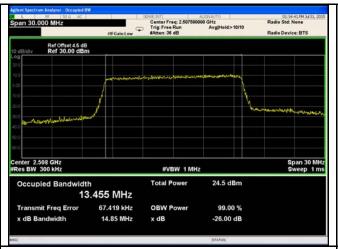
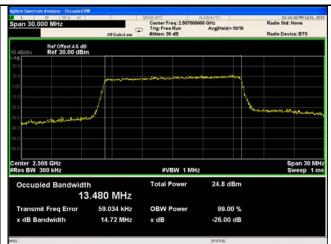
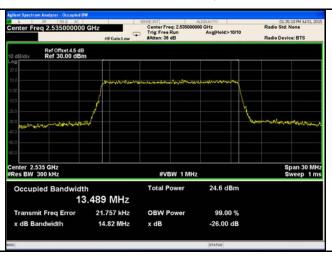


Test Report	15070591-FCC-R5
Page	81 of 149

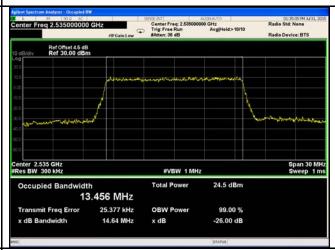




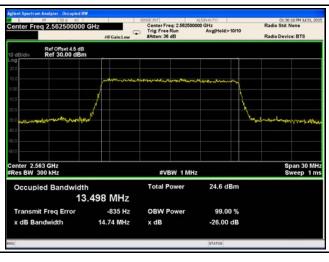
LTE band 7 - Low CH QPSK-15



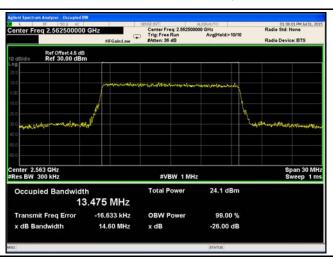
LTE band 7 - Low CH 16QAM-15



LTE band 7 - Middle CH QPSK-15



LTE band 7 - Middle CH 16QAM-15

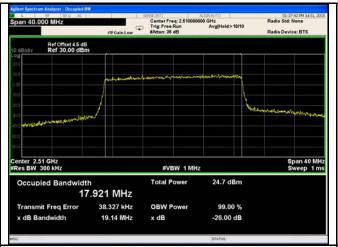


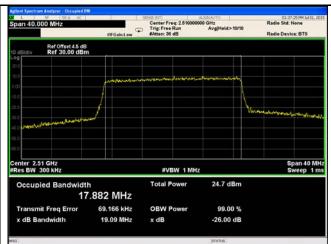
LTE band 7 - High CH QPSK-15

LTE band 7 - High CH 16QAM-15



Test Report	15070591-FCC-R5
Page	82 of 149





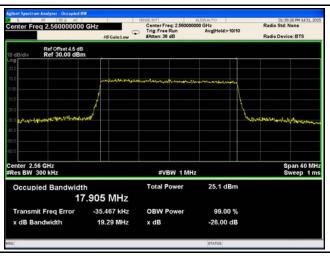
LTE band 7 - Low CH QPSK-20

01:38:34 PM 34/31, Radio Std: None Center Freq: 2.535000000 GHz
Trig: Free Run Avg@Hold>10/10 Ref Offset 4.5 dB Ref 30.00 dBm Span 40 MH Sweep 1 m Center 2.535 GHz Res BW 300 kHz #VBW 1 MHz Occupied Bandwidth Total Power 24.7 dBm 17.915 MHz 99.00 % 30.835 kHz Transmit Freq Error **OBW Power** 19.34 MHz x dB Bandwidth -26,00 dB x dB

LTE band 7 - Low CH 16QAM-20



LTE band 7 - Middle CH QPSK-20



LTE band 7 - Middle CH 16QAM-20



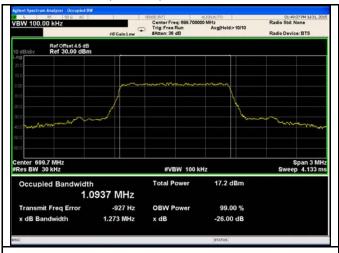
LTE band 7 - High CH QPSK-20

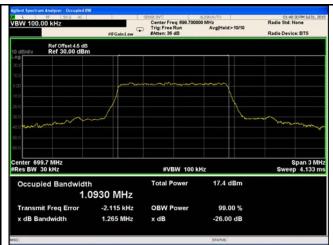
LTE band 7 - High CH 16QAM-20



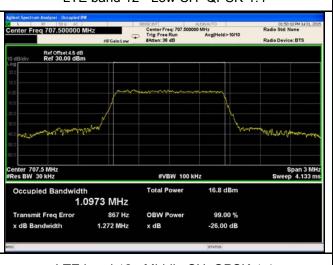
Test Report	15070591-FCC-R5
Page	83 of 149

#### LTE Band 12 (Part 27)

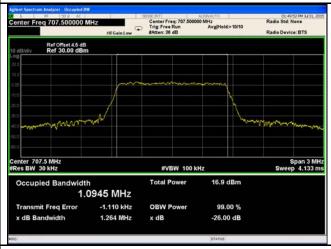




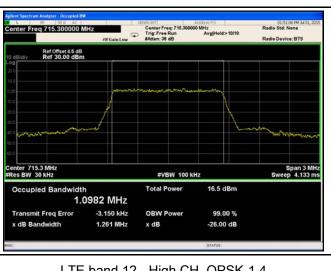
LTE band 12 - Low CH QPSK-1.4



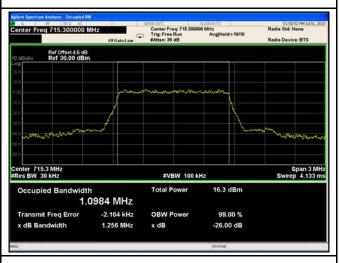
LTE band 12 - Low CH 16QAM-1.4



LTE band 12 - Middle CH QPSK-1.4



LTE band 12 - Middle CH 16QAM-1.4



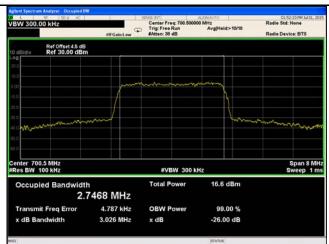
LTE band 12 - High CH QPSK-1.4

LTE band 12 - High CH 16QAM-1.4



Test Report	15070591-FCC-R5
Page	84 of 149

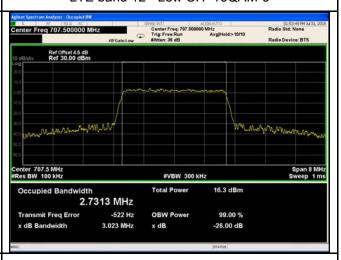




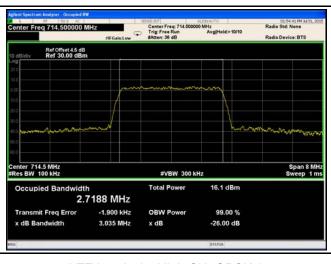
LTE band 12 - Low CH QPSK-3

01:53:27 PM 3/31, Radio Std: None Center Freq: 707.500000 MHz
Trig: Free Run Avg[Hold>10/10 Ref Offset 4.5 dB Ref 30.00 dBm frames moundain months and market the same Span 8 MHz Sweep 1 ms Center 707.5 MHz Res BW 100 kHz #VBW 300 kHz Occupied Bandwidth Total Power 16.3 dBm 2.7353 MHz -261 Hz Transmit Freq Error **OBW Power** 99.00 % 3,046 MHz x dB Bandwidth -26,00 dB x dB

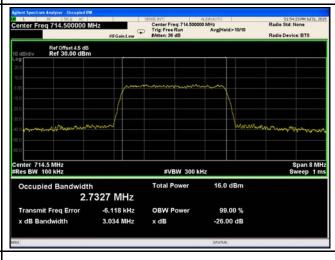
LTE band 12 - Low CH 16QAM-3



LTE band 12 - Middle CH QPSK-3



LTE band 12 - Middle CH 16QAM-3

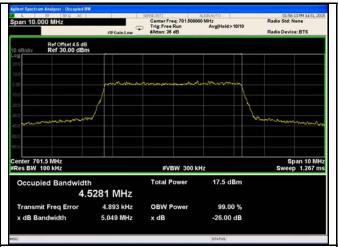


LTE band 12 - High CH QPSK-3

LTE band 12 - High CH 16QAM-3

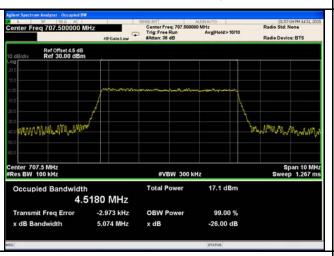


Test Report	15070591-FCC-R5
Page	85 of 149

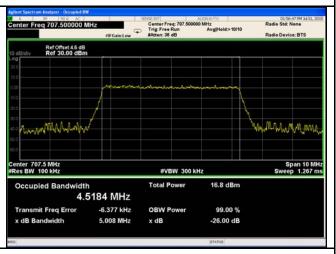




LTE band 12 - Low CH QPSK-5



LTE band 12 - Low CH 16QAM-5



LTE band 12 - Middle CH QPSK-5



LTE band 12 - Middle CH 16QAM-5



LTE band 12 - High CH QPSK-5

LTE band 12 - High CH 16QAM-5



Test Report	15070591-FCC-R5
Page	86 of 149

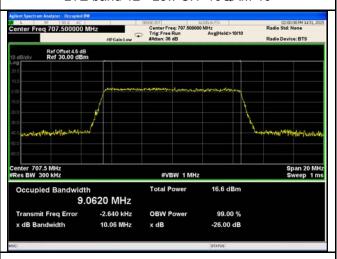




LTE band 12 - Low CH QPSK-10

02:00:25 PM 3J/31, Radio Std: None Center Freq: 707.500000 MHz
Trig: Free Run Avg@Hold>10/10 Ref Offset 4.5 dB Ref 30.00 dBm Center 707.5 MHz Res BW 300 kHz Span 20 MH Sweep 1 m #VBW 1 MHz Occupied Bandwidth Total Power 16.9 dBm 9.0670 MHz Transmit Freq Error 468 Hz **OBW Power** 99.00 % 10,13 MHz x dB Bandwidth -26,00 dB x dB

LTE band 12 - Low CH 16QAM-10



LTE band 12 - Middle CH QPSK-10



LTE band 12 - Middle CH 16QAM-10



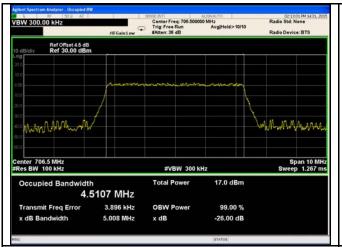
LTE band 12 - High CH QPSK-10

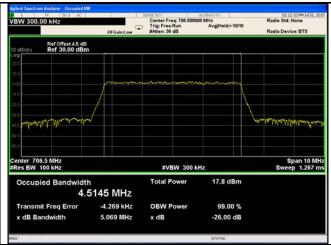
LTE band 12 - High CH 16QAM-10



Test Report	15070591-FCC-R5
Page	87 of 149

#### LTE Band 17 (Part 27)

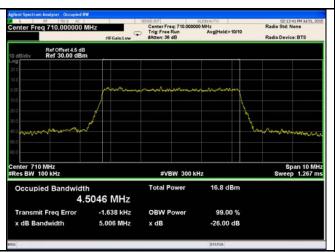




LTE band 17 - Low CH QPSK-5



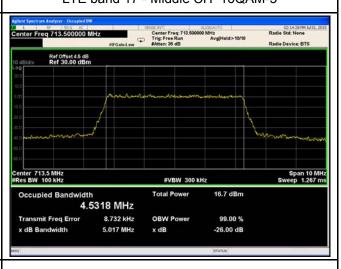
LTE band 17 - Low CH 16QAM-5



LTE band 17 - Middle CH QPSK-5



LTE band 17 - Middle CH 16QAM-5

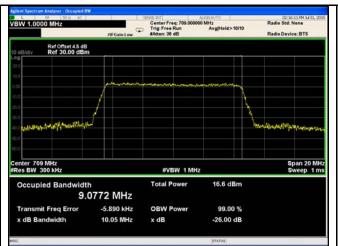


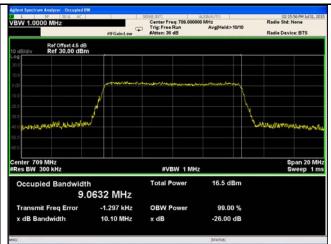
LTE band 17 - High CH QPSK-5

LTE band 17 - High CH 16QAM-5

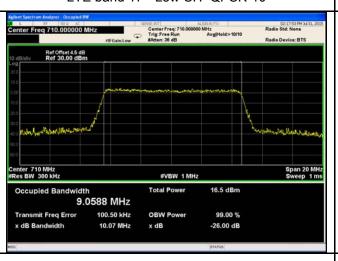


Test Report	15070591-FCC-R5
Page	88 of 149





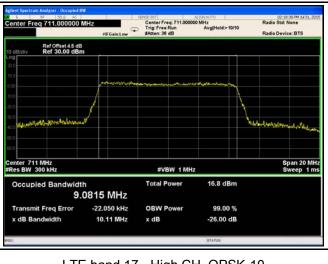
LTE band 17 - Low CH QPSK-10



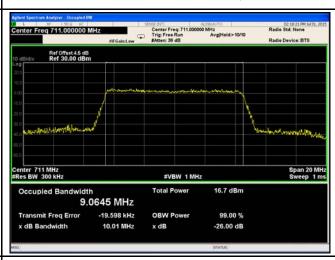
LTE band 17 - Low CH 16QAM-10



LTE band 17 - Middle CH QPSK-10



LTE band 17 - Middle CH 16QAM-10



LTE band 17 - High CH QPSK-10

LTE band 17 - High CH 16QAM-10



Test Report	15070591-FCC-R5
Page	89 of 149

# 6.6 Spurious Emissions at Antenna Terminals

Temperature	23°C
Relative Humidity	55%
Atmospheric Pressure	1031mbar
Test date :	July 31, 2015
Tested By:	Winnie Zhang

#### Requirement(s):

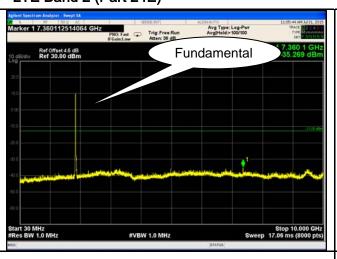
Requirement(s):			
Spec	Item	Requirement	Applicable
§2.1051,		The power of any emission outside of the authorized	
§22.917(a)&	a)	operating frequency ranges must be lower than the	
§24.238(a)	( a)	transmitter power (P) by a factor of at least 43 + 10 log	
§ 27.53(h)		(P) dB	
Test Setup	B	ase Station EUT Spectrum Analyzer	
Test Procedure	<ul> <li>The EUT was connected to Spectrum Analyzer and Base Station via power divider.</li> <li>The Band Edges of low and high channels for the highest RF powers were measured.</li> <li>Setting RBW as roughly BW/100.</li> </ul>		
Remark			
Result	<b>▼</b> Pa	ass Fail	

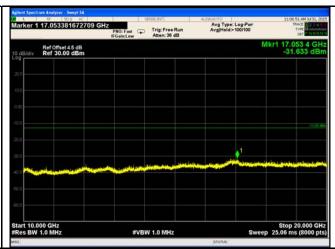
Test Data	Yes	□ <sub>N/A</sub>
Test Plot	Yes (See below)	□ <sub>N/A</sub>



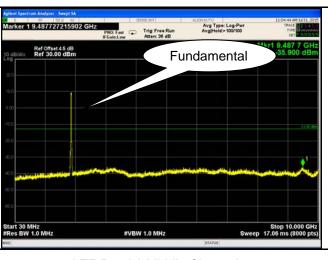
Test Report	15070591-FCC-R5
Page	90 of 149

## Test Plots 30MHz-5GHz LTE Band 2 (Part 24E)





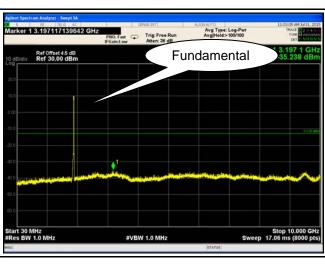
LTE Band 2 - Low Channel-1



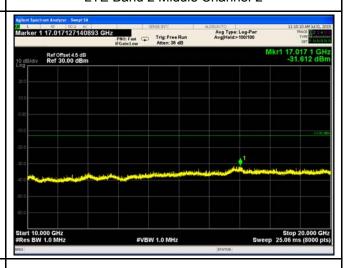
LTE Band 2 - Low Channel-2



LTE Band 2 Middle Channel-1



LTE Band 2 Middle Channel-2



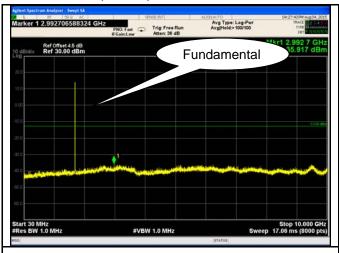
LTE Band 2 - High Channel-1

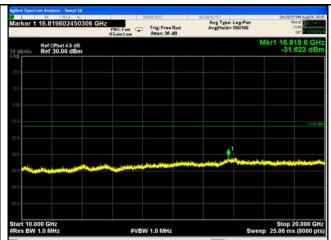
LTE Band 2 - High Channel-2



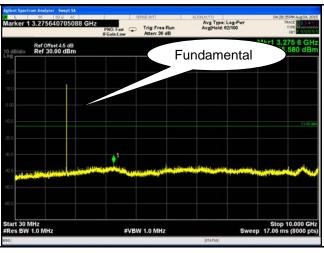
Test Report	15070591-FCC-R5		
Page	91 of 149		

#### LTE Band 4 (Part27) result

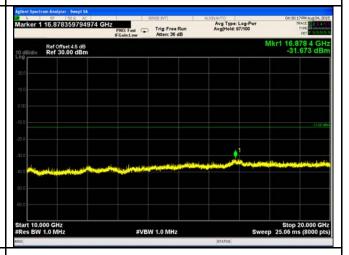




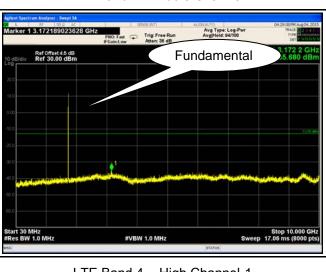
LTE Band 4 - Low Channel-1



LTE Band 4 - Low Channel-2



LTE Band 4 - Middle Channel-1



LTE Band 4 - Middle Channel-2



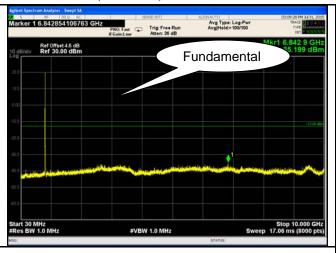
LTE Band 4 - High Channel-1

LTE Band 4 - High Channel-2



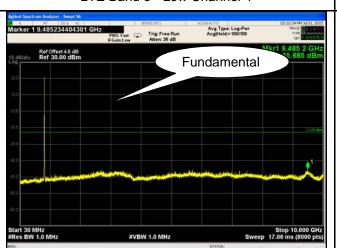
Test Report	15070591-FCC-R5
Page	92 of 149

#### LTE Band 5 (Part 22H)





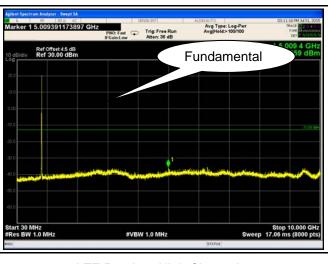
LTE Band 5 - Low Channel-1



LTE Band 5 - Low Channel-2



LTE Band 5- Middle Channel-1



LTE Band 5 - Middle Channel-2



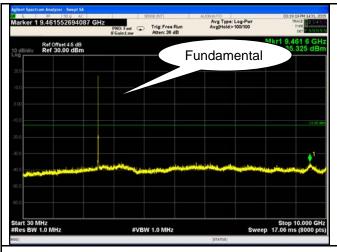
LTE Band 5 - High Channel-1

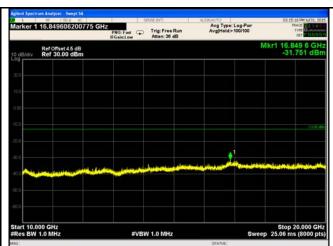
LTE Band 5 - High Channel-2



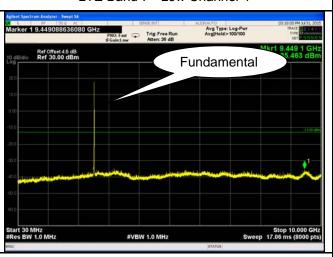
Test Report	15070591-FCC-R5			
Page	93 of 149			

#### LTE Band 7 (Part 27)





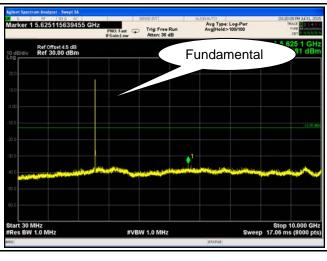
LTE Band 7 - Low Channel-1



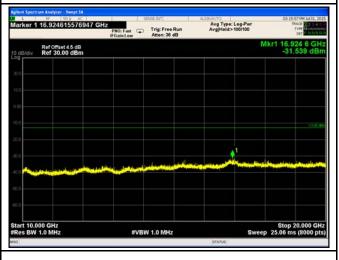
LTE Band 7 - Low Channel-2



LTE Band 7- Middle Channel-1



LTE Band 7 - Middle Channel-2



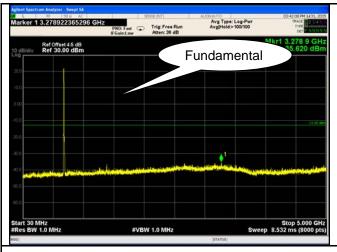
LTE Band 7 - High Channel-1

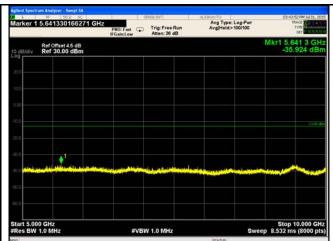
LTE Band 7 - High Channel-2



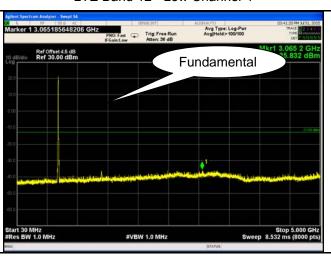
Test Report	15070591-FCC-R5			
Page	94 of 149			

#### LTE Band 12 (Part 27)





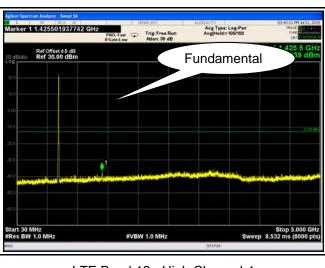
LTE Band 12 - Low Channel-1



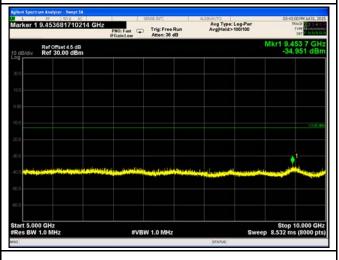
LTE Band 12 - Low Channel-2



LTE Band 12- Middle Channel-1



LTE Band 12 - Middle Channel-2



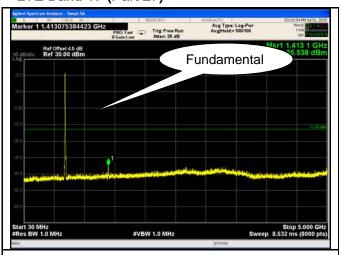
LTE Band 12 - High Channel-1

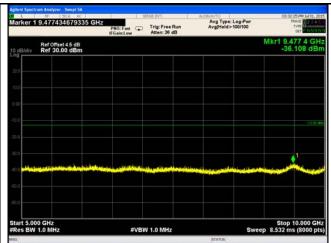
LTE Band 12 - High Channel-2



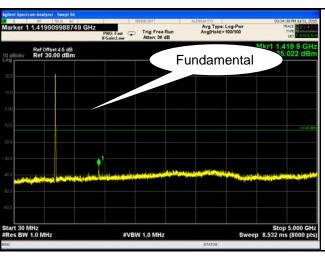
Test Report	15070591-FCC-R5			
Page	95 of 149			

#### LTE Band 17 (Part 27)





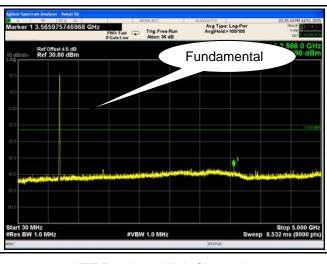
LTE Band 17 - Low Channel-1



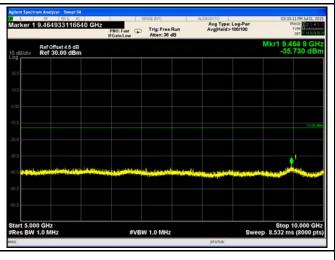
LTE Band 17 - Low Channel-2



LTE Band 17- Middle Channel-1



LTE Band 17 - Middle Channel-2



LTE Band 17 - High Channel-1

LTE Band 17 - High Channel-2



Test Report	15070591-FCC-R5		
Page	96 of 149		

# 6.7 Spurious Radiated Emissions

Temperature	23°C		
Relative Humidity	54%		
Atmospheric Pressure	1030mbar		
Test date :	July 30, 2015		
Tested By :	Winnie Zhang		

### Requirement(s):

Spec	Item	Requirement Applicable					
§2.1053,	The power of any emission outside of the authorized						
§22.917 &		operating frequency ranges must be attenuated below the					
§24.238	a)	transmitter power (P) by a factor of at least 43 + 10 log (P)	<b>V</b>				
		dB. The spectrum is scanned from 30 MHz up to a frequency					
§ 27.53(h)		including its 10th harmonic.					
Test setup	Ant. Tower  Support Units  Turn Table  Ground Plane  Test Receiver						
Test Procedure	<ol> <li>The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable.</li> <li>The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.</li> <li>Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.         Sample Calculation:         EUT Field Strength = Raw Amplitude (dBµV/m) - Amplifier Gain (dB) + Antenna Factor (dB) + Cable Loss (dB) + Filter Attenuation (dB, if used)     </li> </ol>						
Remark							
Result	Pas	ss Fail					



Test Report	15070591-FCC-R5			
Page	97 of 149			

Test Data	Yes	□ <sub>N/A</sub>

## LTE Band 2 (Part 24E) result

### Low channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
3720	-47.14	V	10.25	2.73	-39.62	-13	-26.62
3720	-46.92	Н	10.25	2.73	-39.40	-13	-26.40
91.4	-44.38	V	1.30	0.13	-43.21	-13	-30.21
164.9	-47.51	Н	2.20	0.19	-45.5	-13	-32.50

#### Middle channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
3760	-46.22	V	10.25	2.73	-38.70	-13	-25.70
3760	-47.34	Η	10.25	2.73	-39.82	-13	-26.82
91.7	-45.17	V	1.30	0.13	-44.00	-13	-31.00
164.3	-46.31	Н	2.20	0.19	-44.30	-13	-31.30

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
3800	-45.96	V	10.36	2.73	-38.33	-13	-25.33
3800	-46.85	Н	10.36	2.73	-39.22	-13	-26.22
91.20	-45.66	V	1.30	0.13	-44.49	-13	-31.49
164.5	-47.37	Н	2.20	0.19	-45.36	-13	-32.36



Test Report	15070591-FCC-R5
Page	98 of 149

# LTE Band 4(Part27) result

### Low channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
3440	-44.24	V	10.06	2.52	-36.70	-13	-23.7
3440	-45.97	Н	10.06	2.52	-38.43	-13	-25.43
91.80	-46.81	V	1.30	0.13	-45.64	-13	-32.64
165.2	-48.02	Н	2.20	0.19	-46.01	-13	-33.01

### Middle channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
3465	-45.38	V	10.09	2.52	-37.81	-13	-24.81
3465	-46.82	Н	10.09	2.52	-39.25	-13	-26.25
91.60	-45.11	V	1.30	0.13	-43.94	-13	-30.94
164.7	-48.75	Н	2.20	0.19	-46.74	-13	-33.74

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
3490	-45.68	V	10.09	2.52	-38.11	-13	-25.11
3490	-47.13	Н	10.09	2.52	-39.56	-13	-26.56
91.30	-45.55	V	1.30	0.13	-44.38	-13	-31.38
164.2	-48.79	Н	2.20	0.19	-46.78	-13	-33.78



Test Report	15070591-FCC-R5
Page	99 of 149

# LTE Band 5(Part22H) result

### Low channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
1658	-43.72	V	7.95	0.78	-36.55	-13	-23.55
1658	-45.36	Н	7.95	0.78	-38.19	-13	-25.19
92.30	-44.41	V	1.30	0.13	-43.24	-13	-30.24
164.80	-48.39	Н	2.20	0.19	-46.38	-13	-33.38

### Middle channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
1673	-43.96	V	7.95	0.78	-36.79	-13	-23.79
1673	-45.85	Н	7.95	0.78	-38.68	-13	-25.68
91.90	-44.73	V	1.30	0.13	-43.56	-13	-30.56
165.20	-48.34	Н	2.20	0.19	-46.33	-13	-33.33

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
1688	-44.01	V	7.95	0.78	-36.84	-13	-23.84
1688	-45.96	Н	7.95	0.78	-38.79	-13	-25.79
91.70	-44.55	V	1.30	0.13	-43.38	-13	-30.38
164.50	-49.17	Н	2.20	0.19	-47.16	-13	-34.16



Test Report	15070591-FCC-R5
Page	100 of 149

# LTE Band 7(Part27) result

### Low channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
5020	-45.22	V	10.29	0.98	-35.91	-13	-22.91
5020	-46.49	Н	10.29	0.98	-37.18	-13	-24.18
92.30	-45.51	V	1.30	0.13	-44.34	-13	-31.34
165.70	-48.35	Н	2.20	0.19	-46.34	-13	-33.34

### Middle channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
5070	-45.84	٧	10.3	0.99	-36.53	-13	-23.53
5070	-47.21	Н	10.3	0.99	-37.90	-13	-24.9
92.5	-45.95	V	1.30	0.13	-44.78	-13	-31.78
165.3	-49.18	Н	2.20	0.19	-47.17	-13	-34.17

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
5120	-45.71	V	10.32	1.00	-36.39	-13	-23.39
5120	-48.56	Н	10.32	1.00	-39.24	-13	-26.24
92.40	-45.28	٧	1.30	0.13	-44.11	-13	-31.11
165.20	-48.33	Н	2.20	0.19	-46.32	-13	-33.32



Test Report	15070591-FCC-R5
Page	101 of 149

# LTE Band 12(Part27) result

### Low channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
1408	-46.84	V	7.65	0.75	-39.94	-13	-26.94
1408	-47.59	Н	7.65	0.75	-40.69	-13	-27.69
92.8	-50.33	V	1.30	0.13	-49.16	-13	-36.16
165.7	-51.47	Н	2.20	0.19	-49.46	-13	-36.46

### Middle channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
1415	-46.75	V	7.65	0.75	-39.85	-13	-26.85
1415	-47.32	Н	7.65	0.75	-40.42	-13	-27.42
92.6	-49.85	V	1.30	0.13	-48.68	-13	-35.68
165.8	-50.43	Н	2.20	0.19	-48.42	-13	-35.42

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
1422	-46.52	V	7.65	0.75	-39.62	-13	-26.62
1422	-47.19	Н	7.65	0.75	-40.29	-13	-27.29
92.8	-50.07	V	1.30	0.13	-48.90	-13	-35.90
165.2	-51.34	Н	2.20	0.19	-49.33	-13	-36.33



Test Report	15070591-FCC-R5
Page	102 of 149

# LTE Band 17(Part27) result

#### Low channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
1418	-44.95	٧	7.65	0.75	-38.05	-13	-25.05
1418	-46.42	Н	7.65	0.75	-39.52	-13	-26.52
91.8	-45.06	V	1.30	0.13	-43.89	-13	-30.89
164.5	-47.58	Н	2.20	0.19	-45.57	-13	-32.57

### Middle channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
1420	-44.76	V	7.65	0.75	-37.86	-13	-24.86
1420	-46.85	Η	7.65	0.75	-39.95	-13	-26.95
91.5	-45.14	V	1.30	0.13	-43.97	-13	-30.97
164.3	-47.66	Н	2.20	0.19	-45.65	-13	-32.65

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
1422	-44.52	V	7.65	0.75	-37.62	-13	-24.62
1422	-46.73	Н	7.65	0.75	-39.83	-13	-26.83
91.4	-45.59	V	1.30	0.13	-44.42	-13	-31.42
164.8	-47.91	Н	2.20	0.19	-45.90	-13	-32.90



Test Report	15070591-FCC-R5
Page	103 of 149

# 6.8 Band Edge

Temperature	24°C
Relative Humidity	56%
Atmospheric Pressure	1004mbar
Test date :	August 04, 2015
Tested By:	Winnie Zhang

## Requirement(s):

Spec	Item	Requirement	Applicable	
§22.917(a) §24.238(a) § 27.53(h)	a)	The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.	<b>&lt;</b>	
Test setup	Base Station Spectrum Analyzer EUT			
Procedure	<ul> <li>The EUT was connected to Spectrum Analyzer and Base Station via power divider.</li> <li>The Band Edges of low and high channels for the highest RF powers were measured. Setting RBW as roughly BW/100.</li> </ul>			
Remark				
Result	Pa	ss Fail		

Test Data	Yes	□ <sub>N/A</sub>
Test Plot	Yes (See below)	□ <sub>N/A</sub>



Test Report	15070591-FCC-R5
Page	104 of 149

# LTE Band 2 (Part 24E) result

BW(MHz)	Channel	Frequency (MHz)	Mode	Emission (dBm)	Limit (dBm)
1.4	18607	1850.7	QPSK	-33.261	-13
			16QAM	-34.937	-13
1.4	18900	1909.3	QPSK	-31.796	-13
1.4			16QAM	-32.298	-13
3	10015	1851.5	QPSK	-30.434	-13
3	18615		16QAM	-29.586	-13
2	10105	1908.5	QPSK	-27.143	-13
3	19185		16QAM	-29.771	-13
E	18625	1852.5	QPSK	-24.750	-13
5			16QAM	-24.856	-13
F	19175	1907.5	QPSK	-14.113	-13
5			16QAM	-14.300	-13
40	18650	1855	QPSK	-24.954	-13
10			16QAM	-25.654	-13
40	19150	1905	QPSK	-24.486	-13
10			16QAM	-23.549	-13
45	18675	1857.5	QPSK	-28.172	-13
15			16QAM	-27.740	-13
45	19125	1902.5	QPSK	-26.009	-13
15			16QAM	-26.033	-13
20	18700	1860	QPSK	-30.500	-13
20			16QAM	-30.731	-13
20	19100	1900	QPSK	-29.871	-13
20			16QAM	-30.338	-13



Test Report	15070591-FCC-R5
Page	105 of 149

## LTE Band 4 (Part 27) result

BW(MHz)	Channel	Frequency (MHz)	Mode	Emission (dBm)	Limit (dBm)
1.4	19957	1710.7	QPSK	-37.812	-13
1.4			16QAM	-37.869	-13
4.4	20393	1754.3	QPSK	-36.025	-13
1.4			16QAM	-36.228	-13
2	19965	1711.5	QPSK	-29.892	-13
3			16QAM	-29.130	-13
2	20385	1753.5	QPSK	-32.138	-13
3			16QAM	-31.396	-13
F	19975	1712.5	QPSK	-25.857	-13
5			16QAM	-25.481	-13
F	20375	1752.5	QPSK	-29.689	-13
5			16QAM	-30.186	-13
40	20000	1715	QPSK	-25.524	-13
10			16QAM	-25.354	-13
40	20350	1750	QPSK	-29.216	-13
10			16QAM	-29.265	-13
45	20025	1717.5	QPSK	-29.001	-13
15			16QAM	-29.050	-13
45	20325	1747.5	QPSK	-33.475	-13
15			16QAM	-33.273	-13
20	20050	1720	QPSK	-31.186	-13
20			16QAM	-30.265	-13
20	20300	1745	QPSK	-36.275	-13
20			16QAM	-36.351	-13