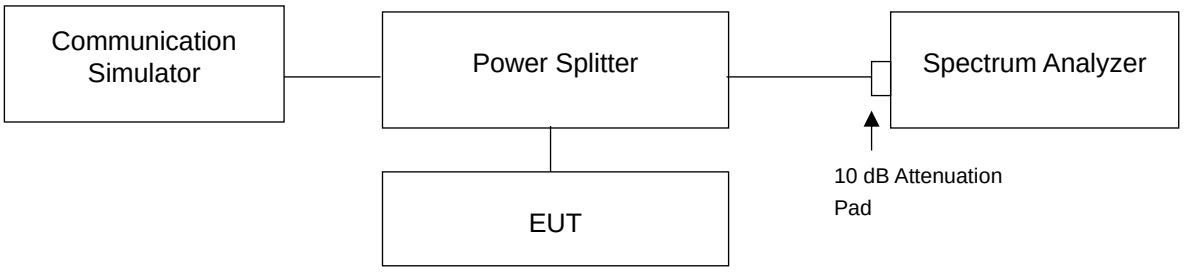
4.7 Conducted Spurious Emissions

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.

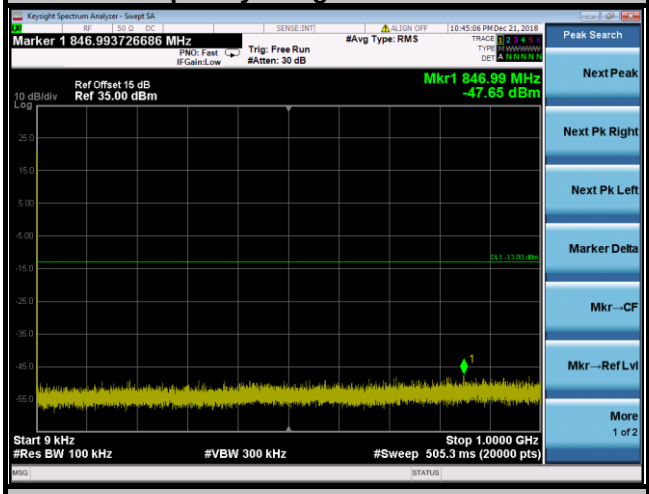
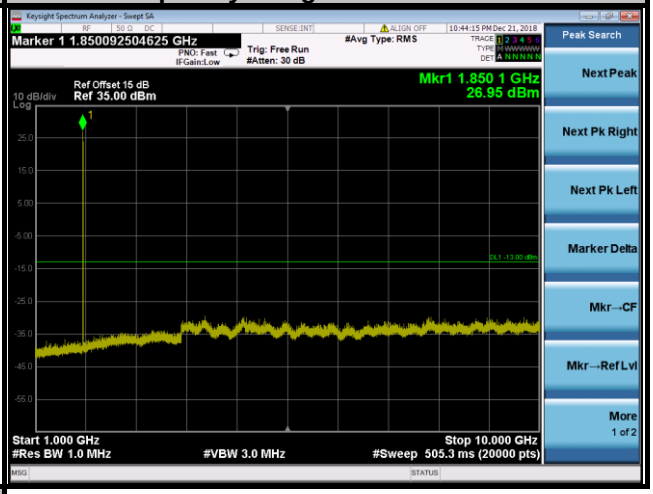
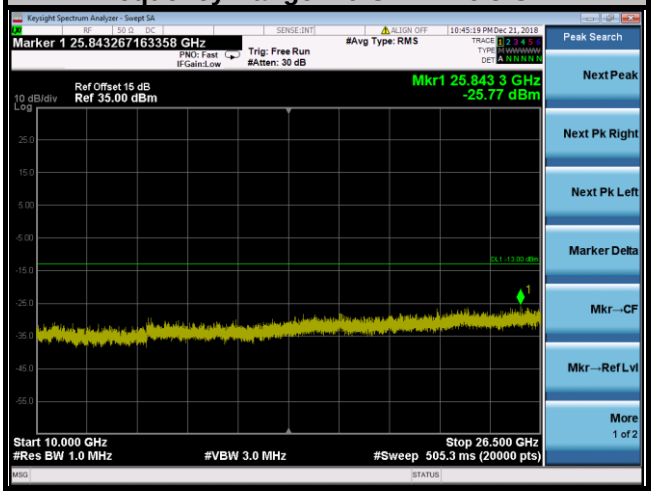
4.7.2 Test Setup



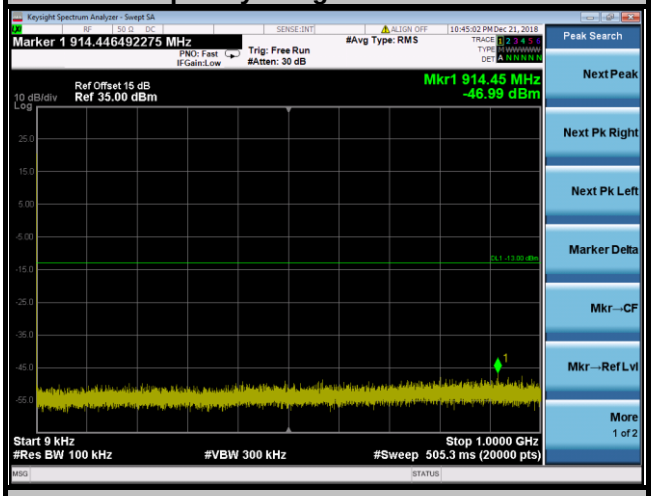
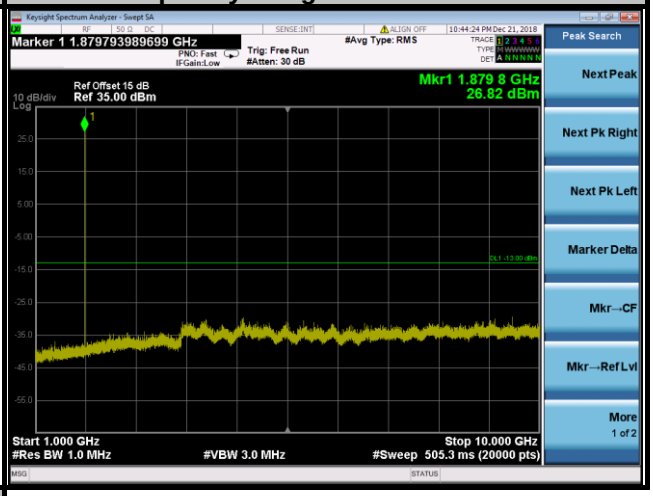
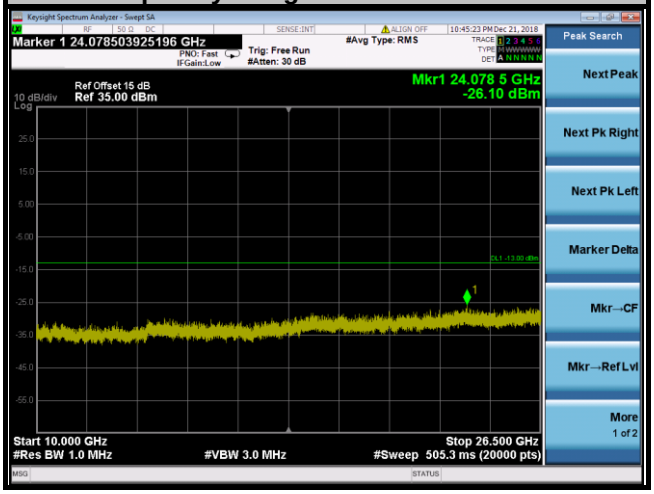
4.7.3 Test Procedure

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 conducted emission measurement.
c. Measuring frequency range is from 1 GHz to 26.5 GHz / 27 GHz. 10 dB attenuation pad is connected with spectrum. RBW = 1 MHz and VBW = 3 MHz is used for conducted emission measurement.

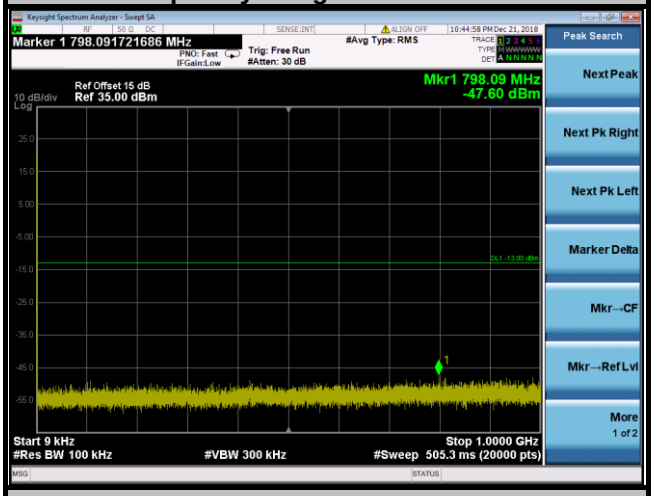
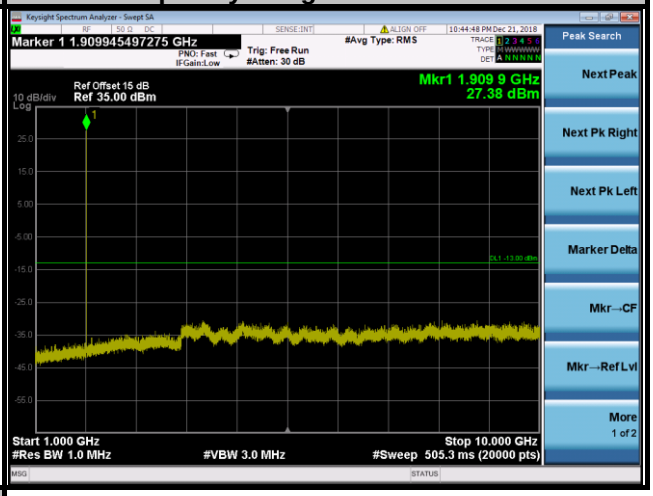
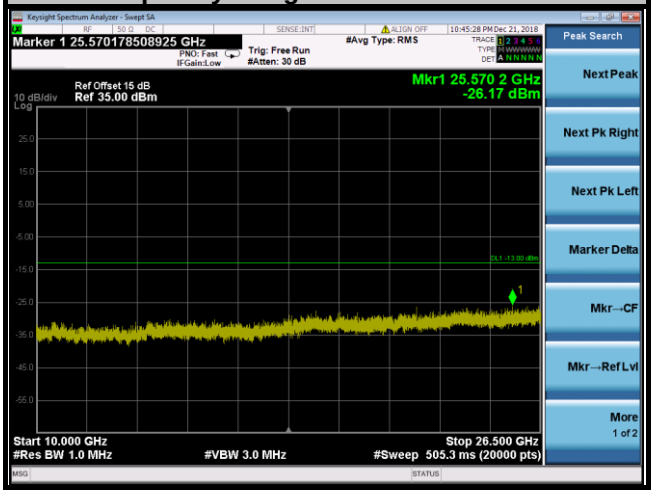
4.7.4 Test Results

GSM	
Channel 512	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Frequency Range: 10 GHz ~ 26.5 GHz	
	

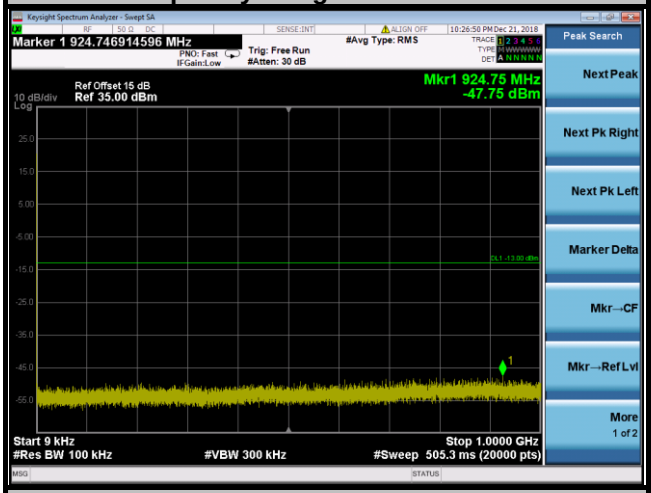
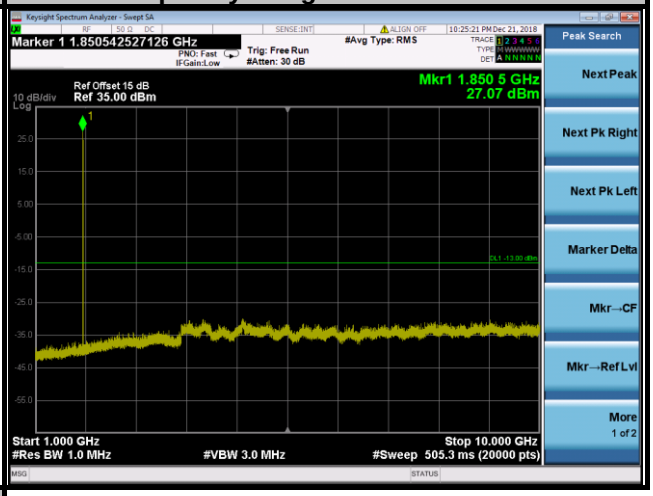
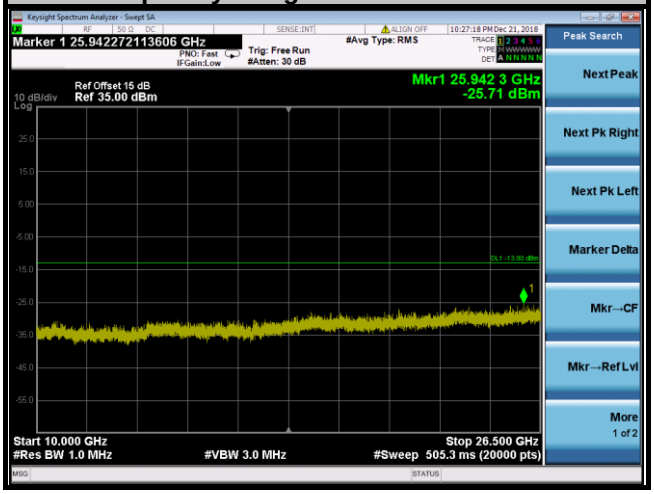
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

GSM	
Channel 661	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Frequency Range: 10 GHz ~ 26.5 GHz	
	

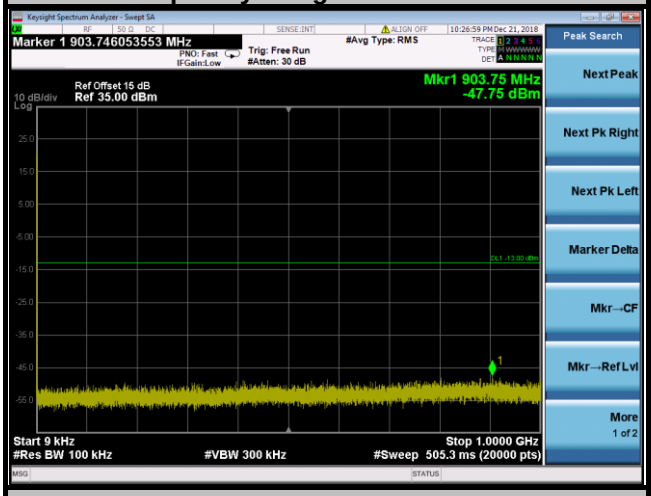
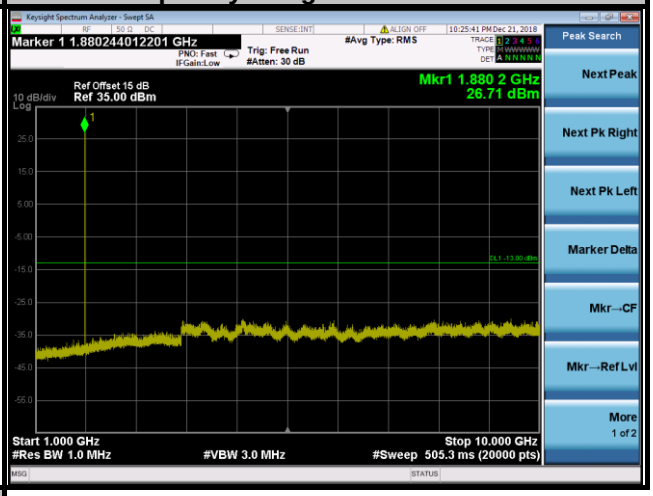
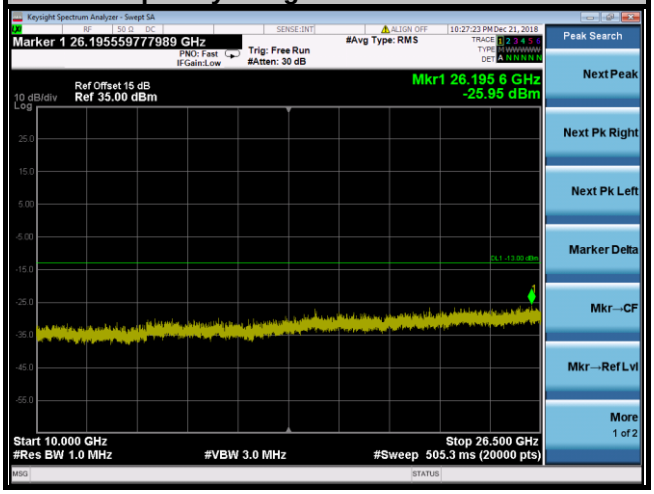
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

GSM	
Channel 810	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Frequency Range: 10 GHz ~ 26.5 GHz	
	

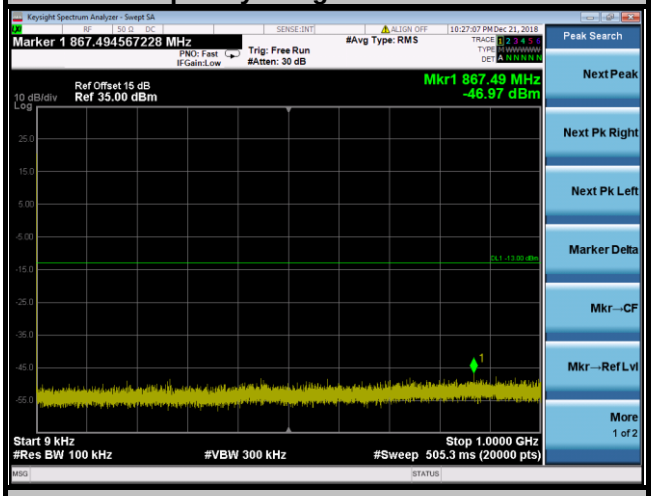
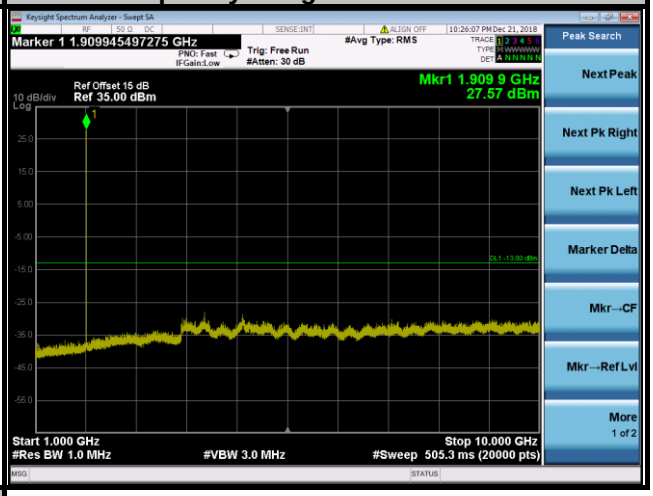
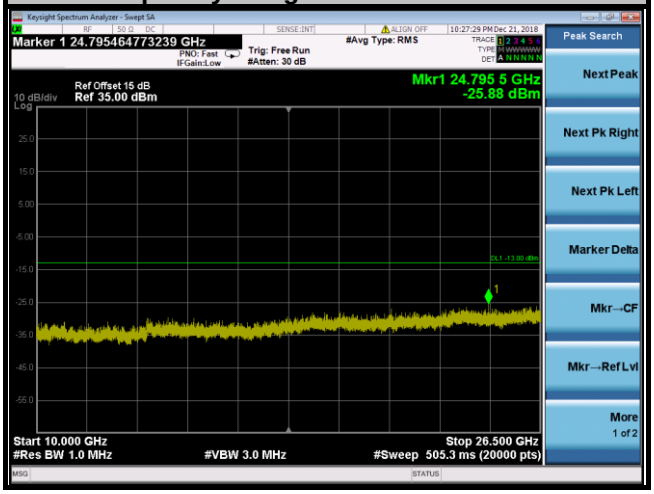
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

EDGE	
Channel 512	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Frequency Range: 10 GHz ~ 26.5 GHz	
	

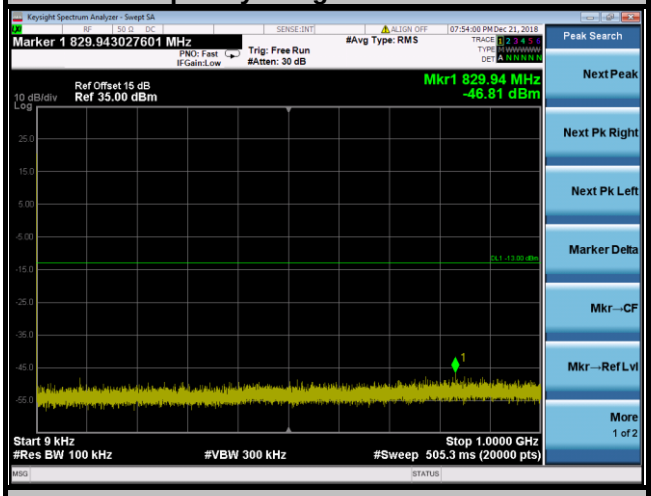
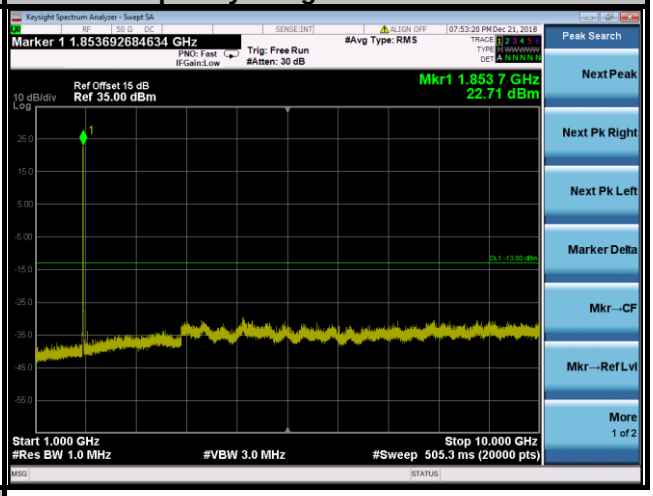
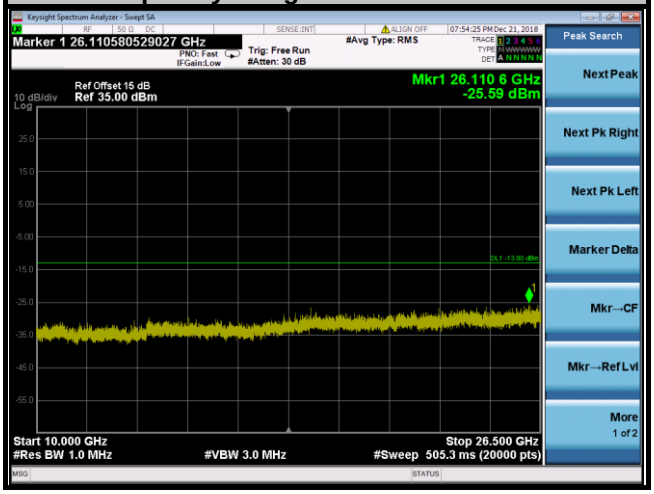
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

EDGE	
Channel 661	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Frequency Range: 10 GHz ~ 26.5 GHz	
	

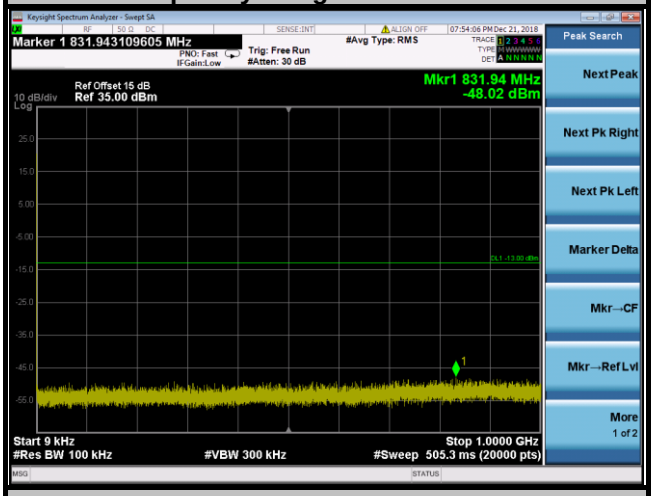
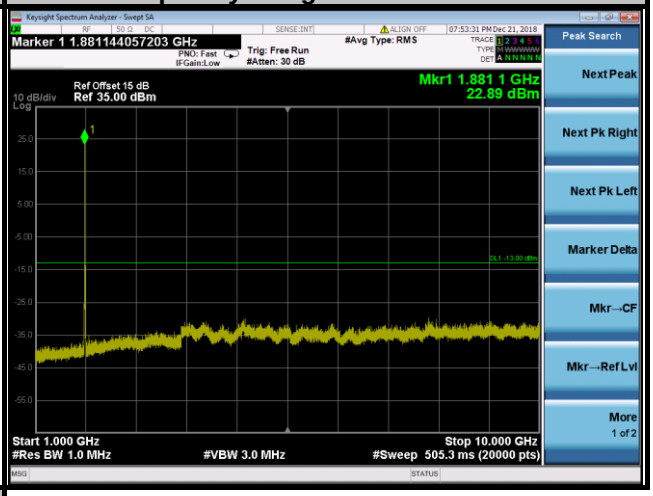
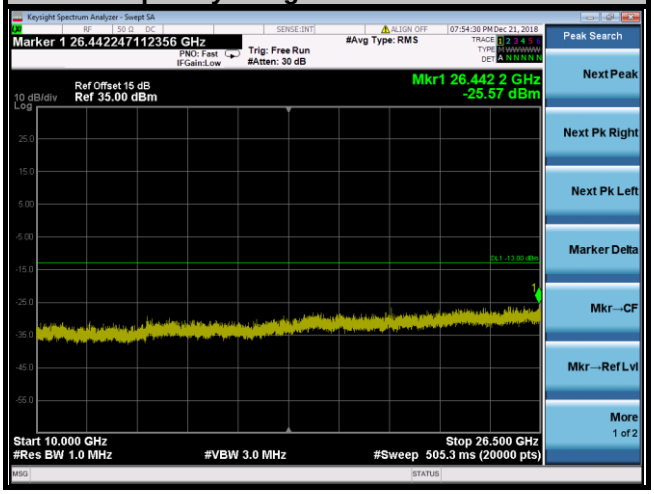
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

EDGE	
Channel 810	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Frequency Range: 10 GHz ~ 26.5 GHz	
	

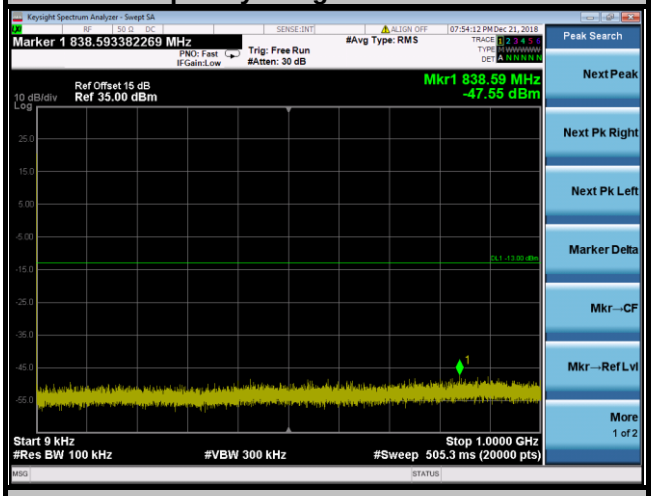
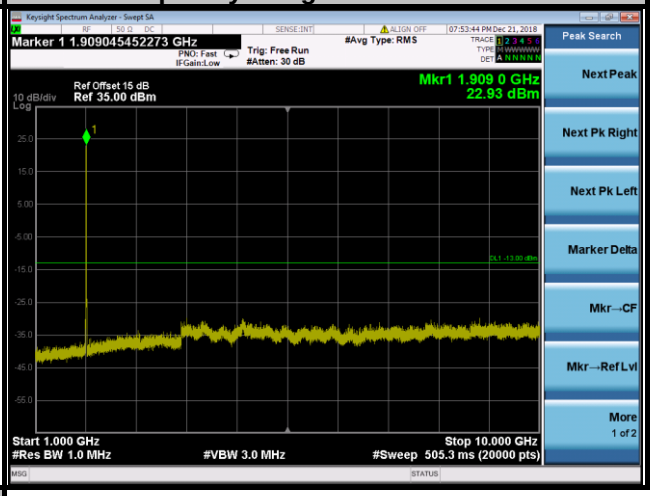
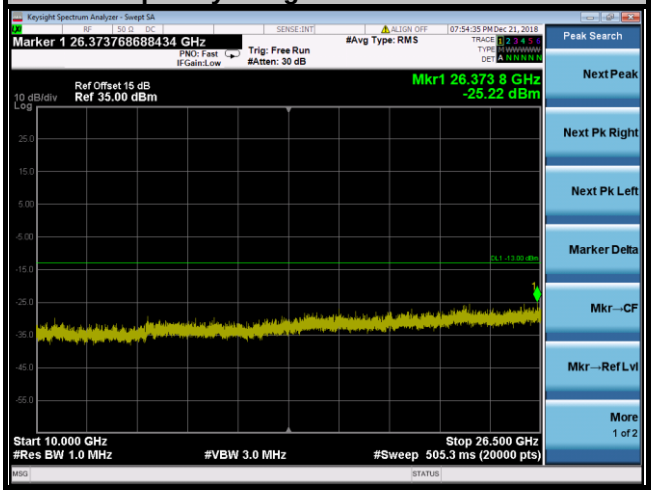
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

WCDMA	
Channel 9262	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Frequency Range: 10 GHz ~ 26.5 GHz	
	

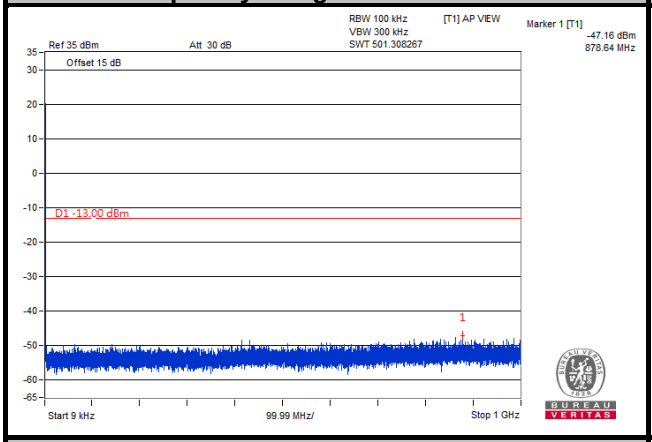
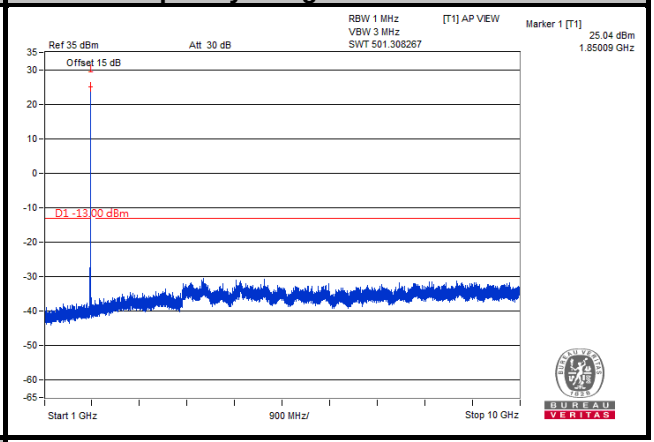
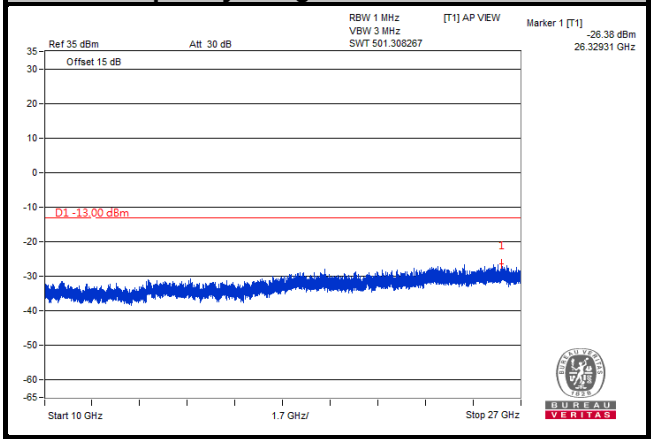
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

WCDMA	
Channel 9400	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Frequency Range: 10 GHz ~ 26.5 GHz	
	

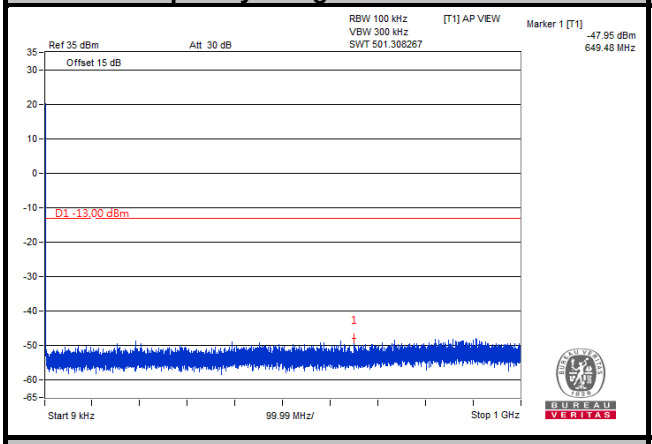
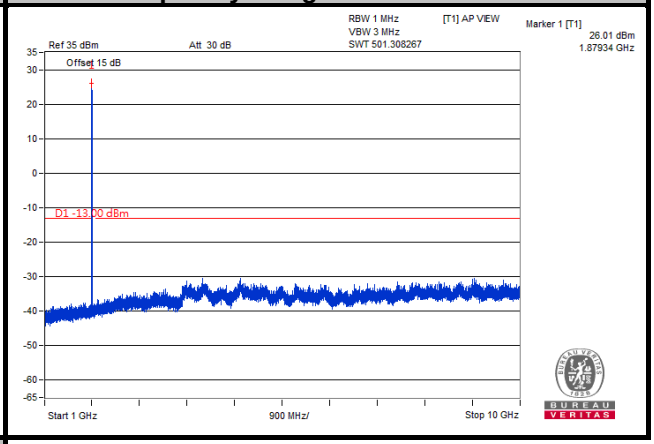
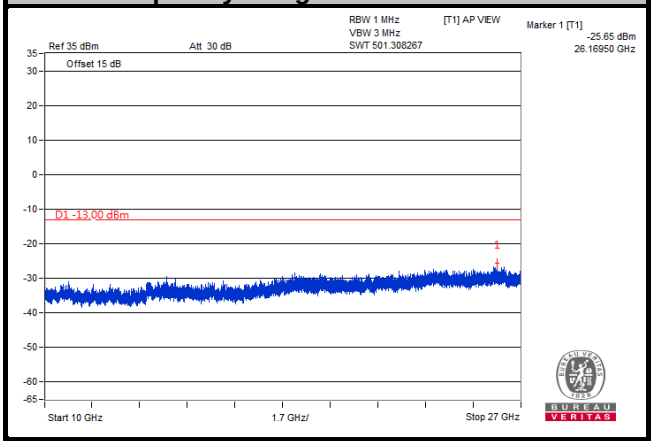
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

WCDMA	
Channel 9538	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Frequency Range: 10 GHz ~ 26.5 GHz	
	

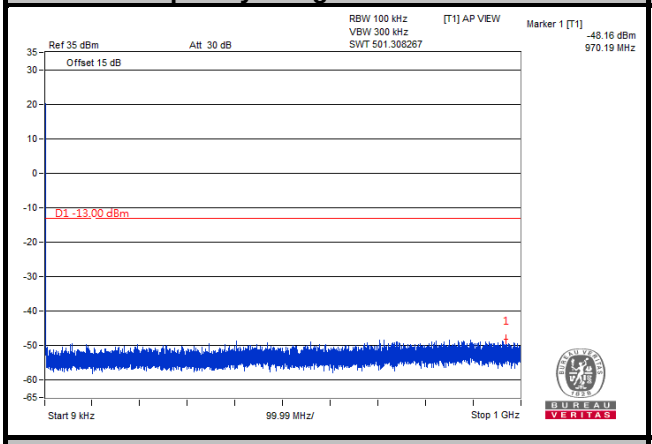
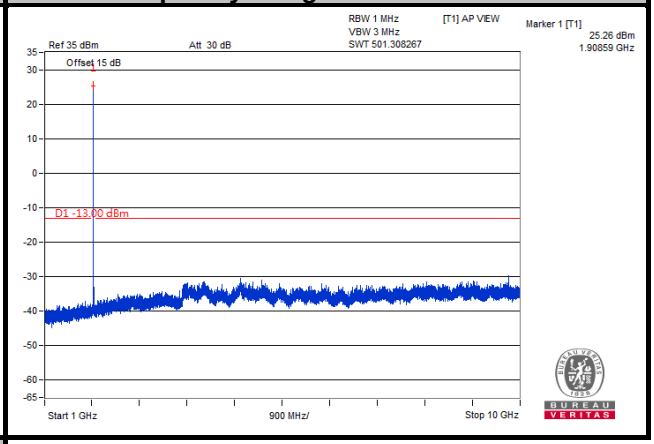
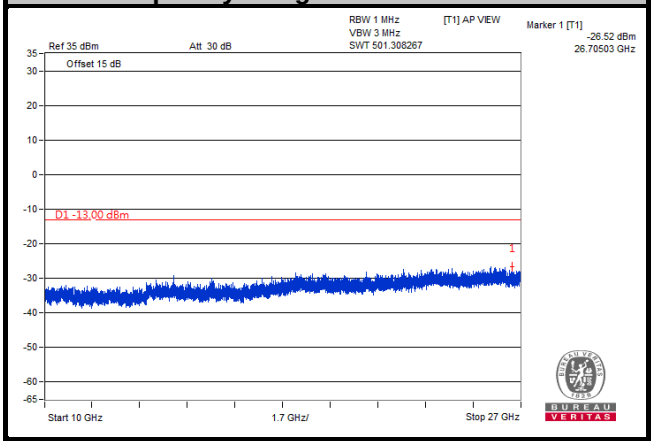
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

LTE Band 2	
Channel Bandwidth: 1.4 MHz	
Channel 18607	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Frequency Range: 10 GHz ~ 27 GHz	
	

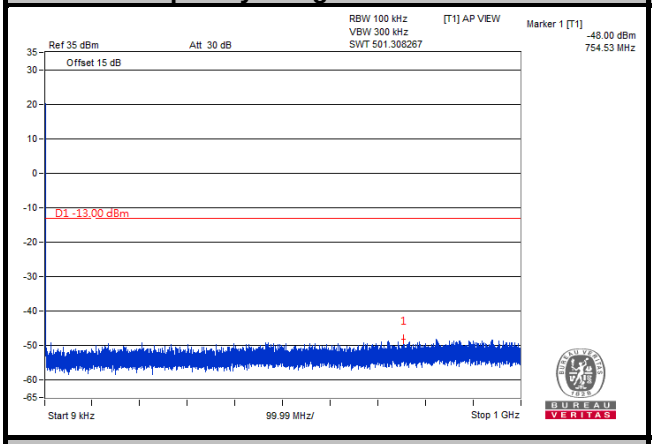
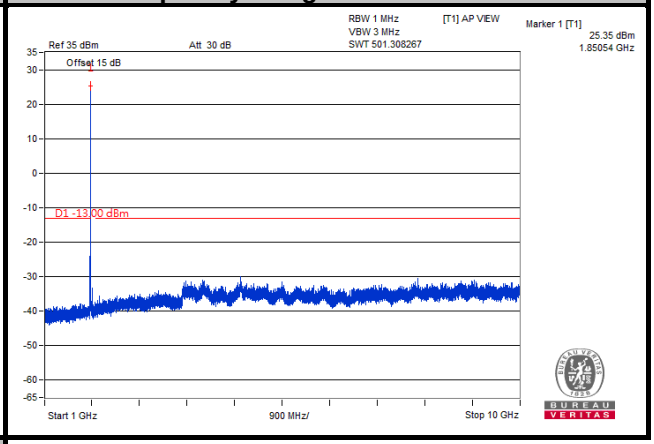
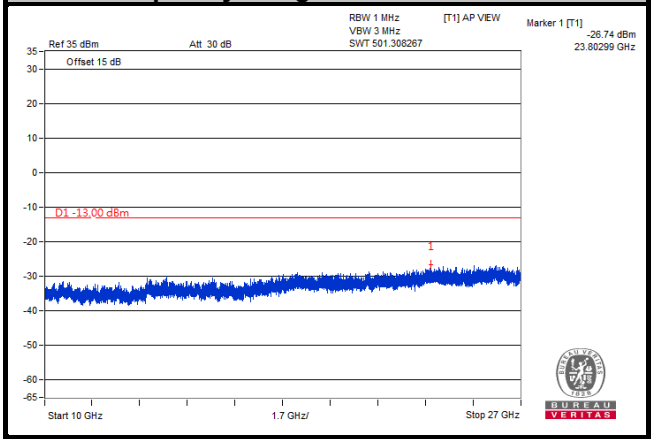
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

LTE Band 2	
Channel Bandwidth: 1.4 MHz	
Channel 18900	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Frequency Range: 10 GHz ~ 27 GHz	
	

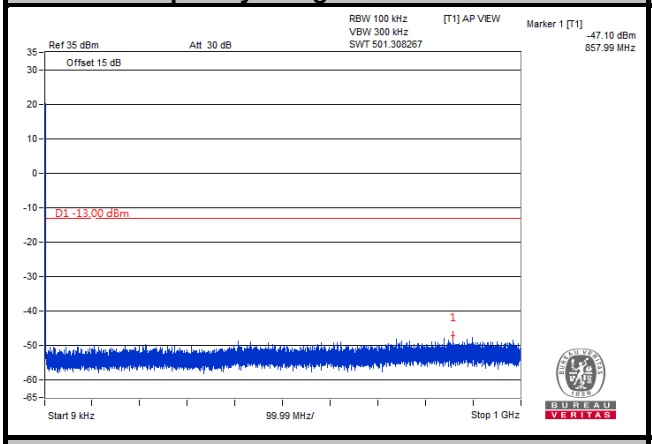
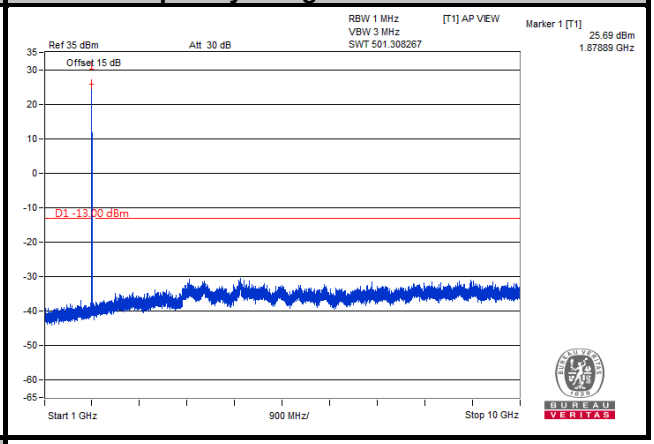
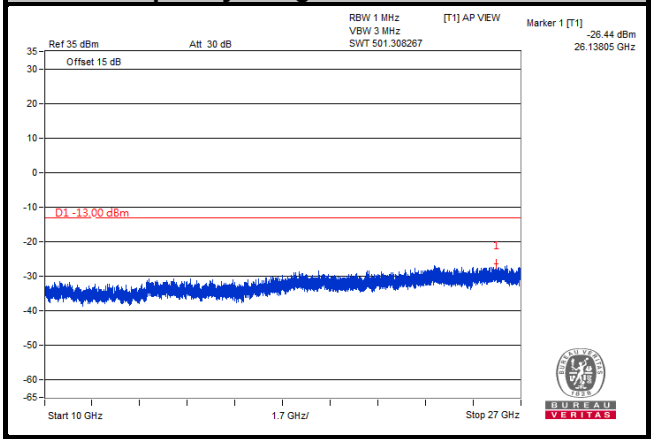
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

LTE Band 2	
Channel Bandwidth: 1.4 MHz	
Channel 19193	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Frequency Range: 10 GHz ~ 27 GHz	
	

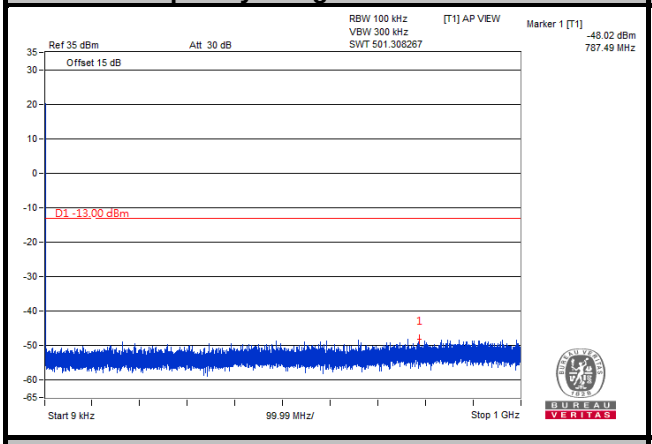
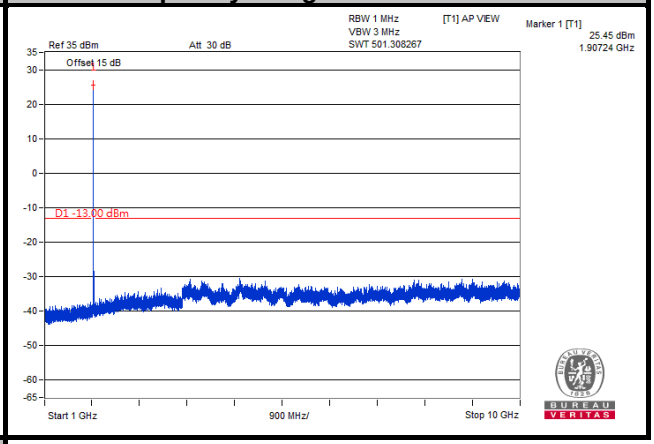
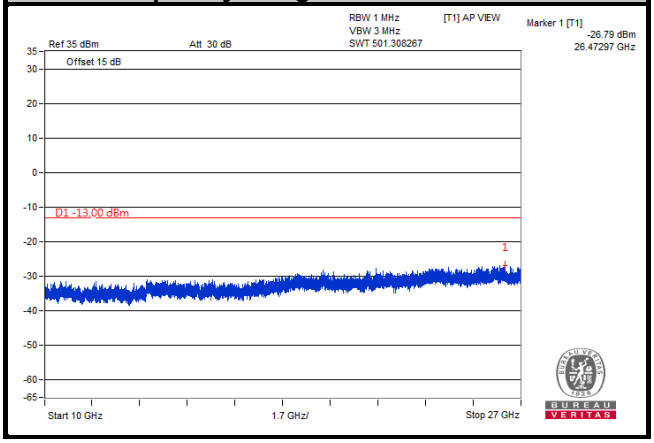
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

LTE Band 2	
Channel Bandwidth: 3 MHz	
Channel 18615	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Frequency Range: 10 GHz ~ 27 GHz	
	

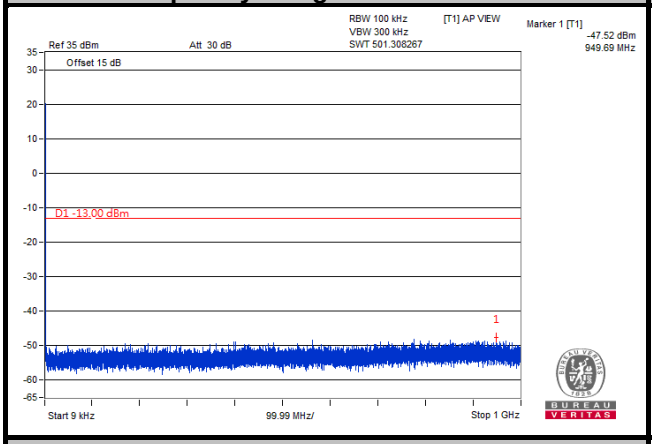
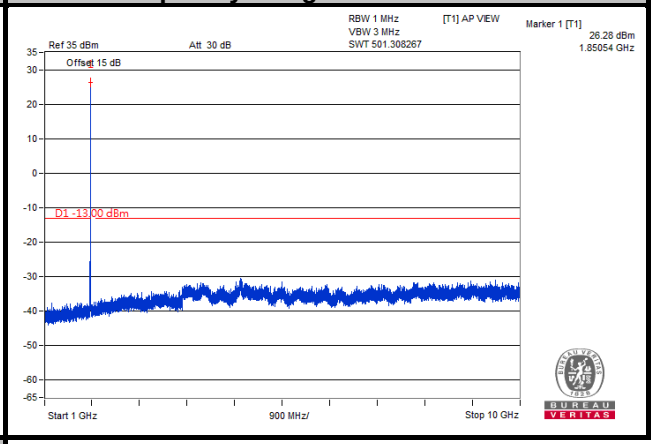
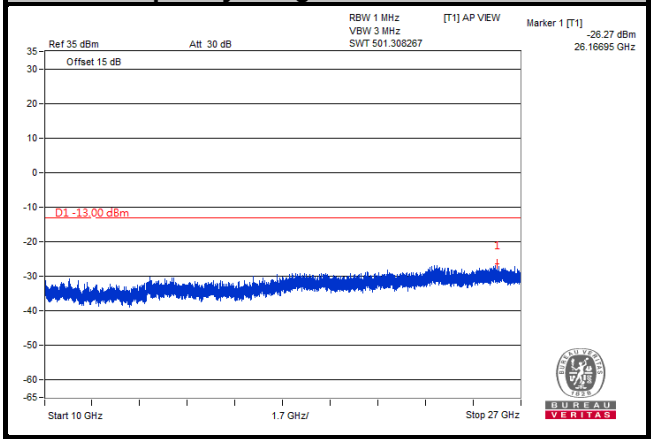
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

LTE Band 2	
Channel Bandwidth: 3 MHz	
Channel 18900	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Frequency Range: 10 GHz ~ 27 GHz	
	

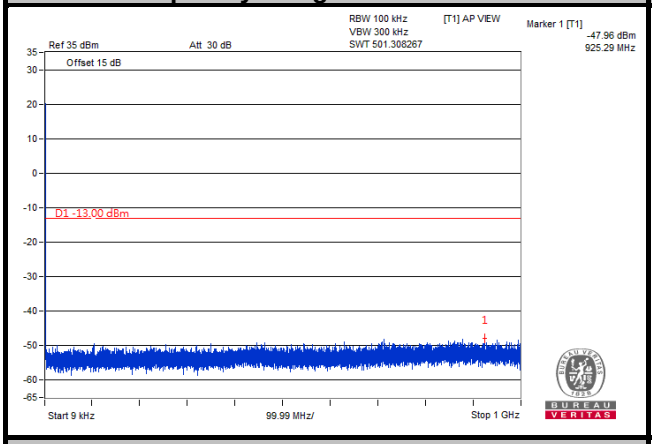
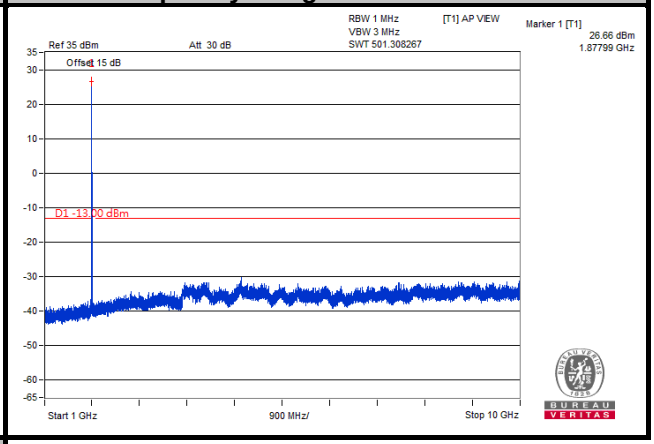
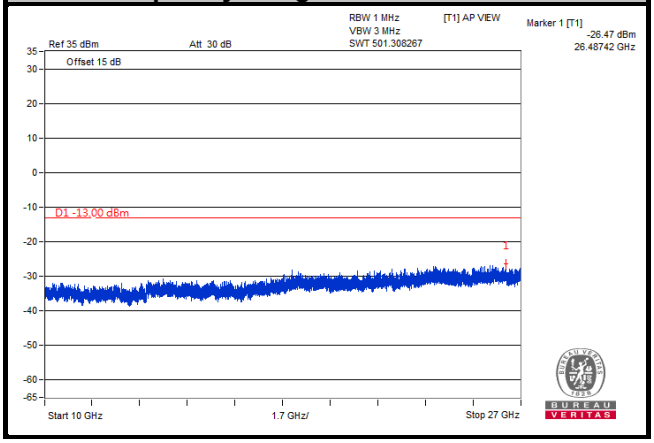
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

LTE Band 2	
Channel Bandwidth: 3 MHz	
Channel 19185	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Frequency Range: 10 GHz ~ 27 GHz	
	

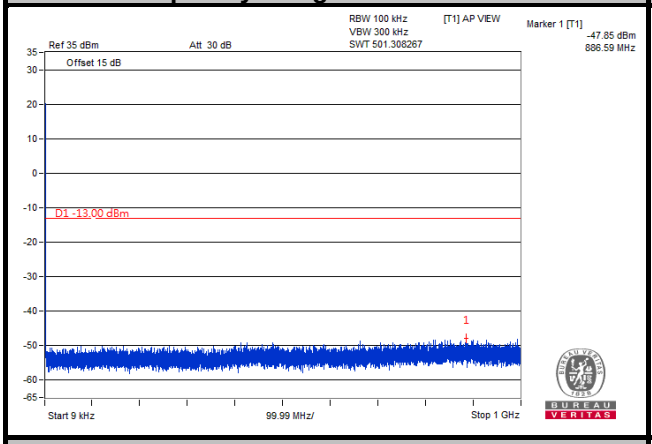
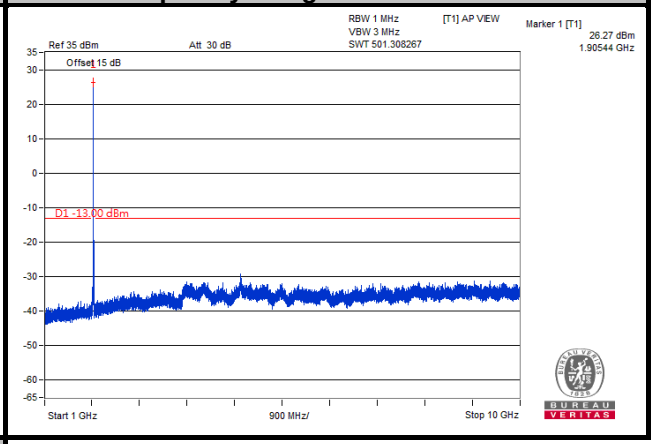
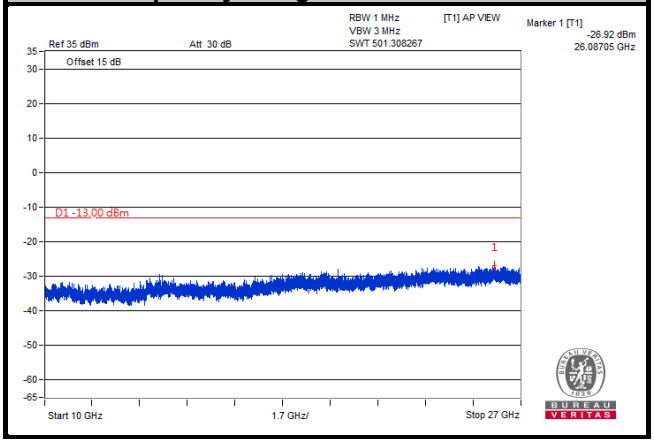
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

LTE Band 2	
Channel Bandwidth: 5 MHz	
Channel 18625	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Frequency Range: 10 GHz ~ 27 GHz	
	

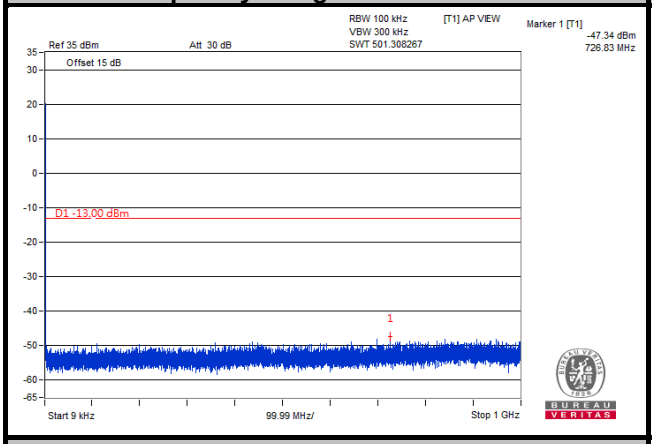
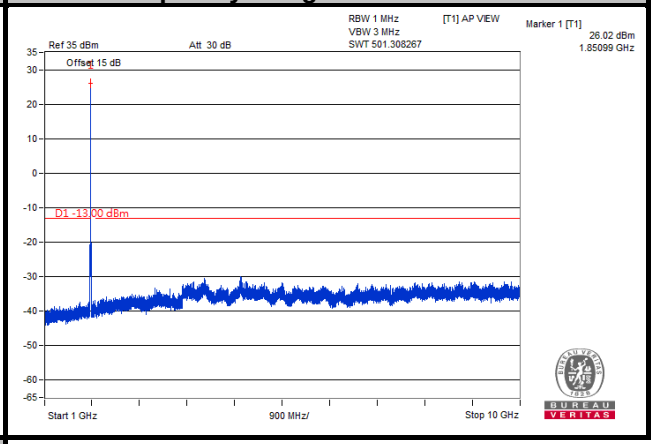
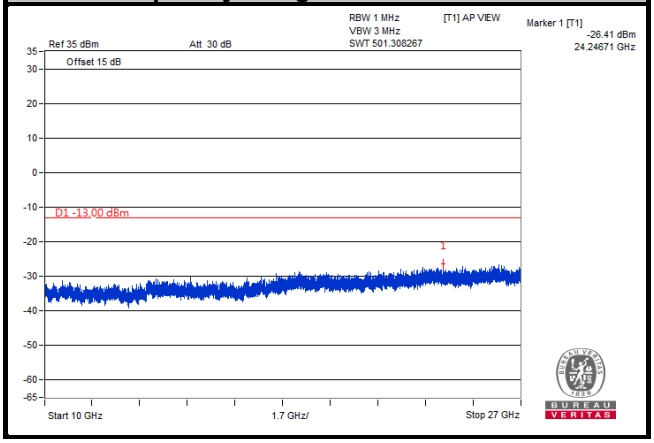
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

LTE Band 2	
Channel Bandwidth: 5 MHz	
Channel 18900	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Frequency Range: 10 GHz ~ 27 GHz	
	

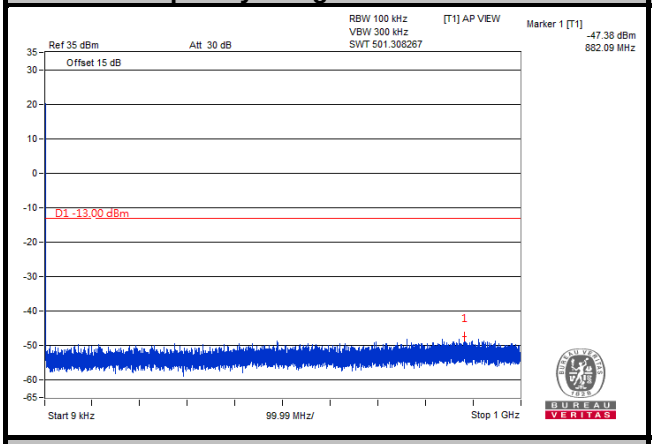
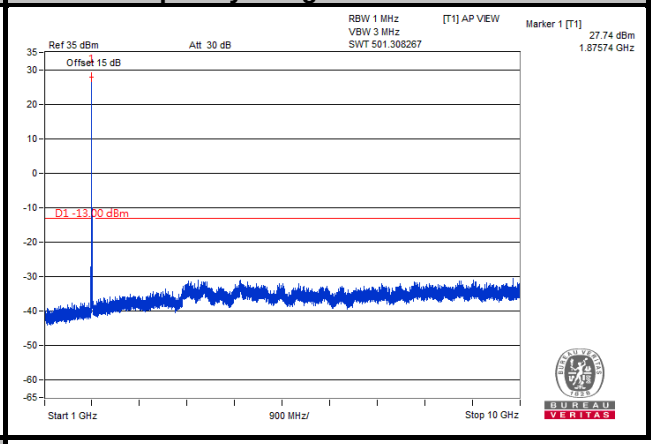
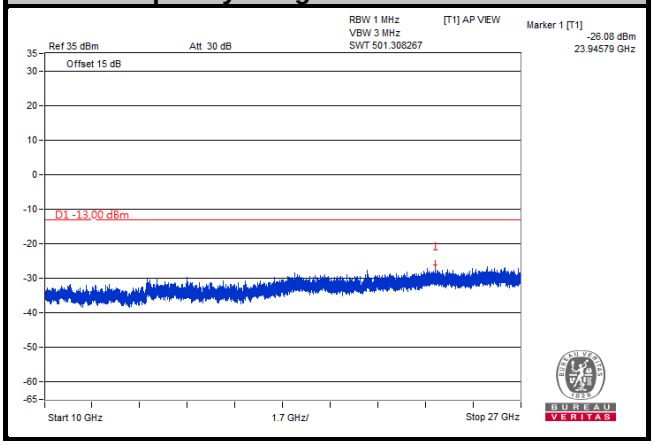
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

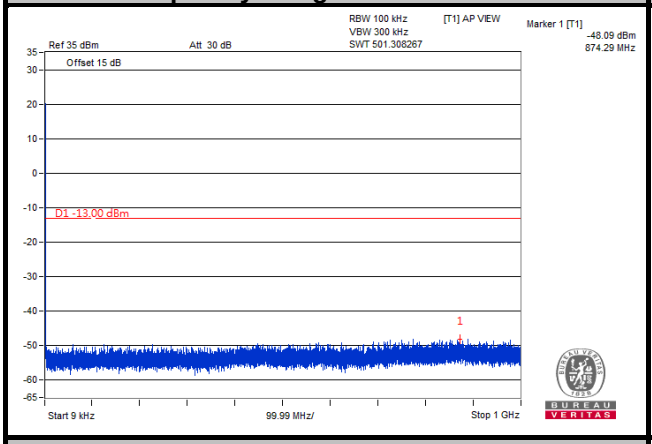
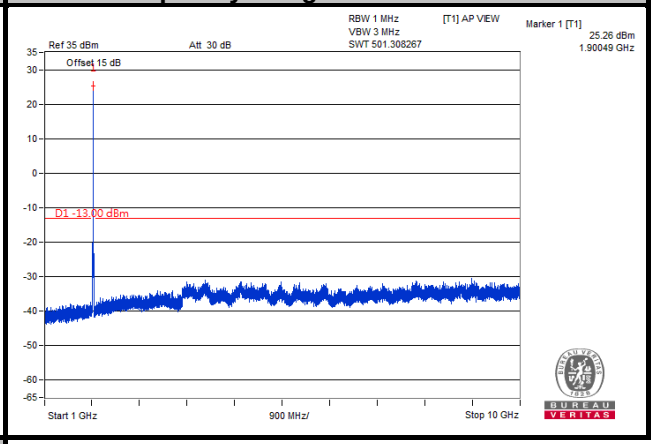
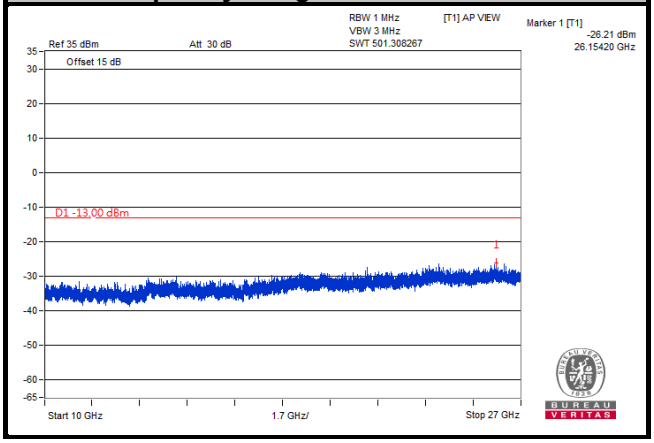
LTE Band 2	
Channel Bandwidth: 5 MHz	
Channel 19175	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Frequency Range: 10 GHz ~ 27 GHz	
	

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

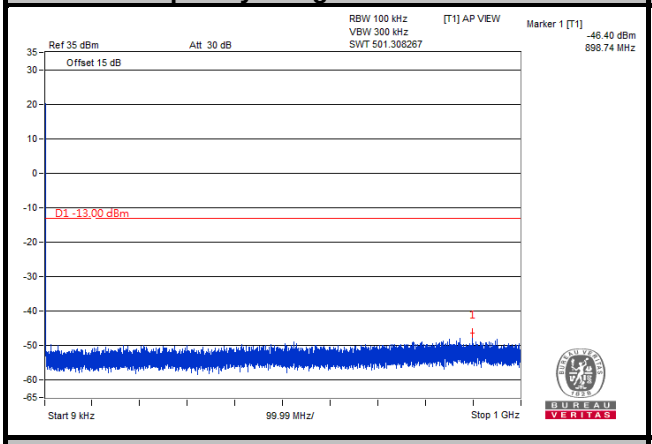
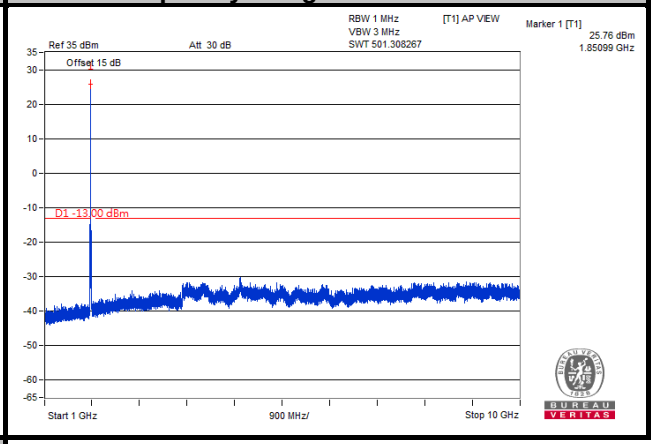
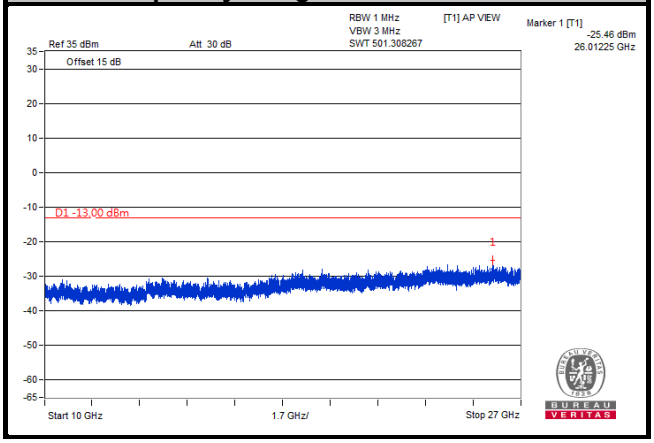
LTE Band 2	
Channel Bandwidth: 10 MHz	
Channel 18650	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Frequency Range: 10 GHz ~ 27 GHz	
	

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

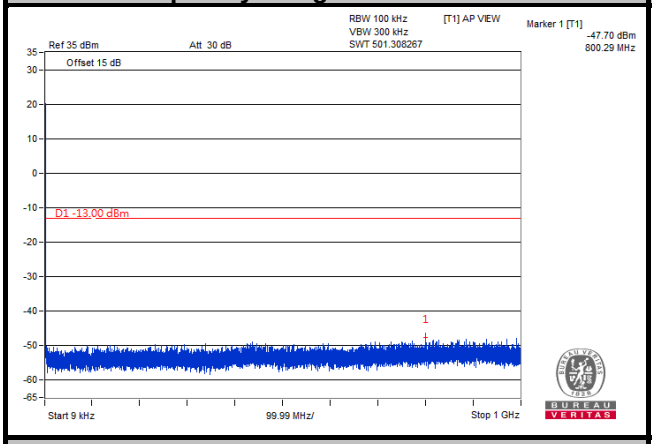
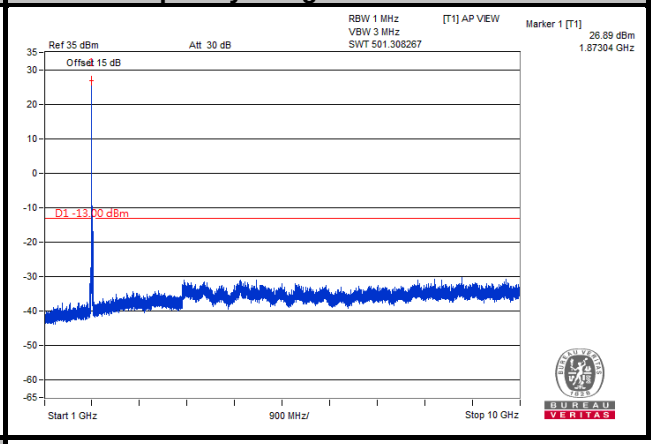
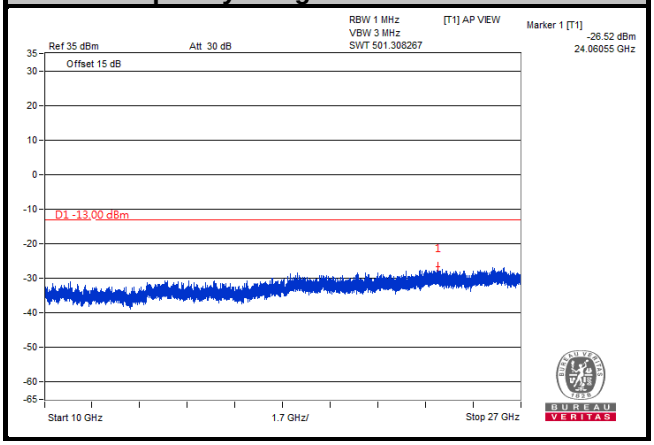
LTE Band 2	
Channel Bandwidth: 10 MHz	
Channel 18900	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Frequency Range: 10 GHz ~ 27 GHz	
	

LTE Band 2	
Channel Bandwidth: 10 MHz	
Channel 19150	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Frequency Range: 10 GHz ~ 27 GHz	
	

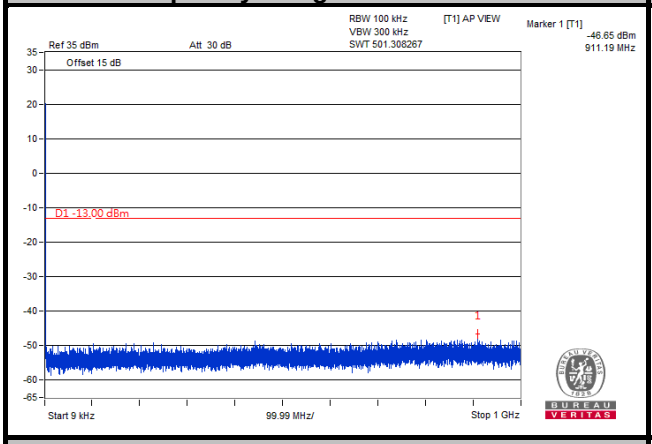
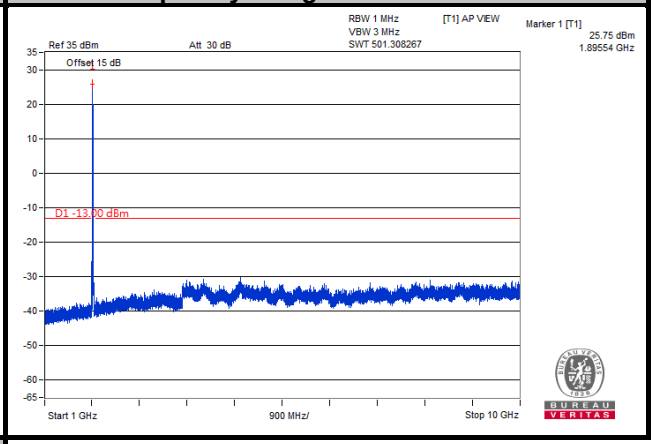
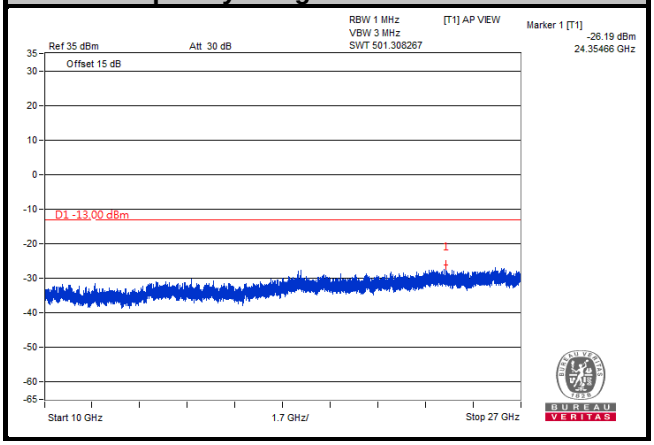
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

LTE Band 2	
Channel Bandwidth: 15 MHz	
Channel 18675	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Frequency Range: 10 GHz ~ 27 GHz	
	

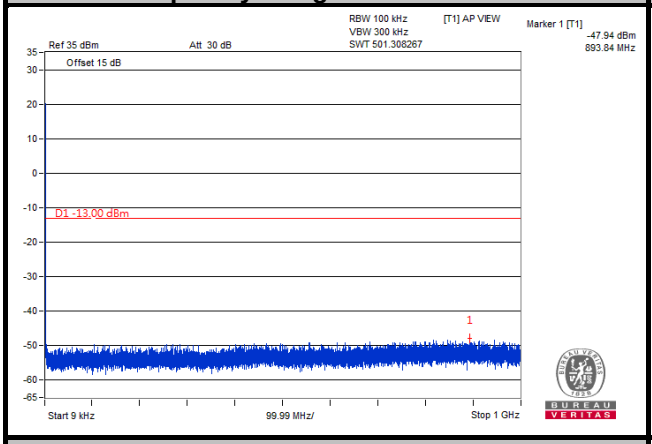
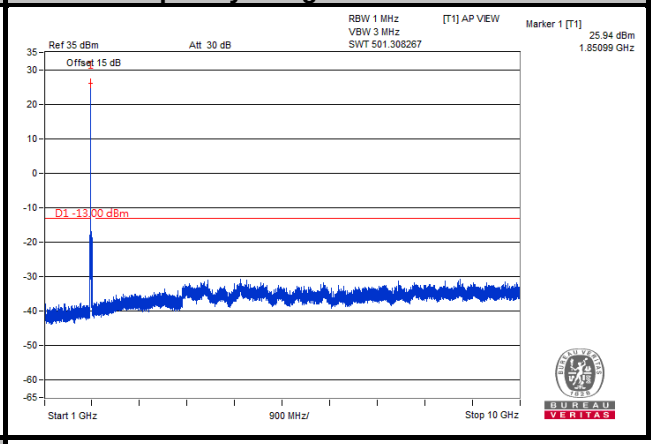
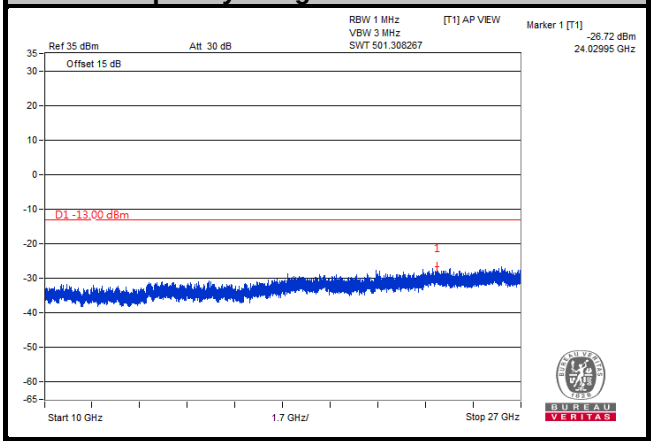
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

LTE Band 2	
Channel Bandwidth: 15 MHz	
Channel 18900	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Frequency Range: 10 GHz ~ 27 GHz	
	

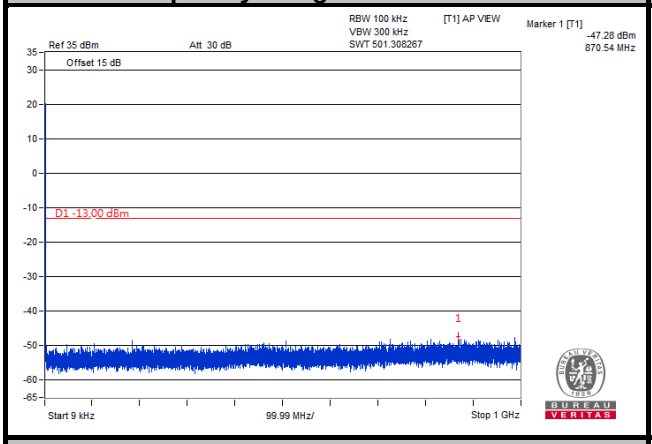
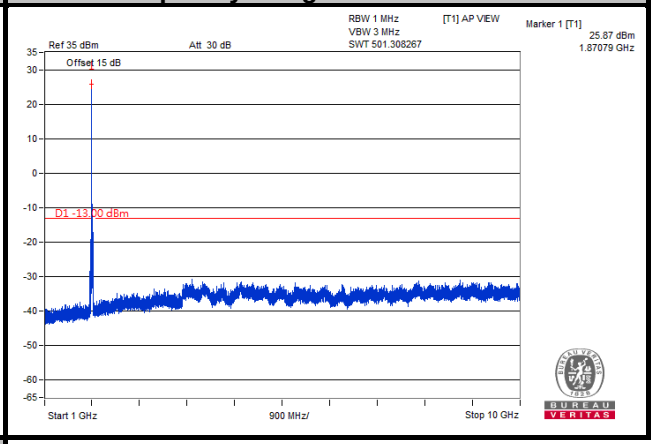
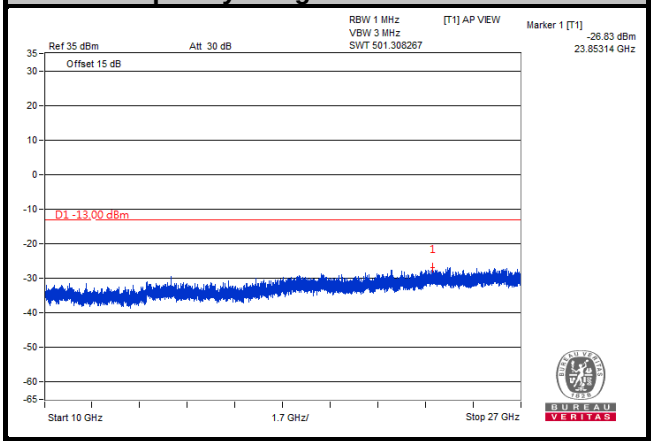
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

LTE Band 2	
Channel Bandwidth: 15 MHz	
Channel 19125	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Frequency Range: 10 GHz ~ 27 GHz	
	

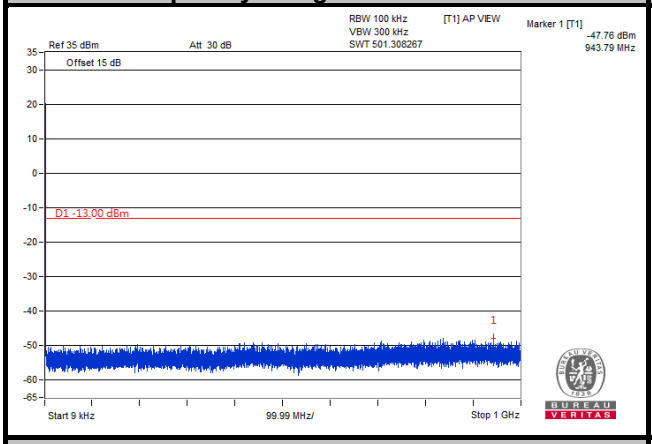
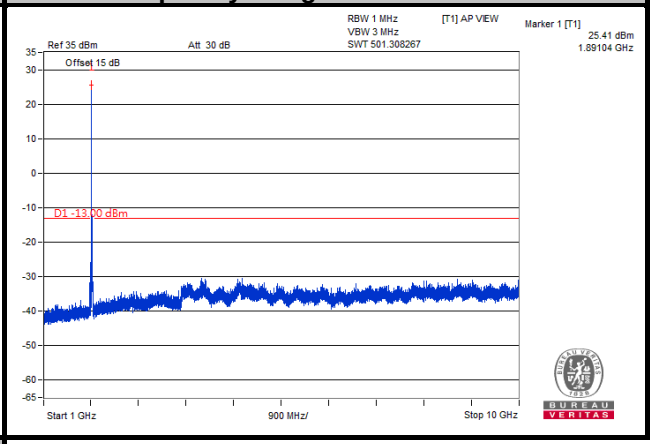
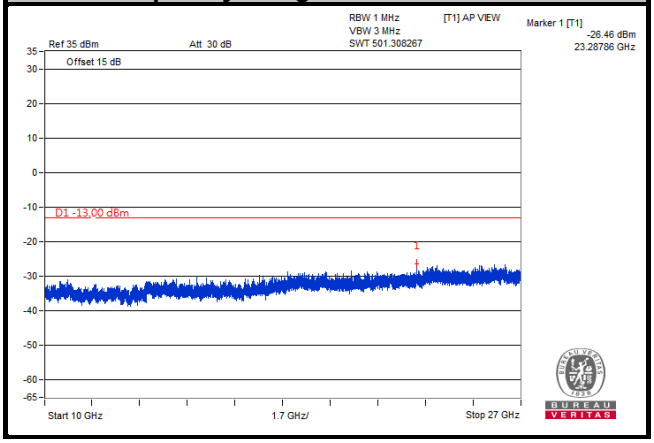
Note: The signal over the limit in 9 kHz is from spectrum analyzer.

LTE Band 2	
Channel Bandwidth: 20 MHz	
Channel 18700	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Frequency Range: 10 GHz ~ 27 GHz	
	

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

LTE Band 2	
Channel Bandwidth: 20 MHz	
Channel 18900	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Frequency Range: 10 GHz ~ 27 GHz	
	

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

LTE Band 2	
Channel Bandwidth: 20 MHz	
Channel 19100	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Frequency Range: 10 GHz ~ 27 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.

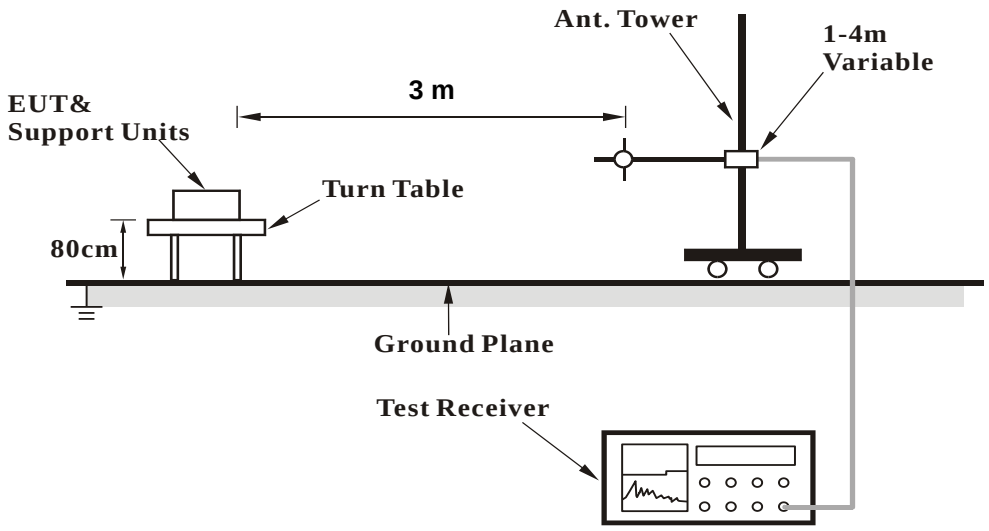
NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz/3 MHz.

4.8.3 Deviation from Test Standard

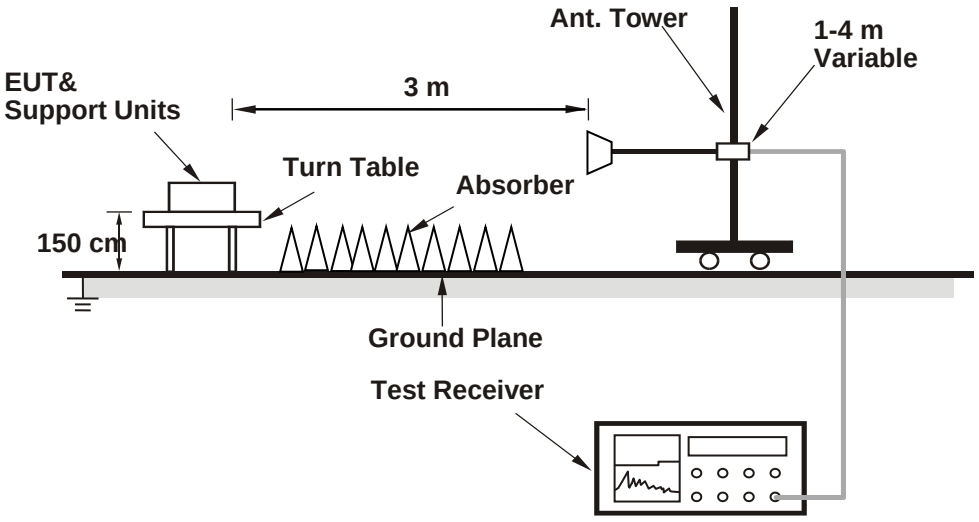
No deviation.

4.8.4 Test Setup

<Radiated Emission below or equal 1 GHz>



<Radiated Emission above 1 GHz>

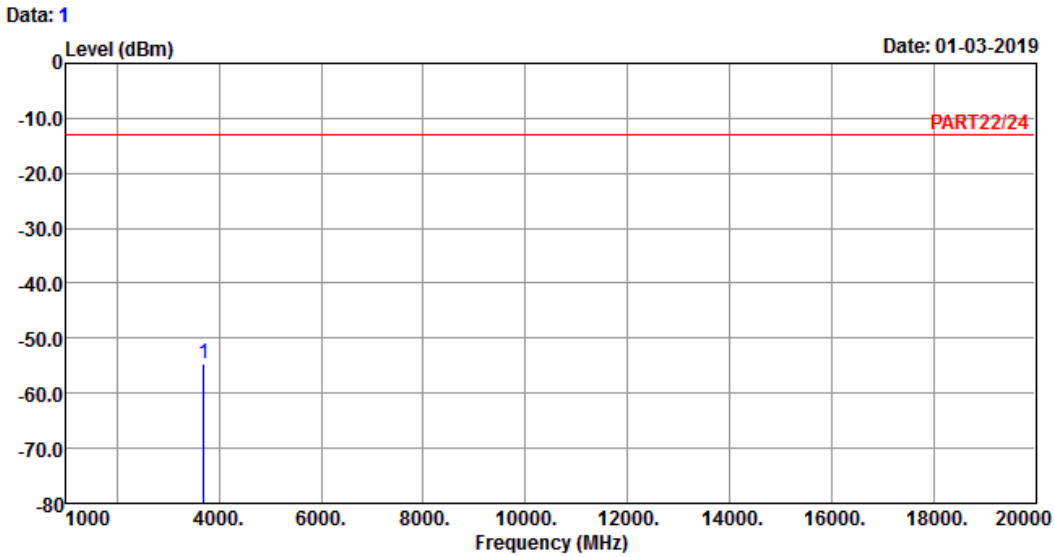


For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.8.5 Test Results

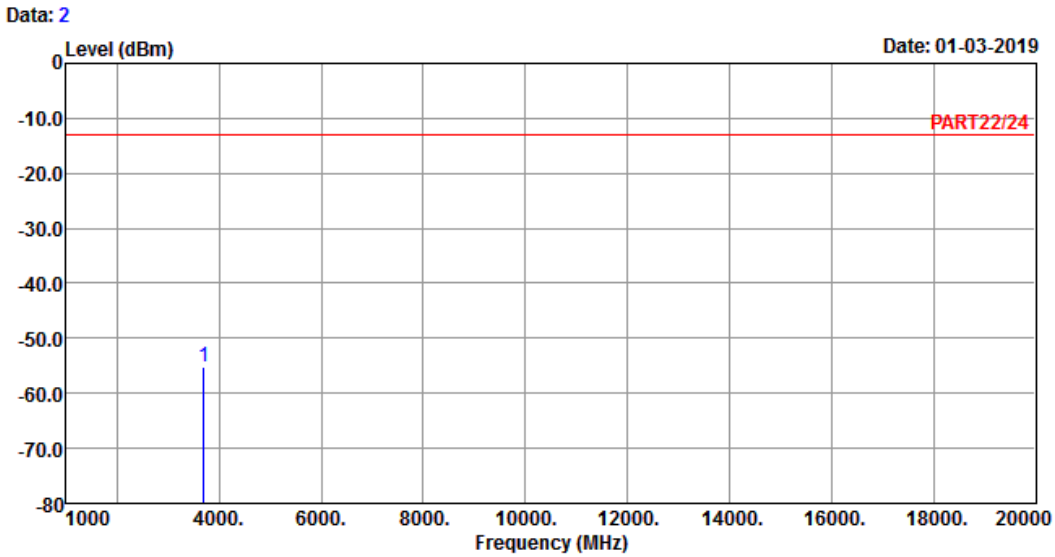
GSM:

Low Channel



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remark : GPRS 1900 Link_L-CH
Tested by: Jisyong Wang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3700.40	-54.53	-47.60	-13.00	-41.53	-6.93	Peak



Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remark : GPRS 1900 Link_L-CH
Tested by: Jisyong Wang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3700.40	-55.25	-48.32	-13.00	-42.25	-6.93	Peak

Middle Channel

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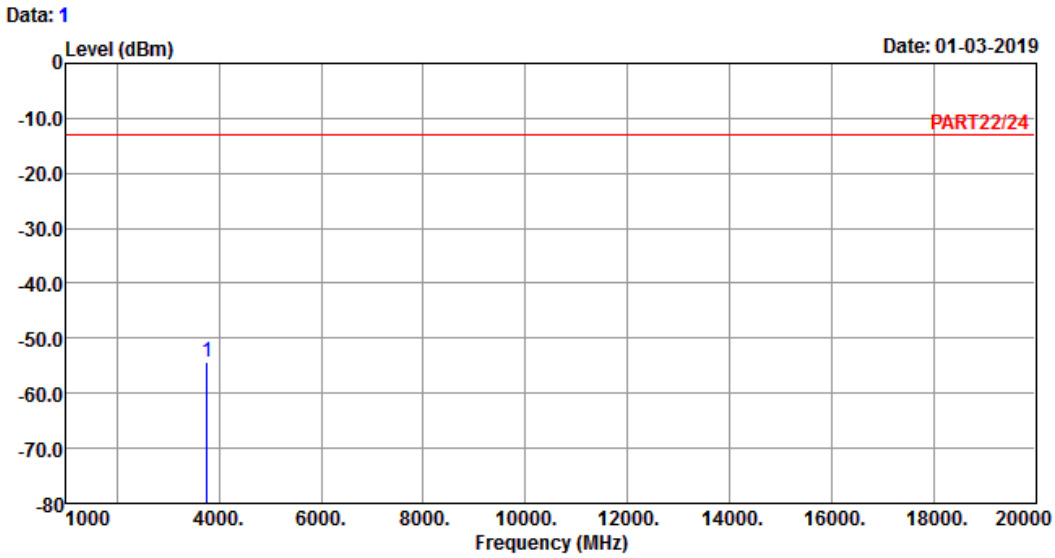
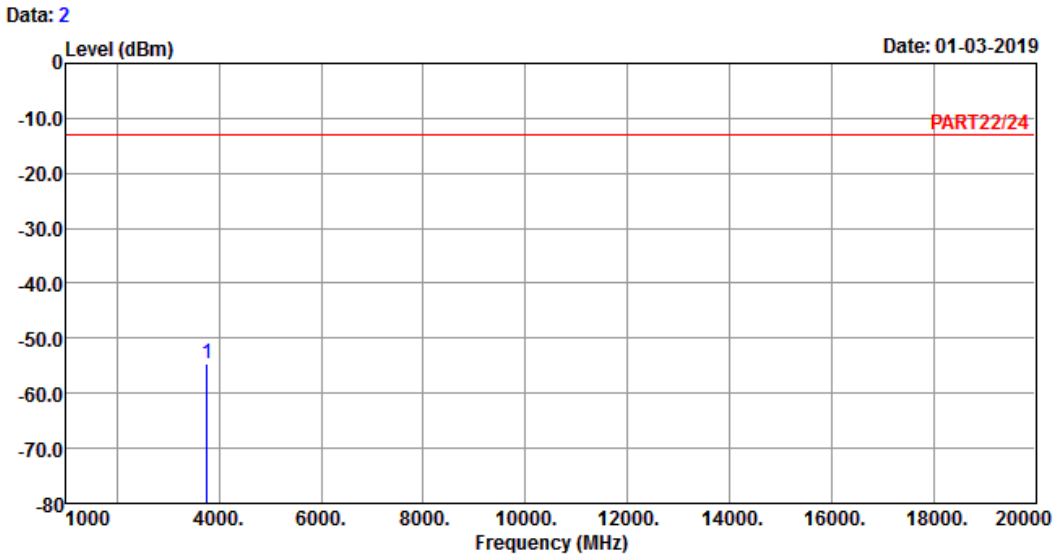


Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remark : GPRS 1900 Link_M-CH
Tested by: Jisyong Wang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3760.00	-54.30	-47.65	-13.00	-41.30	-6.65	Peak



Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remark : GPRS 1900 Link_M-CH
Tested by: Jisyong Wang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3760.00	-54.61	-47.96	-13.00	-41.61	-6.65	Peak

High Channel

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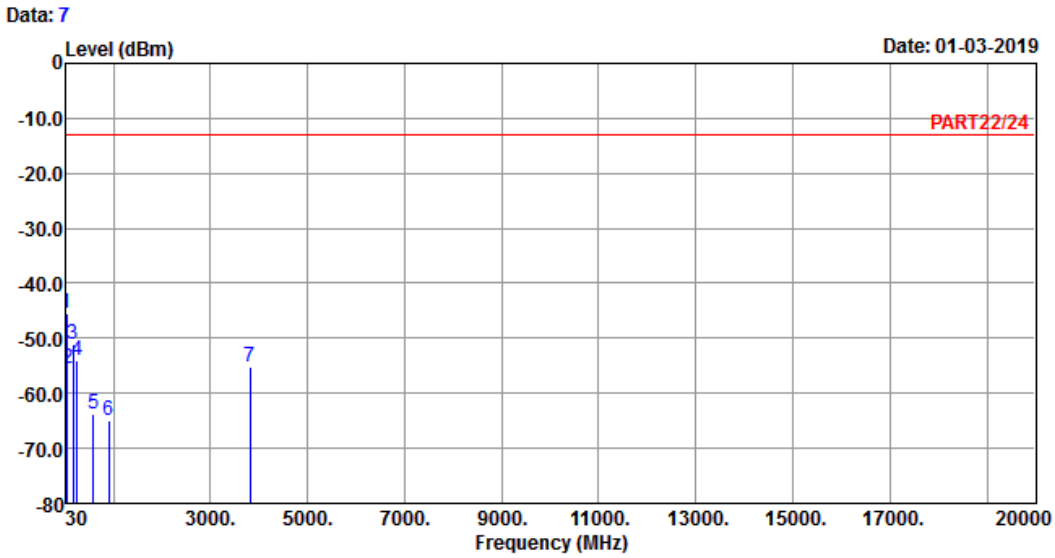
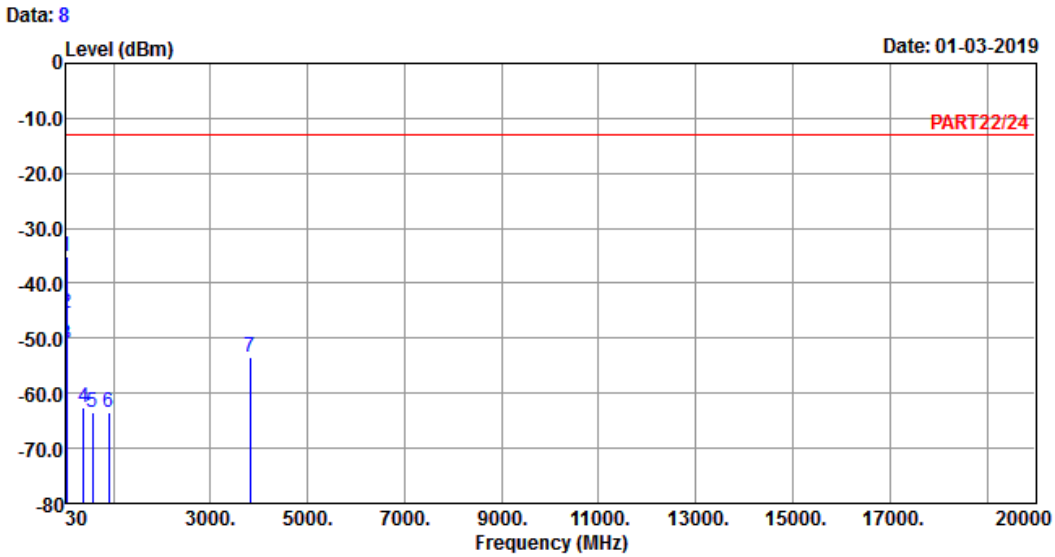


Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remark : GPRS 1900 Link_H-CH
Tested by: Jisyong Wang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	30.00	-45.49	-45.87	-13.00	-32.49	0.38	Peak
2	53.28	-55.46	-49.65	-13.00	-42.46	-5.81	Peak
3	163.86	-51.01	-45.89	-13.00	-38.01	-5.12	Peak
4	260.86	-54.14	-47.93	-13.00	-41.14	-6.21	Peak
5	594.54	-63.66	-62.67	-13.00	-50.66	-0.99	Peak
6	904.94	-65.00	-65.69	-13.00	-52.00	0.69	Peak
7	3819.60	-55.29	-48.89	-13.00	-42.29	-6.40	Peak

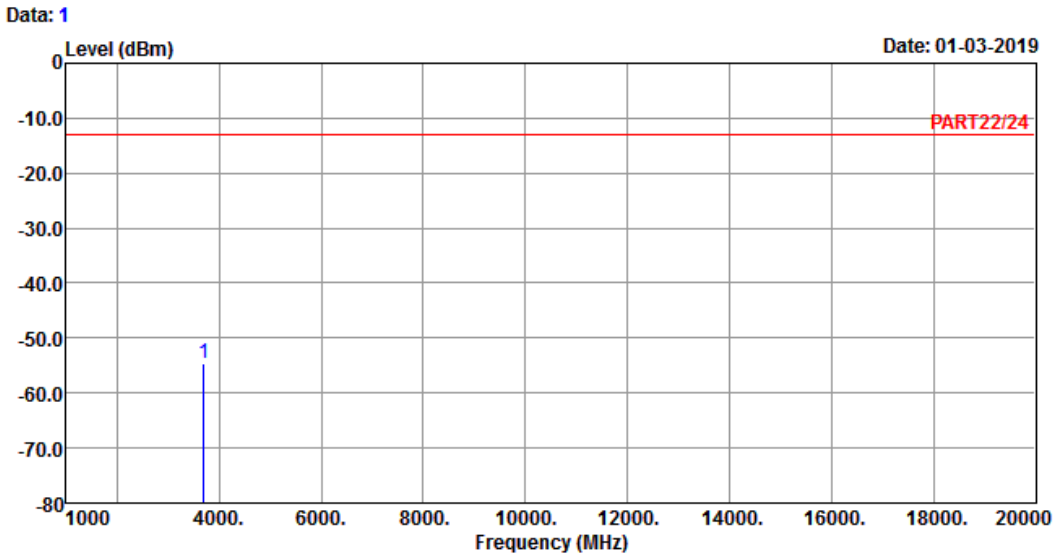


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remark : GPRS 1900 Link_H-CH
Tested by: Jisyong Wang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	30.00	-35.20	-35.58	-13.00	-22.20	0.38	Peak
2	34.85	-45.53	-43.46	-13.00	-32.53	-2.07	Peak
3	42.61	-51.10	-50.16	-13.00	-38.10	-0.94	Peak
4	383.08	-62.48	-56.44	-13.00	-49.48	-6.04	Peak
5	569.32	-63.50	-61.46	-13.00	-50.50	-2.04	Peak
6	907.85	-63.45	-64.21	-13.00	-50.45	0.76	Peak
7	3819.60	-53.55	-47.15	-13.00	-40.55	-6.40	Peak

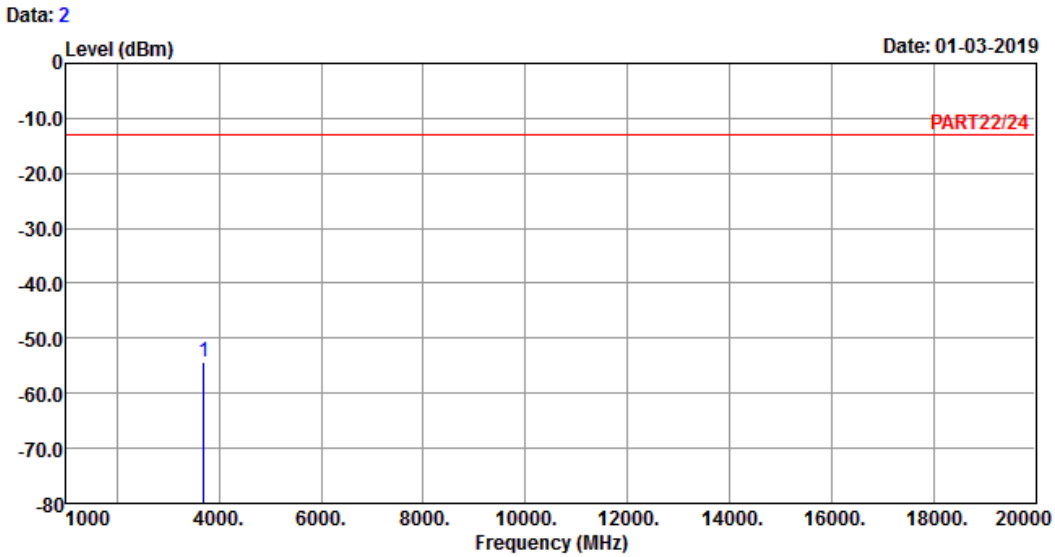
EDGE:

Low Channel



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remark : EDGE 1900 Link_L-CH
Tested by: Jisyong Wang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3700.40	-54.50	-47.57	-13.00	-41.50	-6.93	Peak



Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remark : EDGE 1900 Link_L-CH
Tested by: Jisyong Wang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3700.40	-54.33	-47.40	-13.00	-41.33	-6.93	Peak

Middle Channel

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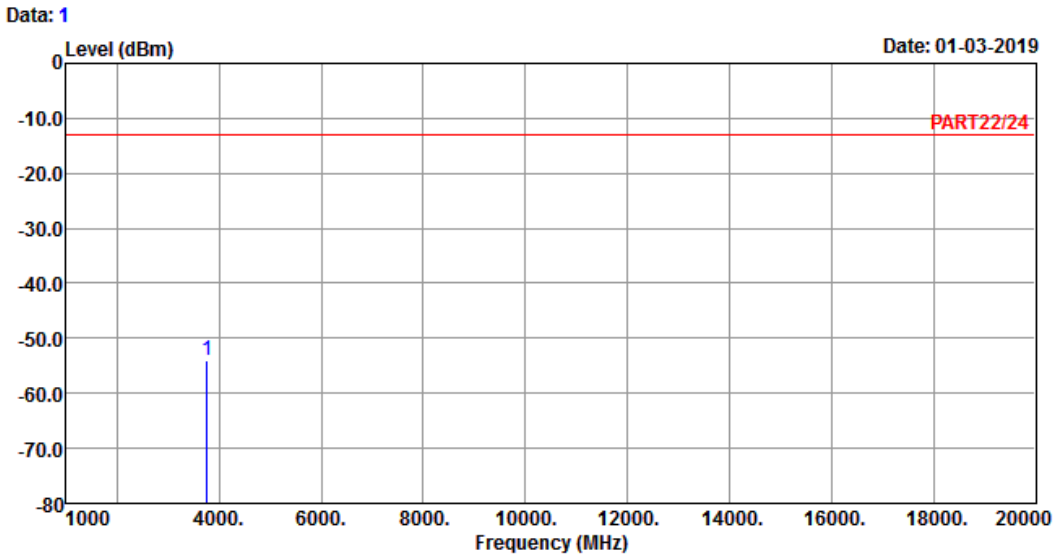
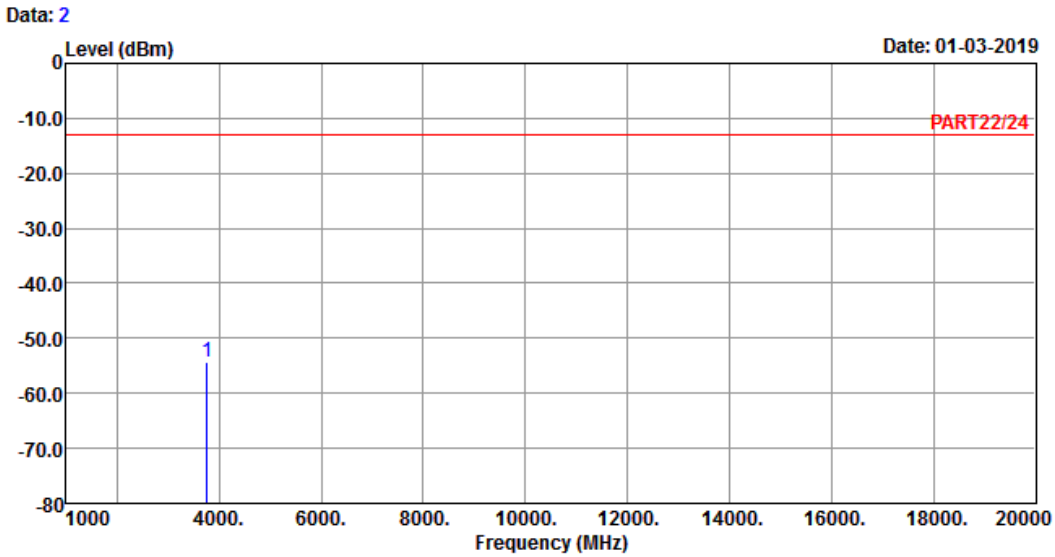


Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remark : EDGE 1900 Link_M-CH
Tested by: Jisyong Wang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3760.00	-54.04	-47.39	-13.00	-41.04	-6.65	Peak

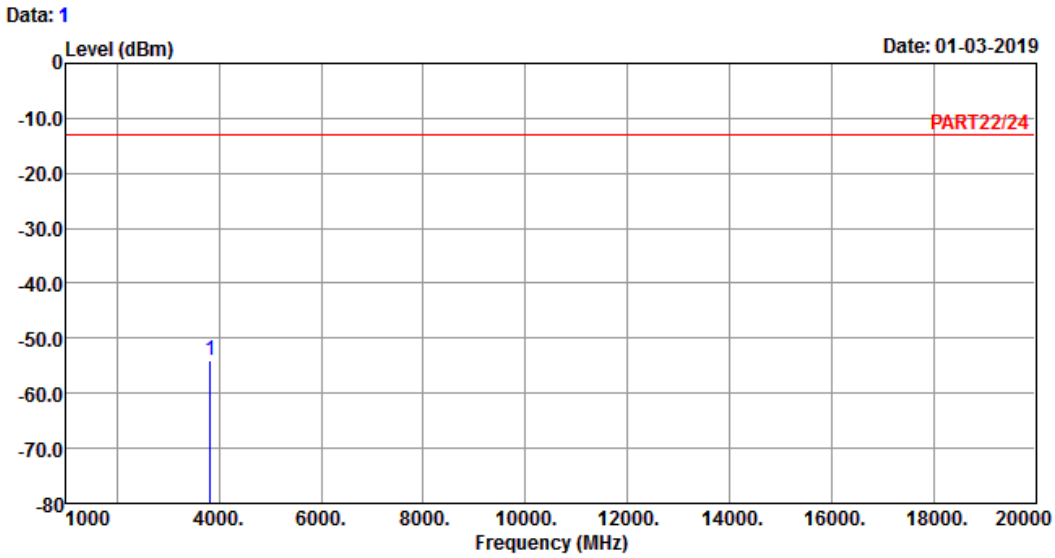


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remark : EDGE 1900 Link_M-CH
Tested by: Jisyong Wang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3760.00	-54.46	-47.81	-13.00	-41.46	-6.65	Peak

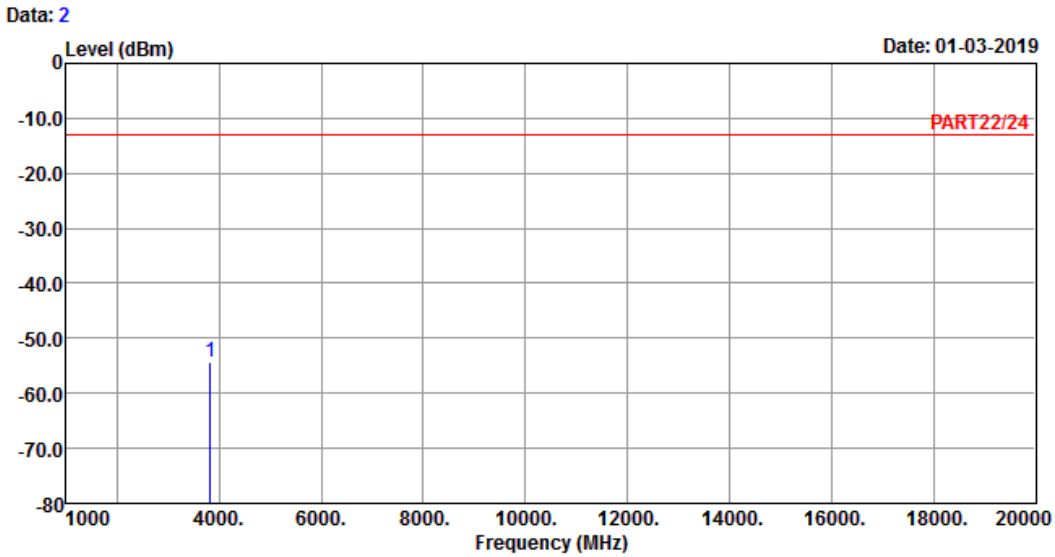
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remark : EDGE 1900 Link_H-CH
Tested by: Jisyong Wang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3819.60	-54.16	-47.76	-13.00	-41.16	-6.40	Peak

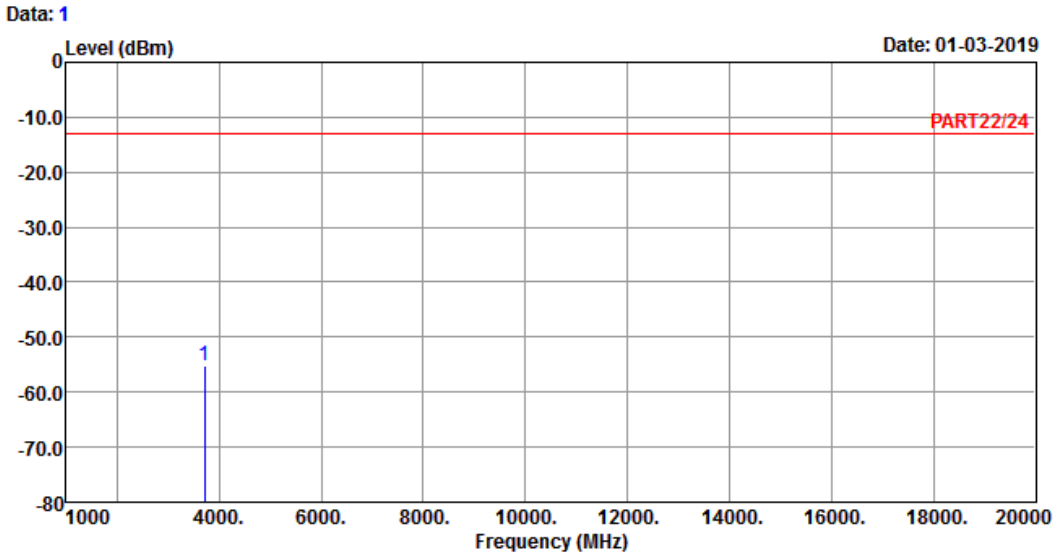


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remark : EDGE 1900 Link_H-CH
Tested by: Jisyong Wang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3819.60	-54.32	-47.92	-13.00	-41.32	-6.40	Peak

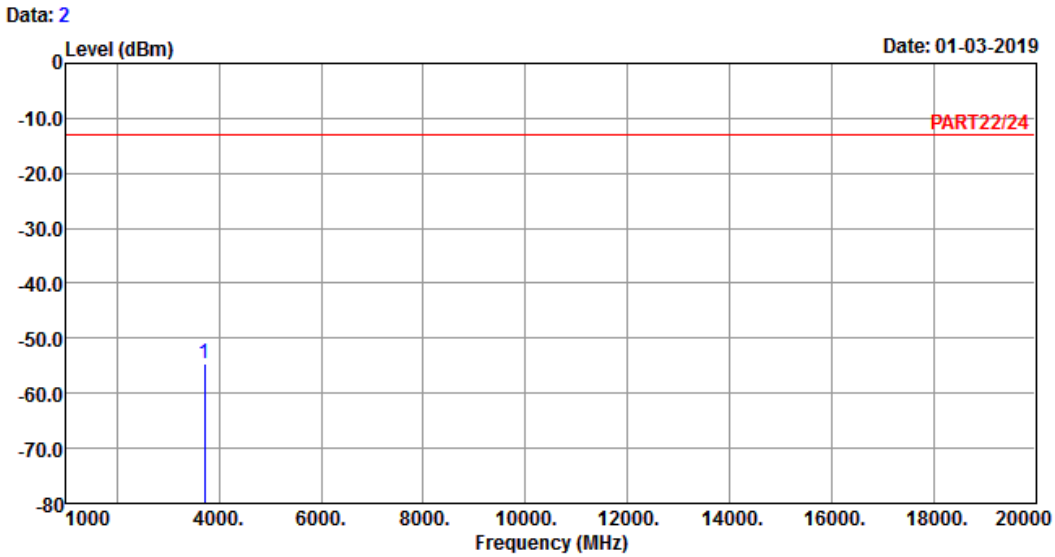
WCDMA:

Low Channel



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remark : WCDMA Band 2 Link_L-CH
Tested by: Jisyong Wang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3704.80	-55.35	-48.42	-13.00	-42.35	-6.93	Peak

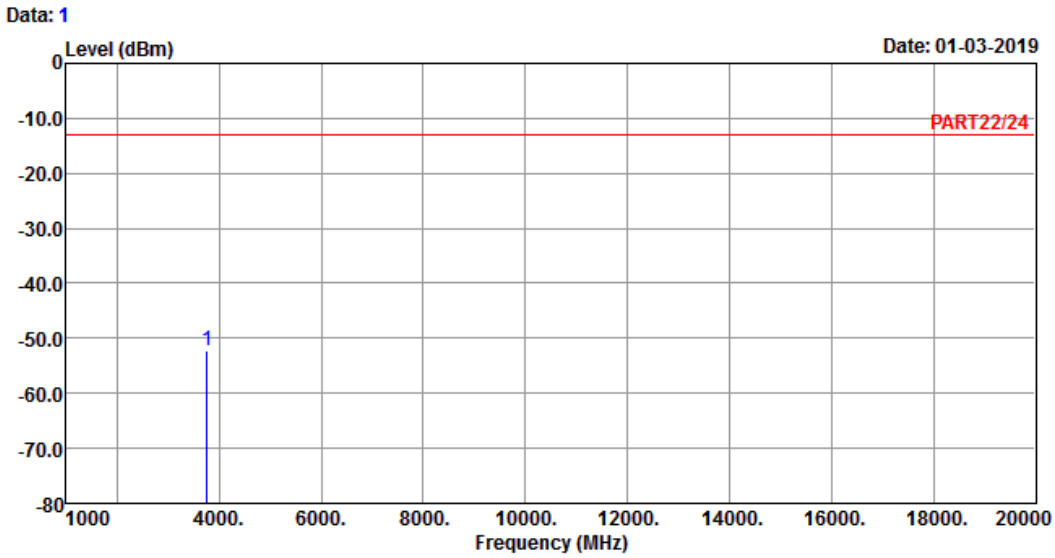


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remark : WCDMA Band 2 Link_L-CH
Tested by: Jisyong Wang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3704.80	-54.71	-47.78	-13.00	-41.71	-6.93	Peak

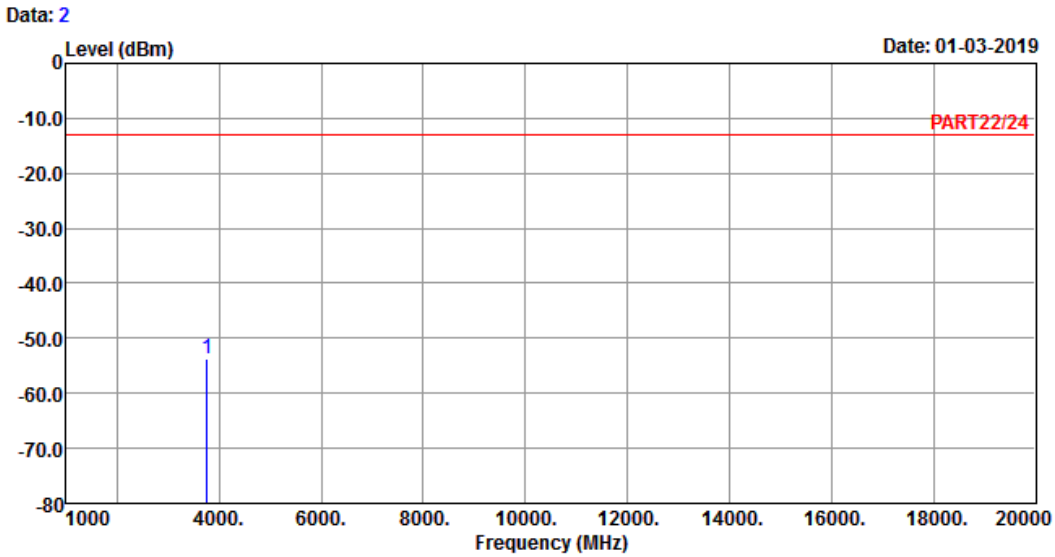
Middle Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remark : WCDMA Band 2 Link_M-CH
Tested by: Jisyong Wang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3760.00	-52.16	-45.51	-13.00	-39.16	-6.65	Peak

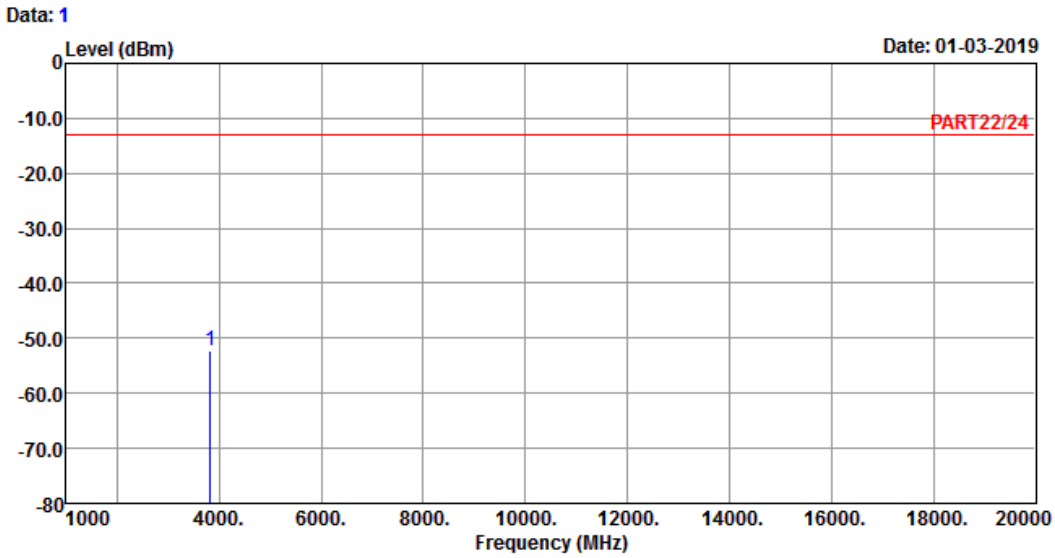


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remark : WCDMA Band 2 Link_M-CH
Tested by: Jisyong Wang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3760.00	-53.81	-47.16	-13.00	-40.81	-6.65	Peak

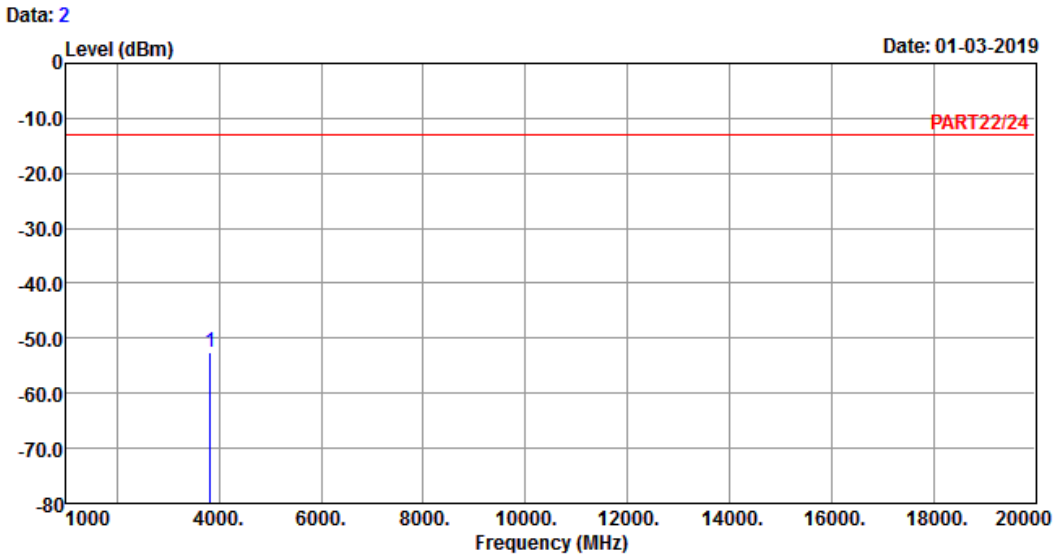
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remark : WCDMA Band 2 Link_H-CH
Tested by: Jisyong Wang

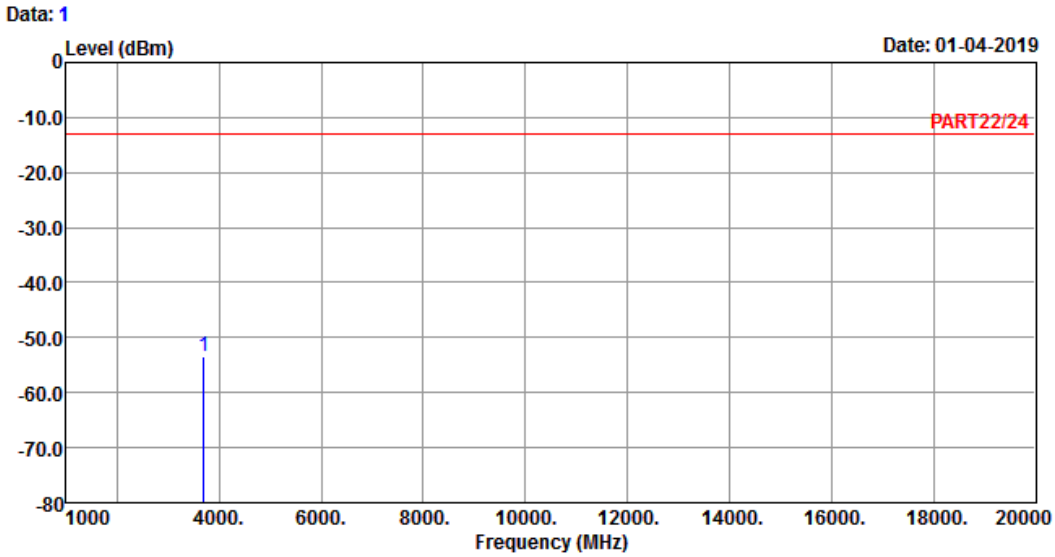
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3815.20	-52.11	-45.71	-13.00	-39.11	-6.40	Peak



Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remark : WCDMA Band 2 Link_H-CH
Tested by: Jisyong Wang

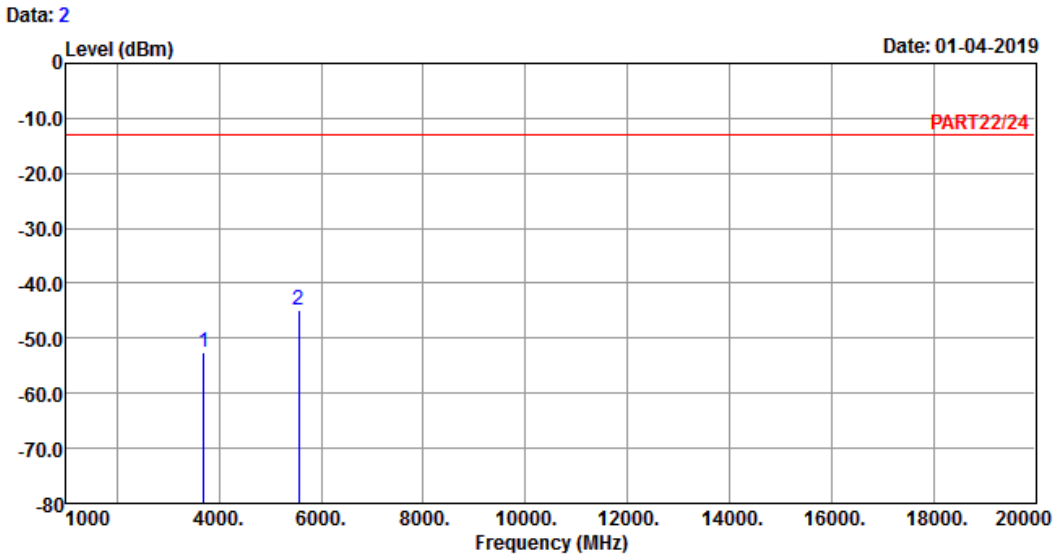
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3815.20	-52.61	-46.21	-13.00	-39.61	-6.40	Peak

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



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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3701.40	-53.52	-46.59	-13.00	-40.52	-6.93	Peak

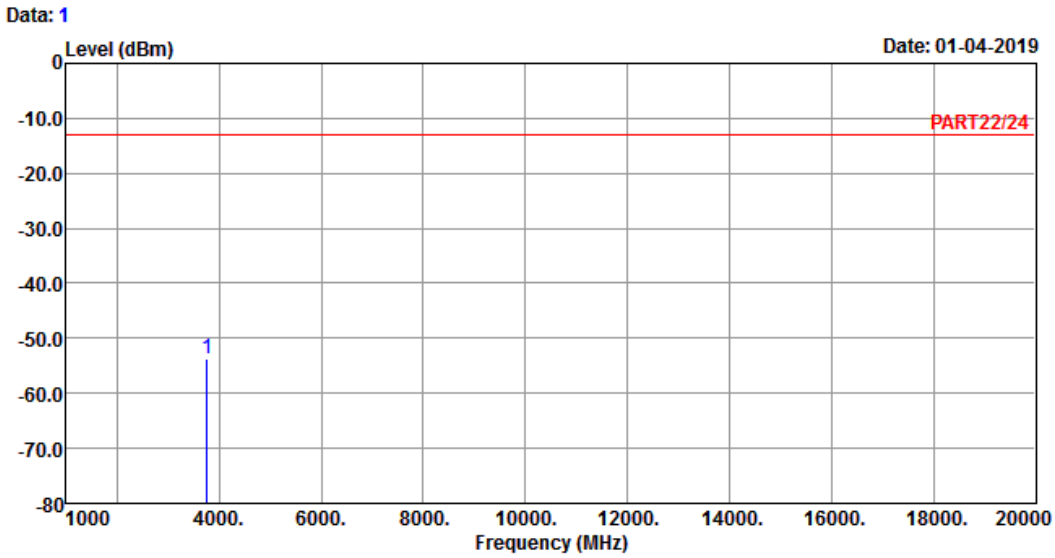


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band 2 QPSK_1.4M Link_L-CH
Tested by: Jisyong Wang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3701.40	-52.53	-45.60	-13.00	-39.53	-6.93	Peak
2 pp	5552.10	-44.90	-43.00	-13.00	-31.90	-1.90	Peak

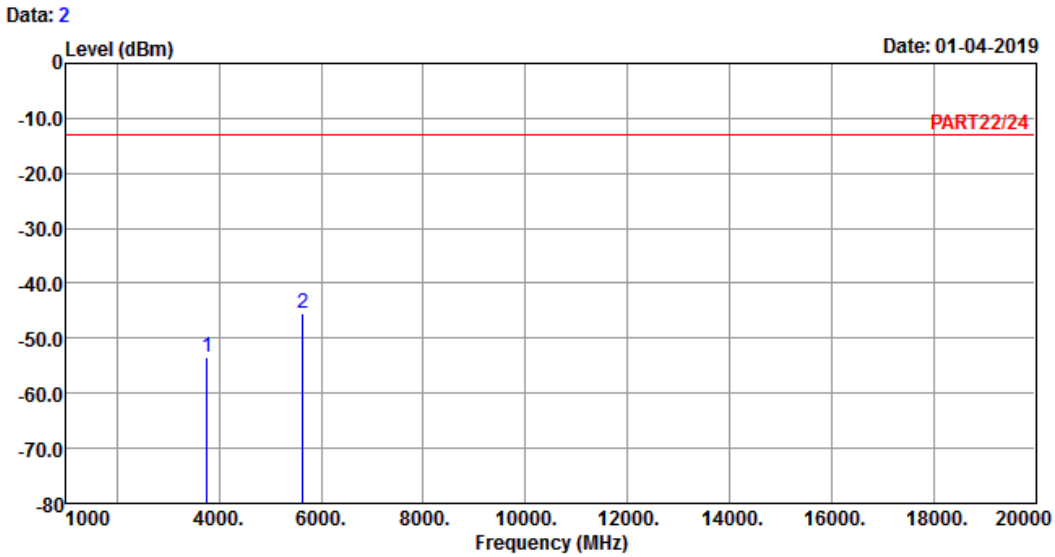
Middle Channel

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: Jisyong Wang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3760.00	-53.87	-47.27	-13.00	-40.87	-6.60	Peak

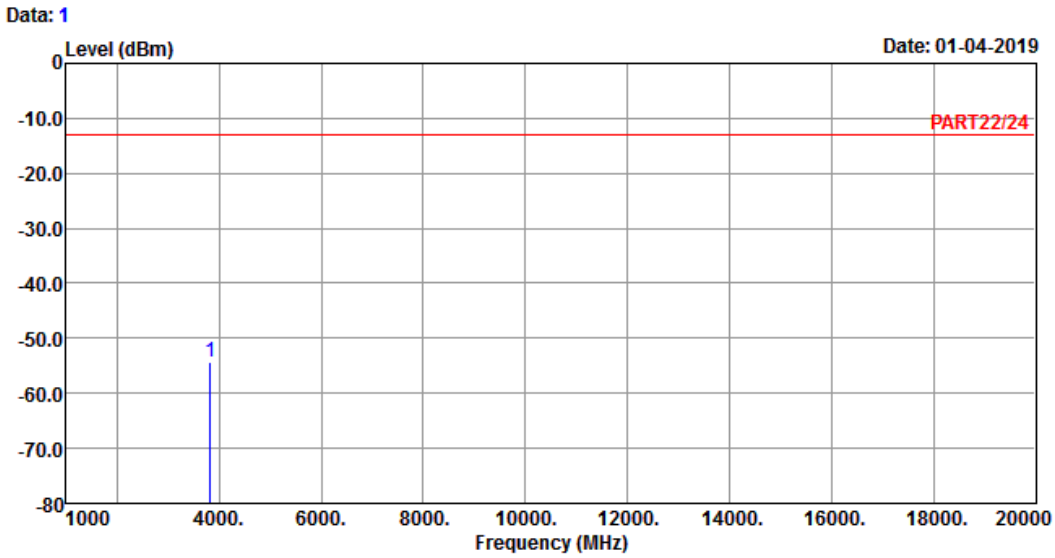


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band 2 QPSK_1.4M Link_M-CH
Tested by: Jisyong Wang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3760.00	-53.36	-46.71	-13.00	-40.36	-6.65	Peak
2 pp	5640.00	-45.46	-43.60	-13.00	-32.46	-1.86	Peak

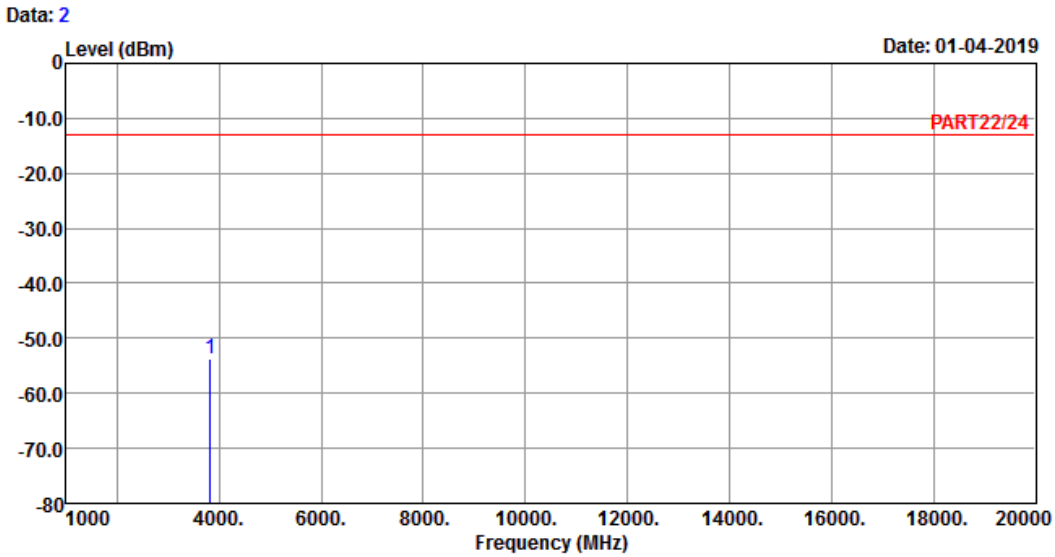
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



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

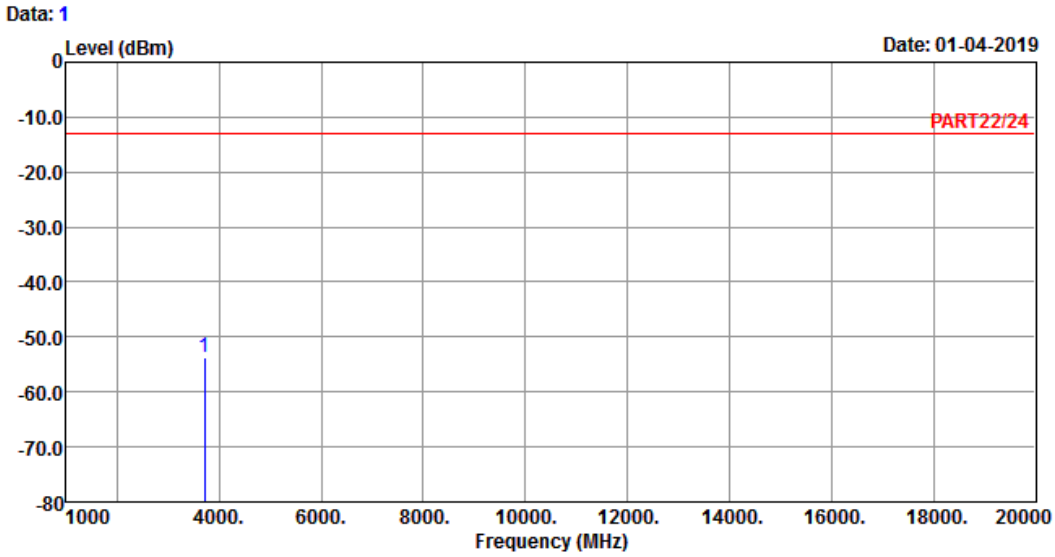
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3818.60	-54.31	-47.91	-13.00	-41.31	-6.40	Peak



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

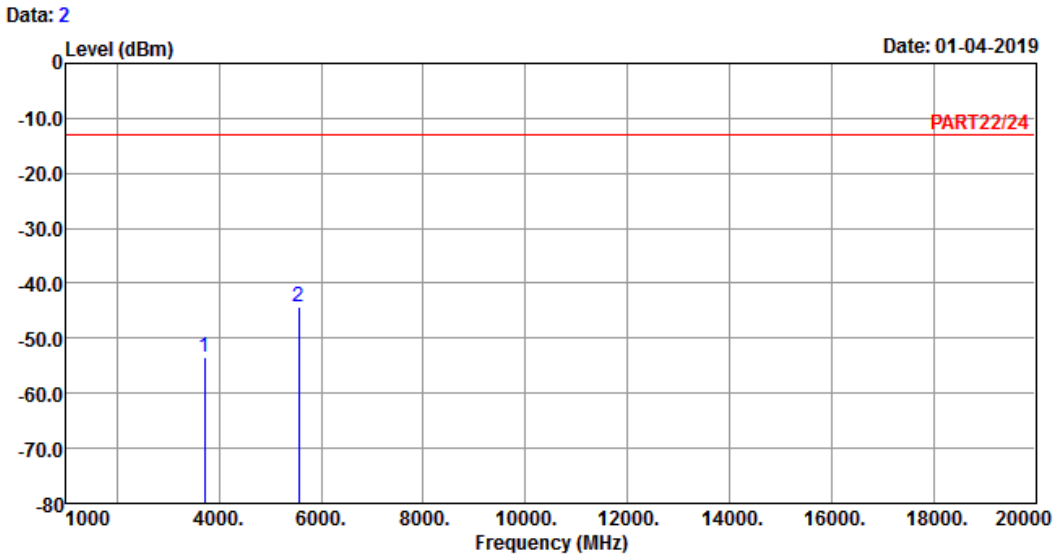
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3818.60	-53.70	-47.30	-13.00	-40.70	-6.40	Peak

Channel Bandwidth: 5 MHz / QPSK
Low Channel



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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3705.00	-53.61	-46.68	-13.00	-40.61	-6.93	Peak

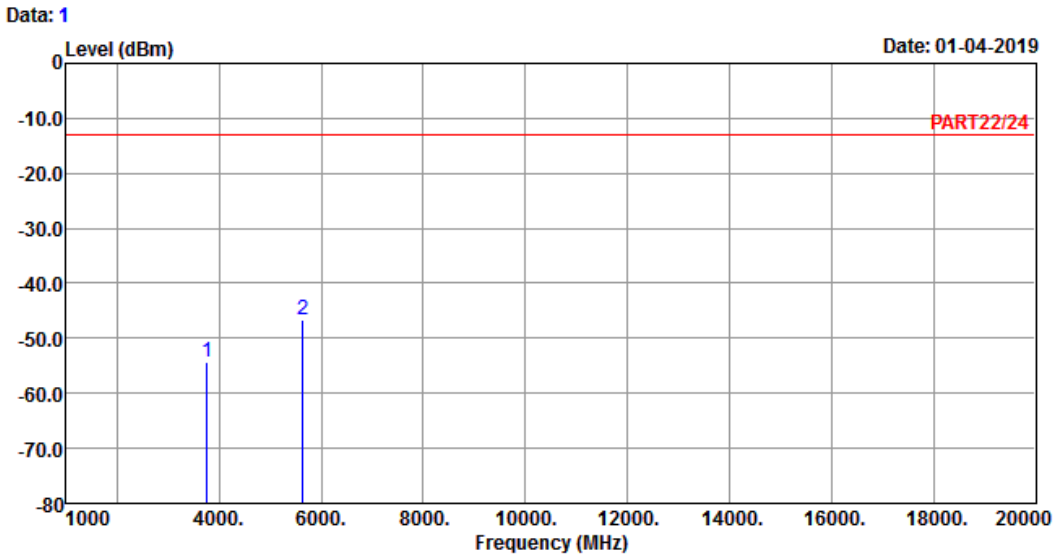


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band 2 QPSK_5M Link_L-CH
Tested by: Jisyong Wang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3705.00	-53.53	-46.60	-13.00	-40.53	-6.93	Peak
2 pp	5557.50	-44.24	-42.33	-13.00	-31.24	-1.91	Peak

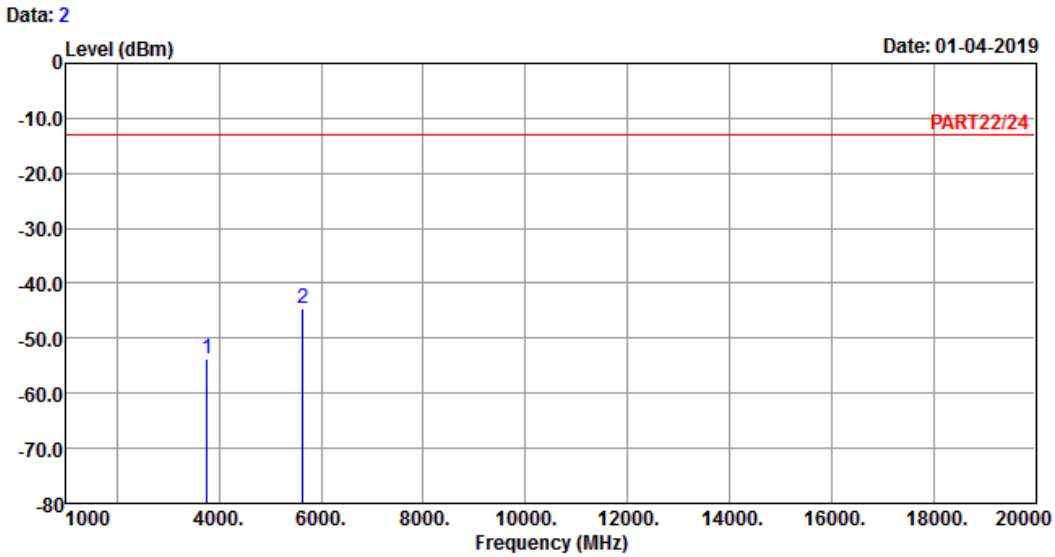
Middle Channel

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: Jisyong Wang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3760.00	-54.25	-47.60	-13.00	-41.25	-6.65	Peak
2 pp	5640.00	-46.61	-44.75	-13.00	-33.61	-1.86	Peak

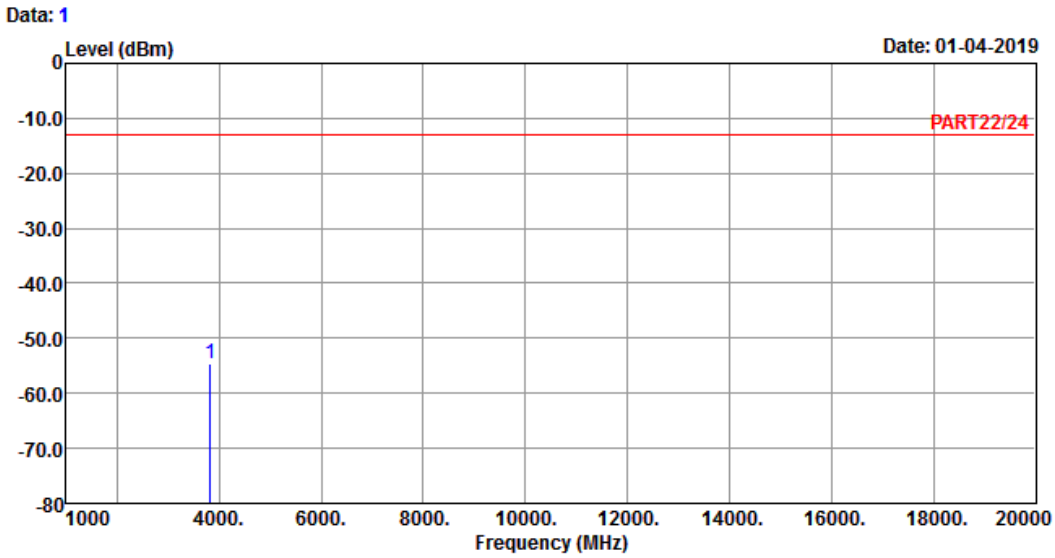


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band 2 QPSK_5M Link_M-CH
Tested by: Jisyong Wang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3760.00	-53.86	-47.21	-13.00	-40.86	-6.65	Peak
2 pp	5640.00	-44.61	-42.75	-13.00	-31.61	-1.86	Peak

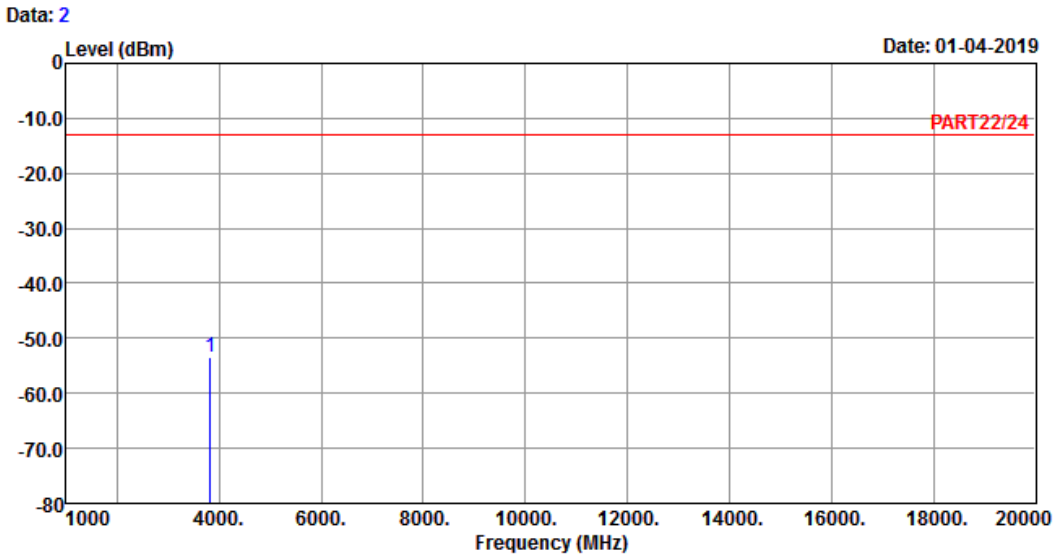
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



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

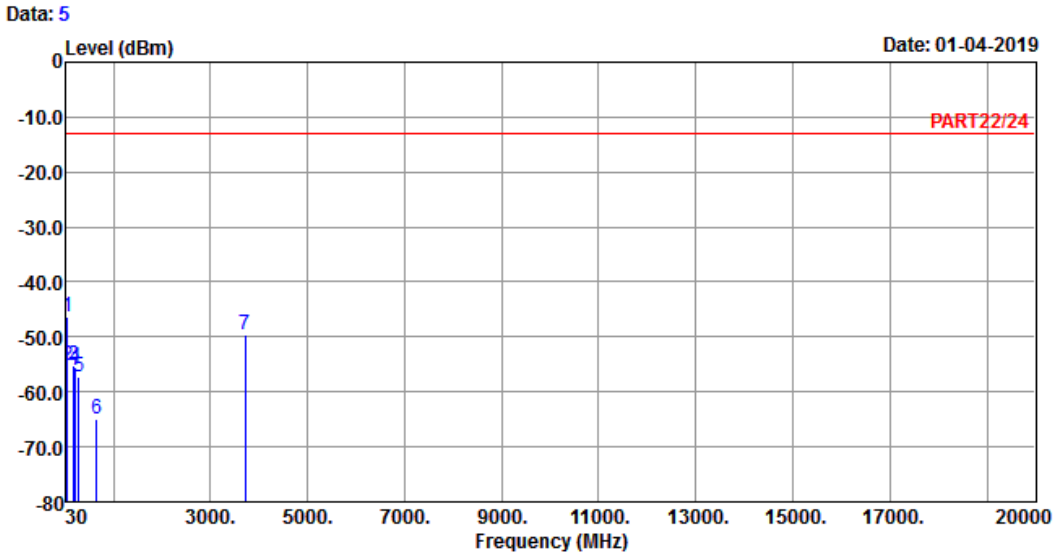
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3815.00	-54.60	-48.20	-13.00	-41.60	-6.40	Peak



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

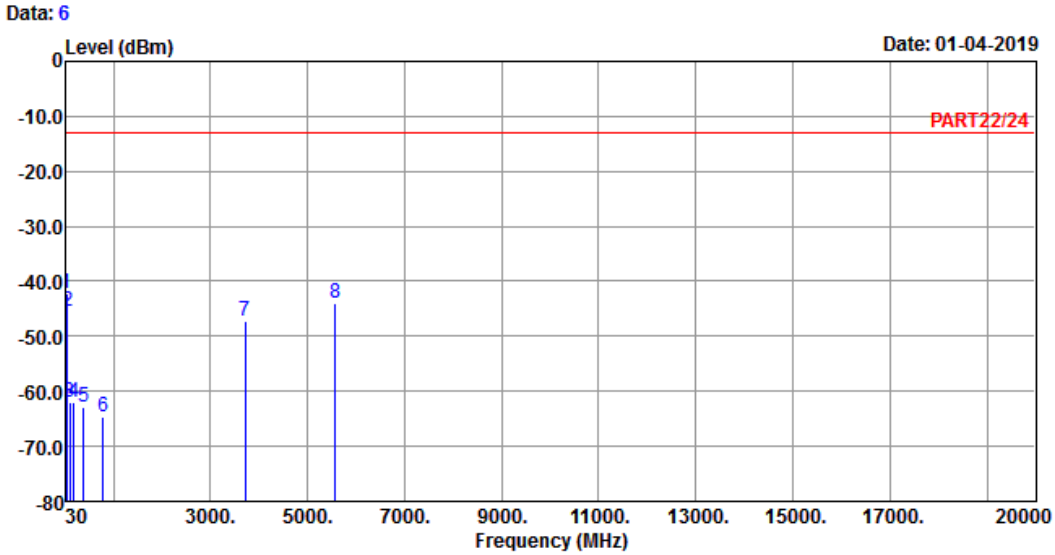
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3815.00	-53.44	-47.04	-13.00	-40.44	-6.40	Peak

Channel Bandwidth: 20 MHz / QPSK
Low Channel



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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	44.55	-46.42	-44.43	-13.00	-33.42	-1.99	Peak
2	53.28	-55.18	-49.37	-13.00	-42.18	-5.81	Peak
3	178.41	-55.24	-48.18	-13.00	-42.24	-7.06	Peak
4	218.18	-55.47	-48.19	-13.00	-42.47	-7.28	Peak
5	286.08	-57.34	-50.61	-13.00	-44.34	-6.73	Peak
6	646.92	-64.93	-64.05	-13.00	-51.93	-0.88	Peak
7	3720.00	-49.45	-42.63	-13.00	-36.45	-6.82	Peak

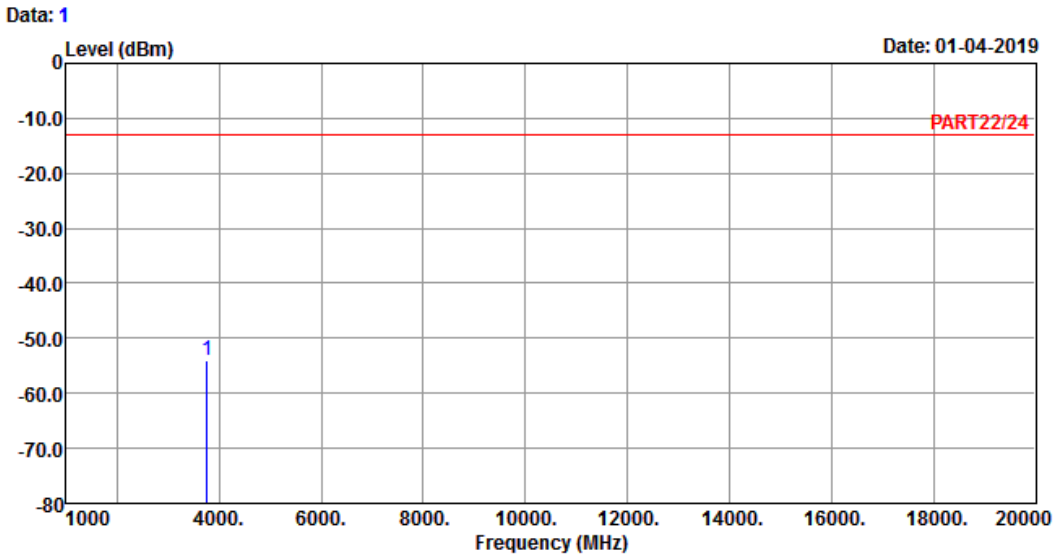


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band 2 QPSK_20M Link_L-CH
Tested by: Jisyong Wang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	30.00	-42.23	-42.61	-13.00	-29.23	0.38	Peak
2	44.55	-45.35	-43.36	-13.00	-32.35	-1.99	Peak
3	95.96	-62.10	-51.32	-13.00	-49.10	-10.78	Peak
4	178.41	-61.87	-54.81	-13.00	-48.87	-7.06	Peak
5	387.93	-63.02	-57.00	-13.00	-50.02	-6.02	Peak
6	791.45	-64.52	-65.28	-13.00	-51.52	0.76	Peak
7	3720.00	-47.29	-40.47	-13.00	-34.29	-6.82	Peak
8	5580.00	-44.07	-42.15	-13.00	-31.07	-1.92	Peak

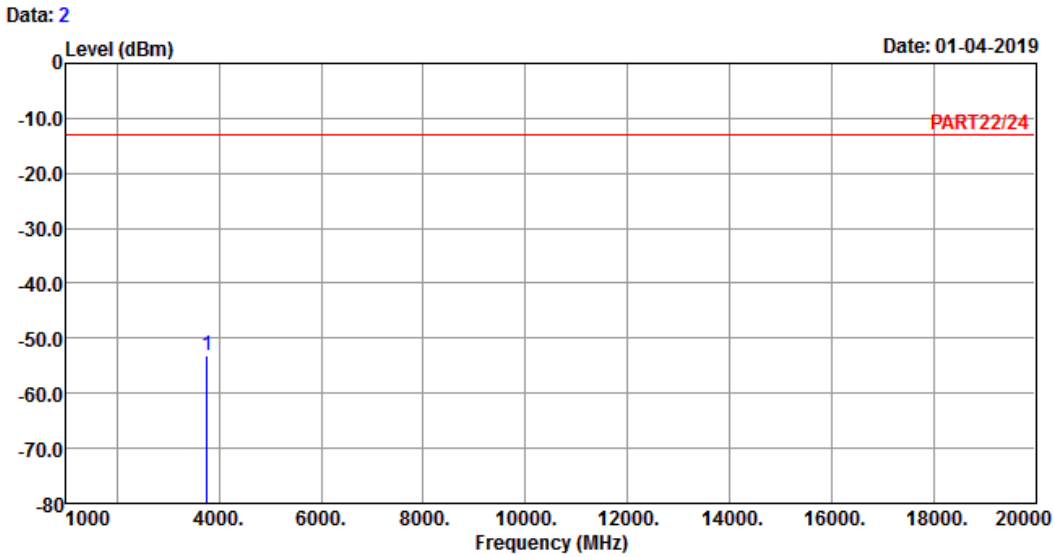
Middle Channel

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: Jisyong Wang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3760.00	-54.12	-47.47	-13.00	-41.12	-6.65	Peak

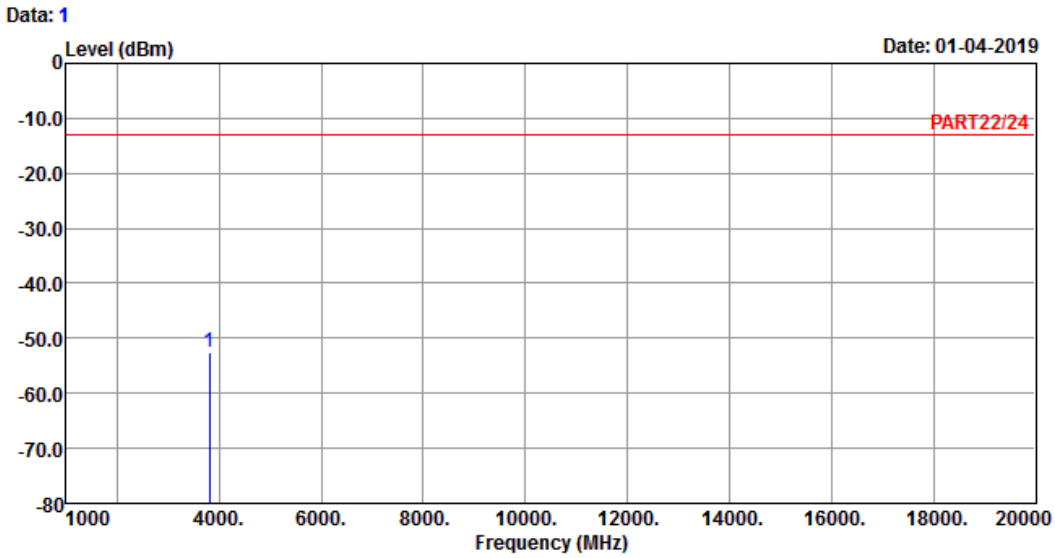


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band 2 QPSK_20M Link_M-CH
Tested by: Jisyong Wang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3760.00	-53.27	-46.62	-13.00	-40.27	-6.65	Peak

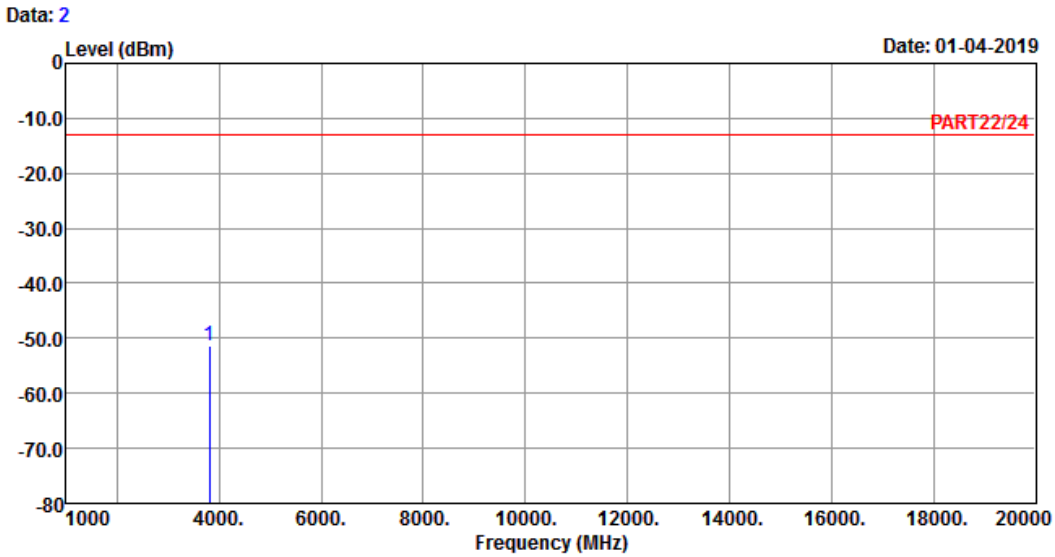
High Channel

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: Jisyong Wang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3800.00	-52.62	-46.19	-13.00	-39.62	-6.43	Peak



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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3800.00	-51.38	-44.95	-13.00	-38.38	-6.43	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:

Linko EMC/RF Lab
Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab
Tel: 886-3-6668565
Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety
Tel: 886-3-3183232
Fax: 886-3-3270892

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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