

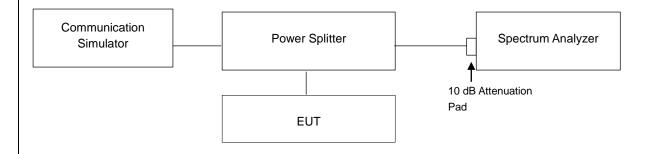


# 4.6 Peak to Average Ratio

## 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



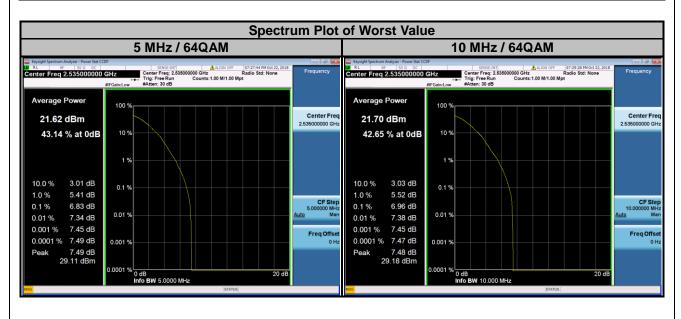
# 4.6.3 Test Procedures

- 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 %.



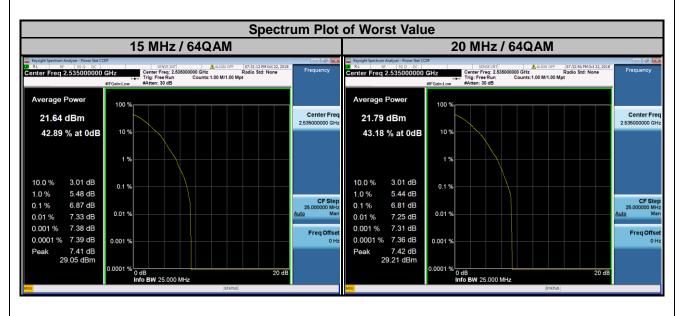
# 4.6.4 Test Results

	LTE Band 7											
	Channel Band	C	Channel Band	dwidth: 1	0 MHz							
Channel	Frequency	Peak to	Average (dB)	e Ratio	Channel	Frequency	Peak to	Peak to Average Rat				
	(MHz)	QPSK	16QAM	64QAM		(MHz)	QPSK	16QAM	64QAM			
20775	2502.5	3.58	5.36	6.81	20800	2505.0	3.50	5.26	6.82			
21100	2535.0	3.61	5.35	6.83	21100	2535.0	3.56	5.30	6.96			
21425	2567.5	3.58	5.26	6.75	21400	2565.0	3.53	5.25	6.82			



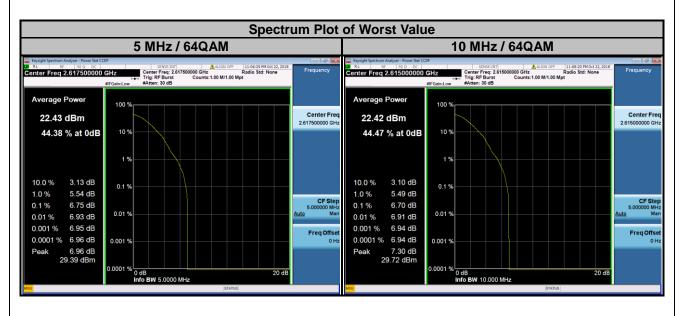


	LTE Band 7											
C	hannel Band	Channel Bandwidth: 20 MHz										
Channel	Frequency	Peak to	o Averag (dB)	e Ratio	Channel	Frequency	Peak to	Peak to Average F				
	(MHz)	QPSK	16QAM	64QAM		(MHz)	QPSK	16QAM	64QAM			
20825	2507.5	3.42	5.21	6.49	20850	2510.0	3.44	5.15	6.39			
21100	2535.0	3.47	5.22	6.87	21100	2535.0	3.51	5.18	6.81			
21375	2562.5	3.45	5.21	6.71	21350	2560.0	3.45	5.19	6.79			





LTE Band 38											
	Channel Ban	dwidth: ሂ	5 MHz		Channel Bandwidth: 10 MHz						
Channel	Frequency	· · · · · · · · · · · · · · · · · · ·		Channel Frequency		Peak to	o Averago (dB)	e Ratio			
	(MHz)	QPSK	16QAM	64QAM		(MHz)	QPSK	16QAM	64QAM		
37775	2572.5	3.64	5.67	6.72	37800	2575.0	4.05	6.00	6.67		
38000	2595.0	4.05	5.92	6.61	38000	2595.0	3.87	5.82	6.70		
38225	2617.5	3.75	6.02	6.75	38200	2615.0	3.70	5.87	6.70		



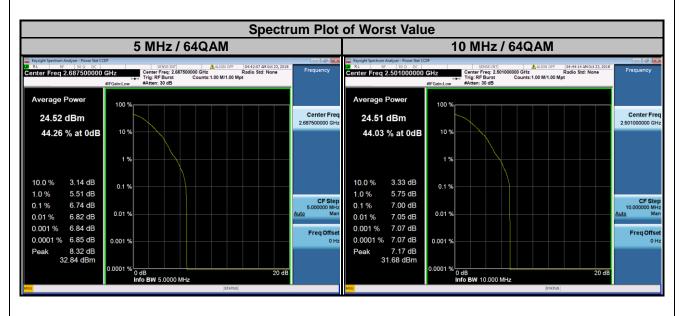


LTE Band 38											
C	hannel Band	width: 1	5 MHz		C	hannel Band	width: 2	0 MHz			
Channel	Frequency	Peak to	Averag	e Ratio	Channel	Frequency	Peak to	Peak to Average R (dB)			
	(MHz)	QPSK	16QAM	64QAM		(MHz)	QPSK	16QAM	64QAM		
37825	2577.5	4.75	5.92	6.50	37850	2580.0	4.23	5.69	6.51		
38000	2595.0	4.74	6.31	6.98	38000	2595.0	4.56	5.86	6.42		
38175	2612.5	4.67	6.28	6.28	38150	2610.0	4.83	5.75	6.76		



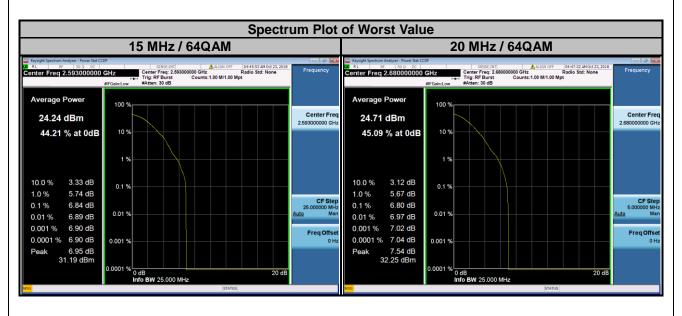


	LTE Band 41 (Power Class 2)											
(	Channel Band	dwidth: 5	MHz		C	hannel Band	width: 1	0 MHz				
Channel	Frequency	Peak to	o Averag (dB)	e Ratio	Channel	Frequency	Peak to	Peak to Average Rat (dB)				
	(MHz)	QPSK	16QAM	64QAM		(MHz)	QPSK	16QAM	64QAM			
39675	2498.5	3.56	5.48	6.72	39700	2501.0	3.53	5.24	7.00			
40620	2593.0	3.67	5.17	6.55	40620	2593.0	3.52	5.45	6.75			
41565	2687.5	3.58	5.68	6.74	41540	2685.0	3.53	5.70	5.45			



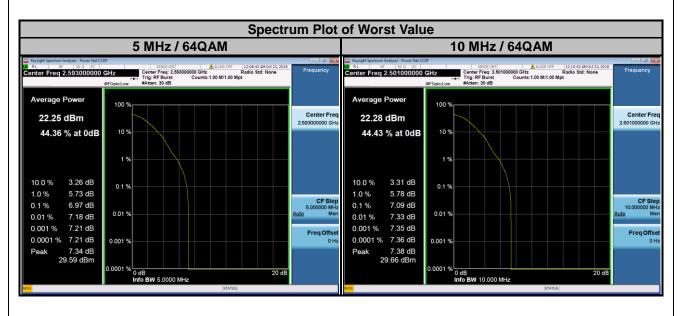


	LTE Band 41 (Power Class 2)											
C	hannel Band	width: 1	5 MHz		C	hannel Band	width: 2	0 MHz				
Channel	Frequency	Peak to	Averag	e Ratio	Channel	Frequency	Peak to	Peak to Average Rate (dB)				
	(MHz)	QPSK	16QAM	64QAM		(MHz)	QPSK	16QAM	64QAM			
39725	2503.5	3.49	5.15	6.75	39750	2506.0	3.49	5.21	6.68			
40620	2593.0	3.46	4.99	6.84	40620	2593.0	3.49	5.16	6.45			
41515	2682.5	3.30	4.16	5.68	41490	2680.0	3.49	5.20	6.80			



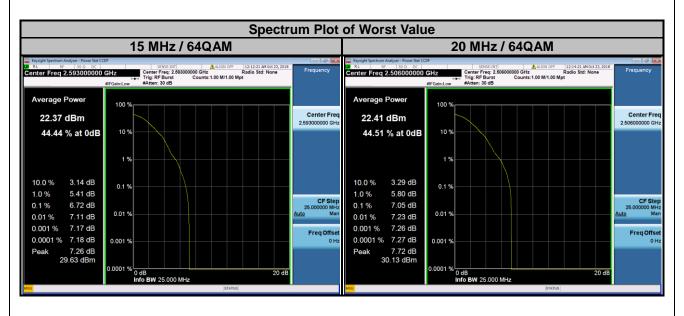


	LTE Band 41 (Power Class 3)											
(	Channel Band	dwidth: 5	MHz		C	hannel Band	width: 1	0 MHz				
Channel	Frequency	Peak to	o Averag (dB)	e Ratio	Channel	Frequency	Peak to	Peak to Average Rat (dB)				
	(MHz)	QPSK	16QAM	64QAM		(MHz)	QPSK	16QAM	64QAM			
39675	2498.5	3.66	5.92	6.87	39700	2501.0	3.49	6.05	7.09			
40620	2593.0	3.89	6.02	6.97	40620	2593.0	3.49	6.04	6.85			
41565	2687.5	3.74	6.03	6.92	41540	2685.0	3.80	6.14	6.93			





	LTE Band 41 (Power Class 3)											
С	hannel Band	width: 1	5 MHz		C	hannel Band	width: 2	0 MHz				
Channel	Frequency	Peak to	Average (dB)	e Ratio	Channel	Frequency	Peak to	Peak to Average Ratio				
	(MHz)	QPSK	16QAM	64QAM		(MHz)	QPSK	16QAM	64QAM			
39725	2503.5	4.59	5.88	6.60	39750	2506.0	4.89	6.01	7.05			
40620	2593.0	5.13	6.02	6.72	40620	2593.0	4.96	6.04	6.87			
41515	2682.5	4.92	5.99	6.45	41490	2680.0	3.95	8.82	6.89			



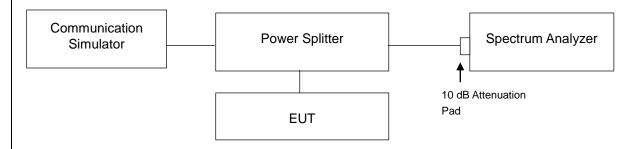


# 4.7 Conducted Spurious Emissions

## 4.7.1 Limits of Conducted Spurious Emissions Measurement

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

## 4.7.2 Test Setup

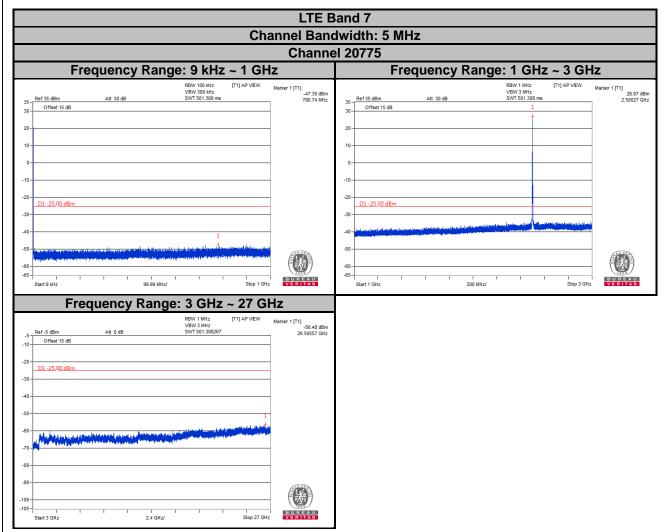


#### 4.7.3 Test Procedure

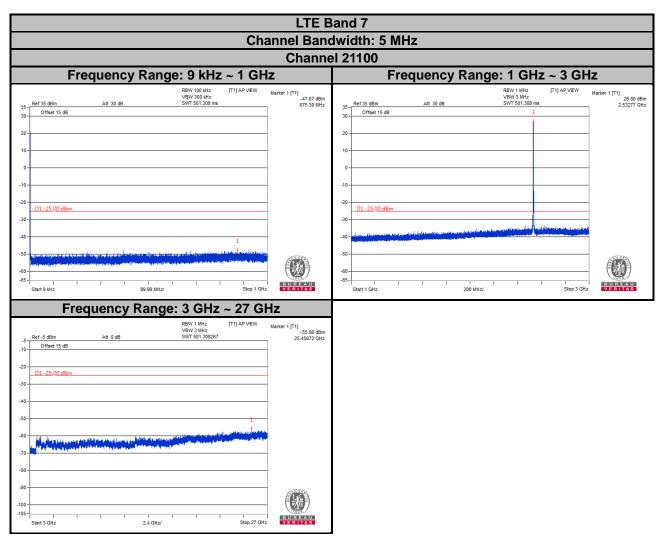
- a. The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
- b. Measuring frequency range is from 9 kHz to 1 GHz. 10 dB attenuation pad is connected with spectrum. RBW = 100 kHz and VBW = 300 kHz are used for conducted emission measurement.
- c. Measuring frequency range is from 1 GHz to 27 GHz. 10 dB attenuation pad is connected with spectrum. RBW = 1 MHz and VBW = 3 MHz are used for conducted emission measurement.



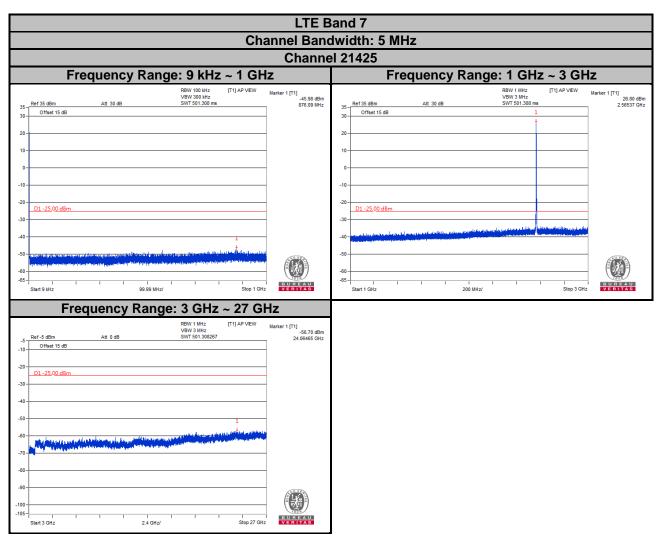
# 4.7.4 Test Results



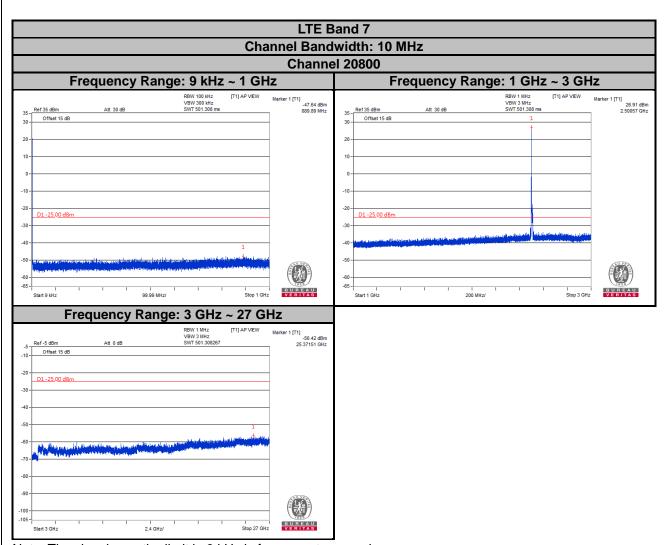




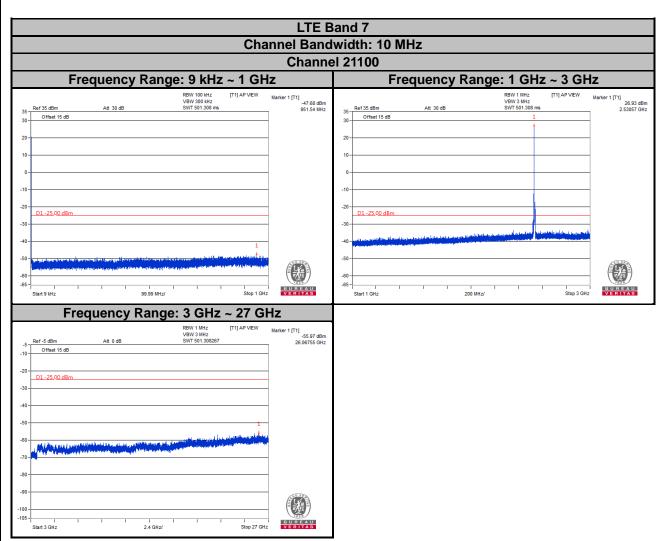




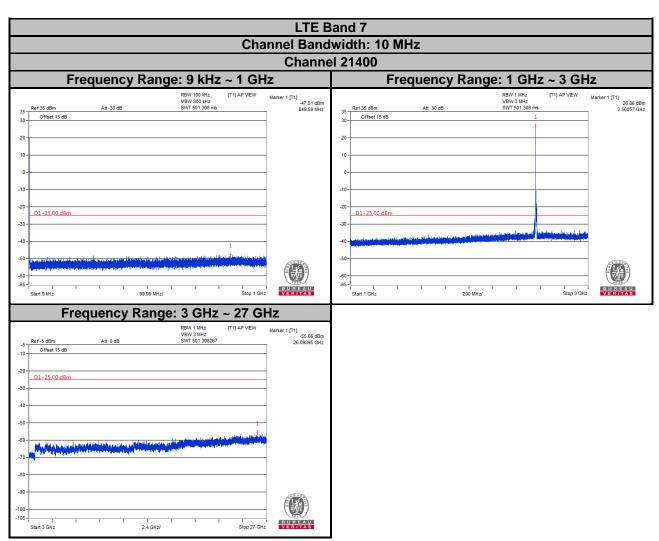




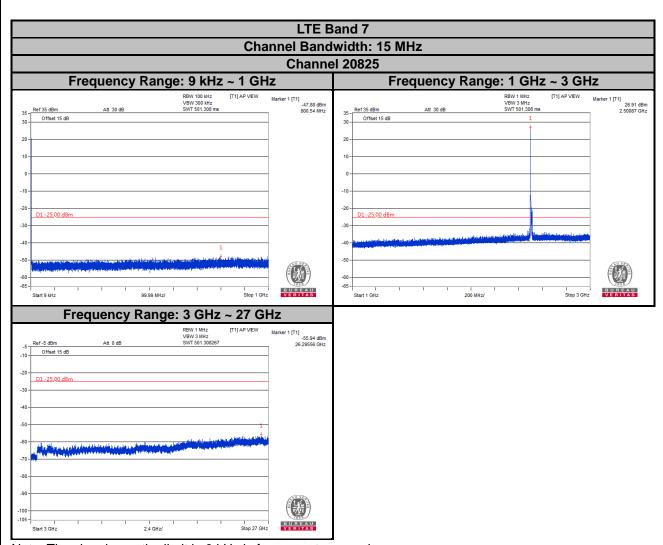




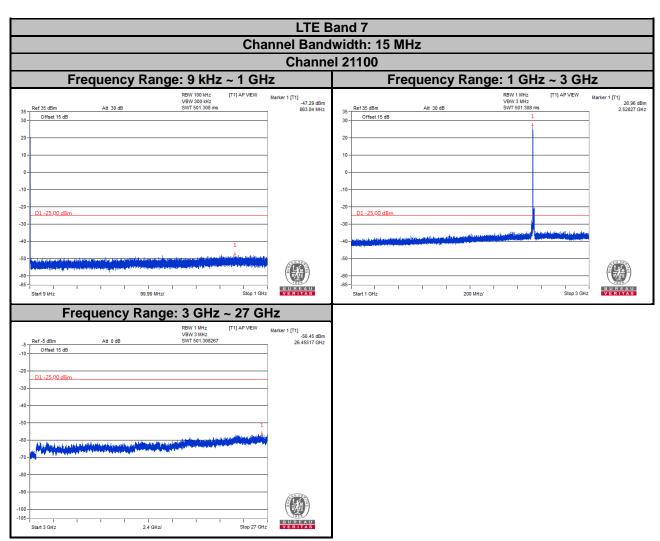




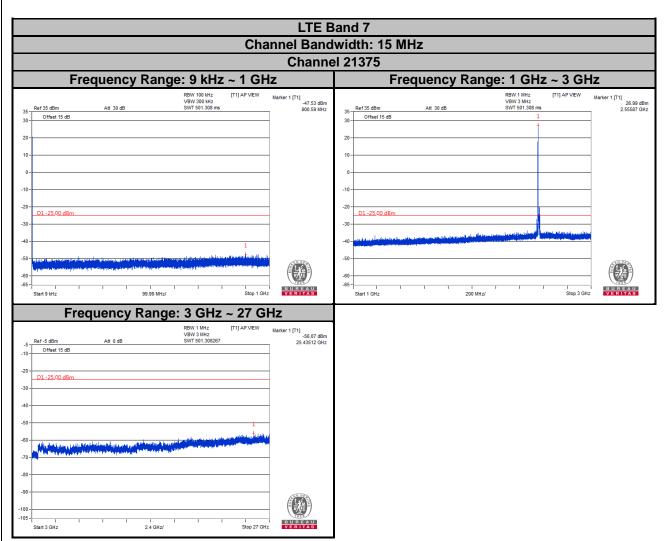




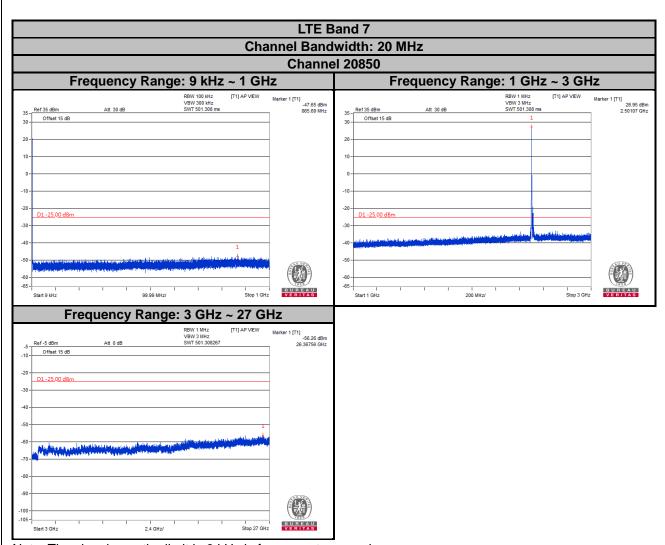




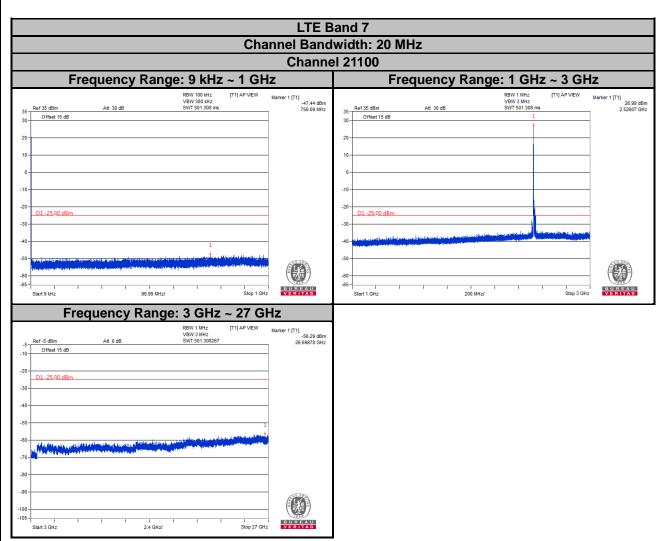




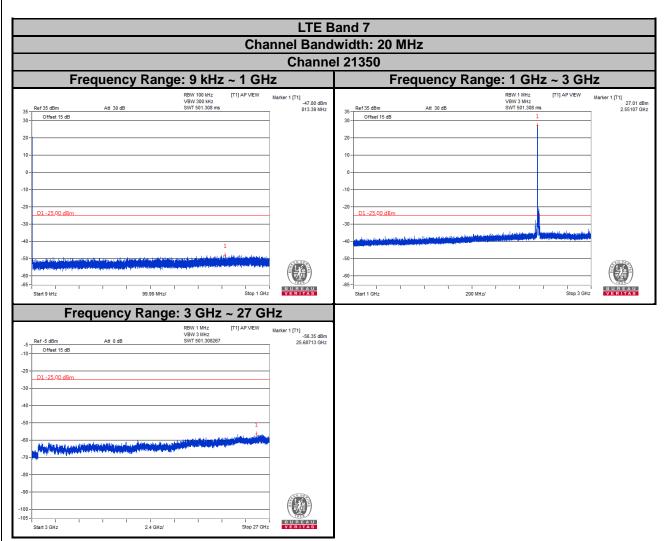




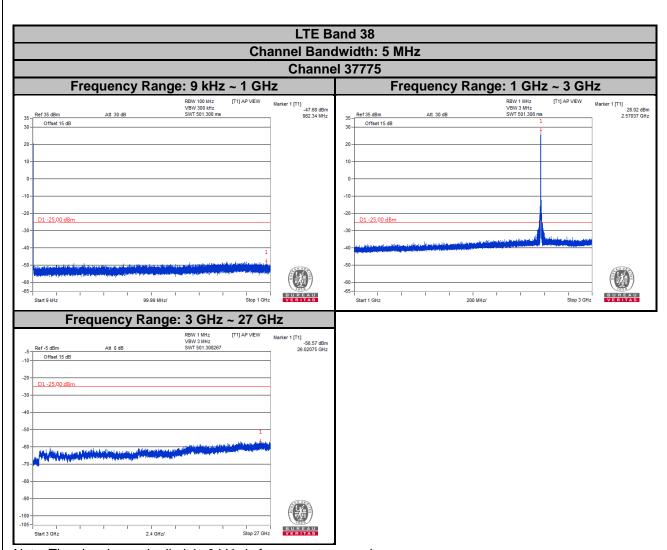




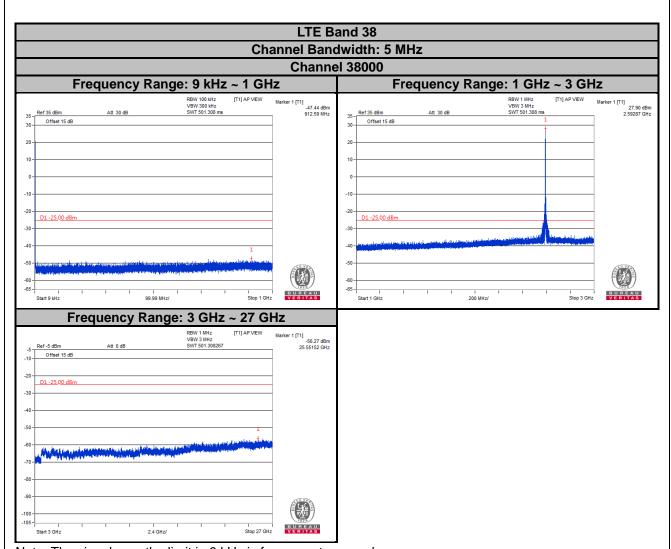




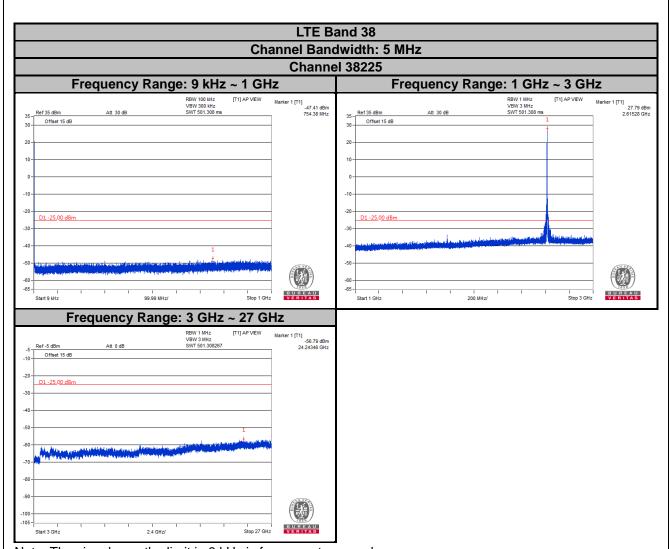




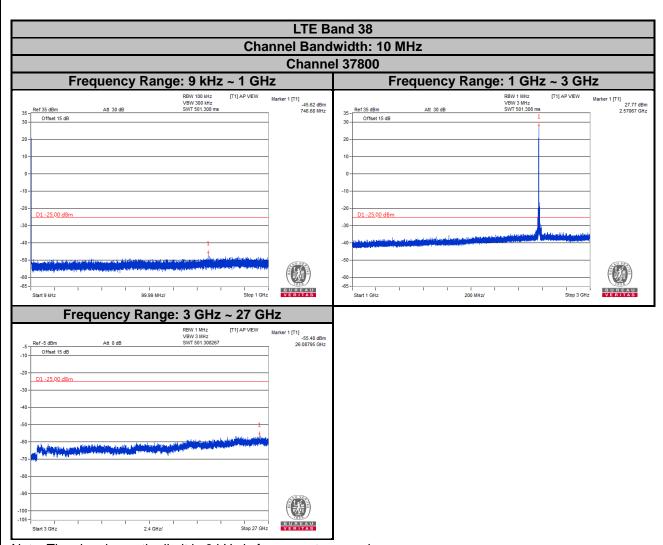




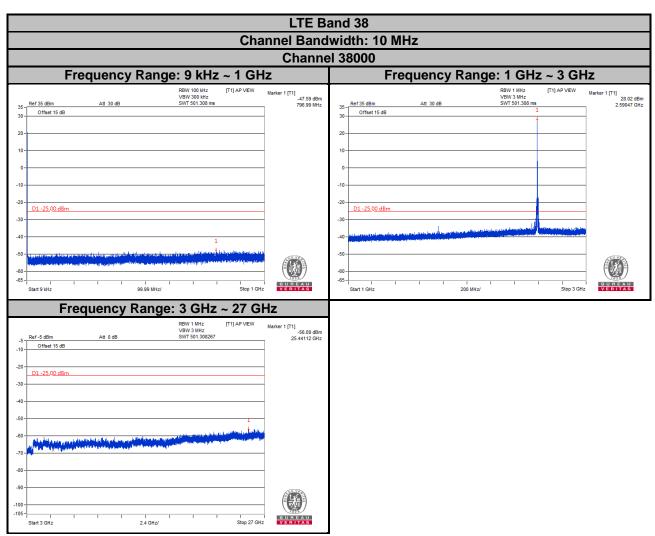




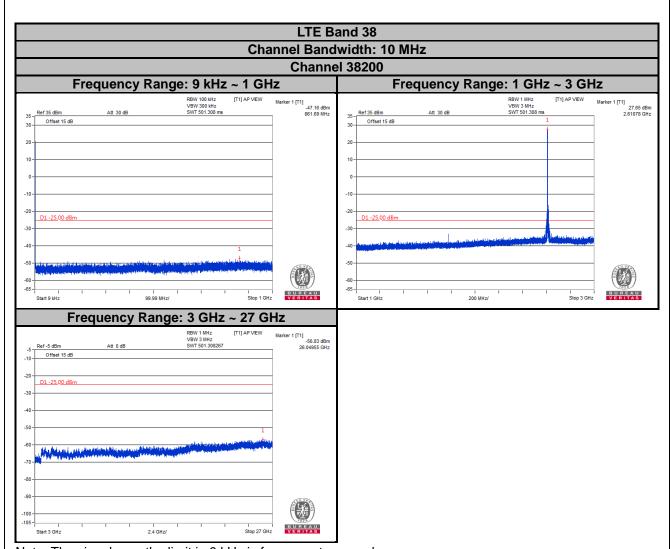




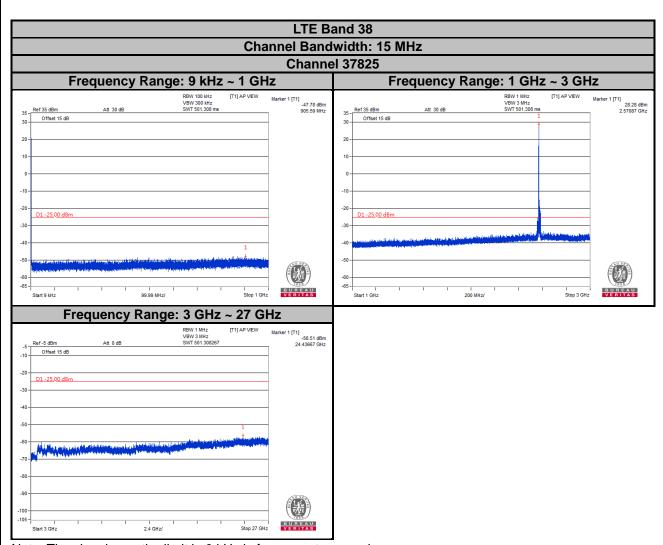




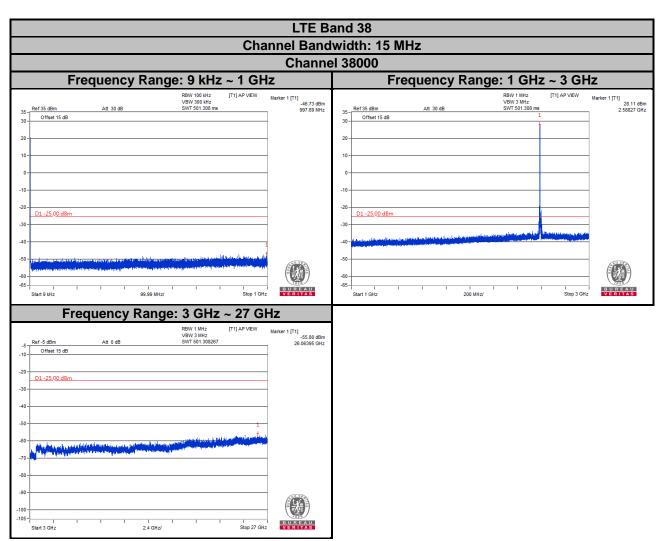




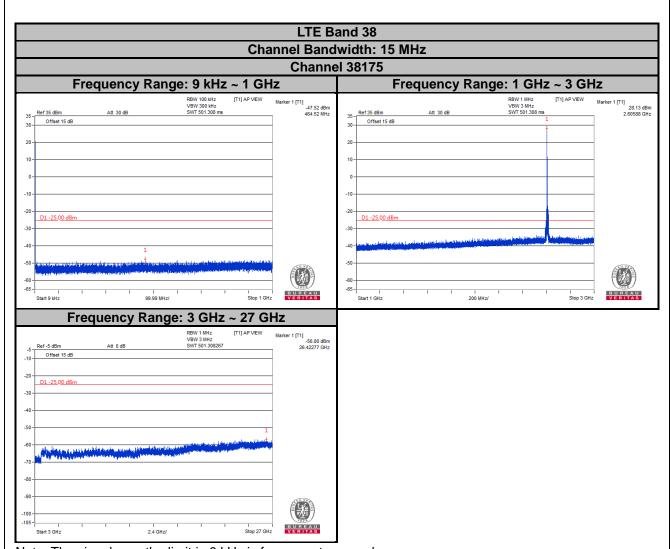




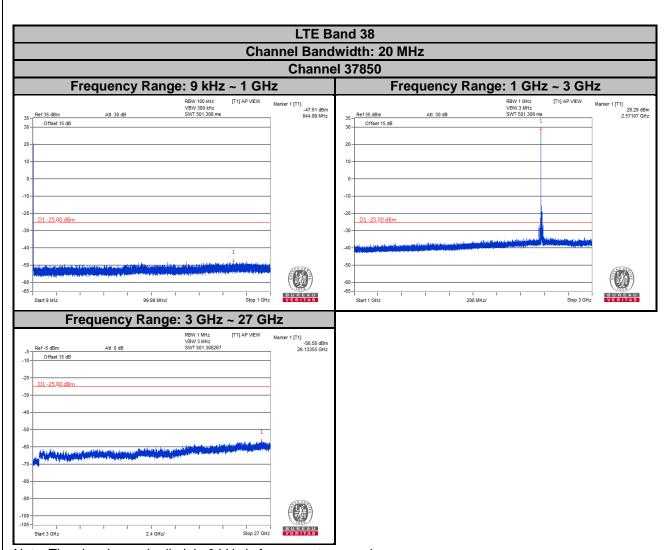




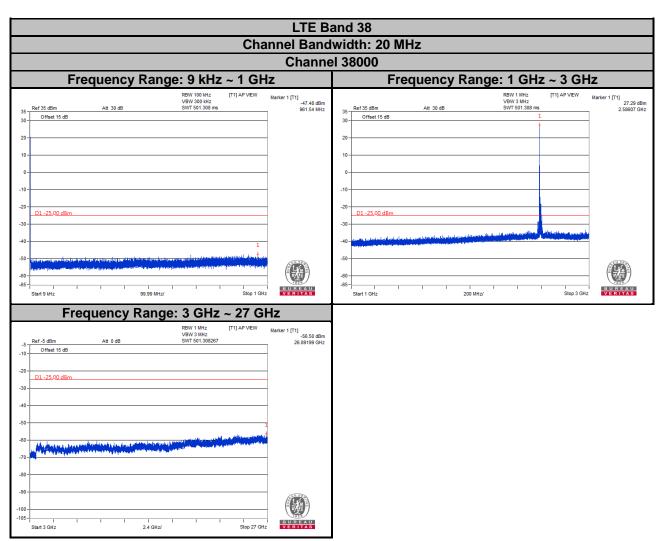




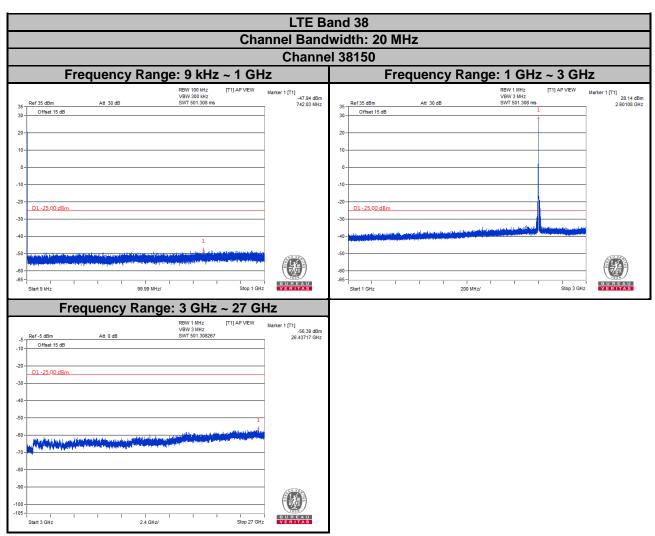






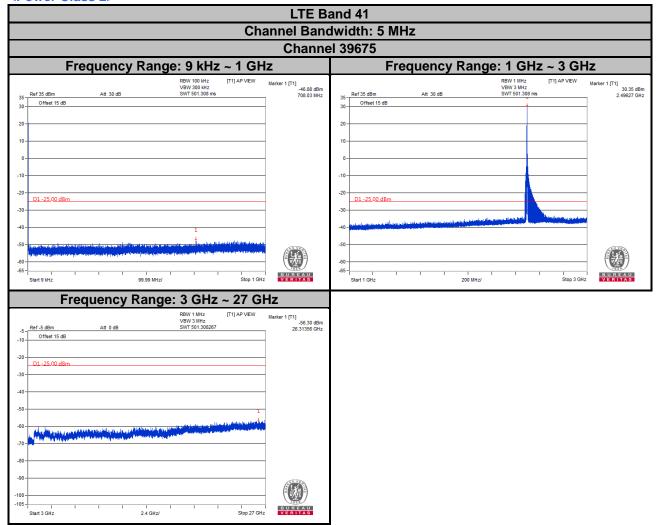




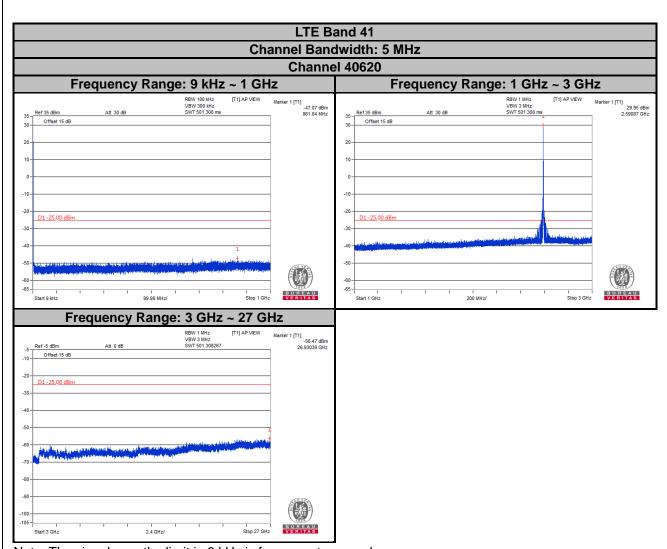




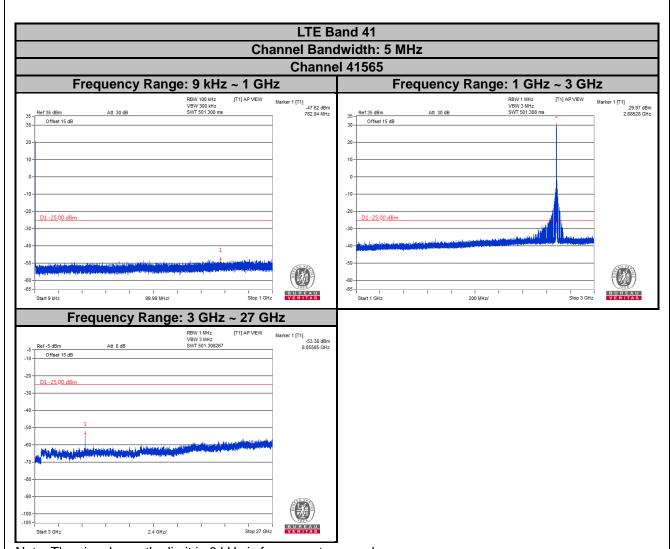
## <Power Class 2>



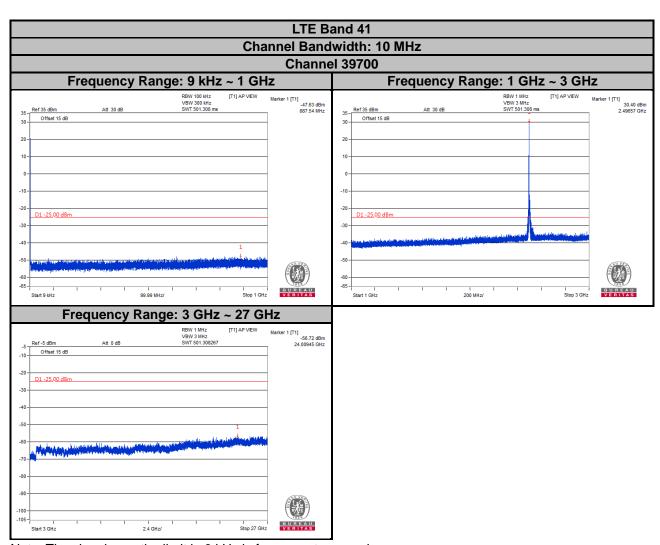




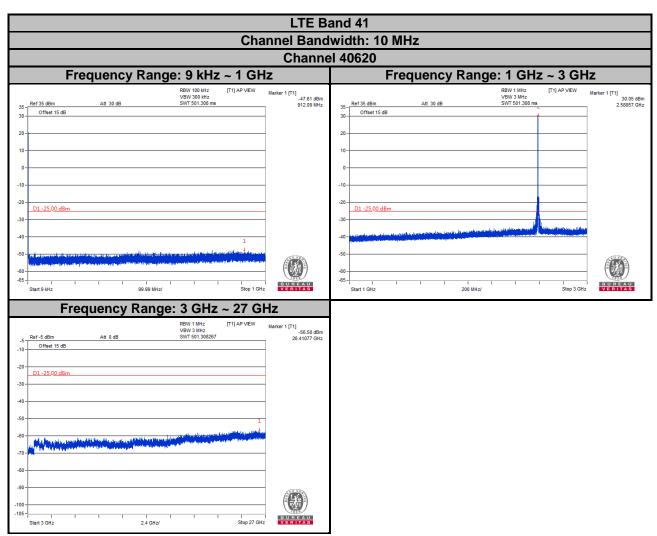




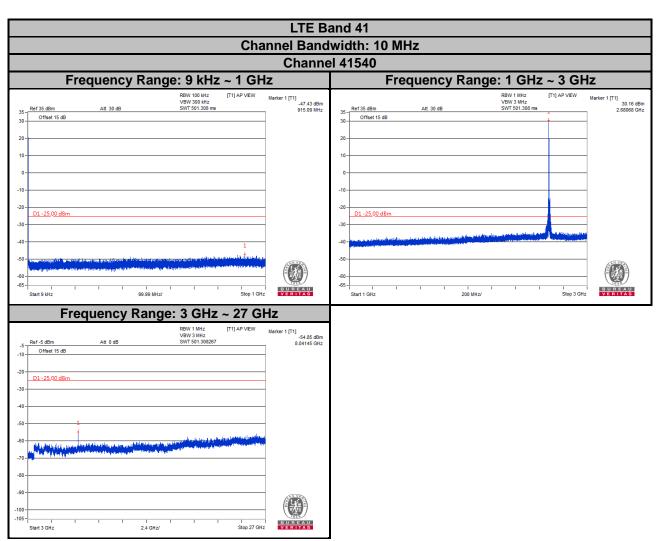




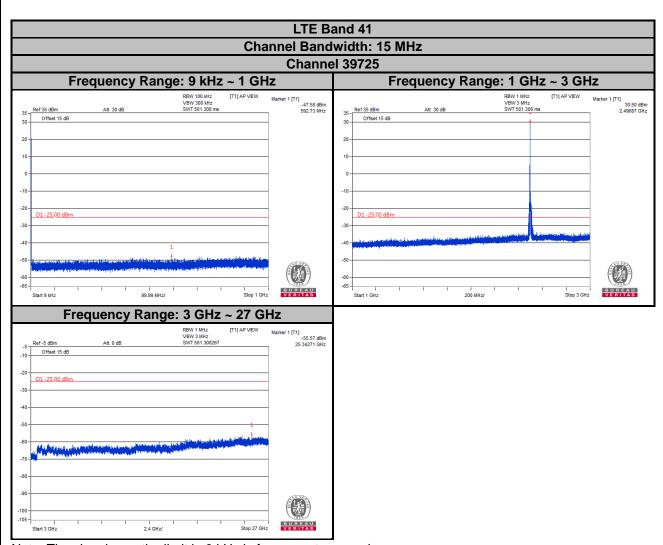




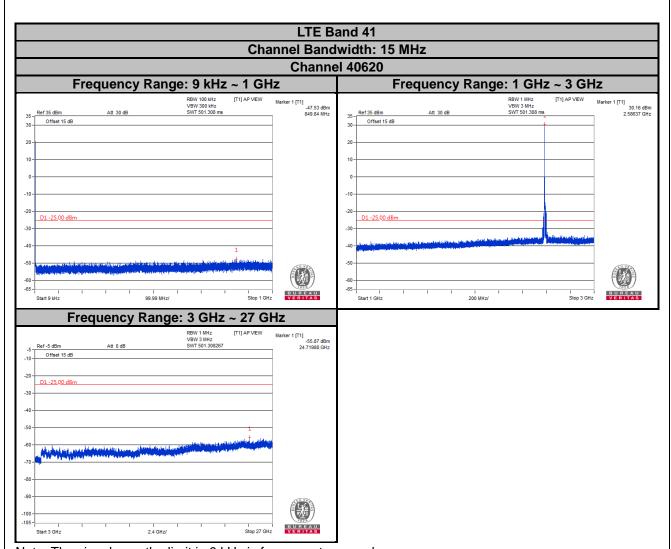




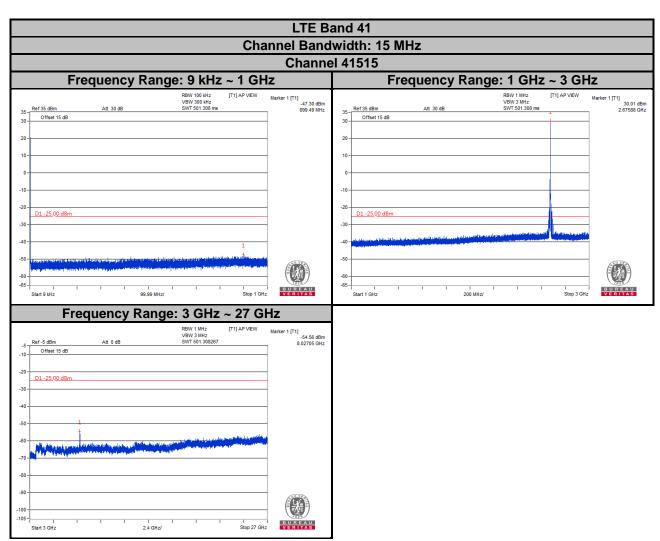




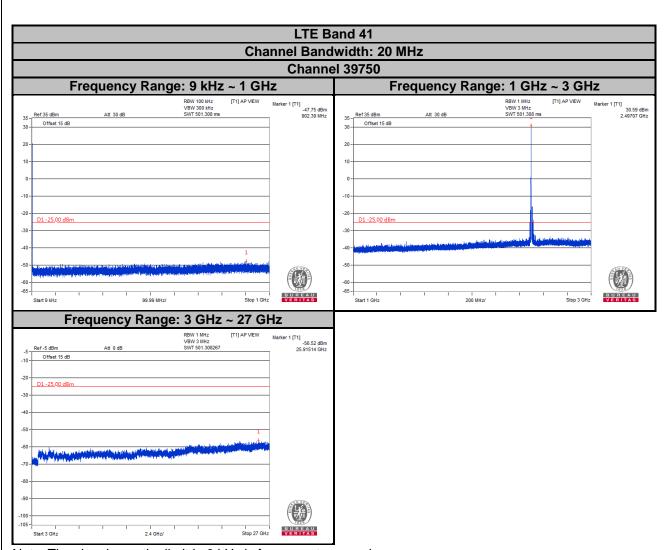




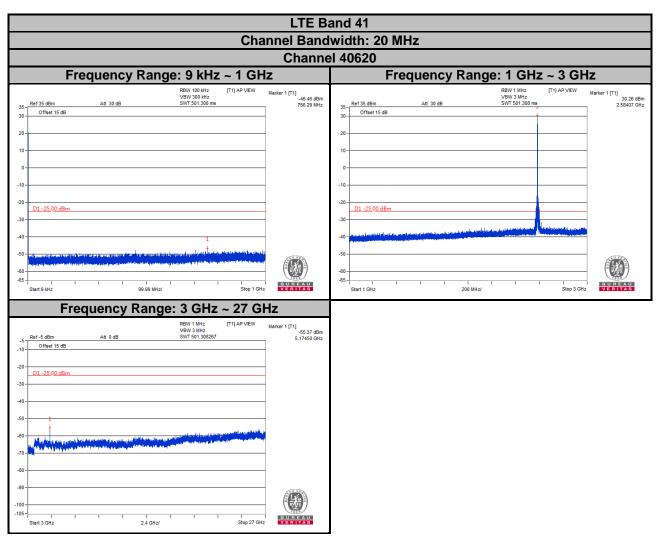




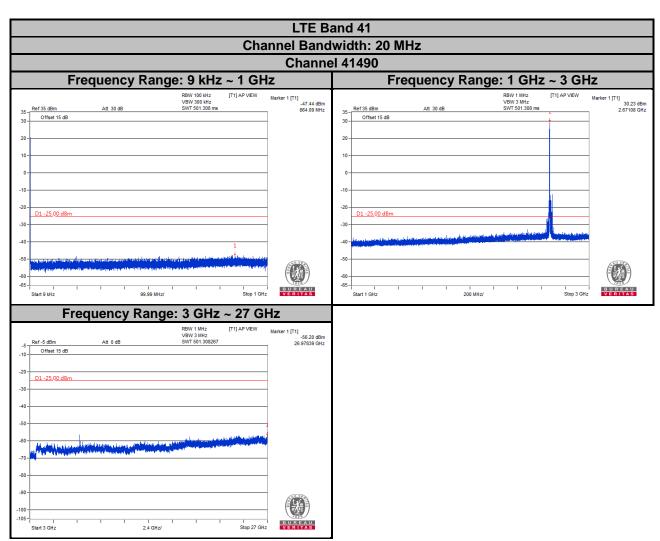






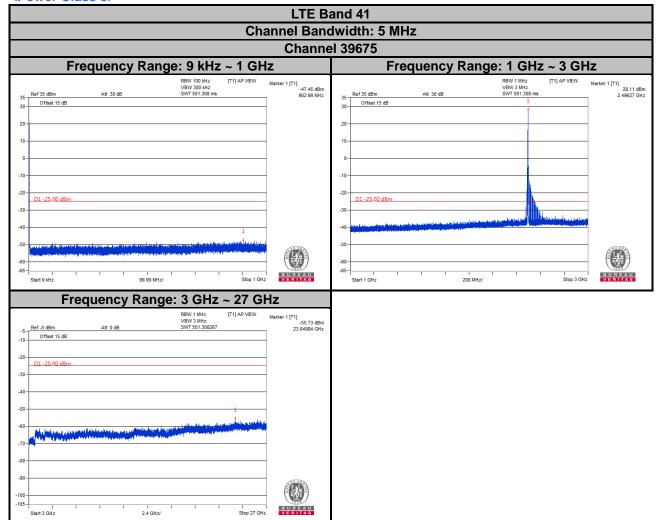




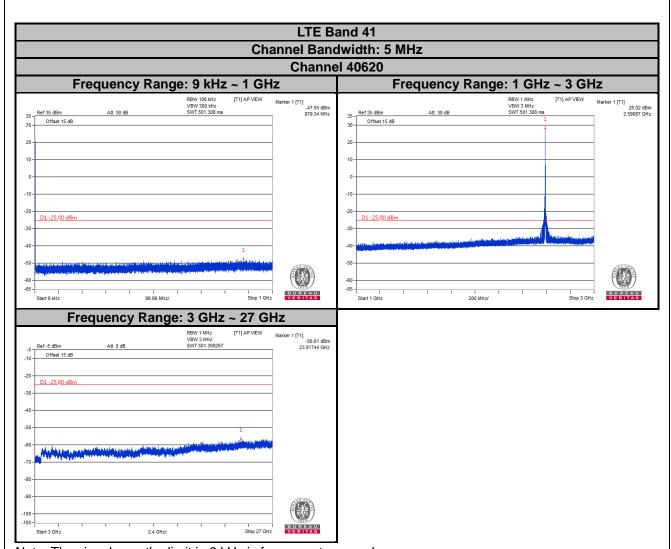




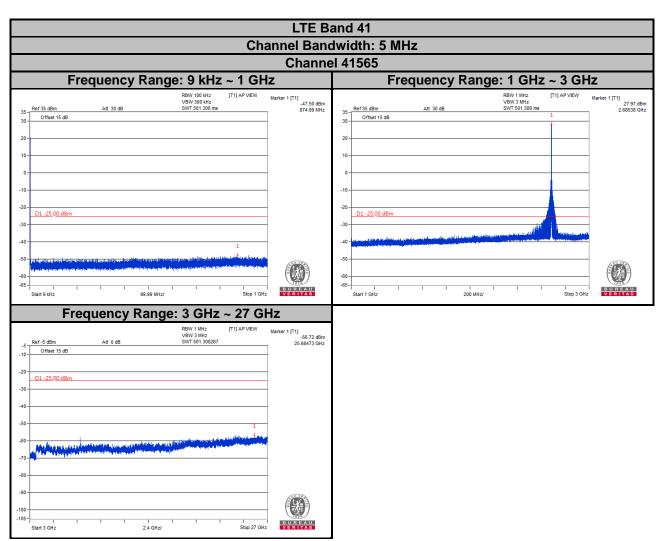
## <Power Class 3>



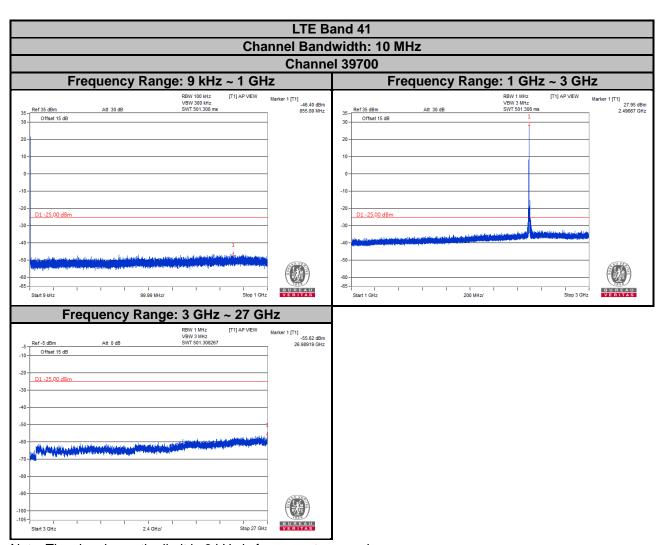




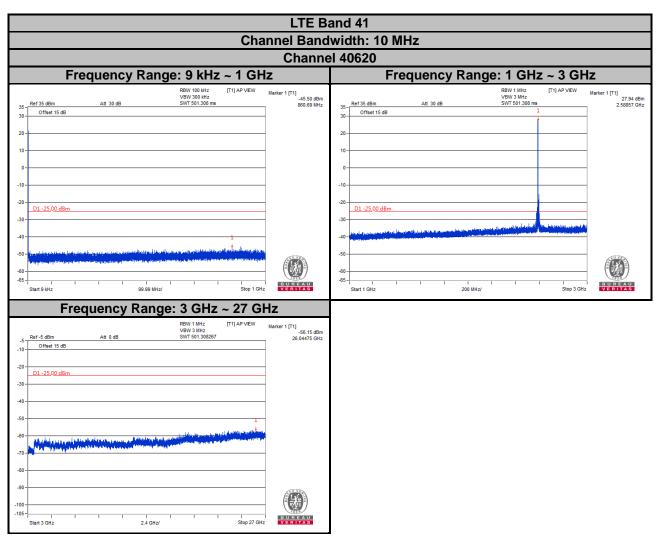




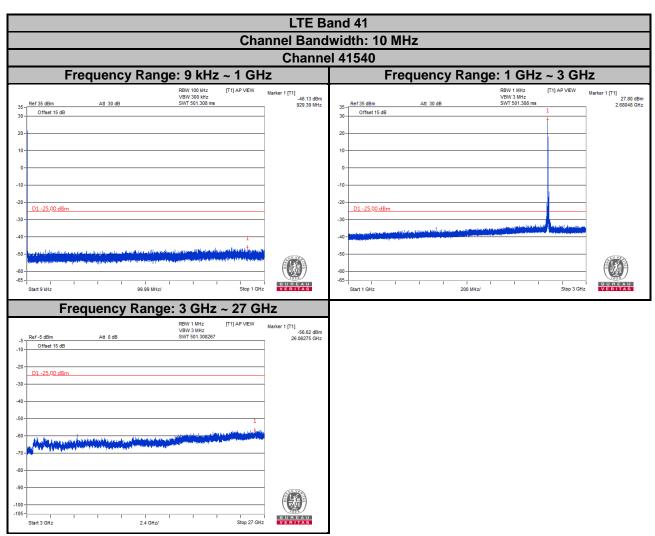




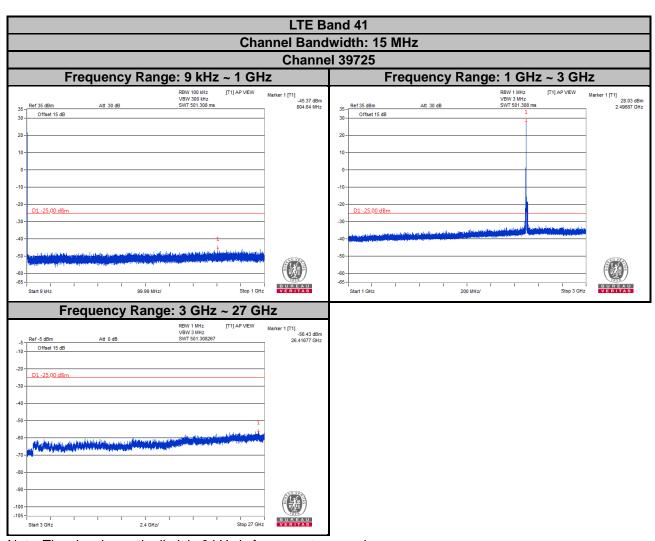




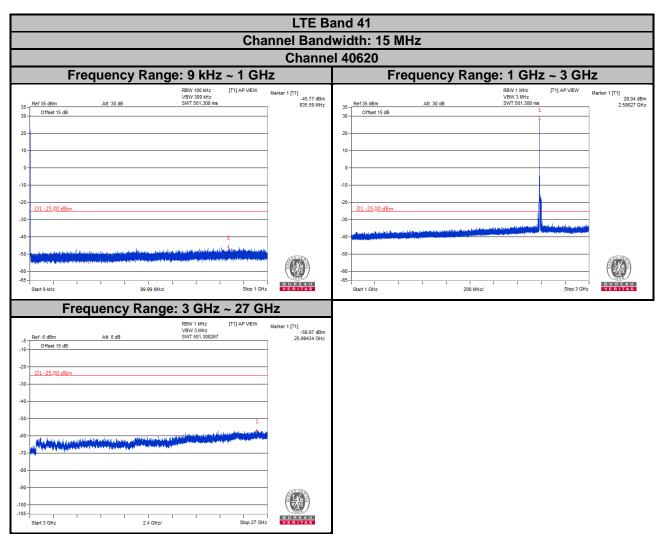




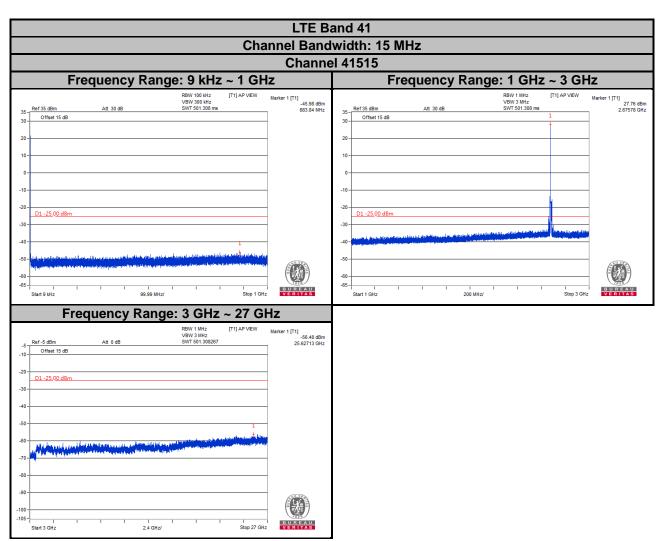




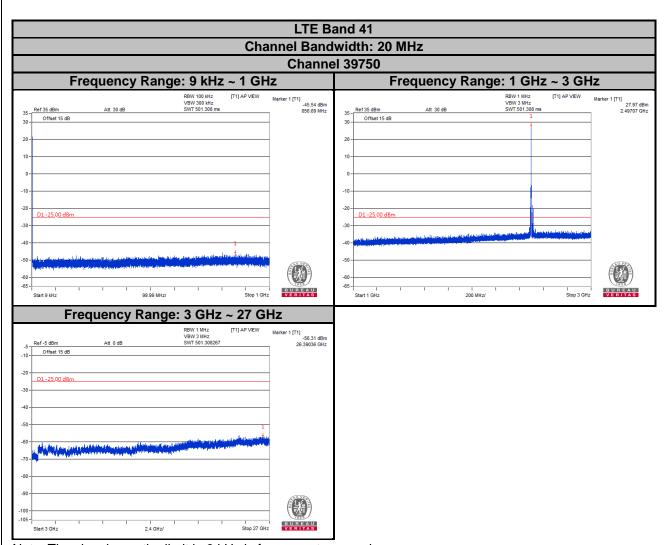




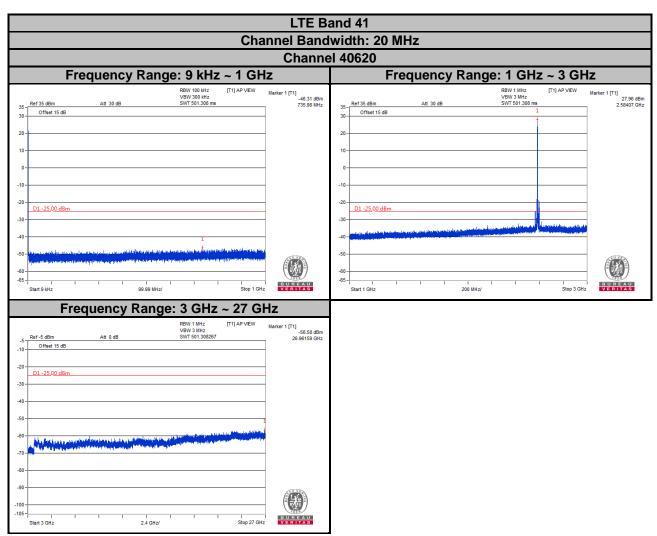




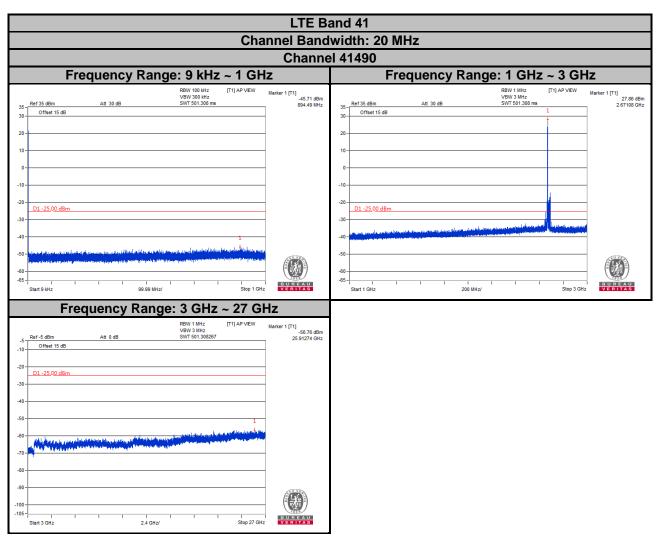














#### 4.8 Radiated Emission Measurement

#### 4.8.1 Limits of Radiated Emission Measurement

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 55 + 10 log (P) dB. The limit of emission is equal to -25 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 of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

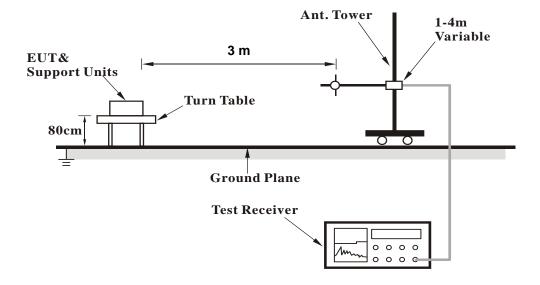
# 4.8.3 Deviation from Test Standard

No deviation.

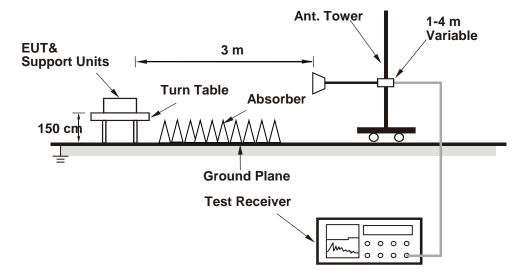


## 4.8.4 Test Setup

## <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

LTE Band 7

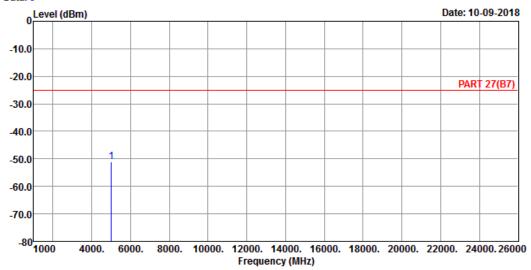
Channel Bandwidth: 5 MHz / QPSK

**Low Channel** 



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

Data: 3



Site : 966 Chamber 5

Condition: PART 27(B7) HORIZONTAL

Remak : LTE Band 7 QPSK\_5M Link\_L-CH

Tested by: Thomas Wei

Read Limit Over

Freq Level Level Line Limit Factor Remark

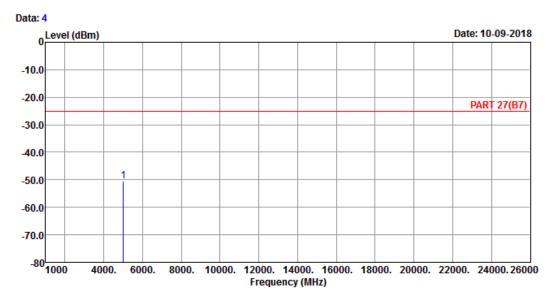
MHz dBm dBm dBm dB dB

1 pp 5005.00 -50.98 -48.52 -25.00 -25.98 -2.46 Peak





## Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 Chamber 5

Condition: PART 27(B7) VERTICAL

Remak : LTE Band 7 QPSK\_5M Link\_L-CH

Tested by: Thomas Wei

Read Limit Over

Freq Level Level Line Limit Factor Remark

MHz dBm dBm dBm dB dB

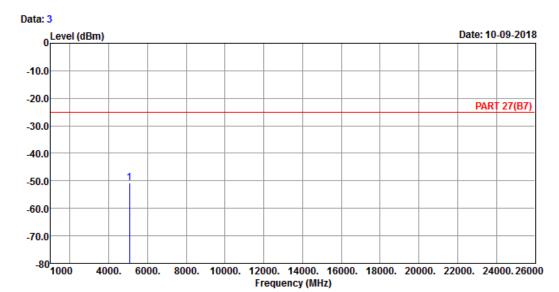
1 pp 5005.00 -50.36 -47.90 -25.00 -25.36 -2.46 Peak



## **Middle Channel**



# Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 Chamber 5

Condition: PART 27(B7) HORIZONTAL

Remak : LTE Band 7 QPSK\_5M Link\_M-CH

Tested by: Thomas Wei

Read Limit Over Freq Level Level Line Limit Factor Remark

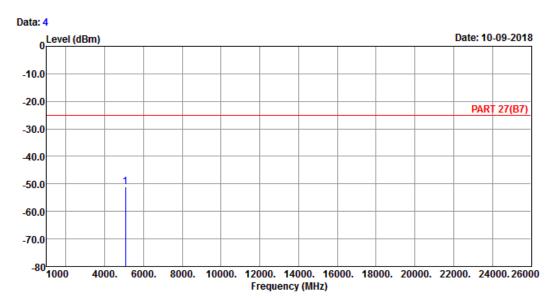
MHz dBm dBm dB dB

1 pp 5070.00 -50.85 -48.98 -25.00 -25.85 -1.87 Peak





# Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 Chamber 5

Condition: PART 27(B7) VERTICAL

Remak : LTE Band 7 QPSK\_5M Link\_M-CH

Tested by: Thomas Wei

Read Limit Over

Freq Level Level Line Limit Factor Remark

MHz dBm dBm dBm dB dB

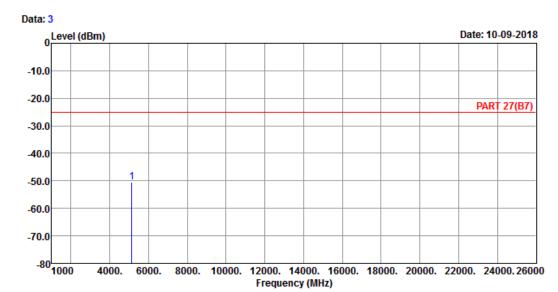
1 pp 5070.00 -50.99 -49.12 -25.00 -25.99 -1.87 Peak



## **High Channel**



# Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 Chamber 5

Condition: PART 27(B7) HORIZONTAL

Remak : LTE Band 7 QPSK\_5M Link\_H-CH

Tested by: Thomas Wei

Read Limit Over

Freq Level Level Line Limit Factor Remark

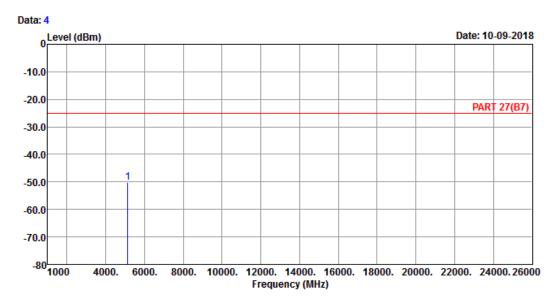
MHz dBm dBm dB dB

1 pp 5135.00 -50.52 -48.78 -25.00 -25.52 -1.74 Peak





# Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 Chamber 5

Condition: PART 27(B7) VERTICAL

Remak : LTE Band 7 QPSK\_5M Link\_H-CH

Tested by: Thomas Wei

Read Limit Over

Freq Level Level Line Limit Factor Remark

MHz dBm dBm dBm dB dB

1 pp 5135.00 -50.32 -48.58 -25.00 -25.32 -1.74 Peak

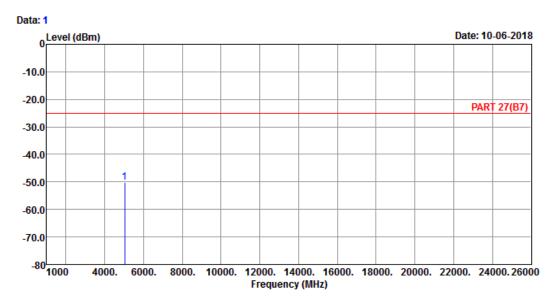


Channel Bandwidth: 20 MHz / QPSK

**Low Channel** 



## Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 Chamber 5

Condition: PART 27(B7) HORIZONTAL

Remak : LTE Band 7 QPSK\_20M Link\_L-CH

Tested by: Thomas Wei

Read Limit Over

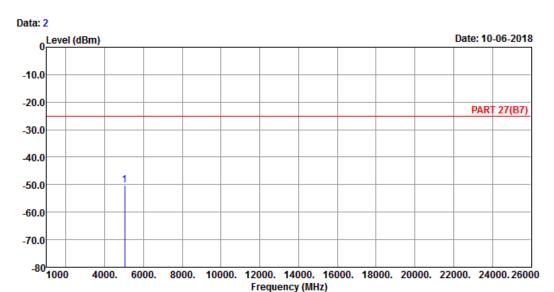
Freq Level Level Line Limit Factor Remark

MHz dBm dBm dBm dB dB

1 pp 5020.00 -50.24 -47.92 -25.00 -25.24 -2.32 Peak







Site : 966 Chamber 5

Condition: PART 27(B7) VERTICAL

Remak : LTE Band 7 QPSK\_20M Link\_L-CH

Tested by: Thomas Wei

Read Limit Over

Freq Level Level Line Limit Factor Remark

MHz dBm dBm dBm dB dB

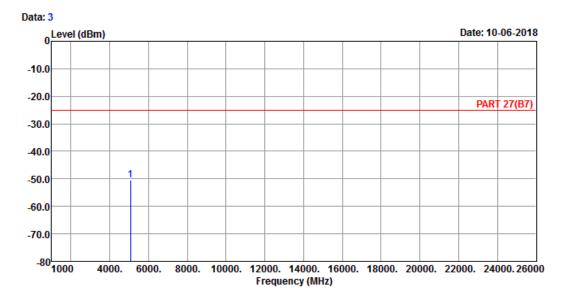
1 pp 5020.00 -50.18 -47.86 -25.00 -25.18 -2.32 Peak



### **Middle Channel**



### Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 Chamber 5

Condition: PART 27(B7) HORIZONTAL

Remak : LTE Band 7 QPSK\_20M Link\_M-CH

Tested by: Thomas Wei

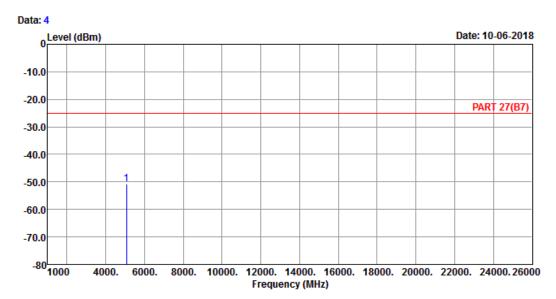
Read Limit Over Freq Level Level Line Limit Factor Remark

MHz dBm dBm dB dB

1 pp 5070.00 -50.34 -48.47 -25.00 -25.34 -1.87 Peak







Site : 966 Chamber 5

Condition: PART 27(B7) VERTICAL

Remak : LTE Band 7 QPSK\_20M Link\_M-CH

Tested by: Thomas Wei

Read Limit Over

Freq Level Level Line Limit Factor Remark

MHz dBm dBm dBm dB dB

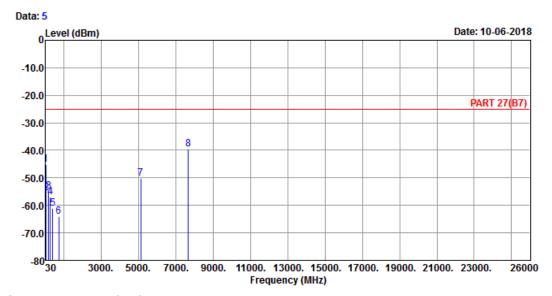
1 pp 5070.00 -50.71 -48.84 -25.00 -25.71 -1.87 Peak



### **High Channel**



### Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 Chamber 5

Condition: PART 27(B7) HORIZONTAL

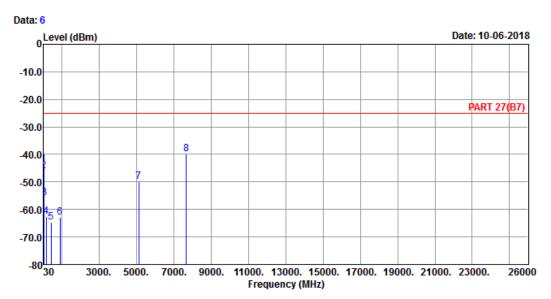
Remak : LTE Band 7 QPSK\_20M Link\_H-CH

Tested by: Thomas Wei

CSCCu	by. Inc	mas we	_				
			Read	Limit	0ver		
	Freq	Level	Level	Line	Limit	Factor	Remark
_							
	MHz	dBm	dBm	dBm	dB	dB	
1	43.58	-45.03	-43.56	-25.00	-20.03	-1.47	Peak
2	52.31	-55.57	-50.03	-25.00	-30.57	-5.54	Peak
3	178.41	-55.05	-47.99	-25.00	-30.05	-7.06	Peak
4	286.08	-57.03	-50.30	-25.00	-32.03	-6.73	Peak
5	401.51	-61.18	-55.25	-25.00	-36.18	-5.93	Peak
6	726.46	-63.96	-64.38	-25.00	-38.96	0.42	Peak
7	5120.00	-50.31	-48.65	-25.00	-25.31	-1.66	Peak
8 pp	7680.00	-39.67	-44.29	-25.00	-14.67	4.62	Peak







Site : 966 Chamber 5

Condition: PART 27(B7) VERTICAL

Remak : LTE Band 7 QPSK\_20M Link\_H-CH

Tested by: Thomas Wei

			Read	Limit	0ver			
	Freq	Level	Level	Line	Limit	Factor	Remark	
	MHz	dBm	dBm	dBm	dB	dB		
1	30.00	-43.58	-43.96	-25.00	-18.58	0.38	Peak	
2	43.58	-46.11	-44.64	-25.00	-21.11	-1.47	Peak	
3	52.31	-55.72	-50.18	-25.00	-30.72	-5.54	Peak	
4	176.47	-62.57	-55.85	-25.00	-37.57	-6.72	Peak	
5	427.70	-64.68	-58.95	-25.00	-39.68	-5.73	Peak	
6	896.21	-62.78	-63.33	-25.00	-37.78	0.55	Peak	
7	5120.00	-49.96	-48.30	-25.00	-24.96	-1.66	Peak	
8 pp	7680.00	-39.94	-44.56	-25.00	-14.94	4.62	Peak	



LTE Band 38

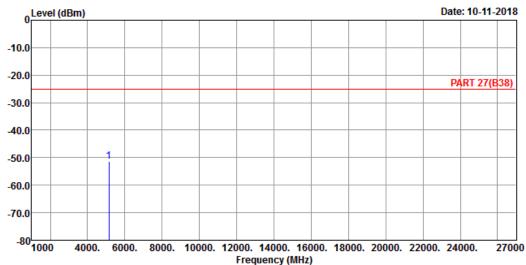
Channel Bandwidth: 5 MHz / QPSK

**Low Channel** 



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch





Site : 966 Chamber 5

Condition: PART 27(B38) HORIZONTAL

Remak : LTE Band 38 QPSK\_5M Link\_L-CH

Tested by: Thomas Wei

Read Limit Over

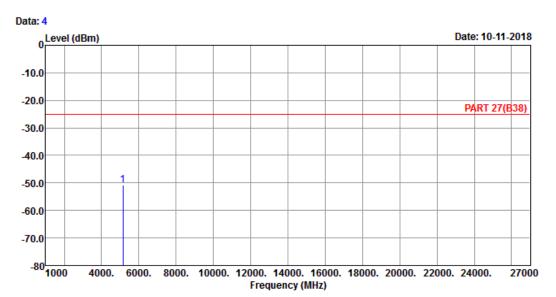
Freq Level Level Line Limit Factor Remark

MHz dBm dBm dBm dB dB

1 pp 5145.00 -51.23 -49.40 -25.00 -26.23 -1.83 Peak







Site : 966 Chamber 5

Condition: PART 27(B38) VERTICAL

Remak : LTE Band 38 QPSK\_5M Link\_L-CH

Tested by: Thomas Wei

Read Limit Over

Freq Level Level Line Limit Factor Remark

MHz dBm dBm dBm dB dB

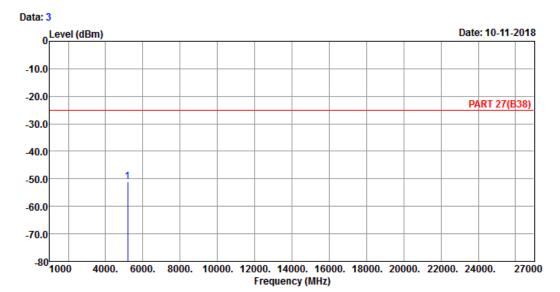
1 pp 5145.00 -50.89 -49.06 -25.00 -25.89 -1.83 Peak



### **Middle Channel**



# Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 Chamber 5

Condition: PART 27(B38) HORIZONTAL

Remak : LTE Band 38 QPSK\_5M Link\_M-CH

Tested by: Thomas Wei

Read Limit Over

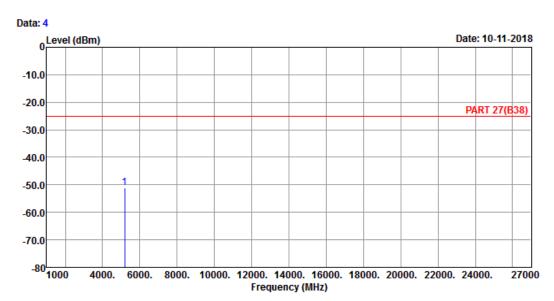
Freq Level Level Line Limit Factor Remark

MHz dBm dBm dB dB

1 pp 5190.00 -51.21 -49.14 -25.00 -26.21 -2.07 Peak







Site : 966 Chamber 5

Condition: PART 27(B38) VERTICAL

Remak : LTE Band 38 QPSK\_5M Link\_M-CH

Tested by: Thomas Wei

Read Limit Over

Freq Level Level Line Limit Factor Remark

MHz dBm dBm dBm dB dB dB

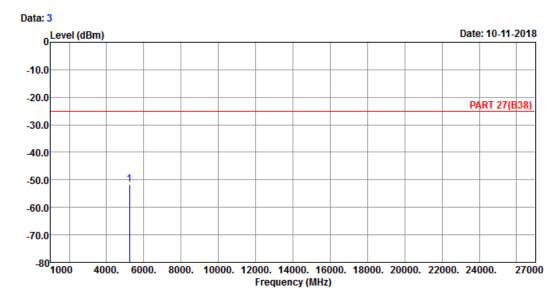
1 pp 5190.00 -50.99 -48.92 -25.00 -25.99 -2.07 Peak



### **High Channel**



# Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 Chamber 5

Condition: PART 27(B38) HORIZONTAL

Remak : LTE Band 38 QPSK\_5M Link\_H-CH

Tested by: Thomas Wei

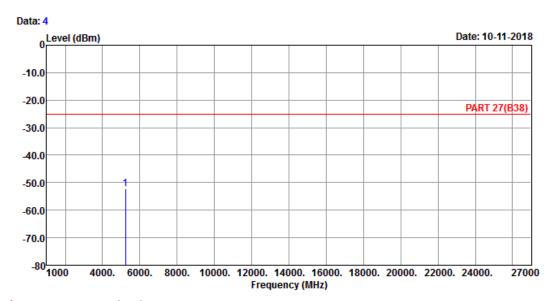
Read Limit Over
Freq Level Level Line Limit Factor Remark

MHz dBm dBm dBm dB dB

1 pp 5235.00 -51.52 -49.11 -25.00 -26.52 -2.41 Peak







Site : 966 Chamber 5

Condition: PART 27(B38) VERTICAL

Remak : LTE Band 38 QPSK\_5M Link\_H-CH

Tested by: Thomas Wei

Read Limit Over

Freq Level Level Line Limit Factor Remark

MHz dBm dBm dBm dB dB

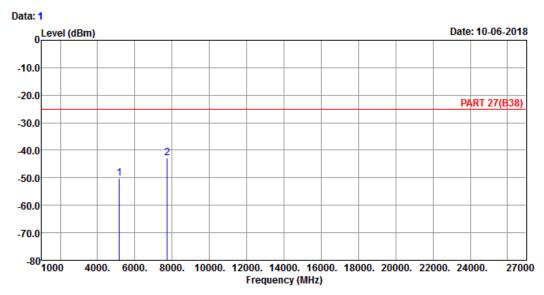
1 pp 5235.00 -52.36 -49.95 -25.00 -27.36 -2.41 Peak



Channel Bandwidth: 20 MHz / QPSK Low Channel



### Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 Chamber 5

Condition: PART 27(B38) HORIZONTAL

Remak : LTE Band 38 QPSK\_20M Link\_L-CH

Tested by: Thomas Wei

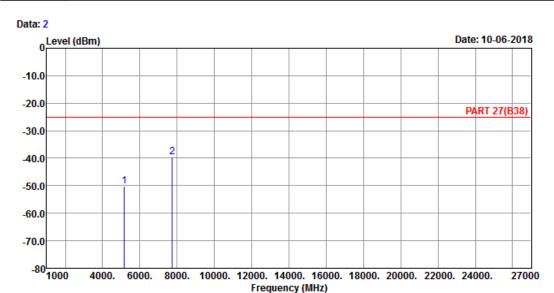
Read Limit Over
Freq Level Level Line Limit Factor Remark

MHz dBm dBm dB dB

1 5160.00 -50.09 -48.18 -25.00 -25.09 -1.91 Peak 2 pp 7740.00 -42.83 -47.51 -25.00 -17.83 4.68 Peak







Site : 966 Chamber 5

Condition: PART 27(B38) VERTICAL

Remak : LTE Band 38 QPSK\_20M Link\_L-CH

Tested by: Thomas Wei

Read Limit Over

Freq Level Level Line Limit Factor Remark

MHz dBm dBm dBm dB dB

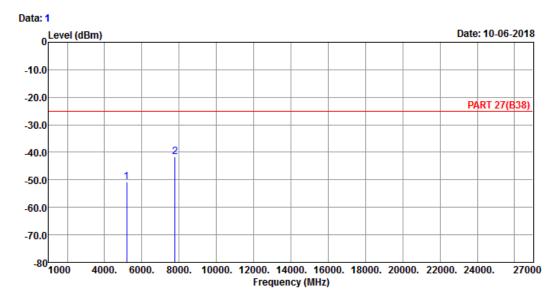
1 5160.00 -50.04 -48.13 -25.00 -25.04 -1.91 Peak 2 pp 7740.00 -39.55 -44.23 -25.00 -14.55 4.68 Peak



### **Middle Channel**



### Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 Chamber 5

Condition: PART 27(B38) HORIZONTAL

Remak : LTE Band 38 QPSK\_20M Link\_M-CH

Tested by: Thomas Wei

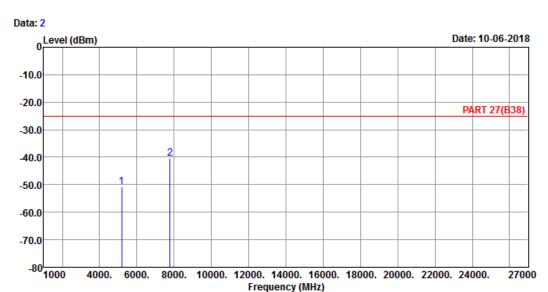
Read Limit Over
Freq Level Level Line Limit Factor Remark

MHz dBm dBm dBm dB dB

1 5190.00 -50.67 -48.60 -25.00 -25.67 -2.07 Peak 2 pp 7785.00 -41.67 -46.41 -25.00 -16.67 4.74 Peak







Site : 966 Chamber 5

Condition: PART 27(B38) VERTICAL

Remak : LTE Band 38 QPSK\_20M Link\_M-CH

Tested by: Thomas Wei

Read Limit Over

 Freq
 Level
 Line
 Limit
 Factor
 Remark

 MHz
 dBm
 dBm
 dBm
 dB
 dB

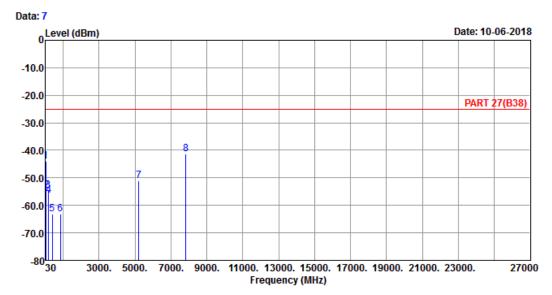
1 5190.00 -50.68 -48.61 -25.00 -25.68 -2.07 Peak 2 pp 7785.00 -40.44 -45.18 -25.00 -15.44 4.74 Peak



### **High Channel**



### Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 Chamber 5

Condition: PART 27(B38) HORIZONTAL

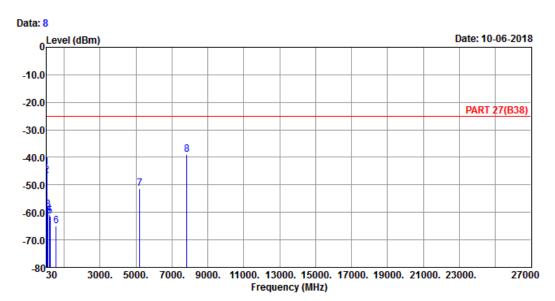
Remak : LTE Band 38 QPSK\_20M Link\_H-CH

Tested by: Thomas Wei

	Freq	Level		Limit Line		Factor	Remark
-	MHz	dBm	dBm	dBm	dB	dB	
1	43.23	-44.02	-42.55	-25.00	-19.02	-1.47	Peak
2	52.41	-54.55	-49.01	-25.00	-29.55	-5.54	Peak
3	170.40	-54.49	-48.79	-25.00	-29.49	-5.70	Peak
4	195.78	-56.24	-48.59	-25.00	-31.24	-7.65	Peak
5	405.70	-63.17	-57.27	-25.00	-38.17	-5.90	Peak
6	852.30	-63.24	-63.55	-25.00	-38.24	0.31	Peak
7	5220.00	-51.03	-48.73	-25.00	-26.03	-2.30	Peak
8 pp	7830.00	-41.41	-46.28	-25.00	-16.41	4.87	Peak







Site : 966 Chamber 5

Condition: PART 27(B38) VERTICAL

Remak : LTE Band 38 QPSK\_20M Link\_H-CH

Tested by: Thomas Wei

			Read	Limit	Over		
	Freq	Level	Level	Line	Limit	Factor	Remark
-	MHz	dBm	dBm	dBm	dB	dB	
1	39.45	-43.77	-44.41	-25.00	-18.77	0.64	Peak
2	44.85	-46.69	-44.70	-25.00	-21.69	-1.99	Peak
3	94.26	-59.06	-48.17	-25.00	-34.06	-10.89	Peak
4	170.13	-60.83	-55.30	-25.00	-35.83	-5.53	Peak
5	213.06	-61.26	-53.79	-25.00	-36.26	-7.47	Peak
6	559.00	-64.91	-62.42	-25.00	-39.91	-2.49	Peak
7	5220.00	-51.24	-48.94	-25.00	-26.24	-2.30	Peak
8 pp	7830.00	-38.94	-43.81	-25.00	-13.94	4.87	Peak



<Power Class 2>

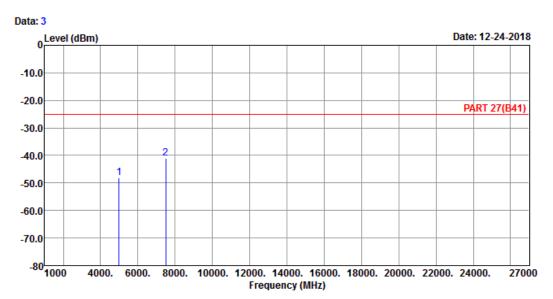
LTE Band 41

Channel Bandwidth: 5 MHz / QPSK

**Low Channel** 



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 Chamber 5

Condition: PART 27(B41) HORIZONTAL

Remak : LTE Band 41 QPSK\_5M Link\_L-CH

Tested by: Thomas Wei

Read Limit Over

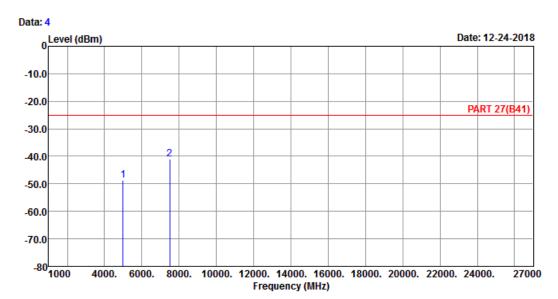
Freq Level Line Limit Factor Remark

MHz dBm dBm dB dB

1 4997.00 -48.11 -45.50 -25.00 -23.11 -2.61 Peak 2 pp 7495.50 -41.02 -45.21 -25.00 -16.02 4.19 Peak







Site : 966 Chamber 5

Condition: PART 27(B41) VERTICAL

Remak : LTE Band 41 QPSK\_5M Link\_L-CH

Tested by: Thomas Wei

Read Limit Over Freq Level Line Limit Factor Remark

MHz dBm dBm dB dB

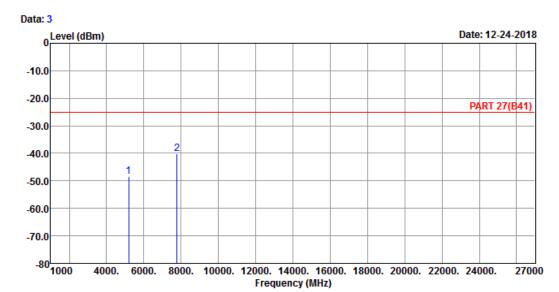
1 4997.00 -48.62 -46.01 -25.00 -23.62 -2.61 Peak 2 pp 7495.50 -41.00 -45.19 -25.00 -16.00 4.19 Peak



### **Middle Channel**



# Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 Chamber 5

Condition: PART 27(B41) HORIZONTAL

Remak : LTE Band 41 QPSK\_5M Link\_M-CH

Tested by: Thomas Wei

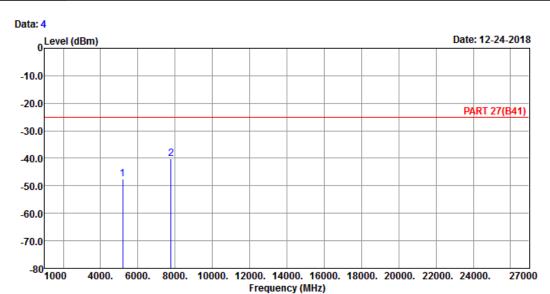
Read Limit Over
Freq Level Level Line Limit Factor Remark

MHz dBm dBm dBm dB dB

1 5186.00 -48.52 -46.53 -25.00 -23.52 -1.99 Peak 2 pp 7779.00 -40.02 -44.76 -25.00 -15.02 4.74 Peak







Site : 966 Chamber 5

Condition: PART 27(B41) VERTICAL

Remak : LTE Band 41 QPSK\_5M Link\_M-CH

Tested by: Thomas Wei

Read Limit Over Freq Level Level Line Limit Factor Remark

MHz dBm dBm dB dB

1 5186.00 -47.63 -45.64 -25.00 -22.63 -1.99 Peak 2 pp 7779.00 -40.11 -44.85 -25.00 -15.11 4.74 Peak

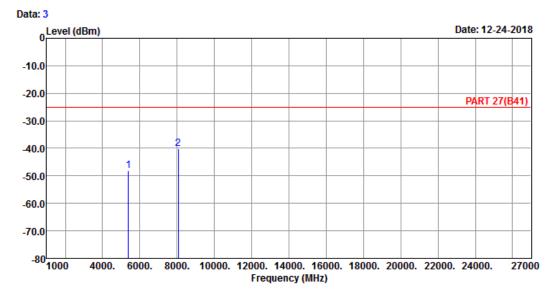


Report Format Version: 6.1.1

### **High Channel**



### Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 Chamber 5

Condition: PART 27(B41) HORIZONTAL

Remak : LTE Band 41 QPSK\_5M Link\_H-CH

Tested by: Thomas Wei

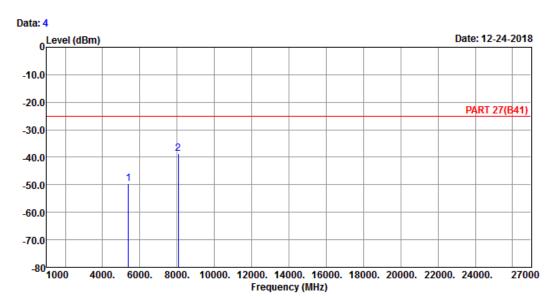
Read Limit Over
Freq Level Level Line Limit Factor Remark

MHz dBm dBm dBm dB dB dB

1 5375.00 -48.25 -45.85 -25.00 -23.25 -2.40 Peak 2 pp 8062.50 -40.01 -45.11 -25.00 -15.01 5.10 Peak







Site : 966 Chamber 5

Condition: PART 27(B41) VERTICAL

Remak : LTE Band 41 QPSK\_5M Link\_H-CH

Tested by: Thomas Wei

Read Limit Over

 Freq
 Level
 Line
 Limit
 Factor
 Remark

 MHz
 dBm
 dBm
 dBm
 dB
 dB

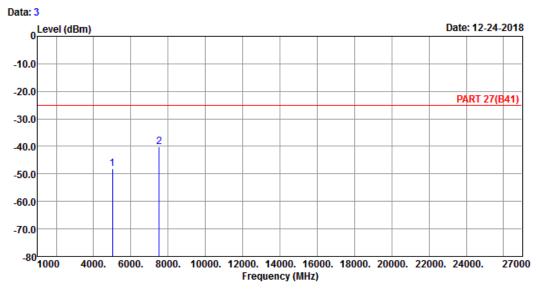
1 5375.00 -49.58 -47.18 -25.00 -24.58 -2.40 Peak 2 pp 8062.50 -38.63 -43.73 -25.00 -13.63 5.10 Peak



# Channel Bandwidth: 20 MHz / QPSK Low Channel



### Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 Chamber 5

Condition: PART 27(B41) HORIZONTAL

Remak : LTE Band 41 QPSK\_20M Link\_L-CH

Tested by: Thomas Wei

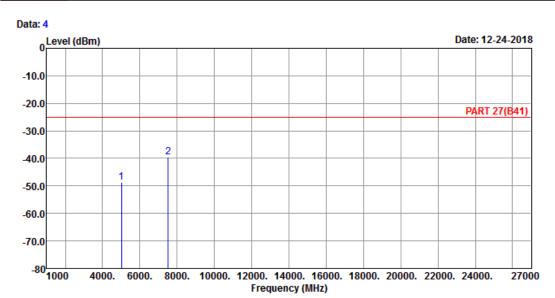
Read Limit Over
Freq Level Level Line Limit Factor Remark

MHz dBm dBm dBm dB dB

1 5012.00 -48.11 -45.65 -25.00 -23.11 -2.46 Peak 2 pp 7518.00 -40.15 -44.36 -25.00 -15.15 4.21 Peak







Site : 966 Chamber 5

Condition: PART 27(B41) VERTICAL

Remak : LTE Band 41 QPSK\_20M Link\_L-CH

Tested by: Thomas Wei

Read Limit Over
Freq Level Level Line Limit Factor Remark

MHz dBm dBm dBm dB dB

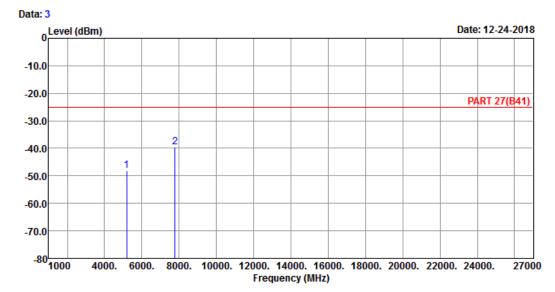
1 5012.00 -48.69 -46.23 -25.00 -23.69 -2.46 Peak 2 pp 7518.00 -39.52 -43.73 -25.00 -14.52 4.21 Peak



### **Middle Channel**



### Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 Chamber 5

Condition: PART 27(B41) HORIZONTAL

Remak : LTE Band 41 QPSK\_20M Link\_M-CH

Tested by: Thomas Wei

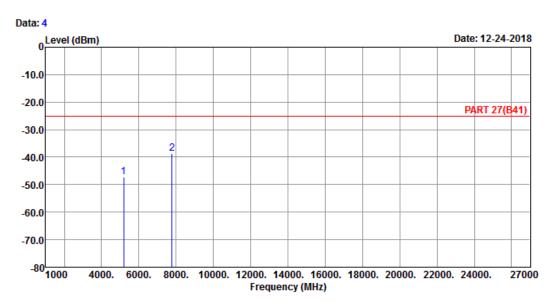
Read Limit Over
Freq Level Level Line Limit Factor Remark

MHz dBm dBm dBm dB dB

1 5186.00 -48.25 -46.26 -25.00 -23.25 -1.99 Peak 2 pp 7779.00 -39.54 -44.28 -25.00 -14.54 4.74 Peak







Site : 966 Chamber 5

Condition: PART 27(B41) VERTICAL

Remak : LTE Band 41 QPSK\_20M Link\_M-CH

Tested by: Thomas Wei

Read Limit Over Freq Level Level Line Limit Factor Remark

MHz dBm dBm dB dB

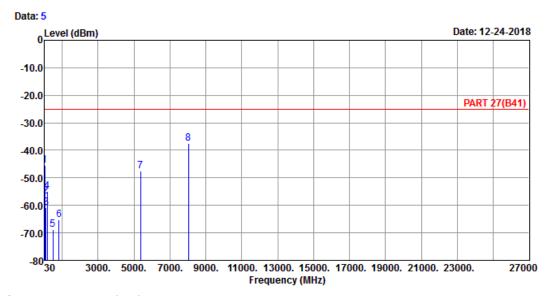
1 5186.00 -47.11 -45.12 -25.00 -22.11 -1.99 Peak 2 pp 7779.00 -38.69 -43.43 -25.00 -13.69 4.74 Peak



### **High Channel**



### Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 Chamber 5

Condition: PART 27(B41) VERTICAL

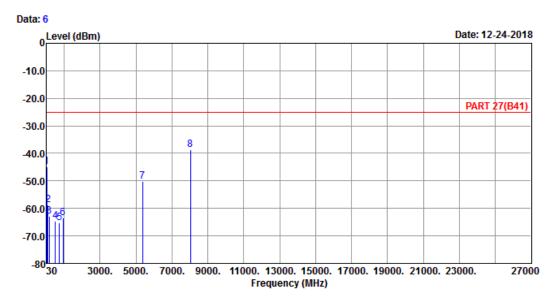
Remak : LTE Band 41 QPSK\_20M Link\_H-CH

Tested by: Thomas Wei

	Freq	Level		Limit Line		Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	43.58	-45.60	-44.13	-25.00	-20.60	-1.47	Peak
2	52.31	-56.58	-51.04	-25.00	-31.58	-5.54	Peak
3	96.93	-60.70	-49.97	-25.00	-35.70	-10.73	Peak
4	170.65	-54.99	-49.29	-25.00	-29.99	-5.70	Peak
5	480.08	-68.85	-63.86	-25.00	-43.85	-4.99	Peak
6	829.28	-65.22	-65.69	-25.00	-40.22	0.47	Peak
7	5360.00	-47.62	-45.11	-25.00	-22.62	-2.51	Peak
8 pp	8040.00	-37.62	-42.90	-25.00	-12.62	5.28	Peak







Site : 966 Chamber 5

Condition: PART 27(B41) HORIZONTAL

Remak : LTE Band 41 QPSK\_20M Link\_H-CH

Tested by: Thomas Wei

			Read	Limit	Over		
	Freq	Level	Level	Line	Limit	Factor	Remark
-	MHz	dBm	dBm	dBm	dB	dB	
1	43.58	-44.88	-43.41	-25.00	-19.88	-1.47	Peak
2	98.87	-58.78	-48.16	-25.00	-33.78	-10.62	Peak
3	174.53	-62.88	-56.50	-25.00	-37.88	-6.38	Peak
4	509.18	-64.53	-60.23	-25.00	-39.53	-4.30	Peak
5	745.86	-65.10	-65.90	-25.00	-40.10	0.80	Peak
6	944.71	-63.53	-65.21	-25.00	-38.53	1.68	Peak
7	5360.00	-50.11	-47.60	-25.00	-25.11	-2.51	Peak
8 pp	8040.00	-38.69	-43.97	-25.00	-13.69	5.28	Peak



<Power Class 3>

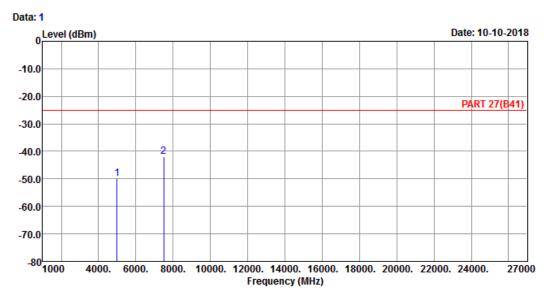
LTE Band 41

Channel Bandwidth: 5 MHz / QPSK

**Low Channel** 



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 Chamber 5

Condition: PART 27(B41) HORIZONTAL

Remak : LTE Band 41 QPSK 5M Link L-CH

Tested by: Thomas Wei

Read Limit Over

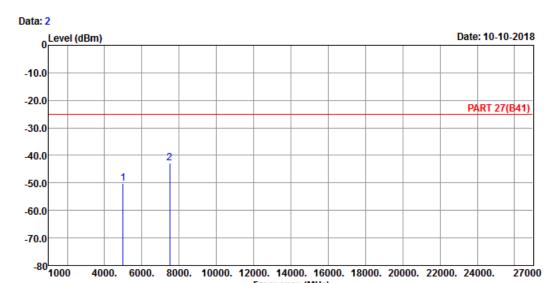
Freq Level Line Limit Factor Remark

MHz dBm dBm dB dB

1 4997.00 -49.86 -47.25 -25.00 -24.86 -2.61 Peak 2 pp 7495.50 -42.03 -46.22 -25.00 -17.03 4.19 Peak







Frequency (MHz)

Site : 966 Chamber 5

Condition: PART 27(B41) VERTICAL

Remak : LTE Band 41 QPSK\_5M Link\_L-CH

Tested by: Thomas Wei

Read Limit Over
Freq Level Level Line Limit Factor Remark

MHz dBm dBm dBm dB dB

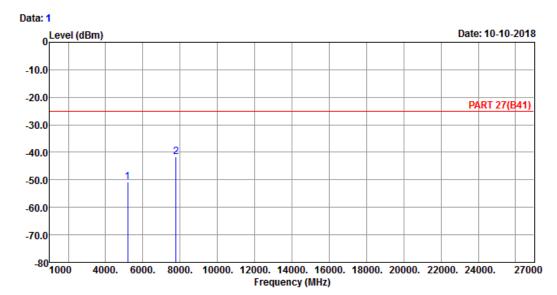
1 4997.00 -50.19 -47.58 -25.00 -25.19 -2.61 Peak 2 pp 7495.50 -42.95 -47.14 -25.00 -17.95 4.19 Peak



### **Middle Channel**



### Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 Chamber 5

Condition: PART 27(B41) HORIZONTAL

Remak : LTE Band 41 QPSK\_5M Link\_M-CH

Tested by: Thomas Wei

Read Limit Over
Freq Level Level Line Limit Factor Remark

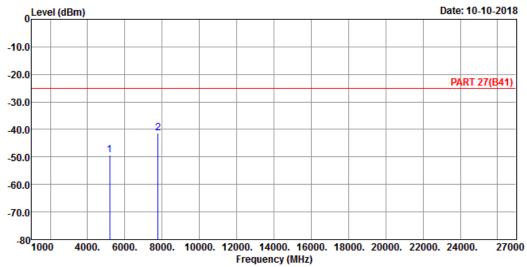
MHz dBm dBm dBm dB dB

1 5186.00 -50.65 -48.66 -25.00 -25.65 -1.99 Peak 2 pp 7779.00 -41.64 -46.38 -25.00 -16.64 4.74 Peak









Site : 966 Chamber 5

Condition: PART 27(B41) VERTICAL

Remak : LTE Band 41 QPSK\_5M Link\_M-CH

Tested by: Thomas Wei

Read Limit Over
Freq Level Level Line Limit Factor Remark

MHz dBm dBm dBm dB dB

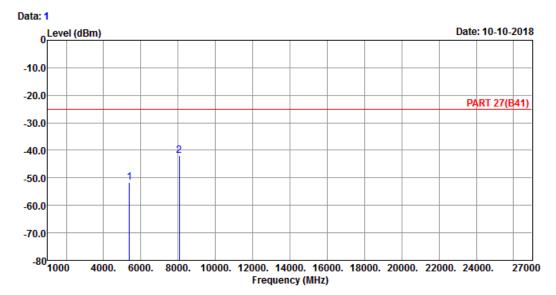
1 5186.00 -49.33 -47.34 -25.00 -24.33 -1.99 Peak 2 pp 7779.00 -41.47 -46.21 -25.00 -16.47 4.74 Peak



### **High Channel**



### Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 Chamber 5

Condition: PART 27(B41) HORIZONTAL

Remak : LTE Band 41 QPSK\_5M Link\_H-CH

Tested by: Thomas Wei

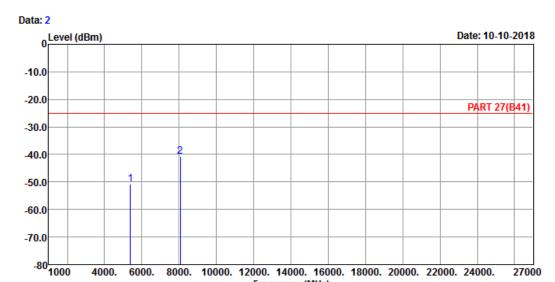
Read Limit Over
Freq Level Level Line Limit Factor Remark

MHz dBm dBm dBm dB dB

1 5375.00 -51.73 -49.33 -25.00 -26.73 -2.40 Peak 2 pp 8062.50 -41.81 -46.91 -25.00 -16.81 5.10 Peak







6000. 8000. 10000. 12000. 14000. 16000. 18000. 20000. 22000. 24000.

Frequency (MHz)

: 966 Chamber 5

4000.

Condition: PART 27(B41) VERTICAL

: LTE Band 41 QPSK\_5M Link\_H-CH

Tested by: Thomas Wei

Read Limit 0ver Line Limit Factor Remark MHz dBm dBm dBm dB dΒ

5375.00 -50.70 -48.30 -25.00 -25.70 -2.40 Peak 2 pp 8062.50 -40.64 -45.74 -25.00 -15.64 5.10 Peak

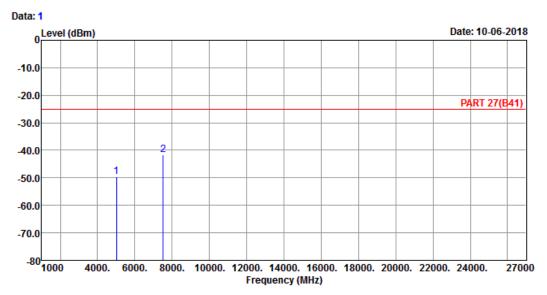
27000



Channel Bandwidth: 20 MHz / QPSK Low Channel



### Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 Chamber 5

Condition: PART 27(B41) HORIZONTAL

Remak : LTE Band 41 QPSK\_20M Link\_L-CH

Tested by: Thomas Wei

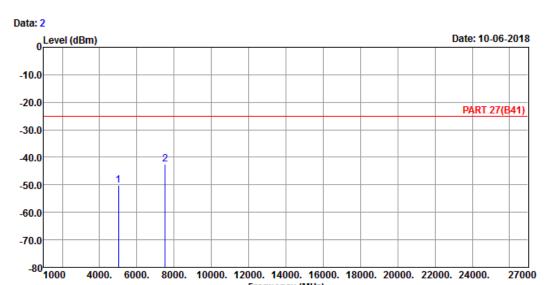
Read Limit Over
Freq Level Level Line Limit Factor Remark

MHz dBm dBm dB dB

1 5012.00 -49.70 -47.24 -25.00 -24.70 -2.46 Peak 2 pp 7518.00 -41.63 -45.84 -25.00 -16.63 4.21 Peak







Frequency (MHz)

Site : 966 Chamber 5

Condition: PART 27(B41) VERTICAL

Remak : LTE Band 41 QPSK\_20M Link\_L-CH

Tested by: Thomas Wei

Read Limit Over
Freq Level Level Line Limit Factor Remark

MHz dBm dBm dB dB

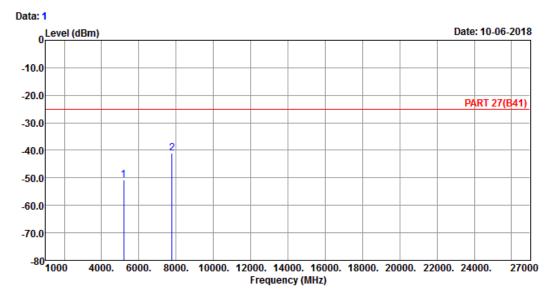
1 5012.00 -50.06 -47.60 -25.00 -25.06 -2.46 Peak 2 pp 7518.00 -42.54 -46.75 -25.00 -17.54 4.21 Peak



### **Middle Channel**



# Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 Chamber 5

Condition: PART 27(B41) HORIZONTAL

Remak : LTE Band 41 QPSK\_20M Link\_M-CH

Tested by: Thomas Wei

Read Limit Over
Freq Level Level Line Limit Factor Remark

MHz dBm dBm dBm dB dB

1 5186.00 -50.80 -48.81 -25.00 -25.80 -1.99 Peak 2 pp 7779.00 -41.12 -45.86 -25.00 -16.12 4.74 Peak



27000



# Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



4000. 6000. 8000. 10000. 12000. 14000. 16000. 18000. 20000. 22000. 24000.

Frequency (MHz)

Site : 966 Chamber 5

Condition: PART 27(B41) VERTICAL

Remak : LTE Band 41 QPSK\_20M Link\_M-CH

Tested by: Thomas Wei

-80<mark>1000</mark>

Read Limit Over
Freq Level Level Line Limit Factor Remark

MHz dBm dBm dBm dB dB

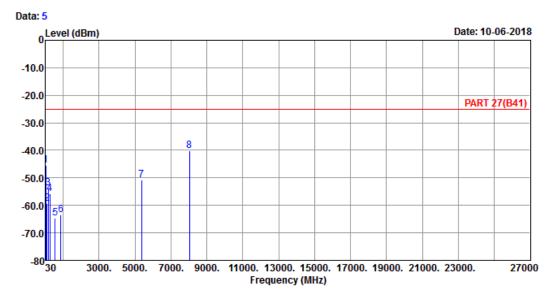
1 5186.00 -49.04 -47.05 -25.00 -24.04 -1.99 Peak 2 pp 7779.00 -41.03 -45.77 -25.00 -16.03 4.74 Peak



### **High Channel**



### Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 Chamber 5

Condition: PART 27(B41) VERTICAL

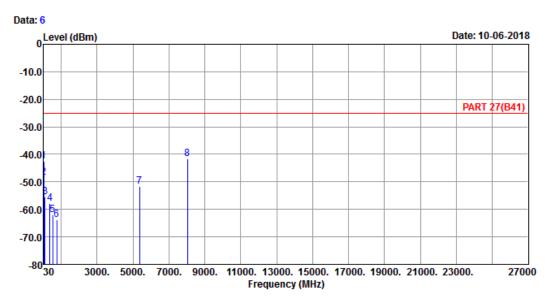
Remak : LTE Band 41 QPSK\_20M Link\_H-CH

Tested by: Thomas Wei

|      | Freq    | Level  |        | Limit<br>Line |        | Factor | Remark |
|------|---------|--------|--------|---------------|--------|--------|--------|
| -    | MHz     | dBm    | dBm    | dBm           | dB     | dB     |        |
| 1    | 44.55   | -45.54 | -43.55 | -25.00        | -20.54 | -1.99  | Peak   |
| 2    | 94.99   | -59.30 | -48.46 | -25.00        | -34.30 | -10.84 | Peak   |
| 3    | 171.62  | -53.72 | -47.85 | -25.00        | -28.72 | -5.87  | Peak   |
| 4    | 262.80  | -55.80 | -49.55 | -25.00        | -30.80 | -6.25  | Peak   |
| 5    | 565.44  | -64.79 | -62.59 | -25.00        | -39.79 | -2.20  | Peak   |
| 6    | 862.26  | -63.49 | -63.85 | -25.00        | -38.49 | 0.36   | Peak   |
| 7    | 5360.00 | -50.87 | -48.36 | -25.00        | -25.87 | -2.51  | Peak   |
| 8 pp | 8040.00 | -40.25 | -45.53 | -25.00        | -15.25 | 5.28   | Peak   |







Site : 966 Chamber 5

Condition: PART 27(B41) HORIZONTAL

Remak : LTE Band 41 QPSK\_20M Link\_H-CH

Tested by: Thomas Wei

|      |         |        | Read   | Limit  | Over   |        |        |
|------|---------|--------|--------|--------|--------|--------|--------|
|      | Freq    | Level  | Level  | Line   | Limit  | Factor | Remark |
|      | MHz     | dBm    | dBm    | dBm    | dB     | dB     |        |
| 1    | 31.94   | -42.49 | -41.89 | -25.00 | -17.49 | -0.60  | Peak   |
| 2    | 45.52   | -48.49 | -45.99 | -25.00 | -23.49 | -2.50  | Peak   |
| 3    | 94.02   | -55.40 | -44.51 | -25.00 | -30.40 | -10.89 | Peak   |
| 4    | 385.99  | -57.79 | -51.76 | -25.00 | -32.79 | -6.03  | Peak   |
| 5    | 523.73  | -62.14 | -58.36 | -25.00 | -37.14 | -3.78  | Peak   |
| 6    | 751.68  | -63.89 | -64.76 | -25.00 | -38.89 | 0.87   | Peak   |
| 7    | 5360.00 | -51.65 | -49.14 | -25.00 | -26.65 | -2.51  | Peak   |
| 8 pp | 8040.00 | -41.63 | -46.91 | -25.00 | -16.63 | 5.28   | Peak   |



| 5 Pictures of Test Arrangements                       |  |  |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|--|--|
| Please refer to the attached file (Test Setup Photo). |  |  |  |  |  |  |  |  |  |
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### Appendix - Information on 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.

Hsin Chu EMC/RF/Telecom Lab

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

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Web Site: <a href="mailto:www.bureauveritas-adt.com">www.bureauveritas-adt.com</a>

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

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