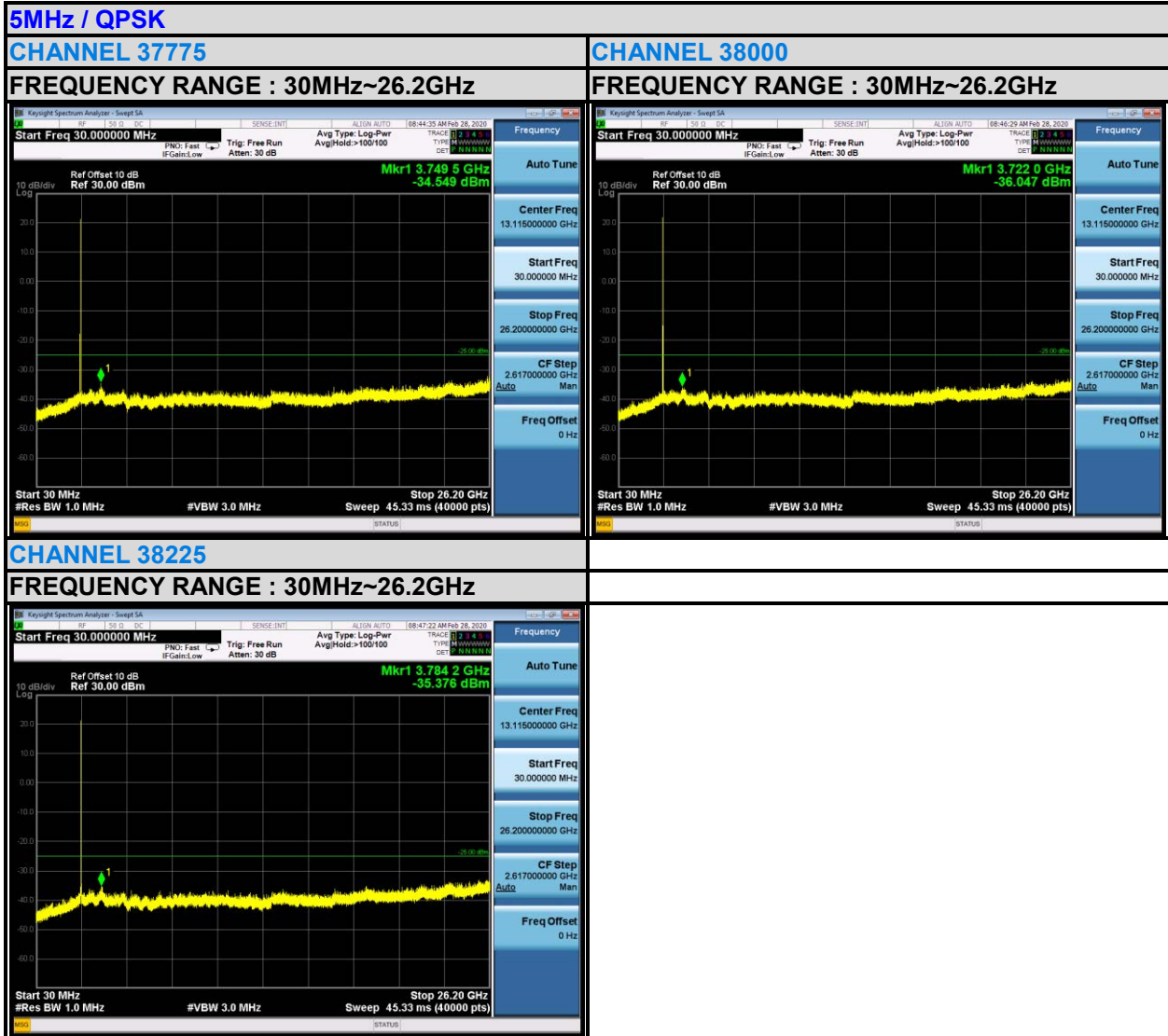


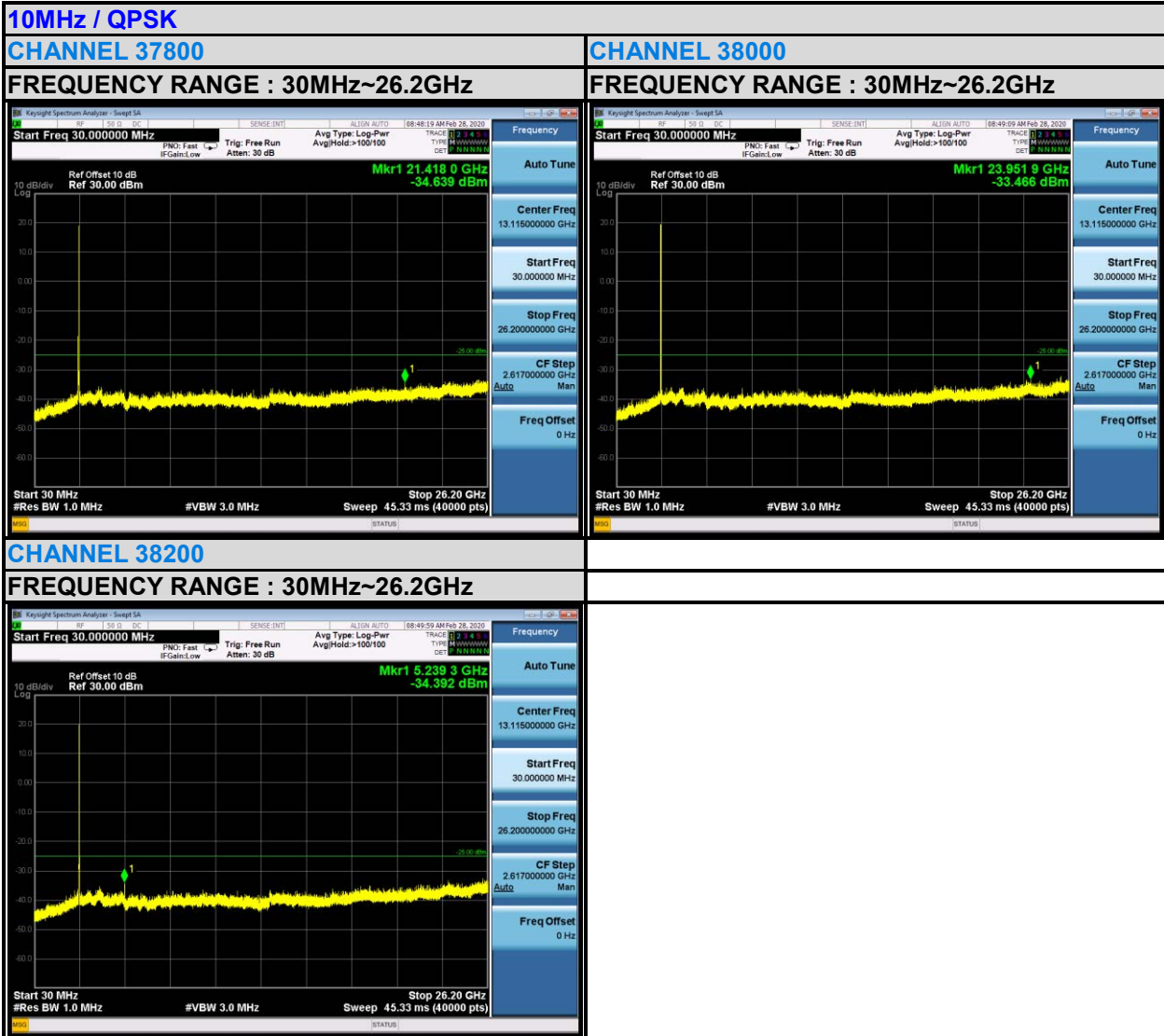


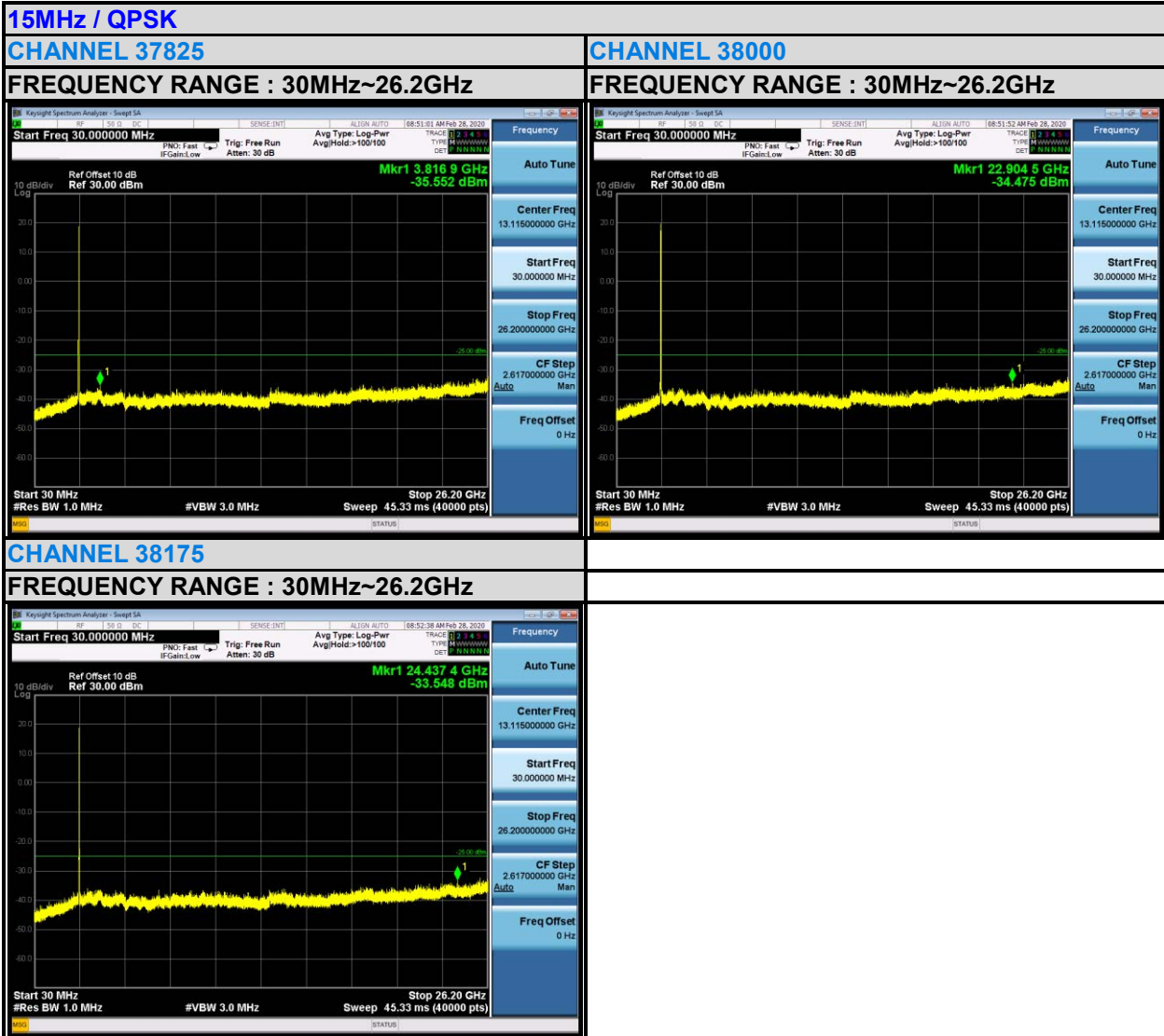
BUREAU VERITAS

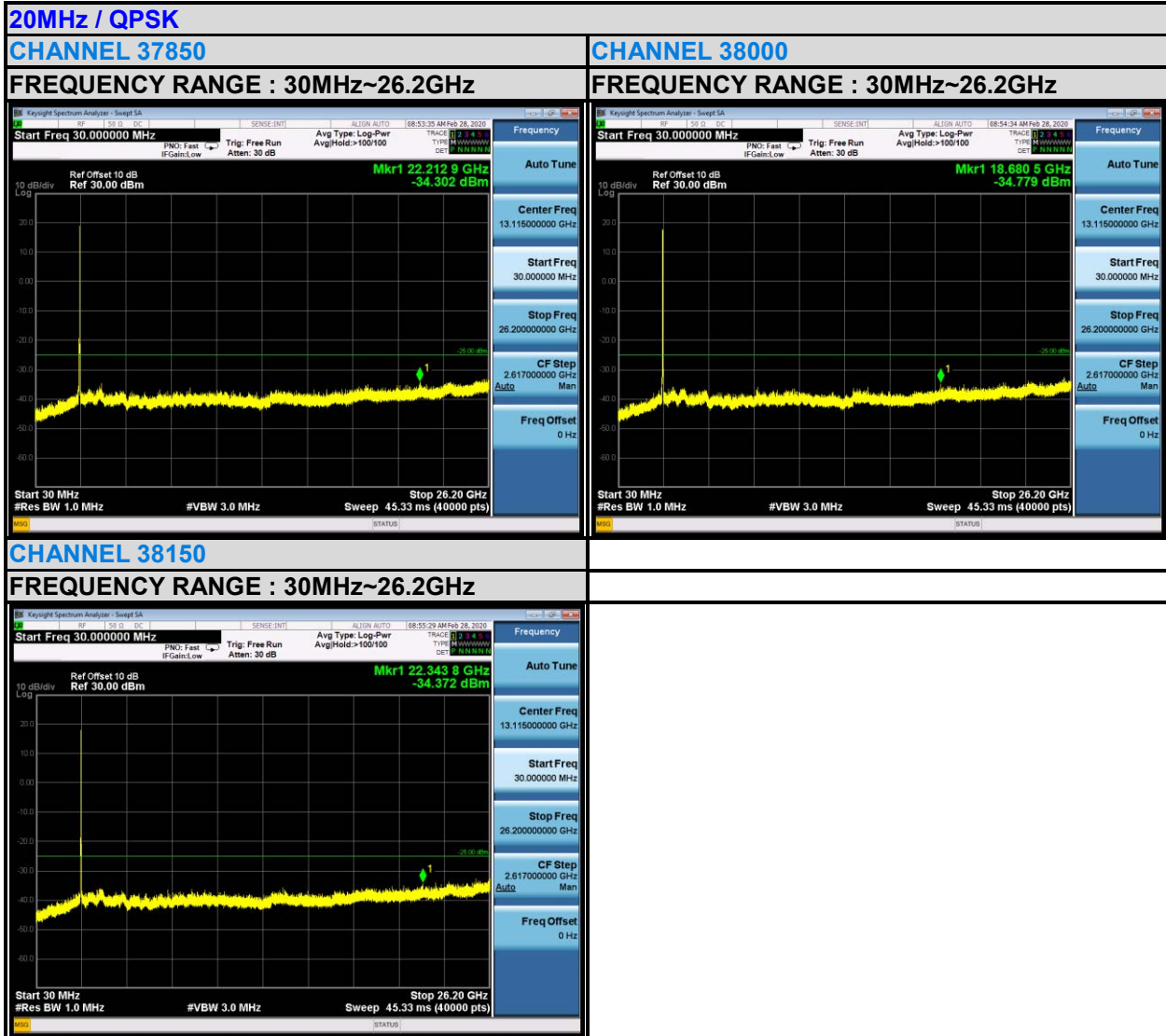
Test Report No.: RF200106W008-7

LTE BAND 38







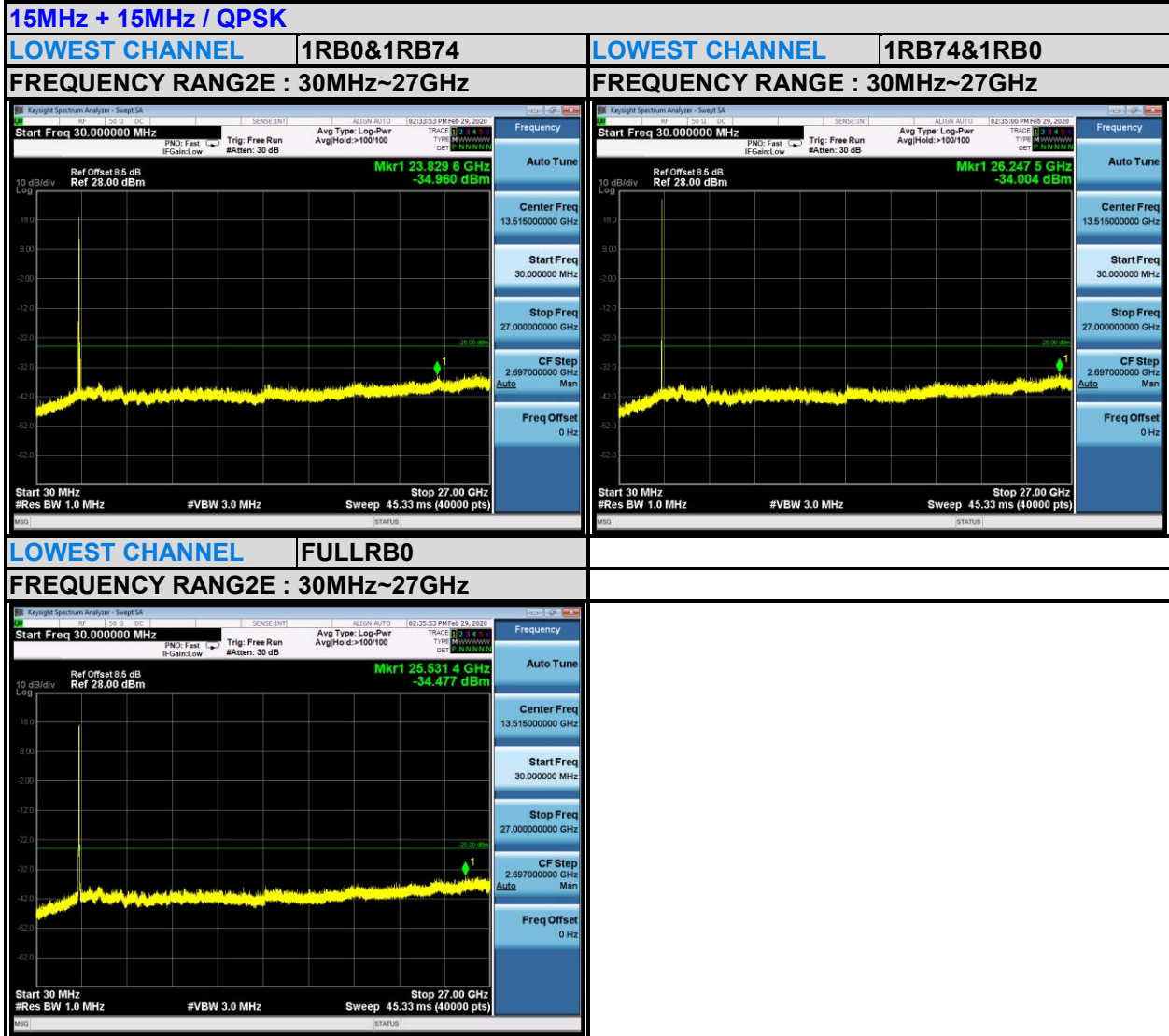




BUREAU VERITAS

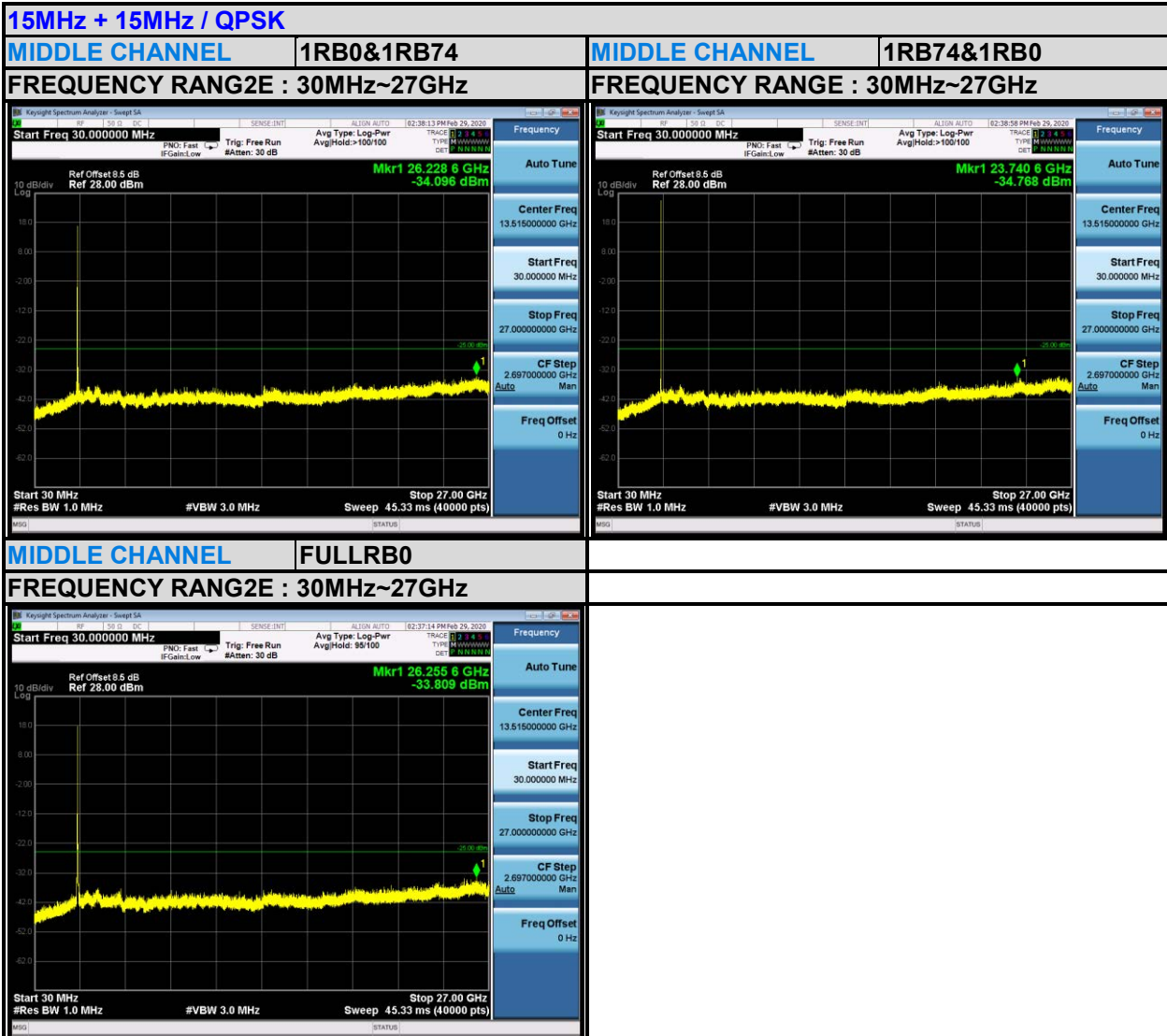
Test Report No.: RF200106W008-7

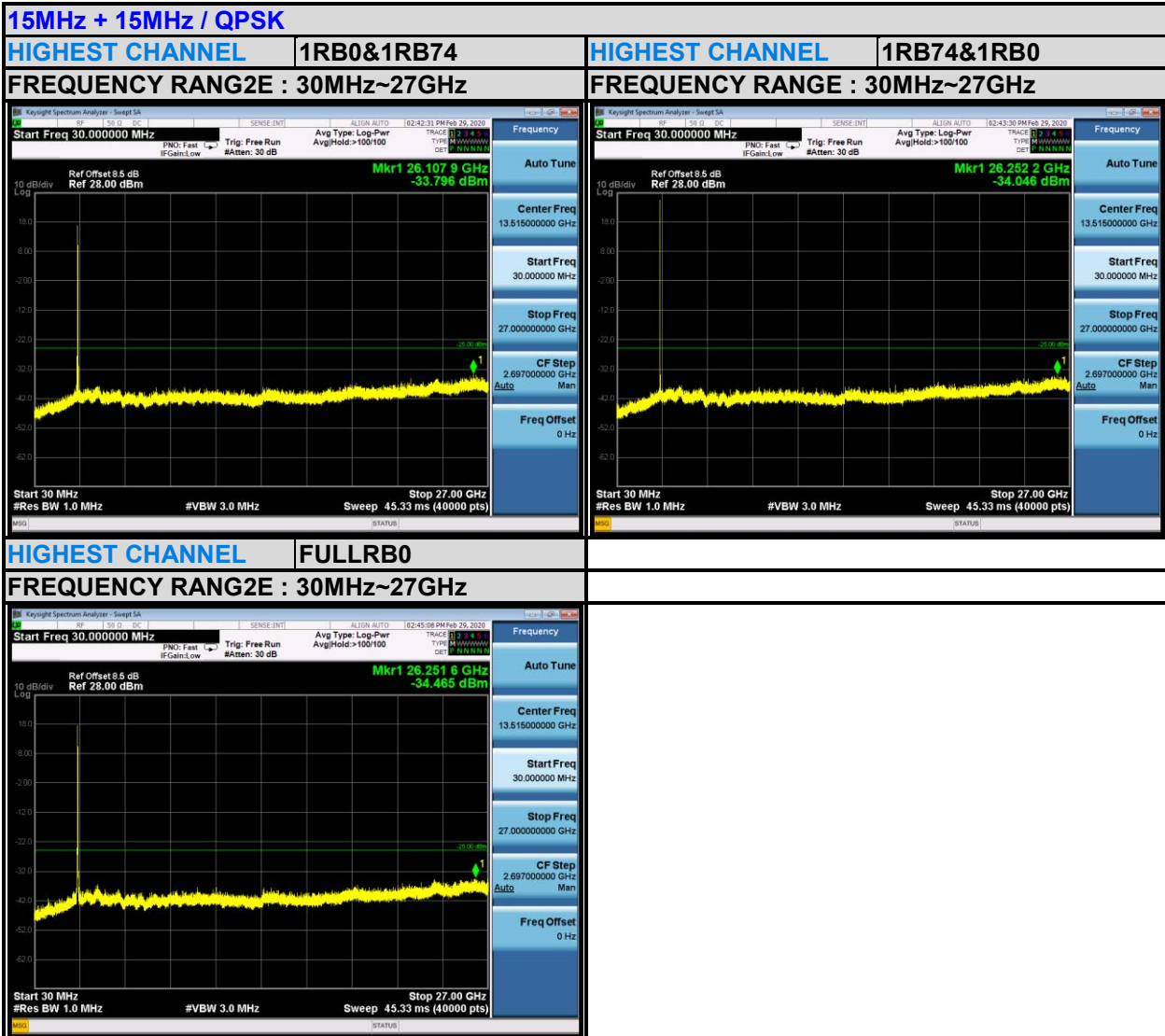
LTE BAND CA_38C

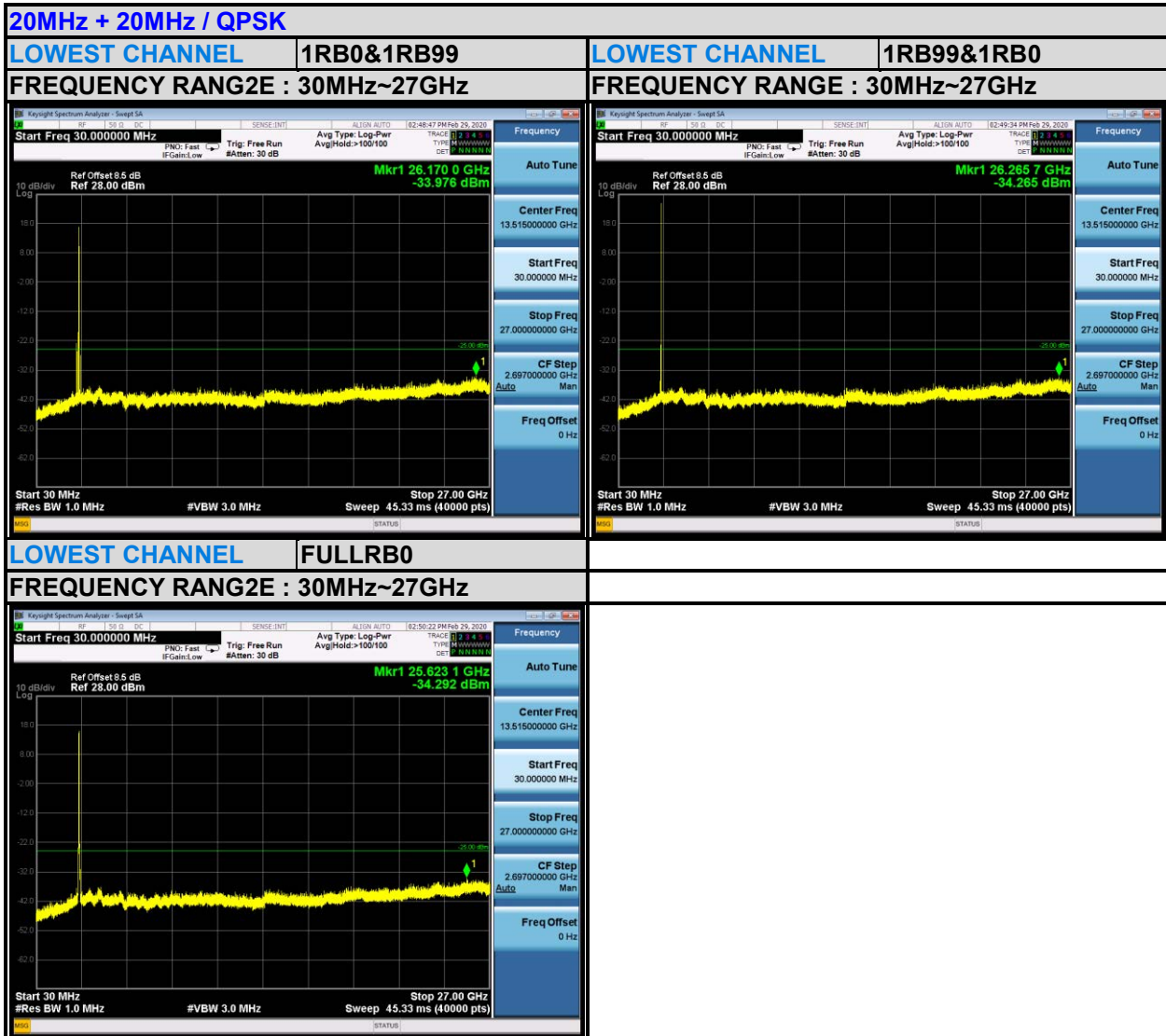




Test Report No.: RF200106W008-7

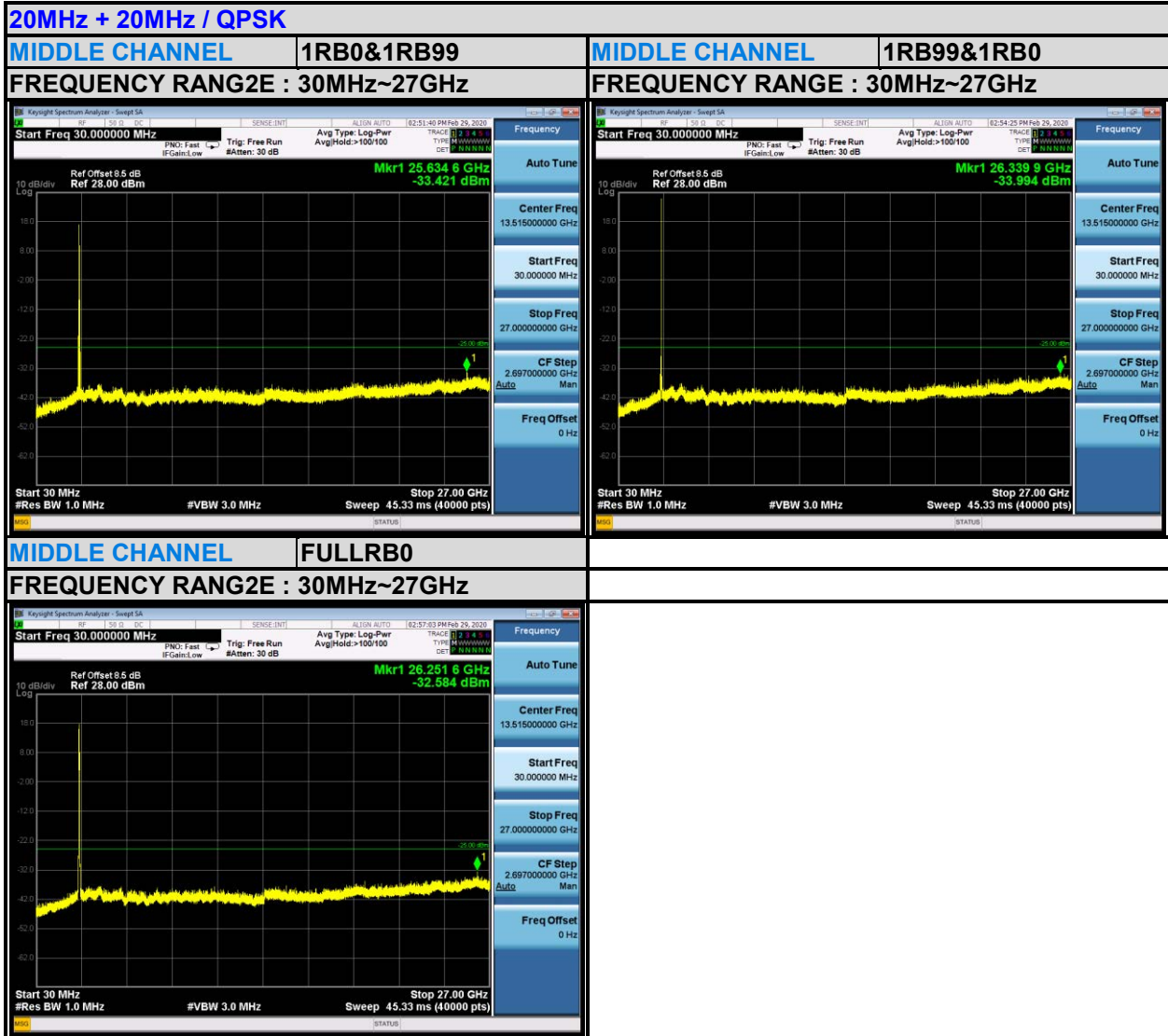


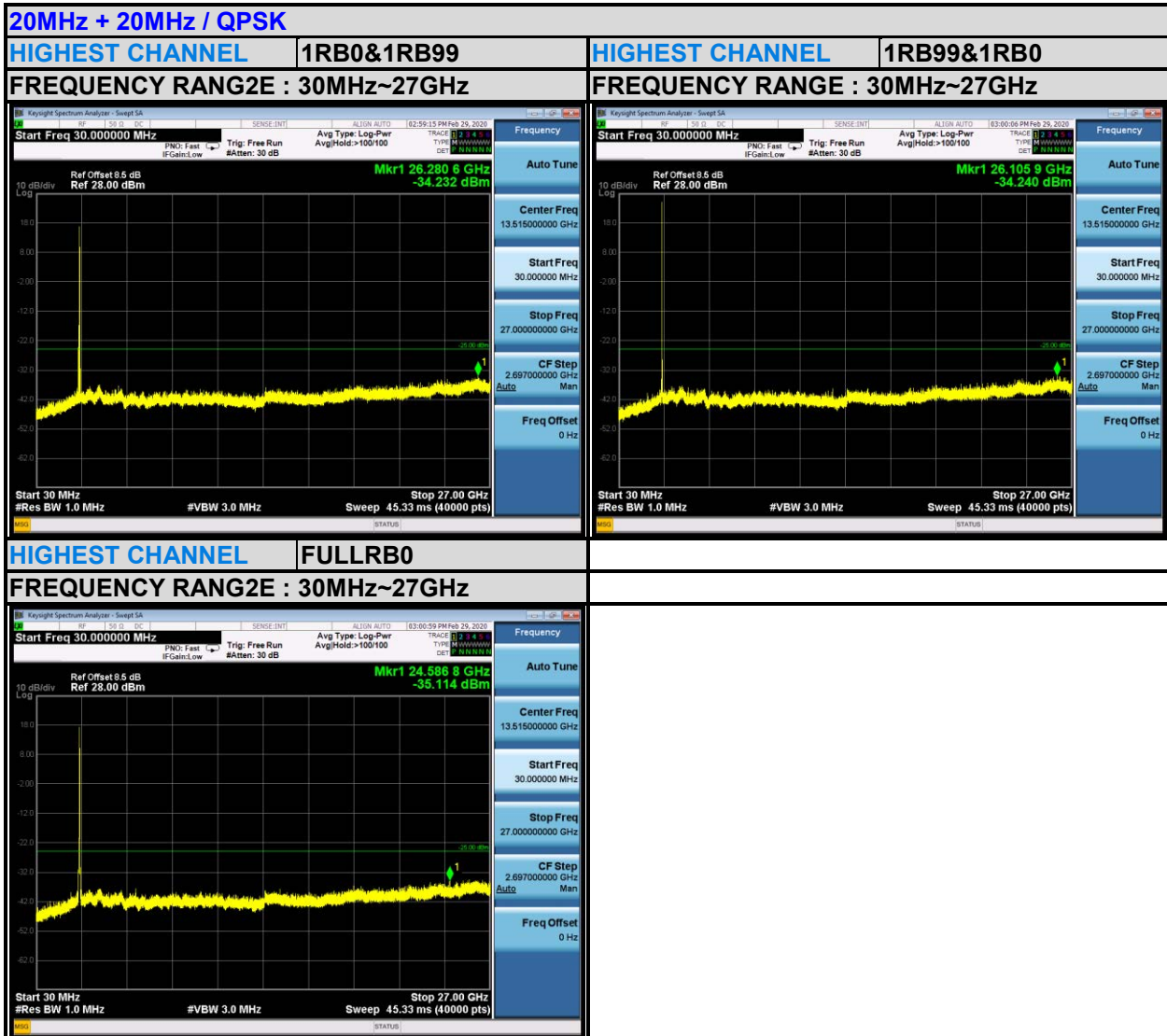






Test Report No.: RF200106W008-7





3.7 RADIATED EMISSION MEASUREMENT

3.7.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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

3.7.2 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,
 $E.R.P \text{ power} = E.I.P.R \text{ power} - 2.15dBi$.

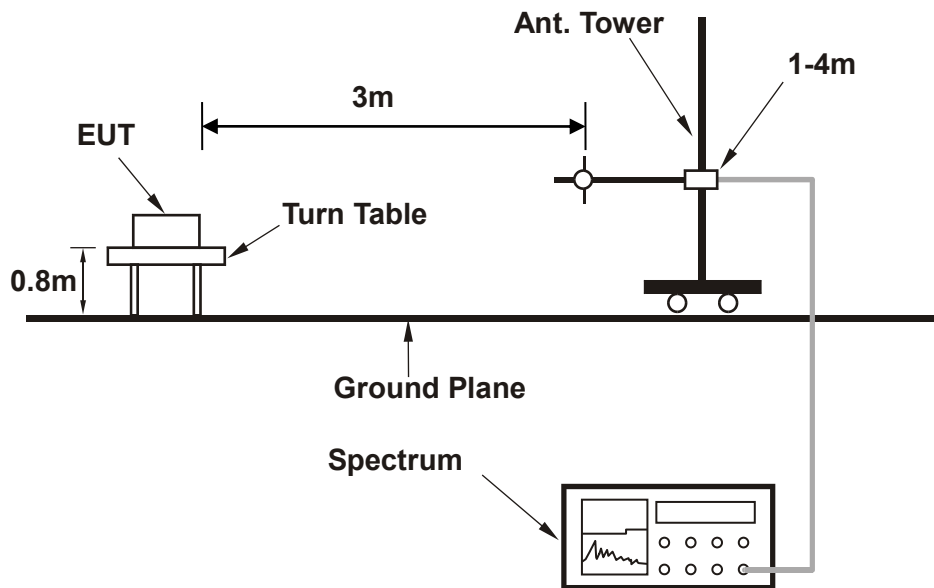
NOTE: The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

3.7.3 DEVIATION FROM TEST STANDARD

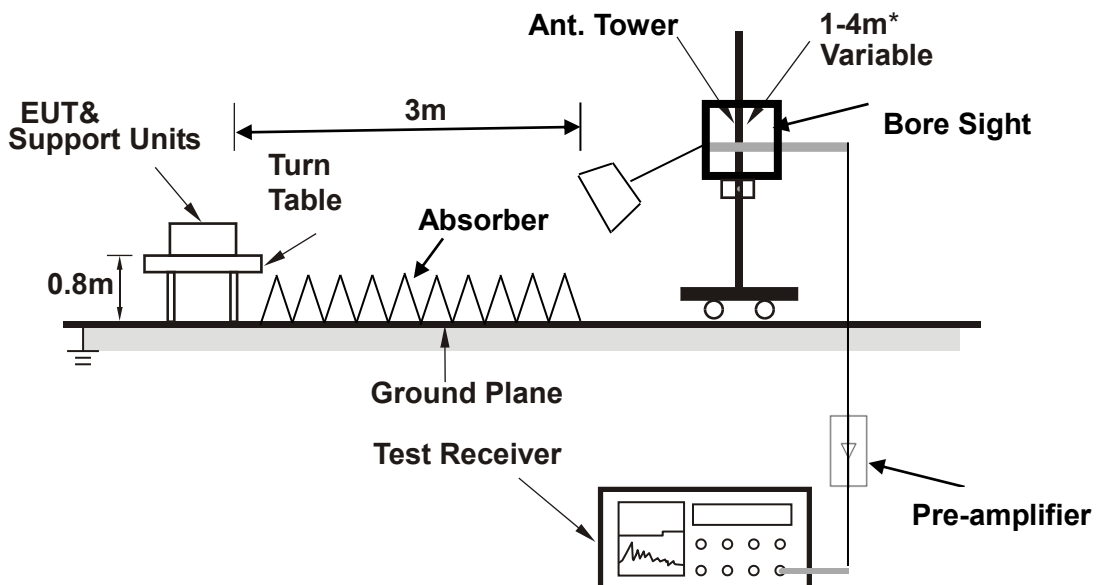
No deviation

3.7.4 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).



3.7.5 TEST RESULTS

BELOW 1GHz WORST-CASE DATA

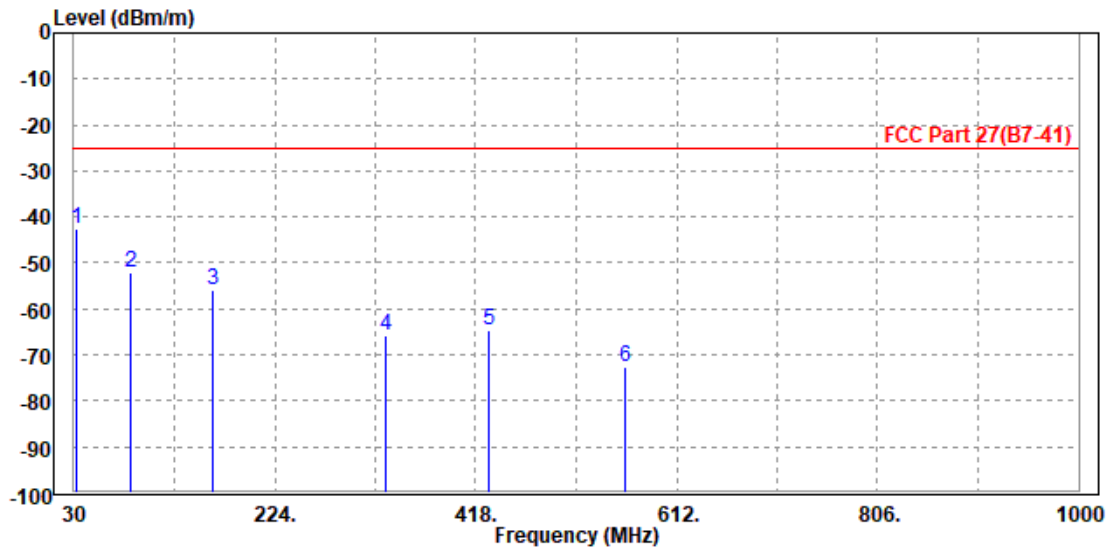
30 MHz – 1GHz data:

LTE Band 7

CHANNEL BANDWIDTH: 10MHz / QPSK

MODE	TX channel 21100	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC5V/9V/10V/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	31.940	-42.48	-59.15	-25.00	-17.48	16.67	Peak	Horizontal
2		85.290	-52.14	-43.76	-25.00	-27.14	-8.38	Peak	Horizontal
3		164.830	-55.79	-37.49	-25.00	-30.79	-18.30	Peak	Horizontal
4		330.700	-65.85	-53.07	-25.00	-40.85	-12.78	Peak	Horizontal
5		430.610	-64.63	-54.19	-25.00	-39.63	-10.44	Peak	Horizontal
6		562.530	-72.80	-63.47	-25.00	-47.80	-9.33	Peak	Horizontal

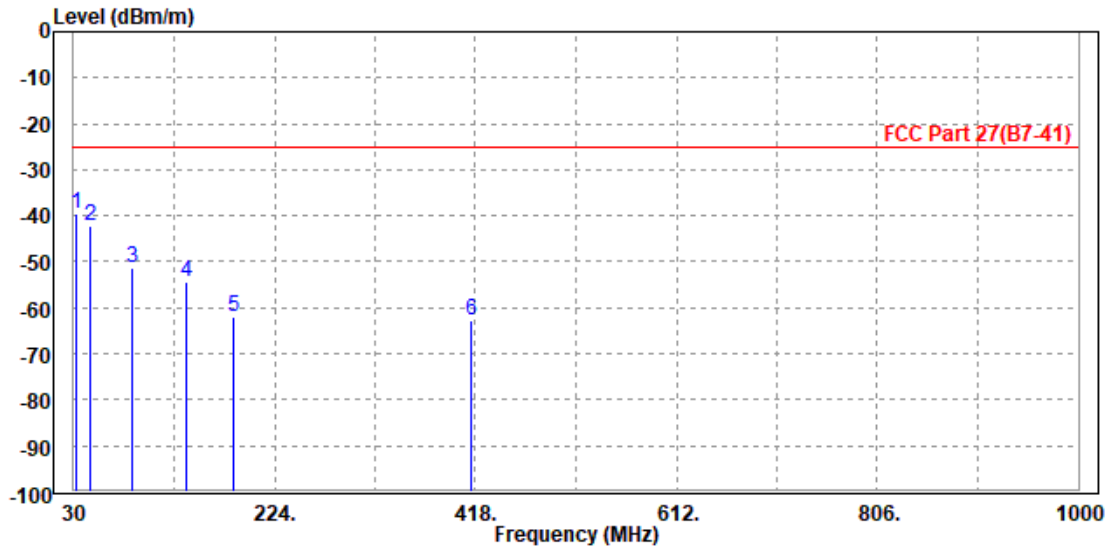




Test Report No.: RF200106W008-7

MODE	TX channel 21100	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC5V/9V/10V/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	31.940	-39.52	-42.27	-25.00	-14.52	2.75 Peak	Vertical
2		45.520	-42.09	-38.75	-25.00	-17.09	-3.34 Peak	Vertical
3		86.260	-51.18	-40.75	-25.00	-26.18	-10.43 Peak	Vertical
4		138.640	-54.50	-39.21	-25.00	-29.50	-15.29 Peak	Vertical
5		184.230	-62.15	-49.52	-25.00	-37.15	-12.63 Peak	Vertical
6		413.150	-62.60	-52.15	-25.00	-37.60	-10.45 Peak	Vertical





BUREAU VERITAS

Test Report No.: RF200106W008-7

ABOVE 1GHz

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

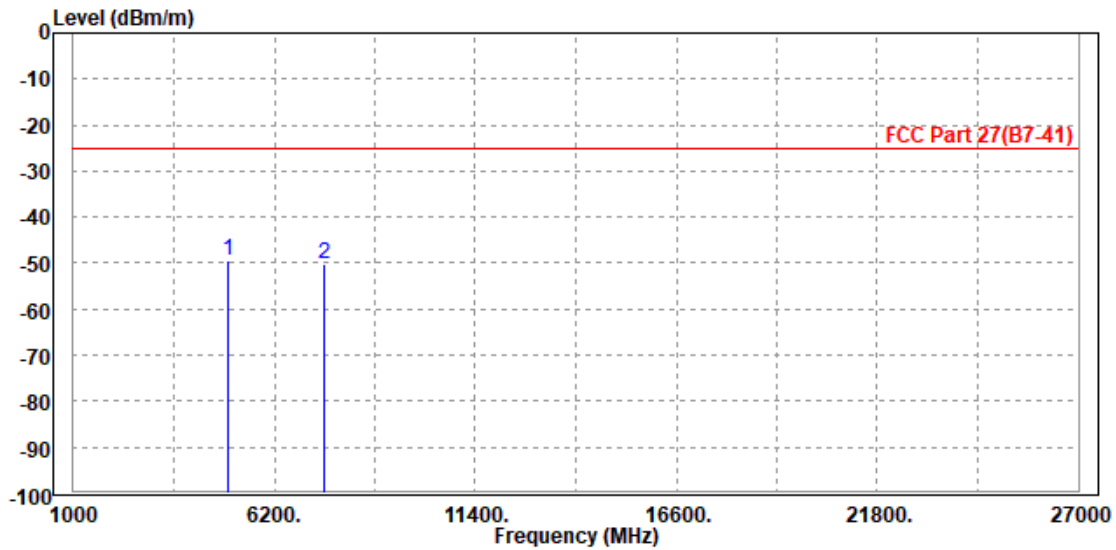
LTE Band 7

CHANNEL BANDWIDTH: 5MHz / QPSK

CH 20775

MODE	TX channel 20775	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC5V/9V/10V/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 5004.000	-49.40	-57.94	-25.00	-24.40	8.54	Peak	Horizontal
2	7507.500	-50.01	-61.37	-25.00	-25.01	11.36	Peak	Horizontal

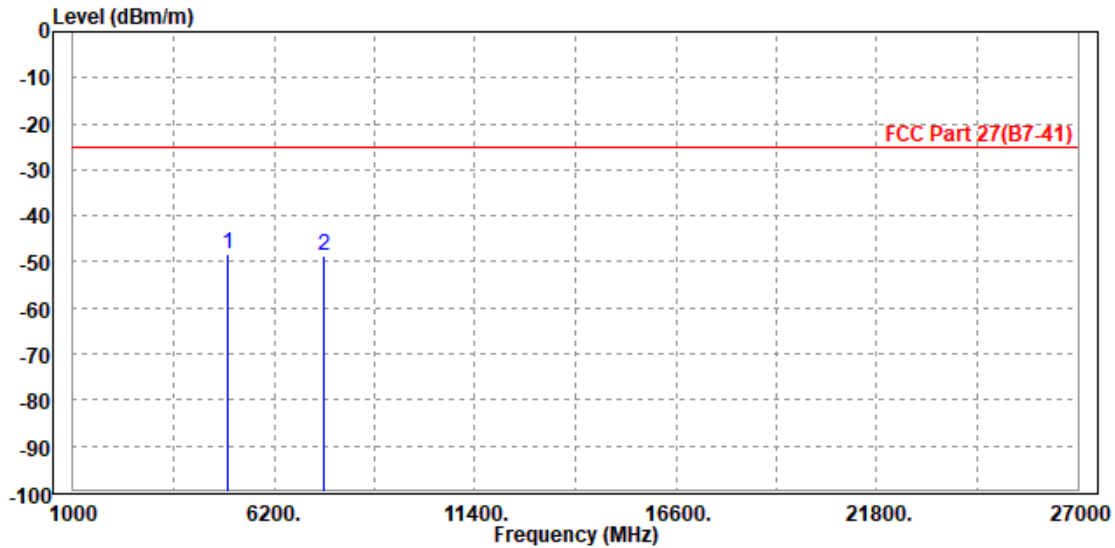




Test Report No.: RF200106W008-7

MODE	TX channel 20775	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC5V/9V/10V/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 5004.000	-48.19	-58.09	-25.00	-23.19	9.90	Peak	Vertical
2	7507.500	-48.75	-61.49	-25.00	-23.75	12.74	Peak	Vertical



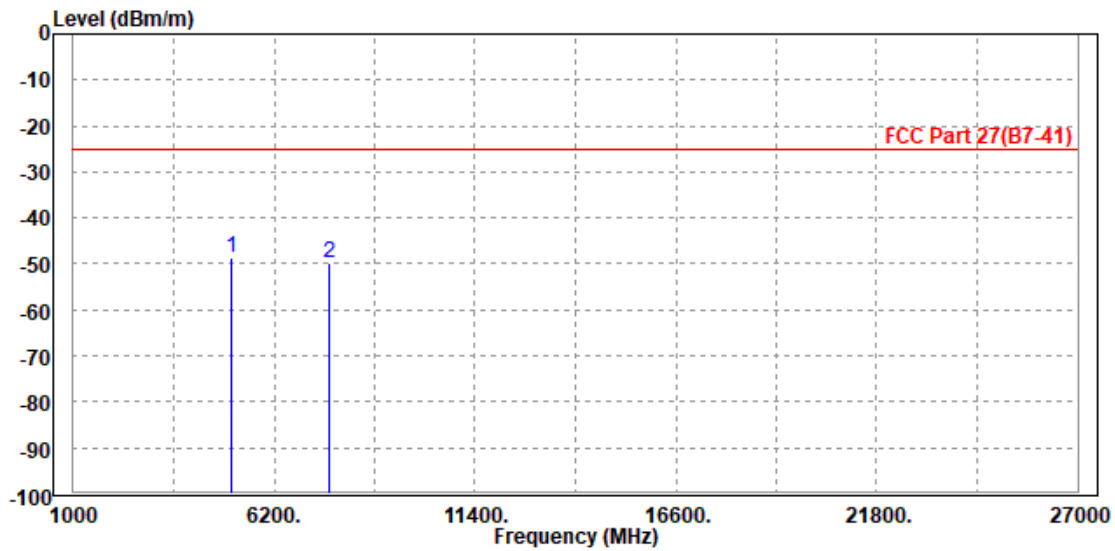


Test Report No.: RF200106W008-7

CH 21100

MODE	TX channel 21100	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC5V/9V/10V/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 5082.000	-48.60	-57.37	-25.00	-23.60	8.77	Peak	Horizontal
2	7605.000	-49.85	-61.25	-25.00	-24.85	11.40	Peak	Horizontal

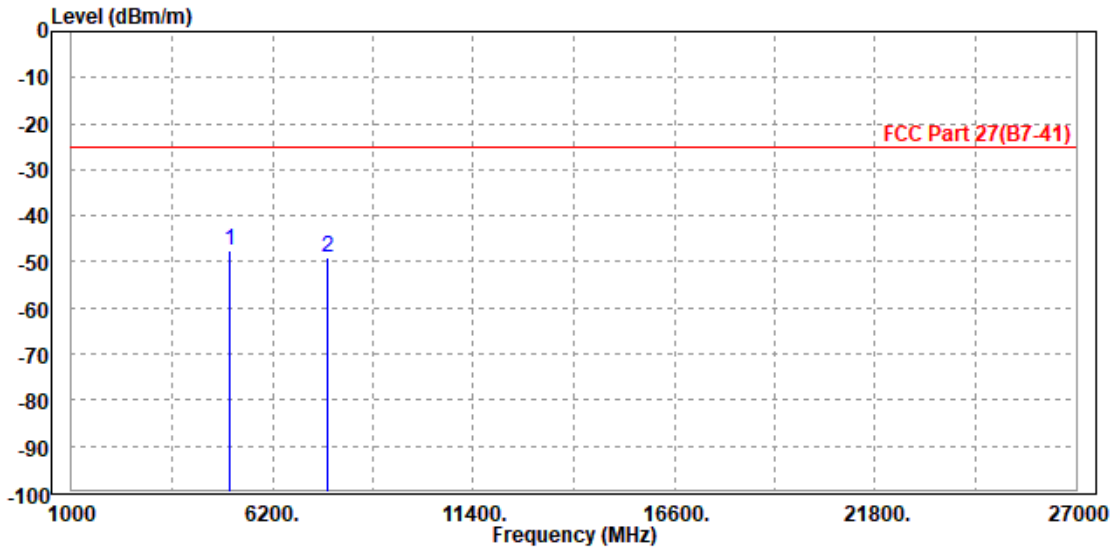




Test Report No.: RF200106W008-7

MODE	TX channel 21100	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC5V/9V/10V/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 5082.000	-47.64	-57.51	-25.00	-22.64	9.87	Peak	Vertical
2	7605.000	-48.90	-61.68	-25.00	-23.90	12.78	Peak	Vertical



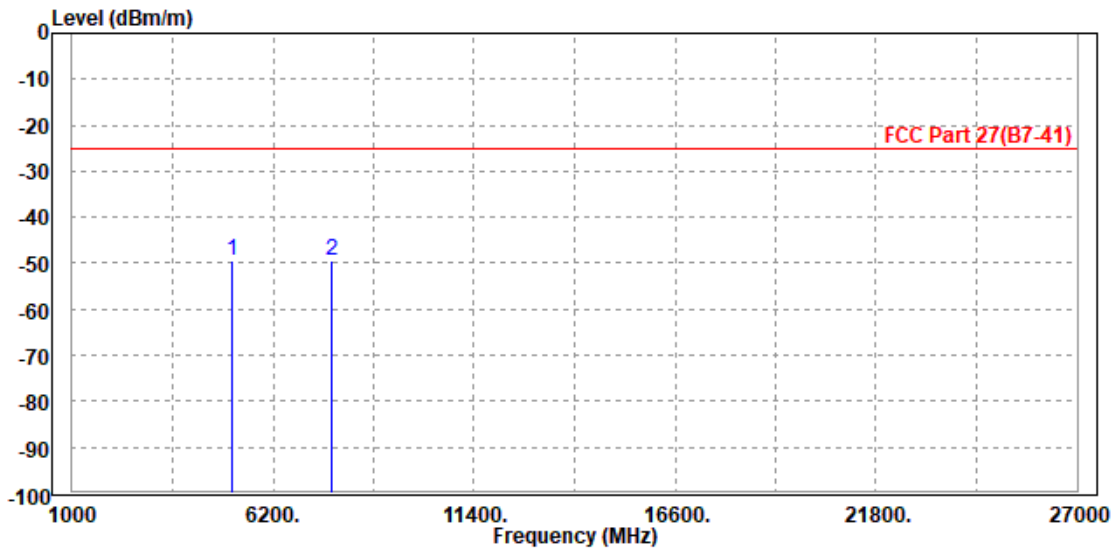


Test Report No.: RF200106W008-7

CH 21425

MODE	TX channel 21425	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC5V/9V/10V/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	5134.000	-49.27	-58.20	-25.00	-24.27	8.93	Peak	Horizontal
2	PP 7702.500	-49.24	-60.68	-25.00	-24.24	11.44	Peak	Horizontal

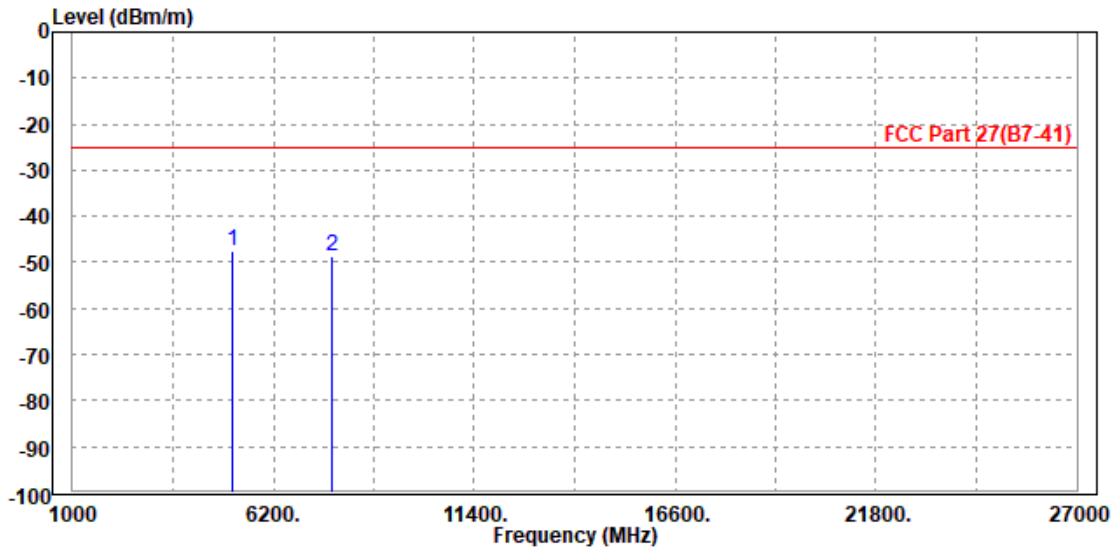




Test Report No.: RF200106W008-7

MODE	TX channel 21425	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC5V/9V/10V/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 5134.000	-47.35	-57.20	-25.00	-22.35	9.85	Peak	Vertical
2	7702.500	-48.71	-61.53	-25.00	-23.71	12.82	Peak	Vertical



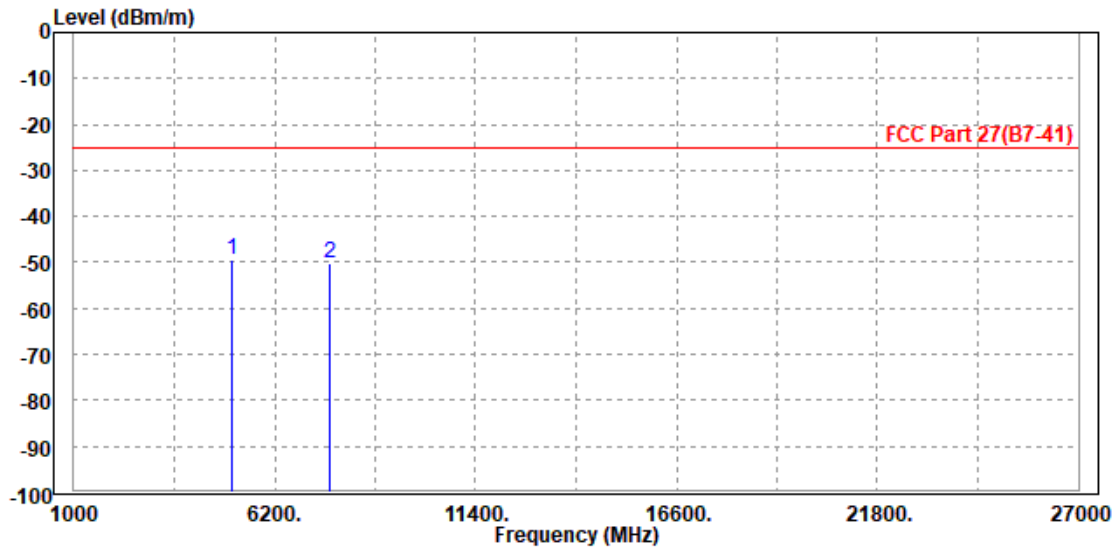


Test Report No.: RF200106W008-7

CHANNEL BANDWIDTH: 10MHz / QPSK

MODE	TX channel 21100	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC5V/9V/10V/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 5082.000	-49.61	-58.38	-25.00	-24.61	8.77	Peak	Horizontal
2	7605.000	-50.09	-61.49	-25.00	-25.09	11.40	Peak	Horizontal

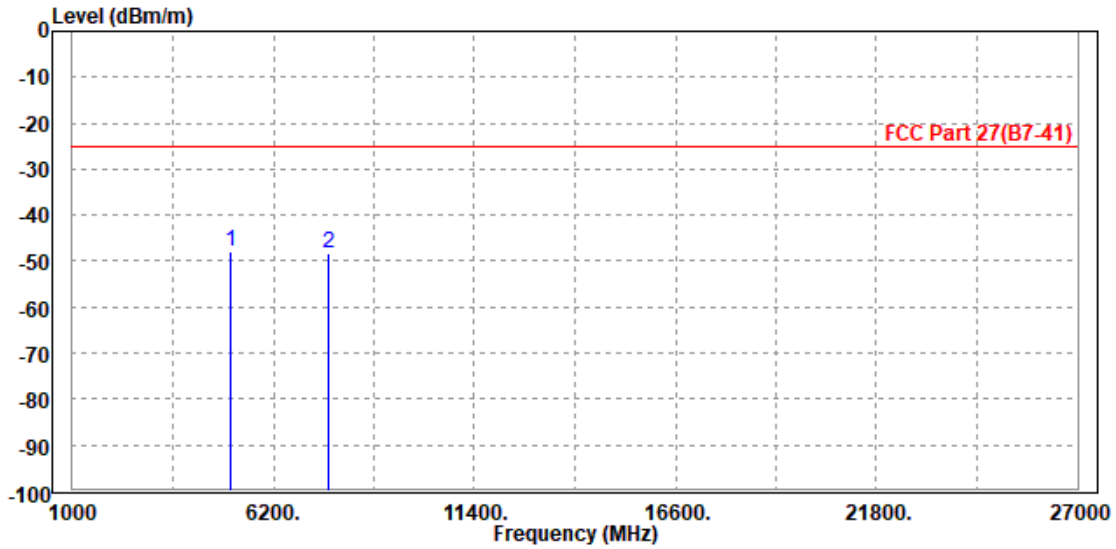




Test Report No.: RF200106W008-7

MODE	TX channel 21100	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC5V/9V/10V/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 5082.000	-47.81	-57.68	-25.00	-22.81	9.87	Peak	Vertical
2	7605.000	-48.13	-60.91	-25.00	-23.13	12.78	Peak	Vertical



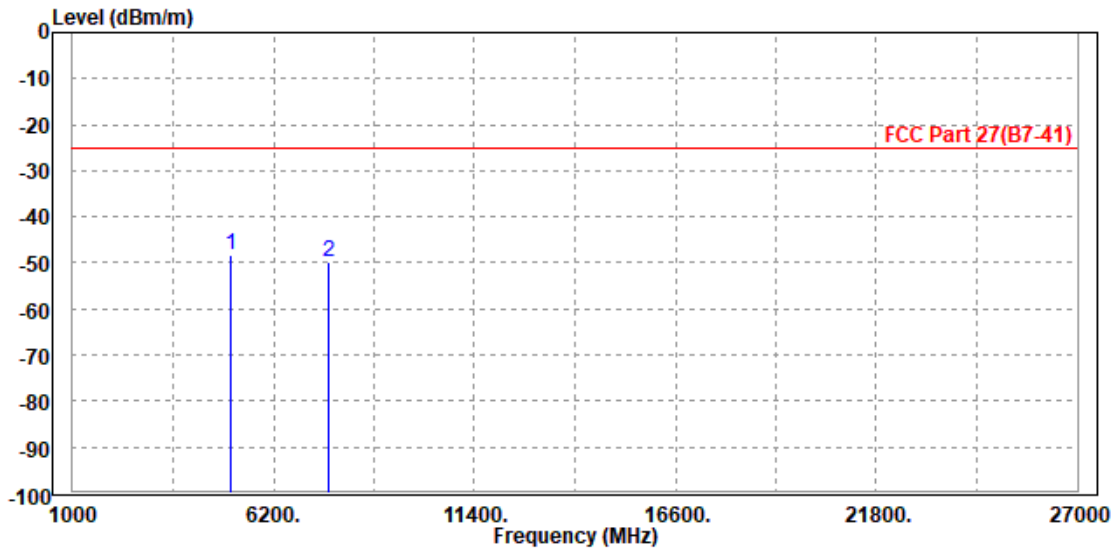


Test Report No.: RF200106W008-7

CHANNEL BANDWIDTH: 15MHz / QPSK

MODE	TX channel 21100	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC5V/9V/10V/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 5082.000	-48.17	-56.94	-25.00	-23.17	8.77	Peak	Horizontal
2	7605.000	-49.96	-61.36	-25.00	-24.96	11.40	Peak	Horizontal





Test Report No.: RF200106W008-7

MODE	TX channel 21100	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC5V/9V/10V/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 5082.000	-48.14	-58.01	-25.00	-23.14	9.87	Peak	Vertical
2	7605.000	-49.57	-62.35	-25.00	-24.57	12.78	Peak	Vertical

