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### 5.8 FIELD STRENGTH OF SPURIOUS RADIATION

FCC 47 CFR Part 2.1051,

GSM 850 & WCDMA Band V & LTE Band 5: FCC 47 CFR Part 22.917(a)(b), GSM 1900 & WCDMA Band II & LTE Band 2: FCC 47 CFR Part 24.238(a)(b),

Test Requirement: WCDMA Band IV & LTE Band 4: FCC 47 CFR Part 27.53(h)(1),

LTE Band 12 & Band 17: FCC 47 CFR Part 27.53(g)

LTE Band 13: FCC 47 CFR Part 27.53(c)(2) LTE Band 7: FCC 47 CFR Part 27.53(m)(4)

Test Method: ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01

#### **Receiver Setup:**

Frequency	quency Detector		VBW	Remark
0.009 MHz-30 MHz	Peak	10 kHz	30 KHz	Peak
30 MHz-1 GHz	Quasi-peak	100 kHz	300 KHz	Peak
Above 1 GHz	Peak	1 MHz	3 MHz	Peak

#### Limits:

FCC 47 CFR Part 22 & FCC 47 CFR Part 24: 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.

FCC 47 CFR Part 27.53(g): For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

FCC 47 CFR Part 27.53(c)(2): On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB;

FCC 47 CFR Part 27.53(h)(1): Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log10 (P) dB. The emission limit equal to -13 dBm.

FCC 47 CFR Part 27.53(m)(4): For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

**Test Setup:** Refer to section 4.2.1 for details.

#### **Test Procedures:**

- 1. Scan up to 10th harmonic, find the maximum radiation frequency to measure.
- 2. The technique used to find the Spurious Emissions of the transmitter was the antenna substitution method. Substitution method was performed to determine the actual ERP/EIRP emission levels of the EUT.

Test procedure as below:

- 1) The EUT was powered ON and placed on a 0.8/1.5m high table at a 3 meter semi/fully Anechoic Chamber. The antenna of the transmitter was extended to its maximum length. Modulation mode and the measuring receiver shall be tuned to the frequency of the transmitter under test.
- 2) The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- 3) The disturbance of the transmitter was maximized on the test receiver display by raising and lowering from 1m to 4m the receive antenna and by rotating through 360° the turntable. After the fundamental emission was maximized, a field strength measurement was made.



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4) Steps 1) to 3) were performed with the EUT and the receive antenna in both vertical and horizontal polarization.

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- 5) The transmitter was then removed and replaced with another antenna. The center of the antenna was approximately at the same location as the center of the transmitter.
- 6) A signal at the disturbance was fed to the substitution antenna by means of a non-radiating cable. With both the substitution and the receive antennas horizontally polarized, the receive antenna was raised and lowered to obtain a maximum reading at the test receiver. The level of the signal generator was adjusted until the measured field strength level in step 3) is obtained for this set of conditions.
- 7) The output power into the substitution antenna was then measured.
- 8) Steps 6) and 7) were repeated with both antennas polarized.
- 9) Calculate power in dBm by the following formula:

ERP(dBm) = Pg(dBm) - cable loss (dB) + antenna gain (dBd) EIRP(dBm) = Pg(dBm) - cable loss (dB) + antenna gain (dBi) EIRP=ERP+2.15dB

where:

Pg is the generator output power into the substitution antenna.

- 10) Test the EUT in the lowest channel, the middle channel the Highest channel
- 11) The radiation measurements are performed in X, Y, Z axis positioning for EUT operation mode, and found the Y axis positioning which it is worse case.
- 12) Repeat above procedures until all frequencies measured was complete.

**Equipment Used:** Refer to section 3 for details.

Test Result: Pass

The measurement data as follows:



# 5.8.1 Radiated Emission Test Data (Below 1GHz)

### **GSM 850 1Tx-slot\_Lowest Channel**

#### Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	42.9305	-77.89	28.25	-49.64	-13.00	-36.64	Peak
2	95.6485	-83.96	27.25	-56.71	-13.00	-43.71	Peak
3	148.9174	-83.15	27.46	-55.69	-13.00	-42.69	Peak

Vei	Vertical										
N	О.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark			
1	1	38.3651	-83.27	30.12	-53.15	-13.00	-40.15	Peak			
2	2	95.6485	-83.68	27.25	-56.43	-13.00	-43.43	Peak			
3	3	148.9174	-84.06	27.46	-56.60	-13.00	-43.60	Peak			

### **GSM 850 1Tx-slot\_Middle Channel**

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	31.7348	-89.73	34.57	-55.16	-13.00	-42.16	Peak
2	89.7866	-84.07	26.77	-57.30	-13.00	-44.30	Peak
3	148.9174	-84.35	27.46	-56.89	-13.00	-43.89	Peak

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Vertica	Vertical										
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark				
1	32.1840	-80.82	34.21	-46.61	-13.00	-33.61	Peak				
2	38.0965	-84.81	30.24	-54.57	-13.00	-41.57	Peak				
3	95.6485	-83.82	27.25	-56.57	-13.00	-43.57	Peak				

# GSM 850 1Tx-slot\_Highest Channel

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No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	31.7348	-87.91	34.57	-53.34	-13.00	-40.34	Peak
2	39.1825	-81.82	29.71	-52.11	-13.00	-39.11	Peak
3	95.6485	-84.04	27.25	-56.79	-13.00	-43.79	Peak

I	Vertica	1									
	No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark			
	1	31.9586	-87.58	34.41	-53.17	-13.00	-40.17	Peak			
	2	38.6357	-83.65	29.98	-53.67	-13.00	-40.67	Peak			
I	3	148.9174	-83.84	27.46	-56.38	-13.00	-43.38	Peak			

### **GSM 1900 1Tx-slot\_Lowest Channel**

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	53.7559	-73.60	-2.89	-76.49	-13.00	-63.49	Peak
2	582.1122	-80.13	6.95	-73.18	-13.00	-60.18	Peak
3	793.0281	-80.73	10.26	-70.47	-13.00	-57.47	Peak

Vertica	nl							
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark	
1	527.5707	-80.37	6.15	-74.22	-13.00	-61.22	Peak	
2	674.6768	-80.99	8.64	-72.35	-13.00	-59.35	Peak	
3	844.8028	-81.11	10.69	-70.42	-13.00	-57.42	Peak	



**GSM 1900 1Tx-slot\_Middle Channel** 

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No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	45.0951	-75.44	-1.57	-77.01	-13.00	-64.01	Peak
2	703.7314	-81.02	9.07	-71.95	-13.00	-58.95	Peak
3	912.6953	-82.08	12.07	-70.01	-13.00	-57.01	Peak

Vertica	/ertical									
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark			
1	32.1840	-79.29	5.36	-73.93	-13.00	-60.93	Peak			
2	535.0377	-79.13	6.24	-72.89	-13.00	-59.89	Peak			
3	919.1315	-81.80	12.28	-69.52	-13.00	-56.52	Peak			

# GSM 1900 1Tx-slot\_Highest Channel

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	53.7559	-73.33	-2.89	-76.22	-13.00	-63.22	Peak
2	674.6768	-80.14	8.64	-71.50	-13.00	-58.50	Peak
3	781.9606	-80.77	10.11	-70.66	-13.00	-57.66	Peak

Vertica	ı						
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	542.6104	-79.80	6.25	-73.55	-13.00	-60.55	Peak
2	689.8035	-80.30	9.10	-71.20	-13.00	-58.20	Peak
3	919.1315	-81.19	12.28	-68.91	-13.00	-55.91	Peak

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### WCDMA Band II RMC 12.2Kbps\_Lowest Channel

### Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	436.3956	-79.07	5.21	-73.86	-13.00	-60.86	Peak
2	776.4849	-80.41	10.85	-69.56	-13.00	-56.56	Peak
3	972.2827	-81.51	14.18	-67.33	-13.00	-54.33	Peak

Vertica	Vertical											
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark					
1	403.9335	-80.79	4.66	-76.13	-13.00	-63.13	Peak					
2	598.7067	-80.68	8.28	-72.40	-13.00	-59.40	Peak					
3	972.2827	-81.75	14.18	-67.57	-13.00	-54.57	Peak					

### WCDMA Band II RMC 12.2Kbps\_Middle Channel

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	602.9288	-80.28	8.42	-71.86	-13.00	-58.86	Peak
2	798.6205	-80.80	11.19	-69.61	-13.00	-56.61	Peak
3	952.0001	-81.46	13.69	-67.77	-13.00	-54.77	Peak

Vertica	ıİ						
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	484.9068	-80.09	5.70	-74.39	-13.00	-61.39	Peak
2	698.8035	-80.80	9.89	-70.91	-13.00	-57.91	Peak
3	979.1392	-82.34	14.33	-68.01	-13.00	-55.01	Peak



WCDMA Band II RMC 12.2Kbps\_Highest Channel

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No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	368.6682	-79.76	3.68	-76.08	-13.00	-63.08	Peak
2	703.7314	-80.24	9.86	-70.38	-13.00	-57.38	Peak
3	972.2827	-82.12	14.18	-67.94	-13.00	-54.94	Peak

Vertica	ıl						
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	33.1015	-79.68	3.27	-76.41	-13.00	-63.41	Peak
2	749.6761	-80.54	10.36	-70.18	-13.00	-57.18	Peak
3	932.1405	-82.01	13.60	-68.41	-13.00	-55.41	Peak

# WCDMA Band IV RMC 12.2Kbps\_Lowest Channel

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	542.6104	-80.28	6.73	-73.55	-13.00	-60.55	Peak
2	703.7314	-80.71	9.86	-70.85	-13.00	-57.85	Peak
3	965.4742	-81.85	14.12	-67.73	-13.00	-54.73	Peak

Vertica	al						
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	471.4665	-79.63	5.47	-74.16	-13.00	-61.16	Peak
2	739.2136	-80.30	10.06	-70.24	-13.00	-57.24	Peak
3	972.2827	-82.02	14.18	-67.84	-13.00	-54.84	Peak



WCDMA Band IV RMC 12.2Kbps\_Middle Channel

	riz		

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	52.6345	-73.45	-3.85	-77.30	-13.00	-64.30	Peak
2	461.6313	-79.46	5.39	-74.07	-13.00	-61.07	Peak
3	958.7135	-82.31	14.05	-68.26	-13.00	-55.26	Peak

Vertica	Vertical											
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark					
1	565.9776	-79.87	7.00	-72.87	-13.00	-59.87	Peak					
2	754.9628	-80.87	10.57	-70.30	-13.00	-57.30	Peak					
3	938.7139	-81.72	13.75	-67.97	-13.00	-54.97	Peak					

# WCDMA Band IV RMC 12.2Kbps\_Highest Channel

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	442.5722	-80.15	5.20	-74.95	-13.00	-61.95	Peak
2	679.4346	-80.78	9.55	-71.23	-13.00	-58.23	Peak
3	893.6557	-81.23	12.51	-68.72	-13.00	-55.72	Peak

Vertical									
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark		
1	406.7820	-80.72	4.66	-76.06	-13.00	-63.06	Peak		
2	598.7067	-80.73	8.28	-72.45	-13.00	-59.45	Peak		
3	952.0001	-81.08	13.69	-67.39	-13.00	-54.39	Peak		

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### WCDMA Band V RMC 12.2Kbps\_Lowest Channel

### Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	458.3987	-87.20	34.36	-52.84	-13.00	-39.84	Peak
2	527.5707	-87.06	35.83	-51.23	-13.00	-38.23	Peak
3	628.8936	-87.46	38.08	-49.38	-13.00	-36.38	Peak

Vertica	I						
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	498.7303	-87.37	35.39	-51.98	-13.00	-38.98	Peak
2	615.7744	-87.29	37.92	-49.37	-13.00	-36.37	Peak
3	708.6941	-87.40	39.00	-48.40	-13.00	-35.40	Peak

### WCDMA Band V RMC 12.2Kbps\_Middle Channel

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	442.5722	-87.21	34.13	-53.08	-13.00	-40.08	Peak
2	535.0377	-86.69	35.96	-50.73	-13.00	-37.73	Peak
3	703.7314	-86.76	39.09	-47.67	-13.00	-34.67	Peak

Vertica	ıl						
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	424.2999	-88.10	33.78	-54.32	-13.00	-41.32	Peak
2	523.8763	-87.14	35.74	-51.40	-13.00	-38.40	Peak
3	698.8035	-87.38	39.12	-48.26	-13.00	-35.26	Peak



WCDMA Band V RMC 12.2Kbps\_Highest Channel

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No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	327.1554	-87.72	31.00	-56.72	-13.00	-43.72	Peak
2	433.3398	-87.60	34.07	-53.53	-13.00	-40.53	Peak
3	693.9101	-87.16	38.97	-48.19	-13.00	-35.19	Peak

Vertica	Vertical											
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark					
1	481.5112	-88.14	34.82	-53.32	-13.00	-40.32	Peak					
2	607.1805	-87.90	37.78	-50.12	-13.00	-37.12	Peak					
3	765.6482	-87.13	40.00	-47.13	-13.00	-34.13	Peak					

### LTE Band 2/ 1.4 MHz Lowest Channel

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	53.7559	-72.80	-2.89	-75.69	-13.00	-62.69	Peak
2	343.6506	-80.05	3.85	-76.20	-13.00	-63.20	Peak
3	607.1805	-79.09	7.79	-71.30	-13.00	-58.30	Peak

Vertica	ı						
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	81.3740	-77.30	-2.57	-79.87	-13.00	-66.87	Peak
2	708.6941	-81.18	8.98	-72.20	-13.00	-59.20	Peak
3	906.3041	-82.14	11.92	-70.22	-13.00	-57.22	Peak



LTE Band 2/ 1.4 MHz \_Middle Channel

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No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	53.7559	-73.49	-2.89	-76.38	-13.00	-63.38	Peak
2	498.7303	-81.14	5.88	-75.26	-13.00	-62.26	Peak
3	945.3336	-82.41	12.19	-70.22	-13.00	-57.22	Peak

Vertica	Vertical								
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark		
1	52.6345	-76.19	-2.62	-78.81	-13.00	-65.81	Peak		
2	64.0800	-75.44	-3.44	-78.88	-13.00	-65.88	Peak		
3	899.9576	-81.86	11.77	-70.09	-13.00	-57.09	Peak		

# LTE Band 2/ 1.4 MHz \_Highest Channel

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	55.6782	-73.23	-3.19	-76.42	-13.00	-63.42	Peak
2	781.9606	-80.58	10.11	-70.47	-13.00	-57.47	Peak
3	932.1405	-81.54	12.25	-69.29	-13.00	-56.29	Peak

Vertica	ı						
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	32.4110	-80.51	5.16	-75.35	-13.00	-62.35	Peak
2	754.9628	-81.56	9.78	-71.78	-13.00	-58.78	Peak
3	925.6132	-82.07	12.25	-69.82	-13.00	-56.82	Peak



LTE Band 2/3 MHz \_Lowest Channel

### Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	53.7559	-73.98	-2.89	-76.87	-13.00	-63.87	Peak
2	633.3285	-80.71	8.08	-72.63	-13.00	-59.63	Peak
3	932.1405	-81.79	12.25	-69.54	-13.00	-56.54	Peak

Vertica	Vertical								
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark		
1	39.4588	-78.47	0.74	-77.73	-13.00	-64.73	Peak		
2	-81.9478	-76.39	-2.55	-78.94	-13.00	-65.94	Peak		
3	945.3336	-81.65	12.19	-69.46	-13.00	-56.46	Peak		

### LTE Band 2/3 MHz Middle Channel

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	53.7559	-73.22	-2.89	-76.11	-13.00	-63.11	Peak
2	684.2259	-80.74	8.81	-71.93	-13.00	-58.93	Peak
3	919.1315	-81.61	12.28	-69.33	-13.00	-56.33	Peak

Vertica	ı						
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	130.3047	-78.10	-1.47	-79.57	-13.00	-66.57	Peak
2	439.4731	-80.17	4.59	-75.58	-13.00	-62.58	Peak
3	804.2523	-81.05	10.28	-70.77	-13.00	-57.77	Peak



LTE Band 2/3 MHz \_Highest Channel

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No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	51.8999	-73.37	-2.47	-75.84	-13.00	-62.84	Peak
2	602.9288	-80.78	7.69	-73.09	-13.00	-60.09	Peak
3	798.6205	-80.55	10.37	-70.18	-13.00	-57.18	Peak

Vertica	Vertical											
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark					
1	34.5270	-79.38	3.39	-75.99	-13.00	-62.99	Peak					
2	268.7212	-80.40	2.25	-78.15	-13.00	-65.15	Peak					
3	809.9238	-81.27	10.13	-71.14	-13.00	-58.14	Peak					

### LTE Band 2/5 MHz \_Lowest Channel

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	52.6345	-74.20	-2.62	-76.82	-13.00	-63.82	Peak
2	633.3285	-80.17	8.08	-72.09	-13.00	-59.09	Peak
3	938.7139	-82.22	12.34	-69.88	-13.00	-56.88	Peak

Vertica	Vertical									
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark			
1	52.6345	-76.06	-2.62	-78.68	-13.00	-65.68	Peak			
2	620.1167	-81.06	7.98	-73.08	-13.00	-60.08	Peak			
3	945.3336	-82.41	12.19	-70.22	-13.00	-57.22	Peak			



LTE Band 2/5 MHz \_Middle Channel

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No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	54.1349	-73.53	-2.97	-76.50	-13.00	-63.50	Peak
2	433.3398	-80.93	5.11	-75.82	-13.00	-62.82	Peak
3	684.2290	-80.74	8.81	-71.93	-13.00	-58.93	Peak

Vertica	Vertical											
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark					
1	54.1349	-74.81	-2.97	-77.78	-13.00	-64.78	Peak					
2	79.6765	-76.37	-2.62	-78.99	-13.00	-65.99	Peak					
3	633.3285	-79.81	8.08	-71.73	-13.00	-58.73	Peak					

# LTE Band 2/5 MHz \_Highest Channel

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	43.8452	-75.77	-1.11	-76.88	-13.00	-63.88	Peak
2	53.7559	-73.03	-2.89	-75.92	-13.00	-62.92	Peak
3	690.8035	-80.75	9.10	-71.65	-13.00	-58.65	Peak

Vertica	Vertical									
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark			
1	674.6768	-81.25	8.64	-72.61	-13.00	-59.61	Peak			
2	821.3871	-80.87	10.27	-70.60	-13.00	-57.60	Peak			
3	919.1315	-81.66	12.28	-69.38	-13.00	-56.38	Peak			



LTE Band 2/10 MHz \_Lowest Channel

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No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	54.1349	-73.43	-2.97	-76.40	-13.00	-63.40	Peak
2	660.6025	-80.38	8.38	-72.00	-13.00	-59.00	Peak
3	925.6132	-82.44	12.25	-70.19	-13.00	-57.19	Peak

Vertica	Vertical											
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark					
1	37.8297	79.35	-157.16	-77.81	-13.00	-64.81	Peak					
2	607.1805	-80.47	7.79	-72.68	-13.00	-59.68	Peak					
3	945.3336	-81.85	12.19	-69.66	-13.00	-56.66	Peak					

### LTE Band 2/ 10 MHz Middle Channel

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	31.9586	-80.89	5.56	-75.33	-13.00	-62.33	Peak
2	55.2883	-74.02	-3.13	-77.15	-13.00	-64.15	Peak
3	938.7139	-81.88	12.34	-69.54	-13.00	-56.54	Peak

Vertica							
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	54.1349	-74.81	-2.97	-77.78	-13.00	-64.78	Peak
2	633.3285	-79.81	8.08	-71.73	-13.00	-58.73	Peak
3	938.7139	-82.52	12.34	-70.18	-13.00	-57.18	Peak



LTE Band 2/10 MHz \_Highest Channel

### Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	53.3794	-72.10	-2.79	-74.89	-13.00	-61.89	Peak
2	771.0475	-81.01	10.00	-71.01	-13.00	-58.01	Peak
3	925.6132	-81.93	12.25	-69.68	-13.00	-56.68	Peak

Vertica	Vertical										
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark				
1	64.0800	-75.81	-3.44	-79.25	-13.00	-66.25	Peak				
2	669.9523	-80.11	8.49	-71.62	-13.00	-58.62	Peak				
3	919.1315	-81.66	12.28	-69.38	-13.00	-56.38	Peak				

### LTE Band 2/15 MHz Lowest Channel

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	55.2883	72.04	-147.21	-75.17	-13.00	-62.17	Peak
2	660.6025	-80.38	8.38	-72.00	-13.00	-59.00	Peak
3	992.9974	82.14	-151.41	-69.27	-13.00	-56.27	Peak

Vertica	ı						
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	64.5319	-76.18	-3.42	-79.60	-13.00	-66.60	Peak
2	79.1185	-76.99	-2.61	-79.60	-13.00	-66.60	Peak
3	938.7139	-81.88	12.34	-69.54	-13.00	-56.54	Peak



LTE Band 2/15 MHz \_Middle Channel

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No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	55.6782	-72.18	-3.19	-75.37	-13.00	-62.37	Peak
2	703.7314	-80.78	9.07	-71.71	-13.00	-58.71	Peak
3	965.4742	-82.33	12.45	-69.88	-13.00	-56.88	Peak

Vertica	Vertical										
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark				
1	458.3987	-81.40	5.18	-76.22	-13.00	-63.22	Peak				
2	611.4623	-80.43	7.87	-72.56	-13.00	-59.56	Peak				
3	793.0281	-81.36	10.26	-71.10	-13.00	-58.10	Peak				

# LTE Band 2/15 MHz \_Highest Channel

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	53.3794	-72.10	-2.79	-74.89	-13.00	-61.89	Peak
2	55.6782	-73.19	-3.19	-76.38	-13.00	-63.38	Peak
3	862.8016	-81.04	11.02	-70.02	-13.00	-57.02	Peak

Vertica	ı						
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	527.5707	-80.07	6.15	-73.92	-13.00	-60.92	Peak
2	628.8936	-80.70	8.09	-72.61	-13.00	-59.61	Peak
3	965.4742	-81.97	12.45	-69.52	-13.00	-56.52	Peak



LTE Band 2/20 MHz \_Lowest Channel

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No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	55.2883	-74.21	-3.13	-77.34	-13.00	-64.34	Peak
2	101.8932	-78.38	-1.43	-79.81	-13.00	-66.81	Peak
3	787.4749	-82.01	10.17	-71.84	-13.00	-58.84	Peak

Vertica	Vertical										
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark				
1	304.9548	-81.43	2.67	-78.76	-13.00	-65.76	Peak				
2	495.2379	-80.71	5.75	-74.96	-13.00	-61.96	Peak				
3	728.8972	-81.41	9.24	-72.17	-13.00	-59.17	Peak				

### LTE Band 2/20 MHz Middle Channel

	No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
I	1	31.7348	-80.40	5.72	-74.68	-13.00	-61.68	Peak
	2	554.1708	-80.34	6.22	-74.12	-13.00	-61.12	Peak
	3	679.4346	-81.41	8.79	-72.62	-13.00	-59.62	Peak

Vertica							
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	535.0377	-80.59	6.24	-74.35	-13.00	-61.35	Peak
2	693.9101	-81.52	8.94	-72.58	-13.00	-59.58	Peak
3	893.6557	-81.82	11.50	-70.32	-13.00	-57.32	Peak



LTE Band 2/ 20 MHz \_Highest Channel

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No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	53.7559	-74.17	-2.89	-77.06	-13.00	-64.06	Peak
2	765.6482	-82.12	9.99	-72.13	-13.00	-59.13	Peak
3	938.7139	-82.07	12.34	-69.73	-13.00	-56.73	Peak

Vertica	Vertical										
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark				
1	79.6765	-76.42	-2.62	-79.04	-13.00	-66.04	Peak				
2	611.4623	-79.80	7.87	-71.93	-13.00	-58.93	Peak				
3	787.4749	-80.44	10.17	-70.27	-13.00	-57.27	Peak				

### LTE Band 4/ 1.4 MHz Lowest Channel

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	31.2919	-79.09	6.02	-73.07	-13.00	-60.07	Peak
2	55.2883	-72.84	-3.13	-75.97	-13.00	-62.97	Peak
3	899.9576	-80.46	11.77	-68.69	-13.00	-55.69	Peak

Vertica	I						
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	54.1349	-72.36	-2.97	-75.33	-13.00	-62.33	Peak
2	412.5395	-79.11	4.67	-74.44	-13.00	-61.44	Peak
3	899.9576	-80.46	11.77	-68.69	-13.00	-55.69	Peak



LTE Band 4/ 1.4 MHz \_Middle Channel

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No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	51.8999	-76.89	-2.47	-79.36	-13.00	-66.36	Peak
2	82.5257	-77.25	-2.53	-79.78	-13.00	-66.78	Peak
3	781.9606	-80.79	10.11	-70.68	-13.00	-57.68	Peak

Vertica	Vertical										
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark				
1	53.3794	-73.50	-2.79	-76.29	-13.00	-63.29	Peak				
2	679.4346	-80.10	8.79	-71.31	-13.00	-58.31	Peak				
3	938.7139	-81.44	12.34	-69.10	-13.00	-56.10	Peak				

# LTE Band 4/ 1.4 MHz \_Highest Channel

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	82.5257	-75.37	-2.53	-77.90	-13.00	-64.90	Peak
2	765.6482	-81.42	9.99	-71.43	-13.00	-58.43	Peak
3	925.6132	-81.88	12.25	-69.63	-13.00	-56.63	Peak

Vertica	ı						
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	54.1349	-73.03	-2.97	-76.00	-13.00	-63.00	Peak
2	749.6761	-81.37	9.57	-71.80	-13.00	-58.80	Peak
3	952.0001	-80.99	12.15	-68.84	-13.00	-55.84	Peak



LTE Band 4/3 MHz \_Lowest Channel

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No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	50.8172	-76.43	-2.52	-78.95	-13.00	-65.95	Peak
2	723.7930	-80.71	9.06	-71.65	-13.00	-58.65	Peak
3	833.0127	-80.89	10.46	-70.43	-13.00	-57.43	Peak

Vertica	Vertical										
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark				
1	40.0173	-77.85	0.55	-77.30	-13.00	-64.30	Peak				
2	646.8217	-81.04	8.05	-72.99	-13.00	-59.99	Peak				
3	844.8028	-82.06	10.69	-71.37	-13.00	-58.37	Peak				

### LTE Band 4/3 MHz Middle Channel

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	33.3349	-78.56	4.33	-74.23	-13.00	-61.23	Peak
2	81.9478	-76.39	-2.55	-78.94	-13.00	-65.94	Peak
3	912.6953	-82.10	12.07	-70.03	-13.00	-57.03	Peak

Vertica							
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	54.1349	-73.22	-2.97	-76.19	-13.00	-63.19	Peak
2	713.6917	-80.35	8.95	-71.40	-13.00	-58.40	Peak
3	912.6953	-81.80	12.07	-69.73	-13.00	-56.73	Peak



LTE Band 4/3 MHz \_Highest Channel

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No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	82.5257	-75.77	-2.53	-78.30	-13.00	-65.30	Peak
2	821.3871	-80.97	10.27	-70.70	-13.00	-57.70	Peak
3	972.2827	-81.58	12.44	-69.14	-13.00	-56.14	Peak

Vertica	Vertical										
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark				
1	55.2883	-72.75	-3.13	-75.88	-13.00	-62.88	Peak				
2	415.4486	-79.74	4.71	-75.03	-13.00	-62.03	Peak				
3	919.1315	-80.98	12.28	-68.70	-13.00	-55.70	Peak				

### LTE Band 4/5 MHz Lowest Channel

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	53.7559	-73.73	-2.89	-76.62	-13.00	-63.62	Peak
2	69.2297	-74.77	-2.95	-77.72	-13.00	-64.72	Peak
3	693.9101	-81.42	8.94	-72.48	-13.00	-59.48	Peak

Vertica	ı						
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	32.8697	-79.81	4.75	-75.06	-13.00	-62.06	Peak
2	433.3398	-81.70	5.11	-76.59	-13.00	-63.59	Peak
3	875.0132	-81.91	11.21	-70.70	-13.00	-57.70	Peak



LTE Band 4/5 MHz \_Middle Channel

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No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark				
1	51.8999	-77.25	-2.47	-79.72	-13.00	-66.72	Peak				
2	81.9478	-77.23	-2.55	-79.78	-13.00	-66.78	Peak				
3	669.9523	-80.66	8.49	-72.17	-13.00	-59.17	Peak				

Vertica	Vertical											
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark					
1	53.7559	-72.36	-2.89	-75.25	-13.00	-62.25	Peak					
2	669.9523	-80.81	8.49	-72.32	-13.00	-59.32	Peak					
3	804.2523	-80.83	10.28	-70.55	-13.00	-57.55	Peak					

# LTE Band 4/5 MHz \_Highest Channel

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	83.1077	-77.04	-2.51	-79.55	-13.00	-66.55	Peak
2	288.2840	-80.29	2.73	-77.56	-13.00	-64.56	Peak
3	698.8035	-81.10	9.10	-72.00	-13.00	-59.00	Peak

Vertica	ı						
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	53.7559	-72.82	-2.89	-75.71	-13.00	-62.71	Peak
2	615.7744	-80.51	7.93	-72.58	-13.00	-59.58	Peak
3	765.6482	-80.69	9.99	-70.70	-13.00	-57.70	Peak



LTE Band 4/10 MHz Lowest Channel

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No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	30.6392	-81.81	6.47	-75.34	-13.00	-62.34	Peak
2	54.1349	-75.17	-2.97	-78.14	-13.00	-65.14	Peak
3	958.7135	-82.31	12.44	-69.87	-13.00	-56.87	Peak

Vertica	Vertical											
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark					
1	54.1349	-73.62	-2.97	-76.59	-13.00	-63.59	Peak					
2	708.6941	-81.15	8.98	-72.17	-13.00	-59.17	Peak					
3	925.6132	-82.60	12.25	-70.35	-13.00	-57.35	Peak					

### LTE Band 4/ 10 MHz Middle Channel

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	52.6345	-77.36	-2.62	-79.98	-13.00	-66.98	Peak
2	81.9478	-75.59	-2.55	-78.14	-13.00	-65.14	Peak
3	406.7820	-80.06	4.66	-75.40	-13.00	-62.40	Peak

Vertica	ı						
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	54.1349	-72.72	-2.97	-75.69	-13.00	-62.69	Peak
2	703.7314	-81.13	9.07	-72.06	-13.00	-59.06	Peak
3	868.8859	-81.67	11.09	-70.58	-13.00	-57.58	Peak



LTE Band 4/ 10 MHz \_Highest Channel

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No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	530.8107	-80.79	6.27	-74.52	-13.00	-61.52	Peak
2	787.4749	-81.59	10.17	-71.42	-13.00	-58.42	Peak
3	925.6132	-82.05	12.25	-69.80	-13.00	-56.80	Peak

Vertica	Vertical										
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark				
1	54.1349	-73.77	-2.97	-76.74	-13.00	-63.74	Peak				
2	781.9606	-81.60	10.11	-71.49	-13.00	-58.49	Peak				
3	919.1315	-82.38	12.28	-70.10	-13.00	-57.10	Peak				

### LTE Band 4/15 MHz Lowest Channel

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	36.0139	-79.81	2.44	-77.37	-13.00	-64.37	Peak
2	82.5257	-77.77	-2.53	-80.30	-13.00	-67.30	Peak
3	965.4742	-82.12	12.45	-69.67	-13.00	-56.67	Peak

Vertica	ı						
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	54.1349	-73.39	-2.97	-76.36	-13.00	-63.36	Peak
2	594.5143	-80.57	7.35	-73.22	-13.00	-60.22	Peak
3	925.6132	-82.54	12.25	-70.29	-13.00	-57.29	Peak



LTE Band 4/15 MHz \_Middle Channel

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No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	53.3794	-76.04	-2.79	-78.83	-13.00	-65.83	Peak
2	765.6482	-81.37	9.99	-71.38	-13.00	-58.38	Peak
3	881.1838	-81.86	11.32	-70.54	-13.00	-57.54	Peak

Vertica	Vertical										
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark				
1	54.1349	-72.04	-2.97	-75.01	-13.00	-62.01	Peak				
2	754.9628	-80.96	9.78	-71.18	-13.00	-58.18	Peak				
3	919.1315	-82.69	12.28	-70.41	-13.00	-57.41	Peak				

# LTE Band 4/ 15 MHz \_Highest Channel

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	31.7348	-80.38	5.72	-74.66	-13.00	-61.66	Peak
2	81.9478	-77.52	-2.55	-80.07	-13.00	-67.07	Peak
3	912.6953	-81.85	12.07	-69.78	-13.00	-56.78	Peak

Vertica	ı						
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	55.6782	-72.87	-3.19	-76.06	-13.00	-63.06	Peak
2	781.9606	-80.82	10.11	-70.71	-13.00	-57.71	Peak
3	958.7135	-81.05	12.44	-68.61	-13.00	-55.61	Peak



LTE Band 4/ 20 MHz \_Lowest Channel

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No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	52.6345	-76.52	-2.62	-79.14	-13.00	-66.14	Peak
2	78.5645	-76.86	-2.60	-79.46	-13.00	-66.46	Peak
3	919.1315	-82.15	12.28	-69.87	-13.00	-56.87	Peak

Vertica	Vertical										
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark				
1	53.7559	-73.45	-2.89	-76.34	-13.00	-63.34	Peak				
2	594.5143	-80.67	7.35	-73.32	-13.00	-60.32	Peak				
3	875.0132	-81.67	11.21	-70.46	-13.00	-57.46	Peak				

### LTE Band 4/ 20 MHz Middle Channel

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	78.5645	-76.98	-2.60	-79.58	-13.00	-66.58	Peak
2	495.2379	-80.62	5.75	-74.87	-13.00	-61.87	Peak
3	744.4265	-80.41	9.41	-71.00	-13.00	-58.00	Peak

Vertica	ı						
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	55.6782	-72.08	-3.19	-75.27	-13.00	-62.27	Peak
2	578.0359	-80.87	6.83	-74.04	-13.00	-61.04	Peak
3	787.4749	-81.20	10.17	-71.03	-13.00	-58.03	Peak



LTE Band 4/ 20 MHz \_Highest Channel

### Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	52.6345	-77.21	-2.62	-79.83	-13.00	-66.83	Peak
2	81.9478	-77.27	-2.55	-79.82	-13.00	-66.82	Peak
3	925.6132	-82.16	12.25	-69.91	-13.00	-56.91	Peak

Vertica	Vertical										
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark				
1	51.8999	-73.02	-2.47	-75.49	-13.00	-62.49	Peak				
2	646.8217	-80.59	8.05	-72.54	-13.00	-59.54	Peak				
3	850.7603	-80.57	10.78	-69.79	-13.00	-56.79	Peak				

### LTE Band 5/ 1.4 MHz Lowest Channel

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	95.6485	-86.64	27.25	-59.39	-13.00	-46.39	Peak
2	535.0377	-89.26	35.53	-53.73	-13.00	-40.73	Peak
3	633.3285	-87.53	38.63	-48.90	-13.00	-35.90	Peak

Vertica							
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	95.6485	-86.82	27.25	-59.57	-13.00	-46.57	Peak
2	550.2902	-88.42	35.46	-52.96	-13.00	-39.96	Peak
3	633.3285	-88.19	37.34	-50.85	-13.00	-37.85	Peak



LTE Band 5/ 1.4 MHz \_Middle Channel

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No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	403.9335	-88.45	33.35	-55.10	-13.00	-42.10	Peak
2	637.7947	-88.37	37.30	-51.07	-13.00	-38.07	Peak
3	798.6205	-87.87	39.57	-48.30	-13.00	-35.30	Peak

Vertica	Vertical									
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark			
1	523.8763	-88.87	35.37	-53.50	-13.00	-40.50	Peak			
2	660.6025	-88.00	37.63	-50.37	-13.00	-37.37	Peak			
3	787.4749	-86.97	39.37	-47.60	-13.00	-34.60	Peak			

# LTE Band 5/ 1.4 MHz \_Highest Channel

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	502.2473	-88.61	35.15	-53.46	-13.00	-40.46	Peak
2	646.8217	-88.32	37.30	-51.02	-13.00	-38.02	Peak
3	804.2523	-87.79	39.47	-48.32	-13.00	-35.32	Peak

Vertica	ıl							
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark	
1	546.4368	-88.72	35.50	-53.22	-13.00	-40.22	Peak	
2	637.7947	-87.99	37.30	-50.69	-13.00	-37.69	Peak	
3	739.2136	-87.65	38.49	-49.16	-13.00	-36.16	Peak	



LTE Band 5/3 MHz \_Lowest Channel

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No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	42.9305	-85.26	28.25	-57.01	-13.00	-44.01	Peak
2	95.6485	-87.07	27.25	-59.82	-13.00	-46.82	Peak
3	148.9174	-86.85	27.46	-59.39	-13.00	-46.39	Peak

Vertical									
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark		
1	91.6996	-86.16	26.94	-59.22	-13.00	-46.22	Peak		
2	252.2523	-88.30	29.67	-58.63	-13.00	-45.63	Peak		
3	523.8763	-88.65	35.37	-53.28	-13.00	-40.28	Peak		

### LTE Band 5/3 MHz Middle Channel

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	502.2473	-87.52	35.15	-52.37	-13.00	-39.37	Peak
2	655.9766	-88.67	37.50	-51.17	-13.00	-38.17	Peak
3	728.8972	-87.66	38.46	-49.20	-13.00	-36.20	Peak

Vertica	ı						
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	602.9288	-89.04	36.96	-52.08	-13.00	-39.08	Peak
2	693.9101	-88.51	38.18	-50.33	-13.00	-37.33	Peak
3	781.9606	-87.27	39.32	-47.95	-13.00	-34.95	Peak



LTE Band 5/3 MHz \_Highest Channel

### Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	488.3264	-88.33	34.77	-53.56	-13.00	-40.56	Peak
2	598.7067	-89.37	36.83	-52.54	-13.00	-39.54	Peak
3	698.8035	-89.01	38.33	-50.68	-13.00	-37.68	Peak

Vertical								
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark	
1	542.6104	-88.82	35.54	-53.28	-13.00	-40.28	Peak	
2	642.2924	-88.76	37.29	-51.47	-13.00	-38.47	Peak	
3	765.6482	-88.13	39.20	-48.93	-13.00	-35.93	Peak	

### LTE Band 5/5 MHz Lowest Channel

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	91.6996	-86.28	26.94	-59.34	-13.00	-46.34	Peak
2	550.2902	-88.55	35.46	-53.09	-13.00	-40.09	Peak
3	651.3831	-87.70	37.35	-50.35	-13.00	-37.35	Peak

Vertica							
No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	350.9722	-88.34	32.31	-56.03	-13.00	-43.03	Peak
2	542.6104	-88.69	35.54	-53.15	-13.00	-40.15	Peak
3	760.2867	-88.02	39.20	-48.82	-13.00	-35.82	Peak