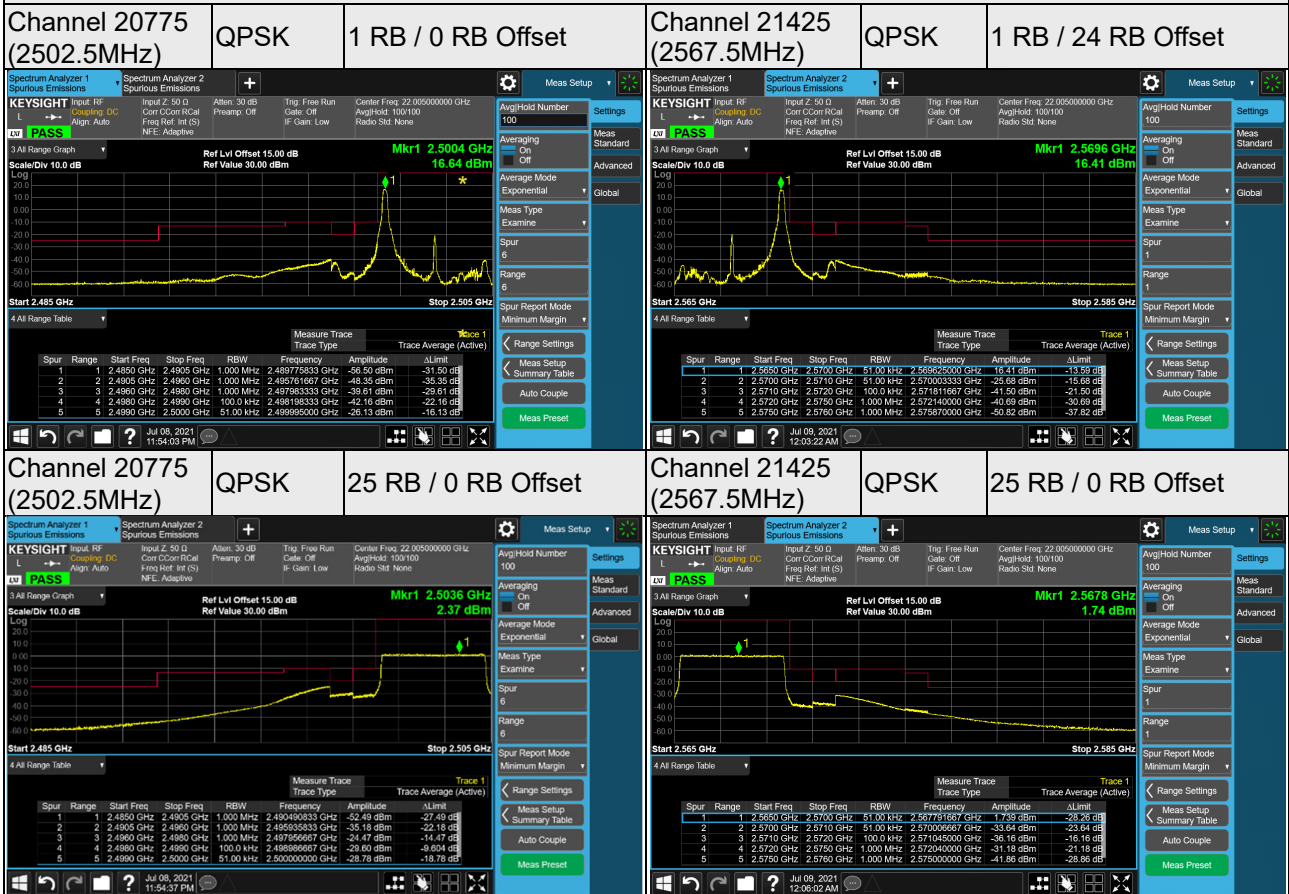
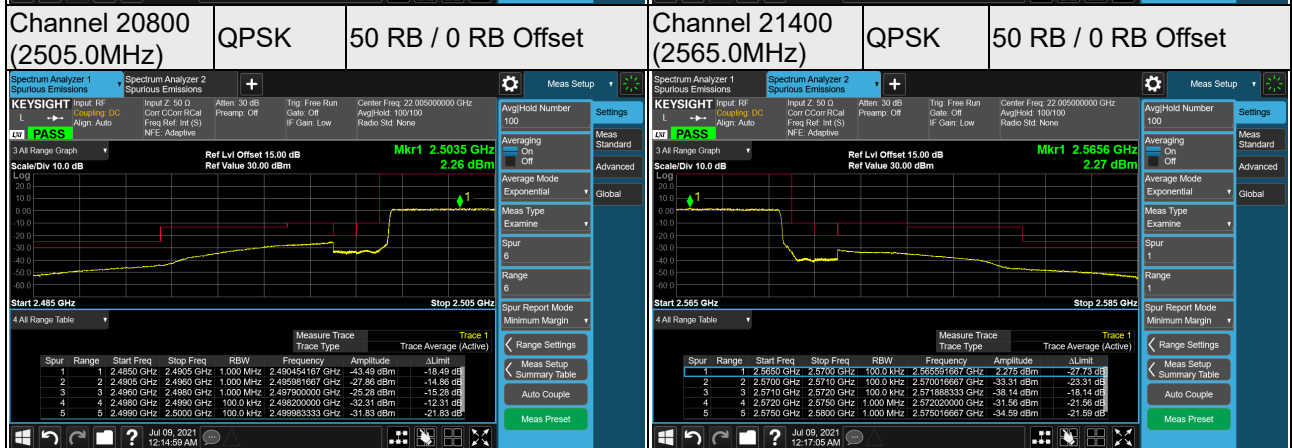
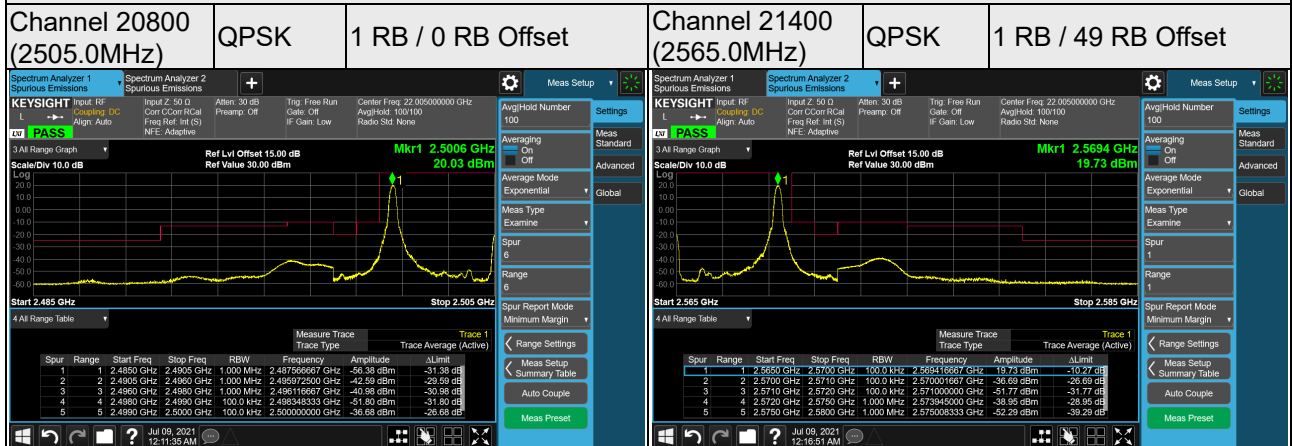


Out-of-Band Emission

LTE Band 7, Channel Bandwidth 5MHz



LTE Band 7, Channel Bandwidth 10MHz

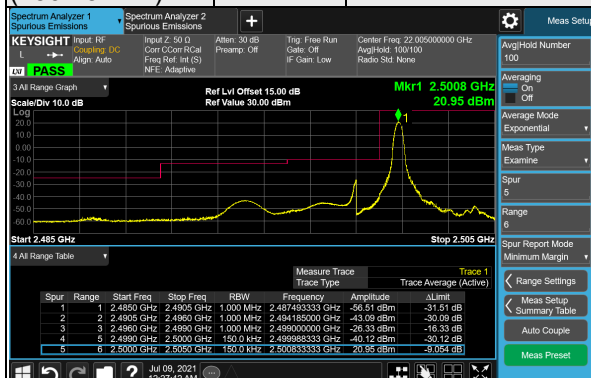


LTE Band 7, Channel Bandwidth 15MHz

Channel 20825
(2507.5MHz)

QPSK

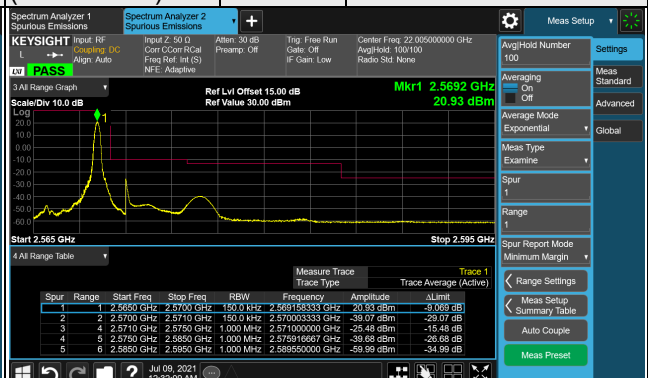
1 RB / 0 RB Offset



Channel 21375
(2562.5MHz)

QPSK

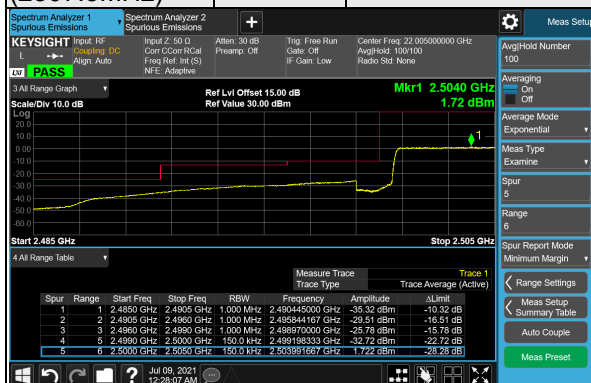
1 RB / 74 RB Offset



Channel 20825
(2507.5MHz)

QPSK

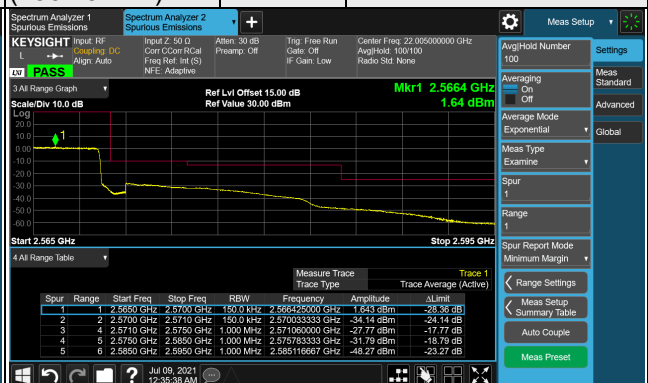
75 RB / 0 RB Offset



Channel 21375
(2562.5MHz)

QPSK

75 RB / 0 RB Offset

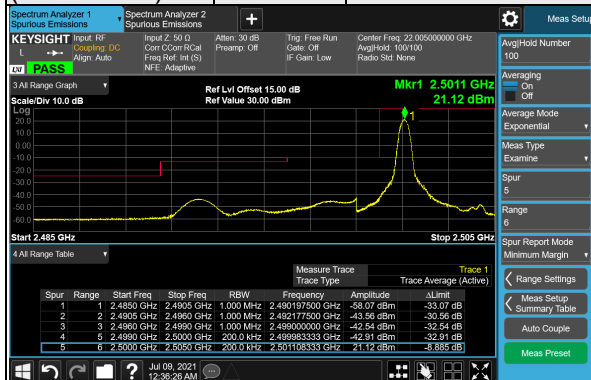


LTE Band 7, Channel Bandwidth 20MHz

Channel 20850
(2510.0MHz)

QPSK

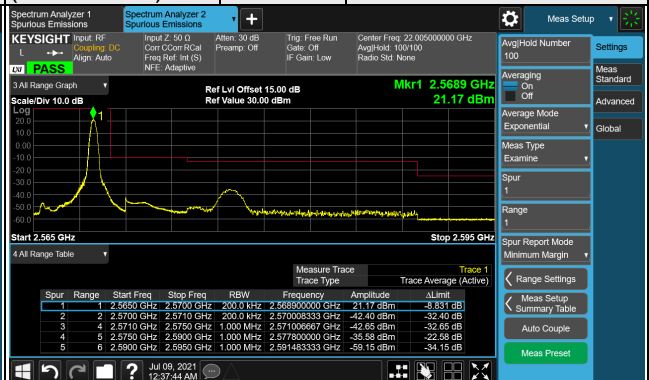
1 RB / 0 RB Offset



Channel 21350
(2560.0MHz)

QPSK

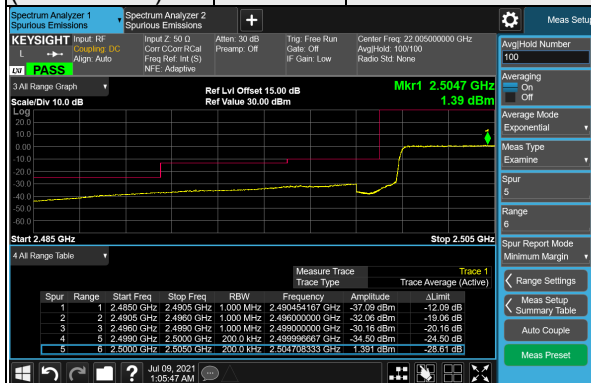
1 RB / 99 RB Offset



Channel 20850
(2510.0MHz)

QPSK

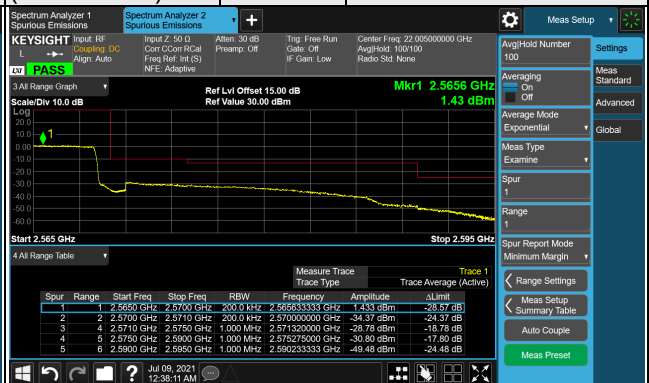
100 RB / 0 RB Offset



Channel 21350
(2560.0MHz)

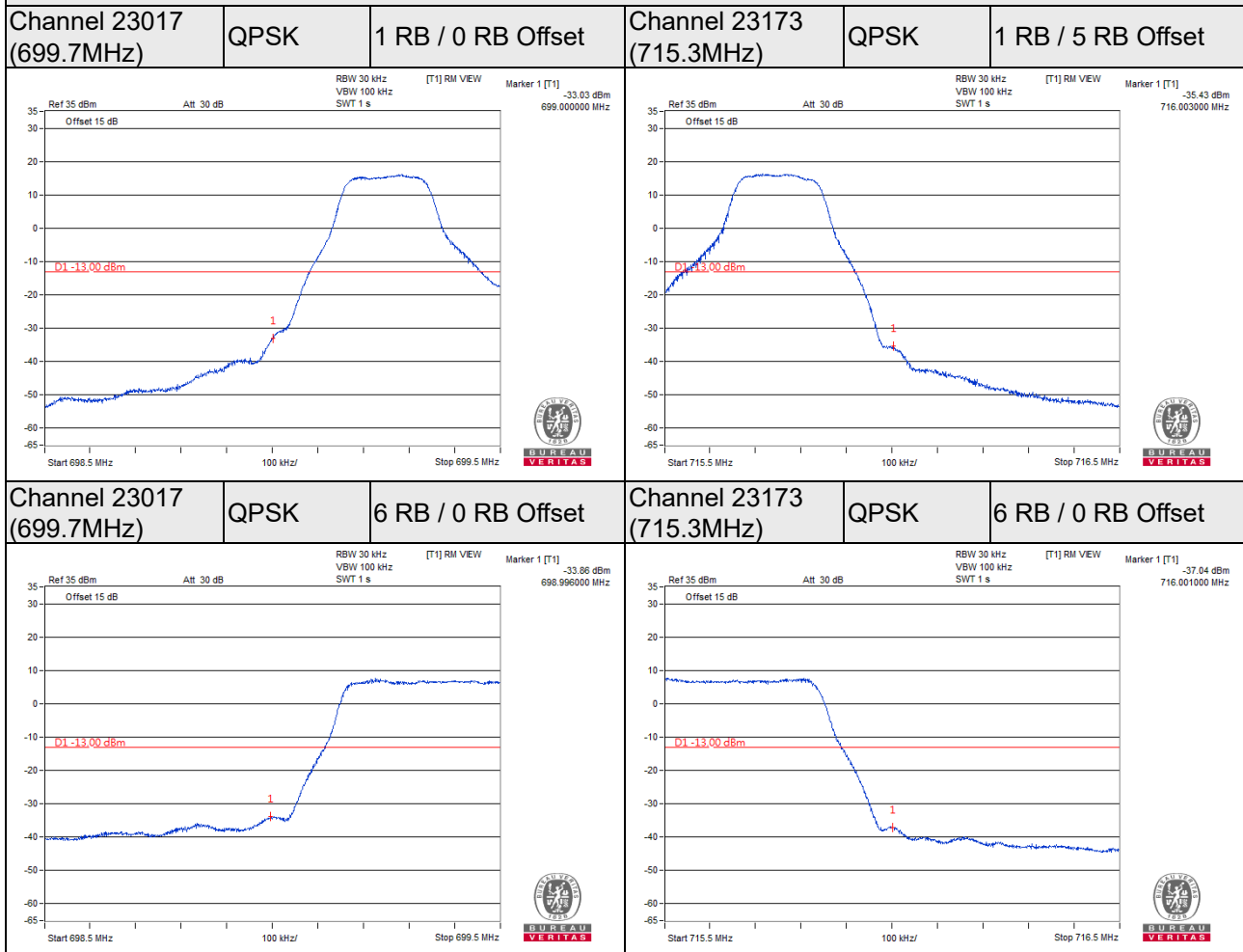
QPSK

100 RB / 0 RB Offset



Band Edge

LTE Band 12, Channel Bandwidth 1.4MHz



LTE Band 12, Channel Bandwidth 3MHz

Channel 23025
(700.5MHz)

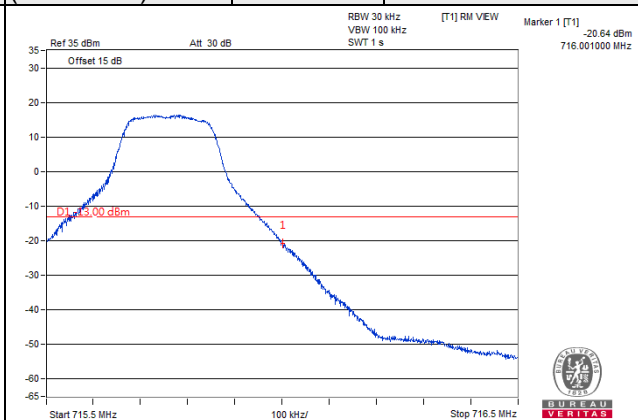
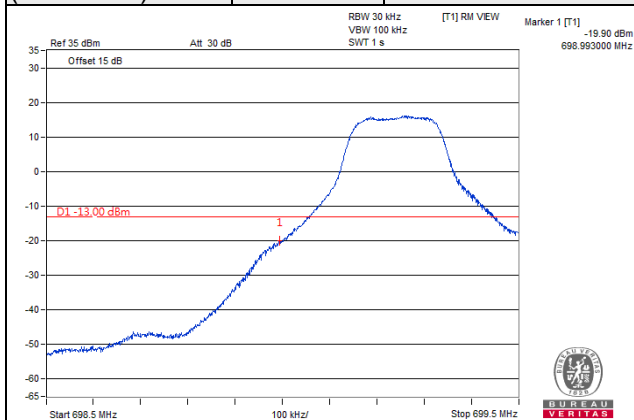
QPSK

1 RB / 0 RB Offset

Channel 23165
(714.5MHz)

QPSK

1 RB / 14RB Offset



Channel 23025
(700.5MHz)

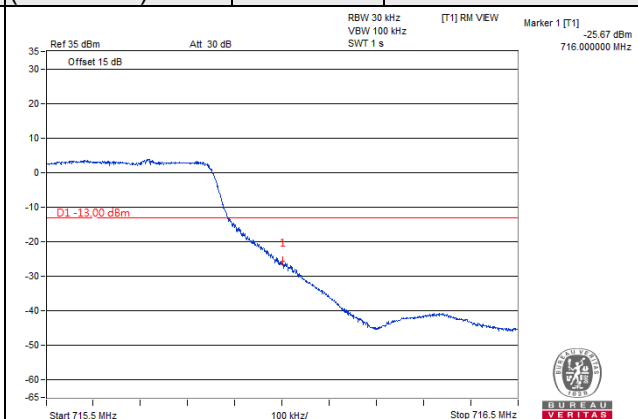
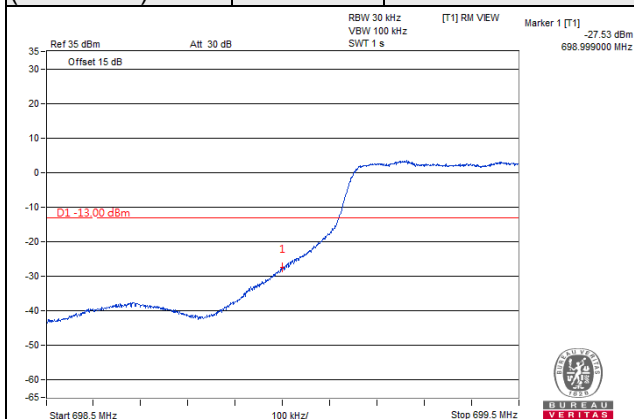
QPSK

15 RB / 0 RB Offset

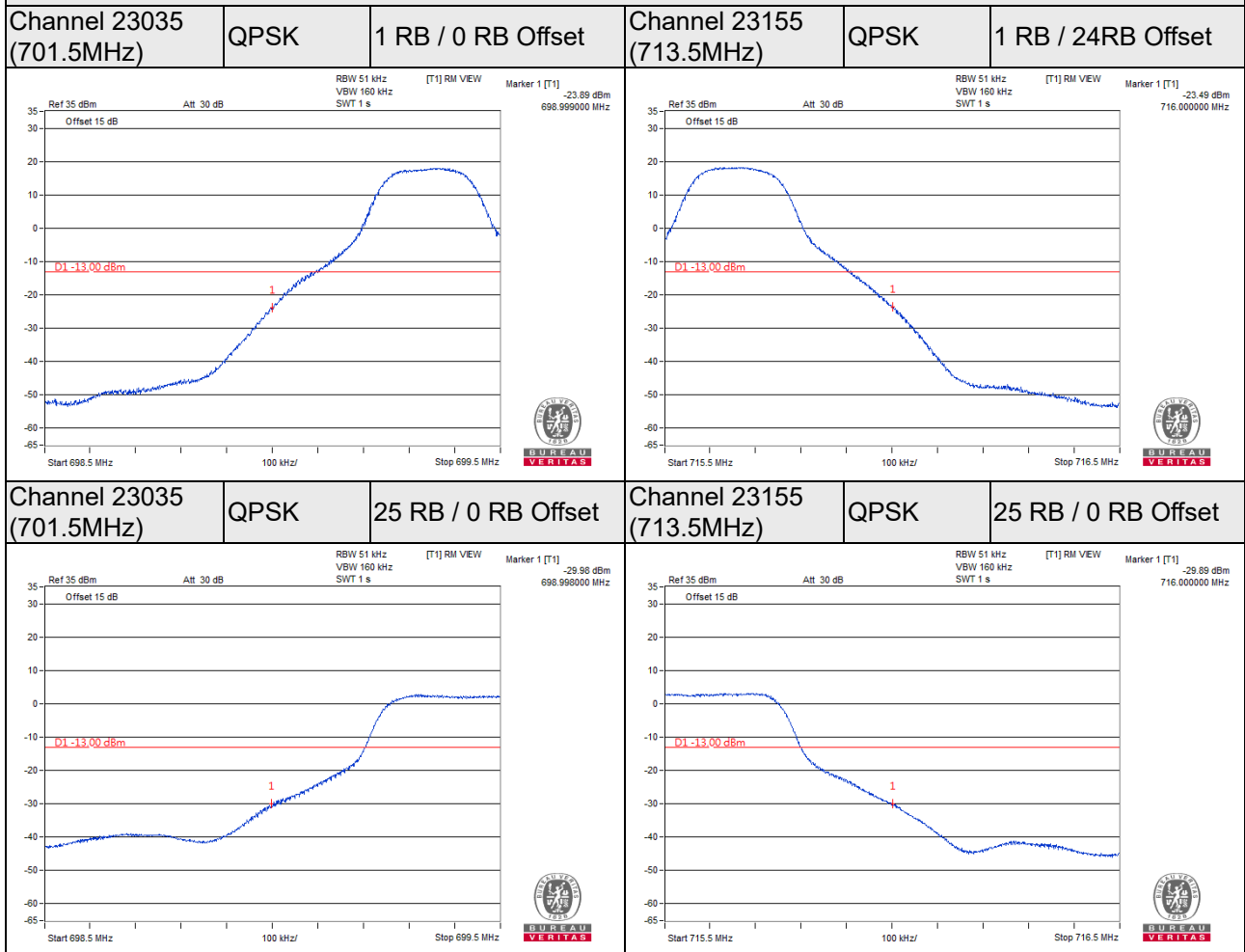
Channel 23165
(714.5MHz)

QPSK

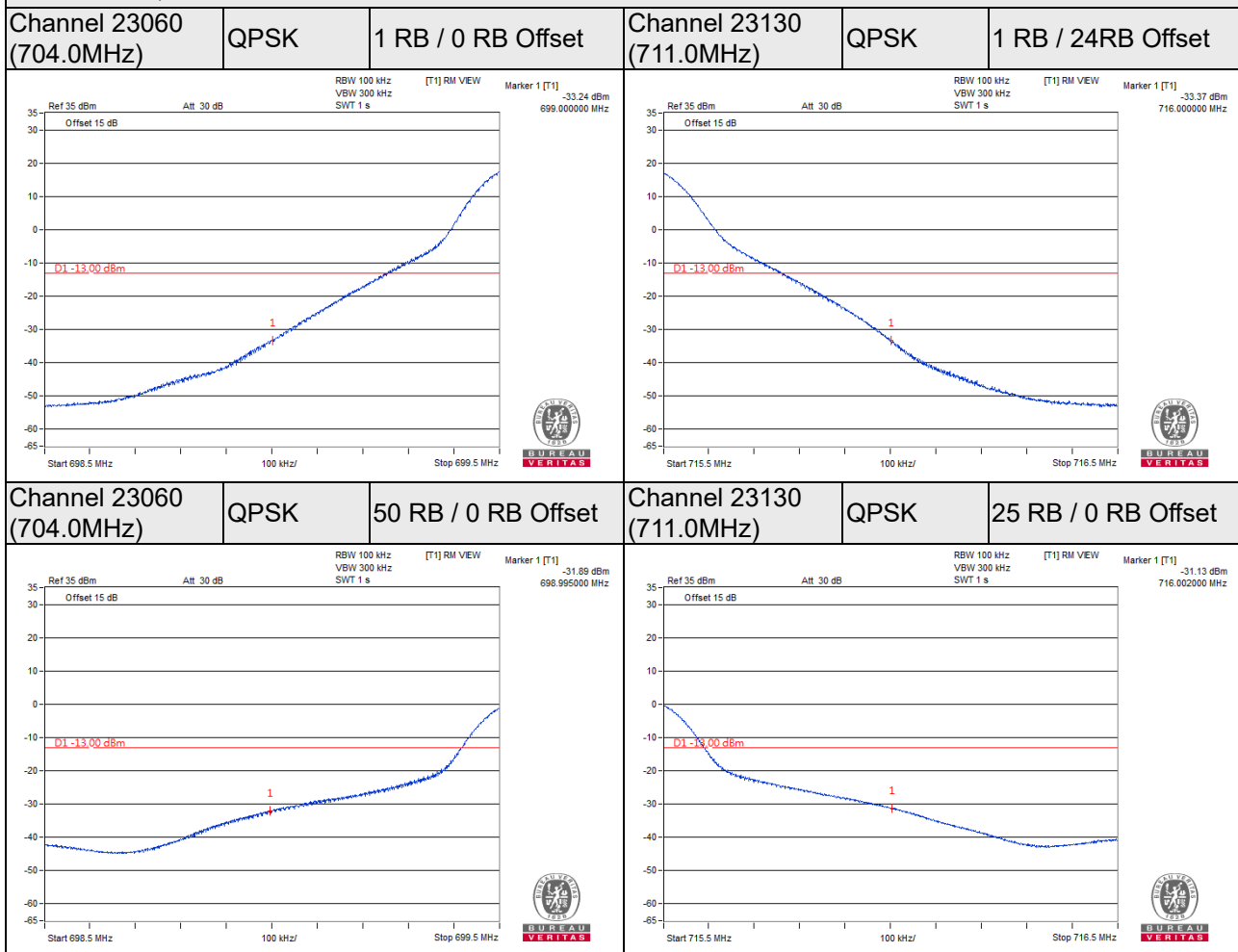
15 RB / 0 RB Offset



LTE Band 12, Channel Bandwidth 5MHz

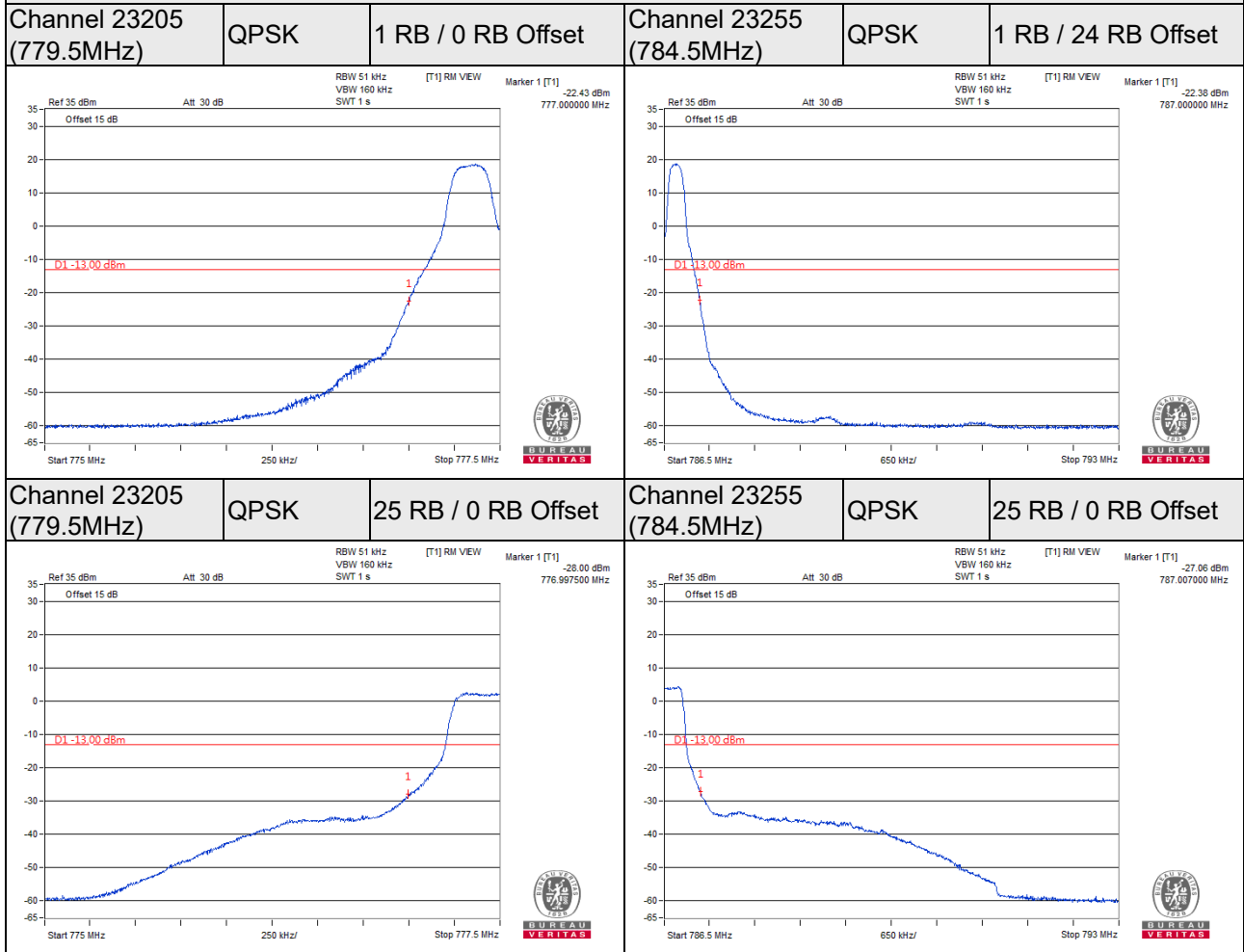


LTE Band 12, Channel Bandwidth 10MHz



Band Edge

LTE Band 13, Channel Bandwidth 5MHz



LTE Band 13, Channel Bandwidth 10MHz

Channel 23230
(782.0MHz)

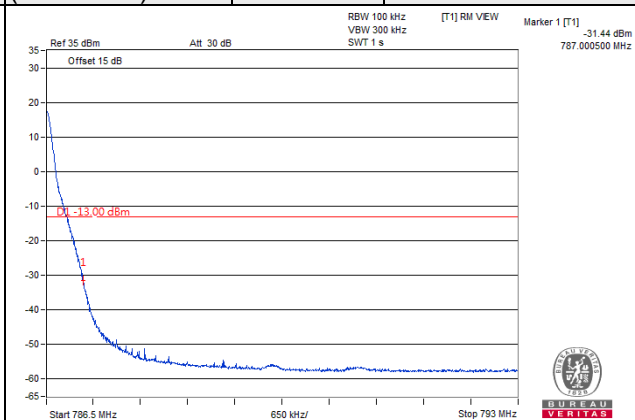
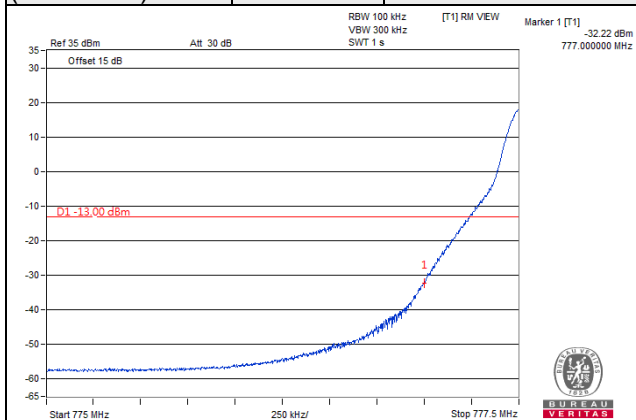
QPSK

1 RB / 0 RB Offset

Channel 23230
(782.0MHz)

QPSK

1 RB / 49 RB Offset



Channel 23230
(782.0MHz)

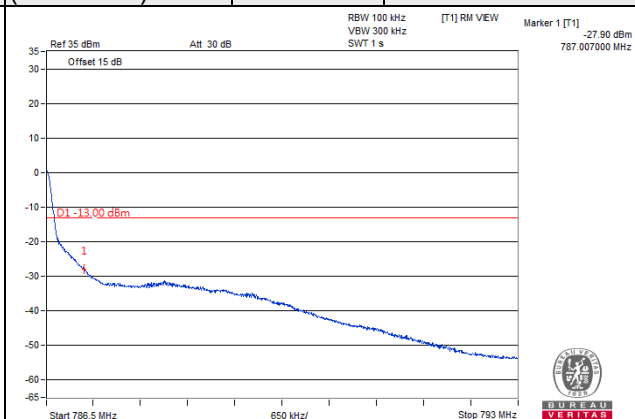
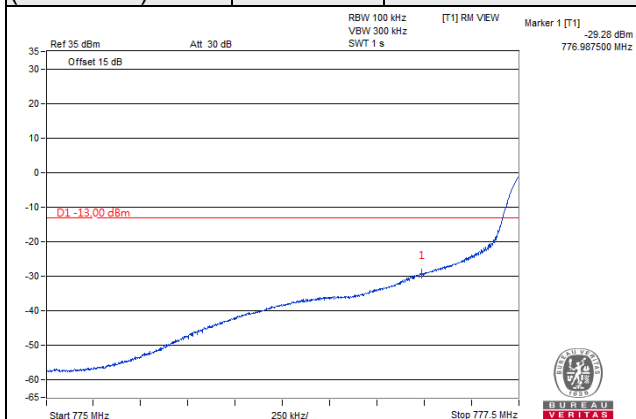
QPSK

50 RB / 0 RB Offset

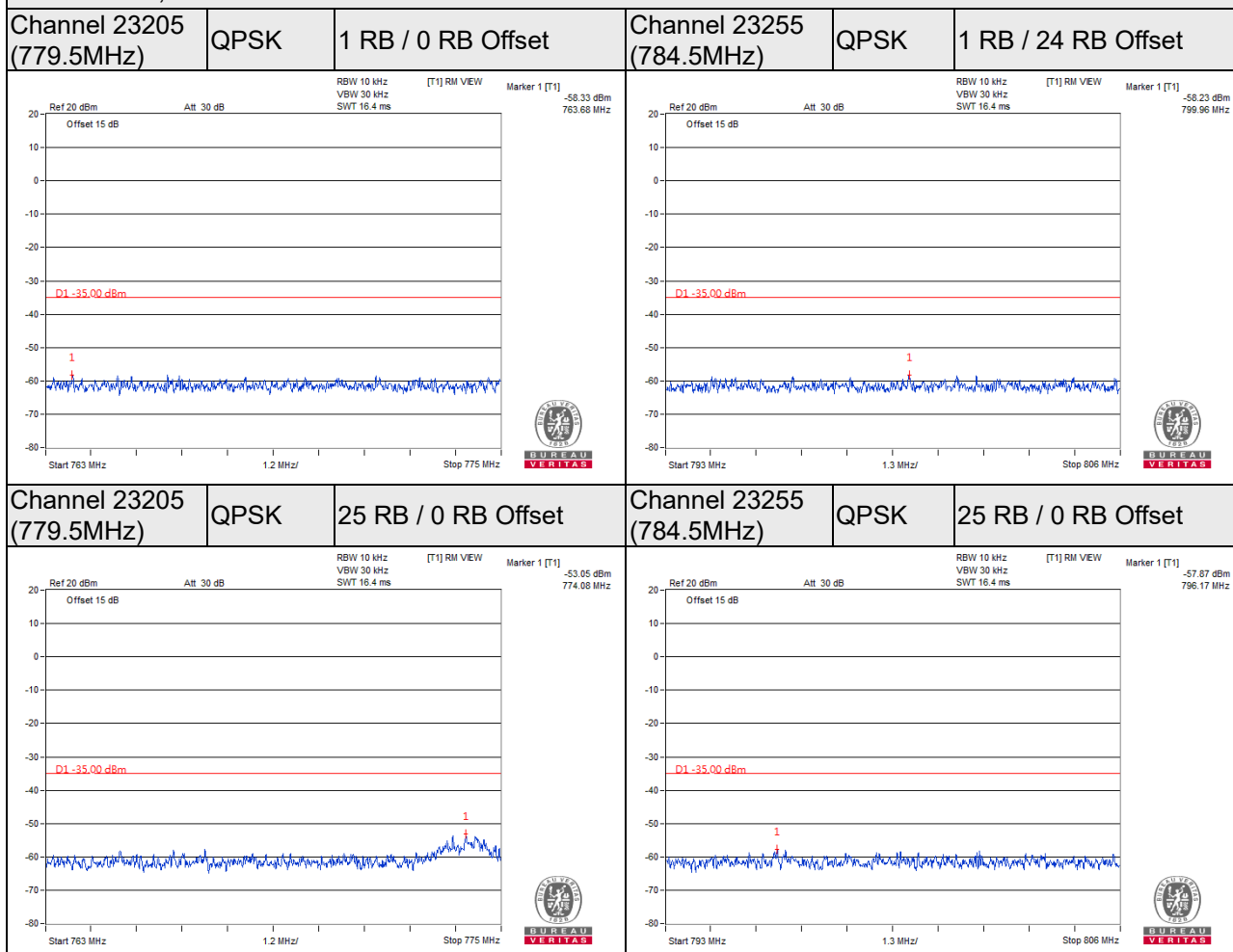
Channel 23230
(782.0MHz)

QPSK

50 RB / 0 RB Offset

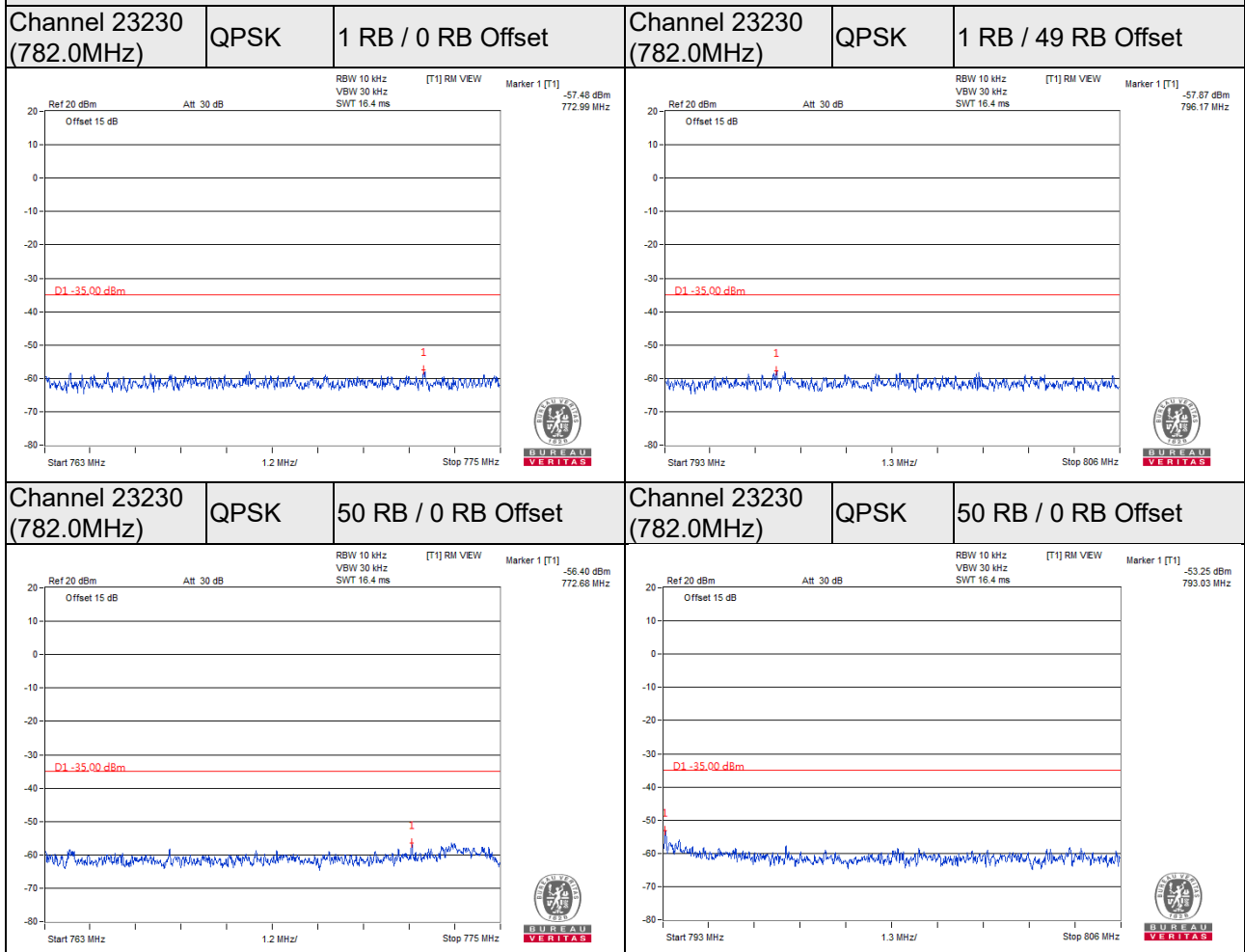


LTE Band 13, Channel Bandwidth 5MHz



For the 763-775MHz and 793-805MHz band, the FCC limit is $65+10\log(P[\text{watt}])$ in a 6.25 kHz bandwidth. Since it was not possible to set the resolution bandwidth to 6.25 kHz with the available equipment, a bandwidth of 10 kHz was used instead to show compliance, and the correction factor is compensated at the spectrum. By using a 10 kHz bandwidth on the spectrum analyzer.

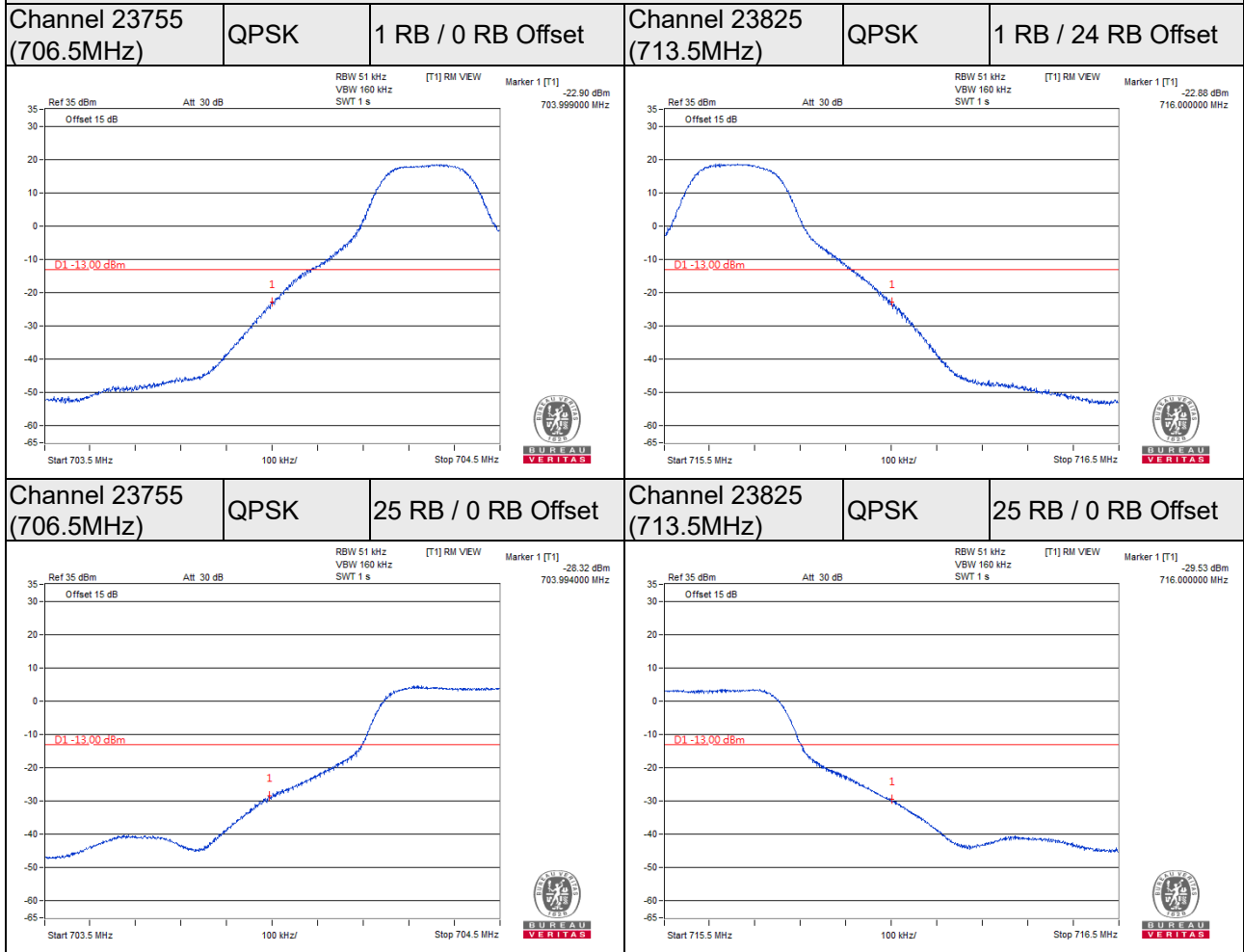
LTE Band 13, Channel Bandwidth 10MHz



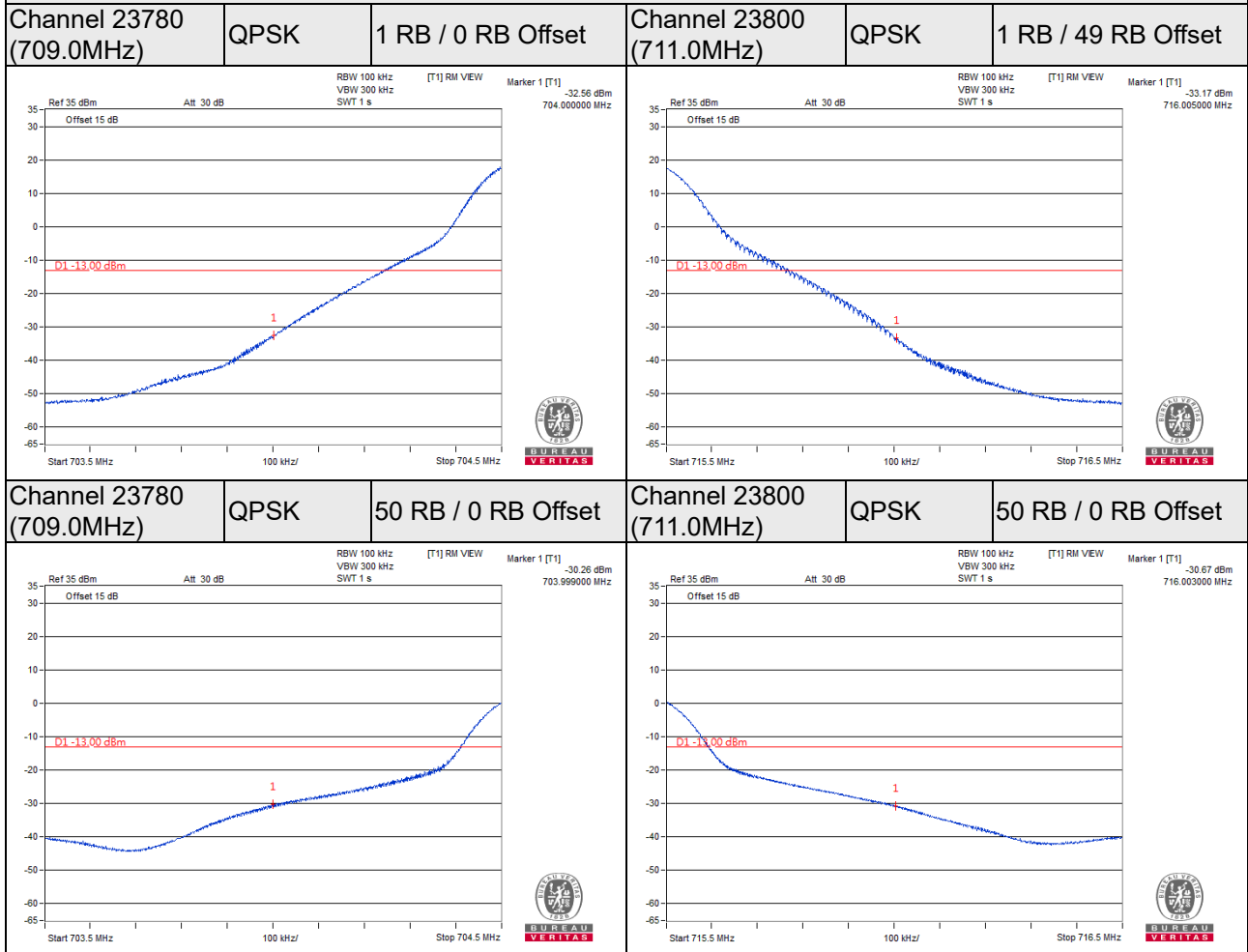
For the 763-775MHz and 793-805MHz band, the FCC limit is $65+10\log(P[\text{watt}])$ in a 6.25 kHz bandwidth. Since it was not possible to set the resolution bandwidth to 6.25 kHz with the available equipment, a bandwidth of 10 kHz was used instead to show compliance, and the correction factor is compensated at the spectrum. By using a 10 kHz bandwidth on the spectrum analyzer.

Band Edge

LTE Band 17, Channel Bandwidth 5MHz



LTE Band 17, Channel Bandwidth 10MHz

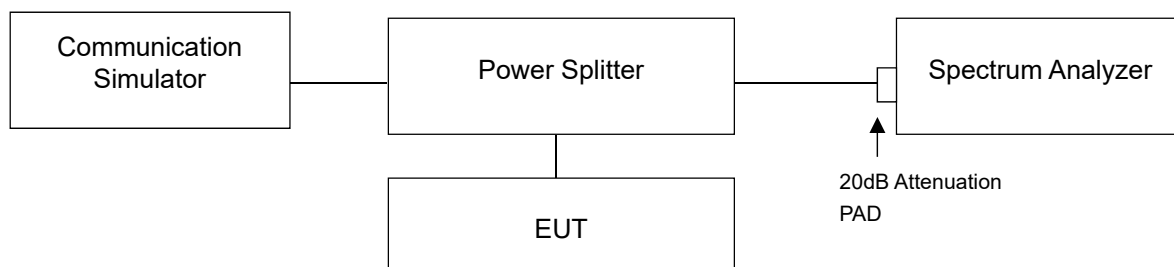


4.6 Peak to Average Ratio

4.6.1 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

4.6.2 Test Setup



4.6.3 Test Procedures

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

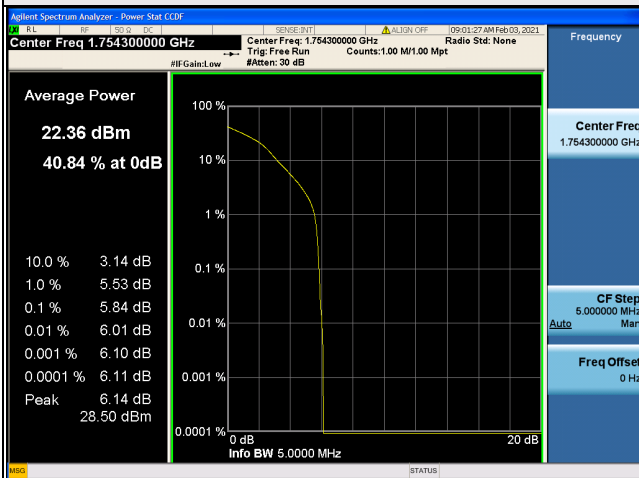
4.6.4 Test Results

LTE Band 4, Channel Bandwidth 1.4MHz			
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		QPSK	16QAM
19957	1710.7	4.01	5.35
20175	1732.5	4.06	5.67
20393	1754.3	4.15	5.84
LTE Band 4, Channel Bandwidth 3MHz			
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		QPSK	16QAM
19965	1711.5	3.81	5.26
20175	1732.5	3.88	5.54
20385	1753.5	3.94	5.57
LTE Band 4, Channel Bandwidth 5MHz			
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		QPSK	16QAM
19975	1712.5	3.81	5.29
20175	1732.5	3.83	5.55
20375	1752.5	3.74	5.44
LTE Band 4, Channel Bandwidth 10MHz			
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		QPSK	16QAM
20000	1715.0	3.73	5.18
20175	1732.5	3.82	5.68
20350	1750.0	3.82	5.39

LTE Band 4, Channel Bandwidth 15MHz			
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		QPSK	16QAM
20025	1717.5	3.75	5.16
20175	1732.5	3.94	5.68
20325	1747.5	3.79	5.37
LTE Band 4, Channel Bandwidth 20MHz			
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		QPSK	16QAM
20050	1720.0	3.75	5.18
20175	1732.5	3.94	5.63
20300	1745.0	3.85	5.45

Spectrum Plot of Worst Value

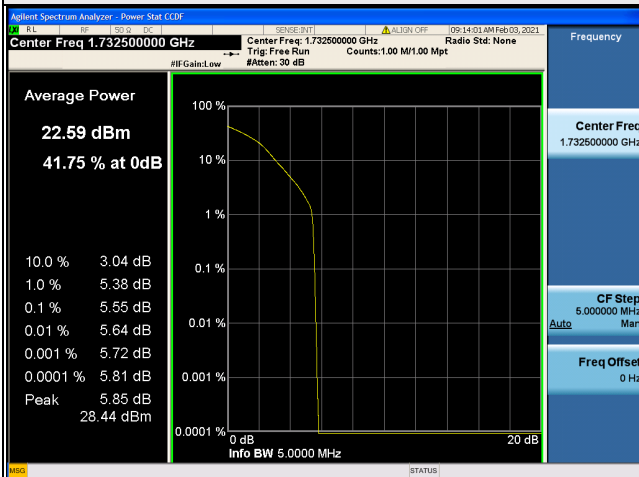
1.4MHz / 16QAM



3MHz / 16QAM



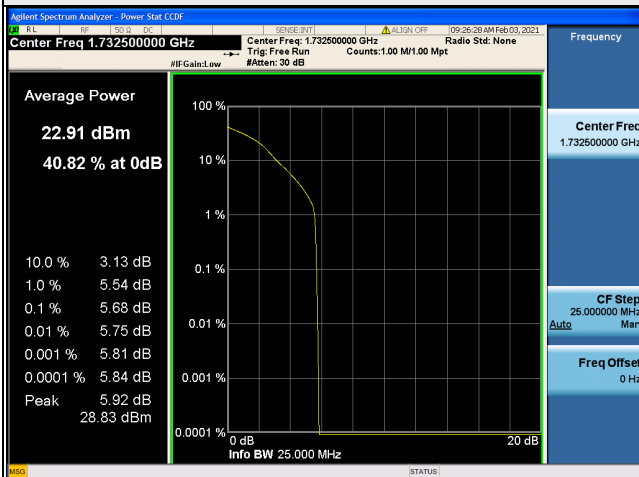
5MHz / 16QAM



10MHz / 16QAM



15MHz / 16QAM



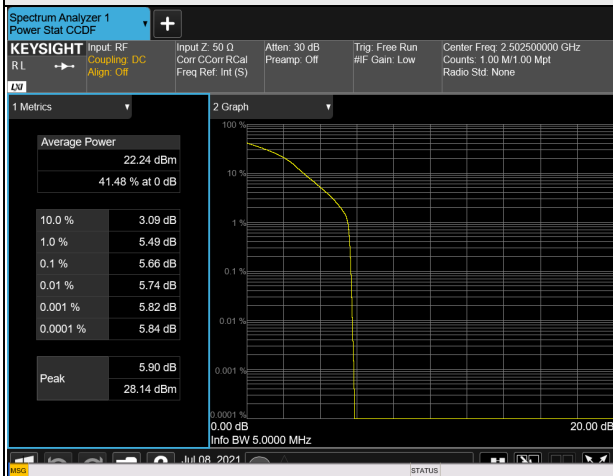
20MHz / 16QAM



LTE Band 7, Channel Bandwidth 5MHz			
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		QPSK	16QAM
20775	2502.5	3.90	5.66
21100	2535.0	3.88	5.65
21425	2567.5	3.68	5.43
LTE Band 7, Channel Bandwidth 10MHz			
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		QPSK	16QAM
20800	2505.0	3.80	5.63
21100	2535.0	3.79	5.64
21400	2565.0	3.76	5.46
LTE Band 7, Channel Bandwidth 15MHz			
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		QPSK	16QAM
20825	2507.5	3.89	5.64
21100	2535.0	3.78	5.54
21375	2562.5	3.74	5.52
LTE Band 7, Channel Bandwidth 20MHz			
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		QPSK	16QAM
20850	2510.0	3.89	5.68
21100	2535.0	3.77	5.61
21350	2560.0	3.71	5.57

Spectrum Plot of Worst Value

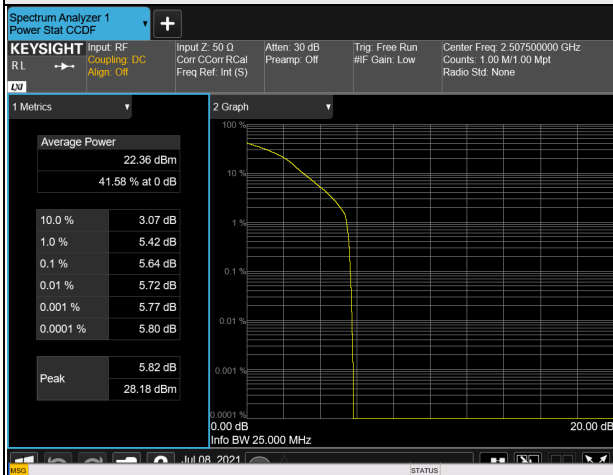
5MHz / 16QAM



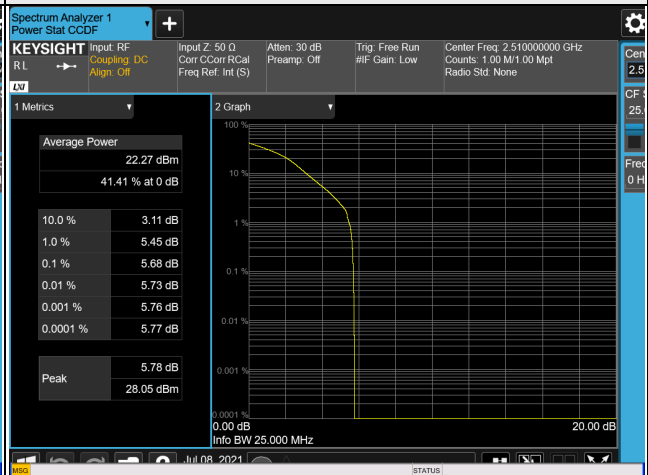
10MHz / 16QAM



15MHz / 16QAM



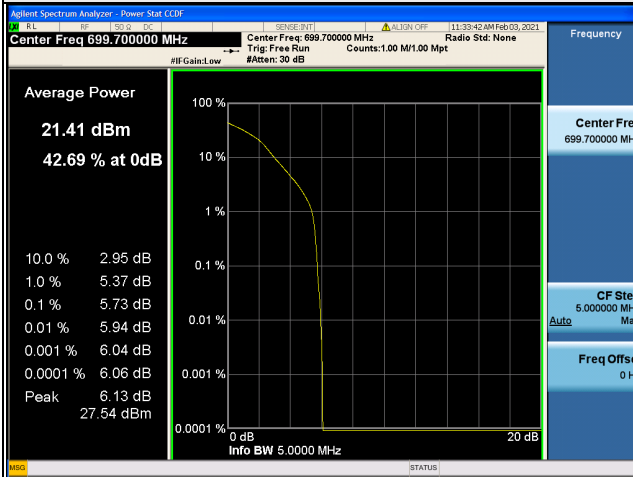
20MHz / 16QAM



LTE Band 12, Channel Bandwidth 1.4MHz			
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		QPSK	16QAM
23017	699.7	3.92	5.73
23095	707.5	3.85	5.65
23173	715.3	3.85	5.58
LTE Band 12, Channel Bandwidth 3MHz			
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		QPSK	16QAM
23025	700.5	3.67	5.54
23095	707.5	3.62	5.42
23165	714.5	3.66	5.40
LTE Band 12, Channel Bandwidth 5MHz			
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		QPSK	16QAM
23035	701.5	3.67	5.46
23095	707.5	3.64	5.42
23155	713.5	3.66	5.43
LTE Band 12, Channel Bandwidth 10MHz			
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		QPSK	16QAM
23060	704.0	3.61	5.47
23095	707.5	3.56	5.41
23130	711.0	3.54	5.32

Spectrum Plot of Worst Value

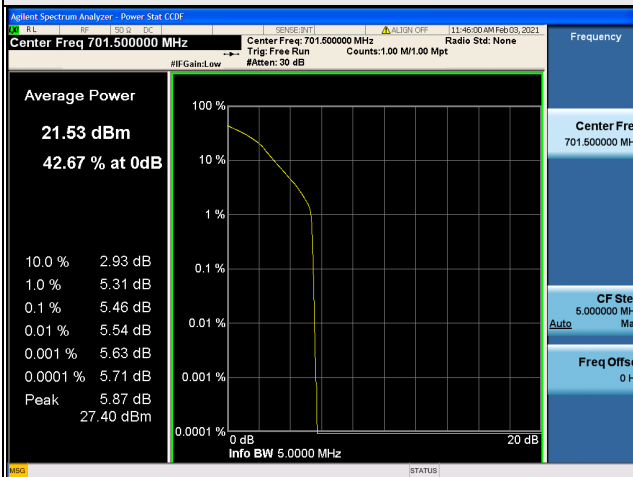
1.4MHz / 16QAM



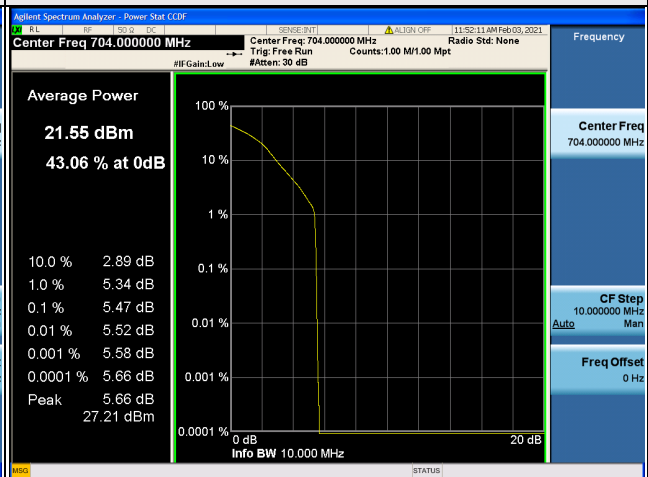
3MHz / 16QAM



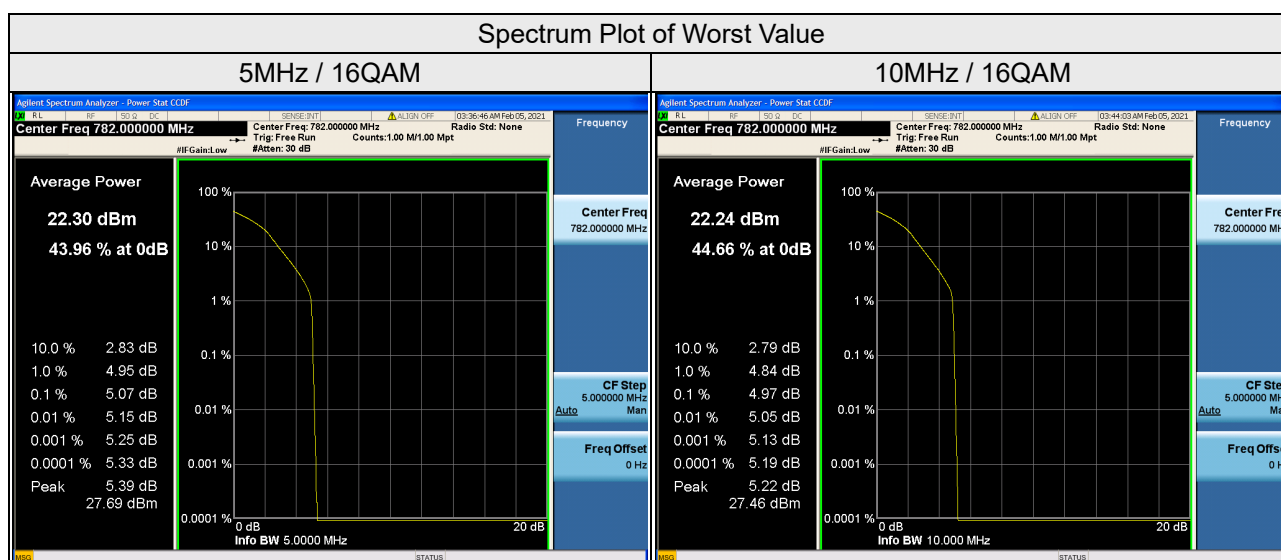
5MHz / 16QAM



10MHz / 16QAM



LTE Band 13, Channel Bandwidth 5MHz			
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		QPSK	16QAM
23205	779.5	3.38	4.94
23230	782.0	3.47	5.07
23255	784.5	3.37	5.03
LTE Band 13, Channel Bandwidth 10MHz			
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		QPSK	16QAM
23230	782.0	3.38	4.97



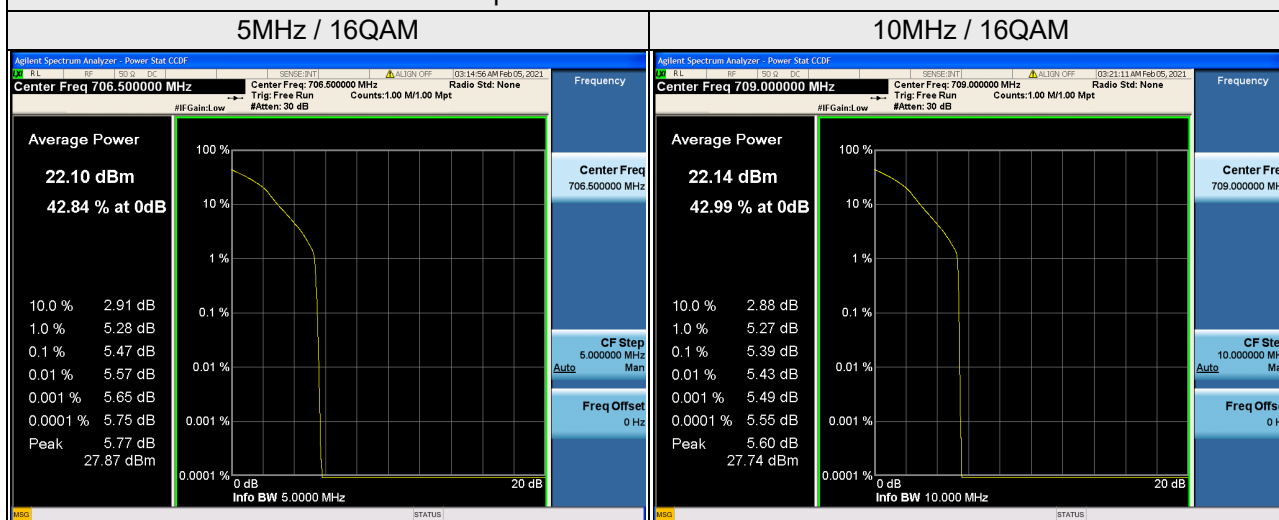
LTE Band 17, Channel Bandwidth 5MHz

Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		QPSK	16QAM
23755	706.5	3.67	5.47
23790	710.0	3.65	5.44
23825	713.5	3.64	5.44

LTE Band 17, Channel Bandwidth 10MHz

Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		QPSK	16QAM
23780	709.0	3.55	5.39
23790	710.0	3.54	5.35
23800	711.0	3.58	5.38

Spectrum Plot of Worst Value



4.7 Conducted Spurious Emissions

4.7.1 Limits of Conducted Spurious Emissions Measurement

For LTE Band 7:

According to FCC 27.53(m)(4), on any frequency outside a licensee's frequency block, The power of any emission shall be attenuated below the transmitter power (P) by at least $55 + 10 \log (P)$ dB. The emission limit equal to -25dBm.

For LTE Band 12, 17:

According to FCC 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. The limit of emissions is equal to -13 dBm.

For LTE Band 13:

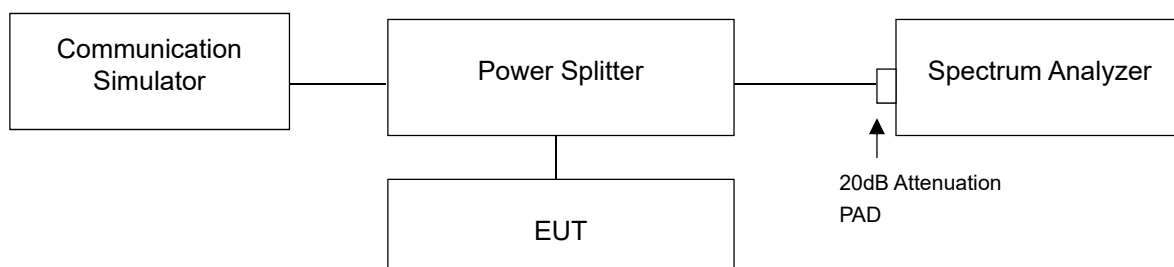
According to FCC 27.53(c)(2), for on any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB. The limit of emissions is equal to -13 dBm.

According to FCC 27.53(f), for operations in the 775-788 MHz, emissions in the band 1559-1610MHz shall be limited to -70 dBW/MHz (EIRP). The limit of emissions is equal to -40 dBm.

For LTE Band 4:

According to FCC 27.53(h), for operations in the 1695-1710MHz, 1710-1755MHz, 1755-1780 MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log (P)$ dB.

4.7.2 Test Setup



4.7.3 Test Procedure

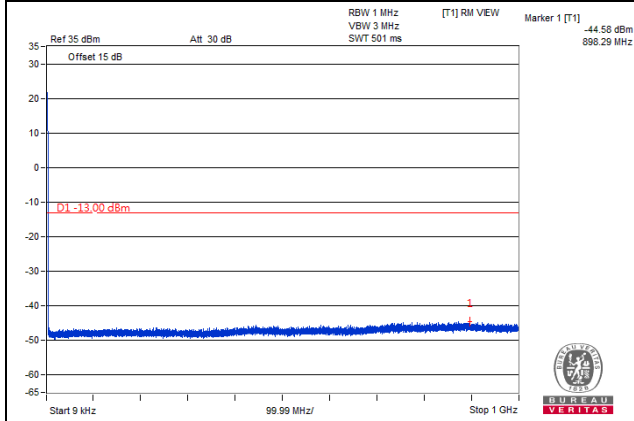
- All measurements were done at 3 channels: low, middle and high operational frequency range.
- Measuring frequency range is from 9 kHz up to the tenth harmonic of the highest fundamental frequency or to 40GHz, whichever is lower. 20dB attenuation pad is connected with spectrum.
- The fundamental frequency above 1GHz, the spectrum set RBW = 1MHz, VBW = 3MHz.
- The fundamental frequency below 1GHz, the spectrum set RBW ≥ 100 kHz, VBW $\geq 3 \times$ RBW.
- Measurement refer to ANSI C63.26 section 5.7.3.

4.7.4 Test Results

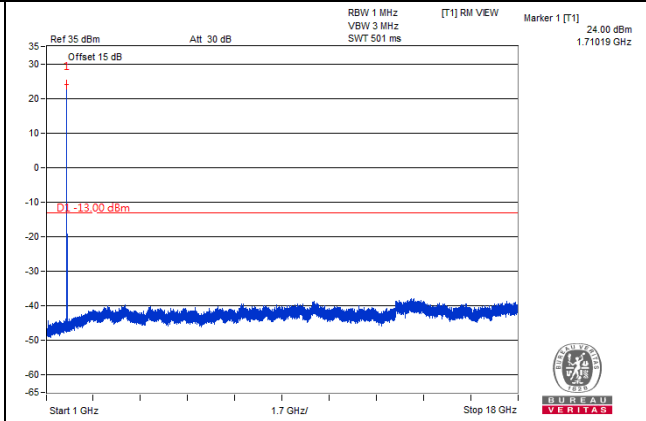
LTE Band 4, Channel Bandwidth 1.4MHz

Channel 19957 (1710.7MHz)

Frequency Range : 9kHz ~ 1GHz

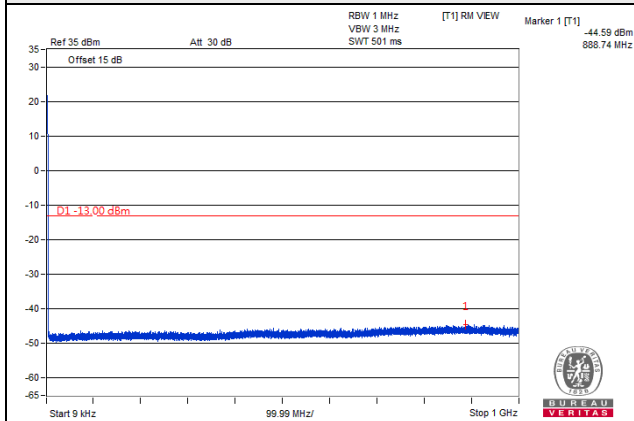


Frequency Range : 1GHz ~ 18GHz

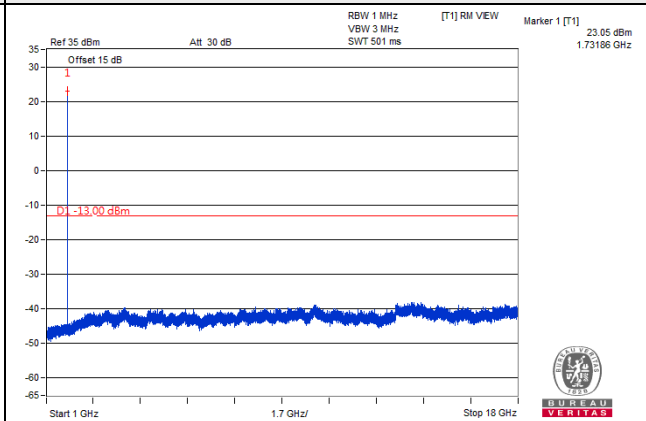


Channel 20175 (1732.5MHz)

Frequency Range : 9kHz ~ 1GHz

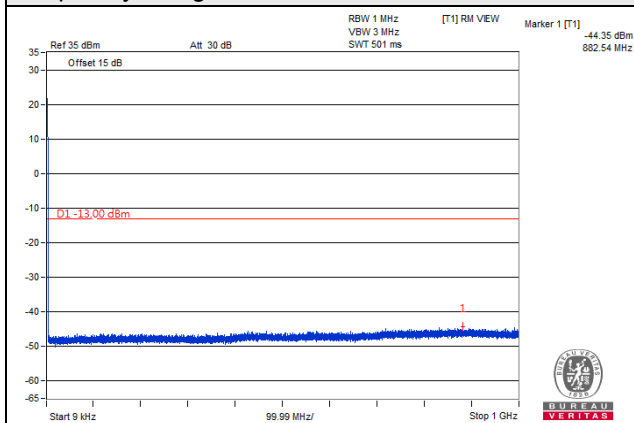


Frequency Range : 1GHz ~ 18GHz

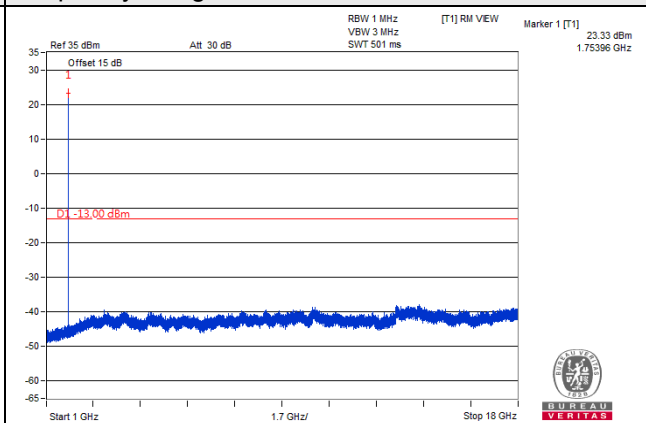


Channel 20393 (1754.3MHz)

Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 18GHz

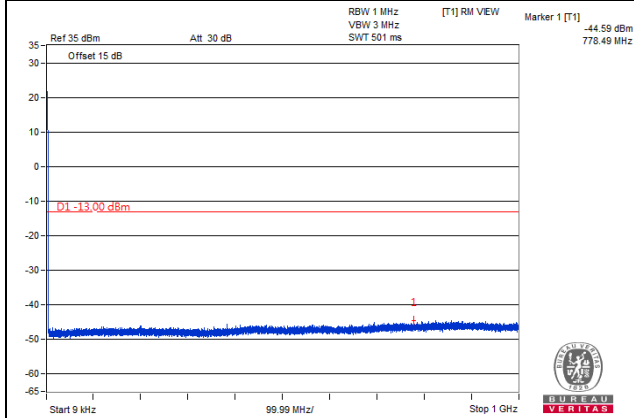


*The 9kHz signal over the limit is from Spectrum.

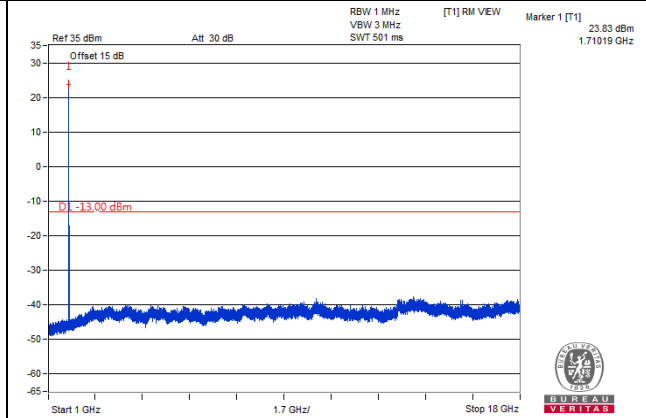
LTE Band 4, Channel Bandwidth 3MHz

Channel 19965 (1711.5MHz)

Frequency Range : 9kHz ~ 1GHz

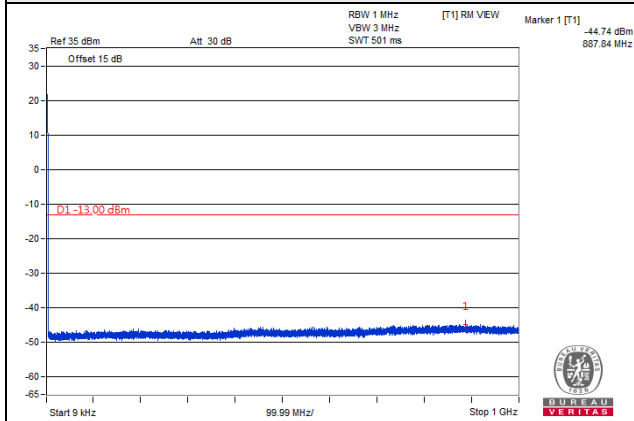


Frequency Range : 1GHz ~ 18GHz

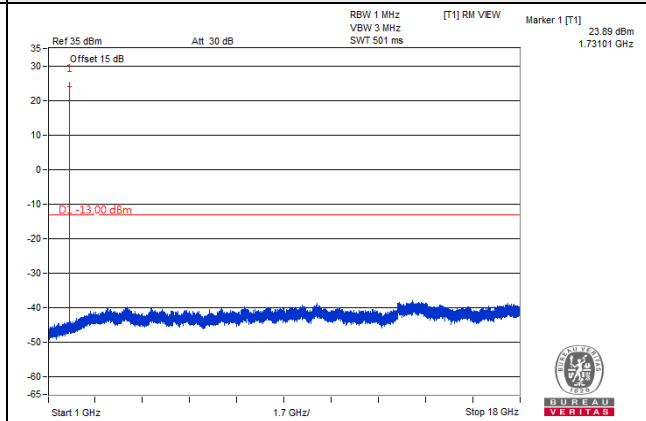


Channel 20175 (1732.5MHz)

Frequency Range : 9kHz ~ 1GHz

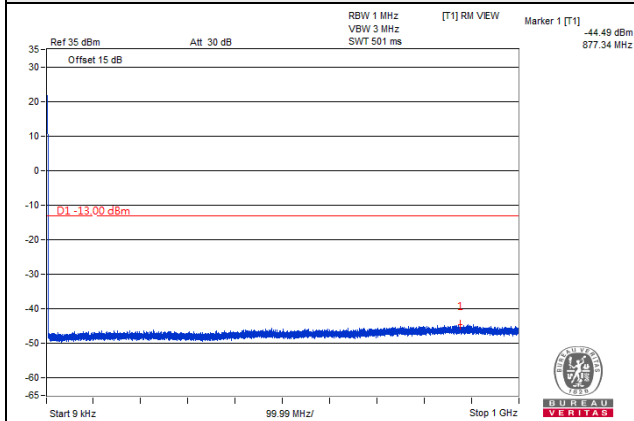


Frequency Range : 1GHz ~ 18GHz

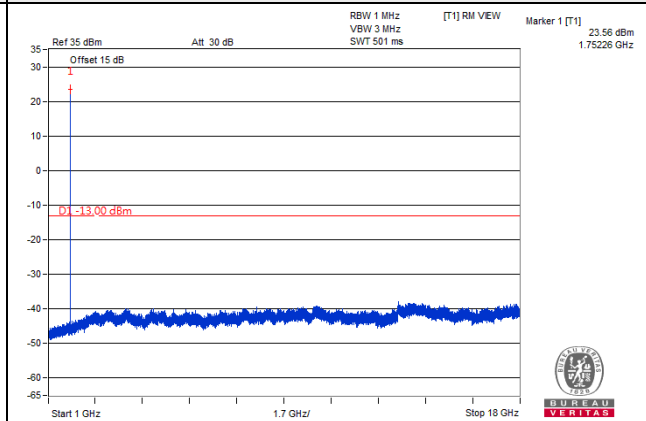


Channel 20385 (1753.5MHz)

Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 18GHz

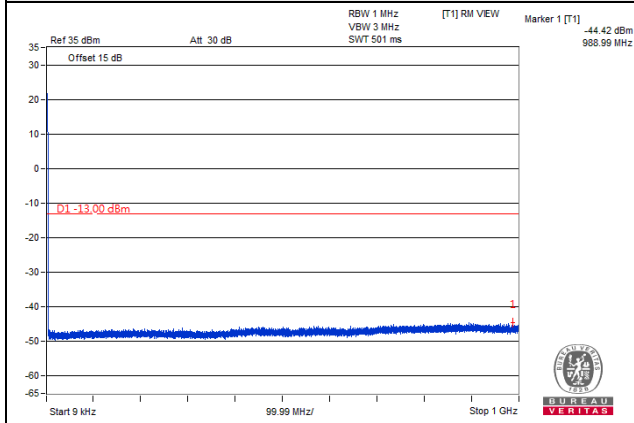


*The 9kHz signal over the limit is from Spectrum.

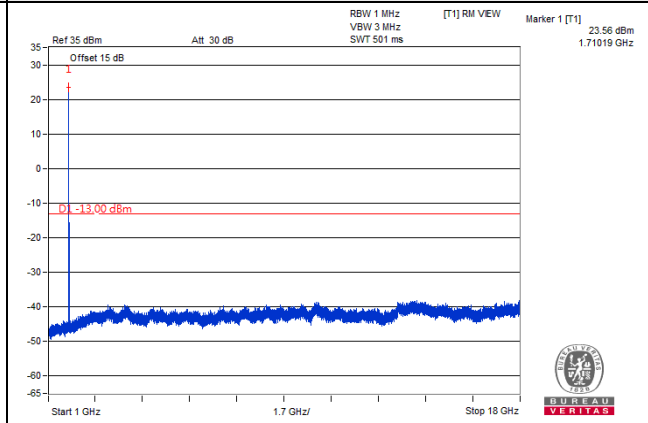
LTE Band 4, Channel Bandwidth 5MHz

Channel 19975 (1712.5MHz)

Frequency Range : 9kHz ~ 1GHz

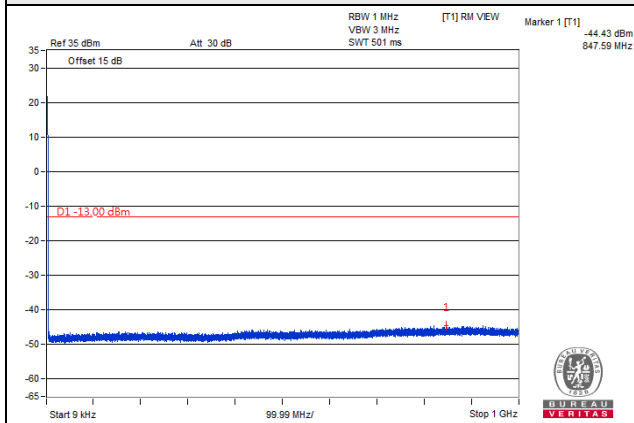


Frequency Range : 1GHz ~ 18GHz

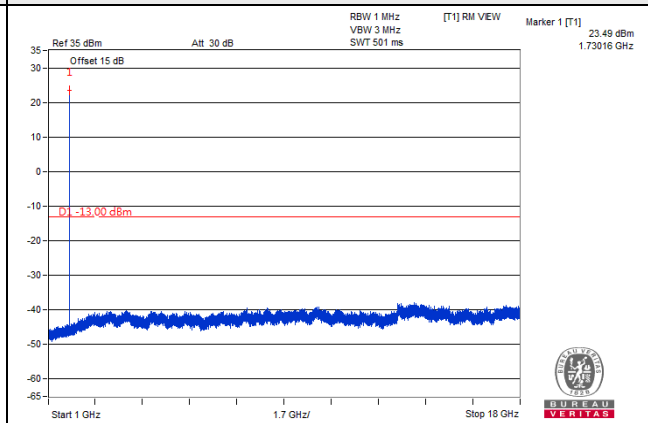


Channel 20175 (1732.5MHz)

Frequency Range : 9kHz ~ 1GHz

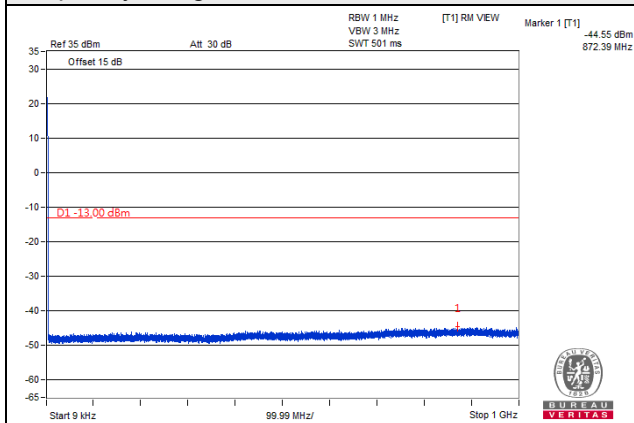


Frequency Range : 1GHz ~ 18GHz

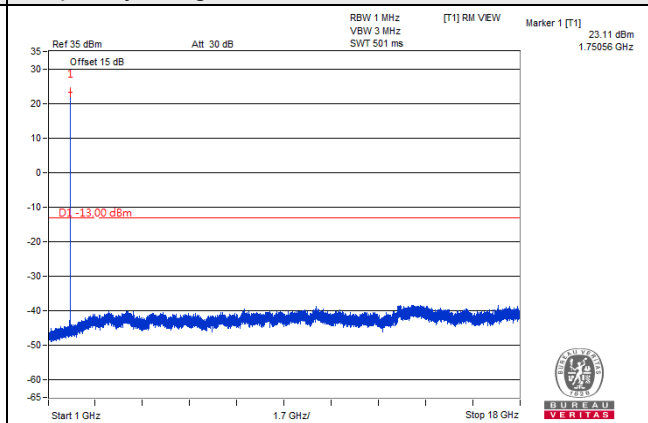


Channel 20375 (1752.5MHz)

Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 18GHz

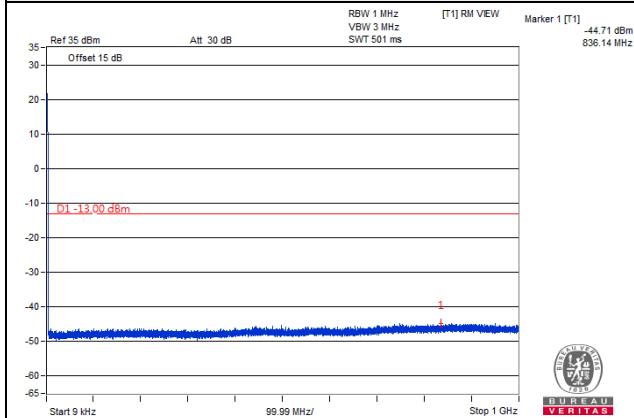


*The 9kHz signal over the limit is from Spectrum.

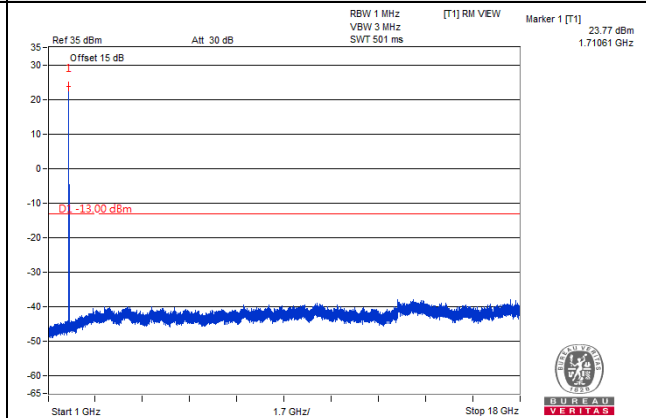
LTE Band 4, Channel Bandwidth 10MHz

Channel 20000 (1715.0MHz)

Frequency Range : 9kHz ~ 1GHz

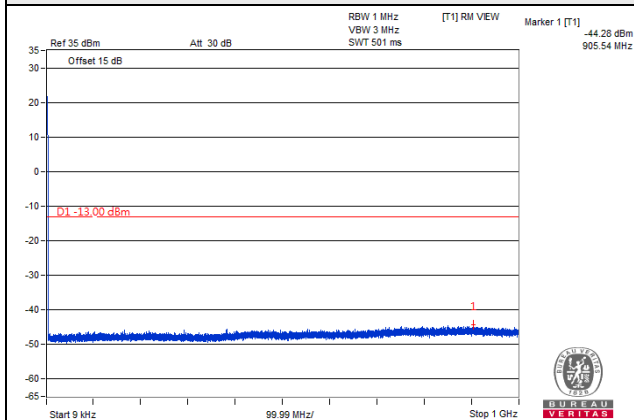


Frequency Range : 1GHz ~ 18GHz

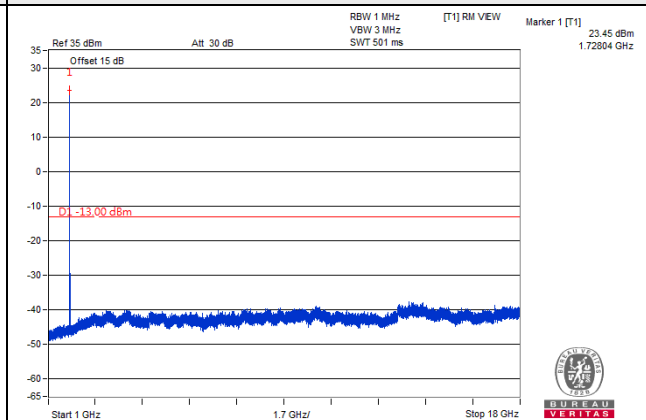


Channel 20175 (1732.5MHz)

Frequency Range : 9kHz ~ 1GHz

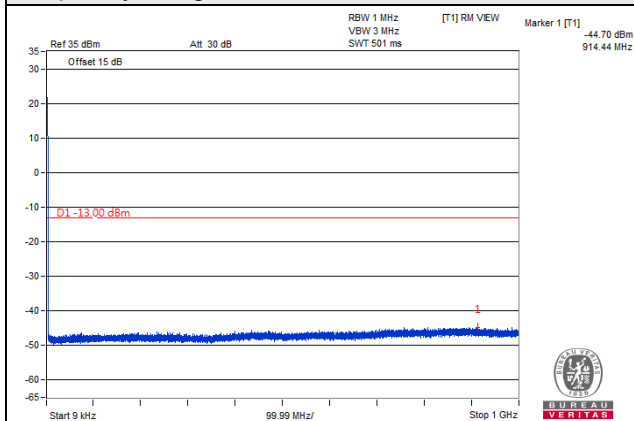


Frequency Range : 1GHz ~ 18GHz

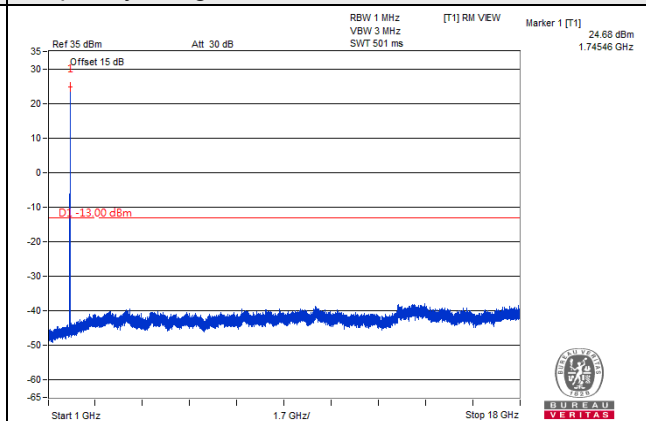


Channel 20350 (1750.0MHz)

Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 18GHz

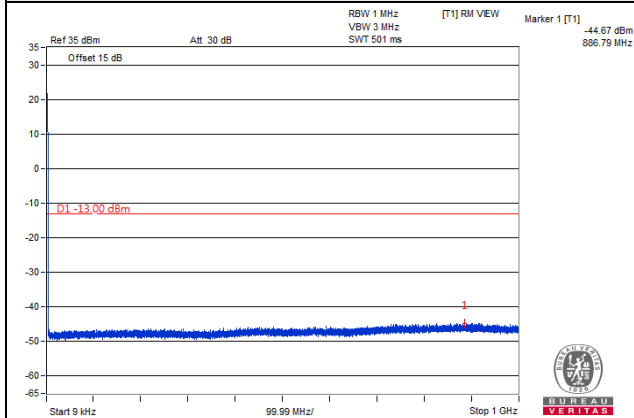


*The 9kHz signal over the limit is from Spectrum.

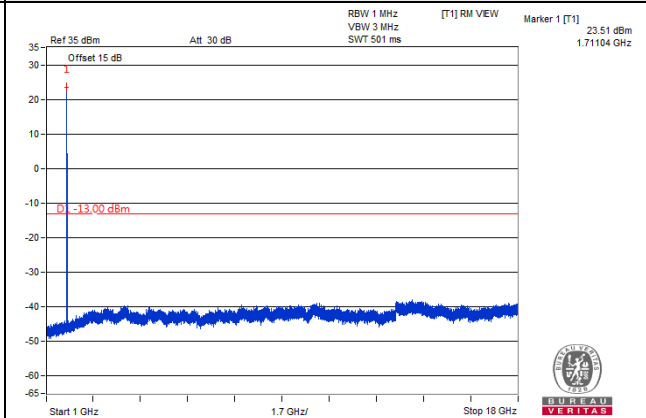
LTE Band 4, Channel Bandwidth 15MHz

Channel 20025 (1717.5MHz)

Frequency Range : 9kHz ~ 1GHz

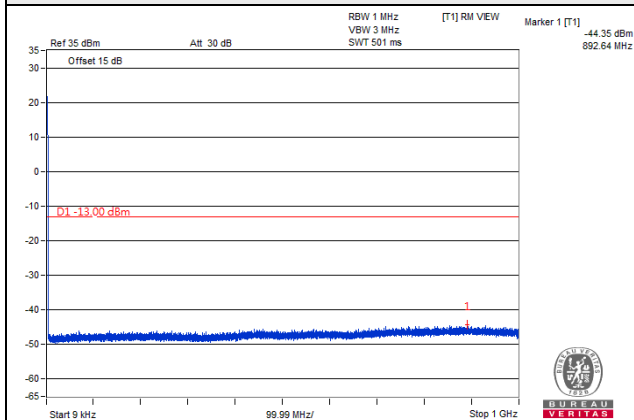


Frequency Range : 1GHz ~ 18GHz

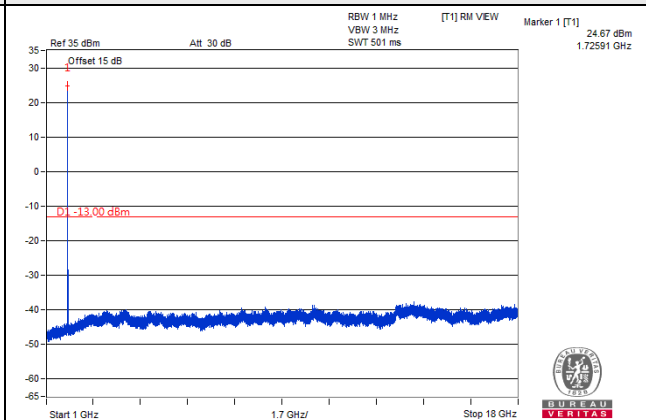


Channel 20175 (1732.5MHz)

Frequency Range : 9kHz ~ 1GHz

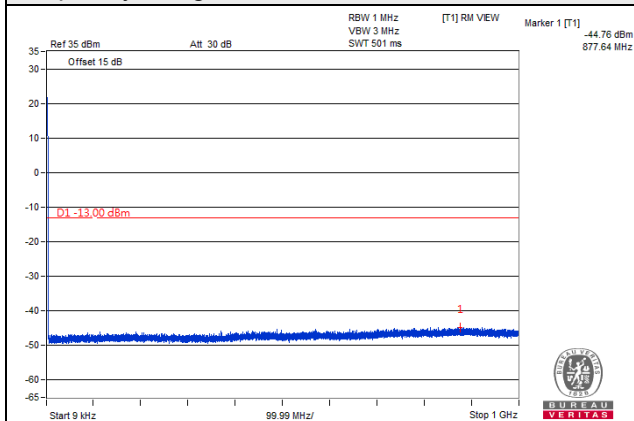


Frequency Range : 1GHz ~ 18GHz

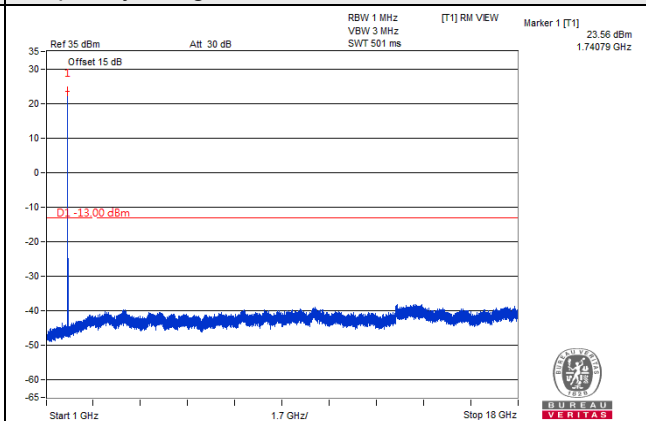


Channel 20325 (1747.5MHz)

Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 18GHz

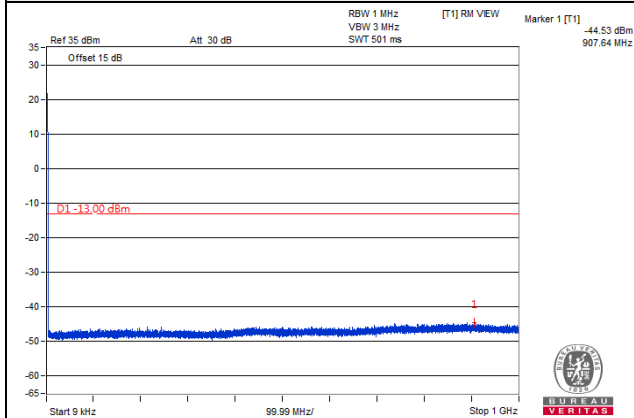


*The 9kHz signal over the limit is from Spectrum.

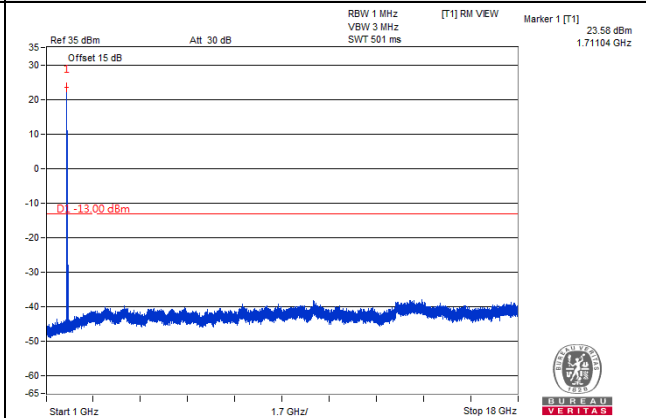
LTE Band 4, Channel Bandwidth 20MHz

Channel 20050 (1720.0MHz)

Frequency Range : 9kHz ~ 1GHz

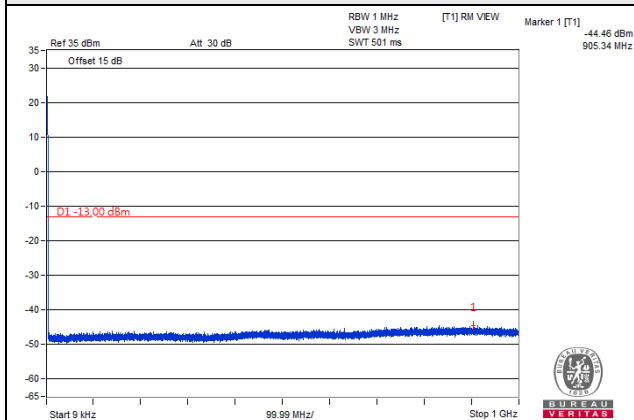


Frequency Range : 1GHz ~ 18GHz

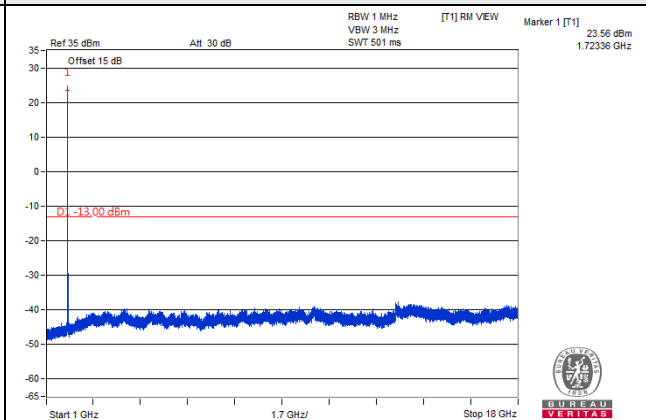


Channel 20175 (1732.5MHz)

Frequency Range : 9kHz ~ 1GHz

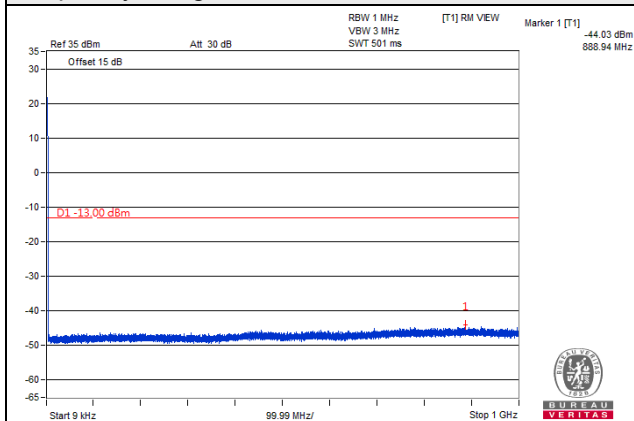


Frequency Range : 1GHz ~ 18GHz

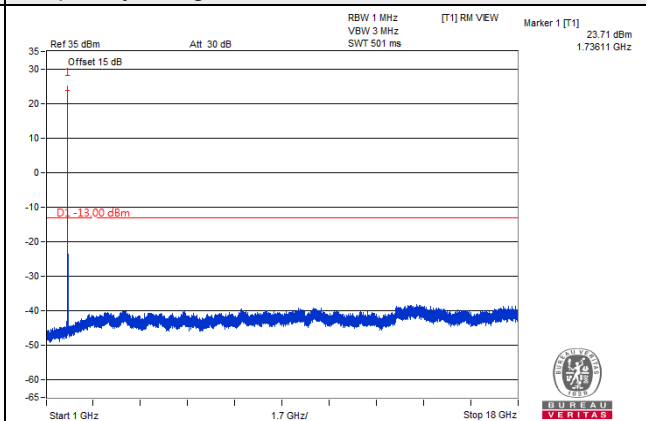


Channel 20300 (1745.0MHz)

Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 18GHz

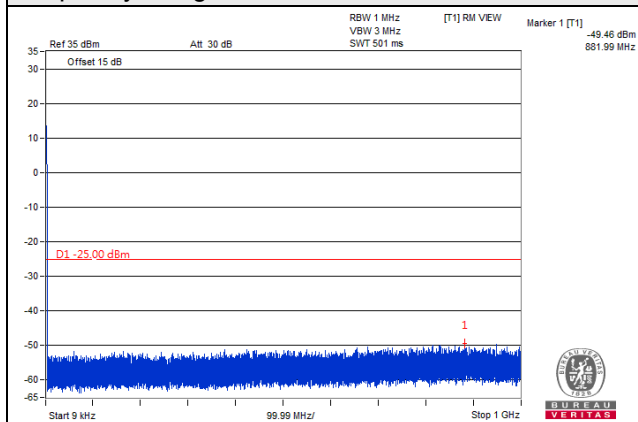


*The 9kHz signal over the limit is from Spectrum.

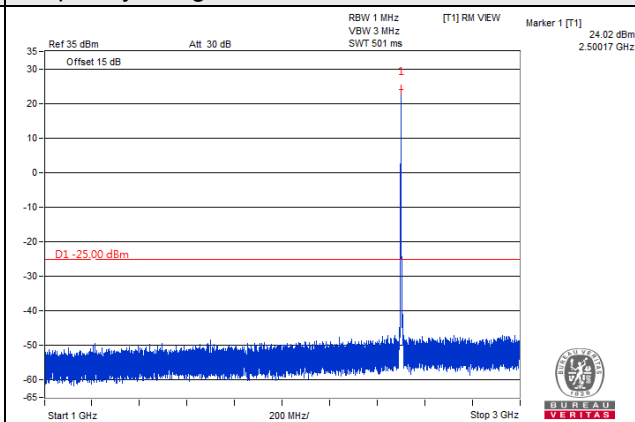
LTE Band 7, Channel Bandwidth 5MHz

Channel 20775 (2502.5MHz)

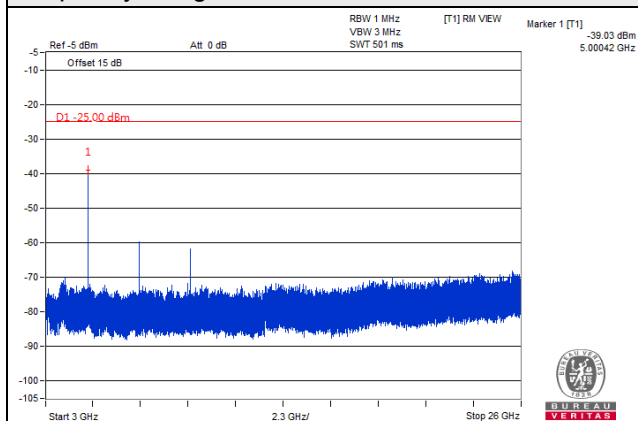
Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 3GHz



Frequency Range : 3GHz ~ 26GHz

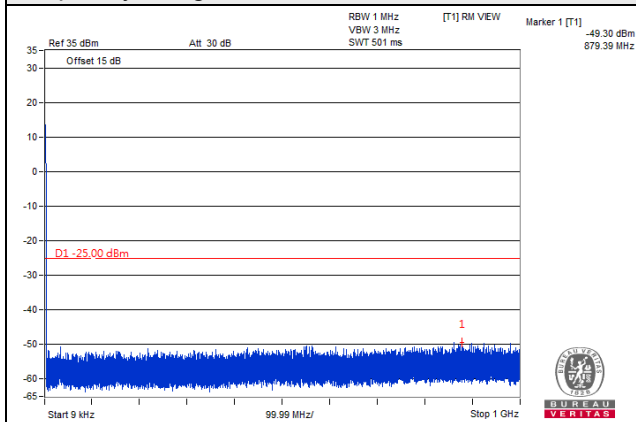


*The 9kHz signal over the limit is from Spectrum.

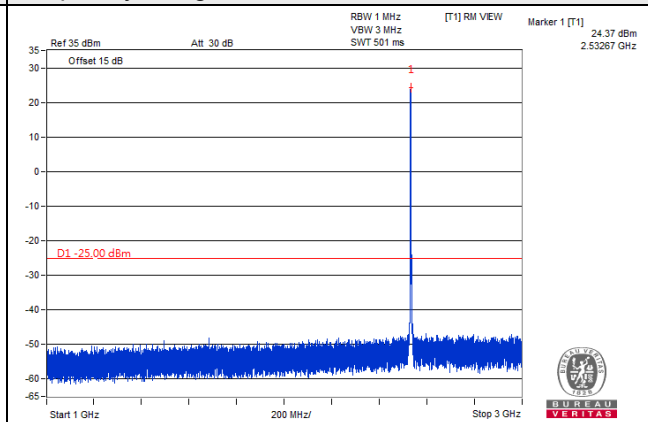
LTE Band 7, Channel Bandwidth 5MHz

Channel 21100 (2535.0MHz)

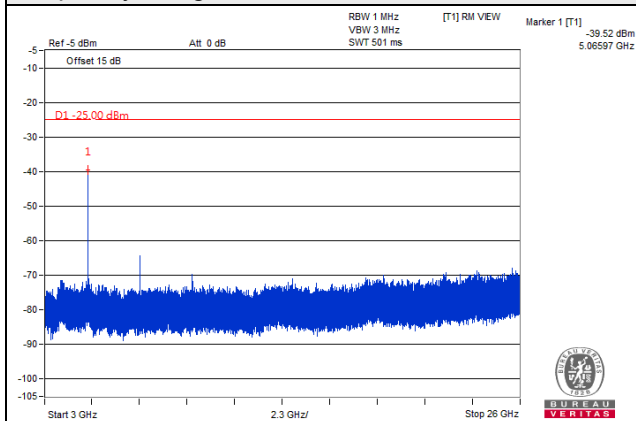
Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 3GHz



Frequency Range : 3GHz ~ 26GHz

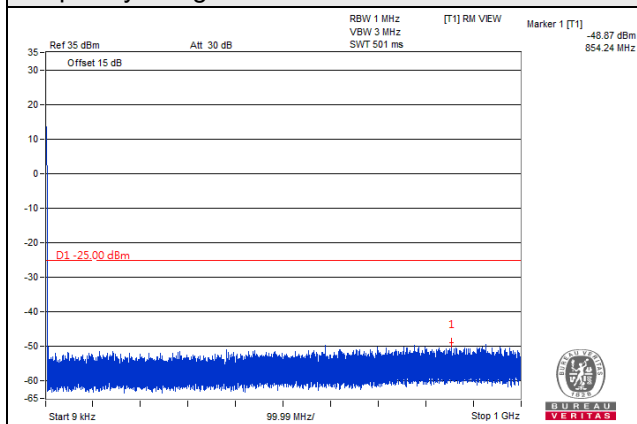


*The 9kHz signal over the limit is from Spectrum.

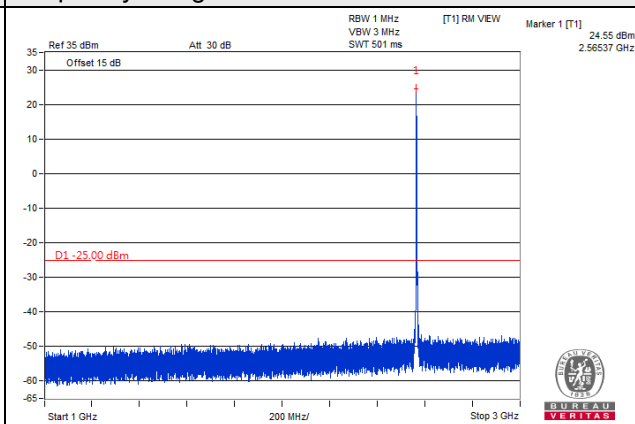
LTE Band 7, Channel Bandwidth 5MHz

Channel 21425 (2567.5MHz)

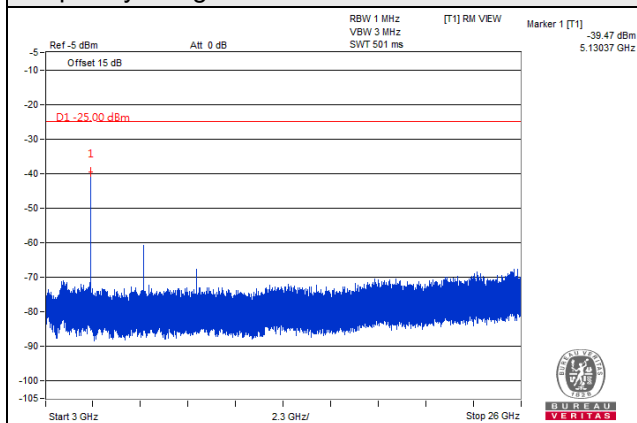
Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 3GHz



Frequency Range : 3GHz ~ 26GHz

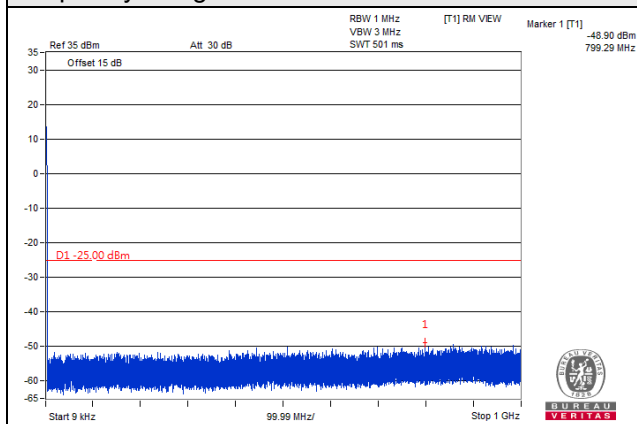


*The 9kHz signal over the limit is from Spectrum.

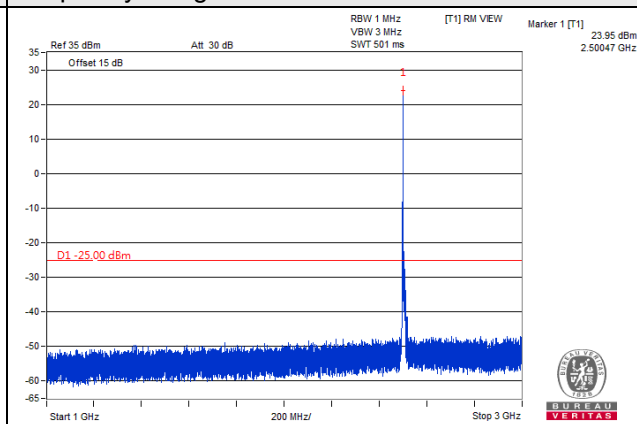
LTE Band 7, Channel Bandwidth 10MHz

Channel 20800 (2505.0MHz)

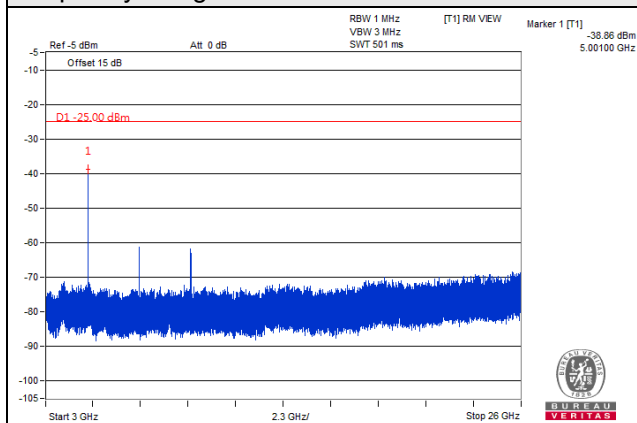
Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 3GHz



Frequency Range : 3GHz ~ 26GHz

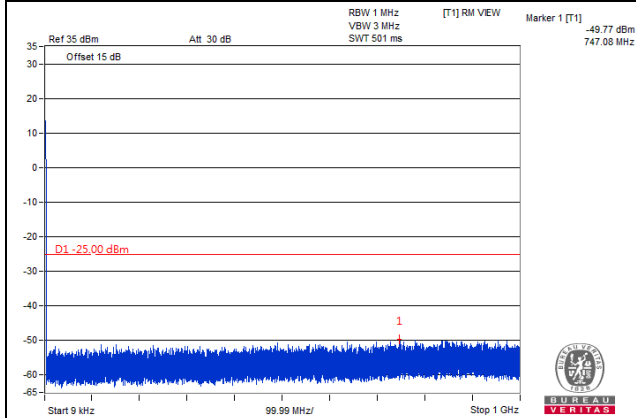


*The 9kHz signal over the limit is from Spectrum.

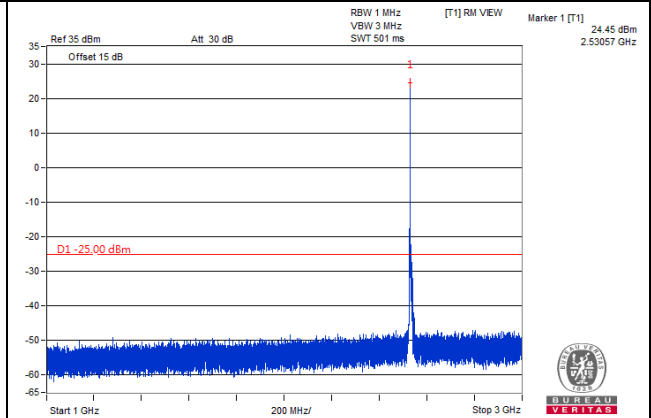
LTE Band 7, Channel Bandwidth 10MHz

Channel 21100 (2535.0MHz)

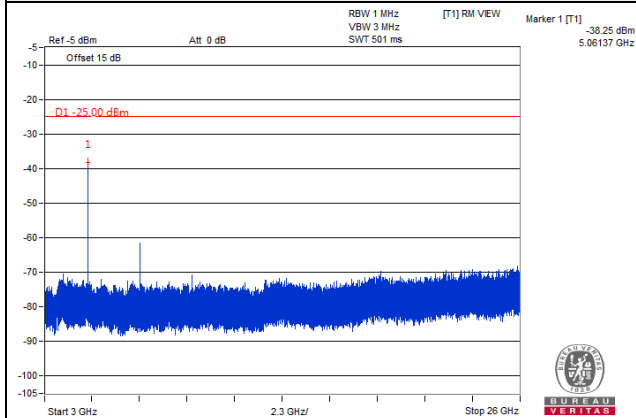
Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 3GHz



Frequency Range : 3GHz ~ 26GHz

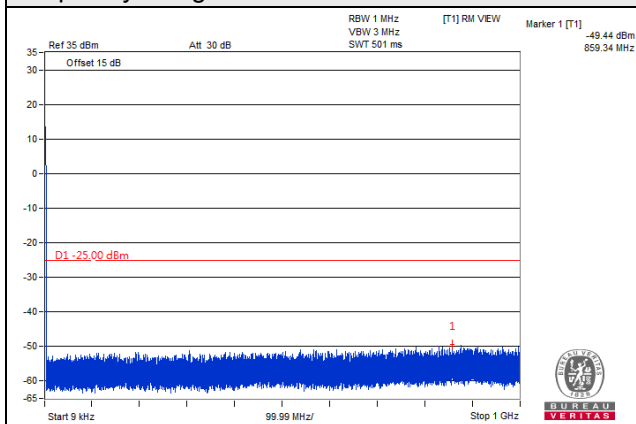


*The 9kHz signal over the limit is from Spectrum.

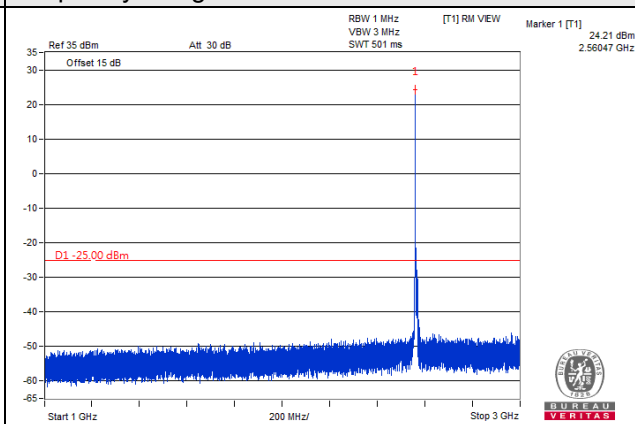
LTE Band 7, Channel Bandwidth 10MHz

Channel 21400 (2565.0MHz)

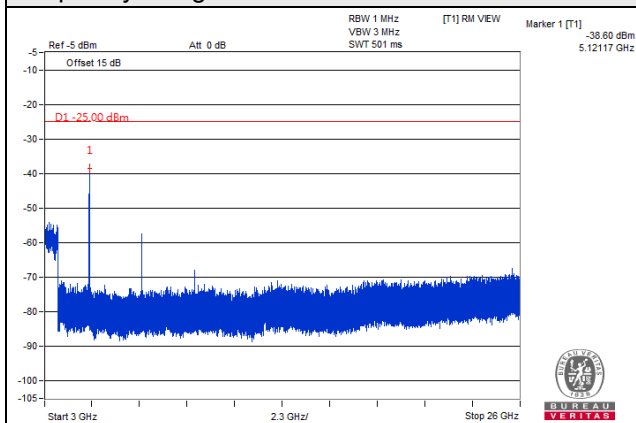
Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 3GHz



Frequency Range : 3GHz ~ 26GHz

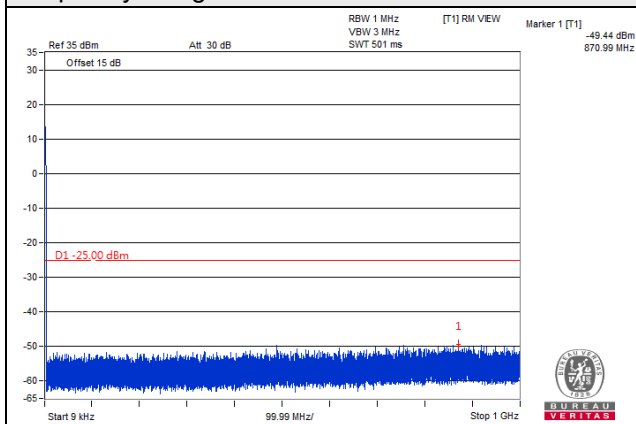


*The 9kHz signal over the limit is from Spectrum.

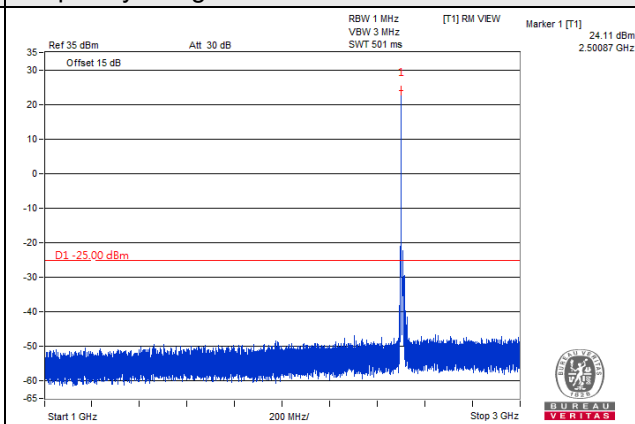
LTE Band 7, Channel Bandwidth 15MHz

Channel 20825 (2507.5MHz)

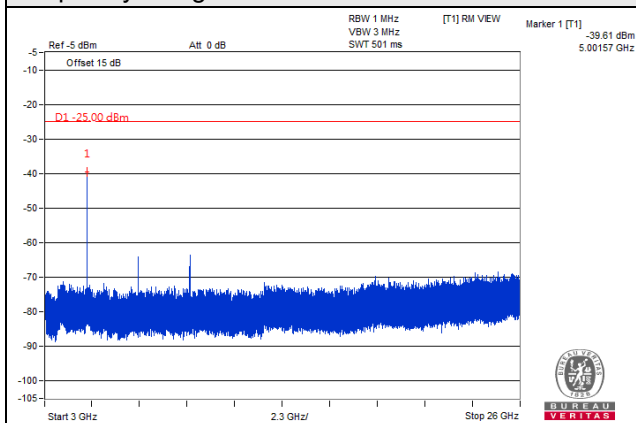
Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 3GHz



Frequency Range : 3GHz ~ 26GHz

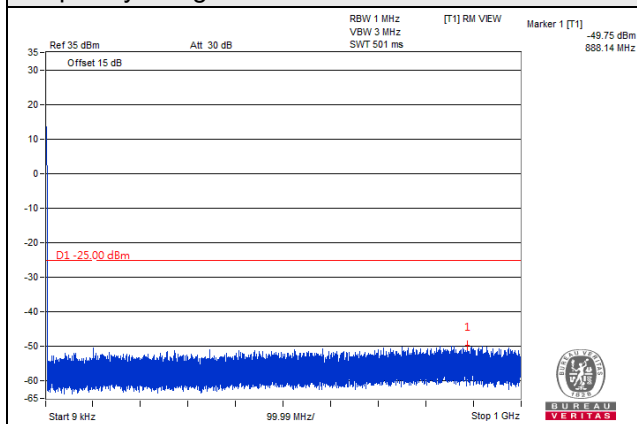


*The 9kHz signal over the limit is from Spectrum.

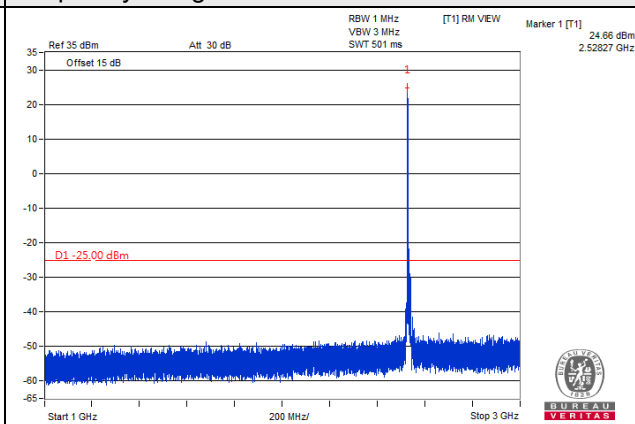
LTE Band 7, Channel Bandwidth 15MHz

Channel 21100 (2535.0MHz)

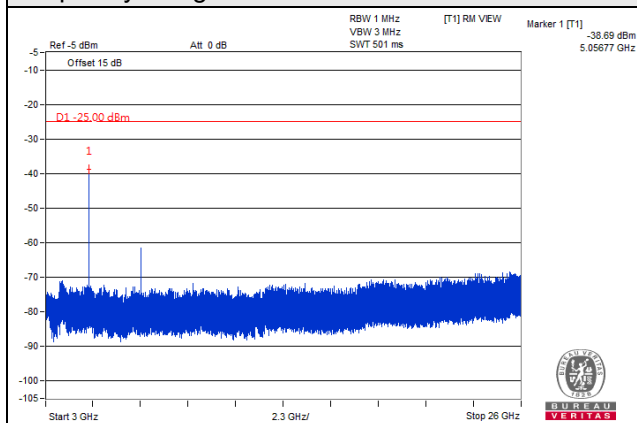
Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 3GHz



Frequency Range : 3GHz ~ 26GHz

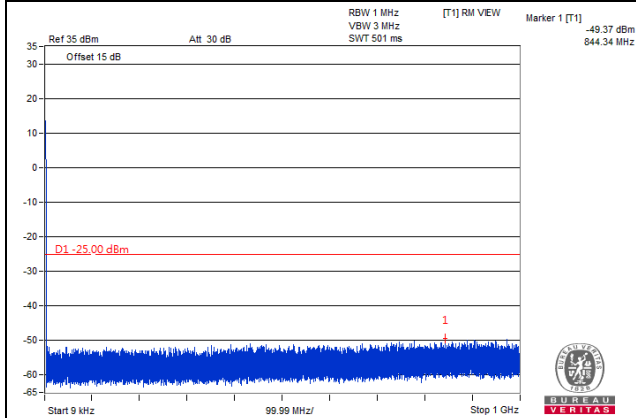


*The 9kHz signal over the limit is from Spectrum.

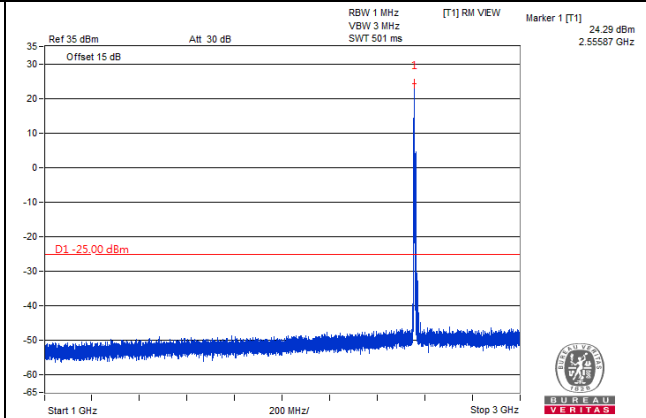
LTE Band 7, Channel Bandwidth 15MHz

Channel 21375 (2562.5MHz)

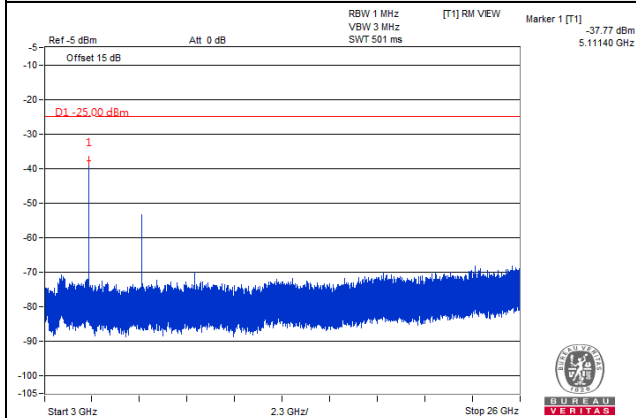
Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 3GHz



Frequency Range : 3GHz ~ 26GHz

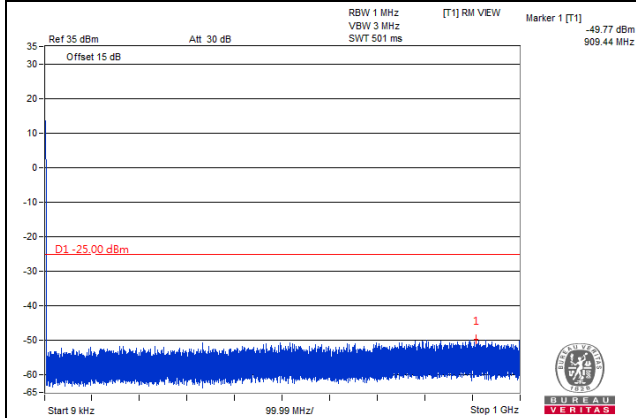


*The 9kHz signal over the limit is from Spectrum.

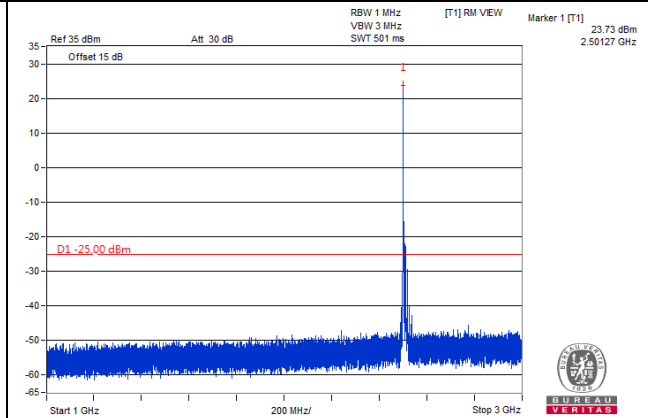
LTE Band 7, Channel Bandwidth 20MHz

Channel 20850 (2510.0MHz)

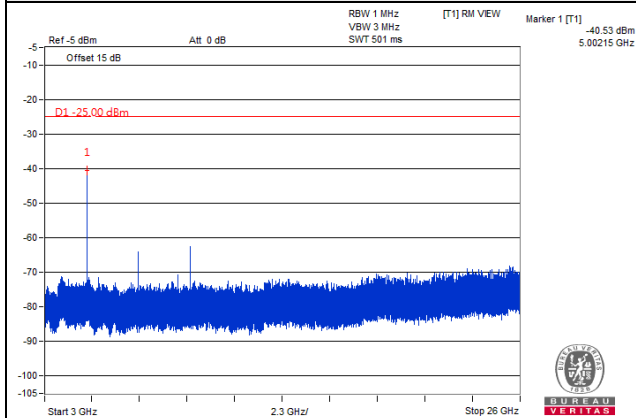
Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 3GHz



Frequency Range : 3GHz ~ 26GHz

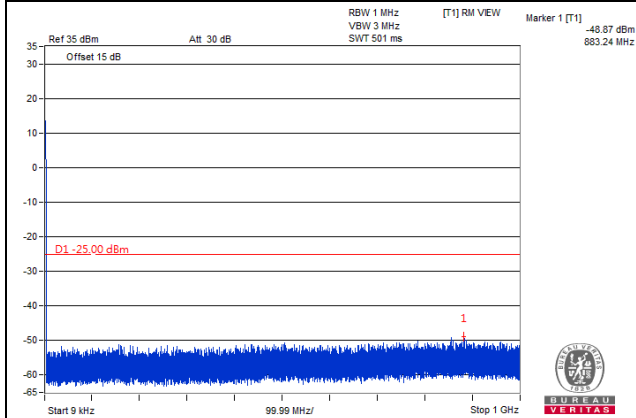


*The 9kHz signal over the limit is from Spectrum.

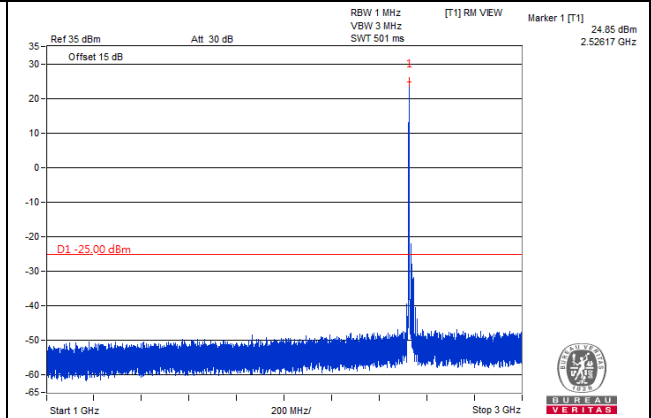
LTE Band 7, Channel Bandwidth 20MHz

Channel 21100 (2535.0MHz)

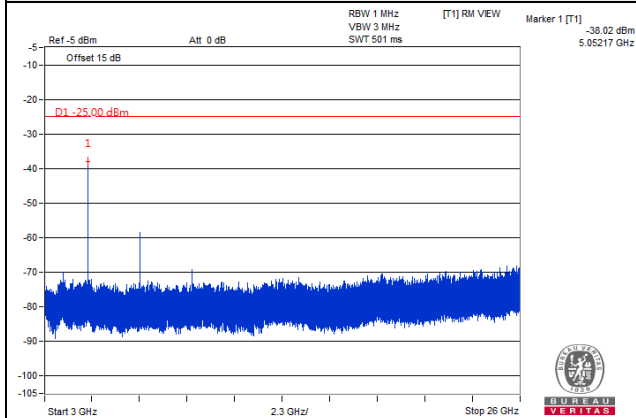
Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 3GHz



Frequency Range : 3GHz ~ 26GHz

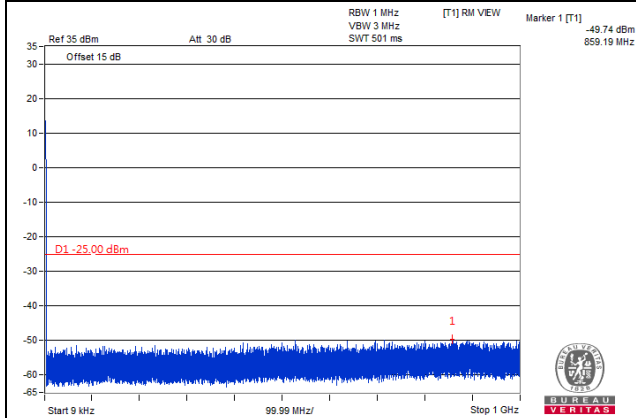


*The 9kHz signal over the limit is from Spectrum.

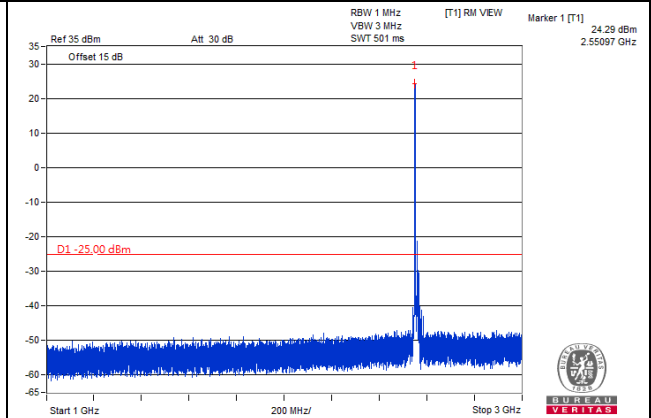
LTE Band 7, Channel Bandwidth 20MHz

Channel 21350 (2560.0MHz)

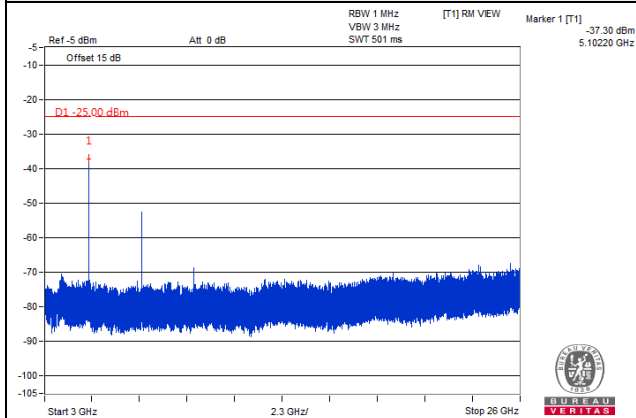
Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 3GHz



Frequency Range : 3GHz ~ 26GHz

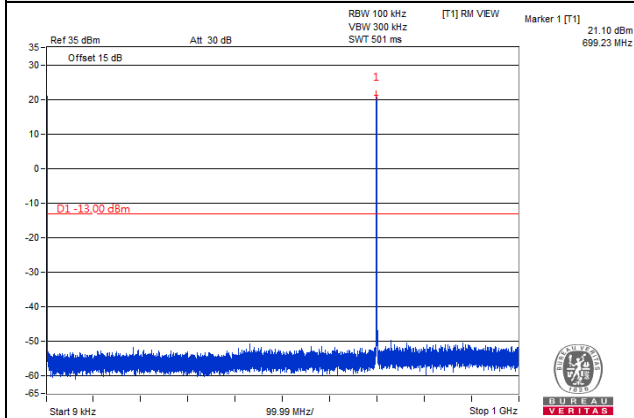


*The 9kHz signal over the limit is from Spectrum.

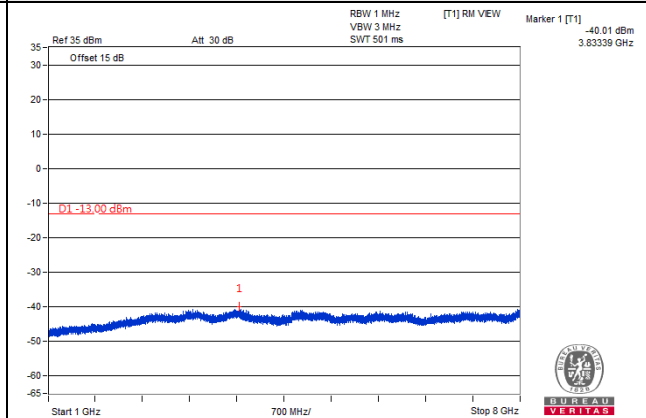
LTE Band 12, Channel Bandwidth 1.4MHz

Channel 23017 (699.7MHz)

Frequency Range : 9kHz ~ 1GHz

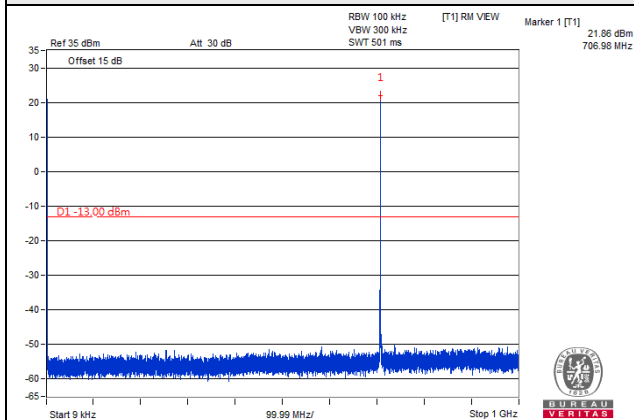


Frequency Range : 1GHz ~ 8GHz

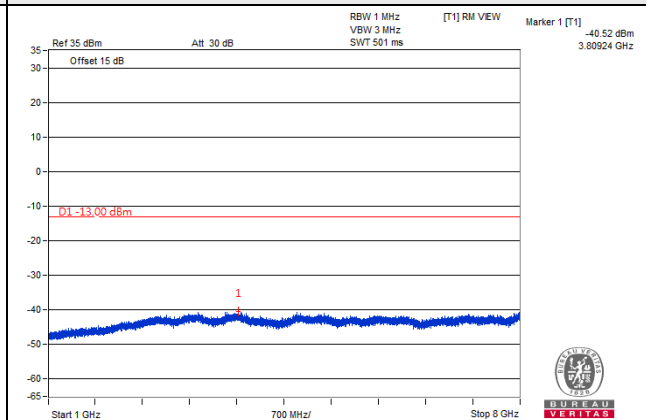


Channel 23095 (707.5MHz)

Frequency Range : 9kHz ~ 1GHz

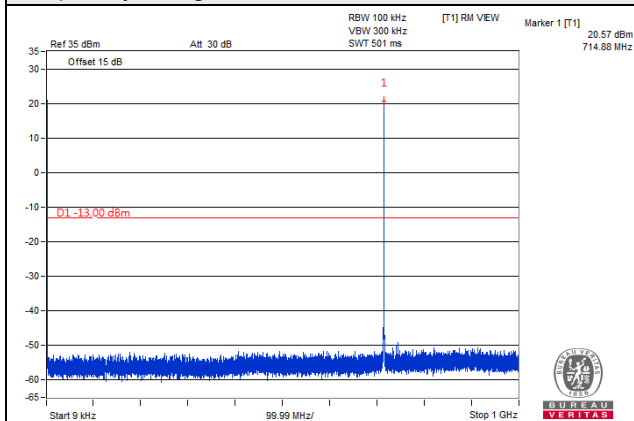


Frequency Range : 1GHz ~ 8GHz

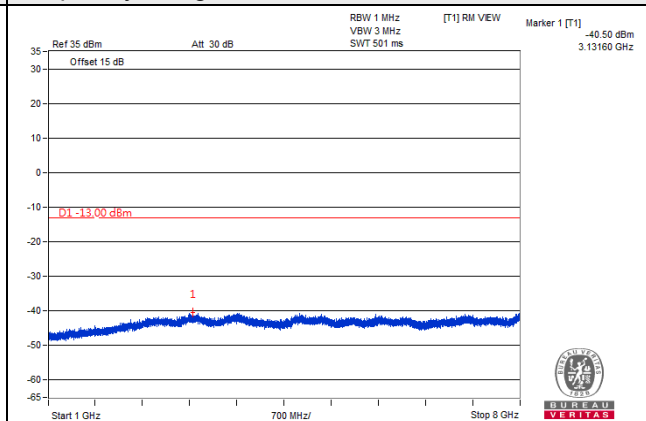


Channel 23173 (715.3MHz)

Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 8GHz

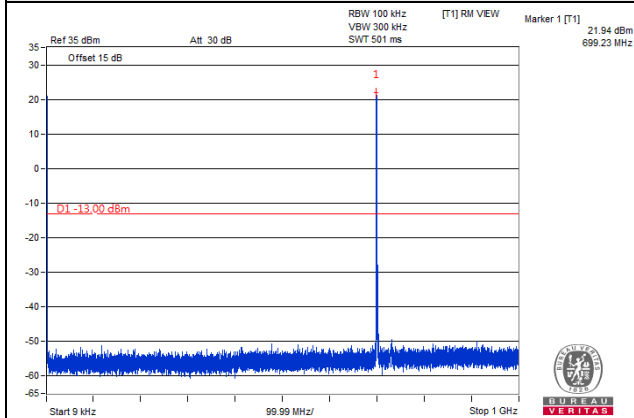


*The 9kHz signal over the limit is from Spectrum.

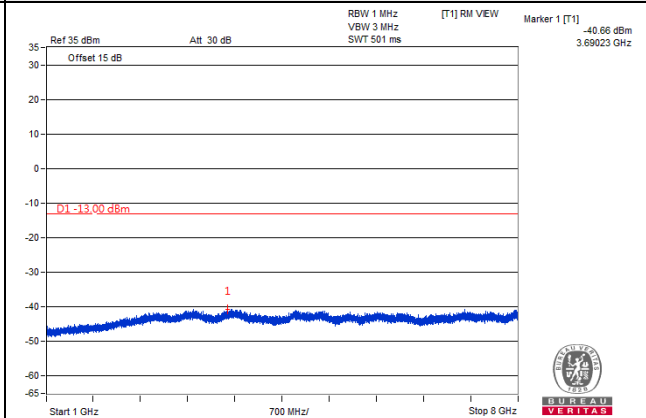
LTE Band 12, Channel Bandwidth 3MHz

Channel 23025 (700.5MHz)

Frequency Range : 9kHz ~ 1GHz

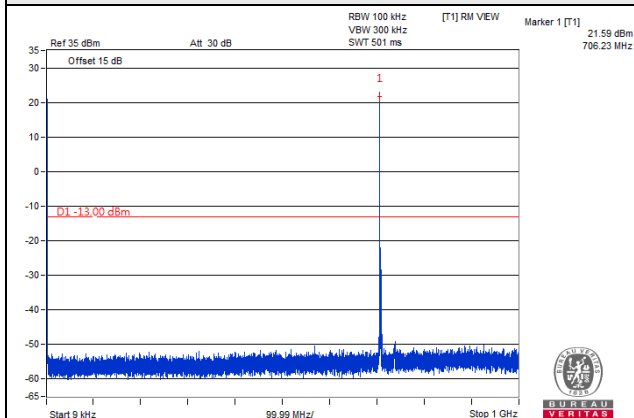


Frequency Range : 1GHz ~ 8GHz

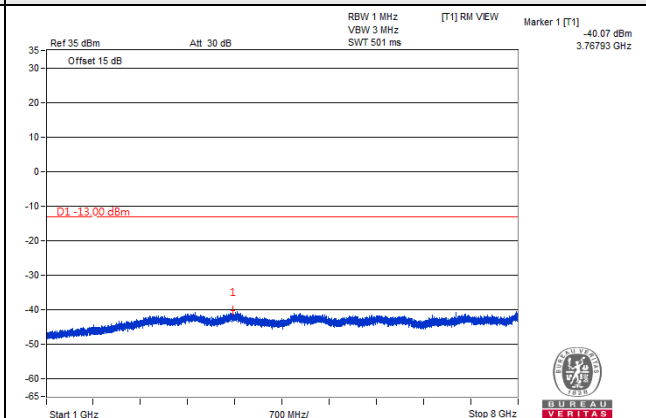


Channel 23095 (707.5MHz)

Frequency Range : 9kHz ~ 1GHz

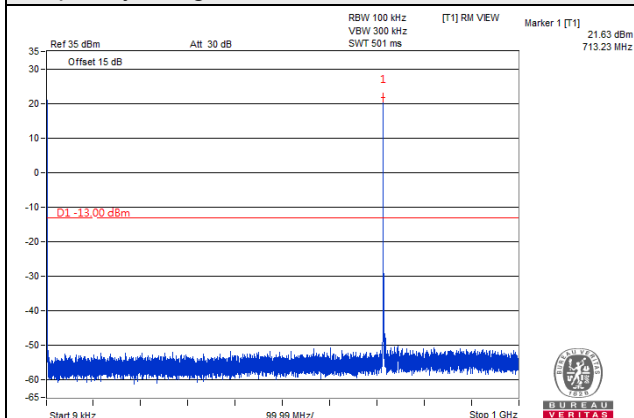


Frequency Range : 1GHz ~ 8GHz

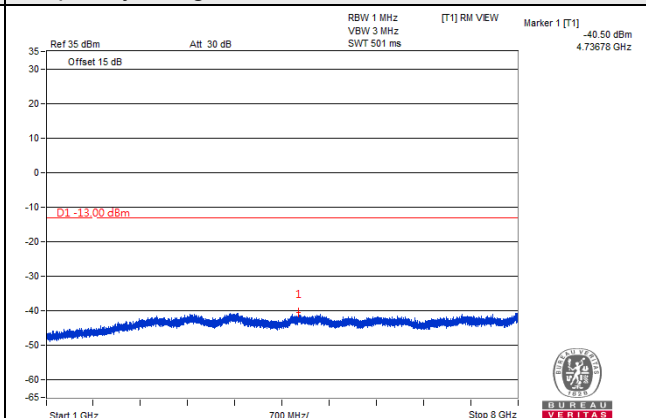


Channel 23165 (714.5MHz)

Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 8GHz

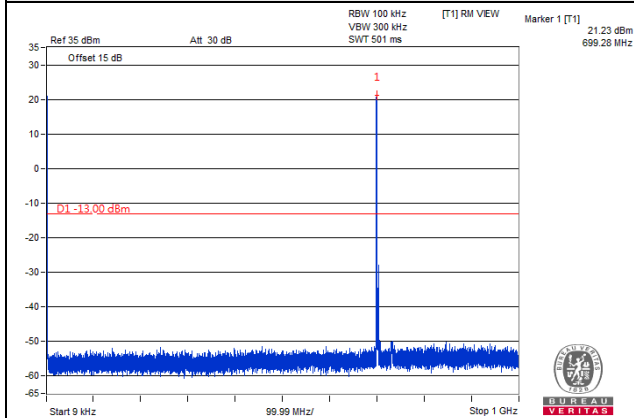


*The 9kHz signal over the limit is from Spectrum.

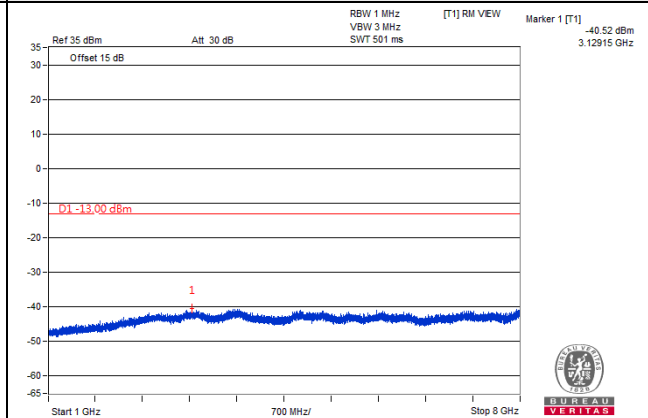
LTE Band 12, Channel Bandwidth 5MHz

Channel 23035 (701.5MHz)

Frequency Range : 9kHz ~ 1GHz

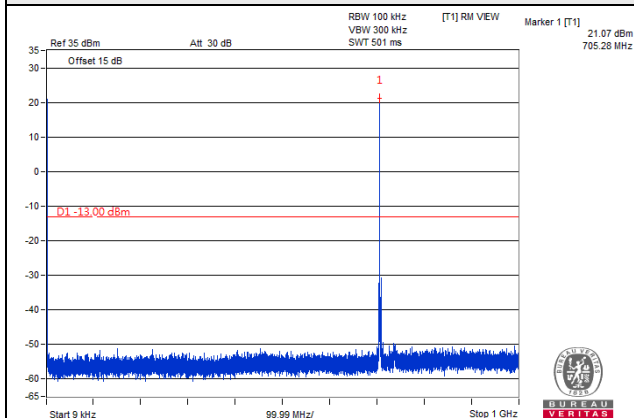


Frequency Range : 1GHz ~ 8GHz

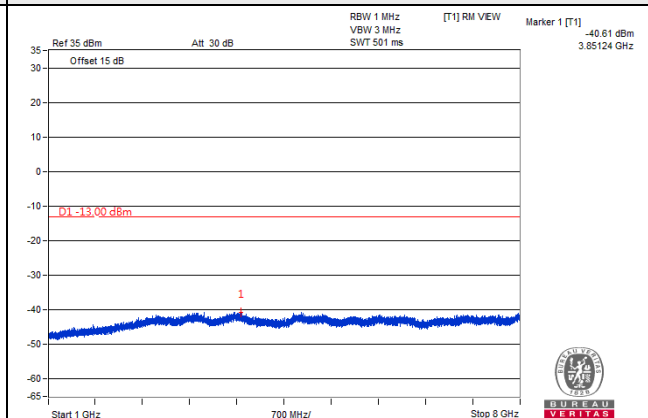


Channel 23095 (707.5MHz)

Frequency Range : 9kHz ~ 1GHz

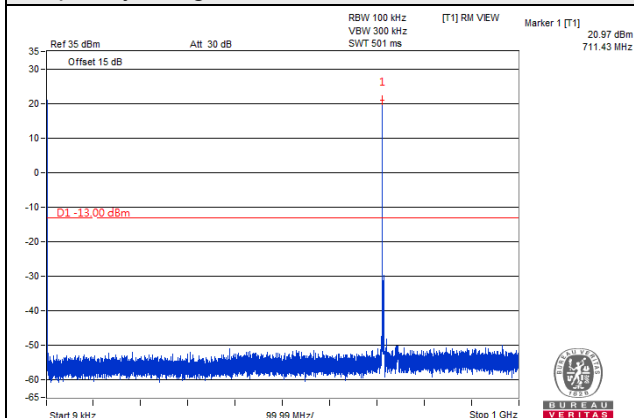


Frequency Range : 1GHz ~ 8GHz

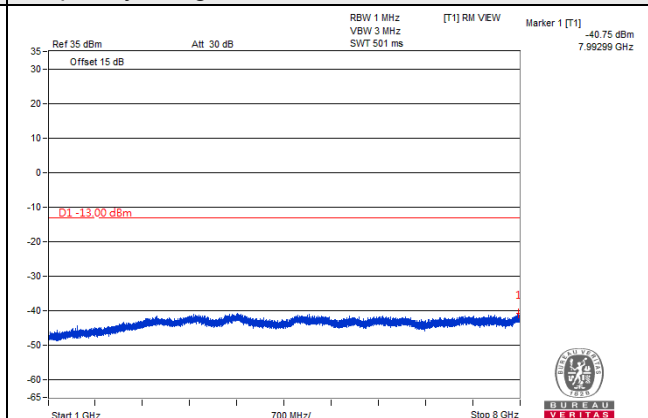


Channel 23155 (713.5MHz)

Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 8GHz

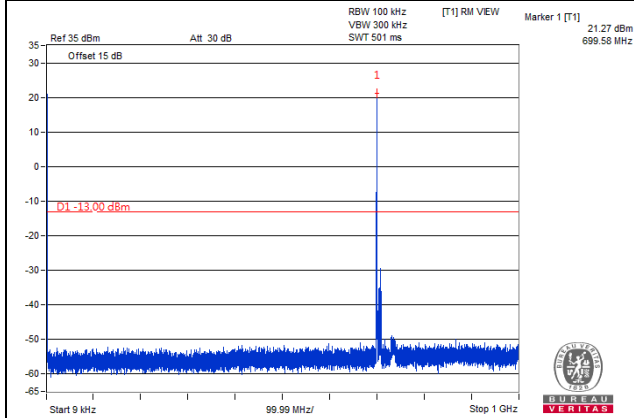


*The 9kHz signal over the limit is from Spectrum.

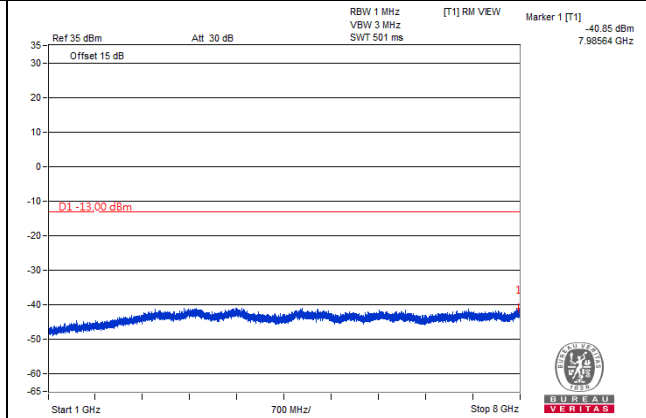
LTE Band 12, Channel Bandwidth 10MHz

Channel 23060 (704.0MHz)

Frequency Range : 9kHz ~ 1GHz

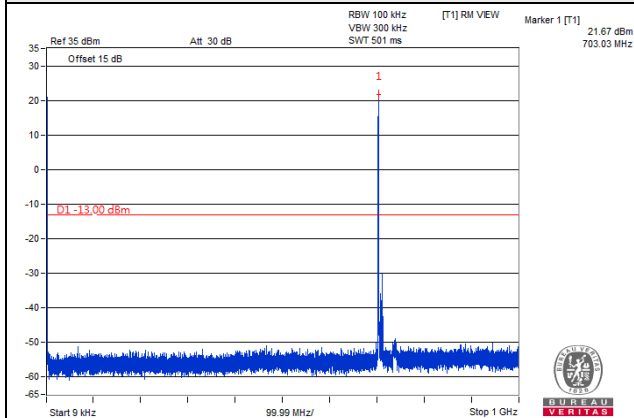


Frequency Range : 1GHz ~ 8GHz

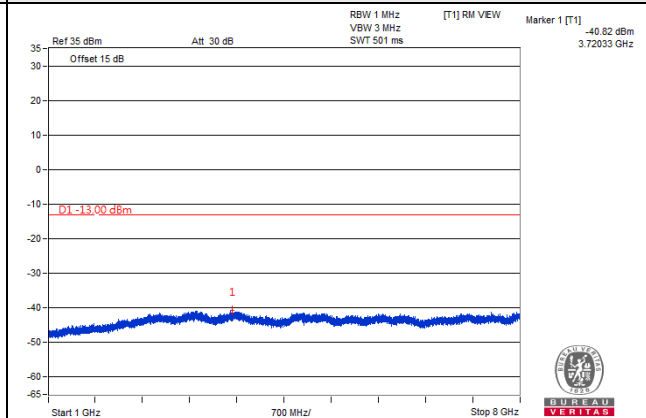


Channel 23095 (707.5MHz)

Frequency Range : 9kHz ~ 1GHz

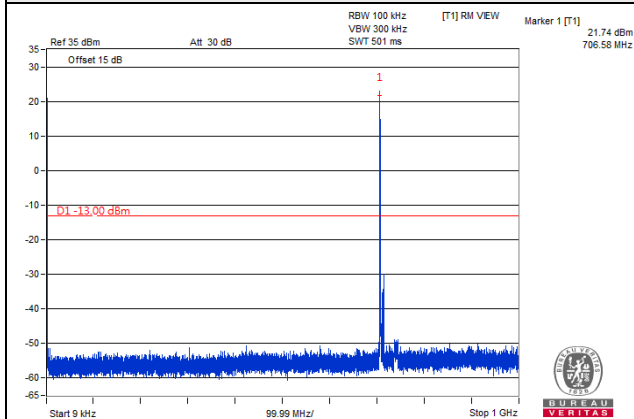


Frequency Range : 1GHz ~ 8GHz

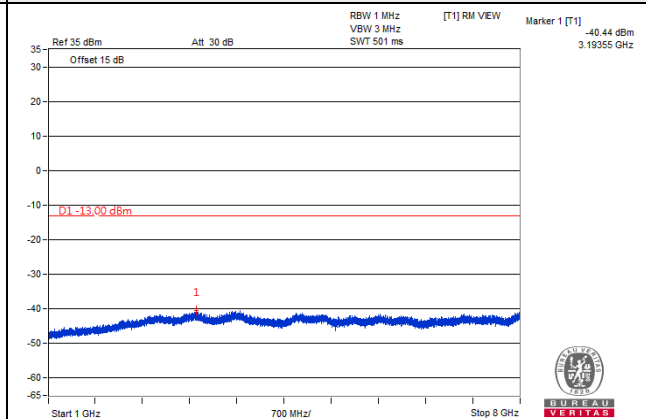


Channel 23130 (711.0MHz)

Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 8GHz

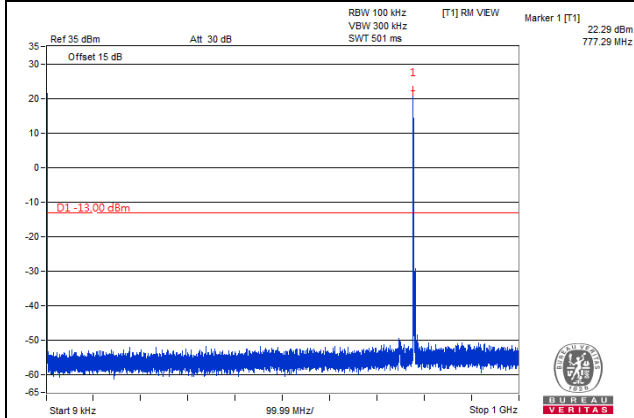


*The 9kHz signal over the limit is from Spectrum.

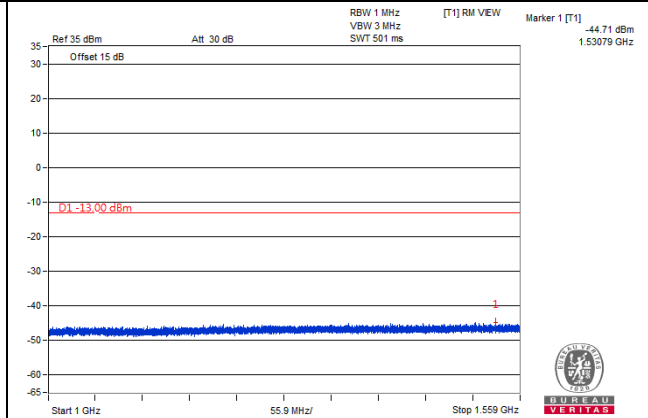
LTE Band 13, Channel Bandwidth 5MHz

Channel 23205 (779.5MHz)

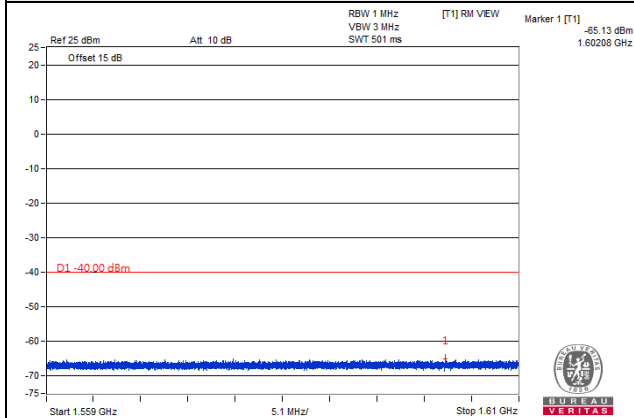
Frequency Range : 9kHz ~ 1GHz



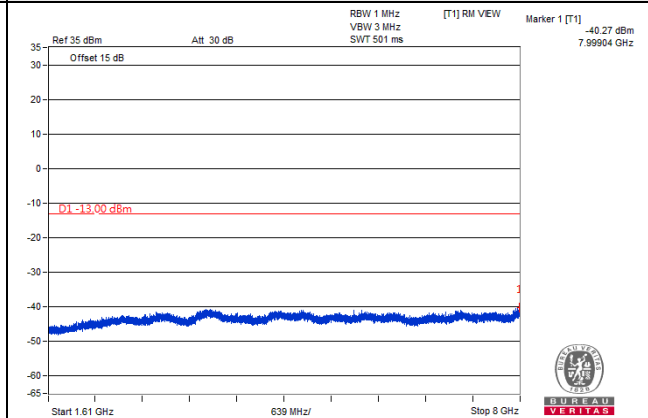
Frequency Range : 1GHz ~ 1.559GHz



Frequency Range : 1.559GHz ~ 1.61GHz



Frequency Range : 1.61GHz ~ 8GHz

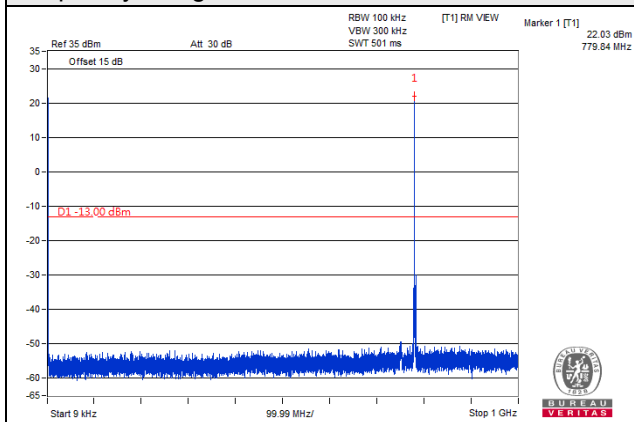


*The 9kHz signal over the limit is from Spectrum.

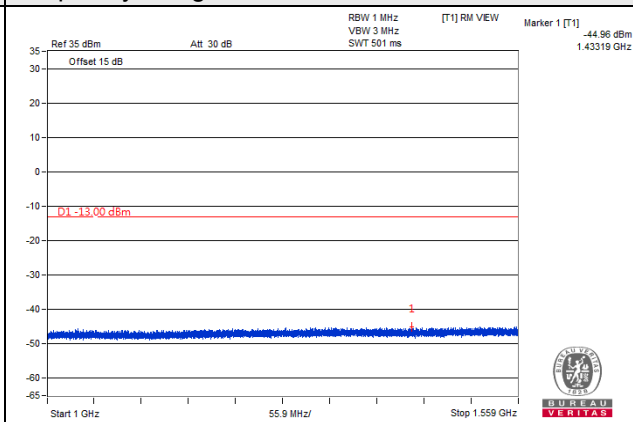
LTE Band 13, Channel Bandwidth 5MHz

Channel 23230 (782.0MHz)

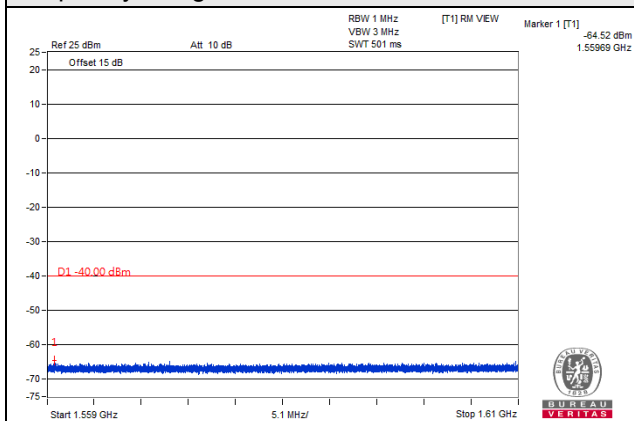
Frequency Range : 9kHz ~ 1GHz



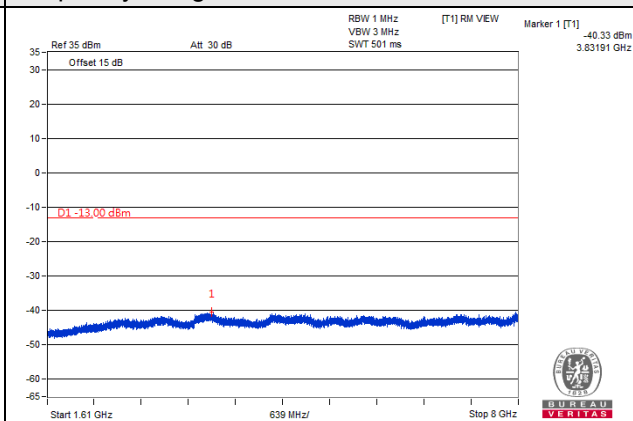
Frequency Range : 1GHz ~ 1.559GHz



Frequency Range : 1.559GHz ~ 1.61GHz



Frequency Range : 1.61GHz ~ 8GHz

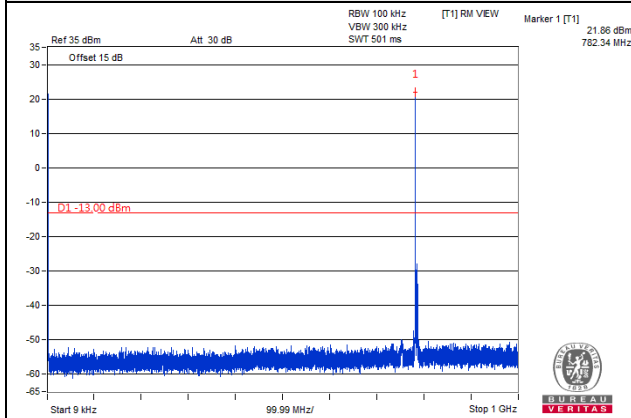


*The 9kHz signal over the limit is from Spectrum.

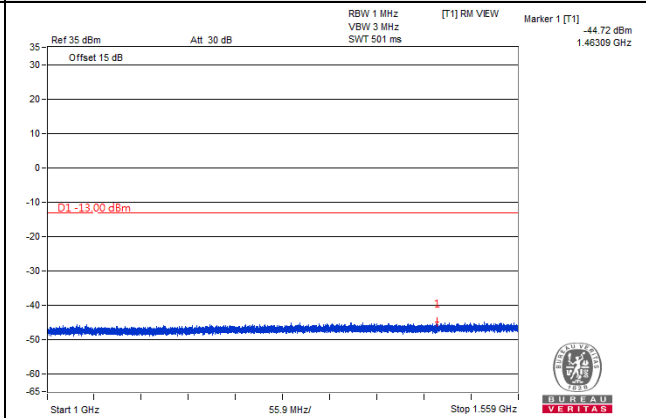
LTE Band 13, Channel Bandwidth 5MHz

Channel 23255 (784.5MHz)

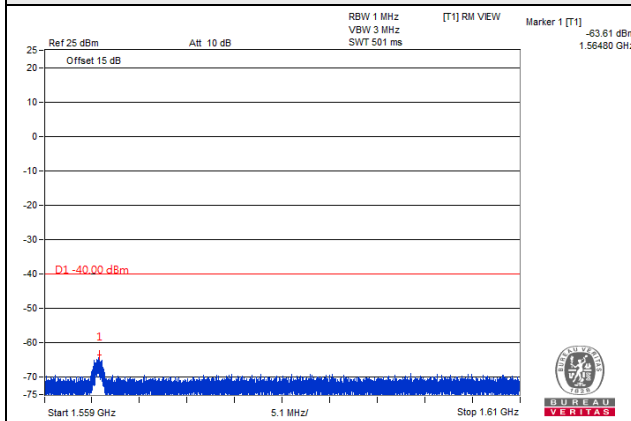
Frequency Range : 9kHz ~ 1GHz



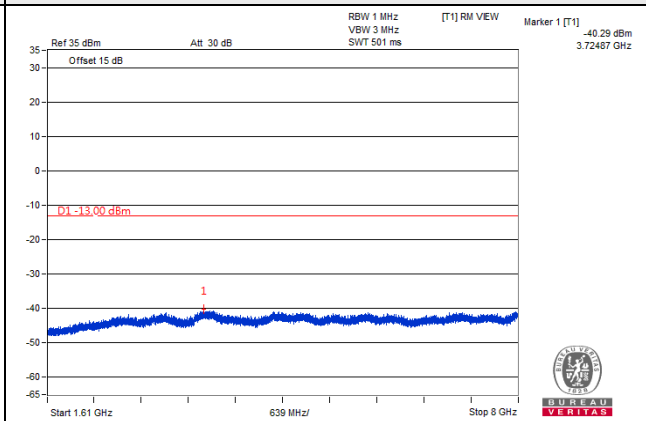
Frequency Range : 1GHz ~ 1.559GHz



Frequency Range : 1.559GHz ~ 1.61GHz



Frequency Range : 1.61GHz ~ 8GHz

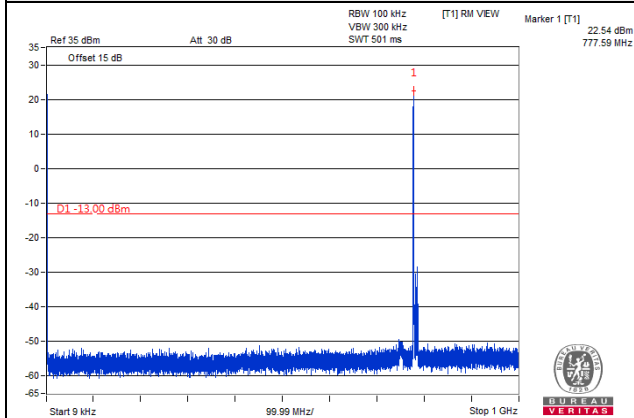


*The 9kHz signal over the limit is from Spectrum.

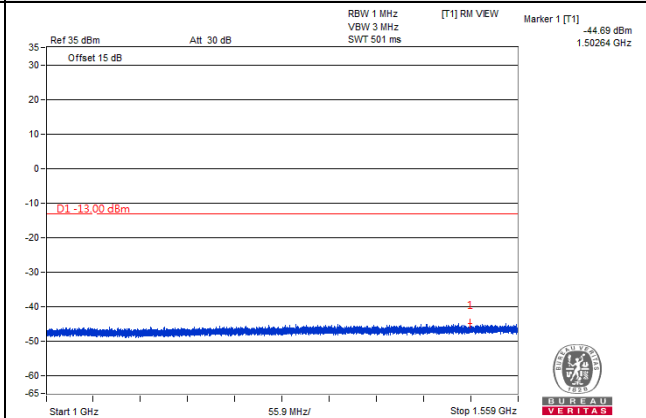
LTE Band 13, Channel Bandwidth 10MHz

Channel 23230 (782.0MHz)

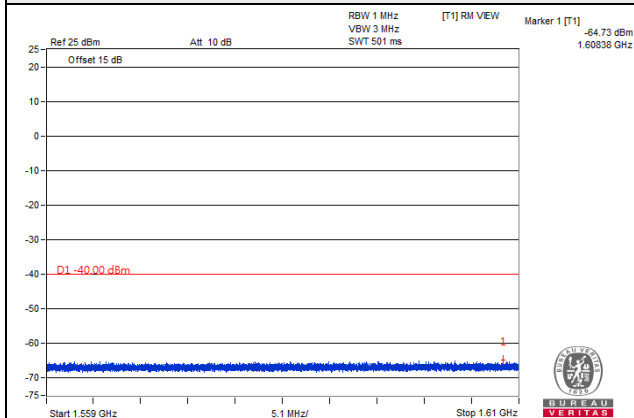
Frequency Range : 9kHz ~ 1GHz



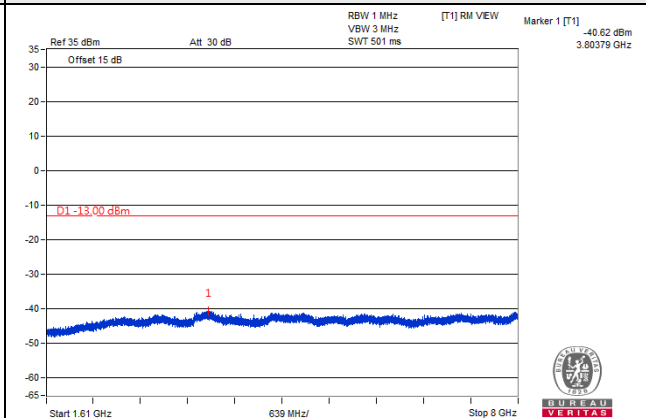
Frequency Range : 1GHz ~ 1.559GHz



Frequency Range : 1.559GHz ~ 1.61GHz



Frequency Range : 1.61GHz ~ 8GHz

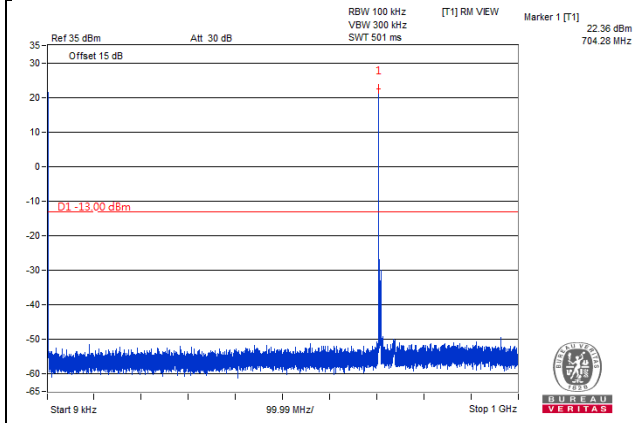


*The 9kHz signal over the limit is from Spectrum.

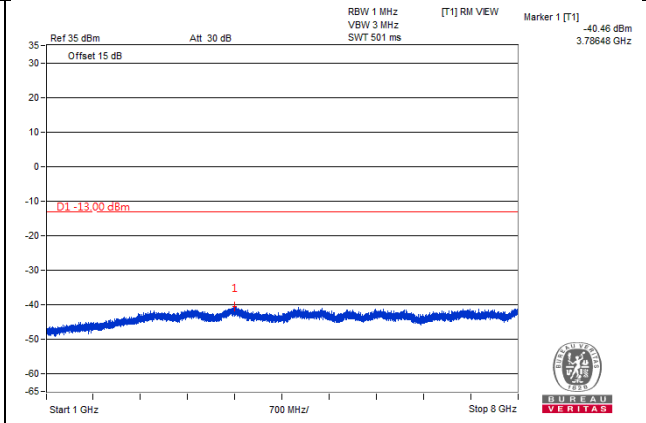
LTE Band 17, Channel Bandwidth 5MHz

Channel 23775 (706.5MHz)

Frequency Range : 9kHz ~ 1GHz

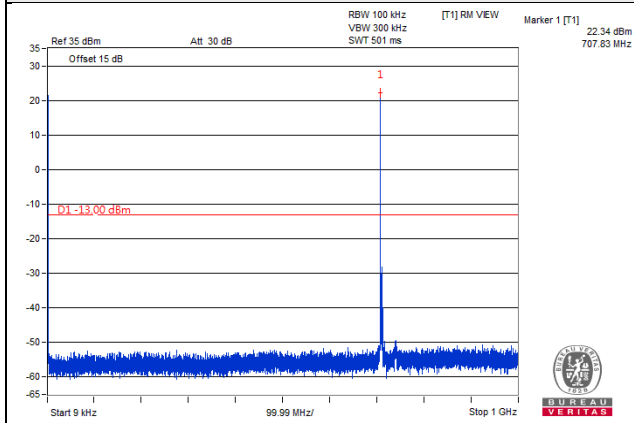


Frequency Range : 1GHz ~ 8GHz

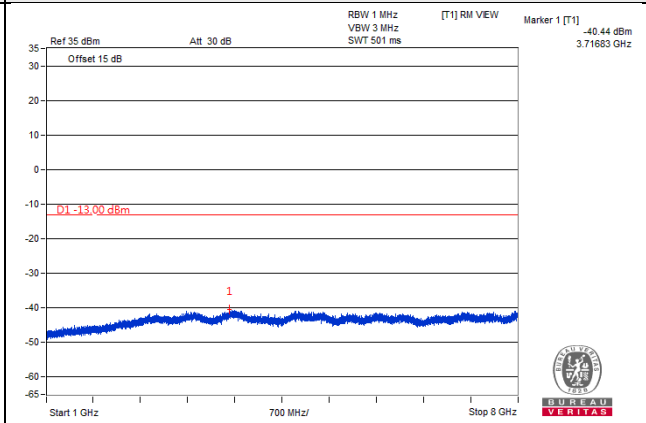


Channel 23790 (710.0MHz)

Frequency Range : 9kHz ~ 1GHz

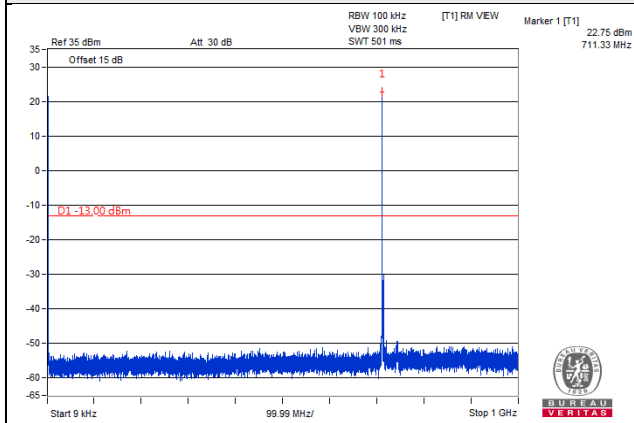


Frequency Range : 1GHz ~ 8GHz

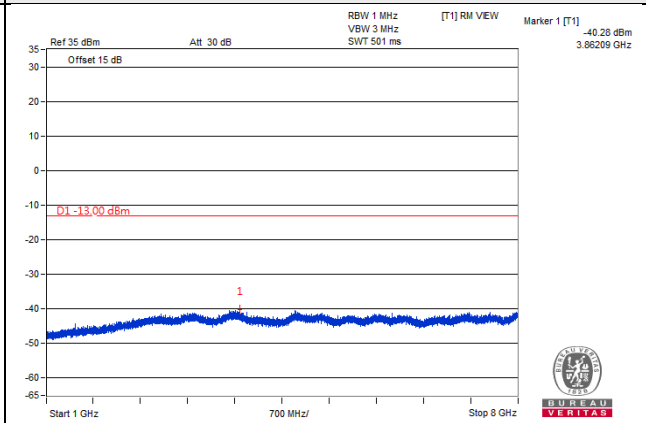


Channel 23825 (713.5MHz)

Frequency Range : 9kHz ~ 1GHz



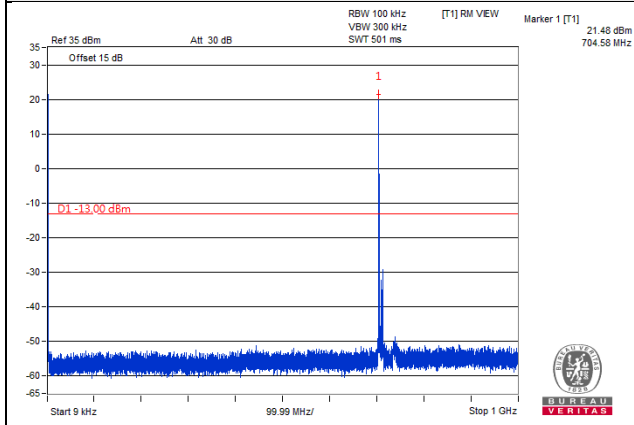
Frequency Range : 1GHz ~ 8GHz



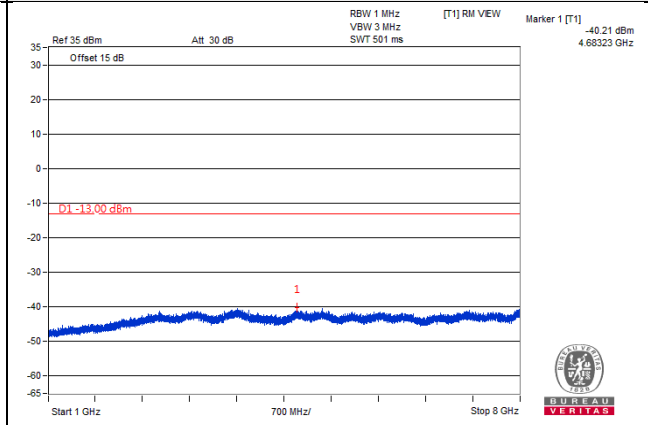
LTE Band 17, Channel Bandwidth 10MHz

Channel 23780 (709.0MHz)

Frequency Range : 9kHz ~ 1GHz

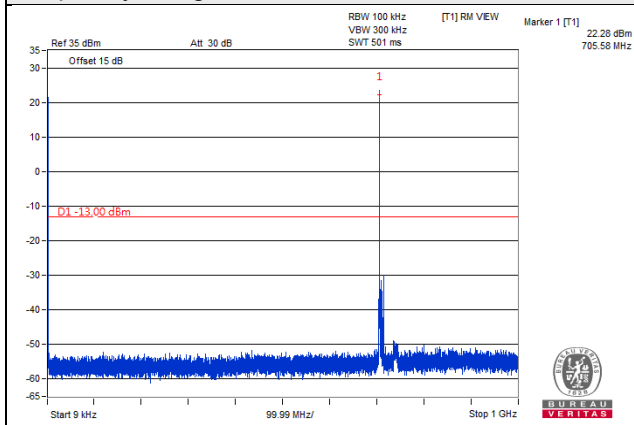


Frequency Range : 1GHz ~ 8GHz

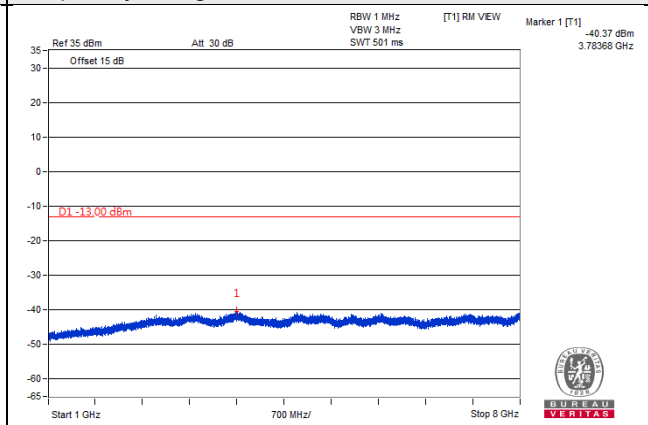


Channel 23790 (710.0MHz)

Frequency Range : 9kHz ~ 1GHz

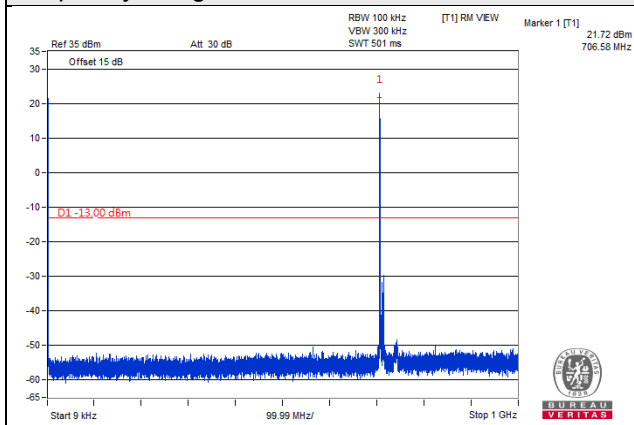


Frequency Range : 1GHz ~ 8GHz

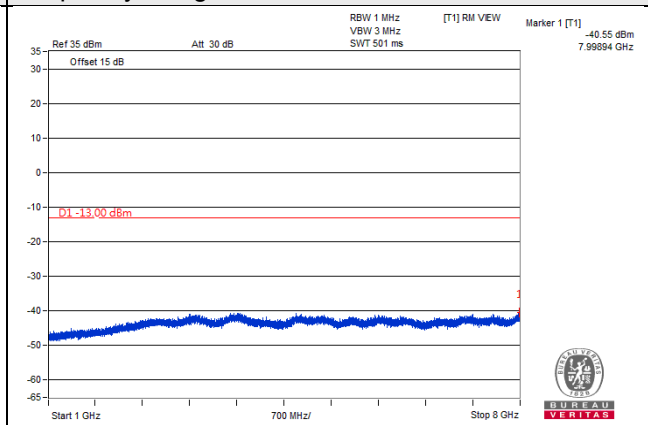


Channel 23800 (711.0MHz)

Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 8GHz



*The 9kHz signal over the limit is from Spectrum.

4.8 Radiated Emission Measurement

4.8.1 Limits of Radiated Emission Measurement

For LTE Band 7:

According to FCC 27.53(m)(4), on any frequency outside a licensee's frequency block, The power of any emission shall be attenuated below the transmitter power (P) by at least $55 + 10 \log (P)$ dB. The emission limit equal to -25dBm.

For LTE Band 12, 17:

According to FCC 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. The limit of emissions is equal to -13 dBm.

For LTE Band 13:

According to FCC 27.53(c)(2), for on any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB. The limit of emissions is equal to -13 dBm.

According to FCC 27.53(f), for operations in the 775-788 MHz, emissions in the band 1559-1610MHz shall be limited to -70 dBW/MHz (EIRP). The limit of emissions is equal to -40 dBm.

For LTE Band 4:

According to FCC 27.53(h), for operations in the 1695-1710MHz, 1710-1755MHz, 1755-1780 MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log (P)$ dB.

4.8.2 Test Procedure

- a. In the semi-anechoic chamber, EUT placed on the 0.8m(below or equal 1GHz) and/or 1.5m(above 1GHz) 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 height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- c. Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP/ERP level.
- d. Following C63.26 section 5.5 and 5.2.7
$$\text{EIRP (dBm)} = E (\text{dB}\mu\text{V/m}) + 20\log(D) - 104.8; \text{ where } D \text{ is the measurement distance (in the far field region) in m.}$$
$$\text{ERP (dBm)} = E (\text{dB}\mu\text{V/m}) + 20\log(D) - 104.8 - 2.15; \text{ where } D \text{ is the measurement distance (in the far field region) in m.}$$

Note:

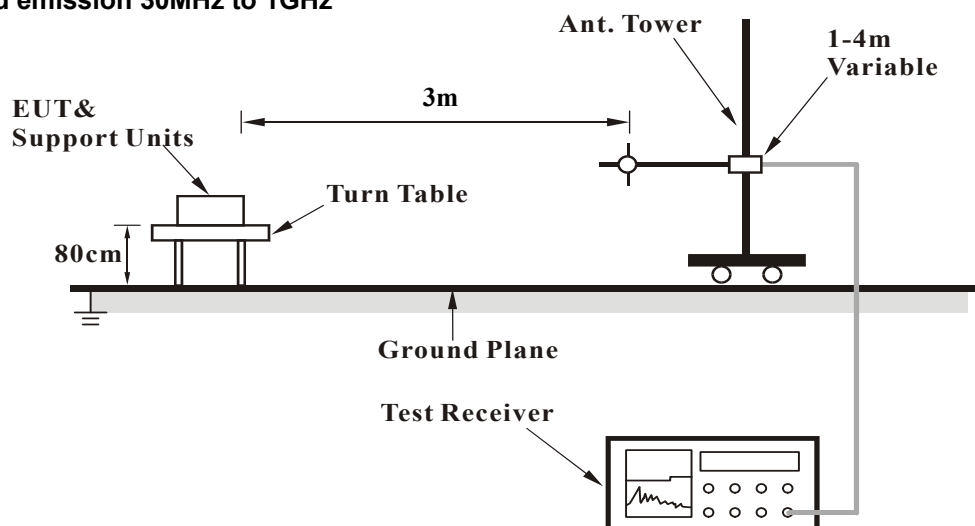
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.
2. The emission levels were against the limit of frequency range 9 kHz ~ 30 MHz:
The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

4.8.3 Deviation from Test Standard

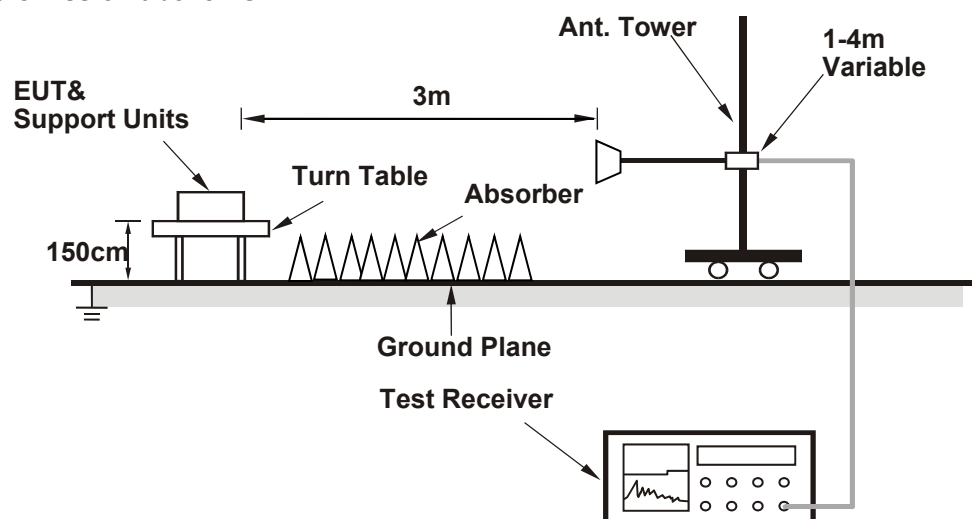
No deviation.

4.8.4 Test Setup

For radiated emission 30MHz to 1GHz



For radiated emission above 1GHz



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

4.8.5 Test Results

Test Mode A

LTE Band 4

Channel Bandwidth: 1.4 MHz / QPSK

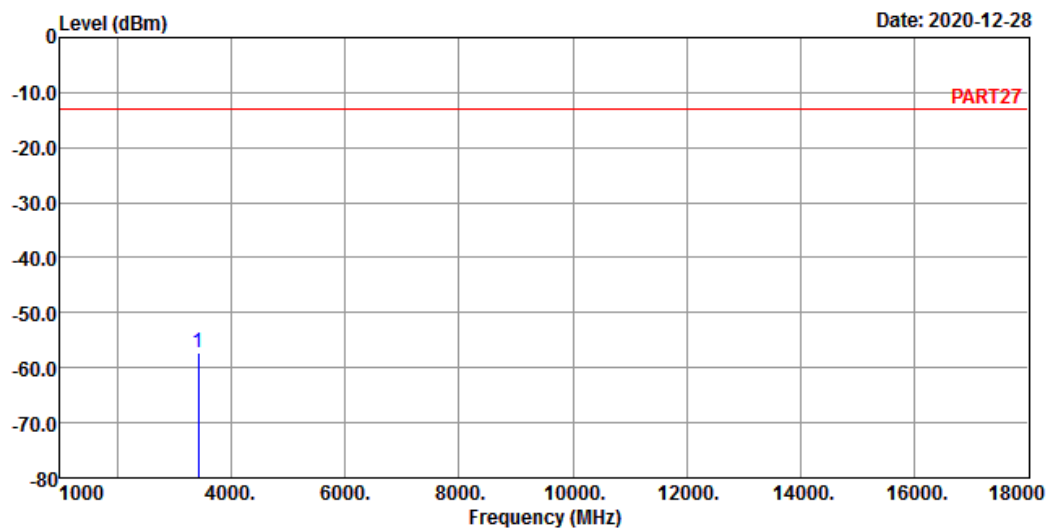
Low Channel



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A D T

Data: 3



Site : 966 Chamber 5

Condition: PART27 HORIZONTAL

Remak : LTE Band 4 QPSK_1.4M Link_L-CH

Tested by: tim-chen

Freq	Level	Read Level	Limit	Over	Limit	Remark
MHz	dBm	dBm	dBm	dB	dB	
1 pp 3421.40	-57.20	-48.86	-13.00	-8.34	-44.20	Peak

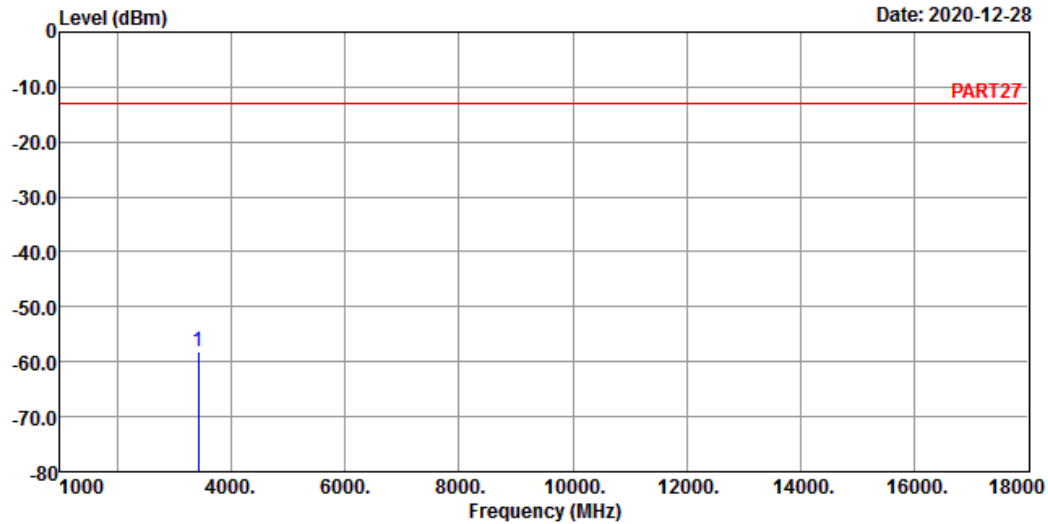


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Date: 2020-12-28



Site : 966 Chamber 5

Condition: PART27 VERTICAL

Remak : LTE Band 4 QPSK_1.4M Link_L-CH

Tested by: tim-chen

Freq	Level	Read	Limit	Over	Limit	Remark
		Level	Line			
MHz	dBm	dBm	dBm	dB	dB	
1 pp 3421.40	-58.10	-49.76	-13.00	-8.34	-45.10	Peak

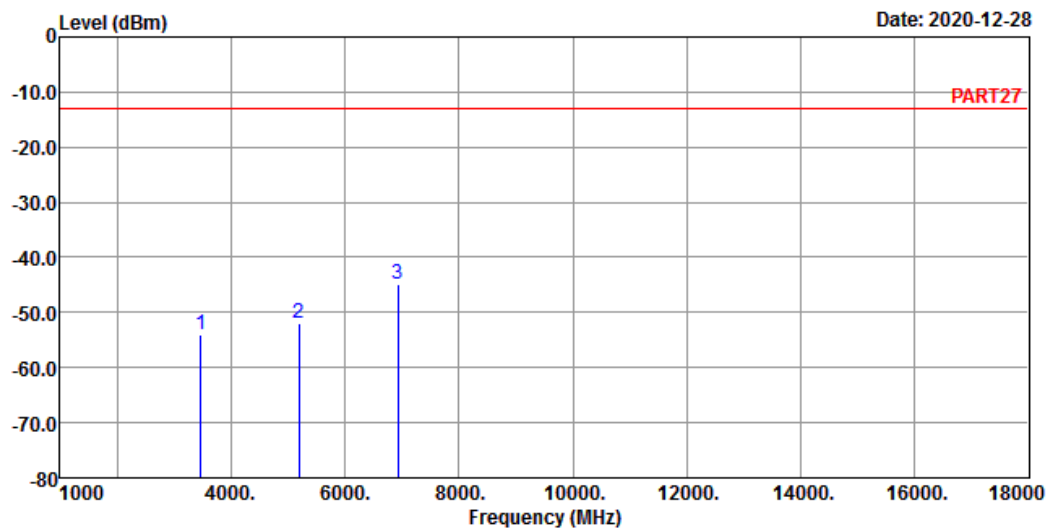
Middle Channel



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Data: 3



Site : 966 Chamber 5

Condition: PART27 HORIZONTAL

Remak : LTE Band 4 QPSK_1.4M Link_M-CH

Tested by: tim-chen

	Freq	Level	Read Level	Limit Line	Over Factor	Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3465.00	-54.09	-46.21	-13.00	-7.88	-41.09	Peak
2	5197.50	-52.04	-49.97	-13.00	-2.07	-39.04	Peak
3 pp	6930.00	-44.99	-47.68	-13.00	2.69	-31.99	Peak

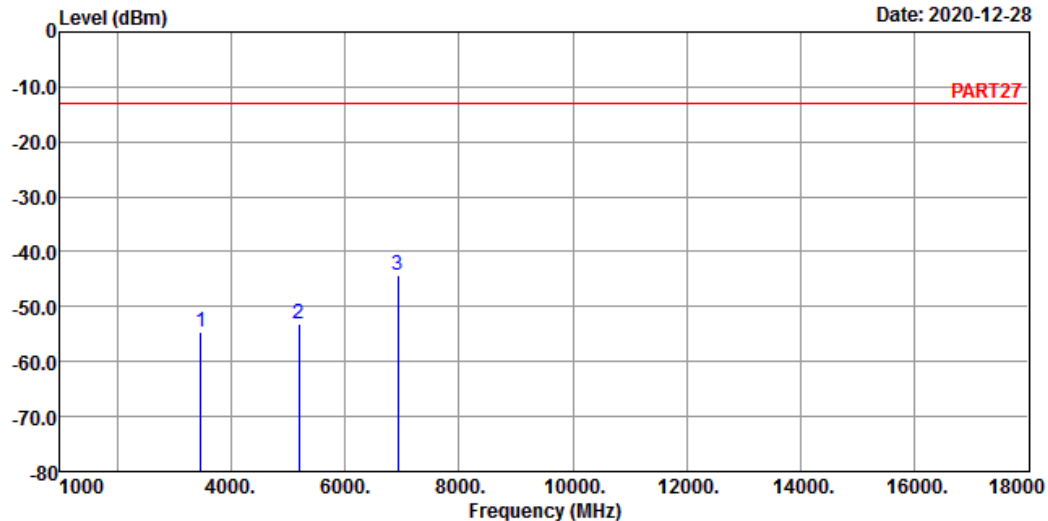


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Data: 4

Date: 2020-12-28



Site : 966 Chamber 5

Condition: PART27 VERTICAL

Remak : LTE Band 4 QPSK_1.4M Link_M-CH

Tested by: tim-chen

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3465.00	-54.53	-46.65	-13.00	-7.88	-41.53	Peak
2	5197.50	-53.22	-51.15	-13.00	-2.07	-40.22	Peak
3 pp	6930.00	-44.27	-46.96	-13.00	2.69	-31.27	Peak

High Channel

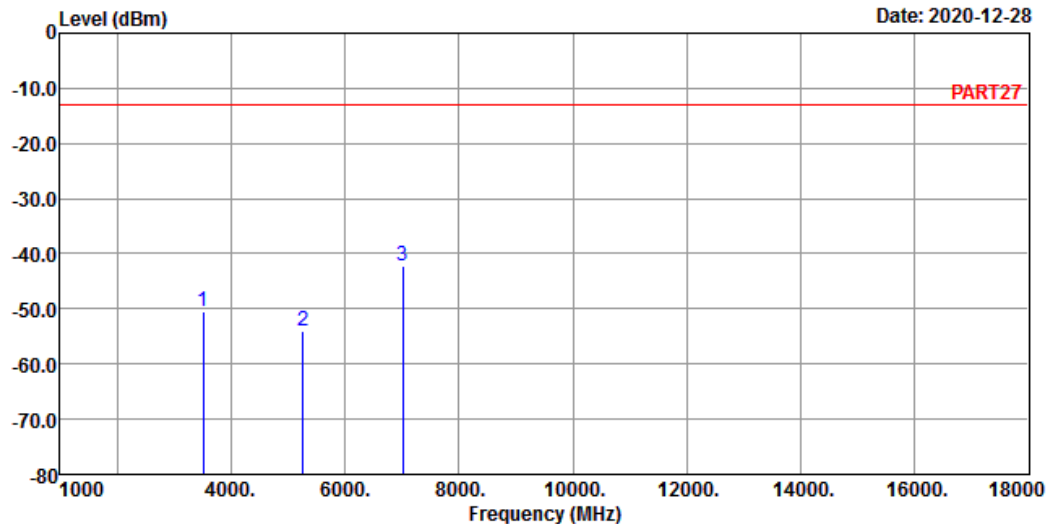


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

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Data: 3

Date: 2020-12-28



Site : 966 Chamber 5

Condition: PART27 HORIZONTAL

Remak : LTE Band 4 QPSK_1.4M Link_H-CH

Tested by: tim-chen

			Read	Limit		Over	
	Freq	Level	Level	Line	Factor	Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3508.60	-50.58	-43.13	-13.00	-7.45	-37.58	Peak
2	5262.90	-53.95	-51.43	-13.00	-2.52	-40.95	Peak
3 pp	7017.20	-42.23	-45.42	-13.00	3.19	-29.23	Peak

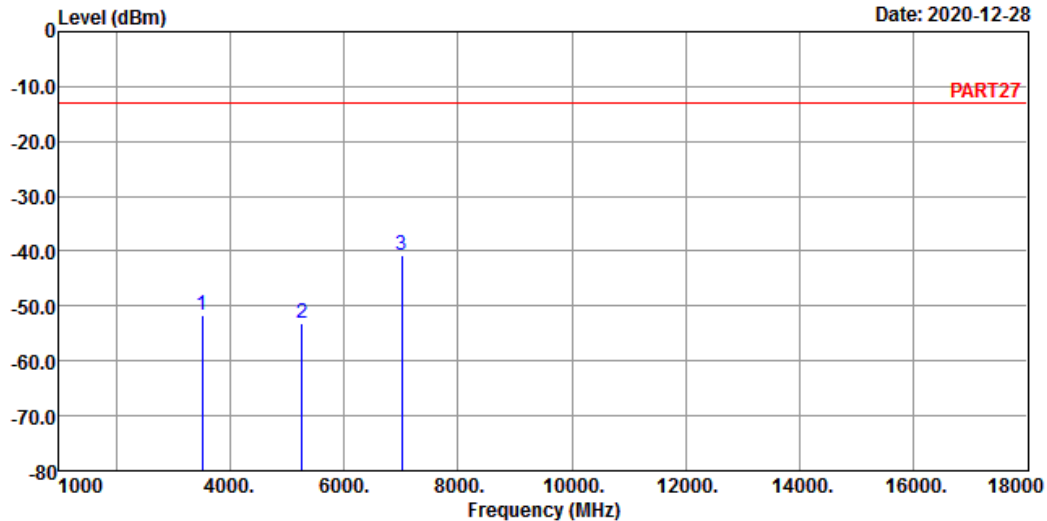


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Data: 4

Date: 2020-12-28



Site : 966 Chamber 5

Condition: PART27 VERTICAL

Remak : LTE Band 4 QPSK_1.4M Link_H-CH

Tested by: tim-chen

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3508.60	-51.55	-44.10	-13.00	-7.45	-38.55	Peak
2	5262.90	-53.02	-50.50	-13.00	-2.52	-40.02	Peak
3 pp	7017.20	-40.66	-43.85	-13.00	3.19	-27.66	Peak

Channel Bandwidth: 5 MHz / QPSK

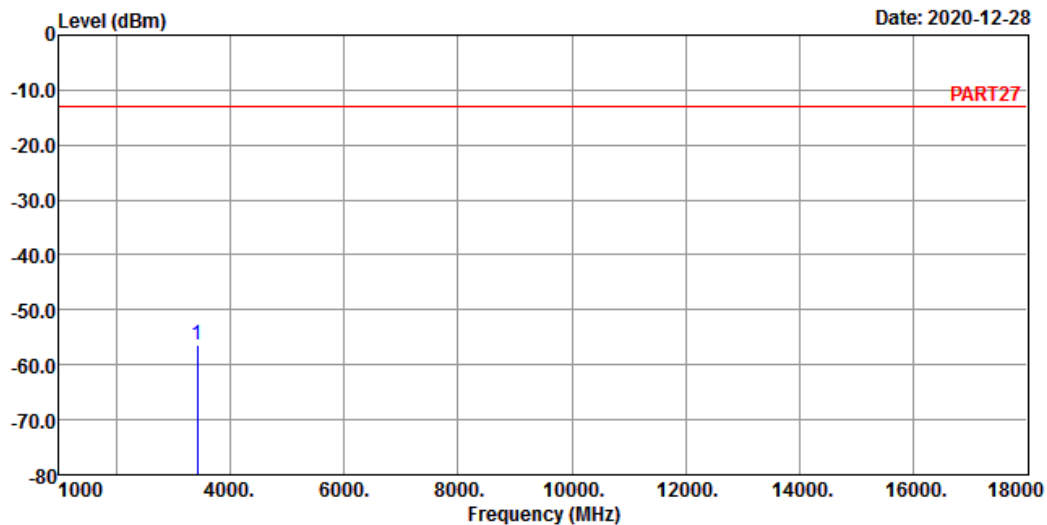
Low Channel



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Data: 3



Site : 966 Chamber 5

Condition: PART27 HORIZONTAL

Remak : LTE Band 4 QPSK_5M Link_L-CH

Tested by: tim-chen

Freq	Level	Read Level	Limit	Over	
MHz	dBm	dBm	dBm	dB	dB

1 pp 3425.00 -56.52 -48.18 -13.00 -8.34 -43.52 Peak

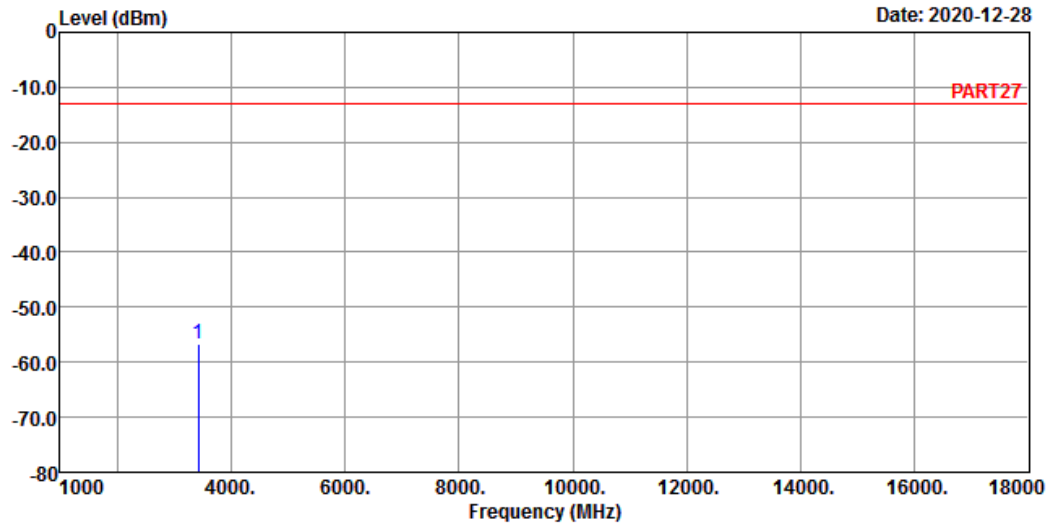


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Data: 4

Date: 2020-12-28



Site : 966 Chamber 5

Condition: PART27 VERTICAL

Remak : LTE Band 4 QPSK_5M Link_L-CH

Tested by: tim-chen

		Read	Limit		Over	
Freq	Level	Level	Line	Factor	Limit	Remark
MHz	dBm	dBm	dBm	dB	dB	
1 pp 3425.00	-56.62	-48.28	-13.00	-8.34	-43.62	Peak

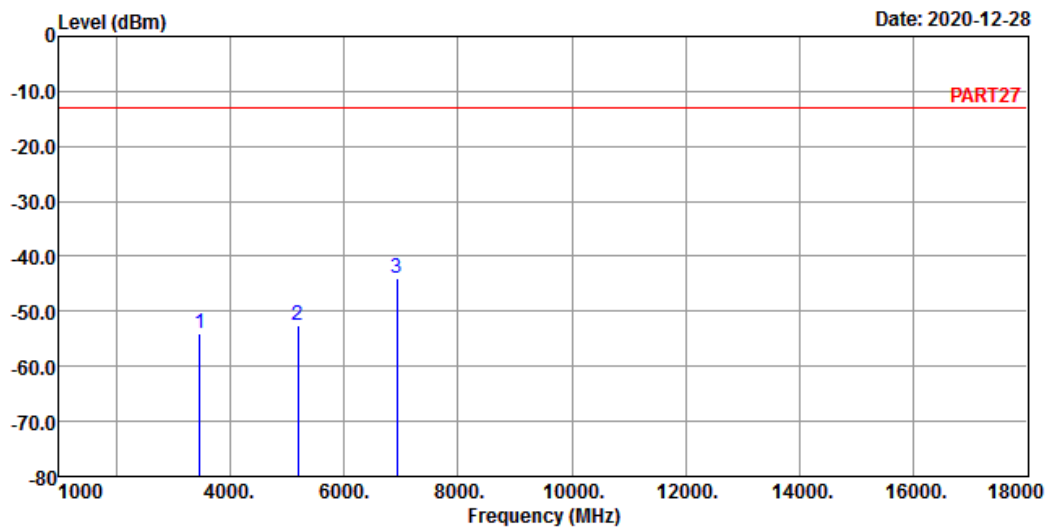
Middle Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

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Data: 3



Site : 966 Chamber 5

Condition: PART27 HORIZONTAL

Remak : LTE Band 4 QPSK_5M Link_M-CH

Tested by: tim-chen

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3465.00	-54.05	-46.17	-13.00	-7.88	-41.05	Peak
2	5197.50	-52.62	-50.55	-13.00	-2.07	-39.62	Peak
3 pp	6930.00	-44.13	-46.82	-13.00	2.69	-31.13	Peak

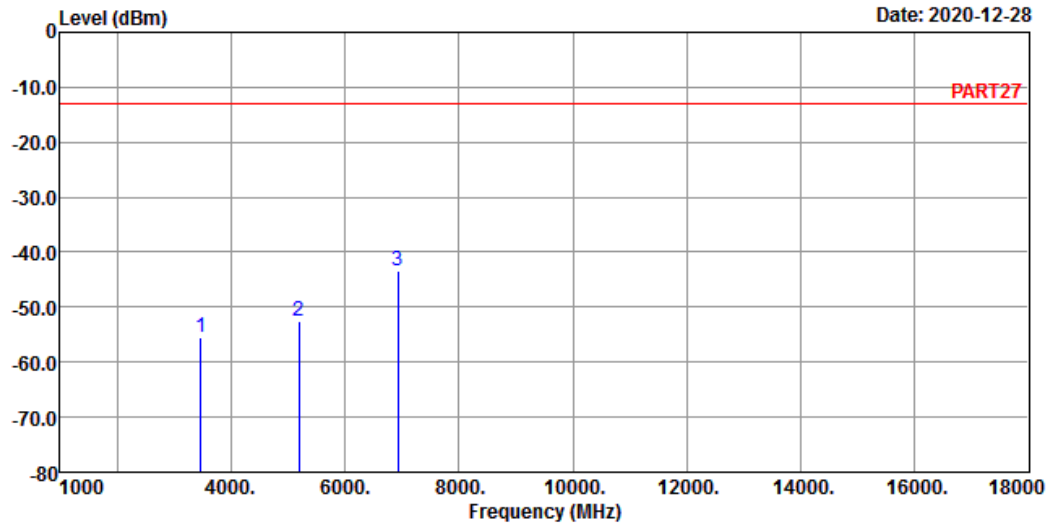


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Data: 4

Date: 2020-12-28



Site : 966 Chamber 5

Condition: PART27 VERTICAL

Remak : LTE Band 4 QPSK_5M Link_M-CH

Tested by: tim-chen

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3465.00	-55.52	-47.64	-13.00	-7.88	-42.52	Peak
2	5197.50	-52.53	-50.46	-13.00	-2.07	-39.53	Peak
3 pp	6930.00	-43.32	-46.01	-13.00	2.69	-30.32	Peak

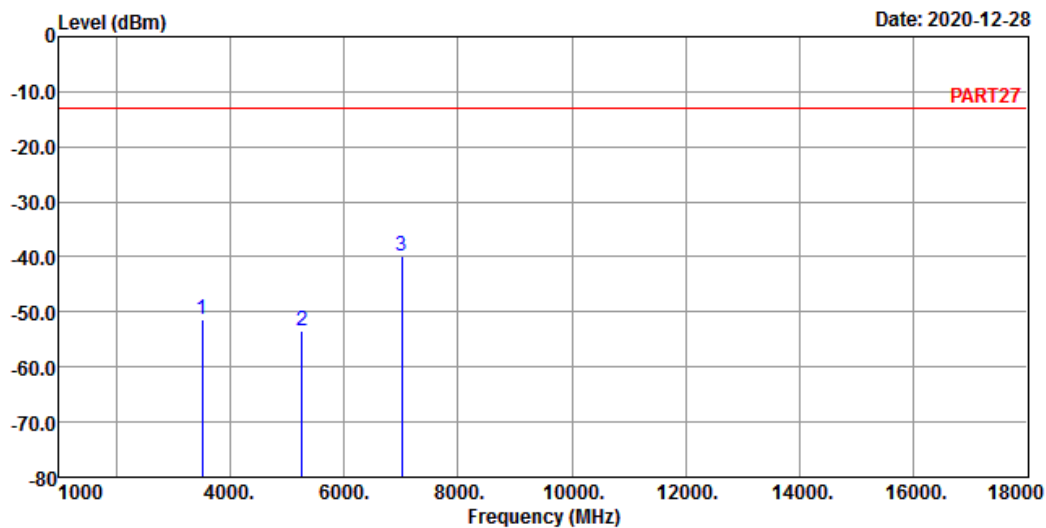
High Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 Chamber 5

Condition: PART27 HORIZONTAL

Remak : LTE Band 4 QPSK_5M Link_H-CH

Tested by: tim-chen

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3505.00	-51.47	-44.02	-13.00	-7.45	-38.47	Peak
2	5257.50	-53.44	-50.92	-13.00	-2.52	-40.44	Peak
3 pp	7010.00	-39.93	-43.12	-13.00	3.19	-26.93	Peak

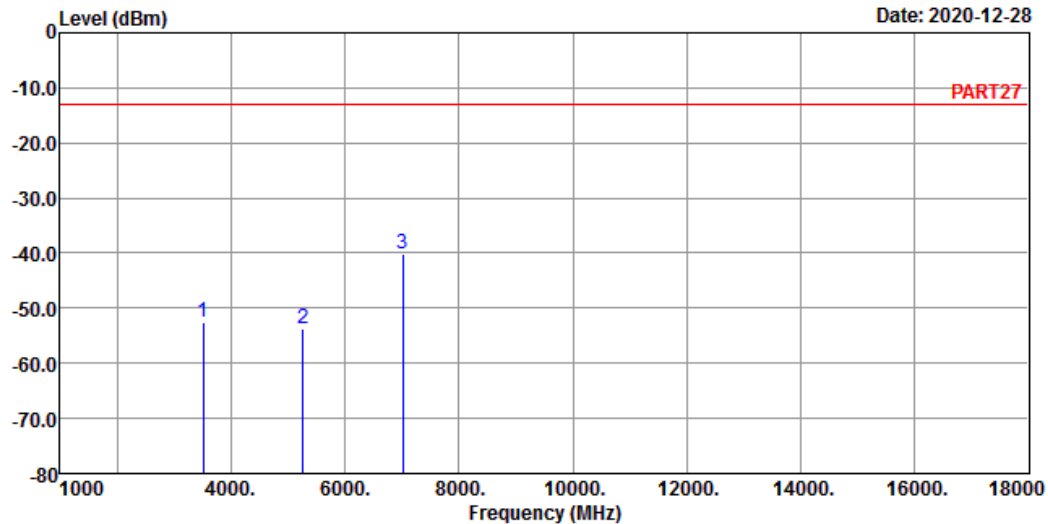


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

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Data: 4

Date: 2020-12-28



Site : 966 Chamber 5

Condition: PART27 VERTICAL

Remak : LTE Band 4 QPSK_5M Link_H-CH

Tested by: tim-chen

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3505.00	-52.56	-45.11	-13.00	-7.45	-39.56	Peak
2	5257.50	-53.63	-51.11	-13.00	-2.52	-40.63	Peak
3 pp	7010.00	-40.16	-43.35	-13.00	3.19	-27.16	Peak

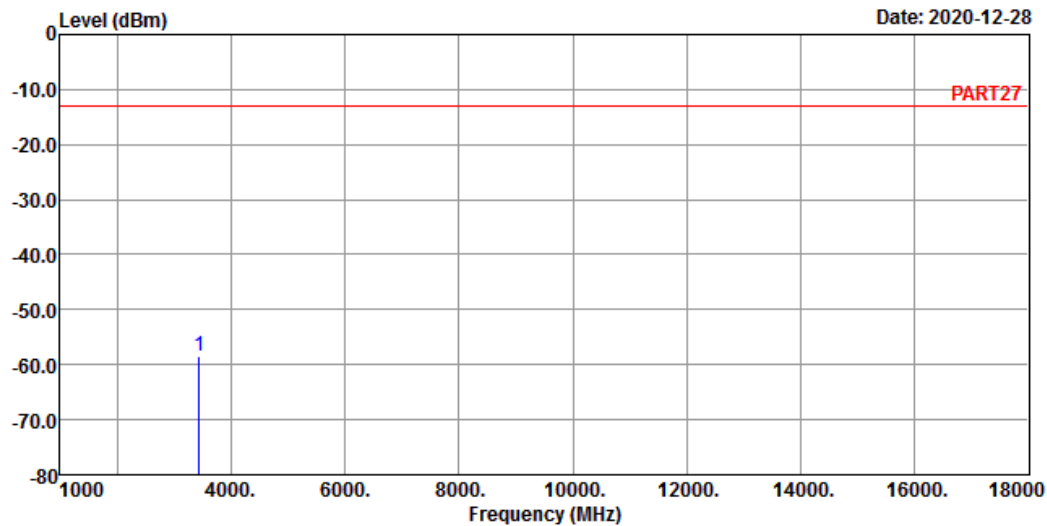
Channel Bandwidth: 20 MHz / QPSK
Low Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 Chamber 5
Condition: PART27 HORIZONTAL
Remak : LTE Band 4 QPSK_20M Link_L-CH
Tested by: Tim Chen

Freq	Level	Read	Limit	Over	
MHz	dBm	Level	Line	Factor	Limit Remark
		dBm	dBm	dB	dB

1 pp 3440.00 -58.57 -50.35 -13.00 -8.22 -45.57 Peak

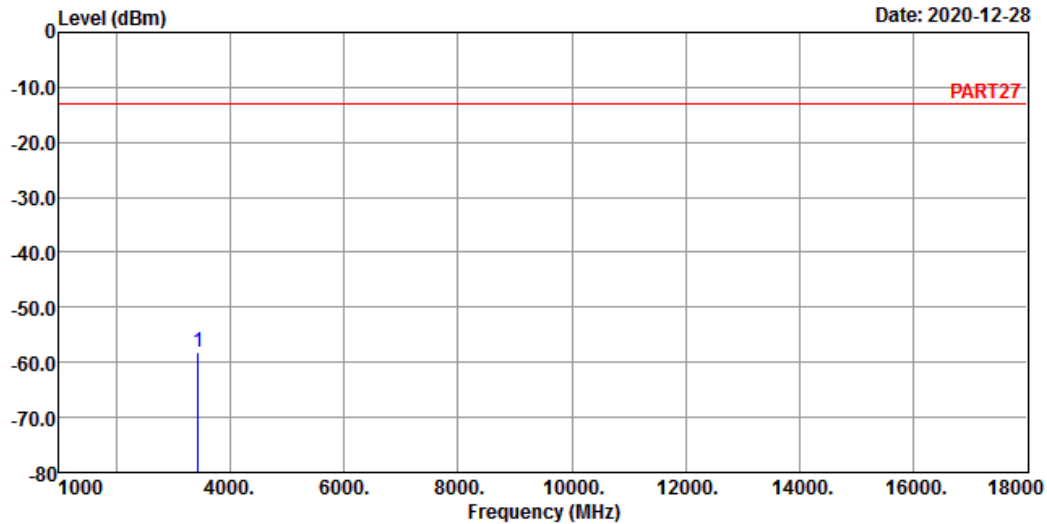


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4

Date: 2020-12-28



Site : 966 Chamber 5

Condition: PART27 VERTICAL

Remak : LTE Band 4 QPSK_20M Link_L-CH

Tested by: Tim Chen

Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
MHz	dBm	dBm	dBm	dB	dB	

1 pp 3440.00 -58.09 -49.87 -13.00 -8.22 -45.09 Peak

Middle Channel

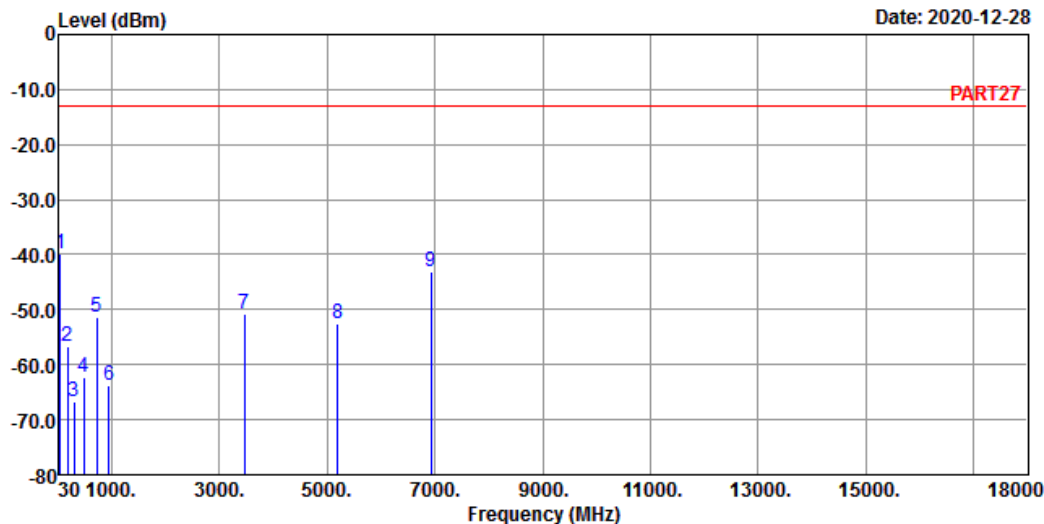


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 5

Date: 2020-12-28



Site : 966 Chamber 5

Condition: PART27 HORIZONTAL

Remak : LTE Band 4 QPSK_20M Link_M-CH

Tested by: Tim Chen

	Freq	Level	Read Level	Limit	Over	
	MHz	dBm	dBm	dBm	Factor	Limit Remark
					dB	dB
1 pp	42.61	-39.93	-38.99	-13.00	-0.94	-26.93 Peak
2	178.41	-56.62	-49.56	-13.00	-7.06	-43.62 Peak
3	302.57	-66.64	-59.67	-13.00	-6.97	-53.64 Peak
4	485.90	-62.18	-57.30	-13.00	-4.88	-49.18 Peak
5	733.25	-51.26	-51.81	-13.00	0.55	-38.26 Peak
6	945.68	-63.79	-65.49	-13.00	1.70	-50.79 Peak
7	3465.00	-50.82	-42.94	-13.00	-7.88	-37.82 Peak
8	5197.50	-52.41	-50.34	-13.00	-2.07	-39.41 Peak
9	6930.00	-43.14	-45.83	-13.00	2.69	-30.14 Peak

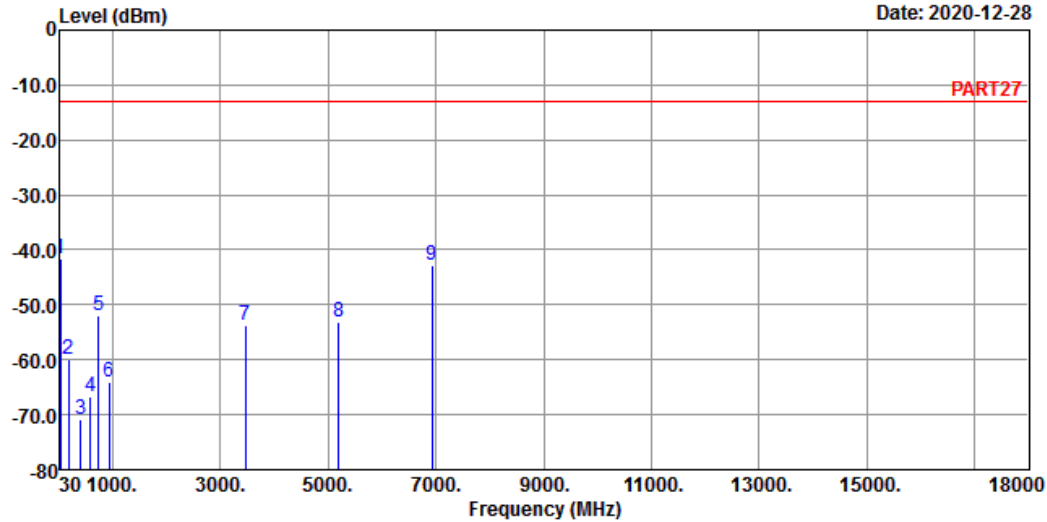


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6

Date: 2020-12-28



Site : 966 Chamber 5

Condition: PART27 VERTICAL

Remak : LTE Band 4 QPSK_20M Link_M-CH

Tested by: Tim Chen

	Freq	Level	Read Level	Limit	Over	
	MHz	dBm	dBm	Line	Factor	Limit Remark
				dBm	dB	dB
1 pp	39.70	-41.53	-42.17	-13.00	0.64	-28.53 Peak
2	178.41	-59.99	-52.93	-13.00	-7.06	-46.99 Peak
3	404.42	-70.77	-64.86	-13.00	-5.91	-57.77 Peak
4	584.84	-66.62	-65.22	-13.00	-1.40	-53.62 Peak
5	746.83	-51.89	-52.71	-13.00	0.82	-38.89 Peak
6	943.74	-64.14	-65.79	-13.00	1.65	-51.14 Peak
7	3465.00	-53.69	-45.81	-13.00	-7.88	-40.69 Peak
8	5197.50	-53.28	-51.21	-13.00	-2.07	-40.28 Peak
9	6930.00	-42.94	-45.63	-13.00	2.69	-29.94 Peak

High Channel

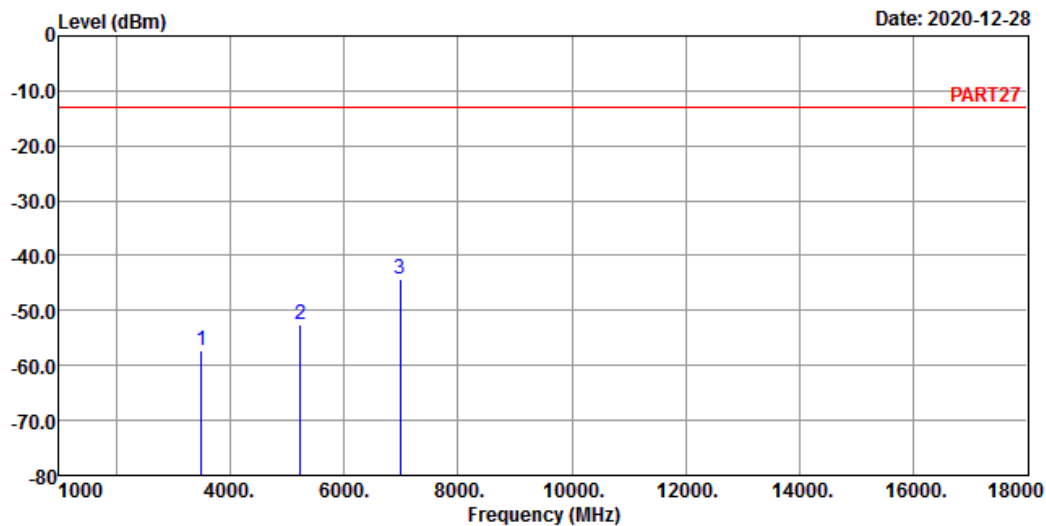


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3

Date: 2020-12-28



Site : 966 Chamber 5

Condition: PART27 HORIZONTAL

Remak : LTE Band 4 QPSK_20M Link_H-CH

Tested by: Tim Chen

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3490.00	-57.22	-49.57	-13.00	-7.65	-44.22	Peak
2	5235.00	-52.64	-50.23	-13.00	-2.41	-39.64	Peak
3 pp	6980.00	-44.30	-47.36	-13.00	3.06	-31.30	Peak

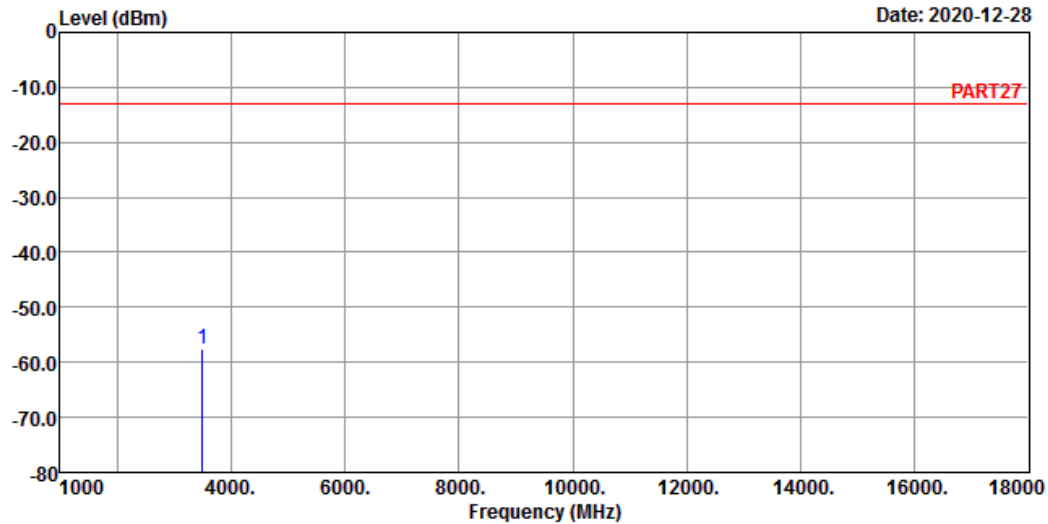


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4

Date: 2020-12-28



Site : 966 Chamber 5

Condition: PART27 VERTICAL

Remak : LTE Band 4 QPSK_20M Link_H-CH

Tested by: Tim Chen

		Read	Limit		Over	
Freq	Level	Level	Line	Factor	Limit	Remark
MHz	dBm	dBm	dBm	dB	dB	

1 pp 3490.00 -57.60 -49.95 -13.00 -7.65 -44.60 Peak

LTE Band 7

Below 1GHz

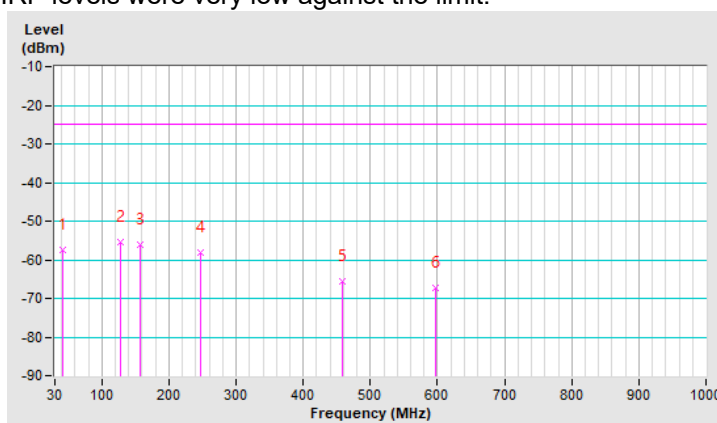
Channel Bandwidth 5MHz

Mode	TX channel 21100 (2535.0MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	26deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Edison Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	41.25	-57.4	-25.0	-32.4	1.49 H	181	47.2	-104.6
2	128.41	-55.5	-25.0	-30.5	1.49 H	202	49.9	-105.4
3	156.52	-56.1	-25.0	-31.1	1.49 H	155	47.6	-103.7
4	247.90	-58.2	-25.0	-33.2	1.00 H	211	45.7	-103.9
5	458.77	-65.6	-25.0	-40.6	1.99 H	301	32.8	-98.4
6	596.54	-67.3	-25.0	-42.3	1.49 H	13	27.8	-95.1

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.

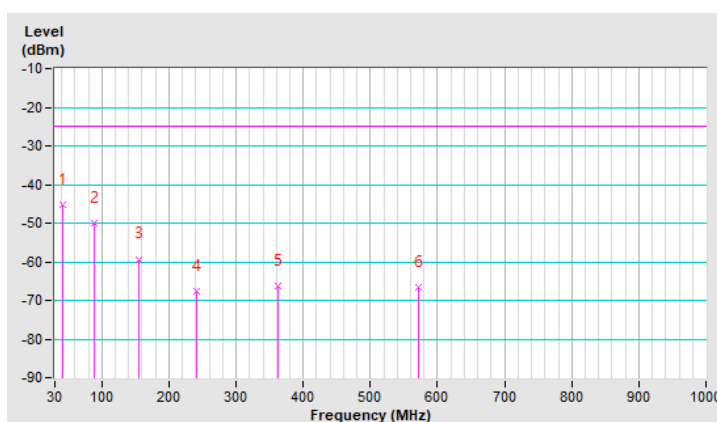


Mode	TX channel 21100 (2535.0MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	26deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Edison Lee		

Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	42.65	-45.4	-25.0	-20.4	1.01 V	242	59.3	-104.7
2	89.04	-50.1	-25.0	-25.1	1.01 V	85	59.5	-109.6
3	155.12	-59.3	-25.0	-34.3	1.01 V	174	44.5	-103.8
4	240.87	-67.6	-25.0	-42.6	1.51 V	48	36.8	-104.4
5	363.17	-66.4	-25.0	-41.4	1.01 V	188	34.2	-100.6
6	572.64	-66.6	-25.0	-41.6	1.01 V	127	29.4	-96.0

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.



Above 1GHz

LTE Band 7, Channel Bandwidth 5MHz

Mode	TX channel 20775 (2502.5MHz)	Frequency Range	1GHz ~ 26GHz
Environmental Conditions	23deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Edison Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5005.00	-36.74	-25.00	-11.74	1.11 H	170	52.30	-89.04
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5005.00	-33.80	-25.00	-8.80	1.32 V	134	55.24	-89.04

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

Mode	TX channel 21100 (2535.0MHz)	Frequency Range	1GHz ~ 26GHz
Environmental Conditions	23deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Edison Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5070.00	-36.40	-25.00	-11.40	1.16 H	165	52.50	-88.90
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5070.00	-31.90	-25.00	-6.90	1.39 V	136	57.00	-88.90

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

Mode	TX channel 21425 (2567.5MHz)	Frequency Range	1GHz ~ 26GHz
Environmental Conditions	23deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Edison Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5135.00	-35.43	-25.00	-10.43	1.23 H	166	53.50	-88.93
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5135.00	-32.33	-25.00	-7.33	1.30 V	137	56.60	-88.93

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.

LTE Band 7, Channel Bandwidth 20MHz

Mode	TX channel 20850 (2510.0MHz)	Frequency Range	1GHz ~ 26GHz
Environmental Conditions	23deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Edison Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5020.00	-36.80	-25.00	-11.80	1.21 H	163	52.19	-88.99
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5020.00	-32.89	-25.00	-7.89	1.43 V	135	56.10	-88.99

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

Mode	TX channel 21100 (2535.0MHz)	Frequency Range	1GHz ~ 26GHz
Environmental Conditions	23deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Edison Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5070.00	-37.07	-25.00	-12.07	1.20 H	169	51.83	-88.90
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5070.00	-32.60	-25.00	-7.60	1.42 V	137	56.30	-88.90

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

Mode	TX channel 21350 (2560.0MHz)	Frequency Range	1GHz ~ 26GHz
Environmental Conditions	23deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Edison Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5120.00	-37.01	-25.00	-12.01	1.18 H	167	51.90	-88.91
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5120.00	-32.78	-25.00	-7.78	1.37 V	133	56.13	-88.91

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.

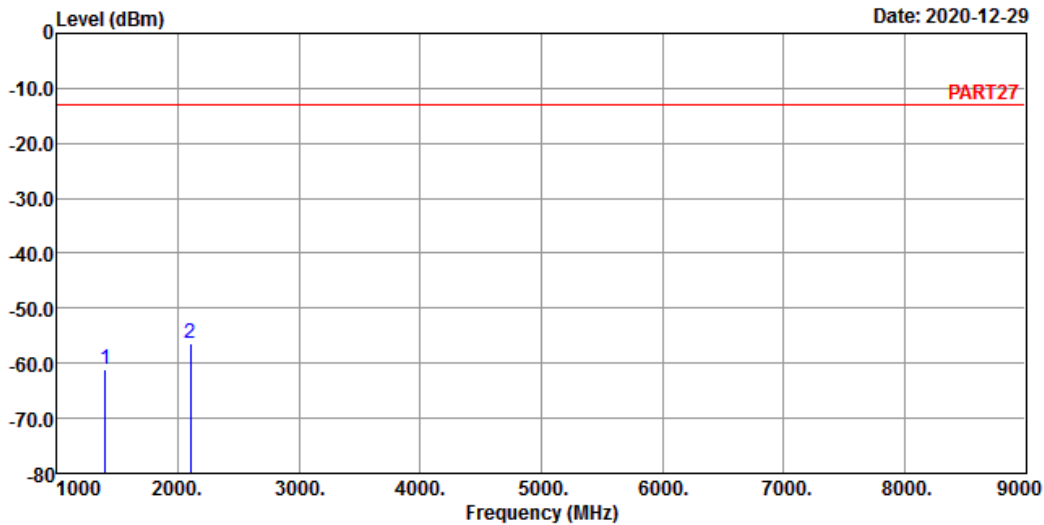
LTE Band 12
Channel Bandwidth: 1.4 MHz / QPSK
Low Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

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Data: 3



Site : 966 Chamber 5
Condition: PART27 HORIZONTAL
Remak : LTE Band 12 QPSK_1.4M Link_L-CH
Tested by: Tim Chen

		Read	Limit		Over	
Freq	Level	Level	Line	Factor	Limit	Remark
MHz	dBm	dBm	dBm	dB	dB	
1	1399.40	-60.99	-49.14	-13.00	-11.85	-47.99 Peak
2 pp	2099.10	-56.33	-46.17	-13.00	-10.16	-43.33 Peak

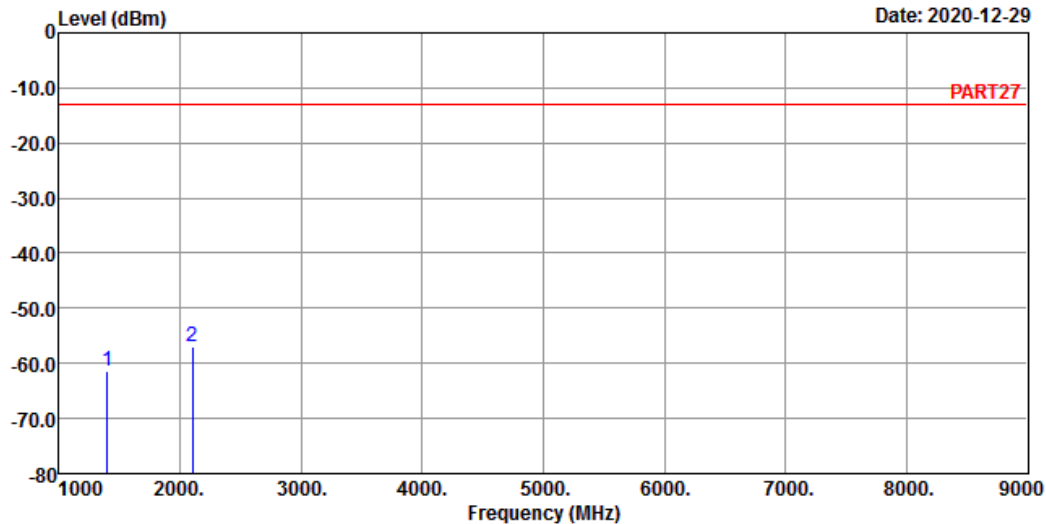


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

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Data: 4

Date: 2020-12-29



Site : 966 Chamber 5

Condition: PART27 VERTICAL

Remak : LTE Band 12 QPSK_1.4M Link_L-CH

Tested by: Tim Chen

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1399.40	-61.31	-49.46	-13.00	-11.85	-48.31	Peak
2 pp	2099.10	-57.12	-46.96	-13.00	-10.16	-44.12	Peak

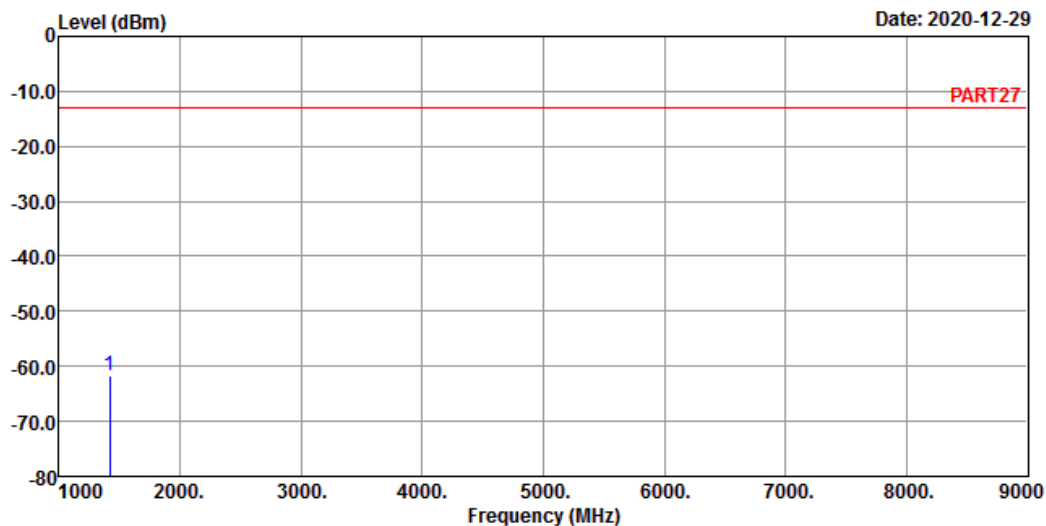
Middle Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

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Data: 3



Site : 966 Chamber 5

Condition: PART27 HORIZONTAL

Remak : LTE Band 12 QPSK_1.4M Link_M-CH

Tested by: Tim Chen

		Read	Limit		Over	
Freq	Level	Level	Line	Factor	Limit	Remark
MHz	dBm	dBm	dBm	dB	dB	

1 pp 1415.00 -61.73 -49.65 -13.00 -12.08 -48.73 Peak

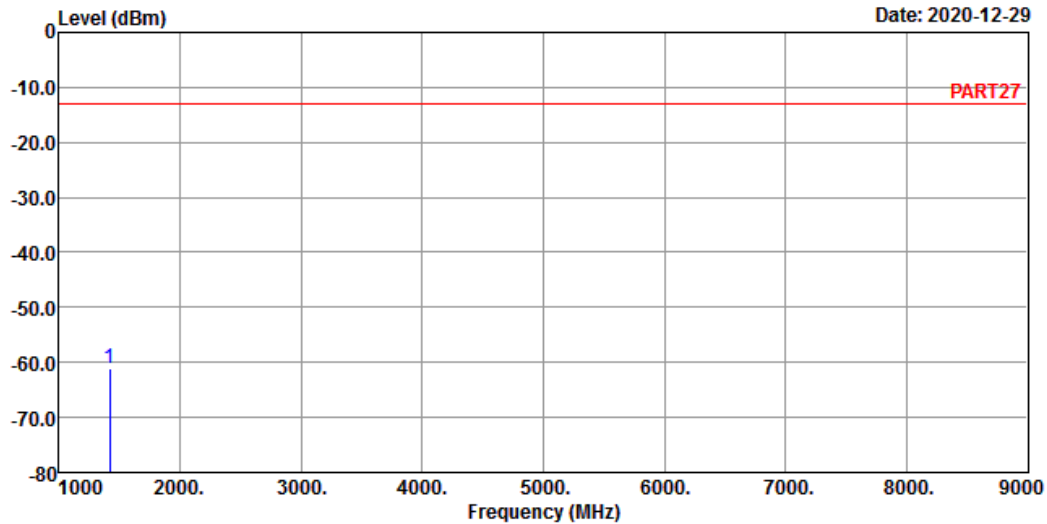


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

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Data: 4

Date: 2020-12-29



Site : 966 Chamber 5

Condition: PART27 VERTICAL

Remak : LTE Band 12 QPSK_1.4M Link_M-CH

Tested by: Tim Chen

		Read	Limit		Over	
Freq	Level	Level	Line	Factor	Limit	Remark
MHz	dBm	dBm	dBm	dB	dB	

1 pp 1415.00 -61.25 -49.17 -13.00 -12.08 -48.25 Peak

High Channel

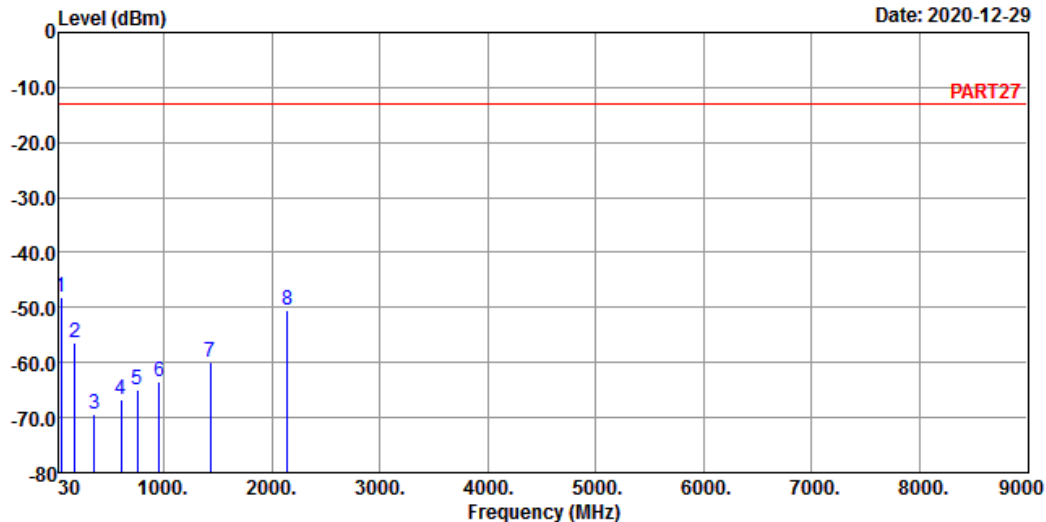


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 5

Date: 2020-12-29



Site : 966 Chamber 5

Condition: PART27 HORIZONTAL

Remak : LTE Band 12 QPSK_1.4M Link_H-CH

Tested by: Tim Chen

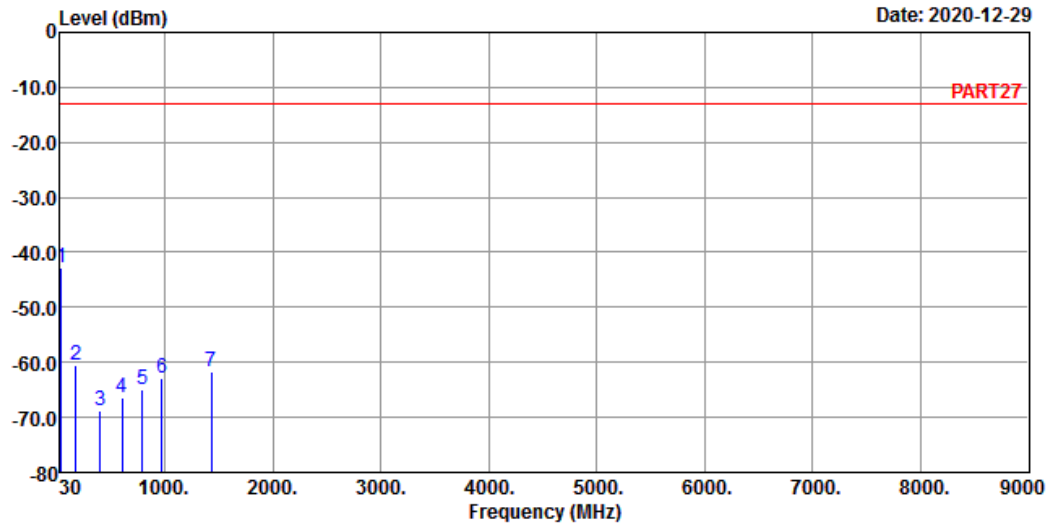
	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	43.58	-48.20	-46.73	-13.00	-1.47	-35.20	Peak
2	178.41	-56.50	-49.44	-13.00	-7.06	-43.50	Peak
3	355.92	-69.28	-63.08	-13.00	-6.20	-56.28	Peak
4	602.30	-66.63	-65.87	-13.00	-0.76	-53.63	Peak
5	755.56	-64.86	-65.72	-13.00	0.86	-51.86	Peak
6	957.32	-63.44	-65.51	-13.00	2.07	-50.44	Peak
7	1430.60	-59.90	-47.59	-13.00	-12.31	-46.90	Peak
8	2145.90	-50.49	-41.02	-13.00	-9.47	-37.49	Peak



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6



Site : 966 Chamber 5

Condition: PART27 VERTICAL

Remak : LTE Band 12 QPSK_1.4M Link_H-CH

Tested by: Tim Chen

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	39.70	-42.75	-43.39	-13.00	0.64	-29.75	Peak
2	178.41	-60.56	-53.50	-13.00	-7.06	-47.56	Peak
3	398.60	-68.68	-62.73	-13.00	-5.95	-55.68	Peak
4	603.27	-66.28	-65.52	-13.00	-0.76	-53.28	Peak
5	787.57	-64.82	-65.59	-13.00	0.77	-51.82	Peak
6	969.93	-63.00	-65.52	-13.00	2.52	-50.00	Peak
7	1430.60	-61.69	-49.38	-13.00	-12.31	-48.69	Peak

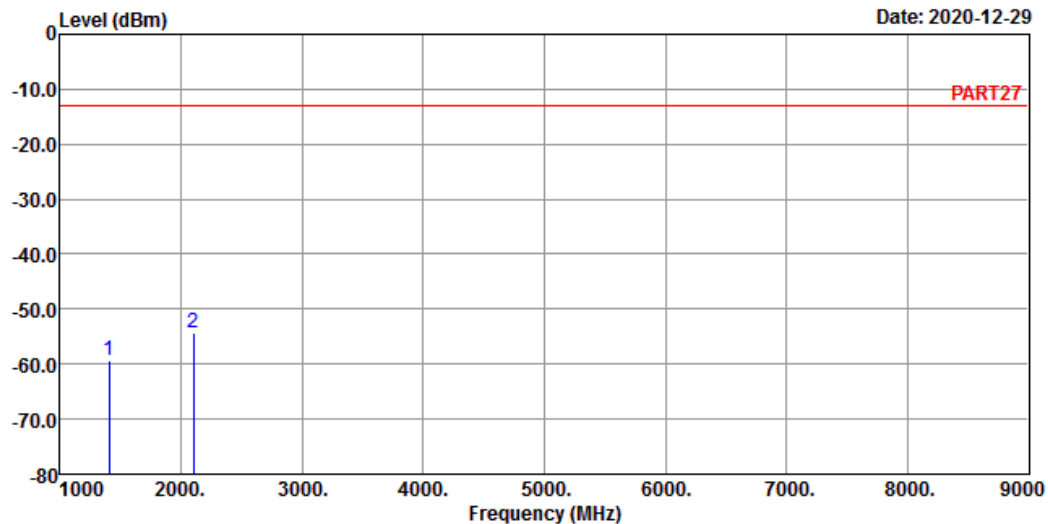
Channel Bandwidth: 5 MHz / QPSK
Low Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 Chamber 5
Condition: PART27 HORIZONTAL
Remak : LTE Band 12 QPSK_5M Link_L-CH
Tested by: Tim Chen

	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1403.00	-59.25	-47.34	-13.00	-11.91	-46.25	Peak
2 pp	2104.50	-54.22	-44.06	-13.00	-10.16	-41.22	Peak

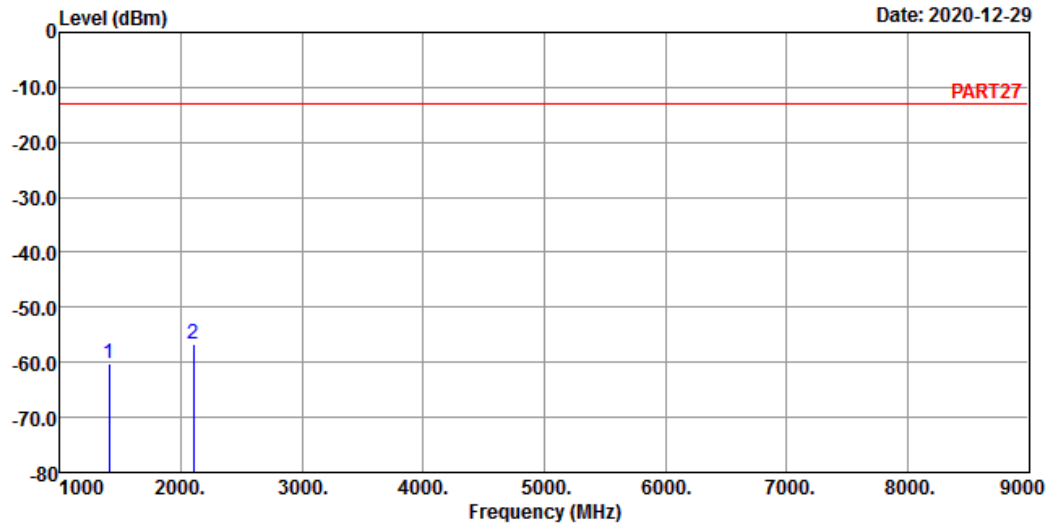


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4

Date: 2020-12-29



Site : 966 Chamber 5

Condition: PART27 VERTICAL

Remak : LTE Band 12 QPSK_5M Link_L-CH

Tested by: Tim Chen

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1403.00	-60.10	-48.19	-13.00	-11.91	-47.10	Peak
2 pp	2104.50	-56.66	-46.50	-13.00	-10.16	-43.66	Peak

Middle Channel

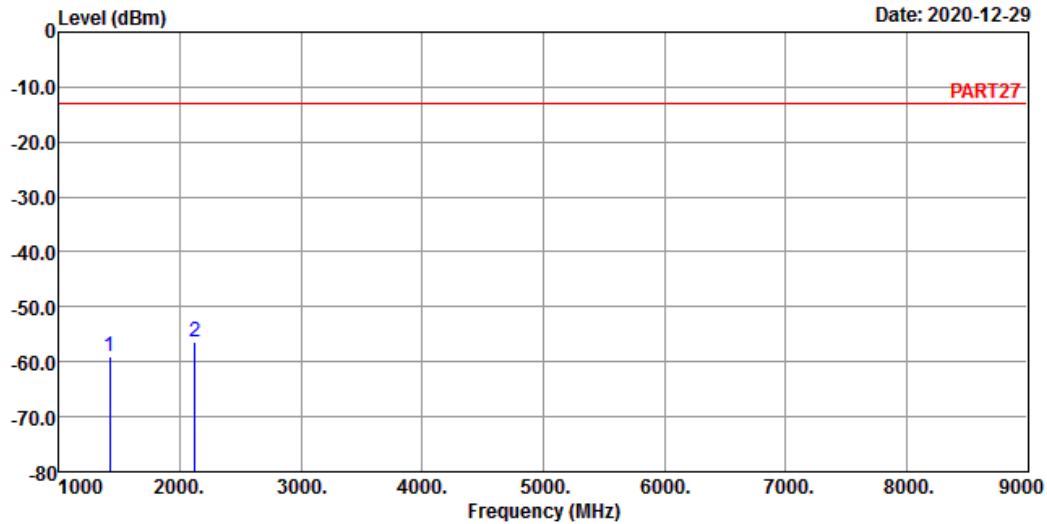


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3

Date: 2020-12-29



Site : 966 Chamber 5

Condition: PART27 HORIZONTAL

Remak : LTE Band 12 QPSK_5M Link_M-CH

Tested by: Tim Chen

			Read	Limit		Over	
	Freq	Level	Level	Line	Factor	Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1415.00	-58.92	-46.84	-13.00	-12.08	-45.92	Peak
2 pp	2122.50	-56.49	-46.62	-13.00	-9.87	-43.49	Peak

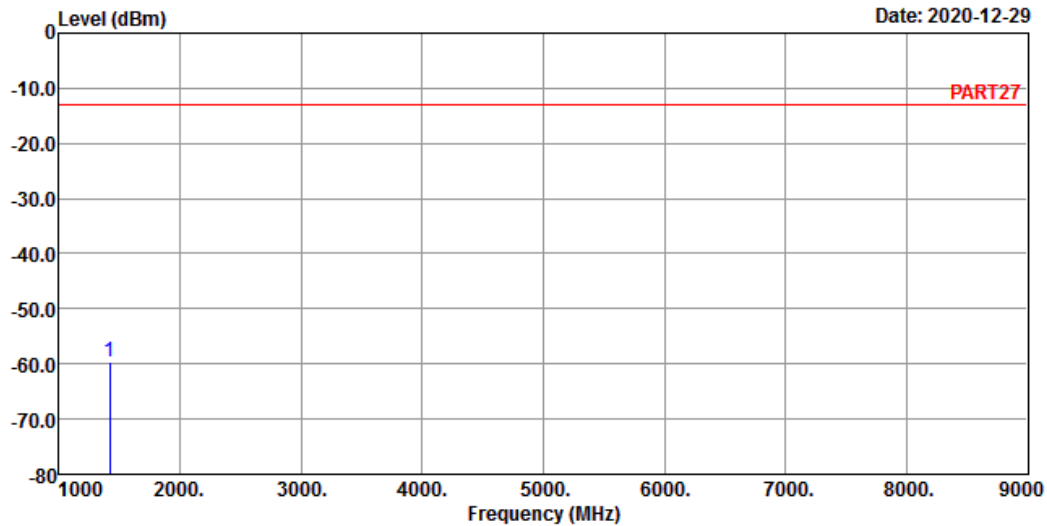


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4

Date: 2020-12-29



Site : 966 Chamber 5

Condition: PART27 VERTICAL

Remak : LTE Band 12 QPSK_5M Link_M-CH

Tested by: Tim Chen

		Read	Limit		Over	
Freq	Level	Level	Line	Factor	Limit	Remark
MHz	dBm	dBm	dBm	dB	dB	

1 pp 1415.00 -59.58 -47.50 -13.00 -12.08 -46.58 Peak

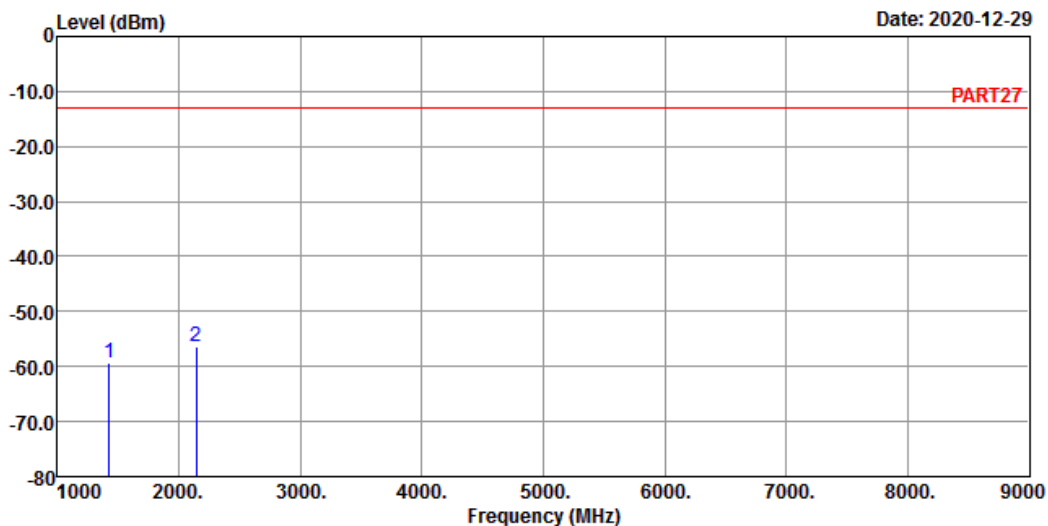
High Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 Chamber 5
 Condition: PART27 HORIZONTAL
 Remak : LTE Band 12 QPSK_5M Link_H-CH
 Tested by: Tim Chen

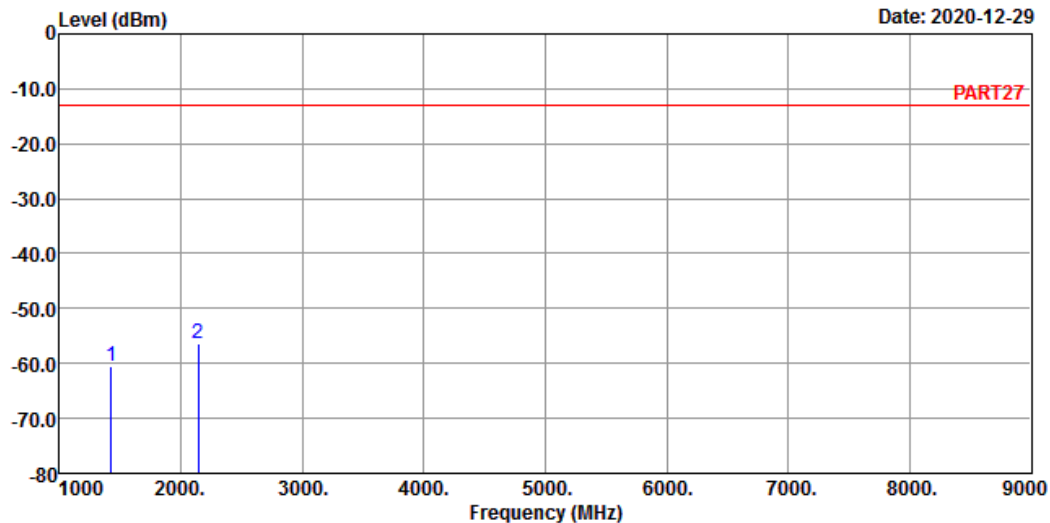
		Read	Limit		Over	
Freq	Level	Level	Line	Factor	Limit	Remark
MHz	dBm	dBm	dBm	dB	dB	
1	1427.00	-59.34	-47.09	-13.00	-12.25	-46.34 Peak
2 pp	2140.50	-56.44	-46.87	-13.00	-9.57	-43.44 Peak



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4



Site : 966 Chamber 5

Condition: PART27 VERTICAL

Remak : LTE Band 12 QPSK_5M Link_H-CH

Tested by: Tim Chen

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1427.00	-60.37	-48.12	-13.00	-12.25	-47.37	Peak
2 pp	2140.50	-56.51	-46.94	-13.00	-9.57	-43.51	Peak

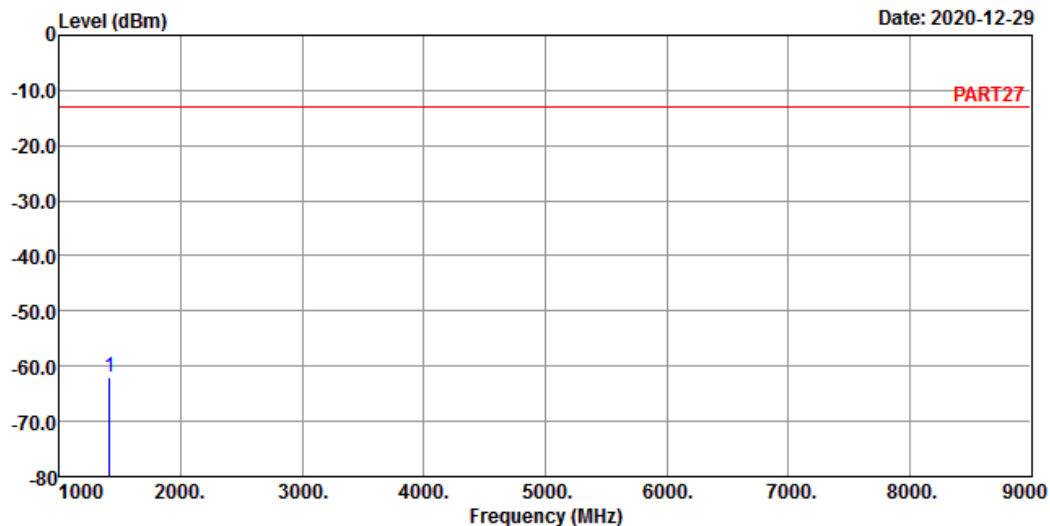
Channel Bandwidth: 10 MHz / QPSK
Low Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 Chamber 5
Condition: PART27 HORIZONTAL
Remak : LTE Band 12 QPSK_10M Link_L-CH
Tested by: Tim Chen

Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
MHz	dBm	dBm	dBm	dB	dB	

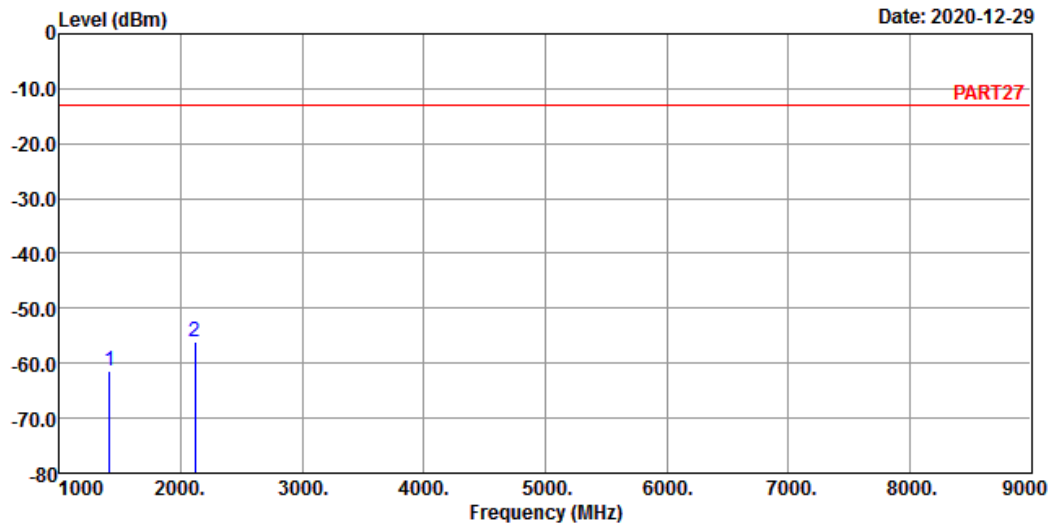
1 pp 1408.00 -61.88 -49.92 -13.00 -11.96 -48.88 Peak



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4



Site : 966 Chamber 5
 Condition: PART27 VERTICAL
 Remak : LTE Band 12 QPSK_10M Link_L-CH
 Tested by: Tim Chen

	Freq	Level	Read Level	Limit	Over	
	MHz	dBm	dBm	dBm	dB	Limit Remark
1	1408.00	-61.53	-49.57	-13.00	-11.96	-48.53 Peak
2 pp	2112.00	-56.07	-46.11	-13.00	-9.96	-43.07 Peak

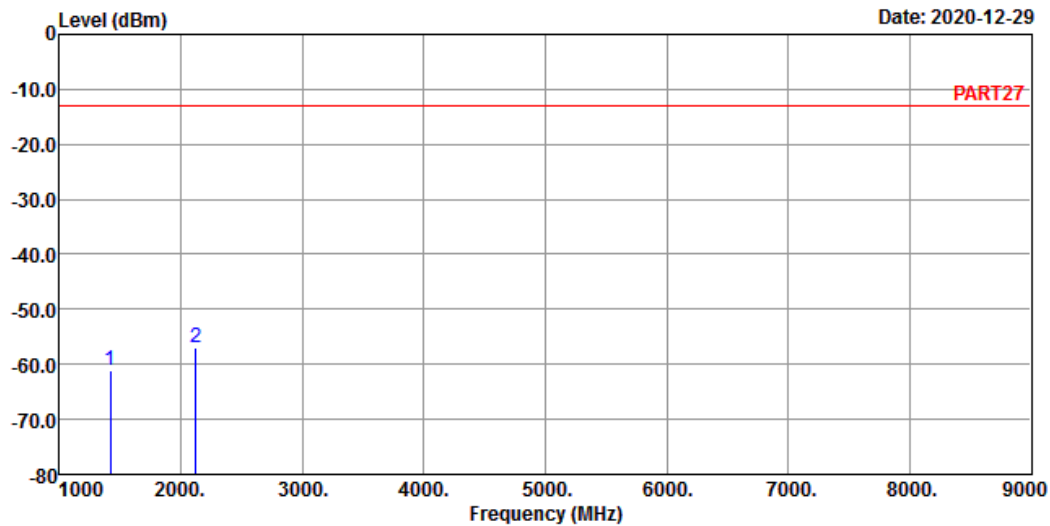
Middle Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 Chamber 5
 Condition: PART27 HORIZONTAL
 Remak : LTE Band 12 QPSK_10M Link_M-CH
 Tested by: Tim Chen

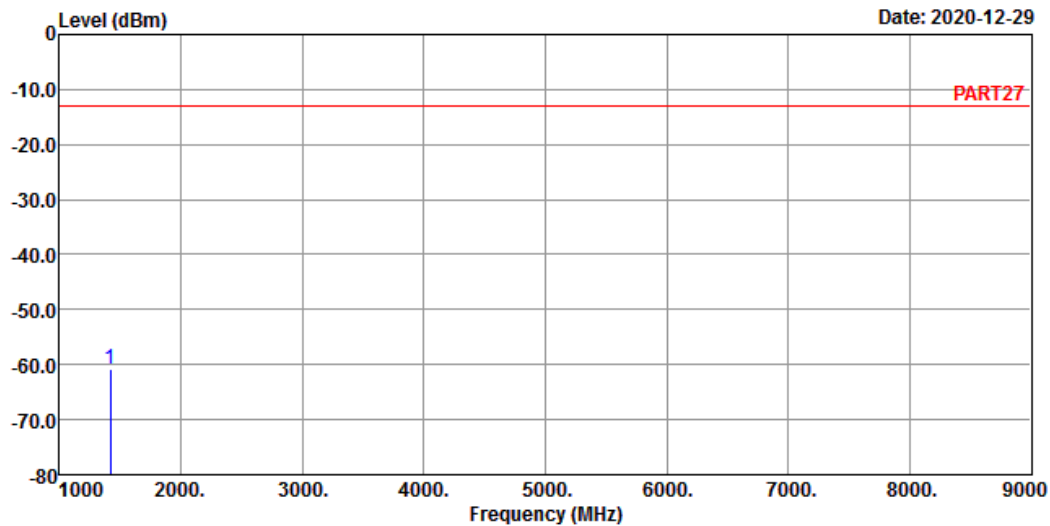
	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1415.00	-61.03	-48.95	-13.00	-12.08	-48.03	Peak
2 pp	2122.50	-56.90	-47.03	-13.00	-9.87	-43.90	Peak



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4



Site : 966 Chamber 5

Condition: PART27 VERTICAL

Remak : LTE Band 12 QPSK_10M Link_M-CH

Tested by: Tim Chen

Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
MHz	dBm	dBm	dBm	dB	dB	

1 pp 1415.00 -60.77 -48.69 -13.00 -12.08 -47.77 Peak

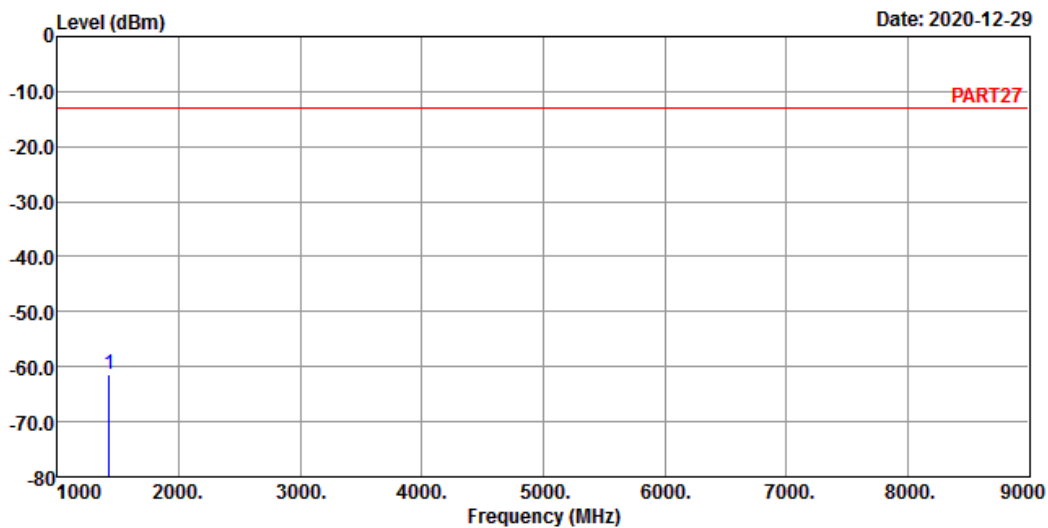
High Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 Chamber 5
 Condition: PART27 HORIZONTAL
 Remak : LTE Band 12 QPSK_10M Link_H-CH
 Tested by: Tim Chen

		Read	Limit		Over	
Freq	Level	Level	Line	Factor	Limit	Remark
MHz	dBm	dBm	dBm	dB	dB	

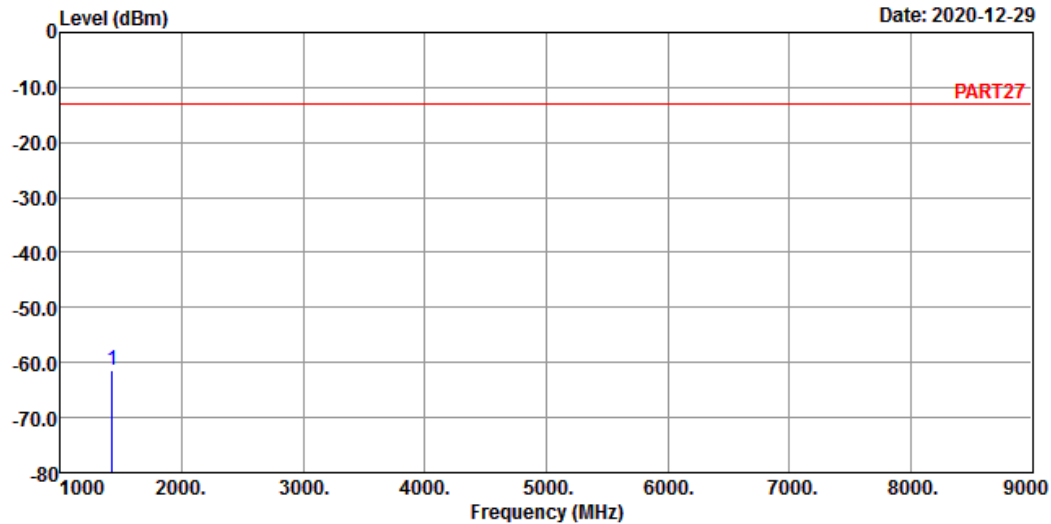
1 pp 1422.00 -61.48 -49.29 -13.00 -12.19 -48.48 Peak



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4



Site : 966 Chamber 5

Condition: PART27 VERTICAL

Remak : LTE Band 12 QPSK_10M Link_H-CH

Tested by: Tim Chen

		Read	Limit		Over	
Freq	Level	Level	Line	Factor	Limit	Remark
MHz	dBm	dBm	dBm	dB	dB	

1 pp 1422.00 -61.54 -49.35 -13.00 -12.19 -48.54 Peak