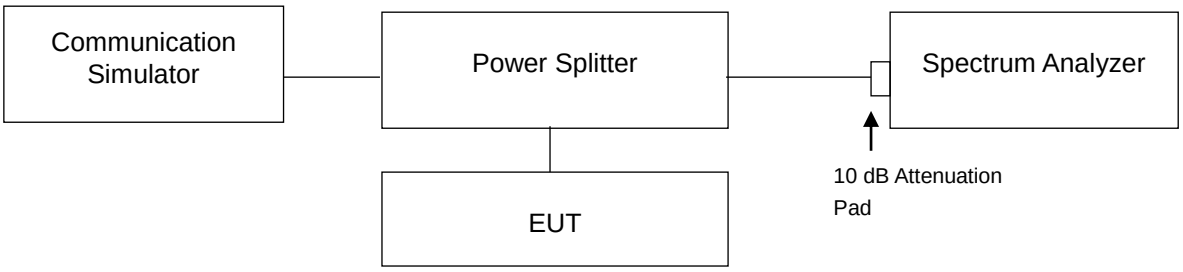
4.5 Band Edge Measurement

4.5.1 Limits of Band Edge Measurement

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. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

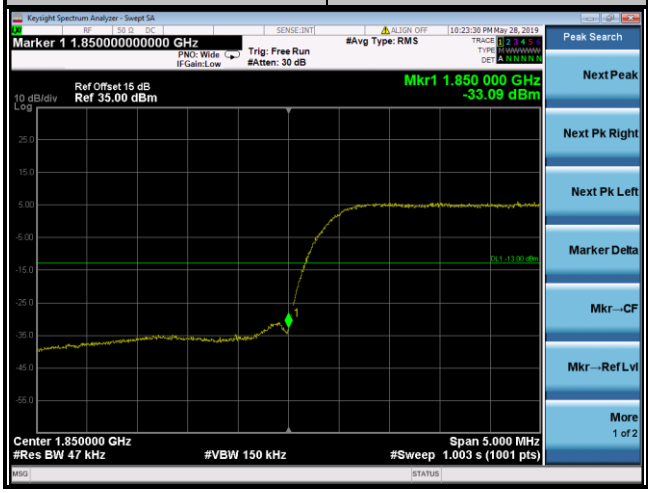
4.5.2 Test Setup

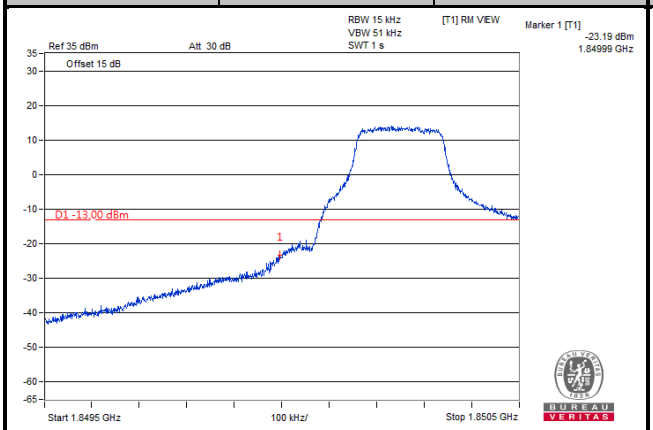
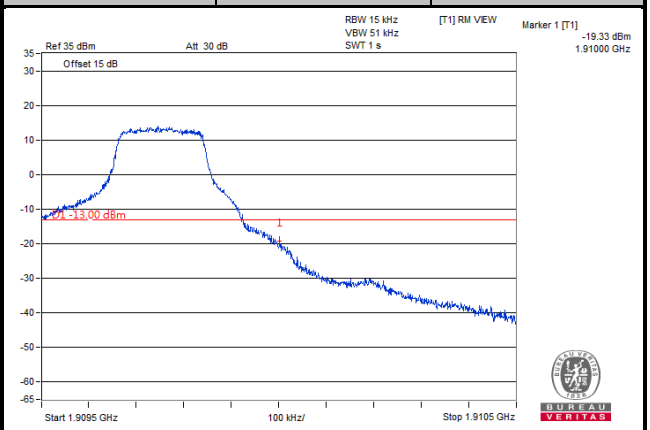
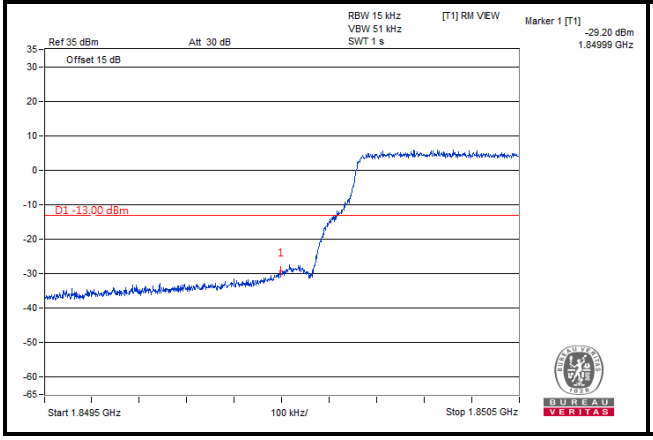
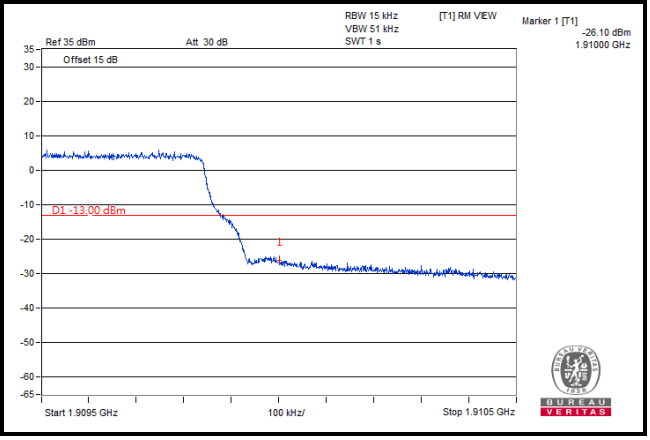


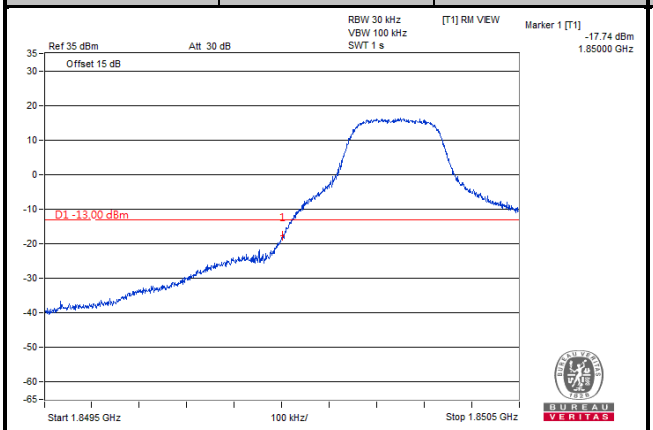
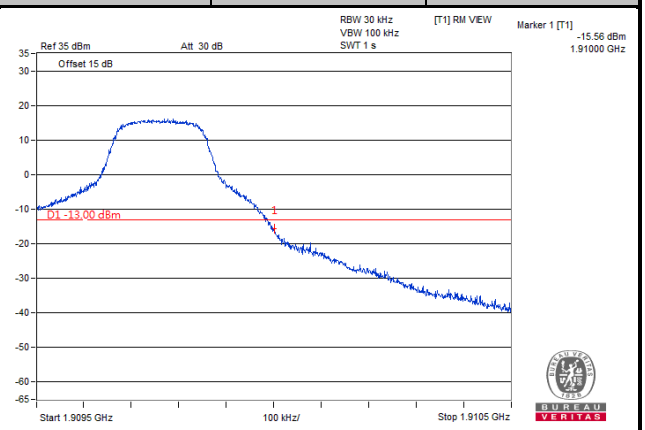
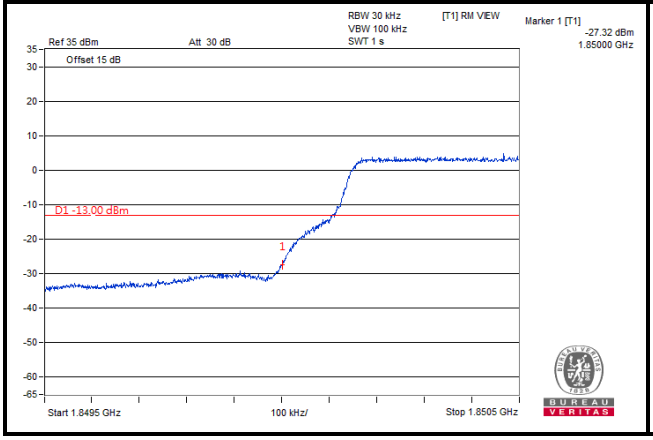
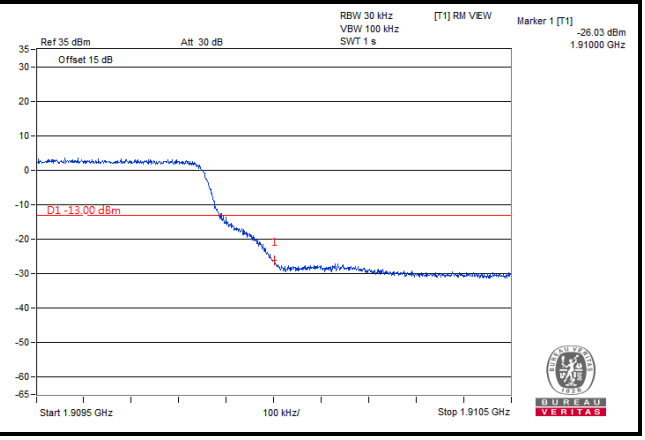
4.5.3 Test Procedures

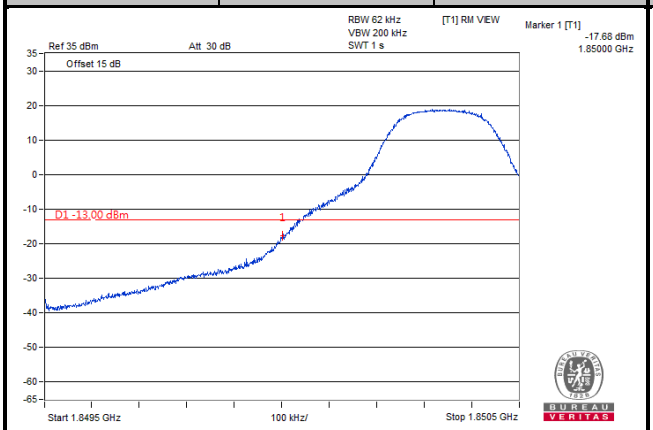
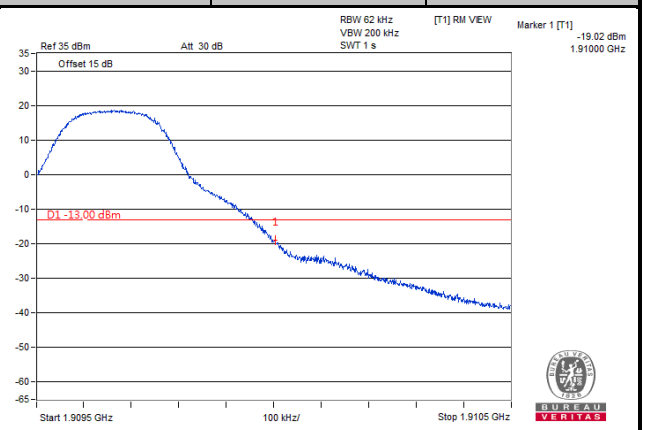
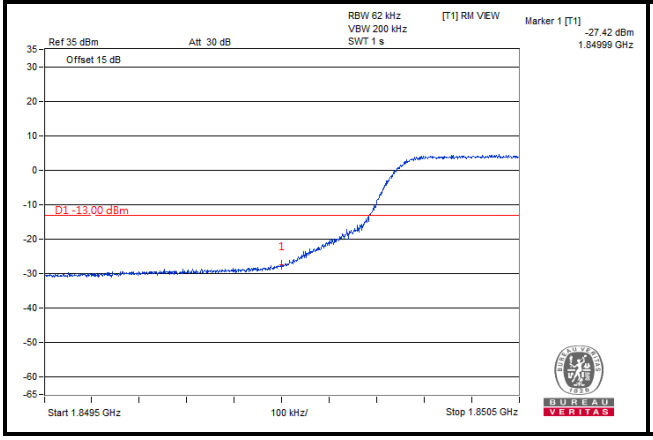
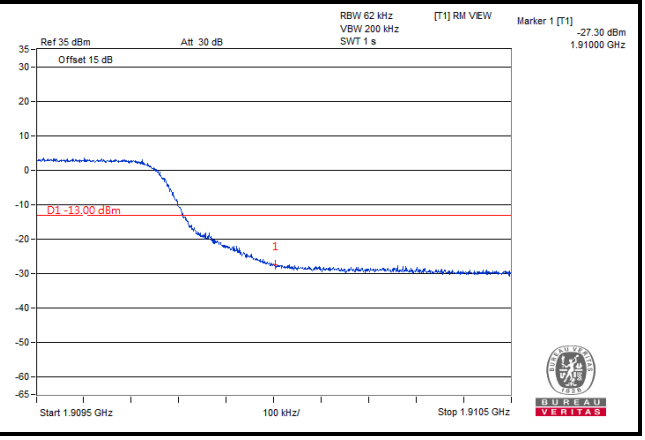
a. All measurements were done at low and high operational frequency range.
b. The center frequency of spectrum is the band edge frequency and span is 5 MHz. RB of the spectrum is 47 kHz and VB of the spectrum is 150 kHz (WCDMA).
c. The center frequency of spectrum is the band edge frequency and span is 1 MHz. RB of the spectrum is 15 kHz and VB of the spectrum is 51 kHz (LTE Bandwidth 1.4 MHz).
d. The center frequency of spectrum is the band edge frequency and span is 1 MHz. RB of the spectrum is 30 kHz and VB of the spectrum is 100 kHz (LTE Bandwidth 3 MHz).
e. The center frequency of spectrum is the band edge frequency and span is 1 MHz. RB of the spectrum is 62 kHz and VB of the spectrum is 200 kHz (LTE Bandwidth 5 MHz).
f. The center frequency of spectrum is the band edge frequency and span is 1 MHz. RB of the spectrum is 100 kHz and VB of the spectrum is 300 kHz (LTE Bandwidth 10 MHz).
g. The center frequency of spectrum is the band edge frequency and span is 1 MHz. RB of the spectrum is 150 kHz and VB of the spectrum is 470 kHz (LTE Bandwidth 15 MHz).
h. The center frequency of spectrum is the band edge frequency and span is 1 MHz. RB of the spectrum is 200 kHz and VB of the spectrum is 1 MHz (LTE Bandwidth 20 MHz).
i. Record the max trace plot into the test report.

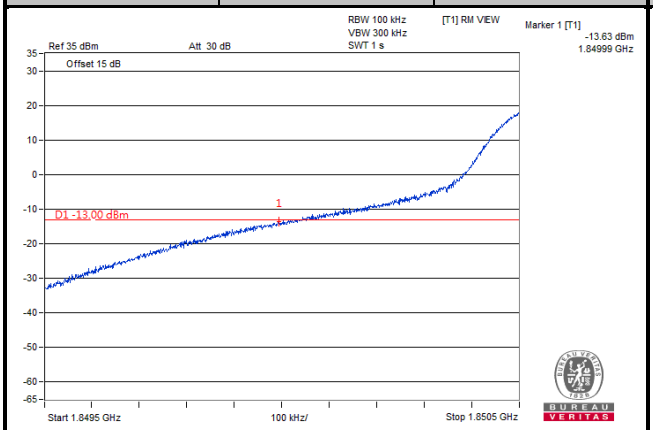
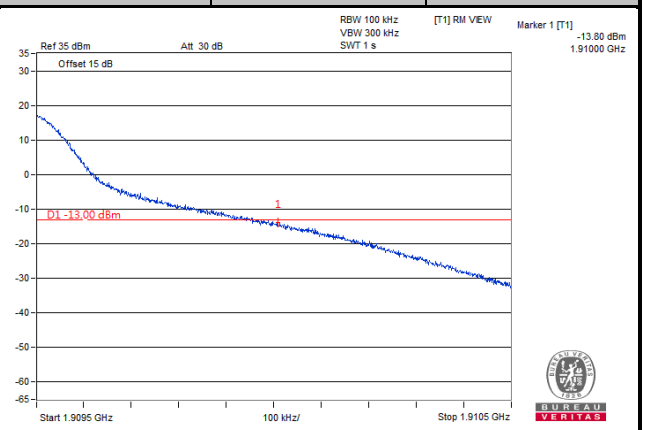
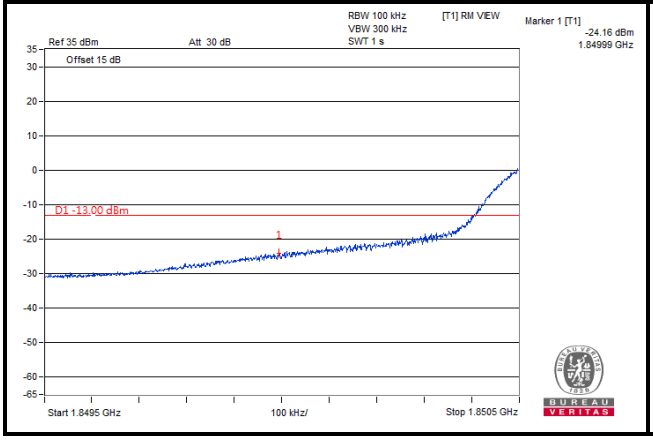
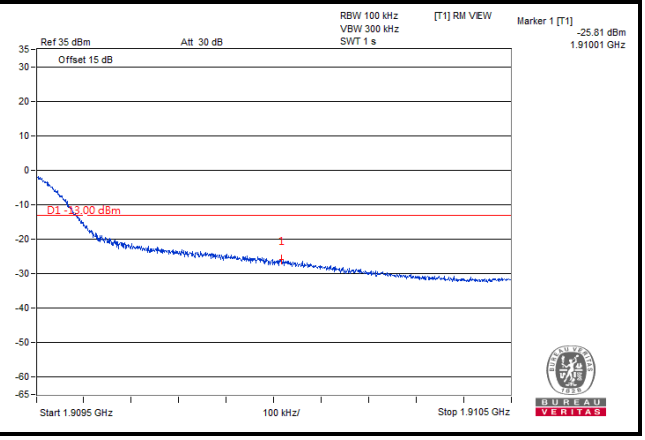
4.5.4 Test Results

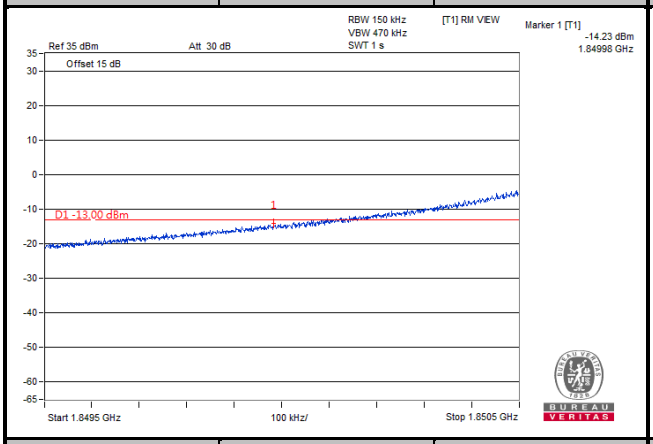
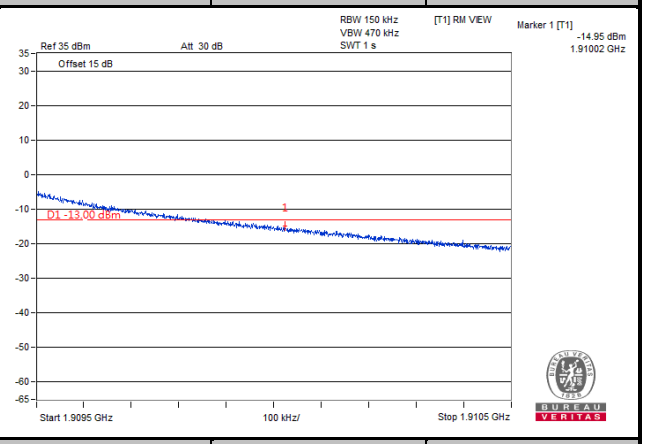
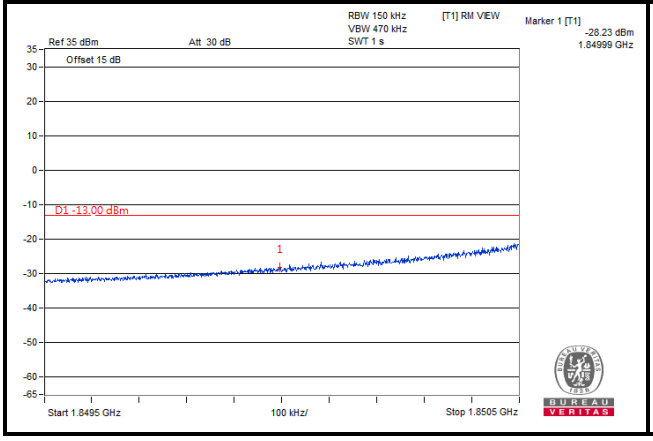
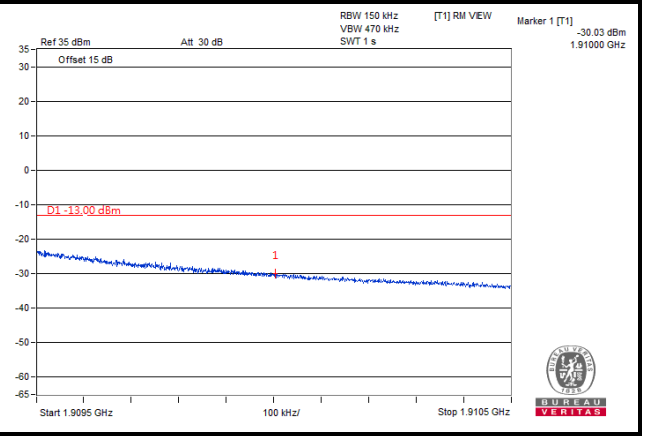
WCDMA			
Channel	9262	Channel	9538
			

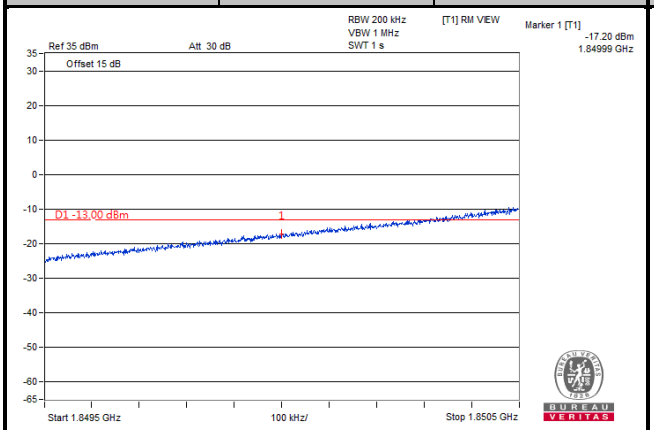
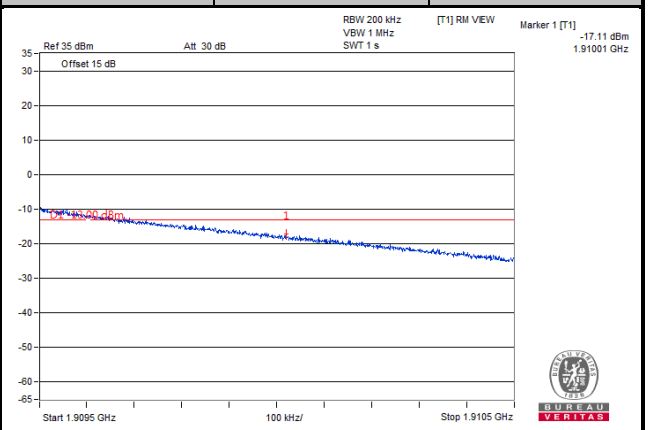
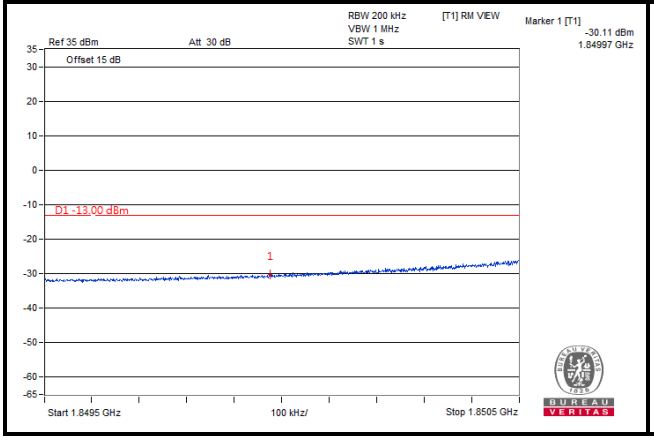
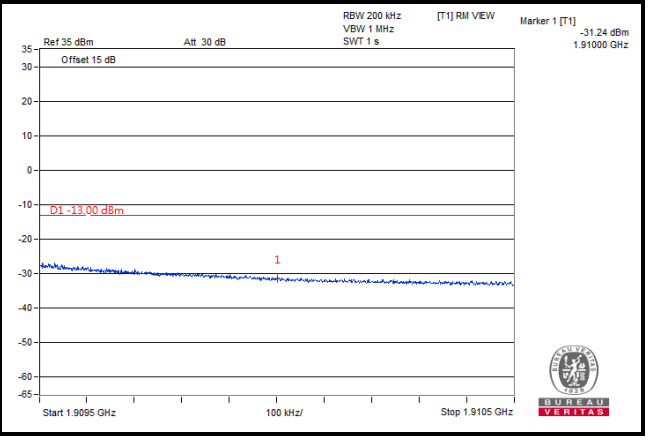
LTE Band 2					
Channel Bandwidth: 1.4 MHz					
Channel	18607	1 RB	Channel	19193	1 RB
					
Channel	18607	6 RB	Channel	19193	6 RB
					

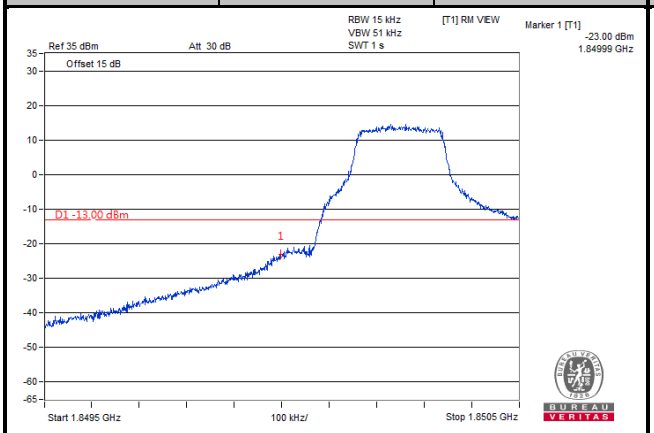
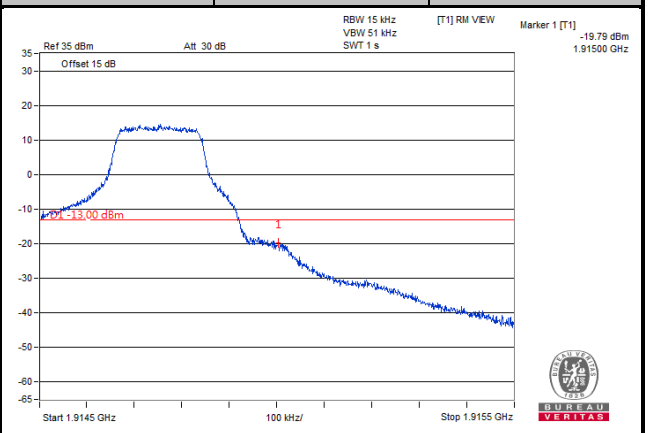
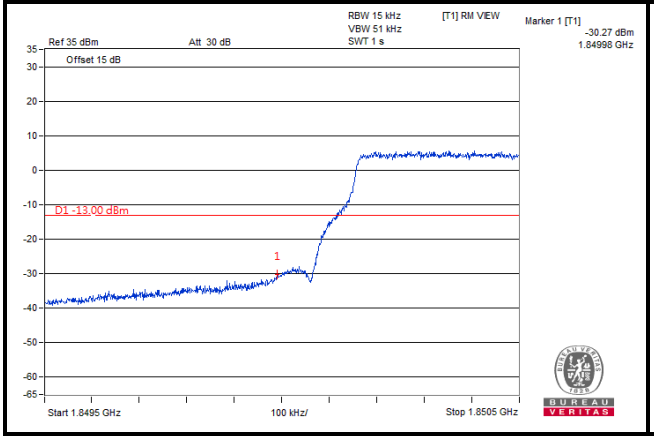
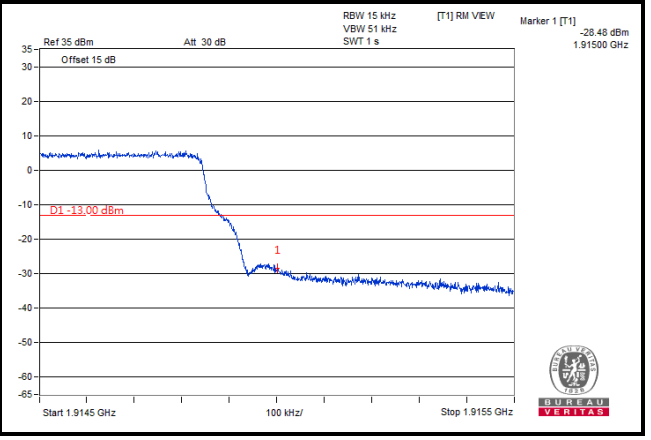
LTE Band 2					
Channel Bandwidth: 3 MHz					
Channel	18615	1 RB	Channel	19185	1 RB
					
Channel	18615	15 RB	Channel	19185	15 RB
					

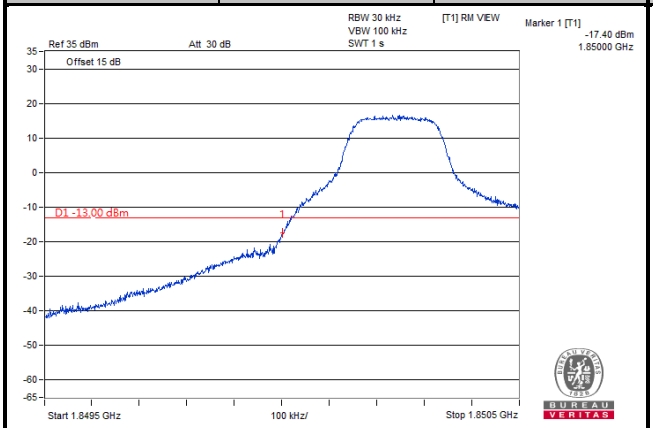
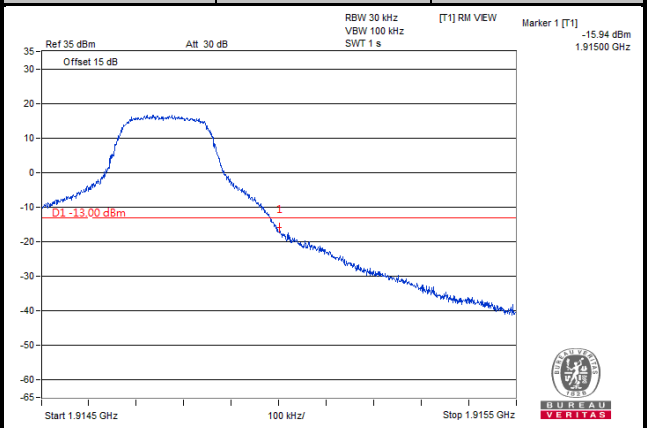
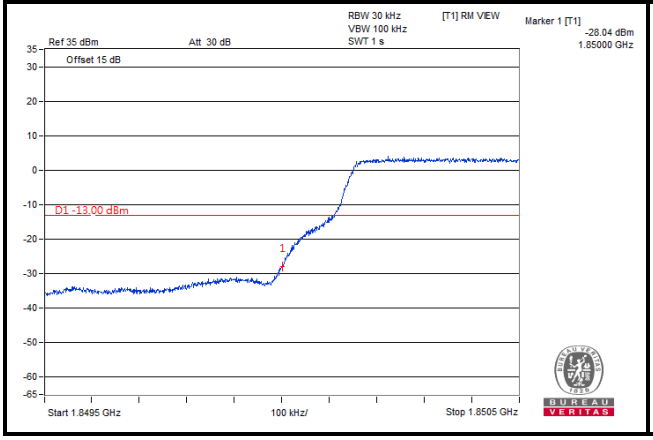
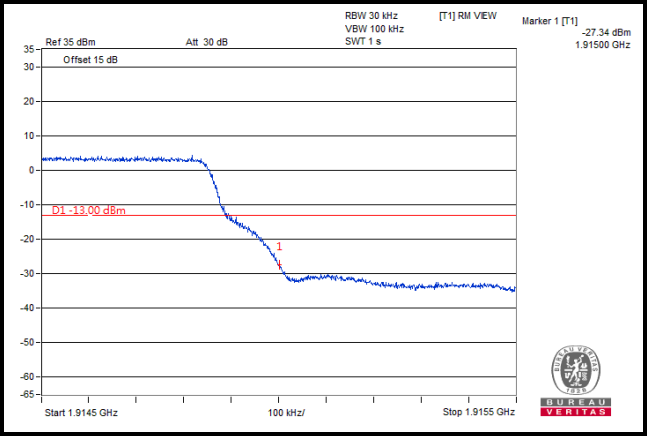
LTE Band 2					
Channel Bandwidth: 5 MHz					
Channel	18625	1 RB	Channel	19175	1 RB
					
Channel	18625	25 RB	Channel	19175	25 RB
					

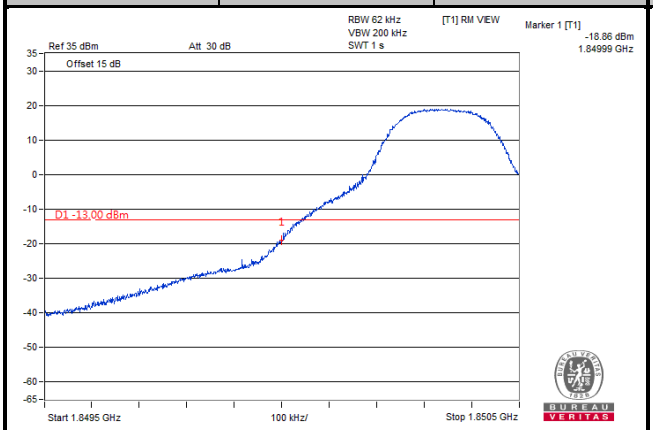
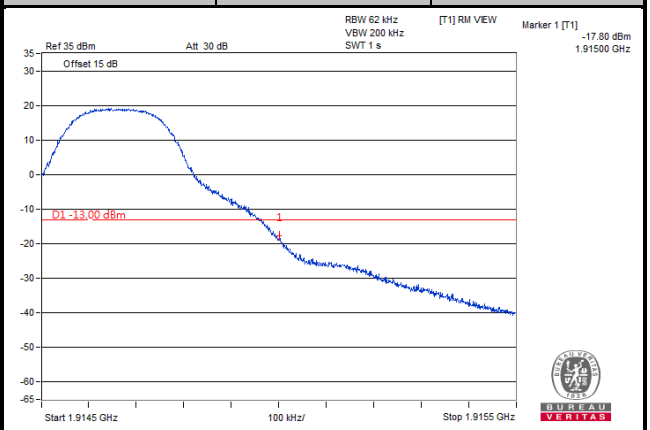
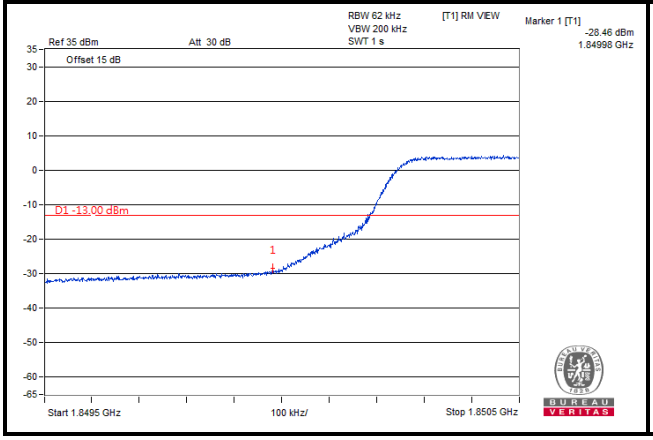
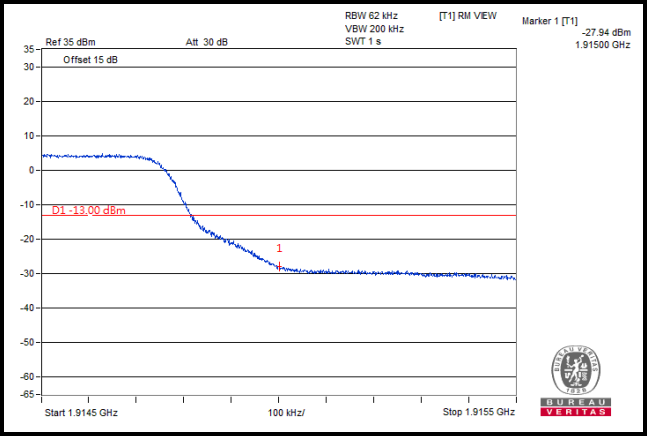
LTE Band 2					
Channel Bandwidth: 10 MHz					
Channel	18650	1 RB	Channel	19150	1 RB
					
Channel	18650	50 RB	Channel	19150	50 RB
					

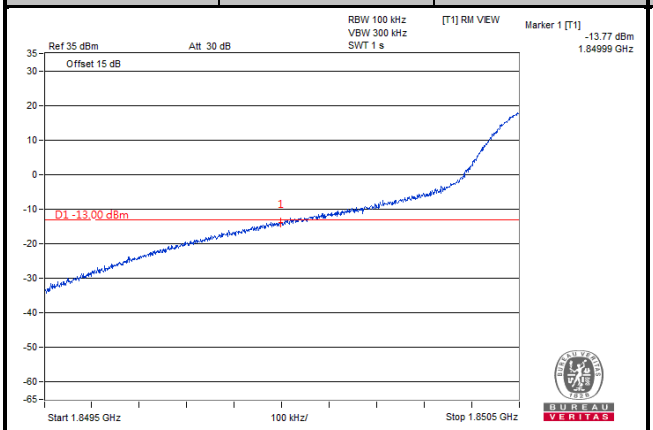
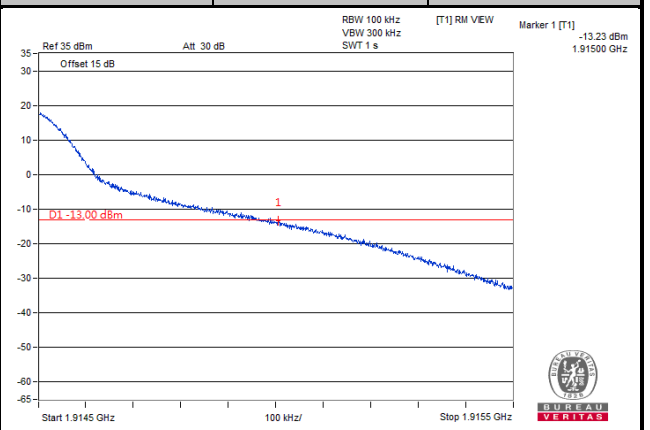
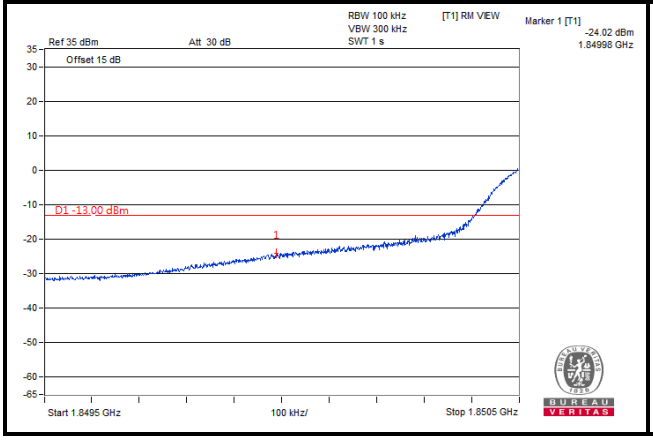
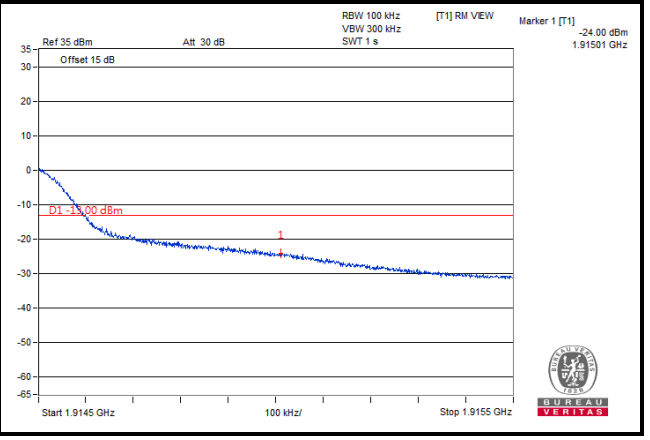
LTE Band 2					
Channel Bandwidth: 15 MHz					
Channel	18675	1 RB	Channel	19125	1 RB
					
Channel	18675	75 RB	Channel	19125	75 RB
					

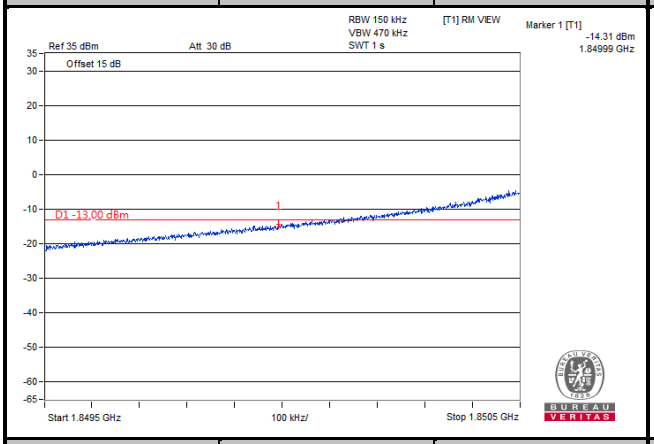
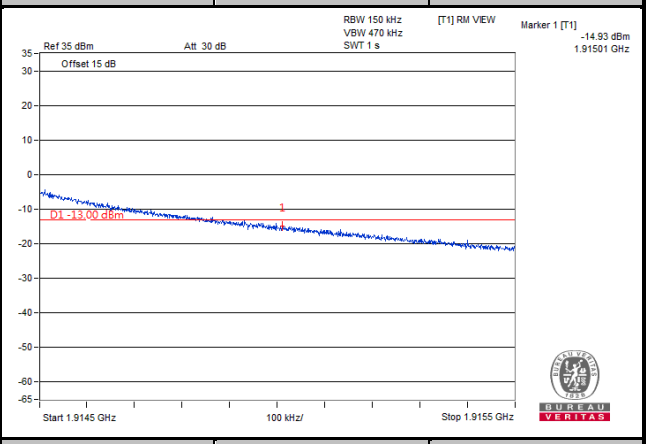
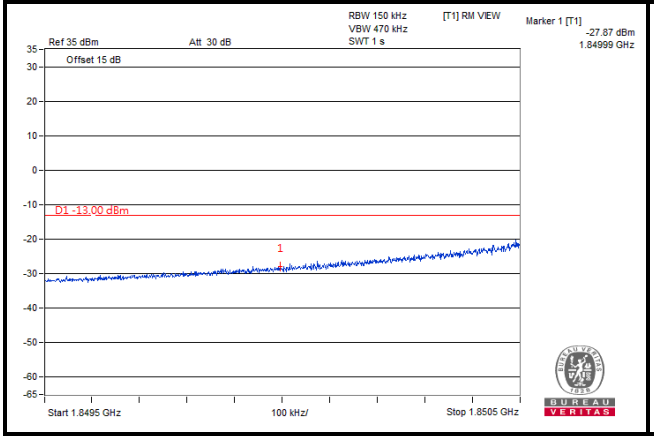
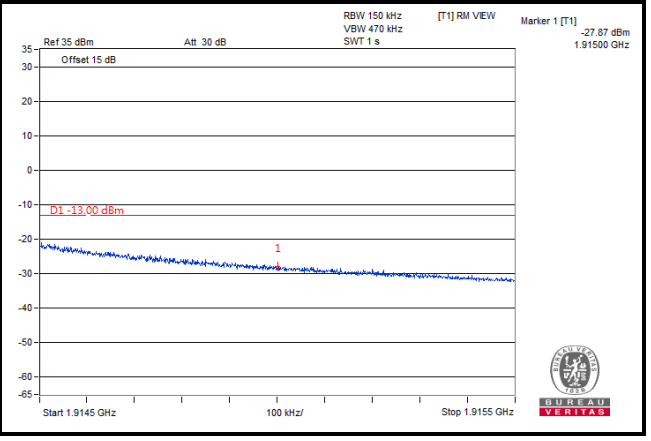
LTE Band 2					
Channel Bandwidth: 20 MHz					
Channel	18700	1 RB	Channel	19100	1 RB
					
Channel	18700	100 RB	Channel	19100	100 RB
					

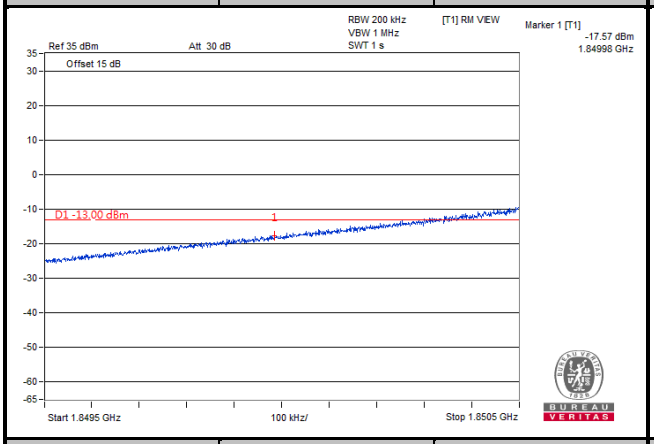
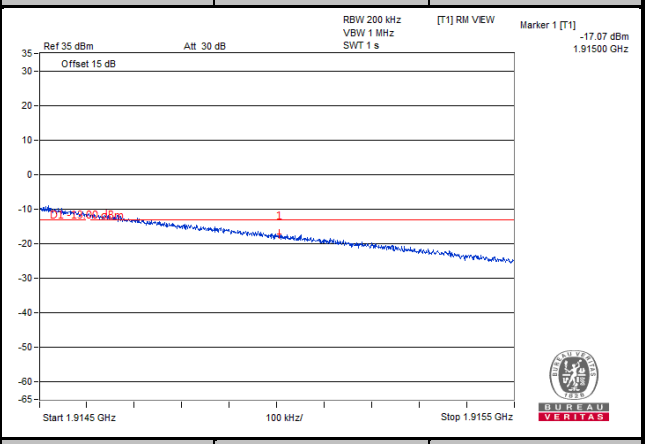
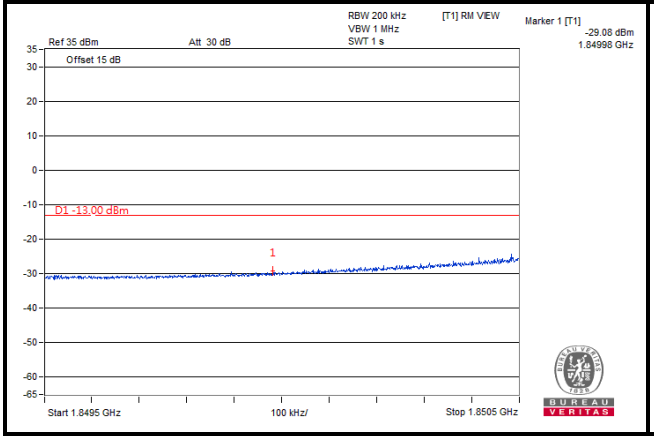
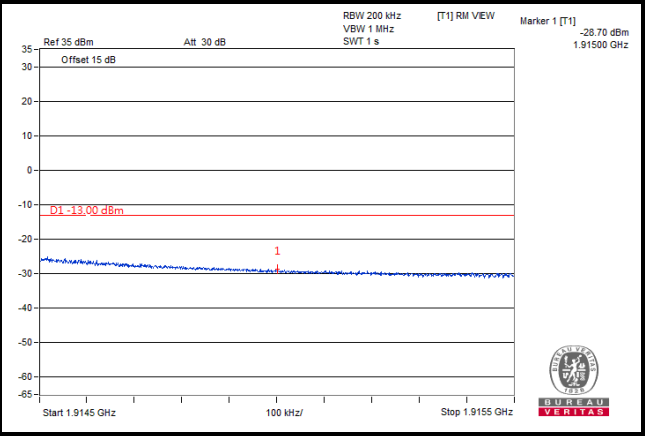
LTE Band 25					
Channel Bandwidth: 1.4 MHz					
Channel	26047	1 RB	Channel	26683	1 RB
					
Channel	26047	6 RB	Channel	26683	6 RB
					

LTE Band 25					
Channel Bandwidth: 3 MHz					
Channel	26055	1 RB	Channel	26675	1 RB
					
Channel	26055	15 RB	Channel	26675	15 RB
					

LTE Band 25					
Channel Bandwidth: 5 MHz					
Channel	26065	1 RB	Channel	26665	1 RB
					
Channel	26065	25 RB	Channel	26665	25 RB
					

LTE Band 25					
Channel Bandwidth: 10 MHz					
Channel	26090	1 RB	Channel	26640	1 RB
					
Channel	26090	50 RB	Channel	26640	50 RB
					

LTE Band 25					
Channel Bandwidth: 15 MHz					
Channel	26115	1 RB	Channel	26615	1 RB
					
Channel	26115	75 RB	Channel	26615	75 RB
					

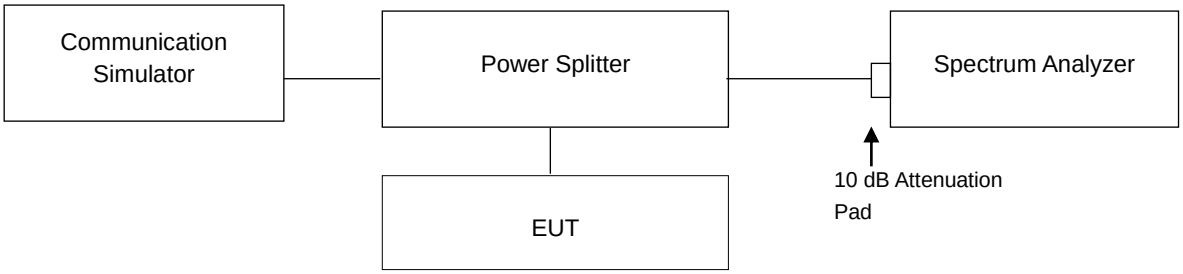
LTE Band 25					
Channel Bandwidth: 20 MHz					
Channel	26140	1 RB	Channel	26590	1 RB
					
Channel	26140	100 RB	Channel	26590	100 RB
					

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



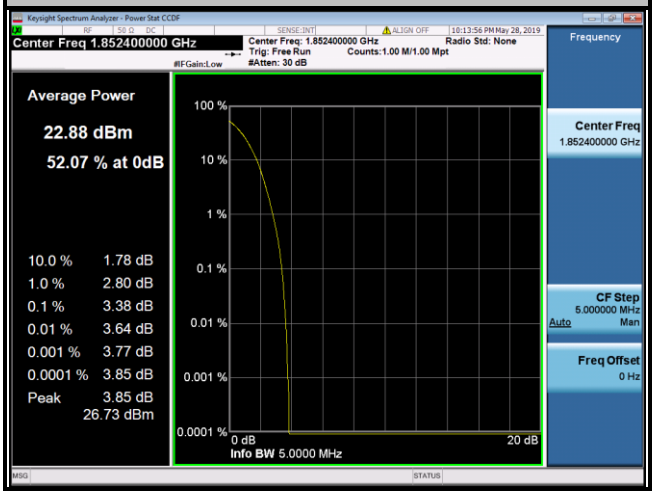
4.6.3 Test Procedures

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

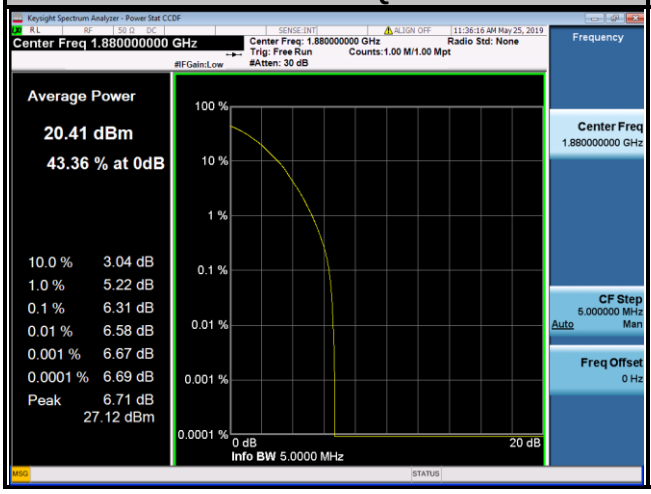
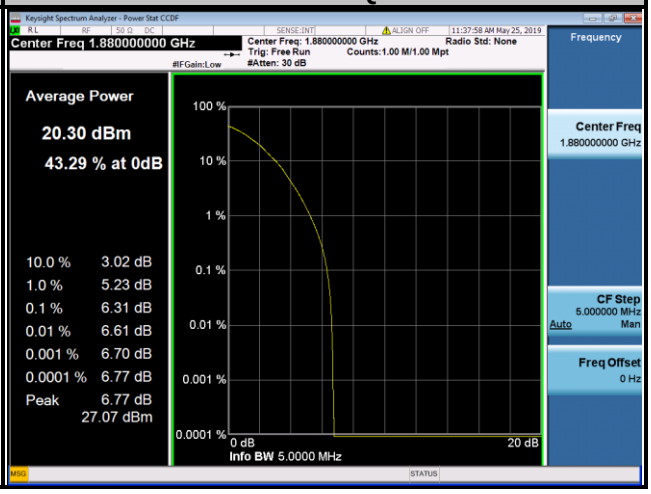
4.6.4 Test Results

Channel	Frequency (MHz)	Peak to Average Ratio (dB)
		WCDMA
9262	1852.4	3.38
9400	1880.0	3.33
9538	1907.6	3.24

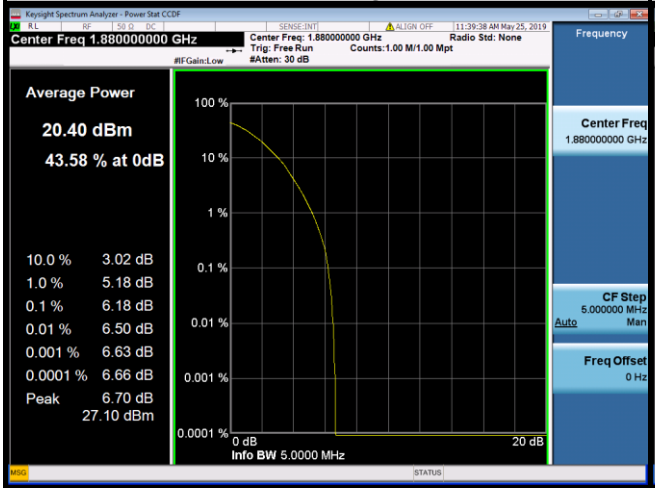
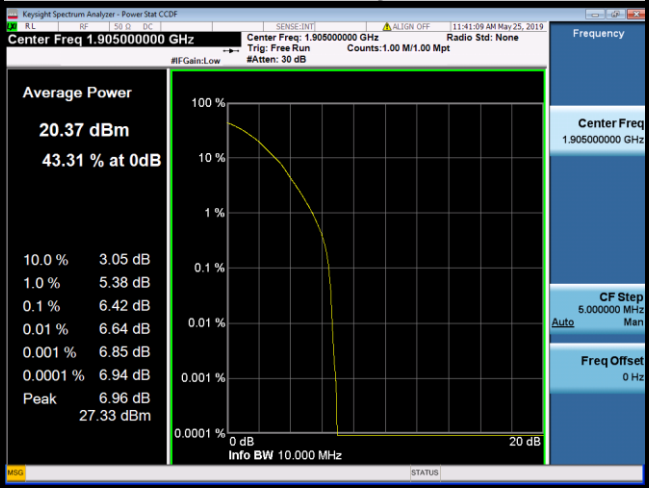
Spectrum Plot of Worst Value
WCDMA



LTE Band 2									
Channel Bandwidth: 1.4 MHz					Channel Bandwidth: 3 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)			Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
18607	1850.7	4.36	5.22	6.07	18615	1851.5	4.41	5.34	6.25
18900	1880.0	5.17	5.84	6.31	18900	1880.0	5.27	5.89	6.31
19193	1909.3	3.19	4.20	5.17	19185	1908.5	3.77	4.75	5.73

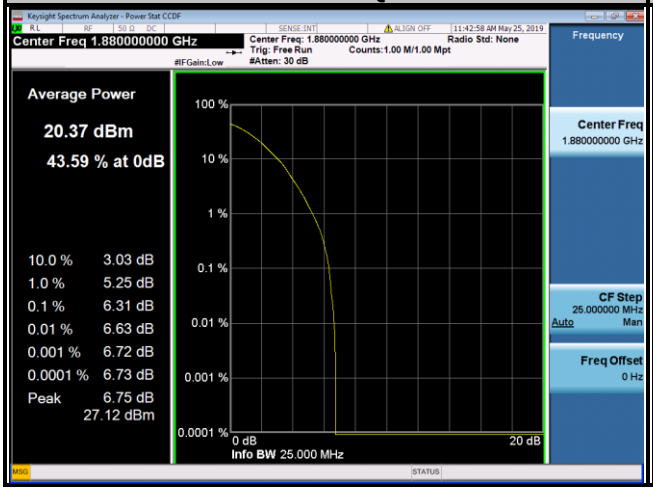
Spectrum Plot of Worst Value	
1.4 MHz / 64QAM	3 MHz / 64QAM
	

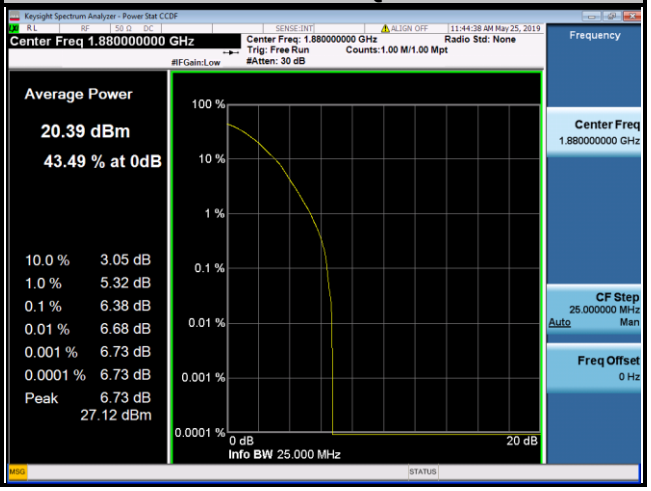
LTE Band 2									
Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)			Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
18625	1852.5	4.35	5.25	6.14	18650	1855.0	4.32	5.28	6.09
18900	1880.0	5.35	5.77	6.18	18900	1880.0	5.37	5.67	6.23
19175	1907.5	4.33	5.20	5.99	19150	1905.0	4.86	5.63	6.42

Spectrum Plot of Worst Value	
5 MHz / 64QAM	10 MHz / 64QAM
	

LTE Band 2									
Channel Bandwidth: 15 MHz					Channel Bandwidth: 20 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)			Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
18675	1857.5	4.35	5.24	6.11	18700	1860.0	4.20	5.21	6.08
18900	1880.0	5.44	5.93	6.31	18900	1880.0	5.48	5.86	6.38
19125	1902.5	4.33	5.35	6.31	19100	1900.0	4.07	5.00	5.98

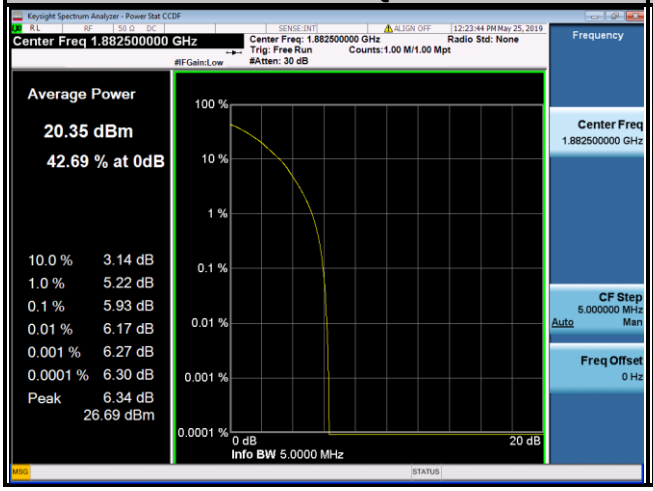
Spectrum Plot of Worst Value	
15 MHz / 64QAM	20 MHz / 64QAM

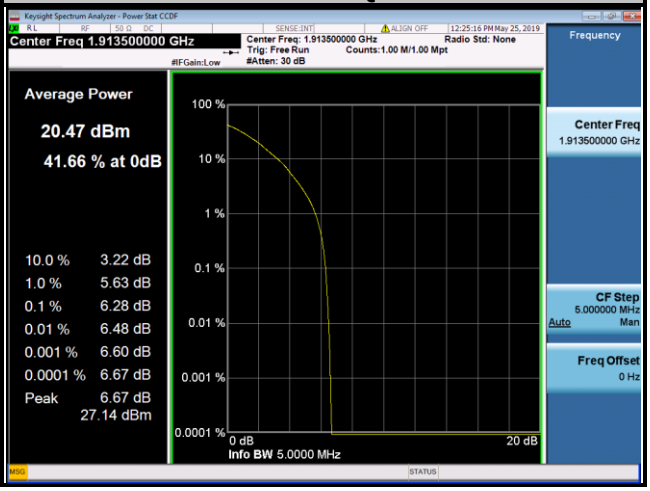




LTE Band 25									
Channel Bandwidth: 1.4 MHz					Channel Bandwidth: 3 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)			Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
26047	1850.7	4.29	5.00	5.57	26055	1851.5	4.34	5.06	5.66
26365	1882.5	4.72	5.38	5.93	26365	1882.5	4.71	5.45	5.99
26683	1914.3	4.06	4.79	5.53	26675	1913.5	4.68	5.47	6.28

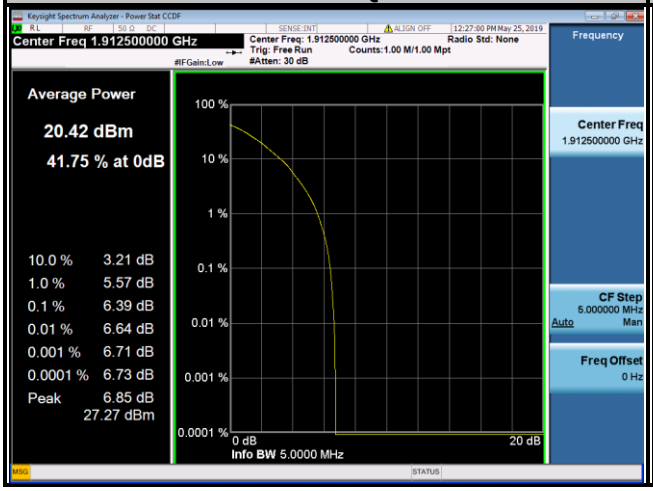
Spectrum Plot of Worst Value	
1.4 MHz / 64QAM	3 MHz / 64QAM

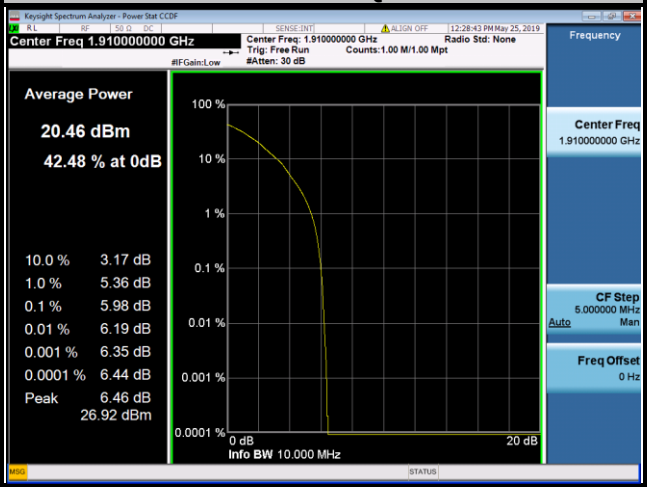




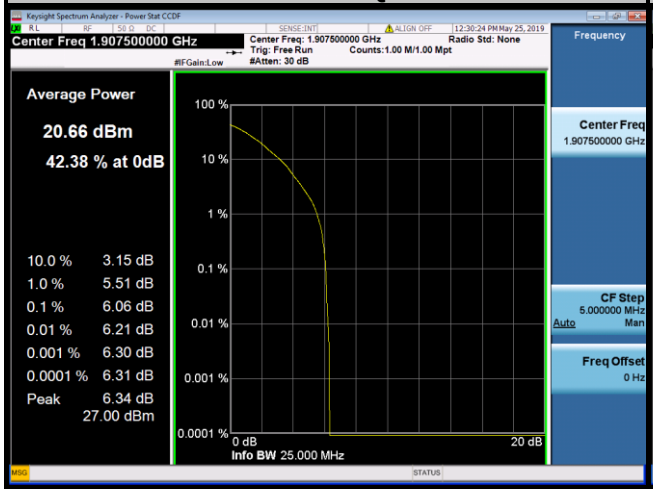
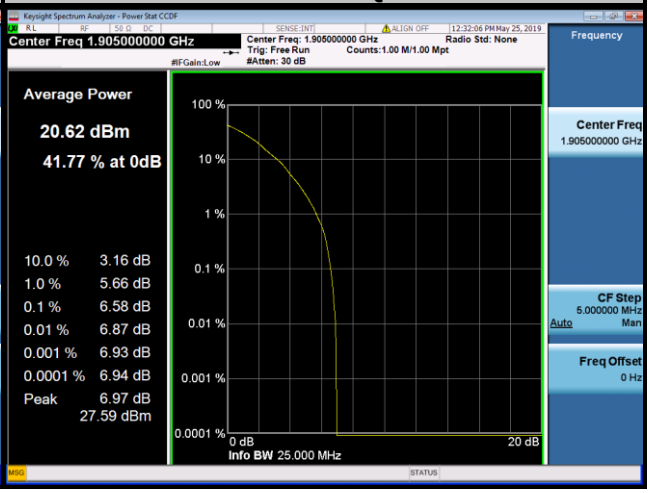
LTE Band 25									
Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)			Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
26065	1852.5	4.28	4.94	5.61	26090	1855.0	4.22	4.90	5.53
26365	1882.5	4.61	5.33	5.87	26365	1882.5	4.50	5.22	5.74
26665	1912.5	4.69	5.52	6.39	26640	1910.0	4.66	5.33	5.98

Spectrum Plot of Worst Value	
5 MHz / 64QAM	10 MHz / 64QAM





LTE Band 25									
Channel Bandwidth: 15 MHz					Channel Bandwidth: 20 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)			Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
26115	1857.5	4.23	4.92	5.47	26140	1860.0	4.22	4.87	5.52
26365	1882.5	4.63	5.33	5.95	26365	1882.5	4.80	5.51	6.05
26615	1907.5	4.78	5.42	6.06	26590	1905.0	5.04	5.88	6.58

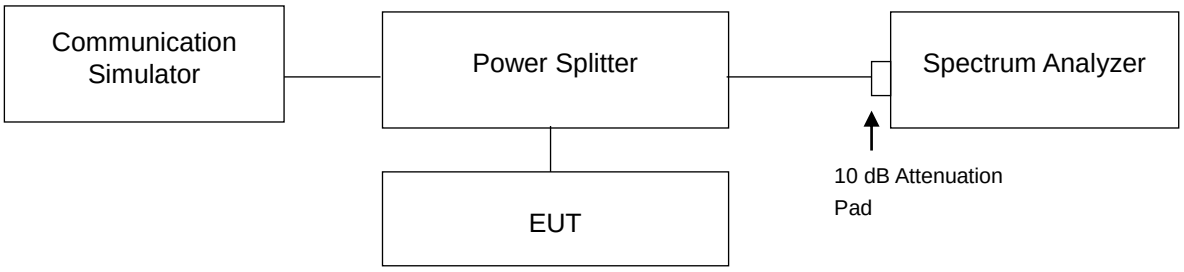
Spectrum Plot of Worst Value	
15 MHz / 64QAM	20 MHz / 64QAM
	

4.7 Conducted Spurious Emissions

4.7.1 Limits of Conducted Spurious Emissions Measurement

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

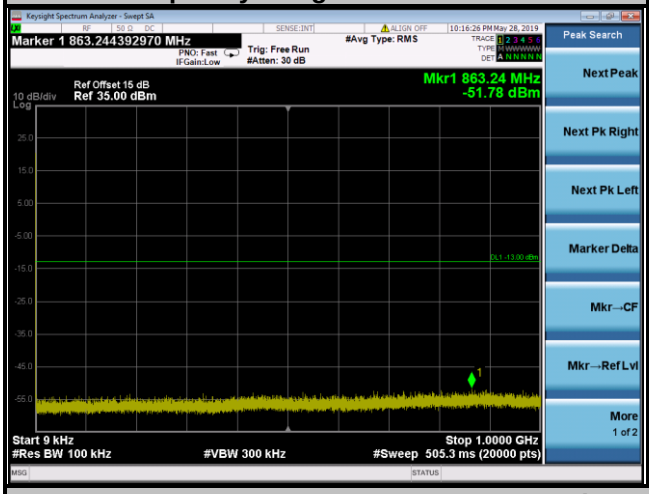
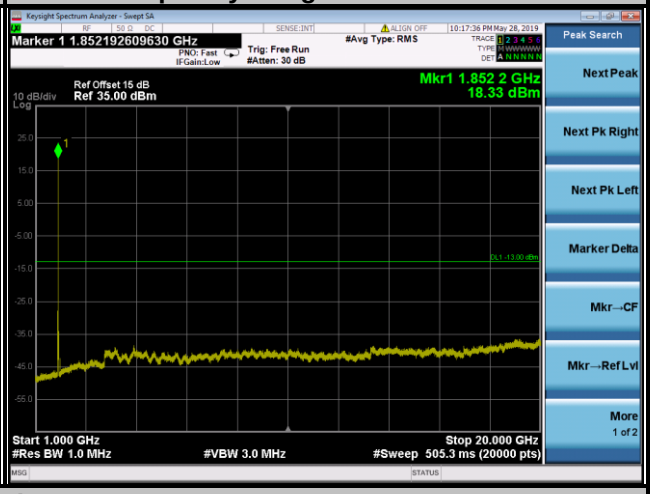
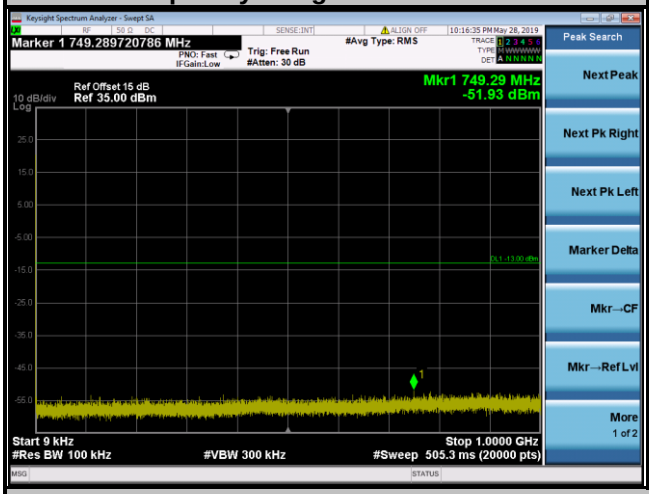
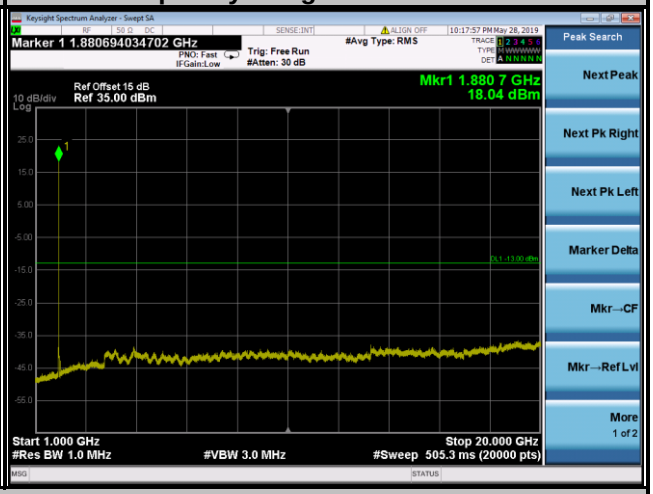
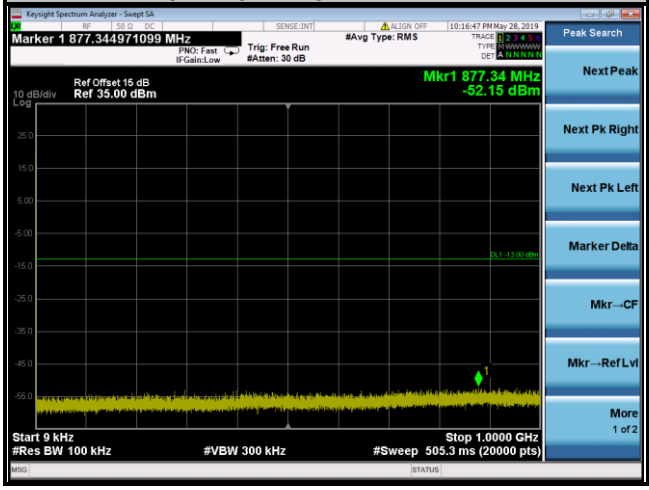
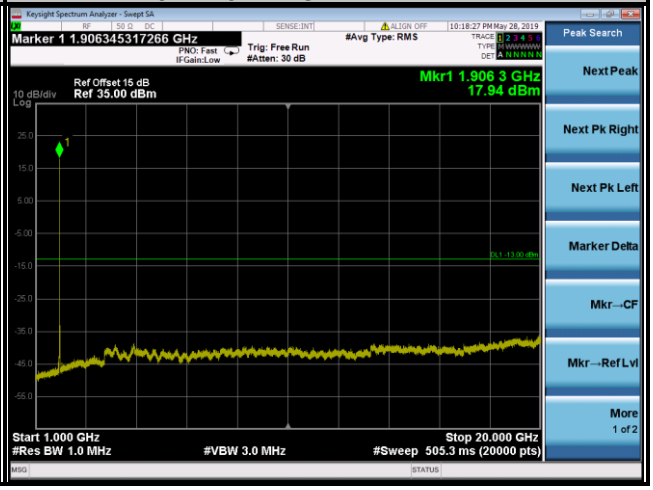
4.7.2 Test Setup



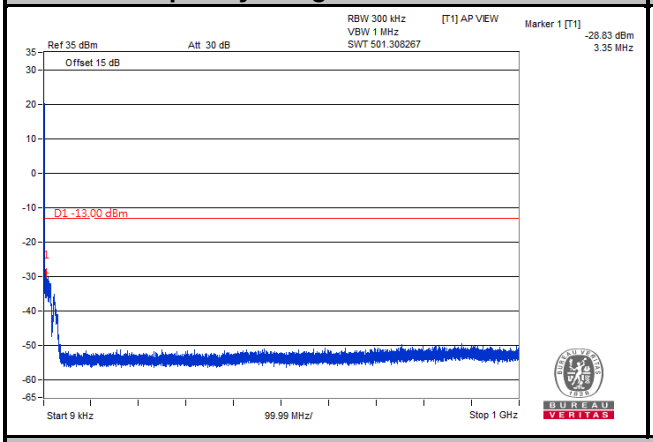
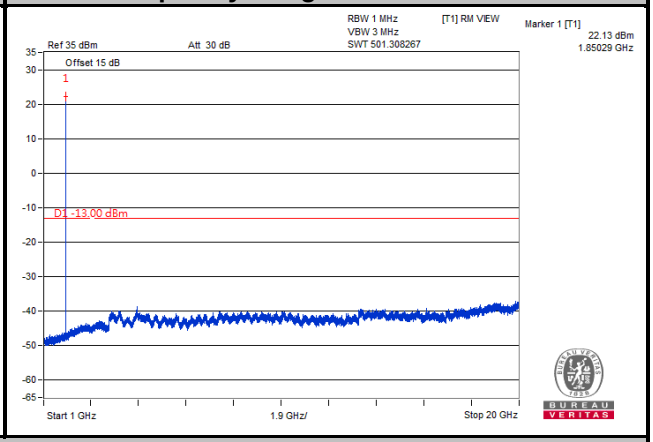
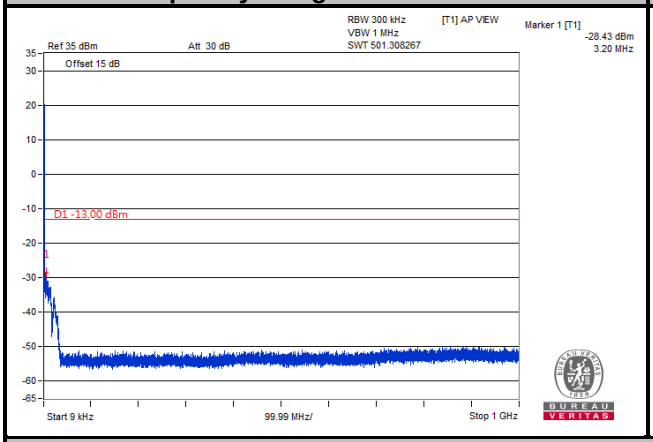
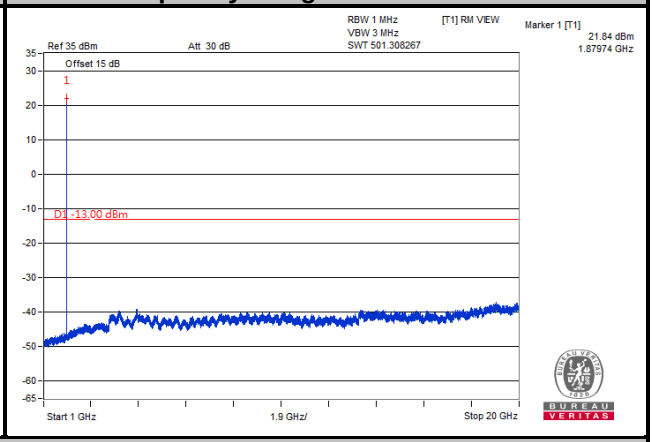
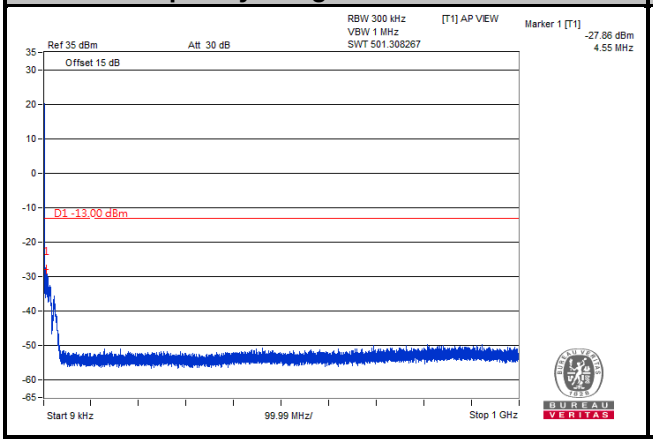
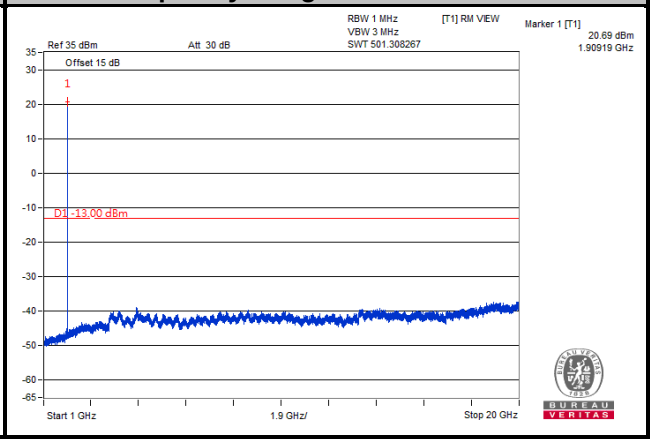
4.7.3 Test Procedure

a. The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
b. Measuring frequency range is from 9 kHz to 1 GHz. 10 dB attenuation pad is connected with spectrum. RBW = 100 kHz and VBW = 300 kHz is used for WCDMA conducted emission measurement. RBW = 300 kHz and VBW = 1 MHz is used for LTE conducted emission measurement.
c. Measuring frequency range is from 1 GHz to 20 GHz. 10 dB attenuation pad is connected with spectrum. RBW = 1 MHz and VBW = 3 MHz is used for conducted emission measurement.
d. Spectrum RBW settings are referenced to ANSI 63.2-1996 section 8.2.2 and ANSI 63.26 section 5.7.2.

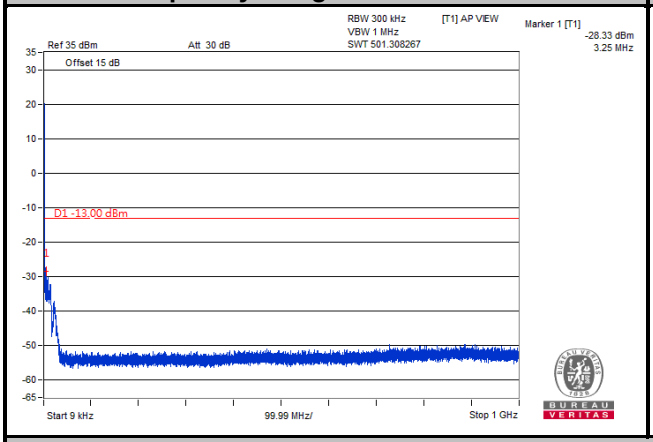
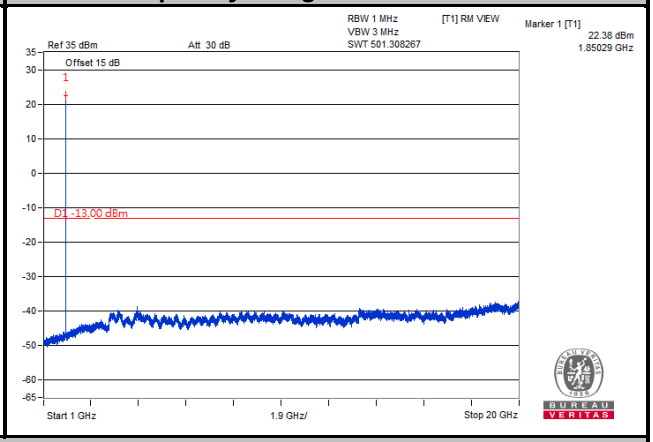
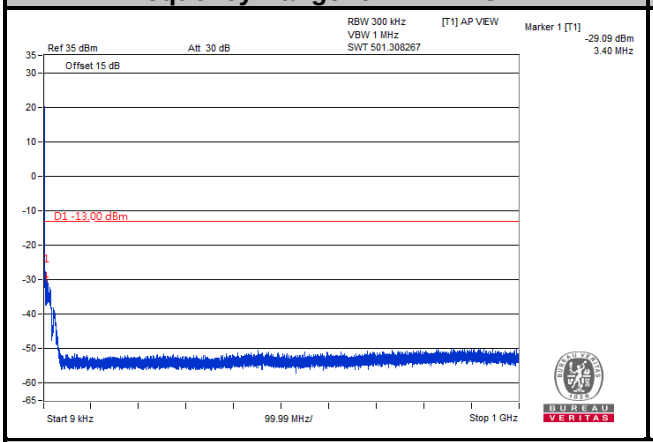
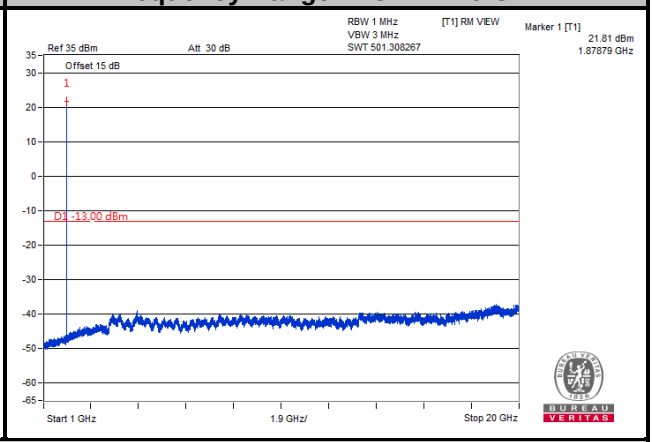
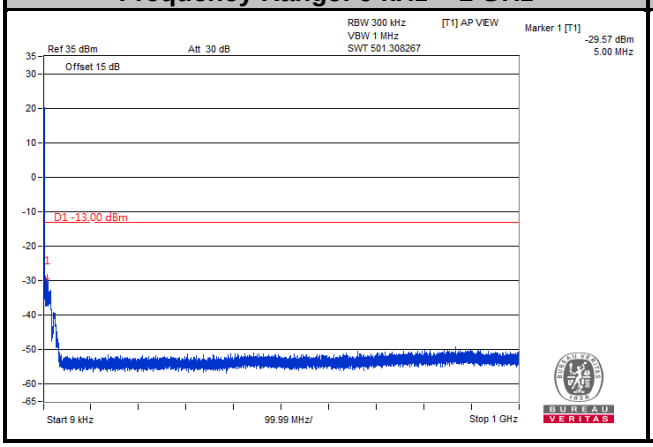
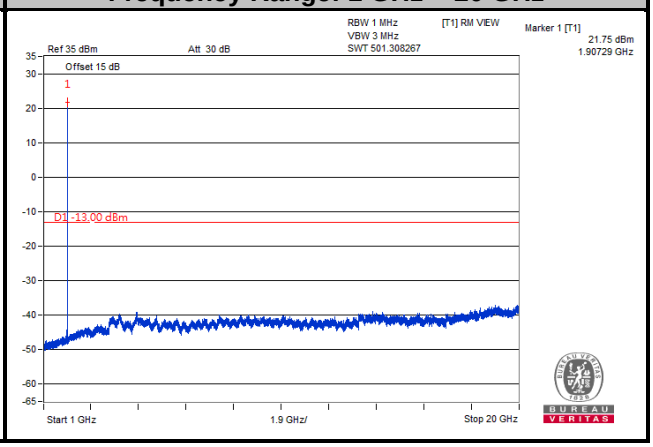
4.7.4 Test Results

WCDMA	
Channel 9262	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	
Channel 9400	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	
Channel 9538	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	

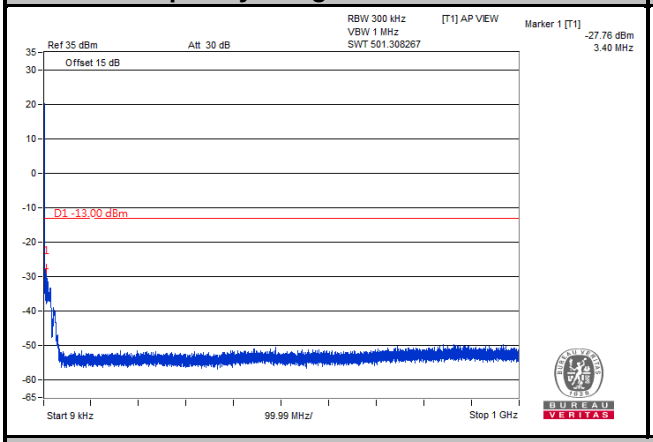
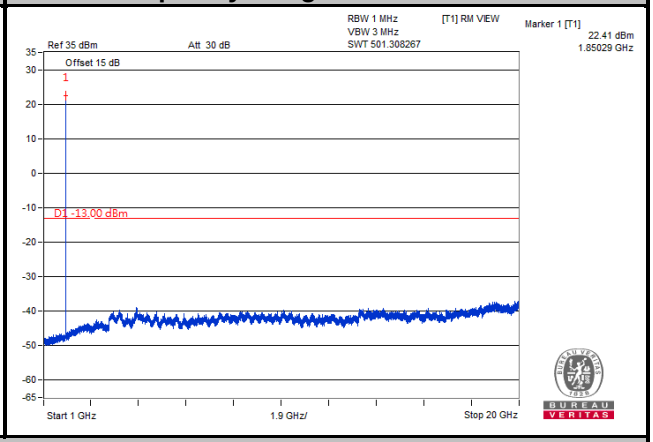
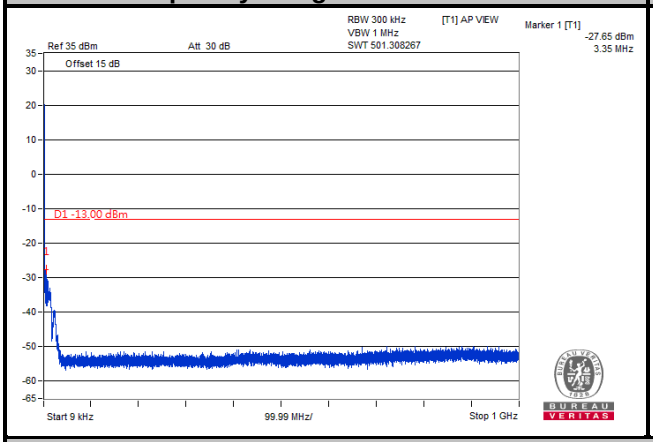
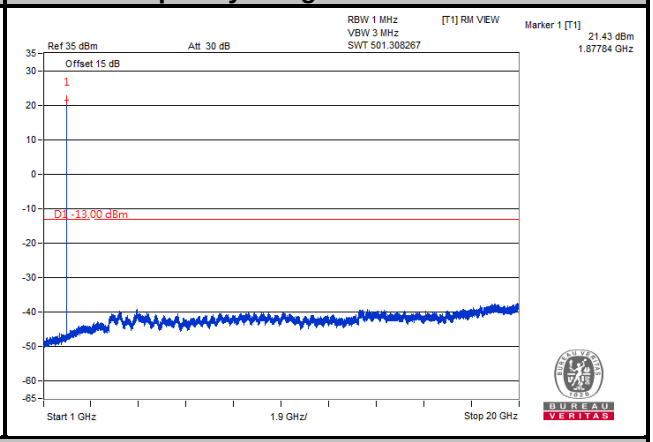
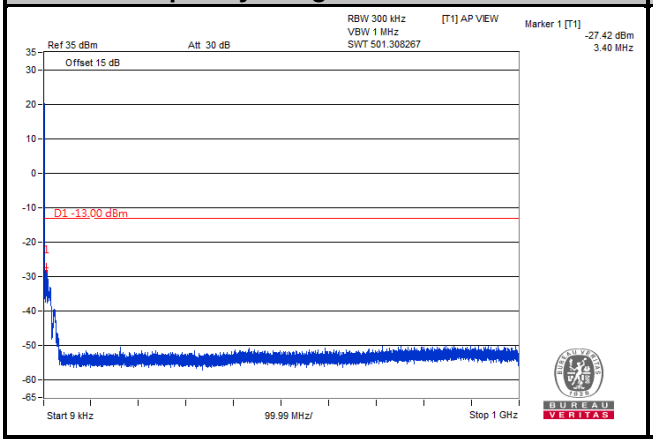
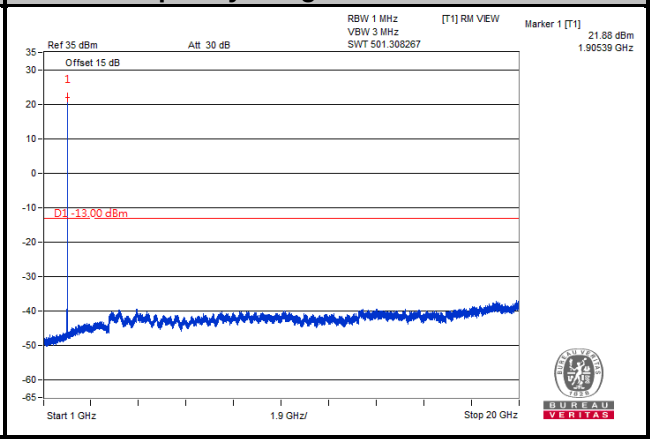
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

LTE Band 2	
Channel Bandwidth: 1.4 MHz	
Channel 18607	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	
Channel 18900	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	
Channel 19193	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	

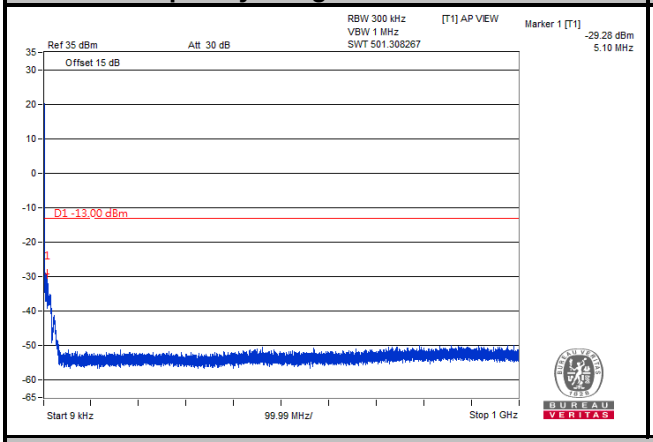
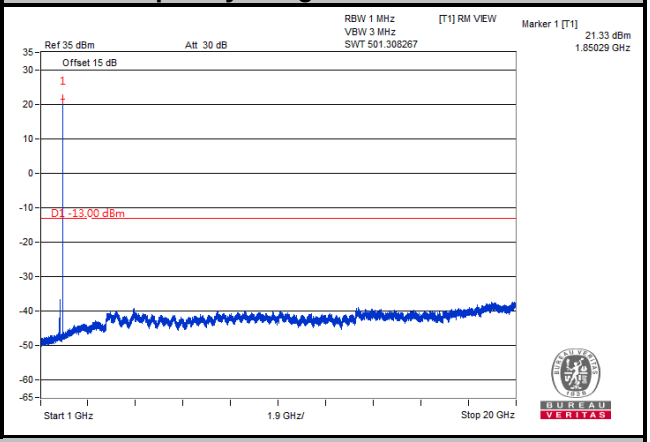
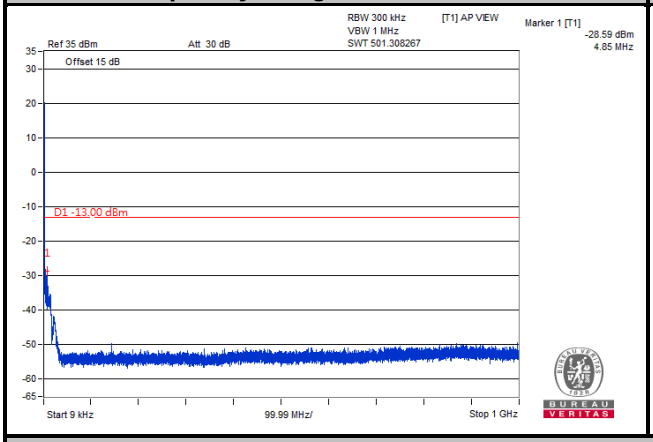
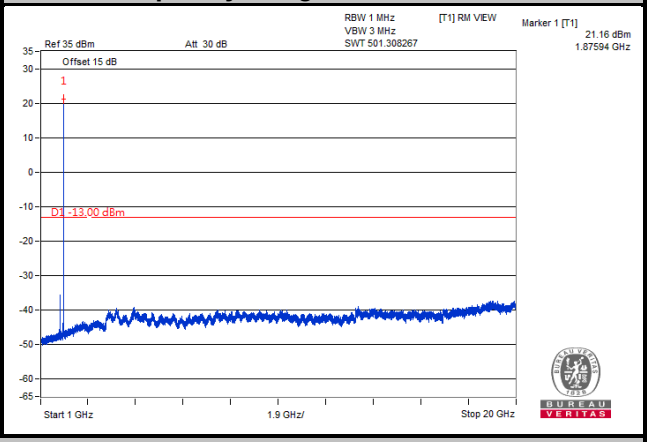
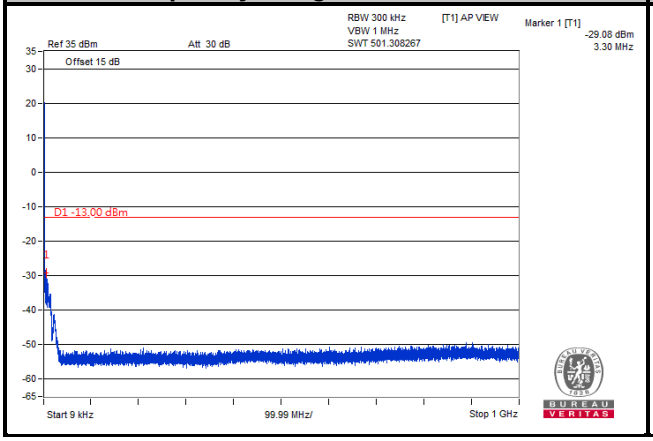
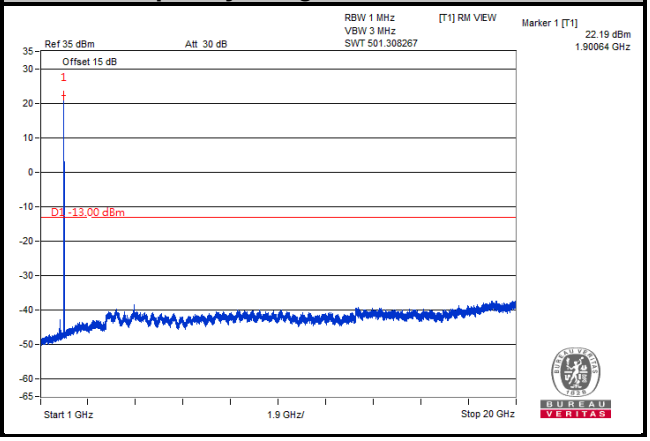
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

LTE Band 2	
Channel Bandwidth: 3 MHz	
Channel 18615	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	
Channel 18900	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	
Channel 19185	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	

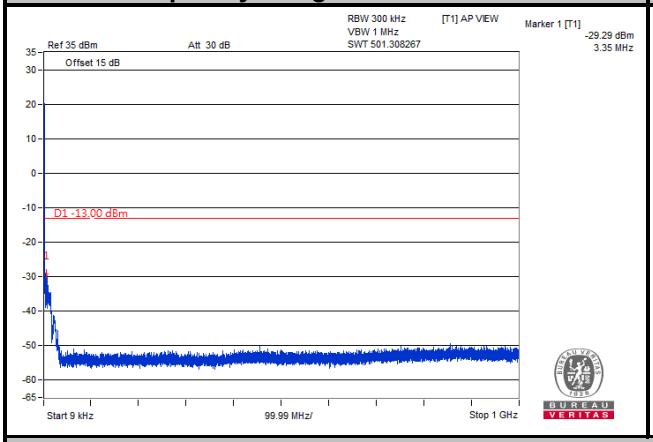
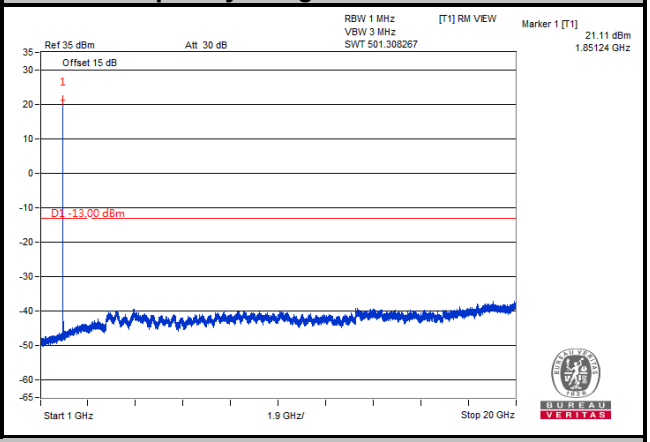
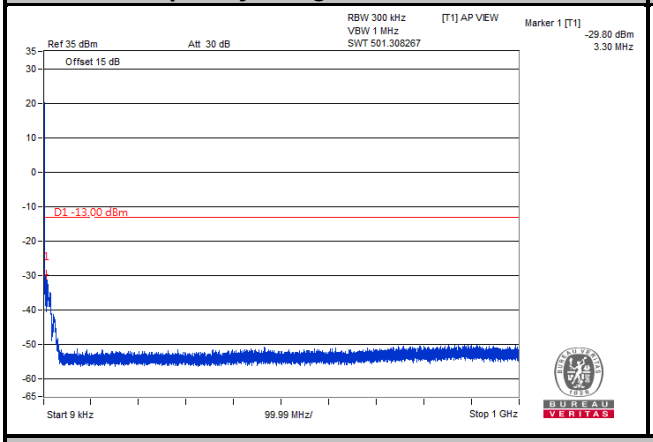
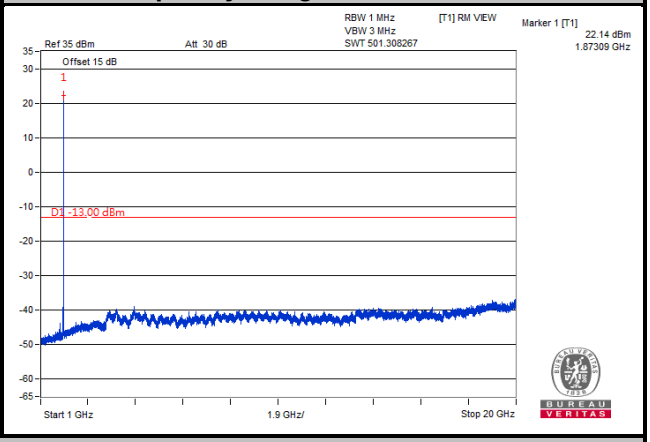
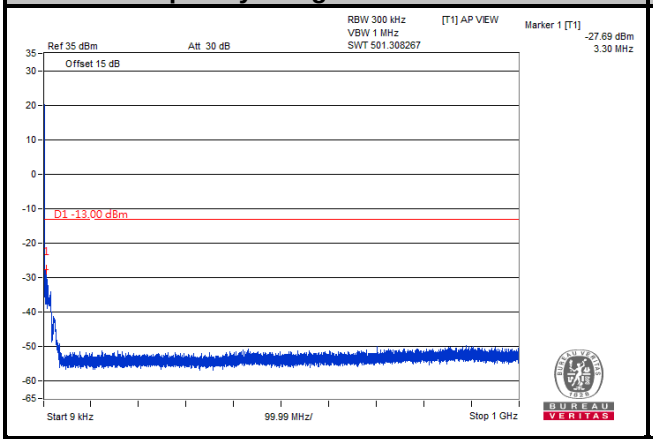
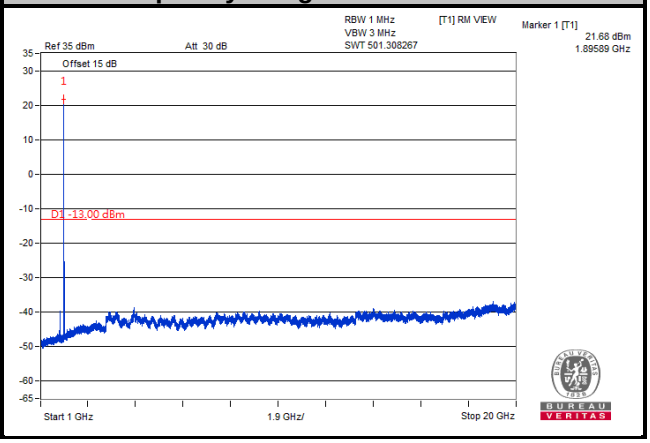
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

LTE Band 2	
Channel Bandwidth: 5 MHz	
Channel 18625	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	
Channel 18900	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	
Channel 19175	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	

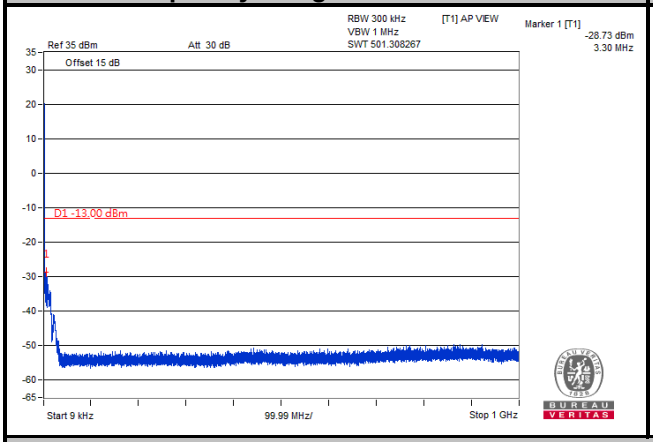
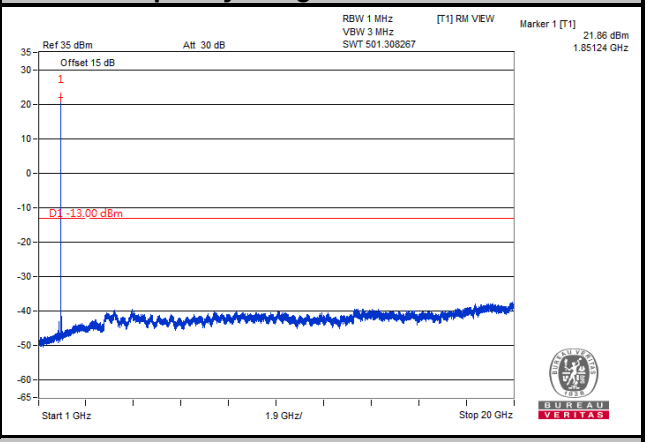
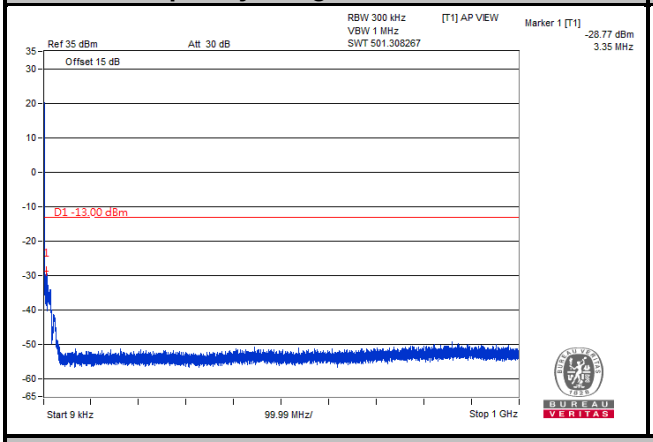
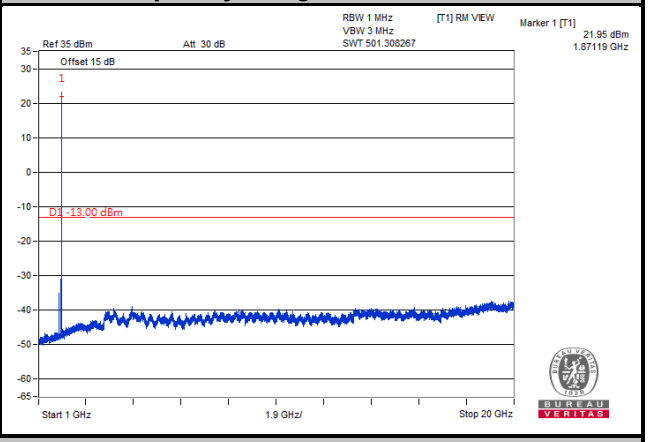
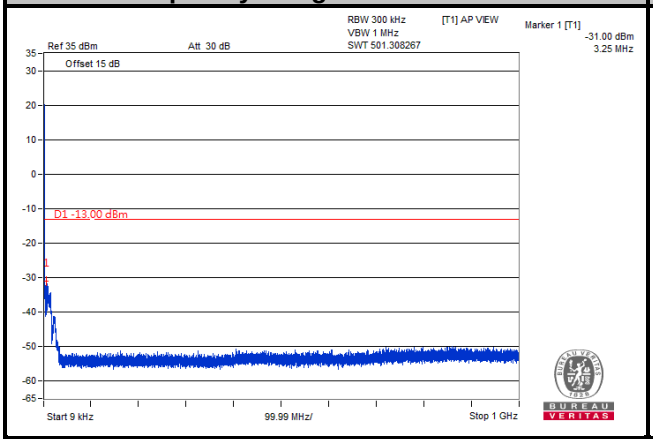
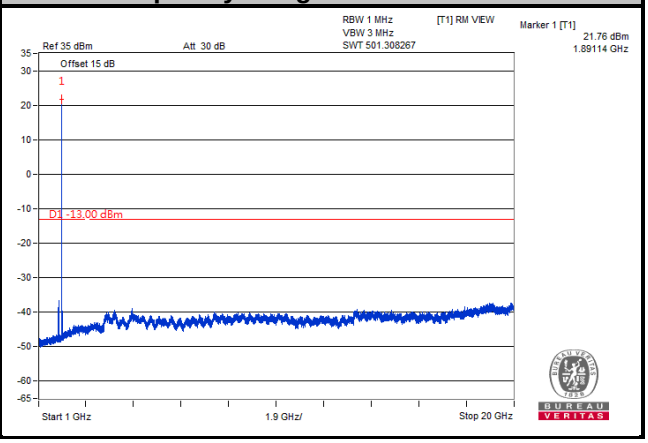
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

LTE Band 2	
Channel Bandwidth: 10 MHz	
Channel 18650	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	
Channel 18900	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	
Channel 19150	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	

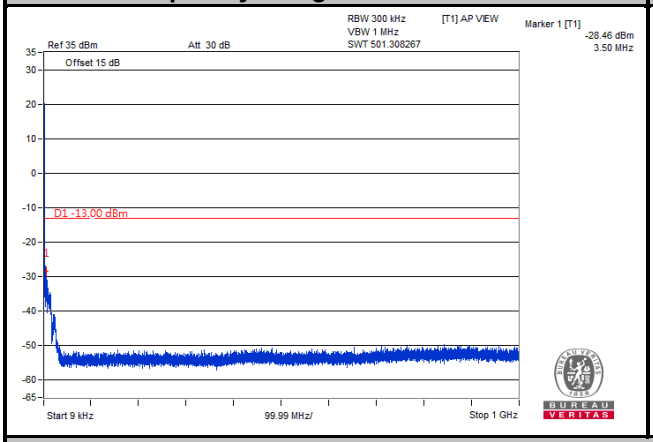
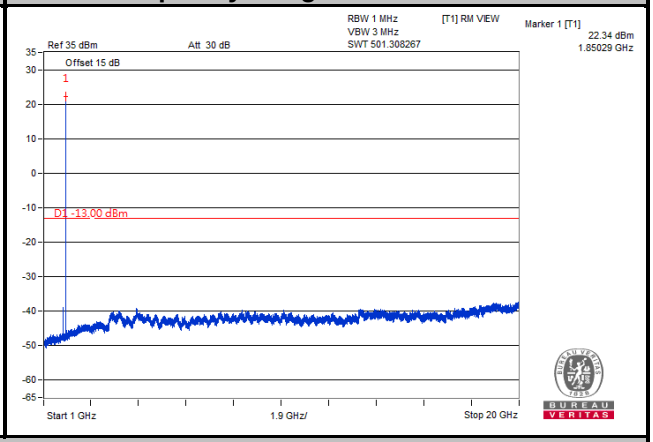
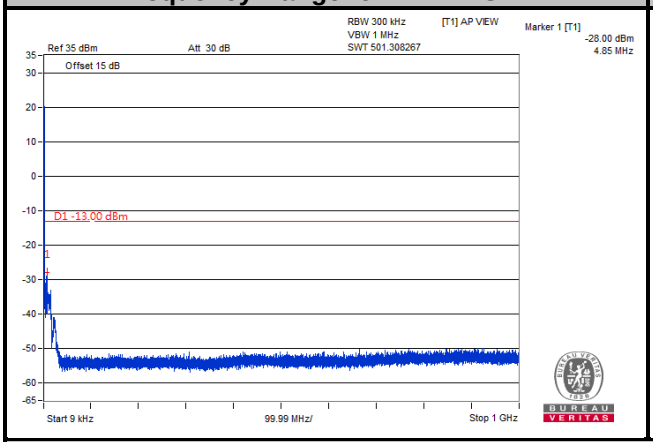
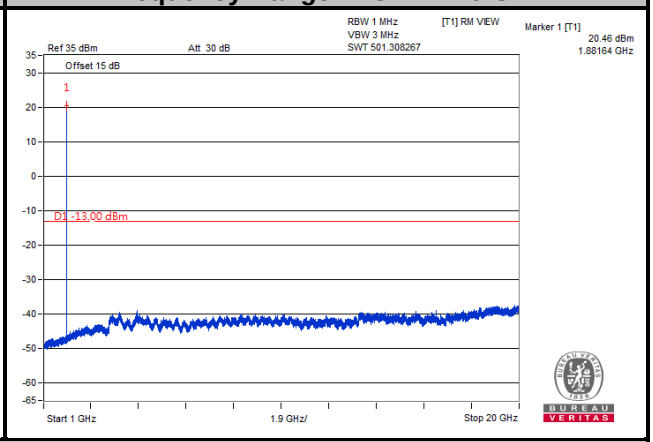
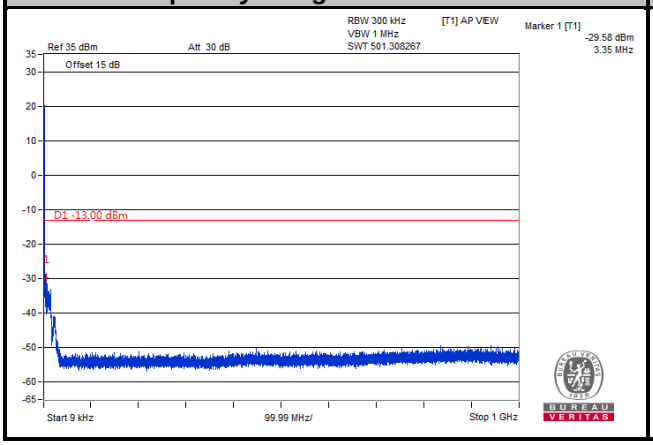
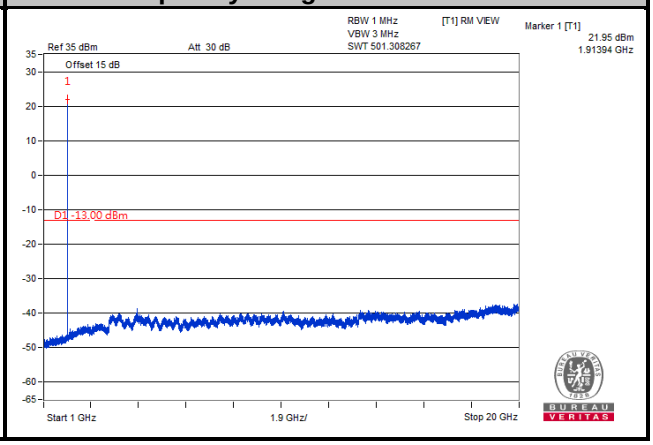
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

LTE Band 2	
Channel Bandwidth: 15 MHz	
Channel 18675	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	
Channel 18900	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	
Channel 19125	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	

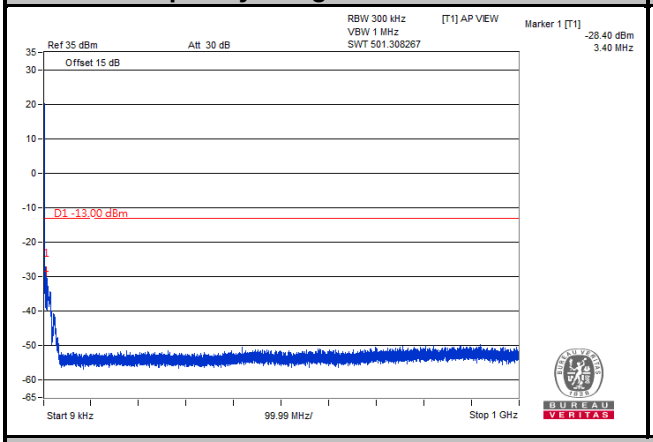
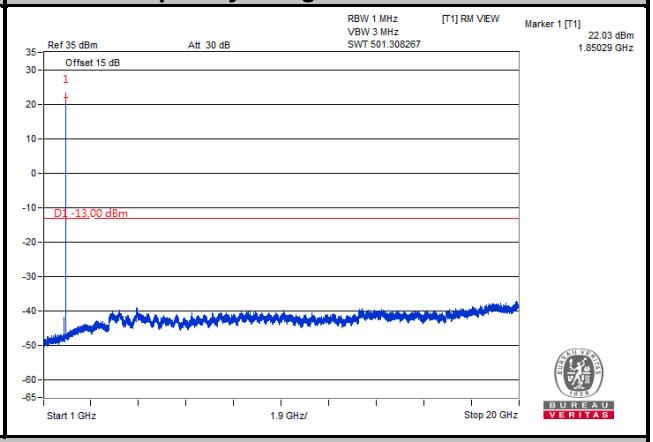
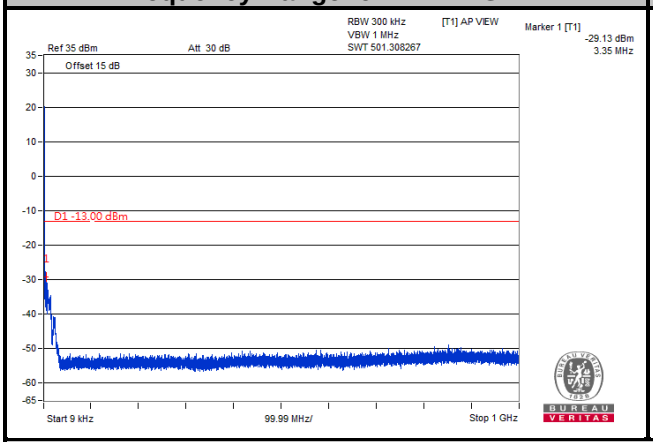
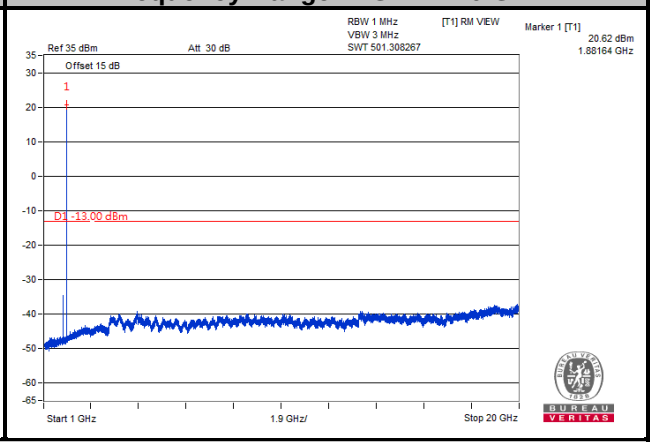
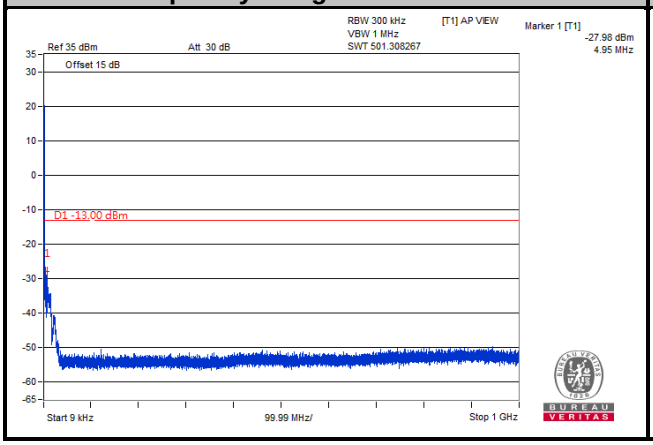
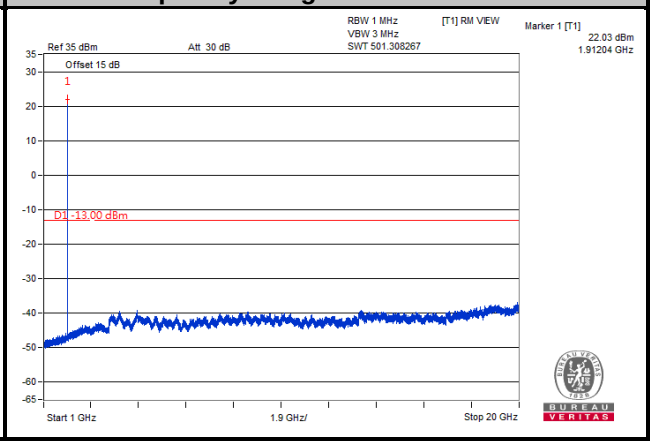
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

LTE Band 2	
Channel Bandwidth: 20 MHz	
Channel 18700	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	
Channel 18900	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	
Channel 19100	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	

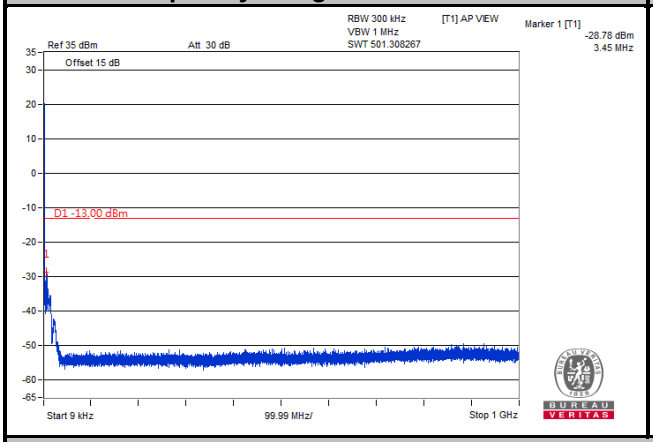
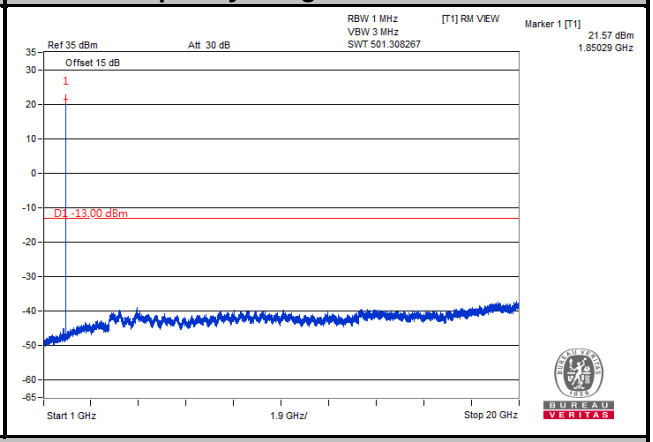
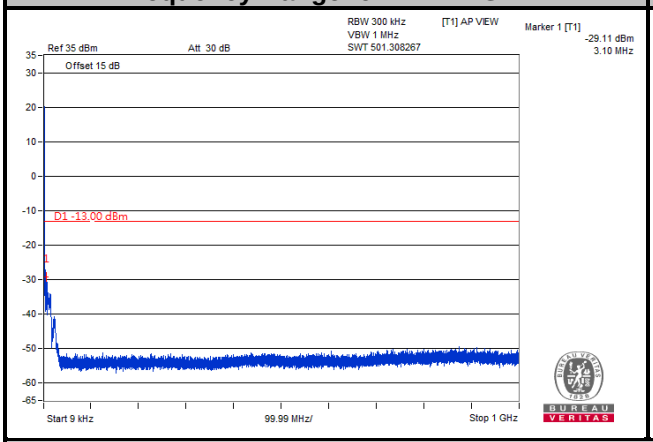
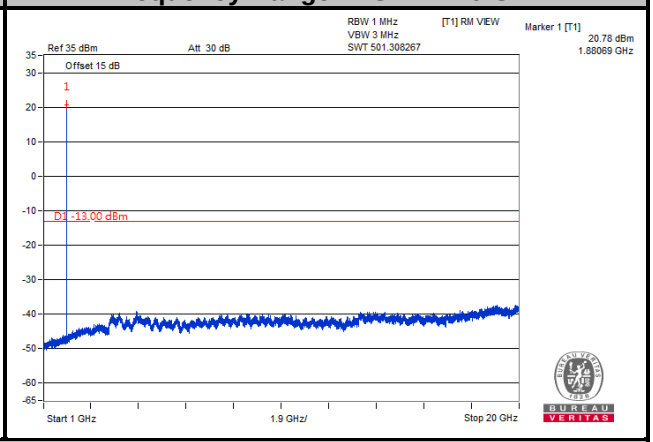
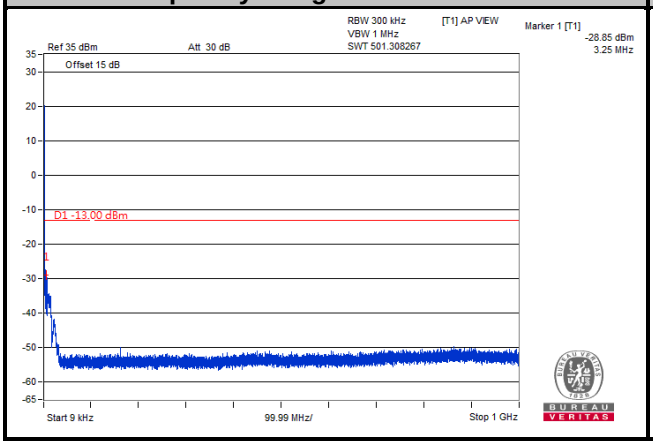
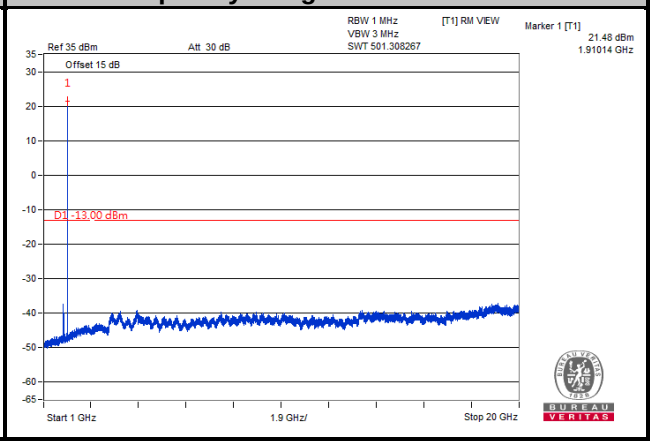
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

LTE Band 25	
Channel Bandwidth: 1.4 MHz	
Channel 26047	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	
Channel 26365	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	
Channel 26683	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	

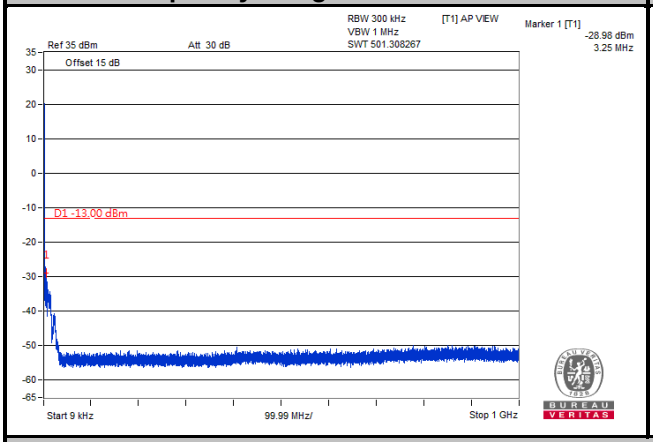
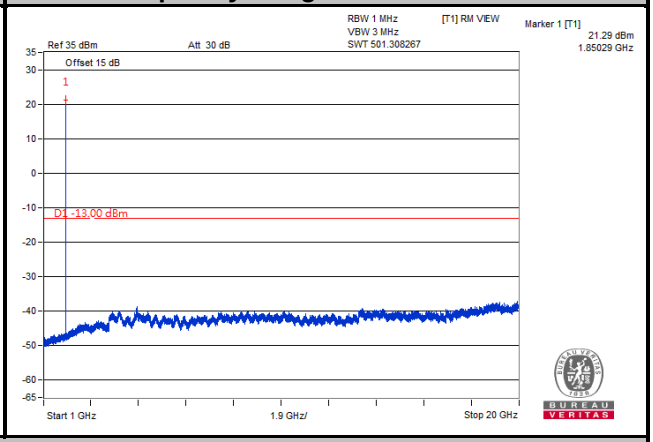
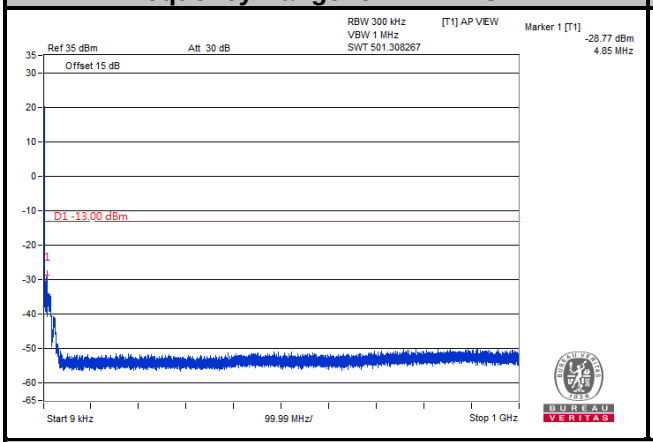
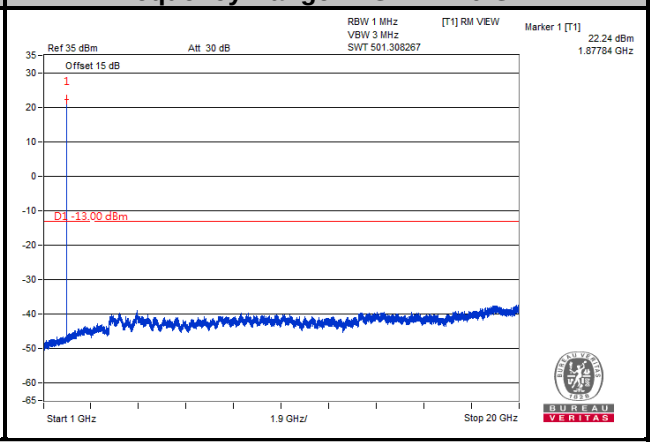
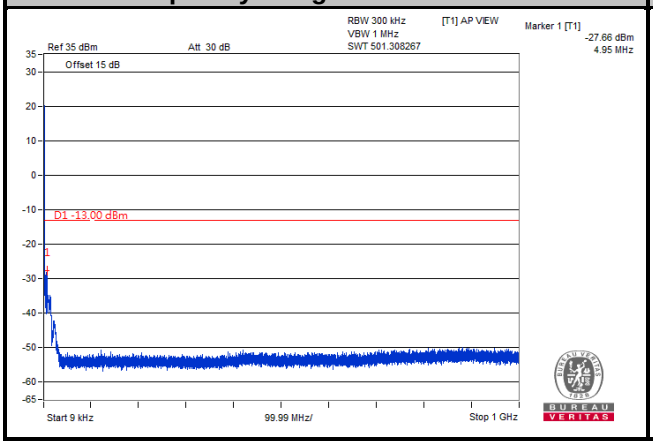
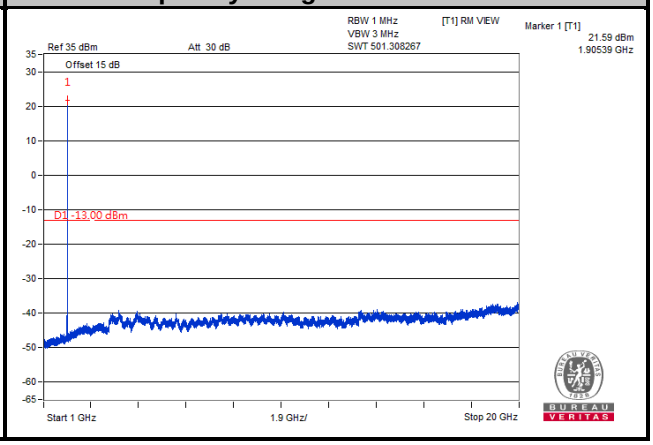
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

LTE Band 25	
Channel Bandwidth: 3 MHz	
Channel 26055	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	
Channel 26365	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	
Channel 26675	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	

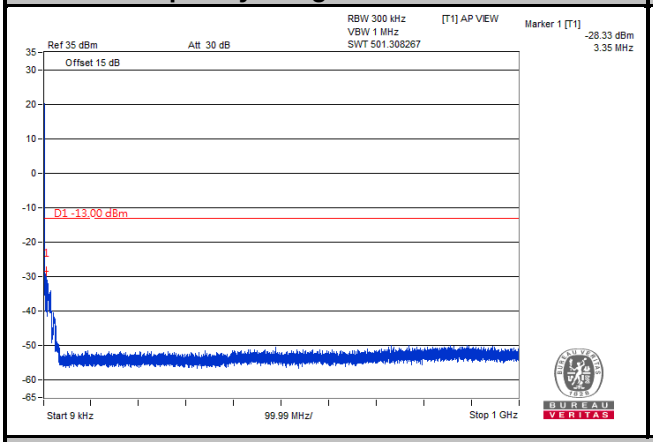
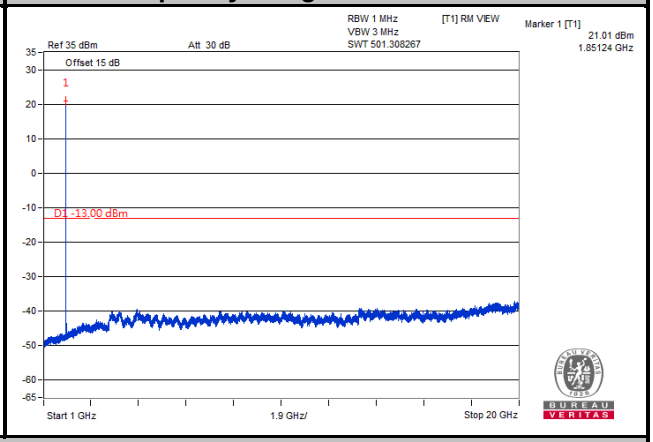
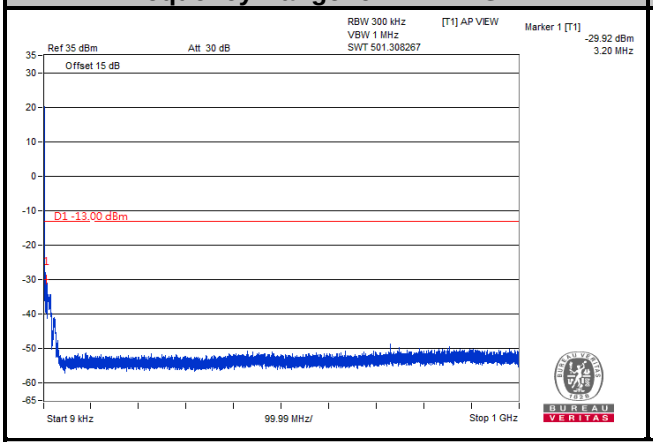
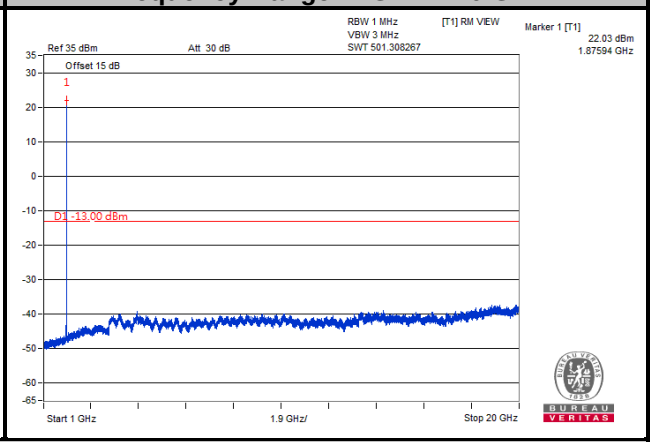
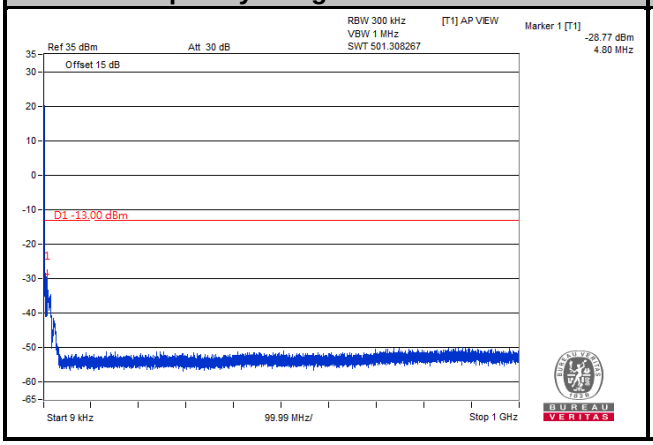
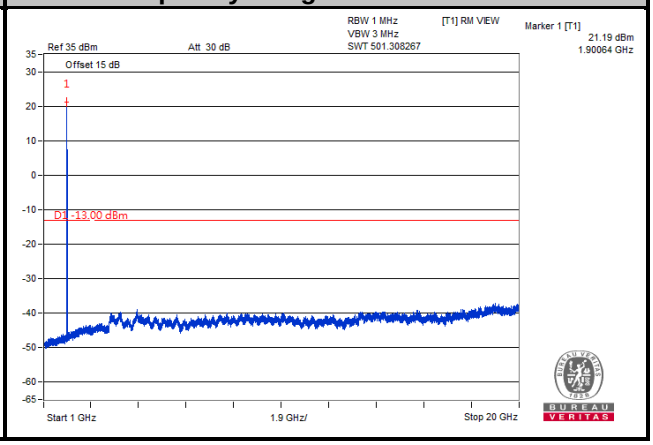
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

LTE Band 25	
Channel Bandwidth: 5 MHz	
Channel 26065	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	
Channel 26365	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	
Channel 26665	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	

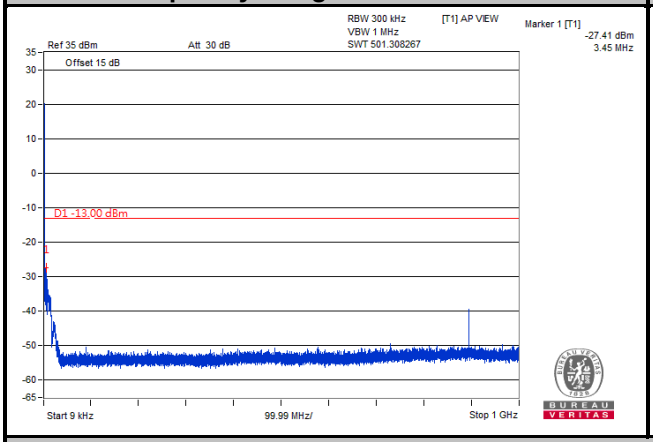
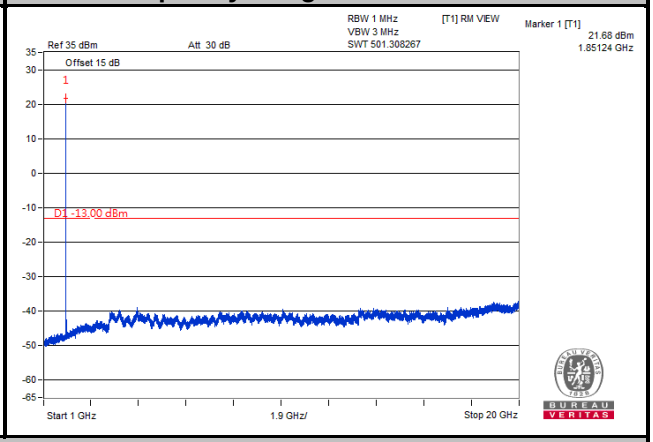
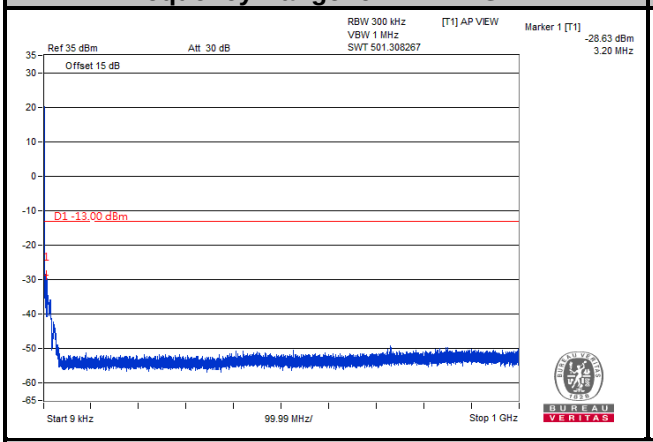
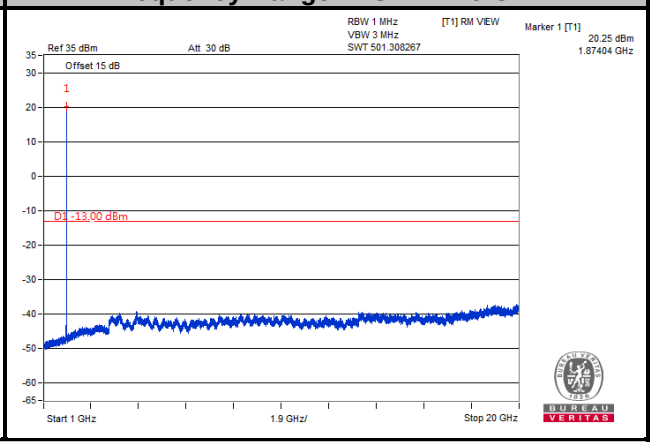
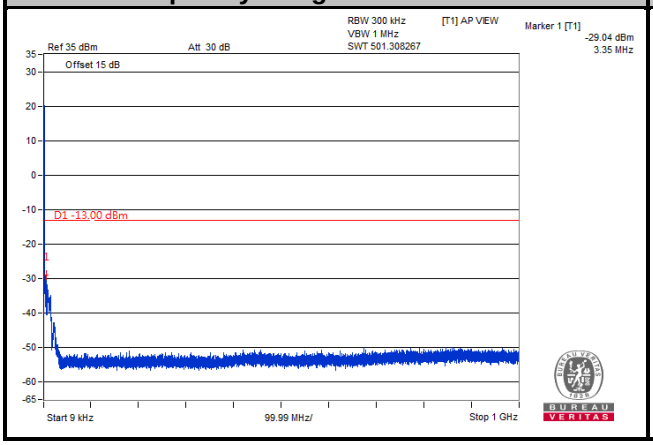
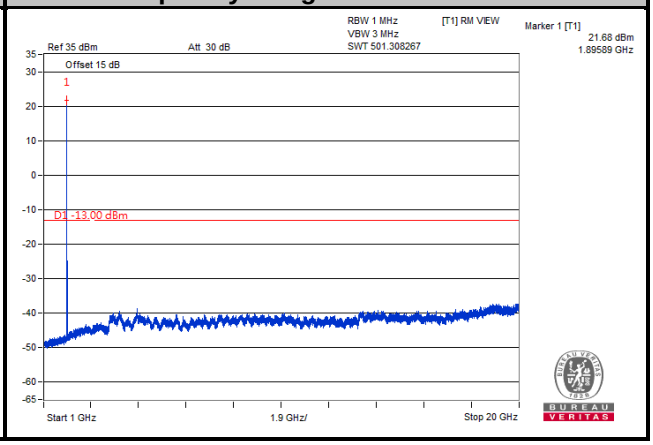
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

LTE Band 25	
Channel Bandwidth: 10 MHz	
Channel 26090	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	
Channel 26365	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	
Channel 26640	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	

Note: The signal over the limit in 9 kHz is from spectrum analyzer.

LTE Band 25	
Channel Bandwidth: 15 MHz	
Channel 26115	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	
Channel 26365	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	
Channel 26615	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	

Note: The signal over the limit in 9 kHz is from spectrum analyzer.

LTE Band 25	
Channel Bandwidth: 20 MHz	
Channel 26140	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	
Channel 26365	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	
Channel 26590	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 20 GHz
	

Note: The signal over the limit in 9 kHz is from spectrum analyzer.

4.8 Radiated Emission Measurement

4.8.1 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 is equal to -13 dBm.

4.8.2 Test Procedure

a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8 m (below or equal 1 GHz) and/or 1.5 m (above 1 GHz) 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 1 m to 4 m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.
b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value” of step a. Record the power level of S.G.
c. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn.
d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.R.P power - 2.15 dB.

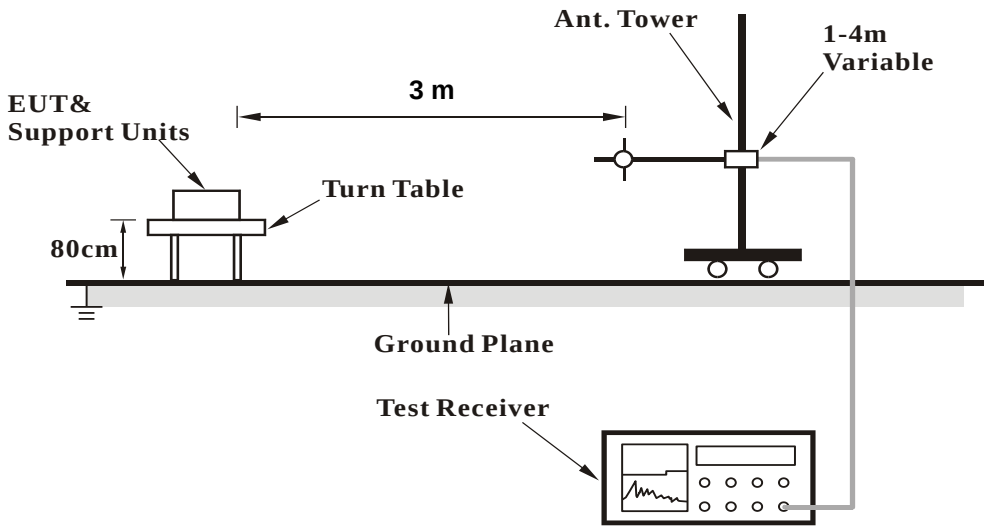
NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz/3 MHz.

4.8.3 Deviation from Test Standard

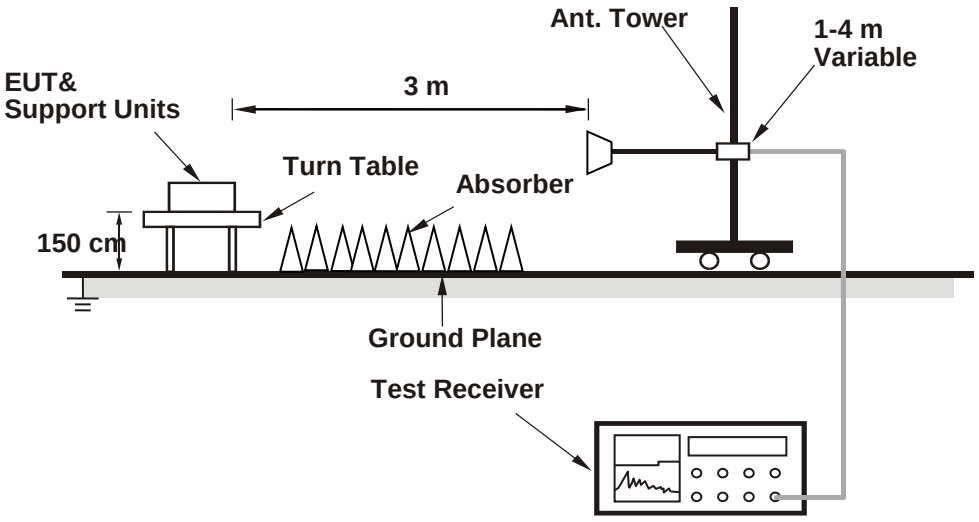
No deviation.

4.8.4 Test Setup

<Radiated Emission below or equal 1 GHz>



<Radiated Emission above 1 GHz>



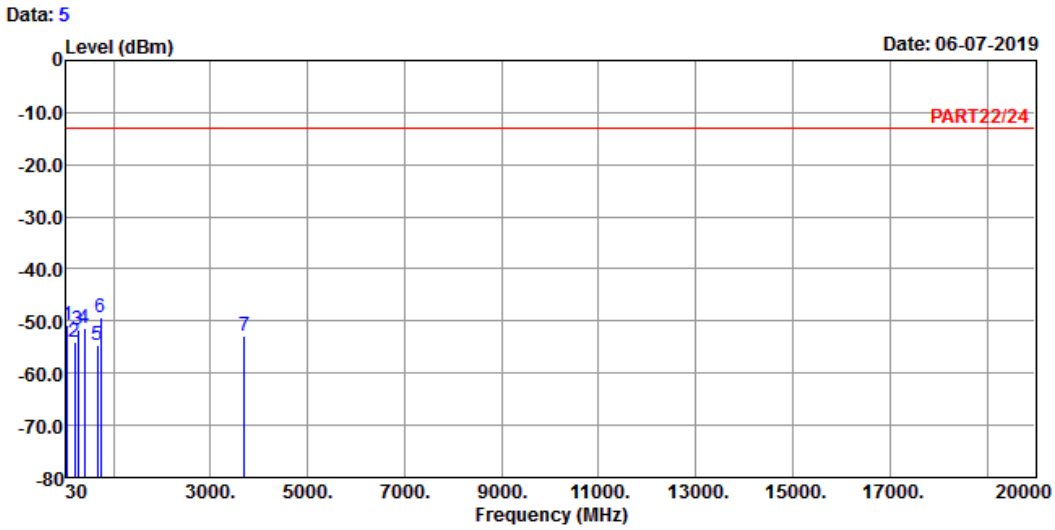
For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.8.5 Test Results

WCDMA:

Low Channel

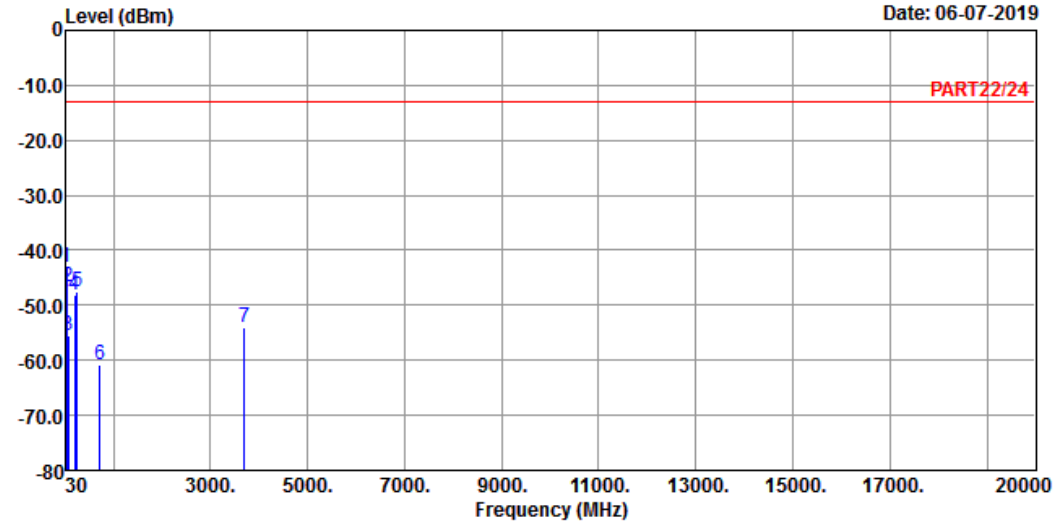
Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remak : WCDMA Band 2 Link_L-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	43.58	-50.88	-49.41	-13.00	-1.47	-37.88	Peak
2	196.84	-54.15	-46.41	-13.00	-7.74	-41.15	Peak
3	261.83	-51.78	-45.55	-13.00	-6.23	-38.78	Peak
4	395.69	-51.49	-45.52	-13.00	-5.97	-38.49	Peak
5	664.38	-54.59	-53.93	-13.00	-0.66	-41.59	Peak
6 pp	731.31	-49.26	-49.78	-13.00	0.52	-36.26	Peak
7	3704.80	-52.93	-46.00	-13.00	-6.93	-39.93	Peak

Data: 6

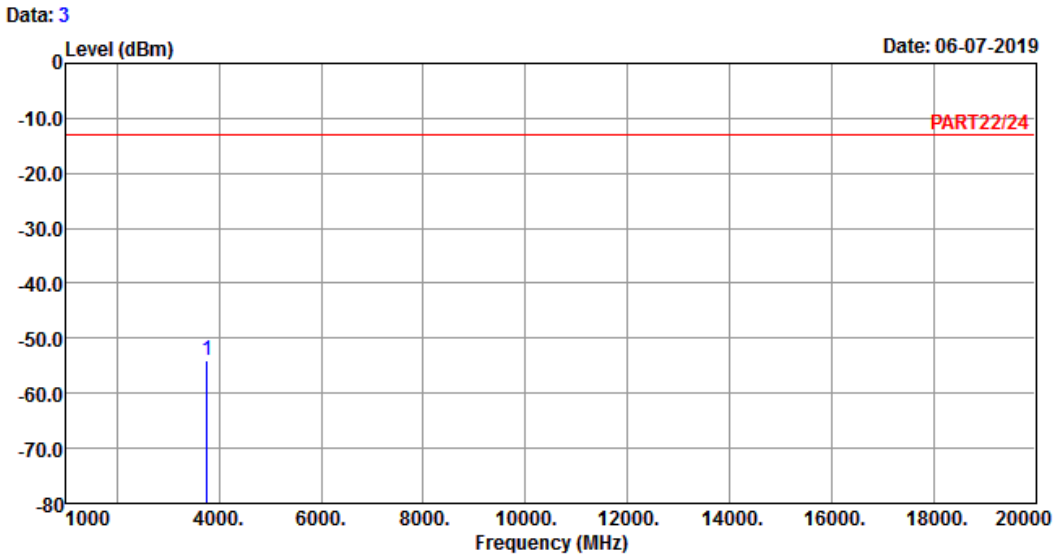


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : WCDMA Band 2 Link_L-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	30.00	-42.95	-43.33	-13.00	0.38	-29.95	Peak
2	43.58	-46.55	-45.08	-13.00	-1.47	-33.55	Peak
3	66.86	-55.37	-47.19	-13.00	-8.18	-42.37	Peak
4	195.87	-48.04	-40.39	-13.00	-7.65	-35.04	Peak
5	259.89	-47.67	-41.48	-13.00	-6.19	-34.67	Peak
6	729.37	-60.90	-61.38	-13.00	0.48	-47.90	Peak
7	3704.80	-54.01	-47.08	-13.00	-6.93	-41.01	Peak

Middle Channel

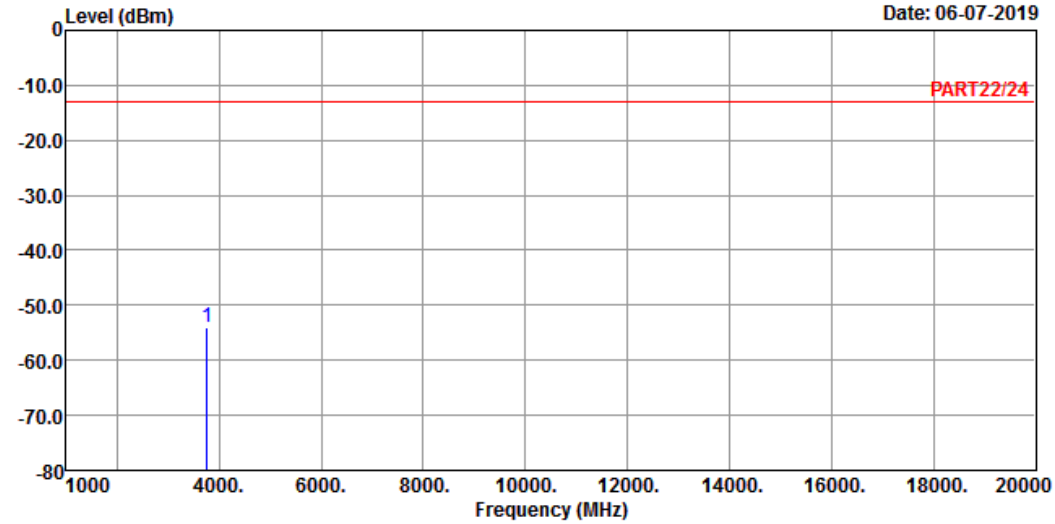
Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remak : WCDMA Band 2 Link_M-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3760.00	-53.89	-47.24	-13.00	-6.65	-40.89	Peak

Data: 4



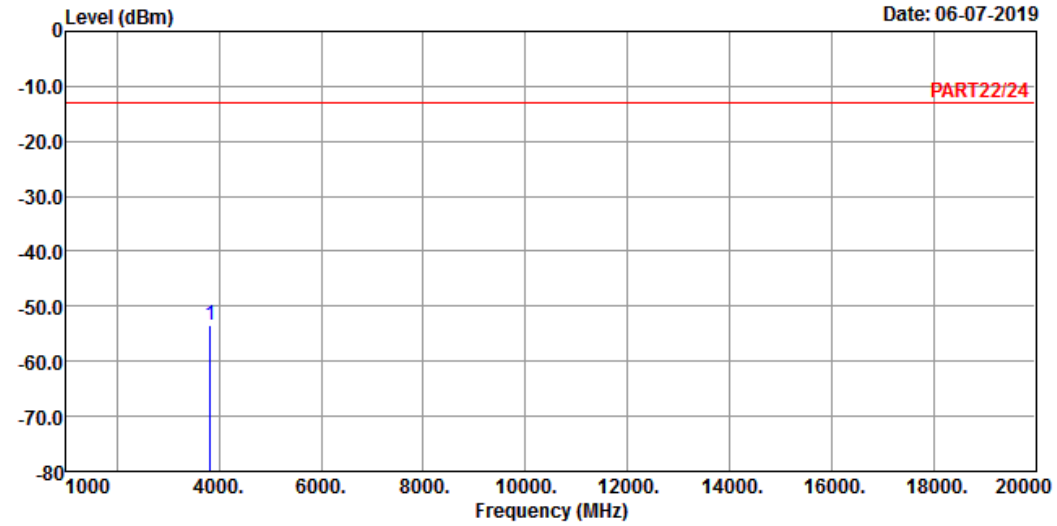
Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : WCDMA Band 2 Link_M-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3760.00	-54.06	-47.41	-13.00	-6.65	-41.06	Peak

High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch

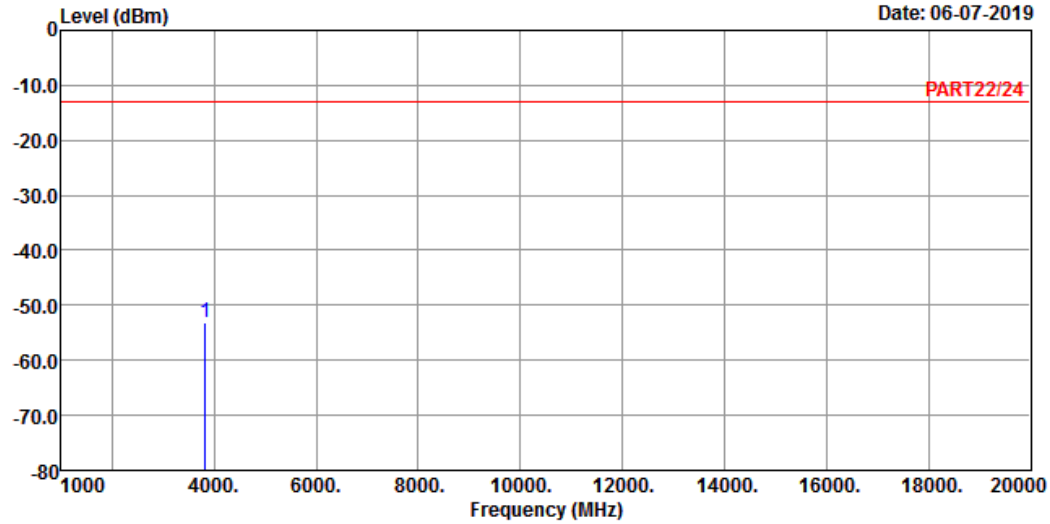
Data: 3



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remak : WCDMA Band 2 Link_H-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3815.20	-53.47	-47.07	-13.00	-6.40	-40.47	Peak

Data: 4

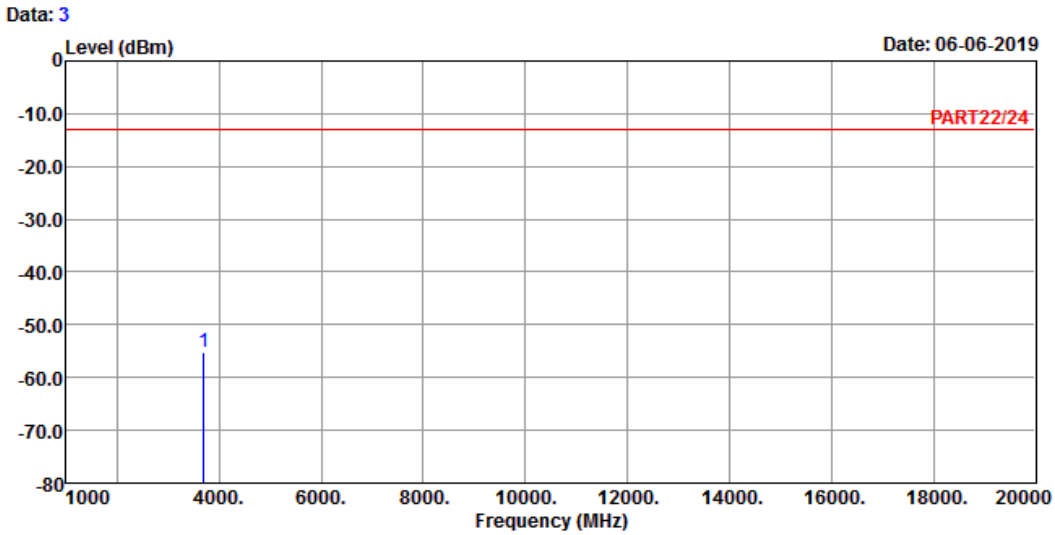


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : WCDMA Band 2 Link_H-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3815.20	-53.01	-46.61	-13.00	-6.40	-40.01	Peak

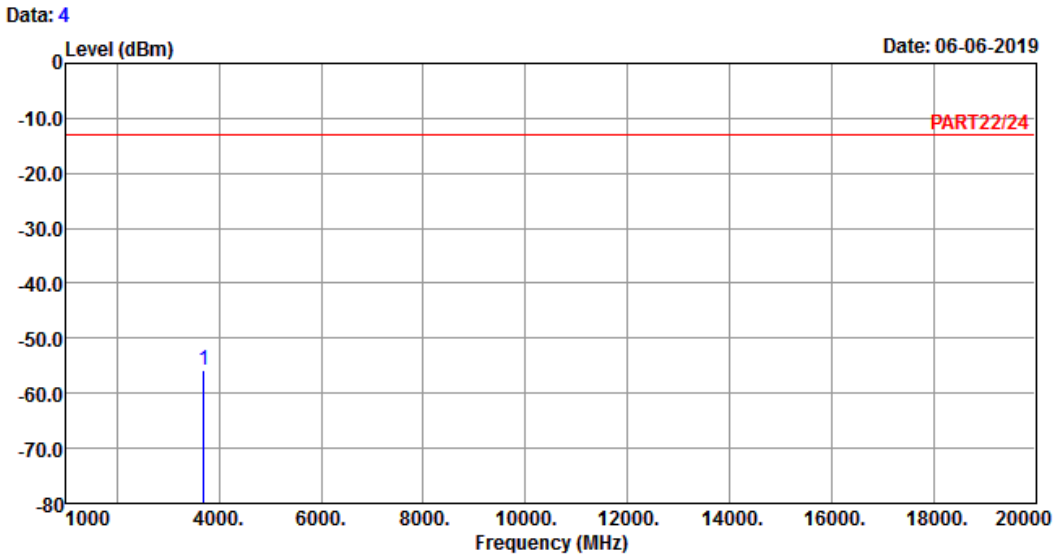
LTE Band 2
Channel Bandwidth: 1.4 MHz / QPSK
Low Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remak : LTE Band 2 QPSK_1.4M Link_L-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3701.40	-55.11	-48.18	-13.00	-6.93	-42.11	Peak

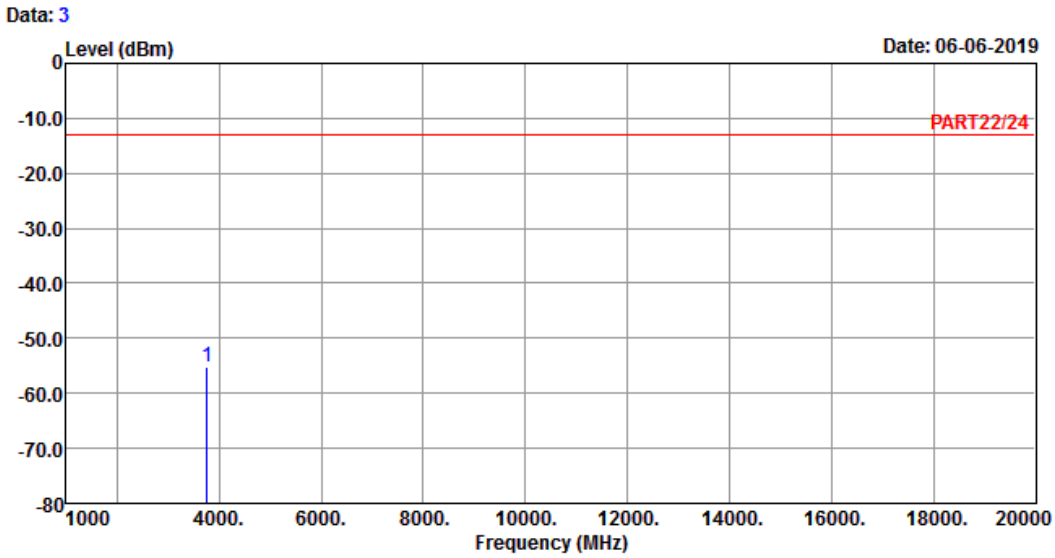


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band 2 QPSK_1.4M Link_L-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3701.40	-55.84	-48.91	-13.00	-6.93	-42.84	Peak

Middle Channel

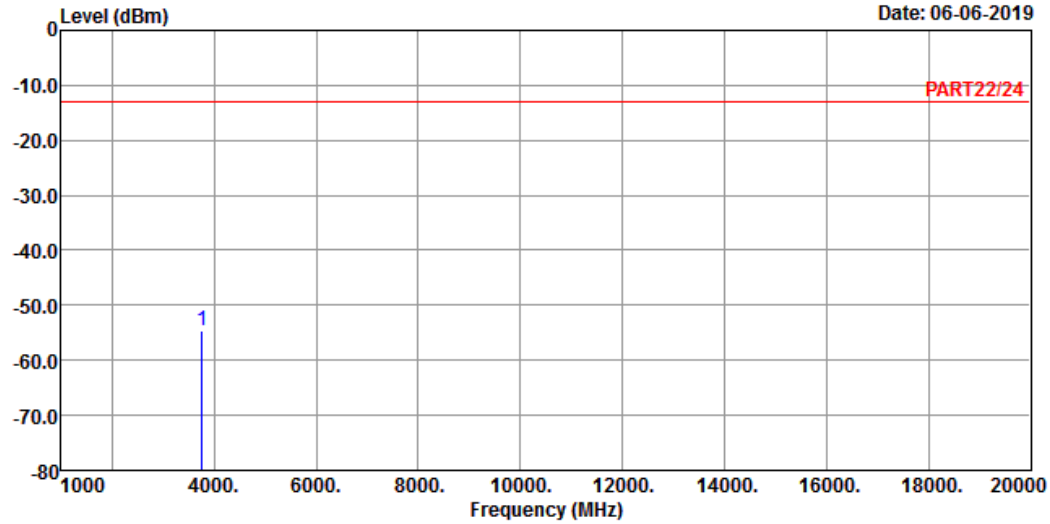
Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remak : LTE Band 2 QPSK_1.4M Link_M-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3760.00	-55.18	-48.53	-13.00	-6.65	-42.18	Peak

Data: 4



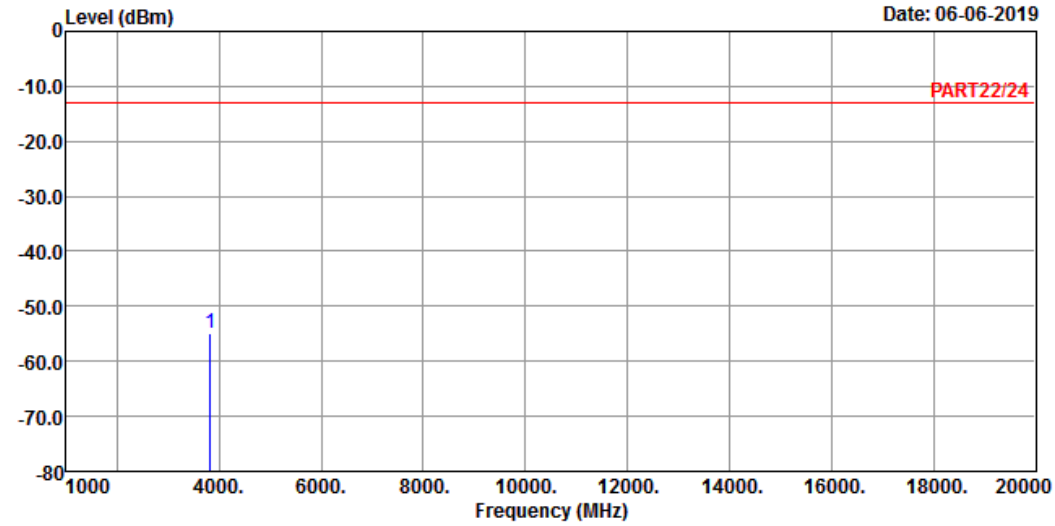
Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band 2 QPSK_1.4M Link_M-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3760.00	-54.62	-47.97	-13.00	-6.65	-41.62	Peak

High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch

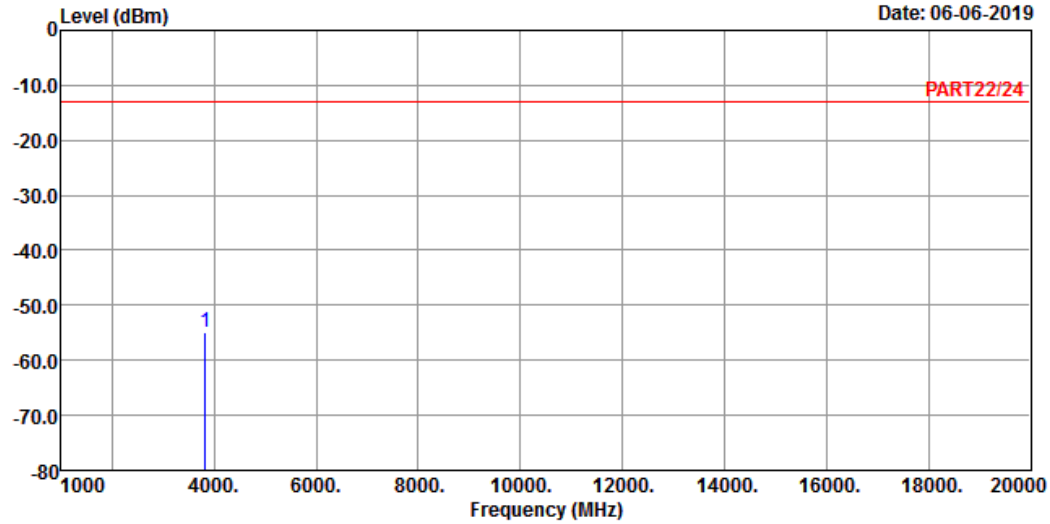
Data: 3



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remak : LTE Band 2 QPSK_1.4M Link_H-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3818.60	-55.03	-48.63	-13.00	-6.40	-42.03	Peak

Data: 4

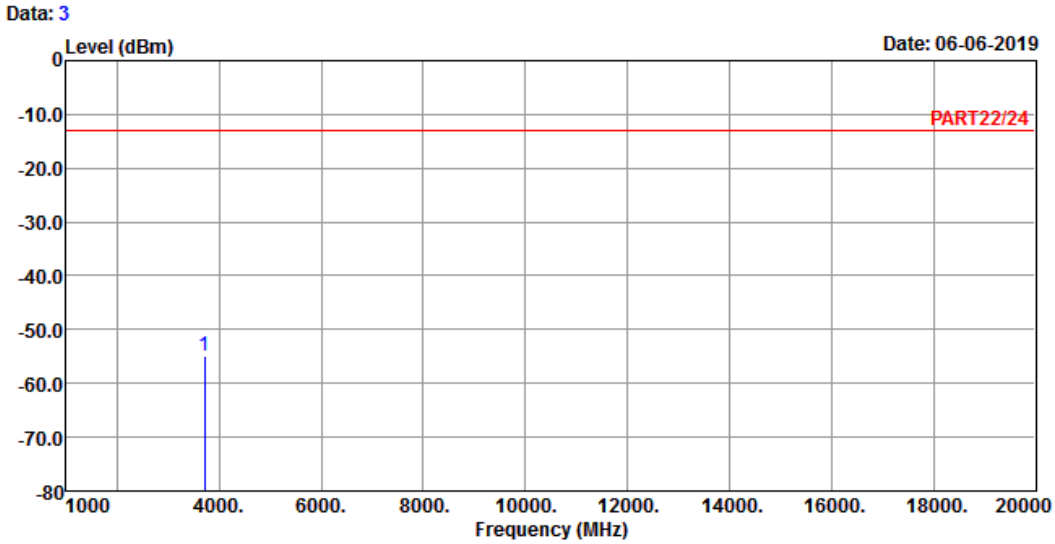


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band 2 QPSK_1.4M Link_H-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3818.60	-54.95	-48.55	-13.00	-6.40	-41.95	Peak

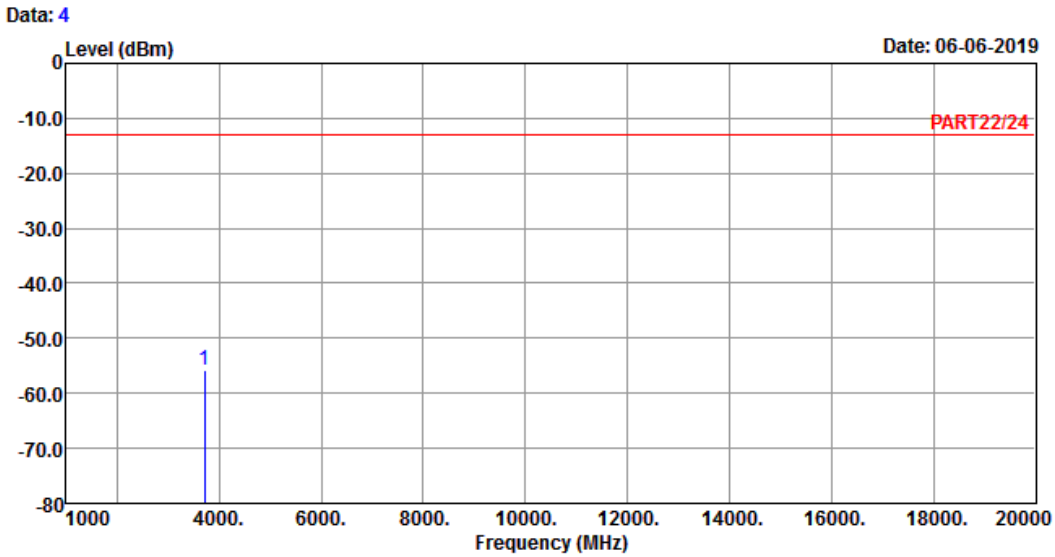
Channel Bandwidth: 5 MHz / QPSK
Low Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remak : LTE Band 2 QPSK_5M Link_L-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3705.00	-54.96	-48.03	-13.00	-6.93	-41.96	Peak

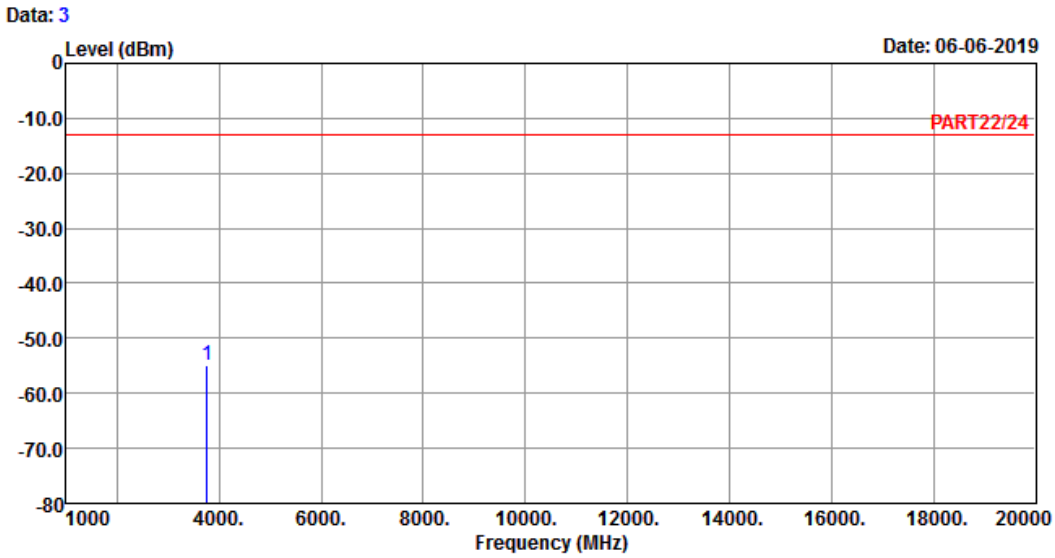


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band 2 QPSK_5M Link_L-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3705.00	-55.71	-48.78	-13.00	-6.93	-42.71	Peak

Middle Channel

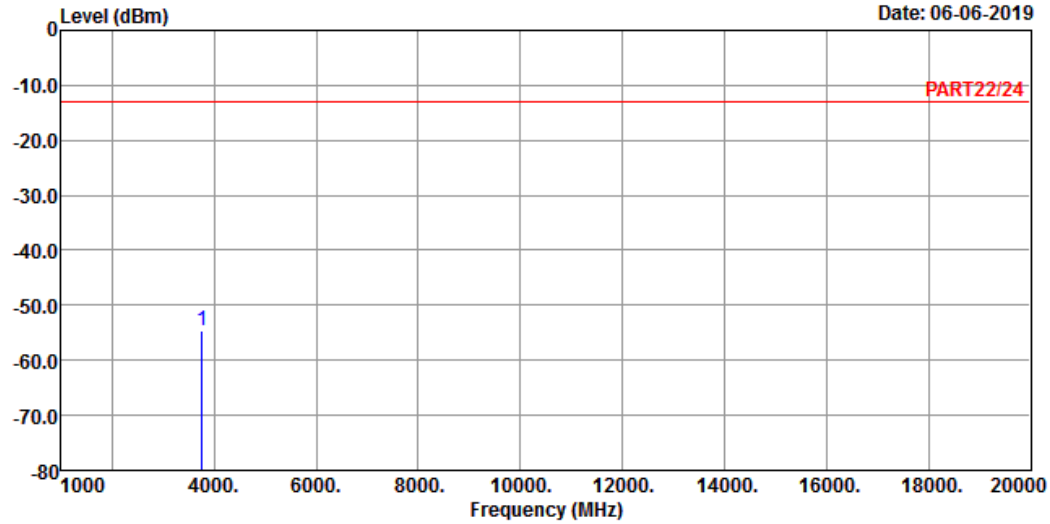
Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remak : LTE Band 2 QPSK_5M Link_M-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3760.00	-55.03	-48.38	-13.00	-6.65	-42.03	Peak

Data: 4



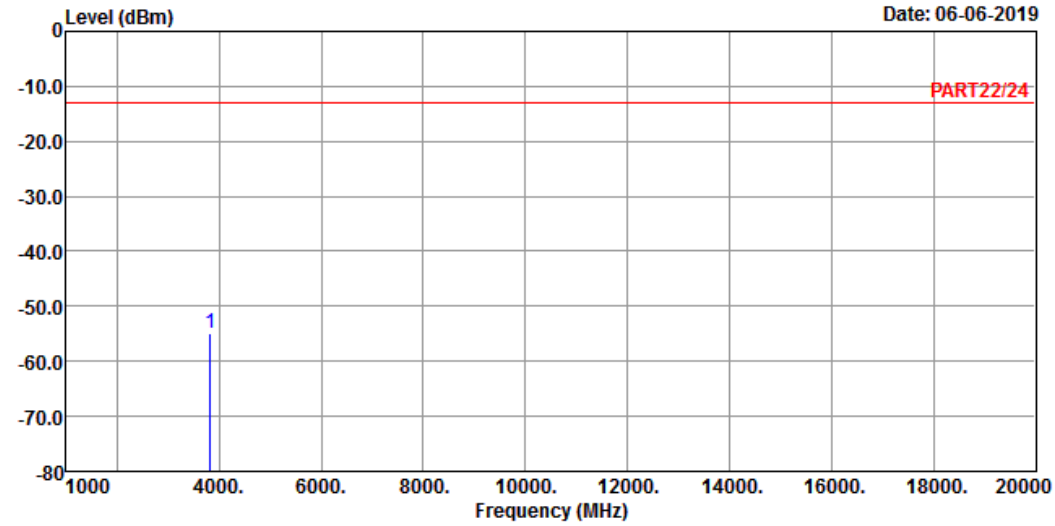
Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band 2 QPSK_5M Link_M-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3760.00	-54.48	-47.83	-13.00	-6.65	-41.48	Peak

High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch

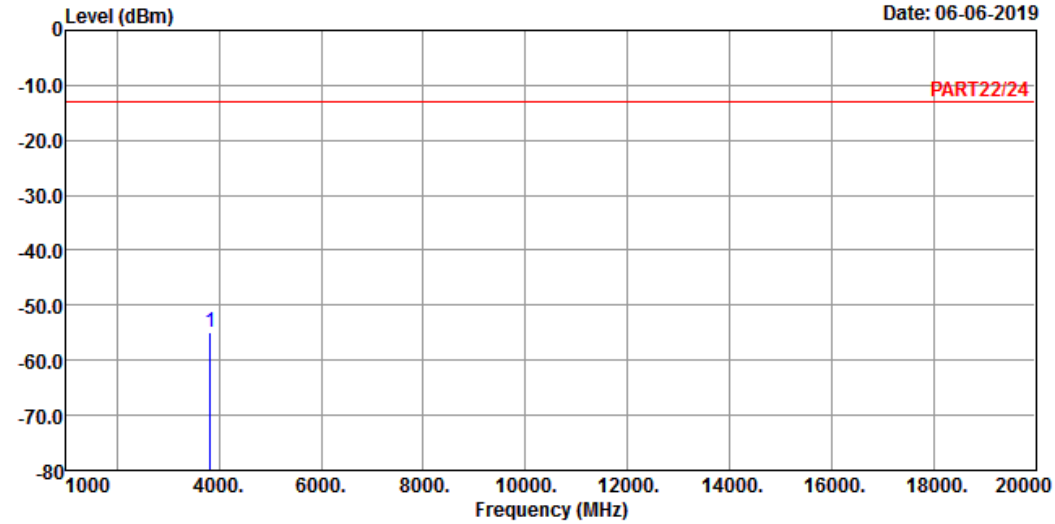
Data: 3



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remak : LTE Band 2 QPSK_5M Link_H-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3815.00	-54.81	-48.41	-13.00	-6.40	-41.81	Peak

Data: 4

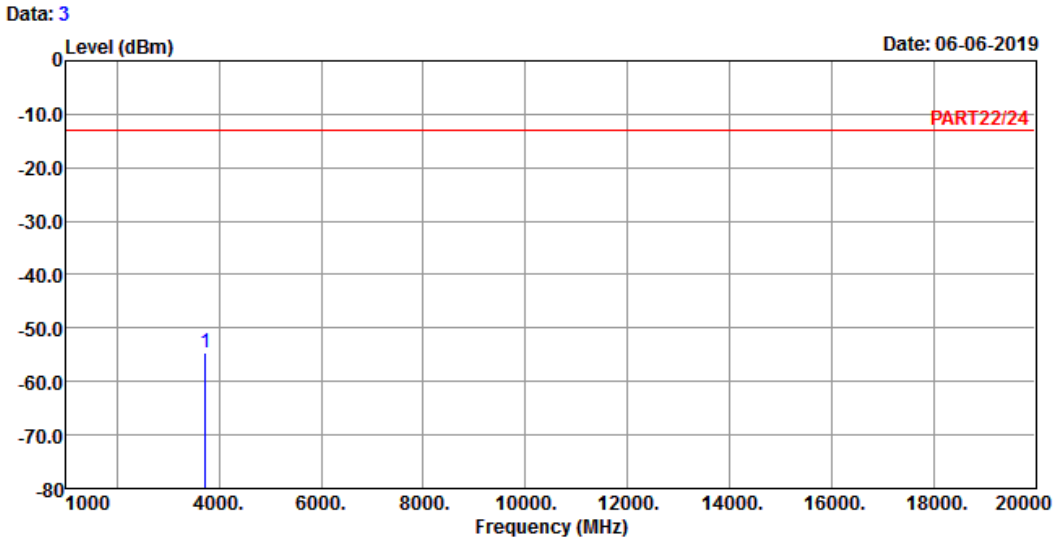


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band 2 QPSK_5M Link_H-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3815.00	-54.78	-48.38	-13.00	-6.40	-41.78	Peak

Channel Bandwidth: 20 MHz / QPSK
Low Channel

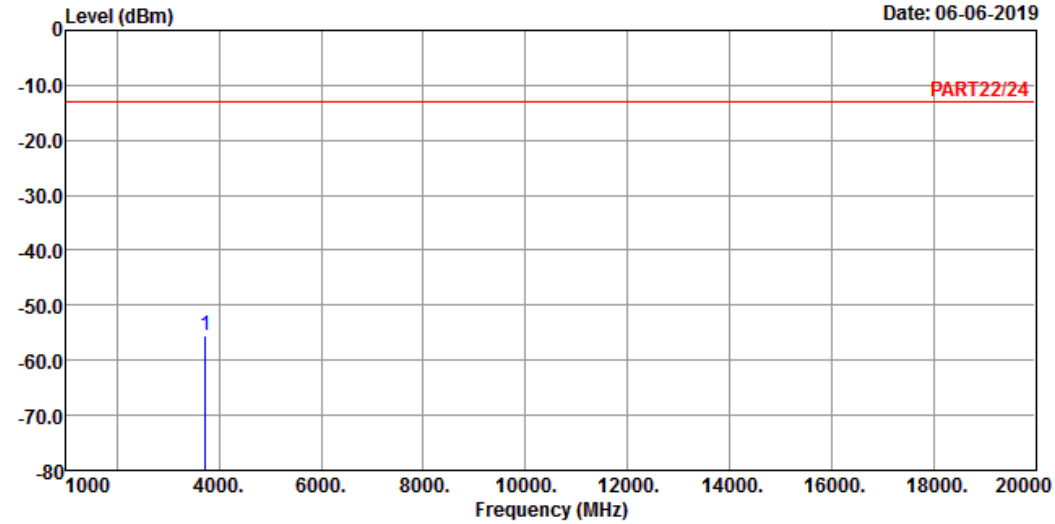
Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remak : LTE Band 2 QPSK_20M Link_L-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3720.00	-54.62	-47.80	-13.00	-6.82	-41.62	Peak

Data: 4

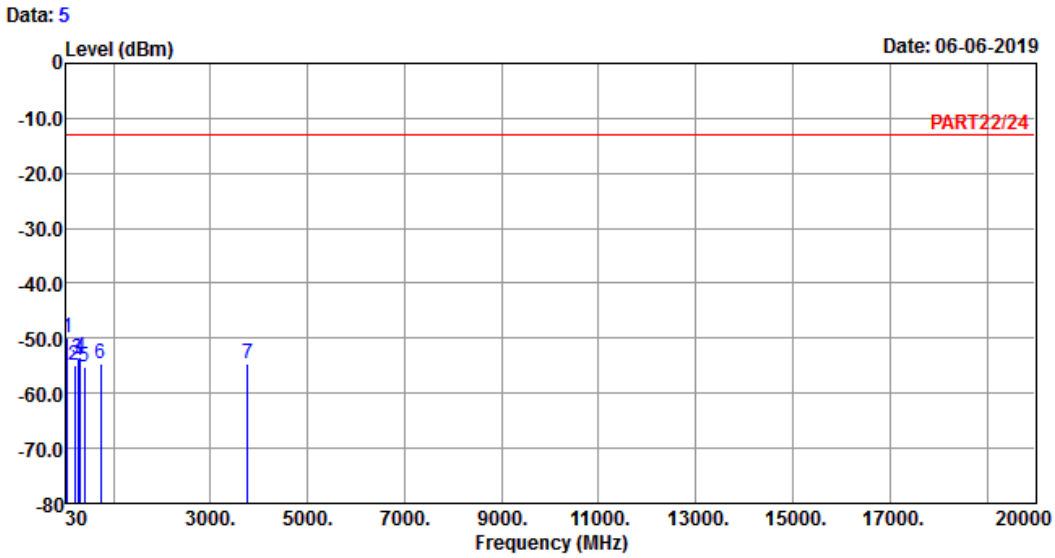


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band 2 QPSK_20M Link_L-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3720.00	-55.35	-48.53	-13.00	-6.82	-42.35	Peak

Middle Channel

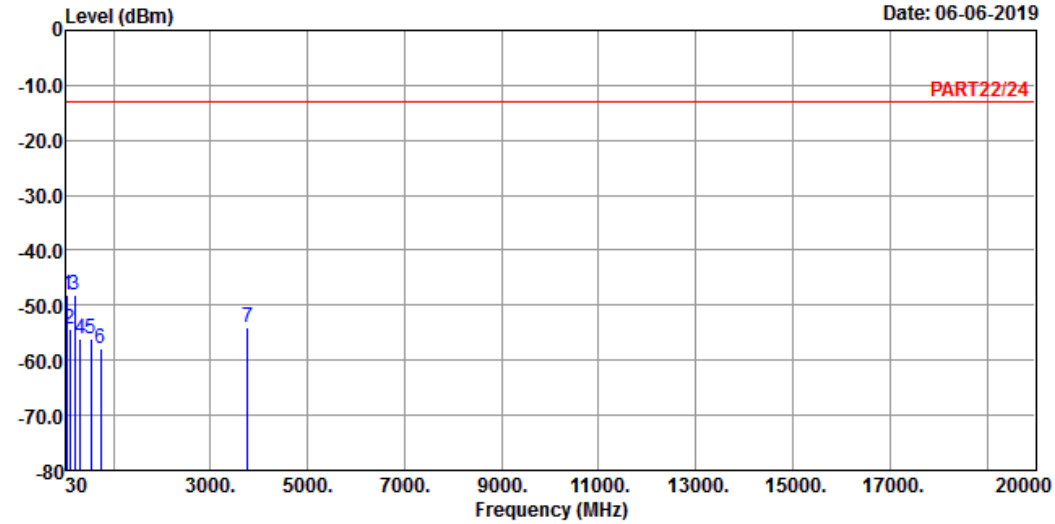
Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remak : LTE Band 2 QPSK_20M Link_M-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	43.58	-49.93	-48.46	-13.00	-1.47	-36.93	Peak
2	202.66	-55.04	-47.14	-13.00	-7.90	-42.04	Peak
3	266.68	-53.70	-47.37	-13.00	-6.33	-40.70	Peak
4	317.12	-53.37	-46.62	-13.00	-6.75	-40.37	Peak
5	398.60	-55.21	-49.26	-13.00	-5.95	-42.21	Peak
6	733.25	-54.68	-55.23	-13.00	0.55	-41.68	Peak
7	3760.00	-54.64	-47.99	-13.00	-6.65	-41.64	Peak

Data: 6

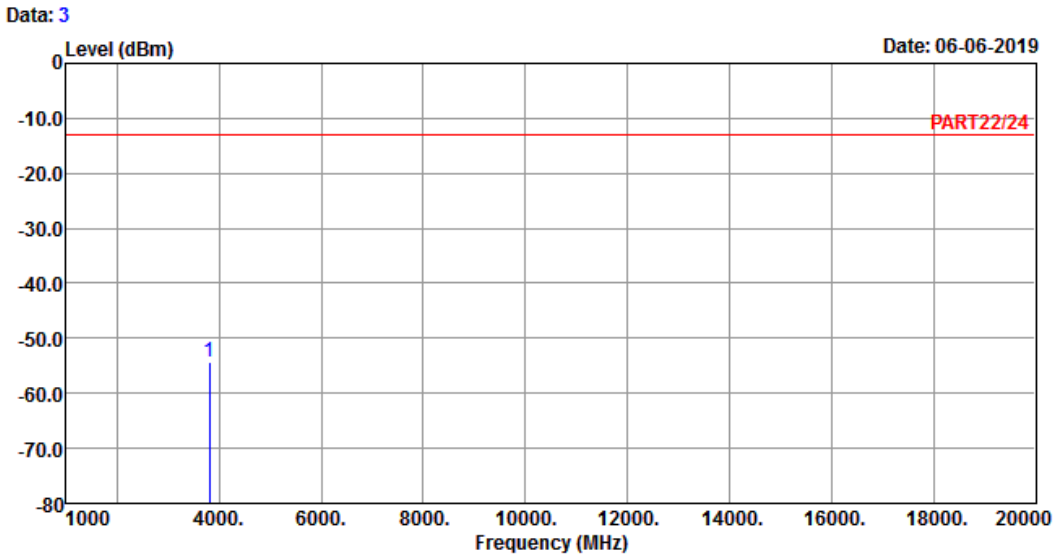


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band 2 QPSK_20M Link_M-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	43.58	-48.02	-46.55	-13.00	-1.47	-35.02	Peak
2	102.75	-54.20	-43.71	-13.00	-10.49	-41.20	Peak
3	194.90	-48.16	-40.61	-13.00	-7.55	-35.16	Peak
4	318.09	-55.95	-49.22	-13.00	-6.73	-42.95	Peak
5	533.43	-55.96	-52.52	-13.00	-3.44	-42.96	Peak
6	731.31	-57.74	-58.26	-13.00	0.52	-44.74	Peak
7	3760.00	-54.11	-47.46	-13.00	-6.65	-41.11	Peak

High Channel

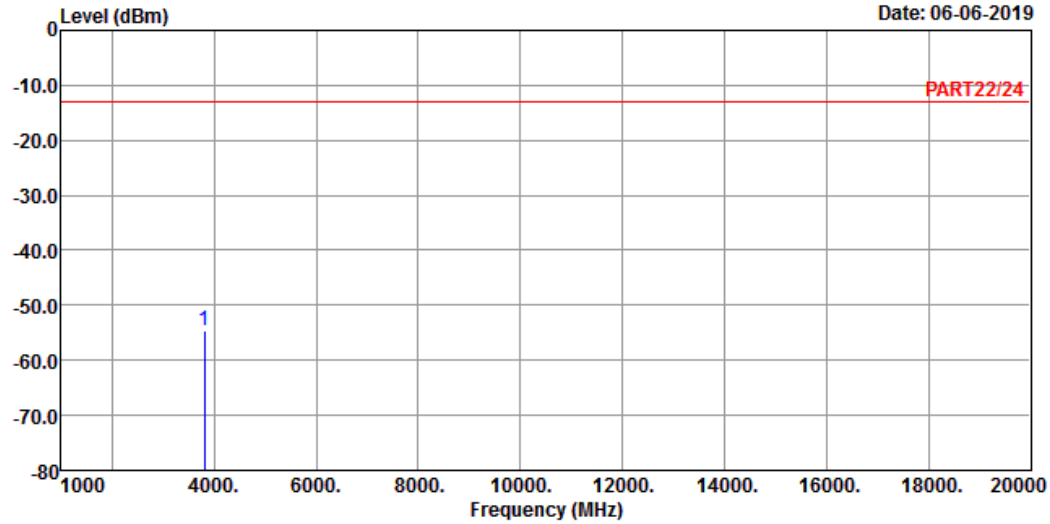
Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remak : LTE Band 2 QPSK_20M Link_H-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3800.00	-54.44	-48.01	-13.00	-6.43	-41.44	Peak

Data: 4

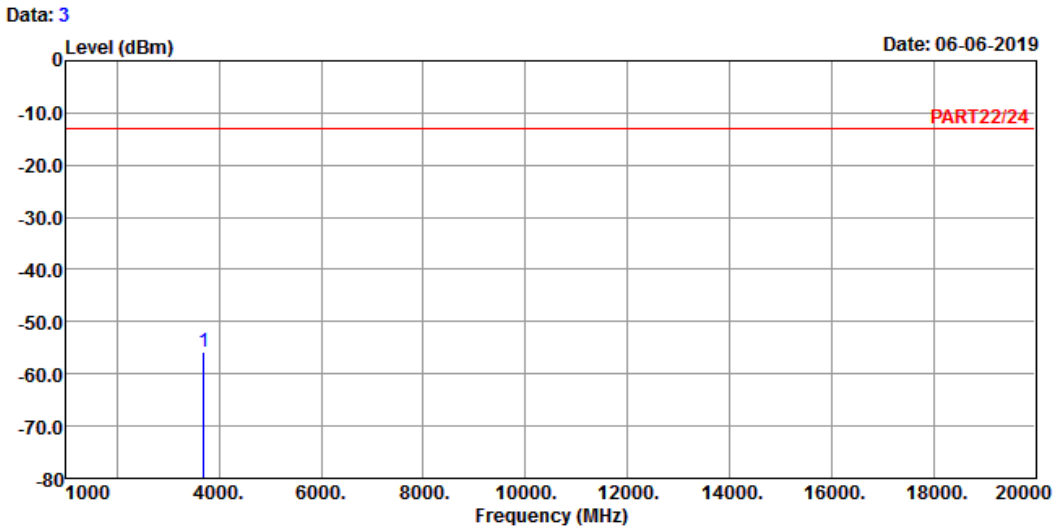


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band 2 QPSK_20M Link_H-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3800.00	-54.52	-48.09	-13.00	-6.43	-41.52	Peak

LTE Band 25
Channel Bandwidth: 1.4 MHz / QPSK
Low Channel

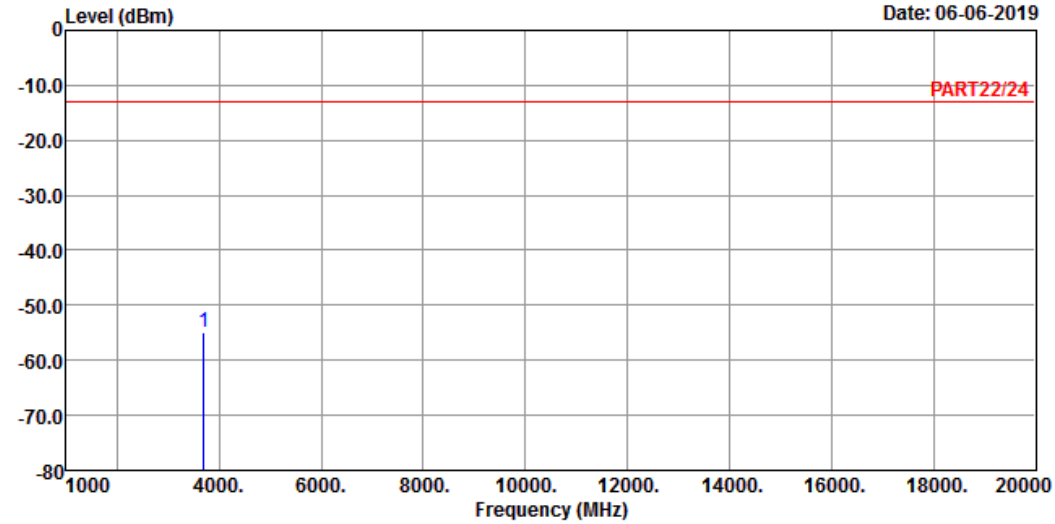
Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remak : LTE Band 25 QPSK_1.4M Link_L-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3701.40	-55.69	-48.76	-13.00	-6.93	-42.69	Peak

Data: 4

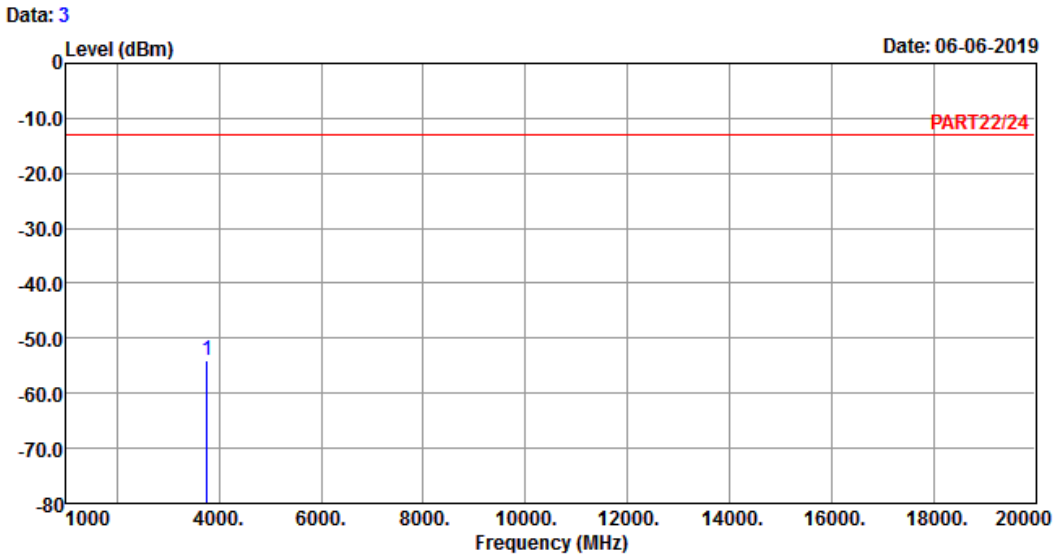


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band 25 QPSK_1.4M Link_L-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3701.40	-55.02	-48.09	-13.00	-6.93	-42.02	Peak

Middle Channel

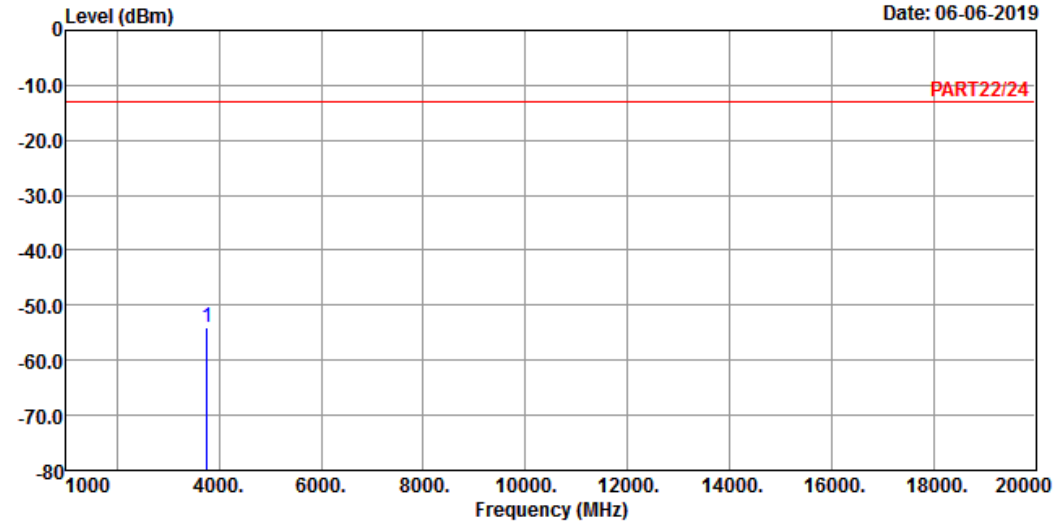
Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remak : LTE Band 25 QPSK_1.4M Link_M-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3765.00	-54.07	-47.47	-13.00	-6.60	-41.07	Peak

Data: 4

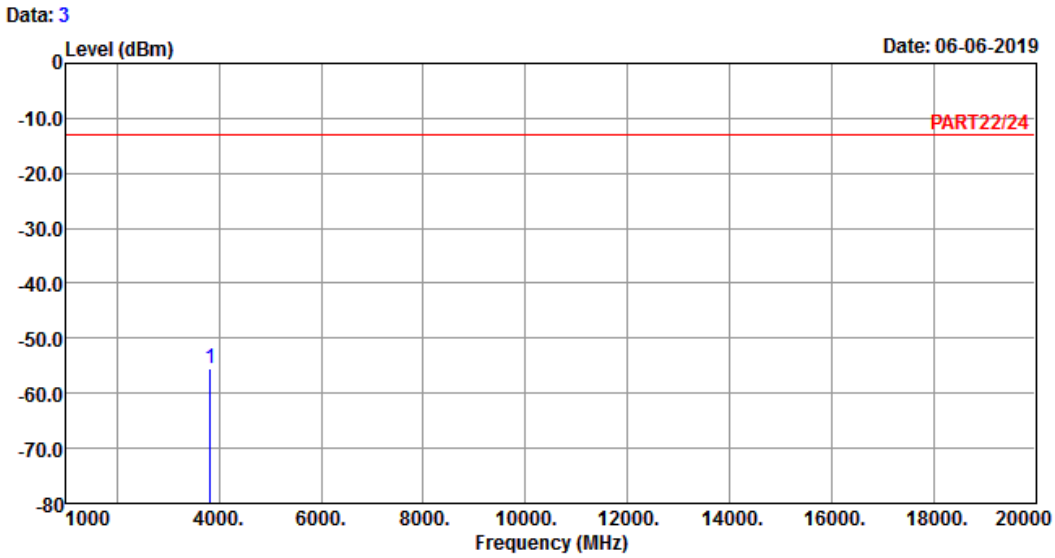


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band 25 QPSK_1.4M Link_M-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3765.00	-53.91	-47.31	-13.00	-6.60	-40.91	Peak

High Channel

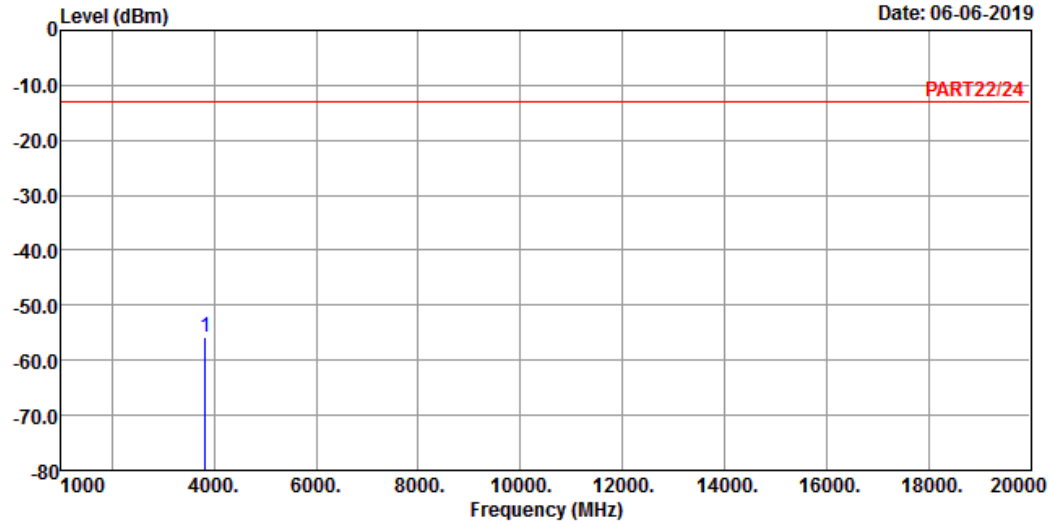
Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remak : LTE Band 25 QPSK_1.4M Link_H-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3828.60	-55.57	-49.20	-13.00	-6.37	-42.57	Peak

Data: 4

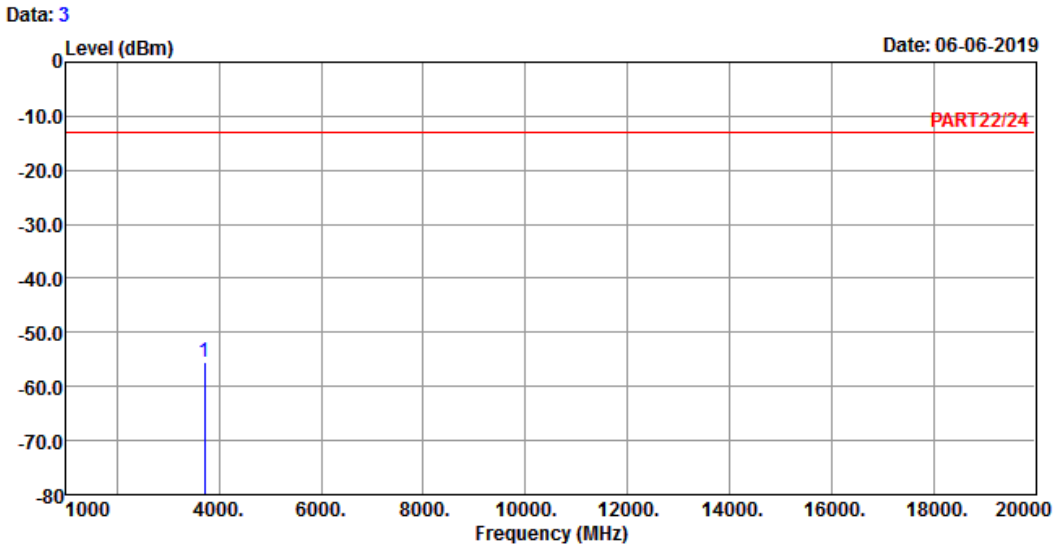


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band 25 QPSK_1.4M Link_H-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3828.60	-55.78	-49.41	-13.00	-6.37	-42.78	Peak

Channel Bandwidth: 5 MHz / QPSK
Low Channel

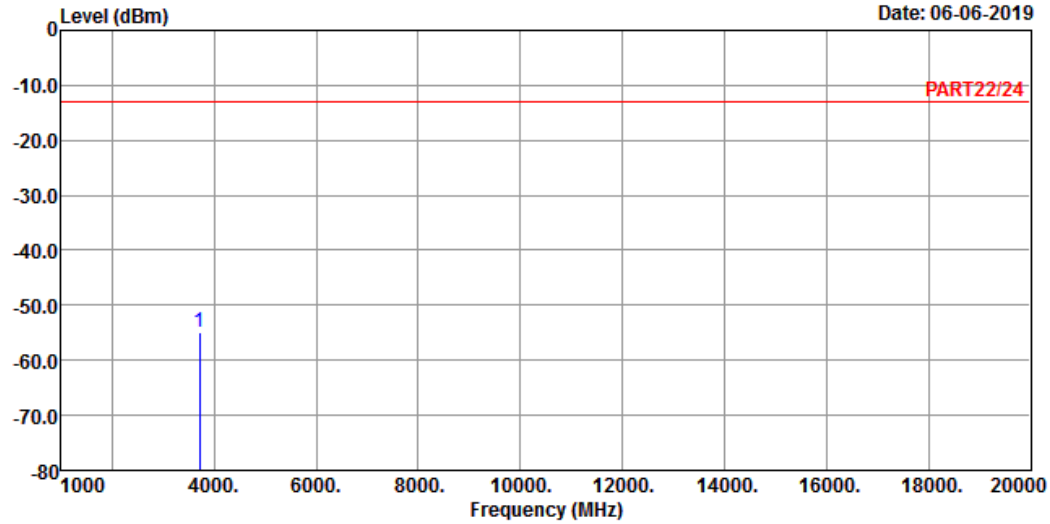
Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remak : LTE Band 25 QPSK_5M Link_L-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3705.00	-55.48	-48.55	-13.00	-6.93	-42.48	Peak

Data: 4

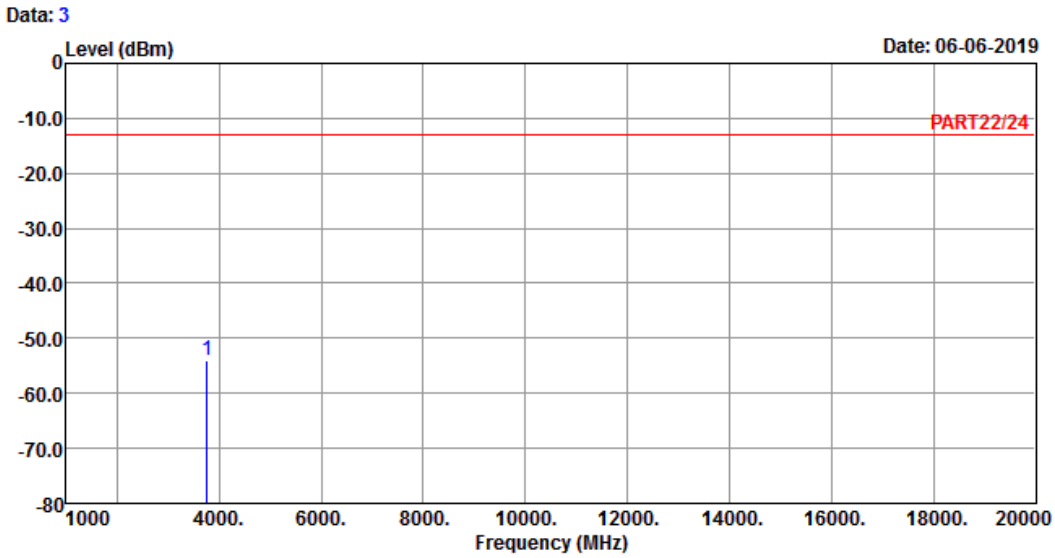


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band 25 QPSK_5M Link_L-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3705.00	-54.77	-47.84	-13.00	-6.93	-41.77	Peak

Middle Channel

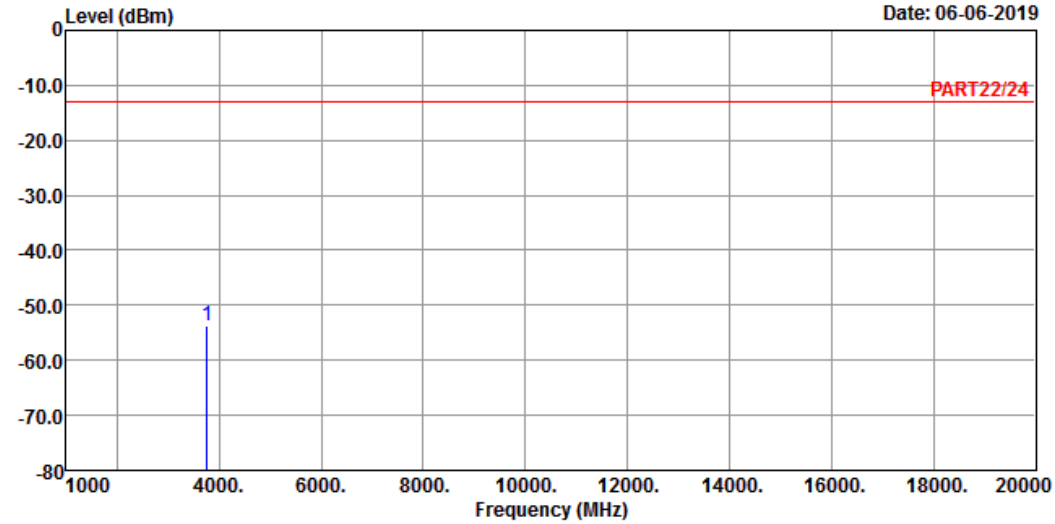
Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remak : LTE Band 25 QPSK_5M Link_M-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3765.00	-53.89	-47.29	-13.00	-6.60	-40.89	Peak

Data: 4

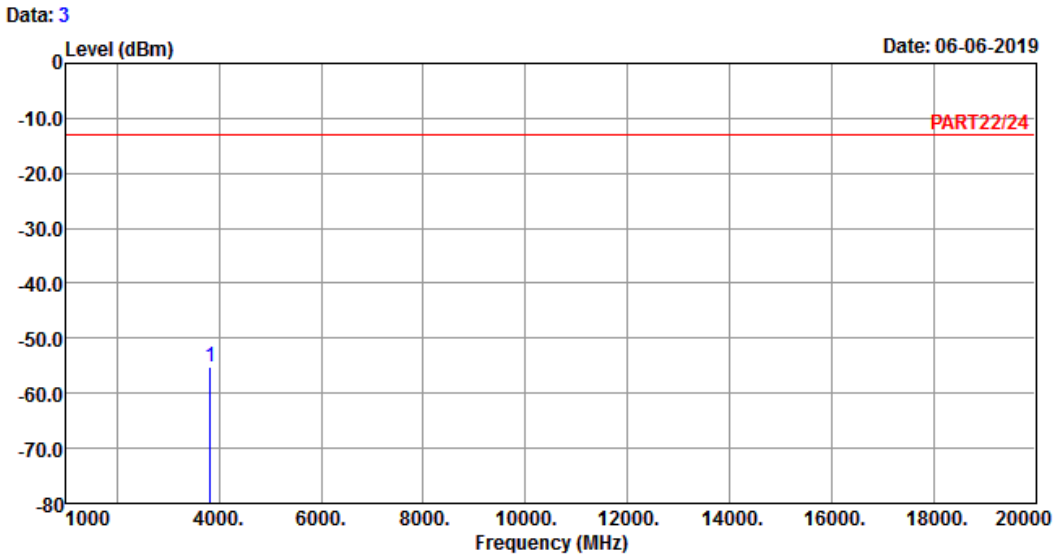


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band 25 QPSK_5M Link_M-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3765.00	-53.77	-47.17	-13.00	-6.60	-40.77	Peak

High Channel

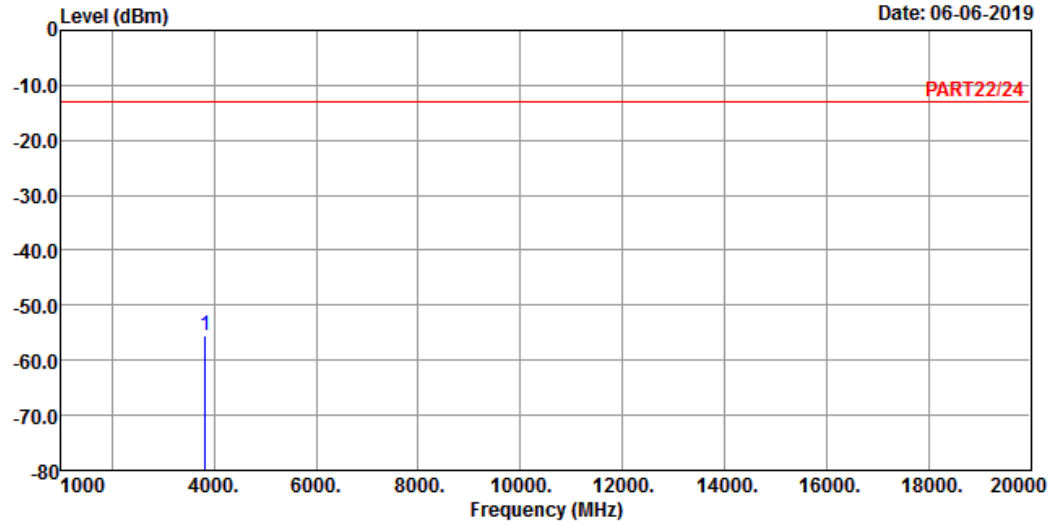
Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band 25 QPSK_5M Link_H-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3825.00	-55.32	-48.95	-13.00	-6.37	-42.32	Peak

Data: 4

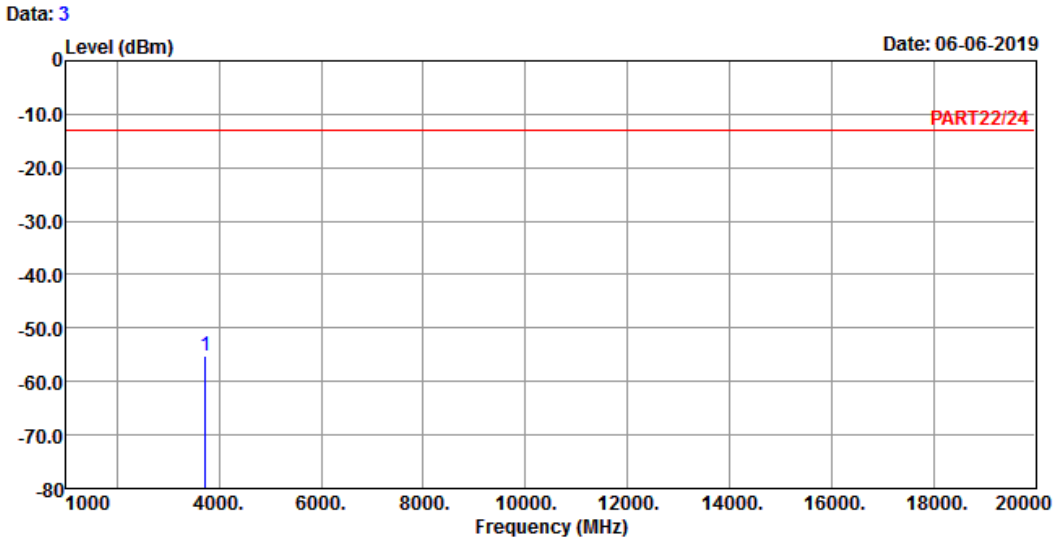


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band 25 QPSK_5M Link_H-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3825.00	-55.45	-49.08	-13.00	-6.37	-42.45	Peak

Channel Bandwidth: 20 MHz / QPSK
Low Channel

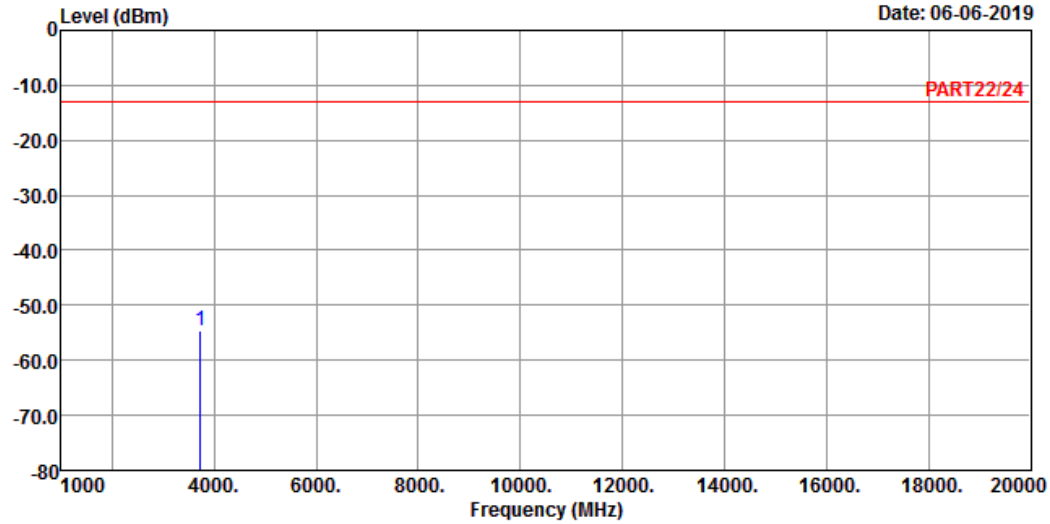
Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remak : LTE Band 25 QPSK_20M Link_L-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3720.00	-55.23	-48.41	-13.00	-6.82	-42.23	Peak

Data: 4

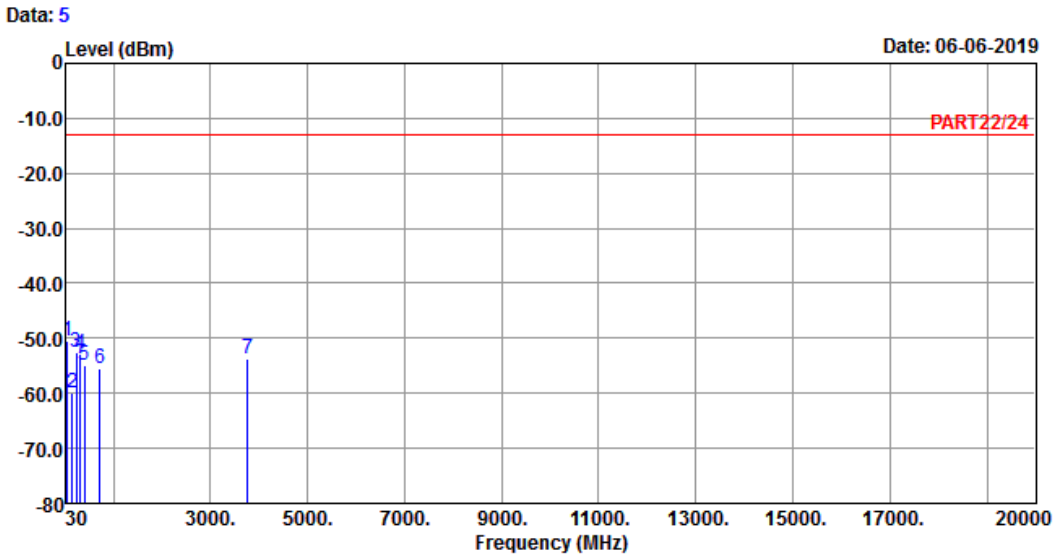


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band 25 QPSK_20M Link_L-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3720.00	-54.48	-47.66	-13.00	-6.82	-41.48	Peak

Middle Channel

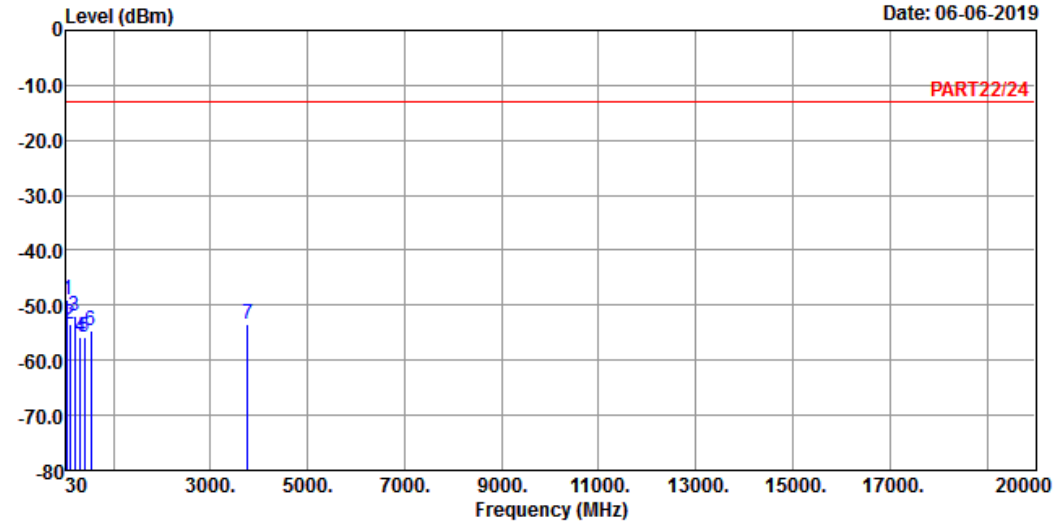
Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remak : LTE Band 25 QPSK_20M Link_M-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	43.58	-50.48	-49.01	-13.00	-1.47	-37.48	Peak
2	152.22	-59.89	-52.86	-13.00	-7.03	-46.89	Peak
3	229.82	-52.45	-45.64	-13.00	-6.81	-39.45	Peak
4	315.18	-52.96	-46.18	-13.00	-6.78	-39.96	Peak
5	397.63	-54.97	-49.01	-13.00	-5.96	-41.97	Peak
6	729.37	-55.57	-56.05	-13.00	0.48	-42.57	Peak
7	3765.00	-53.62	-47.02	-13.00	-6.60	-40.62	Peak

Data: 6

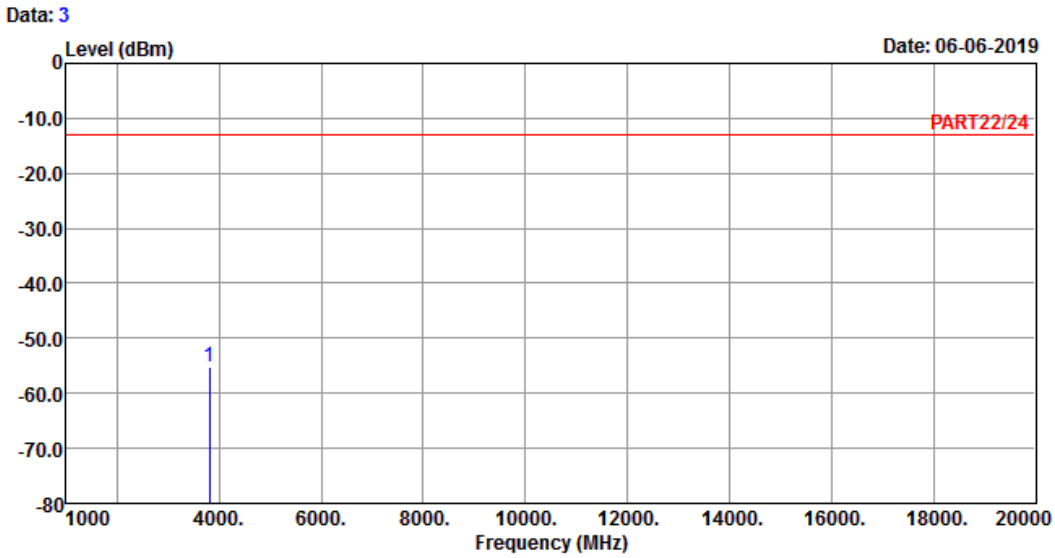


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band 25 QPSK_20M Link_M-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	43.58	-49.05	-47.58	-13.00	-1.47	-36.05	Peak
2	106.63	-53.52	-43.12	-13.00	-10.40	-40.52	Peak
3	196.84	-51.86	-44.12	-13.00	-7.74	-38.86	Peak
4	318.09	-55.86	-49.13	-13.00	-6.73	-42.86	Peak
5	398.60	-55.83	-49.88	-13.00	-5.95	-42.83	Peak
6	532.46	-54.57	-51.10	-13.00	-3.47	-41.57	Peak
7	3765.00	-53.41	-46.81	-13.00	-6.60	-40.41	Peak

High Channel

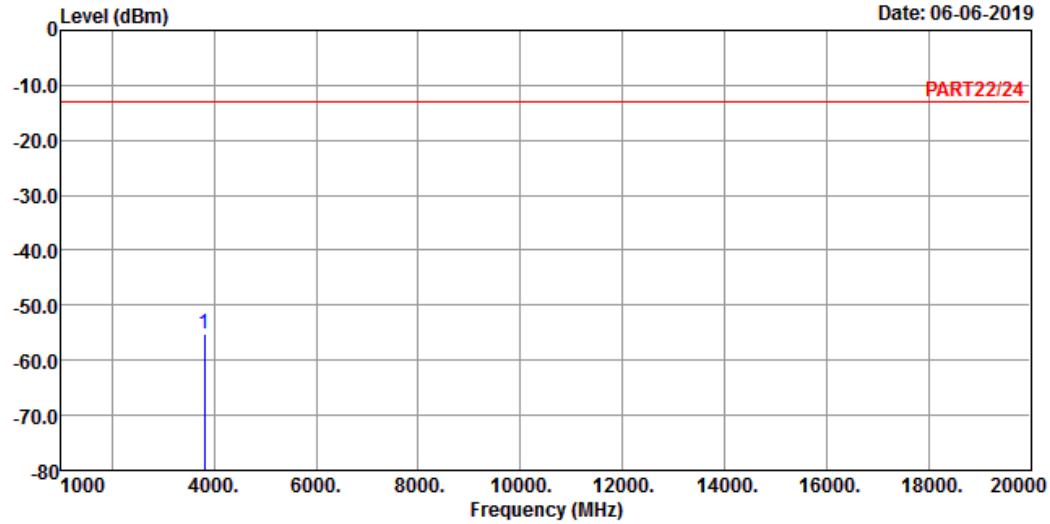
Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remak : LTE Band 25 QPSK_20M Link_H-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3810.00	-55.12	-48.72	-13.00	-6.40	-42.12	Peak

Data: 4



Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band 25 QPSK_20M Link_H-CH
Tested by: Thomas Wei

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3810.00	-55.13	-48.73	-13.00	-6.40	-42.13	Peak

5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

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

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Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab
Tel: 886-3-6668565
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Email: service.adt@tw.bureauveritas.com
Web Site: www.bureauveritas-adt.com

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

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