

Report Number: F690501/RF-RTL011907-1 Page: 121 236

5. Peak-Average Ratio

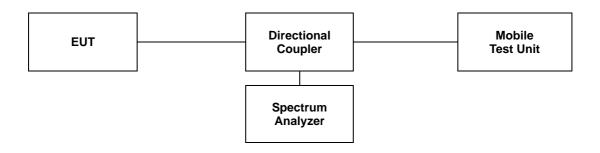
5.1. Limit

- §22.913(d) Measurement of the ERP of Cellular base transmitters and repeaters must be made using an average power measurement technique. The peak-to-average ratio (PAR) of the transmission must not exceed 13 dB.
- §24.232(d), power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (e) of this section. In both instances, equipment employed must be authorized in accordance with the provisions of §24.51. 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.
- §27.50(d)(5), power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (d)(6) of this section. 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.

5.2. Test Procedure

The test follows section 5.7.1 of FCC KDB Publication 971168 D01 v02r02.

- 1. Refer to the instrument's analyzer instruction manual for details on how to use the power statistics/CCDF
- 2. Set resolution/measurement bandwidth ≥ signal's occupied bandwidth.
- 3. Set the number of counts to a value that stabilizes the measured CCDF curve.
- 4. Set the measurement interval as follows:
 - a) For continuous transmissions, set to 1 ms.
- b) For burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize and set the measurement interval to a time that is less than or equal to the burst duration.
- 5. Record the maximum PAPR level associated with a probability of 0.1 %.





Report Number: F690501/RF-RTL011907-1 Page: 122 of 236

5.3 Test Results

Ambient temperature : **(23** ± **1)** ℃ Relative humidity : 47 % R.H.

Band	Mode	Frequency (艦)	PAR (dB)
2 (1.4 州地)	QPSK	1 850.7	4.75
		1 880.0	4.96
		1 909.3	5.30
	QPSK	1 851.5	4.52
2 (3 量)		1 880.0	4.84
		1 908.5	5.01
	QPSK	1 852.5	4.64
2 (5 吨)		1 880.0	4.93
		1 907.5	5.01
	QPSK	1 855.0	4.70
2 (10 吨)		1 880.0	4.87
		1 905.0	4.93
2 (15 Mb)	QPSK	1 857.5	5.10
		1 880.0	5.10
		1 902.5	5.01
2 (20 Mz)	QPSK	1 860.0	5.04
		1 880.0	4.78
		1 900.0	4.75



Report Number: F690501/RF-RTL011907-1 Page: 123 of 236

Band	Mode	Frequency (Mb)	PAR (dB)
		1 710.7	5.16
4 (1.4 贴)	QPSK	1 732.5	4.78
		1 754.3	4.64
	QPSK	1 711.5	4.78
4 (3 MHz)		1 732.5	4.75
		1 753.5	4.72
4 (5 Mb)	QPSK	1 712.5	4.87
		1 732.5	4.67
		1 752.5	4.70
4 (10 Mb)	QPSK	1 715.0	4.84
		1 732.5	4.61
		1 750.0	4.72
4 (15 Mb)	QPSK	1 717.5	5.07
		1 732.5	4.93
		1 747.5	5.04
	QPSK	1 720.0	4.70
4 (20 Mb)		1 732.5	4.70
		1 745.0	4.72

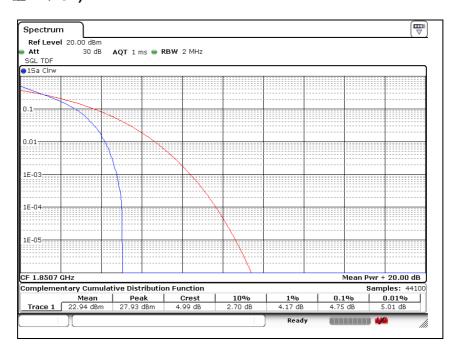
Band	Mode	Frequency (쌘)	PAR (dB)
5 (1.4 Mb)	QPSK	824.7	4.38
		836.5	4.46
		848.3	4.81
5 (3 Mb)	QPSK	825.5	4.41
		836.5	4.55
		847.5	4.72
5 (5 Mb)	QPSK	826.5	4.55
		836.5	4.49
		846.5	4.75
5 (10 吨)	QPSK	829.0	4.70
		836.5	4.46
		844.0	4.72

Band	Mode	Frequency (쌘)	PAR (dB)
13 (5 吨)	QPSK	779.5	4.29
		782.0	4.26
		784.5	4.20
13 (10 M½)	QPSK	-	-
		782.0	4.38
		-	-

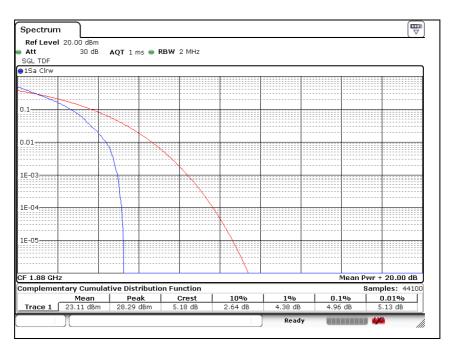


Report Number: F690501/RF-RTL011907-1 Page: 124 of 236

Low Channel



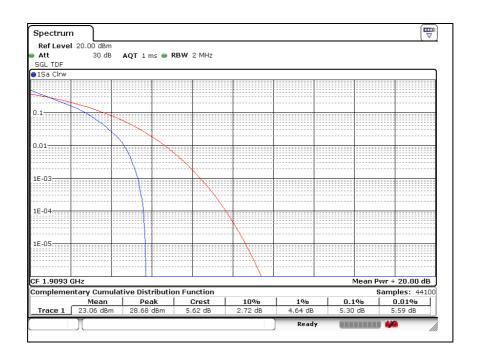
Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 125 236 of

High Channel

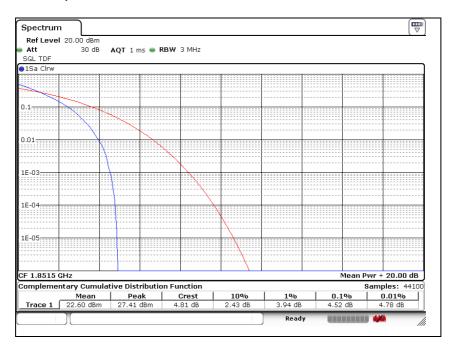




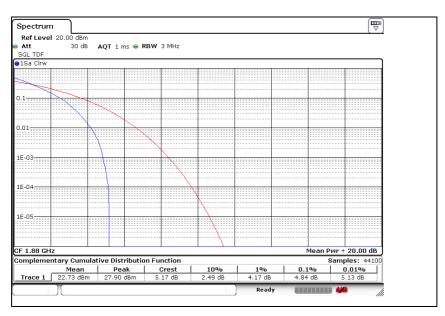
Report Number: F690501/RF-RTL011907-1 Page: 126 of 236

LTE band 2 (3 Mb - QPSK)

Low Channel



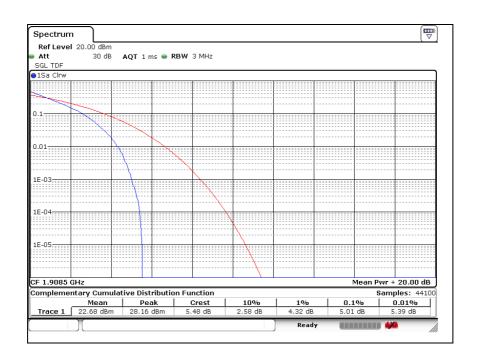
Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 127 236 of

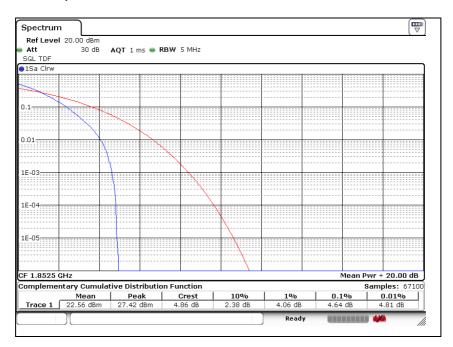
High Channel



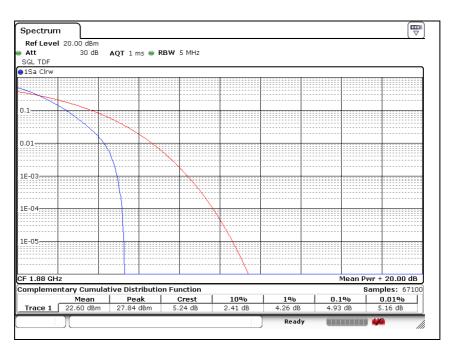


Report Number: F690501/RF-RTL011907-1 Page: 128 of 236

Low Channel



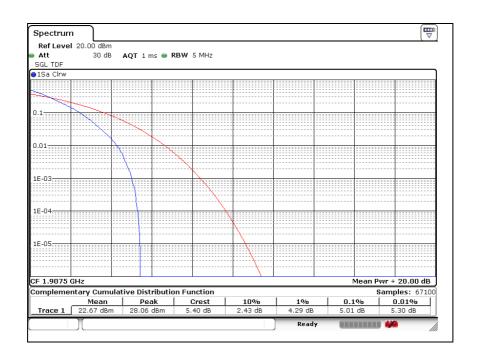
Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 129 of 236

High Channel

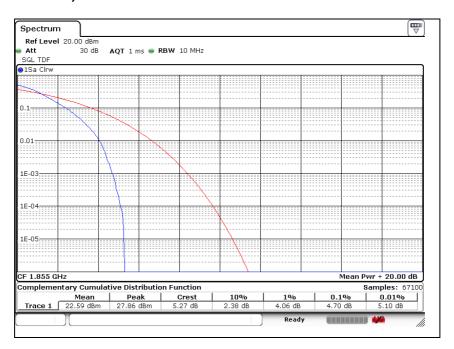




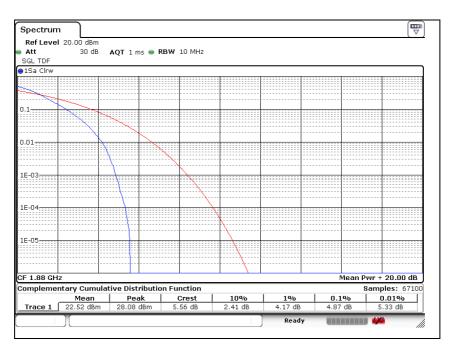
Report Number: F690501/RF-RTL011907-1 Page: 130 of 236

LTE band 2 (10 脏 - QPSK)

Low Channel



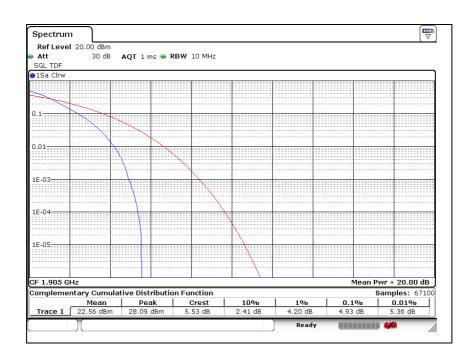
Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 131 236 of

High Channel

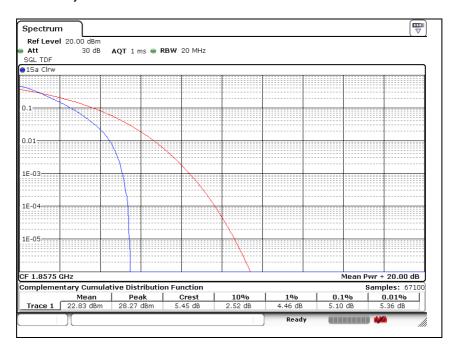




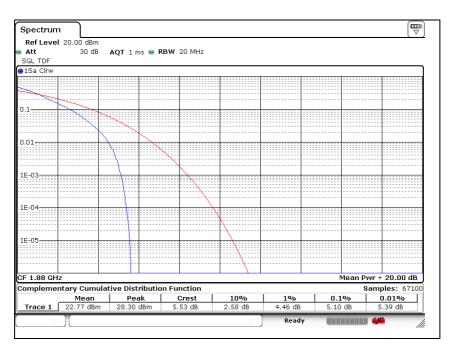
Report Number: F690501/RF-RTL011907-1 Page: 132 of 236

LTE band 2 (15 上 - QPSK)

Low Channel



Middle Channel



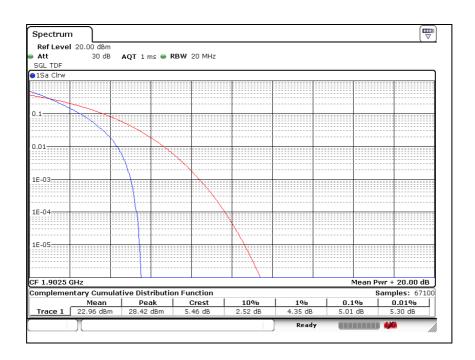
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RTT5041-19(2017.07.10)(0)



Report Number: F690501/RF-RTL011907-1 Page: 133 236 of

High Channel

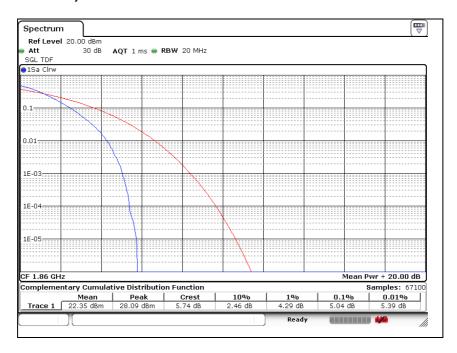




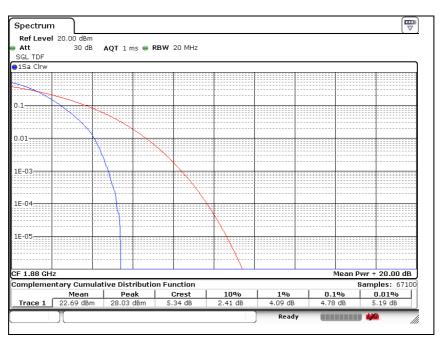
Report Number: F690501/RF-RTL011907-1 Page: 134 of 236

LTE band 2 (20 Mb - QPSK)

Low Channel



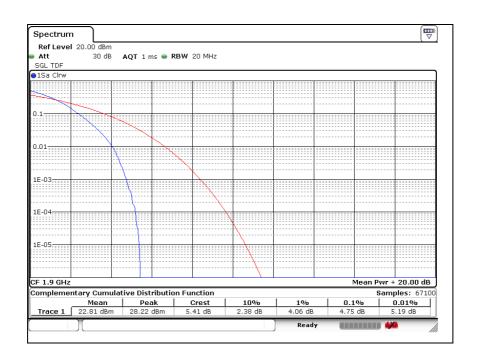
Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 135 236 of

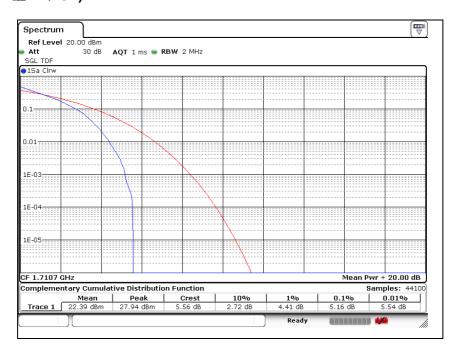
High Channel



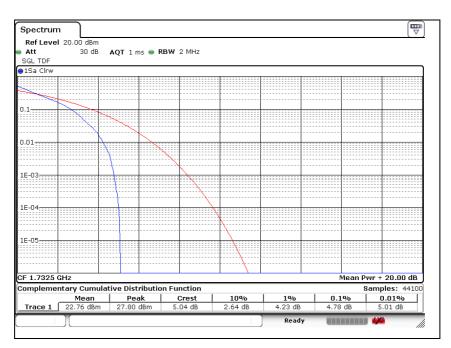


Report Number: F690501/RF-RTL011907-1 Page: 136 of 236

Low Channel



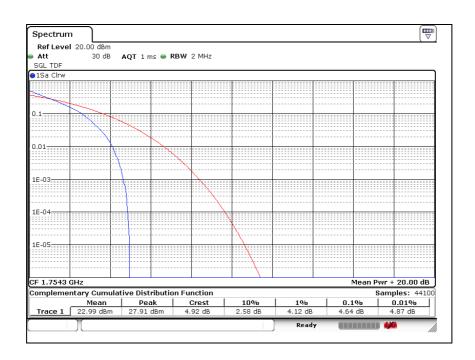
Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 137 236 of

High Channel

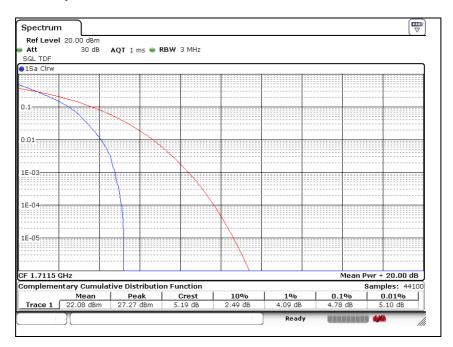




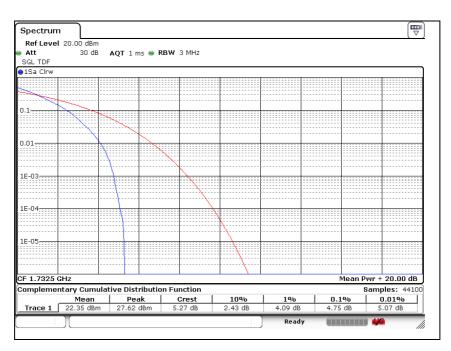
Report Number: F690501/RF-RTL011907-1 Page: 138 of 236

LTE band 4 (3 胍 - QPSK)

Low Channel



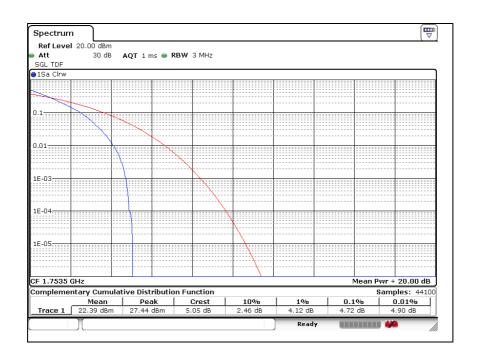
Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 139 236 of

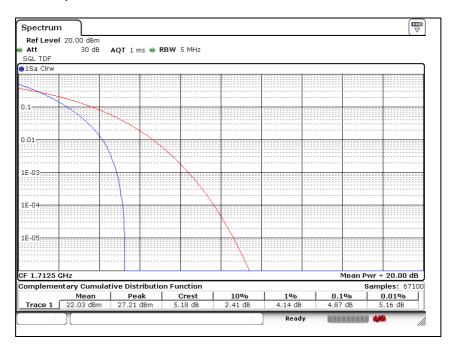
High Channel



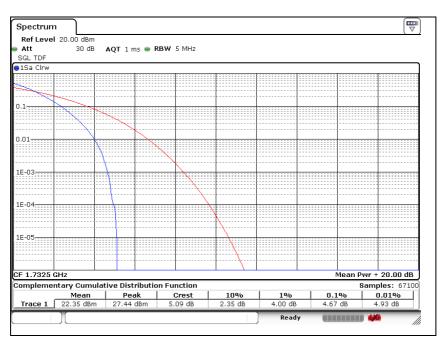


Report Number: F690501/RF-RTL011907-1 Page: 140 of 236

Low Channel



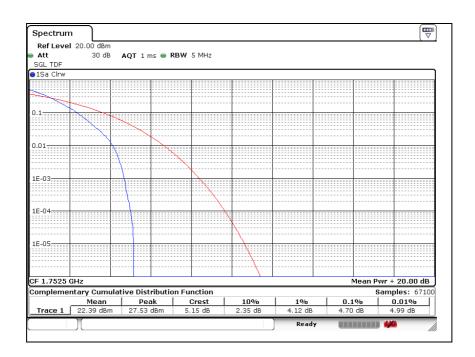
Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 141 of 236

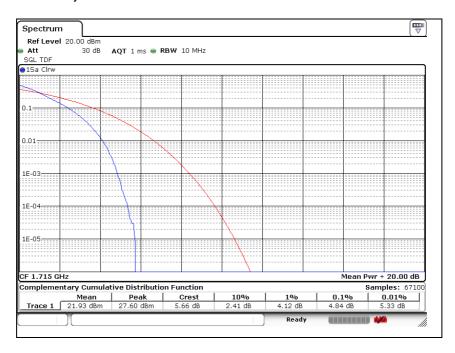
High Channel



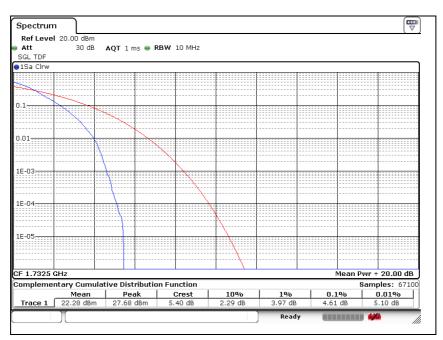


Report Number: F690501/RF-RTL011907-1 Page: 142 of 236

Low Channel



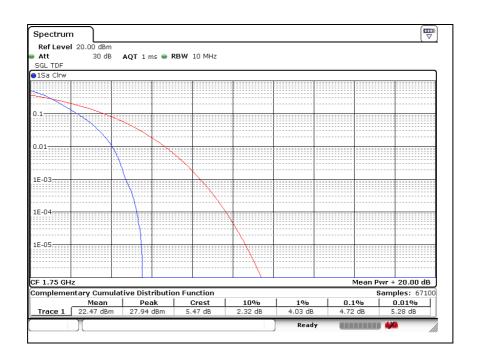
Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 143 236 of

High Channel

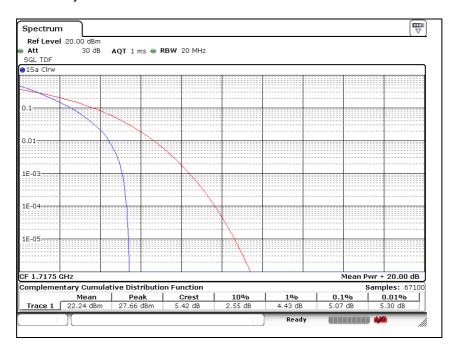




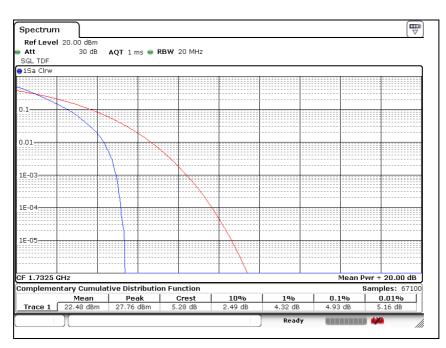
Report Number: F690501/RF-RTL011907-1 Page: 144 of 236

LTE band 4 (15 Mb - QPSK)

Low Channel



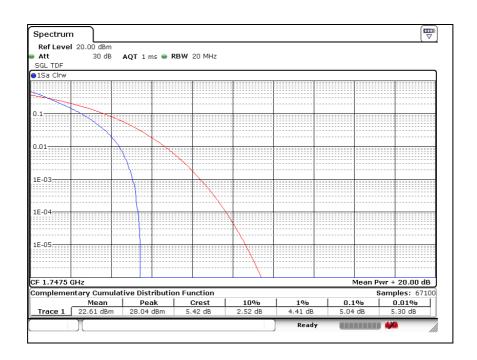
Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 145 236 of

High Channel

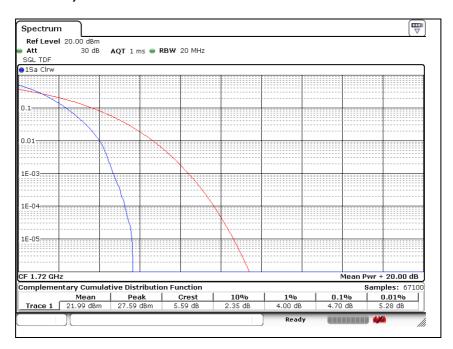




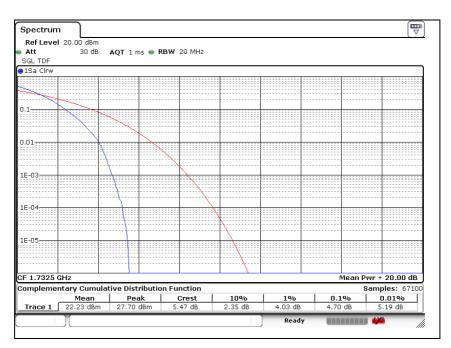
Report Number: F690501/RF-RTL011907-1 Page: 146 of 236

LTE band 4 (20 Mb - QPSK)

Low Channel



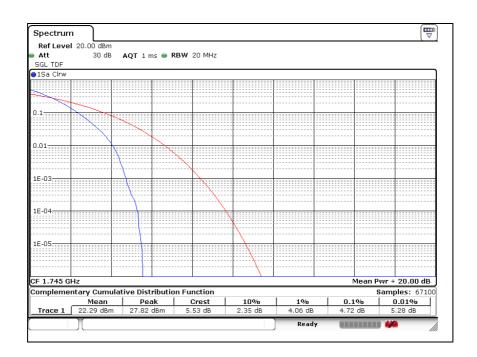
Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 147 236 of

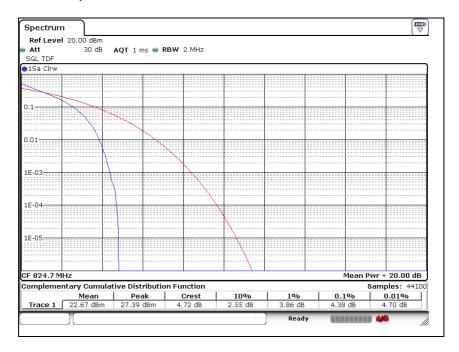
High Channel



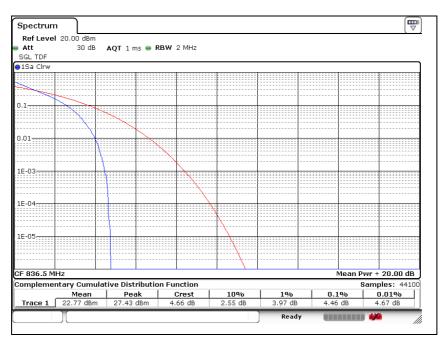


Report Number: F690501/RF-RTL011907-1 Page: 148 of 236

Low Channel



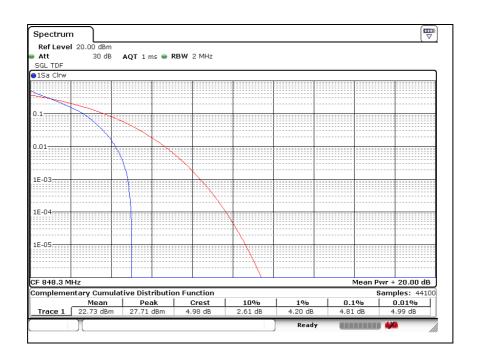
Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 149 236 of

High Channel

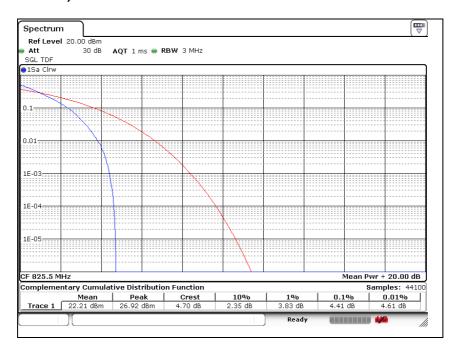




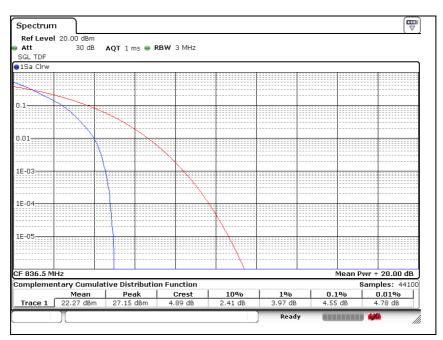
Report Number: F690501/RF-RTL011907-1 Page: 150 of 236

LTE band 5 (3 Mb - QPSK)

Low Channel



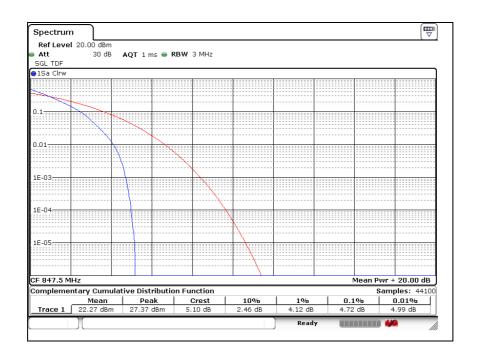
Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 151 236 of

High Channel

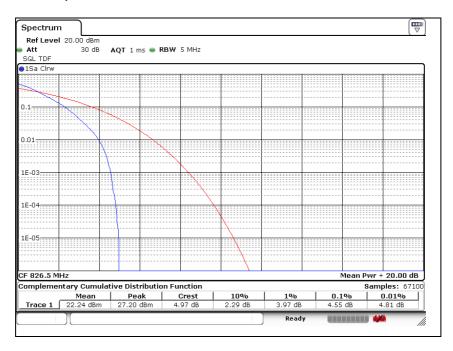




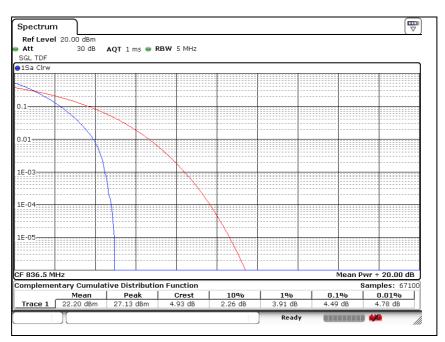
Report Number: F690501/RF-RTL011907-1 Page: 152 of 236

LTE band 5 (5 Mb - QPSK)

Low Channel



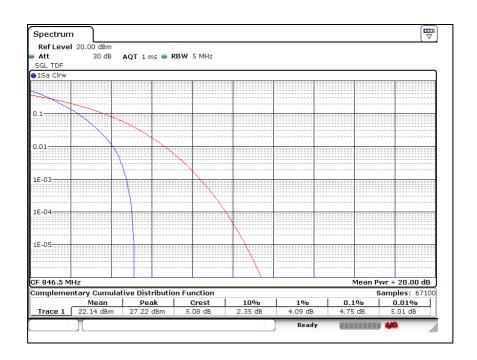
Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 153 236 of

High Channel

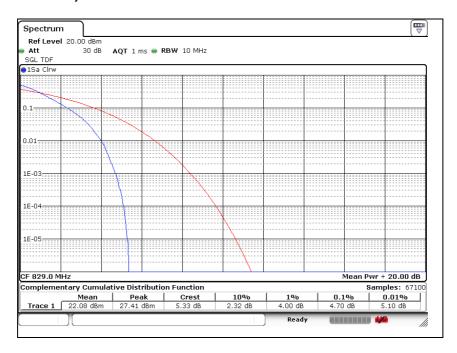




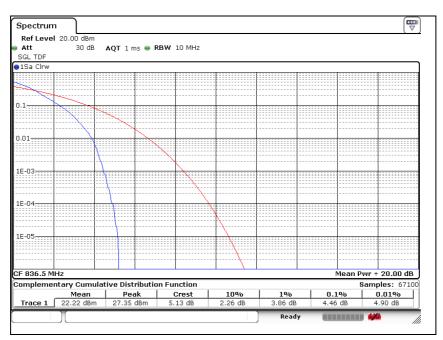
Report Number: F690501/RF-RTL011907-1 Page: 154 of 236

LTE band 5 (10 Mb - QPSK)

Low Channel



Middle Channel



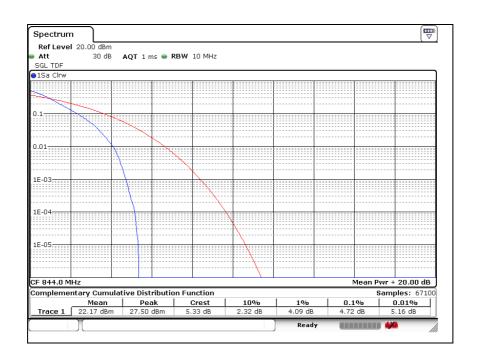
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RTT5041-19(2017.07.10)(0)



Report Number: F690501/RF-RTL011907-1 Page: 155 236 of

High Channel

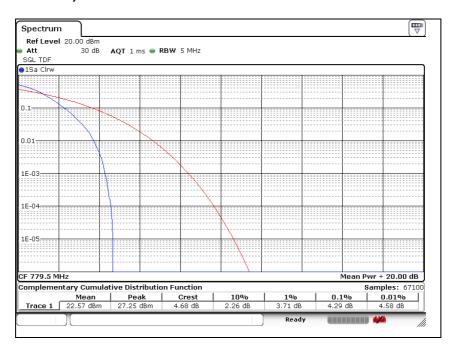




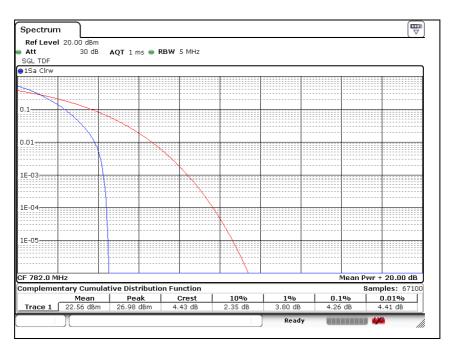
Report Number: F690501/RF-RTL011907-1 Page: 156 of 236

LTE band 13 (5 Mb - QPSK)

Low Channel



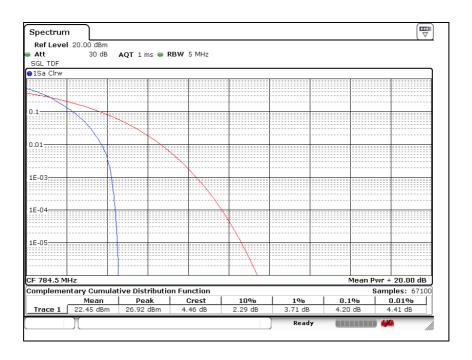
Middle Channel





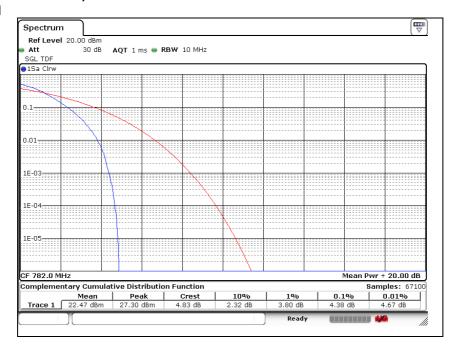
Report Number: F690501/RF-RTL011907-1 Page: 157 of 236

High Channel



LTE band 13 (10 \m - QPSK)

Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 158 236

6. Spurious Emissions at Antenna Terminal

6.1. Limit

- <u>\$22.917(a)</u>, 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 + 10log(P) dB.
- <u>\$24.238(a)</u>, 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.
- §27.53(c)(2), on any frequency outside the 776-788 № 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.
- §27.53(h)(1), for operations in the 1 695-1 710 Mb, 1 710-1 755 Mb, 1 755-1 780 Mb, 1 915-1 920 Mb, 1 995-2 000 Mb, 2 000-2 020 Mb, 2 110-2 155 Mb, 2 155-2 180 Mb, and 2 180-2 200 Mb 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 \log_{10} (P) dB.

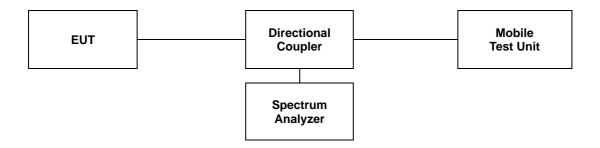


Report Number: F690501/RF-RTL011907-1 Page: 159 of 236

6.2. Test Procedure

The test follows section 6 of FCC KDB Publication 971168 D01 v02r02.

- 1. Start frequency was set to 30 Mb and stop frequency was set to at least 10* the fundamental frequency.
- 2. Detector = Peak.
- 3. Trace mode = Max hold.
- 4. Sweep time = Auto couple.
- 5. The trace was allowed to stabilize.
- 6. Please see notes below for RBW and VBW settings.
- 7. For plots showing conducted spurious emissions from 30 Mb to 20 Gb, all path loss of wide frequency range was investigated and compensated to spectrum analyzer as correction factor.



Notes;

Compliance with the applicable limits is based on the use of measurement instrumentation employing a resolution bandwidth of 100 $\,\mathrm{kl\!h}$ or greater for frequencies less than 1 $\,\mathrm{Gl\!h}$ and frequencies greater than 1 $\,\mathrm{Gl\!h}$. However, in the 1 $\,\mathrm{ll\!h}$ bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two point, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 $\,\mathrm{dB}$ below the transmitter power.



Report Number: F690501/RF-RTL011907-1 Page: 160 of 236

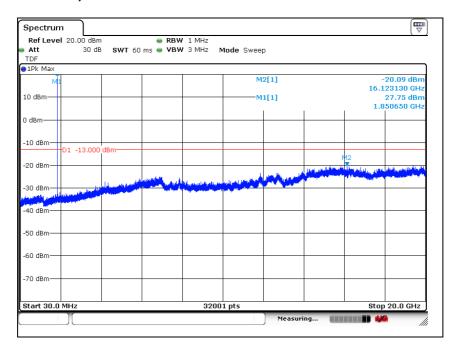
6.3. Test Results

Ambient temperature : **(23** ± **1)** ℃ % R.H. Relative humidity : 47

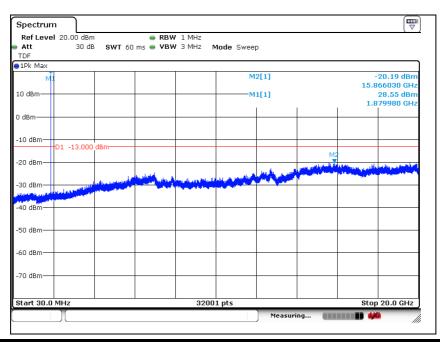
Please refer to the following plots.

LTE band 2 (1.4 Mb - QPSK)

Low Channel



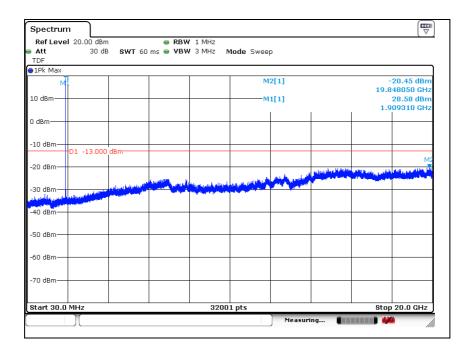
Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 161 236 of

High Channel

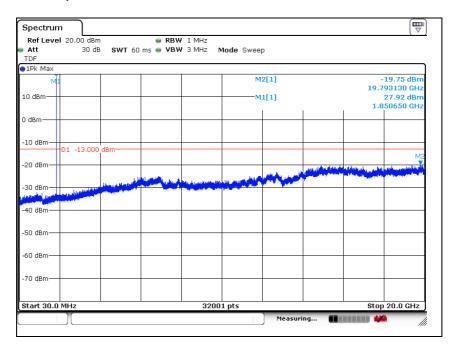




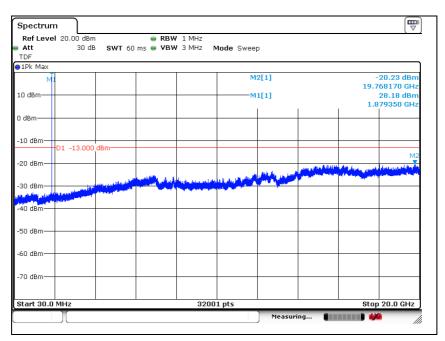
Report Number: F690501/RF-RTL011907-1 Page: 162 of 236

LTE band 2 (3 Mb - QPSK)

Low Channel



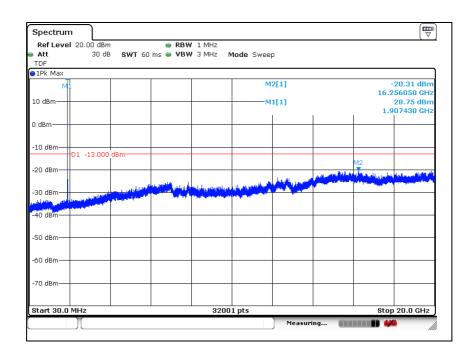
Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 163 236 of

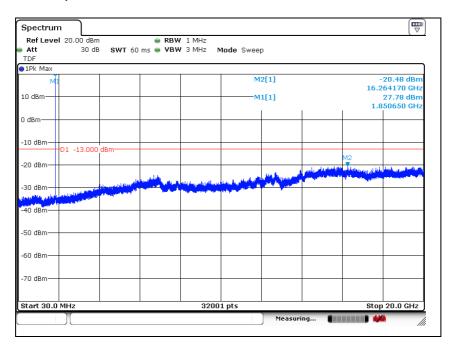
High Channel



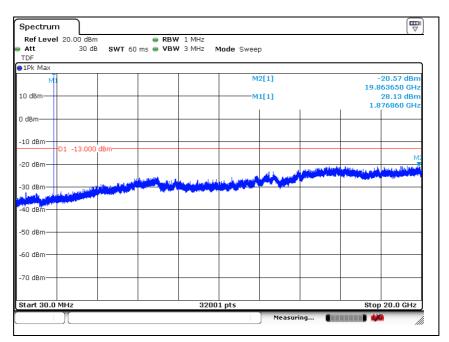


Report Number: F690501/RF-RTL011907-1 Page: 164 of 236

Low Channel



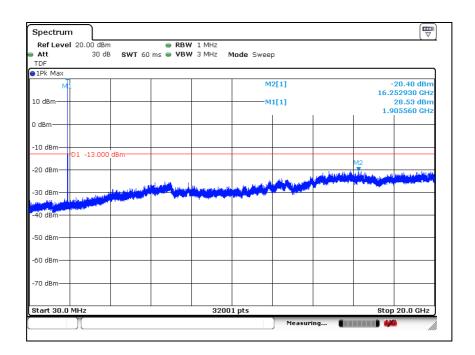
Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 165 236 of

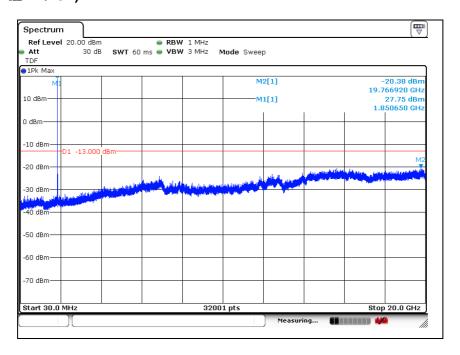
High Channel



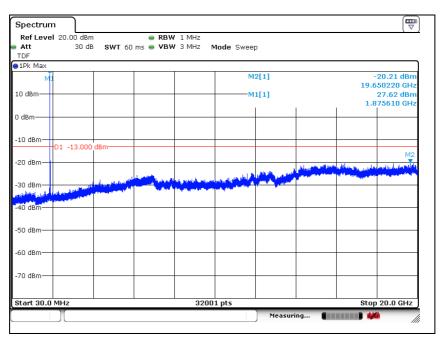


Report Number: F690501/RF-RTL011907-1 Page: 166 of 236

Low Channel



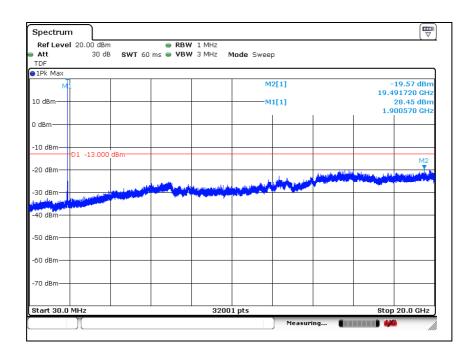
Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 167 236 of

High Channel

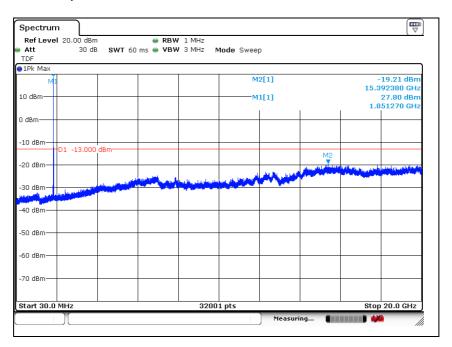




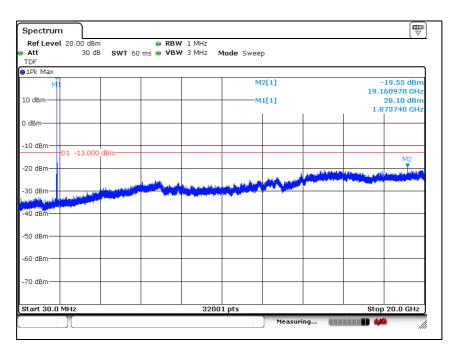
Report Number: F690501/RF-RTL011907-1 Page: 168 of 236

LTE band 2 (15 上 - QPSK)

Low Channel



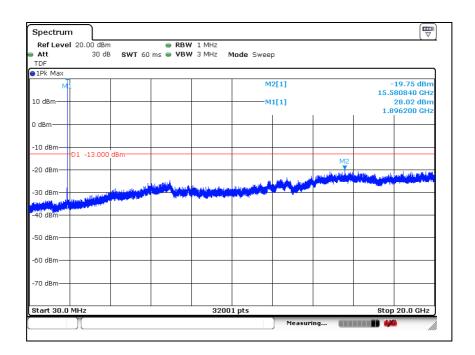
Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 169 236 of

High Channel

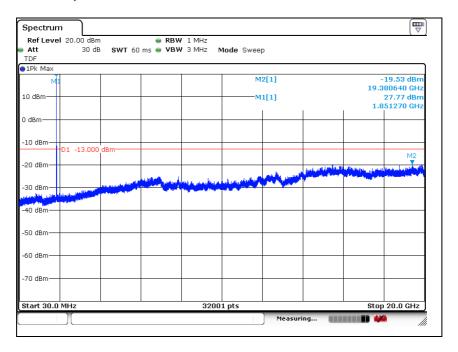




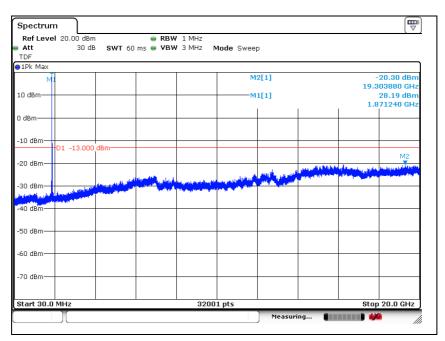
Report Number: F690501/RF-RTL011907-1 Page: 170 of 236

LTE band 2 (20 Mb - QPSK)

Low Channel



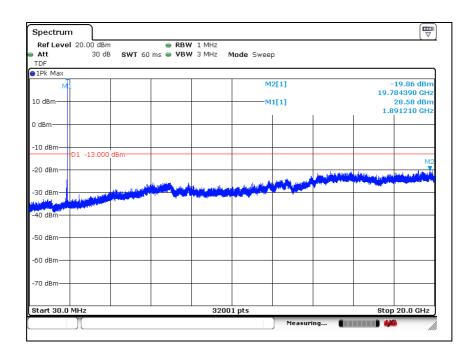
Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 171 236 of

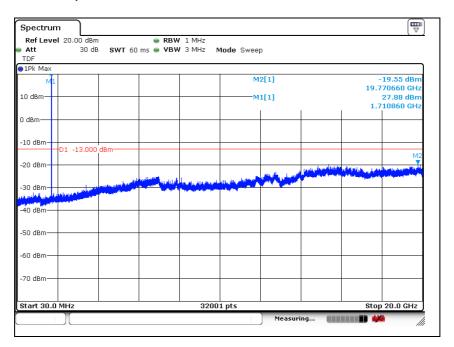
High Channel



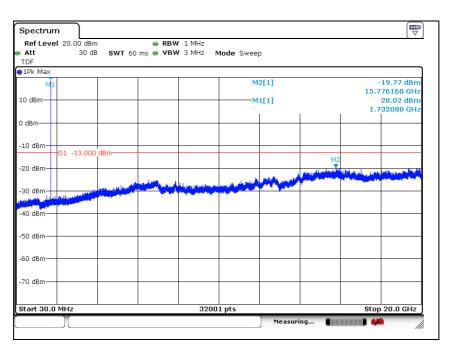


Report Number: F690501/RF-RTL011907-1 Page: 172 of 236

Low Channel



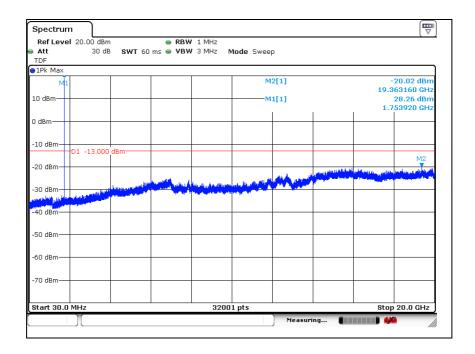
Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 173 236 of

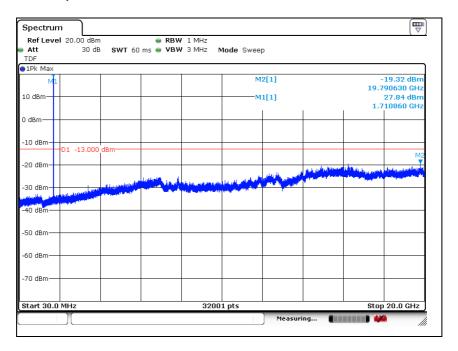
High Channel



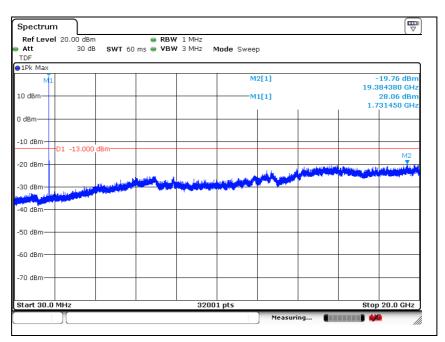


Report Number: F690501/RF-RTL011907-1 Page: 174 of 236

Low Channel



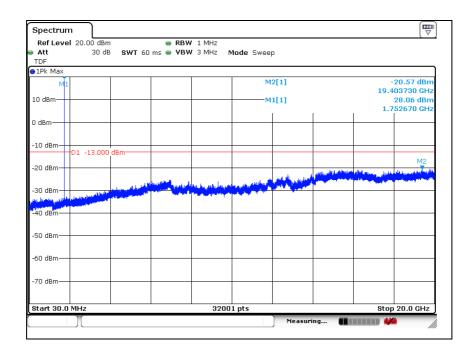
Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 175 236 of

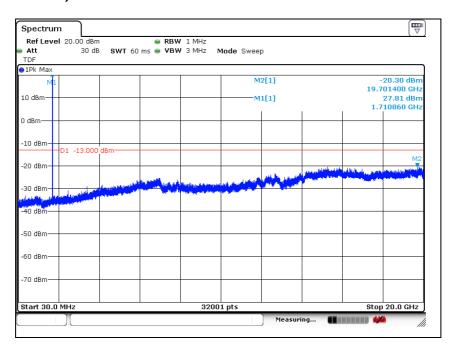
High Channel



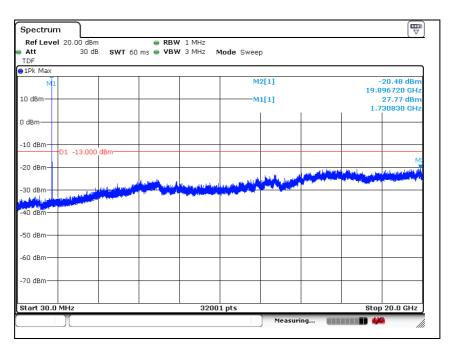


Report Number: F690501/RF-RTL011907-1 Page: 176 of 236

Low Channel



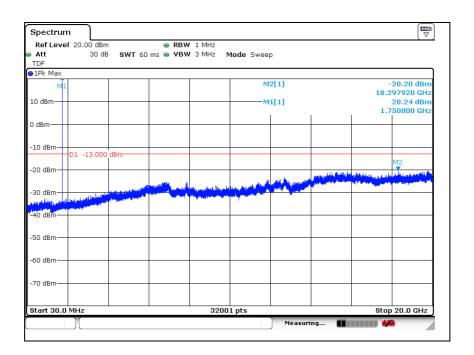
Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 177 236 of

High Channel

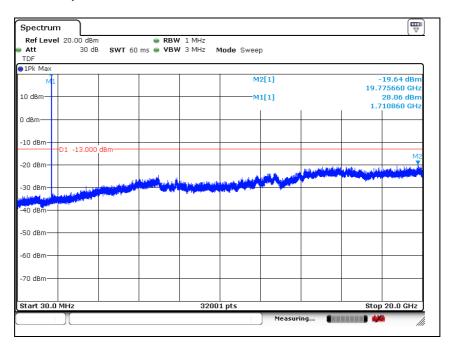




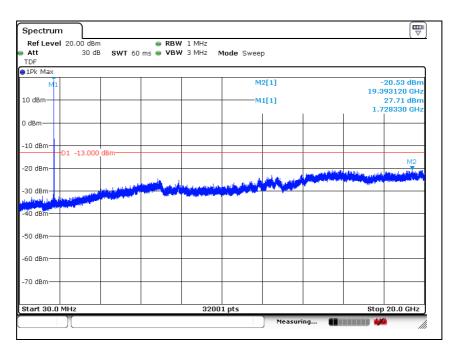
Report Number: F690501/RF-RTL011907-1 Page: 178 of 236

LTE band 4 (10 Mb - QPSK)

Low Channel



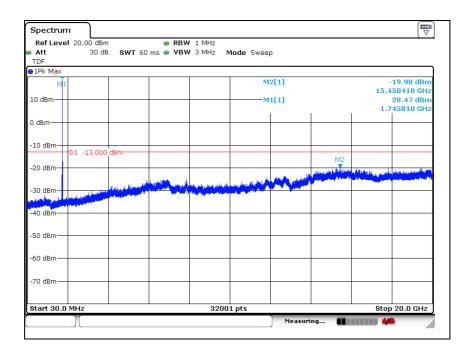
Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 179 236 of

High Channel

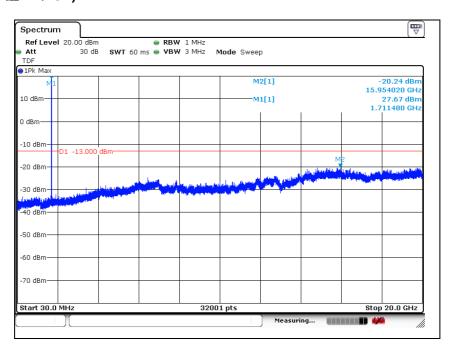




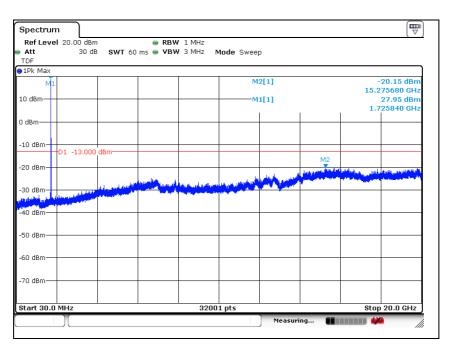
Report Number: F690501/RF-RTL011907-1 Page: 180 of 236

LTE band 4 (15 上 - QPSK)

Low Channel



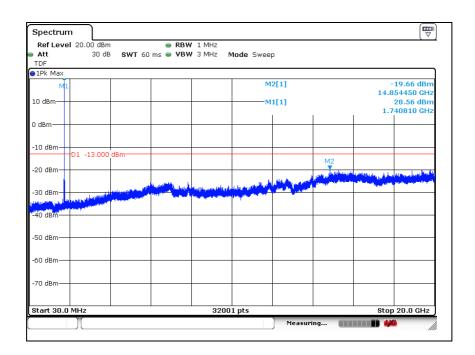
Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 181 236 of

High Channel

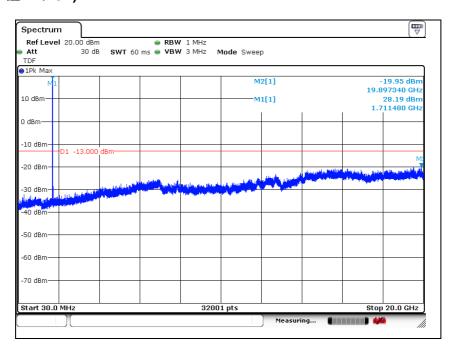




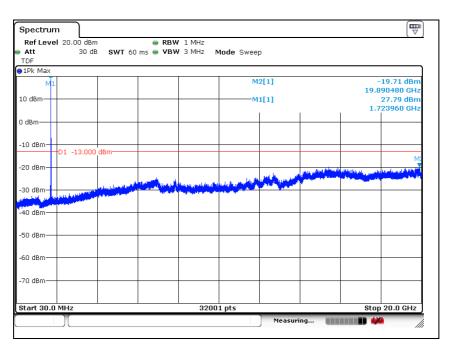
Report Number: F690501/RF-RTL011907-1 Page: 182 of 236

LTE band 4 (20 Mb - QPSK)

Low Channel



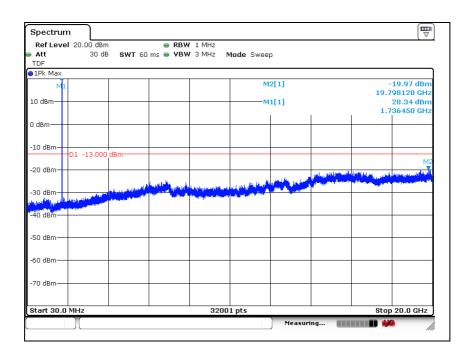
Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 183 236 of

High Channel

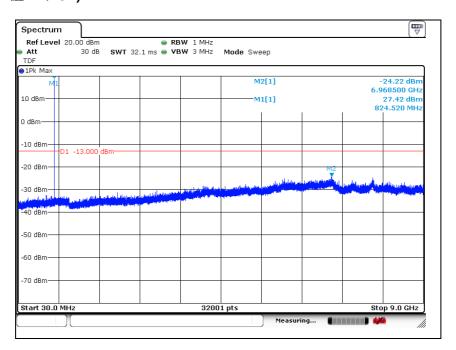




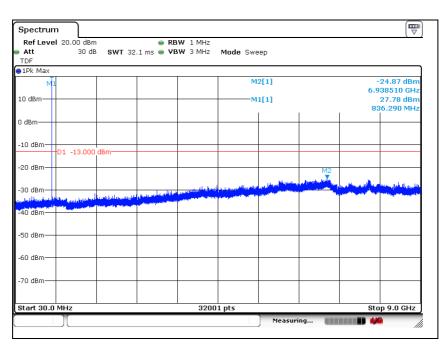
Report Number: F690501/RF-RTL011907-1 Page: 184 of 236

LTE band 5 (1.4 \https://doi.org/10.1016

Low Channel



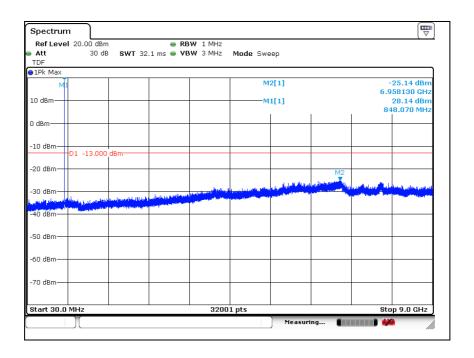
Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 185 236 of

High Channel

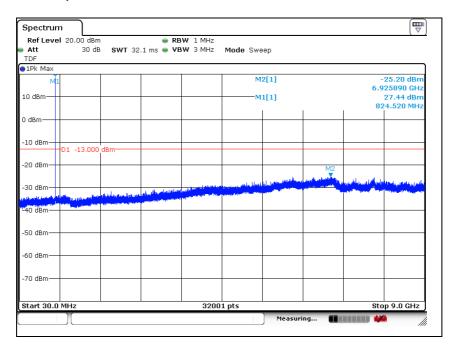




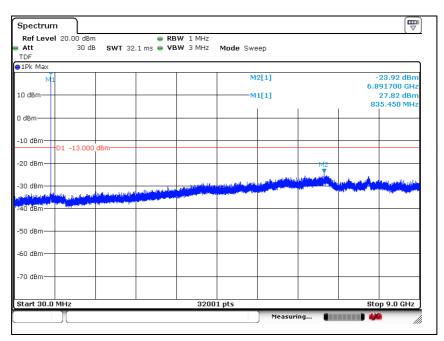
Report Number: F690501/RF-RTL011907-1 Page: 186 of 236

LTE band 5 (3 Mb - QPSK)

Low Channel



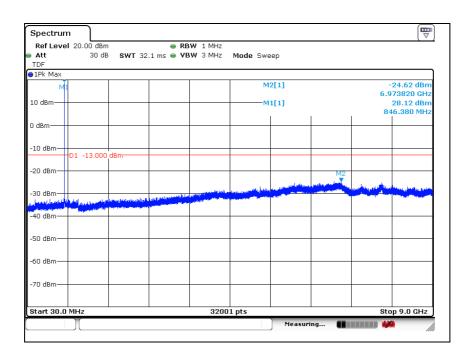
Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 187 236 of

High Channel

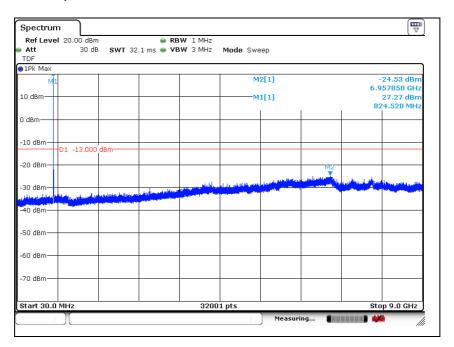




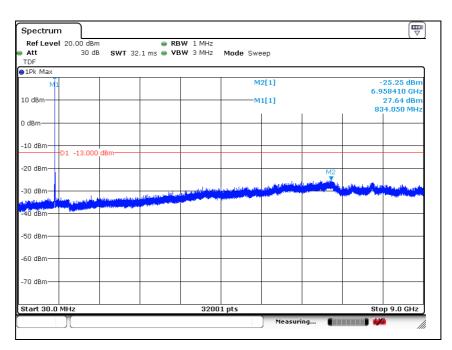
Report Number: F690501/RF-RTL011907-1 Page: 188 of 236

LTE band 5 (5 Mb - QPSK)

Low Channel



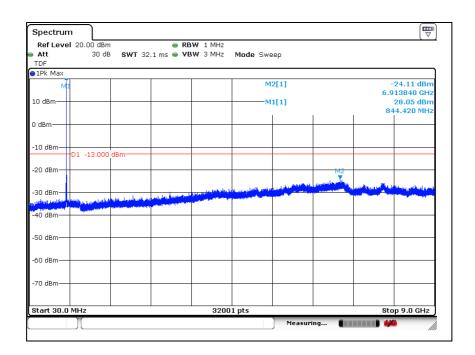
Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 189 236 of

High Channel

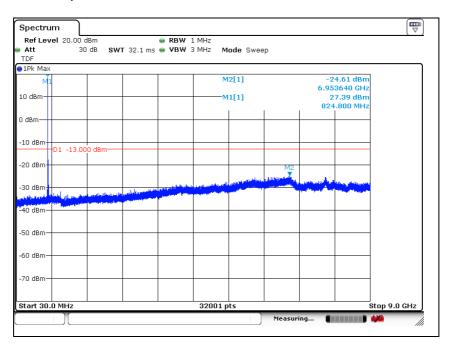




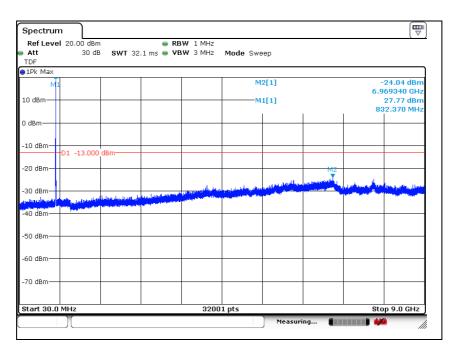
Report Number: F690501/RF-RTL011907-1 Page: 190 of 236

LTE band 5 (10 Mb - QPSK)

Low Channel



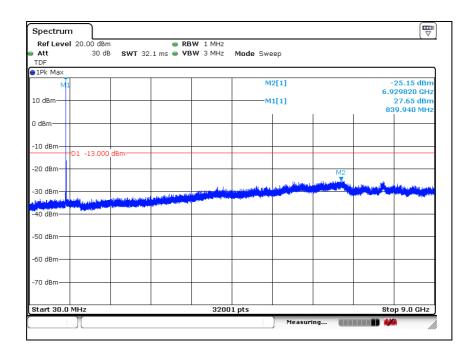
Middle Channel





Report Number: F690501/RF-RTL011907-1 Page: 191 236 of

High Channel

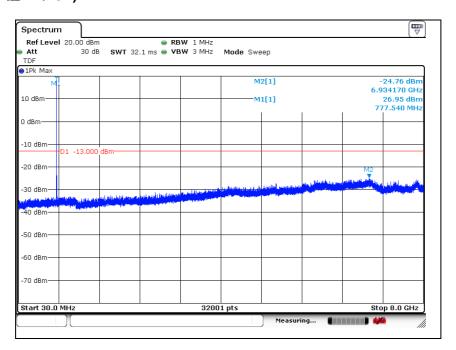




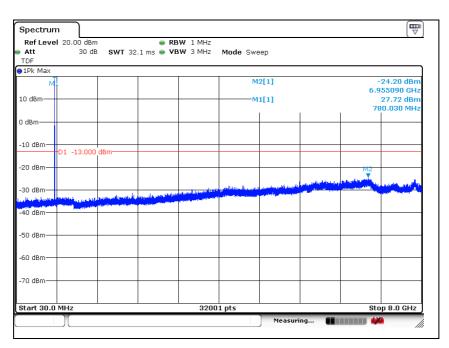
Report Number: F690501/RF-RTL011907-1 Page: 192 of 236

LTE band 13 (5 Mb - QPSK)

Low Channel



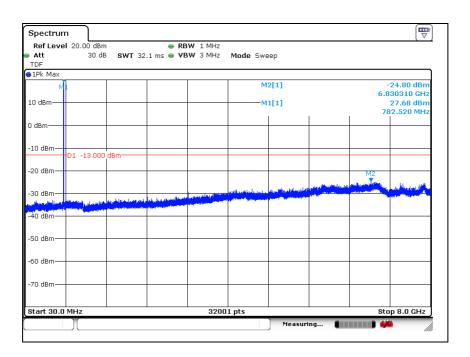
Middle Channel





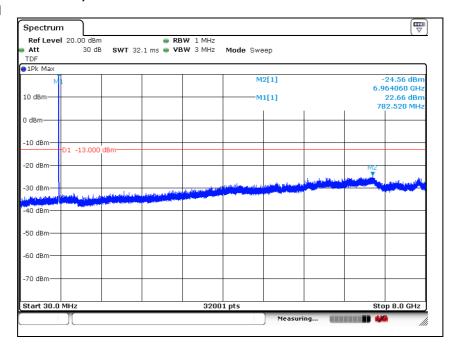
Report Number: F690501/RF-RTL011907-1 Page: 193 of 236

High Channel



LTE band 13 (10 Mb - QPSK)

Middle Channel





of Report Number: F690501/RF-RTL011907-1 Page: 194 236

7. Band Edge

7.1. Limit

- §22.917(a), 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 + 10log(P) dB.
- §24.238(a), 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.
- §27.53(c)(2), on any frequency outside the 776-788 Mb 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.
- \$27.53(h)(1), for operations in the 1 695-1 710 Mb, 1 710-1 755 Mb, 1 755-1 780 Mb, 1 915-1 920 Mb, 1 995-2 000 Mb, 2 000-2 020 Mb, 2 110-2 155 Mb, 2 155-2 180 Mb, and 2 180-2 200 Mb 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 $43 + 10 \log_{10}$ (P) dB.

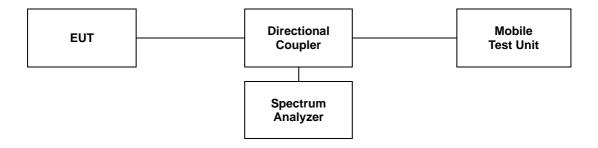


Report Number: F690501/RF-RTL011907-1 Page: 195 of 236

7.2. Test Procedure

The test follows section 6 of FCC KDB Publication 971168 D01 v02r02.

- 1. Span was set large enough so as to capture all out of band emissions near the band edge.
- 2. RBW ≥ 1 % of OBW.
- 3. VBW \geq 3 x RBW.
- 4. Detector = RMS.
- 5. Trace mode = Average.
- 6. Sweep time = Auto.
- 7. The trace was allowed to stabilize.
- 8. All path loss of frequency range was investigated and compensated to spectrum analyzer as correction factor.





Report Number: F690501/RF-RTL011907-1 Page: 196 of 236

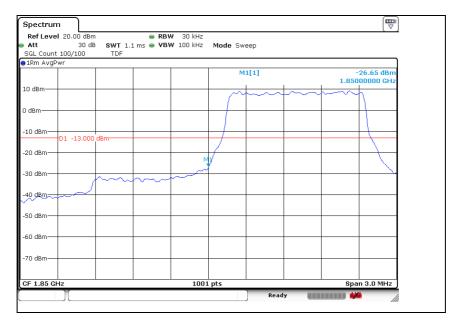
7.3. Test Results

Ambient temperature : **(23** ± **1)** ℃ Relative humidity : 47 % R.H.

Please refer to the following plots.

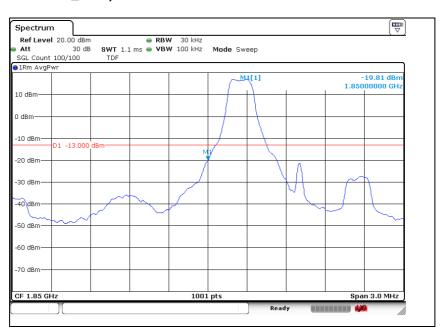
LTE band 2 (1.4 \m - QPSK_RB 6)

Low Channel



LTE band 2 (1.4 \m - QPSK_RB 1)

Low Channel

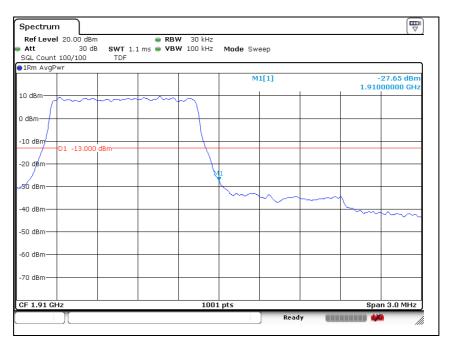




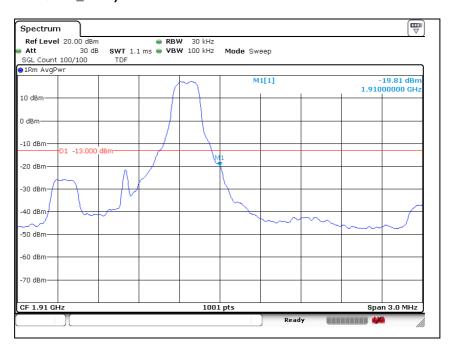
Report Number: F690501/RF-RTL011907-1 Page: 197 of 236

LTE band 2 (1.4 \https://doi.org/10.1016

High Channel



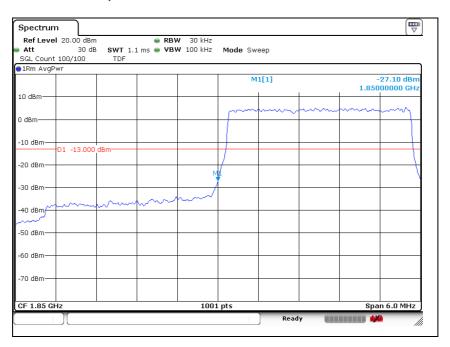
High Channel





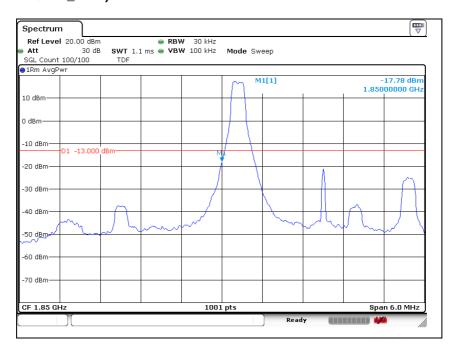
Report Number: F690501/RF-RTL011907-1 Page: 198 of 236

Low Channel



LTE band 2 (3 Mb - QPSK_RB 1)

Low Channel

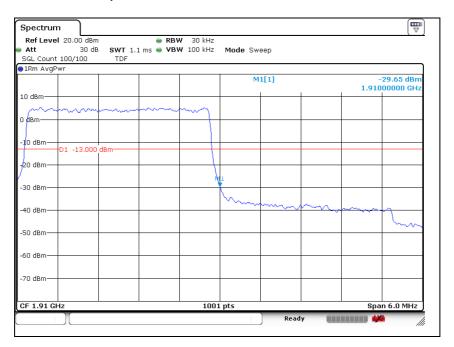




Report Number: F690501/RF-RTL011907-1 Page: 199 of 236

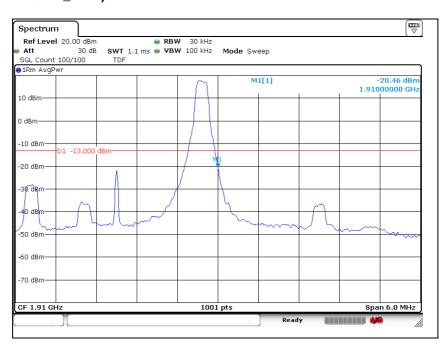
LTE band 2 (3 Mb - QPSK_RB 15)

High Channel



LTE band 2 (3 Mb - QPSK_RB 1)

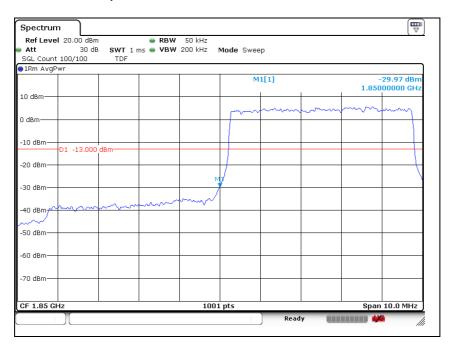
High Channel





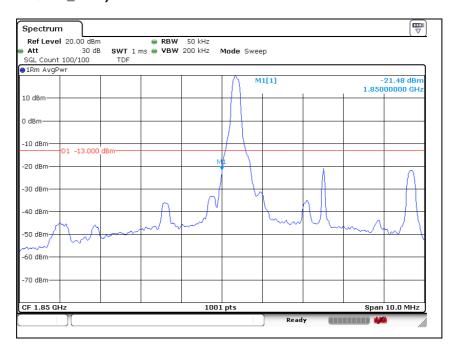
Report Number: F690501/RF-RTL011907-1 Page: 200 of 236

Low Channel



LTE band 2 (5 Mb - QPSK_RB 1)

Low Channel

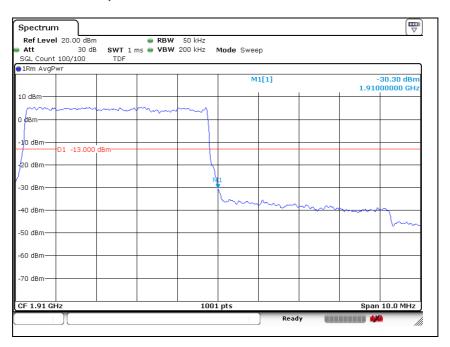




Report Number: F690501/RF-RTL011907-1 Page: 201 of 236

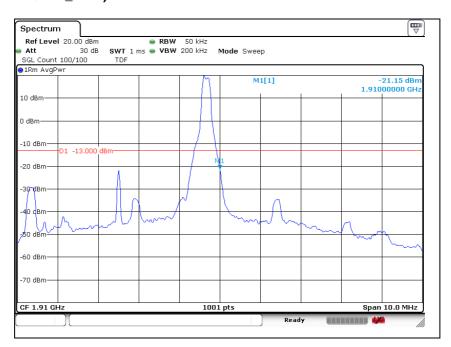
LTE band 2 (5 Mb - QPSK_RB 25)

High Channel



LTE band 2 (5 Mb - QPSK_RB 1)

High Channel

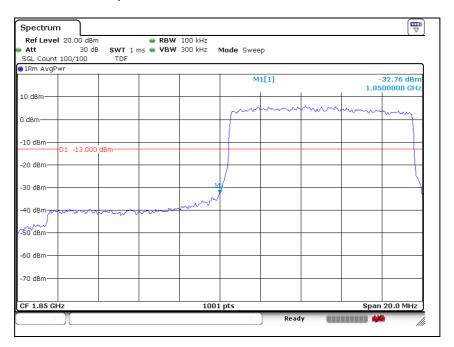




Report Number: F690501/RF-RTL011907-1 Page: 202 of 236

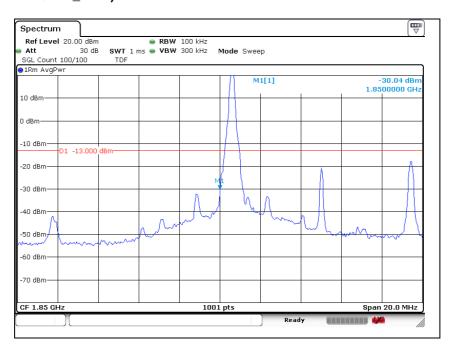
LTE band 2 (10 Mb - QPSK_RB 50)

Low Channel



LTE band 2 (10 \https://example.com/ - QPSK_RB 1)

Low Channel

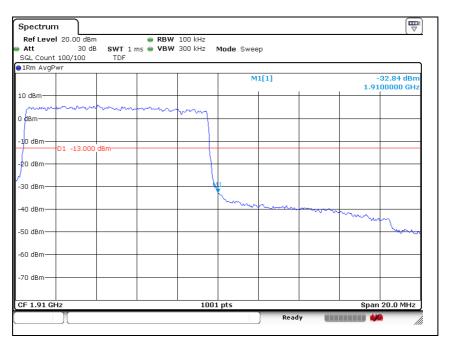




Report Number: F690501/RF-RTL011907-1 Page: 203 of 236

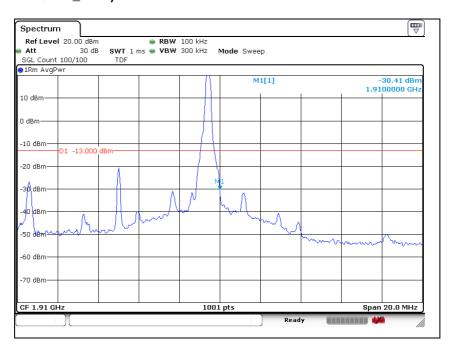
LTE band 2 (10 Mb - QPSK_RB 50)

High Channel



LTE band 2 (10 \https://doi.org/10.1011/10.10

High Channel

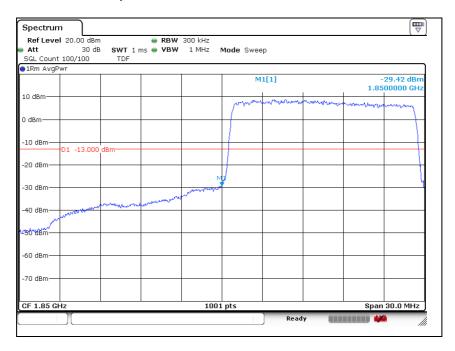




Report Number: F690501/RF-RTL011907-1 Page: 204 of 236

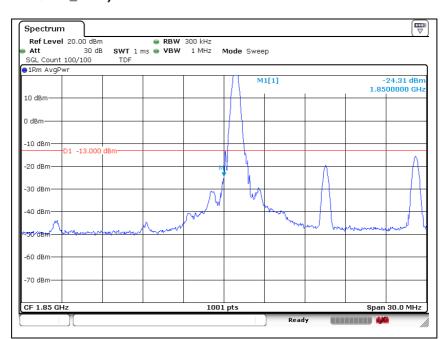
LTE band 2 (15 Mb - QPSK_RB 75)

Low Channel



LTE band 2 (15 \https://doi.org/10.1016/10.10

Low Channel

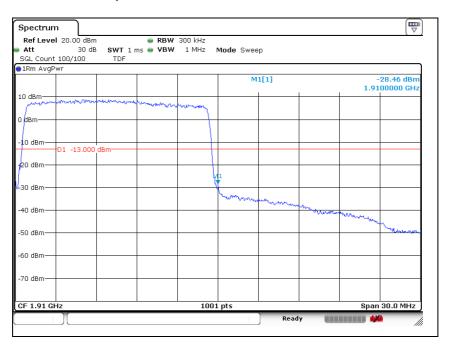




Report Number: F690501/RF-RTL011907-1 Page: 205 of 236

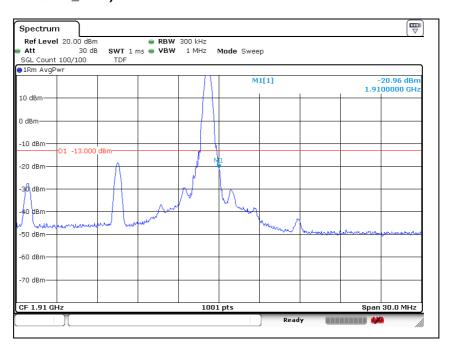
LTE band 2 (15 Mb - QPSK_RB 75)

High Channel



LTE band 2 (15 \https://doi.org/10.1016/10.10

High Channel

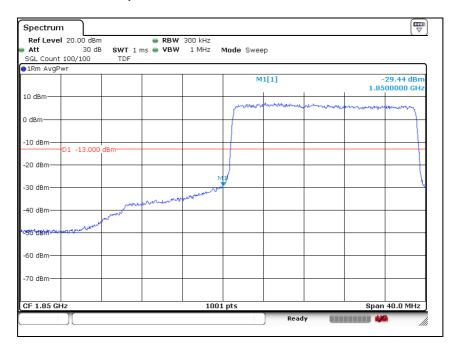




Report Number: F690501/RF-RTL011907-1 Page: 206 of 236

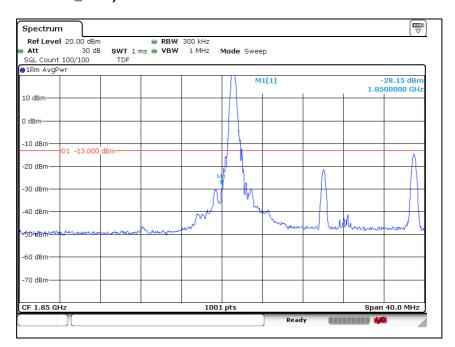
LTE band 2 (20 Mb - QPSK_RB 100)

Low Channel



LTE band 2 (20 Mb - QPSK_RB 1)

Low Channel





Report Number: F690501/RF-RTL011907-1 Page: 207 of 236

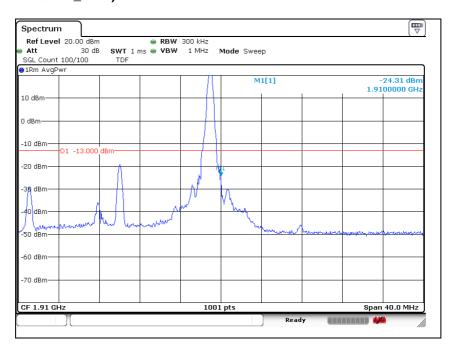
LTE band 2 (20 Mb - QPSK_RB 100)

High Channel



LTE band 2 (20 \https://doi.org/10.1016/10.10

High Channel

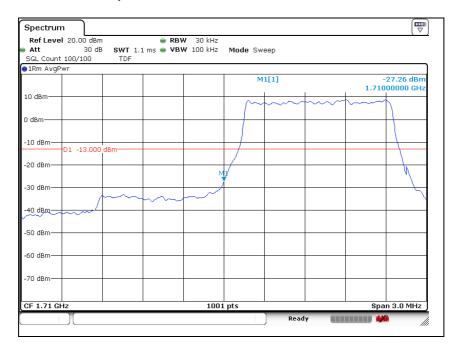




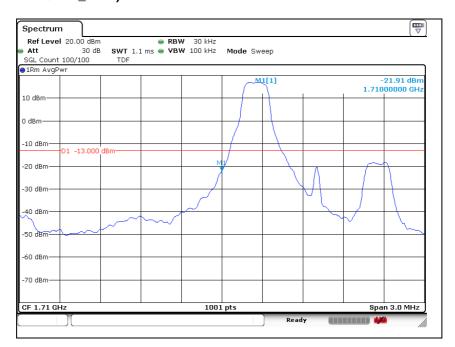
Report Number: F690501/RF-RTL011907-1 Page: 208 of 236

LTE band 4 (1.4 \https://doi.org/10.1016

Low Channel



Low Channel

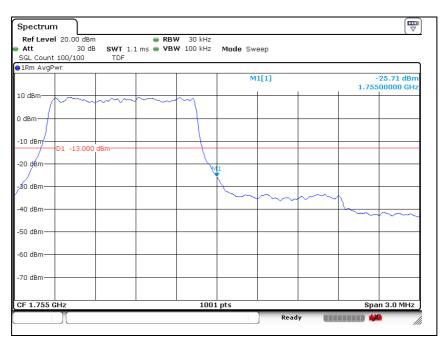




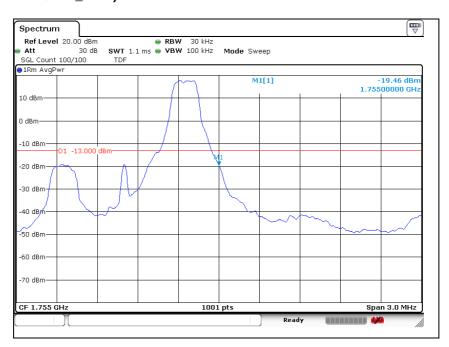
Report Number: F690501/RF-RTL011907-1 Page: 209 of 236

LTE band 4 (1.4 \https://doi.org/10.1016

High Channel



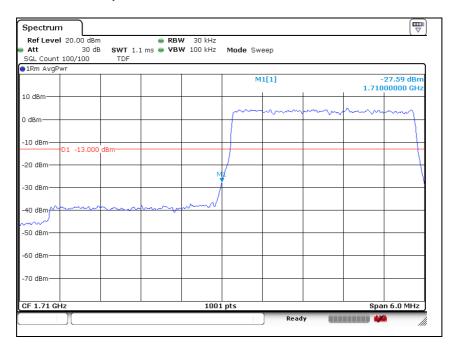
High Channel





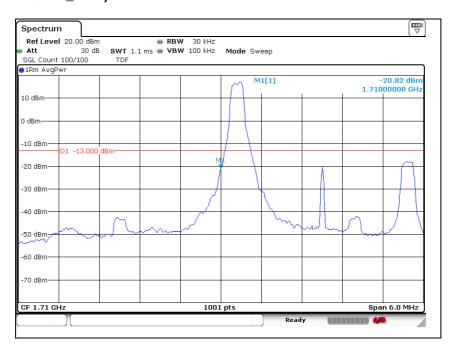
Report Number: F690501/RF-RTL011907-1 Page: 210 of 236

Low Channel



LTE band 4 (3 Mb - QPSK_RB 1)

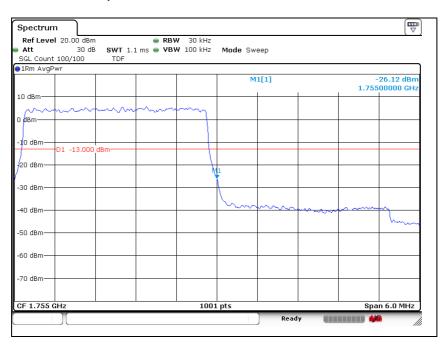
Low Channel





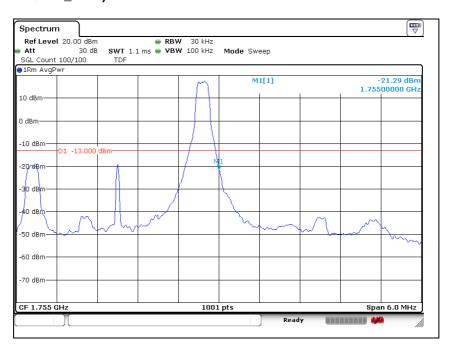
Report Number: F690501/RF-RTL011907-1 Page: 211 of 236

High Channel



LTE band 4 (3 Mb - QPSK_RB 1)

High Channel



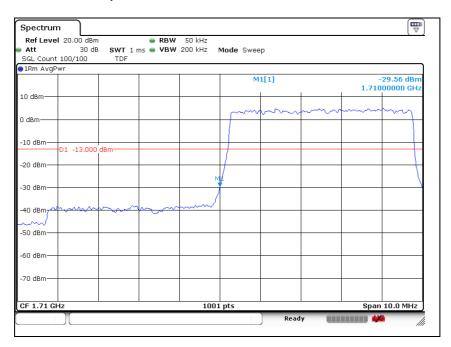
The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This test report cannot be reproduced, except in full, without prior written permission of the Company. This test report does not assure KOLAS accreditation.

RTT5041-19(2017.07.10)(0)



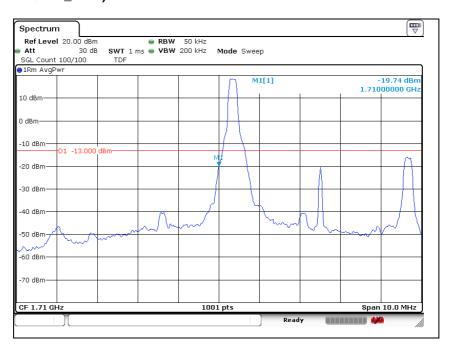
Report Number: F690501/RF-RTL011907-1 Page: 212 of 236

Low Channel



LTE band 4 (5 Mb - QPSK_RB 1)

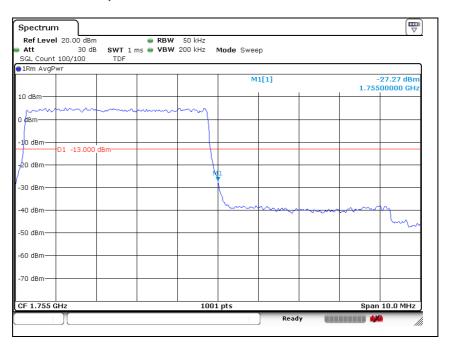
Low Channel





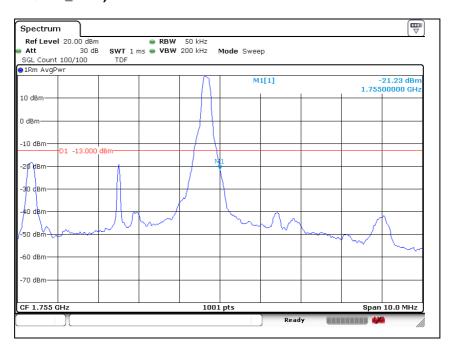
Report Number: F690501/RF-RTL011907-1 Page: 213 of 236

High Channel



LTE band 4 (5 Mb - QPSK_RB 1)

High Channel

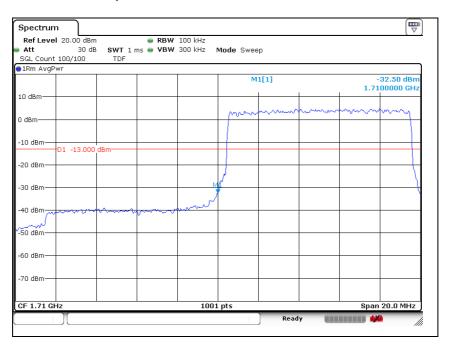




Report Number: F690501/RF-RTL011907-1 Page: 214 of 236

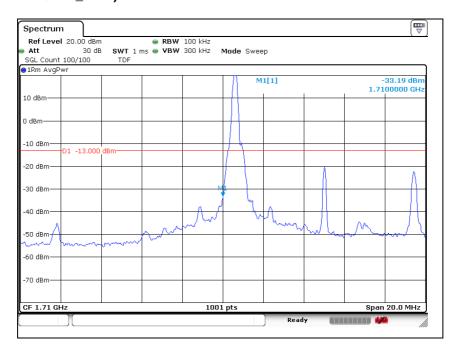
LTE band 4 (10 Mb - QPSK_RB 50)

Low Channel



LTE band 4 (10 \(\mathbb{M}\mathbb{L} - QPSK_RB 1 \)

Low Channel

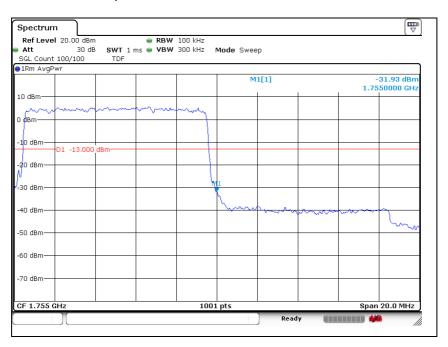




Report Number: F690501/RF-RTL011907-1 Page: 215 of 236

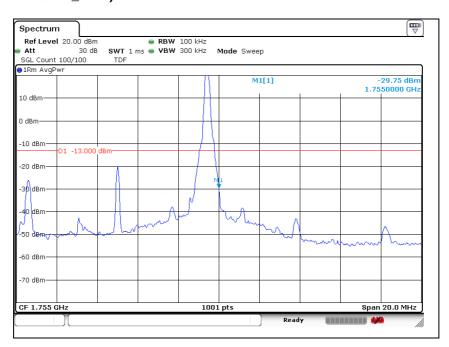
LTE band 4 (10 Mb - QPSK_RB 50)

High Channel



LTE band 4 (10 \(\mathbb{M}\mathbb{L} - QPSK_RB 1 \)

High Channel

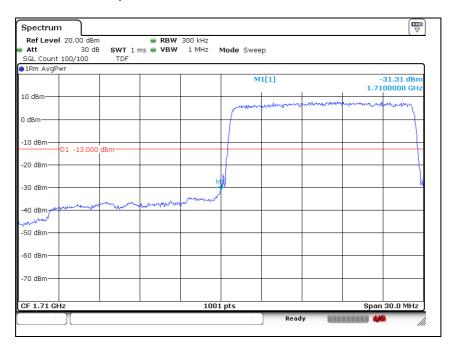




Report Number: F690501/RF-RTL011907-1 Page: 216 of 236

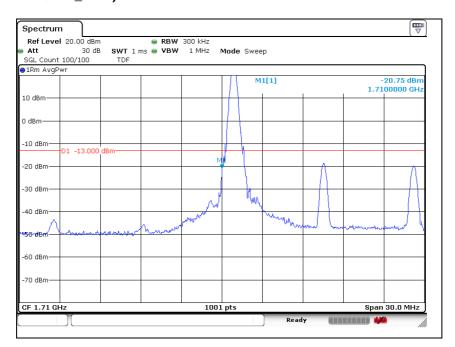
LTE band 4 (15 Mb - QPSK_RB 75)

Low Channel



LTE band 4 (15 Mb - QPSK_RB 1)

Low Channel

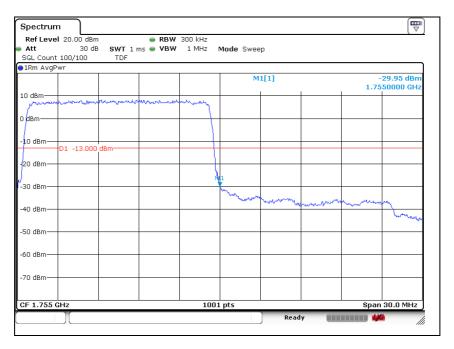




Report Number: F690501/RF-RTL011907-1 Page: 217 of 236

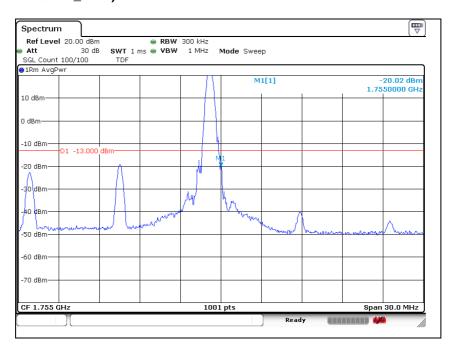
LTE band 4 (15 Mb - QPSK_RB 75)

High Channel



LTE band 4 (15 \(\mu \) - QPSK_RB 1)

High Channel





Report Number: F690501/RF-RTL011907-1 Page: 218 of 236

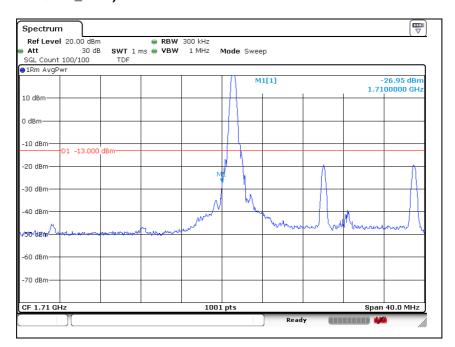
LTE band 4 (20 Mb - QPSK_RB 100)

Low Channel



LTE band 4 (20 \https://doi.org/10.1016/10.10

Low Channel

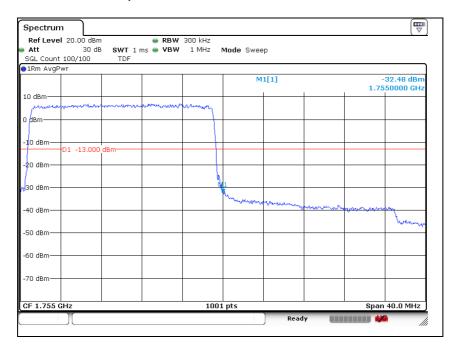




Report Number: F690501/RF-RTL011907-1 Page: 219 of 236

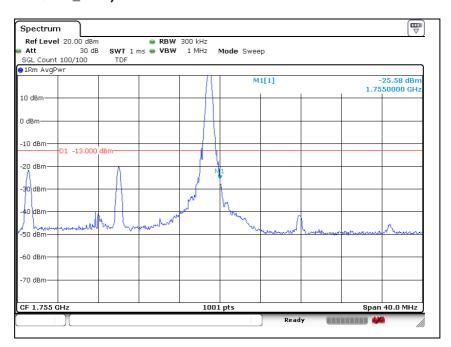
LTE band 4 (20 Mb - QPSK_RB 100)

High Channel



LTE band 4 (20 \https://doi.org/10.1016/10.10

High Channel

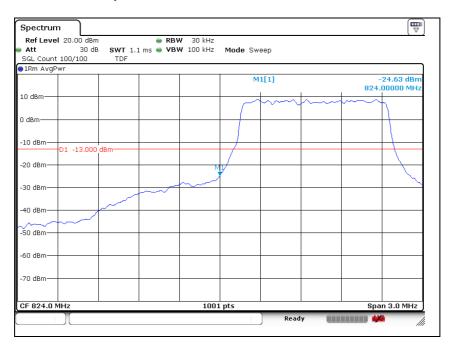




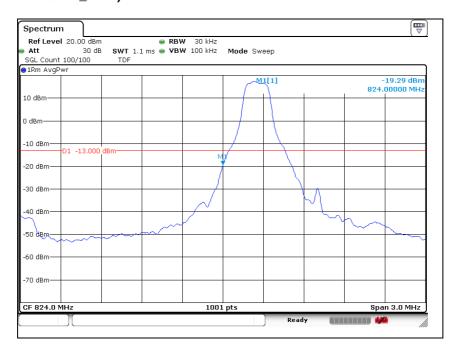
Report Number: F690501/RF-RTL011907-1 Page: 220 of 236

LTE band 5 (1.4 \mathbb{Mb} - QPSK_RB 6)

Low Channel



Low Channel

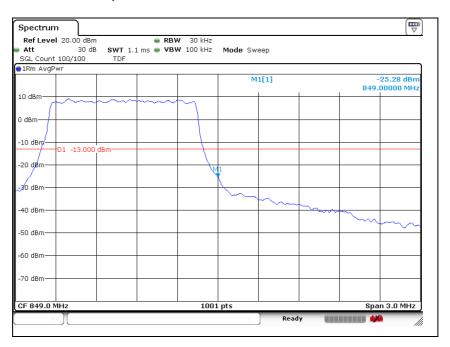




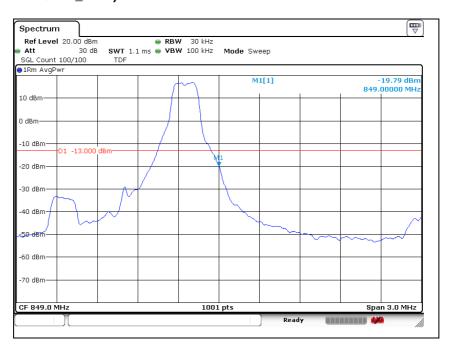
Report Number: F690501/RF-RTL011907-1 Page: 221 of 236

LTE band 5 (1.4 \mathbb{Mb} - QPSK_RB 6)

High Channel



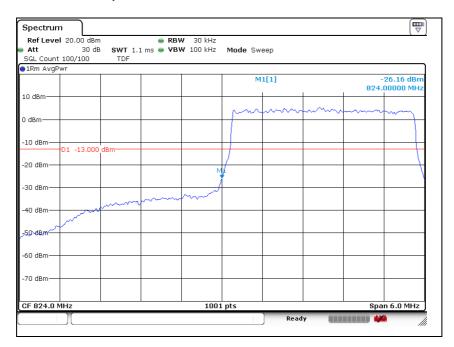
High Channel





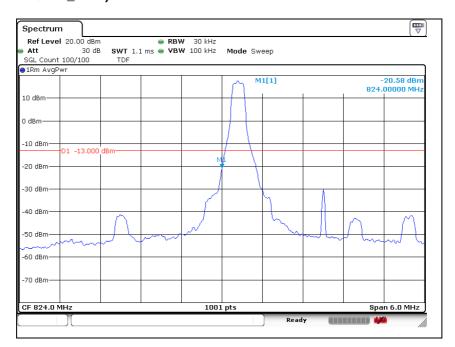
Report Number: F690501/RF-RTL011907-1 Page: 222 of 236

Low Channel



LTE band 5 (3 Mb - QPSK_RB 1)

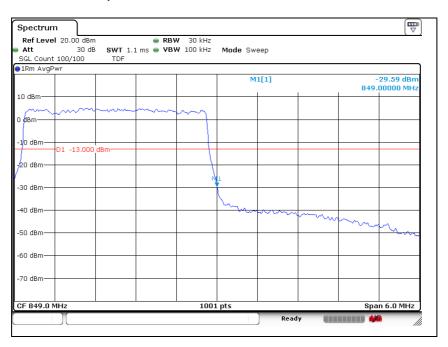
Low Channel





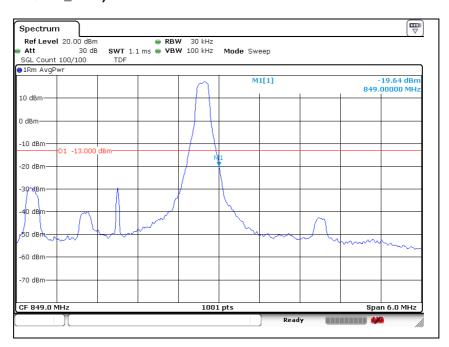
Report Number: F690501/RF-RTL011907-1 Page: 223 of 236

High Channel



LTE band 5 (3 Mb - QPSK_RB 1)

High Channel

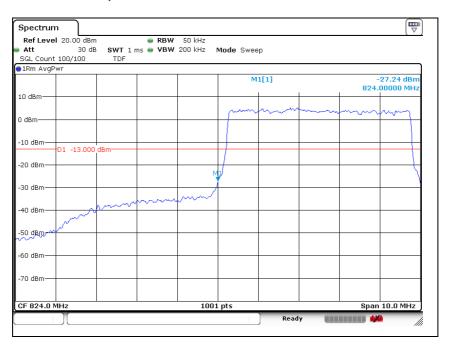




Report Number: F690501/RF-RTL011907-1 Page: 224 of 236

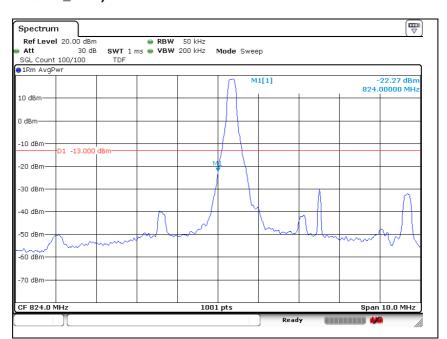
LTE band 5 (5 版 - QPSK_RB 25)

Low Channel



LTE band 5 (5 Mb - QPSK_RB 1)

Low Channel

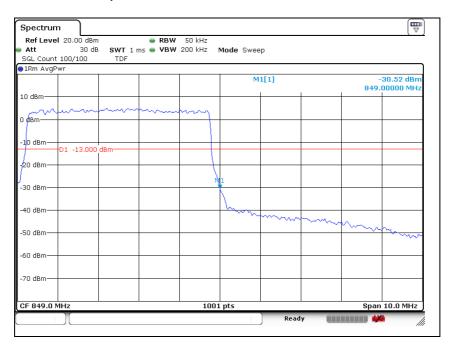




Report Number: F690501/RF-RTL011907-1 Page: 225 of 236

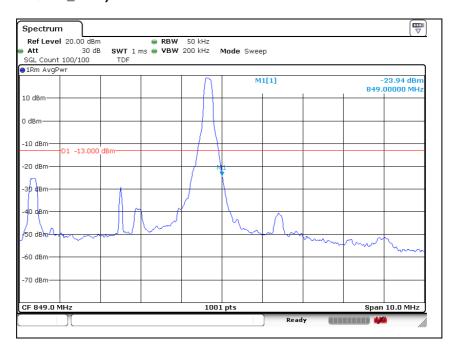
LTE band 5 (5 版 - QPSK_RB 25)

High Channel



LTE band 5 (5 Mb - QPSK_RB 1)

High Channel

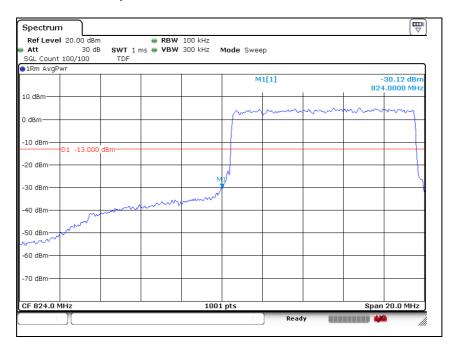




Report Number: F690501/RF-RTL011907-1 Page: 226 of 236

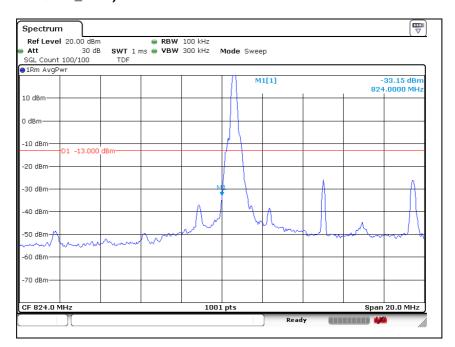
LTE band 5 (10 Mb - QPSK_RB 50)

Low Channel



LTE band 5 (10 Mb - QPSK_RB 1)

Low Channel

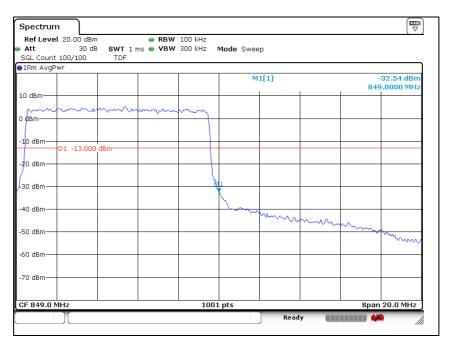




Report Number: F690501/RF-RTL011907-1 Page: 227 of 236

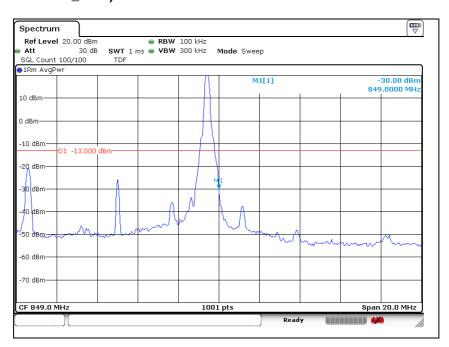
LTE band 5 (10 Mb - QPSK_RB 50)

High Channel



LTE band 5 (10 \(\mathbb{M}\mathbb{L} - QPSK_RB 1 \)

High Channel

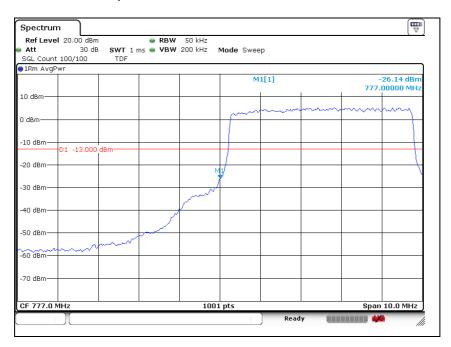




Report Number: F690501/RF-RTL011907-1 Page: 228 of 236

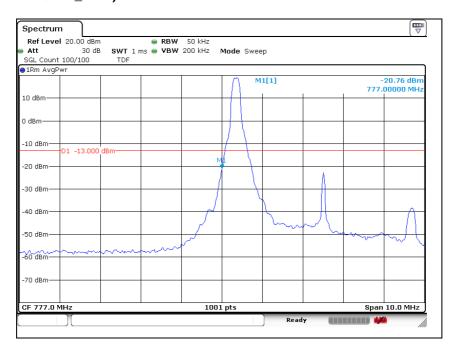
LTE band 13 (5 Mb - QPSK_RB 25)

Low Channel



LTE band 13 (5 版 - QPSK_RB 1)

Low Channel

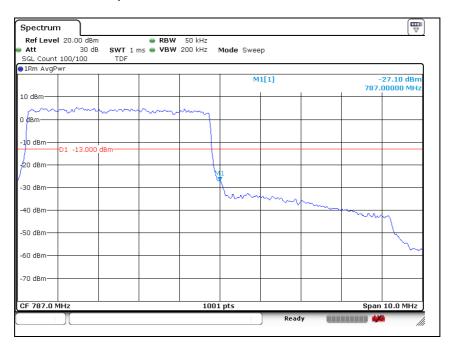




Report Number: F690501/RF-RTL011907-1 Page: 229 of 236

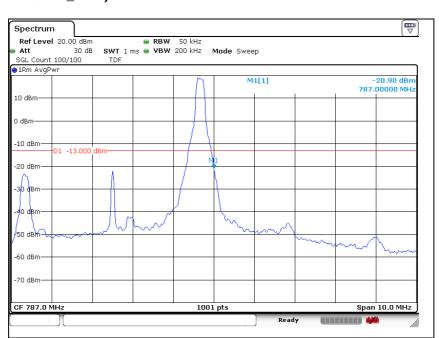
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High Channel



LTE band 13 (5 版 - QPSK_RB 1)

High Channel

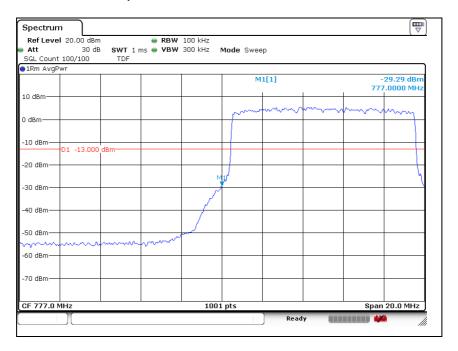




Report Number: F690501/RF-RTL011907-1 Page: 230 of 236

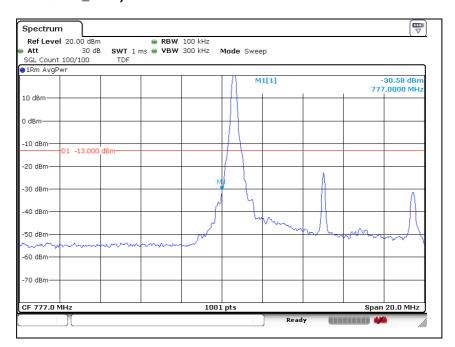
LTE band 13 (10 \(\mu \) - QPSK_RB 50)

Low Channel



LTE band 13 (10 \(\mu \) - QPSK_RB 1)

Low Channel

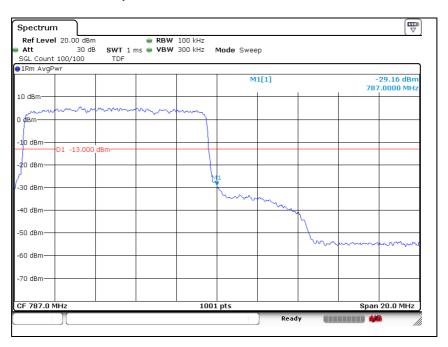




Report Number: F690501/RF-RTL011907-1 Page: 231 of 236

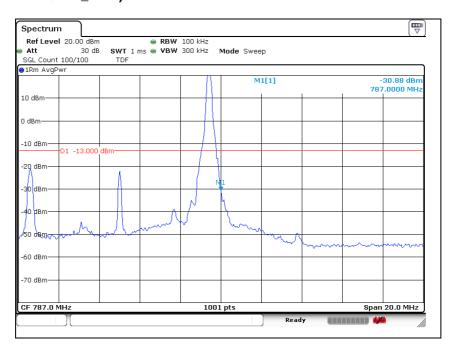
LTE band 13 (10 \(\mu \) - QPSK_RB 50)

High Channel



LTE band 13 (10 \(\mu \) - QPSK_RB 1)

High Channel





Report Number: F690501/RF-RTL011907-1 Page: 232 of 236

8. Frequency Stability

8.1. Limit

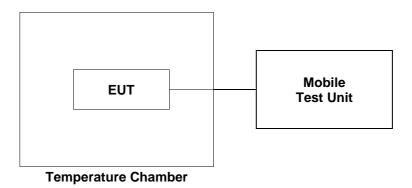
- §2.1055 (a), §2.1055 (d) & following:
- <u>§22.355</u>, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table of this section.

For Mobile devices operating in the 824 to 849 Mb band at a power level less than or equal to 3 Watts, the limit specified in Table C-1 is +/- 2.5 ppm.

- §24.235, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.
- §27.54, the frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

8.2. Test Procedure

- 1. Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power supply and the RF output was connected to a Mobile Test Unit via feed-through attenuators.
- 2. The EUT was placed inside the temperature chamber.
- 3. After the temperature stabilized for approximately 20 minutes, the frequency output was recorded from Mobile Test Unit.





Report Number: F690501/RF-RTL011907-1 Page: 233 of 236

8.3. Test Results

Ambient temperature : **(23** ± **1)** ℃ Relative humidity : 47 % R.H.

LTE band 2 at middle channel

Reference Frequency: 1 880.0 Mb

Frequency Stability versus Temperature

Environment Temperature (℃)	Power Supplied (V _{dc})	Frequency Measure with Time Elapse	
		Frequency Error (Hz)	ppm
50		-6	-0.003 2
40		-2	-0.001 1
30	4.0	1	0.000 5
23		-5	-0.002 7
10		2	0.001 1
0		4	0.002 1
-10		-1	-0.000 5
-20		3	0.001 6
-30		-2	-0.001 1

Frequency Stability versus Power Supply

Environment Temperature (℃)	Power Supplied (V _{dc})	Frequency Measure with Time Elapse	
		Frequency Error (Hz)	ppm
23	4.6	-6	-0.003 2
	3.4	-2	-0.001 1



Report Number: F690501/RF-RTL011907-1 Page: 234 236 of

LTE band 4 at middle channel

Reference Frequency: 1 732.5 Mb

Frequency Stability versus Temperature

Environment Temperature (℃)	Power Supplied (V _{dc})	Frequency Measure with Time Elapse	
		Frequency Error (Hz)	ppm
50		4	0.002 3
40	4.0	2	0.001 2
30		-2	-0.001 2
23		-1	-0.000 6
10		3	0.001 7
0		2	0.001 2
-10		-3	-0.001 7
-20		1	0.000 6
-30		-2	-0.001 2

Frequency Stability versus Power Supply

Environment Temperature (℃)	Power Supplied (V _{dc})	Frequency Measure with Time Elapse	
		Frequency Error (Hz)	ppm
23	4.6	1	0.000 6
	3.4	-2	-0.001 2



Report Number: F690501/RF-RTL011907-1 Page: 235 236 of

LTE band 5 at middle channel

Reference	Frequency:	836.5	MHz.

Frequency Stability versus Temperature

Environment Temperature (℃)	Power Supplied (V _{dc})	Frequency Measure with Time Elapse	
		Frequency Error (Hz)	ppm
50		-2	-0.002 4
40	4	1	0.001 2
30		3	0.003 6
23		1	0.001 2
10		4	0.004 8
0		-2	-0.002 4
-10		-3	-0.003 6
-20		2	0.002 4
-30		-1	-0.001 2

Frequency Stability versus Power Supply

Environment Temperature (℃)	Power Supplied (V _{dc})	Frequency Measure with Time Elapse	
		Frequency Error (Hz)	ppm
23	4.6	-1	-0.001 2
	3.4	3	0.003 6



Report Number: F690501/RF-RTL011907-1 Page: 236 of 236

LTE band 13 at middle channel

Reference Frequency: 782.0 Mb

Frequency Stability versus Temperature

Environment Temperature (℃)	Power Supplied (V _{dc})	Frequency Measure with Time Elapse	
		Frequency Error (Hz)	ppm
50		-4	-0.005 1
40		-1	-0.001 3
30	4	2	0.002 6
23		-3	-0.003 8
10		-1	-0.001 3
0		2	0.002 6
-10		-2	-0.002 6
-20		3	0.003 8
-30		1	0.001 3

Frequency Stability versus Power Supply

Environment Temperature (℃)	Power Supplied (V _{dc})	Frequency Measure with Time Elapse	
		Frequency Error (Hz)	ppm
23	4.6	-3	-0.003 8
	3.4	-1	-0.001 3

- End of the Test Report -