8.43	Peak	Vertical



CHANNEL BANDWIDTH: 10MHz / QPSK

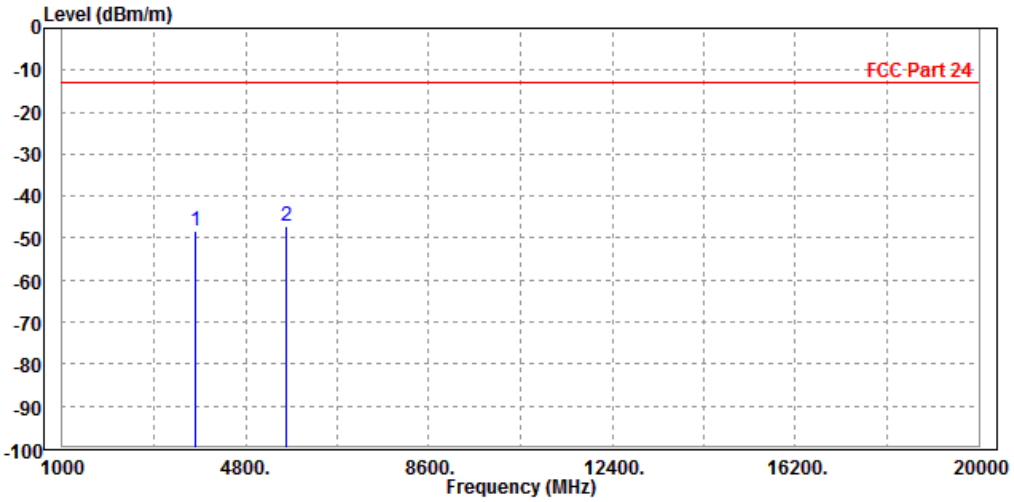
MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-47.63	-51.02	-13.00	-34.63	3.39	Peak	Horizontal
2 PP	5640.000	-46.19	-55.31	-13.00	-33.19	9.12	Peak	Horizontal



MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

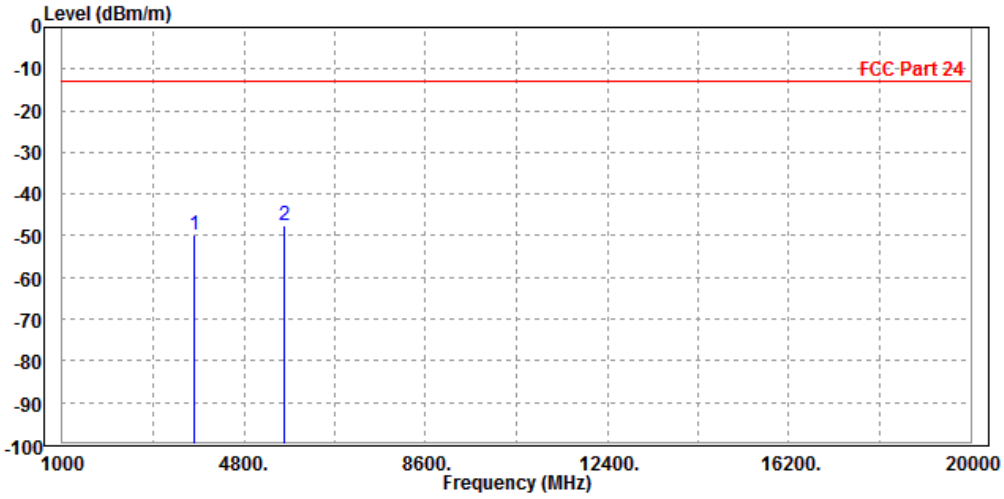
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-48.31	-52.16	-13.00	-35.31	3.85	Peak	Vertical
2 PP	5636.000	-47.09	-55.34	-13.00	-34.09	8.25	Peak	Vertical



CHANNEL BANDWIDTH: 15MHz / QPSK

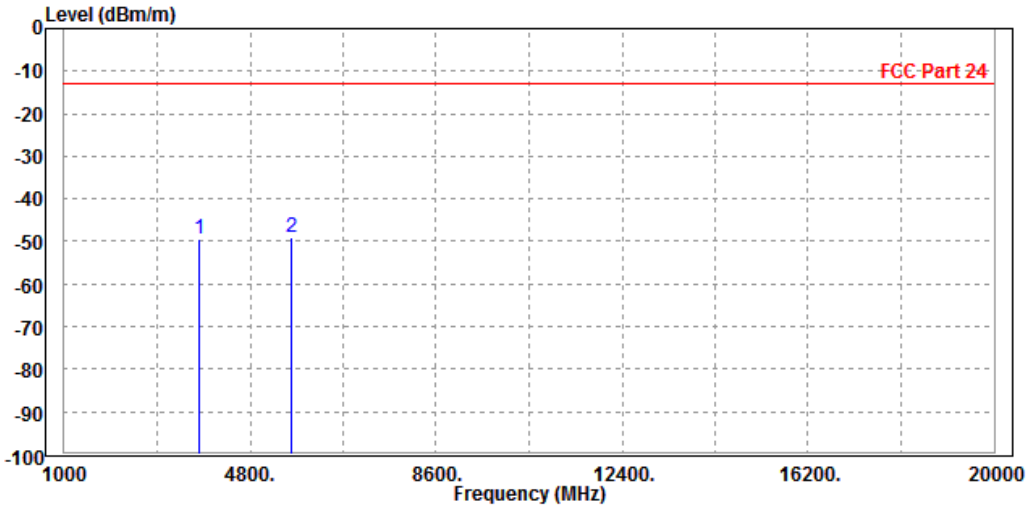
MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-49.82	-53.21	-13.00	-36.82	3.39	Peak	Horizontal
2 PP	5640.000	-47.36	-56.48	-13.00	-34.36	9.12	Peak	Horizontal



MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

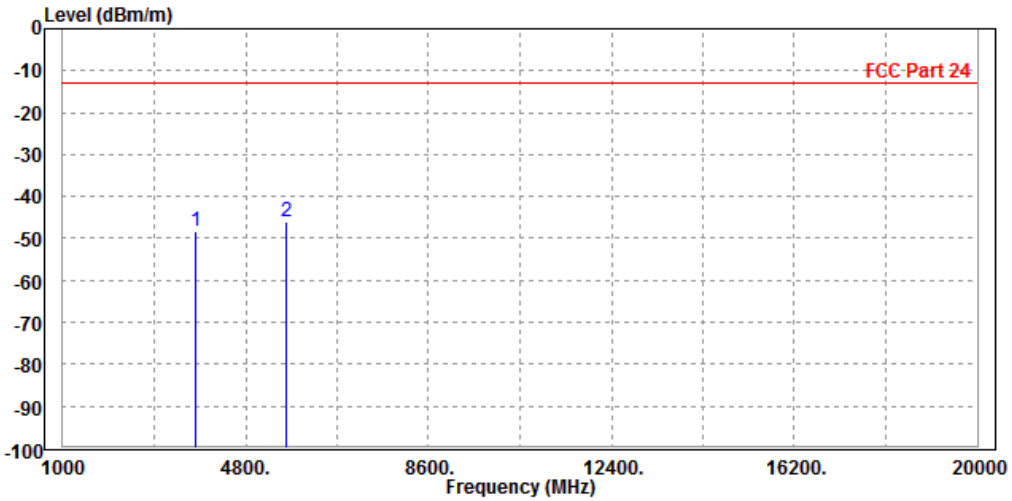
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-49.42	-53.27	-13.00	-36.42	3.85	Peak	Vertical
2 PP	5640.000	-49.15	-57.41	-13.00	-36.15	8.26	Peak	Vertical



CHANNEL BANDWIDTH: 20MHz / QPSK

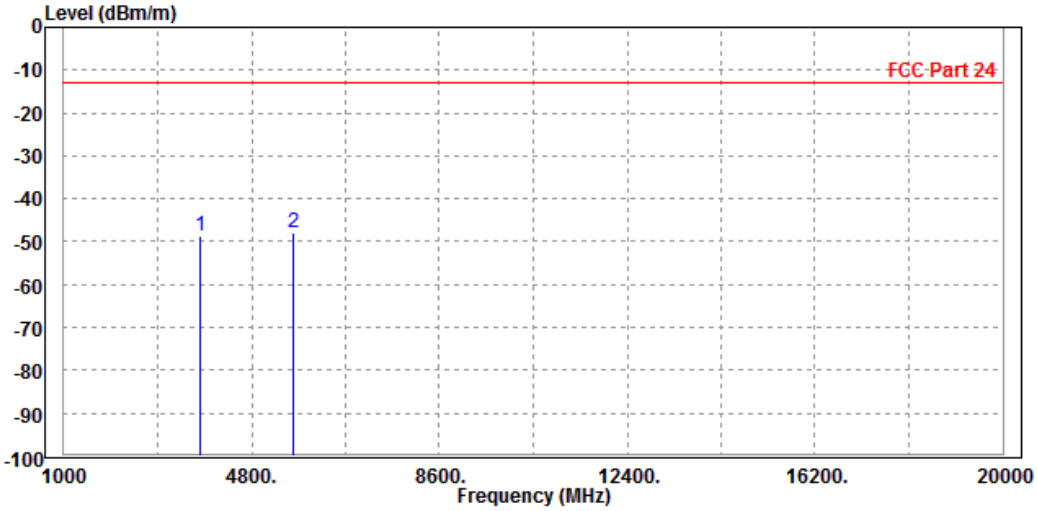
MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-48.46	-51.85	-13.00	-35.46	3.39	Peak	Horizontal
2 PP	5640.000	-46.01	-55.13	-13.00	-33.01	9.12	Peak	Horizontal



MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
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	3755.000	-48.60	-52.45	-13.00	-35.60	3.85	Peak	Vertical
2 PP	5640.000	-48.02	-56.28	-13.00	-35.02	8.26	Peak	Vertical



WWAN-ANT-1

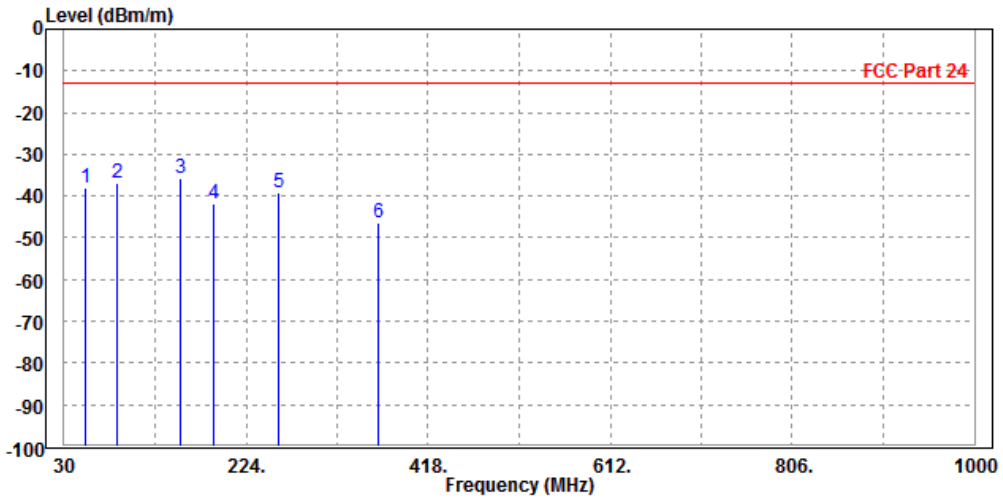
BELOW 1GHz WORST-CASE DATA

30 MHz – 1GHz data:

PCS 1900:

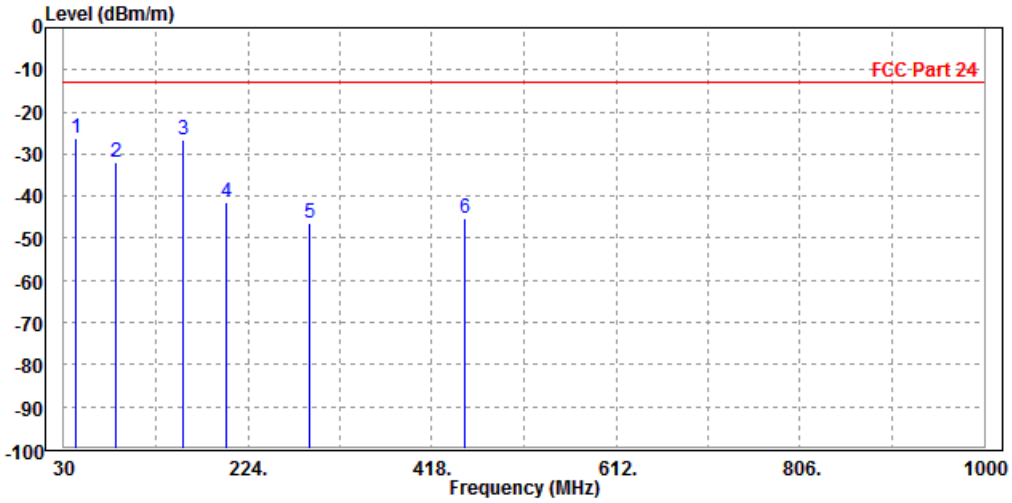
MODE	TX channel 661	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	52.310	-38.21	-45.26	-13.00	-25.21	7.05	Peak	Horizontal
2	86.520	-36.92	-45.28	-13.00	-23.92	8.36	Peak	Horizontal
3 PP	154.230	-35.59	-45.63	-13.00	-22.59	10.04	Peak	Horizontal
4	189.540	-41.80	-52.34	-13.00	-28.80	10.54	Peak	Horizontal
5	258.420	-39.12	-52.31	-13.00	-26.12	13.19	Peak	Horizontal
6	365.450	-46.22	-62.35	-13.00	-33.22	16.13	Peak	Horizontal



MODE	TX channel 661	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
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 42.150	-26.27	-37.35	-13.00	-13.27	11.08	Peak	Vertical
2	85.420	-31.90	-40.36	-13.00	-18.90	8.46	Peak	Vertical
3	155.240	-26.52	-36.59	-13.00	-13.52	10.07	Peak	Vertical
4	201.320	-41.48	-52.34	-13.00	-28.48	10.86	Peak	Vertical
5	289.520	-46.22	-60.21	-13.00	-33.22	13.99	Peak	Vertical
6	452.320	-45.22	-63.25	-13.00	-32.22	18.03	Peak	Vertical



ABOVE 1GHz DATA

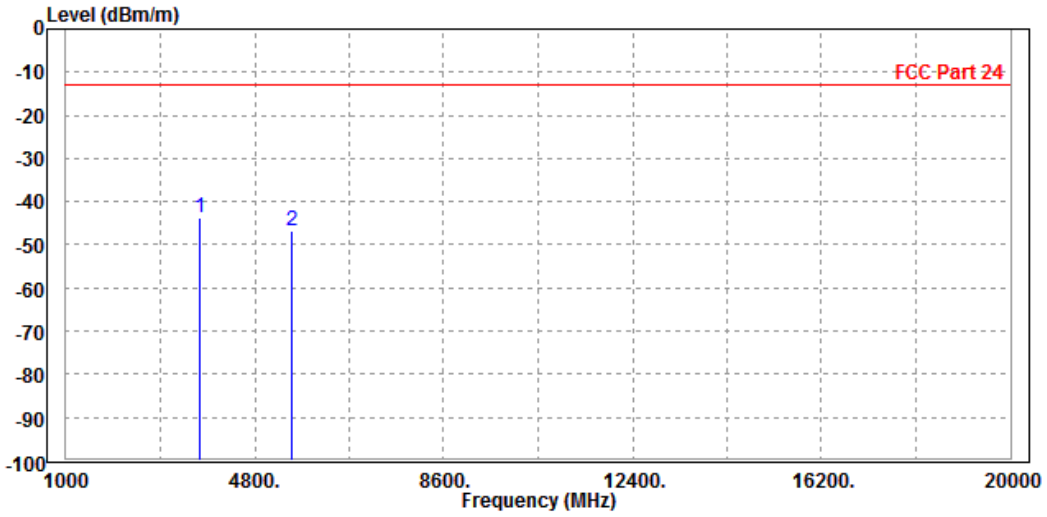
Note: For higher frequency, the emission is too low to be detected.

PCS 1900:

CH 512

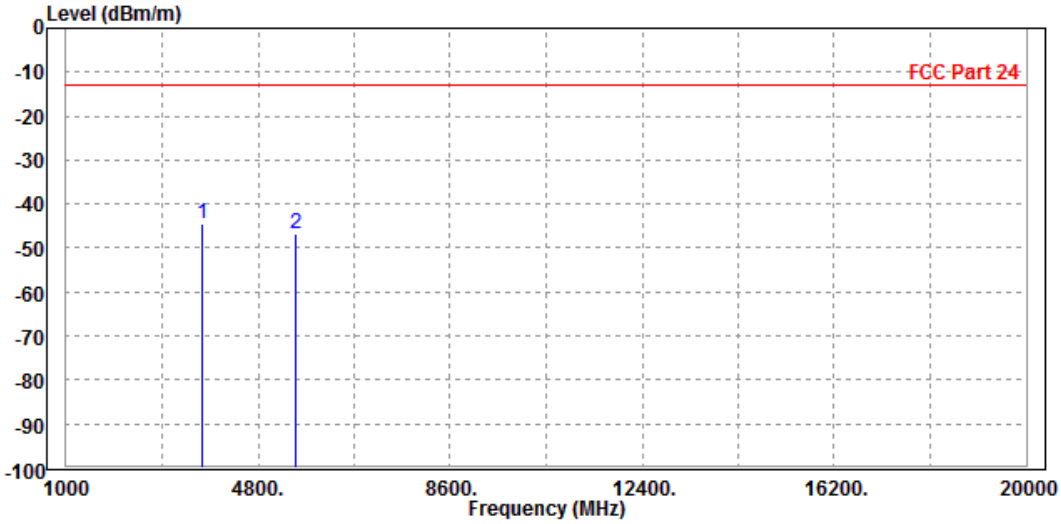
MODE	TX channel 512	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3702.000	-43.62	-46.75	-13.00	-30.62	3.13	Peak	Horizontal
2	5556.000	-46.75	-55.78	-13.00	-33.75	9.03	Peak	Horizontal



MODE	TX channel 512	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

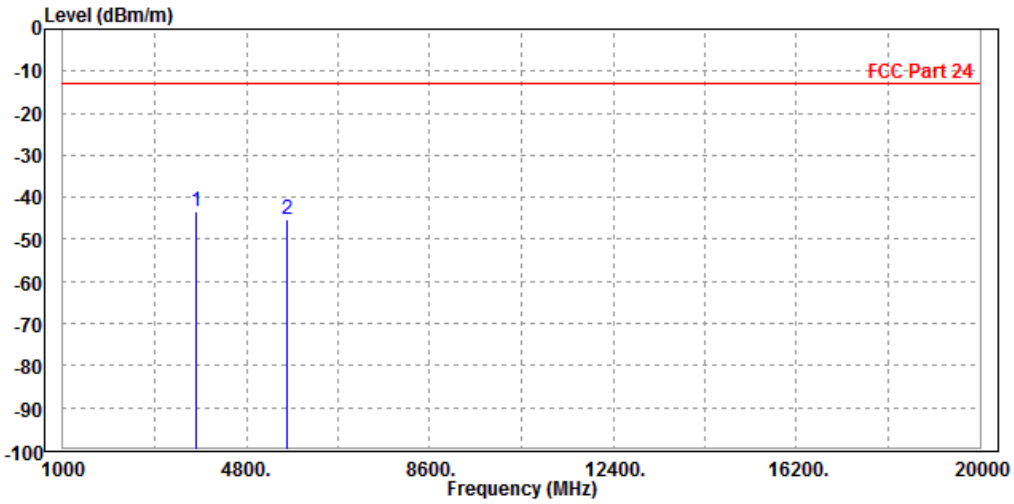
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	3702.000	-44.56	-48.15	-13.00	-31.56	3.59	Peak	Vertical
2	5556.000	-46.60	-54.68	-13.00	-33.60	8.08	Peak	Vertical



CH 661

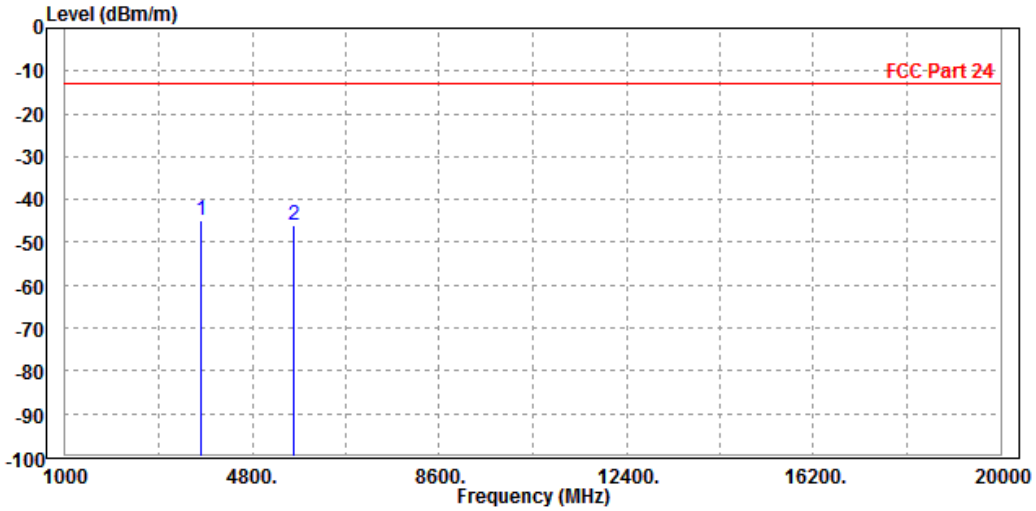
MODE	TX channel 661	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3755.000	-43.20	-46.59	-13.00	-30.20	3.39	Peak	Horizontal
2	5636.000	-45.09	-54.21	-13.00	-32.09	9.12	Peak	Horizontal



MODE	TX channel 661	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

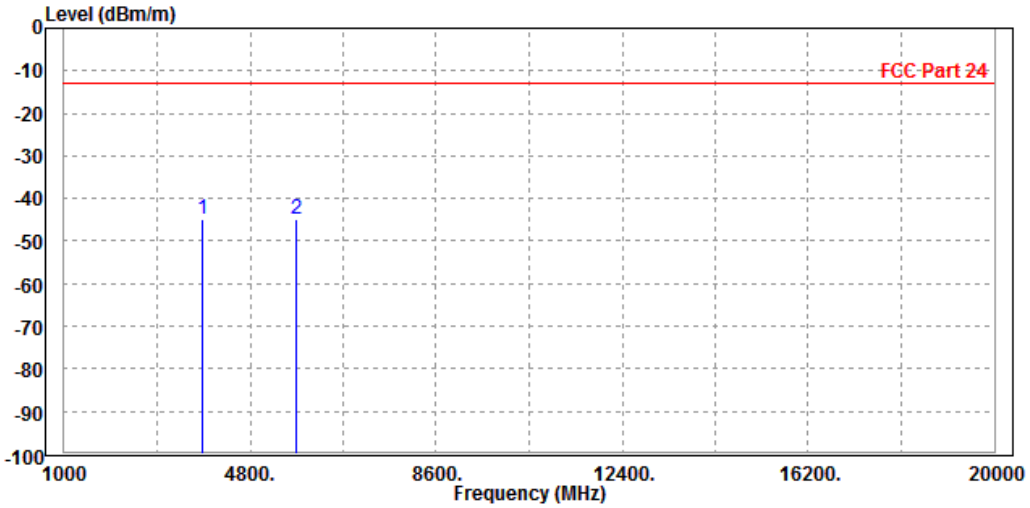
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3755.000	-44.77	-48.62	-13.00	-31.77	3.85	Peak	Vertical
2	5640.000	-46.09	-54.35	-13.00	-33.09	8.26	Peak	Vertical



CH 810

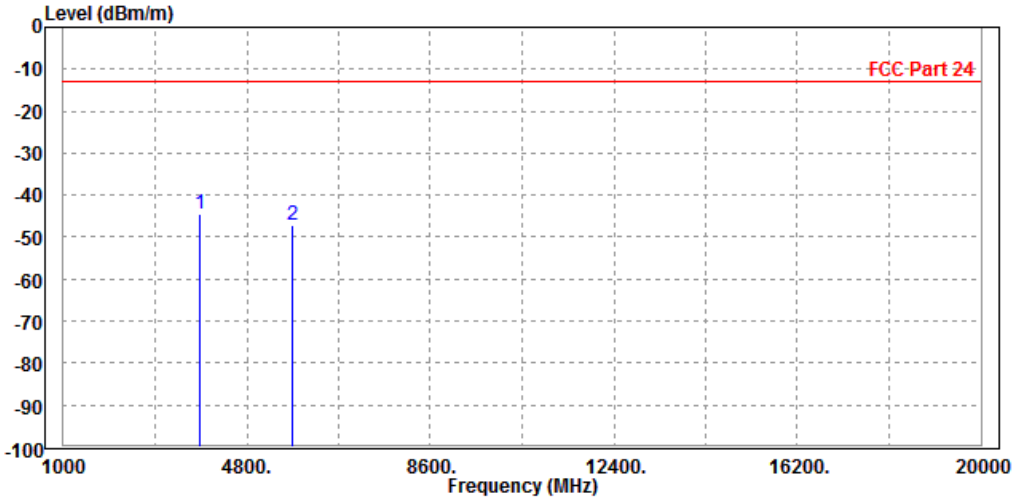
MODE	TX channel 810	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3820.000	-44.97	-48.67	-13.00	-31.97	3.70	Peak	Horizontal
2	5732.000	-45.00	-54.23	-13.00	-32.00	9.23	Peak	Horizontal



MODE	TX channel 810	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
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	3820.000	-44.34	-48.52	-13.00	-31.34	4.18	Peak	Vertical
2		5732.000	-47.20	-55.64	-13.00	-34.20	8.44	Peak	Vertical

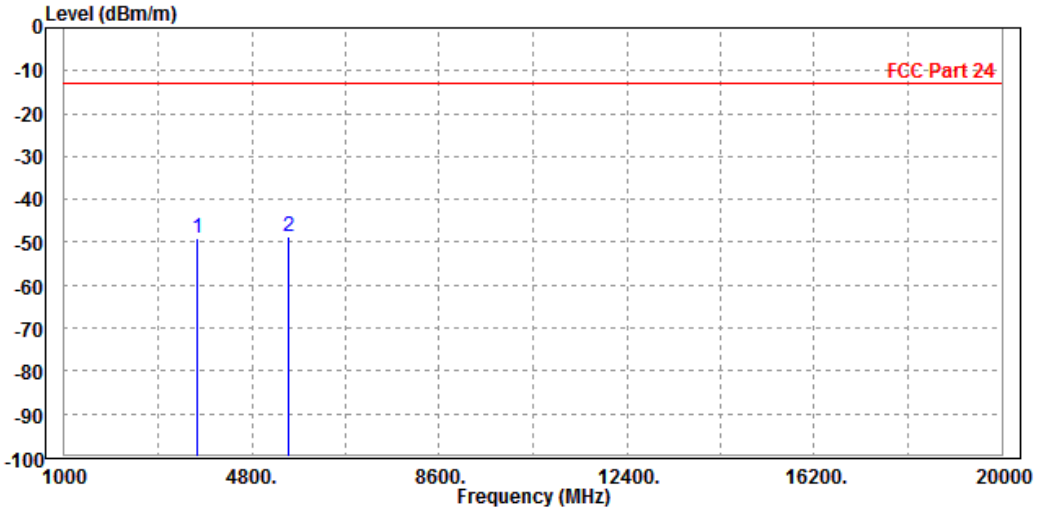


EDGE 1900:

CH 512

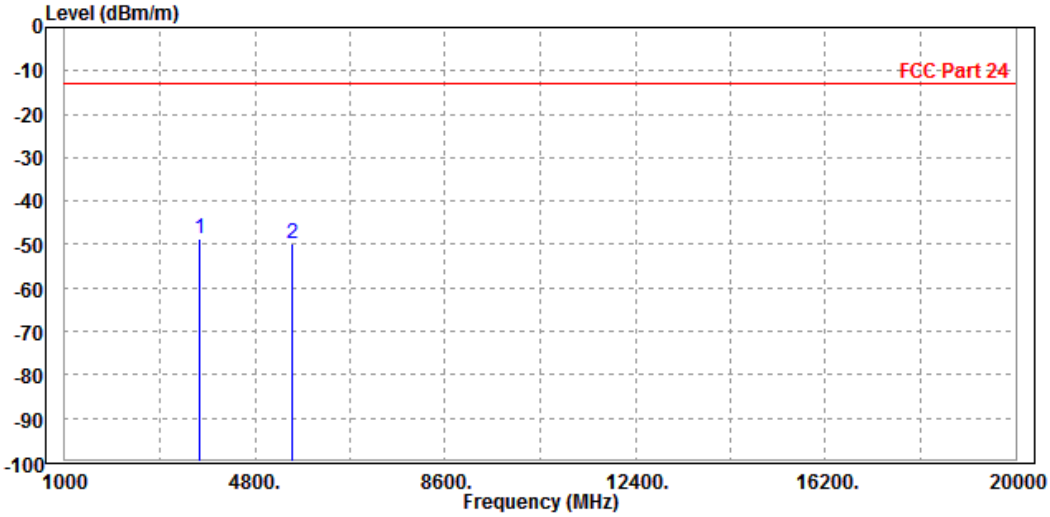
MODE	TX channel 512	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3702.000	-49.02	-52.15	-13.00	-36.02	3.13	Peak	Horizontal
2 PP	5556.000	-48.60	-57.63	-13.00	-35.60	9.03	Peak	Horizontal



MODE	TX channel 512	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

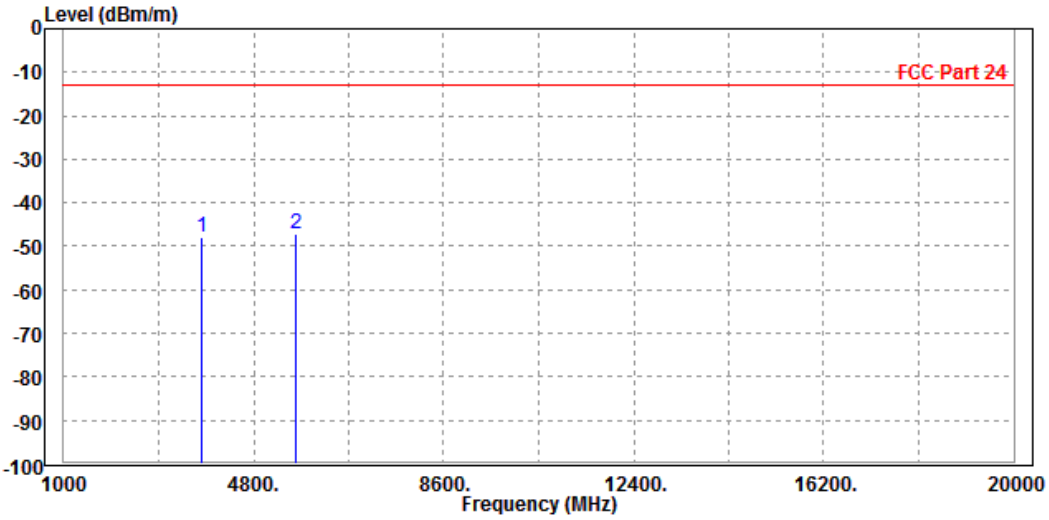
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3702.000	-48.54	-52.13	-13.00	-35.54	3.59	Peak	Vertical
2	5556.000	-49.76	-57.84	-13.00	-36.76	8.08	Peak	Vertical



CH 661

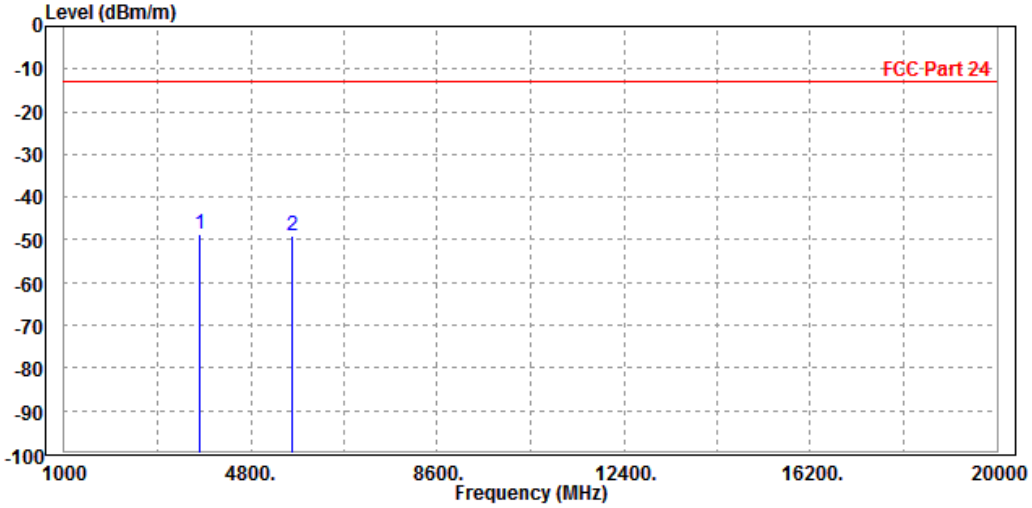
MODE	TX channel 661	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-47.84	-51.23	-13.00	-34.84	3.39	Peak	Horizontal
2 PP	5640.000	-47.23	-56.35	-13.00	-34.23	9.12	Peak	Horizontal



MODE	TX channel 661	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

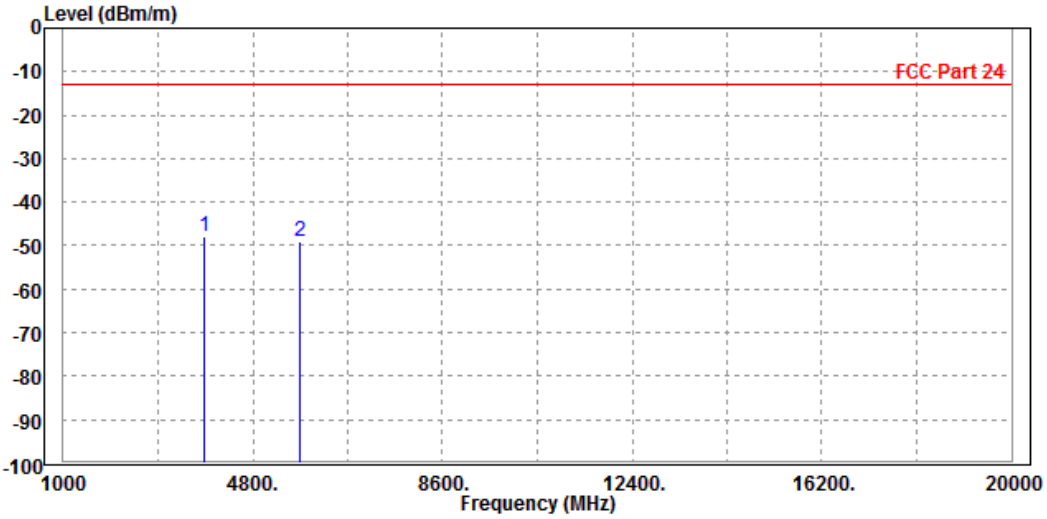
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	3755.000	-48.49	-52.34	-13.00	-35.49	3.85	Peak	Vertical
2	5640.000	-49.16	-57.42	-13.00	-36.16	8.26	Peak	Vertical



CH 810

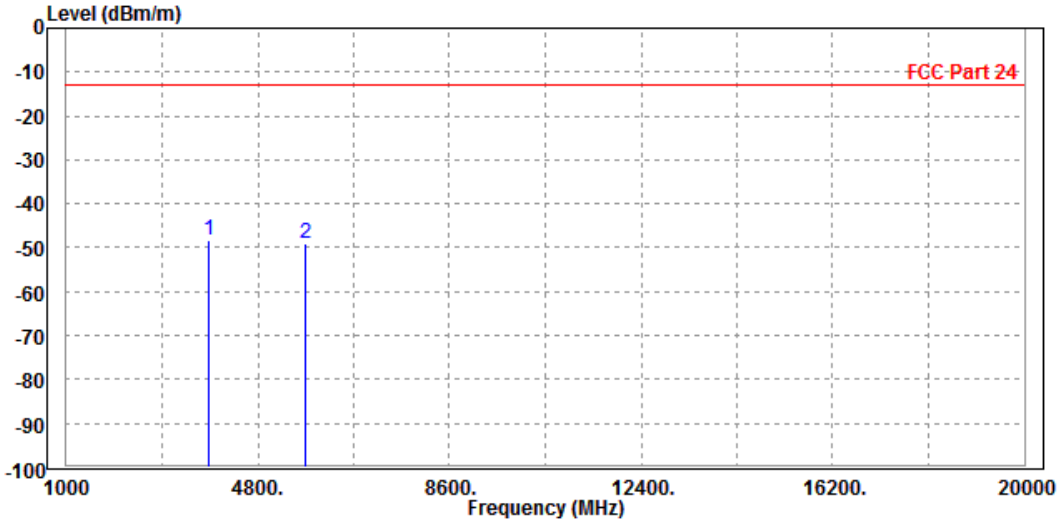
MODE	TX channel 810	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3820.000	-47.94	-51.64	-13.00	-34.94	3.70	Peak	Horizontal
2	5732.000	-49.01	-58.24	-13.00	-36.01	9.23	Peak	Horizontal



MODE	TX channel 810	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
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	3820.000	-48.16	-52.34	-13.00	-35.16	4.18	Peak	Vertical
2	5732.000	-49.02	-57.46	-13.00	-36.02	8.44	Peak	Vertical

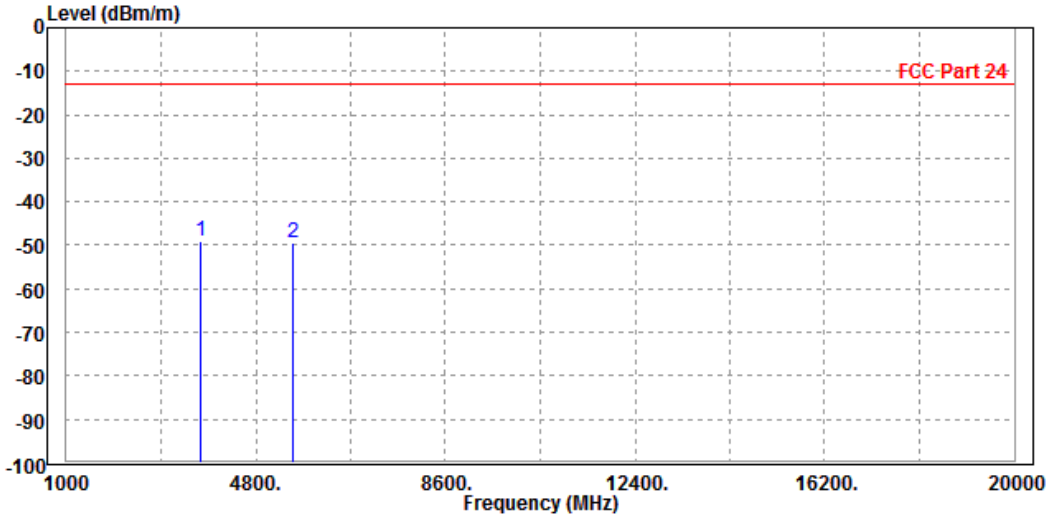


WCDMA Band II

CH 9262

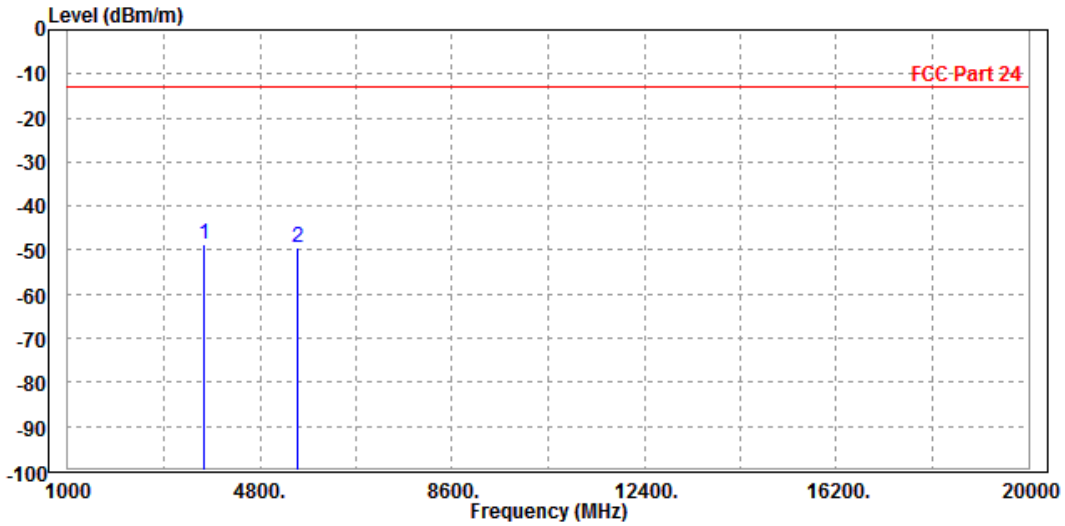
MODE	TX channel 9262	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	3705.000	-49.20	-52.35	-13.00	-36.20	3.15	Peak	Horizontal
2	5556.000	-49.59	-58.62	-13.00	-36.59	9.03	Peak	Horizontal



MODE	TX channel 9262	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

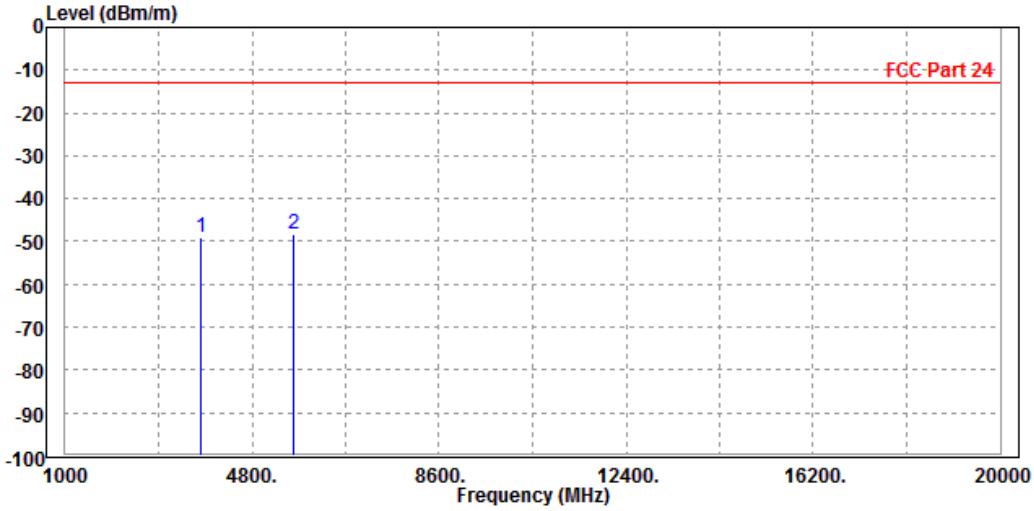
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3705.000	-48.58	-52.18	-13.00	-35.58	3.60	Peak	Vertical
2	5556.000	-49.40	-57.48	-13.00	-36.40	8.08	Peak	Vertical



CH 9400

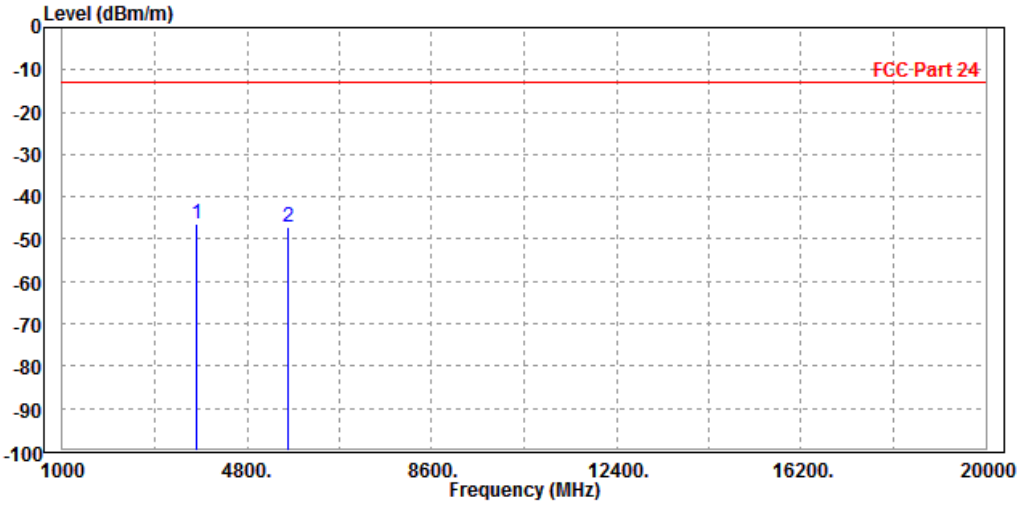
MODE	TX channel 9400	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-48.92	-52.31	-13.00	-35.92	3.39	Peak	Horizontal
2 PP	5636.000	-48.30	-57.42	-13.00	-35.30	9.12	Peak	Horizontal



MODE	TX channel 9400	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

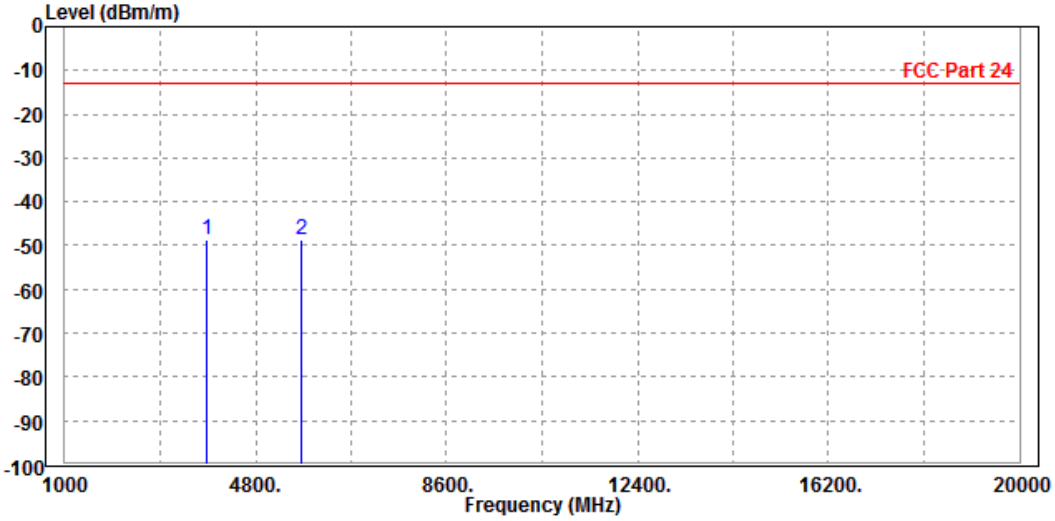
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3755.000	-46.36	-50.21	-13.00	-33.36	3.85	Peak	Vertical
2	5640.000	-47.10	-55.36	-13.00	-34.10	8.26	Peak	Vertical



CH 9538

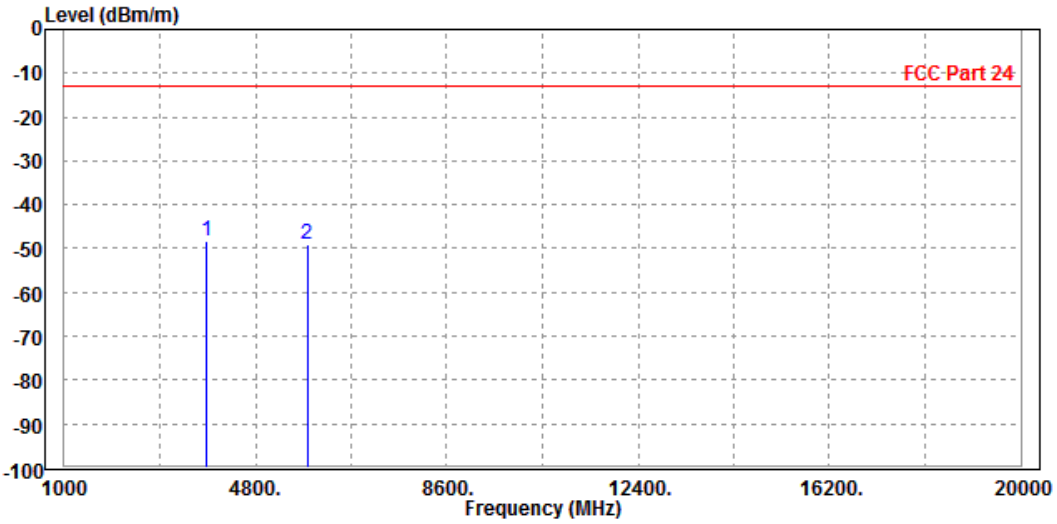
MODE	TX channel 9538	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3815.000	-48.66	-52.34	-13.00	-35.66	3.68	Peak	Horizontal
2 PP	5725.000	-48.62	-57.84	-13.00	-35.62	9.22	Peak	Horizontal



MODE	TX channel 9538	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
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 3815.000	-48.20	-52.36	-13.00	-35.20	4.16	Peak	Vertical
2	5825.000	-48.95	-57.58	-13.00	-35.95	8.63	Peak	Vertical

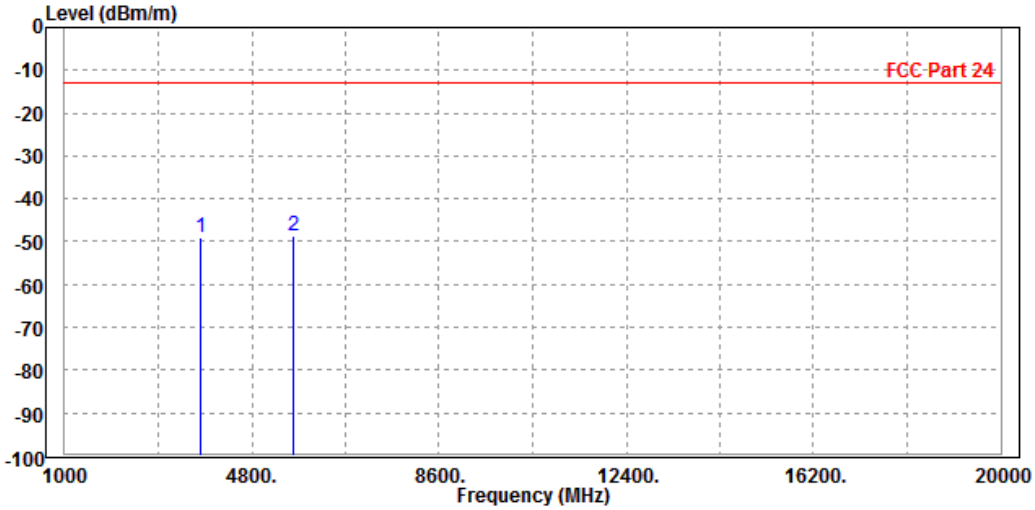


LTE Band 2

CHANNEL BANDWIDTH: 1.4MHz / QPSK

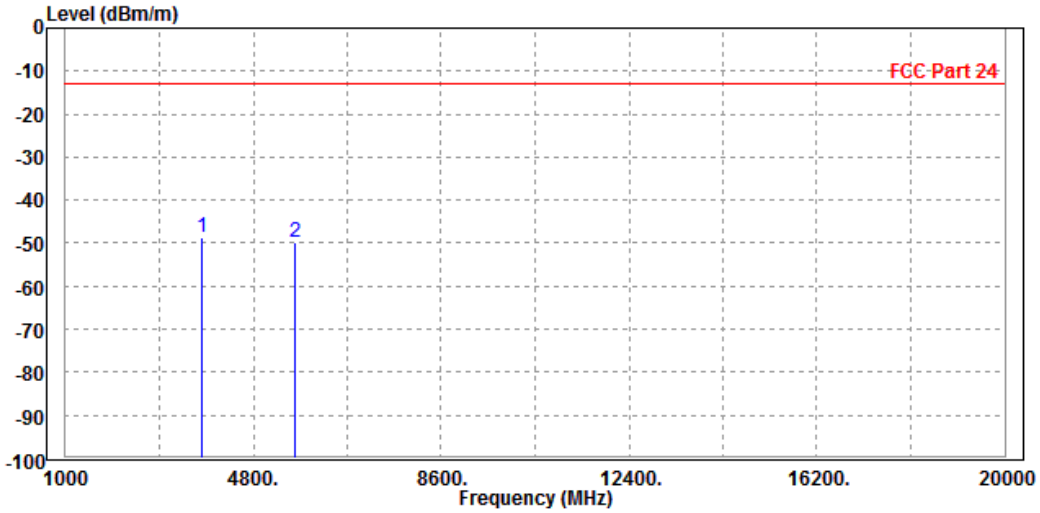
MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-48.97	-52.36	-13.00	-35.97	3.39	Peak	Horizontal
2 PP	5640.000	-48.74	-57.86	-13.00	-35.74	9.12	Peak	Horizontal



MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

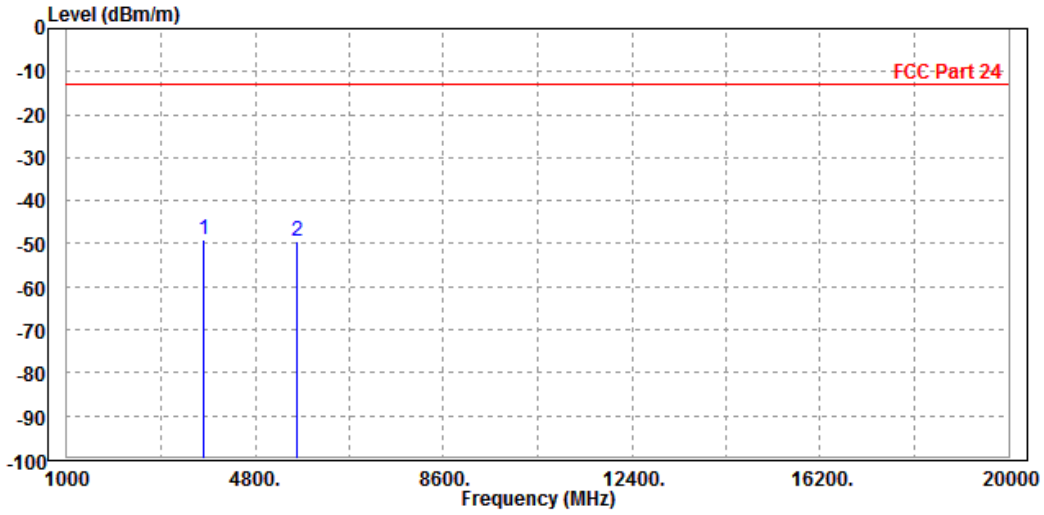
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3755.000	-48.51	-52.36	-13.00	-35.51	3.85	Peak	Vertical
2	5640.000	-49.95	-58.21	-13.00	-36.95	8.26	Peak	Vertical



CHANNEL BANDWIDTH: 3MHz / QPSK

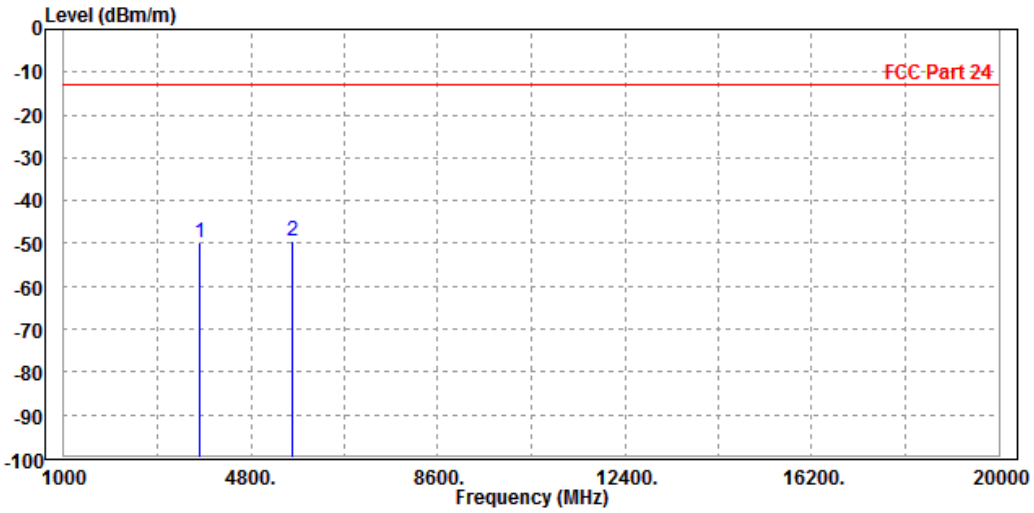
MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3755.000	-48.95	-52.34	-13.00	-35.95	3.39	Peak	Horizontal
2	5640.000	-49.50	-58.62	-13.00	-36.50	9.12	Peak	Horizontal



MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
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	3755.000	-49.79	-53.64	-13.00	-36.79	3.85	Peak	Vertical
2 PP	5640.000	-49.55	-57.81	-13.00	-36.55	8.26	Peak	Vertical

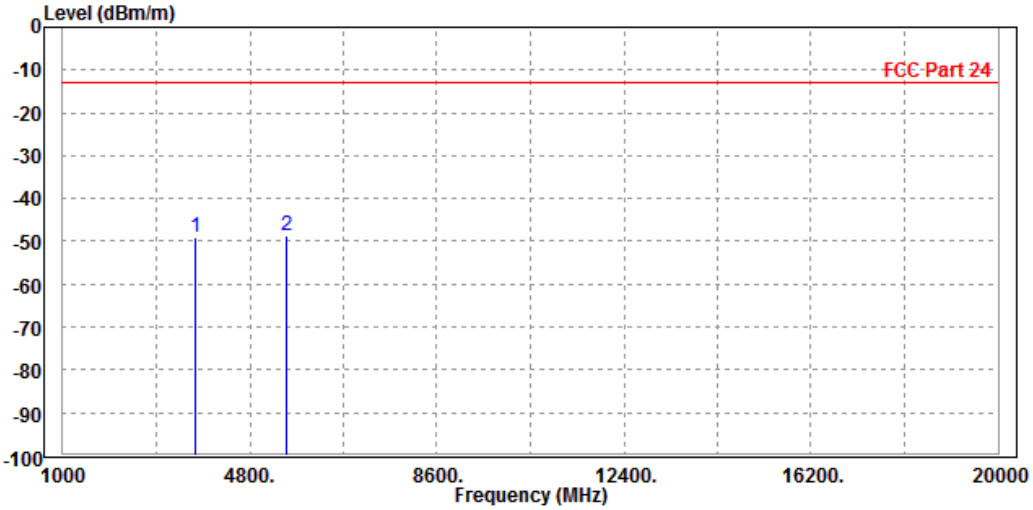


CHANNEL BANDWIDTH: 5MHz / QPSK

CH 18625

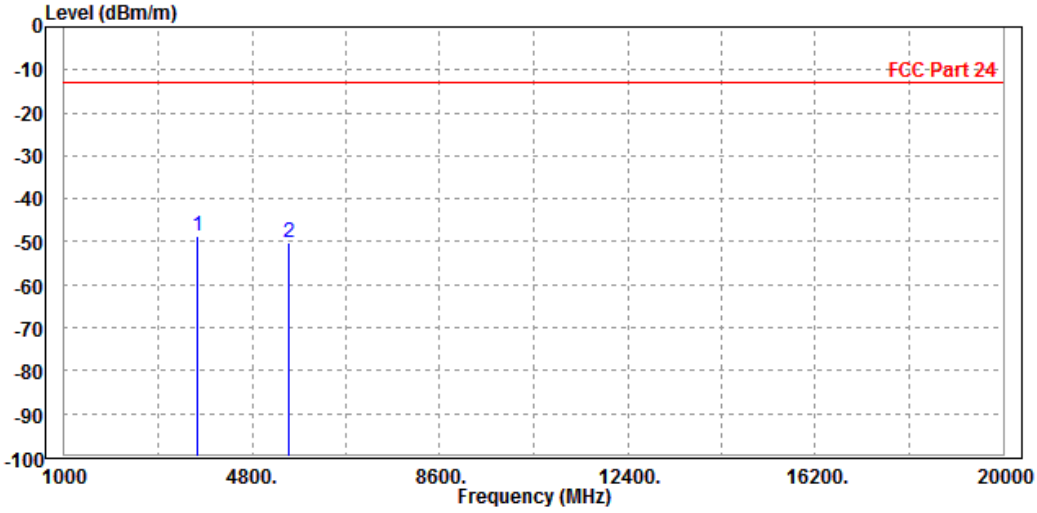
MODE	TX channel 18625	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3705.000	-49.23	-52.38	-13.00	-36.23	3.15	Peak	Horizontal
2 PP	5556.000	-48.65	-57.68	-13.00	-35.65	9.03	Peak	Horizontal



MODE	TX channel 18625	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

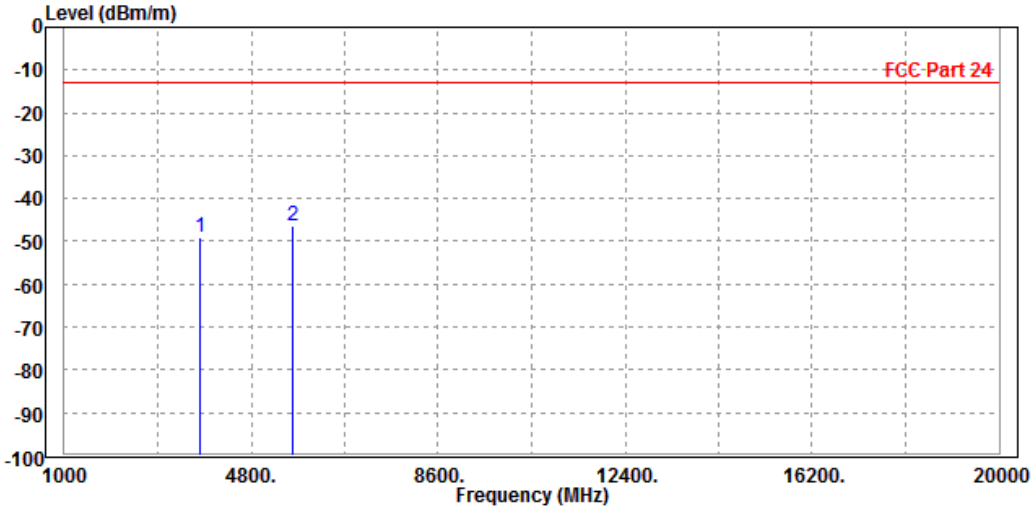
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	3705.000	-48.65	-52.25	-13.00	-35.65	3.60	Peak	Vertical
2	5556.000	-50.08	-58.16	-13.00	-37.08	8.08	Peak	Vertical



CH18900

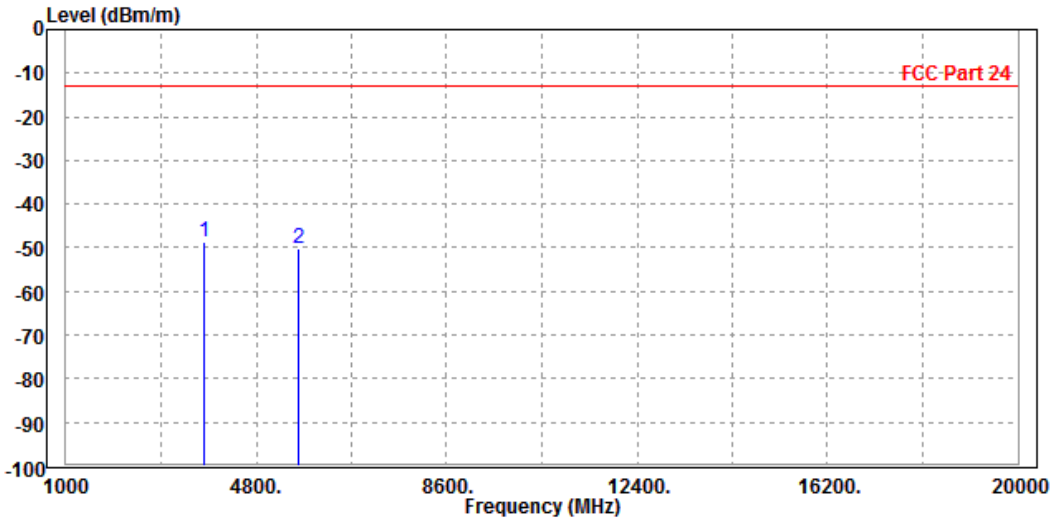
MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-48.92	-52.31	-13.00	-35.92	3.39	Peak	Horizontal
2 PP	5640.000	-46.33	-55.45	-13.00	-33.33	9.12	Peak	Horizontal



MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

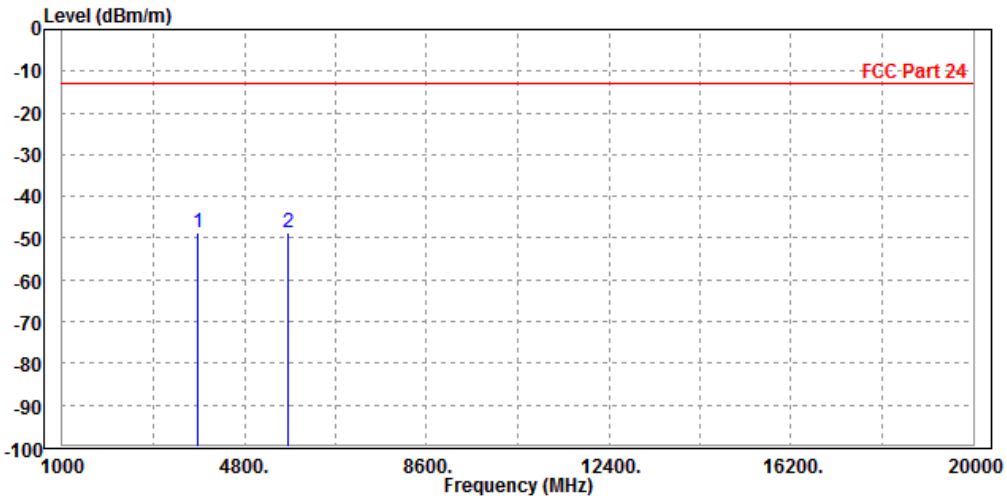
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3755.000	-48.51	-52.36	-13.00	-35.51	3.85		Vertical
2	5640.000	-50.16	-58.42	-13.00	-37.16	8.26		Vertical



CH19175

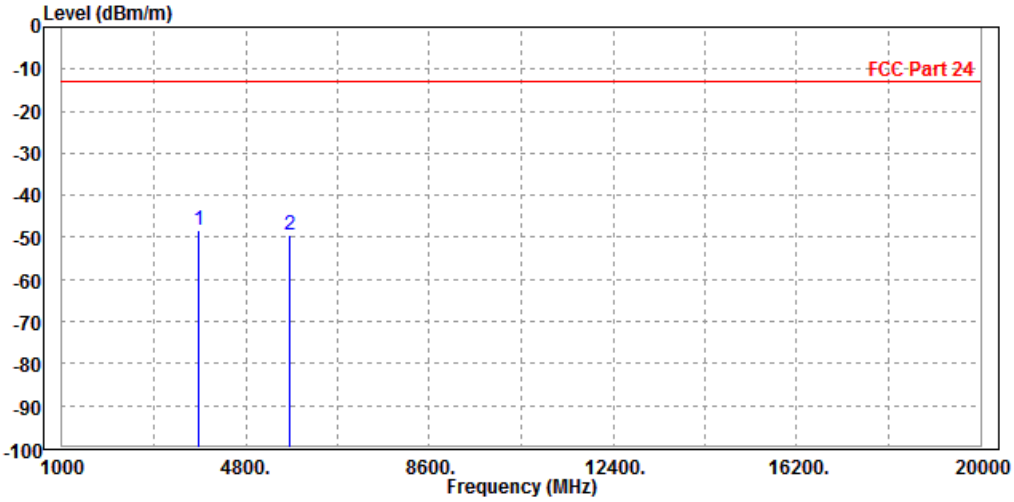
MODE	TX channel 19175	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3815.000	-48.70	-52.38	-13.00	-35.70	3.68	Peak	Horizontal
2 PP	5725.000	-48.62	-57.84	-13.00	-35.62	9.22	Peak	Horizontal



MODE	TX channel 19175	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

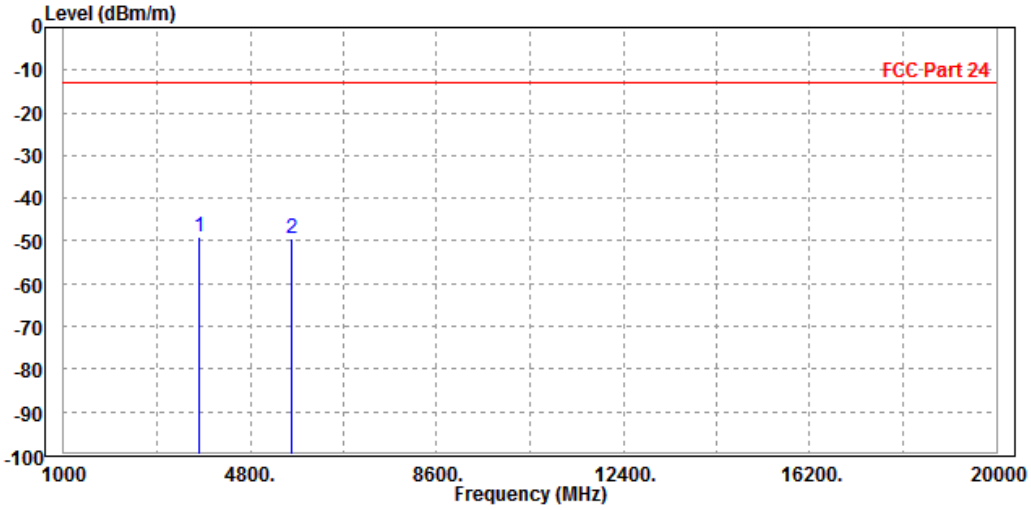
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3815.000	-48.15	-52.31	-13.00	-35.15	4.16	Peak	Vertical
2	5725.000	-49.43	-57.86	-13.00	-36.43	8.43	Peak	Vertical



CHANNEL BANDWIDTH: 10MHz / QPSK

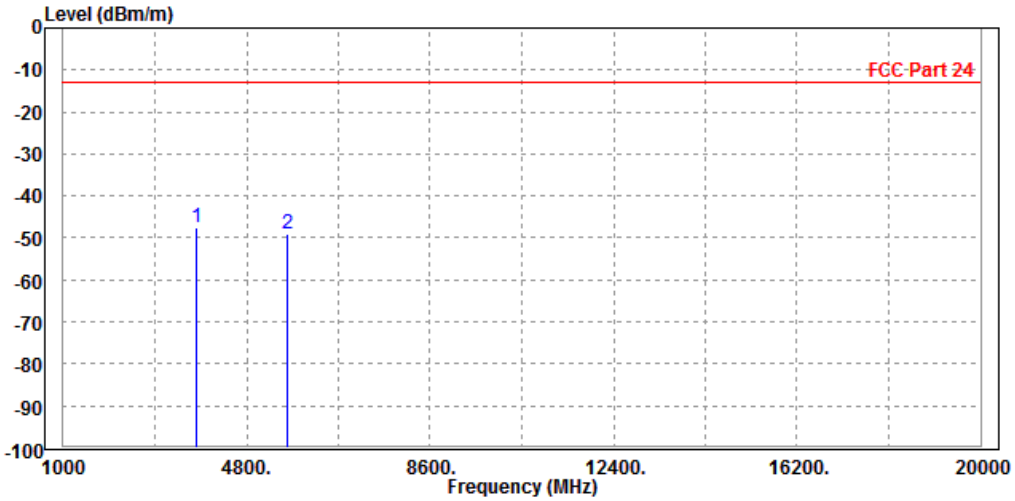
MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	3755.000	-48.92	-52.31	-13.00	-35.92	3.39	Peak	Horizontal
2	5640.000	-49.33	-58.45	-13.00	-36.33	9.12	Peak	Horizontal



MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

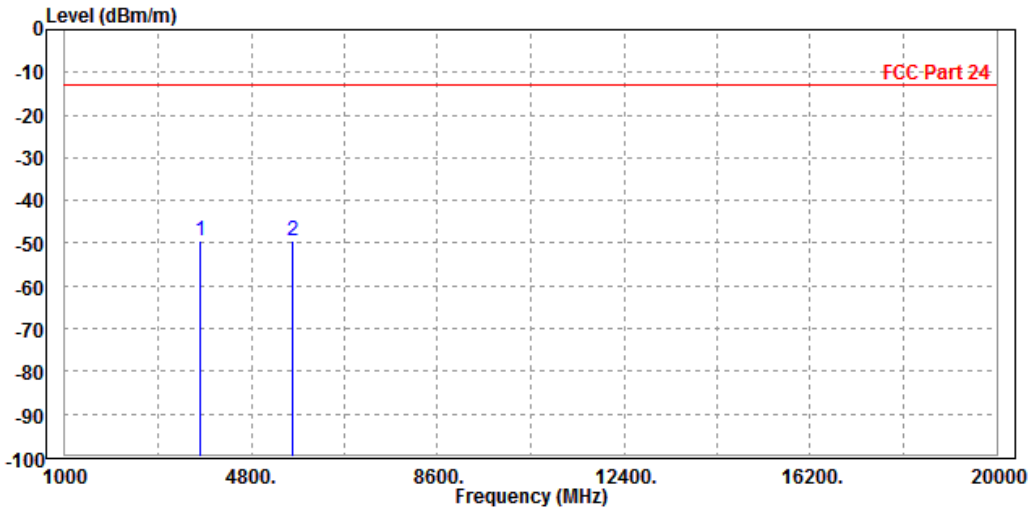
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3755.000	-47.38	-51.23	-13.00	-34.38	3.85	Peak	Vertical
2	5636.000	-49.20	-57.45	-13.00	-36.20	8.25	Peak	Vertical



CHANNEL BANDWIDTH: 15MHz / QPSK

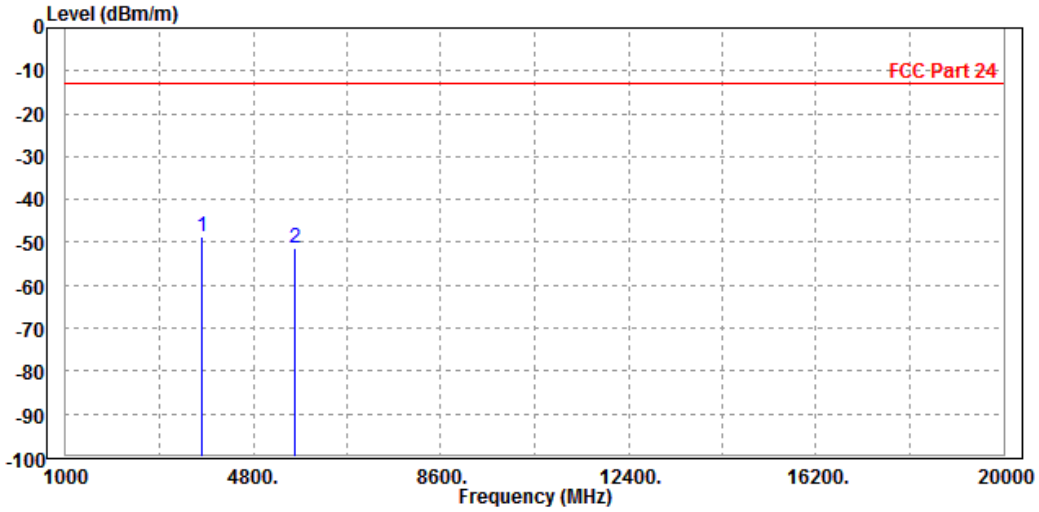
MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3755.000	-49.30	-52.69	-13.00	-36.30	3.39	Peak	Horizontal
2	5640.000	-49.55	-58.67	-13.00	-36.55	9.12	Peak	Horizontal



MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

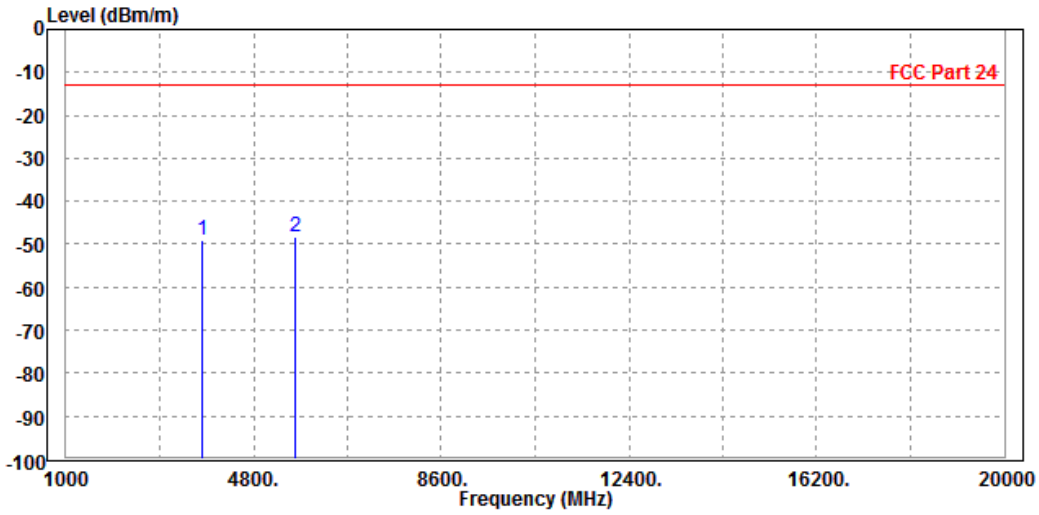
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	3755.000	-48.51	-52.36	-13.00	-35.51	3.85	Peak	Vertical
2	5640.000	-51.38	-59.64	-13.00	-38.38	8.26	Peak	Vertical



CHANNEL BANDWIDTH: 20MHz / QPSK

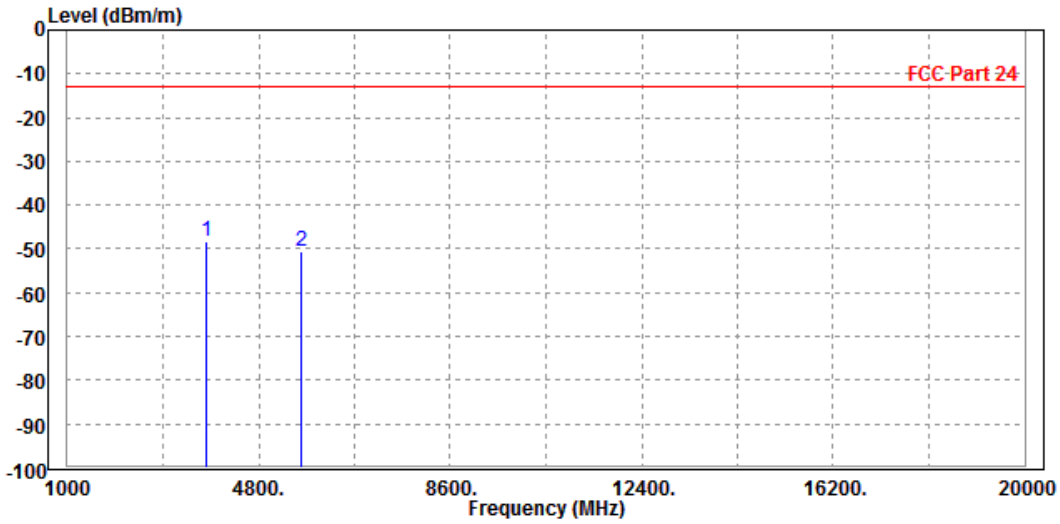
MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-48.97	-52.36	-13.00	-35.97	3.39	Peak	Horizontal
2 PP	5640.000	-48.13	-57.25	-13.00	-35.13	9.12	Peak	Horizontal



MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/12V from adapter
TESTED BY	Star Le		
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	3755.000	-48.46	-52.31	-13.00	-35.46	3.85	Peak	Vertical
2	5640.000	-50.38	-58.64	-13.00	-37.38	8.26	Peak	Vertical

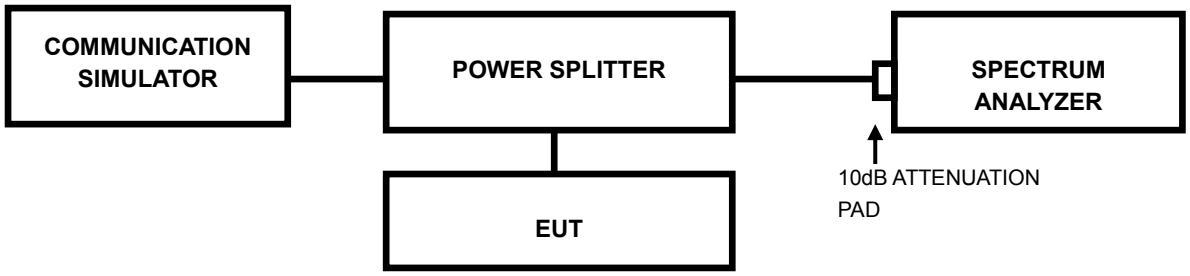


3.7 PEAK TO AVERAGE RATIO

3.7.1 LIMITS OF peak to average ratio MEASUREMENT

In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB

3.7.2 TEST SETUP



3.7.3 TEST PROCEDURES

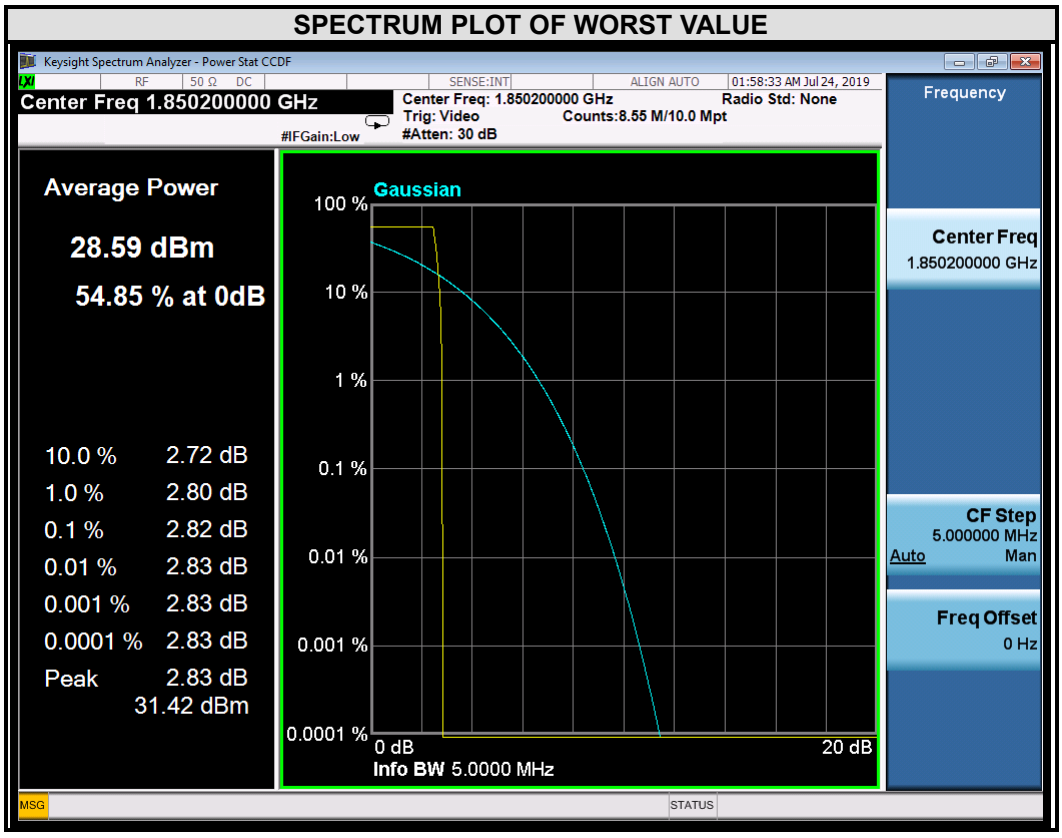
1. Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Record the maximum PAPR level associated with a probability of 0.1%.

3.7.4 TEST RESULTS

GSM

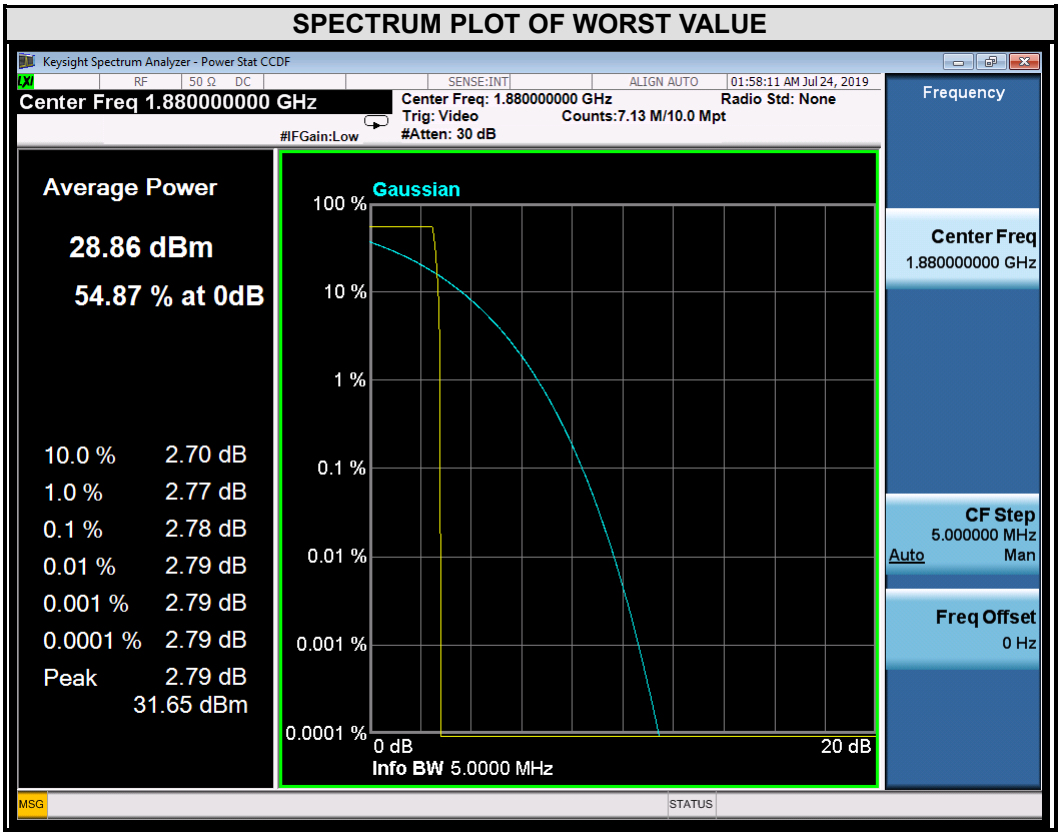
CHANNEL	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
512	1850.2	2.82

SPECTRUM PLOT OF WORST VALUE



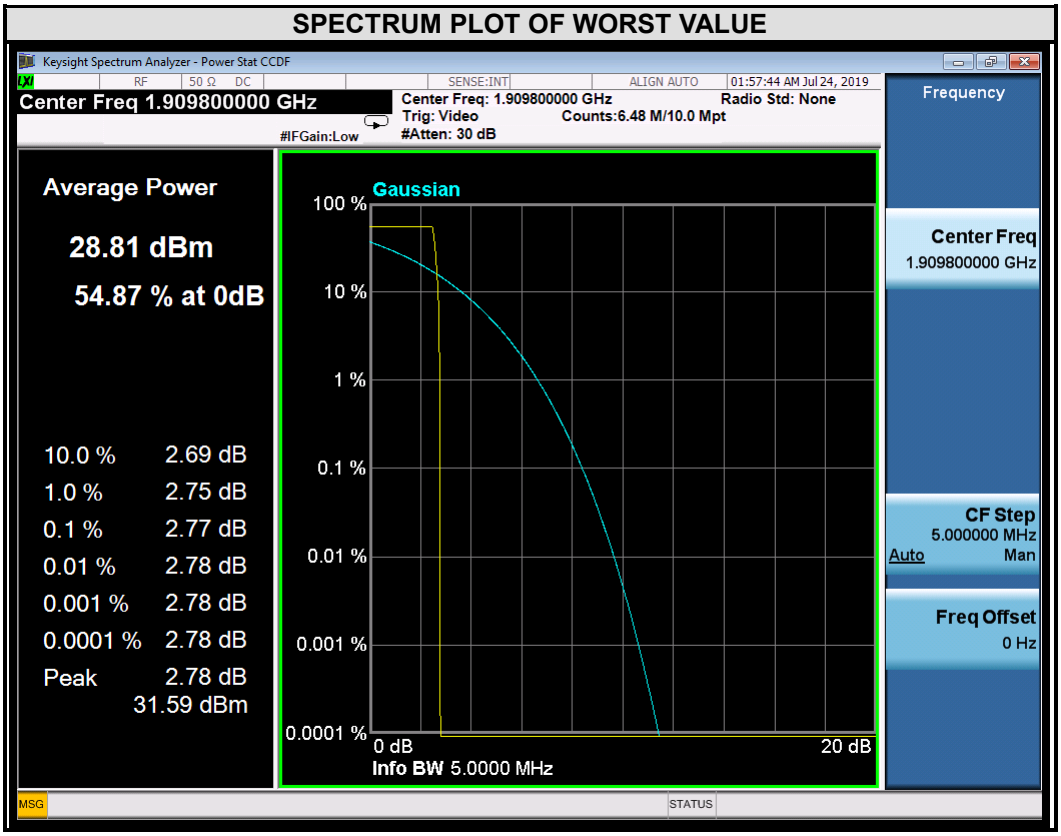
CHANNEL	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
661	1880	2.78

SPECTRUM PLOT OF WORST VALUE



CHANNEL	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
810	1909.8	2.77

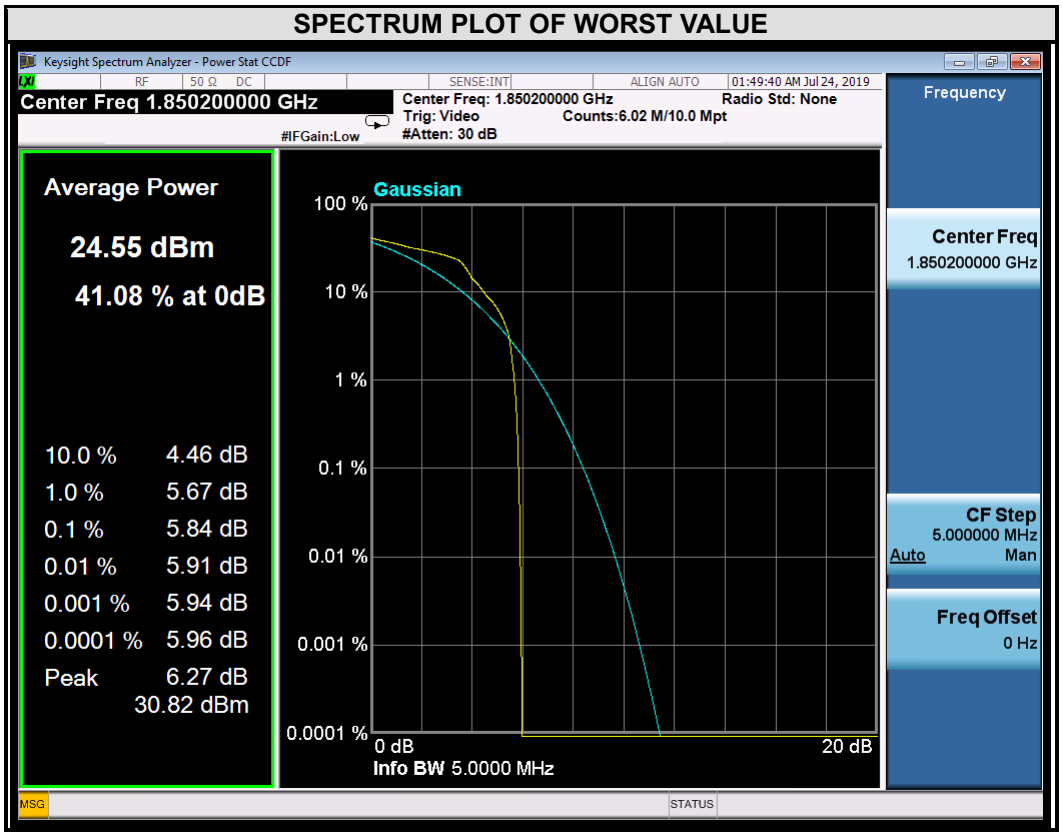
SPECTRUM PLOT OF WORST VALUE



EDGE

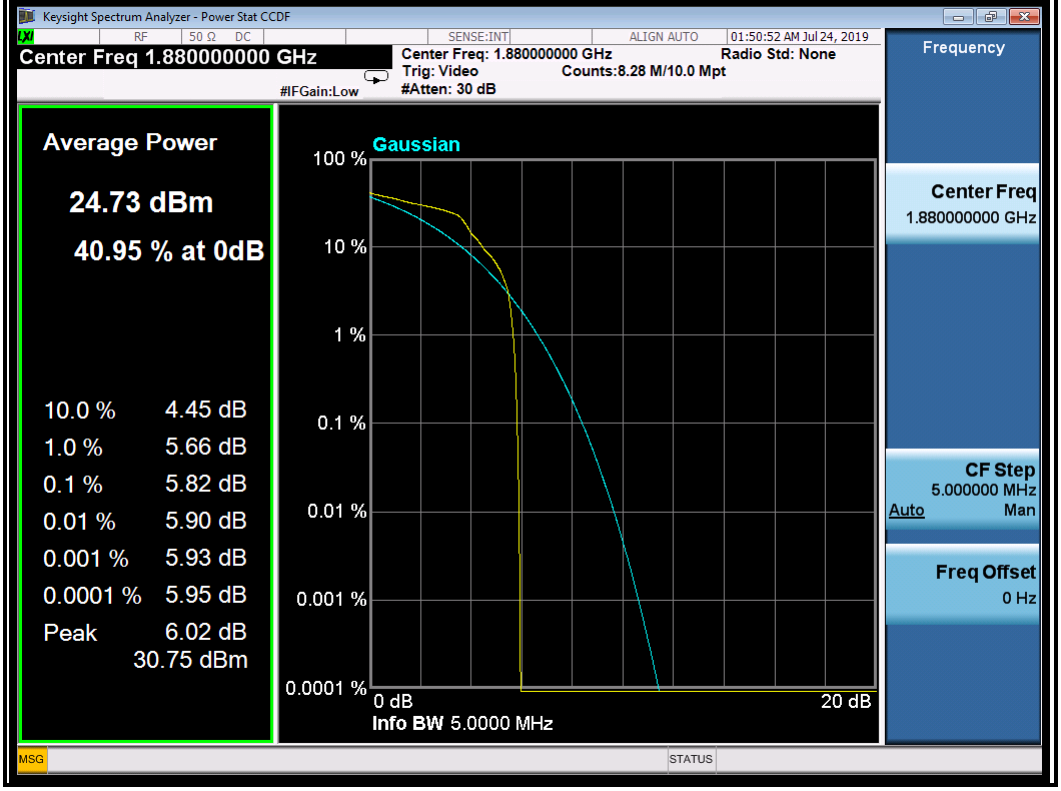
CHANNEL	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
512	1850.2	5.84

SPECTRUM PLOT OF WORST VALUE



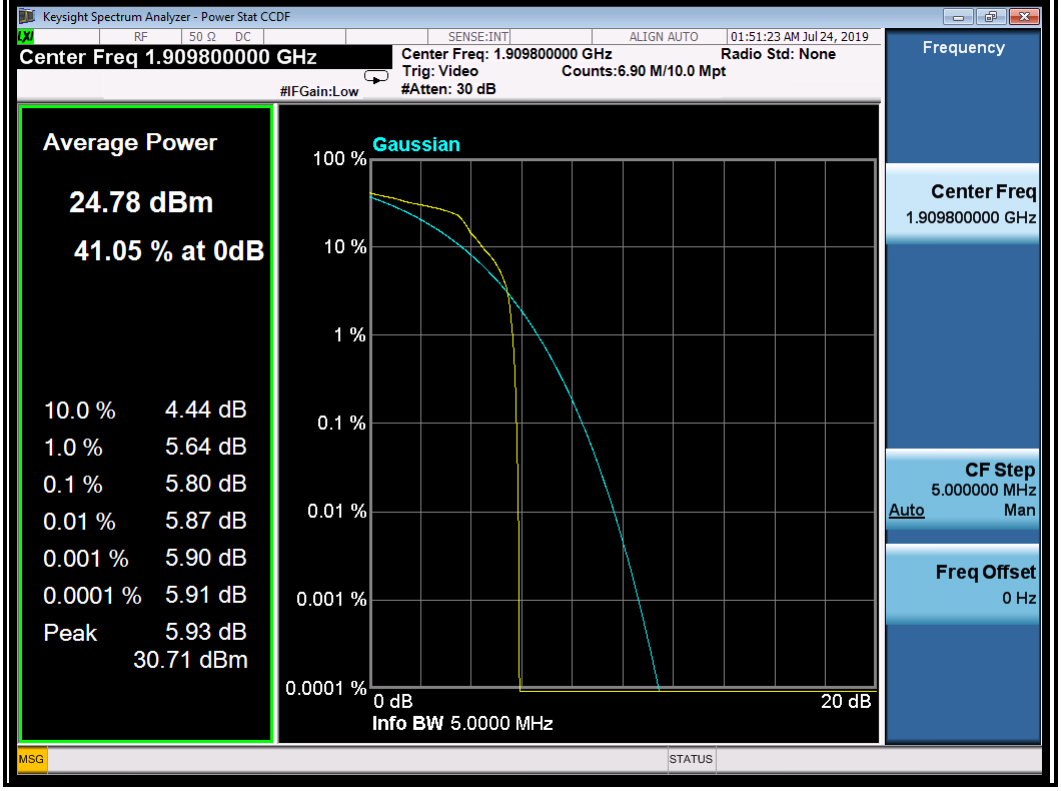
CHANNEL	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
661	1880	5.82

SPECTRUM PLOT OF WORST VALUE



CHANNEL	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
810	1909.8	5.80

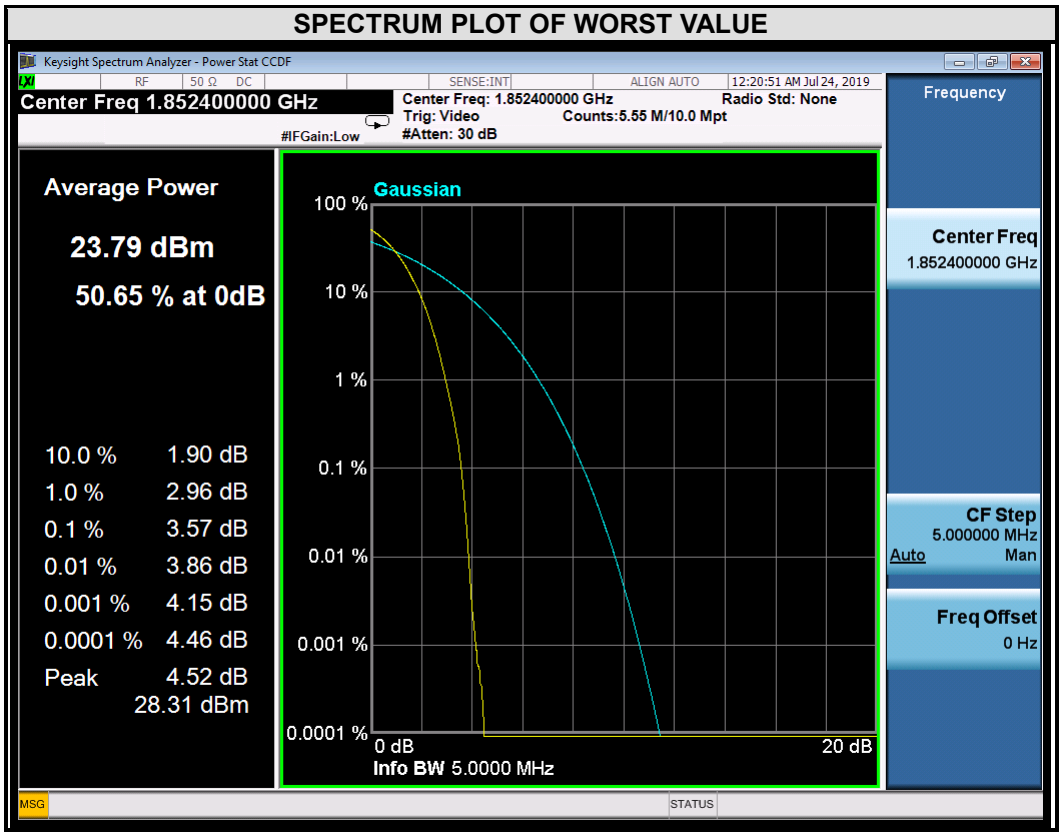
SPECTRUM PLOT OF WORST VALUE



WCDMA

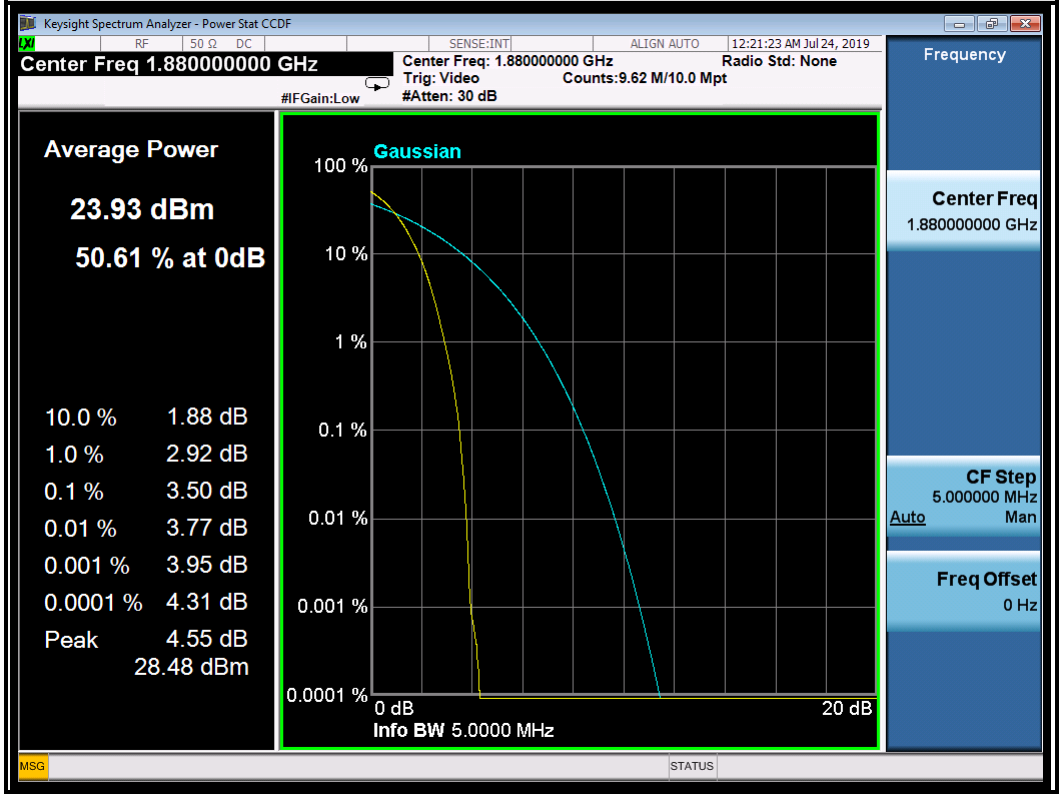
CHANNEL	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
9262	1852.4	3.57

SPECTRUM PLOT OF WORST VALUE



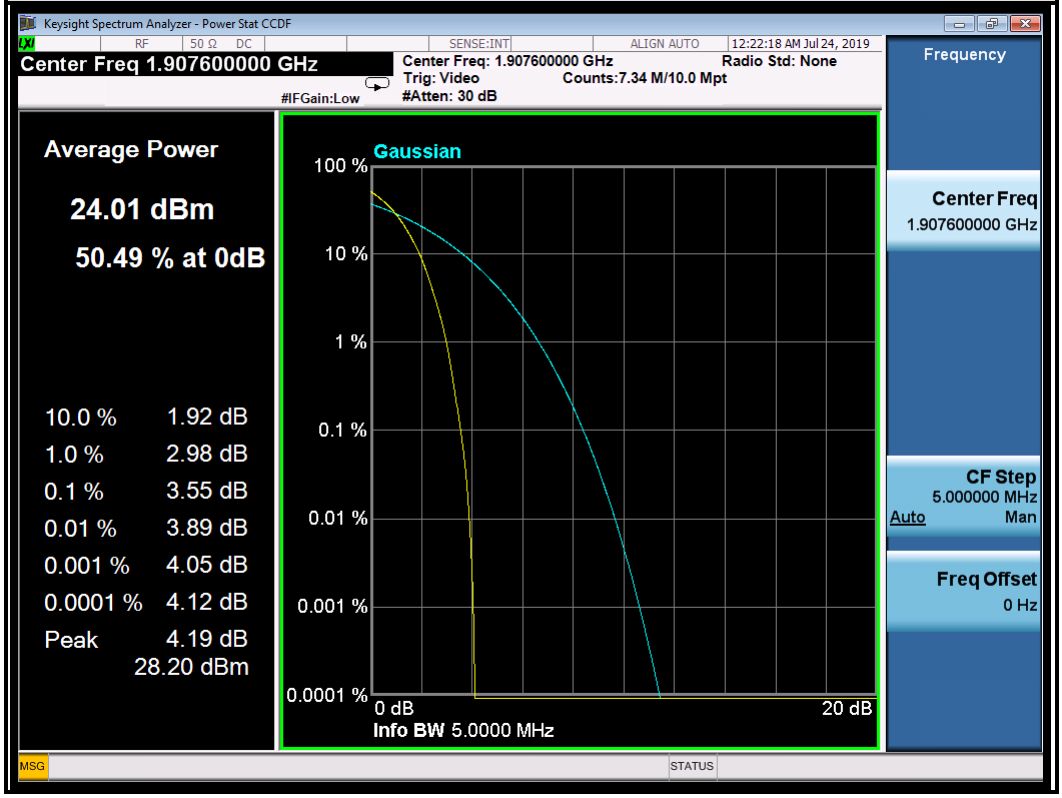
CHANNEL	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
9400	1880.0	3.50

SPECTRUM PLOT OF WORST VALUE



CHANNEL	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
9538	1907.6	3.55

SPECTRUM PLOT OF WORST VALUE

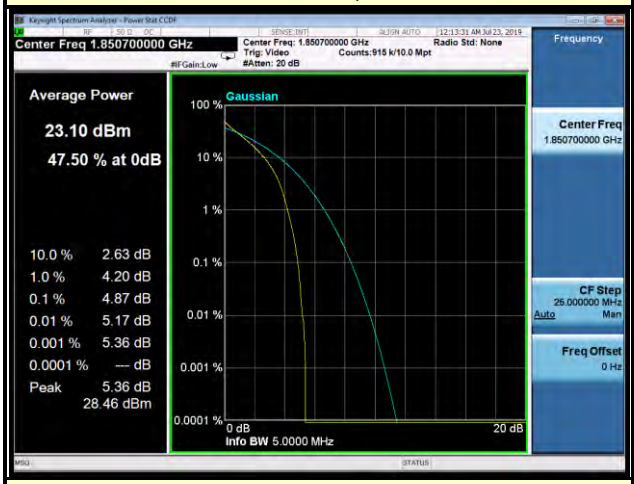


LTE BAND 2

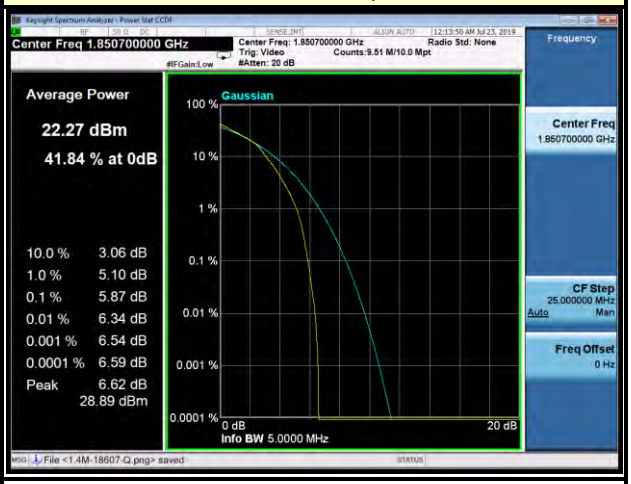
CHANNEL BANDWIDTH: 1.4MHz				
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)		
		QPSK	16QAM	64QAM
18607	1850.7	4.87	5.87	6.60
18900	1880	4.74	5.72	6.48
19193	1909.3	4.60	5.56	6.42

SPECTRUM PLOT OF WORST VALUE

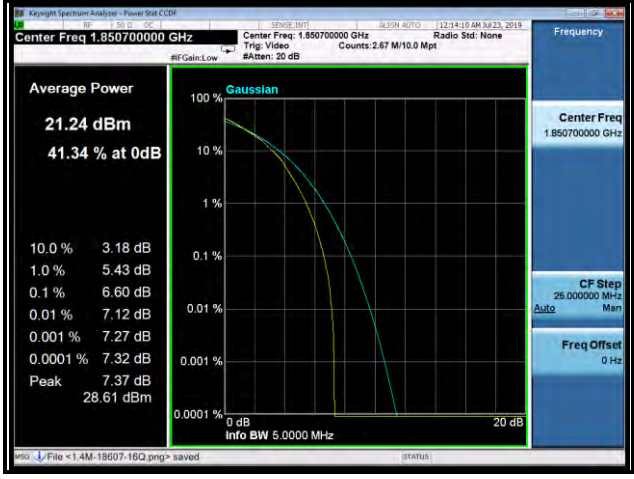
1.4MHz / QPSK



1.4MHz / 16QAM



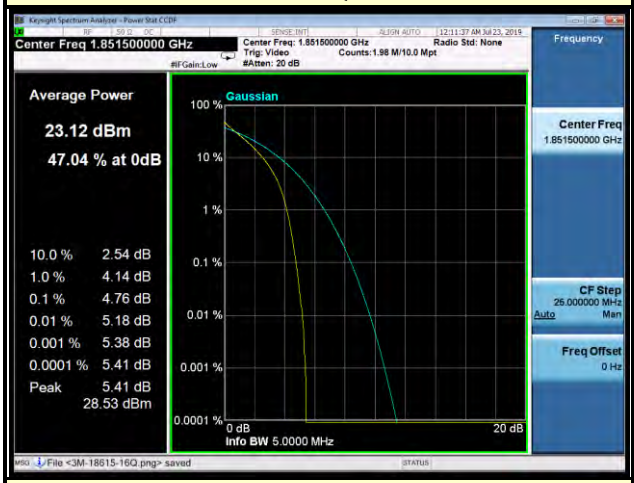
1.4MHz / 64QAM



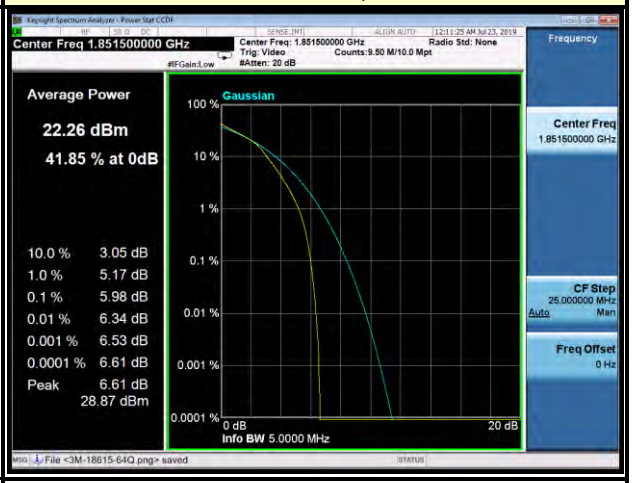
CHANNEL BANDWIDTH: 3MHz				
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)		
		QPSK	16QAM	64QAM
18615	1851.5	4.76	5.98	6.58
18900	1880	4.62	5.84	6.44
19185	1908.5	4.56	5.69	6.40

SPECTRUM PLOT OF WORST VALUE

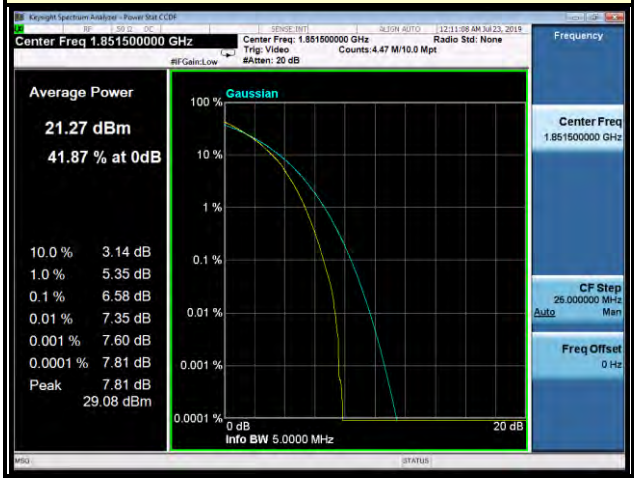
3MHz / QPSK



3MHz / 16QAM



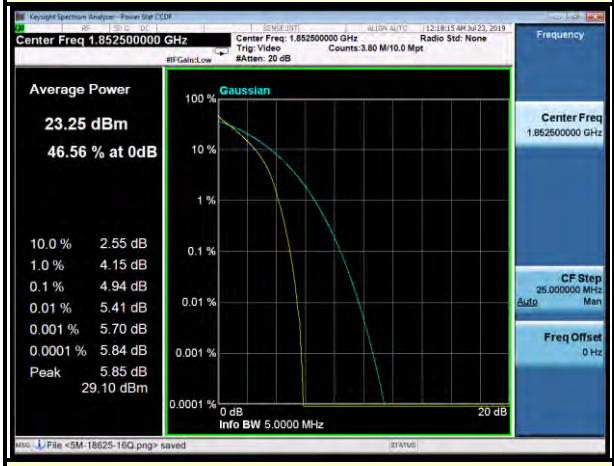
3MHz / 64QAM



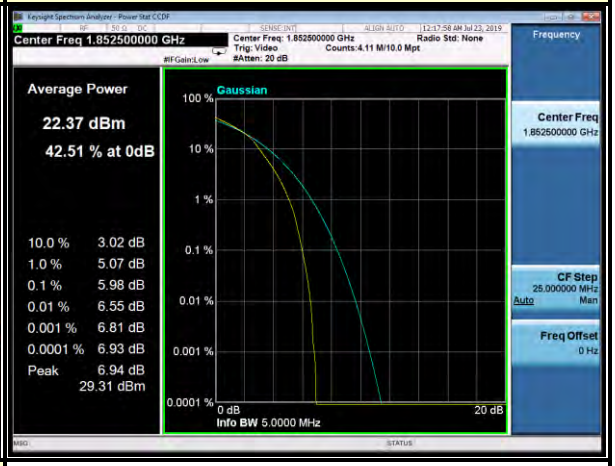
CHANNEL BANDWIDTH: 5MHz				
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)		
		QPSK	16QAM	64QAM
18625	1852.5	4.94	5.98	6.60
18900	1880	4.86	5.88	6.49
19175	1907.5	4.76	5.77	6.45

SPECTRUM PLOT OF WORST VALUE

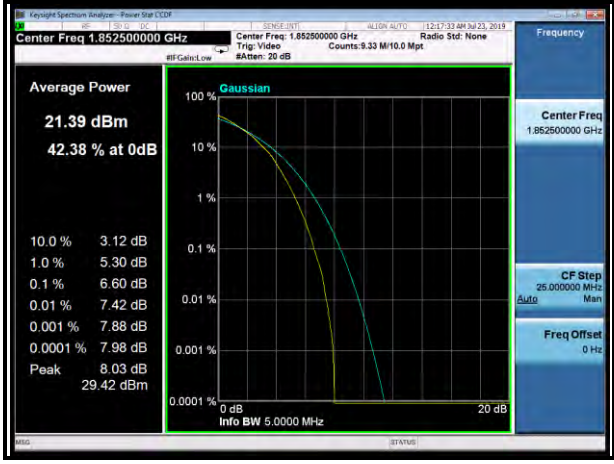
5MHz / QPSK



5MHz / 16QAM



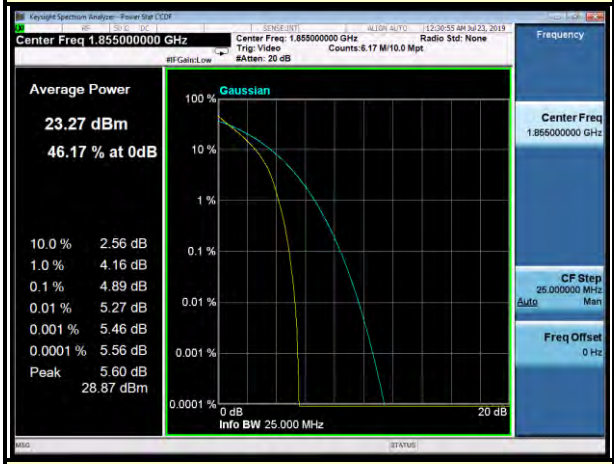
5MHz / 64QAM



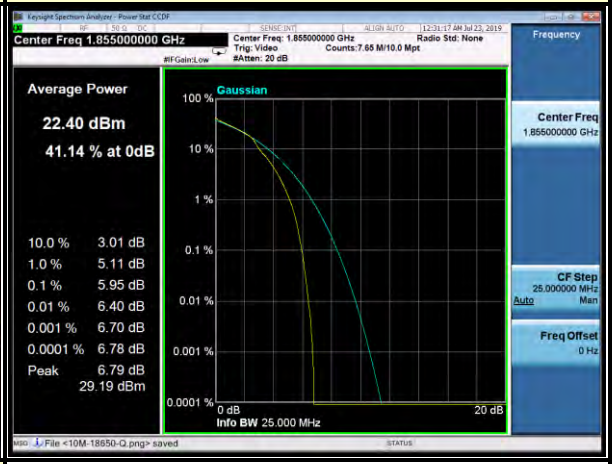
CHANNEL BANDWIDTH: 10MHz				
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)		
		QPSK	16QAM	64QAM
18650	1855	4.89	5.95	6.57
18900	1880	4.73	5.76	6.40
19150	1905	4.54	5.56	6.24

SPECTRUM PLOT OF WORST VALUE

10MHz / QPSK



10MHz / 16QAM

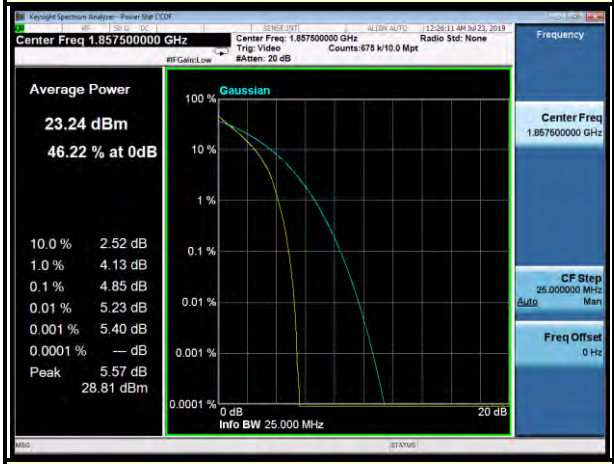


10MHz / 64QAM

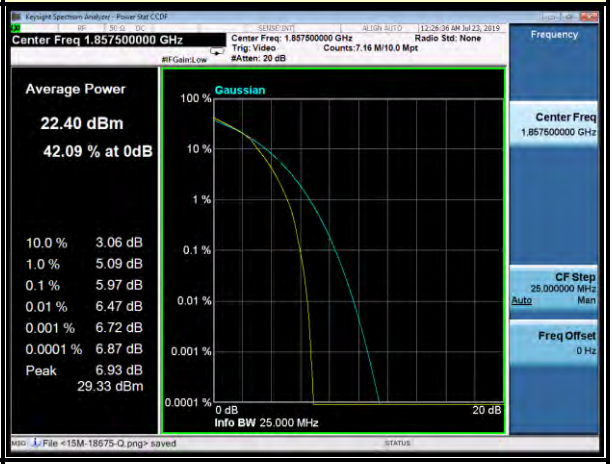
CHANNEL BANDWIDTH: 15MHz				
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)		
		QPSK	16QAM	64QAM
18675	1857.5	4.85	5.97	6.63
18900	1880	4.75	5.81	6.48
19125	1902.5	4.66	5.70	6.41

SPECTRUM PLOT OF WORST VALUE

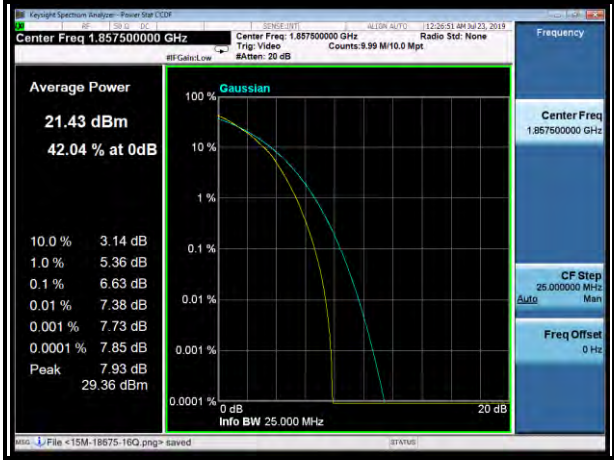
15MHz / QPSK



15MHz / 16QAM



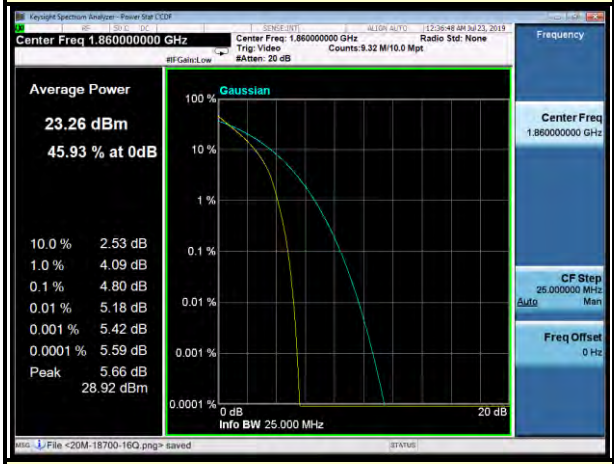
15MHz / 64QAM



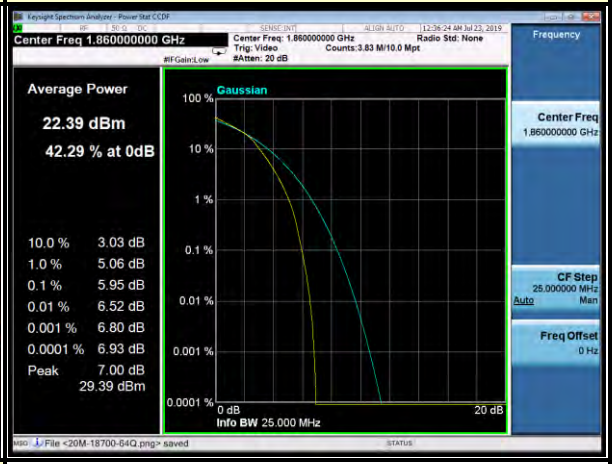
CHANNEL BANDWIDTH: 20MHz				
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)		
		QPSK	16QAM	64QAM
18700	1860	4.80	5.95	6.58
18900	1880	4.75	5.87	6.49
19100	1900	4.70	5.80	6.46

SPECTRUM PLOT OF WORST VALUE

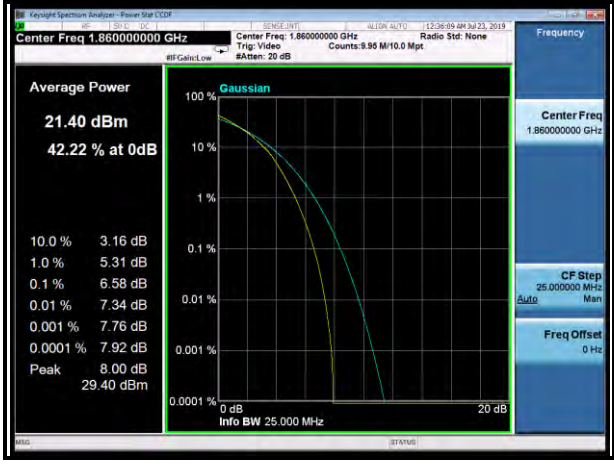
20MHz / QPSK



20MHz / 16QAM



20MHz / 64QAM



4 INFORMATION ON THE TESTING LABORATORIES

We, BV 7LAYERS COMMUNICATIONS TECHNOLOGY (SHENZHEN) CO. LTD., were founded in 2015 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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Web Site: www.adt.com.tw

The address and road map of all our labs can be found in our web site also.

5 APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.

---END---