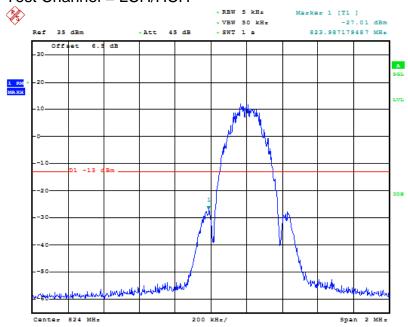
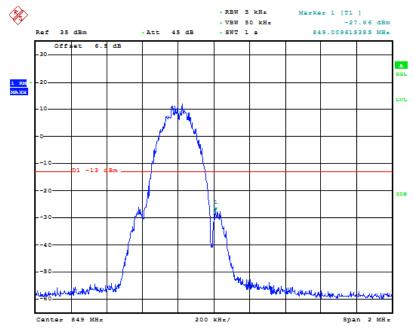
# Band edge measurement Test Band = GSM850 Test Mode = EDGE /TM2 Test Channel = LCH/HCH

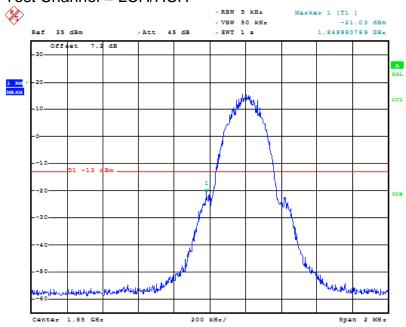


Date: 16.0CT.2017 14:33:01

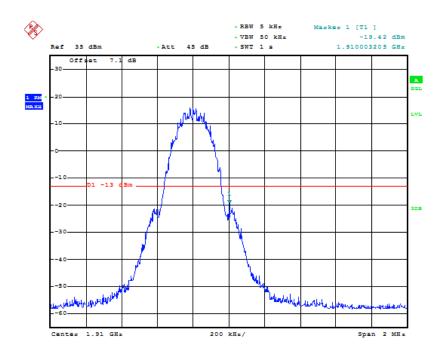


Date: 16.OCT.2017 14:33:46

# Band edge measurement Test Band = GSM1900 Test Mode = GPRS/TM1 Test Channel = LCH/HCH

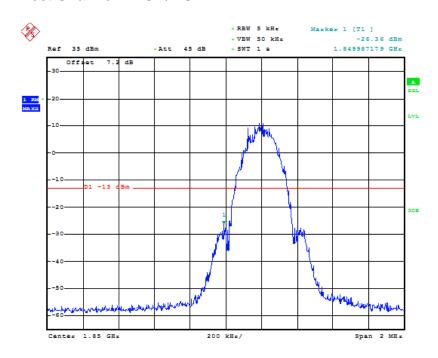


Date: 16.OCT.2017 15:26:02

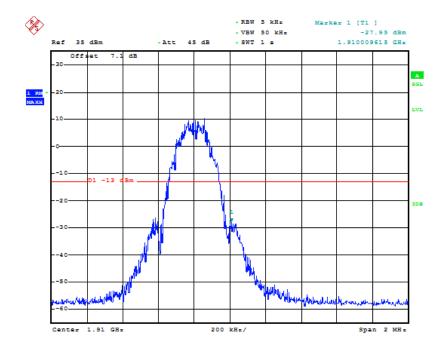


Date: 17.0CT.2017 10:10:40

Band edge measurement Test Band = GSM1900 Test Mode = EDGE /TM2 Test Channel = LCH/HCH

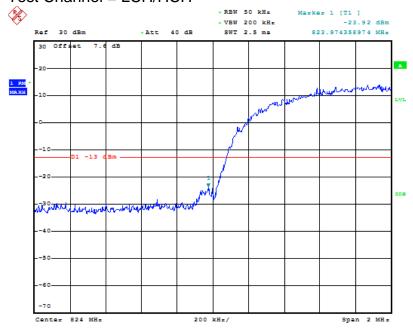


Date: 17.OCT.2017 10:17:25

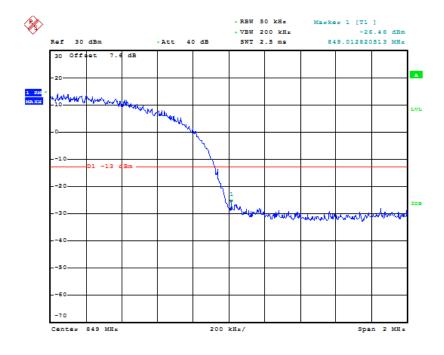


Date: 17.0CT.2017 10:18:16

## Band edge measurement Test Band = WCDMA850 Test Mode = UMTS /TM3 Test Channel = LCH/HCH



Date: 17.OCT.2017 19:13:27

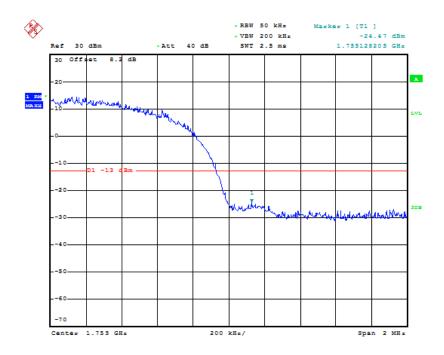


Date: 17.0CT.2017 19:13:43

# Band edge measurement Test Band = WCDMA1700 Test Mode = UMTS /TM3 Test Channel = LCH/HCH

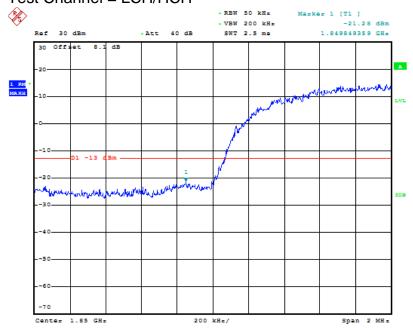


Date: 17.OCT.2017 17:58:54

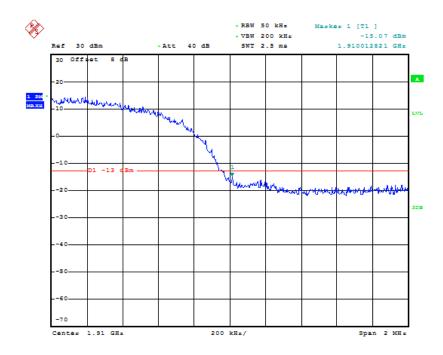


Date: 17.0CT.2017 17:59:09

# Band edge measurement Test Band = WCDMA1900 Test Mode = UMTS /TM3 Test Channel = LCH/HCH

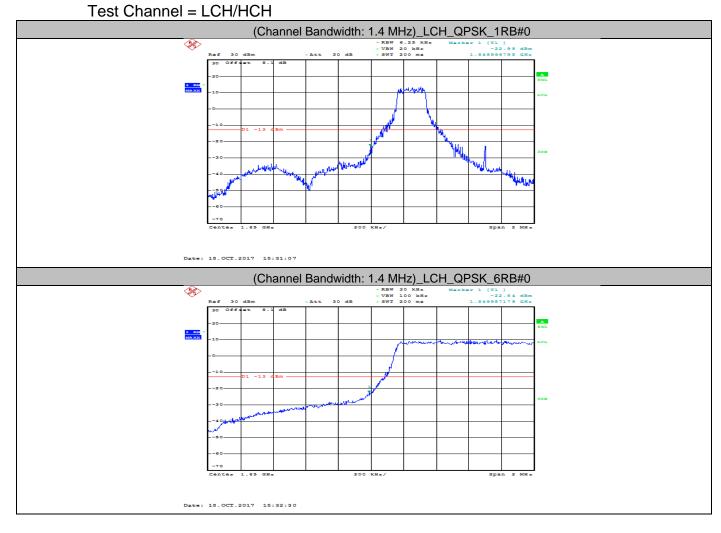


Date: 17.OCT.2017 10:37:27

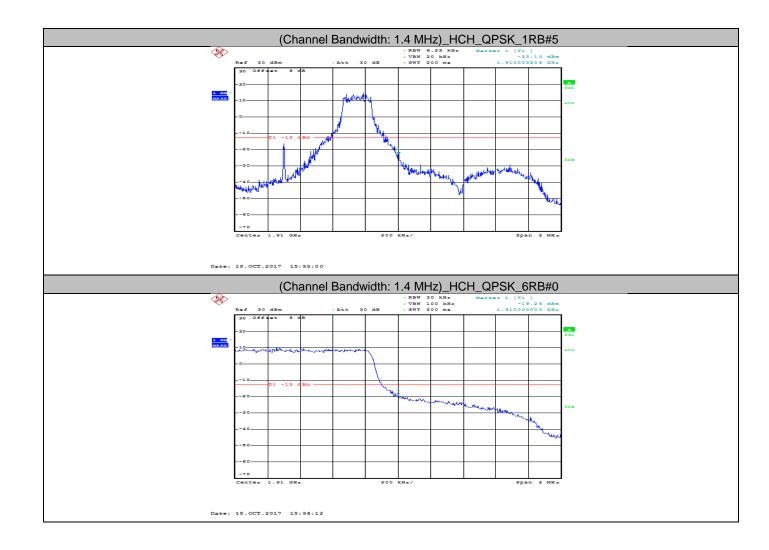


Date: 17.OCT.2017 10:37:42

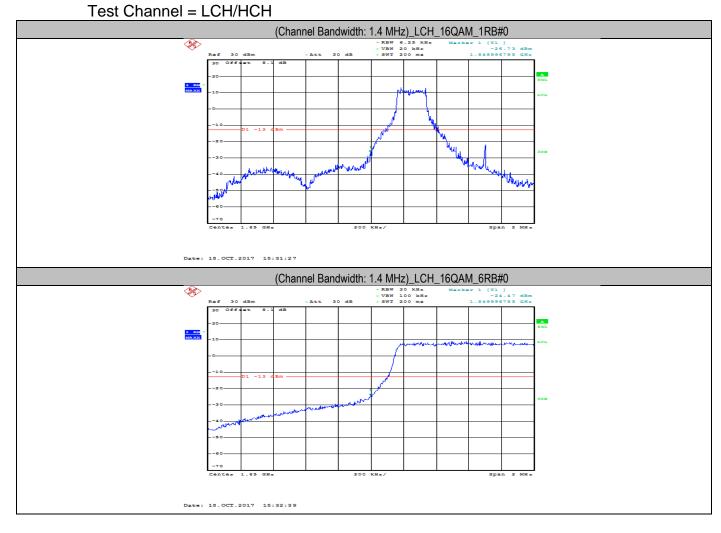
Band edge measurement LTE Band 2 Test Mode = QPSK /TM4 Channel Bandwidth: 1.4 MHz



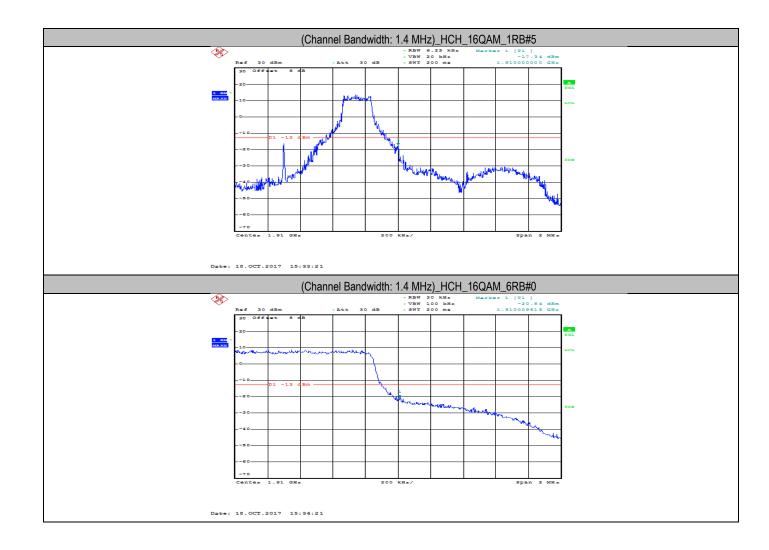
Report No.: WT178005936 Page 287 of 444



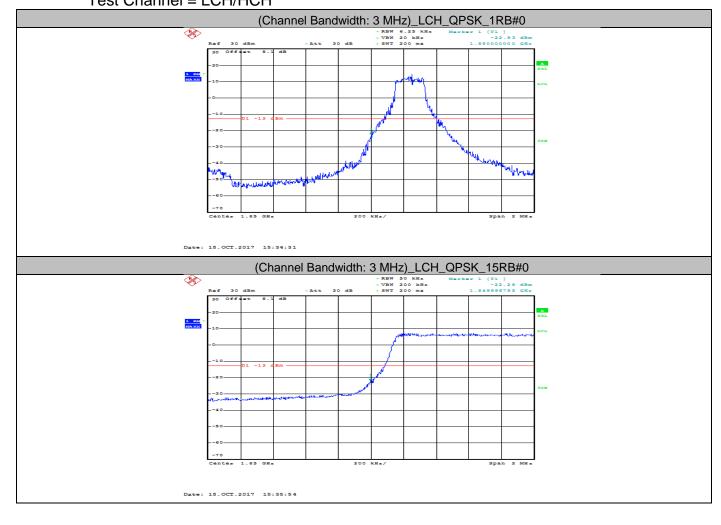
Band edge measurement LTE Band 2 Test Mode = 16QAM /TM5 Channel Bandwidth: 1.4 MHz



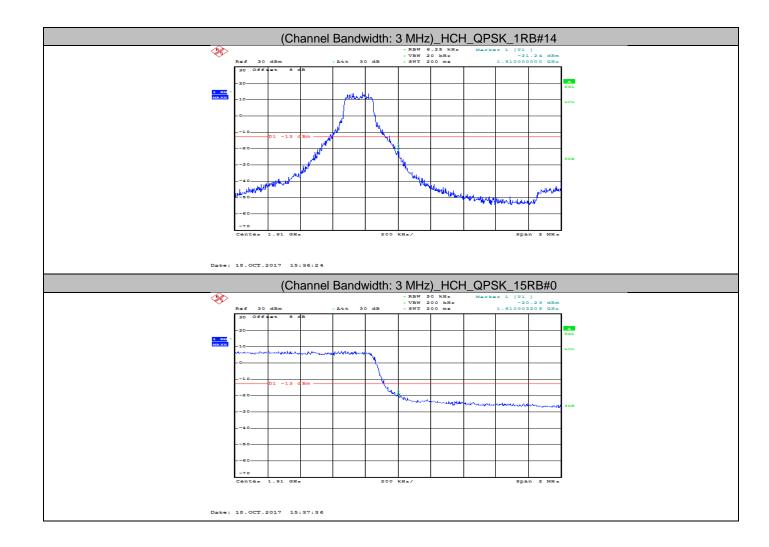
Report No.: WT178005936 Page 289 of 444



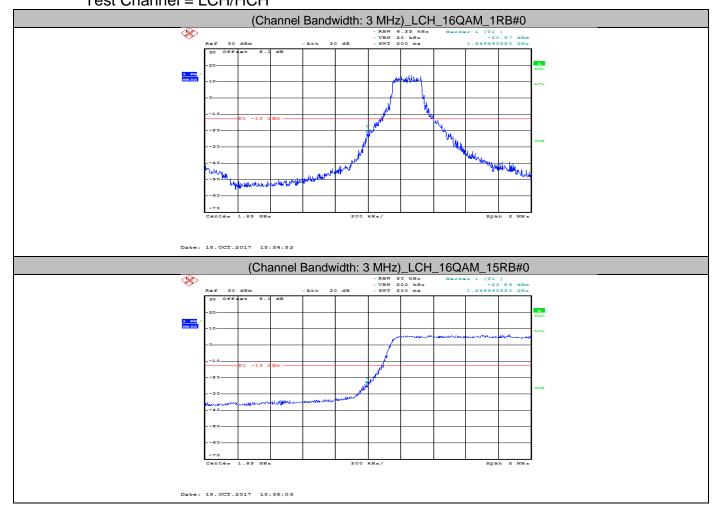
Band edge measurement LTE Band 2 Test Mode = QPSK /TM4 Channel Bandwidth: 3 MHz Test Channel = LCH/HCH



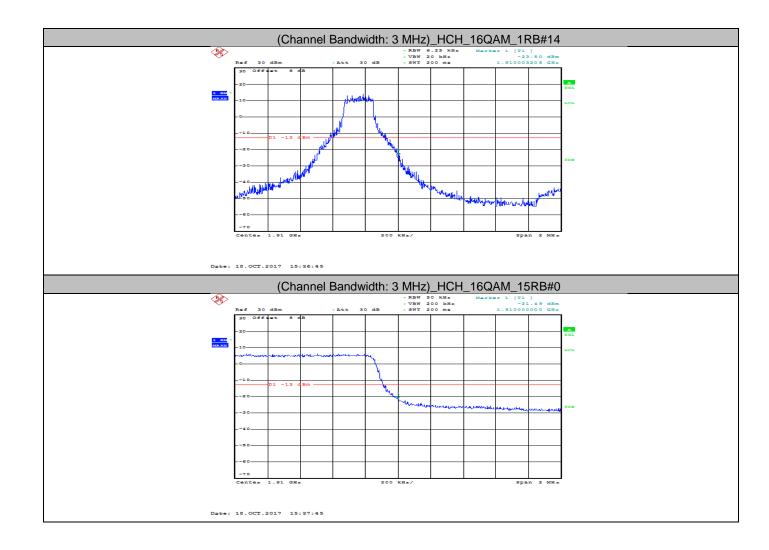
Report No.: WT178005936 Page 291 of 444



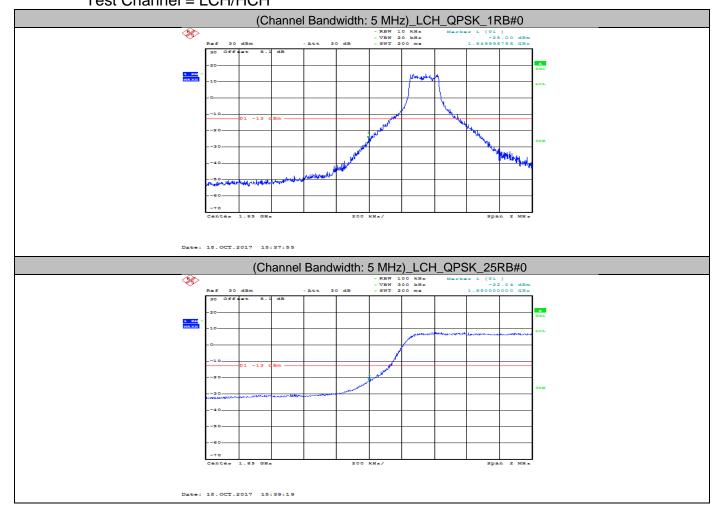
Band edge measurement LTE Band 2 Test Mode = 16QAM /TM5 Channel Bandwidth: 3 MHz Test Channel = LCH/HCH



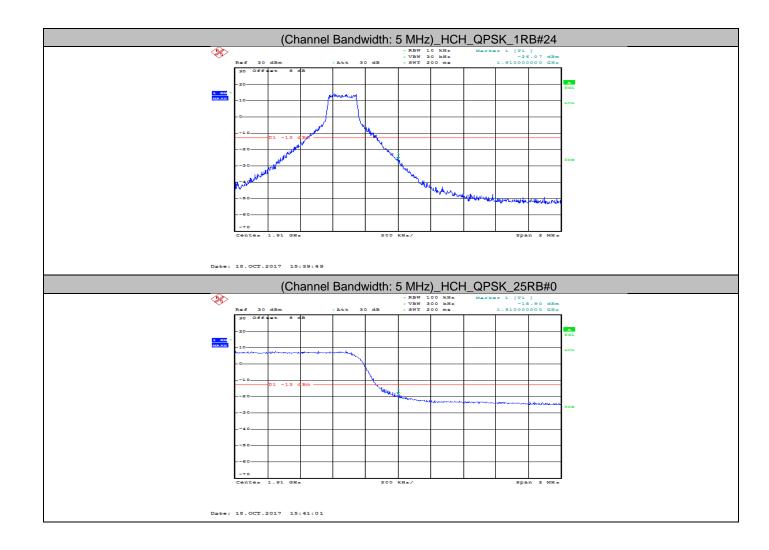
Report No.: WT178005936 Page 293 of 444



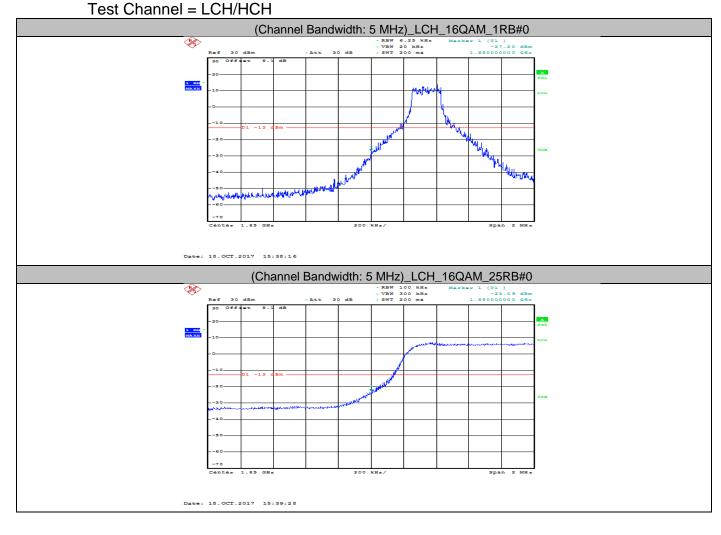
Band edge measurement LTE Band 2 Test Mode = QPSK /TM4 Channel Bandwidth: 5 MHz Test Channel = LCH/HCH



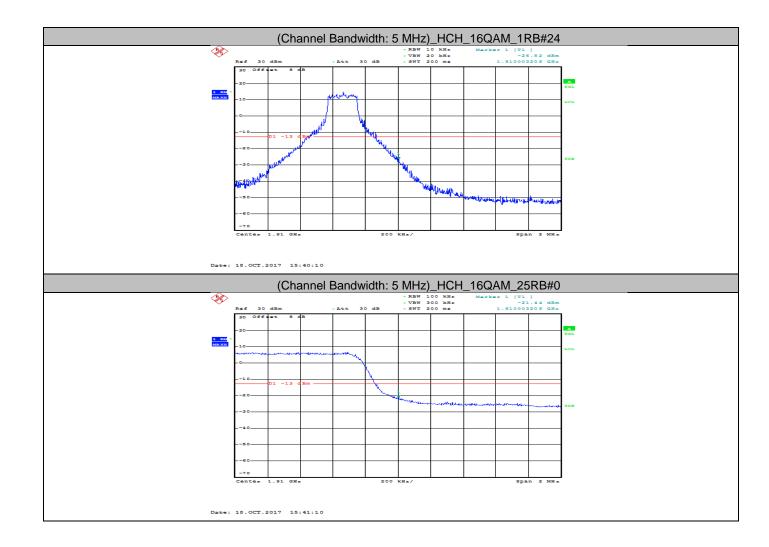
Report No.: WT178005936 Page 295 of 444



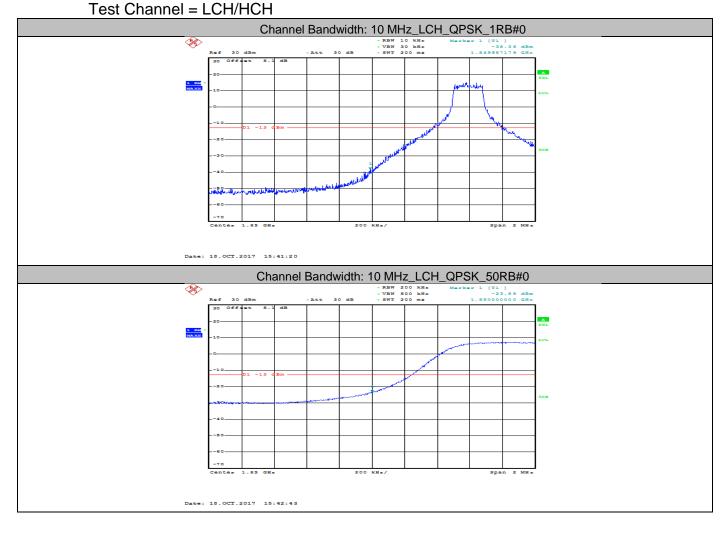
Band edge measurement LTE Band 2 Test Mode = 16QAM /TM5 Channel Bandwidth: 5 MHz



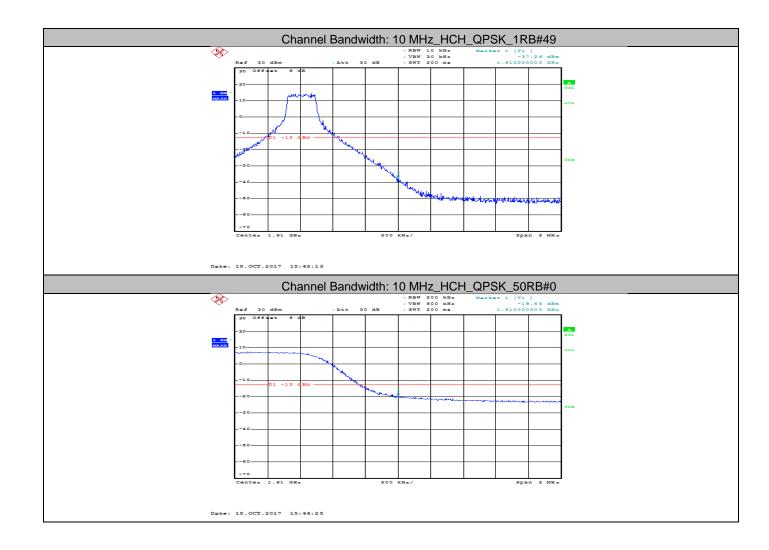
Report No.: WT178005936 Page 297 of 444



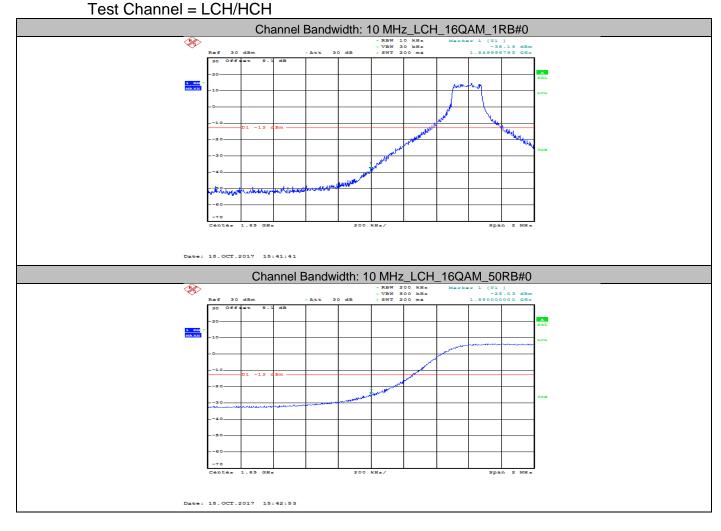
Band edge measurement LTE Band 2 Test Mode = QPSK /TM4 Channel Bandwidth: 10 MHz



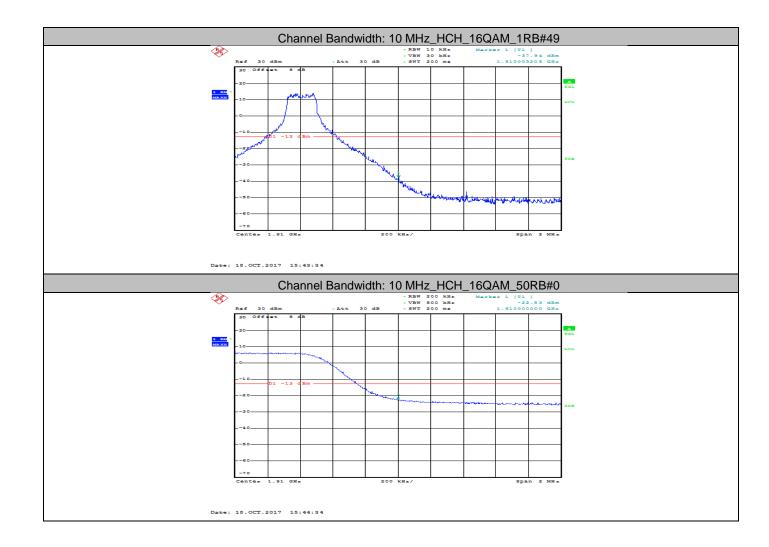
Report No.: WT178005936 Page 299 of 444



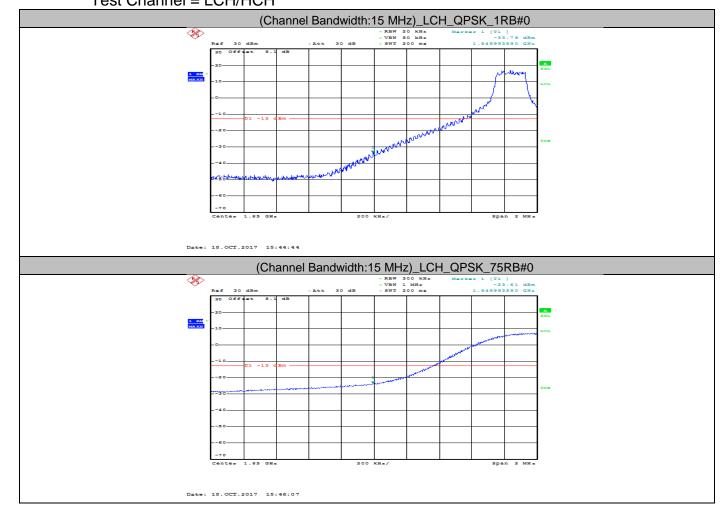
Band edge measurement LTE Band 2 Test Mode = 16QAM /TM5 Channel Bandwidth: 10 MHz



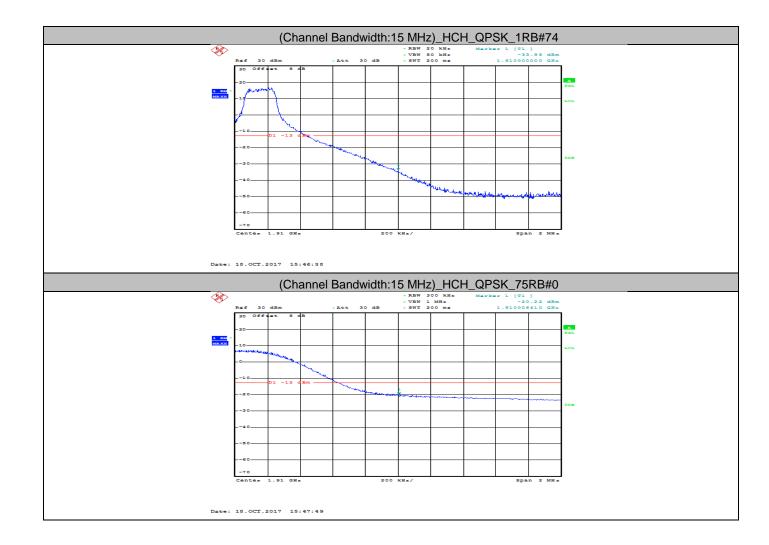
Report No.: WT178005936 Page 301 of 444



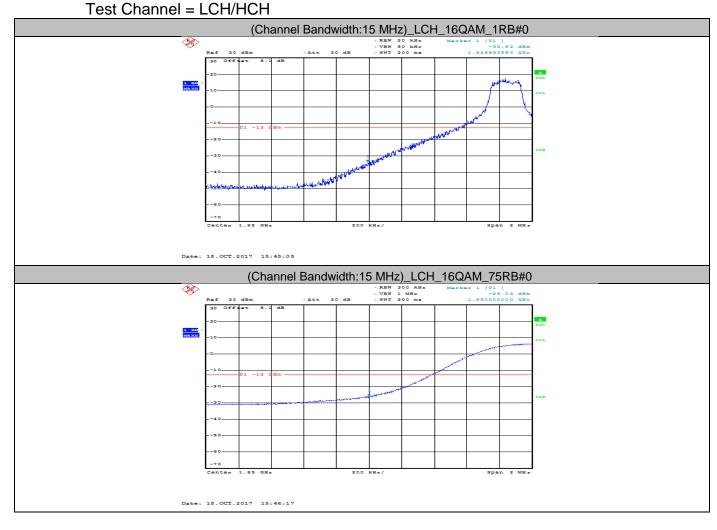
Band edge measurement LTE Band 2 Test Mode = QPSK /TM4 Channel Bandwidth: 15 MHz Test Channel = LCH/HCH



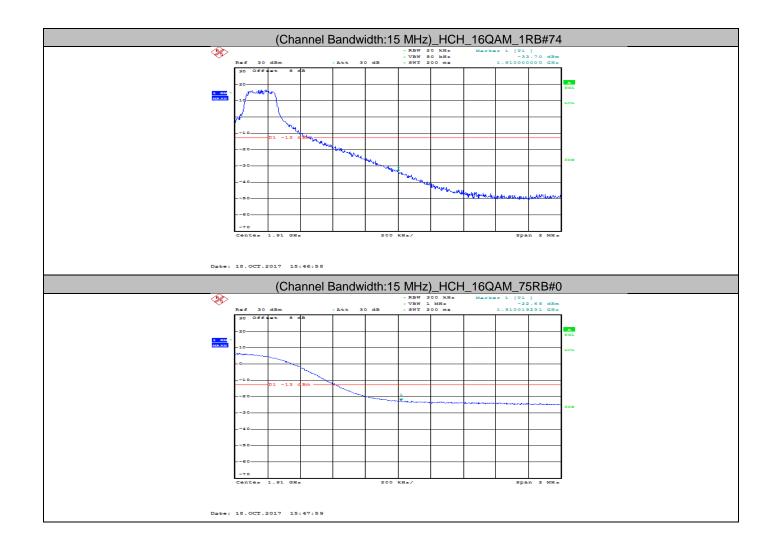
Report No.: WT178005936 Page 303 of 444



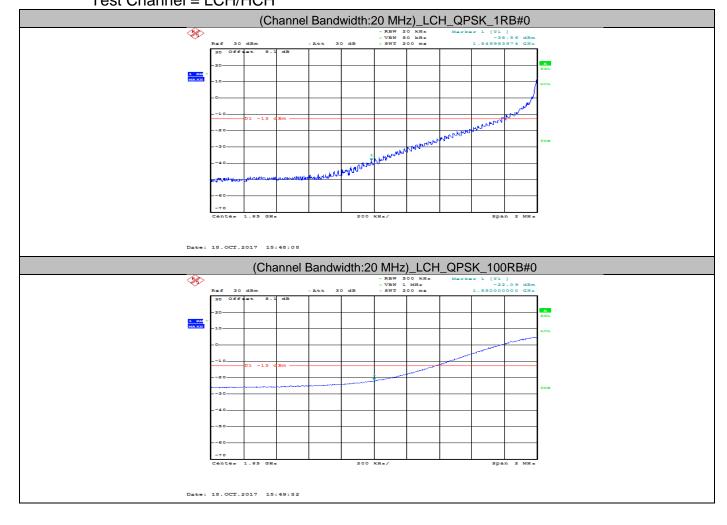
Band edge measurement LTE Band 2 Test Mode = 16QAM /TM5 Channel Bandwidth: 15 MHz



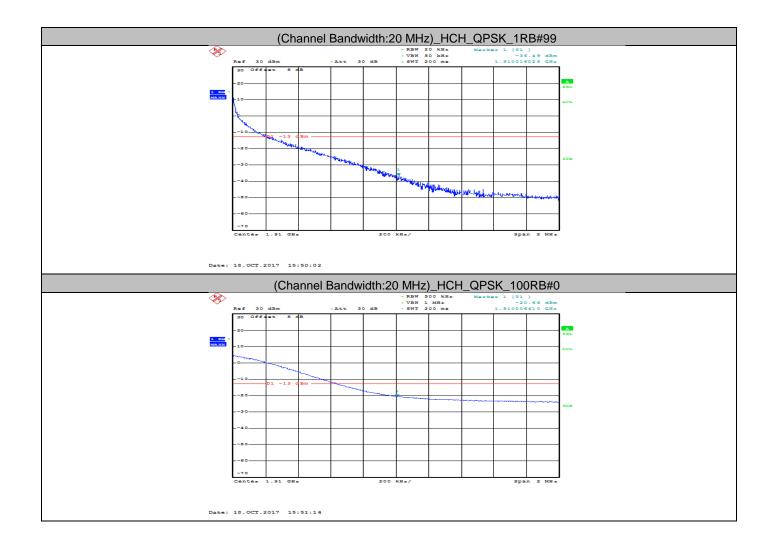
Report No.: WT178005936 Page 305 of 444



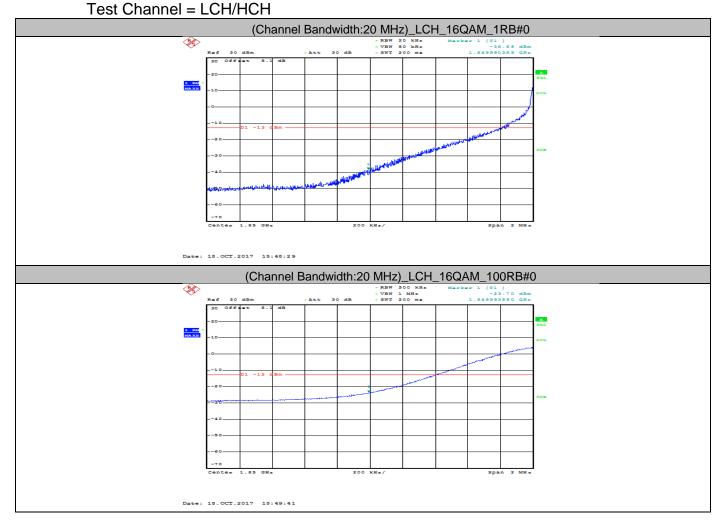
Band edge measurement LTE Band 2 Test Mode = QPSK /TM4 Channel Bandwidth: 20 MHz Test Channel = LCH/HCH



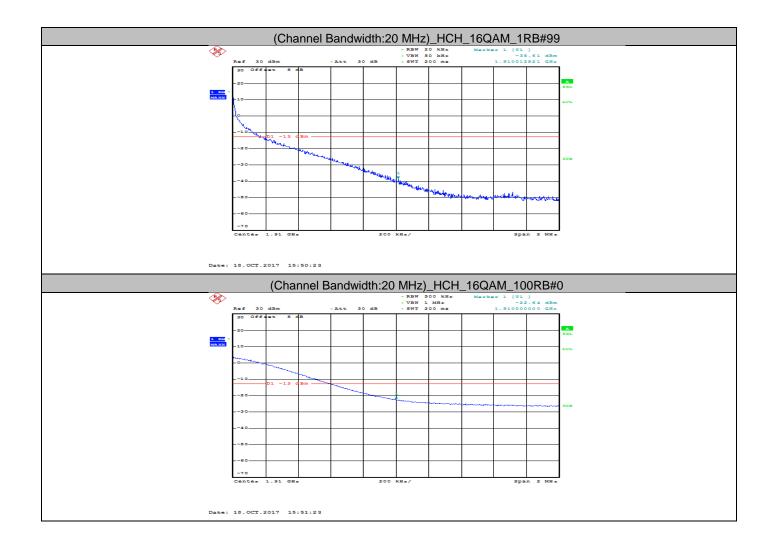
Report No.: WT178005936 Page 307 of 444



Band edge measurement LTE Band 2 Test Mode = 16QAM /TM5 Channel Bandwidth: 20 MHz

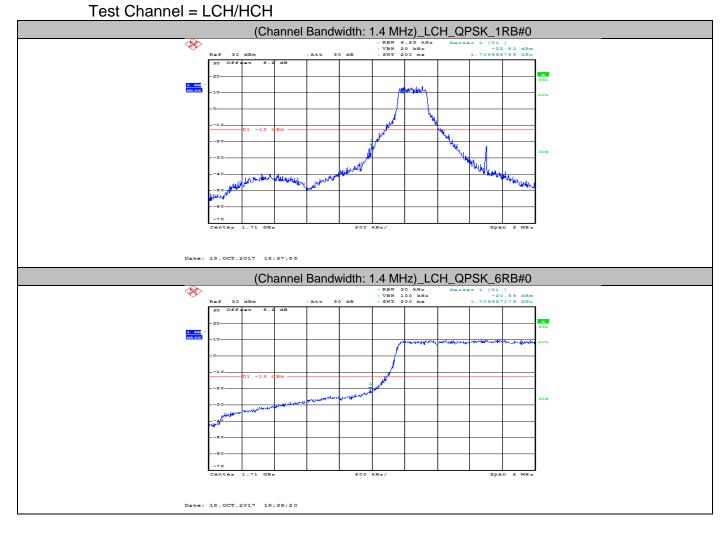


Report No.: WT178005936 Page 309 of 444

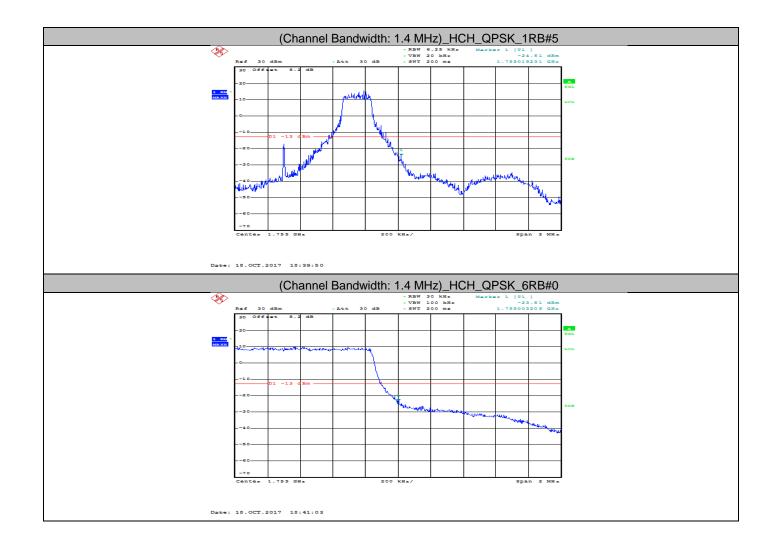


Report No.: WT178005936 Page 310 of 444

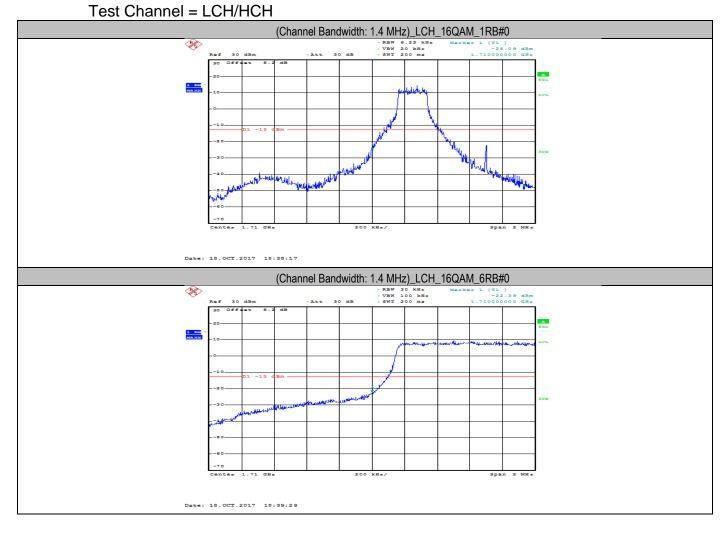
Band edge measurement LTE Band 4 Test Mode = QPSK /TM4 Channel Bandwidth: 1.4 MHz



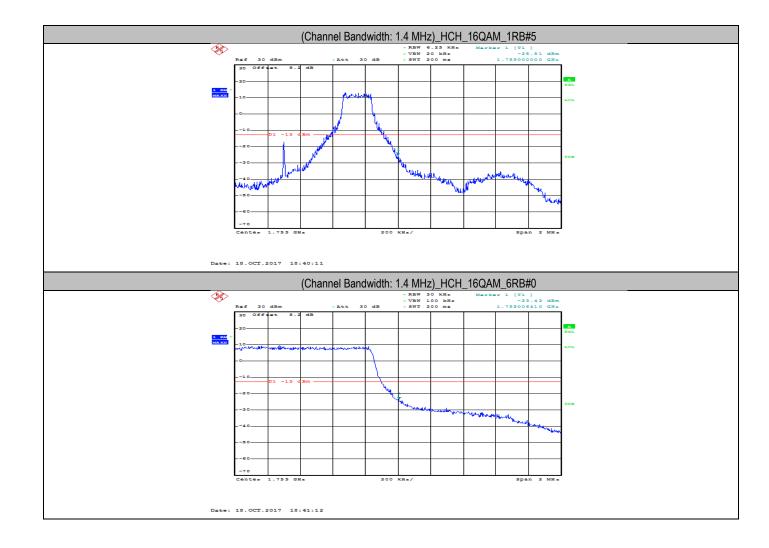
Report No.: WT178005936 Page 311 of 444



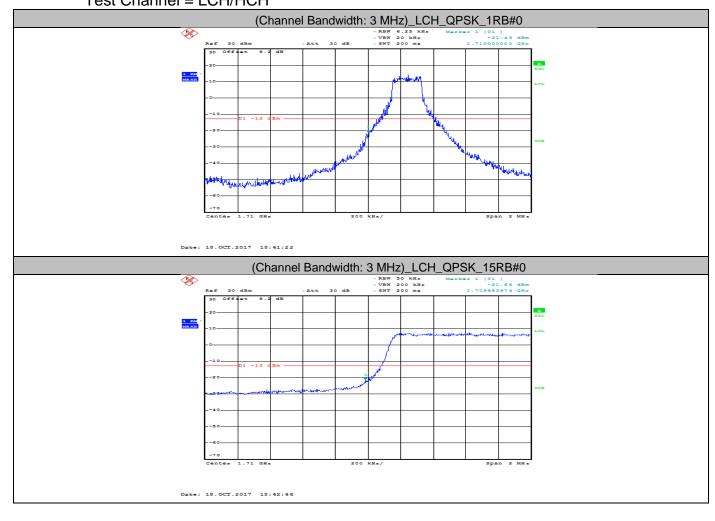
Band edge measurement LTE Band 4 Test Mode = 16QAM /TM5 Channel Bandwidth: 1.4 MHz



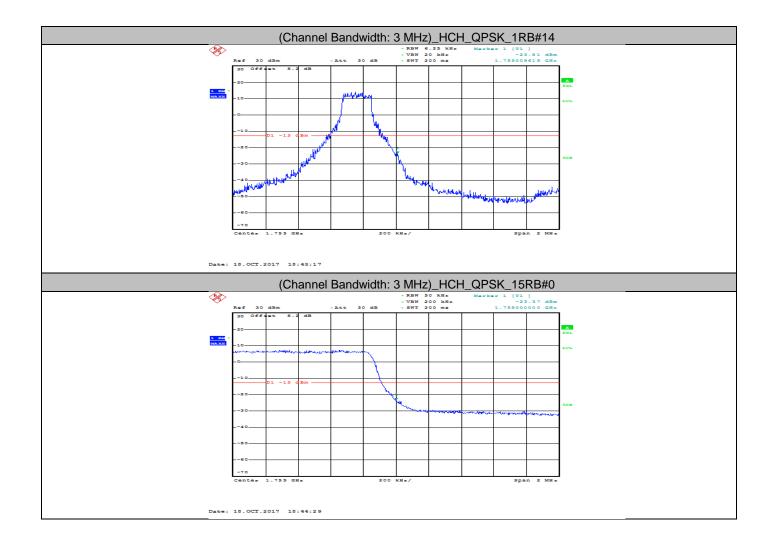
Report No.: WT178005936 Page 313 of 444



Band edge measurement LTE Band 4 Test Mode = QPSK /TM4 Channel Bandwidth: 3 MHz Test Channel = LCH/HCH

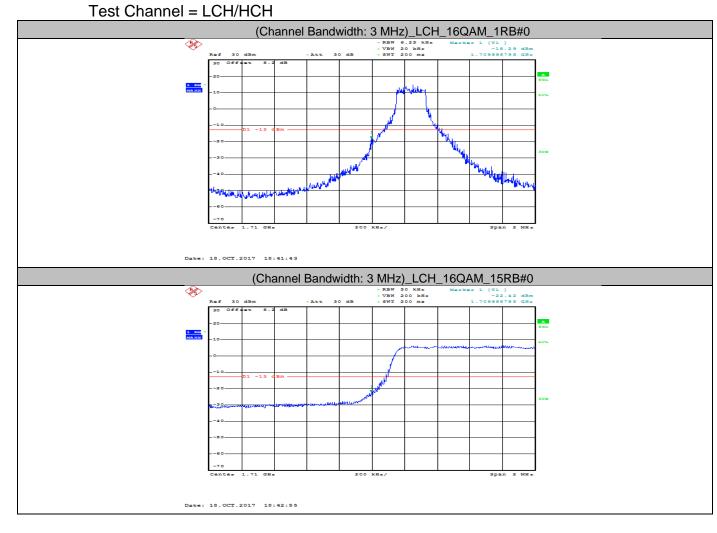


Report No.: WT178005936 Page 315 of 444

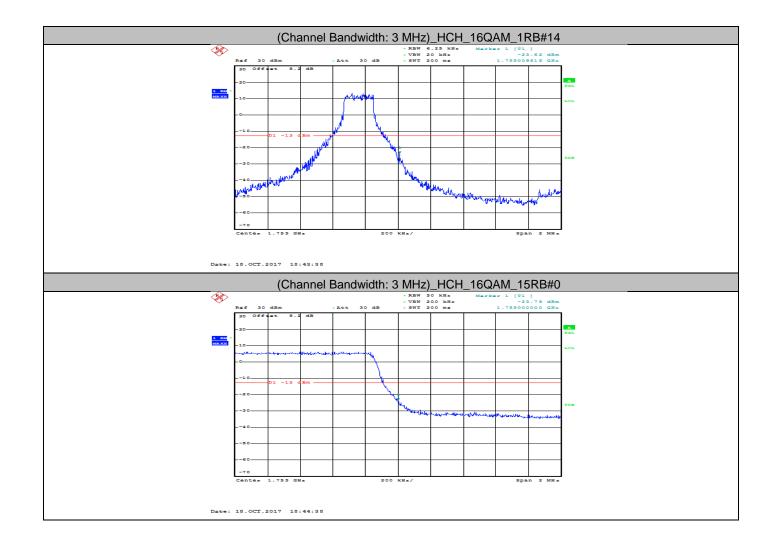


Report No.: WT178005936 Page 316 of 444

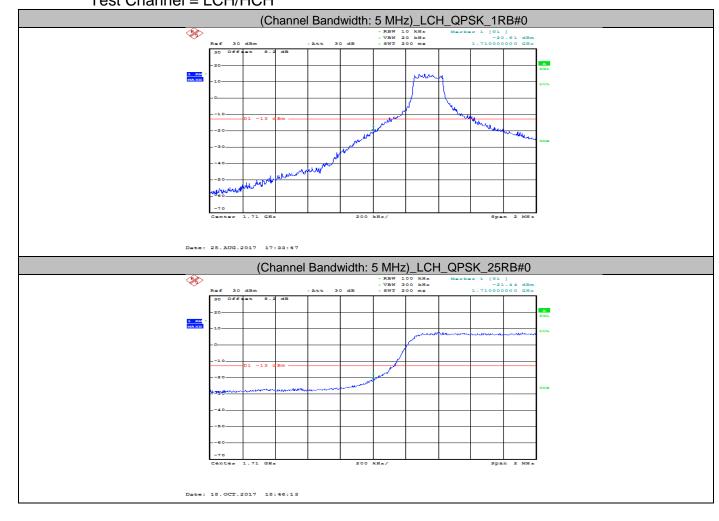
Band edge measurement LTE Band 4 Test Mode = 16QAM /TM5 Channel Bandwidth: 3 MHz



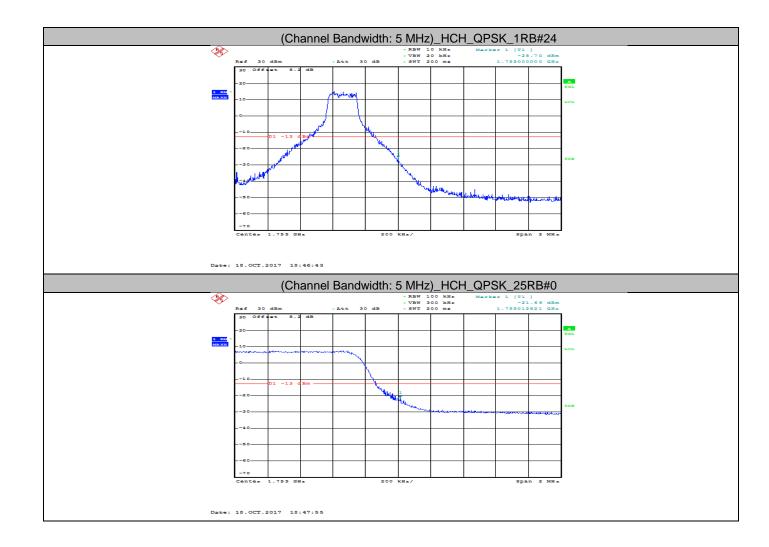
Report No.: WT178005936 Page 317 of 444



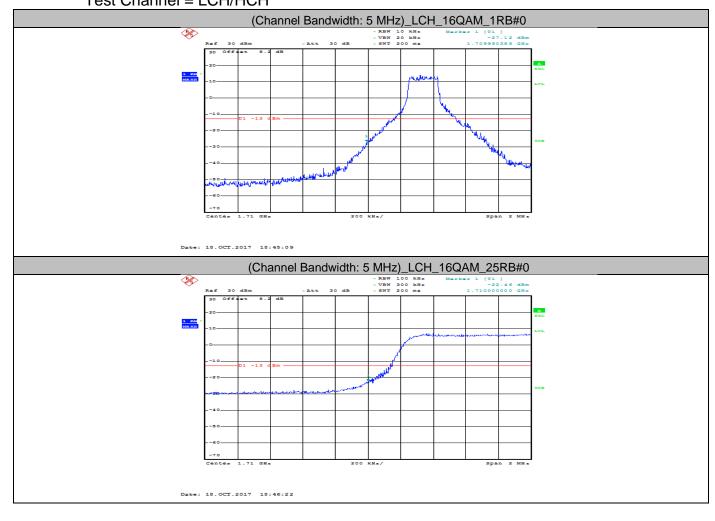
Band edge measurement LTE Band 4 Test Mode = QPSK /TM4 Channel Bandwidth: 5 MHz Test Channel = LCH/HCH



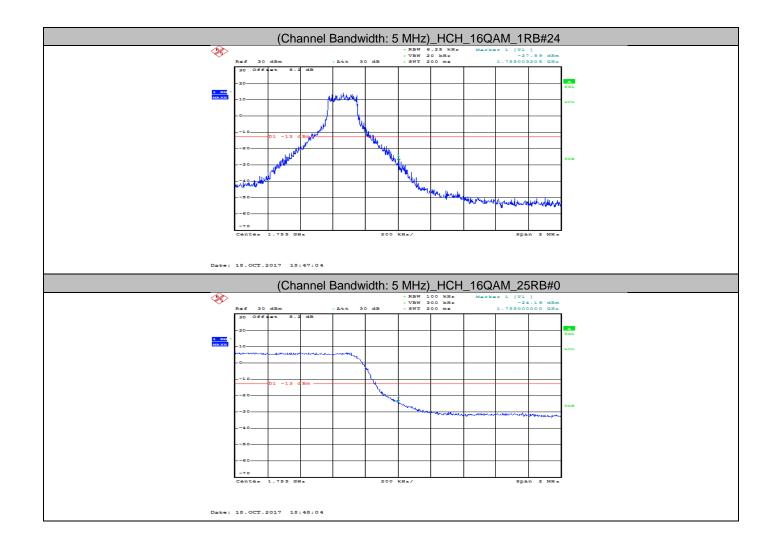
Report No.: WT178005936 Page 319 of 444



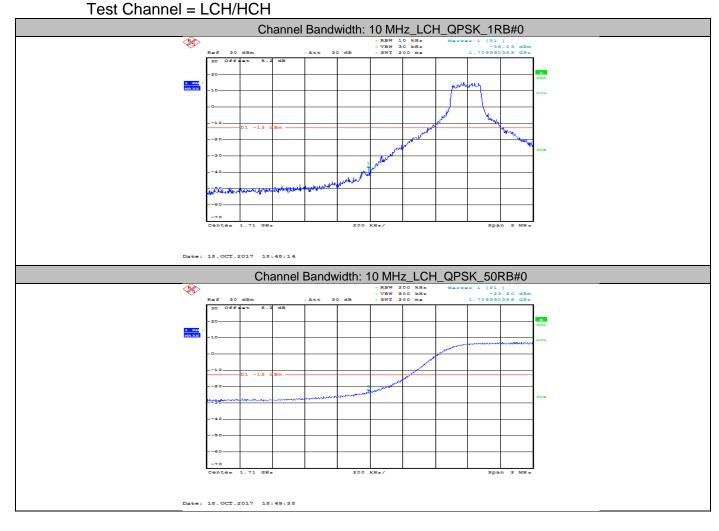
Band edge measurement LTE Band 4 Test Mode = 16QAM /TM5 Channel Bandwidth: 5 MHz Test Channel = LCH/HCH



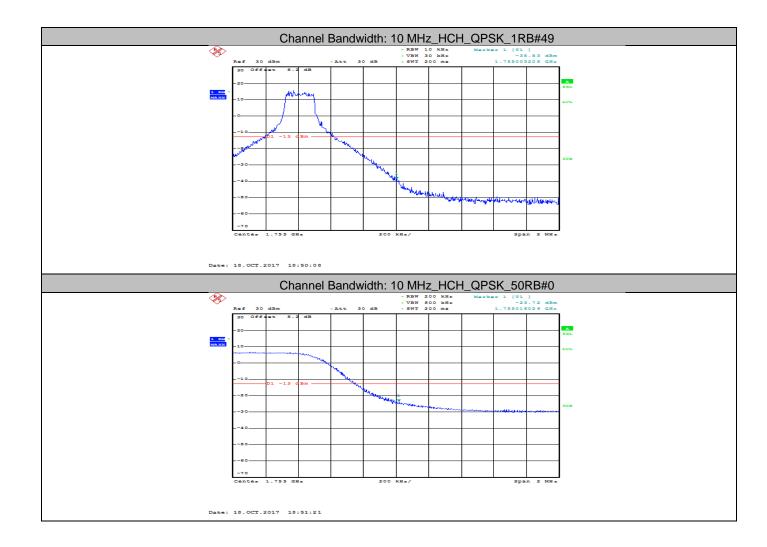
Report No.: WT178005936 Page 321 of 444



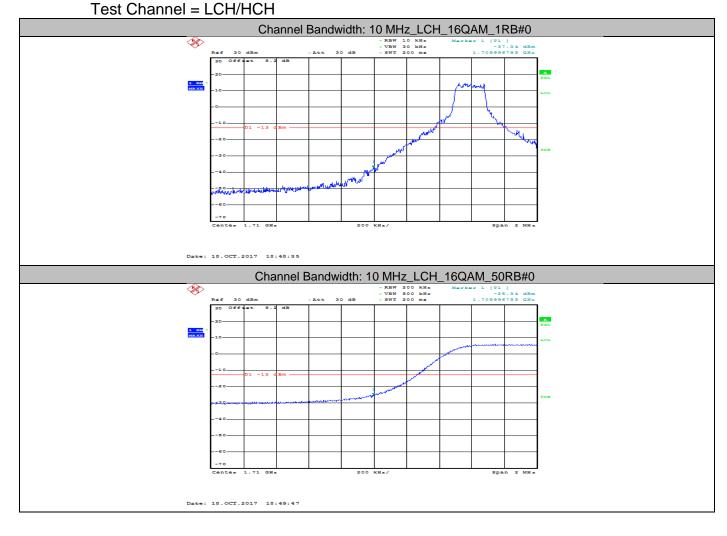
Band edge measurement LTE Band 4 Test Mode = QPSK /TM4 Channel Bandwidth: 10 MHz



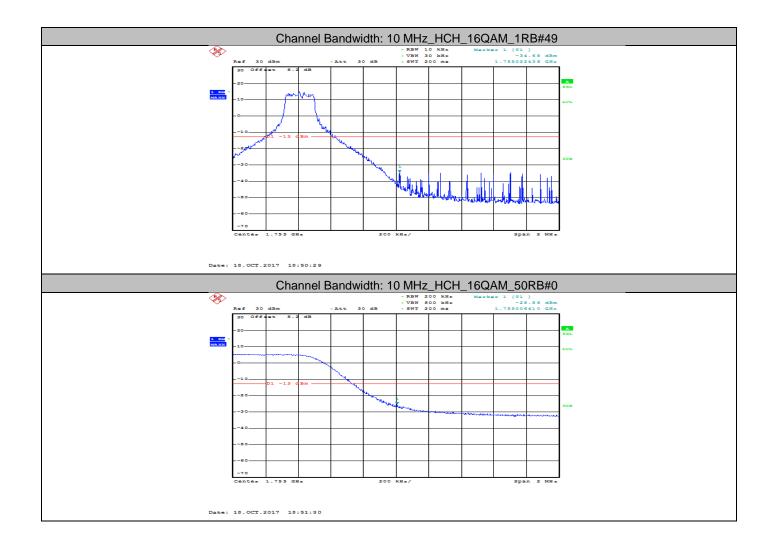
Report No.: WT178005936 Page 323 of 444



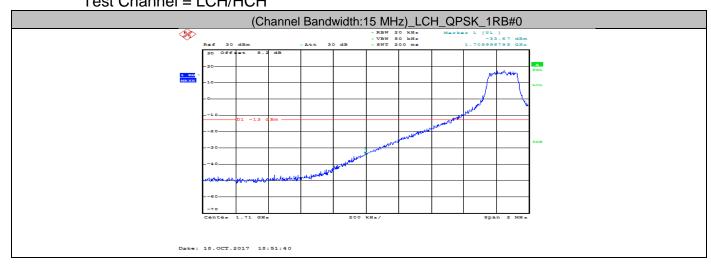
Band edge measurement LTE Band 4 Test Mode = 16QAM /TM5 Channel Bandwidth: 10 MHz

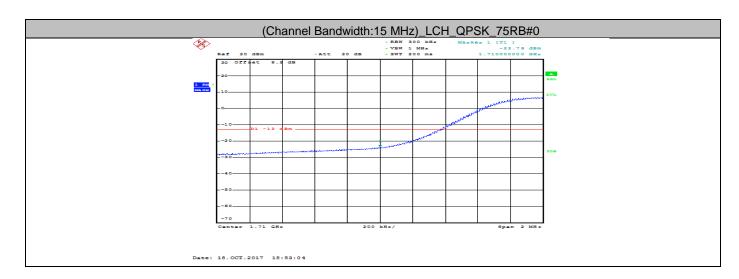


Report No.: WT178005936 Page 325 of 444

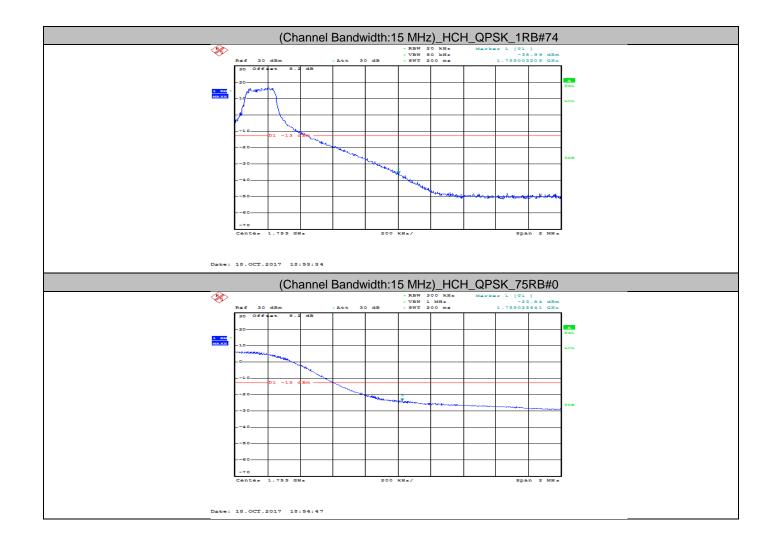


Band edge measurement LTE Band 4 Test Mode = QPSK /TM4 Channel Bandwidth: 15 MHz Test Channel = LCH/HCH

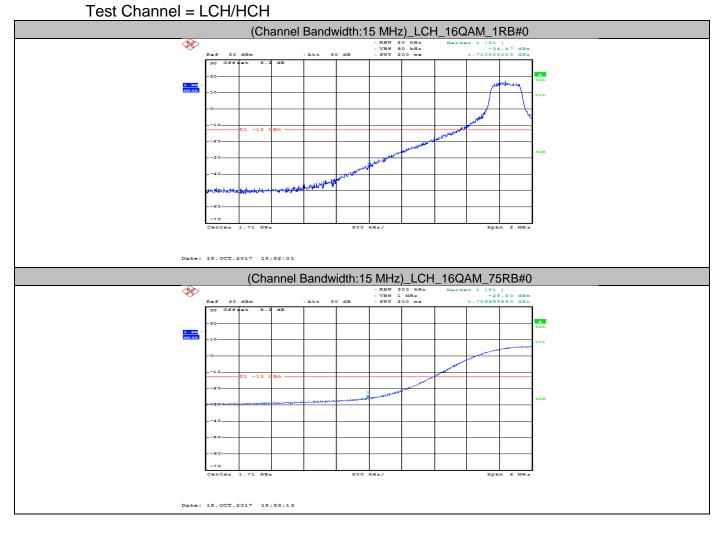




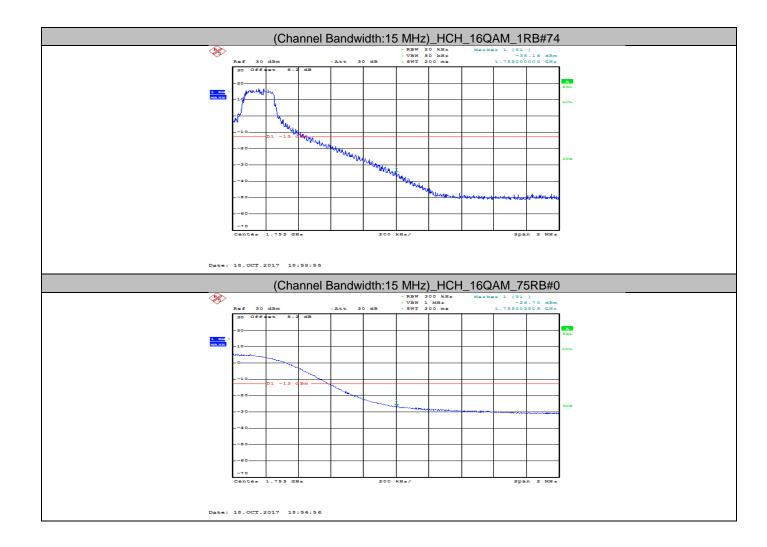
Report No.: WT178005936 Page 327 of 444



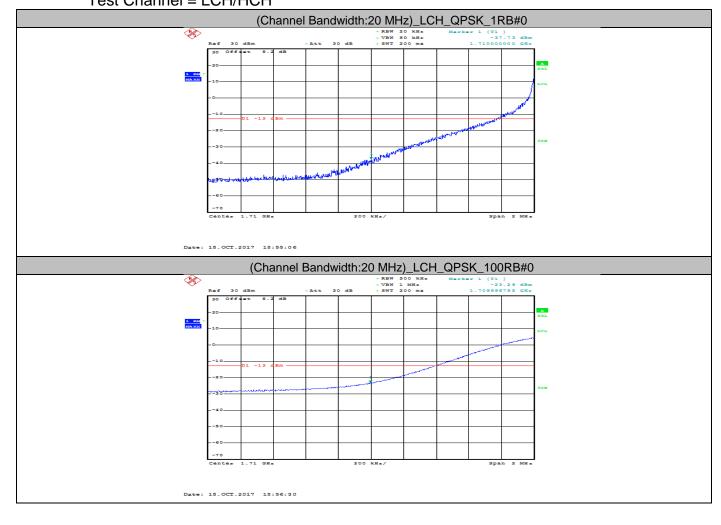
Band edge measurement LTE Band 4 Test Mode = 16QAM /TM5 Channel Bandwidth: 15 MHz



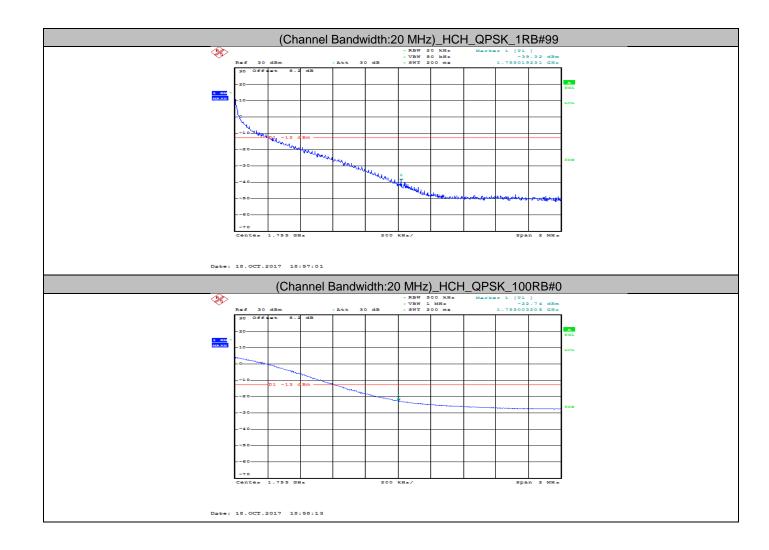
Report No.: WT178005936 Page 329 of 444



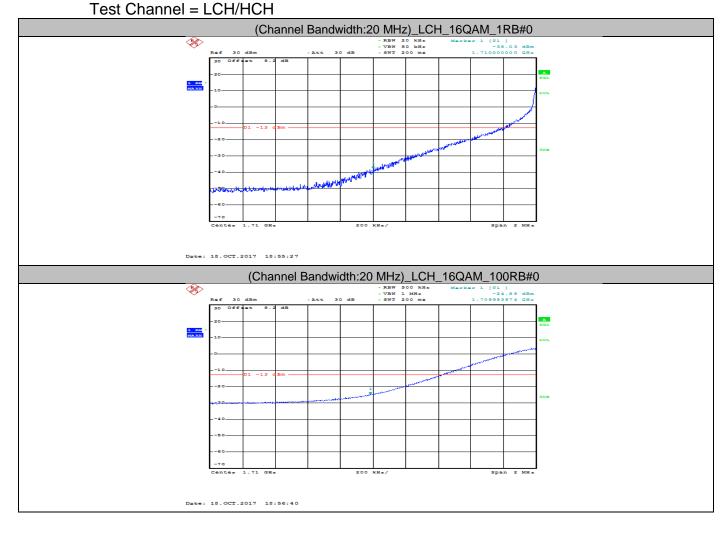
Band edge measurement LTE Band 4 Test Mode = QPSK /TM4 Channel Bandwidth: 20 MHz Test Channel = LCH/HCH



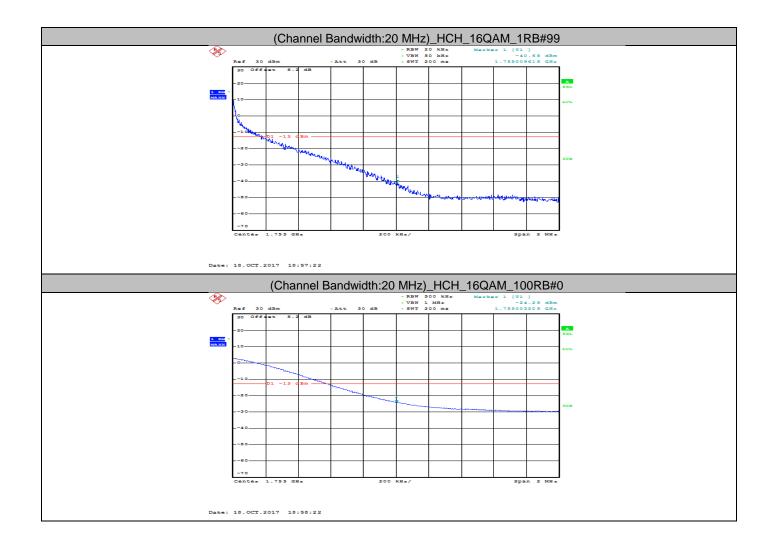
Report No.: WT178005936 Page 331 of 444



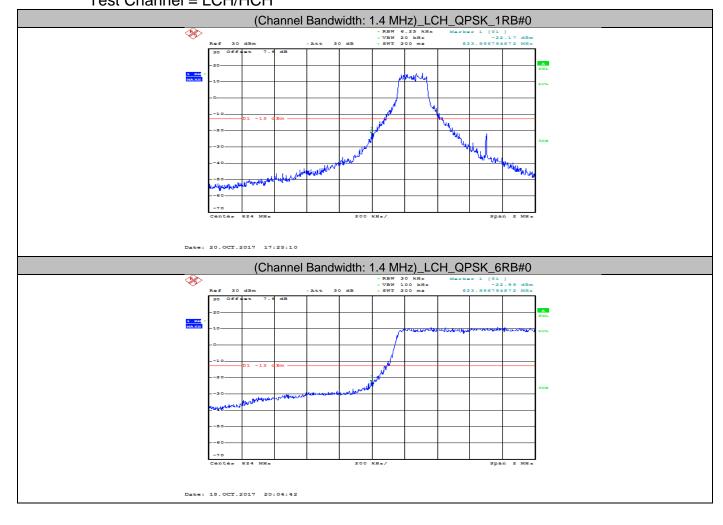
Band edge measurement LTE Band 4 Test Mode = 16QAM /TM5 Channel Bandwidth: 20 MHz



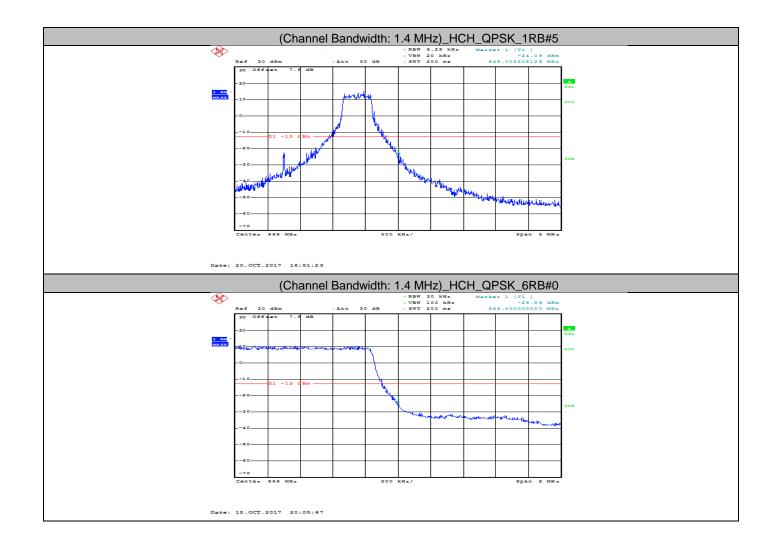
Report No.: WT178005936 Page 333 of 444



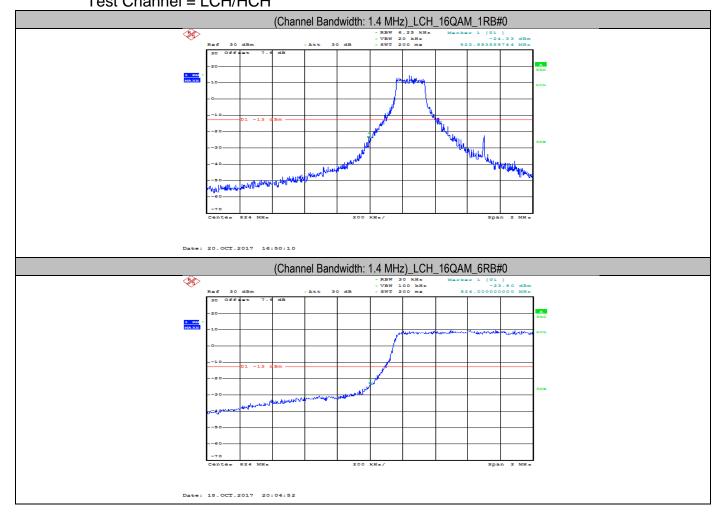
Band edge measurement LTE Band 5 Test Mode = QPSK /TM4 Channel Bandwidth: 1.4 MHz Test Channel = LCH/HCH



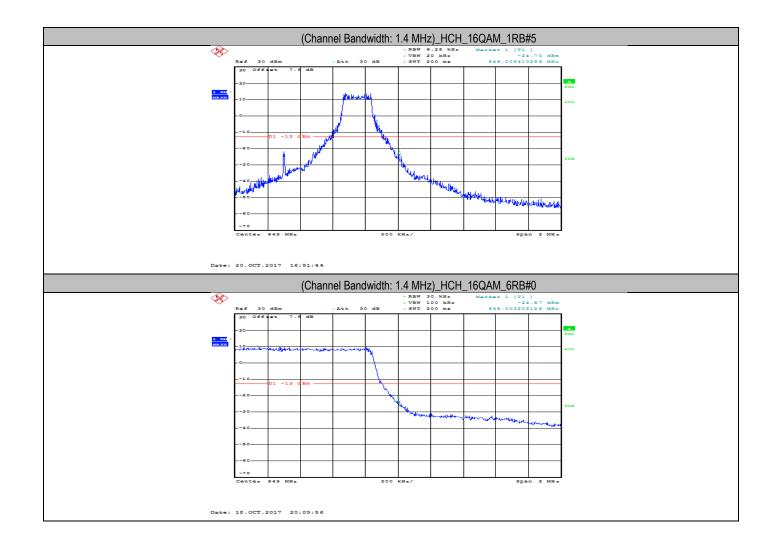
Report No.: WT178005936 Page 335 of 444



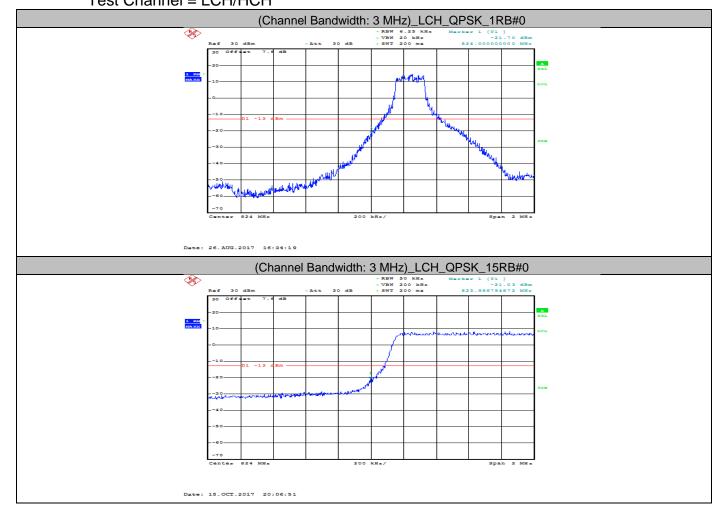
Band edge measurement LTE Band 5 Test Mode = 16QAM /TM5 Channel Bandwidth: 1.4 MHz Test Channel = LCH/HCH



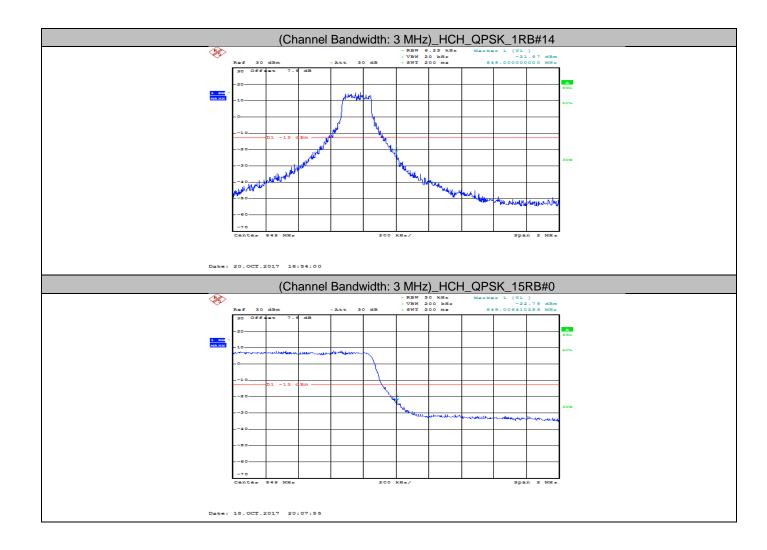
Report No.: WT178005936 Page 337 of 444



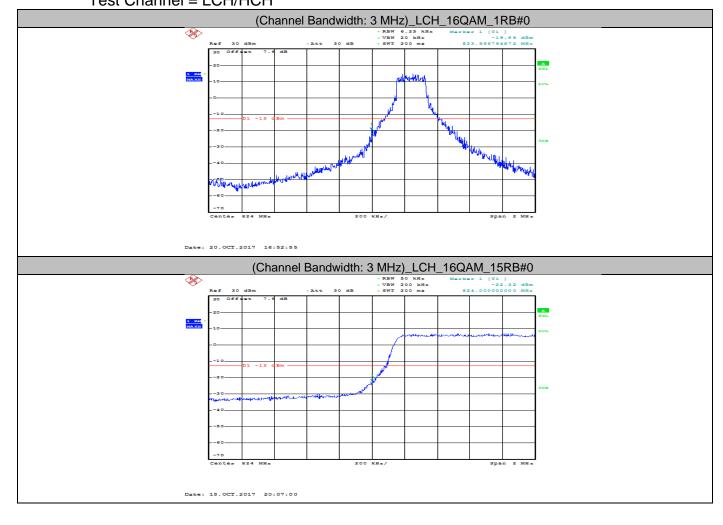
Band edge measurement LTE Band 5 Test Mode = QPSK /TM4 Channel Bandwidth: 3 MHz Test Channel = LCH/HCH



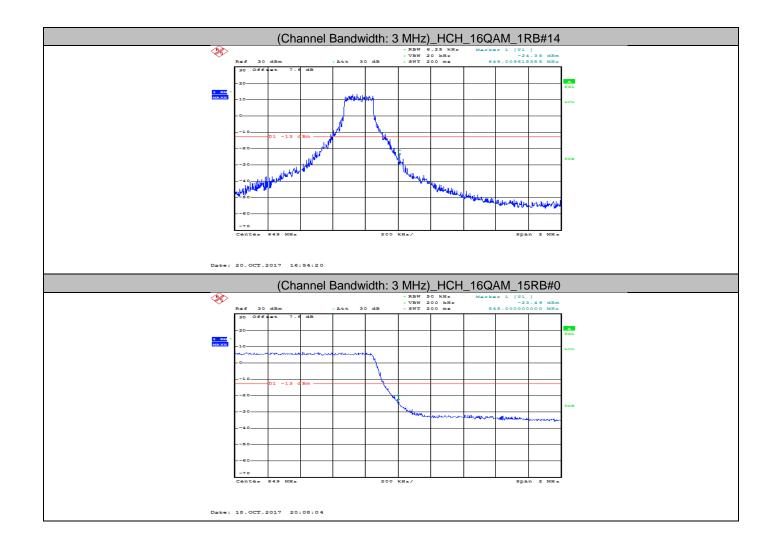
Report No.: WT178005936 Page 339 of 444



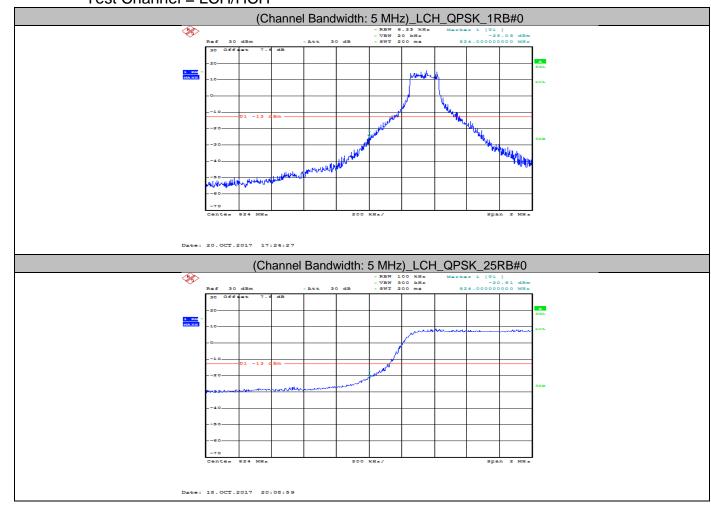
Band edge measurement LTE Band 5 Test Mode = 16QAM /TM5 Channel Bandwidth: 3 MHz Test Channel = LCH/HCH



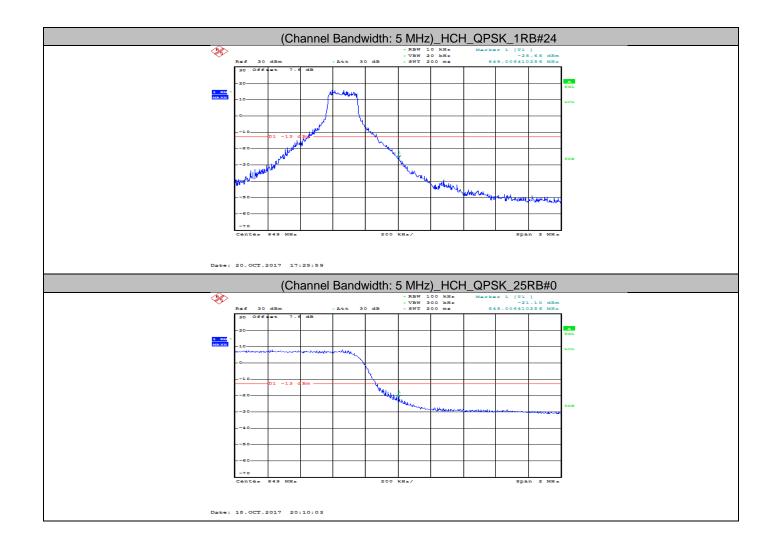
Report No.: WT178005936 Page 341 of 444



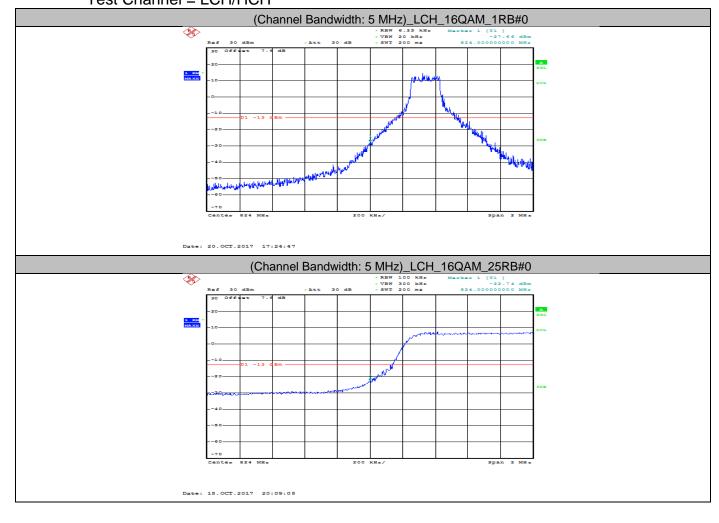
Band edge measurement LTE Band 5 Test Mode = QPSK /TM4 Channel Bandwidth: 5 MHz Test Channel = LCH/HCH



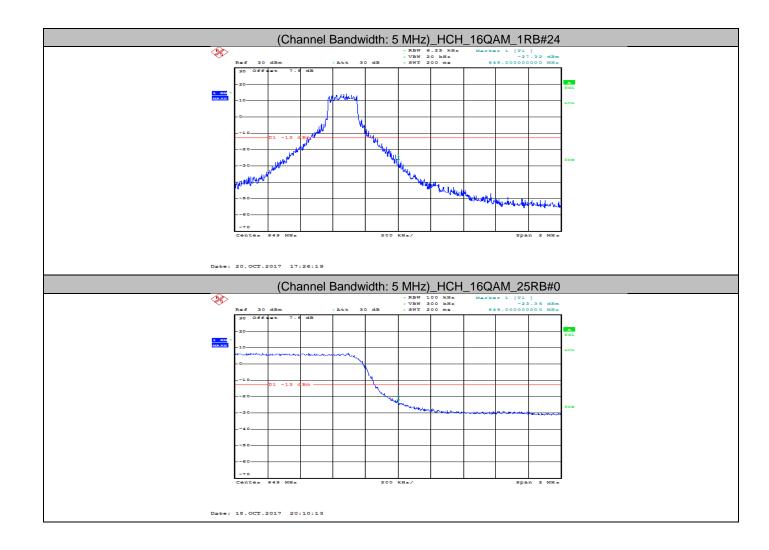
Report No.: WT178005936 Page 343 of 444



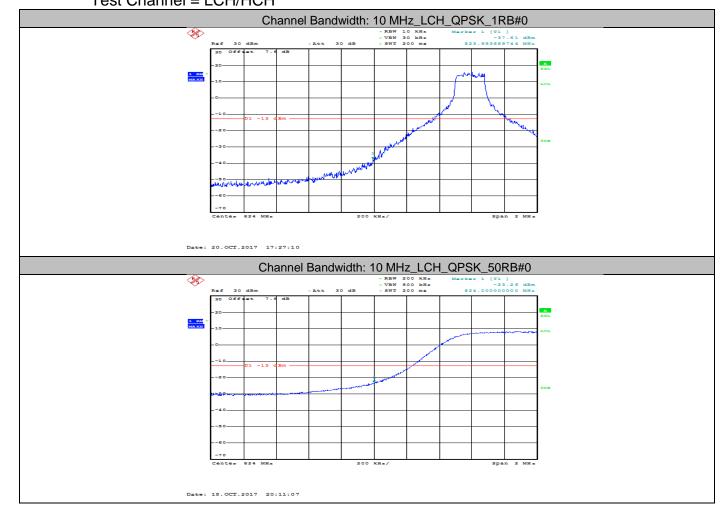
Band edge measurement LTE Band 5 Test Mode = 16QAM /TM5 Channel Bandwidth: 5 MHz Test Channel = LCH/HCH



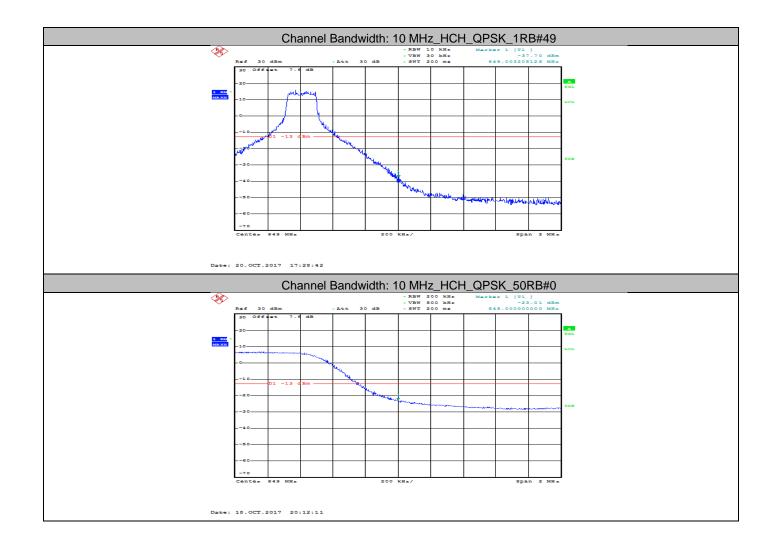
Report No.: WT178005936 Page 345 of 444



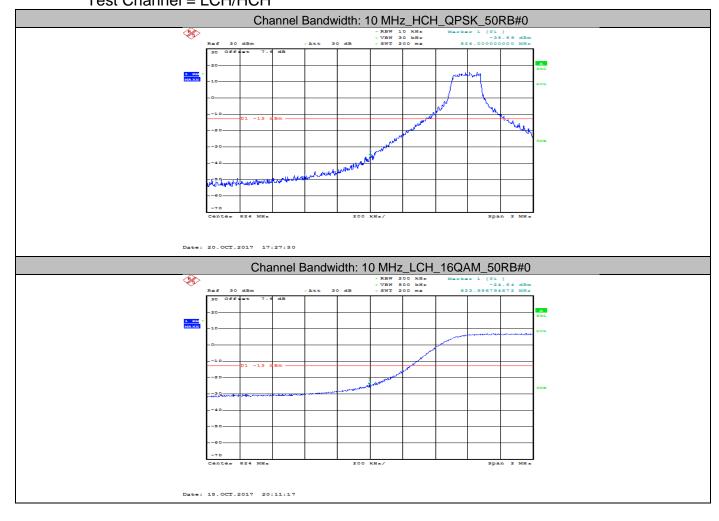
Band edge measurement LTE Band 5 Test Mode = QPSK /TM4 Channel Bandwidth: 10 MHz Test Channel = LCH/HCH



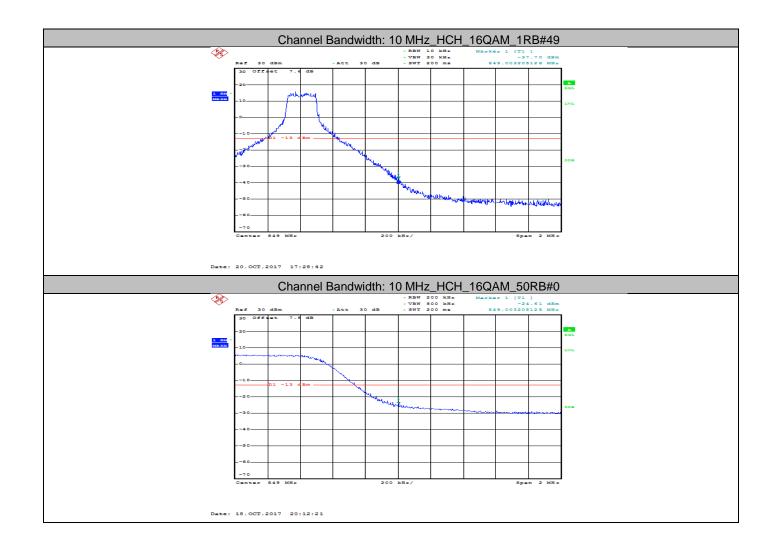
Report No.: WT178005936 Page 347 of 444



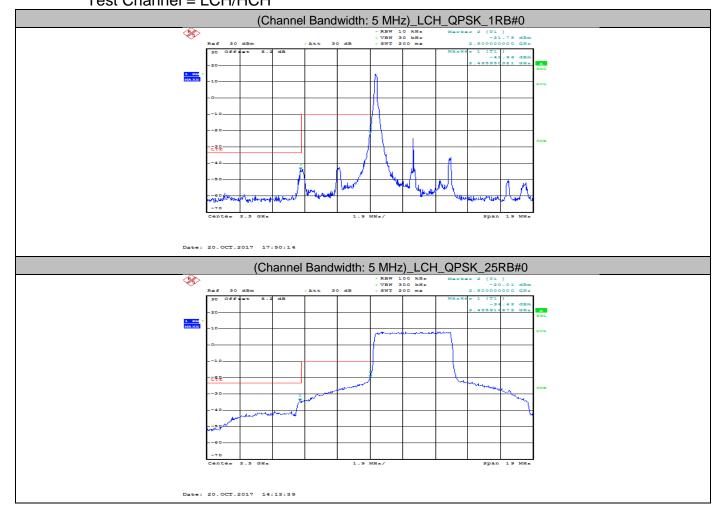
Band edge measurement LTE Band 5 Test Mode = 16QAM /TM5 Channel Bandwidth: 10 MHz Test Channel = LCH/HCH



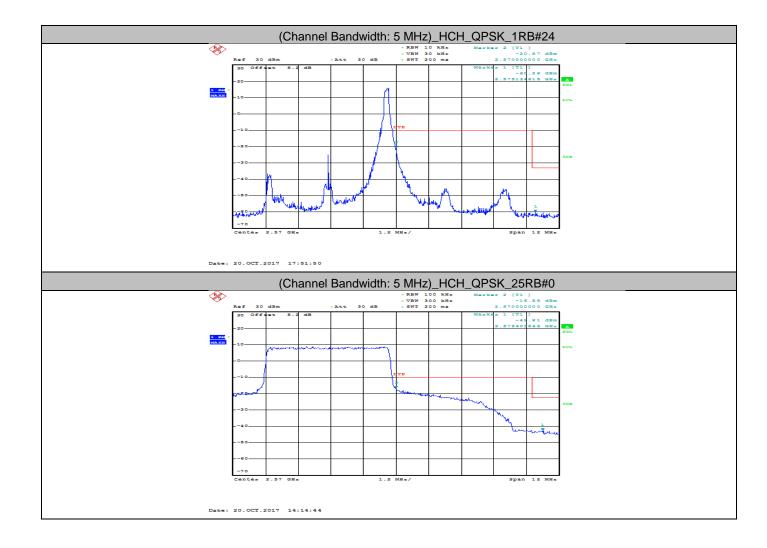
Report No.: WT178005936 Page 349 of 444



Band edge measurement LTE Band 7 Test Mode = QPSK /TM4 Channel Bandwidth: 5 MHz Test Channel = LCH/HCH

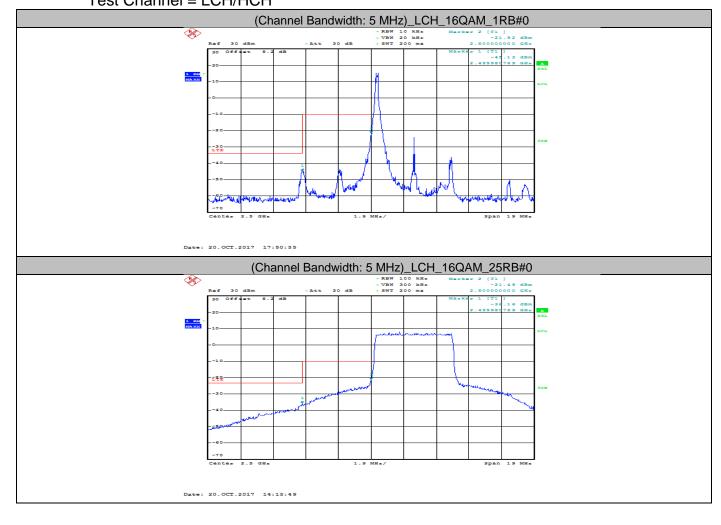


Report No.: WT178005936 Page 351 of 444

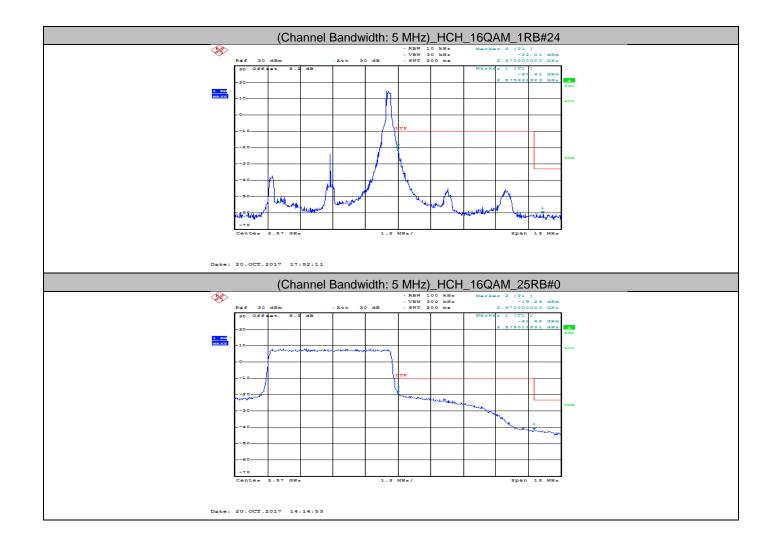


Report No.: WT178005936 Page 352 of 444

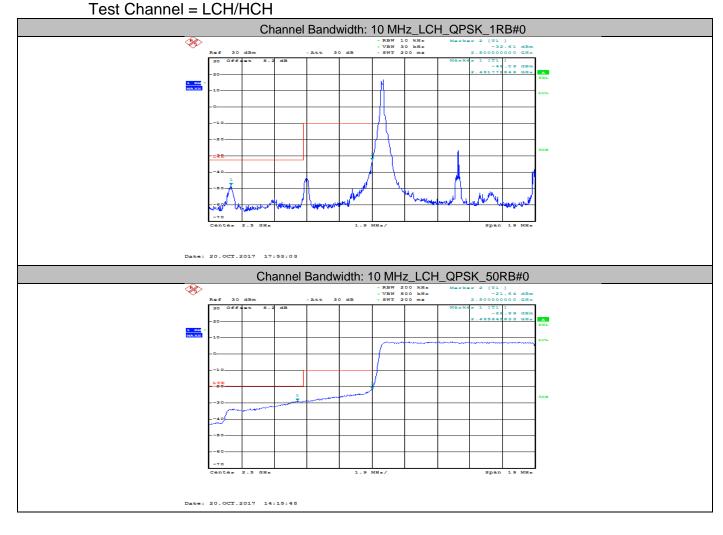
Band edge measurement LTE Band 7 Test Mode = 16QAM /TM5 Channel Bandwidth: 5 MHz Test Channel = LCH/HCH



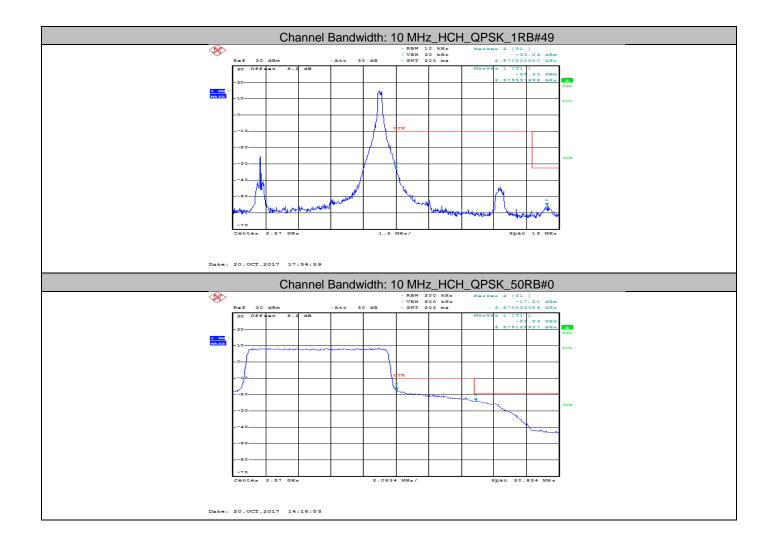
Report No.: WT178005936 Page 353 of 444



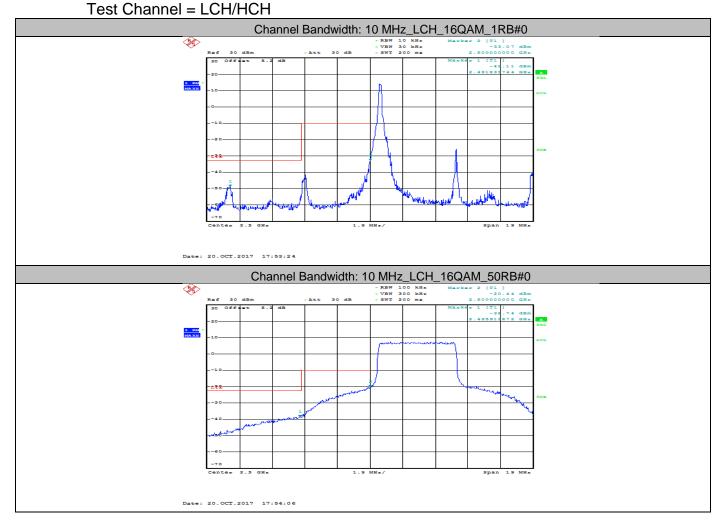
Band edge measurement LTE Band 7 Test Mode = QPSK /TM4 Channel Bandwidth: 10 MHz



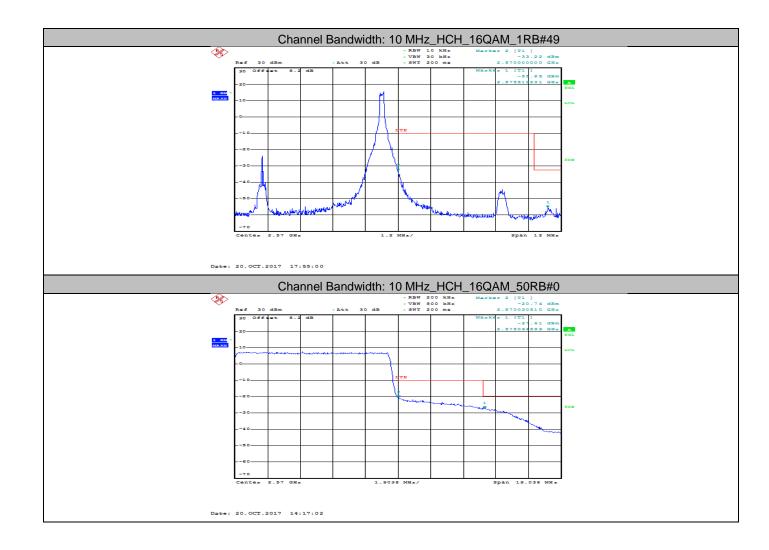
Report No.: WT178005936 Page 355 of 444



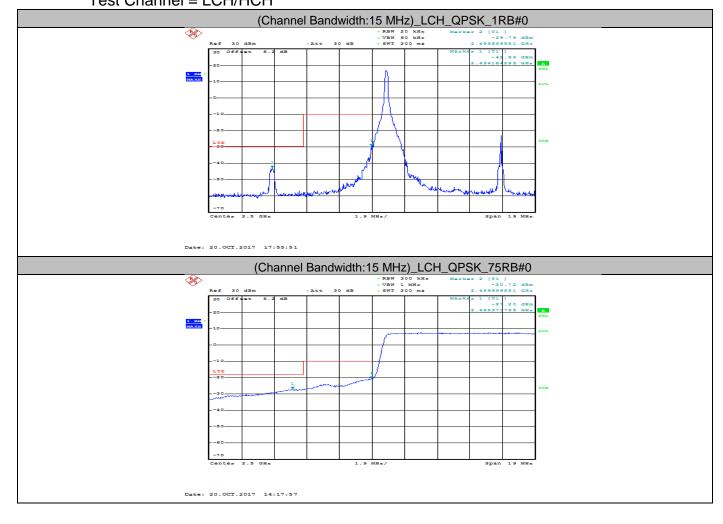
Band edge measurement LTE Band 7 Test Mode = 16QAM /TM5 Channel Bandwidth: 10 MHz



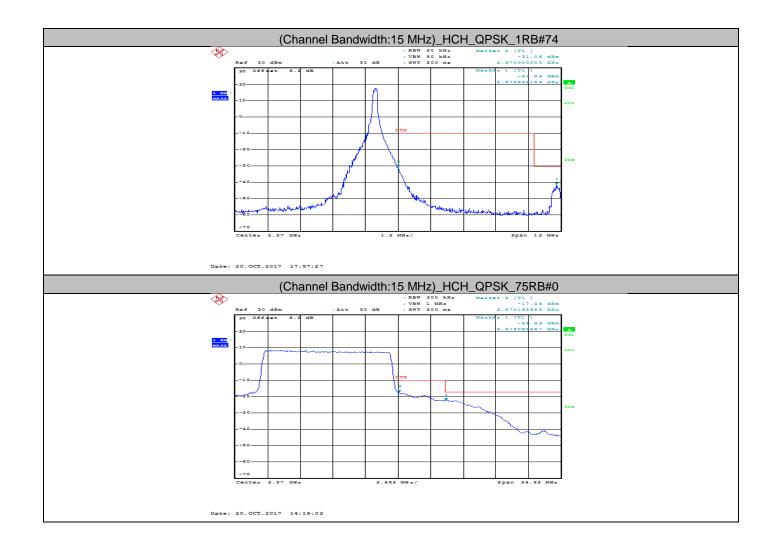
Report No.: WT178005936 Page 357 of 444



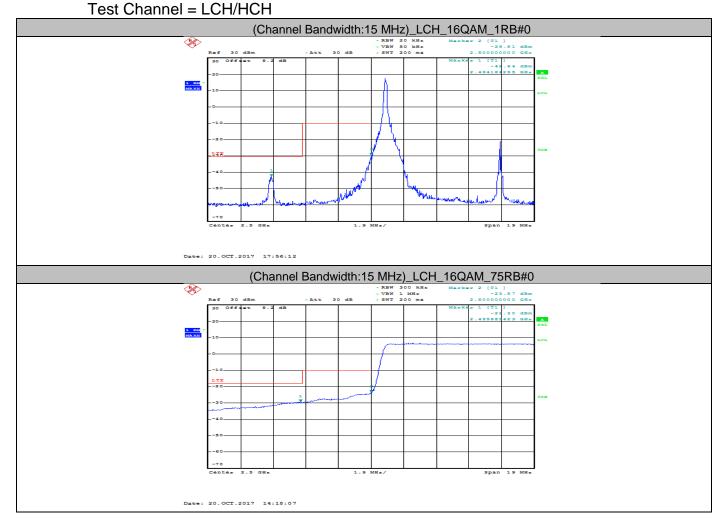
Band edge measurement LTE Band 7 Test Mode = QPSK /TM4 Channel Bandwidth: 15 MHz Test Channel = LCH/HCH



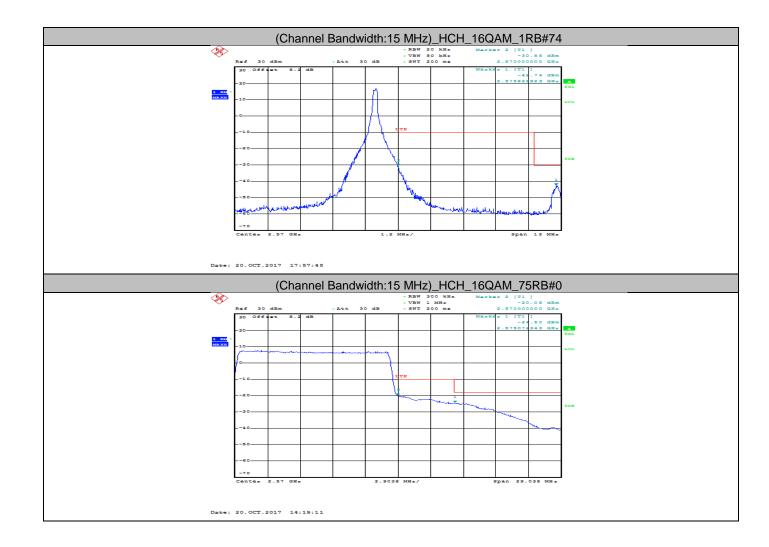
Report No.: WT178005936 Page 359 of 444



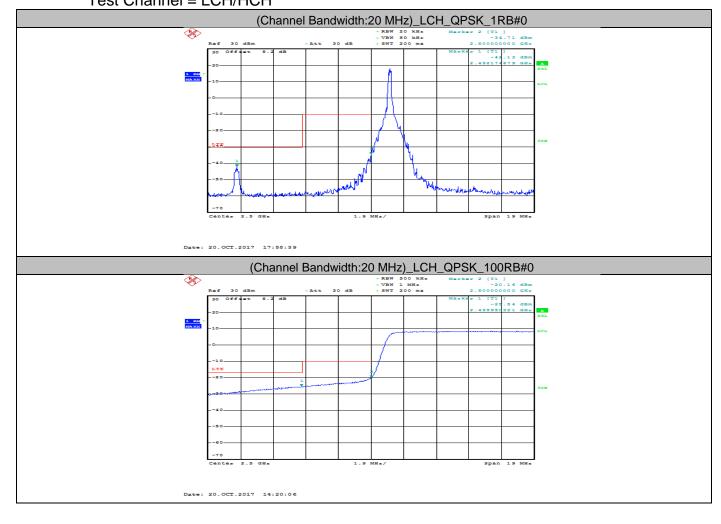
Band edge measurement LTE Band 7 Test Mode = 16QAM /TM5 Channel Bandwidth: 15 MHz



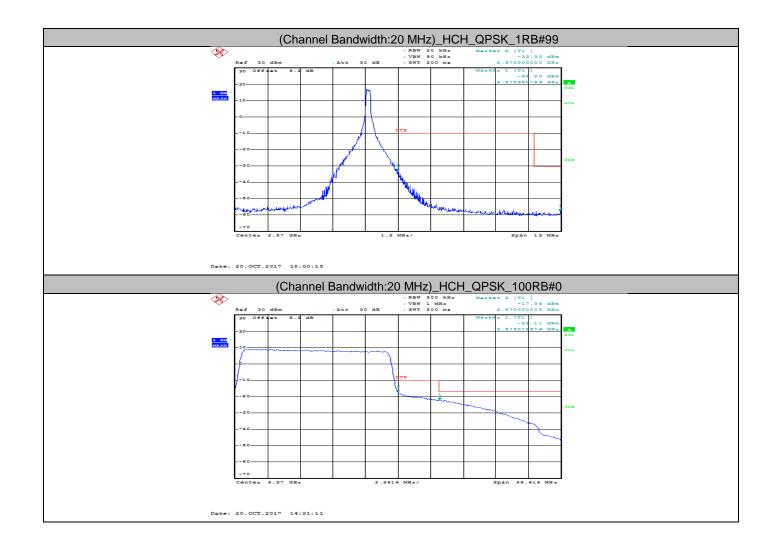
Report No.: WT178005936 Page 361 of 444



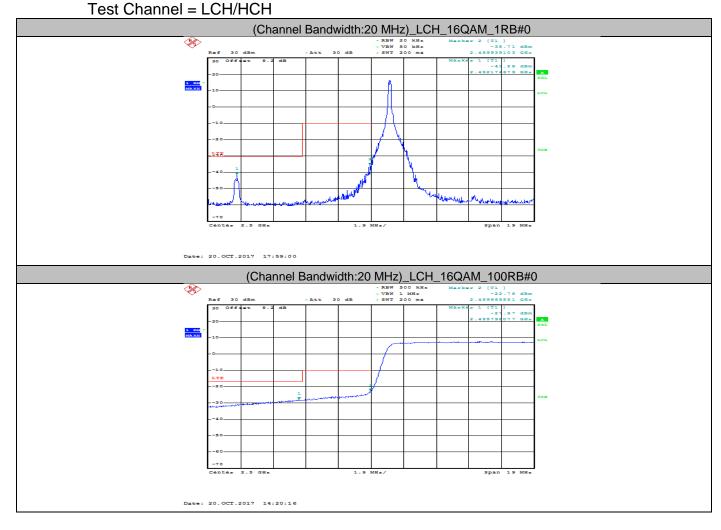
Band edge measurement LTE Band 7 Test Mode = QPSK /TM4 Channel Bandwidth: 20 MHz Test Channel = LCH/HCH



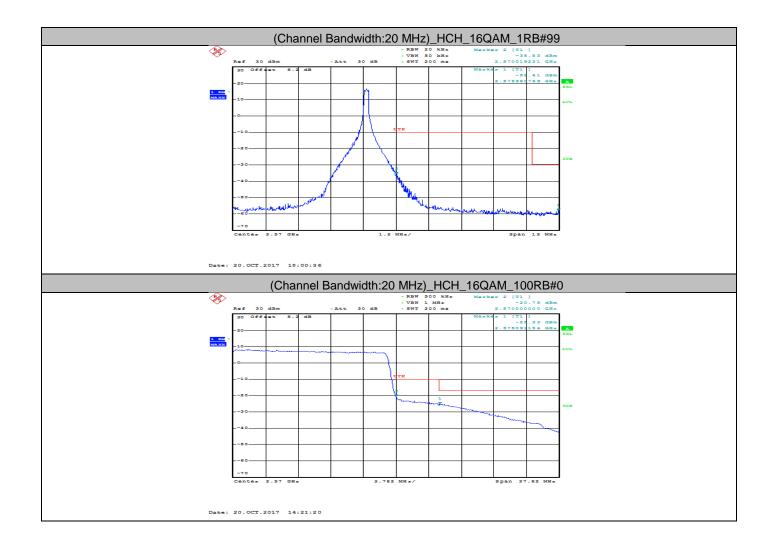
Report No.: WT178005936 Page 363 of 444



Band edge measurement LTE Band 7 Test Mode = 16QAM /TM5 Channel Bandwidth: 20 MHz



Report No.: WT178005936 Page 365 of 444



# 4.5. Spurious Emissions Radiated

### 4.5.1.Test Standard

FCC: CFR Part 2.1053, CFR Part 22.917, CFR Part 24.238, CFR Part 27

#### 4.5.2.Test Limit

Measurements shall be made to detect spurious emissions that may be radiated directly from the cabinet, control circuits, power leads or intermediate circuit elements under normal conditions of installation and operation. Curves or equivalent data shall be supplied showing the magnitude of each harmonic and other spurious emission.

#### 5.5.3 Limits:

(a) Out of band emissions. 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.

For all power levels +30dBm to 0dBm, this becomes a constant specification of -13dBm.

5.5.3.1 FCC 22.917 Emission limitations for cellular equipment.

The rules in this section govern the spectral characteristics of emissions in the Cellular Radiotelephone Service.

(b) Measurement procedure. Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. In the 1MHz 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. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 100 kHz of 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

#### 5.5.3.2 FCC 24.238 Emission limitations for Broadband PCS equipment.

The rules in this section govern the spectral characteristics of emissions in the Broadband Personal Communications Service.

(b) Measurement procedure. Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz 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. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 100 kHz of 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

§ 27.53 (h) For operations in the 1710–1755 MHz and 2110–2155 MHz bands, the

Report No.: WT178005936 Page 367 of 444

power of any

emission outside a licensee's frequency block shall be attenuated below the transmitter power

(P) by at least  $43 + 10 \log 10(P) dB$ .

The unwanted emission power shall be measured with a resolution bandwidth of at least 1% ofthe occupied bandwidth in the 1 MHz band immediately outside and adjacent to the channel edge of the equipment. Beyond the 1 MHz band immediately outside the channel edge of the equipment, a resolution bandwidth of 1 MHz shall be employed. A narrower resolution bandwidth is allowed to be used provided that the measured power is integrated over the full required measurement bandwidth of 1 MHz or 1% of the occupied bandwidth as applicable.

The power of any unwanted emissions measured from the channel edge of the equipment shall be attenuated below the transmitter power, P (dBW), as follows:

- a. for base station and subscriber equipment, other than mobile subscriber equipment, the attenuation shall not be less than 43 + 10 Log10 (p), dB; and
- b. for mobile subscriber equipment, the attenuation shall not be less than 43 + 10 Log10
- (p), dB at the channel edges and 55 + 10 Log10 (p) at 5.5 MHz away and beyond the channel edges where p in (a) and (b) is the transmitter power measured in watts

## 4.5.3.Test Procedure

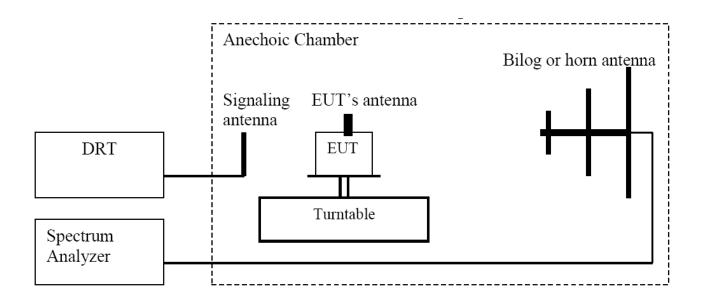
- 1. Connect the equipment as shown in the above diagram with the EUT's antenna in a horizontal orientation.
- 2. Adjust the settings of the Universal Radio Communication Tester (CMU) to set the EUT to its maximum power at the required channel.
- 3. Set the spectrum analyzer to measure peak hold with the required settings.
- 4. Place the measurement antenna in a horizontal orientation. Rotate the EUT 360 . Raise the measurement antenna at 1.5 meters increments and rotate the EUT 360 at maximize all emissions. Measure and record all spurious emissions (LVL) up to the tenth harmonic of the carrier frequency.
- 5. Replace the EUT with a horizontally polarized half wave dipole or known gain antenna. The center of the antenna should be at the same location as the center of the EUT's antenna.
- 6. Connect the antenna to a signal generator with known output power and record the path loss in dB (LOSS). LOSS = Generator Output Power (dBm) Analyzer reading (dBm).
- 7. Determine the level of spurious emissions using the following equation: Spurious (dBm) = LVL (dBm) + LOSS (dB):
- 8. Repeat steps 4, 5 and 6 with all antennas vertically polarized.
- 9. Determine the level of spurious emissions using the following equation: Spurious (dBm) = LVL (dBm) + LOSS (dB):
- 10. Measurements are to be performed with the EUT set to the low, middle and high channel of each frequency band.

(Note: Steps 5 and 6 above are performed prior to testing and LOSS is recorded by test software. Steps 3, 4 and 7 above are performed with test software.)

Spectrum analyzer settings: RBW=VBW=1MHz

## 4.5.4.Test Setup

Report No.: WT178005936 Page 368 of 444



Report No.: WT178005936 Page 369 of 444

### 4.5.5.Test Data

Test Band = GSM850 Test Mode = GPRS/TM1 Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBd]	dB	Level (ERP) [dBm]		[dBm]
1648.4	-0.57	0.9	6.77	40.6	-35.3	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = GSM850 Test Mode = GPRS/TM1 Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBd]	dB	Level (ERP) [dBm]		[dBm]
1673.2	0.23	0.9	6.77	40.6	-34.5	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = GSM850 Test Mode = GPRS/TM1 Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBd]	dB	Level (ERP) [dBm]		[dBm]
1697.6	-0.37	0.9	6.77	40.6	-35.1	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 370 of 444

Test Band = GSM850 Test Mode = EDGE /TM2 Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBd]	dB	Level (ERP) [dBm]		[dBm]
1648.4	-1.57	0.9	6.77	40.6	-36.3	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = GSM850 Test Mode = EDGE /TM2 Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBd]	dB	Level (ERP) [dBm]		[dBm]
1673.2	-1.37	0.9	6.77	40.6	-36.1	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = GSM850 Test Mode = EDGE /TM2 Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBd]	dB	Level (ERP) [dBm]		[dBm]
1697.6	-2.07	0.9	6.77	40.6	-36.8	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 371 of 444

Test Band = WCDMA850 Test Mode = UMTS/TM3 Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBd]	dB	Level (ERP) [dBm]		[dBm]
1652.8	-3.47	0.9	6.77	40.6	-38.2	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = WCDMA850 Test Mode = UMTS/TM3 Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBd]	dB	Level (ERP) [dBm]		[dBm]
1672.8	-2.87	0.9	6.77	40.6	-37.6	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = WCDMA850 Test Mode = UMTS/TM3 Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBd]	dB	Level (ERP) [dBm]		[dBm]
1693.2	-3.57	0.9	6.77	40.6	-38.3	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 372 of 444

Test Band = GSM1900 Test Mode = GPRS/TM1 Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3700.4	-3.73	4.6	9.53	39	-37.8	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = GSM1900 Test Mode = GPRS/TM1 Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3760	-4.03	4.6	9.53	39	-38.1	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = GSM1900 Test Mode = GPRS/TM1 Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3819.6	-3.83	4.6	9.53	39	-37.9	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 373 of 444

Test Band = GSM1900 Test Mode = EDGE /TM2 Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3700.4	-4.53	4.6	9.53	39	-38.6	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = GSM1900 Test Mode = EDGE /TM2 Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3760	-3.33	4.6	9.53	39	-37.4	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = GSM1900 Test Mode = EDGE /TM2 Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3819.6	-4.23	4.6	9.53	39	-38.3	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 374 of 444

Test Band = WCDMA1900 Test Mode = UMTS /TM3 Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3705	-5.23	4.6	9.53	39	-39.3	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = WCDMA1900 Test Mode = UMTS /TM3 Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3760	-5.73	4.6	9.53	39	-39.8	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = WCDMA1900 Test Mode = UMTS /TM3 Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3815.2	-4.33	4.6	9.53	39	-38.4	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 375 of 444

Test Band = WCDMA1700 Test Mode = UMTS /TM3 Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3424.8	-5.81	4.1	9.41	39	-39.5	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = WCDMA1700 Test Mode = UMTS /TM3 Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3465.2	-5.01	4.1	9.41	39	-38.7	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = WCDMA1700 Test Mode = UMTS /TM3 Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3505.2	-5.61	4.1	9.41	39	-39.3	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 376 of 444

Test Band = LTE Band 2
Test Mode = QPSK /TM4
Bandwidth=1.4MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3701.4	-4.63	4.6	9.53	39	-38.7	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 2
Test Mode = QPSK /TM4
Bandwidth=1.4MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3760	-4.13	4.6	9.53	39	-38.2	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 2
Test Mode = QPSK /TM4
Bandwidth=1.4MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3818.6	-5.23	4.6	9.53	39	-39.3	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 377 of 444

Test Band = LTE Band 2
Test Mode = 16QAM /TM5
Bandwidth=1.4MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3701.4	-6.13	4.6	9.53	39	-40.2	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 2
Test Mode = 16QAM /TM5
Bandwidth=1.4MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3760	-6.63	4.6	9.53	39	-40.7	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 2
Test Mode = 16QAM /TM5
Bandwidth=1.4MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3818.6	-6.03	4.6	9.53	39	-40.1	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 378 of 444

Test Band = LTE Band 2
Test Mode = QPSK /TM4
Bandwidth=3MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3703	-5.43	4.6	9.53	39	-39.5	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 2
Test Mode = QPSK /TM4
Bandwidth=3MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3760	-4.83	4.6	9.53	39	-38.9	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 2
Test Mode = QPSK /TM4
Bandwidth=3MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3817	-4.43	4.6	9.53	39	-38.5	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 379 of 444

Test Band = LTE Band 2
Test Mode = 16QAM /TM5
Bandwidth=3MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3703	-5.23	4.6	9.53	39	-39.3	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 2
Test Mode = 16QAM /TM5
Bandwidth=3MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3760	-7.03	4.6	9.53	39	-41.1	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 2
Test Mode = 16QAM /TM5
Bandwidth=3MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3817	-6.43	4.6	9.53	39	-40.5	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 380 of 444

Test Band = LTE Band 2
Test Mode = QPSK /TM4
Bandwidth=5MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3705	-5.23	4.6	9.53	39	-39.3	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 2
Test Mode = QPSK /TM4
Bandwidth=5MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3760	-6.13	4.6	9.53	39	-40.2	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 2
Test Mode = QPSK /TM4
Bandwidth=5MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3815	-7.23	4.6	9.53	39	-41.3	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 381 of 444

Test Band = LTE Band 2
Test Mode = 16QAM /TM5
Bandwidth=5MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3705	-5.93	4.6	9.53	39	-40	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 2
Test Mode = 16QAM /TM5
Bandwidth=5MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3760	-5.13	4.6	9.53	39	-39.2	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 2
Test Mode = 16QAM /TM5
Bandwidth=5MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3815	-5.63	4.6	9.53	39	-39.7	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 382 of 444

Test Band = LTE Band 2
Test Mode = QPSK /TM4
Bandwidth=10MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3710	-4.63	4.6	9.53	39	-38.7	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 2
Test Mode = QPSK /TM4
Bandwidth=10MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3760	-4.93	4.6	9.53	39	-39	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 2
Test Mode = QPSK /TM4
Bandwidth=10MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3810	-6.23	4.6	9.53	39	-40.3	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 383 of 444

Test Band = LTE Band 2
Test Mode = 16QAM /TM5
Bandwidth=10MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3710	-5.53	4.6	9.53	39	-39.6	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 2
Test Mode = 16QAM /TM5
Bandwidth=10MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3760	-6.13	4.6	9.53	39	-40.2	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 2
Test Mode = 16QAM /TM5
Bandwidth=10MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3810	-4.53	4.6	9.53	39	-38.6	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 384 of 444

Test Band = LTE Band 2
Test Mode = QPSK /TM4
Bandwidth=15MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3715	-7.23	4.6	9.53	39	-41.3	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 2
Test Mode = QPSK /TM4
Bandwidth=15MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3760	-6.03	4.6	9.53	39	-40.1	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 2
Test Mode = QPSK /TM4
Bandwidth=15MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3805	-6.53	4.6	9.53	39	-40.6	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 385 of 444

Test Band = LTE Band 2
Test Mode = 16QAM /TM5
Bandwidth=15MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3715	-7.23	4.6	9.53	39	-41.3	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 2
Test Mode = 16QAM /TM5
Bandwidth=15MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3760	-6.73	4.6	9.53	39	-40.8	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 2
Test Mode = 16QAM /TM5
Bandwidth=15MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3805	-6.13	4.6	9.53	39	-40.2	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 386 of 444

Test Band = LTE Band 2
Test Mode = QPSK /TM4
Bandwidth=20MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3720	-5.73	4.6	9.53	39	-39.8	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 2
Test Mode = QPSK /TM4
Bandwidth=20MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3760	-6.53	4.6	9.53	39	-40.6	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 2
Test Mode = QPSK /TM4
Bandwidth=20MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3800	-5.63	4.6	9.53	39	-39.7	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 387 of 444

Test Band = LTE Band 2
Test Mode = 16QAM /TM5
Bandwidth=20MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3720	-6.33	4.6	9.53	39	-40.4	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 2
Test Mode = 16QAM /TM5
Bandwidth=20MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3760	-6.93	4.6	9.53	39	-41	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 2
Test Mode = 16QAM /TM5
Bandwidth=20MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3800	-5.53	4.6	9.53	39	-39.6	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 388 of 444

Test Band = LTE Band 4
Test Mode = QPSK /TM4
Bandwidth=1.4MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3421.4	-5.91	4.1	9.41	39	-39.6	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 4
Test Mode = QPSK /TM4
Bandwidth=1.4MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3465	-6.61	4.1	9.41	39	-40.3	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 4
Test Mode = QPSK /TM4
Bandwidth=1.4MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3508.6	-6.21	4.1	9.41	39	-39.9	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 389 of 444

Test Band = LTE Band 4
Test Mode = 16QAM /TM5
Bandwidth=1.4MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3421.4	-6.61	4.1	9.41	39	-40.3	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 4
Test Mode = 16QAM /TM5
Bandwidth=1.4MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3465	-5.81	4.1	9.41	39	-39.5	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 4
Test Mode = Q16QAM /TM5
Bandwidth=1.4MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3508.6	-5.21	4.1	9.41	39	-38.9	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 390 of 444

Test Band = LTE Band 4
Test Mode = QPSK /TM4
Bandwidth=3MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3423	-6.51	4.1	9.41	39	-40.2	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 4
Test Mode = QPSK /TM4
Bandwidth=3MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3465	-7.11	4.1	9.41	39	-40.8	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 4
Test Mode = QPSK /TM4
Bandwidth=3MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3507	-7.61	4.1	9.41	39	-41.3	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 391 of 444

Test Band = LTE Band 4
Test Mode = 16QAM /TM5
Bandwidth=3MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3423	-7.01	4.1	9.41	39	-40.7	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 4
Test Mode = 16QAM /TM5
Bandwidth=3MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3465	-7.41	4.1	9.41	39	-41.1	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 4
Test Mode = Q16QAM /TM5
Bandwidth=3MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3507	-6.81	4.1	9.41	39	-40.5	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 392 of 444

Test Band = LTE Band 4
Test Mode = QPSK /TM4
Bandwidth=5MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3425	-6.11	4.1	9.41	39	-39.8	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 4
Test Mode = QPSK /TM4
Bandwidth=5MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3465	-4.71	4.1	9.41	39	-38.4	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 4
Test Mode = QPSK /TM4
Bandwidth=5MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3505	-6.51	4.1	9.41	39	-40.2	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 393 of 444

Test Band = LTE Band 4
Test Mode = 16QAM /TM5
Bandwidth=5MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3425	-7.71	4.1	9.41	39	-41.4	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 4
Test Mode = 16QAM /TM5
Bandwidth=5MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3465	-7.01	4.1	9.41	39	-40.7	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 4
Test Mode = Q16QAM /TM5
Bandwidth=5MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3505	-6.41	4.1	9.41	39	-40.1	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 394 of 444

Test Band = LTE Band 4
Test Mode = QPSK /TM4
Bandwidth=10MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3430	-7.61	4.1	9.41	39	-41.3	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 4
Test Mode = QPSK /TM4
Bandwidth=10MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3465	-6.21	4.1	9.41	39	-39.9	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 4
Test Mode = QPSK /TM4
Bandwidth=10MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3500	-6.81	4.1	9.41	39	-40.5	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 395 of 444

Test Band = LTE Band 4
Test Mode = 16QAM /TM5
Bandwidth=10MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3430	-8.61	4.1	9.41	39	-42.3	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 4
Test Mode = 16QAM /TM5
Bandwidth=10MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3465	-8.11	4.1	9.41	39	-41.8	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 4
Test Mode = Q16QAM /TM5
Bandwidth=10MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3500	-6.81	4.1	9.41	39	-40.5	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 396 of 444

Test Band = LTE Band 4
Test Mode = QPSK /TM4
Bandwidth=15MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3435	-7.61	4.1	9.41	39	-41.3	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 4
Test Mode = QPSK /TM4
Bandwidth=15MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3465	-7.21	4.1	9.41	39	-40.9	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 4
Test Mode = QPSK /TM4
Bandwidth=15MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3495	-6.91	4.1	9.41	39	-40.6	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 397 of 444

Test Band = LTE Band 4
Test Mode = 16QAM /TM5
Bandwidth=15MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3435	-8.41	4.1	9.41	39	-42.1	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 4
Test Mode = 16QAM /TM5
Bandwidth=15MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3465	-8.01	4.1	9.41	39	-41.7	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 4
Test Mode = Q16QAM /TM5
Bandwidth=15MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3495	-7.51	4.1	9.41	39	-41.2	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 398 of 444

Test Band = LTE Band 4
Test Mode = QPSK /TM4
Bandwidth=20MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3440	-7.91	4.1	9.41	39	-41.6	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 4
Test Mode = QPSK /TM4
Bandwidth=20MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3465	-6.61	4.1	9.41	39	-40.3	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 4
Test Mode = QPSK /TM4
Bandwidth=20MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
3490	-7.61	4.1	9.41	39	-41.3	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 399 of 444

Test Band = LTE Band 4
Test Mode = 16QAM /TM5
Bandwidth=20MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (ERP) [dBm]		[dBm]
3440	-8.91	4.1	9.41	39	-42.6	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 4
Test Mode = 16QAM /TM5
Bandwidth=20MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (ERP) [dBm]		[dBm]
3465	-8.11	4.1	9.41	39	-41.8	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 4
Test Mode = Q16QAM /TM5
Bandwidth=20MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (ERP) [dBm]		[dBm]
3490	-7.51	4.1	9.41	39	-41.2	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 400 of 444

Test Band = LTE Band 5
Test Mode = QPSK /TM4
Bandwidth=1.4MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
1649.4	-5.87	0.9	6.77	40.6	-40.6	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 5
Test Mode = QPSK /TM4
Bandwidth=1.4MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
1673	-4.47	0.9	6.77	40.6	-39.2	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 5
Test Mode = QPSK /TM4
Bandwidth=1.4MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
1696.7	-5.37	0.9	6.77	40.6	-40.1	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 401 of 444

Test Band = LTE Band 5 Test Mode = 16QAM /TM5 Bandwidth=1.4MHz Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
1649.4	-6.87	0.9	6.77	40.6	-41.6	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 5
Test Mode = 16QAM /TM5
Bandwidth=1.4MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
1673	-6.17	0.9	6.77	40.6	-40.9	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 5
Test Mode = Q16QAM /TM5
Bandwidth=1.4MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
1696.7	-6.27	0.9	6.77	40.6	-41	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 402 of 444

Test Band = LTE Band 5
Test Mode = QPSK /TM4
Bandwidth=3MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
1651	-4.77	0.9	6.77	40.6	-39.5	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 5
Test Mode = QPSK /TM4
Bandwidth=3MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
1673	-4.37	0.9	6.77	40.6	-39.1	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 5
Test Mode = QPSK /TM4
Bandwidth=3MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
1695	-5.57	0.9	6.77	40.6	-40.3	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 403 of 444

Test Band = LTE Band 5
Test Mode = 16QAM /TM5
Bandwidth=3MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
1651	-5.87	0.9	6.77	40.6	-40.6	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 5
Test Mode = 16QAM /TM5
Bandwidth=3MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
1673	-6.37	0.9	6.77	40.6	-41.1	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 5
Test Mode = Q16QAM /TM5
Bandwidth=3MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
1695	-6.97	0.9	6.77	40.6	-41.7	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 404 of 444

Test Band = LTE Band 5
Test Mode = QPSK /TM4
Bandwidth=5MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
1653	-5.87	0.9	6.77	40.6	-40.6	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 5
Test Mode = QPSK /TM4
Bandwidth=5MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
1673	-6.67	0.9	6.77	40.6	-41.4	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 5
Test Mode = QPSK /TM4
Bandwidth=5MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
1693	-6.07	0.9	6.77	40.6	-40.8	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 405 of 444

Test Band = LTE Band 5
Test Mode = 16QAM /TM5
Bandwidth=5MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
1653	-6.77	0.9	6.77	40.6	-41.5	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 5
Test Mode = 16QAM /TM5
Bandwidth=5MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
1673	-5.67	0.9	6.77	40.6	-40.4	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 5
Test Mode = Q16QAM /TM5
Bandwidth=5MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
1693	-6.97	0.9	6.77	40.6	-41.7	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 406 of 444

Test Band = LTE Band 5
Test Mode = QPSK /TM4
Bandwidth=10MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
1658	-6.37	0.9	6.77	40.6	-41.1	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 5
Test Mode = QPSK /TM4
Bandwidth=10MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
1673	-5.87	0.9	6.77	40.6	-40.6	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 5
Test Mode = QPSK /TM4
Bandwidth=10MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
1688	-6.57	0.9	6.77	40.6	-41.3	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 407 of 444

Test Band = LTE Band 5
Test Mode = 16QAM /TM5
Bandwidth=10MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
1693	-6.97	0.9	6.77	40.6	-41.7	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 5
Test Mode = 16QAM /TM5
Bandwidth=10MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
1673	-8.87	0.9	6.77	40.6	-43.6	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 5
Test Mode = Q16QAM /TM5
Bandwidth=10MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
1688	-7.57	0.9	6.77	40.6	-42.3	Vertical	-13

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 408 of 444

Test Band = LTE Band 7
Test Mode = QPSK /TM4
Bandwidth=5MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
5005	-6.18	6.32	10	38.5	-41	Vertical	-25

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 7
Test Mode = QPSK /TM4
Bandwidth=5MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
5070	-5.38	6.32	10	38.5	-40.2	Vertical	-25

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 7
Test Mode = QPSK /TM4
Bandwidth=5MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
5135	-6.58	6.32	10	38.5	-41.4	Vertical	-25

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 409 of 444

Test Band = LTE Band 7
Test Mode = 16QAM /TM5
Bandwidth=5MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
5005	-7.38	6.32	10	38.5	-42.2	Vertical	-25

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 7
Test Mode = 16QAM /TM5
Bandwidth=5MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
5070	-8.28	6.32	10	38.5	-43.1	Vertical	-25

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 7
Test Mode = Q16QAM /TM5
Bandwidth=5MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
5135	-7.88	6.32	10	38.5	-42.7	Vertical	-25

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 410 of 444

Test Band = LTE Band 7
Test Mode = QPSK /TM4
Bandwidth=10MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
5010	-5.78	6.32	10	38.5	-40.6	Vertical	-25

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 7
Test Mode = QPSK /TM4
Bandwidth=10MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
5070	-6.48	6.32	10	38.5	-41.3	Vertical	-25

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 7
Test Mode = QPSK /TM4
Bandwidth=10MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
5130	-5.38	6.32	10	38.5	-40.2	Vertical	-25

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 411 of 444

Test Band = LTE Band 7
Test Mode = 16QAM /TM5
Bandwidth=10MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
5010	-6.28	6.32	10	38.5	-41.1	Vertical	-25

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 7
Test Mode = 16QAM /TM5
Bandwidth=10MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
5070	-6.08	6.32	10	38.5	-40.9	Vertical	-25

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 7
Test Mode = Q16QAM /TM5
Bandwidth=10MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
5130	-7.08	6.32	10	38.5	-41.9	Vertical	-25

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 412 of 444

Test Band = LTE Band 7
Test Mode = QPSK /TM4
Bandwidth=15MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
5015	6.32	10	38.5	-40.8	6.32	Vertical	-25

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 7
Test Mode = QPSK /TM4
Bandwidth=15MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
5070	-6.48	6.32	10	38.5	-41.3	Vertical	-25

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 7
Test Mode = QPSK /TM4
Bandwidth=15MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
5125	-5.78	6.32	10	38.5	-40.6	Vertical	-25

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 413 of 444

Test Band = LTE Band 7
Test Mode = 16QAM /TM5
Bandwidth=15MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
5015	-6.48	6.32	10	38.5	-41.3	Vertical	-25

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 7
Test Mode = 16QAM /TM5
Bandwidth=15MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
5070	-5.78	6.32	10	38.5	-40.6	Vertical	-25

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 7
Test Mode = Q16QAM /TM5
Bandwidth=15MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
5125	-6.58	6.32	10	38.5	-41.4	Vertical	-25

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 414 of 444

Test Band = LTE Band 7
Test Mode = QPSK /TM4
Bandwidth=20MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
5020	-4.38	6.32	10	38.5	-39.2	Vertical	-25

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 7
Test Mode = QPSK /TM4
Bandwidth=20MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
5070	-4.88	6.32	10	38.5	-39.7	Vertical	-25

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 7
Test Mode = QPSK /TM4
Bandwidth=20MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
5120	-5.48	6.32	10	38.5	-40.3	Vertical	-25

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 415 of 444

Test Band = LTE Band 7
Test Mode = 16QAM /TM5
Bandwidth=20MHz
Test Channel = LCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
5020	-6.78	6.32	10	38.5	-41.6	Vertical	-25

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 7
Test Mode = 16QAM /TM5
Bandwidth=20MHz
Test Channel = MCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
5070	-5.88	6.32	10	38.5	-40.7	Vertical	-25

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Test Band = LTE Band 7
Test Mode = Q16QAM /TM5
Bandwidth=20MHz
Test Channel = HCH

Freq.	SG. Level	Cable Loss	Antenna Gain	Preamp	Substitution	polarization	Limit
[MHz]	[dBm]	[dB]	[dBi]	dB	Level (EIRP) [dBm]		[dBm]
5120	-6.78	6.32	10	38.5	-41.6	Vertical	-25

The emissions don't show in above result tables are more than 20dB below the limits Note: both of Vertical and Horizontal polarization are evaluated, and only the worst case is recorded in this report

Report No.: WT178005936 Page 416 of 444

### 4.6. Frequency Stability

CFR 47 (FCC) part 2.1055, 22.355, 24.235 and 27.54

### 4.6.1.Test Limit

According to part 22.355, from 821MHz to 896MHz, for mobile device, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances 2.5ppm.

### 4.6.2.Test Procedure

### GSM/WCDMA

In order to measure the carrier frequency under the condition of AFC lock, it is necessary to make measurements with the EUT in a "call mode". This is accomplished with the use of R&S CMU 200 Universal Radio Communication Tester.

- 1. Measure the carrier frequency at room temperature.
- 2. Subject the EUT to overnight soak at -30 $^{\circ}$ C.
- 3. With the EUT, powered via nominal voltage, connected to the CMU 200 and in a simulated call on mid channel (190 for GSM 850 & 4183 for WCDMA 850 & 661 for PCS1900 & 9400 for WCDMA 1900& 1413 for WCDMA 1700), measure the carrier frequency. These measurements should be made within 2 minutes of powering up the EUT, to prevent significant self-warming.
- 4. Repeat the above measurements at 10 C increments from -30  $^{\circ}$ C to +50  $^{\circ}$ C. Allow at least 1 1/2 hours at each temperature, un-powered, before making measurements.
- 5. Re-measure carrier frequency at room temperature with nominal voltage. Re-measure carrier frequency at low and high voltage. Pause at nominal voltage for 1 1/2 hours un-powered, to allow any self-heating to stabilize, before continuing.
- 6. Subject the EUT to overnight soak at +50  $^{\circ}$ C.
- 7. With the EUT, powered via nominal voltage, connected to the CMU 200 and in a simulated call on mid channel (190 for GSM 850 & 4183 for WCDMA 850 & 661 for PCS1900 & 9400 for WCDMA 1900 & 1413 for WCDMA 1700), measure the carrier frequency. These measurements should be made within 2 minutes of powering up the EUT, to prevent significant self-warming.
- 8. Repeat the above measurements at 10  $^{\circ}$ C increments from +50  $^{\circ}$ C to -30  $^{\circ}$ C. Allow at least 1 1/2 hours at each temperature, un-powered, before making measurements.
- 9. At all temperature levels hold the temperature to +/- 0.5  $\,^\circ\mathrm{C}\,$  during the measurement procedure.

### LTE

- 1. The transmitter output (antenna port) was connected to the BS Simulator.
- 2. The BS simulator was used to set the TX channel and power level and modulate the TX signal with different bit patterns.
- 3. BS simulator used the frequency error function and measured the peak frequency error. Power must be removed when changingfrom one temperature to another or one voltage to another voltage. Power warm up is at least 15 min and power applied should perform before recording frequency error. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.
- 4. EUT is connected the external power supply to control the DC input power. The various Volts from the minimum 3.5 Volts to 4.35 Volts. Each step shall be record the frequency error rate.

Report No.: WT178005936 Page 417 of 444

- 5. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value.
- 6. Extreme temperature rule is-30°C~50°C.

## 4.6.3.Test Setup

Connect the EUT to the Wireless Communication test set CMU200 or CMW 500 via the connector. Then measure the frequency error by the Wireless Communication test set CMU200/CMW 500. The EUT's output is matched with a 50  $\Omega$  load.

### 4.6.4.Test Data

## Measurement Results vs. Variation of Temperature—GSM850

Temperature	Nominal Frequency (MHz)	Measured Frequency Error(Hz)	Result
-30 °C	836.6	6.46	Pass
-20 °C	836.6	8.14	Pass
-10 °C	836.6	5.55	Pass
0 °C	836.6	1.16	Pass
+10 °C	836.6	9.10	Pass
+20 °C	836.6	6.13	Pass
+30 °C	836.6	10.98	Pass
+40 °C	836.6	7.30	Pass
+50 °C	836.6	6.84	Pass

## Measurement Results vs. Variation of Voltage – GSM850

Voltage	Nominal Frequency (MHz)	Measured Frequency Error(Hz)	Result
3.5 V	836.6	14.85	Pass
3.7 V	836.6	13.56	Pass
4.35 V	836.6	14.01	Pass

Report No.: WT178005936 Page 418 of 444

# Measurement Results vs. Variation of Temperature—EDGE850

Temperature	Nominal Frequency (MHz)	Measured Frequency Error(Hz)	Result
-30 °C	836.6	17.89	Pass
-20 °C	836.6	18.11	Pass
-10 °C	836.6	16.69	Pass
0 °C	836.6	18.11	Pass
+10 °C	836.6	15.43	Pass
+20 °C	836.6	17.43	Pass
+30 °C	836.6	17.01	Pass
+40 °C	836.6	17.27	Pass
+50 °C	836.6	16.66	Pass

# Measurement Results vs. Variation of Voltage - EDGE850

Voltage	Nominal Frequency (MHz)	Measured Frequency Error(Hz)	Result
3.5 V	836.6	17.34	Pass
3.7 V	836.6	18.34	Pass
4.35 V	836.6	16.18	Pass

Report No.: WT178005936 Page 419 of 444

# Measurement Results vs. Variation of Temperature—WCDMA850

Temperature	Nominal Frequency (MHz)	Measured Frequency Error(Hz)	Result
-30 °C	836.6	-2.96	Pass
-20 °C	836.6	-3.75	Pass
-10 °C	836.6	-4.14	Pass
0 °C	836.6	-4.73	Pass
+10 °C	836.6	-1.97	Pass
+20 °C	836.6	-0.43	Pass
+30 °C	836.6	-0.85	Pass
+40 °C	836.6	-1.19	Pass
+50 °C	836.6	-2.88	Pass

# Measurement Results vs. Variation of Voltage—WCDMA850

Voltage	Nominal Frequency (MHz)	Measured Frequency Error(Hz)	Result
3.5 V	836.6	-4.12	Pass
3.7 V	836.6	-4.94	Pass
4.35 V	836.6	-3.39	Pass

Report No.: WT178005936 Page 420 of 444

# Measurement Results vs. Variation of Temperature — GSM1900

Temperature	Nominal Frequency (MHz)	Measured Frequency Error(Hz)	Result
-30 °C	1880.0	8.72	Pass
-20 °C	1880.0	-1.55	Pass
-10 °C	1880.0	0.52	Pass
0 °C	1880.0	2.78	Pass
+10 °C	1880.0	5.75	Pass
+20 °C	1880.0	5.04	Pass
+30 °C	1880.0	5.81	Pass
+40 °C	1880.0	3.36	Pass
+50 °C	1880.0	8.59	Pass

# Measurement Results vs. Variation of Voltage — GSM1900

		<u> </u>	
Voltage	Nominal Frequency (MHz)	Measured Frequency Error(Hz)	Result
3.5 V	1880.0	7.75	Pass
3.7 V	1880.0	7.68	Pass
4.35 V	1880.0	11.04	Pass

Report No.: WT178005936 Page 421 of 444

# Measurement Results vs. Variation of Temperature—EDGE1900

Temperature	Nominal Frequency (MHz)	Measured Frequency Error(Hz)	Result
-30 °C	1880.0	6.42	Pass
-20 °C	1880.0	8.27	Pass
-10 °C	1880.0	4.84	Pass
0 °C	1880.0	6.91	Pass
+10 °C	1880.0	3.58	Pass
+20 °C	1880.0	6.72	Pass
+30 °C	1880.0	4.55	Pass
+40 °C	1880.0	7.10	Pass
+50 °C	1880.0	7.07	Pass

# Measurement Results vs. Variation of Voltage-EDGE1900

Voltage	Nominal Frequency (MHz)	Measured Frequency Error(Hz)	Result
3.5 V	1880.0	5.17	Pass
3.7 V	1880.0	6.65	Pass
4.35 V	1880.0	3.75	Pass

Report No.: WT178005936 Page 422 of 444

## Measurement Results vs. Variation of Temperature—WCDMA1900

Temperature	Nominal Frequency (MHz)	Measured Frequency Error(Hz)	Result
-30 °C	1880.0	1.92	Pass
-20 °C	1880.0	0.46	Pass
-10 °C	1880.0	1.13	Pass
0 °C	1880.0	-2.88	Pass
+10 °C	1880.0	-1.92	Pass
+20 °C	1880.0	0.44	Pass
+30 °C	1880.0	-0.78	Pass
+40 °C	1880.0	1.02	Pass
+50 °C	1880.0	1.51	Pass

# Measurement Results vs. Variation of Voltage—WCDMA1900

Voltage	Nominal Frequency (MHz)	Measured Frequency Error(Hz)	Result
3.5 V	1880.0	-0.95	Pass
3.7 V	1880.0	0.37	Pass
4.35 V	1880.0	-1.27	Pass

Report No.: WT178005936 Page 423 of 444

Measurement Results vs. Variation of Temperature—WCDMA1700

Temperature	Nominal Frequency (MHz)	Measured Frequency Error(Hz)	Result
-30 °C	1732.6	1.57	Pass
-20 °C	1732.6	1.57	Pass
-10 °C	1732.6	-1.54	Pass
0 °C	1732.6	-0.75	Pass
+10 °C	1732.6	-0.90	Pass
+20 °C	1732.6	-3.04	Pass
+30 °C	1732.6	-0.87	Pass
+40 °C	1732.6	-4.96	Pass
+50 °C	1732.6	1.68	Pass

## Measurement Results vs. Variation of Voltage—WCDMA1700

		<u> </u>	
Voltage	Nominal Frequency (MHz)	Measured Frequency Error(Hz)	Result
3.5 V	1732.6	-2.84	Pass
3.7 V	1732.6	3.91	Pass
4.35 V	1732.6	-3.68	Pass

Report No.: WT178005936 Page 424 of 444

Measurement Results vs. Variation of Voltage—LTE Band 2(1.4MHZ)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
		3.5	-2.70	PASS
QPSK	1880	3.7	-2.46	PASS
		4.35	-0.67	PASS
		3.5	0.13	PASS
16QAM	1880	3.7	-4.48	PASS
		4.35	-1.37	PASS

Measurement Results vs. Variation of Temperature—LTE Band 2(1.4MHZ)

IVICA	isurement ivesur	is vs. variation or	remperature—LTE ba	110 2(1.41VITZ)
<b></b>	Nominal	_	<u>M</u> easured	\
Modulation	Frequency	Temperature	Frequency	Verdict
	(MHz)		Error(Hz)	
		-30 °C	-2.63	PASS
		-20 °C	-2.66	PASS
		-10 °C	-2.56	PASS
		0 °C	-2.37	PASS
QPSK	1880	+10 °C	-3.28	PASS
		+20 °C	-2.95	PASS
		+30 °C	-2.66	PASS
		+40 °C	-2.33	PASS
		+50 °C	-0.27	PASS
		-30 °C	-1.36	PASS
		-20 °C	-0.24	PASS
		-10 °C	0.64	PASS
		0 °C	0.03	PASS
16QAM	1880	+10 °C	0.29	PASS
	Į.	+20 °C	0.34	PASS
		+30 °C	-1.00	PASS
		+40 °C	-5.18	PASS
		+50 °C	-6.02	PASS

Report No.: WT178005936 Page 425 of 444

Measurement Results vs. Variation of Voltage—LTE Band 2(3MHZ)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
		3.5	-3.73	PASS
QPSK	1880	3.7	-3.18	PASS
		4.35	0.46	PASS
		3.5	-2.93	PASS
16QAM	1880	3.7	-3.89	PASS
		4.35	-0.06	PASS

Measurement Results vs. Variation of Temperature—LTE Band 2(3MHZ)

inicasarement resource vs. variation of remperature ETE Band 2(civiliz)				
Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
	, ,	-30 °C	-3.28	PASS
		-20 °C	-2.45	PASS
		-10 °C	-1.12	PASS
		0 °C	-1.62	PASS
QPSK	1880	+10 °C	-2.75	PASS
		+20 °C	-3.85	PASS
		+30 °C	-3.59	PASS
		+40 °C	-2.68	PASS
		+50 °C	-1.36	PASS
		-30 °C	-1.54	PASS
		-20 °C	1.17	PASS
		-10 °C	-0.87	PASS
		0 °C	-3.22	PASS
16QAM	1880	+10 °C	-1.37	PASS
		+20 °C	-2.32	PASS
		+30 °C	-0.80	PASS
		+40 °C	-3.49	PASS
		+50 °C	-3.19	PASS

Report No.: WT178005936 Page 426 of 444

Measurement Results vs. Variation of Voltage—LTE Band 2(5MHZ)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
		3.5	-2.60	PASS
QPSK	1880	3.7	-3.62	PASS
		4.35	0.77	PASS
		3.5	-3.09	PASS
16QAM	1880	3.7	-3.49	PASS
		4.35	-0.94	PASS

Measurement Results vs. Variation of Temperature—LTE Band 2(5MHZ)

Wedderment Reduction of Temperature ETE Band 2(01/11/2)					
Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict	
	, ,	-30 °C	-1.79	PASS	
		-20 °C	-2.62	PASS	
		-10 °C	-2.42	PASS	
		0 °C	-2.50	PASS	
QPSK	1880	+10 °C	-3.58	PASS	
		+20 °C	-4.42	PASS	
		+30 °C	-2.10	PASS	
		+40 °C	-1.73	PASS	
		+50 °C	-1.04	PASS	
		-30 °C	-0.89	PASS	
		-20 °C	1.10	PASS	
		-10 °C	-0.77	PASS	
		0 °C	-1.90	PASS	
16QAM	1880	+10 °C	-3.60	PASS	
		+20 °C	-3.38	PASS	
		+30 °C	-2.09	PASS	
		+40 °C	-3.75	PASS	
		+50 °C	-2.85	PASS	

Report No.: WT178005936 Page 427 of 444

Measurement Results vs. Variation of Voltage—LTE Band 2(10MHZ)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
		3.5	-1.89	PASS
QPSK	1880	3.7	-2.37	PASS
		4.35	0.59	PASS
		3.5	-4.09	PASS
16QAM	1880	3.7	-2.79	PASS
		4.35	0.49	PASS

Measurement Results vs. Variation of Temperature—LTE Band 2(10MHZ)

Wedderment Reduction of Temperature ETE Band 2(10WHZ)					
Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict	
	, ,	-30 °C	-2.27	PASS	
		-20 °C	-2.19	PASS	
		-10 °C	-2.62	PASS	
		0 °C	-0.89	PASS	
QPSK	1880	+10 °C	-1.87	PASS	
		+20 °C	-4.22	PASS	
		+30 °C	-2.59	PASS	
		+40 °C	-3.25	PASS	
		+50 °C	1.63	PASS	
		-30 °C	2.56	PASS	
		-20 °C	1.46	PASS	
		-10 °C	1.60	PASS	
		0 °C	-1.97	PASS	
16QAM	1880	+10 °C	-1.63	PASS	
		+20 °C	-2.17	PASS	
		+30 °C	-3.52	PASS	
		+40 °C	-3.00	PASS	
		+50 °C	-2.95	PASS	

Report No.: WT178005936 Page 428 of 444

Measurement Results vs. Variation of Voltage—LTE Band 2(15MHZ)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
		3.5	-1.76	PASS
QPSK	1880	3.7	-3.23	PASS
		4.35	-4.06	PASS
		3.5	-4.16	PASS
16QAM	1880	3.7	-3.83	PASS
		4.35	-3.22	PASS

#### Measurement Results vs. Variation of Temperature—LTE Band 2(15MHZ)

IVI	casarcinent ite	saits vs. variation	or remperature Lit	_ Dana 2(15141112)
Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
		-30 °C	-2.63	PASS
		-20 °C	-3.26	PASS
		-10 °C	-2.52	PASS
		0 °C	-2.83	PASS
QPSK	1880	+10 °C	-3.36	PASS
		+20 °C	-3.63	PASS
		+30 °C	-4.13	PASS
		+40 °C	-3.35	PASS
		+50 °C	-4.53	PASS
		-30 °C	-3.55	PASS
		-20 °C	-2.27	PASS
		-10 °C	-1.86	PASS
		0 °C	-4.25	PASS
16QAM	1880	+10 °C	-4.58	PASS
		+20 °C	-3.62	PASS
		+30 °C	-3.91	PASS
		+40 °C	-4.73	PASS
		+50 °C	-3.15	PASS

Report No.: WT178005936 Page 429 of 444

Measurement Results vs. Variation of Voltage—LTE Band 2(20MHZ)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
		3.5	1.67	PASS
QPSK	1880	3.7	-1.93	PASS
		4.35	-4.12	PASS
		3.5	2.06	PASS
16QAM	1880	3.7	-4.18	PASS
		4.35	-4.59	PASS

Measurement Results vs. Variation of Temperature—LTE Band 2(20MHZ)

Wedderent Reddits vs. Variation of Temperature ETE Band 2(2011/12)					
Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict	
	, ,	-30 °C	1.49	PASS	
		-20 °C	2.19	PASS	
		-10 °C	1.63	PASS	
		0 °C	-0.21	PASS	
QPSK	1880	+10 °C	-2.27	PASS	
		+20 °C	-3.59	PASS	
		+30 °C	-4.39	PASS	
		+40 °C	-3.39	PASS	
		+50 °C	-2.95	PASS	
		-30 °C	-3.55	PASS	
		-20 °C	-3.33	PASS	
		-10 °C	-1.53	PASS	
		0 °C	0.03	PASS	
16QAM	1880	+10 °C	1.13	PASS	
		+20 °C	0.96	PASS	
		+30 °C	1.80	PASS	
		+40 °C	-3.88	PASS	
		+50 °C	-4.02	PASS	

Report No.: WT178005936 Page 430 of 444

Measurement Results vs. Variation of Voltage—LTE Band 4(1.4MHZ)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
		3.5	2.36	PASS
QPSK	1732.5	3.7	-0.10	PASS
		4.35	-3.16	PASS
		3.5	2.06	PASS
16QAM	1732.5	3.7	0.97	PASS
		4.35	0.97	PASS

Measurement Results vs. Variation of Temperature—LTE Band 4(1.4MHZ)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
	, ,	-30 °C	0.82	PASS
		-20 °C	0.46	PASS
		-10 °C	2.26	PASS
		0 °C	0.67	PASS
QPSK	1732.5	+10 °C	1.09	PASS
		+20 °C	0.69	PASS
		+30 °C	-0.49	PASS
		+40 °C	1.62	PASS
		+50 °C	-1.62	PASS
		-30 °C	-3.62	PASS
		-20 °C	-1.47	PASS
		-10 °C	-2.82	PASS
		0 °C	1.70	PASS
16QAM	1732.5	+10 °C	1.89	PASS
		+20 °C	1.70	PASS
		+30 °C	1.82	PASS
		+40 °C	-0.29	PASS
		+50 °C	0.13	PASS

Report No.: WT178005936 Page 431 of 444

Measurement Results vs. Variation of Voltage—LTE Band 4(3MHZ)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
		3.5	0.10	PASS
QPSK	1732.5	3.7	-1.03	PASS
		4.35	-0.56	PASS
		3.5	0.50	PASS
16QAM	1732.5	3.7	0.50	PASS
		4.35	-0.14	PASS

Measurement Results vs. Variation of Temperature—LTE Band 4(3MHZ)

Wedstrement Resource vs. Variation of Temperature ETE Band 4(OWITE)				
Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
	, ,	-30 °C	-0.73	PASS
		-20 °C	-0.16	PASS
		-10 °C	-2.09	PASS
		0 °C	-0.59	PASS
QPSK	1732.5	+10 °C	-0.73	PASS
		+20 °C	-0.21	PASS
		+30 °C	0.43	PASS
		+40 °C	-1.00	PASS
		+50 °C	0.80	PASS
		-30 °C	-0.21	PASS
		-20 °C	-0.23	PASS
		-10 °C	0.56	PASS
		0 °C	1.17	PASS
16QAM	1732.5	+10 °C	1.54	PASS
		+20 °C	-1.17	PASS
		+30 °C	-1.12	PASS
		+40 °C	0.47	PASS
		+50 °C	0.19	PASS

Report No.: WT178005936 Page 432 of 444

Measurement Results vs. Variation of Voltage—LTE Band 4(5MHZ)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
		3.5	1.75	PASS
QPSK	1732.5	3.7	0.40	PASS
		4.35	-2.47	PASS
		3.5	1.87	PASS
16QAM	1732.5	3.7	0.56	PASS
		4.35	-1.49	PASS

#### Measurement Results vs. Variation of Temperature—LTE Band 4(5MHZ)

Wicasarchient Results vs. Variation of Temperature ETE Band 4(own 12)					
Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict	
		-30 °C	1.87	PASS	
		-20 °C	2.62	PASS	
		-10 °C	-0.17	PASS	
		0 °C	0.74	PASS	
QPSK	1732.5	+10 °C	-0.53	PASS	
		+20 °C	1.14	PASS	
		+30 °C	0.86	PASS	
		+40 °C	1.47	PASS	
		+50 °C	-3.50	PASS	
		-30 °C	-2.20	PASS	
		-20 °C	-2.98	PASS	
		-10 °C	-3.50	PASS	
		0 °C	0.77	PASS	
16QAM	1732.5	+10 °C	2.25	PASS	
		+20 °C	1.17	PASS	
		+30 °C	1.33	PASS	
		+40 °C	1.22	PASS	
		+50 °C	0.97	PASS	

Report No.: WT178005936 Page 433 of 444

Measurement Results vs. Variation of Voltage—LTE Band 4(10MHZ)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
		3.5	-2.62	PASS
QPSK	1732.5	3.7	0.36	PASS
		4.35	1.19	PASS
		3.5	-3.20	PASS
16QAM	1732.5	3.7	-1.37	PASS
		4.35	1.39	PASS

# Measurement Results vs. Variation of Temperature—LTE Band 4(10MHZ)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
	, ,	-30 °C	-2.85	PASS
		-20 °C	-3.72	PASS
		-10 °C	-1.99	PASS
		0 °C	-1.50	PASS
QPSK	1732.5	+10 °C	-0.77	PASS
		+20 °C	-0.14	PASS
		+30 °C	-0.67	PASS
		+40 °C	0.01	PASS
		+50 °C	1.76	PASS
		-30 °C	2.42	PASS
		-20 °C	1.36	PASS
		-10 °C	1.47	PASS
		0 °C	-3.29	PASS
16QAM	1732.5	+10 °C	-3.75	PASS
		+20 °C	-2.82	PASS
		+30 °C	-4.68	PASS
		+40 °C	0.82	PASS
		+50 °C	-0.44	PASS

Report No.: WT178005936 Page 434 of 444

Measurement Results vs. Variation of Voltage—LTE Band 4(15MHZ)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
		3.5	0.23	PASS
QPSK	1732.5	3.7	0.11	PASS
		4.35	0.11	PASS
		3.5	-0.90	PASS
16QAM	1732.5	3.7	-1.49	PASS
		4.35	1.67	PASS

# Measurement Results vs. Variation of Temperature—LTE Band 4(15MHZ)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
	, ,	-30 °C	0.44	PASS
		-20 °C	0.51	PASS
		-10 °C	0.10	PASS
		0 °C	0.77	PASS
QPSK	1732.5	+10 °C	-0.04	PASS
		+20 °C	-0.10	PASS
		+30 °C	-0.46	PASS
		+40 °C	-0.70	PASS
		+50 °C	0.30	PASS
		-30 °C	-0.06	PASS
		-20 °C	0.20	PASS
		-10 °C	-1.26	PASS
		0 °C	-1.60	PASS
16QAM	1732.5	+10 °C	0.57	PASS
		+20 °C	1.09	PASS
		+30 °C	0.70	PASS
		+40 °C	0.43	PASS
		+50 °C	-0.50	PASS

Report No.: WT178005936 Page 435 of 444

Measurement Results vs. Variation of Voltage—LTE Band 4(20MHZ)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
		3.5	2.09	PASS
QPSK	1732.5	3.7	-0.13	PASS
		4.35	-3.45	PASS
		3.5	1.39	PASS
16QAM	1732.5	3.7	0.31	PASS
		4.35	-4.12	PASS

# Measurement Results vs. Variation of Temperature—LTE Band 4(20MHZ)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
		-30 °C	0.86	PASS
		-20 °C	0.86	PASS
		-10 °C	1.34	PASS
		0 °C	1.12	PASS
QPSK	1732.5	+10 °C	0.36	PASS
		+20 °C	-1.34	PASS
		+30 °C	0.24	PASS
		+40 °C	0.46	PASS
		+50 °C	-2.20	PASS
		-30 °C	-2.99	PASS
		-20 °C	-3.78	PASS
		-10 °C	-2.50	PASS
		0 °C	1.67	PASS
16QAM	1732.5	+10 °C	2.65	PASS
		+20 °C	1.97	PASS
		+30 °C	1.13	PASS
		+40 °C	-0.03	PASS
		+50 °C	-0.56	PASS

Report No.: WT178005936 Page 436 of 444

Measurement Results vs. Variation of Voltage—LTE Band 5(1.4MHZ)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
		3.5	-1.42	PASS
QPSK	836.5	3.7	-0.67	PASS
		4.35	-0.10	PASS
		3.5	-0.89	PASS
16QAM	836.5	3.7	-2.05	PASS
		4.35	0.26	PASS

Measurement Results vs. Variation of Temperature—LTE Band 5(1.4MHZ)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
	, ,	-30 °C	-1.75	PASS
		-20 °C	-1.02	PASS
		-10 °C	-1.07	PASS
		0 °C	-1.20	PASS
QPSK	836.5	+10 °C	-0.31	PASS
		+20 °C	-1.30	PASS
		+30 °C	-0.92	PASS
		+40 °C	0.36	PASS
		+50 °C	-0.31	PASS
		-30 °C	-0.59	PASS
		-20 °C	-0.74	PASS
		-10 °C	-0.46	PASS
		0 °C	-1.13	PASS
16QAM	836.5	+10 °C	-1.12	PASS
		+20 °C	-0.29	PASS
		+30 °C	-0.67	PASS
		+40 °C	-1.76	PASS
		+50 °C	-1.73	PASS

Report No.: WT178005936 Page 437 of 444

Measurement Results vs. Variation of Voltage—LTE Band 5(3MHZ)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
		3.5	-0.51	PASS
QPSK	836.5	3.7	-0.74	PASS
		4.35	-1.20	PASS
		3.5	-0.20	PASS
16QAM	836.5	3.7	-0.07	PASS
		4.35	-1.79	PASS

Measurement Results vs. Variation of Temperature—LTE Band 5(3MHZ)

Medicare recorded vs. Variation of Temperature ETE Band O(OWITE)				
Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
	, ,	-30 °C	-0.50	PASS
		-20 °C	-0.26	PASS
		-10 °C	-0.56	PASS
		0 °C	0.03	PASS
QPSK	836.5	+10 °C	-0.72	PASS
		+20 °C	-1.62	PASS
		+30 °C	-1.47	PASS
		+40 °C	-0.90	PASS
		+50 °C	-1.06	PASS
		-30 °C	-2.49	PASS
		-20 °C	-1.89	PASS
		-10 °C	-2.43	PASS
		0 °C	0.09	PASS
16QAM	836.5	+10 °C	0.01	PASS
		+20 °C	-0.26	PASS
		+30 °C	-0.33	PASS
		+40 °C	-0.86	PASS
		+50 °C	-0.53	PASS

Report No.: WT178005936 Page 438 of 444

Measurement Results vs. Variation of Voltage—LTE Band 5(5MHZ)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
		3.5	-2.13	PASS
QPSK	836.5	3.7	-0.46	PASS
		4.35	0.27	PASS
		3.5	-1.10	PASS
16QAM	836.5	3.7	-0.01	PASS
		4.35	-0.16	PASS

#### Measurement Results vs. Variation of Temperature—LTE Band 5(5MHZ)

IVI	easurement ives	suits vs. variation	or remperature L	I L Darid 3(31VII IZ)
Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
	,	-30 °C	-1.93	PASS
		-20 °C	-1.87	PASS
		-10 °C	-1.26	PASS
		0 °C	-0.59	PASS
QPSK	836.5	+10 °C	-1.13	PASS
		+20 °C	-0.09	PASS
		+30 °C	-1.43	PASS
		+40 °C	-0.67	PASS
		+50 °C	-1.13	PASS
		-30 °C	-0.09	PASS
		-20 °C	-1.43	PASS
		-10 °C	-0.67	PASS
		0 °C	-1.24	PASS
16QAM	836.5	+10 °C	-1.47	PASS
		+20 °C	-1.26	PASS
		+30 °C	-0.72	PASS
		+40 °C	0.01	PASS
		+50 °C	-0.92	PASS

Report No.: WT178005936 Page 439 of 444

Measurement Results vs. Variation of Voltage—LTE Band 5(10MHZ)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
		3.5	-0.64	PASS
QPSK	836.5	3.7	-0.70	PASS
		4.35	0.04	PASS
		3.5	-0.73	PASS
16QAM	836.5	3.7	-0.64	PASS
		4.35	-0.21	PASS

Measurement Results vs. Variation of Temperature—LTE Band 5(10MHZ)

Wedderment Resource vo. Variation of Temperature ETE Band of Town 12)				
Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
	, ,	-30 °C	-1.10	PASS
		-20 °C	-0.86	PASS
		-10 °C	-1.43	PASS
		0 °C	-0.51	PASS
QPSK	836.5	+10 °C	-0.44	PASS
		+20 °C	-0.94	PASS
		+30 °C	-0.46	PASS
		+40 °C	-0.96	PASS
		+50 °C	-0.70	PASS
		-30 °C	-1.04	PASS
		-20 °C	-0.56	PASS
		-10 °C	-0.46	PASS
		0 °C	-1.02	PASS
16QAM	836.5	+10 °C	-1.72	PASS
		+20 °C	-1.10	PASS
		+30 °C	0.16	PASS
		+40 °C	-1.20	PASS
		+50 °C	-0.63	PASS

Report No.: WT178005936 Page 440 of 444

Measurement Results vs. Variation of Voltage—LTE Band 7(5MHZ)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
		3.5	3.92	PASS
QPSK	2535	3.7	-0.23	PASS
		4.35	5.61	PASS
		3.5	-0.33	PASS
16QAM	2535	3.7	-3.93	PASS
		4.35	2.88	PASS

# Measurement Results vs. Variation of Temperature—LTE Band 7(5MHZ)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
	, ,	-30 °C	-1.24	PASS
		-20 °C	0.31	PASS
		-10 °C	3.02	PASS
		0 °C	3.98	PASS
QPSK	2535	+10 °C	-4.66	PASS
		+20 °C	-5.31	PASS
		+30 °C	-1.52	PASS
		+40 °C	-4.39	PASS
		+50 °C	1.89	PASS
		-30 °C	0.07	PASS
		-20 °C	2.20	PASS
		-10 °C	-1.69	PASS
		0 °C	4.53	PASS
16QAM	2535	+10 °C	0.49	PASS
		+20 °C	4.18	PASS
		+30 °C	0.79	PASS
		+40 °C	-0.21	PASS
		+50 °C	-0.20	PASS

Report No.: WT178005936 Page 441 of 444

Measurement Results vs. Variation of Voltage—LTE Band 7(10MHZ)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
		3.5	-6.28	PASS
QPSK	2535	3.7	-0.64	PASS
		4.35	-4.71	PASS
		3.5	-0.13	PASS
16QAM	2535	3.7	-2.83	PASS
		4.35	-7.47	PASS

Measurement Results vs. Variation of Temperature—LTE Band 7(10MHZ)

		dito vo. variation	or romporatoro L	TE Dana 7 (TOMITE)
Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
		-30 °C	-3.46	PASS
		-20 °C	-4.76	PASS
		-10 °C	1.32	PASS
		0 °C	-5.42	PASS
QPSK	2535	+10 °C	0.41	PASS
		+20 °C	-2.40	PASS
		+30 °C	-2.46	PASS
		+40 °C	-4.01	PASS
		+50 °C	-3.00	PASS
		-30 °C	-2.83	PASS
		-20 °C	-2.30	PASS
		-10 °C	-2.23	PASS
		0 °C	-6.57	PASS
16QAM	2535	+10 °C	-3.23	PASS
		+20 °C	-5.22	PASS
		+30 °C	-5.78	PASS
		+40 °C	-1.80	PASS
		+50 °C	-4.63	PASS

Report No.: WT178005936 Page 442 of 444

Measurement Results vs. Variation of Voltage—LTE Band 7(15MHZ)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
		3.5	0.79	PASS
QPSK	2535	3.7	-4.35	PASS
		4.35	2.60	PASS
		3.5	0.90	PASS
16QAM	2535	3.7	-4.86	PASS
		4.35	3.99	PASS

# Measurement Results vs. Variation of Temperature—LTE Band 7(15MHZ)

induction in the date ver variation of remperature 212 Band (Termin2)					
Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict	
QPSK	2535	-30 °C	4.05	PASS	
		-20 °C	-0.29	PASS	
		-10 °C	1.67	PASS	
		0 °C	-1.72	PASS	
		+10 °C	-4.82	PASS	
		+20 °C	-4.46	PASS	
		+30 °C	-3.13	PASS	
		+40 °C	-2.90	PASS	
		+50 °C	1.53	PASS	
16QAM	2535	-30 °C	0.76	PASS	
		-20 °C	1.82	PASS	
		-10 °C	1.57	PASS	
		0 °C	0.57	PASS	
		+10 °C	-0.70	PASS	
		+20 °C	2.32	PASS	
		+30 °C	-0.80	PASS	
		+40 °C	-0.99	PASS	
		+50 °C	-1.30	PASS	

Report No.: WT178005936 Page 443 of 444

Measurement Results vs. Variation of Voltage—LTE Band 7(20MHZ)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
		3.5	1.09	PASS
QPSK	2535	3.7	-2.89	PASS
		4.35	2.00	PASS
		3.5	0.89	PASS
16QAM	2535	3.7	-2.45	PASS
		4.35	0.60	PASS

# Measurement Results vs. Variation of Temperature—LTE Band 7(20MHZ)

induction in the date very variation of remperature ETE Band (Leivin E)					
Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict	
QPSK	2535	-30 °C	2.62	PASS	
		-20 °C	-0.13	PASS	
		-10 °C	1.33	PASS	
		0 °C	3.42	PASS	
		+10 °C	-1.52	PASS	
		+20 °C	-3.72	PASS	
		+30 °C	-3.43	PASS	
		+40 °C	-3.58	PASS	
		+50 °C	-0.84	PASS	
16QAM	2535	-30 °C	1.12	PASS	
		-20 °C	-0.56	PASS	
		-10 °C	0.62	PASS	
		0 °C	1.40	PASS	
		+10 °C	0.99	PASS	
		+20 °C	1.86	PASS	
		+30 °C	1.17	PASS	
		+40 °C	1.40	PASS	
		+50 °C	0.99	PASS	

Report No.: WT178005936 Page 444 of 444