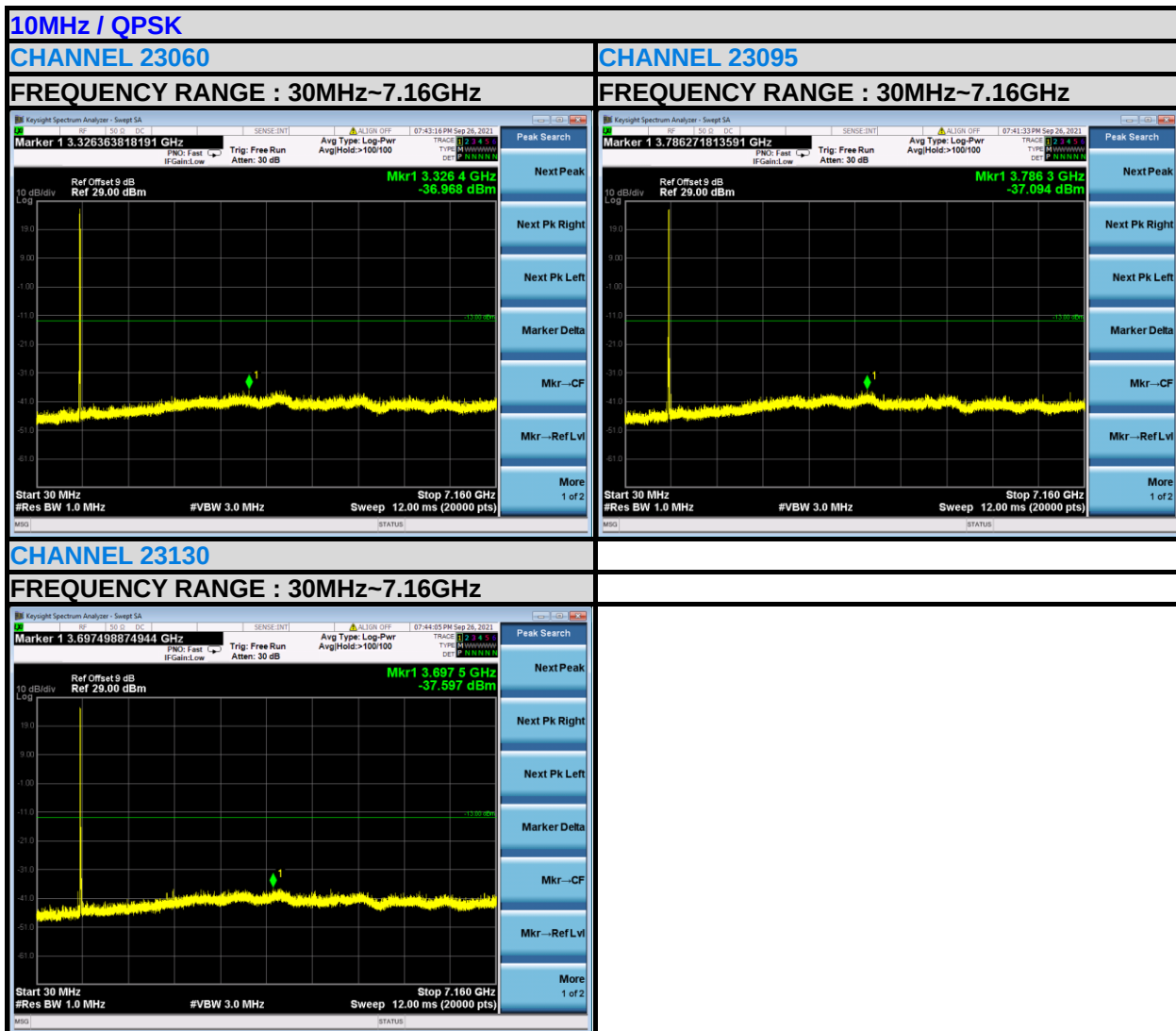




3.6 RADIATED EMISSION MEASUREMENT

3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

27.53(g) 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. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. 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.

27.53(h) For operations in the 1710-1755MHz band, the FCC limit is $43 + 10 \log(P)$ dB. Below the transmitter power (P) in a 1MHz bandwidth. However, in the 1MHz kilohertz bands immediately outside and adjacent to a 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.

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. $EIRP = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}.$
- d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole,
 $E.R.P \text{ power} = E.I.P.R \text{ power} - 2.15\text{dBi}.$

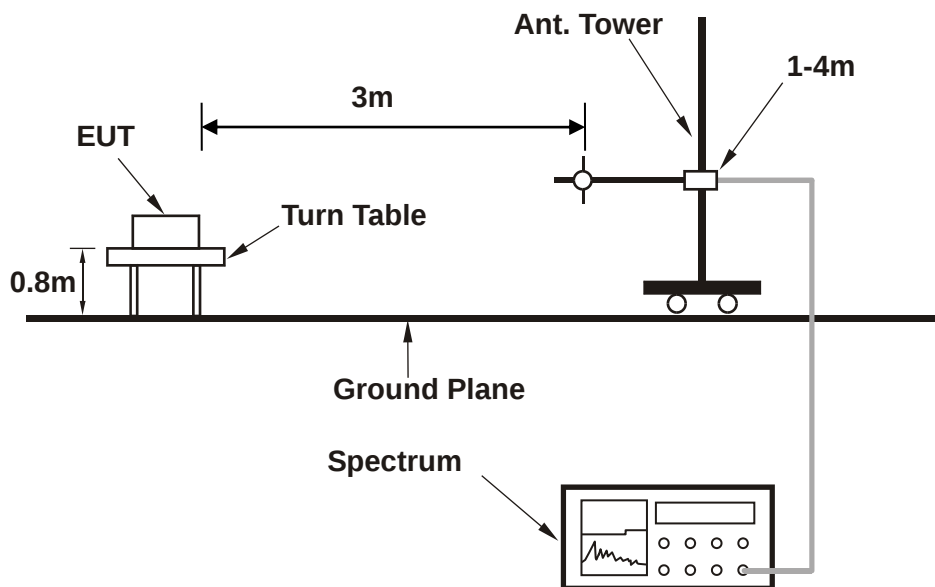
NOTE: The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

3.6.3 DEVIATION FROM TEST STANDARD

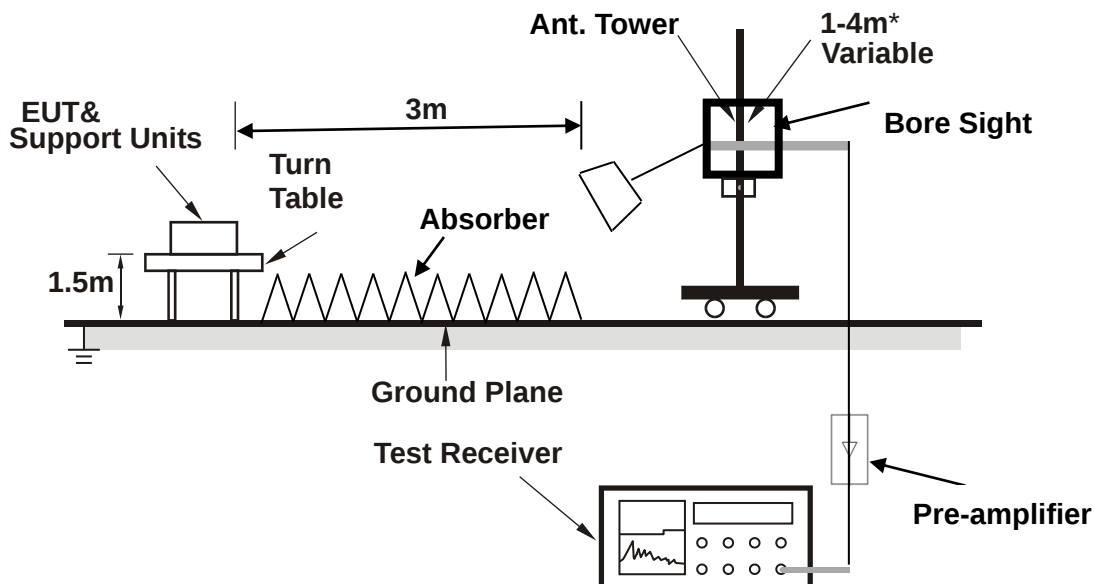
No deviation

3.6.4 TEST SETUP

< Frequency Range 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: For 9KHz-30MHz, all emission lower than the limit 20dB, not recording data

BELOW 1GHz WORST-CASE DATA

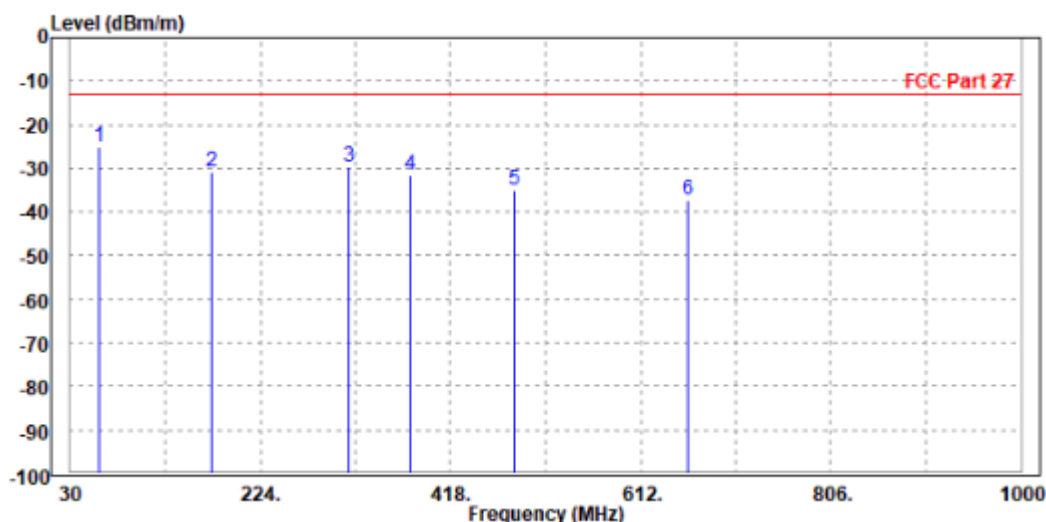
30 MHz – 1GHz data:

LTE Band 4

CHANNEL BANDWIDTH: 3MHz / QPSK

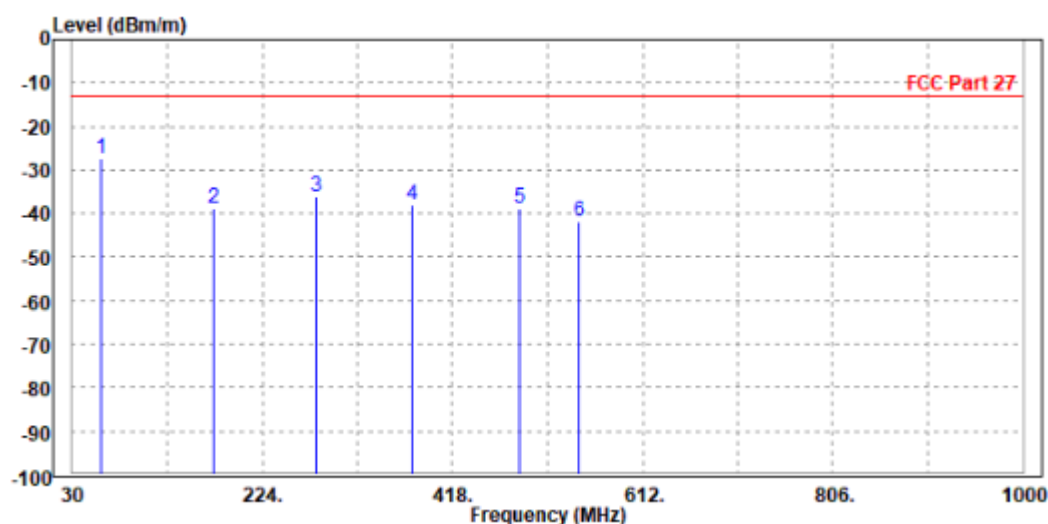
MODE	TX channel 19965	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 13.7V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	60.070	-25.12	-32.72	-13.00	-12.12	7.60	Peak	Horizontal
2	174.530	-30.92	-41.31	-13.00	-17.92	10.39	Peak	Horizontal
3	314.210	-29.78	-44.19	-13.00	-16.78	14.41	Peak	Horizontal
4	377.260	-31.38	-47.62	-13.00	-18.38	16.24	Peak	Horizontal
5	482.990	-34.85	-53.24	-13.00	-21.85	18.39	Peak	Horizontal
6	660.500	-37.41	-59.32	-13.00	-24.41	21.91	Peak	Horizontal



MODE	TX channel 19965	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 13.7V
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	60.070	-27.24	-35.14	-13.00	-14.24	7.90	Peak	Vertical
2	174.530	-38.74	-49.37	-13.00	-25.74	10.63	Peak	Vertical
3	278.320	-36.07	-50.55	-13.00	-23.07	14.48	Peak	Vertical
4	376.290	-38.14	-54.82	-13.00	-25.14	16.68	Peak	Vertical
5	485.900	-38.60	-57.43	-13.00	-25.60	18.83	Peak	Vertical
6	547.010	-41.73	-61.68	-13.00	-28.73	19.95	Peak	Vertical





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Test Report No.: W7L-P21090017RF02

ABOVE 1GHz

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

WORST-CASE DATA

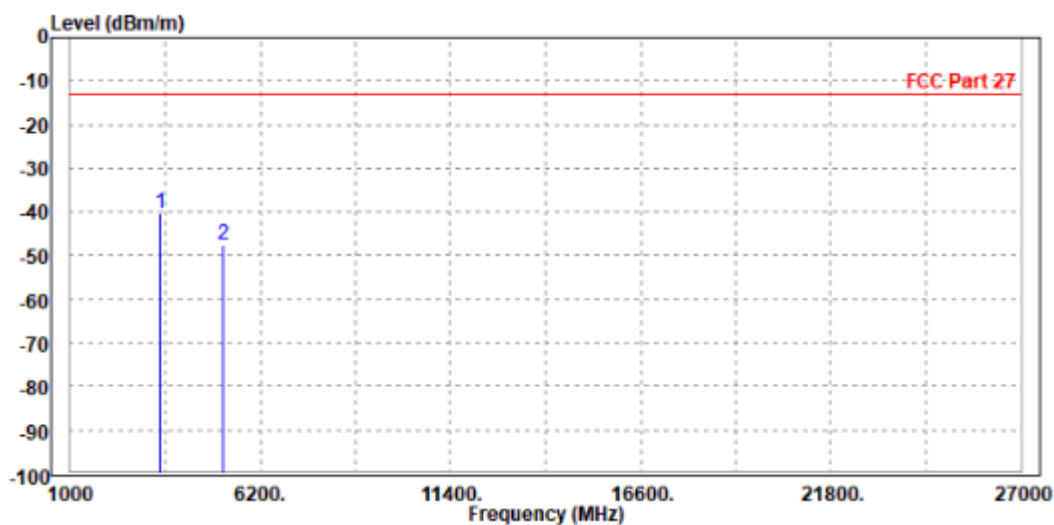
LTE Band 4

CHANNEL BANDWIDTH: 1.4MHz / QPSK

CH 20175

MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 13.7V
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	3470.000	-40.44	-49.02	-13.00	-27.44	8.58	Peak	Horizontal
2	5197.500	-47.41	-56.53	-13.00	-34.41	9.12	Peak	Horizontal

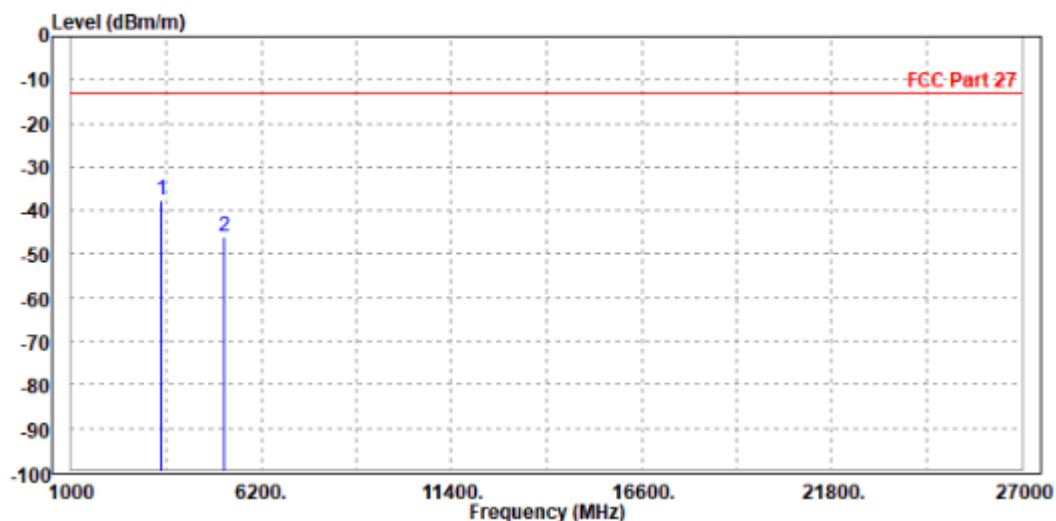




Test Report No.: W7L-P21090017RF02

MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 13.7V
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	3470.000	-37.52	-46.68	-13.00	-24.52	9.16	Peak	Vertical
2		5197.500	-46.02	-55.84	-13.00	-33.02	9.82	Peak	Vertical





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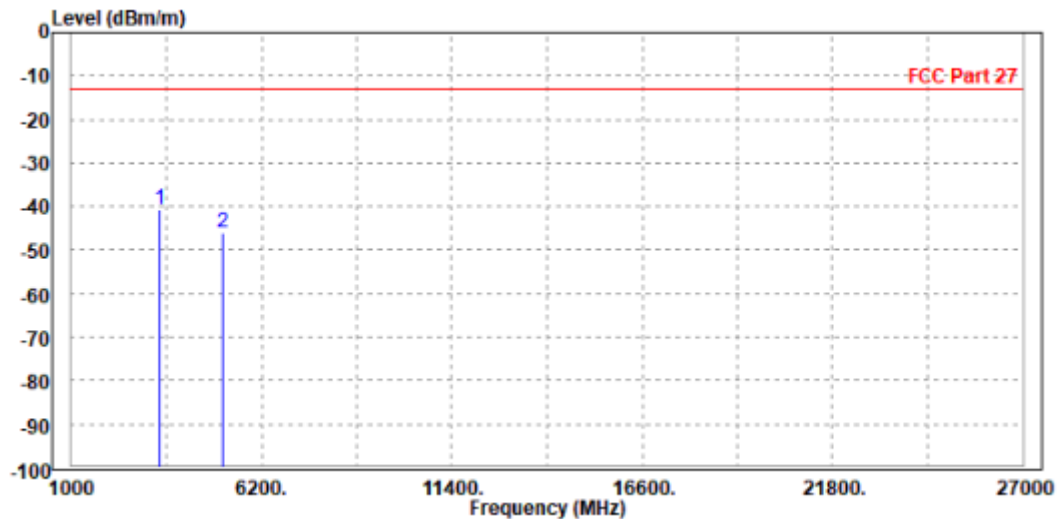
Test Report No.: W7L-P21090017RF02

CHANNEL BANDWIDTH: 3MHz / QPSK

CH 19965

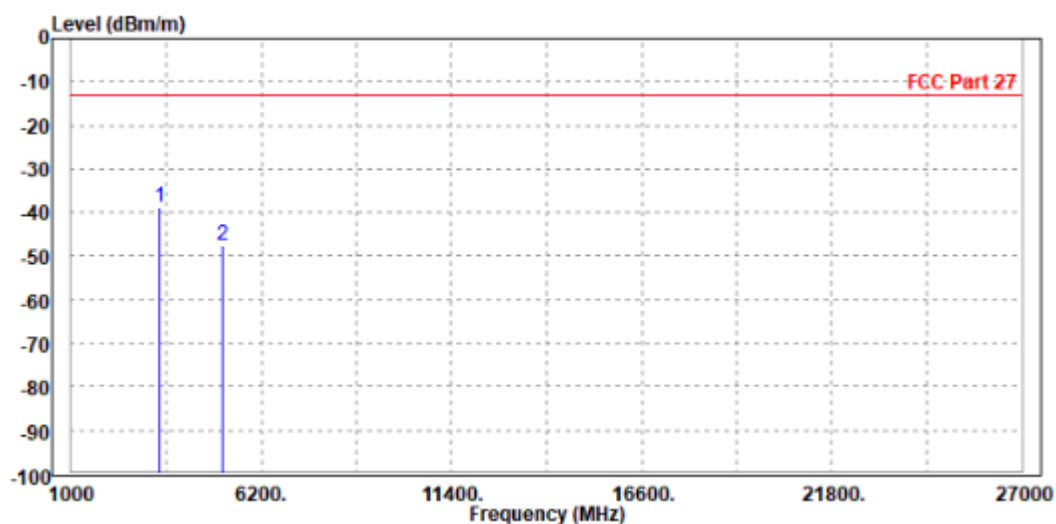
MODE	TX channel 19965	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 13.7V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	3418.000	-40.70	-49.29	-13.00	-27.70	8.59	Peak	Horizontal
2		5134.500	-45.85	-54.78	-13.00	-32.85	8.93	Peak	Horizontal



MODE	TX channel 19965	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 13.7V
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	3418.000	-38.81	-47.92	-13.00	-25.81	9.11	Peak	Vertical
2		5134.500	-47.59	-57.44	-13.00	-34.59	9.85	Peak	Vertical





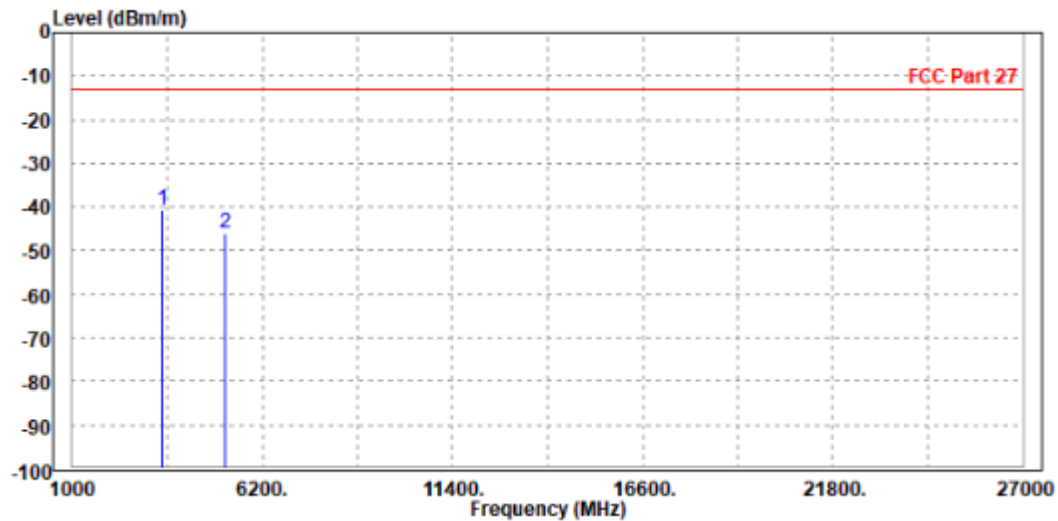
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CH 20175

Test Report No.: W7L-P21090017RF02

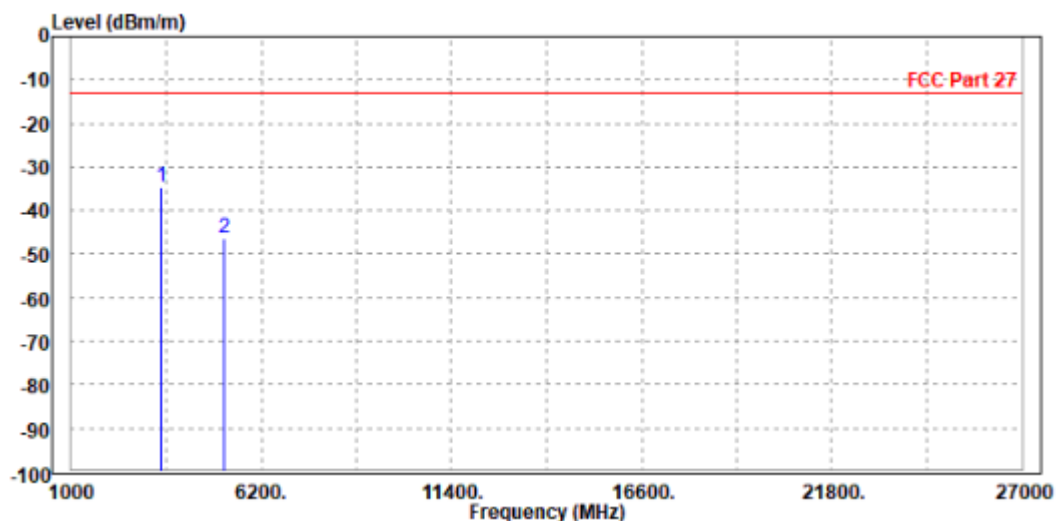
MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 13.7V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	3470.000	-40.52	-49.10	-13.00	-27.52	8.58	Peak	Horizontal
2		5197.500	-46.08	-55.20	-13.00	-33.08	9.12	Peak	Horizontal



MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 13.7V
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	3470.000	-34.52	-43.68	-13.00	-21.52	9.16	Peak	Vertical
2		5197.500	-46.36	-56.18	-13.00	-33.36	9.82	Peak	Vertical





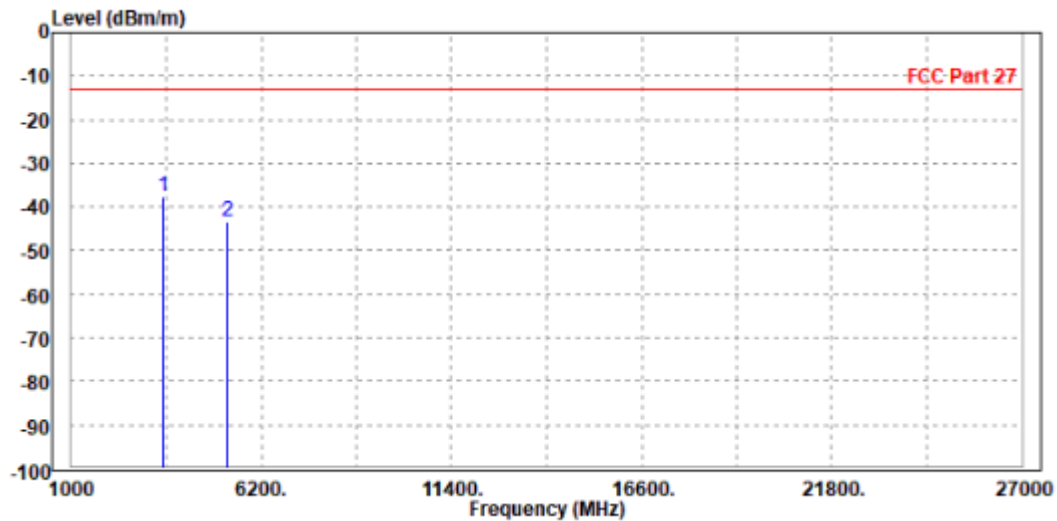
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Test Report No.: W7L-P21090017RF02

CH 20385

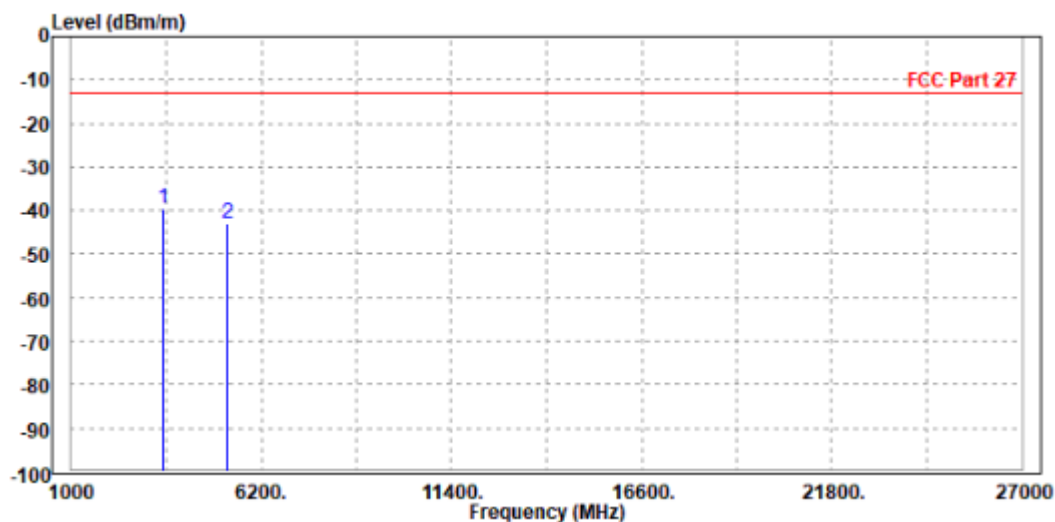
MODE	TX channel 20385	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 13.7V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	3496.000	-37.48	-46.05	-13.00	-24.48	8.57	Peak	Horizontal
2		5260.500	-43.19	-52.49	-13.00	-30.19	9.30	Peak	Horizontal



MODE	TX channel 20385	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 13.7V
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	3496.000	-39.72	-48.91	-13.00	-26.72	9.19	Peak	Vertical
2	5260.500	-42.80	-52.60	-13.00	-29.80	9.80	Peak	Vertical





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VERITAS

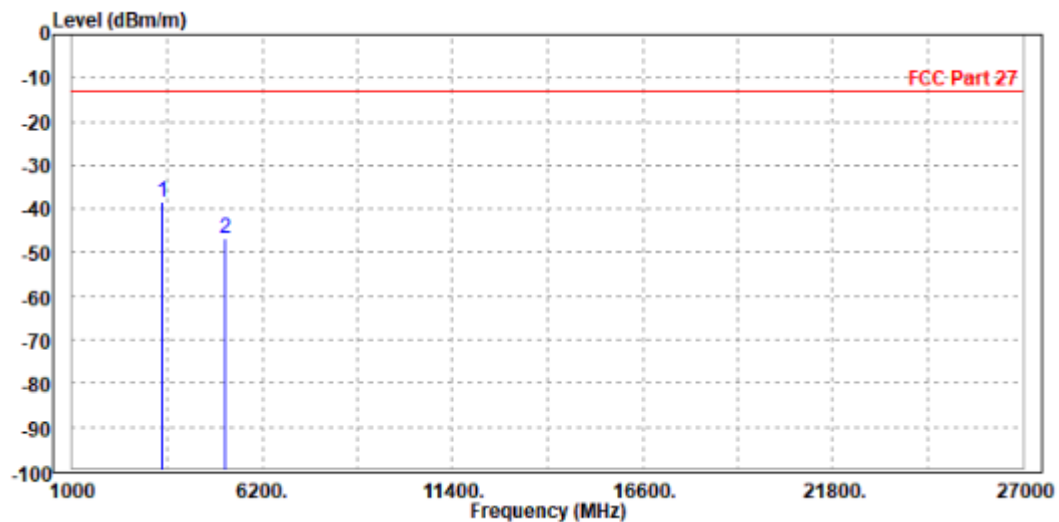
Test Report No.: W7L-P21090017RF02

CHANNEL BANDWIDTH: 5MHz / QPSK

CH 20175

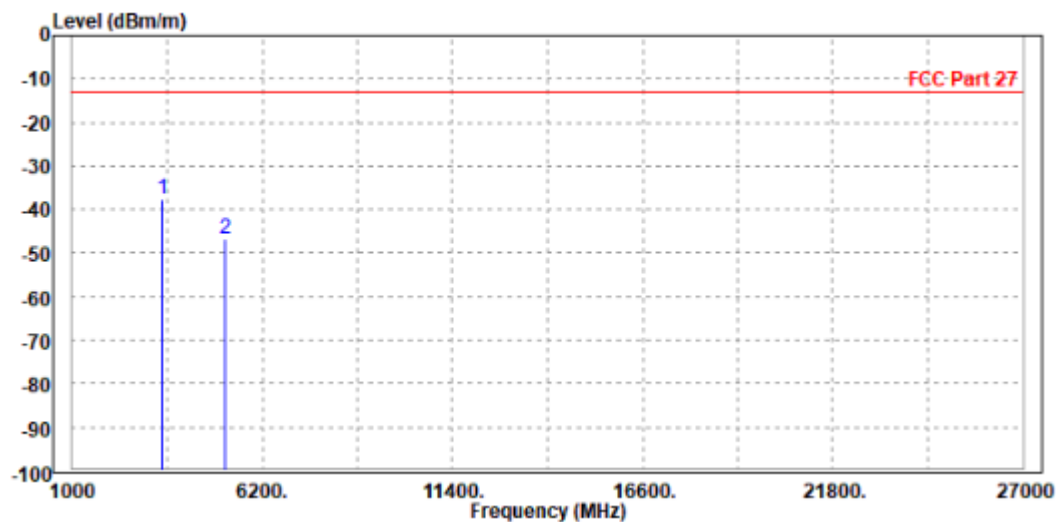
MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 13.7V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	3470.000	-38.38	-46.96	-13.00	-25.38	8.58	Peak	Horizontal
2		5197.500	-46.83	-55.95	-13.00	-33.83	9.12	Peak	Horizontal



MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 13.7V
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	3470.000	-37.81	-46.97	-13.00	-24.81	9.16	Peak	Vertical
2		5197.500	-46.83	-56.65	-13.00	-33.83	9.82	Peak	Vertical





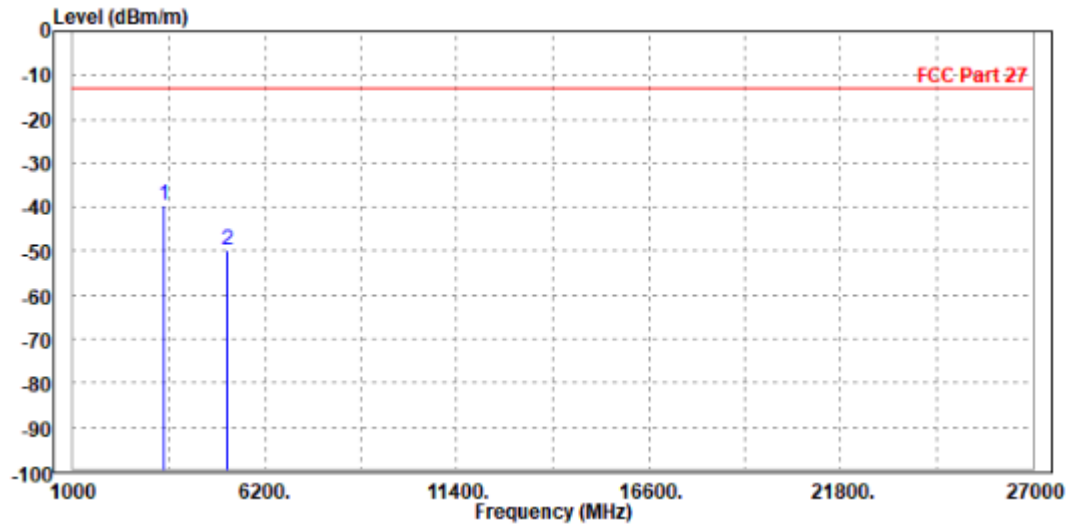
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Test Report No.: W7L-P21090017RF02

CHANNEL BANDWIDTH: 10MHz / QPSK

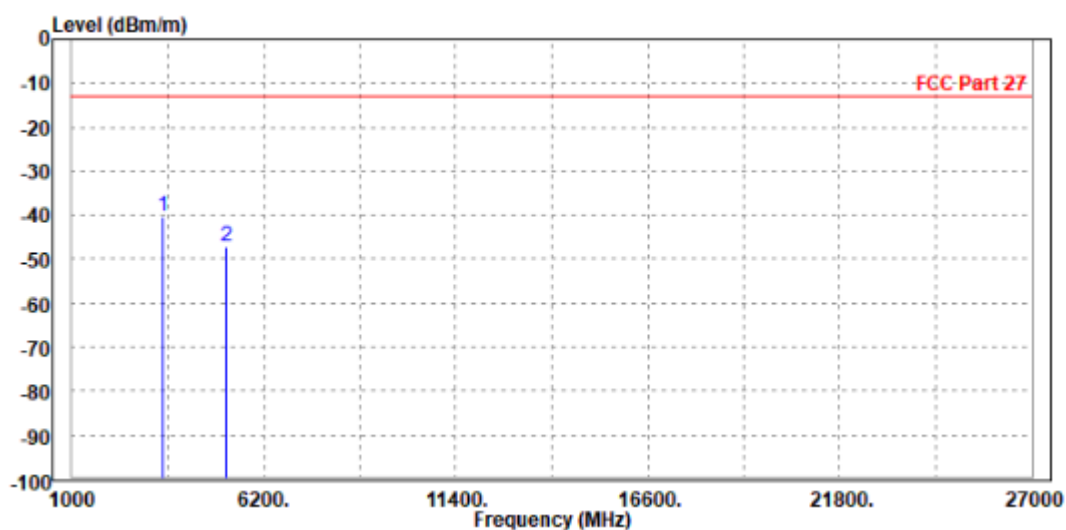
MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 13.7V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	3470.000	-39.73	-48.31	-13.00	-26.73	8.58	Peak	Horizontal
2		5197.500	-49.63	-58.75	-13.00	-36.63	9.12	Peak	Horizontal



MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 13.7V
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	3470.000	-40.14	-49.30	-13.00	-27.14	9.16	Peak	Vertical
2	5197.500	-47.27	-57.09	-13.00	-34.27	9.82	Peak	Vertical





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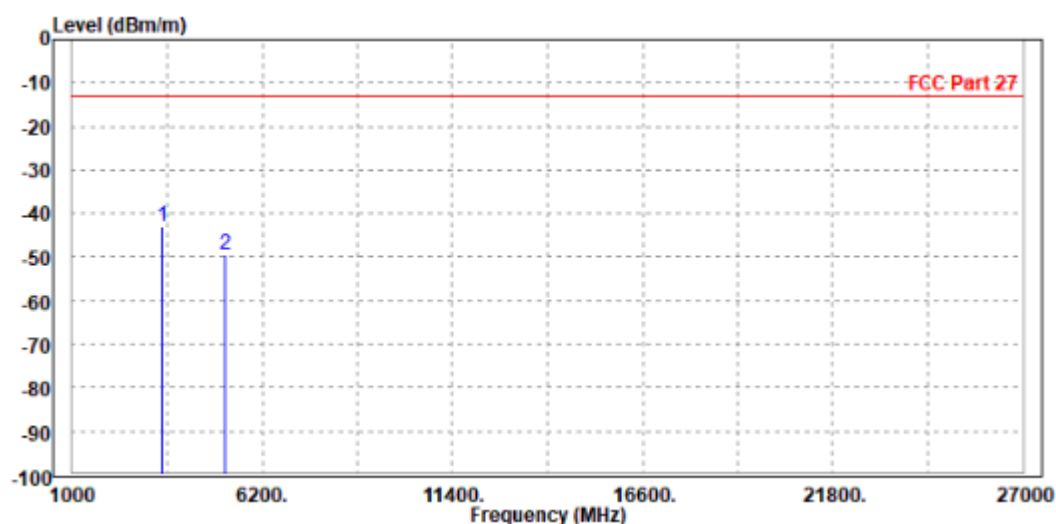
Test Report No.: W7L-P21090017RF02

CHANNEL BANDWIDTH: 15MHz / QPSK

CH20175

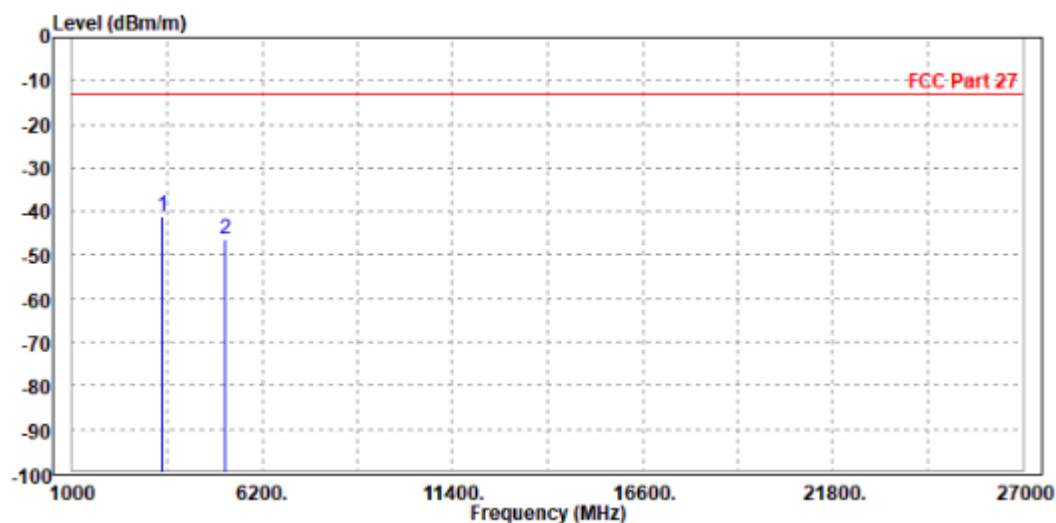
MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 13.7V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	3470.000	-43.03	-51.61	-13.00	-30.03	8.58	Peak	Horizontal
2	5197.500	-49.34	-58.46	-13.00	-36.34	9.12	Peak	Horizontal



MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 13.7V
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	3470.000	-41.07	-50.23	-13.00	-28.07	9.16	Peak	Vertical
2		5197.500	-46.52	-56.34	-13.00	-33.52	9.82	Peak	Vertical





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VERITAS

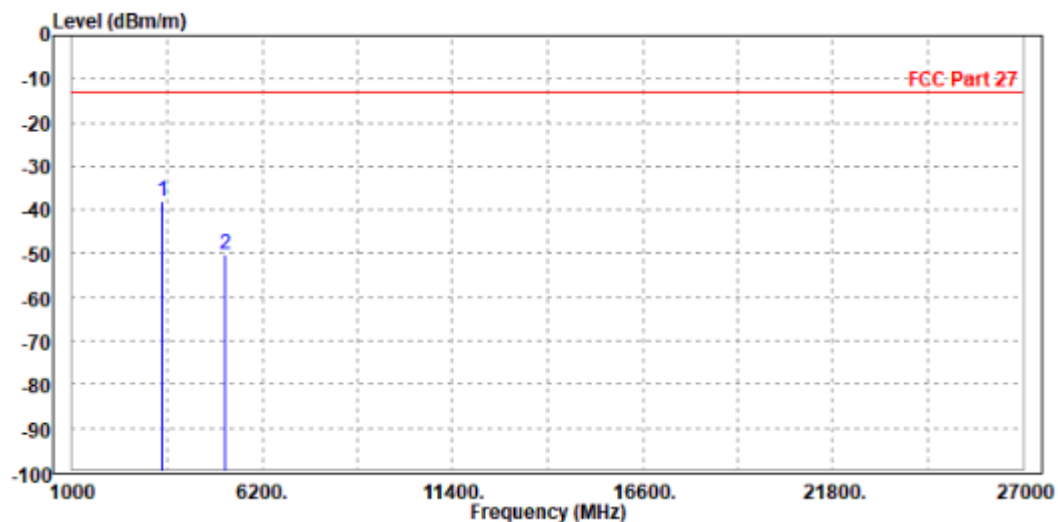
Test Report No.: W7L-P21090017RF02

CHANNEL BANDWIDTH: 20MHz / QPSK

CH 20175

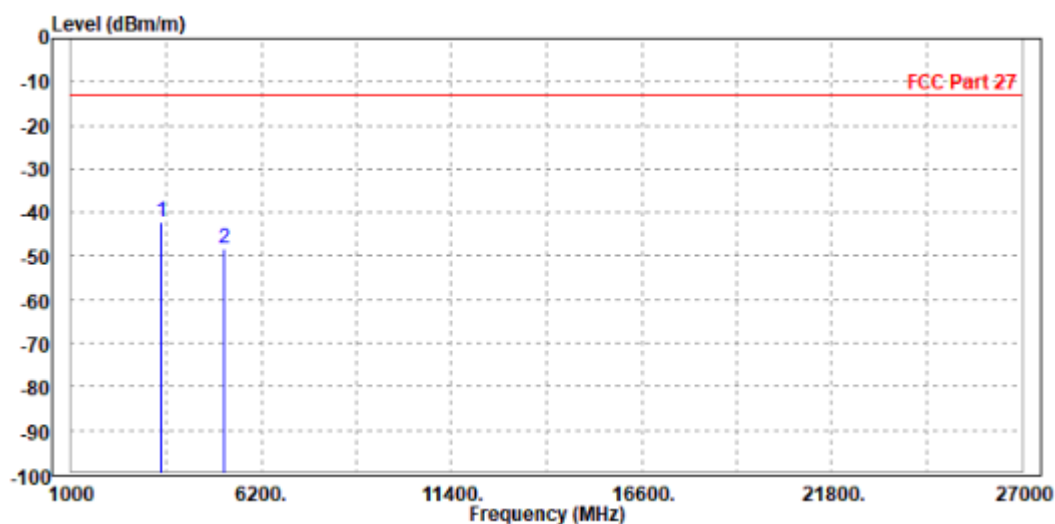
MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 13.7V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	3470.000	-38.17	-46.75	-13.00	-25.17	8.58	Peak	Horizontal
2		5197.500	-50.28	-59.40	-13.00	-37.28	9.12	Peak	Horizontal



MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 13.7V
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	3470.000	-42.17	-51.33	-13.00	-29.17	9.16	Peak	Vertical
2		5197.500	-48.47	-58.29	-13.00	-35.47	9.82	Peak	Vertical





**BUREAU
VERITAS**

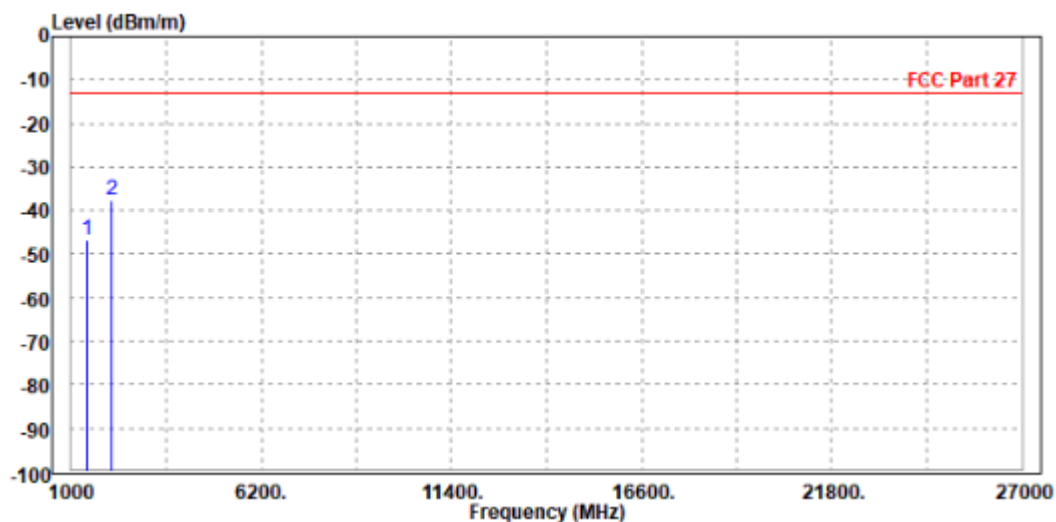
Test Report No.: W7L-P21090017RF02

LTE BAND 12

CHANNEL BANDWIDTH: 1.4MHz / QPSK

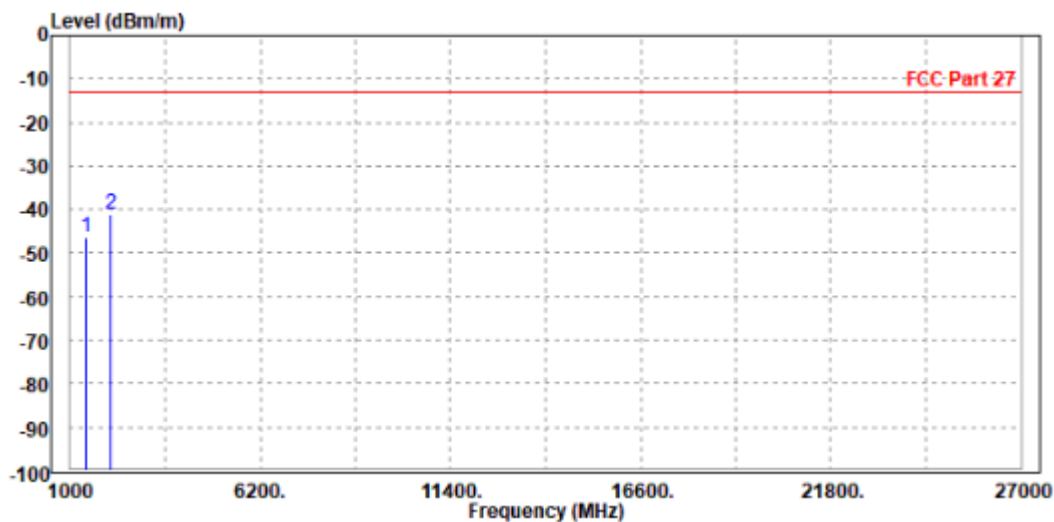
MODE	TX channel 23095	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 13.7V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1416.000	-46.64	-47.72	-13.00	-33.64	1.08	Peak	Horizontal
2 PP	2122.500	-37.83	-45.50	-13.00	-24.83	7.67	Peak	Horizontal



MODE	TX channel 23095	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 13.7V
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	1416.000	-46.37	-48.06	-13.00	-33.37	1.69	Peak	Vertical
2 PP	2122.500	-40.93	-47.62	-13.00	-27.93	6.69	Peak	Vertical





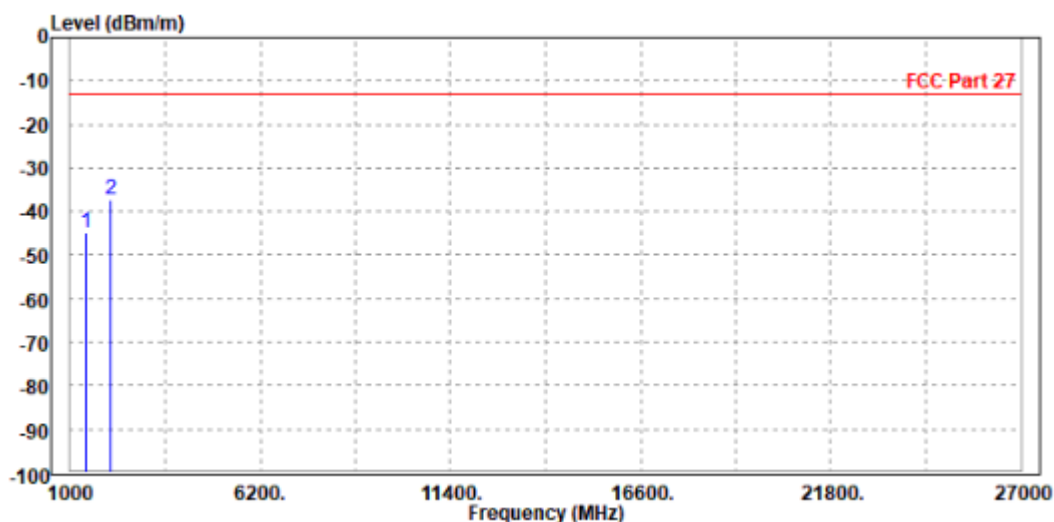
Test Report No.: W7L-P21090017RF02

CHANNEL BANDWIDTH: 3MHz / QPSK

CH23095

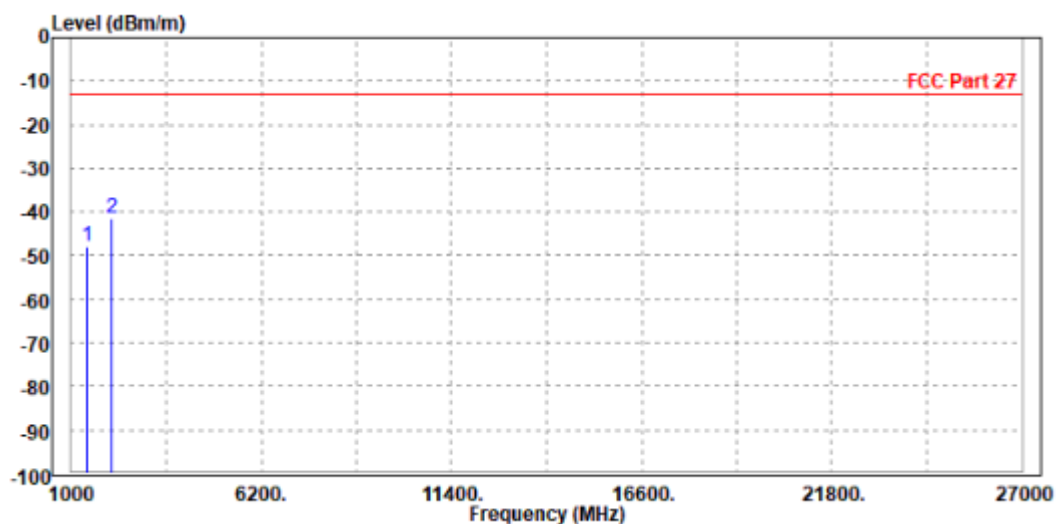
MODE	TX channel 23095	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 13.7V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1416.000	-44.97	-46.05	-13.00	-31.97	1.08	Peak	Horizontal
2 PP	2122.500	-37.30	-44.97	-13.00	-24.30	7.67	Peak	Horizontal



MODE	TX channel 23095	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 13.7V
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	1416.000	-47.78	-49.47	-13.00	-34.78	1.69	Peak	Vertical
2 PP	2122.500	-41.42	-48.11	-13.00	-28.42	6.69	Peak	Vertical

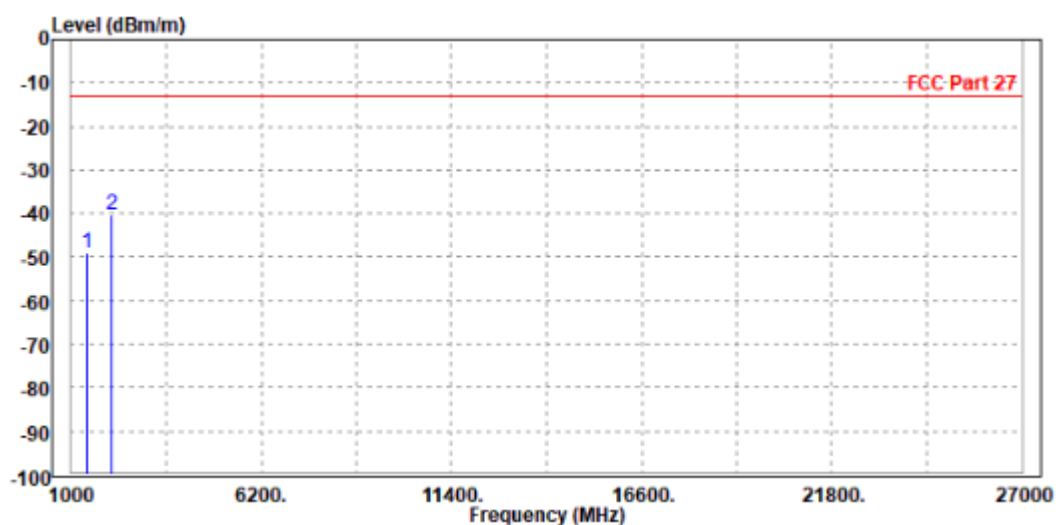


CHANNEL BANDWIDTH: 5MHz / QPSK

CH23035

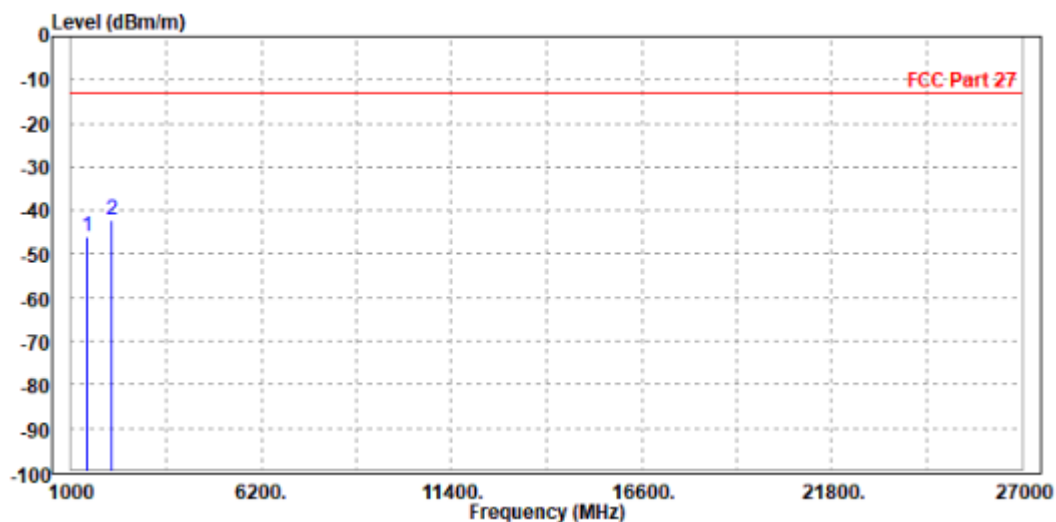
MODE	TX channel 23035	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 13.7V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1416.000	-49.04	-50.12	-13.00	-36.04	1.08	Peak	Horizontal
2 PP	2104.500	-40.49	-48.14	-13.00	-27.49	7.65	Peak	Horizontal



MODE	TX channel 23035	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 13.7V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

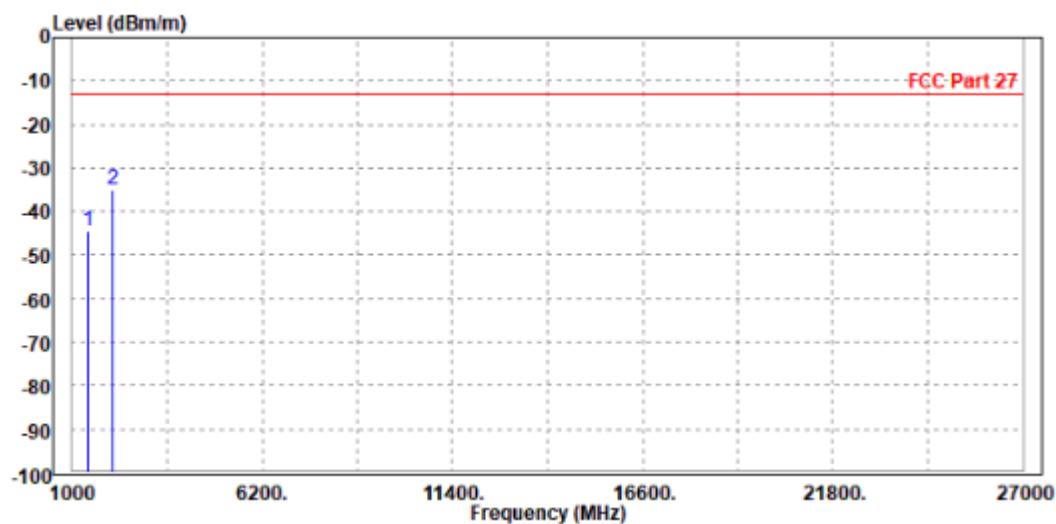
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1416.000	-45.89	-47.58	-13.00	-32.89	1.69	Peak	Vertical
2 PP	2104.500	-42.34	-49.01	-13.00	-29.34	6.67	Peak	Vertical



CH23095

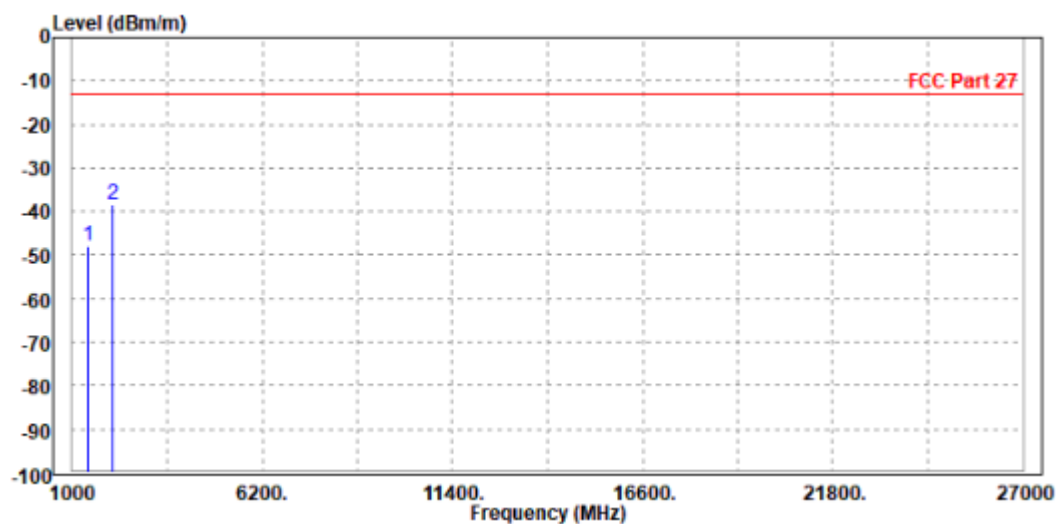
MODE	TX channel 23095	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 13.7V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1416.000	-44.66	-45.74	-13.00	-31.66	1.08	Peak	Horizontal
2 PP	2122.500	-35.08	-42.75	-13.00	-22.08	7.67	Peak	Horizontal



MODE	TX channel 23095	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 13.7V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

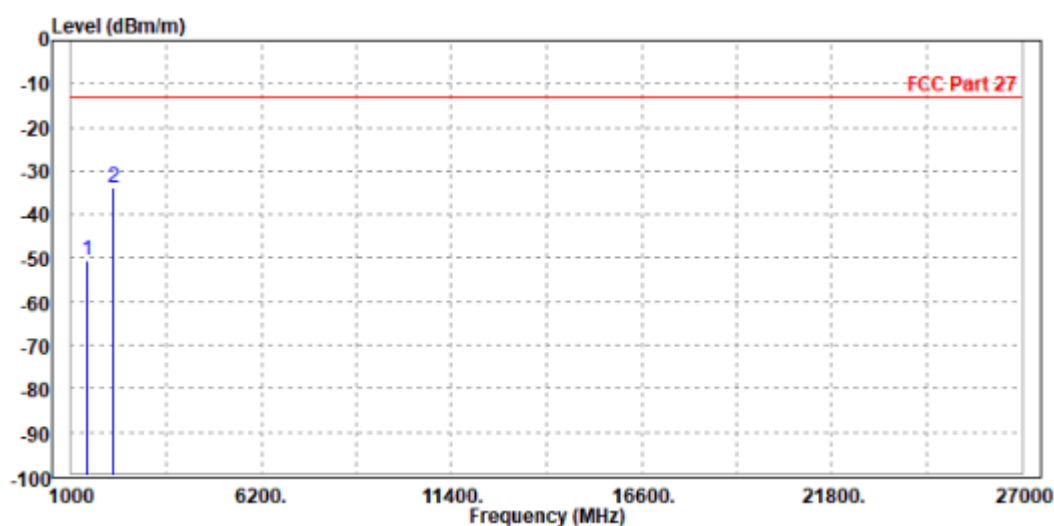
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1416.000	-48.09	-49.78	-13.00	-35.09	1.69	Peak	Vertical
2 PP	2122.500	-38.53	-45.22	-13.00	-25.53	6.69	Peak	Vertical



CH23155

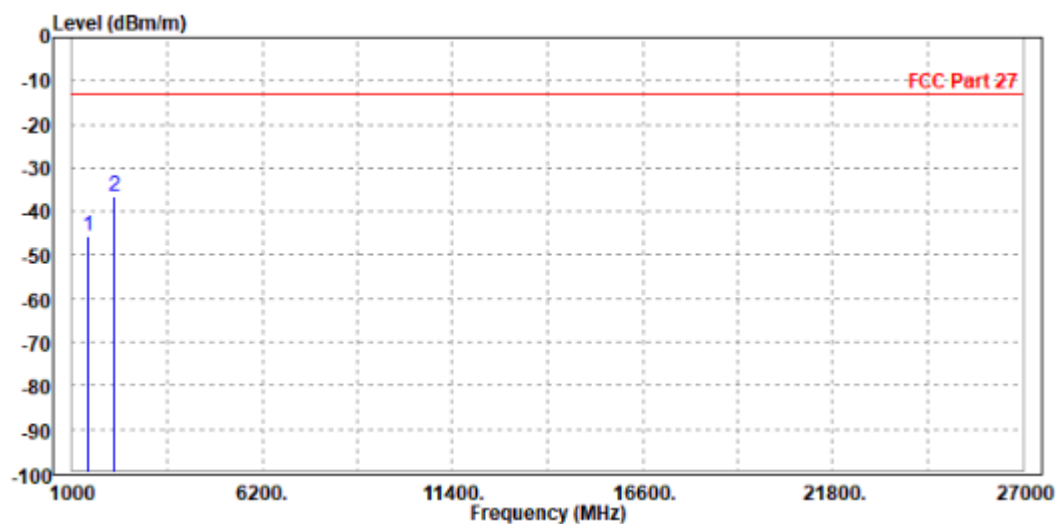
MODE	TX channel 23155	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 13.7V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1416.000	-50.61	-51.69	-13.00	-37.61	1.08	Peak	Horizontal
2 PP	2140.500	-33.83	-41.52	-13.00	-20.83	7.69	Peak	Horizontal



MODE	TX channel 23155	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 13.7V
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	1416.000	-45.81	-47.50	-13.00	-32.81	1.69	Peak	Vertical
2 PP	2140.500	-36.57	-43.28	-13.00	-23.57	6.71	Peak	Vertical

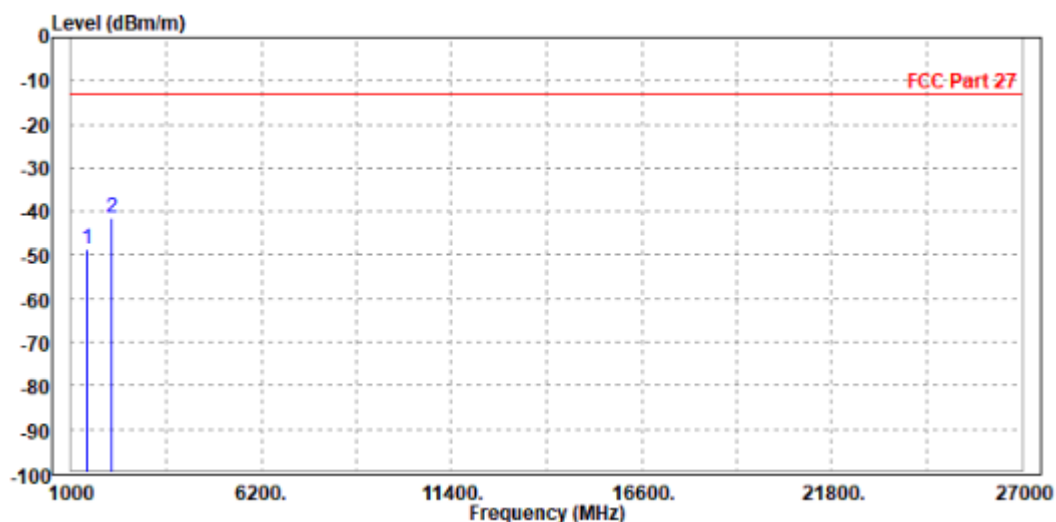


CHANNEL BANDWIDTH: 10MHz / QPSK

CH23060

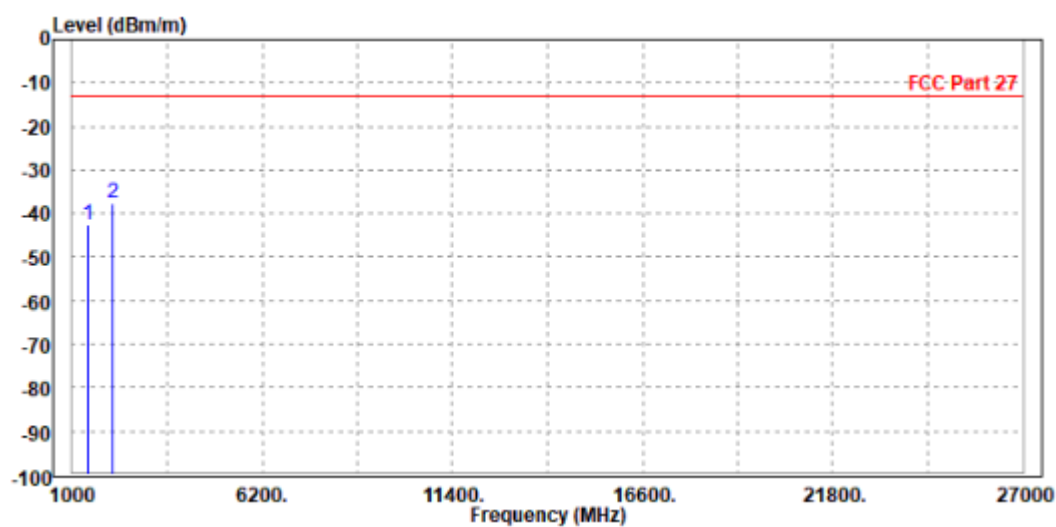
MODE	TX channel 23060	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 13.7V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1416.000	-48.78	-49.86	-13.00	-35.78	1.08	Peak	Horizontal
2 PP	2122.500	-41.43	-49.10	-13.00	-28.43	7.67	Peak	Horizontal



MODE	TX channel 23060	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 13.7V
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	1416.000	-42.44	-44.13	-13.00	-29.44	1.69	Peak	Vertical
2 PP	2122.500	-37.66	-44.35	-13.00	-24.66	6.69	Peak	Vertical

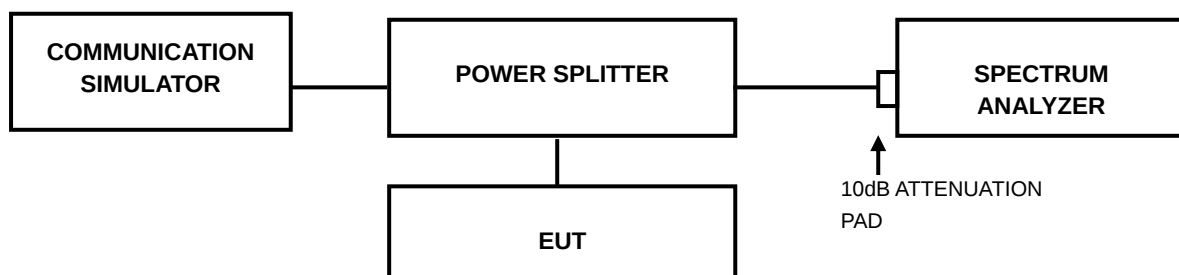


3.7 PEAK TO AVERAGE RATIO

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



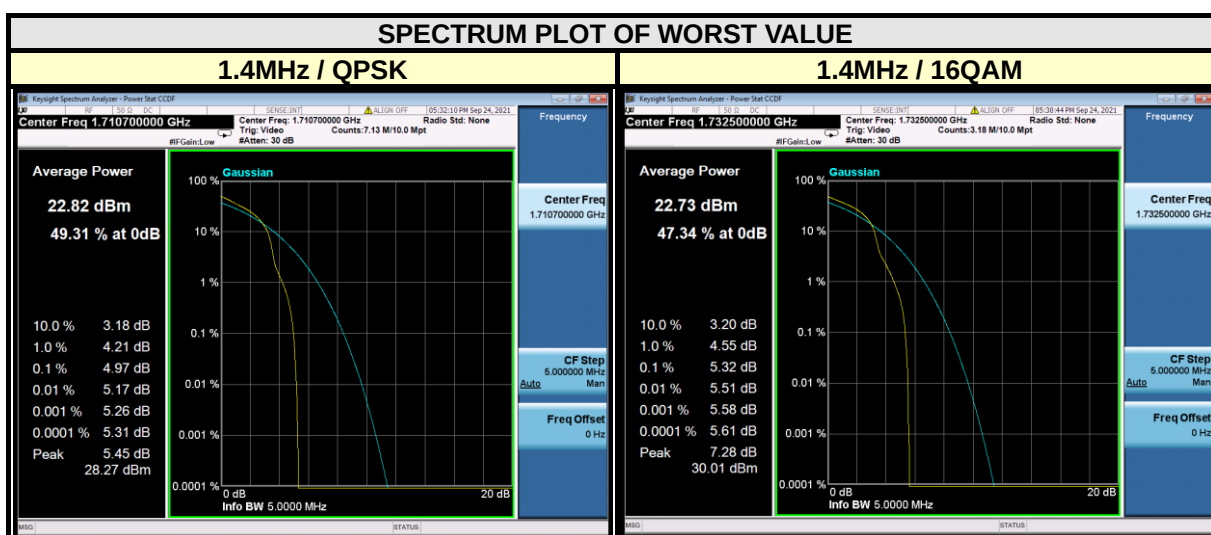
3.7.3 TEST PROCEDURES

1. Set resolution/measurement bandwidth $\geq$ 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%.

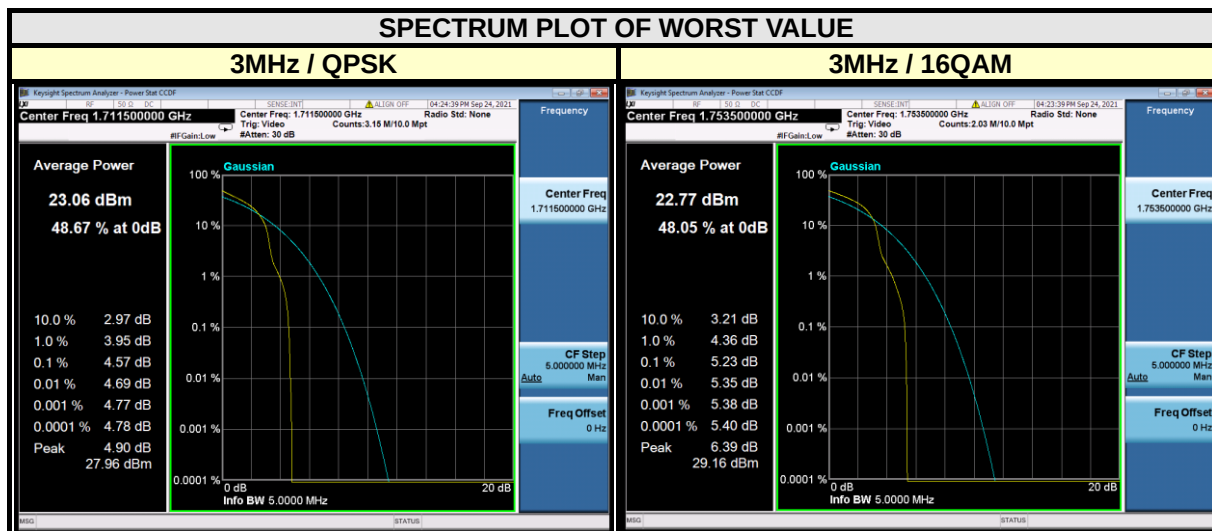
3.7.4 TEST RESULTS

LTE BAND 4

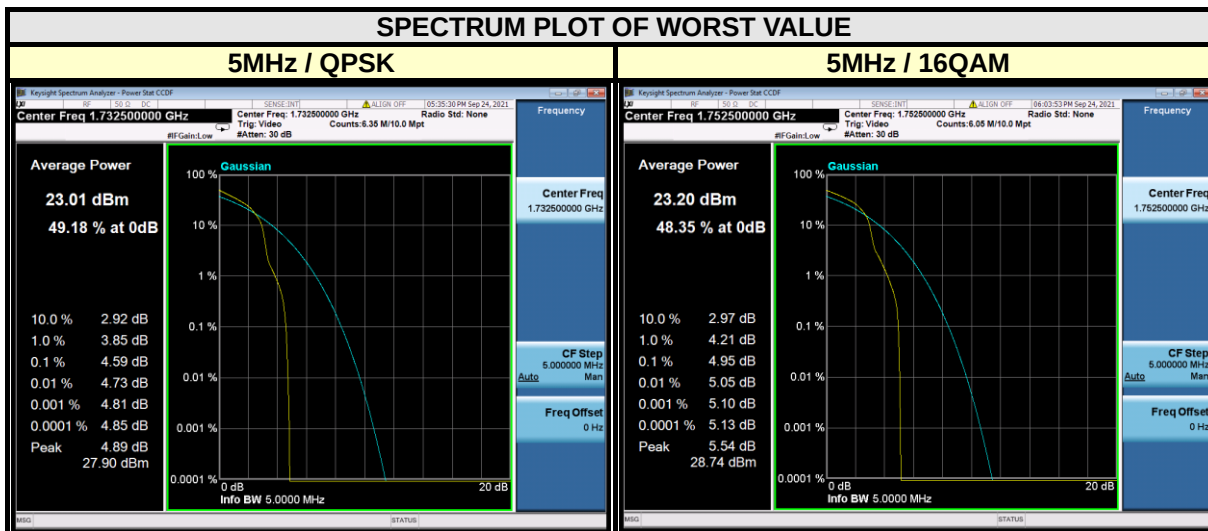
CHANNEL BANDWIDTH: 1.4MHz				
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)		
		QPSK	16QAM	64QAM
19957	1710.7	4.97	5.21	/
20175	1732.5	4.95	5.32	/
20393	1754.3	4.77	5.14	/



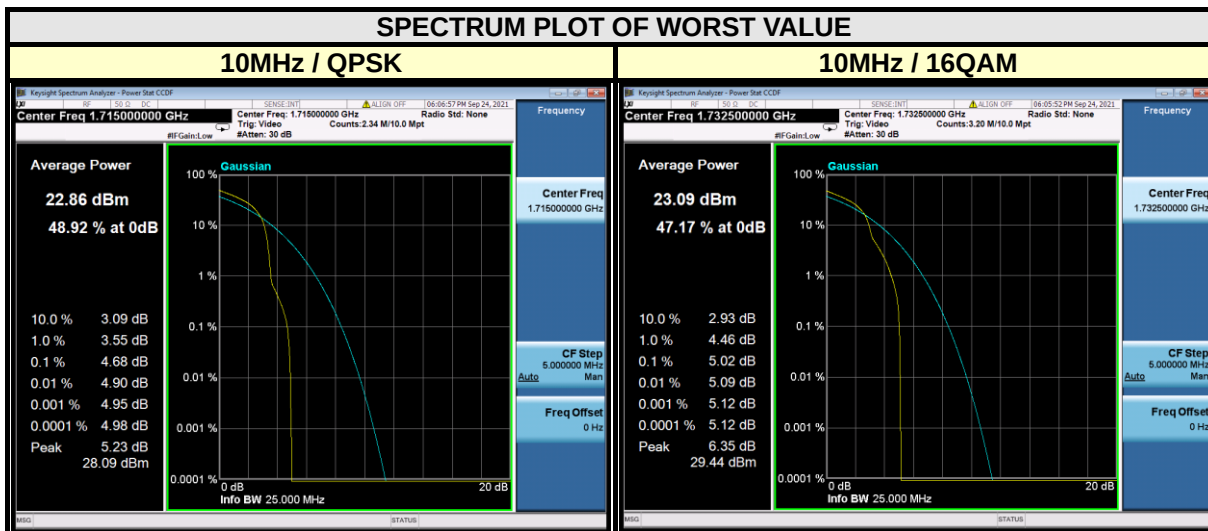
CHANNEL BANDWIDTH: 3MHz				
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)		
		QPSK	16QAM	64QAM
19965	1711.5	4.57	5.04	/
20175	1732.5	4.57	4.91	/
20385	1753.5	4.57	5.23	/



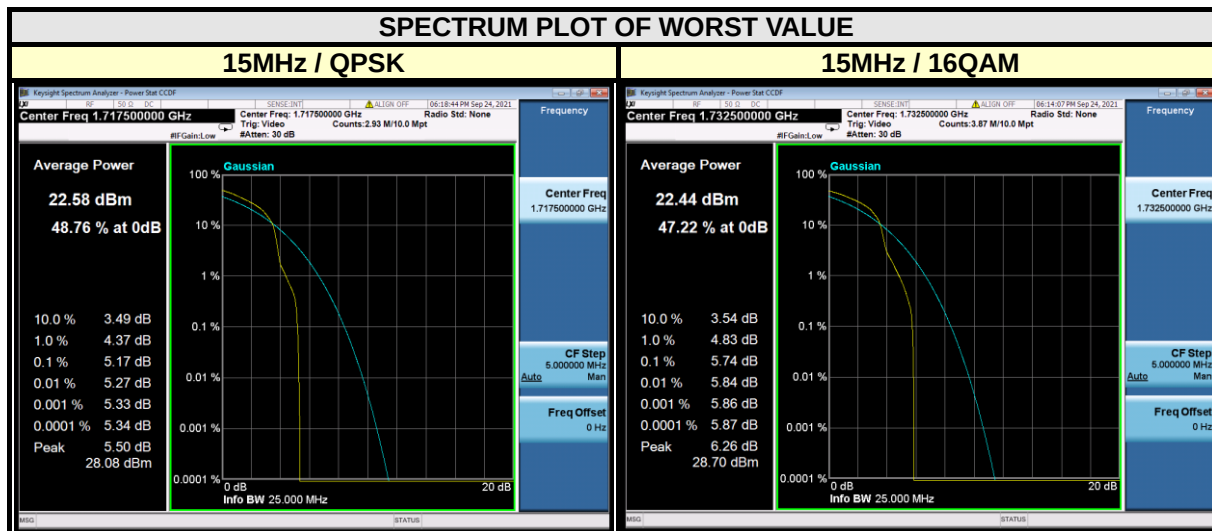
CHANNEL BANDWIDTH: 5MHz				
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)		
		QPSK	16QAM	64QAM
19975	1712.5	3.42	3.14	/
20175	1732.5	4.59	4.52	/
20375	1752.5	4.46	4.95	/



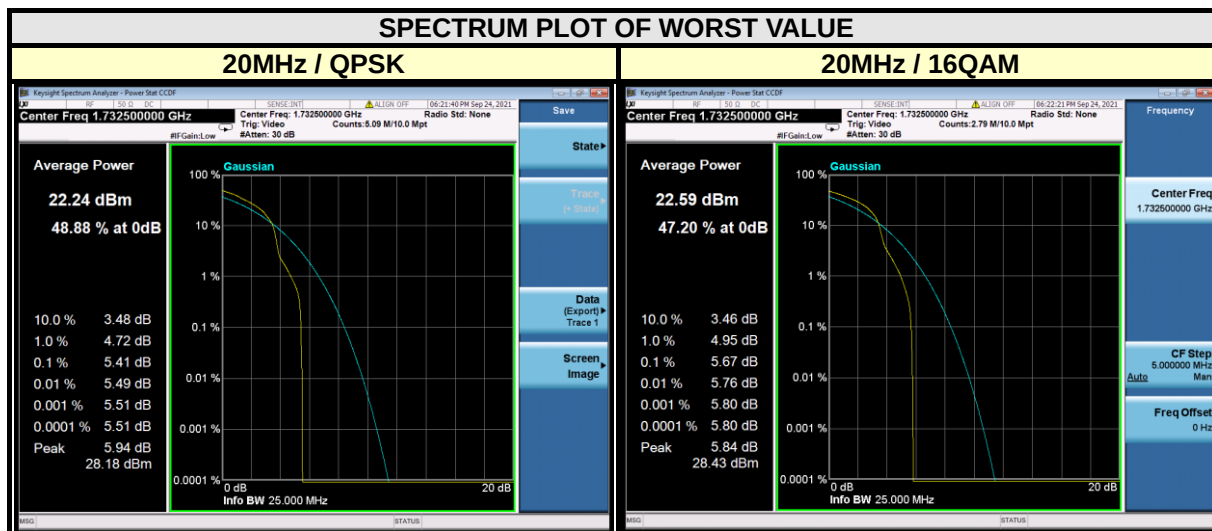
CHANNEL BANDWIDTH: 10MHz				
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)		
		QPSK	16QAM	64QAM
20000	1715	4.68	4.85	/
20175	1732.5	3.63	5.02	/
20350	1750	4.56	5.01	/



CHANNEL BANDWIDTH: 15MHz				
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)		
		QPSK	16QAM	64QAM
20025	1717.5	5.17	5.48	/
20175	1732.5	5.12	5.74	/
20325	1747.5	4.91	5.50	/

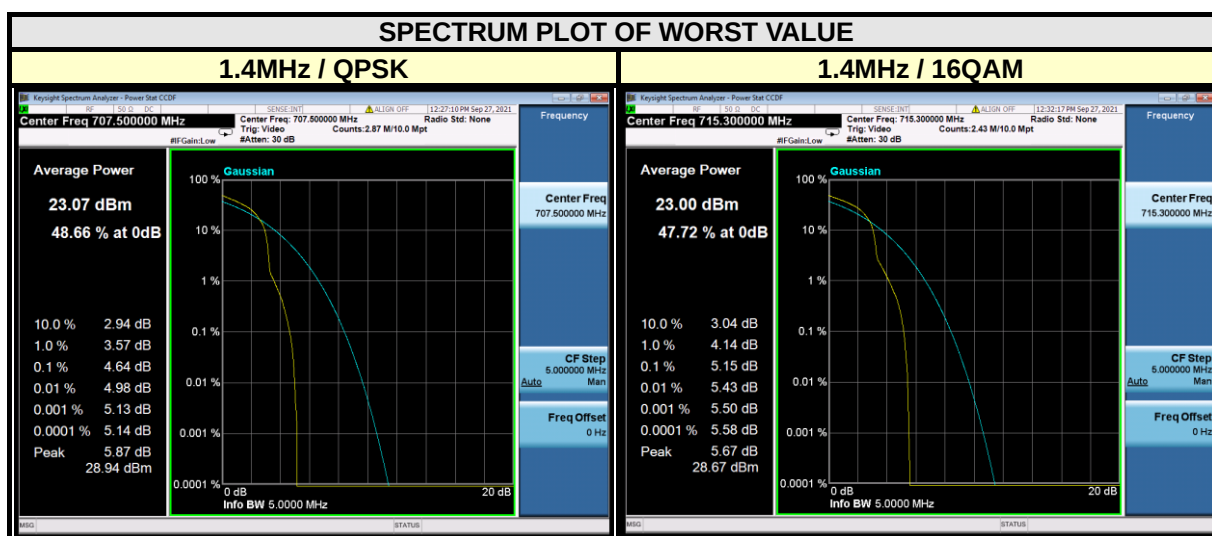


CHANNEL BANDWIDTH: 20MHz				
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)		
		QPSK	16QAM	64QAM
20050	1720	4.82	5.42	/
20175	1732.5	5.41	5.67	/
20300	1745	5.14	5.55	/

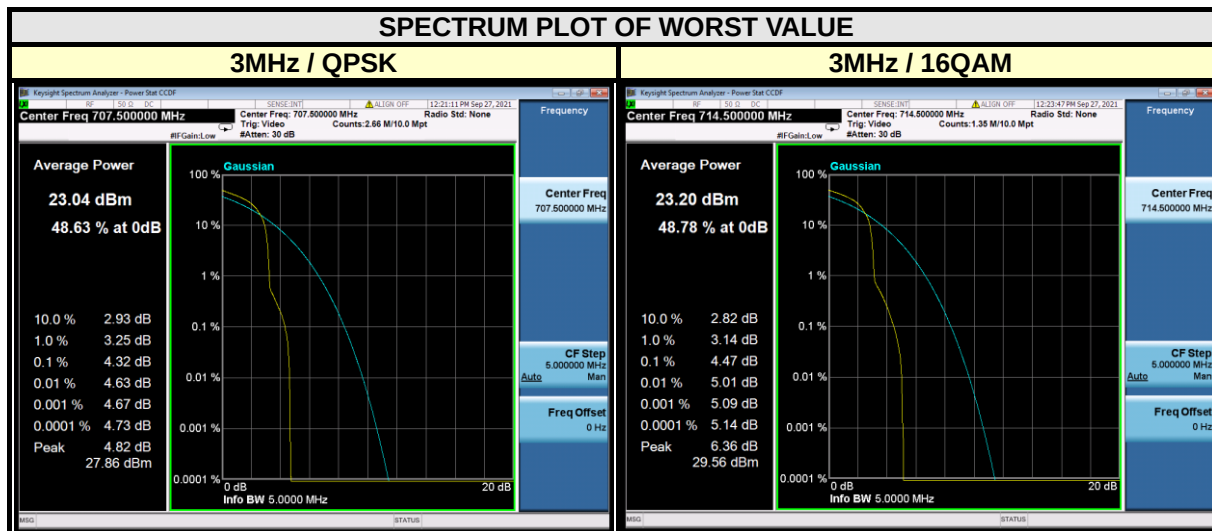


LTE BAND 12

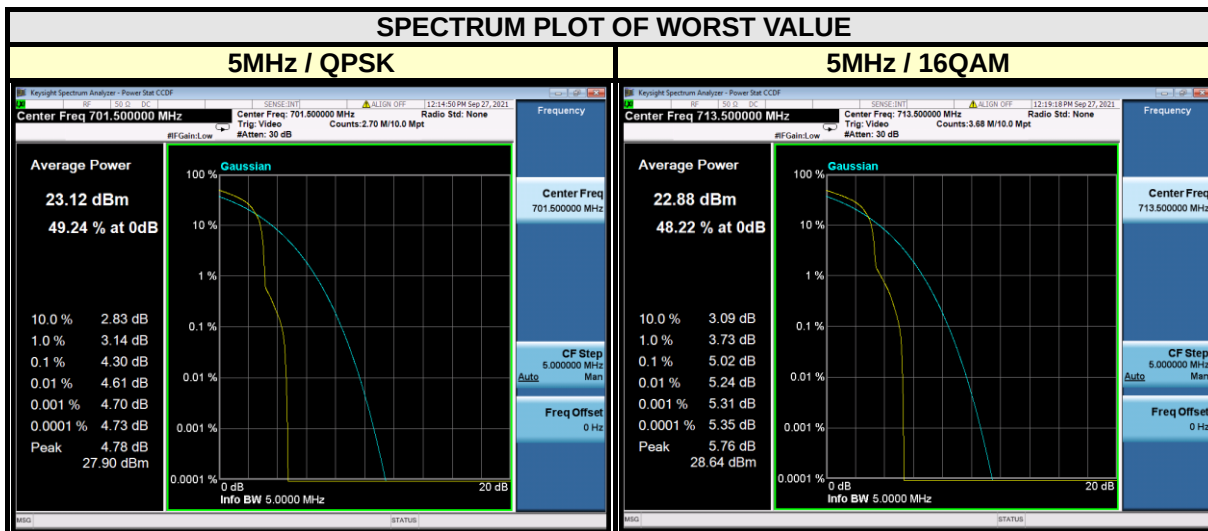
CHANNEL BANDWIDTH: 1.4MHz				
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)		
		QPSK	16QAM	64QAM
23017	699.7	4.53	4.83	/
23095	707.5	4.64	5.12	/
23173	715.3	4.57	5.15	/



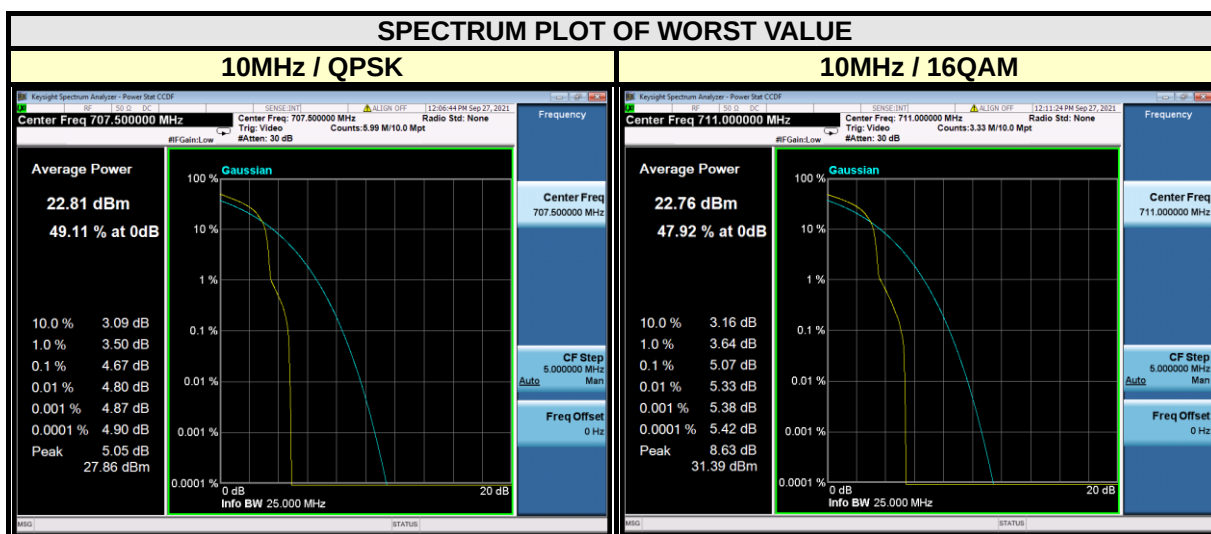
CHANNEL BANDWIDTH: 3MHz				
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)		
		QPSK	16QAM	64QAM
23025	700.5	4.04	4.14	/
23095	707.5	4.32	3.83	/
23165	714.5	3.93	4.47	/



CHANNEL BANDWIDTH: 5MHz				
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)		
		QPSK	16QAM	64QAM
23035	701.5	4.30	3.76	/
23095	707.5	4.30	3.02	/
23155	713.5	3.77	5.02	/



CHANNEL BANDWIDTH: 10MHz				
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)		
		QPSK	16QAM	64QAM
23060	704	4.31	4.96	/
23095	707.5	4.67	4.76	/
23130	711	4.55	5.07	/





Test Report No.: W7L-P21090017RF02

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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Tel: +86-755-88696566

Fax: +86-755-88696577

Email: customerservice.sw@cn.bureauveritas.com

Web Site: www.adt.com.tw

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



Test Report No.: W7L-P21090017RF02

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---