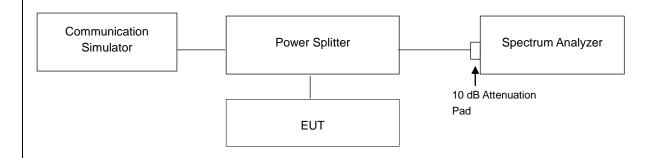


4.6 Peak to Average Ratio

4.6.1 Limits of Peak to Average Ratio Measurement

In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB.

4.6.2 Test Setup



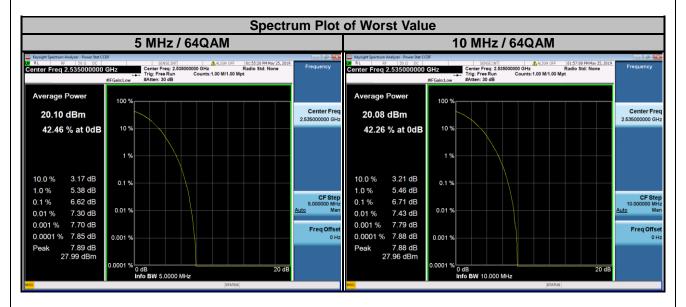
4.6.3 Test Procedures

- 1. Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;
- 2. Set the number of counts to a value that stabilizes the measured CCDF curve;
- 3. Record the maximum PAPR level associated with a probability of 0.1 %.



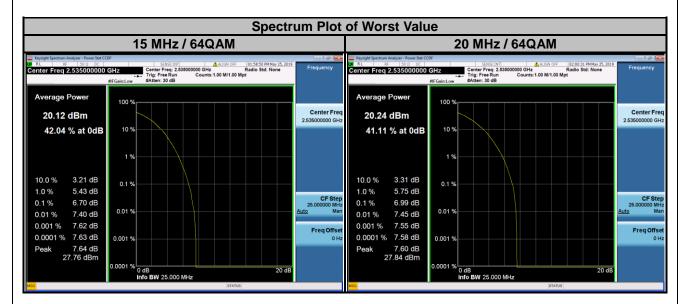
4.6.4 Test Results

| LTE Band 7 | | | | | | | | | |
|--------------------------|-----------|---------|------------------|---------|---------|--------------|-------------------------------|-------|-------|
| Channel Bandwidth: 5 MHz | | | | | C | Channel Band | width: 1 | 0 MHz | |
| Channel | Frequency | Peak to | o Averag (dB) | e Ratio | Channel | Frequency | Peak to Average Ratio (dB) | | |
| | (MHz) | QPSK | 16QAM | 64QAM | | (MHz) | QPSK | 16QAM | 64QAM |
| 20775 | 2502.5 | 5.07 | 6.10 | 6.48 | 20800 | 2505.0 | 5.04 | 6.04 | 6.41 |
| 21100 | 2535.0 | 5.20 | 6.16 | 6.62 | 21100 | 2535.0 | 5.27 | 6.28 | 6.71 |
| 21425 | 2567.5 | 4.92 | 5.93 | 6.45 | 21400 | 2565.0 | 5.02 | 5.95 | 6.58 |



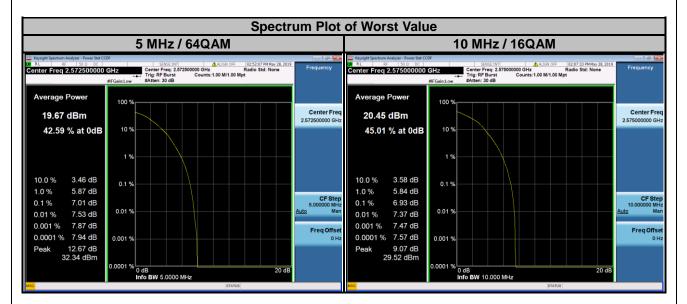


| LTE Band 7 | | | | | | | | | |
|------------|--------------------|---------|-------------------------------|----------|---------|-----------|-------------------------------|-------|-------|
| C | hannel Band | C | hannel Band | width: 2 | 0 MHz | | | | |
| Channel | Frequency (MHz) | Peak to | Peak to Average Ratio (dB) | | Channel | Frequency | Peak to Average Ratio (dB) | | |
| | (11172) | QPSK | 16QAM | 64QAM | | (MHz) | QPSK | 16QAM | 64QAM |
| 20825 | 2507.5 | 4.99 | 5.91 | 6.39 | 20850 | 2510.0 | 4.93 | 5.99 | 6.51 |
| 21100 | 2535.0 | 5.20 | 6.18 | 6.70 | 21100 | 2535.0 | 5.37 | 6.29 | 6.99 |
| 21375 | 2562.5 | 5.17 | 5.92 | 6.55 | 21350 | 2560.0 | 4.87 | 5.86 | 6.46 |



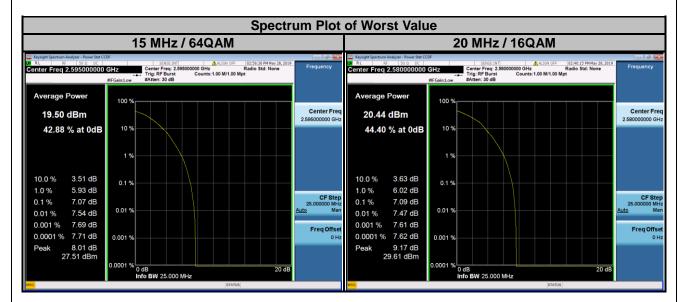


| LTE Band 38 | | | | | | | | | |
|-------------|----------------|------|--------------|-----------|-------------------------------|--------|------|-------|-------|
| (| Channel Ban | C | Channel Band | width: 1 | 0 MHz | | | | |
| Channel | Frequency (dB) | | Channel | Frequency | Peak to Average Ratio (dB) | | | | |
| | (MHz) | QPSK | 16QAM | 64QAM | | (MHz) | QPSK | 16QAM | 64QAM |
| 37775 | 2572.5 | 5.28 | 6.79 | 7.01 | 37800 | 2575.0 | 5.38 | 6.93 | 6.81 |
| 38000 | 2595.0 | 5.26 | 6.78 | 6.79 | 38000 | 2595.0 | 5.38 | 6.70 | 6.52 |
| 38225 | 2617.5 | 5.08 | 6.45 | 6.58 | 38200 | 2615.0 | 5.38 | 6.22 | 6.48 |



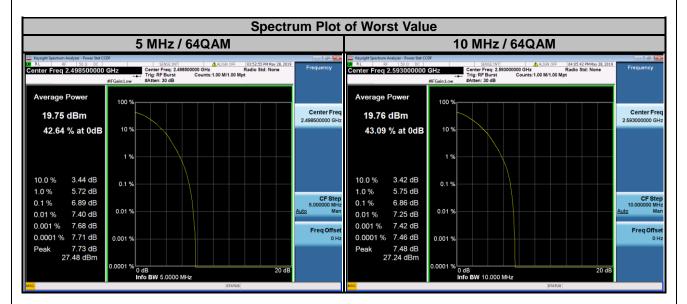


| LTE Band 38 | | | | | | | | | |
|-------------|--------------------|------|-------------|----------|--------------------|-------------------------------|------|-------|-------|
| C | hannel Band | C | hannel Band | width: 2 | 0 MHz | | | | |
| Channel | Frequency (MHz) | | | Channel | Frequency (MHz) | Peak to Average Ratio (dB) | | | |
| | (11172) | QPSK | 16QAM | 64QAM | | (11172) | QPSK | 16QAM | 64QAM |
| 37825 | 2577.5 | 5.11 | 6.86 | 6.67 | 37850 | 2580.0 | 5.41 | 7.09 | 6.77 |
| 38000 | 2595.0 | 6.28 | 6.86 | 7.07 | 38000 | 2595.0 | 6.28 | 6.51 | 6.85 |
| 38175 | 2612.5 | 5.74 | 6.39 | 6.68 | 38150 | 2610.0 | 5.85 | 6.59 | 6.57 |



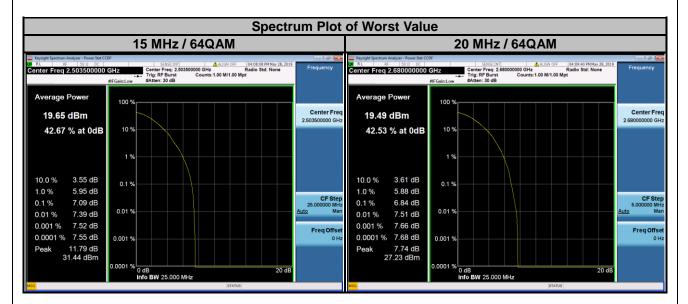


| LTE Band 41 | | | | | | | | | |
|-------------|--------------------|-------------------------------|-------------|----------|--------------------|-------------------------------|------|-------|-------|
| (| Channel Band | C | hannel Band | width: 1 | 0 MHz | | | | |
| Channel | Frequency (MHz) | Peak to Average Ratio (dB) | | Channel | Frequency (MHz) | Peak to Average Ratio (dB) | | | |
| | (1112) | QPSK | 16QAM | 64QAM | | (11172) | QPSK | 16QAM | 64QAM |
| 39675 | 2498.5 | 5.97 | 6.83 | 6.89 | 39700 | 2501.0 | 5.91 | 6.68 | 6.46 |
| 40620 | 2593.0 | 5.35 | 6.52 | 6.87 | 40620 | 2593.0 | 5.58 | 6.57 | 6.86 |
| 41565 | 2687.5 | 5.24 | 6.43 | 6.67 | 41540 | 2685.0 | 5.41 | 6.50 | 6.54 |





| LTE Band 41 | | | | | | | | | |
|-------------|--------------------|-------------------------------|-------------|----------|-----------|-------------------------------|------|-------|-------|
| C | hannel Band | C | hannel Band | width: 2 | 0 MHz | | | | |
| Channel | Frequency (MHz) | Peak to Average Ratio (dB) | | Channel | Frequency | Peak to Average Ratio (dB) | | | |
| | | QPSK | 16QAM | 64QAM | | (MHz) | QPSK | 16QAM | 64QAM |
| 39725 | 2503.5 | 5.96 | 6.62 | 7.09 | 39750 | 2506.0 | 5.84 | 6.58 | 6.71 |
| 40620 | 2593.0 | 5.46 | 7.01 | 6.83 | 40620 | 2593.0 | 5.71 | 6.81 | 6.68 |
| 41515 | 2682.5 | 5.48 | 6.46 | 6.86 | 41490 | 2680.0 | 5.66 | 6.69 | 6.84 |



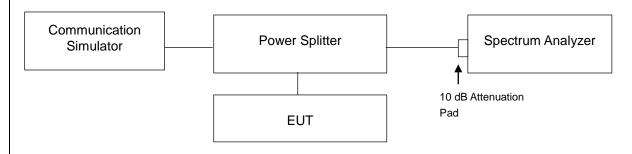


4.7 Conducted Spurious Emissions

4.7.1 Limits of Conducted Spurious Emissions Measurement

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

4.7.2 Test Setup

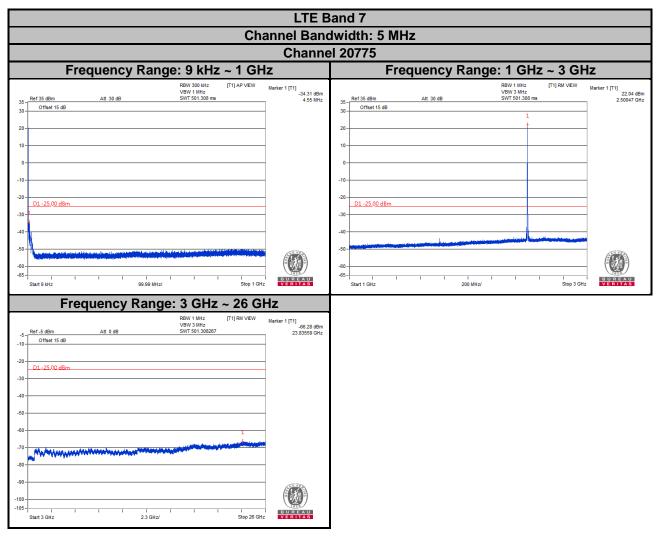


4.7.3 Test Procedure

- a. The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
- Measuring frequency range is from 9 kHz to 3 GHz. 10 dB attenuation pad is connected with spectrum.
 RBW = 300 kHz and VBW = 1 MHz are used for conducted emission measurement.
- c. Measuring frequency range is from 3 GHz to 26 or 27 GHz. 10 dB attenuation pad is connected with spectrum. RBW = 1 MHz and VBW = 3 MHz are used for conducted emission measurement.
- d. Spectrum RBW settings are referenced to ANSI 63.26 section 5.7.2.



4.7.4 Test Results





| LTE B | and 7 | | | | | | | | |
|---|---|--|--|--|--|--|--|--|--|
| Channel Banc | Channel Bandwidth: 5 MHz | | | | | | | | |
| Channel 21100 | | | | | | | | | |
| Frequency Range: 9 kHz ~ 1 GHz | Frequency Range: 1 GHz ~ 3 GHz | | | | | | | | |
| BBY 300 H/2 [T1] AP VEW Marker 1 [T1] -33.11 dBm -4.85 MHz -4.85 MHz -4.85 MHz -33.11 dBm -33.11 dBm -33.11 dBm -33.11 dBm -4.85 MHz -33.11 dBm -4.85 MHz -4.85 MHz -4.85 MHz -4.85 MHz -33.11 dBm -33.11 dBm -33.11 dBm -4.85 MHz -4.85 MHz -4.85 MHz -33.11 dBm -4.85 MHz -33.11 dBm -4.85 MHz -4.85 MHz <th>RBW1 Miz [T1] RW VEW Marker 1 [T1] 22.28 dBm 35 Ref 35 dBm Att 30 dB SWT 501 308 ms 22.53277 GHz 30 Offset 15 dB 1 1 1 20 1 1 1 1 10 0 1 1 1</th> | RBW1 Miz [T1] RW VEW Marker 1 [T1] 22.28 dBm 35 Ref 35 dBm Att 30 dB SWT 501 308 ms 22.53277 GHz 30 Offset 15 dB 1 1 1 20 1 1 1 1 10 0 1 1 1 | | | | | | | | |
| -10 | -10 -20 D1 -25,00 dBm -30 -40 | | | | | | | | |
| Frequency Range: 3 GHz ~ 26 GHz | | | | | | | | | |
| Ref -5 dbm Att 0 dB SWT 501.30267 Marker 1 [T'] -68.38 dbm 25.47212 OHz -10 -0 | | | | | | | | | |
| -90 -100 -105 -11 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 | | | | | | | | | |



| LTE E | Band 7 | | | | | | | |
|--|---|--|--|--|--|--|--|--|
| Channel Ban | dwidth: 5 MHz | | | | | | | |
| Channel 21425 | | | | | | | | |
| Frequency Range: 9 kHz ~ 1 GHz | Frequency Range: 1 GHz ~ 3 GHz | | | | | | | |
| RBW 300 HHz [T1] AP VEW VBW 1 MHz Marker 1 [T1] -33.77 dBm 30 | BBW 1 MHz VBW 3 MHz [T1] RM VEW VBW 3 MHz Marker 1 [T1] 22.34 dBm 35 Ref 35 dBm Att 30 dB SWT 501.308 ms 22.56537 GHz 30 | | | | | | | |
| 20 D1-25.00 dBm -30 | 20 D1-25.00 dBm -30 | | | | | | | |
| Sector Att 0 dB Clip Att 0 dB | | | | | | | | |
| -100 -105 | | | | | | | | |



| LTE Ba | |
|--|--|
| Channel Bandv | |
| Channel | |
| Frequency Range: 9 kHz ~ 1 GHz | Frequency Range: 1 GHz ~ 3 GHz |
| RBW 300 HHz [T1] AP VEW Marker 1 [T1] 3.3 49 dBm 35 Ref 35 dBm Att 30 dB SWT 501.308 ms -33 49 dBm -33 49 dBm -33 49 dBm -33 49 dBm -34 90 MHz -34 90 MHz -36 90 MHz | Ref 35 dBm Att 30 dB SWT 501 308 ms Marker 1 [T1] Marker 1 [T1] 22.46 dBm 2.50057 GHz 30 0 0 1 0 2.50057 GHz 2.50057 GHz 00 0 |
| Start 9 KHz 99.99 MHz/ Stop 1 GHz VERITAE | Start 1 GHz 200 MHz/ Stop 3 GHz VERTIAS |
| RBW1 MH2 [T1] RM VEW Market 1 [T1] 0.05 cBm 5 Ref-5 dBm Att 0 dB SWT 501 302607 24 37151 GHz -10 -10 -10 -10 -10 -20 D1 -25.00 dBm -10 -10 -30 -10 -10 -10 -10 -10 -10 -10 -10 -10 -10 -10 -10 -10 -10 -10 -100 -10 -10 -10 -100 -10 -10 -10 -100 -10 -10 -10 | |



| | Band 7 | | | | | | | |
|--|---|--|--|--|--|--|--|--|
| | sand 7 dwidth: 10 MHz | | | | | | | |
| Channel 21100 | | | | | | | | |
| Frequency Range: 9 kHz ~ 1 GHz | Frequency Range: 1 GHz ~ 3 GHz | | | | | | | |
| RBW 300 HHz [T1] AP VEW Marker 1 [T1] VBW 1 MHz 35 - Ref 35 dBm Att 30 dB SWT 501.306 ms -34.88 dBm 30 - Coffset 15 dB | RBW 1 MHz [T'] RM VEW Marker 1 [T'] 22.60 dBm 35 Ref 35 dBm Att 30 dB SWT 501.306 ms 2.55067 GHz 2.55067 GHz 30 | | | | | | | |
| 0 | 0 | | | | | | | |
| -40- -50- -60- -60- -55- -1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 | 40 -50 -66 -65 -51 -51 -51 -51 -51 -51 -51 -51 -51 -5 | | | | | | | |
| Frequency Range: 3 GHz ~ 26 GHz | | | | | | | | |
| BBW1 Miz [T1] RM VEW Marker 1 [T1] -68 27 dBm -68 27 dBm -68 27 dBm 23 55612 GHz 24 55612 GHz | | | | | | | | |
| -80 -90 -100 -105 -5tart 3 OHz -107 -105 -107 -107 -107 -107 -107 -107 -107 -107 | | | | | | | | |



| | Band 7 | | | | | | | |
|---|---|--|--|--|--|--|--|--|
| Channel Bandwidth: 10 MHz Channel 21400 | | | | | | | | |
| Frequency Range: 9 kHz ~ 1 GHz | Frequency Range: 1 GHz ~ 3 GHz | | | | | | | |
| RBW 300 MHz [T1] AP VEW Marker 1 [T1] 35 Ref 35 dBm Att 30 dB SWT 501 308 ms 5.00 MHz 30- Offset 15 dB | RBW 1 MM: [T1] RM VEW Marker 1 [T1] 35 Ref 35 dBm Att 30 dB SWT 501.308 ms 2.3.18 dBm 30 Offset 15 dB 1 2.56077 GHz 2.56077 GHz 20 1 1 1 1 1 10 1 1 1 1 1 | | | | | | | |
| -10 | -20 - D1-25.00 dBm | | | | | | | |
| -40 | -40 - -50 - -60 - -65 - -55 - -55 - -55 - -55 - -55 - -56 - | | | | | | | |
| Frequency Range: 3 GHz ~ 26 GHz | | | | | | | | |
| RBW 1 MHz USW 3 MHz [T1] RM VEW USW 3 MHz Marker 1 [T1] -80.11 dBm -80.11 dBm -5 Ref-5 dBm Att 0 dB SWT 501.308267 25.5357 GHz 25.5357 GHz -10 | | | | | | | | |
| -80 -90 -105 -105 -105 -105 -105 -105 -105 -10 | | | | | | | | |



| LTE B | |
|--|--|
| Channel Bandy Channel | |
| | |
| Frequency Range: 9 kHz ~ 1 GHz (1) AP VEW VIHIE VEW VIHIE SWT 501.300 ms Offset 15 dB Offset 10 dB <td< th=""><th>Frequency Range: 1 GHz ~ 3 GHz Rev 1 Mrz [T1] RM VEW VBW 3 Mrz [T1] RM VEW Start 30 dB SWT 501309 ms Offset 15 dB 1 Offset 15 dB 1 D 1 D 1 D 1 D 1 D 1 D 1 D 1 D 1 D 1 D 1 D 1</th></td<> | Frequency Range: 1 GHz ~ 3 GHz Rev 1 Mrz [T1] RM VEW VBW 3 Mrz [T1] RM VEW Start 30 dB SWT 501309 ms Offset 15 dB 1 Offset 15 dB 1 D 1 D 1 D 1 D 1 D 1 D 1 D 1 D 1 D 1 D 1 D 1 |
| -80- -85- -85- -85- -85- -85- -85- -85- | -80 |
| Ref -5 dBm At 0 dB SWT 501.30227 Marker 1 [T1] 66.09 dBm -0 | |



| | and 7 | | |
|--|--|--|--|
| LTE Band 7 Channel Bandwidth: 15 MHz | | | |
| Channel 21100 | | | |
| Frequency Range: 9 kHz ~ 1 GHz | Frequency Range: 1 GHz ~ 3 GHz | | |
| RBM 300 HHz [T1] AP VEW Marker 1 [T1] 35 Ref 35 dBm Att 30 dB SWT 501 308 ms 34.00 dBm 5.00 MHz 30 Offset 15 dB | RBV1 1MH2 [T1] RM VEW Marker 1[T1] 35 Ref 35 dBm Att 30 dB SWT 501 308 ms 22.43 dBm 22.43 dBm 22.52827 GHz 30 1 <td< th=""></td<> | | |
| -10- -20- -01-25,00 d8m -30-1 + | -10 | | |
| -50 -50 -50 -50 -50 -50 -50 -50 | -50 | | |
| Frequency Range: 3 GHz ~ 26 GHz | | | |
| RBV 11 Mrz [T1] RM VEW Marker 1 [T1] BBV 11 Mrz [T1] RM VEW Marker 1 [T1] -5 Ref. 5 dBm Att 0 dB SWT 501 308267 Att 0 40 QHz -60 65 dBm 24 01040 GHz -10 -0 | | | |
| -80 | | | |



| | TE Band 7 | |
|--|--|--|
| Channel Bandwidth: 15 MHz Channel 21375 | | |
| | | |
| Marker 1 [1] | | |
| -10 | -10 -20 D1-25,00 dBm -30 -40 | |
| 500 400 400 400 400 400 400 400 | -50- -60- -65- -51- -1- -1- -1- -1- -1- -1- | |
| RBW 1 Mri: VBW 3 Mri: 10 Marker 1 [T1] -5 Ref-5 dBm Att 0 dB SWT 501.302/87 23.0 -10 Offset 15 dB SWT 501.302/87 23.0 -20 D1-25.00.dBm | -85 90 dBm 69183 GHz | |
| -/0 | | |



| LTE Band 7 Channel Bandwidth: 20 MHz Channel 20850 Frequency Range: 9 kHz ~ 1 GHz Frequency Range: 1 GHz ~ 3 GHz | | | | | |
|---|---|---------------------------|--------|--|---------------|
| | | | | | |
| | | | 20- | | |
| Frequency Range: 9 kHz ~ 1 GHz RBW 300 kHz VBW 1 MHz VBW 1 MHz SWT 501.300 ms RBW 300 kHz VBW 1 MHz SWT 501.300 ms | er 1 [T1] -32.43 dBm 4.60 MHz | 35-Ref 35 dBm | | 196: 1 GHZ ~ 3 (RBW 1 MHz VBW 3 MHz SWT 501.308 ms | |
| Offset 15 dB | | 30 - Offset 15 dB 20 - | | 1 | |
| | | 0 | | | _ |
| | | -10 | | | _ |
| D1-25,00 dBm | | -30 | | | |
| | BU REAU | -50 - | | | |
| | VERITAS | Start 1 GHz | 200 MH | z/ Stop | 3 GHz VERITAS |
| RBW 1 MHz [T1] RM VEW Marker VEW 3 MHz VEW 3 MHz VEW 3 MHz Offset 15 dB SWT 501.308267 VEW 3 MHz | er 1 [T1] -66.00 dBm 25.74813 GHz | | | | |
| | | | | | |
| | | | | | |
| 1 | | | | | |
| ······································ | | | | | |
| Start 3 GHz 2.3 GHz/ Stop 26 GHz | BUREAU VERITAS | | | | |



| | Pand 7 | | |
|--|---|--|--|
| LTE Band 7 Channel Bandwidth: 20 MHz | | | |
| Channel 21100 | | | |
| Frequency Range: 9 kHz ~ 1 GHz | Frequency Range: 1 GHz ~ 3 GHz | | |
| RBW 300 MHz [T1] AP VEW Marker 1 [T1] 35 Ref 35 dBm Att 30 dB SWT 501 308 ms -34 20 dBm 4 30 MHz 30 | RB/95 dBm Att 30 dB SWT 501 308 ms 22.76 dBm 30 Offset 15 dB 2<52597 GHz 2<52597 GHz 20 1 1 1 10 1 1 1 | | |
| 0- -10- -20- | 0 | | |
| -40- -50- -60- -65- -55- | -00 -50 -60 -65 -51 -51 -65 -51 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 | | |
| Frequency Range: 3 GHz ~ 26 GHz | | | |
| BRW IM:z [T1] RM VEW Marker 1 [T1] -68.12 dBm -5 Ref-5 dB Att 0 dB SWT 501.308267 24.11045 GHz -10 Offset 15 dB - - 24.11045 GHz 24.11045 GHz -20 D1-25.00 dBm - <t< td=""><td></td></t<> | | | |
| -90- -100- -105- Start 3 GHz 2.3 GHz/ Stop 26 GHz | | | |



| LTE Band 7 Channel Bandwidth: 20 MHz | | | |
|--|--|--|--|
| Channel 21350 | | | |
| Frequency Range: 9 kHz ~ 1 GHz | Frequency Range: 1 GHz ~ 3 GHz | | |
| RBW 300 kHz [T1] AP VEW VBW 1 MHz Marker 1 [T1] 35 Ref 35 dBm Att 30 dB SWT 501.300 ms -34.57 dBm 30 Offset 15 dB 4.45 MHz -4.45 MHz 20 | Ref 35 dBm Att 30 dB SWT 501 306 ms Marker 1 [71] 22.76 dBm 30 Offset 15 dB 1 2.55107 GHz 2.55107 GHz 20 1 1 1 1 | | |
| 0 | 0 -10 -20 D1 -25,00 d8m -30 -40 | | |
| -50 -60 -65 -51 -51 -51 -51 -51 -51 -51 -51 -51 -5 | -50 -60 -65 -51 -51 -51 -51 -51 -51 -51 -51 -51 -5 | | |
| Frequency Range: 3 GHz ~ 26 GHz Ref-5 dBm Att 0 dB (11) RM VEW VBW 3 MHz (11) RM VEW VBW 3 MHz Marker 1 [[11] 66.35 dBm | | | |
| -70 -80 -90 -100 -105 -105 -105 -107 -105 -107 -107 -107 -107 -107 -107 -107 -107 | | | |

| | z 35 - Ref 35 dBm Att 30 dB SWT 501.308 ms 2.57017 GHz 30 - Offset 15 dB |
|--|--|
| Frequency Range: 9 kHz ~ 1 GHz BBW 300 MHz T(1) AP VEW VBW1 MHz (11) AP VEW Offset 15 dB Att 20 dB | Frequency Range: 1 GHz ~ 3 GHz Barrier 1 (11) (11) Barrier 1 (11) (11) |
| R8W 300 MHz [T1] AP VEW Marker 1 [T1] 49.74 dB VBW1 MHz 49.74 dB 500 ms 952.14 MH Offset 15 dB 952.14 MH 952.14 MH | RBW 1 MHz [T1] RM VEW Marker 1 [T1] 1 VBW 3 MHz VBW 3 MHz 22.84 dBm 35 Ref 35 dBm Att 30 dB SWT 501.300 ms 25.7017 GHz 30 Offset 15 dB |
| VBW1 MHz samer1 [11] 40 74 dB Ref 35 dB SWT 501.308 ms 952.14 MH Offset 15 dB | 1 VBW 3 MHz VBW 3 MHz 22,84 dBm 23.5 Ref 35 dBm Att 30 dB SWT 501.308 ms 255017 GHz 30 Offset 15 dB |
| | |
| D1 -25,00 dBm | 0 -10 -20 D1 -25,00 dBm |
| | |
| Start 9 WHz 99 99 WHz/ Stop 1 GHz Frequency Range: 3 GHz ~ 27 GHz | Start 1 GHz 200 MHz/ Stop 3 GHz VERTAS |
| RBW 1 Mitz [T1] RM VEW Marker 1 [T1] VBW 3 Mitz -65.39 dB Ref -5 dBm Att 0 dB SWT 501.300267 26.42037 GH Offset 15 dB | |
| D1-25.00 d8m | |
| | |
| | |
| | |



| LTE Band 38 | | | |
|--|---|--|--|
| Channel Bandwidth: 5 MHz | | | |
| Channel 38000 | | | |
| Frequency Range: 9 kHz ~ 1 GHz | Frequency Range: 1 GHz ~ 3 GHz | | |
| Ref 35 dbm Aft 30 dB SWY 500 Hr2 [T1] AP VEW Marker 1 [T1] 49,49 30 Offset 15 dB SWT 501.300 ms 870.091 20 | BBW 1 MHz [T1] RM \/EW Marker 1 [T1] 228 dBm MHz 35 Ref 35 dBm Att 30 dB SWT 501.308 ms 2 259 dBm 30 Offset 15 dB 1 2 259257 GHz 1 20 1 1 1 1 1 1 10 10 1 1 1 1 1 1 | | |
| 0 | 0 -10 -20 | | |
| 40 - 1 50 | -40 -50 -60 -65 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 | | |
| Frequency Range: 3 GHz ~ 27 GHz | | | |
| RBW 1 MHz [T1] RM VEW Marker 1 [T1] 55 54 5 Ref-5 dBm Alt 0 dB SWT 501.308267 26 41557 10 Offset 15 dB D1 - 25.00 dBm 26 41557 26 41557 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 | đBm GHZ | | |
| 90 | | | |



| LTE Band 38 | | | | | | |
|---|--|--|--|----------------|---|---|
| Channel Bandwidth: 5 MHz | | | | | | |
| Channel 38225Frequency Range: 9 kHz ~ 1 GHzFrequency Range: 1 GHz ~ 3 GHz | | | 11- | | | |
| Frequency F | | | Fre | equency Ra | RBW 1 MHz [T1] RM VIEW | |
| 35 Ref 35 dBm Att 30 dB 30 Offset 15 dB | VBW 11Mz SWT 501.308 ms | Marker 1 [71] -49.19 dBm 899.99 MHz | 35 - Ref 35 dBm 30 - Offset 15 dB 20 - | Att 30 dB | VBW 3 MHz [11] KW VEW SWT 501.308 ms | Marker 1 [T1] 23.32 dBm 2.61538 GHz |
| 10 | | | 10 | | | |
| -20 | | | -20 | | | |
| -40 | n - / An da la barran ann an Anna an An 3 89 MHz/ | 1 L Stop 1 GHz | -40 -50 -60 -65 -65 -1 | I I I 200 M | Hz/ Stop 3 G | BUREAU YERITAS |
| Frequency R | ange: 3 GHz ~ | 27 GHz | | | | |
| -5 Ref-5 dBm Att 0 dB -10 Offset 15 dB -20 D1 -25.00 dBm -30 | |) RM VEW Marker 1 [71] -05.80 dBm 24.14145 GHz | | | | |
| -70 | | | | | | |
| -105-1111111111111111111111111111111111 | I I I I 2.4 GHz/ | BUREAU Stop 27 GHz VERITAS | | | | |



| LTE Band 38 | | | |
|--|---|--|--|
| Channel Bandwidth: 10 MHz Channel 37800 | | | |
| Frequency Range: 9 kHz ~ 1 GHz | Frequency Range: 1 GHz ~ 3 GHz | | |
| RBW 300 Mtz [T1] AP VEW VBW 1 Mtz Marter 1 [T1] -49.27 dBm sob 64 Mtz 30 ———————————————————————————————————— | RBW 11 Miz VBW 31 Miz 00 W 5 Miz 20 (T1) RM VEW VBW 31 Miz 20 Marker 1 [T1] 2.3 13 dBm 2.57067 GHz 30 Offset 15 dB 1 1 30 0 1 2 10 1 1 2 10 1 1 1 20 1 1 1 10 1 1 1 20 1 1 1 10 1 1 1 20 1 1 1 10 1 1 1 1 20 1 1 1 1 20 1 1 1 1 20 1 1 1 1 20 1 1 1 1 1 30 1 1 1 1 1 1 30 1 1 1 1 1 1 1 30 1 1 1< | | |
| Frequency Range: 3 GHz ~ 27 GHz RBW 1 MHz VBW 3 MHz SWT 501 300267 (1) RM VEW Offset 15 dB | | | |



| LTE Band 38 | | | |
|---|--|--|--|
| Channel Bandwidth: 10 MHz | | | |
| Channel 38000 | | | |
| Frequency Range: 9 kHz ~ 1 GHz | Frequency Range: 1 GHz ~ 3 GHz | | |
| Ret 30 00 Htz [T1] AP VEW Market 1 [T1] 35 Ret 35 dBm Atl 30 dB SWT 501.308 ms 838.69 MHz 30 Offset 15 dB 30 35.69 MHz 838.69 MHz 20 | RBW1 MM2 VBW3 MM2 [T1] RM VEW VBW3 MM2 Marker 1 [T1] 22.76 dBm 35 Ref 35 dBm Att 30 dB SWT 501.308 ms 2.59077 GHz 30 1 1 2.59077 GHz 2.59077 GHz 20 1 1 1 1 0 1 1 1 1 0 1 1 1 1 0 1 1 1 1 0 1 1 1 1 0 1 1 1 1 0 1 1 1 1 1 0 1 1 1 1 1 0 1 1 1 1 1 0 1 1 1 1 1 1 0 1 1 1 1 1 1 0 1 1 1 1 1 1 0 1 1 | | |
| -30 -30 -40 -50 -50 -51 -51 -51 -51 -51 -51 -51 -51 | -30 -40 -50 -50 -50 -55 -55 -55 -55 -55 -55 -5 | | |
| RBW 1 MHz [T1] RM VEW Marker 1 [T1] 65.53 dBm -0 | | | |
| -90 -100 -105 -105 -105 -107 -107 -107 -107 -107 -107 -107 -107 | | | |



| LTE Band 38 | | | |
|---|---|--|--|
| Channel Bandwidth: 10 MHz | | | |
| Channel 38200 | | | |
| Frequency Range: 9 kHz ~ 1 GHz | Frequency Range: 1 GHz ~ 3 GHz | | |
| RB/W 300 HHz [T1] AP VEW Marker 1 [T1] 35 Ref 35 dBm Att 30 dB SWT 501.308 ms 971.14 MHz 30 Offset 15 dB 971.14 MHz 971.14 MHz 20 | RBV1 1MH2 [T1] RM VEW Marker 1 [T1] VBW 3 MH2 [T1] RM VEW Marker 1 [T1] 35 Ref 35 dBm Att 30 dB SWT 501308 ms 22.6108 g 30 0 1 1 1 20 1 1 1 1 | | |
| 10 | 10 | | |
| -20 D1 -25.00 dBm | -20- D1-25.00 dBm -30- -40- | | |
| -50 | -50 -00 -05 -51art 1 GHz 200 MHz/ Stop 3 GHz URE AU Start 1 GHz 200 MHz/ Stop 3 GHz | | |
| Frequency Range: 3 GHz ~ 27 GHz | | | |
| R8 W1 Mbz [T1] RM VEW Marker 1 [T1] 84 91 dBm 84 91 dBm 2-84 91 dB | | | |
| -80 -90 | | | |



| LTE Band 38 | | | |
|--|---|--|--|
| Channel Bandwidth: 15 MHz Channel 37825 | | | |
| Frequency Range: 9 kHz ~ 1 GHz | Frequency Range: 1 GHz ~ 3 GHz | | |
| Ref 35 dBm Att 30 dB SWr 10 Hz Marker 1 [T1] -49.76 dBn 30 Offset 15 dB | RBW 1 MHz [T1] RM VIEW Marker 1 [T1] VBW 3 MHz 22.93 dBm | | |
| Frequency Range: 3 GHz ~ 27 GHz BBV 1 Miz VSW 3 Miz SW 501 300207 Contract 15 dB Contract | | | |



| LTE Ba | |
|---|---|
| Channel Bandy | |
| Channe | |
| Frequency Range: 9 kHz ~ 1 GHz | Frequency Range: 1 GHz ~ 3 GHz |
| Ref 30 Cf1 AP VEW Marker 1 [T1] 43 79 dbm 35 Ref 25 dbm Att 30 dB SWT 501.308 ms 648 89 MHz 30 Offset 15 dB 648 89 MHz 648 89 MHz 20 | RBW1 MMz [T1] RM VEW Marker 1 [T1] 22.87 dBm 35 Ref 35 dBm Att 30 dB SWT 501 308 ms 258837 GHz 258837 GHz 30 Offset 15 dB 1 1 258837 GHz 258837 GHz 20 1 |
| -50 -65 -51 -51 -51 -51 -51 -51 -51 -51 -51 -5 | -50 -66 -65 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - |
| RBW1 MHz [T1] RM VEW Marker 1 [T1] -5 Ref -5 dBm Att 0 dB SWT 501.30287 26.02675 GHz -10 -10 -10 -10 26.02675 GHz -20 D1 -25.00 dBm -10 -10 -10 -60 -10 -10 -10 -10 | |
| -90 | |



| | and 38 | | | | | | |
|---|---|--|--|--|--|--|--|
| | lwidth: 15 MHz | | | | | | |
| Channel 38175 | | | | | | | |
| Frequency Range: 9 kHz ~ 1 GHz | Frequency Range: 1 GHz ~ 3 GHz | | | | | | |
| RBW 300 Hrz [T1] AP VEW Marker 1 [T1] -49.14 dBm 35 - Ref 35 dBm Att 30 dB SWT 501.308 ms 887.04 MHz -49.14 dBm 30 - Offset 15 dB | RBW 1 MHz [T1] RM V/EW Marker 1 [T1] 22.81 dBm 35 Ref 35 dBm Att 30 dB SWT 501.308 ms 2.80688 GHz 30 | | | | | | |
| 0 | 10 | | | | | | |
| -10 | -10 -20 D1-25.00 dBm -30 | | | | | | |
| -40 - 1 -50 - 1 -60 | -40 | | | | | | |
| Start 9 MHz 99 99 MHz/ Stop 1 GHz VERNEXAS | Start 1 GHz 200 MHz/ Stop 3 GHz VERTRAS | | | | | | |
| Sector Ref State Control Contr | | | | | | | |
| -50 | | | | | | | |
| -90 -100 -105 -105 -105 -107 -107 -107 -107 -107 -107 -107 -107 | | | | | | | |



| LTE Band 38 | | | | | | | | |
|--|--|--|--|--|--|--|--|--|
| Channel Bandwidth: 20 MHz Channel 37850 | | | | | | | | |
| Frequency Range: 9 kHz ~ 1 GHz | Frequency Range: 1 GHz ~ 3 GHz | | | | | | | |
| Ref 35 dBm Marker 1 [T1] -49.59 dBm 30 Offset 15 dB -49.59 dBm -90.49 MHz -90.49 MHz 00 | Ref 35 dBm Att 30 dB SWT 50 / 30 / ms Marker 1 [T1] 23 02 dBm 30 Offset 15 dB 1 1 2 2 2 1 2 2 2 1 2 2 2 0 1 2 2 0 1< | | | | | | | |
| Ref -5 dBm Att 0 dB VBW 1 Miz VBW 3 Miz SWT 501 303267 Marker 1 [T1] -4 4 97 dBm 26 39616 GHz -0 | | | | | | | | |



| LTE Band 38 Channel Bandwidth: 20 MHz | | | | | | | | | |
|--|---|--|--|--|--|--|--|--|--|
| Channel 38000 | | | | | | | | | |
| Frequency Range: 9 kHz ~ 1 GHz Frequency Range: 1 GHz ~ 3 GHz | | | | | | | | | |
| RBIV 300 M/z [T1] AP VEW VBW 11 MHz Marker 1 [T1] -49 63 dBm 35- Ref 35 dBm Att 30 dB SWT 501.306 ms 921.64 MHz 30- | RBW 1 MH2 [T1] RM VEW VBW 3 MH2 Marker 1 [T1] 22.06 dBm 35 Ref 35 dBm Att 30 dB SWT 501.308 ms 2.56617 GH2 30 | | | | | | | | |
| -10 | -10 | | | | | | | | |
| -80- -85- Start 9 M/z 99.99 M/z/ Stop 1 GHz VICE ALL AS | -30 -60 -65 -55 -51art 1 GHz -200 MHz/ Stop 3 GHz -00 -00 -00 -00 -00 -00 -00 -00 -00 -0 | | | | | | | | |
| Frequency Range: 3 GHz ~ 27 GHz Ref.5 dBm Att 0 dB Cliptical State SWT 1MHz VBW 3 MHz SWT 10 VBW 3 MHz SSWT 10 VBW 3 MHz SSWT 501 303267 SSWT 501 303267 SWT 501 30227 | | | | | | | | | |
| -90 -100 -105 -105 -105 -105 -107 -105 -107 -107 -107 -107 -107 -107 -107 -107 | | | | | | | | | |



| | and 20 | | | | | | | |
|---|--|--|--|--|--|--|--|--|
| LTE Band 38 Channel Bandwidth: 20 MHz Channel 38150 | | | | | | | | |
| | | | | | | | | |
| BBW 300 Mtz [T1] AP VEW Marter 1 [T1] 48.99 dBm 35 Ref 35 dBm Att 30 dB SWT 501 308 ms 663.89 MHz 30 Offset 15 dB 663.89 MHz 663.89 MHz 663.89 MHz 20 10 0 0 0 0 | RBW 1 Mitz [T1] RM VEW Marker 1 [T1] 22.82 dBm 35 Ref 35 dBm Att 30 dB SWT 501.308 ms 2.80088 GHz 30 Offset 15 dB 1 2.80088 GHz 2.80088 GHz 20 1 1 1 1 10 1 1 1 1 0 1 1 1 1 | | | | | | | |
| -10 -20 -20 -20 -20 -20 -40 -40 -1 | -10 -20 - D1-25.00 dBm | | | | | | | |
| -50 -60 -65 -51 -51 -51 -51 -51 -51 -51 -51 -51 -5 | -50 -60 -65 -55 -55 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5 | | | | | | | |
| Frequency Range: 3 GHz ~ 27 GHz | | | | | | | | |
| RBW1 IMF2 [T1] RW VEW Marker 1 [T1] -5 Ref - 5 dBm Att 0 dB SWT 501.308267 26.72 dBm -10 Offset 15 dB 0 20.10715 GHz 28.10715 GHz -20 D1-25.00 dBm 0 0 0 -30 0 0 0 0 -40 0 0 0 0 -50 0 0 0 0 -70 0 0 0 0 | | | | | | | | |
| -80 -90 -100 -105 - Slart 3 OHz 2 4 GHz/ Slop 27 GHz | | | | | | | | |

| LTE Ba | and 41 | | | | | | |
|---|---|--|--|--|--|--|--|
| Channel Banc | lwidth: 5 MHz | | | | | | |
| Channel 39675 | | | | | | | |
| Frequency Range: 9 kHz ~ 1 GHz | Frequency Range: 1 GHz ~ 3 GHz | | | | | | |
| Hold With Control [11] AP VEW Marker 1 [11] VEW 1 IML -49.40 dBm -49.40 dBm 30 Offset 15 dB - - 20 - - - 10 - - - 0 - - - | RBV 1 M/z [T1] RM VEW Marker 1 [T1] Marker 1 [T1] 22.70 dBm 36 Ref 35 dBm Att 30 dB SWT 501.300 ms 2.49617 GHz 30 0 1 1 1 20 1 1 1 1 10 1 1 1 1 | | | | | | |
| -10- -20 <u>D1-25,00 d8m</u> -30- -40- | -10 | | | | | | |
| -50- -60- -65- -54- -55- -54- -55- -54- -55- -54- -55- -54- | -50 -50 -50 -50 -50 -50 -50 -50 -50 -50 | | | | | | |
| Frequency Range: 3 GHz ~ 27 GHz | | | | | | | |
| Ref S dBm Att 0 dB SWT 501.302267 Marker 1 [T1] -65.27 dBm -50 -01-25.00 dBm -01-25.00 | | | | | | | |
| -90- -100- -105- -105- -105- -105- -105- -105- -105- -105- -106- - | | | | | | | |



| | LTE B | and 41 | | | | | | | |
|---|--|--------------------------------------|-----------------|--|---|--|--|--|--|
| Channel Bandwidth: 5 MHz | | | | | | | | | |
| | Channel 40620 | | | | | | | | |
| Frequency Range: 9 kHz ~ 1 (| GHz | Frequency Range: 1 GHz ~ 3 GHz | | | | | | | |
| RBW 300 kH: [T1] AP VI VBW 1 HM: 35 Ref 35 dBm Att 30 dB SWT 501.308 ms 30 Offset 15 dB | W Marker 1 [T1] -49.39 dBm 931.19 MHz | 35 - Ref 35 dBm 30 - Offset 15 dB | Att 30 dB | RBW 1 MHz [T1] RM VIEW VBW 3 MHz SWT 501.308 ms 1 | Marker 1 [T1] 23.05 dBm 2.59097 GHz | | | | |
| 20 | _ | 20 | | + | _ | | | | |
| -10- | | -10- | | | _ | | | | |
| -20 | | -20- <u>D1 -25.00 dBm</u> -30- | | | _ | | | | |
| -40- | | -40 | | | | | | | |
| -80 -85 | BUREAU VERITAS | -60 - -65 - 1 I Start 1 GHz | I I I 200 MH | z/ Stop 3 Gł | B U R E A U VERITAS | | | | |
| Frequency Range: 3 GHz ~ 27 | GHz | | | | | | | | |
| RBW 1 MHz [T1] RM VI -5 Ref -5 dBm Att 0 dB SWT 501 308267 -10 Offset 15 dB -10 | EW Marker 1 [T1] -85.36 dBm 26.11795 GHz | | | | | | | | |
| -20- | | | | | | | | | |
| -40- -50- -60- | | | | | | | | | |
| -70 -70- -80- | | | | | | | | | |
| -90 | | | | | | | | | |
| -105 | 27 GHz VERITAS | | | | | | | | |



| LTE Band 41 | | | | | | | | | |
|--|---|---|---|-----------------|-----------------------------|---|--|--|--|
| | 0 | Channel Band | | Hz | | | | | |
| Channel 41565 Frequency Range: 9 kHz ~ 1 GHz Frequency Range: 1 GHz ~ 3 GHz | | | | | | | | | |
| Frequency Ra | | Frequency Range: 1 GHz ~ 3 GHz | | | | | | | |
| 35 Ref 35 dBm Att 30 dB 30 Offset 15 dB 20 - | RBW 300 MHz [T1] AP VE VBW 1 MHz SWT 501.308 ms | W Marker 1 [T1] -49.61 dBm 853.89 MHz | 35 - Ref 35 dBm 30 - Offset 15 dB 20 - | Att 30 dB | VBW 3 MHz SWT 501.308 ms | Marker 1 [T1] 23.38 dBm 2.68528 GHz | | | |
| 10 | | | 10- 0- -10- -20- <u>D1 -25,00 d8m</u> | | | - | | | |
| -30 | 1 Strand Automatican Standard Market Standard | | -30 - -40 - -50 - -60 - | | | | | | |
| Frequency Ra | nge: 3 GHz ~ 27 | | -65- Start 1 GHz | I I I 200 МН | z/ Stop 3 G | U REAU U REAU VERITAS | | | |
| -5- -10- -20- -5 dBm Att 0 dB -10- -10- -20- | RBW 1 MHz [T1] RM VE VBW 3 MHz SWT 501.308267 | W Marker 1 [T1] -65.54 dBm 26.11435 GHz | | | | | | | |
| _00 | | | | | | | | | |
| -50 | | | | | | | | | |
| -80 - | | | | | | | | | |
| -100 -105 Start 3 GHz 2.4 C | 1 1 1 1 3Hz/ Stop 2 | | | | | | | | |

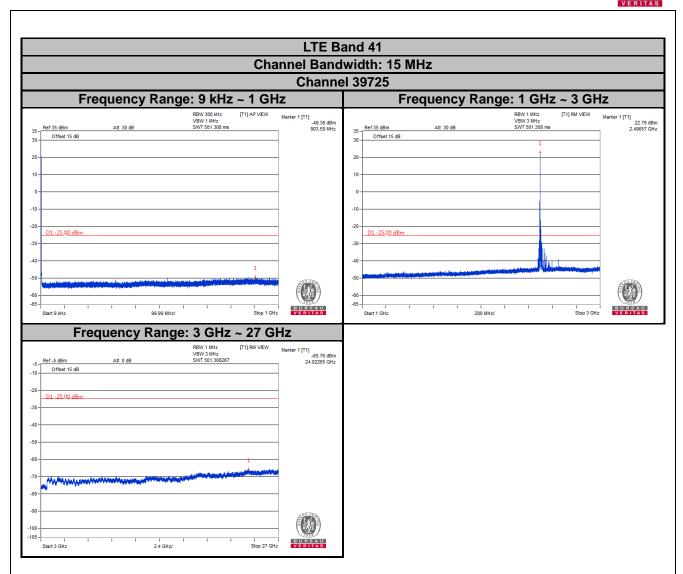
| LTE Band 41 | | | | | | | | | |
|---|--|--|-----------------|---|---|------------|--|---------------------|---|
| | | | Cha | | width: 10 M | Hz | | | |
| | | | | | el 39700 | | | | |
| Fre | equency Ran | - | ~ 1 GH | Z | Fre | quency Rai | - | 2 ~ 3 Gł | lz |
| 35 - Ref 35 dBm 30 - Offset 15 dB 20 - | Att 30 dB | RBW 300 kHz VBW 1 MHz SWT 501.308 ms | [T1] AP VIEW | Marker 1 [T1] -49.49 dBm 917.24 MHz | 35 - <mark>Ref 35 dBm 30 - Offset 15 dB 20</mark> | Att 30 dB | RBW 1 MHz VBW 3 MHz SWT 501.308 ms | (T1) RM VIEW | Marker 1 [T1] 23.01 dBm 2.49647 GHz |
| 10 | | | | | 10 | | | | - |
| 40 - 50 - 60 - 65 - 51 - 51 - 51 - 51 - 51 - 51 - 51 - 5 | d of descent of the second s | | 1 Stop 1 GHz | BUREAU VERITAS | -40 | | z/ | I I Stop 3 GH | |
| Free | quency Rang | e: 3 GHz | ~ 27 GH | Ηz | | | | | |
| -5 - Ref -5 dBm -10 - Offset 15 dB -20 - D1 - 25.00 dBm -30 | Att 0 dB | RBW 1 MHz VBW 3 MHZ SWT 501.308267 | [T1] RM VEW | Marker 1 [71] -85.61 dBm 26.12875 GHz | | | | | |
| -90 | 1 1 1 2.4 GHz/ | 1 1 1 | Stop 27 GHz | B U R E A U V E R I T A S | | | | | |



| LTE Band 41 Channel Bandwidth: 10 MHz | | | | | |
|---|--|--|--|--|--|
| | | | | | |
| Frequency Range: 9 kHz ~ 1 GHz | Frequency Range: 1 GHz ~ 3 GHz | | | | |
| RBW 300 Hrz [T1] AP VEW Marker 1 [T1] 45 50 dbm 35 Ref 35 dbm Att 30 dB SWT 501.308 ms 45 50 dbm 650 59 Mhz 30 Offset 15 dB Offset 15 dB 650 59 Mhz 650 59 Mhz 650 59 Mhz 20 | RBW1 IM12 [T1] RM VEW Marker 1 [T1] 22.99 dBm 36 Att 30 dB SWT 501 308 ms 2.59857 GHz 2.59857 GHz 30 Offset 15 dB 1 1 2.59857 GHz 2.59857 GHz 20 1 1 1 1 1 1 1 0 1 | | | | |
| 40- 50- 60- 65- 510 | -40 -50 -50 -50 -50 -50 -50 -50 -50 -50 -5 | | | | |
| S Ref - 5 dBm Att 0 dB SWT 501.308.267 28.04955 GHz -10 Offset 15 dB | | | | | |
| -90 | | | | | |



| LTE Band 41 Channel Bandwidth: 10 MHz | | | | | |
|--|--|--|--|--|--|
| | | | | | |
| Frequency Range: 9 kHz ~ 1 GHz | Frequency Range: 1 GHz ~ 3 GHz | | | | |
| RBW 300 MHz [T1] AP VEW Marker 1 [T1] -49.01 dBm 35 Ref 35 dBm Att 30 dB SWT 501.308 ms 602.74 MHz 30 Offset 15 dB 602.74 MHz 602.74 MHz 20 | RBW1 MHz [T1] RM VEW Marker 1 [T1] 22.81 dBm 35 Ref 35 dBm Att 30 dB SWT 501 308 ms 22.804B GHz 22.804B GHz 22.804B GHz 22.804B GHz 22.804B GHz 20.804B GHz 20.804B GHz 20.804B GHz 1 | | | | |
| -10 | -10 | | | | |
| Frequency Range: 3 GHz ~ 27 GHz | 50- 60- 65- 51art 1 GHz 200 MHz/ Stop 3 GHz UR CAU | | | | |
| Bit VI Miz [T1] RM VEW Marker 1 [T1] -64.80 dBm -44.80 dBm -64.80 dBm -00 -01 -01.500267 28.09515 GHz -01 -01 -01 -01 -01 -01 -01 -01 -01 -01 -00 -01 -01 -01 -01 -00 -01 -01 -01 -01 | | | | | |
| -70 -70 -90 -105 -105 -105 -107 -105 -107 -107 -107 -107 -107 -107 -107 -107 | | | | | |

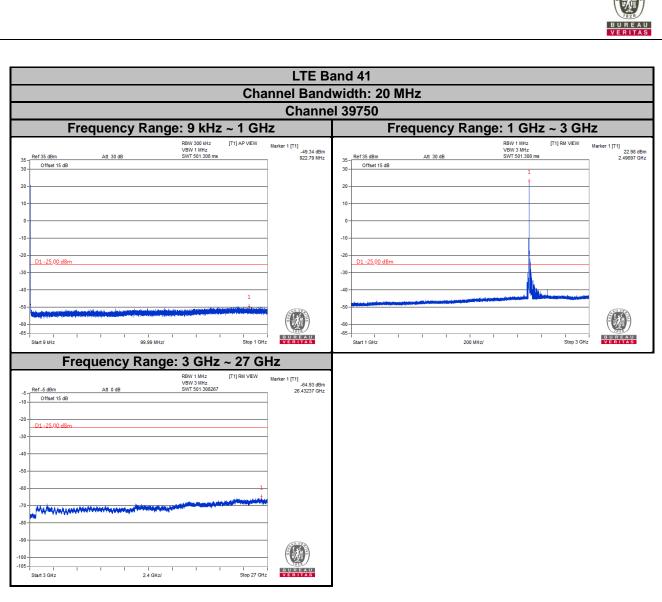




| LTE Ba | and 41 | | | | | |
|--|---|--|--|--|--|--|
| Channel Bandy | | | | | | |
| Channe | Channel 40620 | | | | | |
| Frequency Range: 9 kHz ~ 1 GHz | Frequency Range: 1 GHz ~ 3 GHz | | | | | |
| BBW 300 Miz [T1] AP VEW Marker 1 [T1] 35 -Ref 35 dBm Att 30 dB -49 30 dBm 30 Offset 15 dB -69 30 dBm 857.79 MHz 20 | RBW 1 MHz [T1] RM VEW Marker 1 [T1] 35 Ref 35 dBm Att 30 dB SWT 501 308 ms 22 36 dBm 30 Offset 15 dB 1 2.56637 GHz 2.56637 GHz 20 1 1 1 1 1 | | | | | |
| 10 | 10 | | | | | |
| | | | | | | |
| Start 9 MHZ 99 99 MHZ/ Stop 1 GHZ VERTICAS | Start 1 GHz 200 MHz/ Stop 3 GHz VERTAG | | | | | |
| Requeries y Realinge: S of Dirac ~ 27 OFL2 Rest and the original of the original origina origina oris original original original original original origin | | | | | | |
| -80 | | | | | | |



| LTE Band 41 Channel Bandwidth: 15 MHz Channel 41515 | | | | | |
|--|---|--|--|--|--|
| | | | | | |
| RBW 300 H/2 [T1] AP VEW VBW 1 M/z 49.41 dBm 712.93 M/z 36 Offset 15 dB 712.93 M/z 712.93 M/z 20 0 0 0 0 | RBW 1 MHz [T1] RN VEW Marker 1 [T1] 22.73 dBm 35 Ref 35 dBm Att 30 dB SWT 501.308 ms 267578 GHz 30 Offset 15 dB 1 2 267578 GHz 20 1 1 1 10 1 1 1 | | | | |
| 0 | 0 | | | | |
| 1 -50 -60 -65 -51 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 | -50 -50 -50 -50 -50 -50 -50 -50 -50 -50 | | | | |
| Frequency Range: 3 GHz ~ 27 GHz Image: Start and Star | | | | | |
| -00 -70 -70 -90 -90 -90 -105 -101 -105 -101 -105 -101 -105 -101 -105 -101 -105 -101 -105 -101 -105 -101 -105 -101 -101 | | | | | |





| LTE Band 41 Channel Bandwidth: 20 MHz | | | | | | |
|--|--|---|--------------------------------------|------------|--|---|
| | | | | | | |
| | Channel 40620 | | | | | |
| Frequency Rar | nge: 9 kHz ~ 1 G | Hz | Fre | quency Rar | nge: 1 GHz ~ 3 G | Hz |
| 35 - Ref 35 dBm Att 30 dB 30 - Offset 15 dB | RBW 300 kHz [T1] AP VEW VBW 1 MHz SWT 501.308 ms | Marker 1 [T1] -49.63 dBm 987.39 MHz | 35 - Ref 35 dBm 30 - Offset 15 dB | Att 30 dB | RBW 1 MHz [T1] RM VEW VBW 3 MHz SWT 501.308 ms | Marker 1 [T1] 23.39 dBm 2.58397 GHz |
| 20 | | | 20 | | T | _ |
| -10 | | | 0 | | | _ |
| -30 | | | | | | |
| -50 | Line ka ang katalan ka | BUREAU SHZ VERITAS | -50 - -60 - -65 - - 1 - | | | BUREAU VERITAS |
| Frequency Ran | qe: 3 GHz ~ 27 (| GHz | | | | |
| -5 Ref -5 dBm Att 0 dB -10 Offset 15 dB | RBW 1 MHz [T1] RM VIEW VBW 3 MHz SWT 501.308267 | | | | | |
| _D1-25.00.dBm -30 | | _ | | | | |
| -50 | | | | | | |
| -70 | | | | | | |
| -100 | y Stop 27 | B U R E A U BHZ V E R I T A S | | | | |



| LTE Band 41 Channel Bandwidth: 20 MHz | | | | | |
|---|--|--|--|--|--|
| | | | | | |
| Frequency Range: 9 kHz ~ 1 GHz | Frequency Range: 1 GHz ~ 3 GHz | | | | |
| NBM 300 Mr2 [11] AP VEW Marker 1 [T1] 35 Ref 35 dBm Att 30 dB SWT 501 308 ms 871.54 MHz 30 Offset 15 dB SWT 501 308 ms 871.54 MHz 20 | VBW 3 MHz VBW 3 MHz 22.57 dBm 22.57 dBm 22.57 dBm 267126 GHz 267126 GHz 267126 GHz 10 | | | | |
| -10 | 0 | | | | |
| -so -so -so -so -start 9 Mrz - Start 9 Mrz - | -50 -60 -65 -51 -51 -11 -11 -11 -11 -11 -11 -11 -1 | | | | |
| Ref-5 dBm Alt 0 dB SWT 501:308257 Marker 1 [T1] -65:54 dBm -0 | | | | | |
| -80 | | | | | |



4.8 Radiated Emission Measurement

4.8.1 Limits of Radiated Emission Measurement

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

4.8.2 Test Procedure

- a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8 m (below or equal 1 GHz) and/or 1.5 m (above 1 GHz) height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1 m to 4 m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value" of step a. Record the power level of S.G.
- c. EIRP = Output power level of S.G TX cable loss + Antenna gain of substitution horn.
- d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.R.P power 2.15 dB.

NOTE: The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

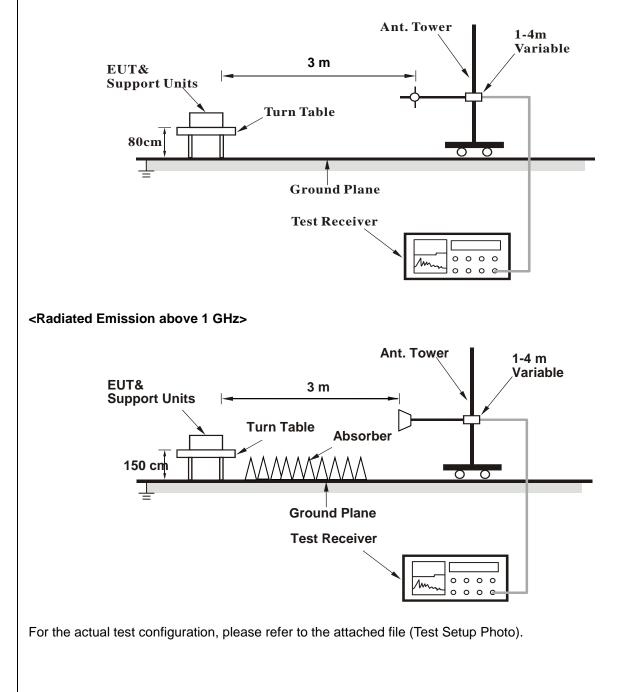
4.8.3 Deviation from Test Standard

No deviation.



4.8.4 Test Setup

<Radiated Emission below or equal 1 GHz>





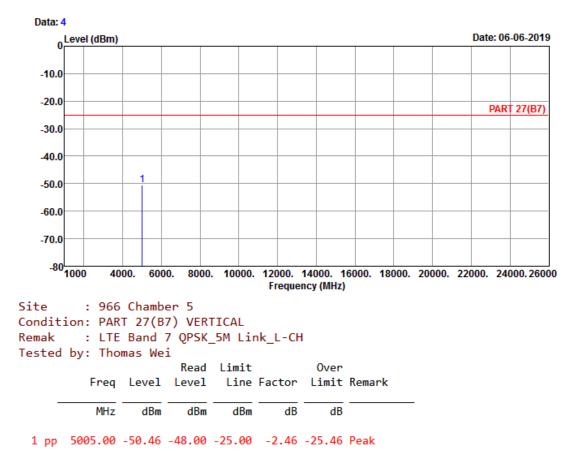
4.8.5 Test Results

LTE Band 7 Channel Bandwidth: 5 MHz / QPSK Low Channel





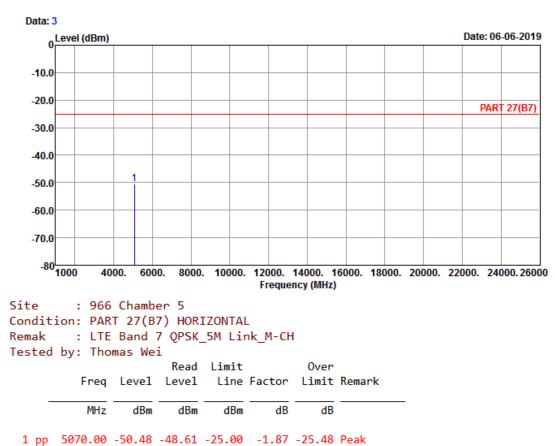






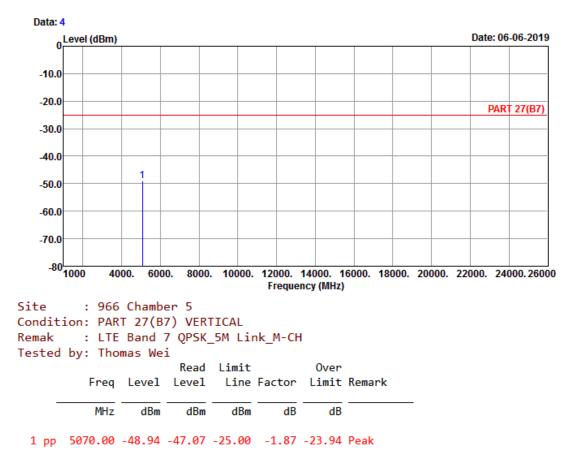
Middle Channel







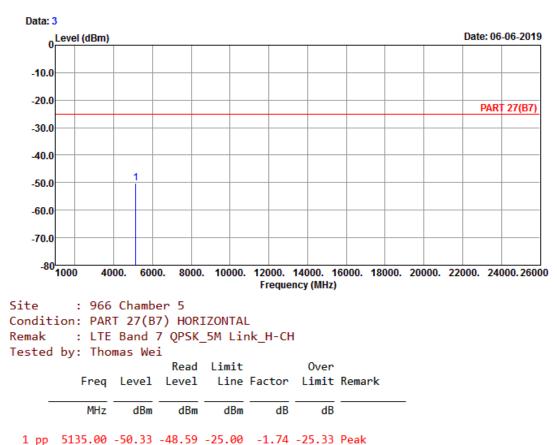






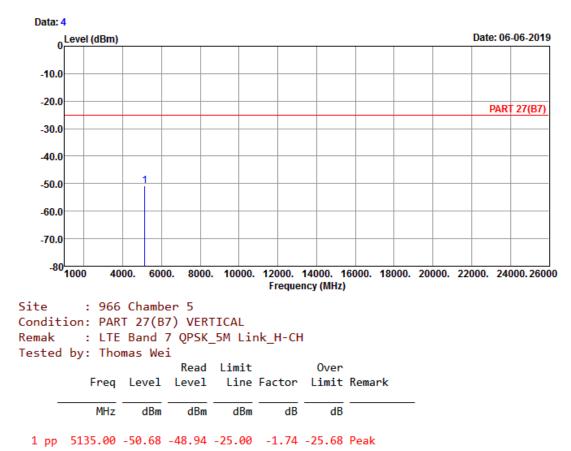
High Channel





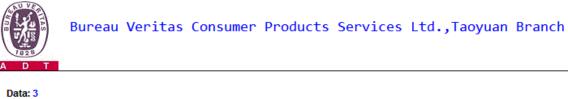


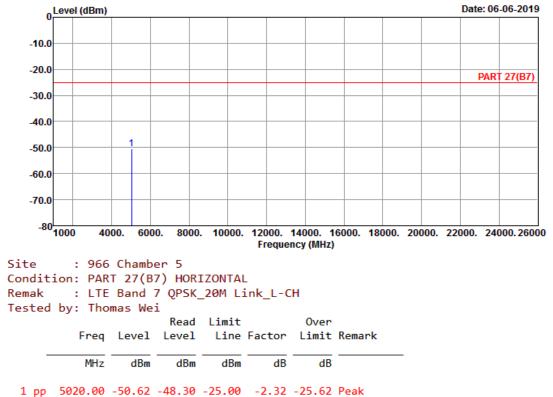






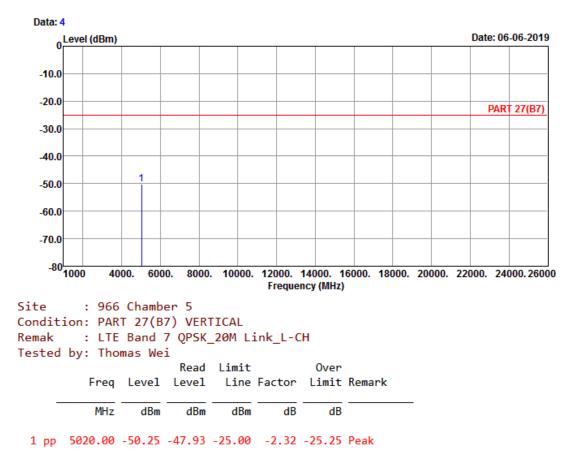
Channel Bandwidth: 20 MHz / QPSK Low Channel







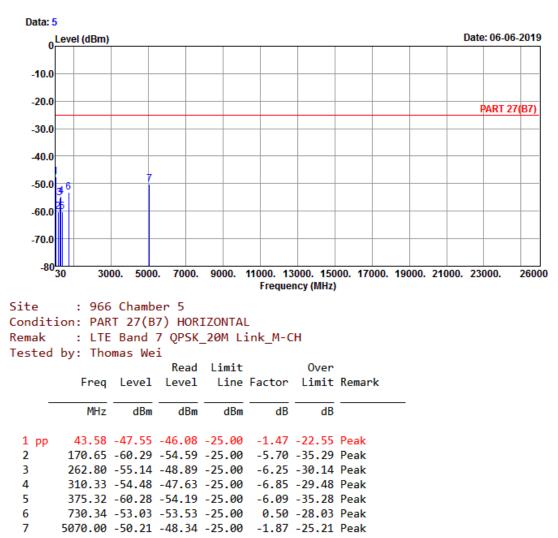






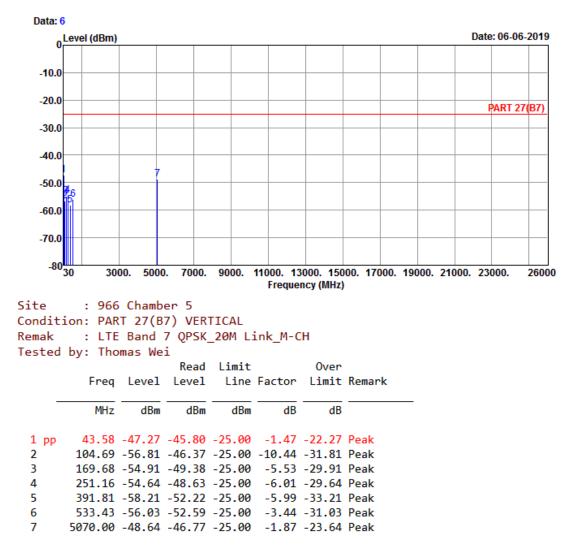
Middle Channel







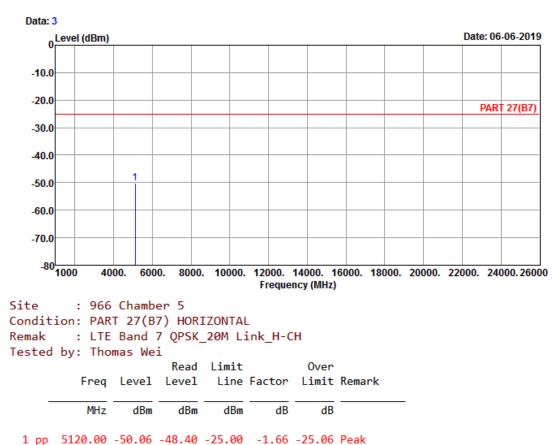






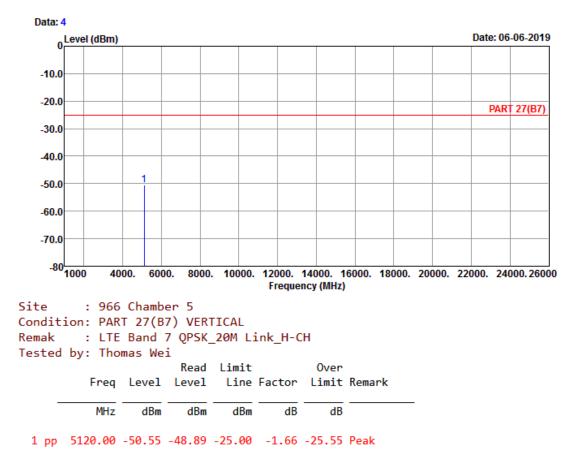
High Channel





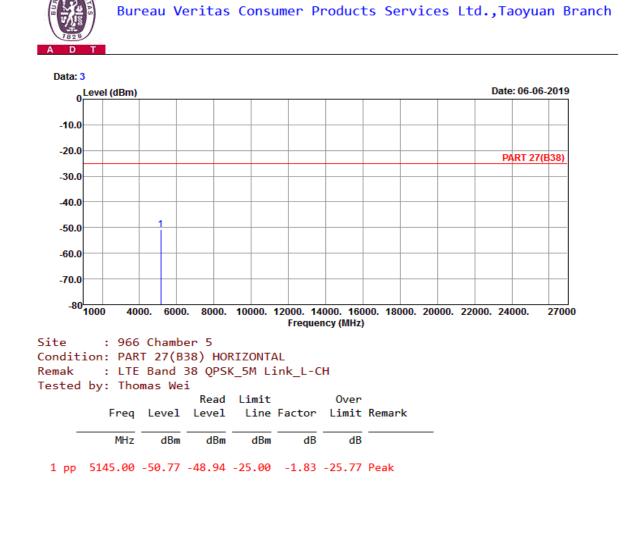






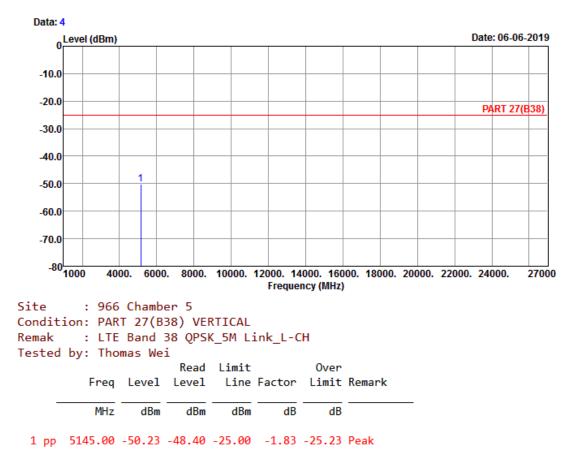


LTE Band 38 Channel Bandwidth: 5 MHz / QPSK Low Channel





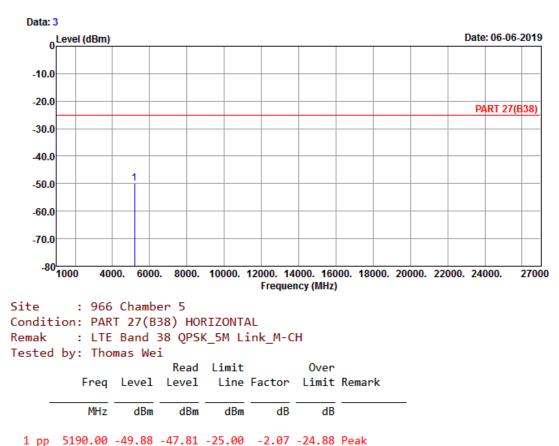






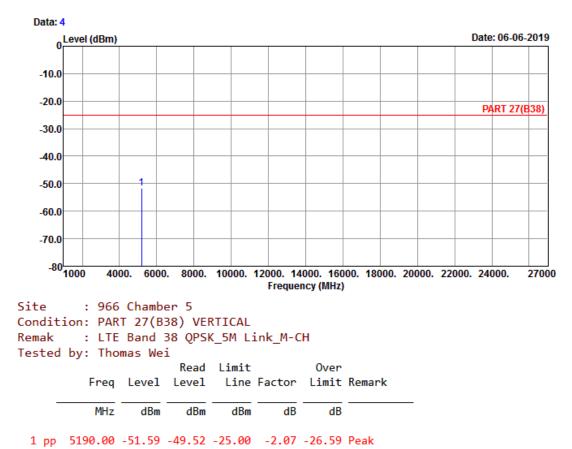
Middle Channel







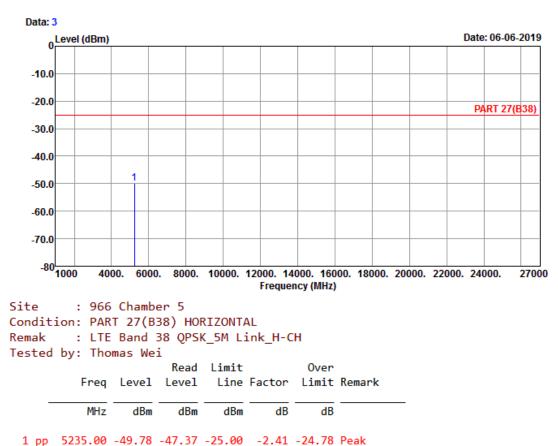






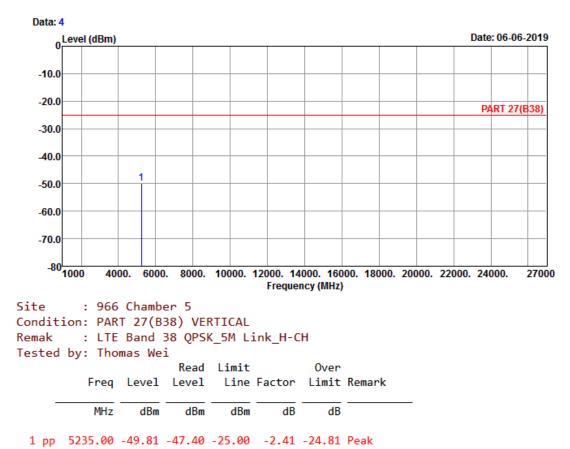
High Channel





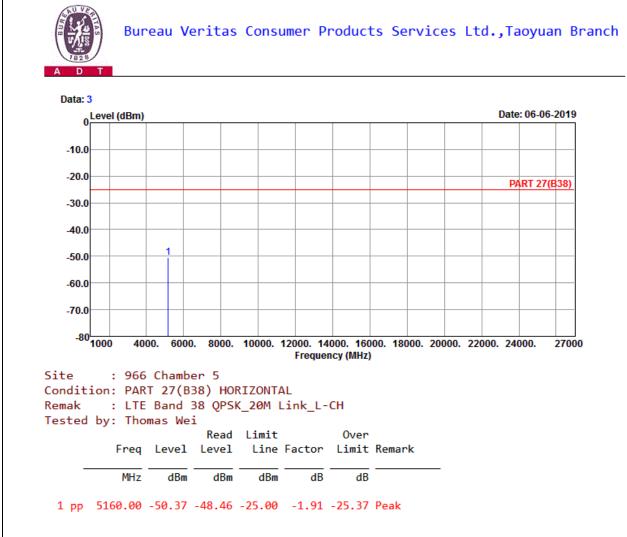






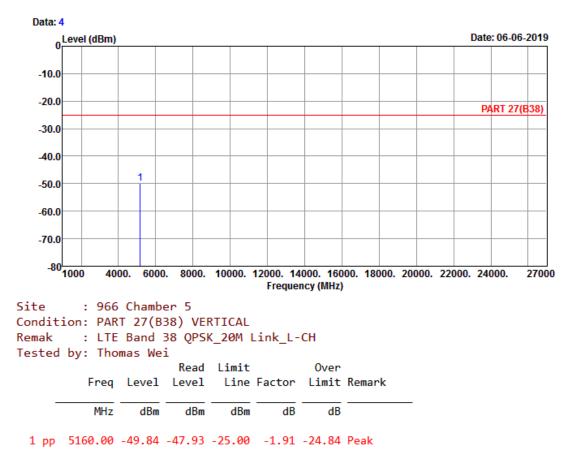


Channel Bandwidth: 20 MHz / QPSK Low Channel





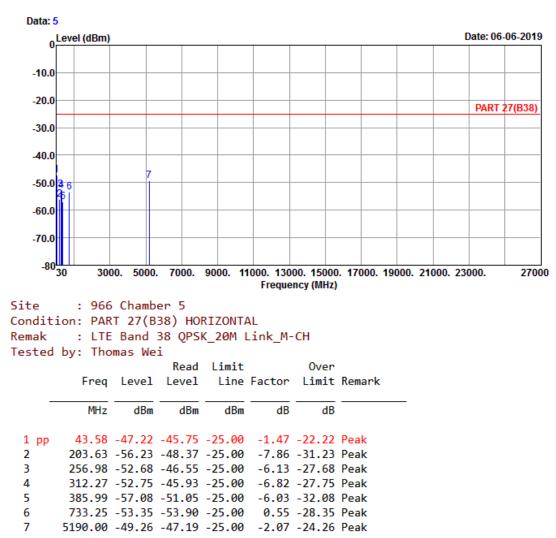






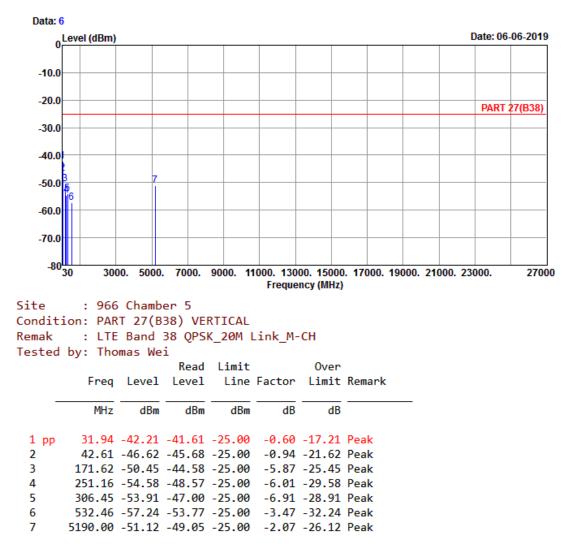
Middle Channel







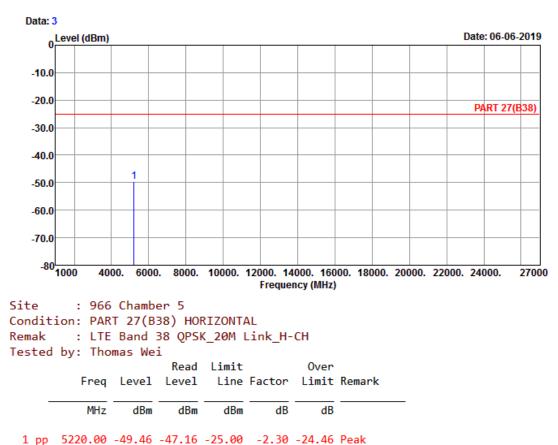






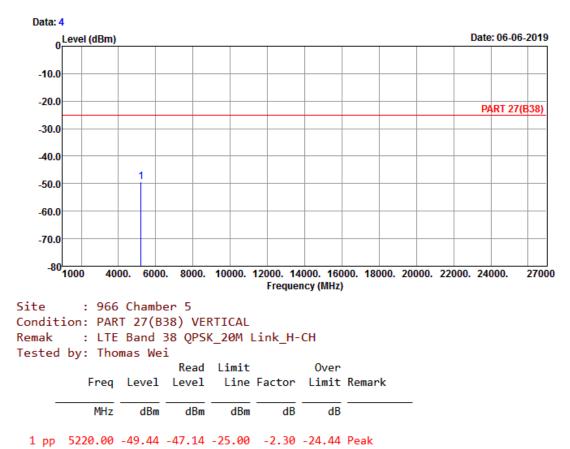
High Channel





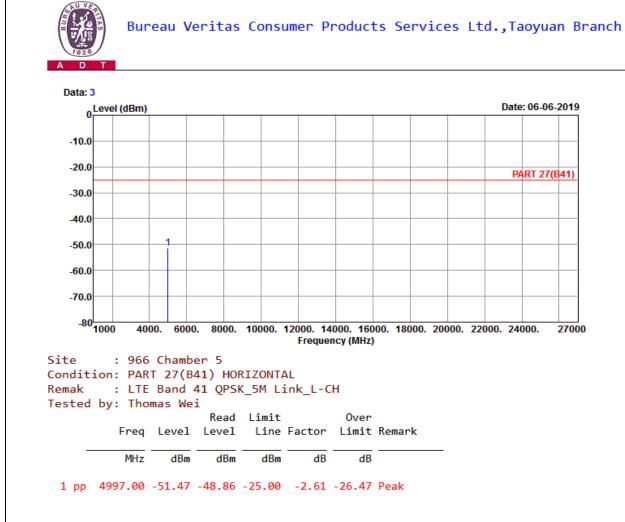






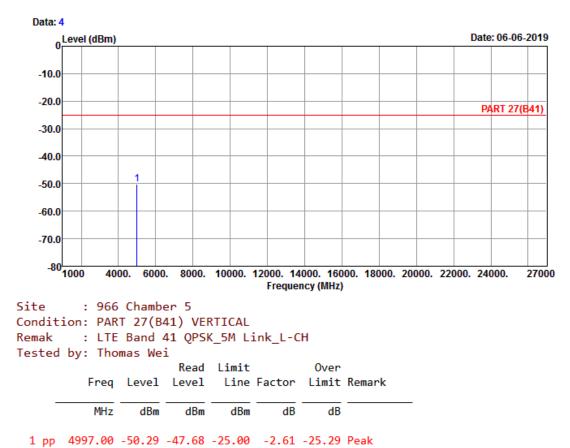


LTE Band 41 Channel Bandwidth: 5 MHz / QPSK Low Channel





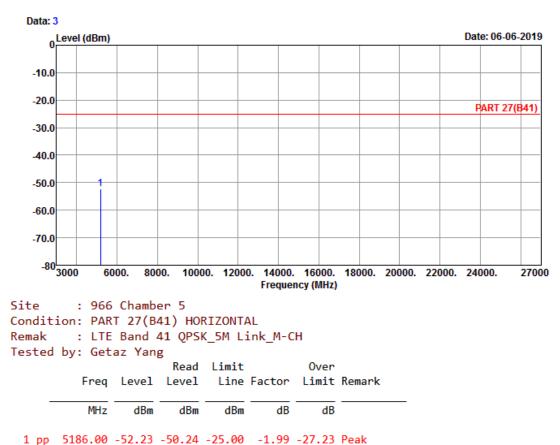






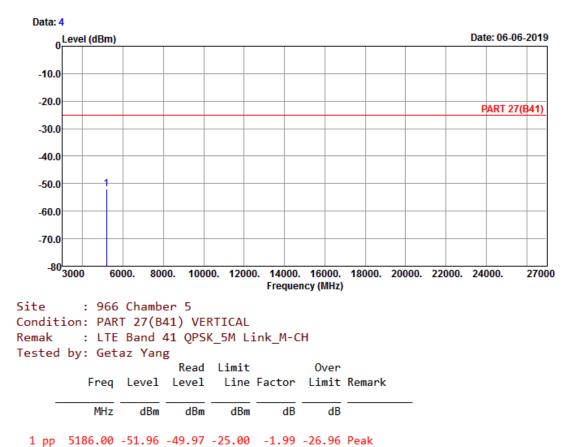
Middle Channel







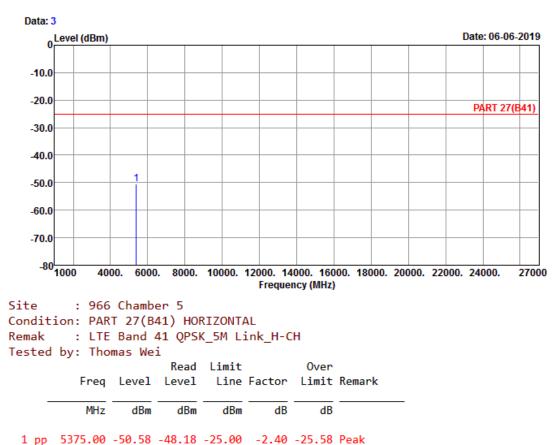






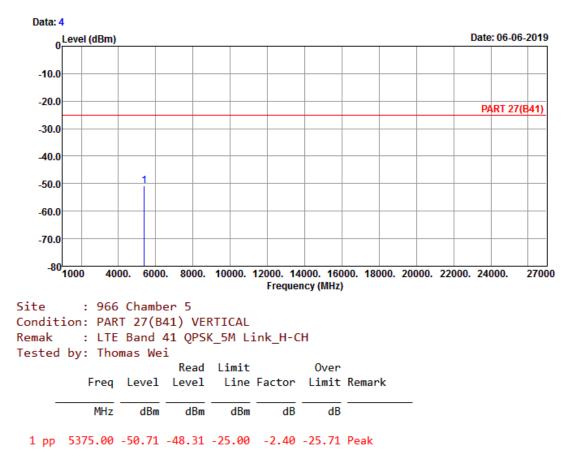
High Channel





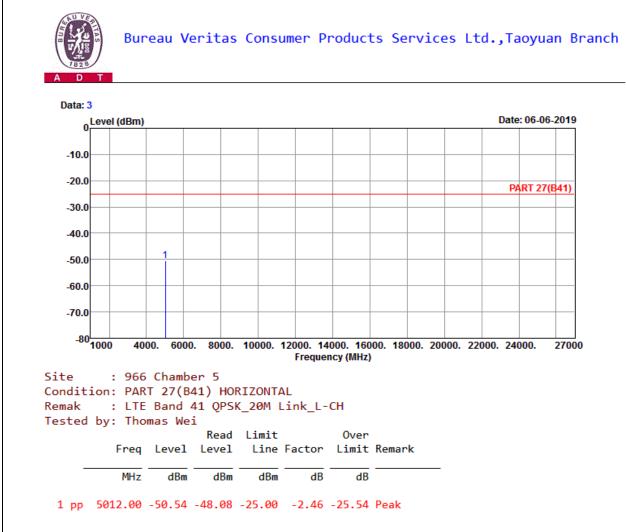






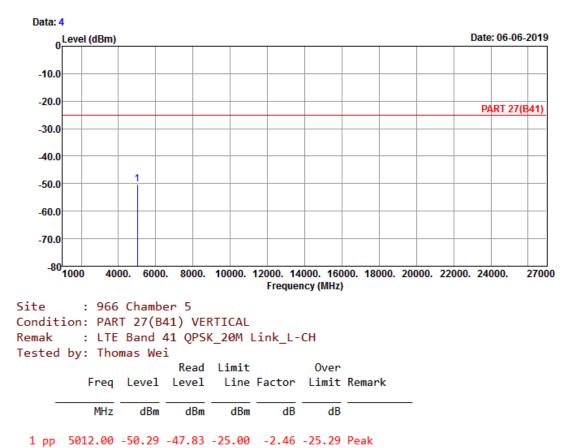


Channel Bandwidth: 20 MHz / QPSK Low Channel





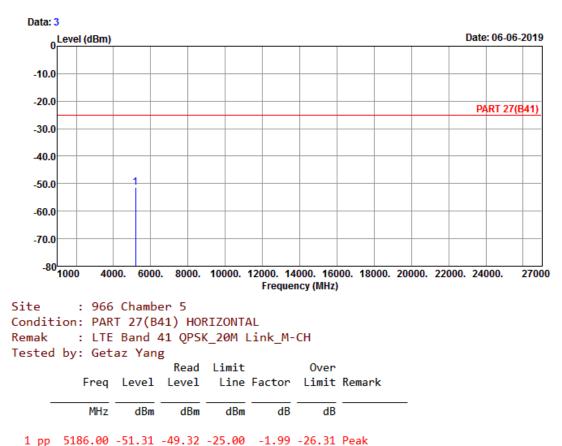






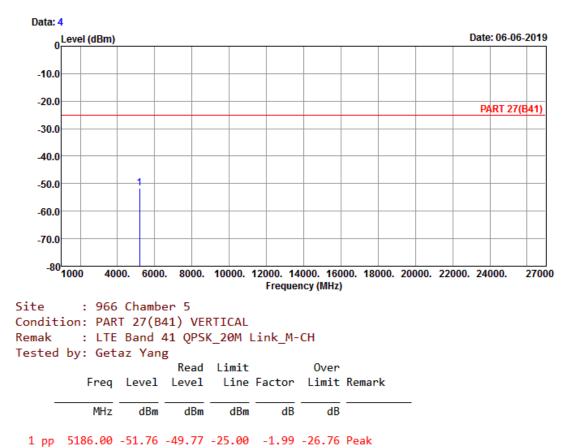
Middle Channel







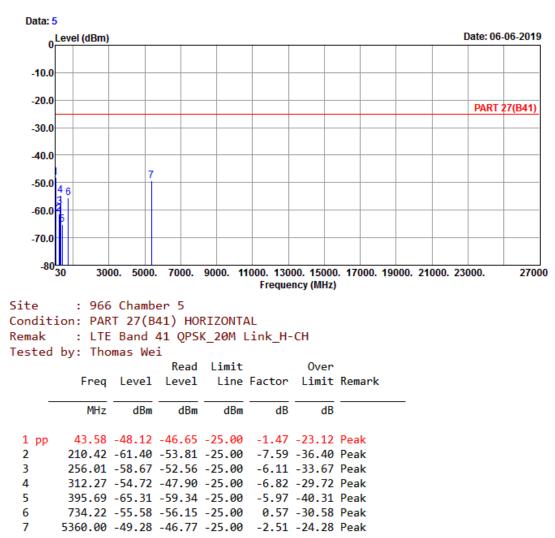






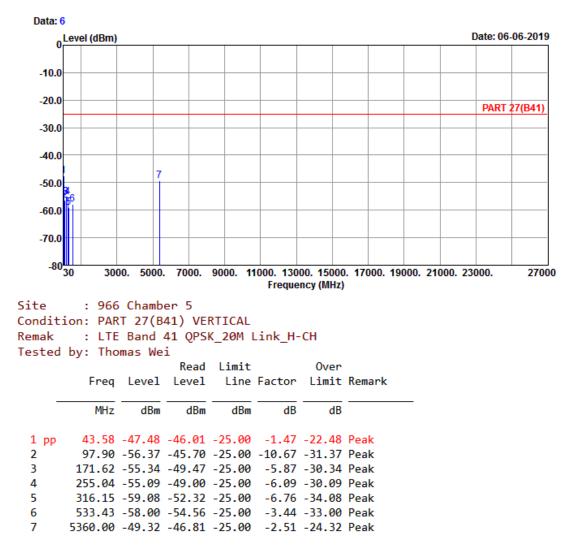
High Channel













5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).



Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

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

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Email: <u>service.adt@tw.bureauveritas.com</u> Web Site: <u>www.bureauveritas-adt.com</u>

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

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