



### 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  $-13\text{dBm}$ .

#### 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.  $\text{EIRP} = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$ .

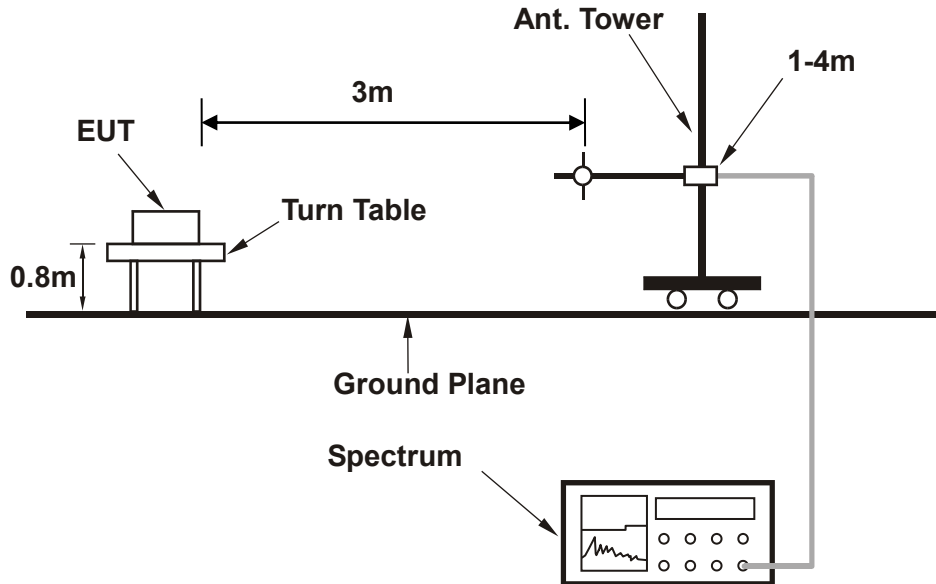
**NOTE:** The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

#### 3.6.3 DEVIATION FROM TEST STANDARD

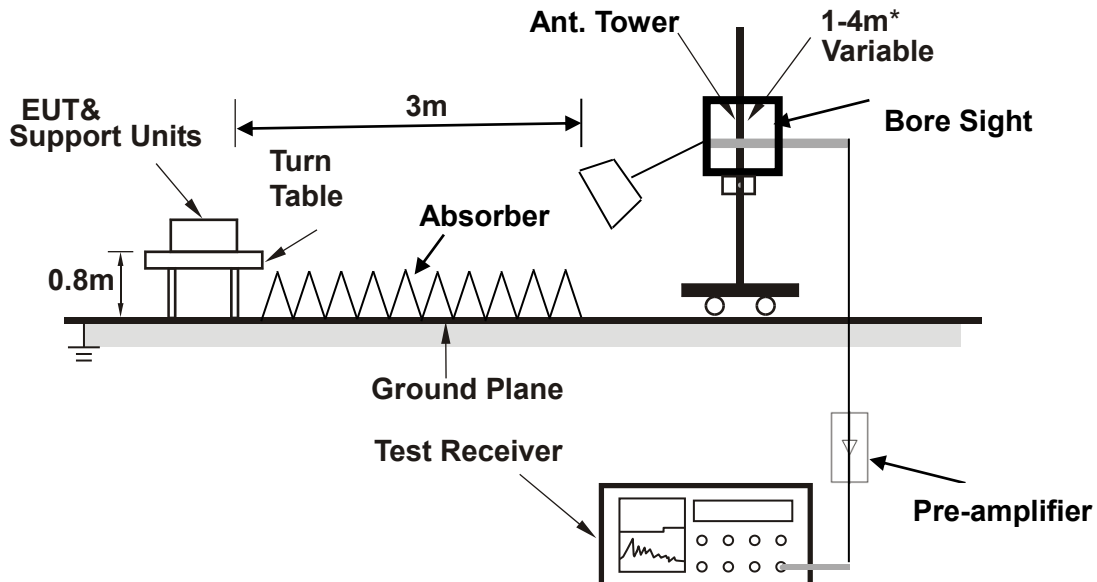
No deviation

### 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

#### BELOW 1GHz WORST-CASE DATA

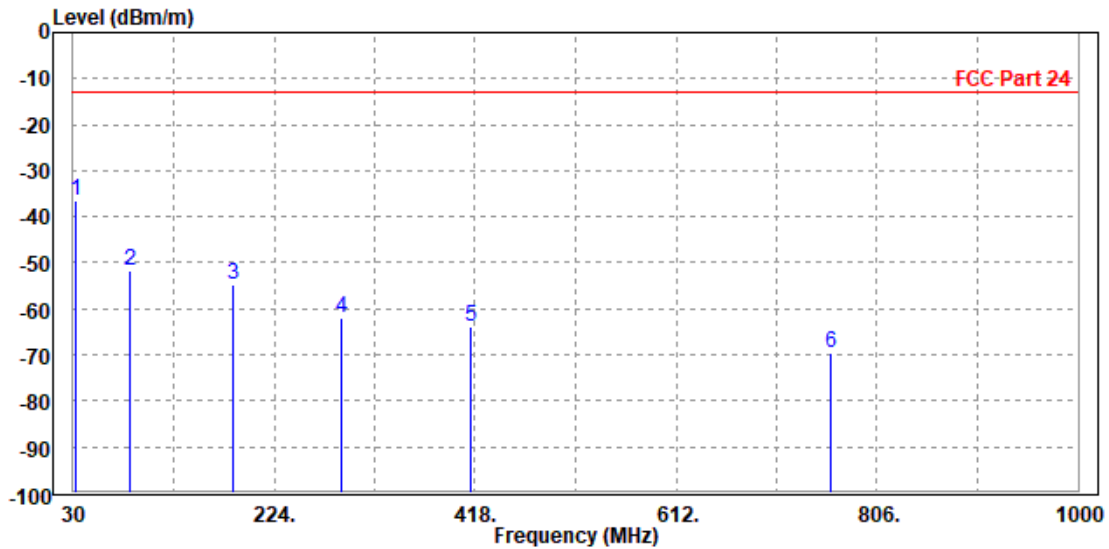
30 MHz – 1GHz data:

LTE Band 2

CHANNEL BANDWIDTH: 10MHz / QPSK

<b>MODE</b>	TX channel 18900	<b>FREQUENCY RANGE</b>	Below 1000MHz
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 70%RH	<b>INPUT POWER</b>	DC 5V/9V/10/12V from adapter
<b>TESTED BY</b>	Star Le		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	32.910	-36.60	-51.94	-13.00	-23.60	15.34 Peak	Horizontal
2		85.290	-51.54	-43.16	-13.00	-38.54	-8.38 Peak	Horizontal
3		184.230	-54.84	-37.19	-13.00	-41.84	-17.65 Peak	Horizontal
4		288.990	-62.06	-47.71	-13.00	-49.06	-14.35 Peak	Horizontal
5		414.120	-64.04	-53.59	-13.00	-51.04	-10.45 Peak	Horizontal
6		761.380	-69.62	-65.09	-13.00	-56.62	-4.53 Peak	Horizontal



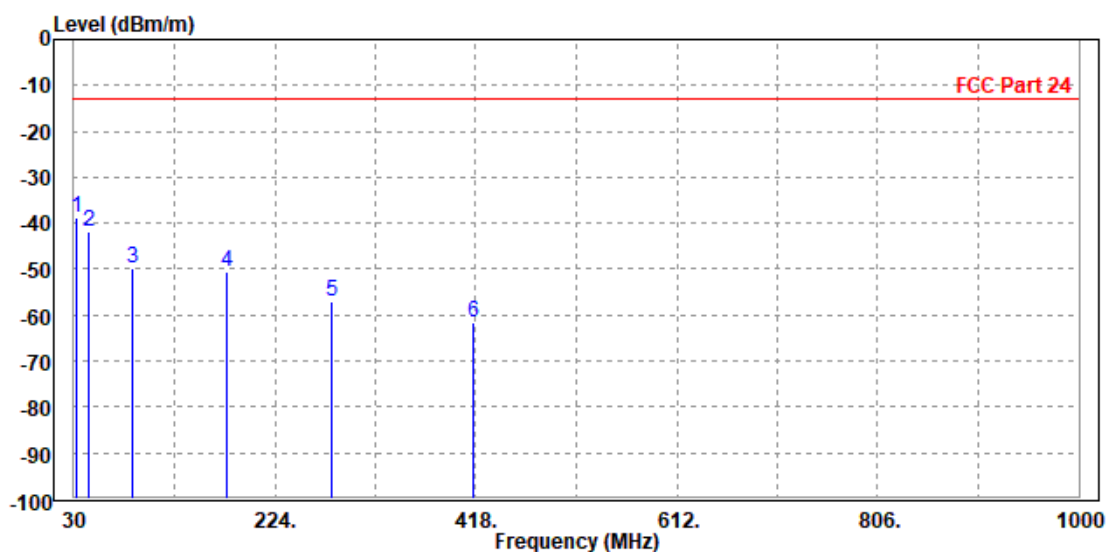


**BUREAU  
VERITAS**

Test Report No.: RF200106W008-5

<b>MODE</b>	TX channel 18900	<b>FREQUENCY RANGE</b>	Below 1000MHz
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 70%RH	<b>INPUT POWER</b>	DC 5V/9V/10/12V from adapter
<b>TESTED BY</b>	Star Le		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	32.910	-38.87	-40.33	-13.00	-25.87	1.46	Peak	Vertical
2	44.550	-41.83	-38.82	-13.00	-28.83	-3.01	Peak	Vertical
3	86.260	-49.77	-39.34	-13.00	-36.77	-10.43	Peak	Vertical
4	178.410	-50.73	-37.40	-13.00	-37.73	-13.33	Peak	Vertical
5	278.320	-57.02	-45.63	-13.00	-44.02	-11.39	Peak	Vertical
6	416.060	-61.57	-51.23	-13.00	-48.57	-10.34	Peak	Vertical





**ABOVE 1GHz DATA**

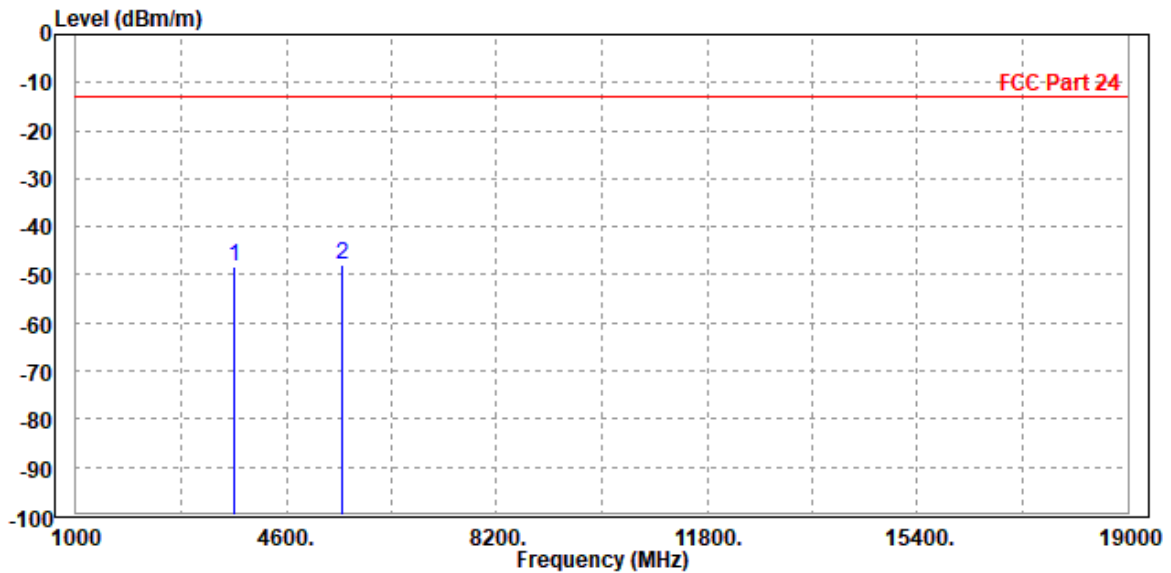
**Note:** For higher frequency, the emission is too low to be detected.

**PCS 1900:**

**CH 512**

<b>MODE</b>	TX channel 512	<b>FREQUENCY RANGE</b>	Above 1000MHz
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 70%RH	<b>INPUT POWER</b>	DC 5V/9V/10/12V from adapter
<b>TESTED BY</b>	Star Le		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>			

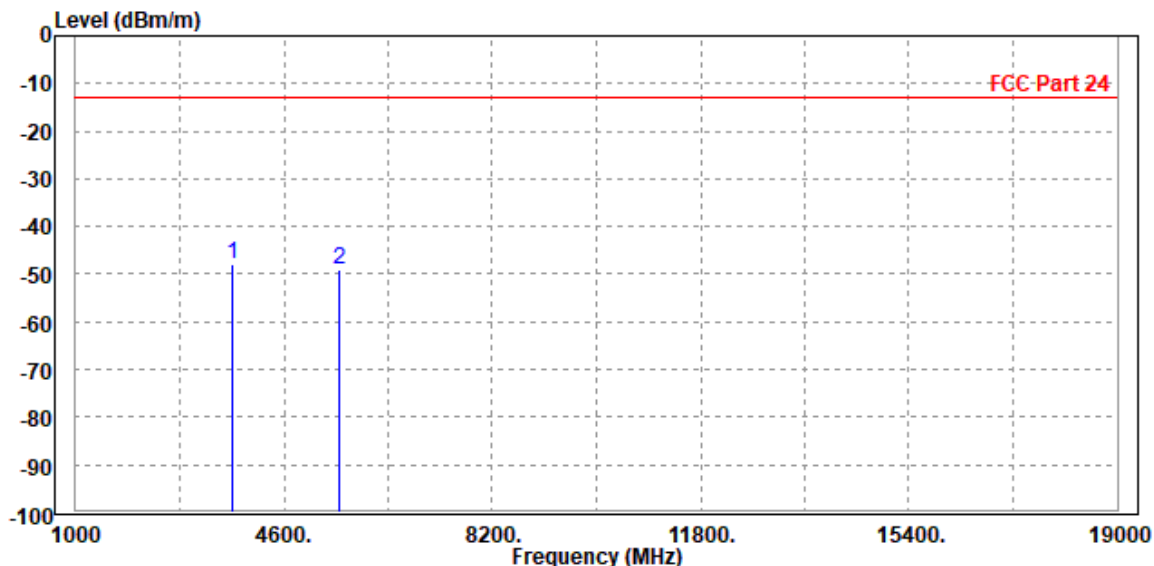
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3700.000	-48.46	-57.25	-13.00	-35.46	8.79	Peak	Horizontal
2 PP	5550.600	-47.98	-58.17	-13.00	-34.98	10.19	Peak	Horizontal





<b>MODE</b>	TX channel 512	<b>FREQUENCY RANGE</b>	Above 1000MHz
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 70%RH	<b>INPUT POWER</b>	DC 5V/9V/10/12V from adapter
<b>TESTED BY</b>	Star Le		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3700.000	-47.76	-57.01	-13.00	-34.76	9.25	Peak	Vertical
2	5550.600	-48.96	-58.86	-13.00	-35.96	9.90	Peak	Vertical





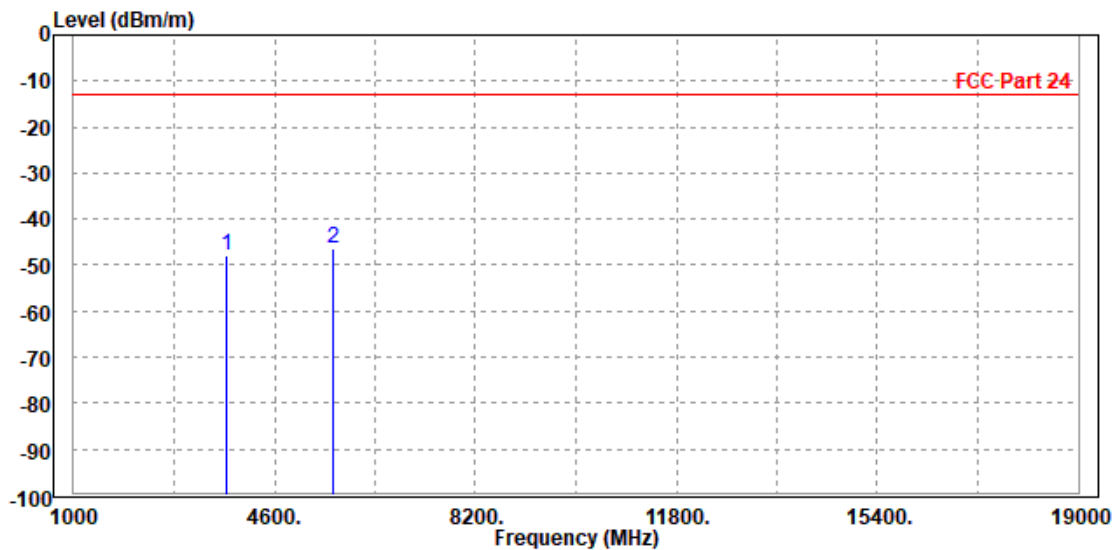
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Test Report No.: RF200106W008-5

CH 661

MODE	TX channel 661	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/10/12V from adapter
TESTED BY	Star Le		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3754.000	-47.83	-56.67	-13.00	-34.83	8.84	Peak	Horizontal
2	PP 5640.000	-46.36	-56.84	-13.00	-33.36	10.48	Peak	Horizontal



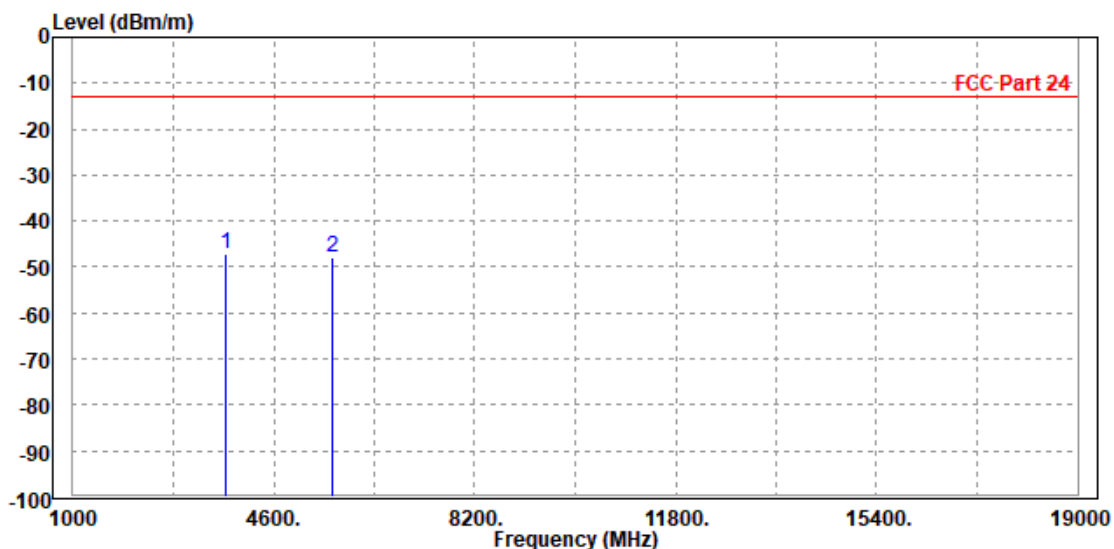


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VERITAS**

Test Report No.: RF200106W008-5

<b>MODE</b>	TX channel 661	<b>FREQUENCY RANGE</b>	Above 1000MHz
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 70%RH	<b>INPUT POWER</b>	DC 5V/9V/10/12V from adapter
<b>TESTED BY</b>	Star Le		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3754.000	-46.99	-56.26	-13.00	-33.99	9.27	Peak	Vertical
2	5640.000	-47.90	-58.15	-13.00	-34.90	10.25	Peak	Vertical



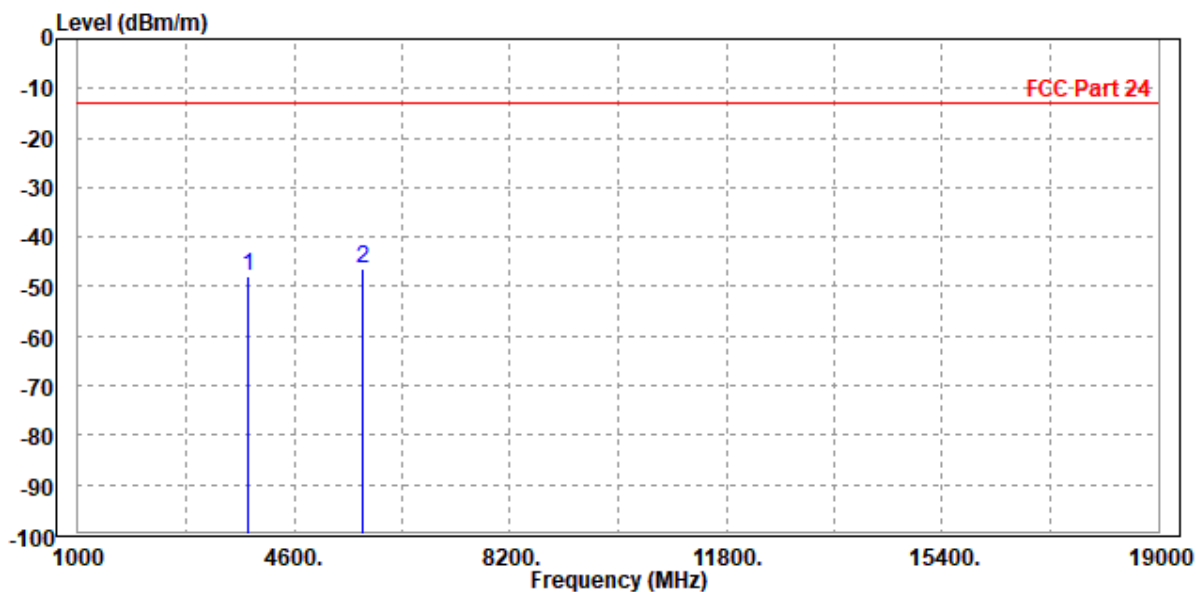




CH 810

MODE	TX channel 810	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/10/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

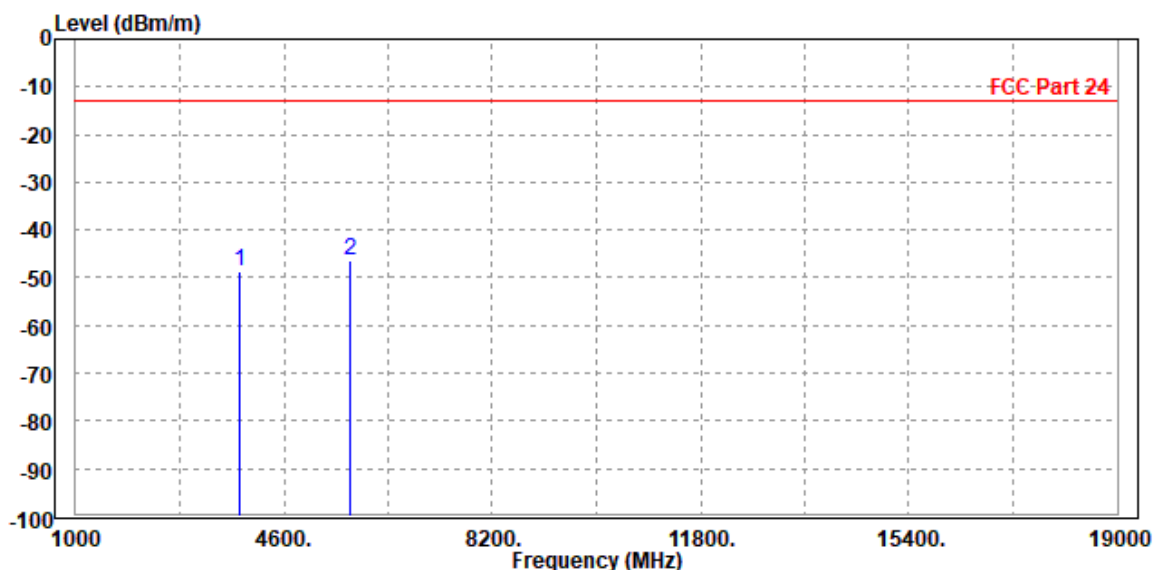
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3826.000	-47.93	-56.85	-13.00	-34.93	8.92	Peak	Horizontal
2 PP	5729.400	-46.41	-57.19	-13.00	-33.41	10.78	Peak	Horizontal





MODE	TX channel 810	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/10/12V 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	3826.000	-48.61	-57.90	-13.00	-35.61	9.29	Peak	Vertical
2 PP	5729.400	-46.23	-56.82	-13.00	-33.23	10.59	Peak	Vertical



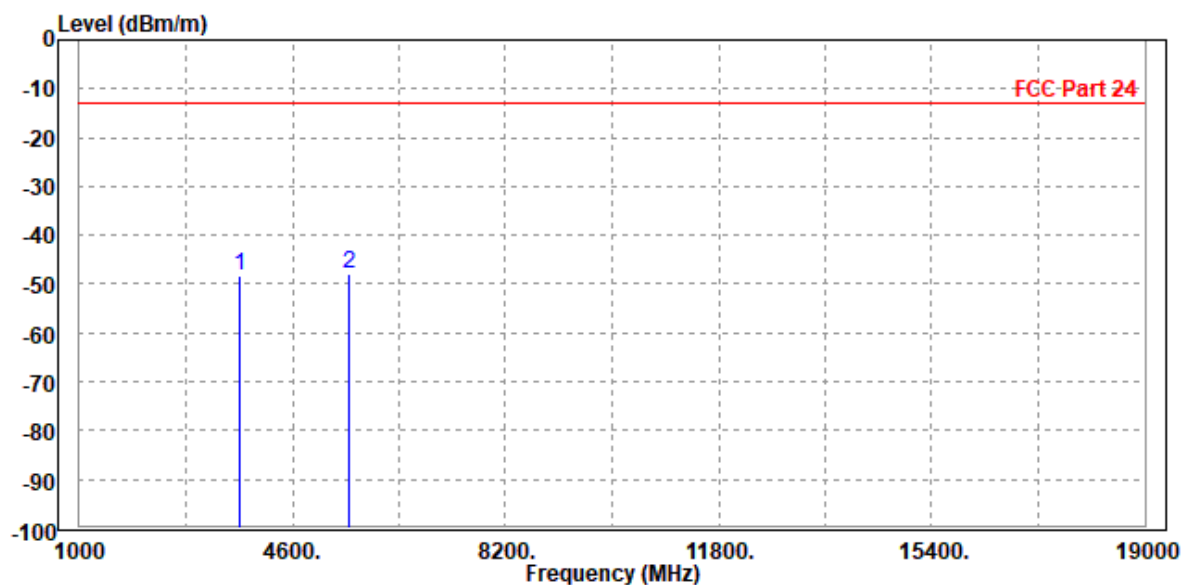


EDGE 1900:

CH 512

MODE	TX channel 512	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/10/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

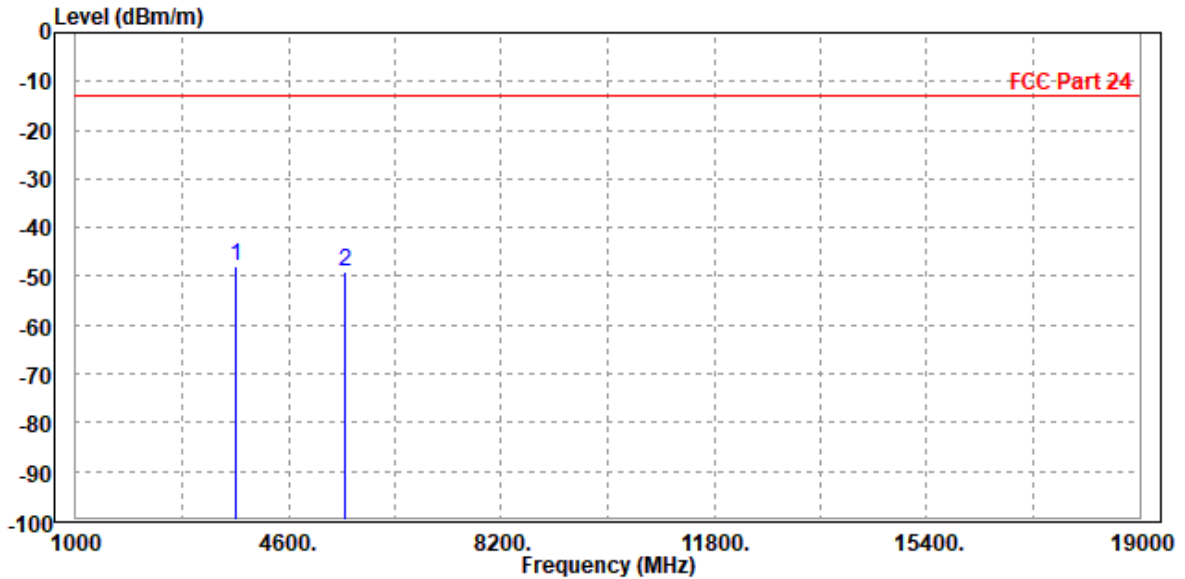
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3700.000	-48.46	-57.25	-13.00	-35.46	8.79	Peak	Horizontal
2 PP	5550.600	-47.98	-58.17	-13.00	-34.98	10.19	Peak	Horizontal





<b>MODE</b>	TX channel 512	<b>FREQUENCY RANGE</b>	Above 1000MHz
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 70%RH	<b>INPUT POWER</b>	DC 5V/9V/10/12V from adapter
<b>TESTED BY</b>	Star Le		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	3700.000	-47.76	-57.01	-13.00	-34.76	9.25	Peak	Vertical
2	5550.600	-48.96	-58.86	-13.00	-35.96	9.90	Peak	Vertical





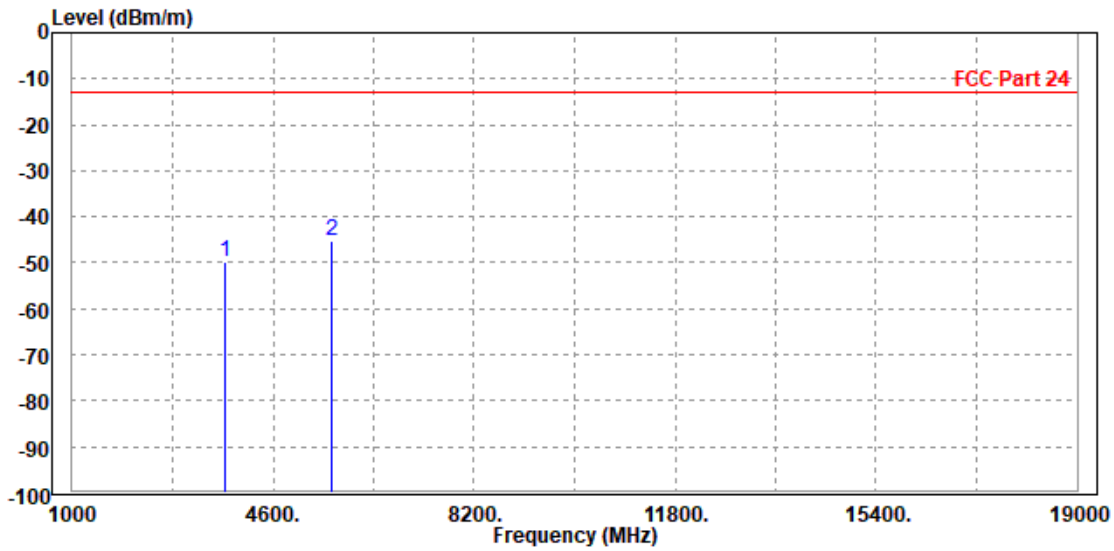
BUREAU VERITAS

Test Report No.: RF200106W008-5

CH 661

MODE	TX channel 661	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/10/12V from adapter
TESTED BY	Star Le		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3754.000	-49.84	-58.68	-13.00	-36.84	8.84	Peak	Horizontal
2 PP	5640.000	-45.21	-55.69	-13.00	-32.21	10.48	Peak	Horizontal



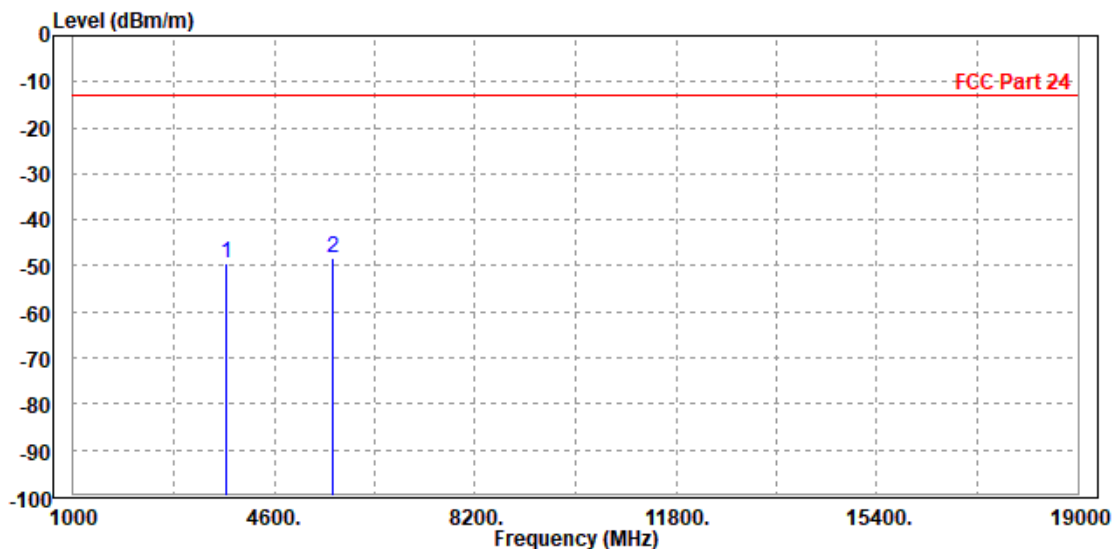


BUREAU VERITAS

Test Report No.: RF200106W008-5

MODE	TX channel 661	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/10/12V from adapter
TESTED BY	Star Le		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3754.000	-49.29	-58.56	-13.00	-36.29	9.27	Peak	Vertical
2	PP 5640.000	-48.34	-58.59	-13.00	-35.34	10.25	Peak	Vertical

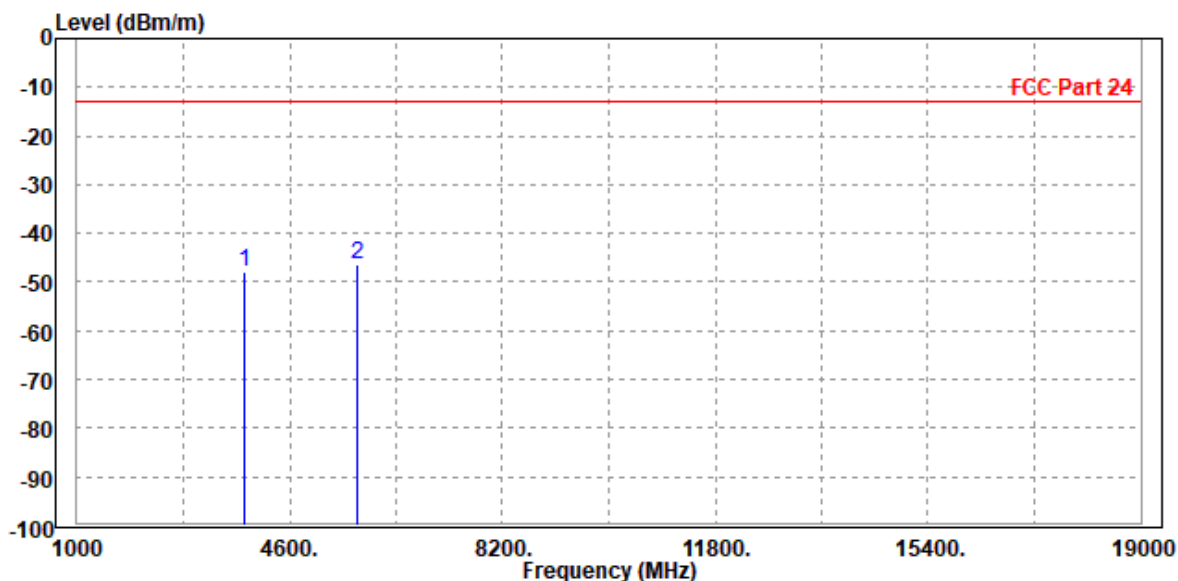




CH 810

MODE	TX channel 810	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/10/12V from adapter
TESTED BY	Star Le		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>			

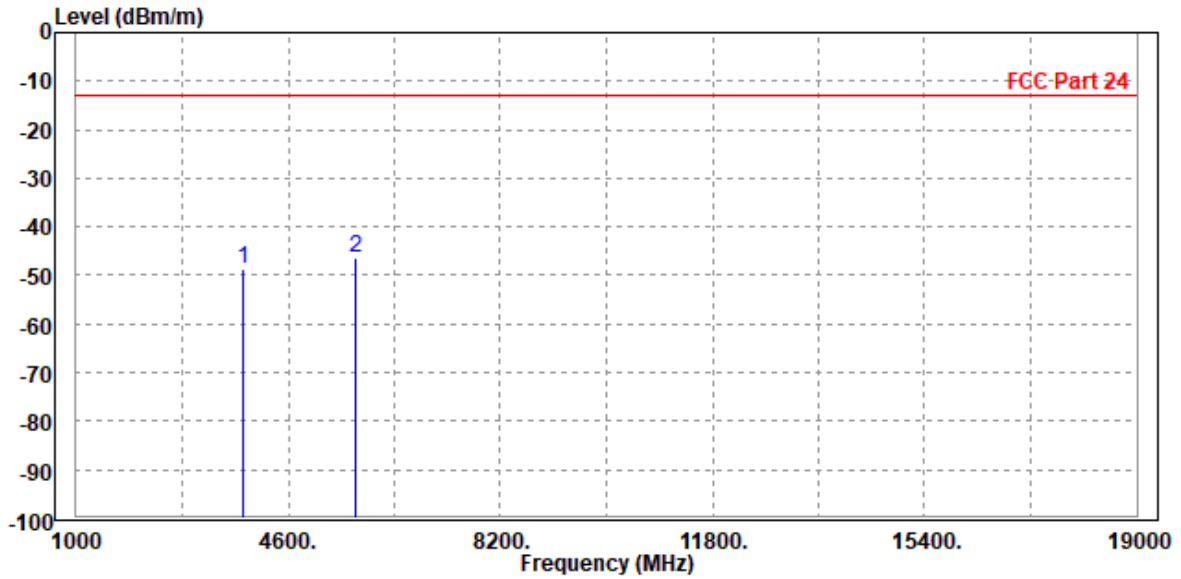
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3826.000	-47.93	-56.85	-13.00	-34.93	8.92	Peak	Horizontal
2 PP	5729.400	-46.41	-57.19	-13.00	-33.41	10.78	Peak	Horizontal





MODE	TX channel 810	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/10/12V from adapter
TESTED BY	Star Le		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3826.000	-48.61	-57.90	-13.00	-35.61	9.29	Peak	Vertical
2 PP	5729.400	-46.23	-56.82	-13.00	-33.23	10.59	Peak	Vertical





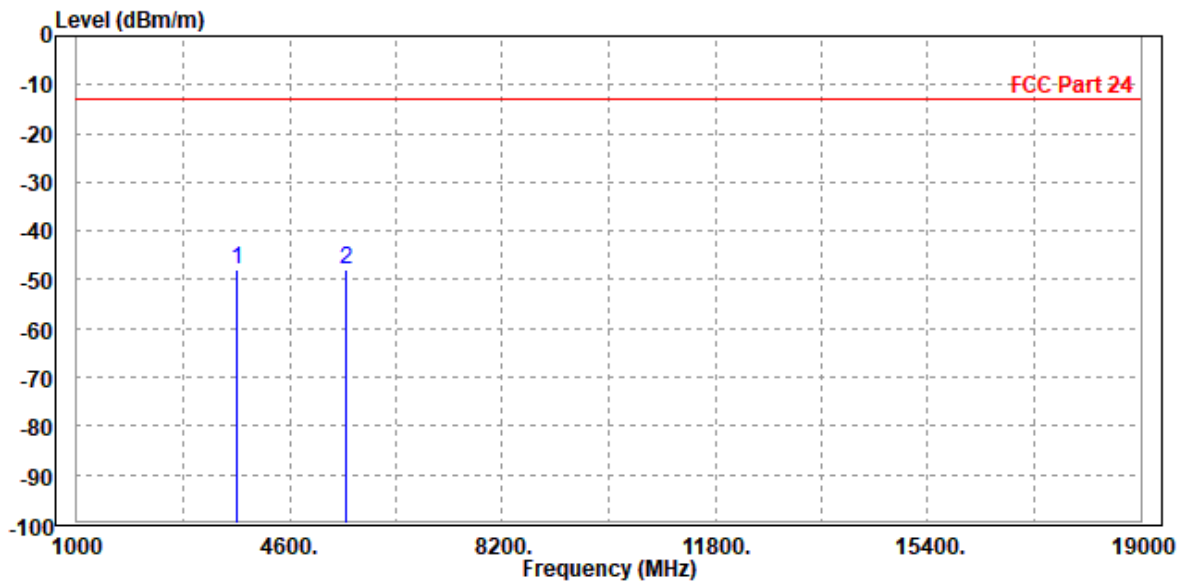


**WCDMA Band II**

**CH 9262**

<b>MODE</b>	TX channel 9262	<b>FREQUENCY RANGE</b>	Above 1000MHz
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 70%RH	<b>INPUT POWER</b>	DC 5V/9V/10/12V from adapter
<b>TESTED BY</b>	Star Le		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>			

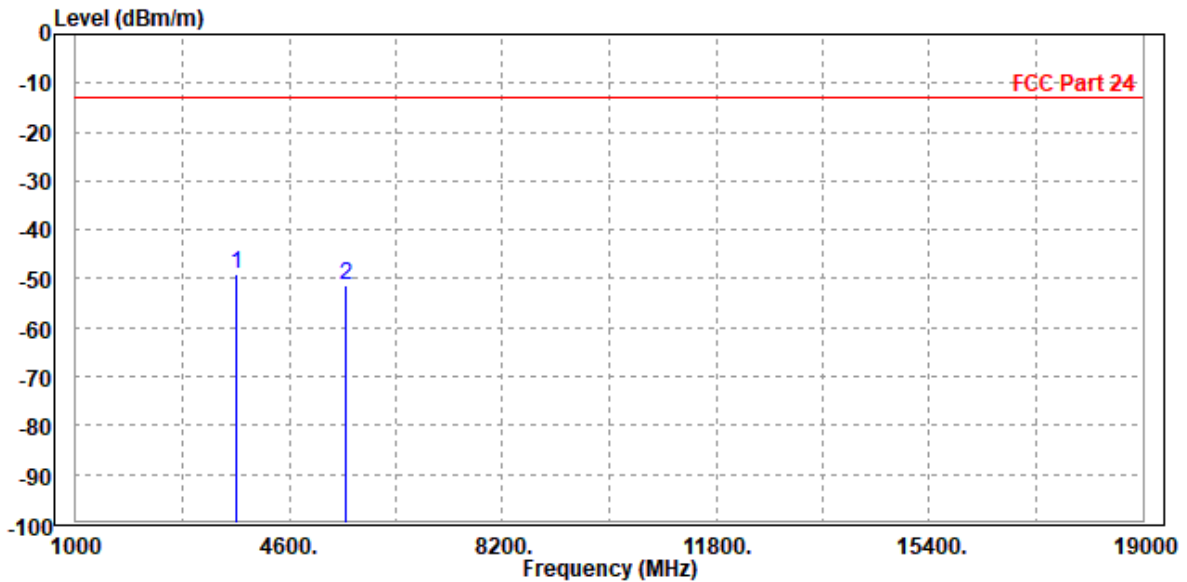
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3700.000	-47.81	-56.60	-13.00	-34.81	8.79	Peak	Horizontal
2	5557.200	-47.99	-58.20	-13.00	-34.99	10.21	Peak	Horizontal





<b>MODE</b>	TX channel 9262	<b>FREQUENCY RANGE</b>	Above 1000MHz
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 70%RH	<b>INPUT POWER</b>	DC 5V/9V/10/12V from adapter
<b>TESTED BY</b>	Star Le		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3700.000	-48.88	-58.13	-13.00	-35.88	9.25	Peak	Vertical
2	5557.200	-51.37	-61.30	-13.00	-38.37	9.93	Peak	Vertical

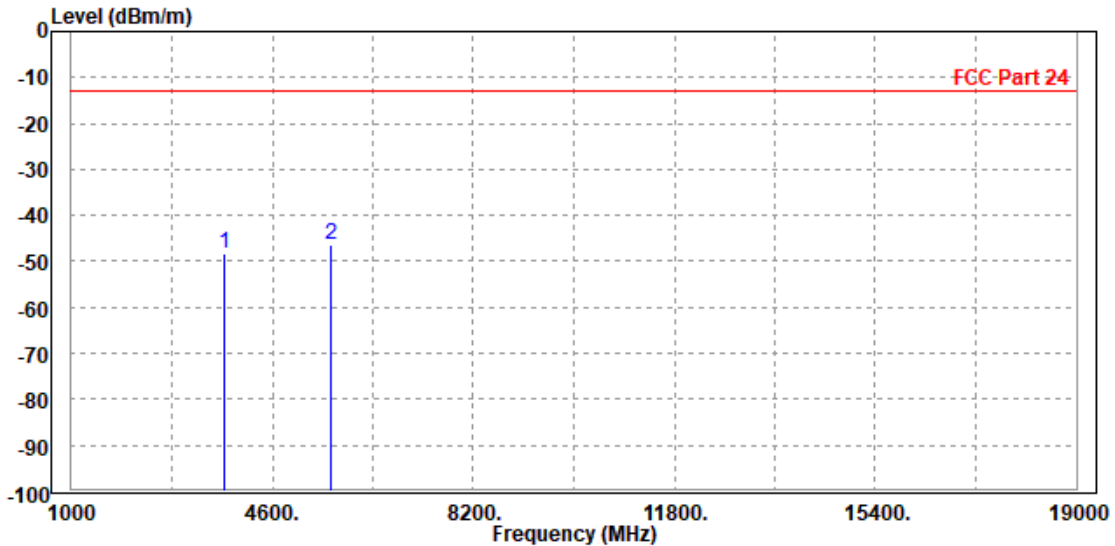




CH 9400

MODE	TX channel 9400	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/10/12V from adapter
TESTED BY	Star Le		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>			

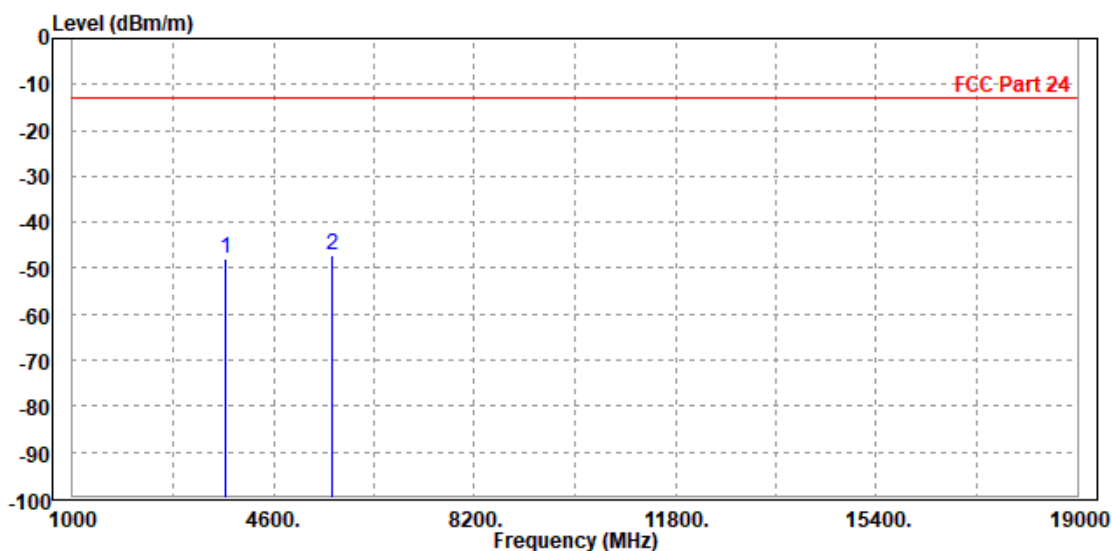
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3754.000	-48.33	-57.17	-13.00	-35.33	8.84	Peak	Horizontal
2	PP 5640.000	-46.47	-56.95	-13.00	-33.47	10.48	Peak	Horizontal





MODE	TX channel 9400	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/10/12V from adapter
TESTED BY	Star Le		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3754.000	-47.78	-57.05	-13.00	-34.78	9.27	Peak	Vertical
2	PP 5640.000	-47.18	-57.43	-13.00	-34.18	10.25	Peak	Vertical

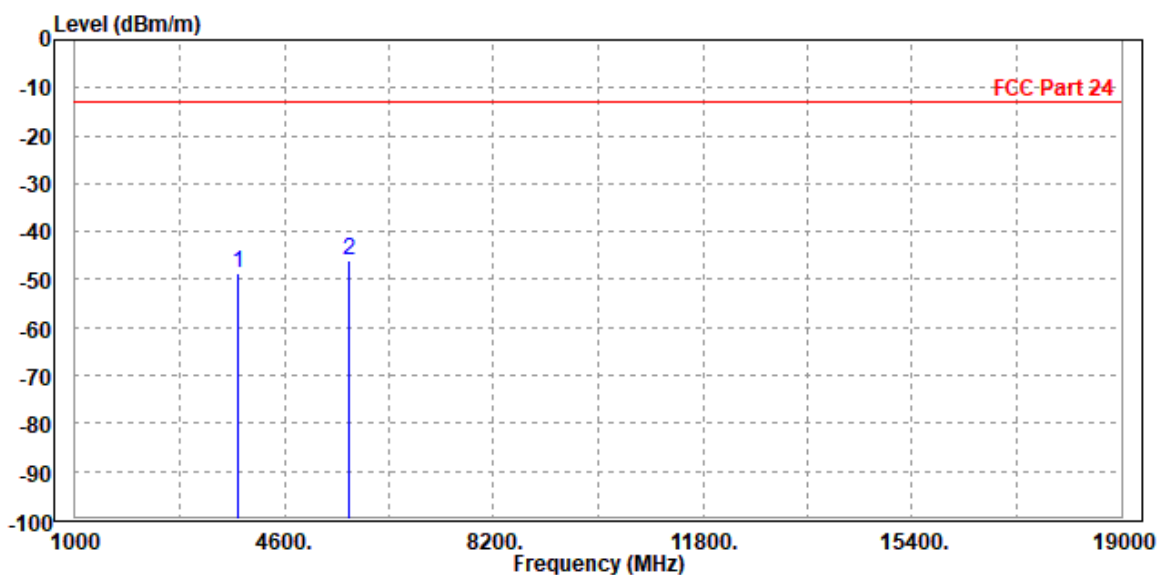




CH 9538

MODE	TX channel 9538	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/10/12V 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	3808.000	-48.60	-57.50	-13.00	-35.60	8.90	Peak	Horizontal
2	PP 5722.800	-46.15	-56.91	-13.00	-33.15	10.76	Peak	Horizontal



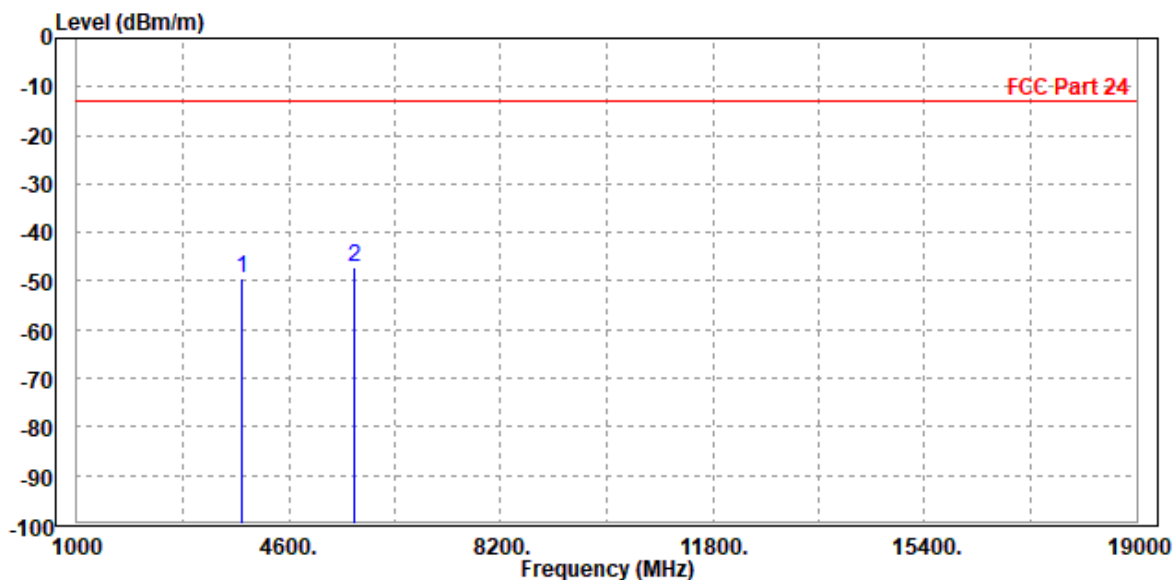


BUREAU VERITAS

Test Report No.: RF200106W008-5

MODE	TX channel 9538	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/10/12V 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	3808.000	-49.28	-58.56	-13.00	-36.28	9.28	Peak	Vertical
2 PP	5722.800	-47.10	-57.67	-13.00	-34.10	10.57	Peak	Vertical



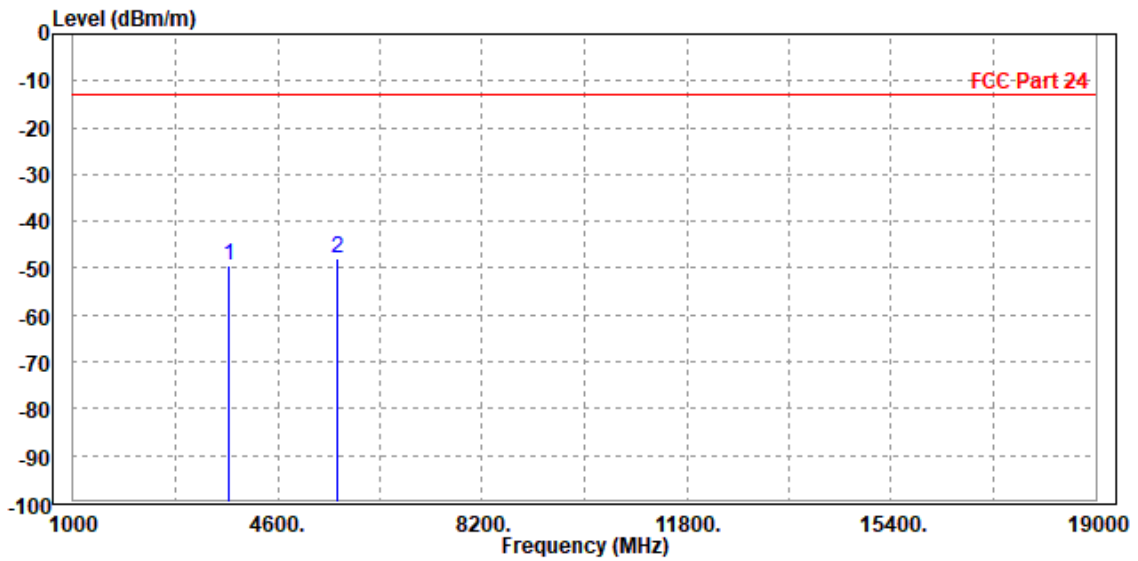


**LTE Band 2**

**CHANNEL BANDWIDTH: 1.4MHz / QPSK**

<b>MODE</b>	TX channel 18900	<b>FREQUENCY RANGE</b>	Above 1000MHz
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 70%RH	<b>INPUT POWER</b>	DC 5V/9V/10/12V from adapter
<b>TESTED BY</b>	Star Le		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>			

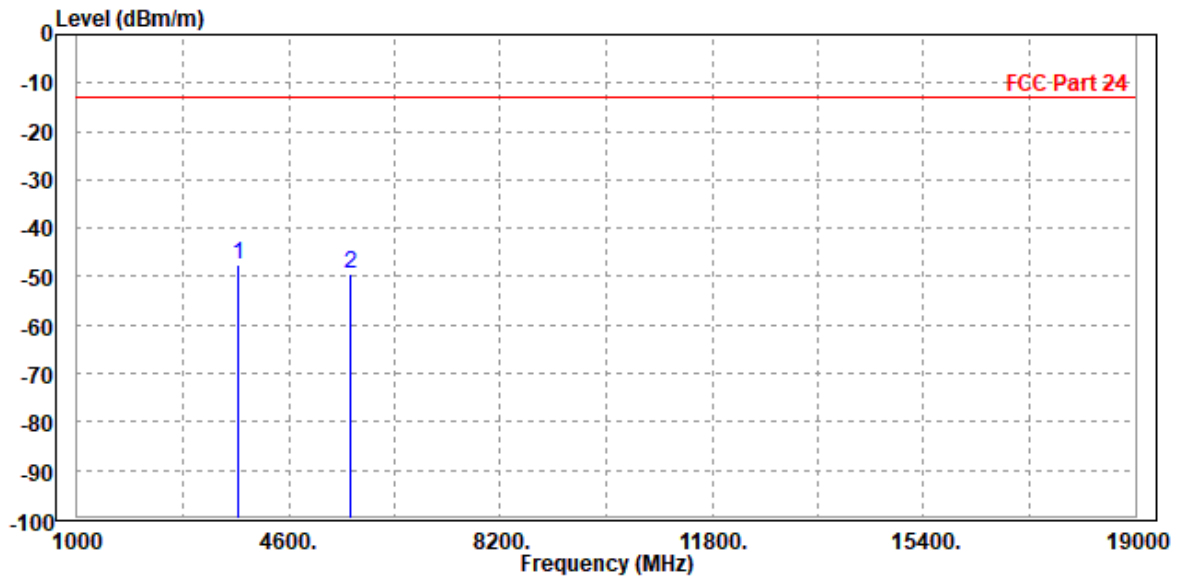
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3754.000	-49.35	-58.19	-13.00	-36.35	8.84	Peak	Horizontal
2 PP	5640.000	-47.85	-58.33	-13.00	-34.85	10.48	Peak	Horizontal





<b>MODE</b>	TX channel 18900	<b>FREQUENCY RANGE</b>	Above 1000MHz
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 70%RH	<b>INPUT POWER</b>	DC 5V/9V/10/12V from adapter
<b>TESTED BY</b>	Star Le		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3754.000	-47.45	-56.72	-13.00	-34.45	9.27	Peak	Vertical
2	5640.000	-49.36	-59.61	-13.00	-36.36	10.25	Peak	Vertical



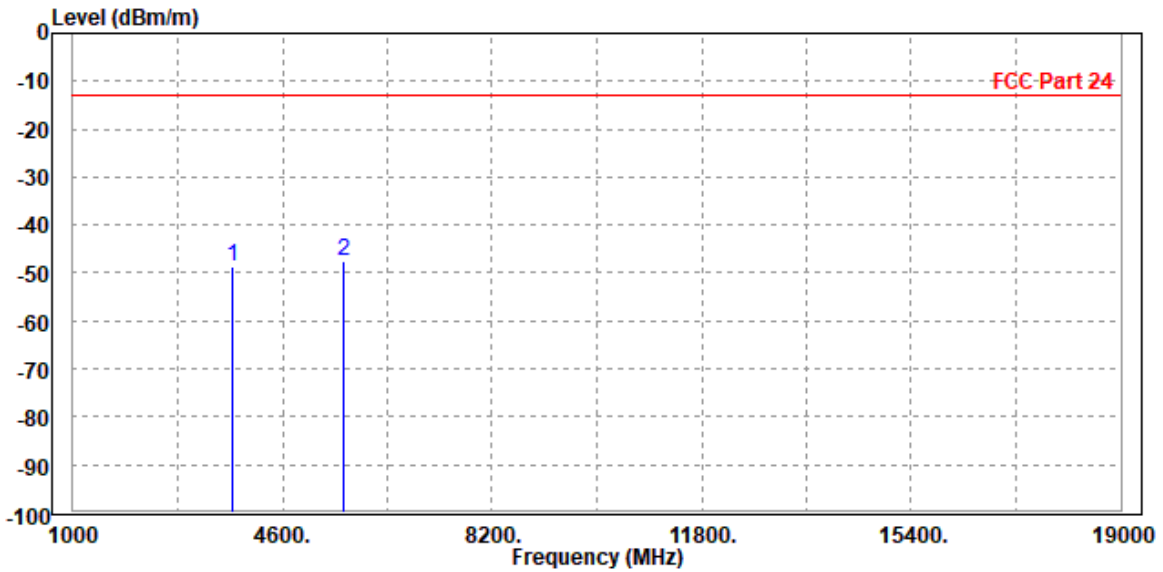




CHANNEL BANDWIDTH: 3MHz / QPSK

MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/10/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

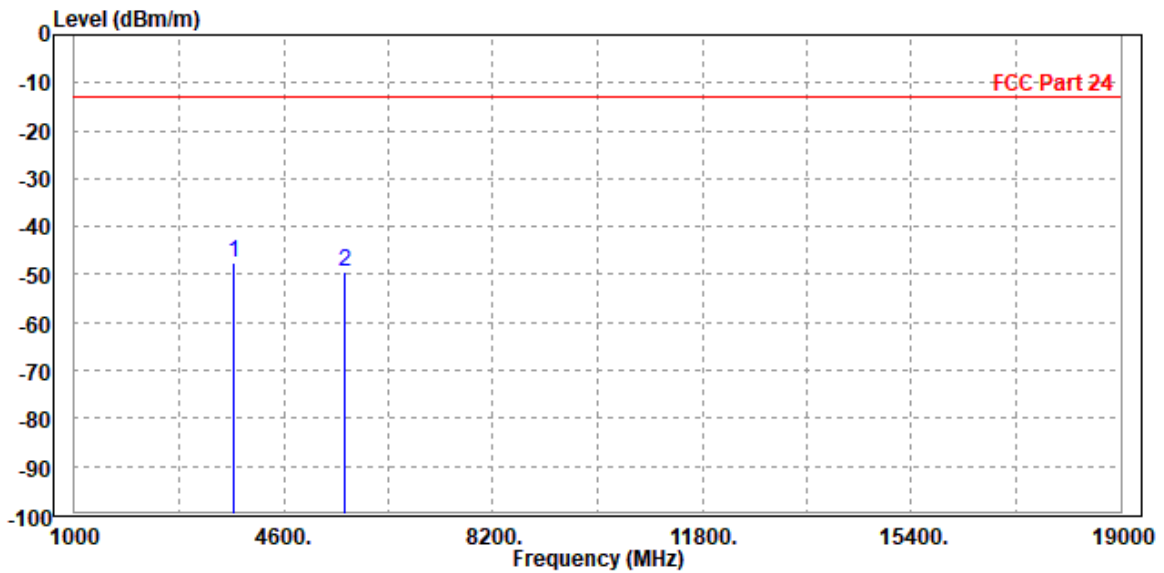
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3754.000	-48.79	-57.63	-13.00	-35.79	8.84	Peak	Horizontal
2	PP 5640.000	-47.36	-57.84	-13.00	-34.36	10.48	Peak	Horizontal





MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/10/12V from adapter
TESTED BY	Star Le		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3754.000	-47.45	-56.72	-13.00	-34.45	9.27	Peak	Vertical
2	5640.000	-49.36	-59.61	-13.00	-36.36	10.25	Peak	Vertical

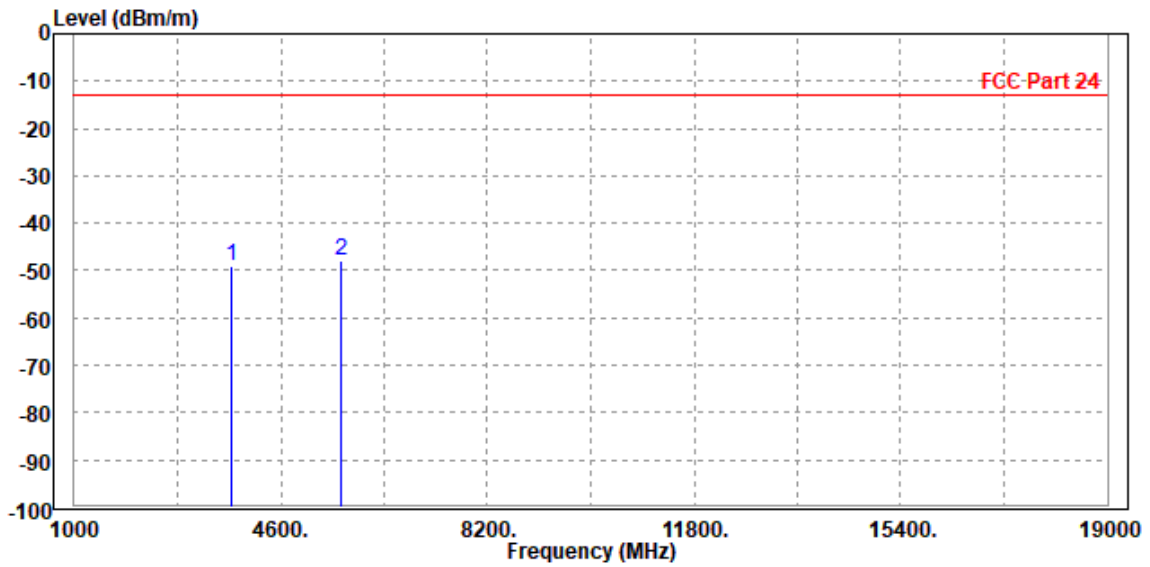




CHANNEL BANDWIDTH: 5MHz / QPSK

MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/10/12V from adapter
TESTED BY	Star Le		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>			

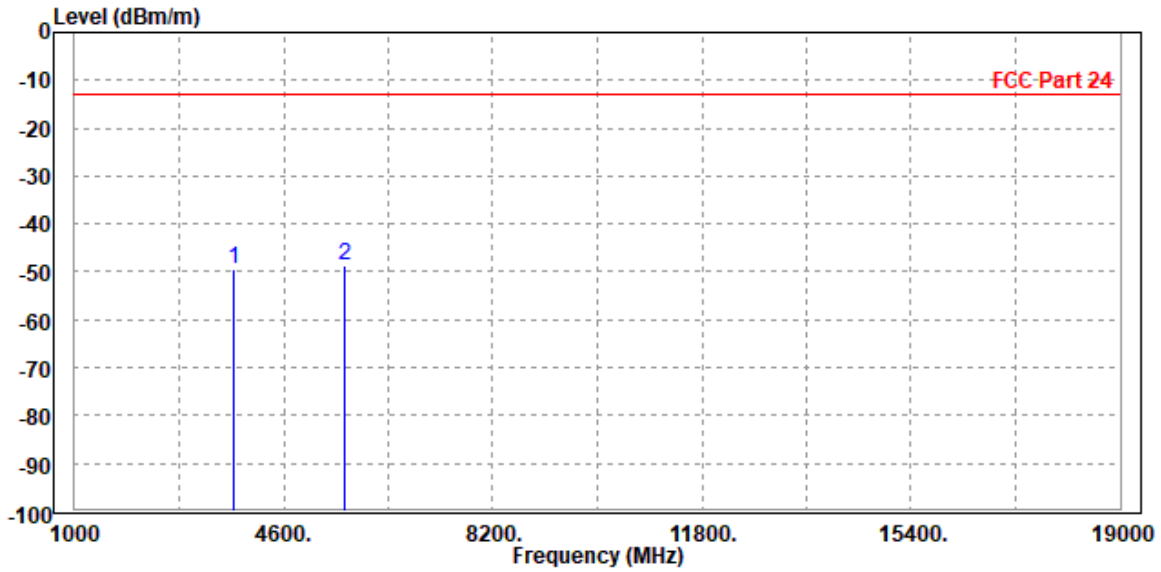
	Read	Limit	Over				
Freq	Level	Level	Line	Limit	Factor	Remark	Pol/Phase
MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3754.000	-49.19	-58.03	-13.00	-36.19	8.84 Peak	Horizontal
2	PP 5640.000	-47.97	-58.45	-13.00	-34.97	10.48 Peak	Horizontal





MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/10/12V 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	3754.000	-49.57	-58.84	-13.00	-36.57	9.27	Peak	Vertical
2	PP 5640.000	-48.54	-58.79	-13.00	-35.54	10.25	Peak	Vertical



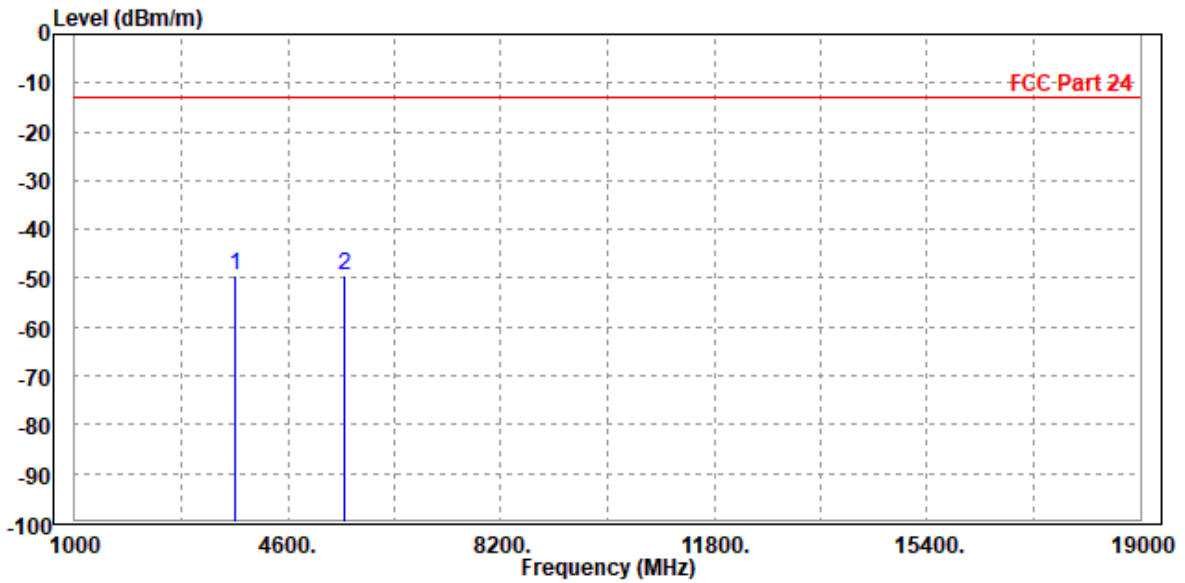


CHANNEL BANDWIDTH: 10MHz / QPSK

CH18650

MODE	TX channel 18650	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/10/12V from adapter
TESTED BY	Star Le		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3718.000	-49.42	-58.23	-13.00	-36.42	8.81	Peak	Horizontal
2	5565.000	-49.59	-59.83	-13.00	-36.59	10.24	Peak	Horizontal



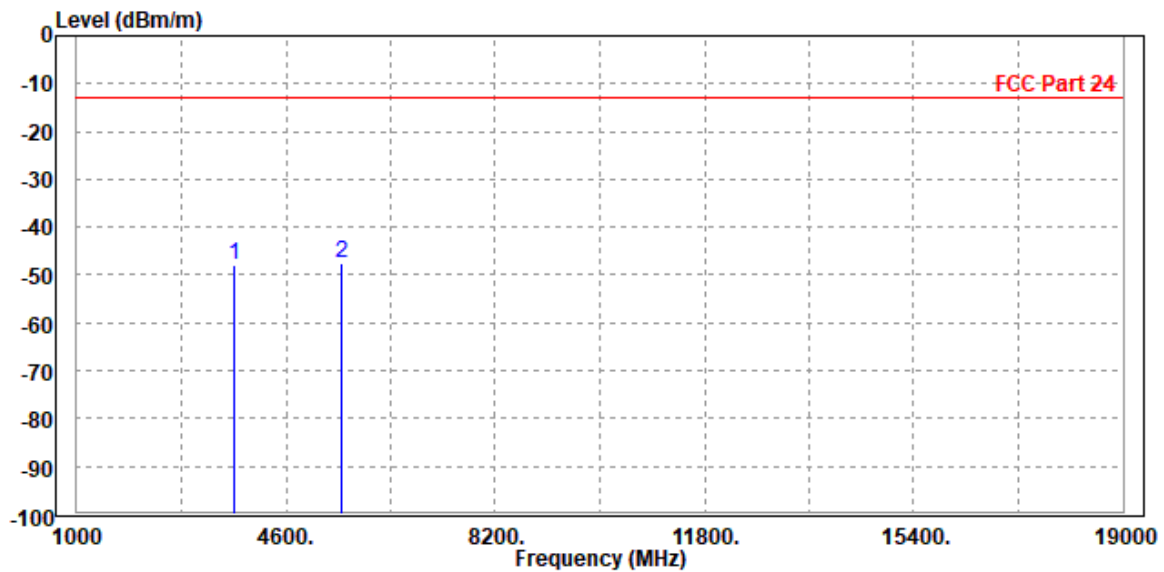


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<b>MODE</b>	TX channel 18650	<b>FREQUENCY RANGE</b>	Above 1000MHz
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 70%RH	<b>INPUT POWER</b>	DC 5V/9V/10/12V from adapter
<b>TESTED BY</b>	Star Le		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3718.000	-48.08	-57.34	-13.00	-35.08	9.26	Peak	Vertical
2 PP	5565.000	-47.56	-57.52	-13.00	-34.56	9.96	Peak	Vertical

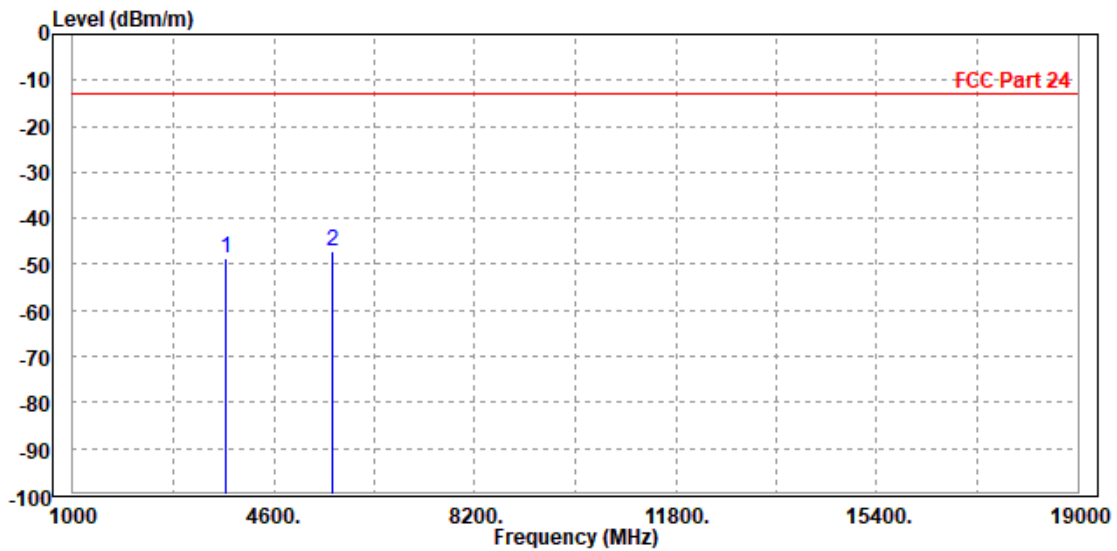




**CH18900**

<b>MODE</b>	TX channel 18900	<b>FREQUENCY RANGE</b>	Above 1000MHz
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 70%RH	<b>INPUT POWER</b>	DC 5V/9V/10/12V from adapter
<b>TESTED BY</b>	Star Le		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>			

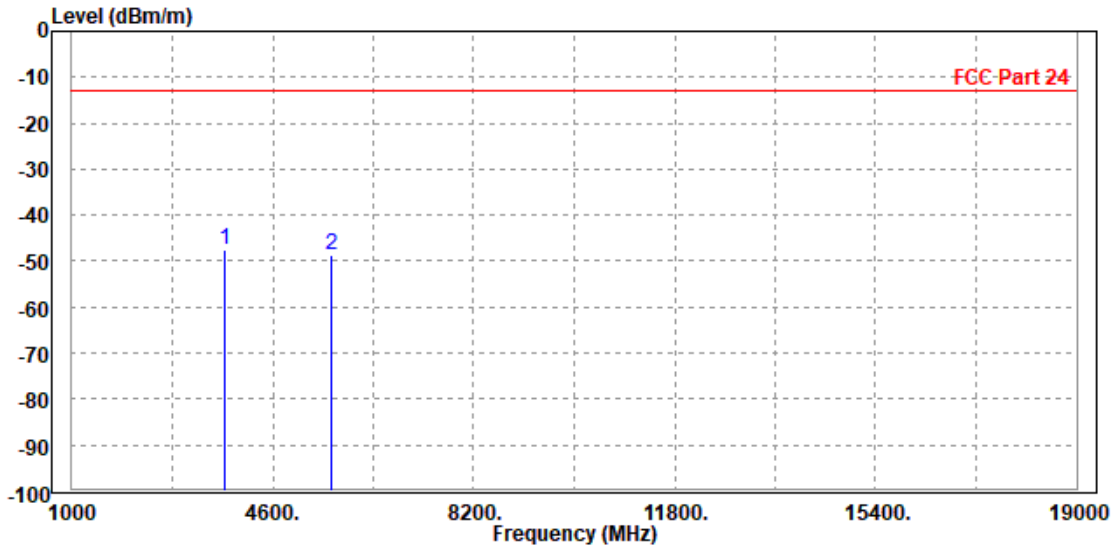
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3754.000	-48.85	-57.69	-13.00	-35.85	8.84	Peak	Horizontal
2 PP	5640.000	-47.23	-57.71	-13.00	-34.23	10.48	Peak	Horizontal





<b>MODE</b>	TX channel 18900	<b>FREQUENCY RANGE</b>	Above 1000MHz
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 70%RH	<b>INPUT POWER</b>	DC 5V/9V/10/12V from adapter
<b>TESTED BY</b>	Star Le		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3754.000	-47.42	-56.69	-13.00	-34.42	9.27	Peak	Vertical
2	5640.000	-48.63	-58.88	-13.00	-35.63	10.25	Peak	Vertical



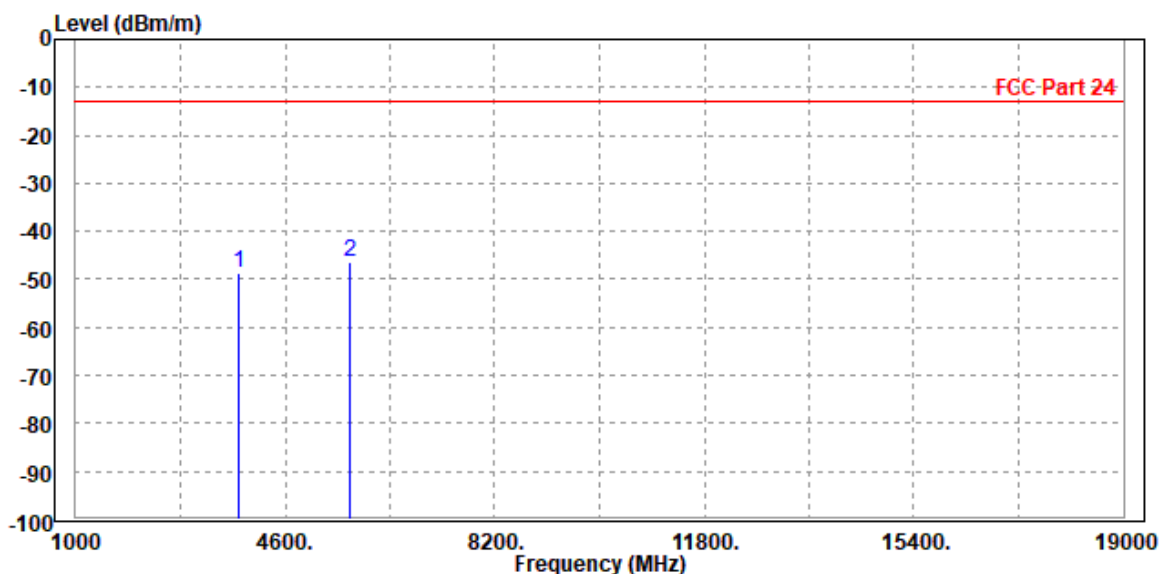




CH19150

MODE	TX channel 19150	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/10/12V from adapter
TESTED BY	Star Le		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3808.000	-48.84	-57.74	-13.00	-35.84	8.90	Peak	Horizontal
2 PP	5715.000	-46.41	-57.14	-13.00	-33.41	10.73	Peak	Horizontal



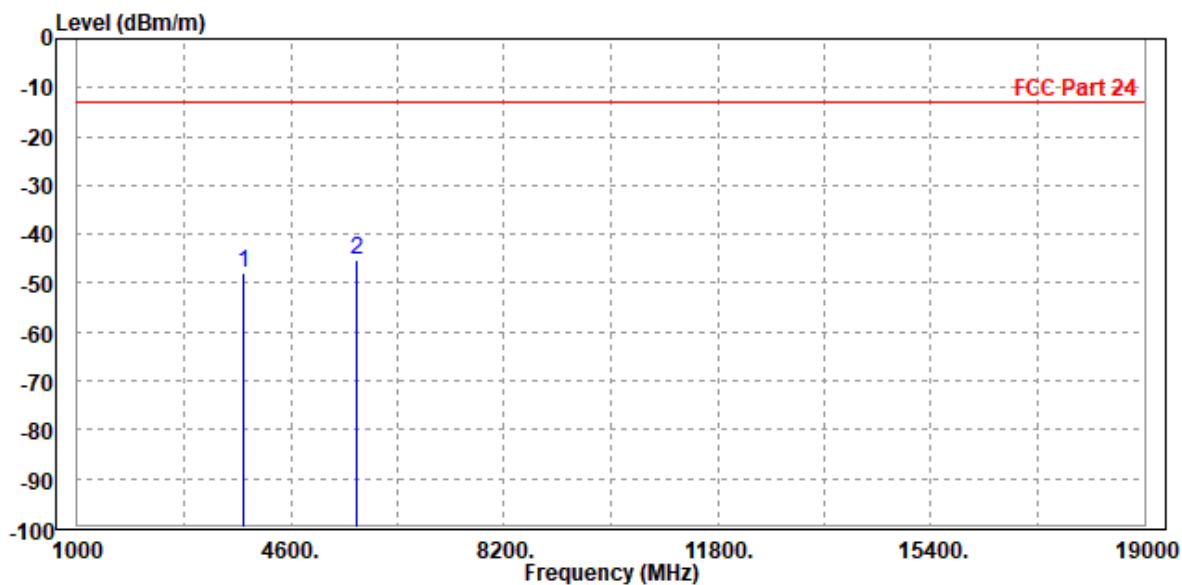


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<b>MODE</b>	TX channel 19150	<b>FREQUENCY RANGE</b>	Above 1000MHz
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 70%RH	<b>INPUT POWER</b>	DC 5V/9V/10/12V from adapter
<b>TESTED BY</b>	Star Le		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3808.000	-47.85	-57.13	-13.00	-34.85	9.28	Peak	Vertical
2	PP 5715.000	-45.35	-55.89	-13.00	-32.35	10.54	Peak	Vertical





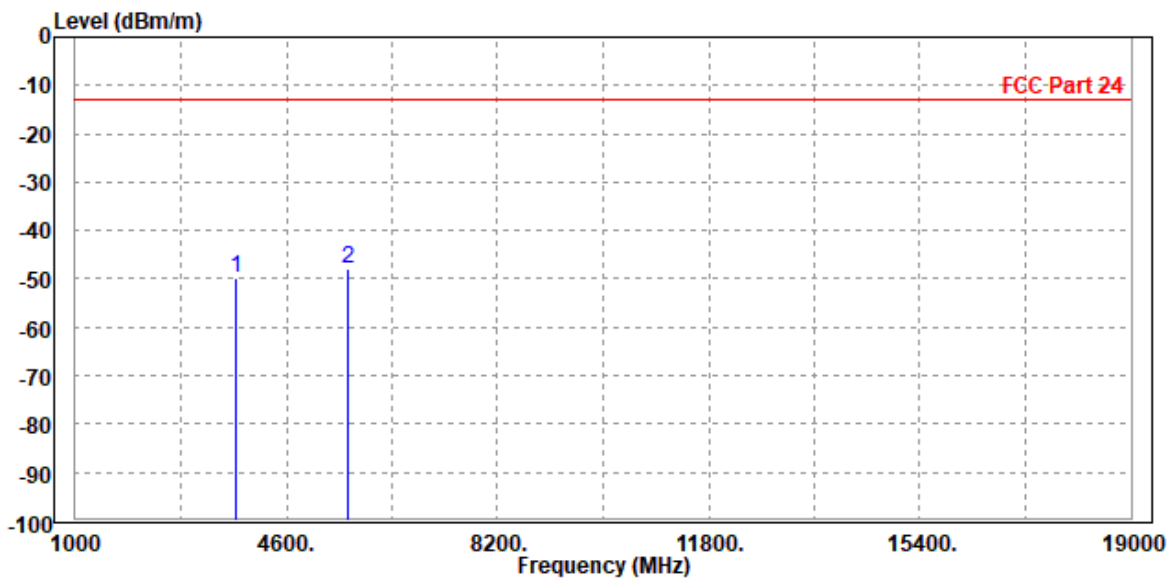
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CHANNEL BANDWIDTH: 15MHz / QPSK

MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/10/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

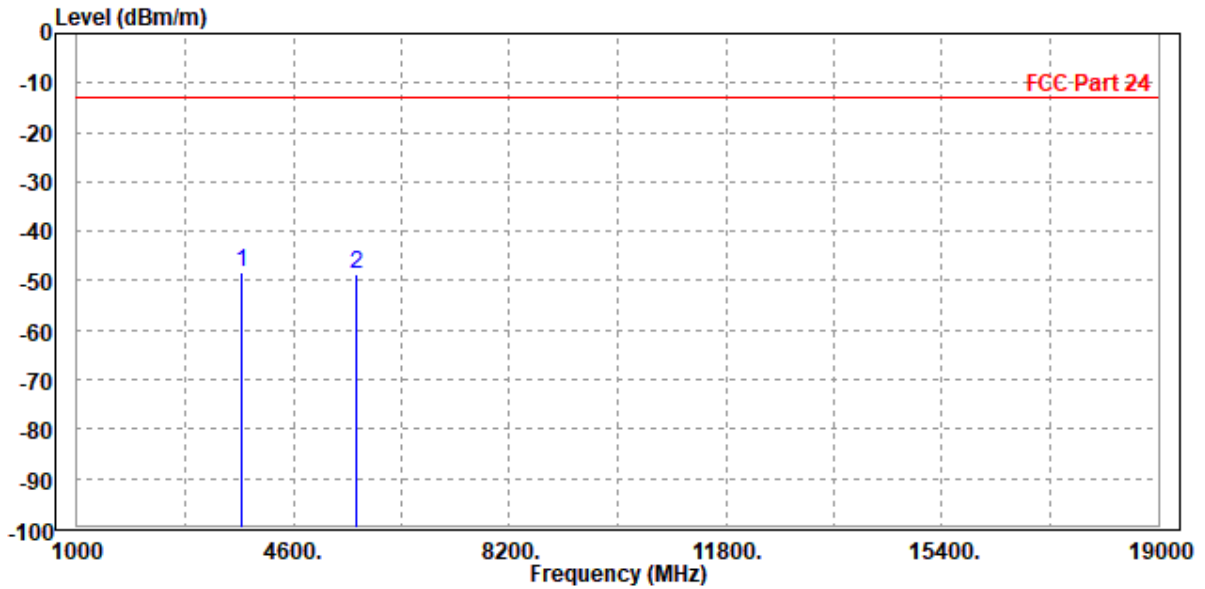
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3754.000	-49.88	-58.72	-13.00	-36.88	8.84	Peak	Horizontal
2	PP 5640.000	-48.09	-58.57	-13.00	-35.09	10.48	Peak	Horizontal





MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/10/12V from adapter
TESTED BY	Star Le		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3754.000	-48.24	-57.51	-13.00	-35.24	9.27	Peak	Vertical
2	5640.000	-48.55	-58.80	-13.00	-35.55	10.25	Peak	Vertical

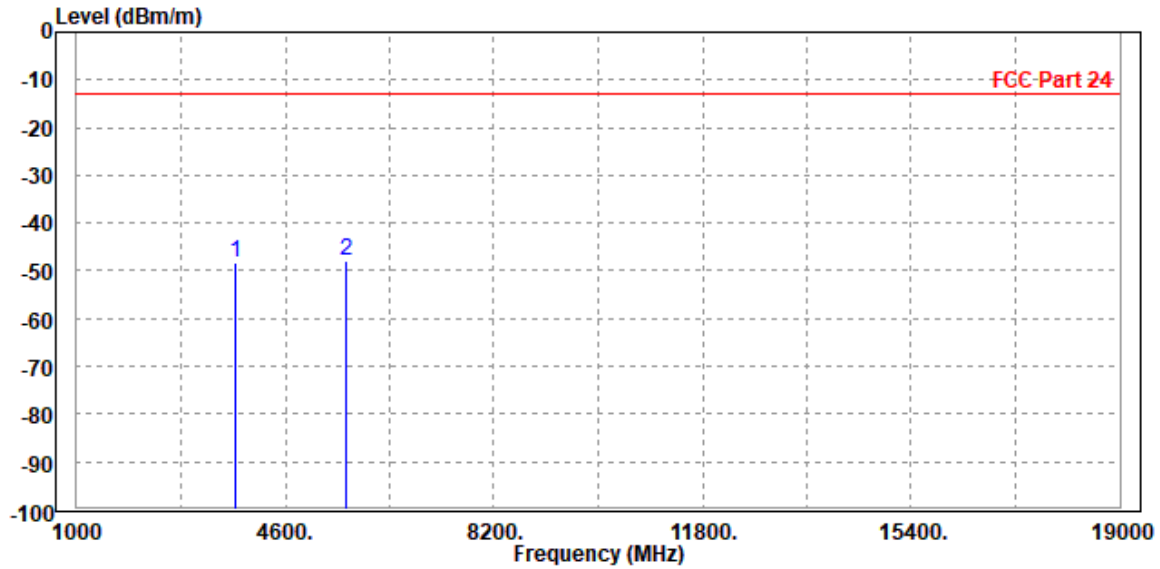




CHANNEL BANDWIDTH: 20MHz / QPSK

MODE	TX channel 18900	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V/9V/10/12V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

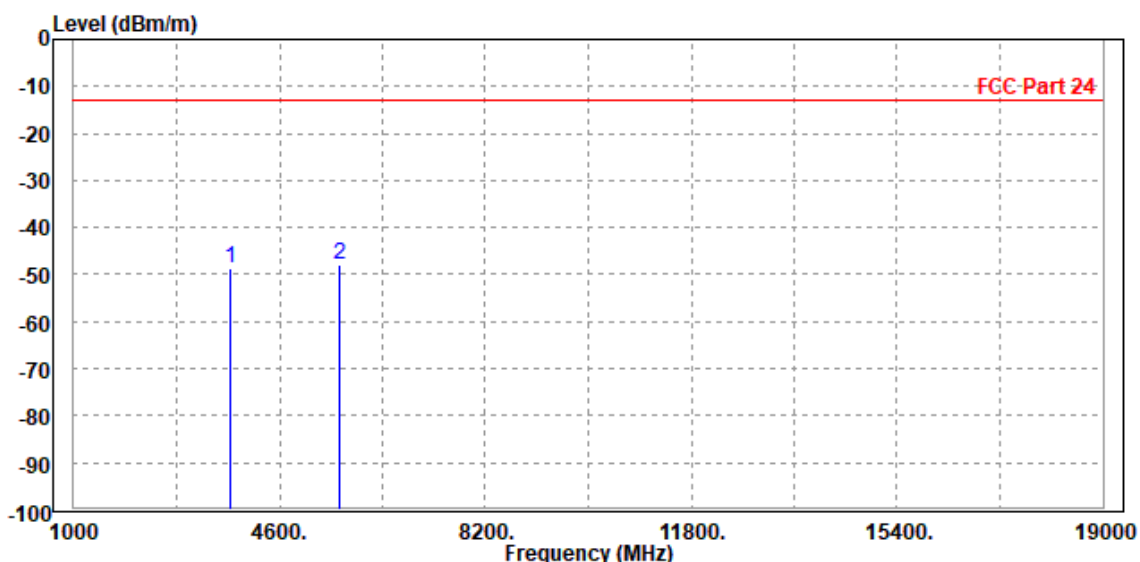
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3754.000	-48.22	-57.06	-13.00	-35.22	8.84	Peak	Horizontal
2 PP	5640.000	-47.85	-58.33	-13.00	-34.85	10.48	Peak	Horizontal





<b>MODE</b>	TX channel 18900	<b>FREQUENCY RANGE</b>	Above 1000MHz
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 70%RH	<b>INPUT POWER</b>	DC 5V/9V/10/12V from adapter
<b>TESTED BY</b>	Star Le		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3754.000	-48.56	-57.83	-13.00	-35.56	9.27	Peak	Vertical
2 PP	5640.000	-48.10	-58.35	-13.00	-35.10	10.25	Peak	Vertical



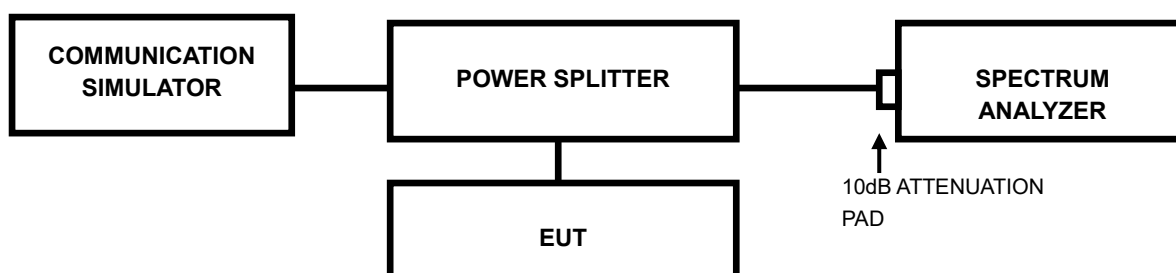


### 3.7 PEAK TO AVERAGE RATIO

#### 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

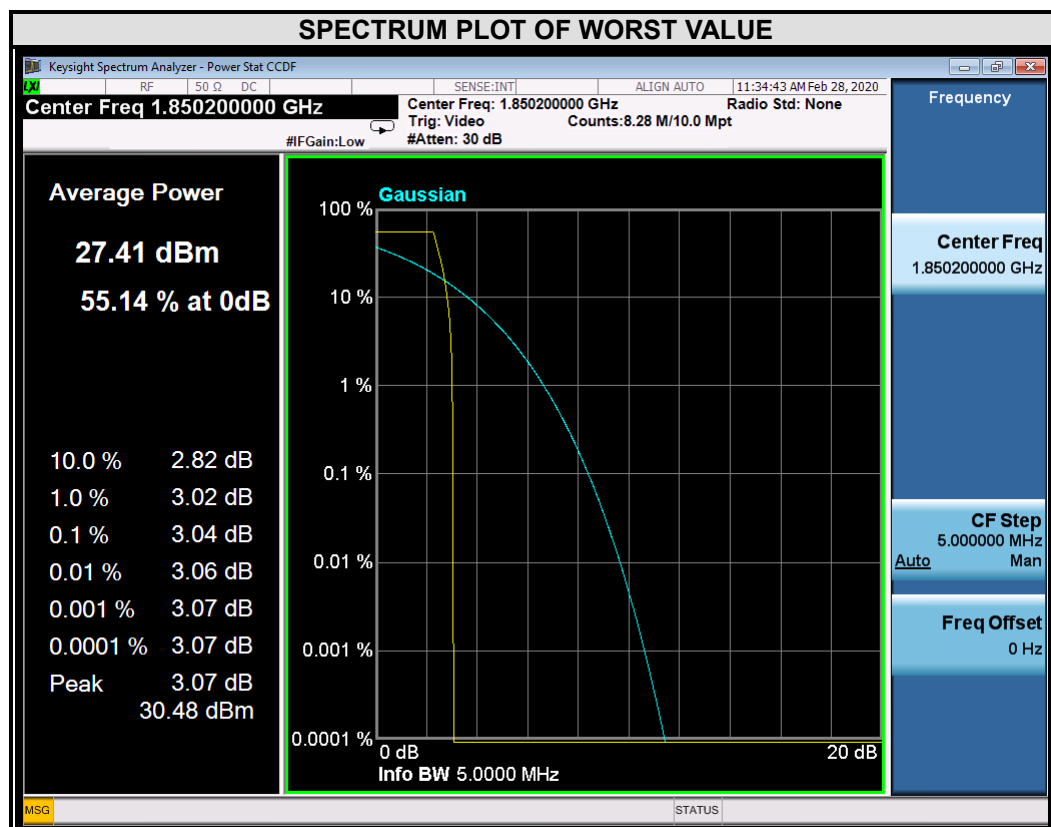
1. Set resolution/measurement bandwidth  $\geq$  signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Record the maximum PAPR level associated with a probability of 0.1%.



### 3.7.4 TEST RESULTS

#### GSM

CHANNEL	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
512	1850.2	3.04



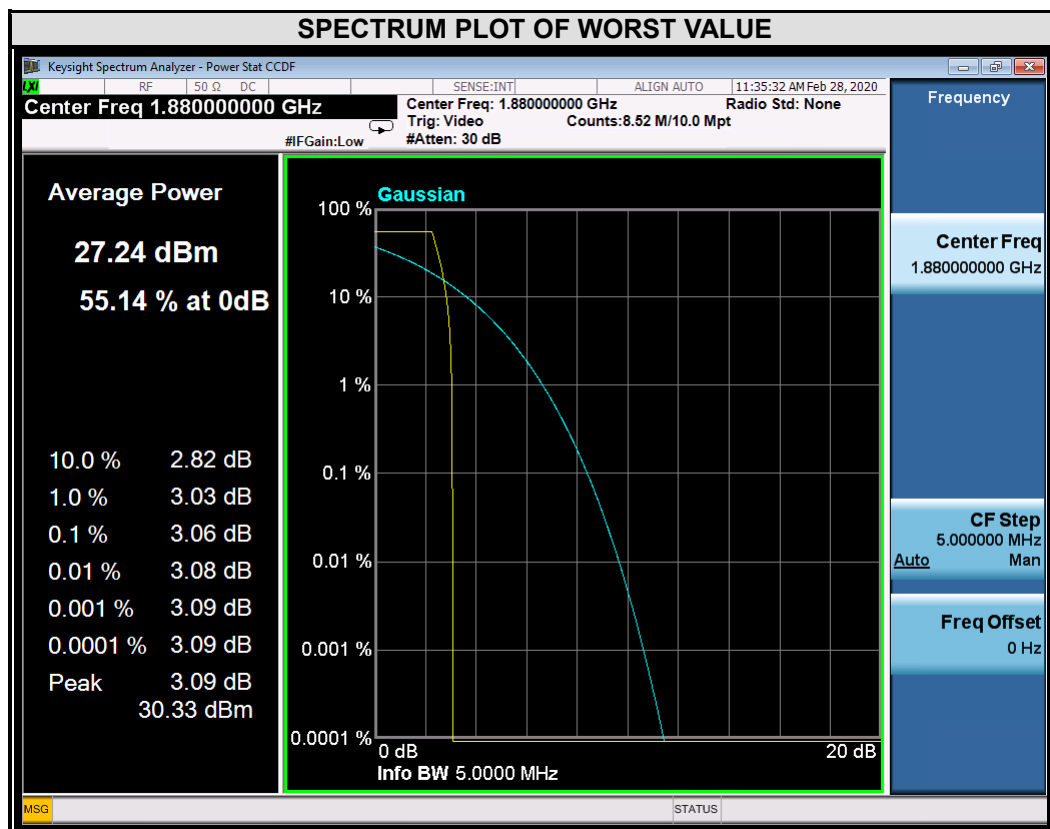




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CHANNEL	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
661	1880	3.06

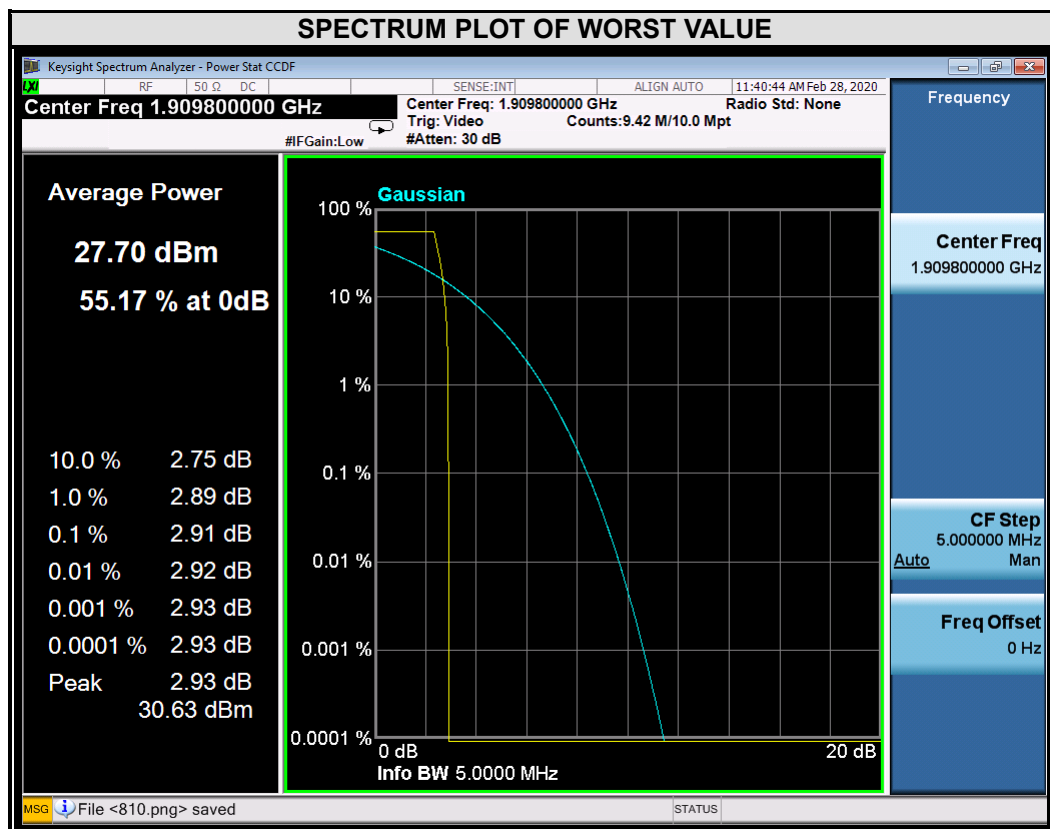




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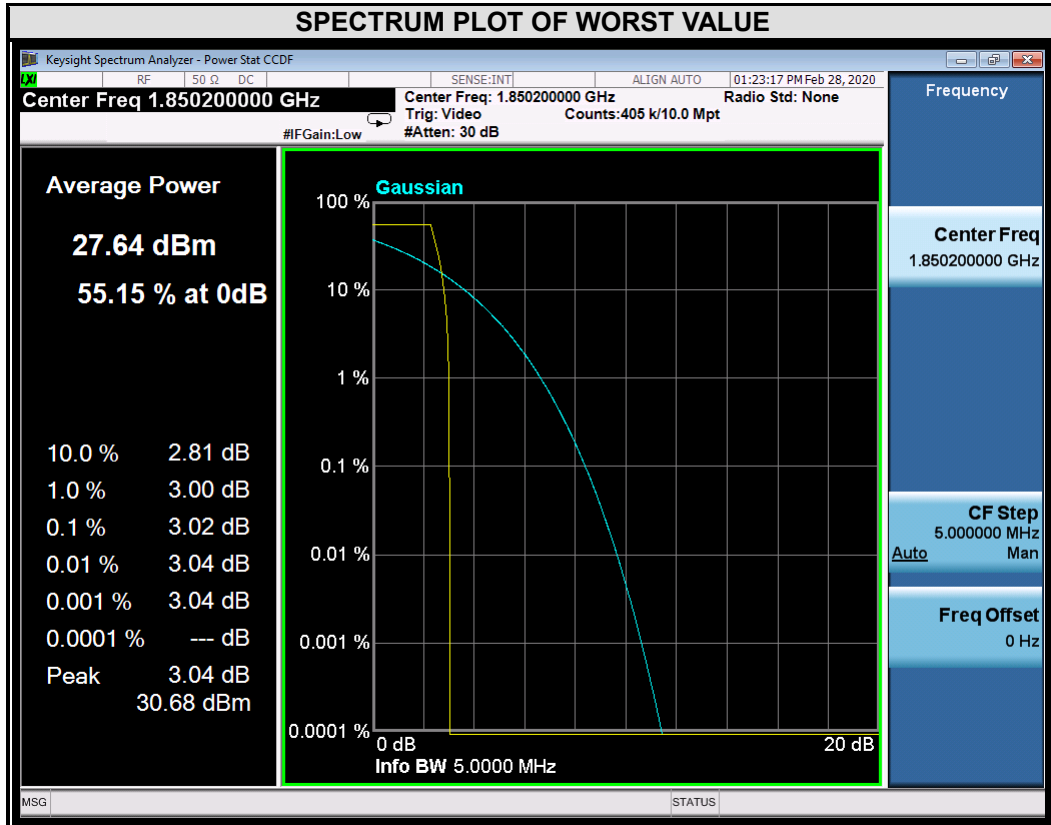
CHANNEL	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
810	1909.8	2.91





EDGE

CHANNEL	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
512	1850.2	3.02

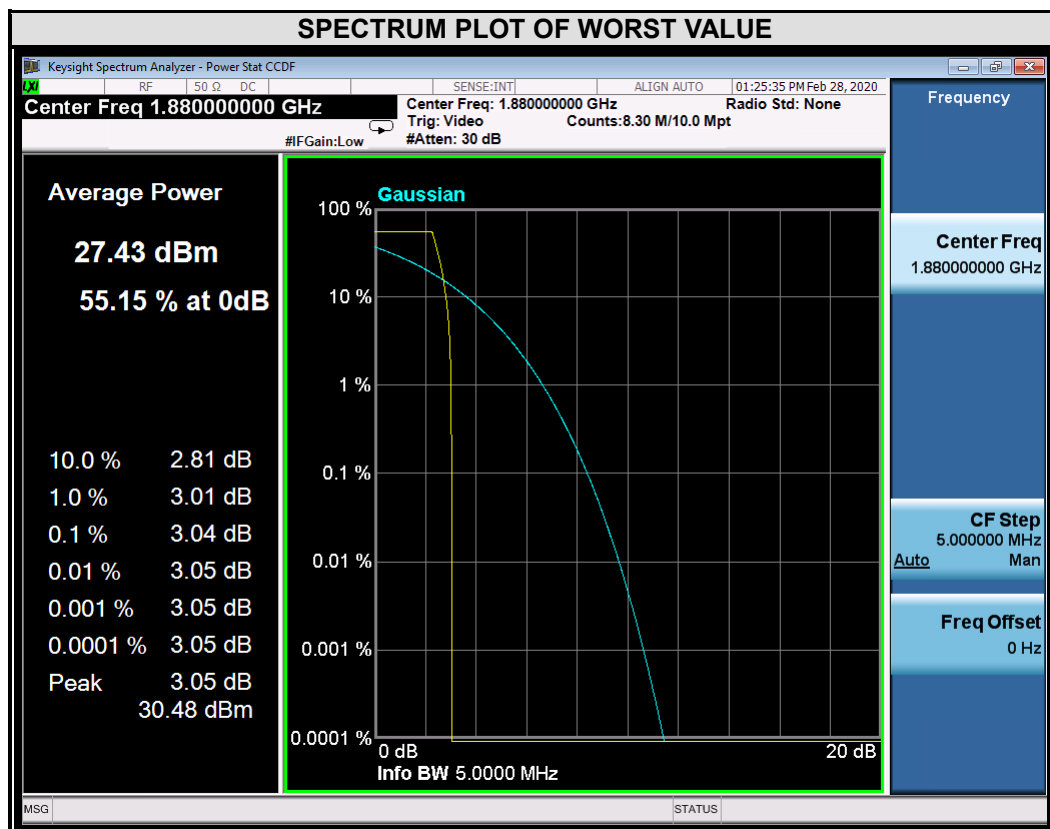




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CHANNEL	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
661	1880	3.04

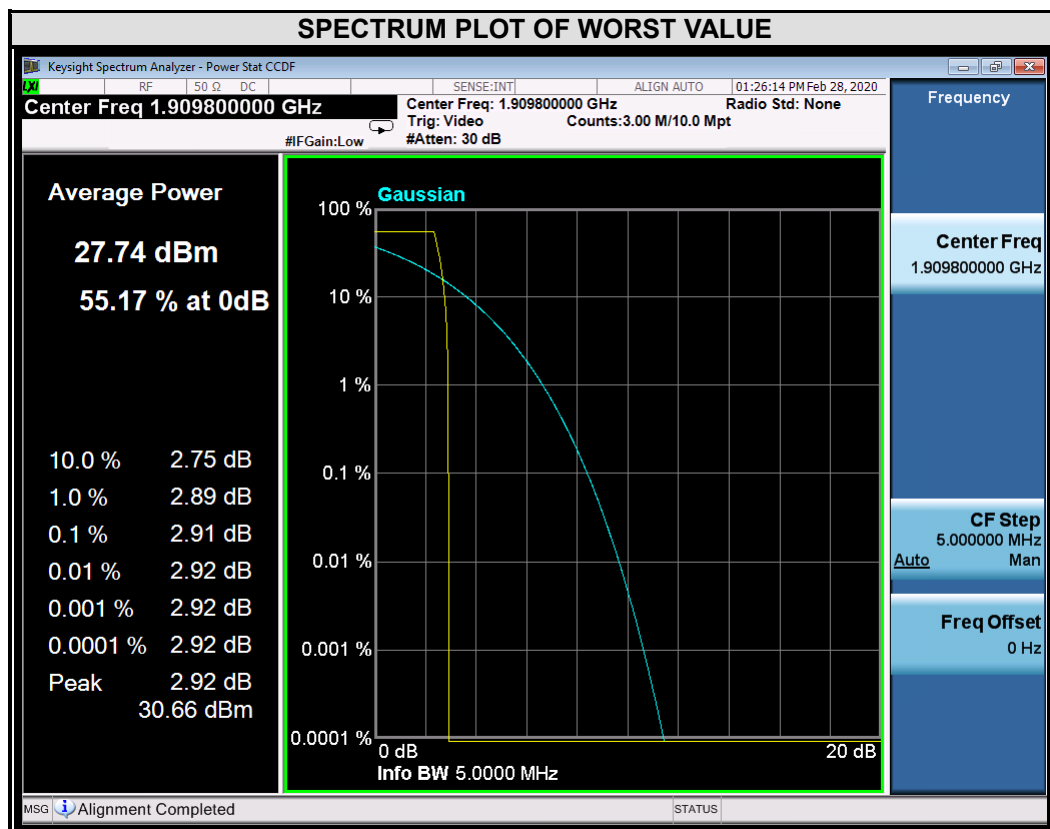




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Test Report No.: RF200106W008-5

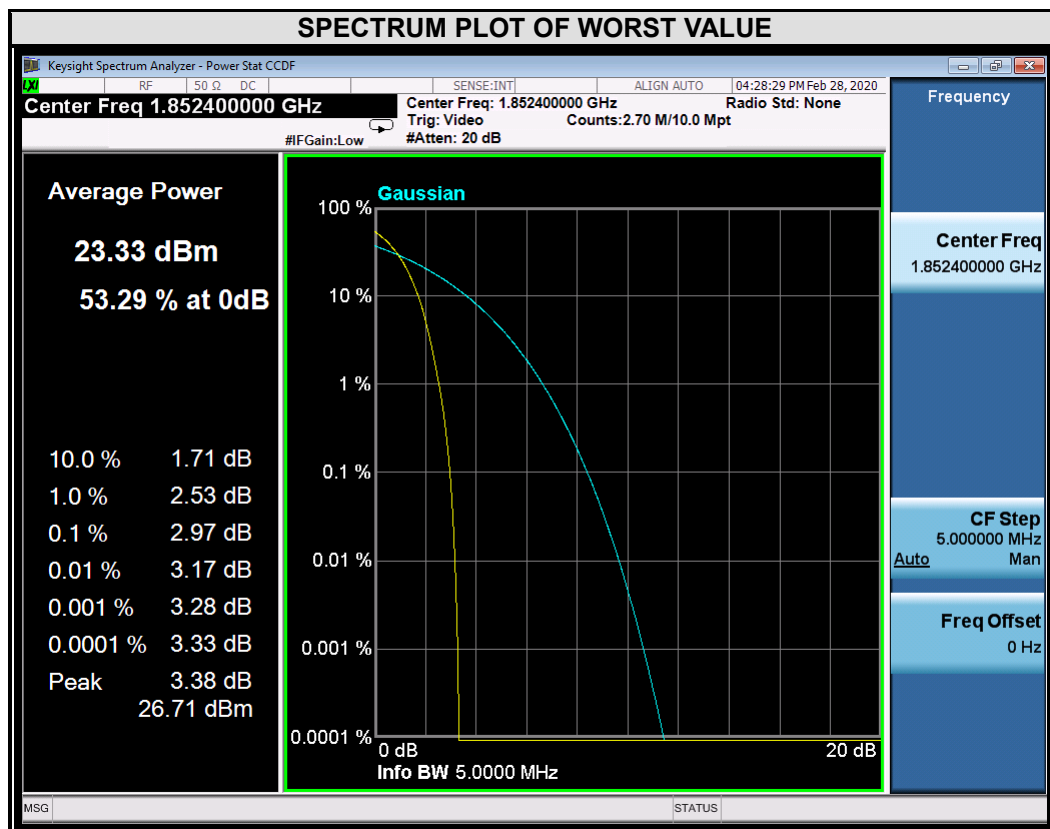
CHANNEL	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
810	1909.8	2.91





WCDMA

CHANNEL	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
9262	1852.4	2.97

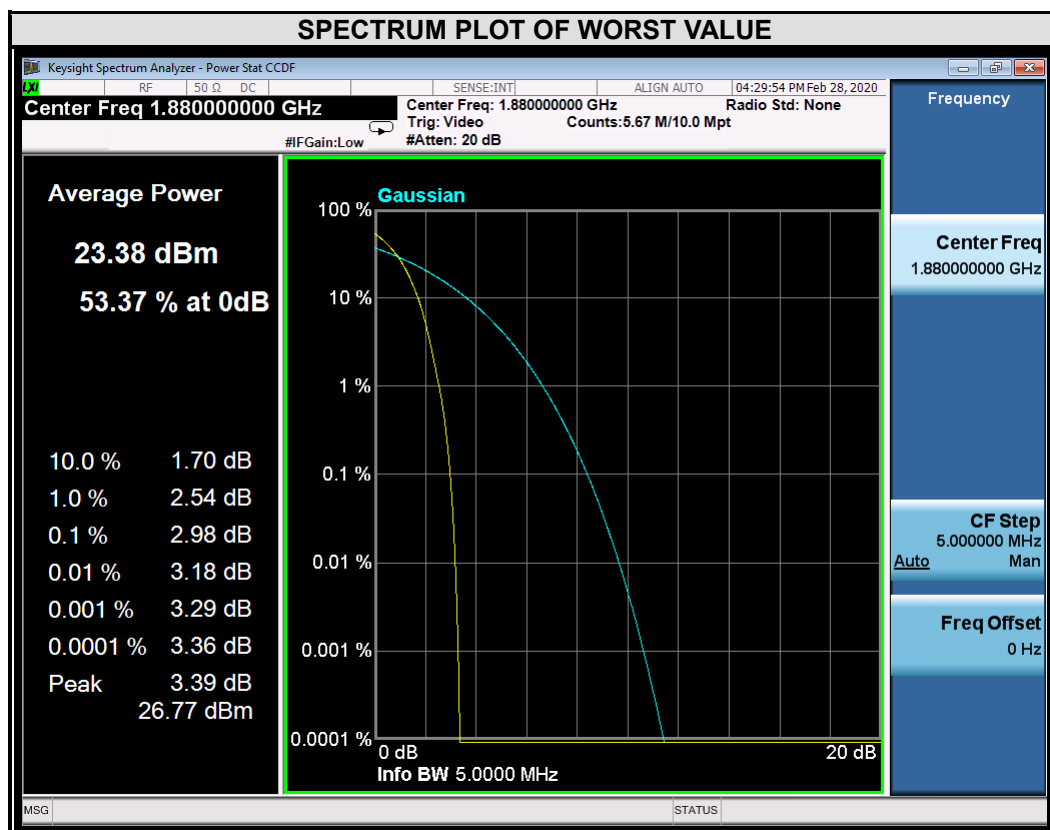




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CHANNEL	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
9400	1880.0	2.98

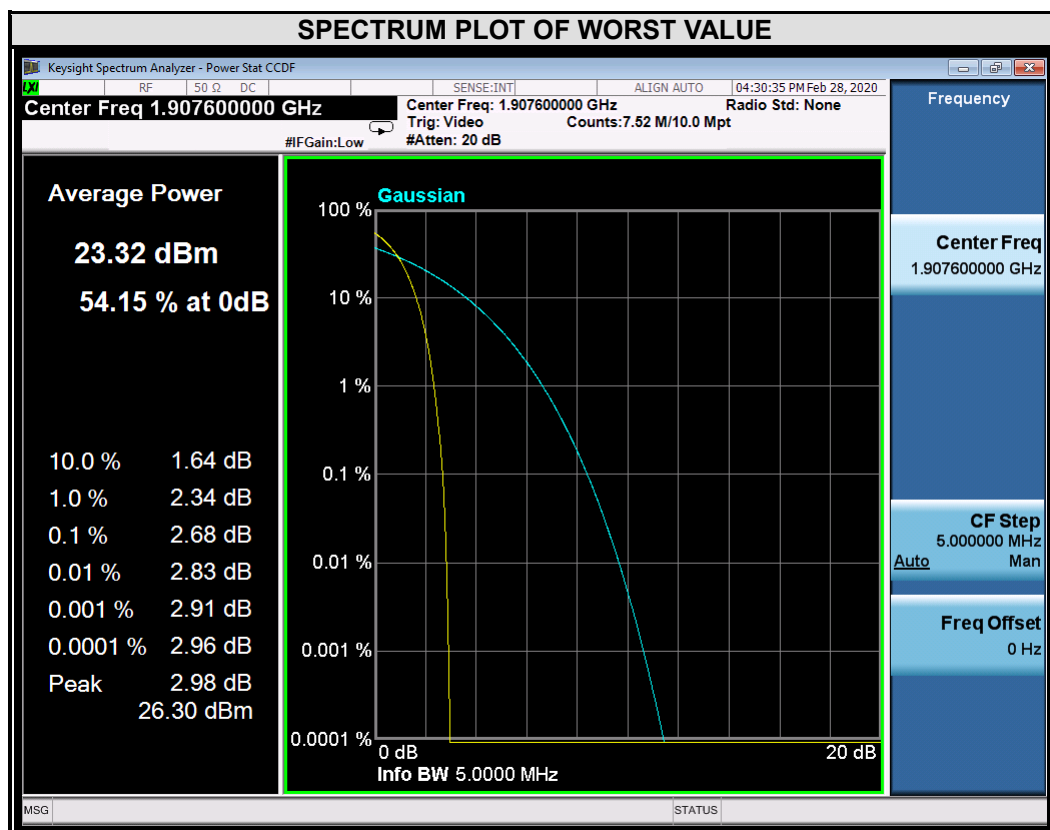




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CHANNEL	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
9538	1907.6	2.68

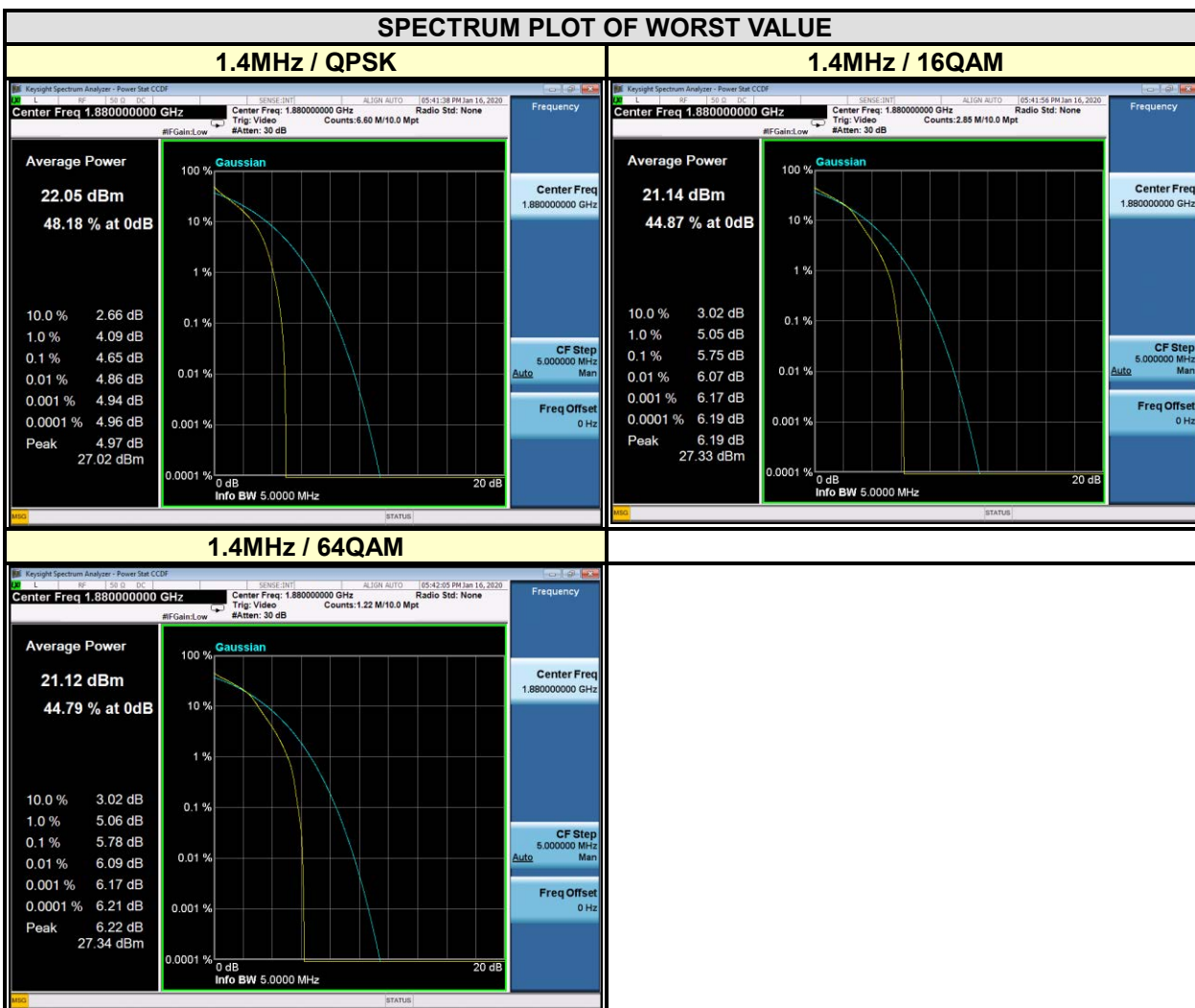






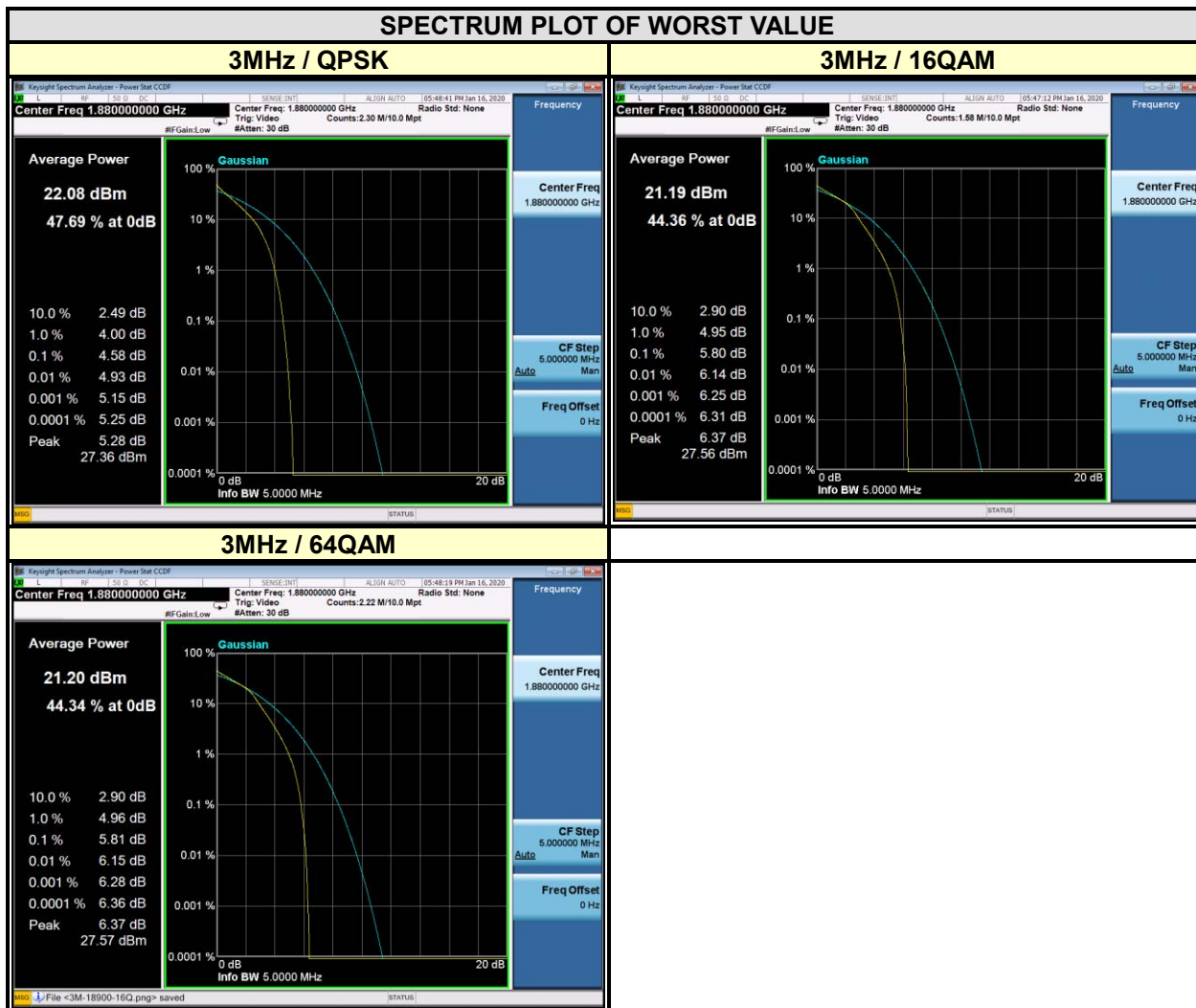
**LTE BAND 2**

CHANNEL BANDWIDTH: 1.4MHz				
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)		
		QPSK	16QAM	64QAM
18607	1850.7	4.46	5.57	5.56
18900	1880	4.65	5.75	5.78
19193	1909.3	3.81	4.90	4.91



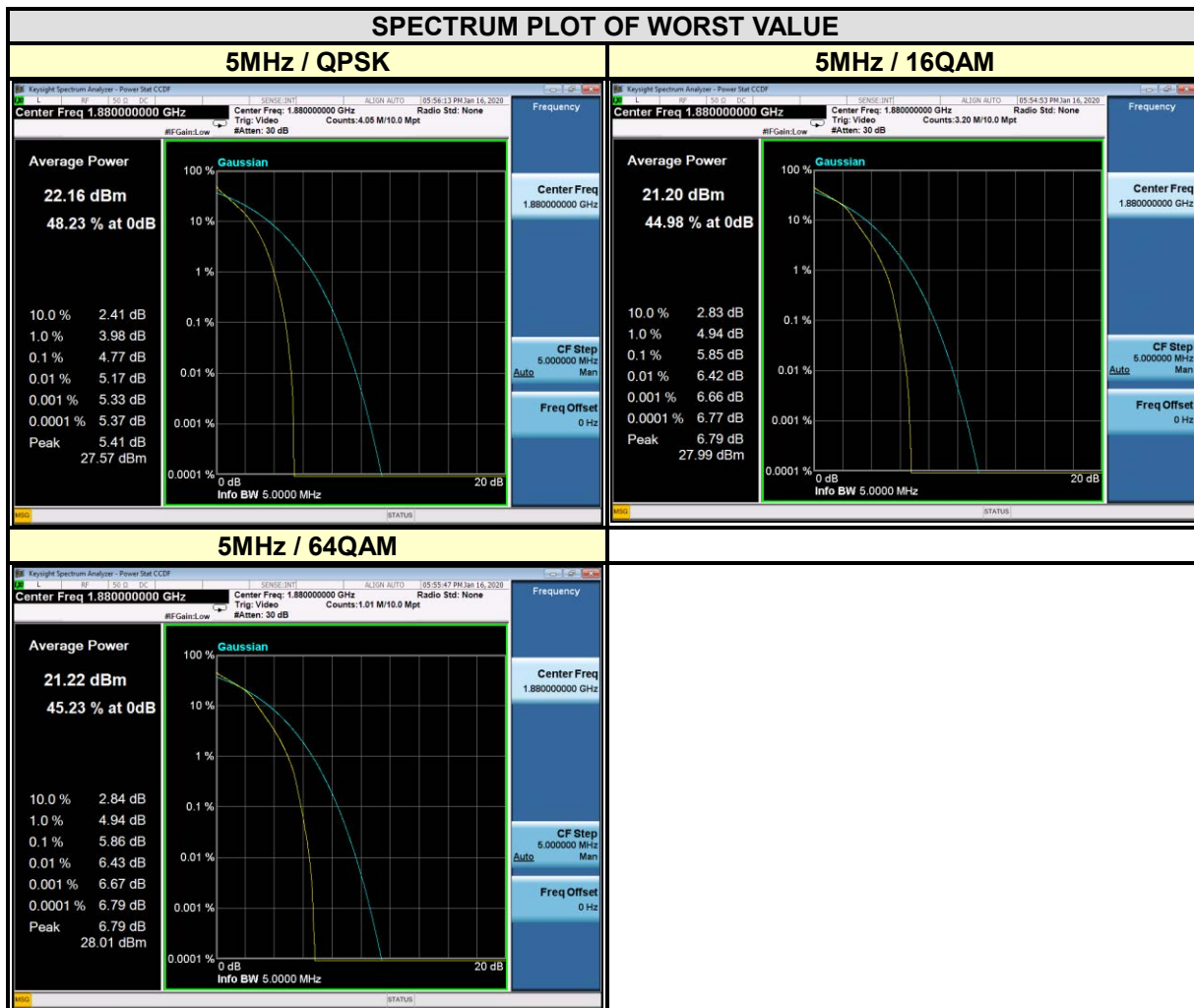


CHANNEL BANDWIDTH: 3MHz				
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)		
		QPSK	16QAM	64QAM
18615	1851.5	4.49	5.69	5.61
18900	1880	4.58	5.80	5.81
19185	1908.5	4.01	5.15	5.15



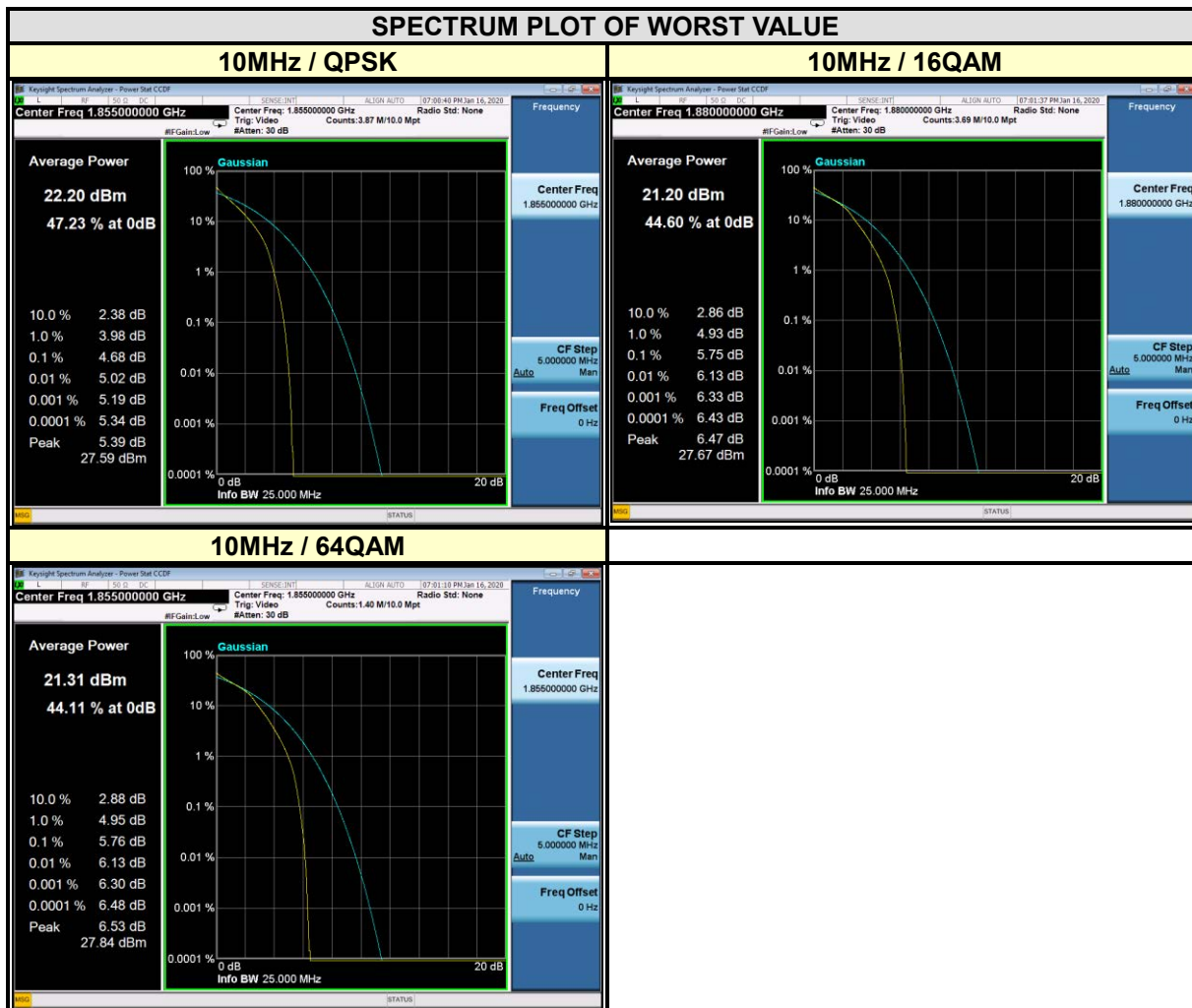


CHANNEL BANDWIDTH: 5MHz				
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)		
		QPSK	16QAM	64QAM
18625	1852.5	4.73	5.85	5.84
18900	1880	4.77	5.85	5.86
19175	1907.5	4.47	5.54	5.53



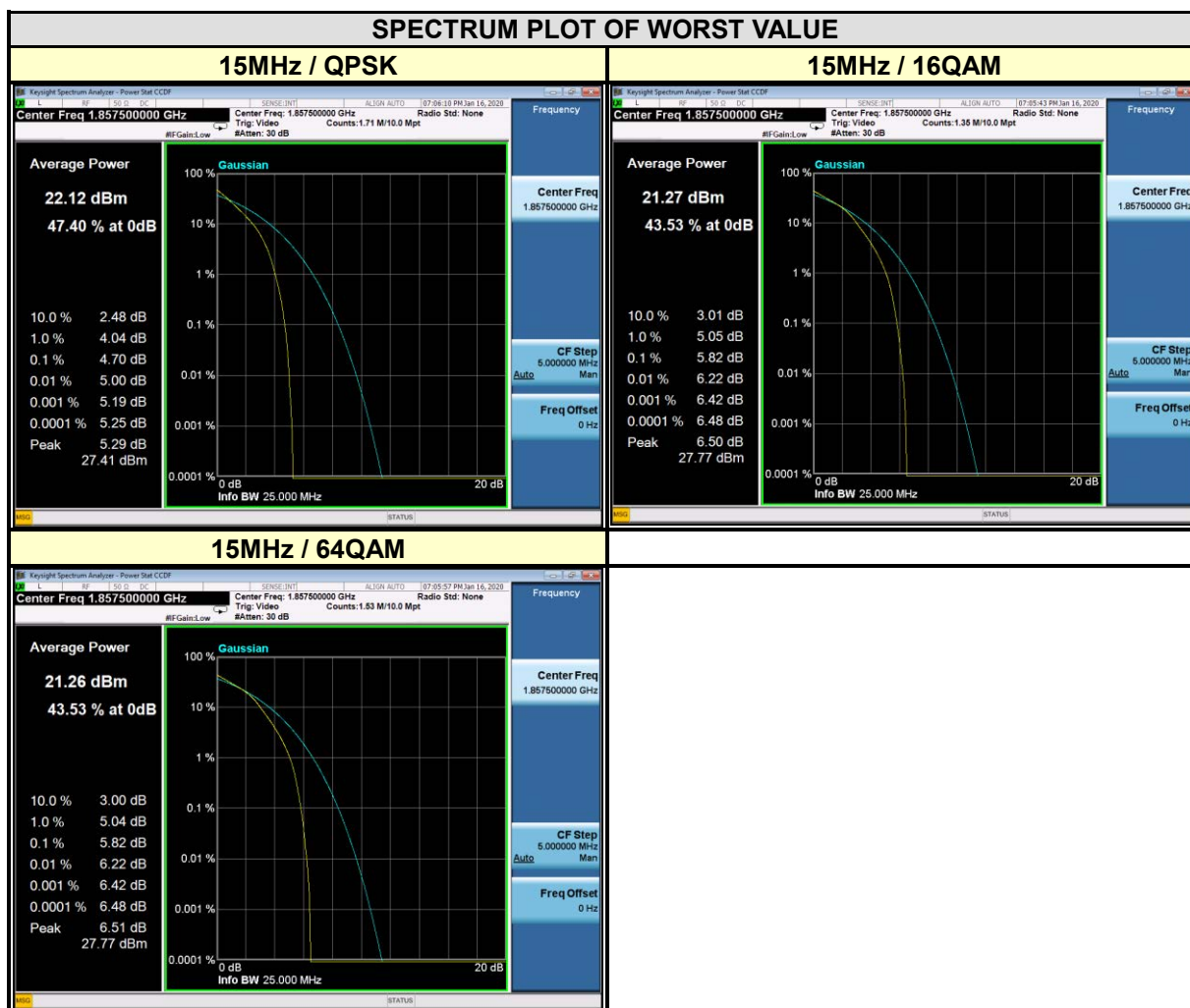


CHANNEL BANDWIDTH: 10MHz				
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)		
		QPSK	16QAM	64QAM
18650	1855	4.68	5.71	5.76
18900	1880	4.65	5.75	5.76
19150	1905	4.45	5.52	5.51





CHANNEL BANDWIDTH: 15MHz				
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)		
		QPSK	16QAM	64QAM
18675	1857.5	4.70	5.82	5.82
18900	1880	4.69	5.80	5.82
19125	1902.5	4.65	5.73	5.76



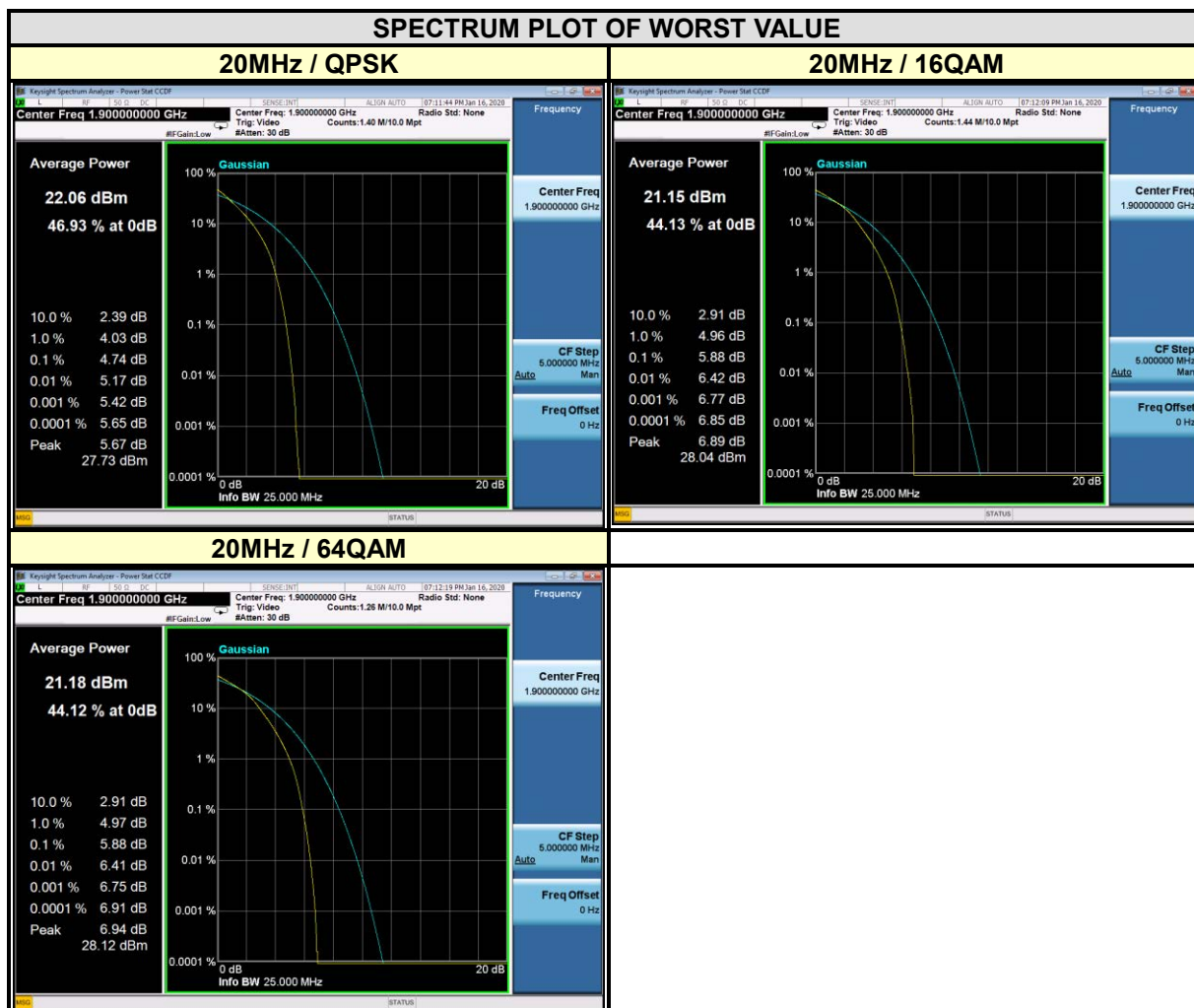




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CHANNEL BANDWIDTH: 20MHz				
CHANNEL	Frequency (MHz)	PEAK TO AVERAGE RATIO (dB)		
		QPSK	16QAM	64QAM
18700	1860	4.68	5.76	5.77
18900	1880	4.73	5.82	5.83
19100	1900	4.74	5.88	5.88





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## 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:

**Shenzhen EMC/RF Lab:**

Tel: +86-755-88696566

Fax: +86-755-88696577

**Email:** [customerservice.dg@cn.bureauveritas.com](mailto:customerservice.dg@cn.bureauveritas.com)

**Web Site:** [www.adt.com.tw](http://www.adt.com.tw)

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



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**VERITAS**

## **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---**