# RF TEST REPORT

| | |
|---|---|
| **Applicant** | ZTE Corporation |
| **FCC ID** | SRQ-ZTEN9519 |
| **Product** | LTE/CDMA/WCDMA/GSM(GPRS) Multi-Mode Digital Mobile Phone |
| **Model** | N9519 |
| **Report No.** | RXA1601-0005RF02R2 |
| **Issue Date** | March 29, 2016 |

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC CFR47 Part 2/ FCC CFR 47 Part 24H**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

*Performed by: Changxu Wan*

*Reviewed by: Lingling Kang*

*Approved by: Kai Xu*

TESTING
No. L2264


## TA Technology (Shanghai) Co., Ltd.

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# Summary of measurement results

| No. | Test Case | Clause in FCC rules | Verdict |
|---|---|---|---|
| 1 | RF power output | 2.1046 | PASS |
| 2 | Effective Isotropic Radiated power | 24.232 | PASS |
| 3 | Occupied Bandwidth | 2.1049 | PASS |
| 4 | Band Edge Compliance | 24.238 | PASS |
| 5 | Peak-to-Average Power Ratio | 24.232/KDB 971168 D01(5.7) | PASS |
| 6 | Frequency Stability | 2.1055 / 24.235 | PASS |
| 7 | Spurious Emissions at Antenna Terminals | 2.1051 / 24.238 | PASS |
| 8 | Radiates Spurious Emission | 2.1053 / 24.238 | PASS |
| Date of Testing: January 4, 2016~ February 4, 2016 | | | |


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# 1. Test Laboratory

## 1.1. Notes of the test report

This report shall not be reproduced in full or partial, without the written approval of **TA technology (shanghai) co., Ltd).**The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein .Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above. This report must not be used by the client to claim product certification, approval, or endorsement by CNAS or any government agencies.

## 1.2. Test facility

**CNAS (accreditation number:L2264)**

TA Technology (Shanghai) Co., Ltd. has obtained the accreditation of China National Accreditation Service for Conformity Assessment (CNAS).

**FCC (recognition number is 428261)**

TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

**IC (recognition number is 8510A)**

TA Technology (Shanghai) Co., Ltd. has been listed by industry Canada to perform electromagnetic emission measurement.

**VCCI (recognition number is C-4595, T-2154, R-4113, G-766)**

TA Technology (Shanghai) Co., Ltd. has been listed by industry Japan to perform electromagnetic emission measurement.

**A2LA (Certificate Number: 3857.01)**

TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.


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## 1.3. Testing Location

| | |
|---|---|
| Company: | TA Technology (Shanghai) Co., Ltd. |
| Address: | No.145, Jintang Rd, Tangzhen Industry Park, Pudong |
| City: | Shanghai |
| Post code: | 201201 |
| Country: | P. R. China |
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# 2. General Description of Equipment under Test

**Client Information**

| | |
|---|---|
| **Applicant** | ZTE Corporation |
| **Applicant address** | ZTE Plaza, #55 Keji Road South, Hi-Tech, Industrial Park, Nanshan District Shenzhen, Guangdong, P.R.China |
| **Manufacturer** | ZTE Corporation |
| **Manufacturer address** | ZTE Plaza, #55 Keji Road South, Hi-Tech, Industrial Park, Nanshan District Shenzhen, Guangdong, P.R.China |


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## General information

| | | | |
|---|---|---|---|
| Model: | N9519 | | |
| Product MEID: | 99000677000320 | | |
| Hardware Version: | cuhA | | |
| Software Version: | N9519V1.0.0B01 | | |
| Power Supply: | Battery/AC adapter | | |
| Antenna Type: | Internal Antenna | | |
| Test Mode(s): | GSM1900; CDMA BC1; WCDMA Band II; LTE Band 2/25; | | |
| Test Modulation: | (GSM)GMSK,8PSK;<br>(CDMA)QPSK; (WCDMA)QPSK;<br>(LTE)QPSK,16QAM | | |
| GPRS/EGPRS Multislot Class: | 33 | | |
| HSDPA UE Category: | 24 | | |
| HSUPA UE Category: | 4 | | |
| Maximum E.I.R.P. | GSM 1900: 27.71 dBm<br>WCDMA Band II: 22.57dBm<br>CDMA BC1: 22.50dBm<br>LTE Band 2: 21.77dBm<br>LTE Band 25: 21.74dBm | | |
| Rated Power Supply Voltage: | 3.8V | | |
| Extreme Voltage: | Minimum: 3.6V Maximum: 4.35V | | |
| Extreme Temperature: | Lowest: -10°C Highest: +55°C | | |
| Operating Frequency Range(s) | Band | Tx (MHz) | Rx (MHz) |
| | GSM1900 | 1850 ~ 1910 | 1930 ~ 1990 |
| | CDMA BC1 | 1850 ~ 1910 | 1930 ~ 1990 |
| | WCDMA Band II | 1850 ~ 1910 | 1930 ~ 1990 |
| | LTE Band 2 | 1850 ~ 1910 | 1930 ~ 1990 |
| | LTE Band 25 | 1850 ~ 1915 | 1930 ~ 1995 |
| EUT Accessory | | | |
| Battery | Manufacturer: SCUD(FUJIAN)ELECTRONICS<br>Model: Li3831T43P4h826247<br>Power Rating: DC 3.8V, Li-ion | | |
| Adapter | Manufacturer: Salcomp<br>Model: STC-A515A-Z | | |
| Note: The information of the EUT is declared by the manufacturer.<br>Please refer to the specifications or user manual for details. | | | |


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# 3. Applied Standards

According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

**FCC CFR47 Part 2 (2014)**

**FCC CFR 47 Part 24H (2014)**

**ANSI/TIA-603-D (2010)**

**KDB 971168 D01 Power Meas License Digital Systems v02r02**


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# 4. Test Configuration

There is more than one SIM card slot, each one should be applied throughout the compliance test re spectively, and however, only the worst case (SIM 1) will be recorded in this report.

Radiated measurements are performed by rotating the EUT in three different orthogonal test planes. EUT stand-up position (Z axis), lie-down position (X, Y axis). Receiver antenna polarization (horizontal and vertical), the worst emission was found in position (Z axis, vertical polarization) and the worst case was recorded.
All mode and data rates and positions and RB size and modulations were investigated.
Subsequently, only the worst case emissions are reported.
The following testing in GSM/CDMA/WCDMA/LTE is set based on the maximum RF Output Power.

Test modes are chosen to be reported as the worst case configuration below:

| | **Test items** | **Modes/Modulation** | | |
|---|---|---|---|---|
| | | GSM 1900 | WCDMA Band V | CDMA BC1 |
| Conducted Test cases | RF power output | GSM /GPRS /EGPRS | RMC HSDPA HSUPA DC-HSDPA HSPA+ | 1xRTT EV-DO Rev.0 EV-DO Rev.A |
| | Occupied Bandwidth | GSM /GPRS /EGPRS | RMC | EV-DO Rev.0 |
| | Band Edge Compliance | GSM /GPRS /EGPRS | RMC | EV-DO Rev.0 |
| | Peak-to-Average Power Ratio | GSM /GPRS /EGPRS | RMC | EV-DO Rev.0 |
| | Frequency Stability | GSM /GPRS /EGPRS | RMC | EV-DO Rev.0 |
| | Spurious Emissions at Antenna Terminals | GSM | RMC | EV-DO Rev.0 |
| Radiated Test cases | Effective Radiated Power | GSM /GPRS /EGPRS | RMC | 1xRTT EV-DO Rev.0 |
| | Radiates Spurious Emission | GSM | RMC | EV-DO Rev.0 |


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Test modes are chosen to be reported as the worst case configuration below for LTE Band 2/25:

| Test items | Bandwidth (MHz) | | | | | | Modulation | | RB | | | Test Channel | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.4 | 3 | 5 | 10 | 15 | 20 | QPSK | 16QAM | 1 | 50% | 100% | L | M | H |
| RF power output | O | O | O | O | O | O | O | O | O | O | O | O | O | O |
| Effective Isotropic Radiated power | O | O | O | O | O | O | O | O | - | - | O | O | O | O |
| Occupied Bandwidth | O | O | O | O | O | O | O | O | - | - | O | O | O | O |
| Band Edge Compliance | O | O | O | O | O | O | O | O | O | - | O | O | - | O |
| Peak-to-Average Power Ratio | O | O | O | O | O | O | O | O | - | - | O | O | O | O |
| Frequency Stability | O | O | O | O | O | O | O | O | - | - | O | - | O | - |
| Conducted Spurious Emissions | O | O | O | O | O | O | O | - | O | - | - | O | O | O |
| Radiates Spurious Emission | O | O | O | O | O | O | O | - | O | - | - | O | O | O |
| Note | 1. The mark “O” means that this configuration is chosen for testing.<br>2. The mark “-” means that this configuration is not testing. | | | | | | | | | | | | | |


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# 5. Test Case Results

## 5.1. RF Power Output

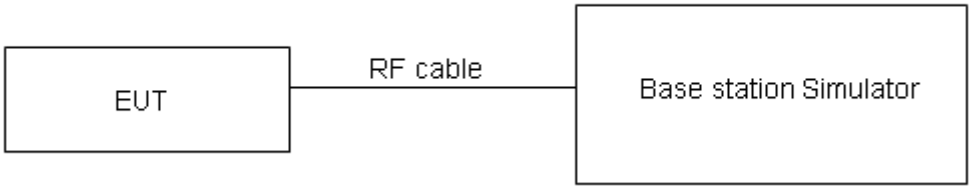
### Ambient condition

| Temperature | Relative humidity | Pressure |
|---|---|---|
| 23°C ~25°C | 45%~50% | 101.5kPa |

### Methods of Measurement

During the process of the testing, The EUT is controlled by the Base Station Simulator to ensure max power transmission and proper modulation.

### Test Setup




The loss between RF output port of the EUT and the input port of the tester has been taken into consideration.

### Limits

No specific RF power output requirements in part 2.1046.

### Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k$ = 2, $U$= 0.4 dB.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## Test Results

| GSM 1900 | | AV Conducted Power(dBm) | | |
|---|---|---|---|---|
| | | Channel 512 | Channel 661 | Channel 810 |
| | | 1850.2(MHz) | 1880(MHz) | 1909.8(MHz) |
| GSM | Results | **29.65** | **29.44** | **29.49** |
| GPRS (GMSK) | 1TXslot | **29.54** | **29.62** | **29.71** |
| | 2TXslots | 29.48 | 29.58 | 29.63 |
| | 3TXslots | 29.41 | 29.50 | 29.58 |
| | 4TXslots | 29.38 | 29.40 | 29.50 |
| EGPRS (8PSK) | 1TXslot | **25.71** | **25.79** | **25.79** |
| | 2TXslots | 25.67 | 25.65 | 25.70 |
| | 3TXslots | 25.60 | 25.61 | 25.67 |
| | 4TXslots | 25.27 | 25.45 | 25.42 |

Note: 1) The maximum RF Output Power numbers are marks in bold.
2) The following testing in GPRS/EGPRS is set to 1TXslot based on the maximum RF Output Power.

| CDMA BC1 | | | AV Conducted Power(dBm) | | |
|---|---|---|---|---|---|
| | | | Channel 25 | Channel 600 | Channel 1175 |
| | | | 1851.25(MHz) | 1880(MHz) | 1908.75(MHz) |
| 1xRTT | RC 1 | SO55 (Loopback) | 23.56 | 23.45 | 23.02 |
| | RC 3 | SO55 (Loopback) | 23.51 | 23.39 | 23.14 |
| | | TDSO32 (FCH+SCH) | 23.55 | 23.47 | 23.15 |
| | | TDSO32 (FCH) | 23.55 | 23.44 | 23.16 |
| EV-DO | Rev.0 | RTAP | **23.56** | **23.45** | **23.13** |
| | Rev.A | RETAP | 23.56 | 23.43 | 23.16 |

Note: 1) The maximum RF Output Power numbers are marks in bold.
2) The following testing in Rev.0 based on the maximum RF Output Power.


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| WCDMA Band II | | AV Conducted Power(dBm) | | |
|---|---|---|---|---|
| | | Channel 9262 | Channel 9400 | Channel 9538 |
| | | 1852.4(MHz) | 1880(MHz) | 1907.6(MHz) |
| **RMC** | | **24.25** | **24.53** | **24.42** |
| **HSDPA** | Sub - Test 1 | 24.15 | 24.30 | 24.25 |
| | Sub - Test 2 | 24.14 | 24.29 | 24.24 |
| | Sub - Test 3 | 23.63 | 23.78 | 23.73 |
| | Sub - Test 4 | 23.62 | 23.77 | 23.72 |
| **HSUPA** | Sub - Test 1 | 24.11 | 24.26 | 24.21 |
| | Sub - Test 2 | 22.10 | 22.25 | 22.20 |
| | Sub - Test 3 | 23.08 | 23.24 | 23.19 |
| | Sub - Test 4 | 22.07 | 22.23 | 22.18 |
| | Sub - Test 5 | 24.06 | 24.22 | 24.17 |
| **HSDPA+** | Sub - Test 1 | 24.06 | 24.21 | 24.16 |
| | Sub - Test 2 | 24.14 | 24.29 | 24.24 |
| | Sub - Test 3 | 23.63 | 23.78 | 23.73 |
| | Sub - Test 4 | 23.62 | 23.77 | 23.72 |
| **HSUPA+** | Sub - Test 1 | 24.11 | 24.26 | 24.21 |
| | Sub - Test 2 | 22.10 | 22.25 | 22.20 |
| | Sub - Test 3 | 23.03 | 23.18 | 23.29 |
| | Sub - Test 4 | 22.02 | 22.17 | 22.28 |
| | Sub - Test 5 | 24.17 | 24.32 | 24.27 |
| **DC-HSDPA** | Sub - Test 1 | 24.07 | 24.24 | 24.17 |
| | Sub - Test 2 | 24.06 | 24.23 | 24.16 |
| | Sub - Test 3 | 23.64 | 23.72 | 23.67 |
| | Sub - Test 4 | 23.63 | 23.71 | 23.66 |

Note:1) The maximum RF Output Power numbers are marks in bold.
2) The following testing in RMC based on the maximum RF Output Power.


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| LTE FDD Band 2 | | | | AV Conducted Power(dBm) | | |
|---|---|---|---|---|---|---|
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) | | |
| | | | | 18607/1850.7 | 18900/1880 | 19193/1909.3 |
| 1.4MHz | QPSK | 1 | 0 | 23.81 | 23.84 | 24.07 |
| | | 1 | 2 | 23.88 | 23.97 | 23.95 |
| | | 1 | 5 | 23.63 | 23.64 | 23.86 |
| | | 3 | 0 | 23.35 | 23.39 | 23.46 |
| | | 3 | 2 | 23.32 | 23.41 | 23.30 |
| | | 3 | 3 | 23.25 | 23.32 | 23.29 |
| | | 6 | 0 | 22.83 | 22.86 | 22.82 |
| | 16QAM | 1 | 0 | 23.03 | 22.93 | 22.46 |
| | | 1 | 2 | 23.31 | 22.05 | 23.14 |
| | | 1 | 5 | 22.93 | 22.70 | 22.86 |
| | | 3 | 0 | 22.55 | 22.49 | 22.02 |
| | | 3 | 2 | 22.45 | 21.65 | 22.70 |
| | | 3 | 3 | 22.38 | 22.49 | 22.29 |
| | | 6 | 0 | 21.82 | 21.76 | 21.91 |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) | | |
| | | | | 18615/1851.5 | 18900/1880 | 19185/1908.5 |
| 3MHz | QPSK | 1 | 0 | 23.71 | 23.74 | 23.97 |
| | | 1 | 7 | 23.78 | 23.87 | 23.85 |
| | | 1 | 14 | 23.53 | 23.54 | 23.76 |
| | | 8 | 0 | 22.73 | 22.77 | 22.84 |
| | | 8 | 4 | 22.70 | 22.79 | 22.68 |
| | | 8 | 7 | 22.63 | 22.70 | 22.67 |
| | | 15 | 0 | 22.72 | 22.76 | 22.72 |
| | 16QAM | 1 | 0 | 22.93 | 22.83 | 22.36 |
| | | 1 | 7 | 23.21 | 21.95 | 23.04 |
| | | 1 | 14 | 22.82 | 22.60 | 22.76 |
| | | 8 | 0 | 21.74 | 21.68 | 21.91 |
| | | 8 | 4 | 21.64 | 21.83 | 21.89 |
| | | 8 | 7 | 21.57 | 21.68 | 21.77 |
| | | 15 | 0 | 21.71 | 21.66 | 21.81 |


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| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) | | |
|---|---|---|---|---|---|---|
| | | | | 18625/1852.5 | 18900/1880 | 19175/1907.5 |
| 5MHz | QPSK | 1 | 0 | 23.73 | 23.76 | 23.99 |
| | | 1 | 13 | 23.81 | 23.89 | 23.87 |
| | | 1 | 24 | 23.55 | 23.56 | 23.78 |
| | | 12 | 0 | 22.75 | 22.79 | 22.86 |
| | | 12 | 6 | 22.72 | 22.81 | 22.70 |
| | | 12 | 13 | 22.65 | 22.72 | 22.69 |
| | | 25 | 0 | 22.75 | 22.78 | 22.74 |
| | 16QAM | 1 | 0 | 22.95 | 22.85 | 22.38 |
| | | 1 | 13 | 23.23 | 21.97 | 23.06 |
| | | 1 | 24 | 22.85 | 22.62 | 22.78 |
| | | 12 | 0 | 21.76 | 21.70 | 21.93 |
| | | 12 | 6 | 21.66 | 21.86 | 21.91 |
| | | 12 | 13 | 21.59 | 21.70 | 21.80 |
| | | 25 | 0 | 21.74 | 21.68 | 21.83 |
| **Bandwidth** | Modulation | RB size | RB offset | Channel/Frequency (MHz) | | |
| | | | | 18650/1855 | 18900/1880 | 19150/1905 |
| 10MHz | QPSK | 1 | 0 | 23.74 | 23.77 | 24.01 |
| | | 1 | 25 | 23.82 | 23.90 | 23.89 |
| | | 1 | 49 | 23.57 | 23.57 | 23.80 |
| | | 25 | 0 | 22.77 | 22.80 | 22.88 |
| | | 25 | 13 | 22.73 | 22.82 | 22.72 |
| | | 25 | 25 | 22.67 | 22.74 | 22.71 |
| | | 50 | 0 | 22.76 | 22.80 | 22.75 |
| | 16QAM | 1 | 0 | 22.97 | 22.86 | 22.39 |
| | | 1 | 25 | 23.24 | 21.99 | 23.07 |
| | | 1 | 49 | 22.86 | 22.63 | 22.80 |
| | | 25 | 0 | 21.78 | 21.71 | 21.95 |
| | | 25 | 13 | 21.67 | 21.87 | 21.93 |
| | | 25 | 25 | 21.61 | 21.72 | 21.81 |
| | | 50 | 0 | 21.75 | 21.70 | 21.85 |
| **Bandwidth** | Modulation | RB size | RB offset | Channel/Frequency (MHz) | | |
| | | | | 18675/1857.5 | 18900/1880 | 19125/1902.5 |


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| | | | | | | |
|---|---|---|---|---|---|---|
| 15MHz | QPSK | 1 | 0 | 23.77 | 23.81 | 24.04 |
| | | 1 | 38 | 23.85 | 23.93 | 23.92 |
| | | 1 | 74 | 23.60 | 23.61 | 23.83 |
| | | 36 | 0 | 22.80 | 22.84 | 22.91 |
| | | 36 | 18 | 22.76 | 22.85 | 22.75 |
| | | 36 | 39 | 22.70 | 22.77 | 22.74 |
| | | 75 | 0 | 22.79 | 22.83 | 22.79 |
| | 16QAM | 1 | 0 | 23.00 | 22.90 | 22.42 |
| | | 1 | 38 | 23.28 | 22.02 | 23.11 |
| | | 1 | 74 | 22.89 | 22.67 | 22.83 |
| | | 36 | 0 | 21.81 | 21.74 | 21.98 |
| | | 36 | 18 | 21.71 | 21.90 | 21.96 |
| | | 36 | 39 | 21.64 | 21.75 | 21.84 |
| | | 75 | 0 | 21.78 | 21.73 | 21.88 |
| **Bandwidth** | Modulation | RB size | RB offset | Channel/Frequency (MHz) | | |
| | | | | 18700/1860 | 18900/1880 | 19100/1900 |
| 20MHz | QPSK | 1 | 0 | 23.80 | 23.83 | 24.06 |
| | | 1 | 50 | 23.87 | 23.96 | 23.94 |
| | | 1 | 99 | 23.62 | 23.63 | 23.85 |
| | | 50 | 0 | 22.82 | 22.86 | 22.93 |
| | | 50 | 25 | 22.79 | 22.88 | 22.77 |
| | | 50 | 50 | 22.72 | 22.79 | 22.76 |
| | | 100 | 0 | 22.81 | 22.85 | 22.81 |
| | 16QAM | 1 | 0 | 23.02 | 22.92 | 22.45 |
| | | 1 | 50 | 23.30 | 22.04 | 23.13 |
| | | 1 | 99 | 22.91 | 22.69 | 22.85 |
| | | 50 | 0 | 21.83 | 21.77 | 22.00 |
| | | 50 | 25 | 21.73 | 21.92 | 21.98 |
| | | 50 | 50 | 21.66 | 21.77 | 21.86 |
| | | 100 | 0 | 21.80 | 21.75 | 21.90 |


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| LTE FDD Band 25 | | | | AV Conducted Power(dBm) | | |
|---|---|---|---|---|---|---|
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) | | |
| | | | | 26047/1850.7 | 26365/1882.5 | 26683/1914.3 |
| 1.4MHz | QPSK | 1 | 0 | 23.79 | 24.05 | 23.66 |
| | | 1 | 2 | 23.80 | 23.63 | 23.63 |
| | | 1 | 5 | 23.58 | 23.49 | 23.50 |
| | | 3 | 0 | 23.68 | 23.80 | 23.12 |
| | | 3 | 2 | 22.66 | 22.95 | 23.07 |
| | | 3 | 3 | 22.60 | 23.17 | 22.84 |
| | | 6 | 0 | 22.60 | 22.06 | 22.57 |
| | 16QAM | 1 | 0 | 22.74 | 22.54 | 22.59 |
| | | 1 | 2 | 23.09 | 22.79 | 22.89 |
| | | 1 | 5 | 22.93 | 22.33 | 22.54 |
| | | 3 | 0 | 22.26 | 22.28 | 22.26 |
| | | 3 | 2 | 22.21 | 22.25 | 22.28 |
| | | 3 | 3 | 22.23 | 22.13 | 22.07 |
| | | 6 | 0 | 21.58 | 21.55 | 21.49 |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) | | |
| | | | | 26055/1851.5 | 26365/1882.5 | 26675/1913.5 |
| 3MHz | QPSK | 1 | 0 | 23.68 | 23.95 | 23.55 |
| | | 1 | 7 | 23.69 | 23.53 | 23.52 |
| | | 1 | 14 | 23.48 | 23.39 | 23.40 |
| | | 8 | 0 | 23.58 | 22.50 | 22.52 |
| | | 8 | 4 | 22.55 | 22.54 | 22.37 |
| | | 8 | 7 | 22.49 | 22.47 | 22.44 |
| | | 15 | 0 | 22.49 | 21.95 | 22.47 |
| | 16QAM | 1 | 0 | 22.63 | 22.44 | 22.48 |
| | | 1 | 7 | 22.99 | 22.69 | 22.79 |
| | | 1 | 14 | 22.82 | 22.22 | 22.44 |
| | | 8 | 0 | 21.53 | 22.55 | 21.54 |
| | | 8 | 4 | 21.49 | 21.52 | 21.55 |
| | | 8 | 7 | 21.50 | 21.40 | 21.34 |
| | | 15 | 0 | 21.47 | 21.45 | 21.39 |


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| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) | | |
|---|---|---|---|---|---|---|
| | | | | 26065/1852.5 | 26365/1882.5 | 26665/1912.5 |
| 5MHz | QPSK | 1 | 0 | 23.72 | 23.98 | 23.59 |
| | | 1 | 13 | 23.72 | 23.56 | 23.56 |
| | | 1 | 24 | 23.51 | 23.42 | 23.43 |
| | | 12 | 0 | 23.61 | 22.53 | 22.55 |
| | | 12 | 6 | 22.59 | 22.58 | 22.40 |
| | | 12 | 13 | 22.53 | 22.50 | 22.47 |
| | | 25 | 0 | 22.52 | 21.98 | 22.50 |
| | 16QAM | 1 | 0 | 22.67 | 22.47 | 22.52 |
| | | 1 | 13 | 23.02 | 22.72 | 22.82 |
| | | 1 | 24 | 22.86 | 22.26 | 22.47 |
| | | 12 | 0 | 21.57 | 22.59 | 21.57 |
| | | 12 | 6 | 21.52 | 21.56 | 21.59 |
| | | 12 | 13 | 21.54 | 21.44 | 21.38 |
| | | 25 | 0 | 21.50 | 21.48 | 21.42 |
| **Bandwidth** | Modulation | RB size | RB offset | Channel/Frequency (MHz) | | |
| | | | | 26090/1855 | 26365/1882.5 | 26640/1910 |
| 10MHz | QPSK | 1 | 0 | 23.74 | 24.01 | 23.61 |
| | | 1 | 25 | 23.75 | 23.59 | 23.58 |
| | | 1 | 49 | 23.54 | 23.45 | 23.45 |
| | | 25 | 0 | 23.63 | 22.56 | 22.58 |
| | | 25 | 13 | 22.61 | 22.60 | 22.43 |
| | | 25 | 25 | 22.55 | 22.52 | 22.49 |
| | | 50 | 0 | 22.55 | 22.01 | 22.52 |
| | 16QAM | 1 | 0 | 22.69 | 22.49 | 22.54 |
| | | 1 | 25 | 23.05 | 22.74 | 22.85 |
| | | 1 | 49 | 22.88 | 22.28 | 22.49 |
| | | 25 | 0 | 21.59 | 22.61 | 21.59 |
| | | 25 | 13 | 21.55 | 21.58 | 21.61 |
| | | 25 | 25 | 21.56 | 21.46 | 21.40 |
| | | 50 | 0 | 21.53 | 21.51 | 21.45 |
| **Bandwidth** | Modulation | RB size | RB offset | Channel/Frequency (MHz) | | |
| | | | | 26115/1857.5 | 26365/1882.5 | 26615/1907.5 |


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| | | | | | | |
|---|---|---|---|---|---|---|
| 15MHz | QPSK | 1 | 0 | 23.75 | 24.02 | 23.62 |
| | | 1 | 25 | 23.76 | 23.60 | 23.59 |
| | | 1 | 49 | 23.55 | 23.46 | 23.46 |
| | | 25 | 0 | 23.65 | 22.57 | 22.59 |
| | | 25 | 13 | 22.62 | 22.61 | 22.44 |
| | | 25 | 25 | 22.56 | 22.54 | 22.50 |
| | | 50 | 0 | 22.56 | 22.02 | 22.53 |
| | 16QAM | 1 | 0 | 22.70 | 22.50 | 22.55 |
| | | 1 | 25 | 23.06 | 22.76 | 22.86 |
| | | 1 | 49 | 22.89 | 22.29 | 22.50 |
| | | 25 | 0 | 21.60 | 22.62 | 21.60 |
| | | 25 | 13 | 21.56 | 21.59 | 21.62 |
| | | 25 | 25 | 21.57 | 21.47 | 21.41 |
| | | 50 | 0 | 21.54 | 21.52 | 21.46 |
| **Bandwidth** | Modulation | RB size | RB offset | Channel/Frequency (MHz) | | |
| | | | | 26140/1860 | 26365/1882.5 | 26590/1905 |
| 20MHz | QPSK | 1 | 0 | 23.77 | 24.04 | 23.65 |
| | | 1 | 50 | 23.78 | 23.62 | 23.61 |
| | | 1 | 99 | 23.57 | 23.48 | 23.49 |
| | | 50 | 0 | 23.67 | 22.59 | 22.61 |
| | | 50 | 25 | 22.64 | 22.63 | 22.46 |
| | | 50 | 50 | 22.59 | 22.56 | 22.53 |
| | | 100 | 0 | 22.58 | 22.04 | 22.56 |
| | 16QAM | 1 | 0 | 22.73 | 22.53 | 22.57 |
| | | 1 | 50 | 23.08 | 22.78 | 22.88 |
| | | 1 | 99 | 22.91 | 22.32 | 22.53 |
| | | 50 | 0 | 21.62 | 22.65 | 21.63 |
| | | 50 | 25 | 21.58 | 21.62 | 21.64 |
| | | 50 | 50 | 21.59 | 21.50 | 21.43 |
| | | 100 | 0 | 21.56 | 21.54 | 21.48 |

Note:

1) The following testing in worst case based on the maximum RF Output Power.


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## 5.2. Effective Isotropic Radiated Power

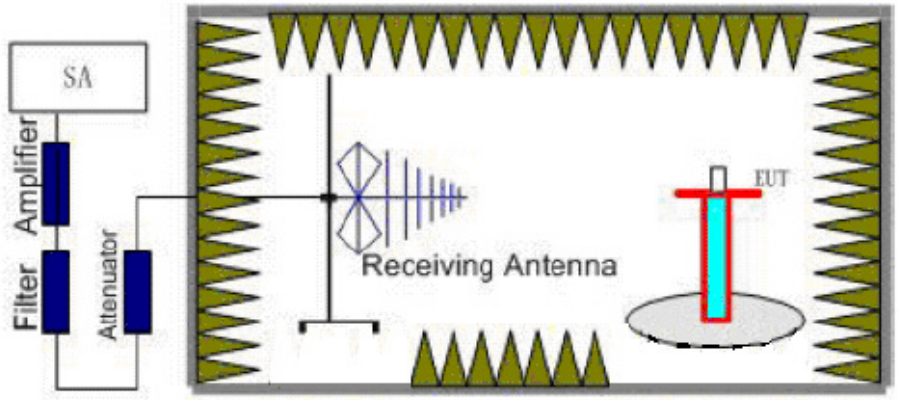
**Ambient condition**

| Temperature | Relative humidity |
|---|---|
| 21°C ~25°C | 40%~60% |

**Methods of Measurement**

The measurement procedures in TIA- 603-D are used.
1. The EUT was placed on a turntable with 1.5 meter height in a fully anechoic chamber.
2. The EUT was set at 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. GSM operating modes: Set RBW= 1MHz, VBW= 3MHz, RMS detector over burst;
UMTS operating modes: Set RBW= 100 KHz, VBW= 300 KHz, RMS detector over frame, and use channel power option with bandwidth=5MHz, per section 4.0 of KDB 971168 D01.
4. The table was rotated 360 degrees to determine the position of the highest radiated power.
5. The height of the receiving antenna is adjusted to look for the maximum ERP/EIRP.
6. Taking the record of maximum ERP/EIRP.
7. A dipole antenna was substituted in place of the EUT and was driven by a signal generator.
8. The conducted power at the terminal of the dipole antenna is measured.
9. Repeat step 3 to step 5 to get the maximum ERP/EIRP of the substitution antenna.
10. ERP/EIRP = Ps + Et – Es + Gs = Ps + Rt – Rs + Gs
Ps (dBm)：Input power to substitution antenna.
Gs (dBi or dBd)：Substitution antenna Gain.
Et = Rt + AF
Es = Rs + AF
AF (dB/m)：Receive antenna factor
Rt：The highest received signal in spectrum analyzer for EUT.
Rs：The highest received signal in spectrum analyzer for substitution antenna.

**Test Setup**




**Limits**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Rule Part 24.232(b) specifies that "Mobile/portable stations are limited to 2 watts EIRP. Peak power" and Rule Part 24.232(c) specifies that "Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage".

| | |
|---|---|
| Limit (EIRP) | ⩽ 2 W (33 dBm) |

**Measurement Uncertainty**

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k$ = 2, $U$= 1.19 dB


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**Test Results:**

| Mode | Polarization | Frequency (MHz) | Rt (dBm) | Rs (dBm) | Ps (dBm) | Gs (dBi) | EIRP (dBm) | Limit (dBm) | Conclusion |
|---|---|---|---|---|---|---|---|---|---|
| GSM 1900 | H | 1850.2 | -31.59 | -55.38 | 0 | 1.92 | 25.71 | 33 | Pass |
| | H | 1880 | -31.93 | -55.84 | 0 | 1.94 | 25.85 | 33 | Pass |
| | H | 1909.8 | -32.09 | -55.78 | 0 | 1.90 | 25.59 | 33 | Pass |
| | V | 1850.2 | -30.85 | -56.18 | 0 | 1.92 | 27.25 | 33 | Pass |
| | V | 1880 | -30.84 | -56.61 | 0 | 1.94 | 27.71 | 33 | Pass |
| | V | 1909.8 | -31.66 | -56.64 | 0 | 1.90 | 26.88 | 33 | Pass |
| GPRS 1900 | H | 1850.2 | -22.47 | -55.38 | 0 | 1.92 | 25.50 | 33 | Pass |
| | H | 1880 | -22.79 | -55.84 | 0 | 1.94 | 25.27 | 33 | Pass |
| | H | 1909.8 | -23.27 | -55.78 | 0 | 1.90 | 25.15 | 33 | Pass |
| | V | 1850.2 | -30.92 | -56.18 | 0 | 1.92 | 27.18 | 33 | Pass |
| | V | 1880 | -31.64 | -56.61 | 0 | 1.94 | 26.91 | 33 | Pass |
| | V | 1909.8 | -31.74 | -56.64 | 0 | 1.90 | 26.80 | 33 | Pass |
| EGPRS 1900 | H | 1850.2 | -33.90 | -55.38 | 0 | 1.92 | 23.40 | 33 | Pass |
| | H | 1880 | -34.57 | -55.84 | 0 | 1.94 | 23.21 | 33 | Pass |
| | H | 1909.8 | -33.71 | -55.78 | 0 | 1.90 | 23.97 | 33 | Pass |
| | V | 1850.2 | -33.74 | -56.18 | 0 | 1.92 | 24.36 | 33 | Pass |
| | V | 1880 | -33.83 | -56.61 | 0 | 1.94 | 24.72 | 33 | Pass |
| | V | 1909.8 | -33.02 | -56.64 | 0 | 1.90 | 25.52 | 33 | Pass |
| WCDMA Band II | H | 1852.4 | -36.95 | -55.22 | 0 | 1.91 | 20.18 | 33 | Pass |
| | H | 1880 | -37.24 | -55.84 | 0 | 1.94 | 20.54 | 33 | Pass |
| | H | 1907.6 | -36.99 | -55.78 | 0 | 1.92 | 20.71 | 33 | Pass |
| | V | 1852.4 | -35.53 | -56.19 | 0 | 1.91 | 22.57 | 33 | Pass |
| | V | 1880 | -36.45 | -56.61 | 0 | 1.94 | 22.10 | 33 | Pass |
| | V | 1907.6 | -36.24 | -56.77 | 0 | 1.92 | 22.45 | 33 | Pass |
| CDMA BC 1 1xRTT | H | 1851.25 | -36.27 | -55.27 | 0 | 1.91 | 20.91 | 33 | Pass |
| | H | 1880 | -37.20 | -55.84 | 0 | 1.94 | 20.58 | 33 | Pass |
| | H | 1908.75 | -36.92 | -55.77 | 0 | 1.92 | 20.77 | 33 | Pass |
| | V | 1851.25 | -35.59 | -56.18 | 0 | 1.91 | 22.50 | 33 | Pass |
| | V | 1880 | -36.23 | -56.61 | 0 | 1.94 | 22.32 | 33 | Pass |
| | V | 1908.75 | -36.23 | -56.67 | 0 | 1.92 | 22.36 | 33 | Pass |
| CDMA BC 1 EVDO | H | 1851.25 | -36.50 | -55.27 | 0 | 1.91 | 20.68 | 33 | Pass |
| | H | 1880 | -37.70 | -55.84 | 0 | 1.94 | 20.08 | 33 | Pass |
| | H | 1908.75 | -37.22 | -55.77 | 0 | 1.92 | 20.47 | 33 | Pass |
| | V | 1851.25 | -35.85 | -56.18 | 0 | 1.91 | 22.24 | 33 | Pass |
| | V | 1880 | -36.87 | -56.61 | 0 | 1.94 | 21.68 | 33 | Pass |
| | V | 1908.75 | -36.39 | -56.67 | 0 | 1.92 | 22.20 | 33 | Pass |


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| LTE Band 2 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| bandwidth | Polarization | Frequency (MHz) | Rt (dBm) | Rs (dBm) | Ps (dBm) | Gs (dBi) | EIRP (dBm) | Limit (dBm) | Conclusion |
| 1.4 MHz (QPSK) | H | 1850.7 | -38.69 | -54.89 | 0 | 1.90 | 18.10 | 33 | Pass |
| | H | 1880 | -39.69 | -56.66 | 0 | 1.92 | 18.89 | 33 | Pass |
| | H | 1909.3 | -41.05 | -58.09 | 0 | 1.91 | 18.95 | 33 | Pass |
| | V | 1850.7 | -37.46 | -55.05 | 0 | 1.90 | 19.49 | 33 | Pass |
| | V | 1880 | -37.47 | -56.41 | 0 | 1.92 | 20.86 | 33 | Pass |
| | V | 1909.3 | -38.17 | -57.85 | 0 | 1.91 | 21.59 | 33 | Pass |
| 1.4 MHz (16QAM) | H | 1850.7 | -39.47 | -54.89 | 0 | 1.90 | 17.32 | 33 | Pass |
| | H | 1880 | -40.57 | -56.66 | 0 | 1.92 | 18.01 | 33 | Pass |
| | H | 1909.3 | -41.89 | -58.09 | 0 | 1.91 | 18.11 | 33 | Pass |
| | V | 1850.7 | -38.41 | -55.05 | 0 | 1.90 | 18.54 | 33 | Pass |
| | V | 1880 | -38.22 | -56.41 | 0 | 1.92 | 20.11 | 33 | Pass |
| | V | 1909.3 | -38.78 | -57.85 | 0 | 1.91 | 20.98 | 33 | Pass |
| 3 MHz (QPSK) | H | 1851.5 | -38.87 | -54.93 | 0 | 1.91 | 17.97 | 33 | Pass |
| | H | 1880 | -39.15 | -56.66 | 0 | 1.94 | 19.45 | 33 | Pass |
| | H | 1908.5 | -39.79 | -58.08 | 0 | 1.91 | 20.20 | 33 | Pass |
| | V | 1851.5 | -37.15 | -55.04 | 0 | 1.91 | 19.80 | 33 | Pass |
| | V | 1880 | -36.94 | -56.41 | 0 | 1.94 | 21.41 | 33 | Pass |
| | V | 1908.5 | -38.21 | -57.86 | 0 | 1.91 | 21.56 | 33 | Pass |
| 3 MHz (16QAM) | H | 1851.5 | -39.64 | -54.93 | 0 | 1.91 | 17.20 | 33 | Pass |
| | H | 1880 | -39.83 | -56.66 | 0 | 1.94 | 18.77 | 33 | Pass |
| | H | 1908.5 | -40.34 | -58.08 | 0 | 1.91 | 19.65 | 33 | Pass |
| | V | 1851.5 | -37.93 | -55.04 | 0 | 1.91 | 19.02 | 33 | Pass |
| | V | 1880 | -37.59 | -56.41 | 0 | 1.94 | 20.76 | 33 | Pass |
| | V | 1908.5 | -38.99 | -57.86 | 0 | 1.91 | 20.78 | 33 | Pass |
| 5 MHz (QPSK) | H | 1852.5 | -39.08 | -54.98 | 0 | 1.92 | 17.82 | 33 | Pass |
| | H | 1880 | -39.81 | -56.66 | 0 | 1.94 | 18.79 | 33 | Pass |
| | H | 1907.5 | -40.60 | -58.05 | 0 | 1.90 | 19.35 | 33 | Pass |
| | V | 1852.5 | -37.23 | -55.14 | 0 | 1.92 | 19.83 | 33 | Pass |
| | V | 1880 | -37.94 | -56.41 | 0 | 1.94 | 20.41 | 33 | Pass |
| | V | 1907.5 | -38.68 | -57.97 | 0 | 1.90 | 21.19 | 33 | Pass |
| 5 MHz (16QAM) | H | 1852.5 | -39.69 | -54.98 | 0 | 1.92 | 17.21 | 33 | Pass |
| | H | 1880 | -40.48 | -56.66 | 0 | 1.94 | 18.12 | 33 | Pass |
| | H | 1907.5 | -41.19 | -58.05 | 0 | 1.90 | 18.76 | 33 | Pass |
| | V | 1852.5 | -38.11 | -55.14 | 0 | 1.92 | 18.95 | 33 | Pass |
| | V | 1880 | -38.67 | -56.41 | 0 | 1.94 | 19.68 | 33 | Pass |
| | V | 1907.5 | -39.31 | -57.97 | 0 | 1.90 | 20.56 | 33 | Pass |
| 10 MHz (QPSK) | H | 1855 | -40.50 | -55.09 | 0 | 1.91 | 16.50 | 33 | Pass |
| | H | 1880 | -41.33 | -56.66 | 0 | 1.94 | 17.27 | 33 | Pass |
| | H | 1905 | -47.87 | -58.01 | 0 | 1.92 | 12.06 | 33 | Pass |


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| LTE Band 2 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| bandwidth | Polarization | Frequency (MHz) | Rt (dBm) | Rs (dBm) | Ps (dBm) | Gs (dBi) | EIRP (dBm) | Limit (dBm) | Conclusion |
| | V | 1855 | -38.27 | -55.08 | 0 | 1.91 | 18.72 | 33 | Pass |
| | V | 1880 | -38.05 | -56.41 | 0 | 1.94 | 20.30 | 33 | Pass |
| | V | 1905 | -44.25 | -57.81 | 0 | 1.92 | 15.48 | 33 | Pass |
| 10 MHz (16QAM) | H | 1855 | -41.14 | -55.09 | 0 | 1.91 | 15.86 | 33 | Pass |
| | H | 1880 | -42.07 | -56.66 | 0 | 1.94 | 16.53 | 33 | Pass |
| | H | 1905 | -48.71 | -58.01 | 0 | 1.92 | 11.22 | 33 | Pass |
| | V | 1855 | -38.97 | -55.08 | 0 | 1.91 | 18.02 | 33 | Pass |
| | V | 1880 | -38.82 | -56.41 | 0 | 1.94 | 19.53 | 33 | Pass |
| | V | 1905 | -45.52 | -57.81 | 0 | 1.92 | 14.21 | 33 | Pass |
| 15 MHz (QPSK) | H | 1857.5 | -38.76 | -55.23 | 0 | 1.93 | 18.40 | 33 | Pass |
| | H | 1880 | -38.60 | -56.66 | 0 | 1.94 | 20.00 | 33 | Pass |
| | H | 1902.5 | -39.72 | -57.95 | 0 | 1.92 | 20.15 | 33 | Pass |
| | V | 1857.5 | -37.29 | -55.24 | 0 | 1.93 | 19.88 | 33 | Pass |
| | V | 1880 | -37.58 | -56.41 | 0 | 1.94 | 20.77 | 33 | Pass |
| | V | 1902.5 | -38.84 | -57.69 | 0 | 1.92 | 21.77 | 33 | Pass |
| 15 MHz (16QAM) | H | 1857.5 | -40.89 | -55.23 | 0 | 1.93 | 16.27 | 33 | Pass |
| | H | 1880 | -40.86 | -56.66 | 0 | 1.94 | 17.74 | 33 | Pass |
| | H | 1902.5 | -42.06 | -57.95 | 0 | 1.92 | 17.81 | 33 | Pass |
| | V | 1857.5 | -39.70 | -55.24 | 0 | 1.93 | 17.47 | 33 | Pass |
| | V | 1880 | -40.16 | -56.41 | 0 | 1.94 | 18.19 | 33 | Pass |
| | V | 1902.5 | -40.53 | -57.69 | 0 | 1.92 | 19.08 | 33 | Pass |
| 20 MHz (QPSK) | H | 1860 | -36.67 | -55.35 | 0 | 1.93 | 20.61 | 33 | Pass |
| | H | 1880 | -38.49 | -56.66 | 0 | 1.94 | 20.11 | 33 | Pass |
| | H | 1900 | -39.10 | -57.86 | 0 | 1.92 | 20.68 | 33 | Pass |
| | V | 1860 | -35.71 | -55.31 | 0 | 1.93 | 21.53 | 33 | Pass |
| | V | 1880 | -37.60 | -56.41 | 0 | 1.94 | 20.75 | 33 | Pass |
| | V | 1900 | -37.87 | -57.66 | 0 | 1.92 | 21.71 | 33 | Pass |
| 20 MHz (16QAM) | H | 1860 | -38.80 | -55.35 | 0 | 1.93 | 18.48 | 33 | Pass |
| | H | 1880 | -40.75 | -56.66 | 0 | 1.94 | 17.85 | 33 | Pass |
| | H | 1900 | -41.44 | -57.86 | 0 | 1.92 | 18.34 | 33 | Pass |
| | V | 1860 | -38.12 | -55.31 | 0 | 1.93 | 19.12 | 33 | Pass |
| | V | 1880 | -40.18 | -56.41 | 0 | 1.94 | 18.17 | 33 | Pass |
| | V | 1900 | -40.56 | -57.66 | 0 | 1.92 | 19.02 | 33 | Pass |


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| LTE Band 25 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| bandwidth | Polarization | Frequency (MHz) | Rt (dBm) | Rs (dBm) | Ps (dBm) | Gs (dBi) | EIRP (dBm) | Limit (dBm) | Conclusion |
| 1.4 MHz (QPSK) | H | 1850.7 | -37.33 | -54.68 | 0 | 1.88 | 19.23 | 33 | Pass |
| | H | 1882.5 | -38.45 | -55.94 | 0 | 1.91 | 19.40 | 33 | Pass |
| | H | 1914.3 | -37.69 | -55.62 | 0 | 1.89 | 19.82 | 33 | Pass |
| | V | 1850.7 | -36.38 | -54.68 | 0 | 1.88 | 20.18 | 33 | Pass |
| | V | 1882.5 | -36.97 | -55.94 | 0 | 1.91 | 20.88 | 33 | Pass |
| | V | 1914.3 | -35.77 | -55.62 | 0 | 1.89 | 21.74 | 33 | Pass |
| 1.4 MHz (16QAM) | H | 1850.7 | -39.46 | -54.68 | 0 | 1.88 | 17.10 | 33 | Pass |
| | H | 1882.5 | -40.71 | -55.94 | 0 | 1.91 | 17.14 | 33 | Pass |
| | H | 1914.3 | -40.03 | -55.62 | 0 | 1.89 | 17.48 | 33 | Pass |
| | V | 1850.7 | -38.79 | -54.68 | 0 | 1.88 | 17.77 | 33 | Pass |
| | V | 1882.5 | -39.55 | -55.94 | 0 | 1.91 | 18.30 | 33 | Pass |
| | V | 1914.3 | -38.46 | -55.62 | 0 | 1.89 | 19.05 | 33 | Pass |
| 3 MHz (QPSK) | H | 1851.5 | -36.53 | -54.68 | 0 | 1.87 | 20.02 | 33 | Pass |
| | H | 1882.5 | -37.96 | -55.94 | 0 | 1.91 | 19.89 | 33 | Pass |
| | H | 1913.5 | -36.86 | -55.62 | 0 | 1.89 | 20.65 | 33 | Pass |
| | V | 1851.5 | -35.45 | -54.68 | 0 | 1.87 | 21.10 | 33 | Pass |
| | V | 1882.5 | -36.84 | -55.94 | 0 | 1.91 | 21.01 | 33 | Pass |
| | V | 1913.5 | -36.37 | -55.62 | 0 | 1.89 | 21.14 | 33 | Pass |
| 3 MHz (16QAM) | H | 1851.5 | -38.66 | -54.68 | 0 | 1.87 | 17.89 | 33 | Pass |
| | H | 1882.5 | -40.22 | -55.94 | 0 | 1.91 | 17.63 | 33 | Pass |
| | H | 1913.5 | -39.20 | -55.62 | 0 | 1.89 | 18.31 | 33 | Pass |
| | V | 1851.5 | -37.86 | -54.68 | 0 | 1.87 | 18.69 | 33 | Pass |
| | V | 1882.5 | -39.42 | -55.94 | 0 | 1.91 | 18.43 | 33 | Pass |
| | V | 1913.5 | -39.06 | -55.62 | 0 | 1.89 | 18.45 | 33 | Pass |
| 5 MHz (QPSK) | H | 1852.5 | -37.97 | -55.23 | 0 | 1.85 | 19.11 | 33 | Pass |
| | H | 1882.5 | -38.26 | -55.85 | 0 | 1.91 | 19.50 | 33 | Pass |
| | H | 1912.5 | -38.66 | -56.54 | 0 | 1.90 | 19.78 | 33 | Pass |
| | V | 1852.5 | -37.70 | -56.20 | 0 | 1.85 | 20.35 | 33 | Pass |
| | V | 1882.5 | -38.54 | -56.63 | 0 | 1.91 | 20.00 | 33 | Pass |
| | V | 1912.5 | -38.37 | -57.23 | 0 | 1.90 | 20.76 | 33 | Pass |
| 5 MHz (16QAM) | H | 1852.5 | -40.10 | -55.23 | 0 | 1.85 | 16.98 | 33 | Pass |
| | H | 1882.5 | -40.52 | -55.85 | 0 | 1.91 | 17.24 | 33 | Pass |
| | H | 1912.5 | -41.00 | -56.54 | 0 | 1.90 | 17.44 | 33 | Pass |
| | V | 1852.5 | -40.11 | -56.20 | 0 | 1.85 | 17.94 | 33 | Pass |
| | V | 1882.5 | -41.12 | -56.63 | 0 | 1.91 | 17.42 | 33 | Pass |
| | V | 1912.5 | -41.06 | -57.23 | 0 | 1.90 | 18.07 | 33 | Pass |
| 10 MHz (QPSK) | H | 1855 | -37.23 | -55.21 | 0 | 1.88 | 19.86 | 33 | Pass |
| | H | 1882.5 | -38.86 | -55.85 | 0 | 1.91 | 18.90 | 33 | Pass |
| | H | 1910 | -39.29 | -56.54 | 0 | 1.94 | 19.19 | 33 | Pass |


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| LTE Band 25 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| bandwidth | Polarization | Frequency (MHz) | Rt (dBm) | Rs (dBm) | Ps (dBm) | Gs (dBi) | EIRP (dBm) | Limit (dBm) | Conclusion |
| | V | 1855 | -37.20 | -56.21 | 0 | 1.88 | 20.89 | 33 | Pass |
| | V | 1882.5 | -38.03 | -56.63 | 0 | 1.91 | 20.51 | 33 | Pass |
| | V | 1910 | -38.91 | -57.24 | 0 | 1.94 | 20.27 | 33 | Pass |
| 10 MHz (16QAM) | H | 1855 | -39.36 | -55.21 | 0 | 1.88 | 17.73 | 33 | Pass |
| | H | 1882.5 | -41.12 | -55.85 | 0 | 1.91 | 16.64 | 33 | Pass |
| | H | 1910 | -41.63 | -56.54 | 0 | 1.94 | 16.85 | 33 | Pass |
| | V | 1855 | -39.61 | -56.21 | 0 | 1.88 | 18.48 | 33 | Pass |
| | V | 1882.5 | -40.61 | -56.63 | 0 | 1.91 | 17.93 | 33 | Pass |
| | V | 1910 | -41.60 | -57.24 | 0 | 1.94 | 17.58 | 33 | Pass |
| 15 MHz (QPSK) | H | 1857.5 | -38.75 | -55.20 | 0 | 1.88 | 18.33 | 33 | Pass |
| | H | 1882.5 | -38.85 | -55.85 | 0 | 1.91 | 18.91 | 33 | Pass |
| | H | 1907.5 | -39.25 | -56.51 | 0 | 1.94 | 19.20 | 33 | Pass |
| | V | 1857.5 | -37.10 | -56.18 | 0 | 1.88 | 20.96 | 33 | Pass |
| | V | 1882.5 | -38.19 | -56.63 | 0 | 1.91 | 20.35 | 33 | Pass |
| | V | 1907.5 | -37.95 | -57.21 | 0 | 1.94 | 21.20 | 33 | Pass |
| 15 MHz (16QAM) | H | 1857.5 | -40.88 | -55.20 | 0 | 1.88 | 16.20 | 33 | Pass |
| | H | 1882.5 | -41.11 | -55.85 | 0 | 1.91 | 16.65 | 33 | Pass |
| | H | 1907.5 | -41.59 | -56.51 | 0 | 1.94 | 16.86 | 33 | Pass |
| | V | 1857.5 | -39.51 | -56.18 | 0 | 1.88 | 18.55 | 33 | Pass |
| | V | 1882.5 | -40.77 | -56.63 | 0 | 1.91 | 17.77 | 33 | Pass |
| | V | 1907.5 | -40.64 | -57.21 | 0 | 1.94 | 18.51 | 33 | Pass |
| 20 MHz (QPSK) | H | 1860 | -38.37 | -55.18 | 0 | 1.90 | 18.71 | 33 | Pass |
| | H | 1882.5 | -38.91 | -55.85 | 0 | 1.91 | 18.85 | 33 | Pass |
| | H | 1905 | -39.50 | -56.48 | 0 | 1.93 | 18.91 | 33 | Pass |
| | V | 1860 | -37.20 | -56.17 | 0 | 1.90 | 20.87 | 33 | Pass |
| | V | 1882.5 | -38.58 | -56.63 | 0 | 1.91 | 19.96 | 33 | Pass |
| | V | 1905 | -38.69 | -57.20 | 0 | 1.93 | 20.44 | 33 | Pass |
| 20 MHz (16QAM) | H | 1860 | -40.50 | -55.18 | 0 | 1.90 | 16.58 | 33 | Pass |
| | H | 1882.5 | -41.17 | -55.85 | 0 | 1.91 | 16.59 | 33 | Pass |
| | H | 1905 | -41.84 | -56.48 | 0 | 1.93 | 16.57 | 33 | Pass |
| | V | 1860 | -39.61 | -56.17 | 0 | 1.90 | 18.46 | 33 | Pass |
| | V | 1882.5 | -41.16 | -56.63 | 0 | 1.91 | 17.38 | 33 | Pass |
| | V | 1905 | -41.38 | -57.20 | 0 | 1.93 | 17.75 | 33 | Pass |


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## 5.3. Occupied Bandwidth

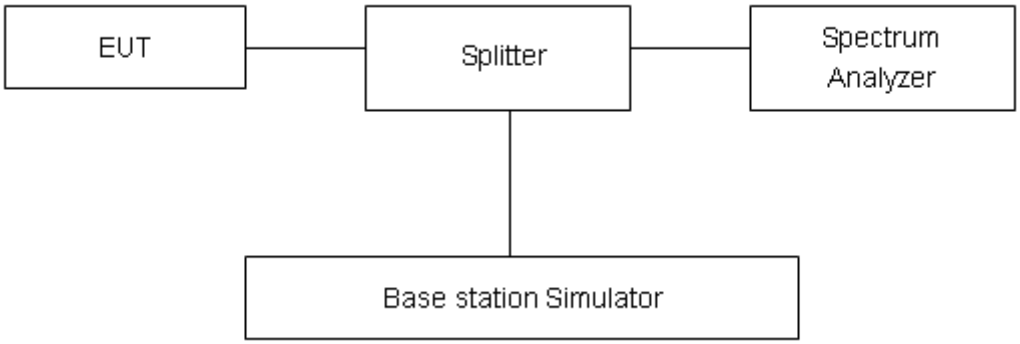
### Ambient condition

| Temperature | Relative humidity | Pressure |
|---|---|---|
| 23°C ~25°C | 45%~50% | 101.5kPa |

### Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The occupied bandwidth is measured using spectrum analyzer.
RBW is set to 3kHz, VBW is set to 10kHz for GSM 1900,
RBW is set to 51kHz, VBW is set to 160kHz for WCDMA Band II,
RBW is set to 15kHz,VBW is set to 51kHz for CDMA BC1,
RBW is set to 51kHz, VBW is set to 160kHz for LTE Band 2/25(1.4MHz),
RBW is set to 100kHz,VBW is set to 300kHz for LTE Band 2/25 (3MHz/5MHz),
RBW is set to 300kHz,VBW is set to 1MHz for LTE Band 2/25(10MHz/15MHz/20MHz).
99% power and -26dBc occupied bandwidths are recorded. Spectrum analyzer plots are included on the following pages.

### Test Setup




### Limits

No specific occupied bandwidth requirements in part 2.1049.

### Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor *k* = 2, *U*= 624Hz.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**Test Result**

| Mode | Channel | Frequency (MHz) | 99% Power Bandwidth (MHz) | -26dBc Bandwidth(MHz) |
|---|---|---|---|---|
| GSM 1900 (GSM) | 512 | 1850.2 | 0.2463673 | 0.309590 |
| | 661 | 1880.0 | 0.2469724 | 0.314841 |
| | 810 | 1909.8 | 0.2460745 | 0.309302 |
| GPRS 1900 (GMSK) | 512 | 1850.2 | 0.2426581 | 0.314385 |
| | 661 | 1880.0 | 0.2430431 | 0.317809 |
| | 810 | 1909.8 | 0.2450116 | 0.316469 |
| EGPRS 1900 (8-PSK) | 512 | 1850.2 | 0.2465598 | 0.311440 |
| | 661 | 1880.0 | 0.2433318 | 0.310671 |
| | 810 | 1909.8 | 0.2510586 | 0.319715 |

| Mode | Channel | Frequency (MHz) | 99% Power Bandwidth (MHz) | -26dBc Bandwidth(MHz) |
|---|---|---|---|---|
| WCDMA Band II (RMC) | 9262 | 1852.4 | 4.1656 | 4.643 |
| | 9400 | 1880 | 4.1580 | 4.654 |
| | 9538 | 1907.6 | 4.1600 | 4.635 |
| CDMA BC1 1xRTT | 25 | 1851.25 | 1.2772 | 1.413 |
| | 600 | 1880 | 1.2781 | 1.412 |
| | 1175 | 1908.75 | 1.2689 | 1.421 |


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| LTE Band 2 | | Channel | Frequency (MHz) | 99% Power Bandwidth (MHz) | -26dBc Bandwidth(MHz) |
|---|---|---|---|---|---|
| Bandwidth | Modulation | | | | |
| 1.4MHz | QPSK | 18607 | 1850.7 | 1.1202 | 1.393 |
| | | 18900 | 1880.0 | 1.1378 | 1.367 |
| | | 19193 | 1909.3 | 1.1184 | 1.362 |
| | 16QAM | 18607 | 1850.7 | 1.1157 | 1.348 |
| | | 18900 | 1880.0 | 1.1236 | 1.351 |
| | | 19193 | 1909.3 | 1.1265 | 1.356 |
| 3MHz | QPSK | 18615 | 1851.5 | 2.7492 | 3.042 |
| | | 18900 | 1880 | 2.7531 | 3.072 |
| | | 19185 | 1908.5 | 2.7472 | 3.059 |
| | 16QAM | 18615 | 1851.5 | 2.7382 | 3.056 |
| | | 18900 | 1880 | 2.7355 | 3.071 |
| | | 19185 | 1908.5 | 2.7387 | 3.047 |
| 5MHz | QPSK | 18625 | 1852.5 | 4.5296 | 5.017 |
| | | 18900 | 1880 | 4.5293 | 5.016 |
| | | 19175 | 1907.5 | 4.5254 | 5.025 |
| | 16QAM | 18625 | 1852.5 | 4.5281 | 5.058 |
| | | 18900 | 1880 | 4.5208 | 5.043 |
| | | 19175 | 1907.5 | 4.5426 | 5.045 |
| 10MHz | QPSK | 18650 | 1855 | 9.0364 | 10.05 |
| | | 18900 | 1880 | 9.0702 | 10.14 |
| | | 19150 | 1905 | 9.0713 | 10.07 |
| | 16QAM | 18650 | 1855 | 9.0418 | 9.947 |
| | | 18900 | 1880 | 9.0174 | 10.04 |
| | | 19150 | 1905 | 9.0787 | 10.10 |
| 15MHz | QPSK | 18675 | 1857.5 | 13.504 | 14.74 |
| | | 18900 | 1880 | 13.534 | 14.77 |
| | | 19125 | 1902.5 | 13.482 | 14.67 |
| | 16QAM | 18675 | 1857.5 | 13.504 | 14.74 |
| | | 18900 | 1880 | 13.534 | 14.77 |
| | | 19125 | 1902.5 | 13.482 | 14.67 |
| 20MHz | QPSK | 18700 | 1860 | 17.851 | 19.16 |
| | | 18900 | 1880 | 17.903 | 19.21 |
| | | 19100 | 1900 | 17.949 | 19.20 |
| | 16QAM | 18700 | 1860 | 17.851 | 19.16 |
| | | 18900 | 1880 | 17.903 | 19.21 |
| | | 19100 | 1900 | 17.949 | 19.20 |


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| LTE Band 25 | | Channel | Frequency (MHz) | 99% Power Bandwidth (MHz) | -26dBc Bandwidth(MHz) |
|---|---|---|---|---|---|
| Bandwidth | Modulation | | | | |
| 1.4MHz | QPSK | 26047 | 1850.7 | 1.1135 | 1.376 |
| | | 26365 | 1882.5 | 1.1226 | 1.360 |
| | | 26683 | 1914.3 | 1.1287 | 1.349 |
| | 16QAM | 26047 | 1850.7 | 1.1177 | 1.375 |
| | | 26365 | 1882.5 | 1.1337 | 1.363 |
| | | 26683 | 1914.3 | 1.1160 | 1.354 |
| 3MHz | QPSK | 26055 | 1851.5 | 2.7329 | 3.066 |
| | | 26365 | 1882.5 | 2.7435 | 3.045 |
| | | 26675 | 1913.5 | 2.7366 | 3.057 |
| | 16QAM | 26055 | 1851.5 | 2.7455 | 3.039 |
| | | 26365 | 1882.5 | 2.7659 | 3.052 |
| | | 26675 | 1913.5 | 2.7425 | 3.073 |
| 5MHz | QPSK | 26065 | 1852.5 | 4.5208 | 4.996 |
| | | 26365 | 1882.5 | 4.5469 | 5.064 |
| | | 26665 | 1912.5 | 4.5189 | 5.015 |
| | 16QAM | 26065 | 1852.5 | 4.5515 | 4.993 |
| | | 26365 | 1882.5 | 4.5057 | 4.977 |
| | | 26665 | 1912.5 | 4.5456 | 5.004 |
| 10MHz | QPSK | 26090 | 1855 | 9.0549 | 10.00 |
| | | 26365 | 1882.5 | 9.0820 | 10.04 |
| | | 26640 | 1910 | 9.0604 | 10.02 |
| | 16QAM | 26090 | 1855 | 9.0523 | 10.05 |
| | | 26365 | 1882.5 | 9.0749 | 10.00 |
| | | 26640 | 1910 | 9.0454 | 10.06 |
| 15MHz | QPSK | 26115 | 1857.5 | 13.436 | 14.77 |
| | | 26365 | 1882.5 | 13.521 | 14.72 |
| | | 26615 | 1907.5 | 13.447 | 14.73 |
| | 16QAM | 26115 | 1857.5 | 13.488 | 14.73 |
| | | 26365 | 1882.5 | 13.488 | 14.75 |
| | | 26615 | 1907.5 | 13.475 | 14.66 |
| 20MHz | QPSK | 26140 | 1860 | 17.874 | 19.14 |
| | | 26365 | 1882.5 | 17.903 | 19.17 |
| | | 26590 | 1905 | 17.875 | 19.41 |
| | 16QAM | 26140 | 1860 | 17.913 | 19.32 |
| | | 26365 | 1882.5 | 17.953 | 19.28 |
| | | 26590 | 1905 | 17.871 | 19.29 |


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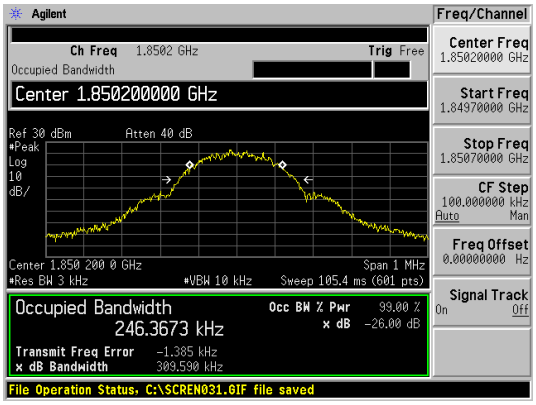
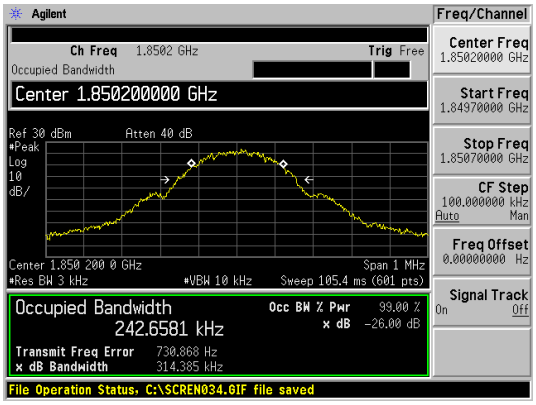
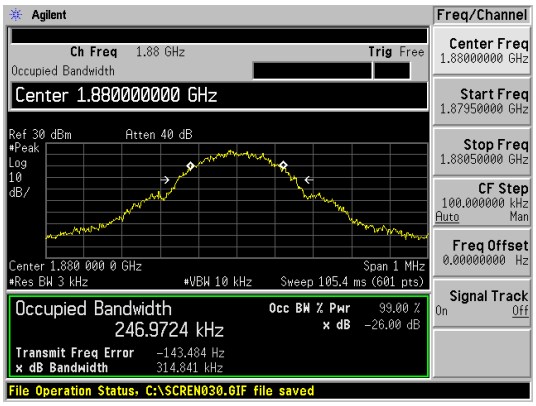
GSM1900 GSM CH512



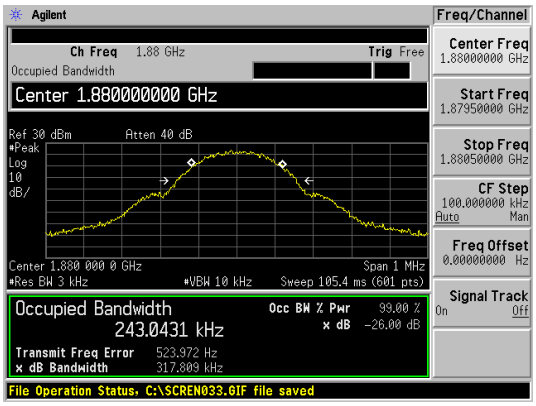

GSM1900 GPRS CH512



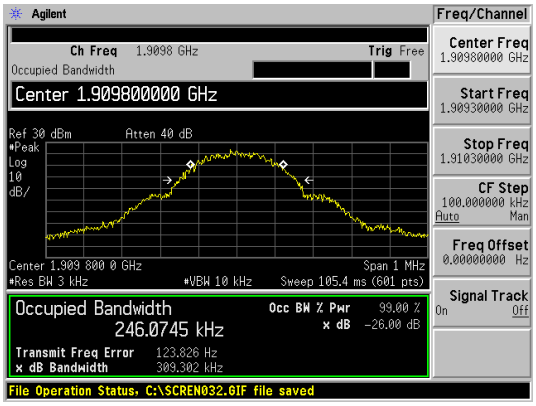

GSM 1900 GSM CH661



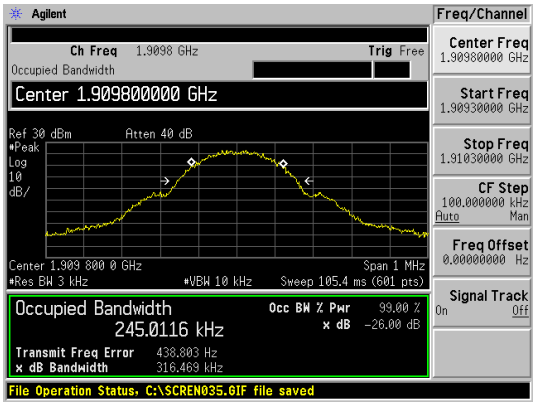

GSM 1900 GPRS CH661



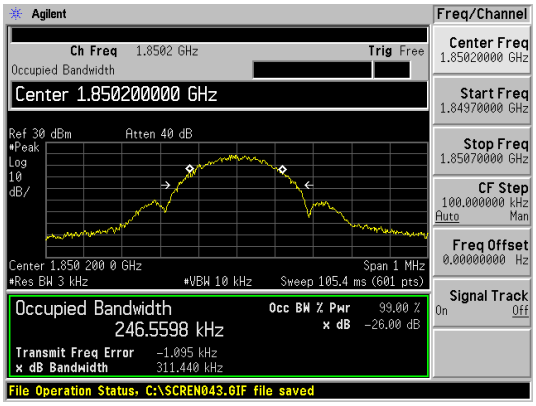

GSM 1900 GSM CH810



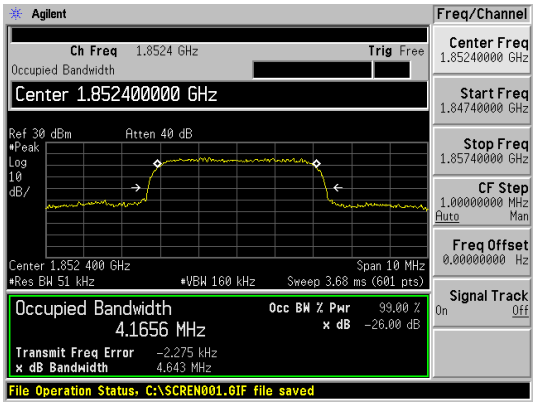

GSM 1900 GPRS CH810




GSM1900 EGPRS CH512




WCDMA Band II RMC CH9262





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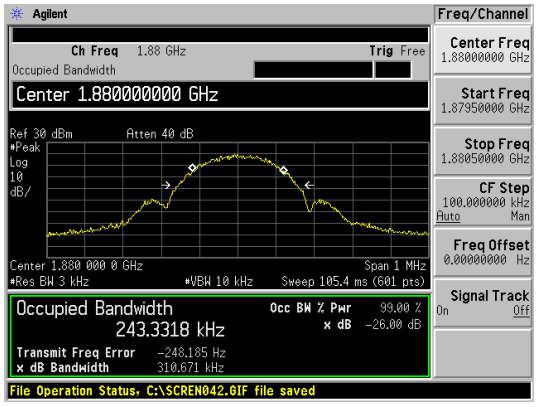
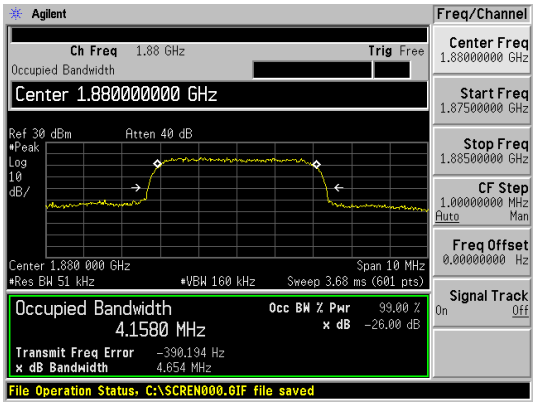
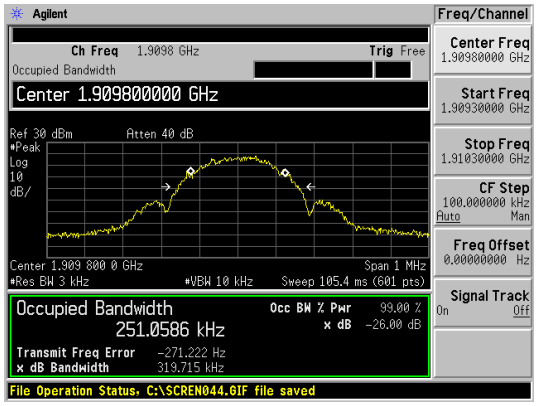
GSM 1900 EGPRS CH661



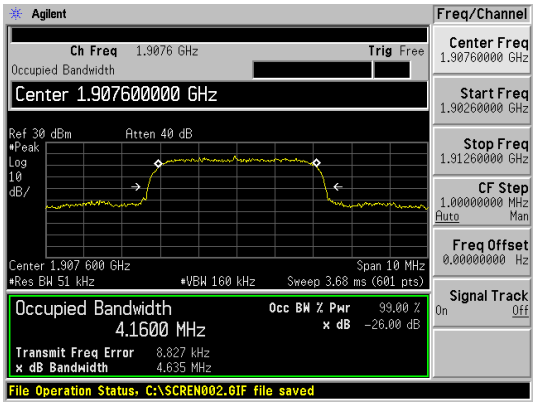

WCDMA Band II RMC CH9400



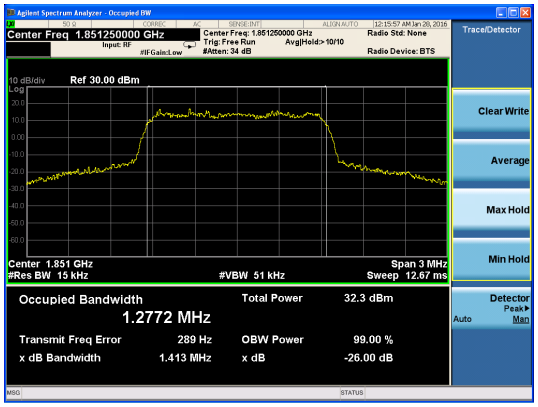

GSM 1900 EGPRS CH810



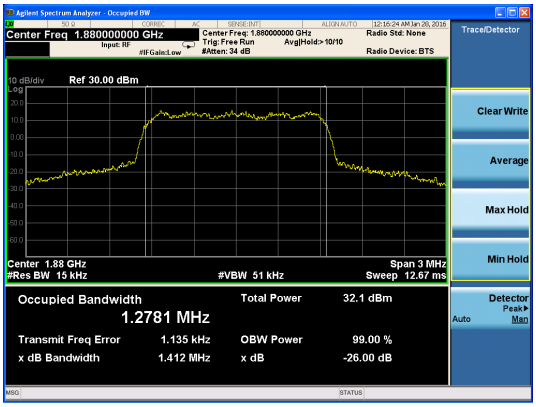

WCDMA Band II RMC CH9538



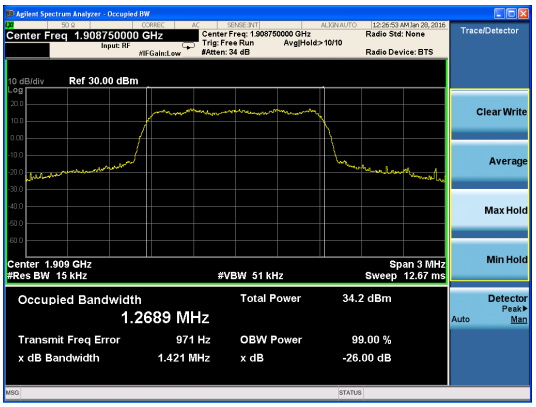

CDMA BC1 1xRTT CH25




CDMA BC1 1xRTT CH600




CDMA BC1 1xRTT CH1175





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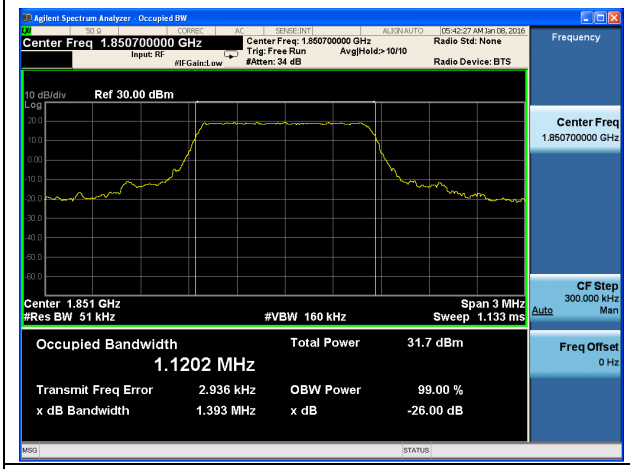
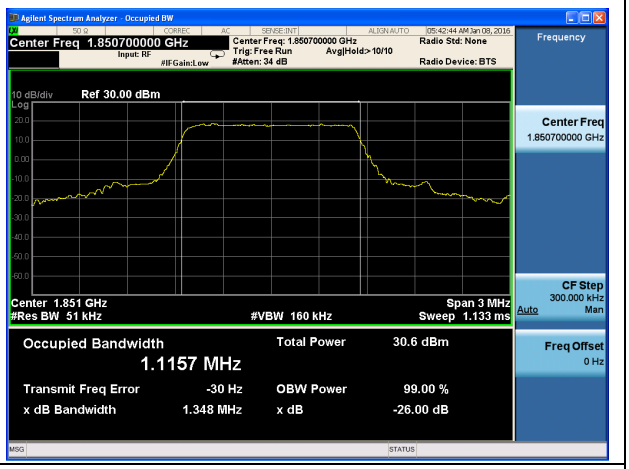
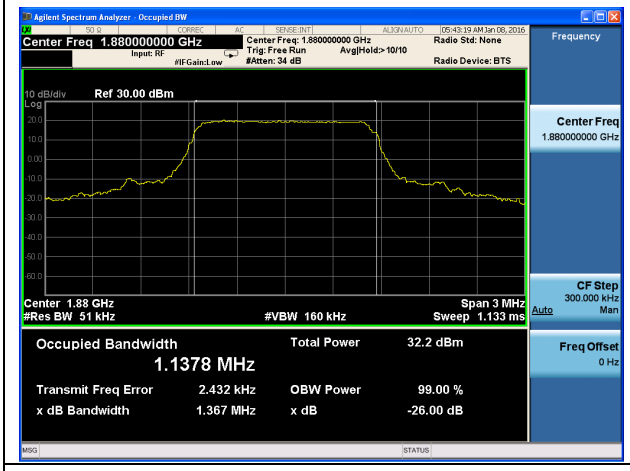
LTE Band 2 1.4MHz QPSK CH18607



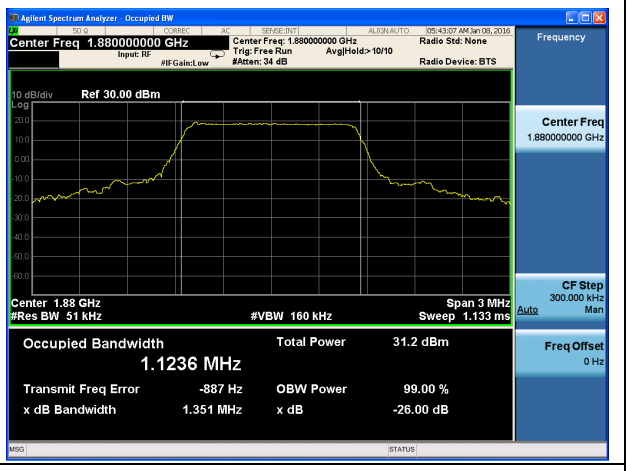

LTE Band 2 1.4MHz 16QAM CH18607



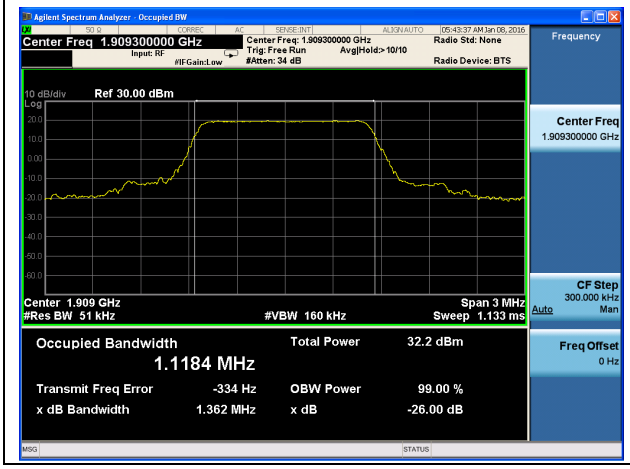

LTE Band 2 1.4MHz QPSK CH18900



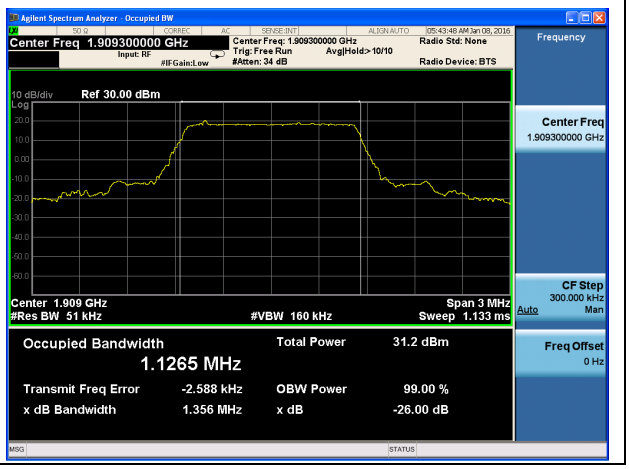

LTE Band 2 1.4MHz 16QAM CH18900




LTE Band 2 1.4MHz QPSK CH19193




LTE Band 2 1.4MHz 16QAM CH19193





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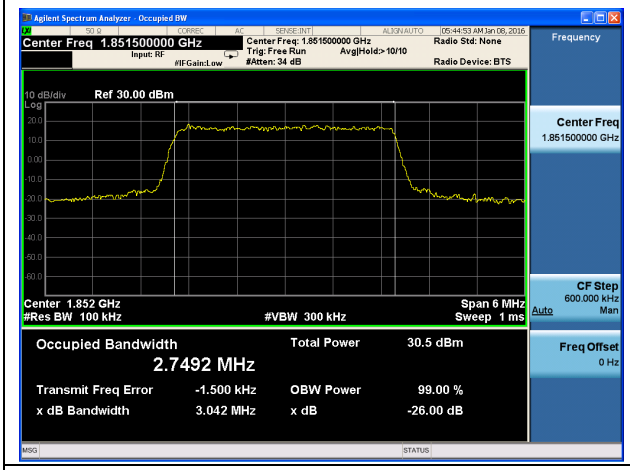
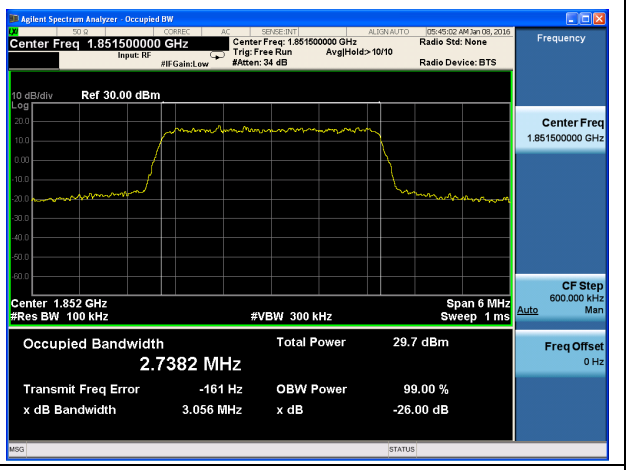
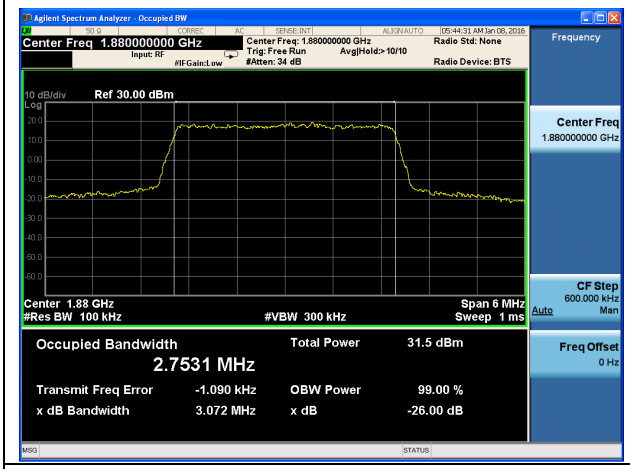
LTE Band 2 3MHz QPSK CH18615



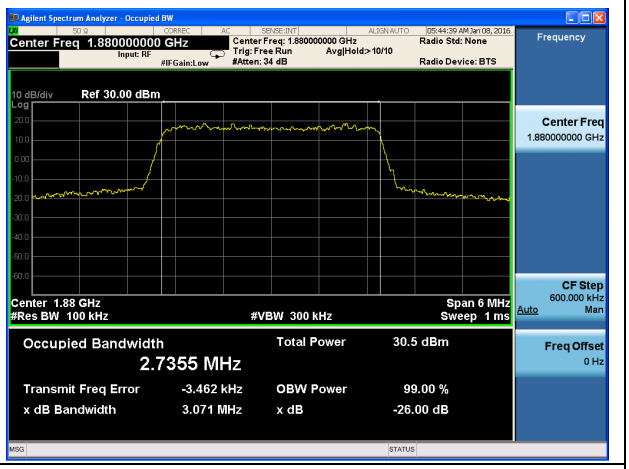

LTE Band 2 3MHz 16QAM CH18615



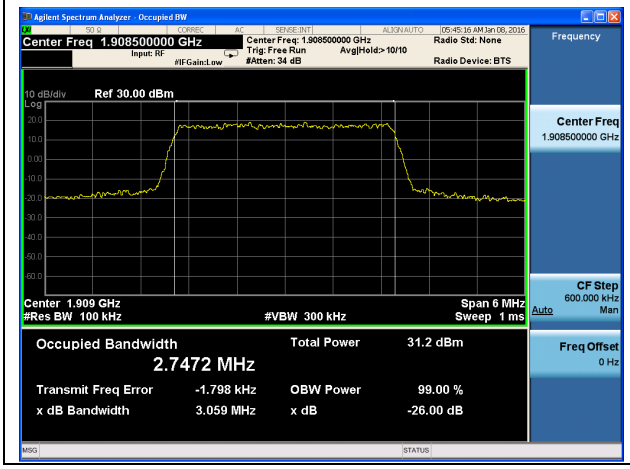

LTE Band 2 3MHz QPSK CH18900



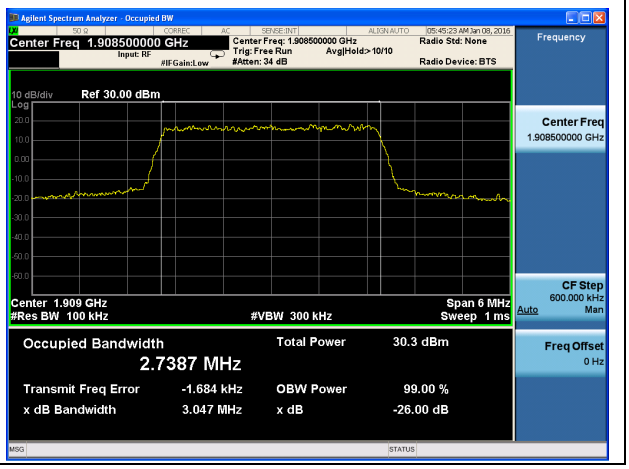

LTE Band 2 3MHz 16QAM CH18900




LTE Band 2 3MHz QPSK CH19185




LTE Band 2 3MHz 16QAM CH19185





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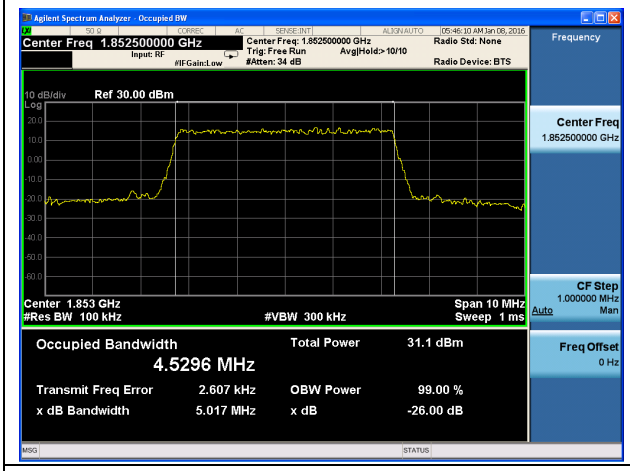
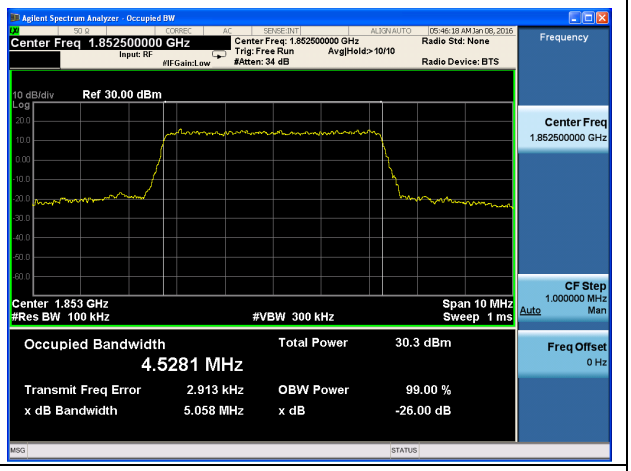
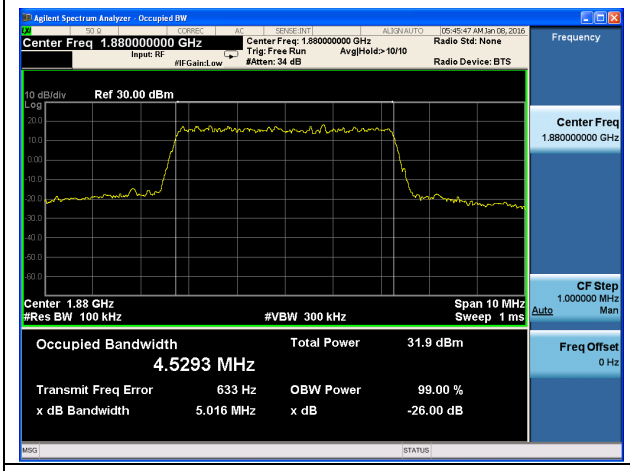
LTE Band 2 5MHz QPSK CH18625



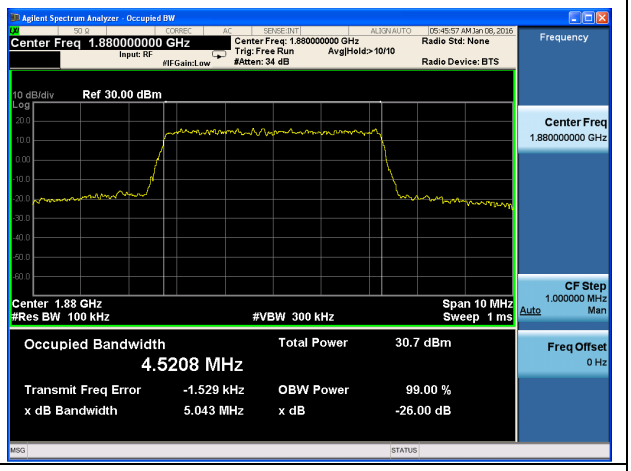

LTE Band 2 5MHz 16QAM CH18625




LTE Band 2 5MHz QPSK CH18900




LTE Band 2 5MHz 16QAM CH18900

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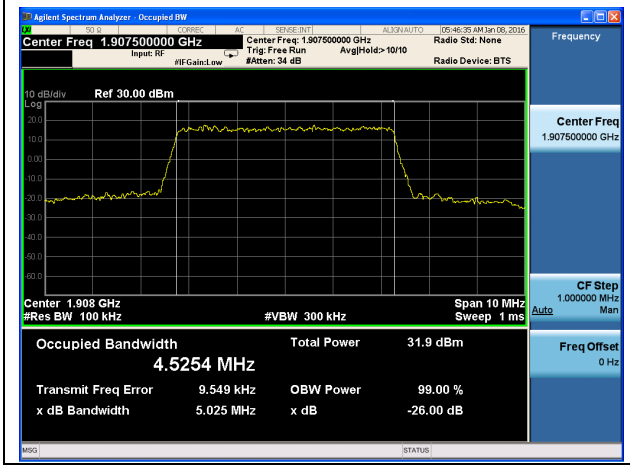


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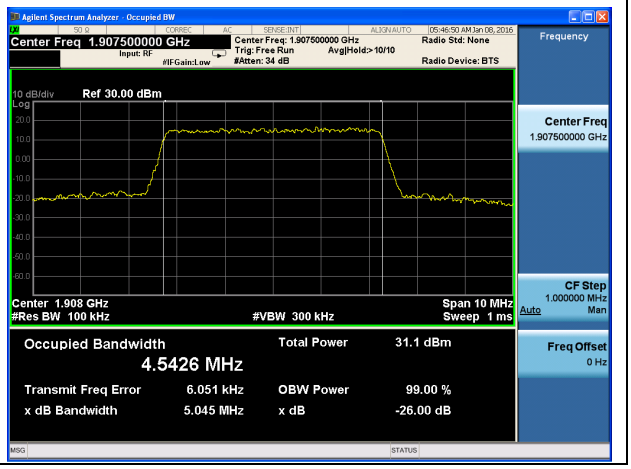



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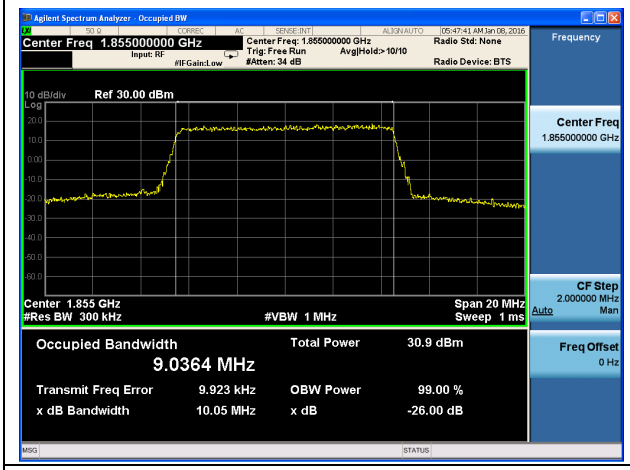
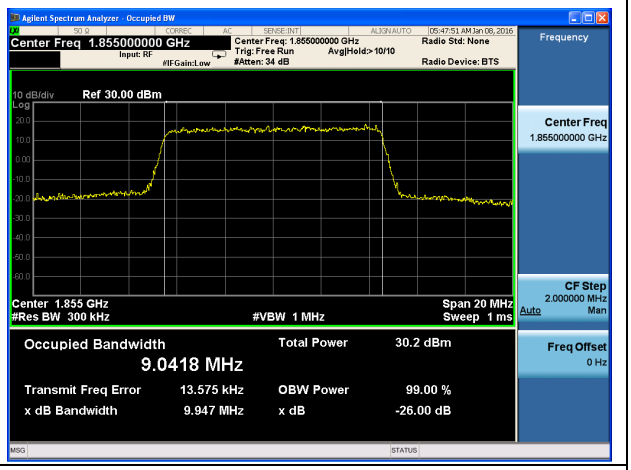
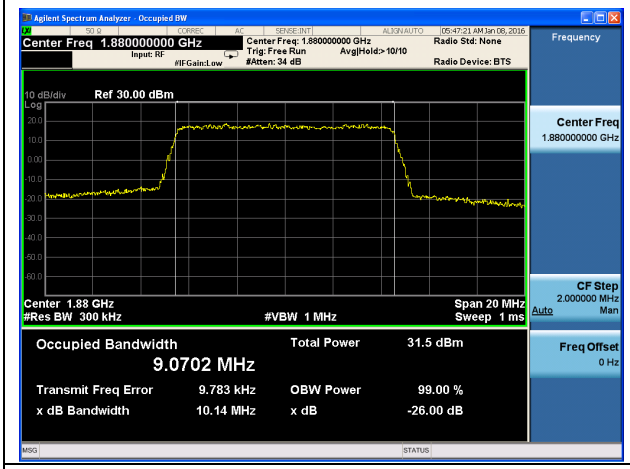
LTE Band 2 10MHz QPSK CH18650



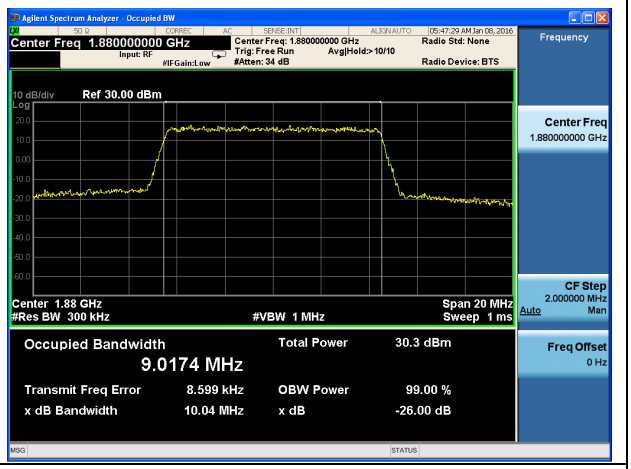

LTE Band 2 10MHz 16QAM CH18650




LTE Band 2 10MHz QPSK CH18900




LTE Band 2 10MHz 16QAM CH18900

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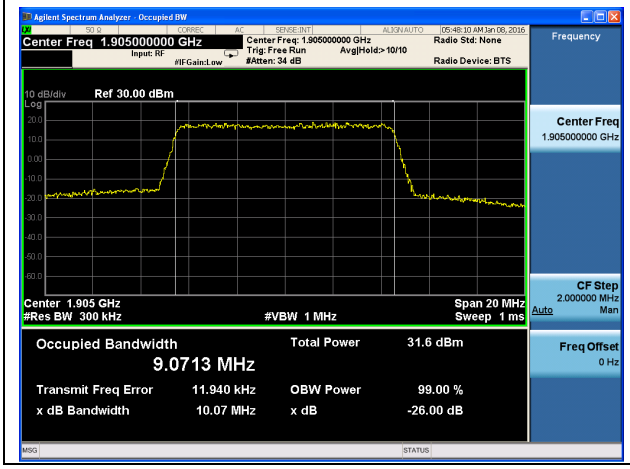
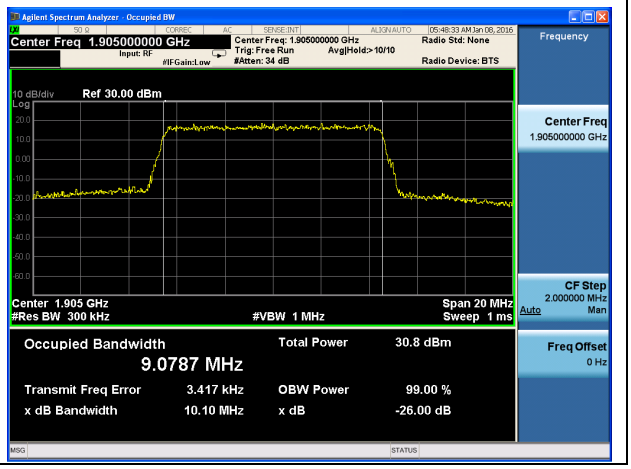



LTE Band 2 10MHz 16QAM CH19150





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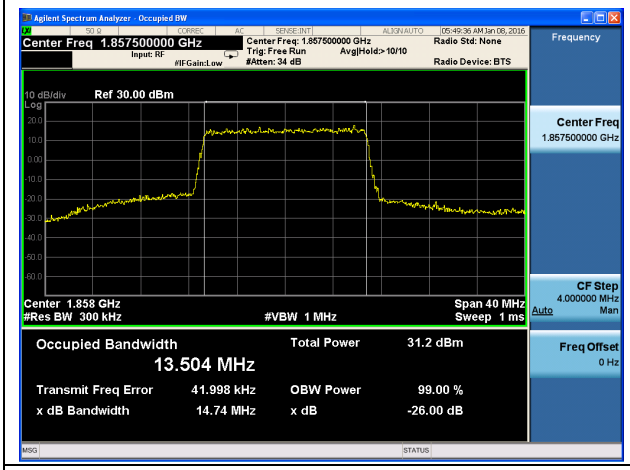
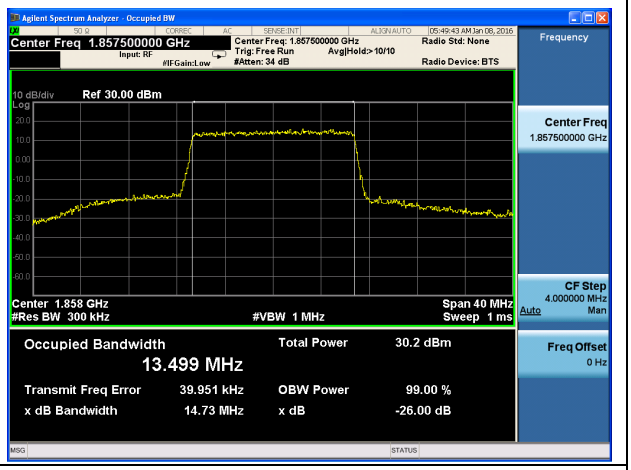
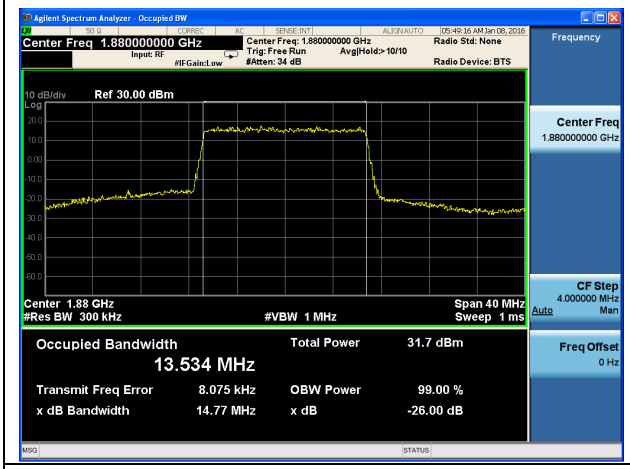
LTE Band 2 15MHz QPSK CH18675



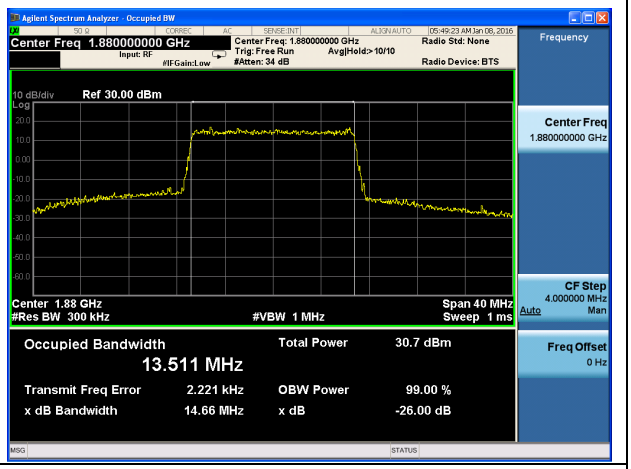

LTE Band 2 15MHz 16QAM CH18675




LTE Band 2 15MHz QPSK CH18900




LTE Band 2 15MHz 16QAM CH18900

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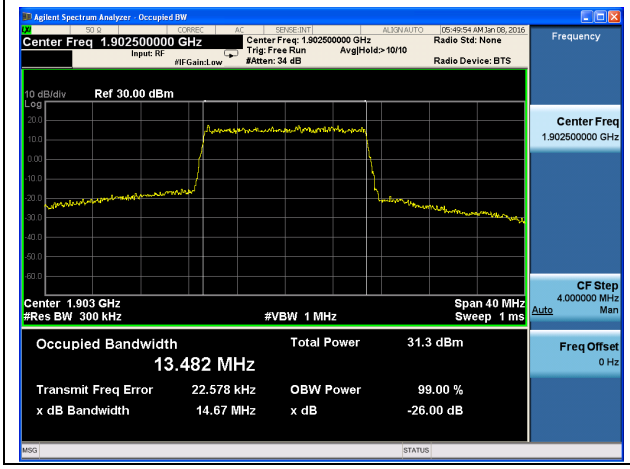


LTE Band 2 15MHz 16QAM CH19125

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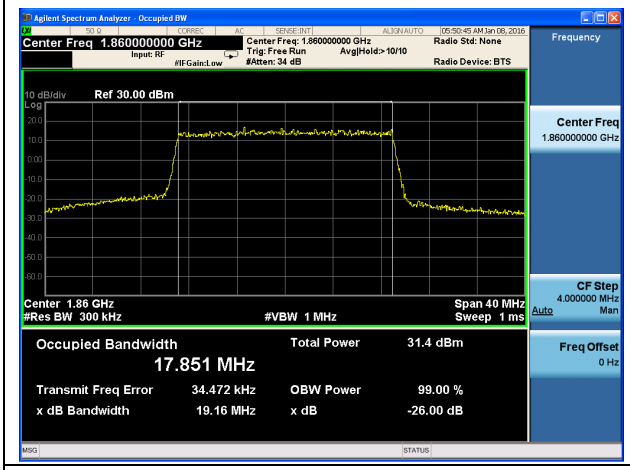
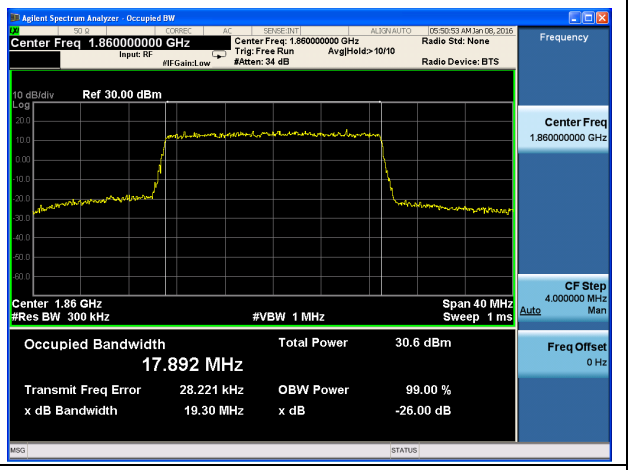
LTE Band 2 20MHz QPSK CH18700




LTE Band 2 20MHz 16QAM CH18700

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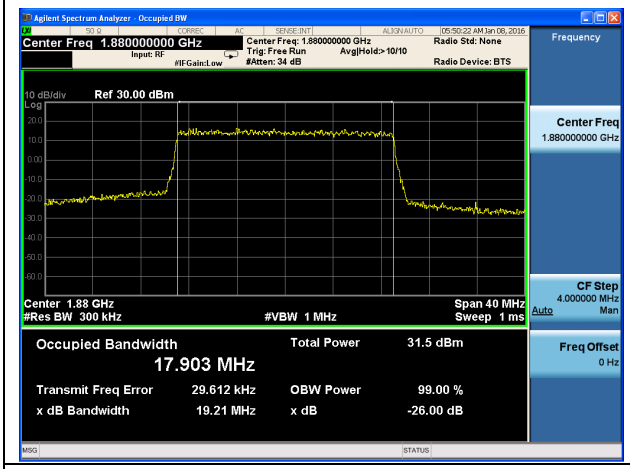


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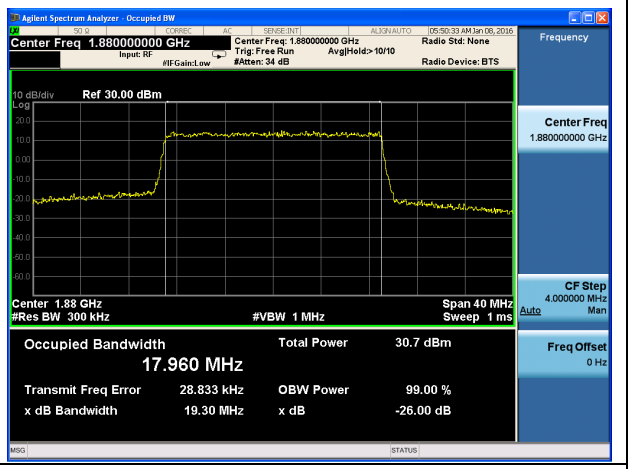
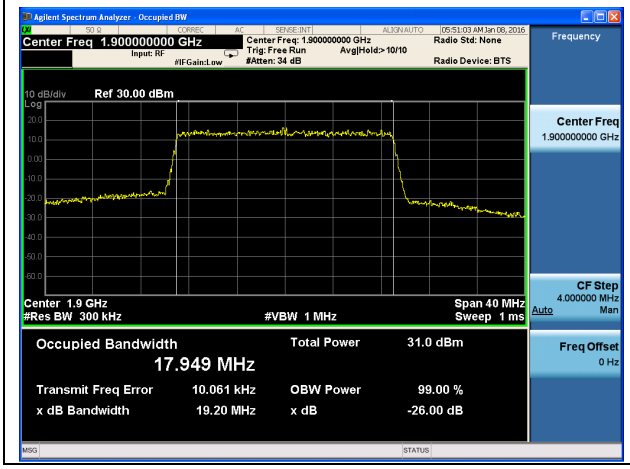



LTE Band 2 20MHz QPSK CH19100




LTE Band 2 20MHz 16QAM CH19100

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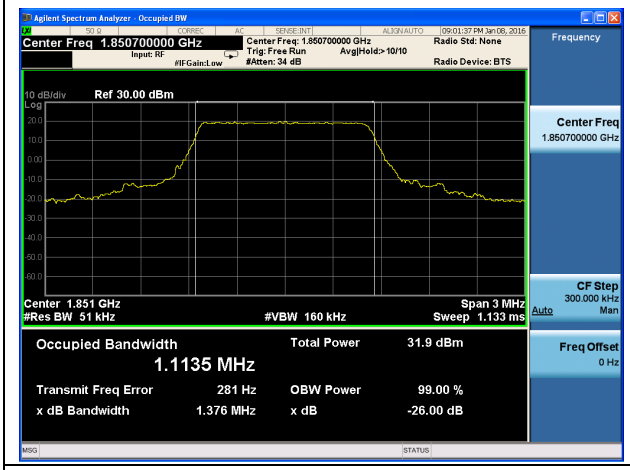
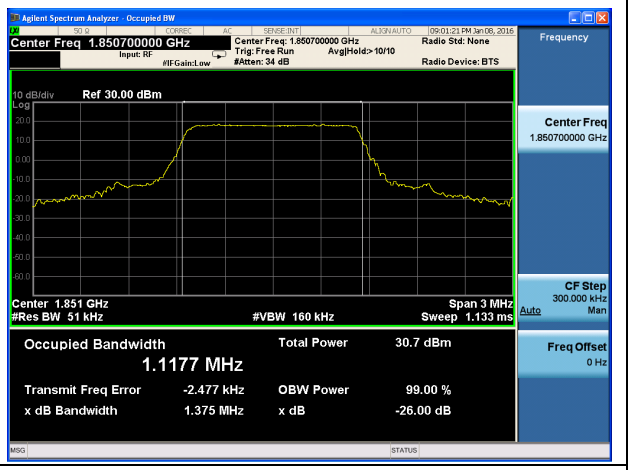
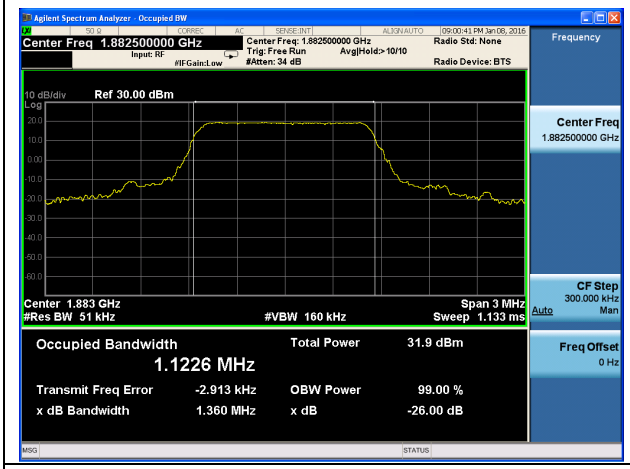
LTE Band 25 1.4MHz QPSK CH26047



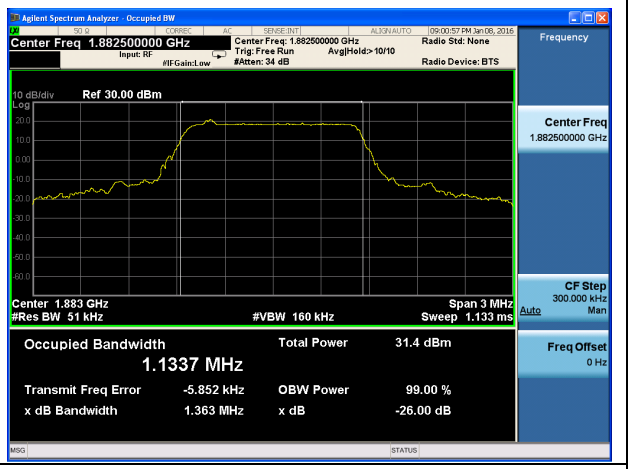

LTE Band 25 1.4MHz 16QAM CH26047




LTE Band 25 1.4MHz QPSK CH26365




LTE Band 25 1.4MHz 16QAM CH26365

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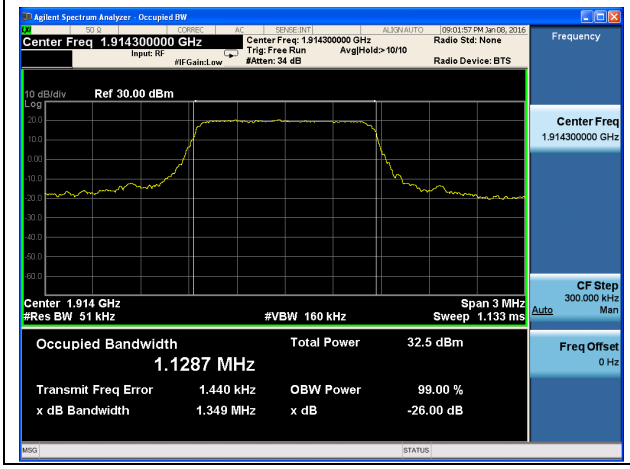
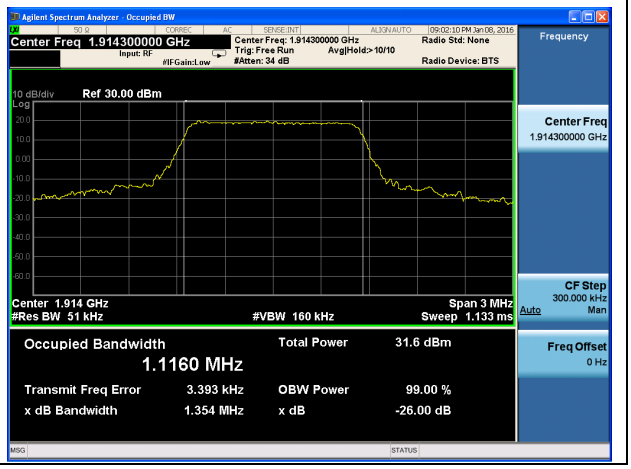



LTE Band 25 1.4MHz 16QAM CH26683





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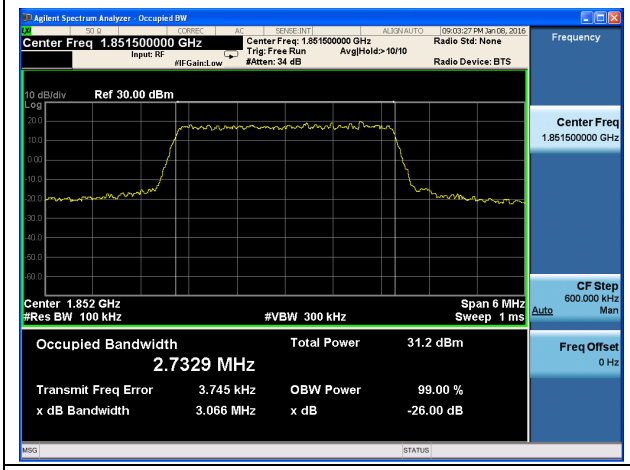
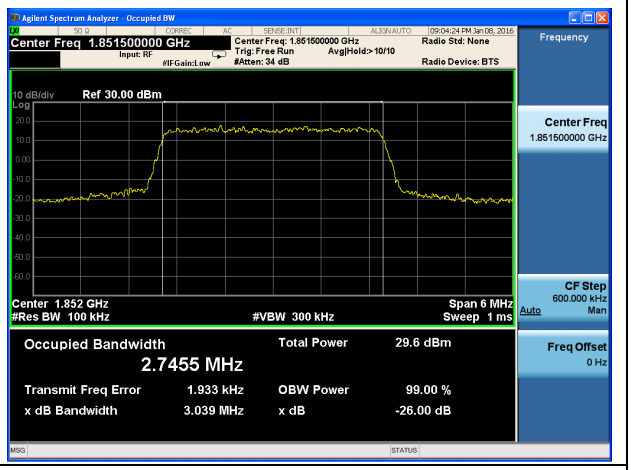
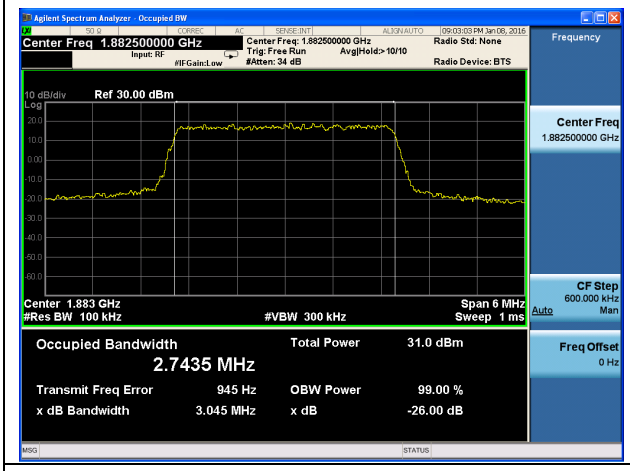
LTE Band 25 3MHz QPSK CH26055



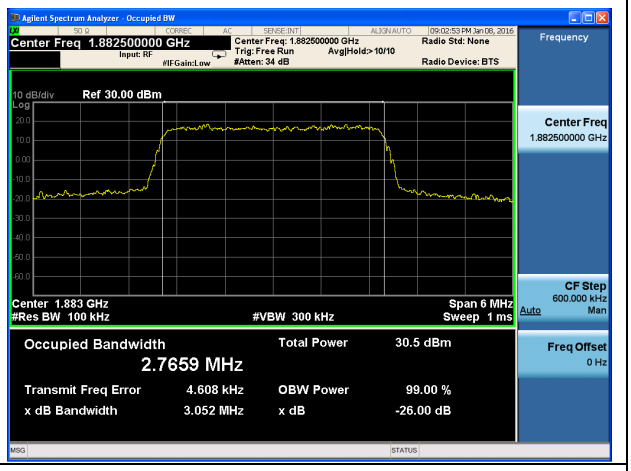

LTE Band 25 3MHz 16QAM CH26055



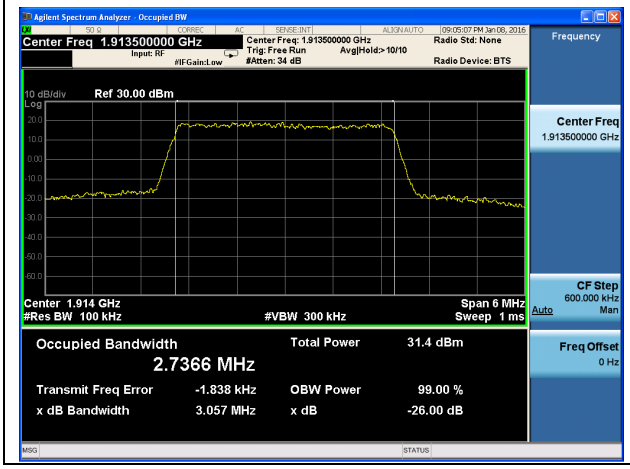

LTE Band 25 3MHz QPSK CH26365



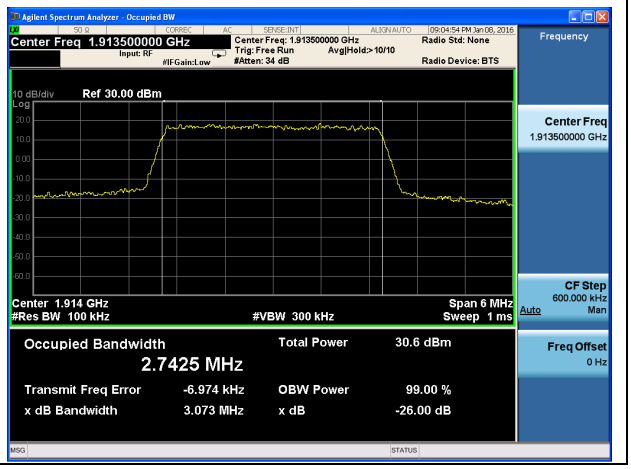

LTE Band 25 3MHz 16QAM CH26365




LTE Band 25 3MHz QPSK CH26675




LTE Band 25 3MHz 16QAM CH26675





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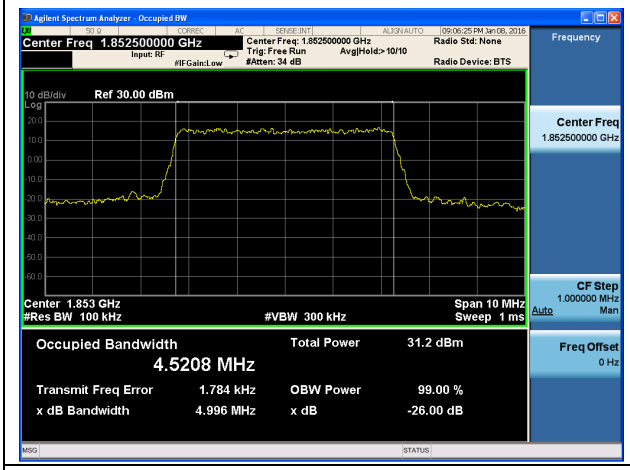
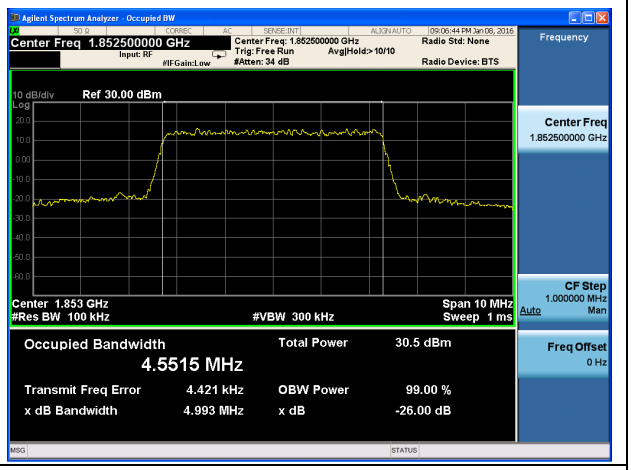
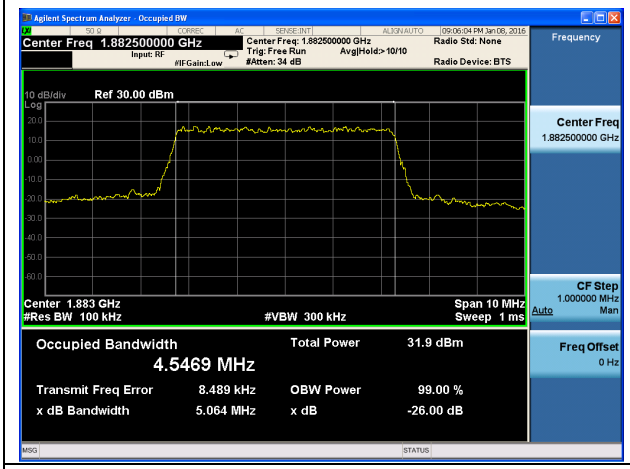
LTE Band 25 5MHz QPSK CH26065



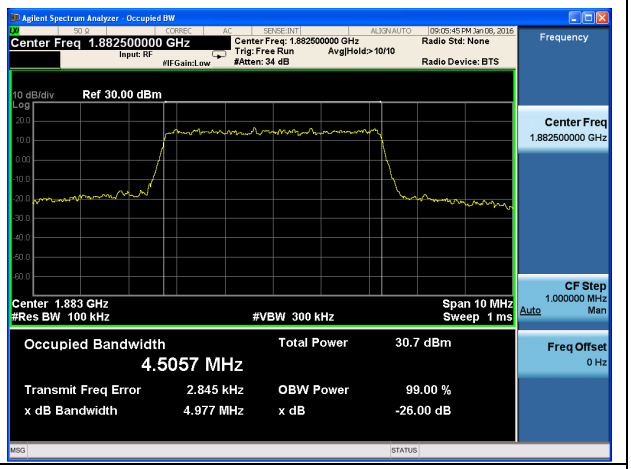

LTE Band 25 5MHz 16QAM CH26065



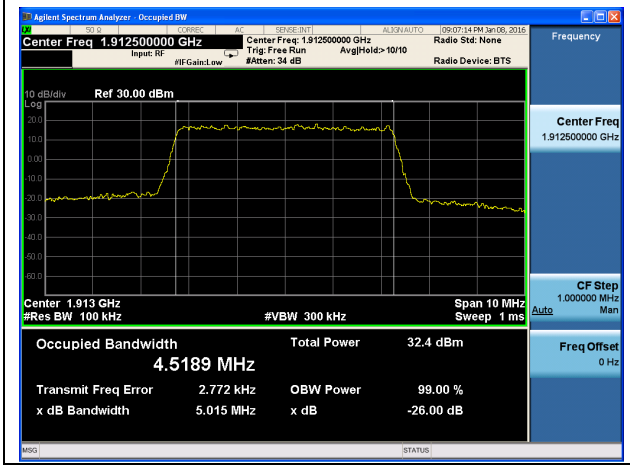

LTE Band 25 5MHz QPSK CH26365



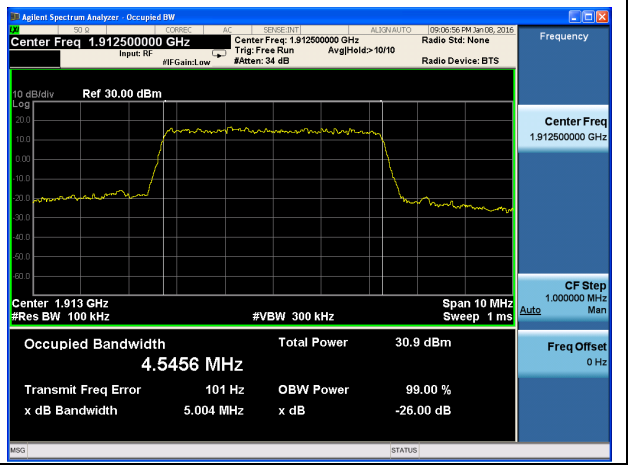

LTE Band 25 5MHz 16QAM CH26365




LTE Band 25 5MHz QPSK CH26665




LTE Band 25 5MHz 16QAM CH26665





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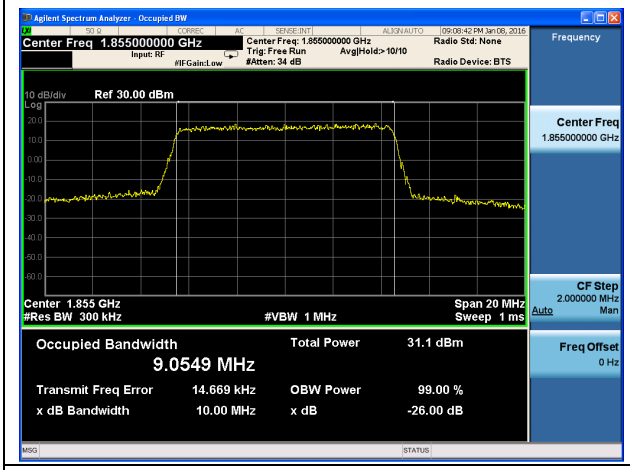
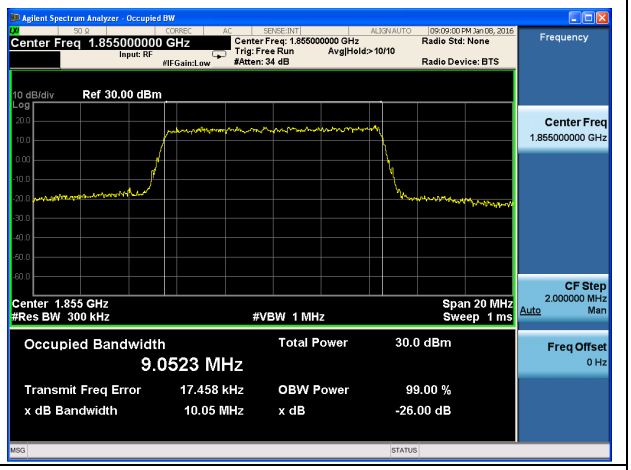
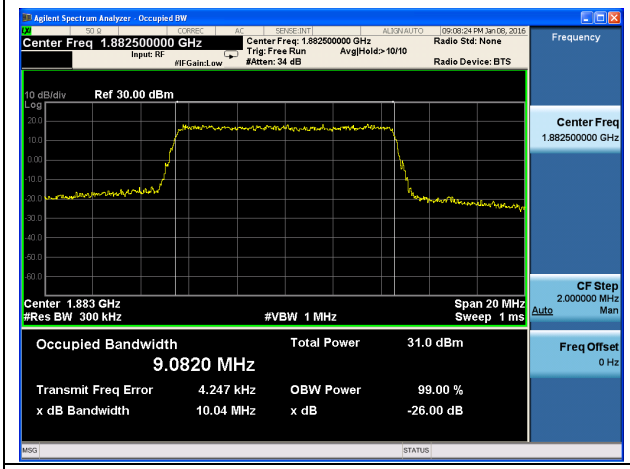
LTE Band 25 10MHz QPSK CH26090



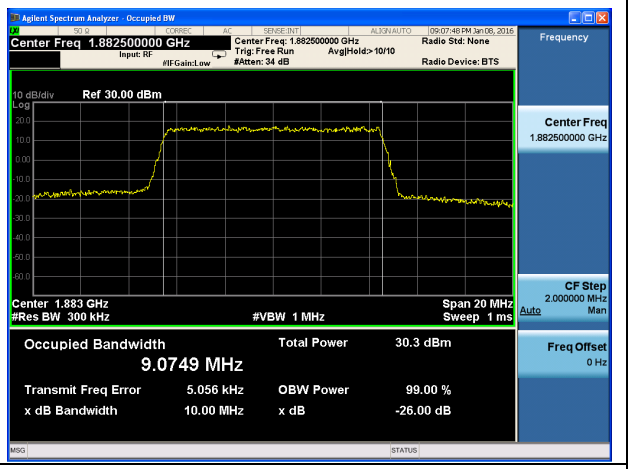

LTE Band 25 10MHz 16QAM CH26090



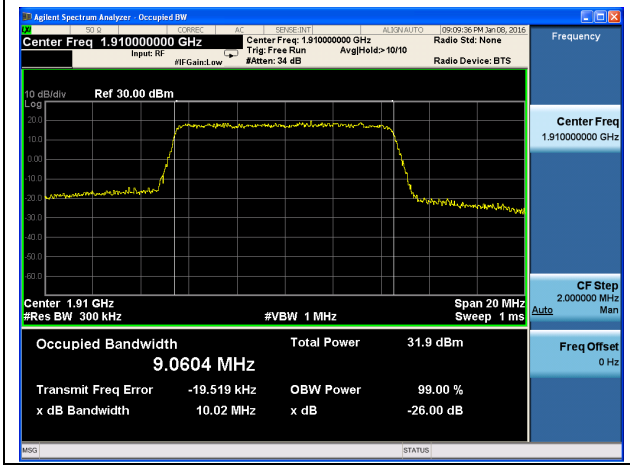

LTE Band 25 10MHz QPSK CH26365



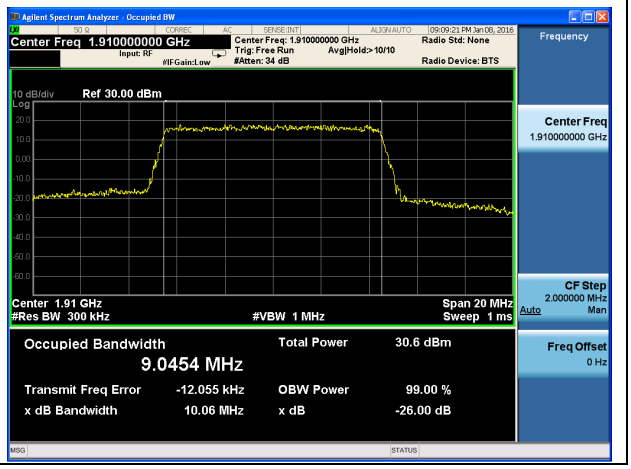

LTE Band 25 10MHz 16QAM CH26365




LTE Band 25 10MHz QPSK CH26640




LTE Band 25 10MHz 16QAM CH26640





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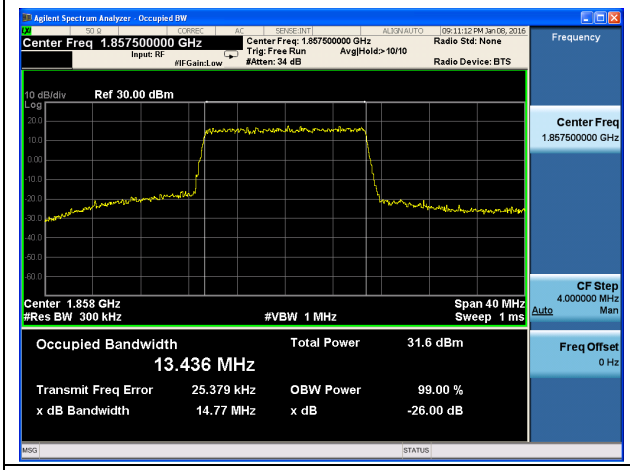
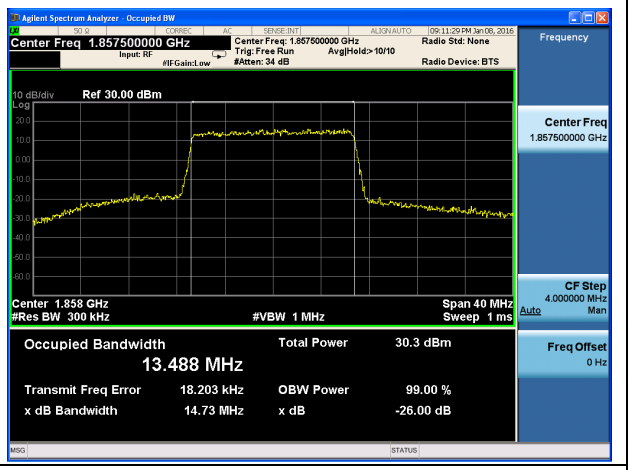
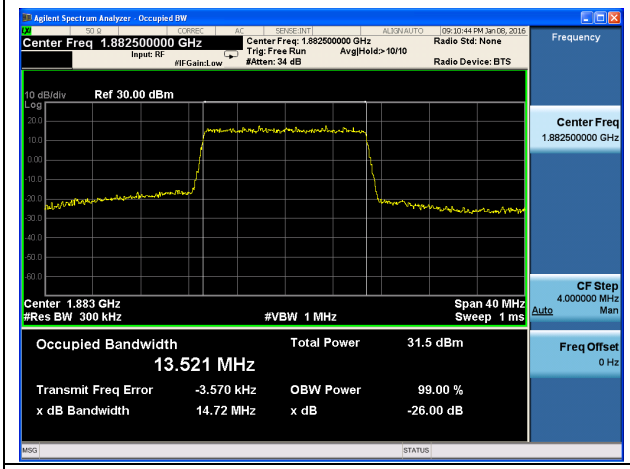
LTE Band 25 15MHz QPSK CH26115



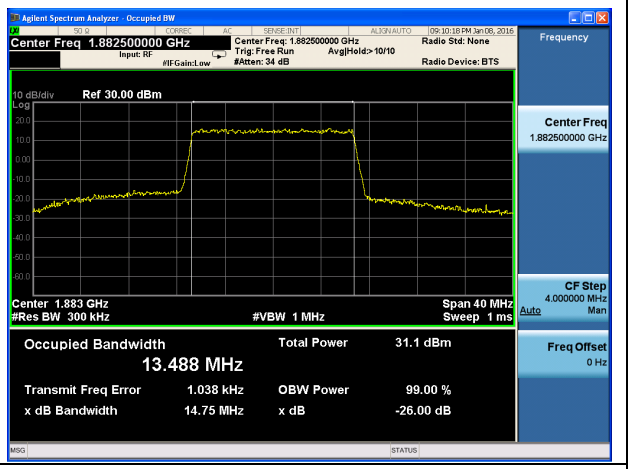

LTE Band 25 15MHz 16QAM CH26115




LTE Band 25 15MHz QPSK CH26365




LTE Band 25 15MHz 16QAM CH26365

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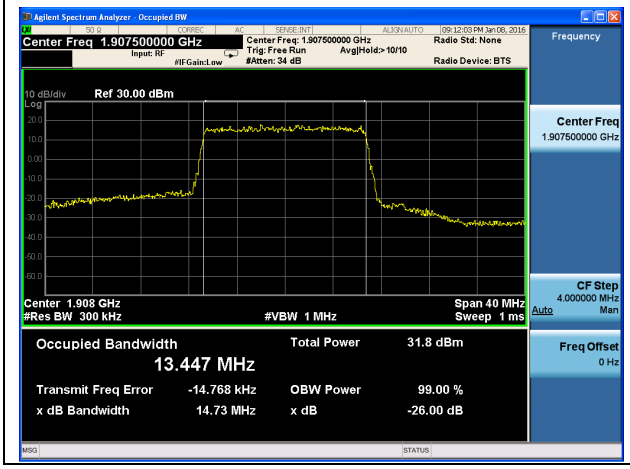
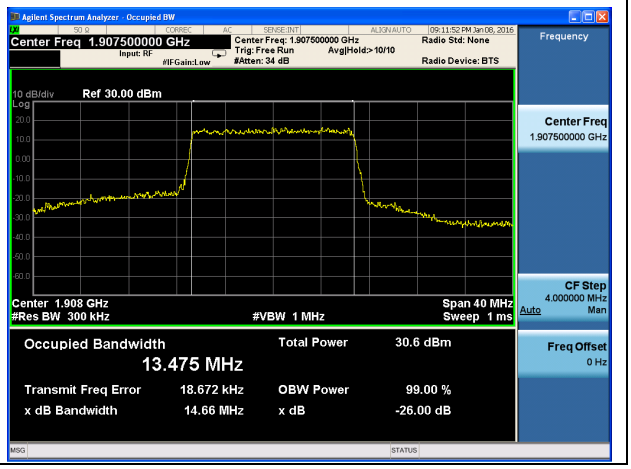



LTE Band 25 15MHz 16QAM CH26615





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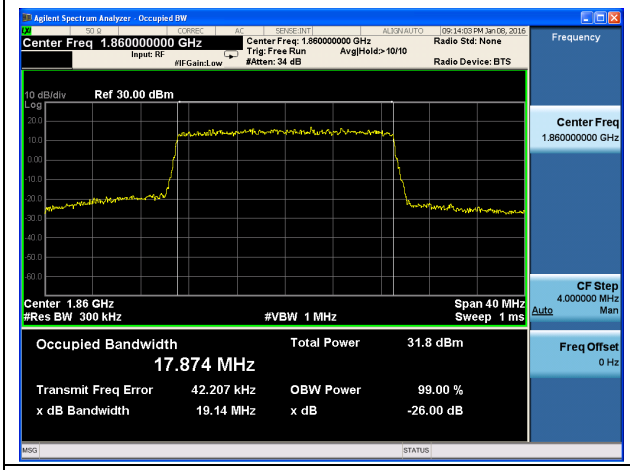
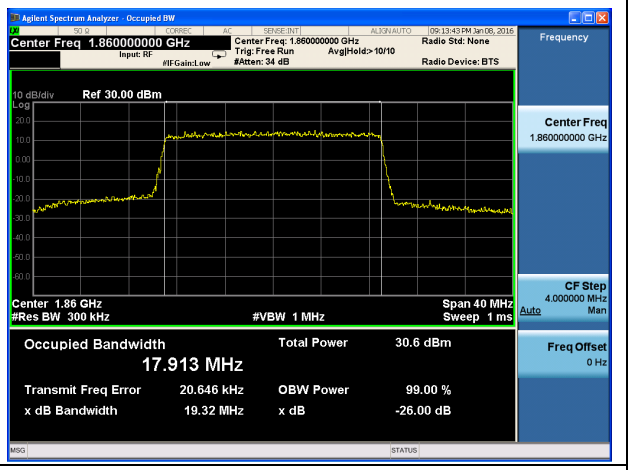
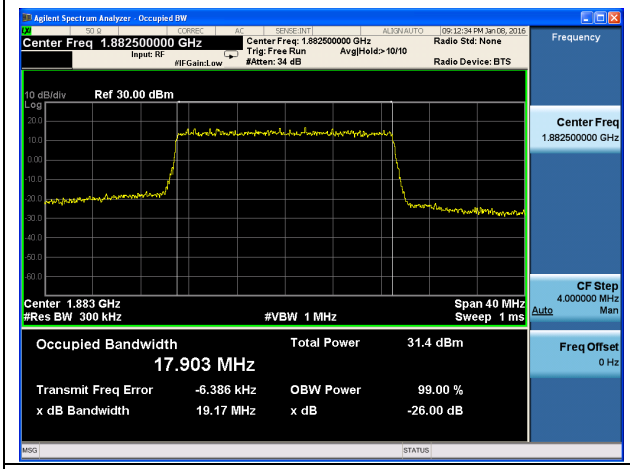
LTE Band 25 20MHz QPSK CH26140



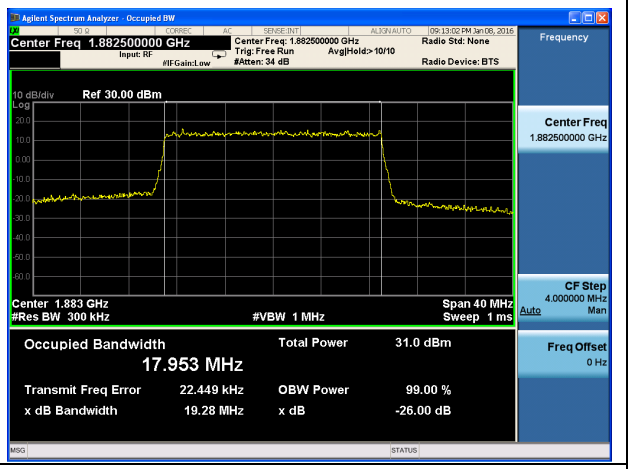

LTE Band 25 20MHz 16QAM CH26140



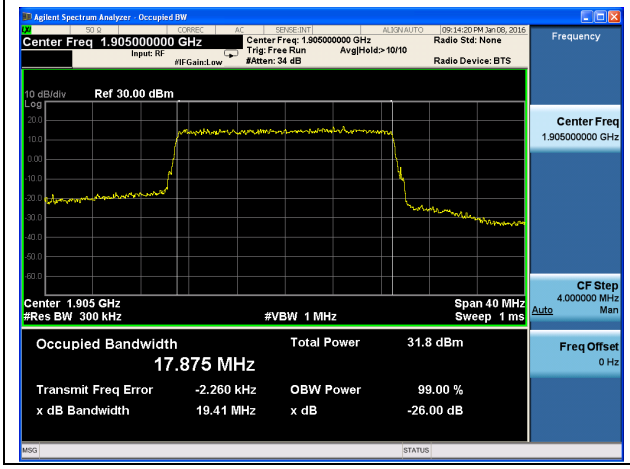

LTE Band 25 20MHz QPSK CH26365



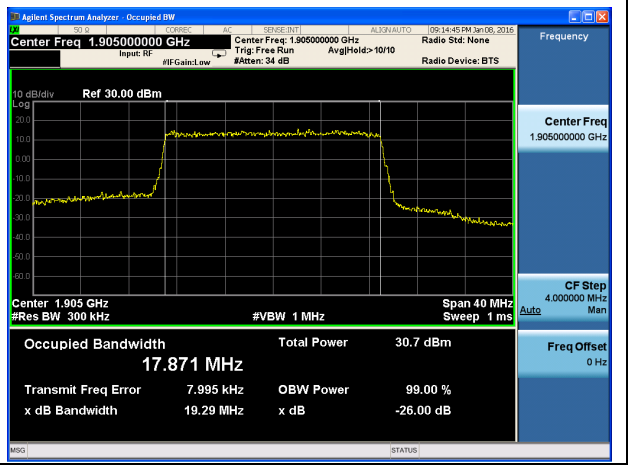

LTE Band 25 20MHz 16QAM CH26365




LTE Band 25 20MHz QPSK CH26590




LTE Band 25 20MHz 16QAM CH26590





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## 5.4. Band Edge Compliance

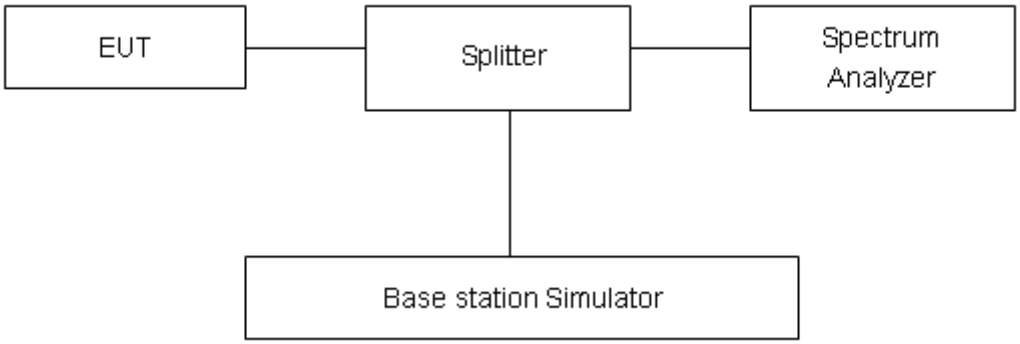
### Ambient condition

| Temperature | Relative humidity | Pressure |
|---|---|---|
| 23°C ~25°C | 45%~50% | 101.5kPa |

### Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The band edge of the lowest and highest channels were measured. The Average detector is used and RBW is set to 3kHz, VBW is set to 10kHz for GSM 1900,
RBW is set to 51kHz, VBW is set to 160kHz for WCDMA Band II,
RBW is set to 15kHz,VBW is set to 51kHz for CDMA BC1,
RBW is set to 15kHz, VBW is set to 51kHz for LTE Band 2/25(1.4MHz),
RBW is set to 30kHz,VBW is set to 100kHz for LTE Band 2/25 (3MHz),
RBW is set to 51kHz,VBW is set to 160kHz for LTE Band 2/25 (5MHz),
RBW is set to 100kHz,VBW is set to 300kHz for LTE Band 2/25(10MHz),
RBW is set to 150kHz,VBW is set to 510kHz for LTE Band 2/25(15MHz),
RBW is set to 200kHz,VBW is set to 620kHz for LTE Band 2/25(20MHz).
Spectrum analyzer plots are included on the following pages.

### Test Setup




### Limits

Rule Part 24.238(a) specifies that “on any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least 43 + 10 log10 (P) dB.”

| Limit | -13 dBm |
|---|---|

### Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor *k* = 1.96, *U*=0.684dB.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**Test Result:**

| Mode | Carrier frequency (MHz) | Reference value (dBm) | Limit (dBm) | Conclusion |
|---|---|---|---|---|
| GSM 1900 (GSM) | 1850.0 | -34.122 | -13 | PASS |
| | 1910.0 | -35.703 | -13 | PASS |
| GPRS 1900 (GMSK) | 1850.0 | -31.518 | -13 | PASS |
| | 1910.0 | -30.668 | -13 | PASS |
| EGPRS 1900 (8-PSK) | 1850.0 | -32.667 | -13 | PASS |
| | 1910.0 | -32.523 | -13 | PASS |
| WCDMA Band II RMC | 1850 | -28.194 | -13 | PASS |
| | 1910 | -30.311 | -13 | PASS |
| CDMA BC1 1xRTT | 25 | -31.177 | -13 | PASS |
| | 1175 | -32.148 | -13 | PASS |

| LTE Band 2 | | Channel | RB | Reference value (dBm) | Limit (dBm) | Conclusion |
|---|---|---|---|---|---|---|
| Bandwidth | Modulation | | | | | |
| 1.4MHz | QPSK | 18607 | 1 | -22.782 | -13 | PASS |
| | | | 100% | -26.364 | -13 | PASS |
| | | 19193 | 1 | -21.988 | -13 | PASS |
| | | | 100% | -25.035 | -13 | PASS |
| | 16QAM | 18607 | 1 | -23.896 | -13 | PASS |
| | | | 100% | -23.378 | -13 | PASS |
| | | 19193 | 1 | -25.099 | -13 | PASS |
| | | | 100% | -21.858 | -13 | PASS |
| 3MHz | QPSK | 18615 | 1 | -19.032 | -13 | PASS |
| | | | 100% | -26.399 | -13 | PASS |
| | | 19185 | 1 | -18.902 | -13 | PASS |
| | | | 100% | -26.314 | -13 | PASS |
| | 16QAM | 18615 | 1 | -20.122 | -13 | PASS |
| | | | 100% | -24.696 | -13 | PASS |
| | | 19185 | 1 | -18.092 | -13 | PASS |
| | | | 100% | -25.390 | -13 | PASS |
| 5MHz | QPSK | 18625 | 1 | -21.593 | -13 | PASS |
| | | | 100% | -25.997 | -13 | PASS |
| | | 19175 | 1 | -21.805 | -13 | PASS |
| | | | 100% | -26.701 | -13 | PASS |


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| LTE Band 2 | | Channel | RB | Reference value (dBm) | Limit (dBm) | Conclusion |
|---|---|---|---|---|---|---|
| Bandwidth | Modulation | | | | | |
| | 16QAM | 18625 | 1 | -22.125 | -13 | PASS |
| | | | 100% | -27.149 | -13 | PASS |
| | | 19175 | 1 | -20.865 | -13 | PASS |
| | | | 100% | -26.019 | -13 | PASS |
| 10MHz | QPSK | 18650 | 1 | -31.738 | -13 | PASS |
| | | | 100% | -28.985 | -13 | PASS |
| | | 19150 | 1 | -29.836 | -13 | PASS |
| | | | 100% | -29.006 | -13 | PASS |
| | 16QAM | 18650 | 1 | -31.799 | -13 | PASS |
| | | | 100% | -28.597 | -13 | PASS |
| | | 19150 | 1 | -31.056 | -13 | PASS |
| | | | 100% | -28.574 | -13 | PASS |
| 15MHz | QPSK | 18675 | 1 | -28.066 | -13 | PASS |
| | | | 100% | -29.497 | -13 | PASS |
| | | 19125 | 1 | -26.033 | -13 | PASS |
| | | | 100% | -30.301 | -13 | PASS |
| | 16QAM | 18675 | 1 | -29.638 | -13 | PASS |
| | | | 100% | -28.353 | -13 | PASS |
| | | 19125 | 1 | -25.431 | -13 | PASS |
| | | | 100% | -30.170 | -13 | PASS |
| 20MHz | QPSK | 18700 | 1 | -32.797 | -13 | PASS |
| | | | 100% | -27.918 | -13 | PASS |
| | | 19100 | 1 | -31.812 | -13 | PASS |
| | | | 100% | -30.900 | -13 | PASS |
| | 16QAM | 18700 | 1 | -32.863 | -13 | PASS |
| | | | 100% | -28.128 | -13 | PASS |
| | | 19100 | 1 | -30.647 | -13 | PASS |
| | | | 100% | -30.396 | -13 | PASS |


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| LTE Band 25 | | Channel | RB | Reference value (dBm) | Limit (dBm) | Conclusion |
|---|---|---|---|---|---|---|
| Bandwidth | Modulation | | | | | |
| 1.4MHz | QPSK | 26047 | 1 | -27.294 | -13 | PASS |
| | | | 100% | -23.366 | -13 | PASS |
| | | 26683 | 1 | -24.590 | -13 | PASS |
| | | | 100% | -27.230 | -13 | PASS |
| | 16QAM | 26047 | 1 | -25.765 | -13 | PASS |
| | | | 100% | -23.633 | -13 | PASS |
| | | 26683 | 1 | -24.059 | -13 | PASS |
| | | | 100% | -25.840 | -13 | PASS |
| 3MHz | QPSK | 26055 | 1 | -19.846 | -13 | PASS |
| | | | 100% | -25.203 | -13 | PASS |
| | | 26675 | 1 | -28.072 | -13 | PASS |
| | | | 100% | -22.693 | -13 | PASS |
| | 16QAM | 26055 | 1 | -20.134 | -13 | PASS |
| | | | 100% | -24.889 | -13 | PASS |
| | | 26675 | 1 | -30.929 | -13 | PASS |
| | | | 100% | -27.388 | -13 | PASS |
| 5MHz | QPSK | 26065 | 1 | -20.880 | -13 | PASS |
| | | | 100% | -25.990 | -13 | PASS |
| | | 26665 | 1 | -21.339 | -13 | PASS |
| | | | 100% | -27.709 | -13 | PASS |
| | 16QAM | 26065 | 1 | -21.377 | -13 | PASS |
| | | | 100% | -26.848 | -13 | PASS |
| | | 26665 | 1 | -21.075 | -13 | PASS |
| | | | 100% | -27.257 | -13 | PASS |
| 10MHz | QPSK | 26090 | 1 | -32.225 | -13 | PASS |
| | | | 100% | -28.627 | -13 | PASS |
| | | 26640 | 1 | -29.551 | -13 | PASS |
| | | | 100% | -31.452 | -13 | PASS |
| | 16QAM | 26090 | 1 | -32.718 | -13 | PASS |
| | | | 100% | -28.173 | -13 | PASS |
| | | 26640 | 1 | -31.006 | -13 | PASS |
| | | | 100% | -31.875 | -13 | PASS |
| 15MHz | QPSK | 26115 | 1 | -29.381 | -13 | PASS |
| | | | 100% | -28.473 | -13 | PASS |
| | | 26615 | 1 | -27.598 | -13 | PASS |
| | | | 100% | -31.840 | -13 | PASS |
| | 16QAM | 26115 | 1 | -28.006 | -13 | PASS |
| | | | 100% | -28.205 | -13 | PASS |
| | | 26615 | 1 | -29.645 | -13 | PASS |
| | | | 100% | -31.267 | -13 | PASS |
| 20MHz | QPSK | 26140 | 1 | -31.700 | -13 | PASS |


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| LTE Band 25 | | Channel | RB | Reference value (dBm) | Limit (dBm) | Conclusion |
|---|---|---|---|---|---|---|
| Bandwidth | Modulation | | | | | |
| | | | 100% | -28.068 | -13 | PASS |
| | | 26590 | 1 | -29.562 | -13 | PASS |
| | | | 100% | -32.077 | -13 | PASS |
| | 16QAM | 26140 | 1 | -31.667 | -13 | PASS |
| | | | 100% | -28.107 | -13 | PASS |
| | | 26590 | 1 | -29.747 | -13 | PASS |
| | | | 100% | -32.139 | -13 | PASS |


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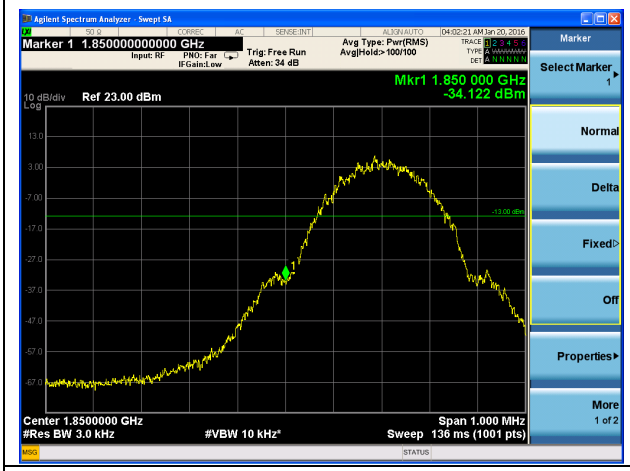
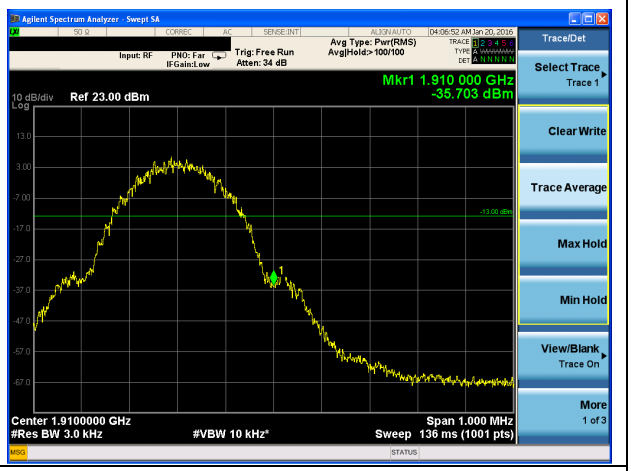
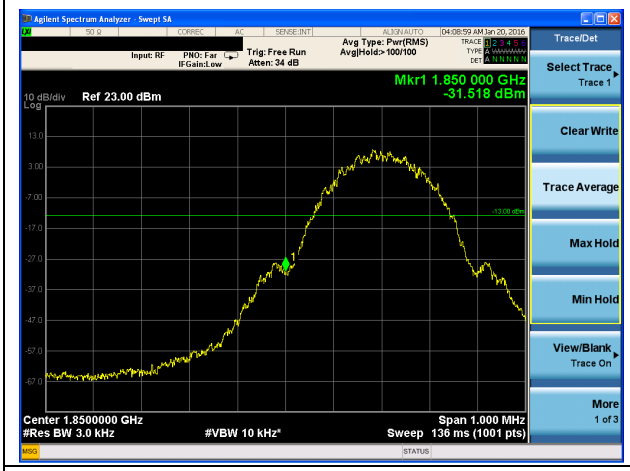
GSM1900 GSM CH512



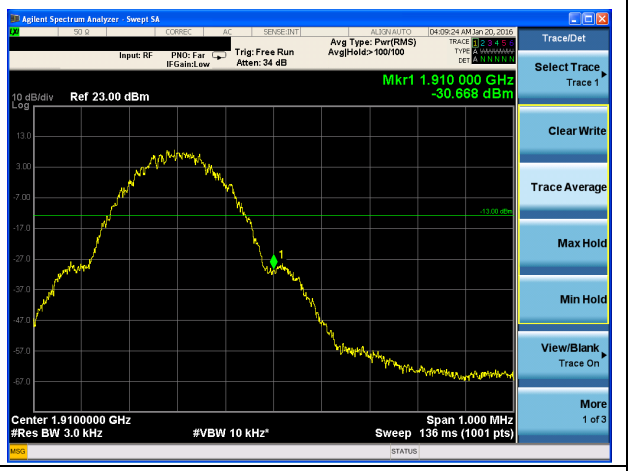

GSM 1900 GSM CH810



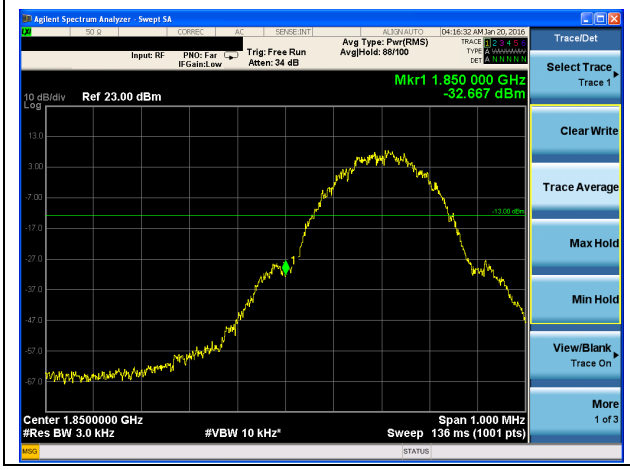

GSM1900 GPRS CH512



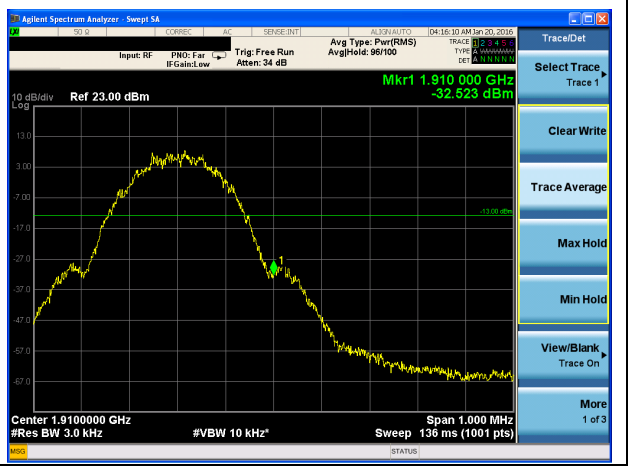

GSM 1900 GPRS CH810




GSM1900 EGPRS CH512




GSM 1900 EGPRS CH810





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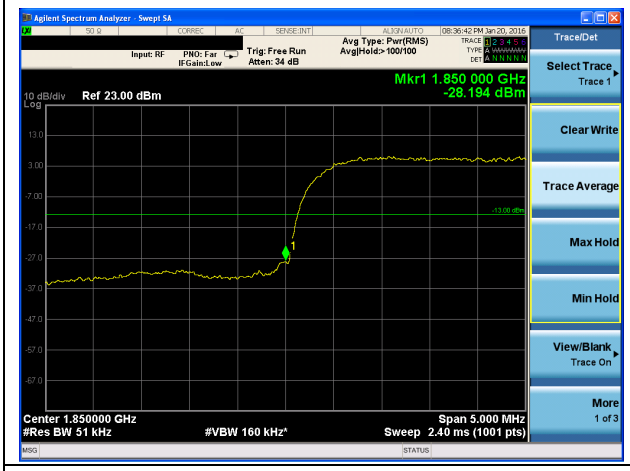
WCDMA Band II RMC CH9262




WCDMA Band II RMC CH9538

CDMA BC1 1xRTT CH25

CDMA BC1 1xRTT CH1175

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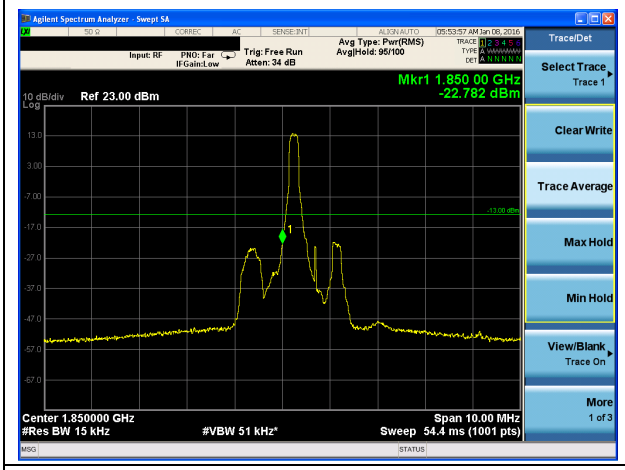
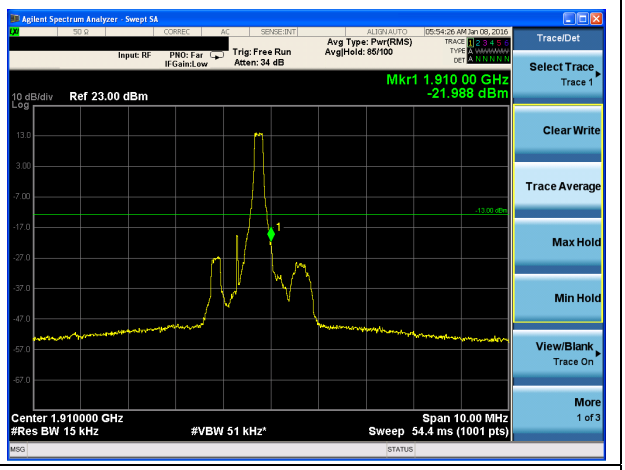
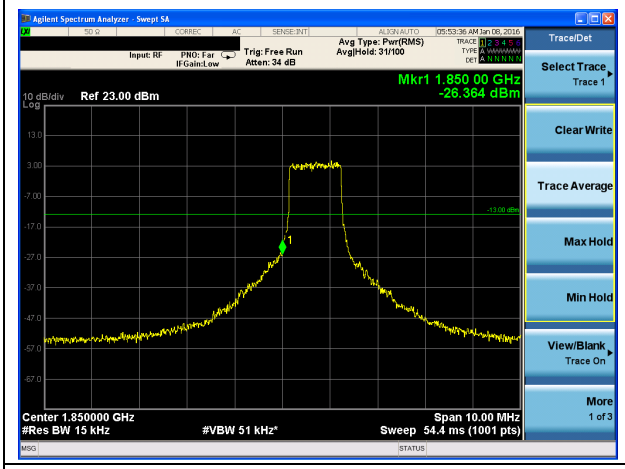
LTE Band 2 1.4MHz QPSK 1RB CH18607



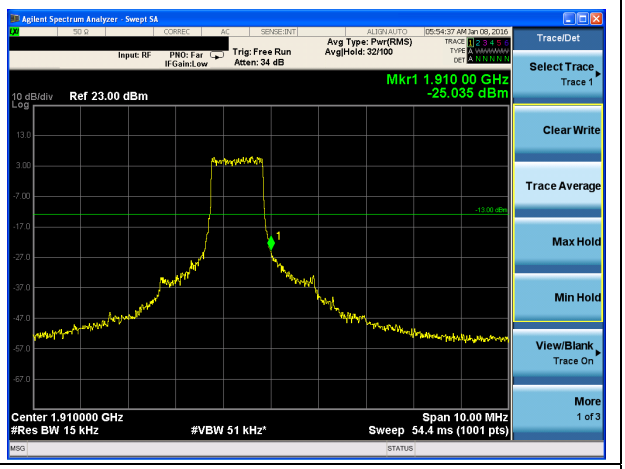

LTE Band 2 1.4MHz QPSK 1RB CH19193



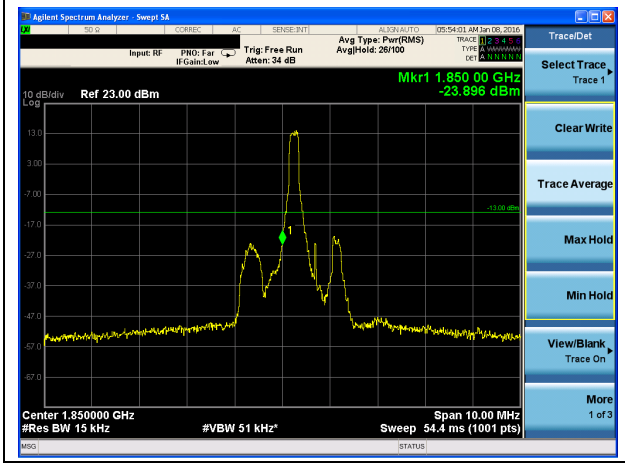

LTE Band 2 1.4MHz QPSK 100%RB CH18607



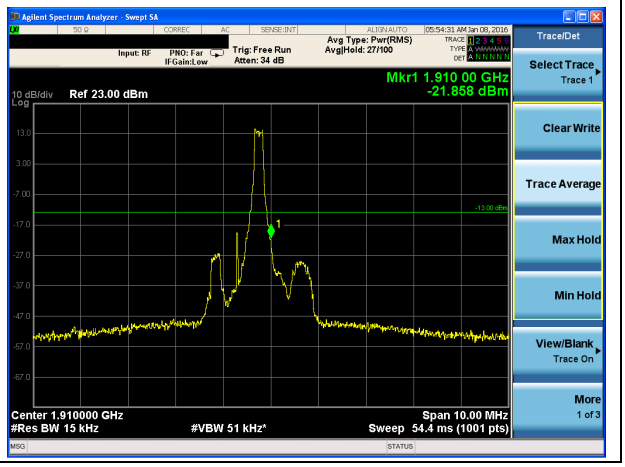

LTE Band 2 1.4MHz QPSK 100%RB CH19193




LTE Band 2 1.4MHz 16QAM 1RB CH18607




LTE Band 2 1.4MHz 16QAM 1RB CH19193





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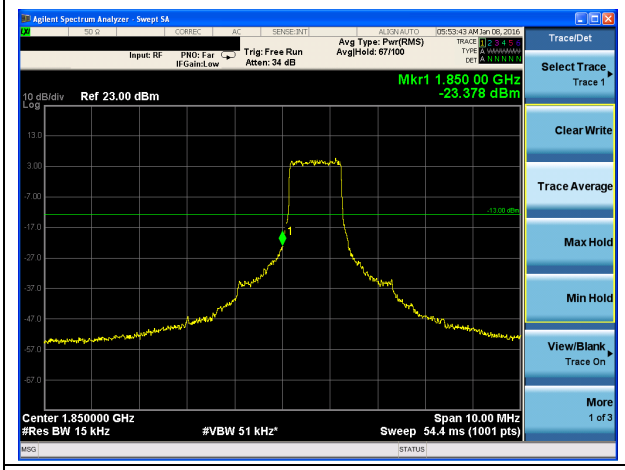
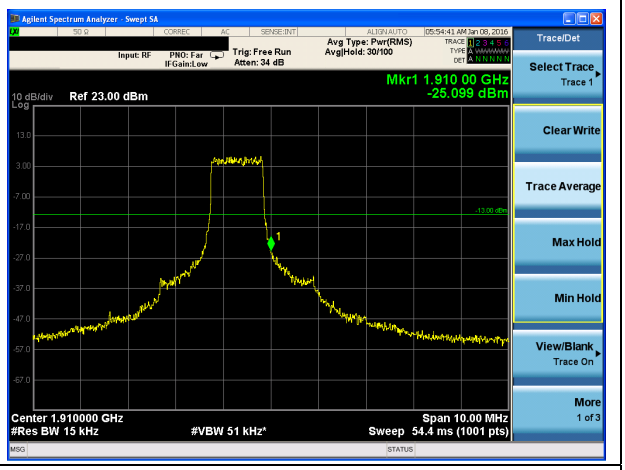
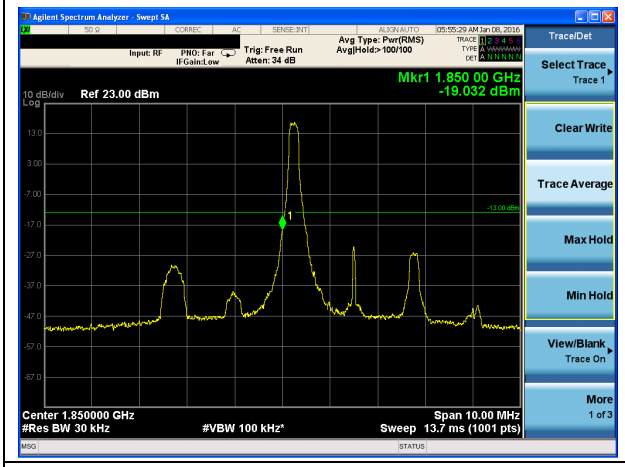
LTE Band 2 1.4MHz 16QAM 100%RB CH18607



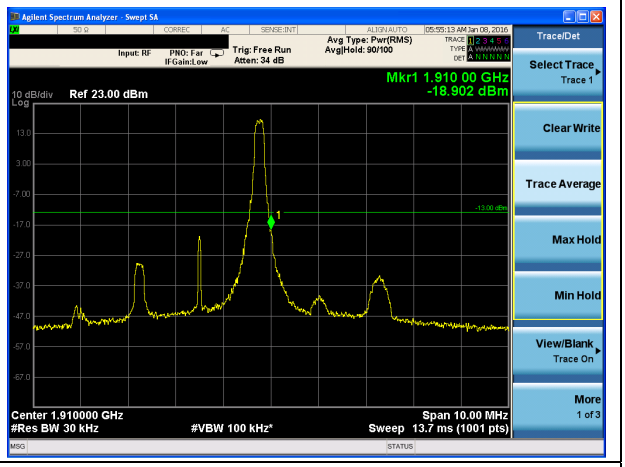

LTE Band 2 1.4MHz 16QAM 100%RB CH19193



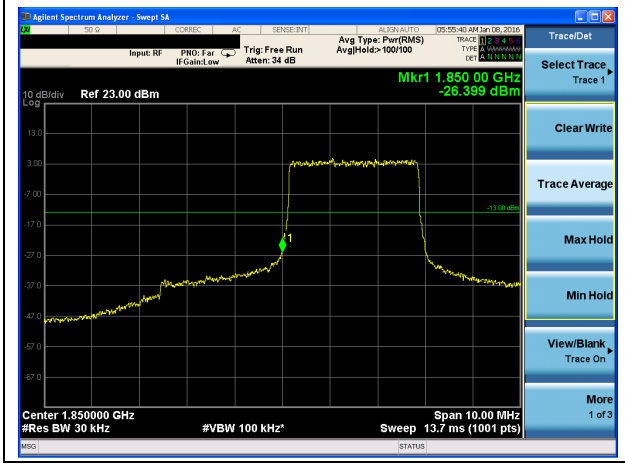

LTE Band 2 3MHz QPSK 1RB CH18615




LTE Band 2 3MHz QPSK 1RB CH19185




LTE Band 2 3MHz QPSK 100%RB CH18615




LTE Band 2 3MHz QPSK 100%RB CH19185

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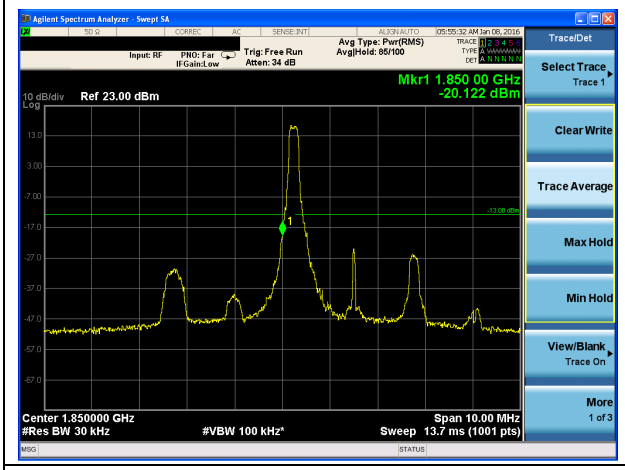
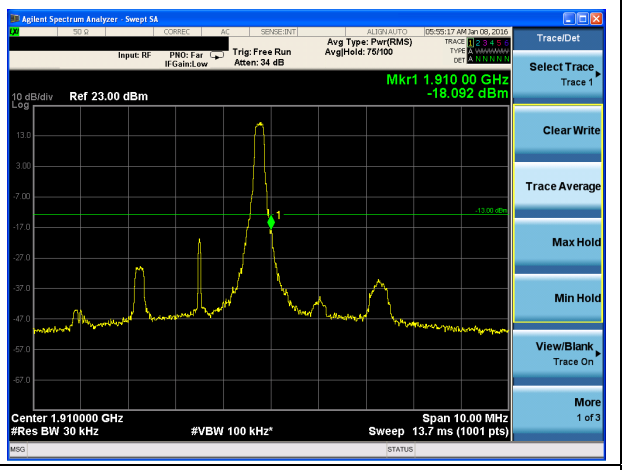
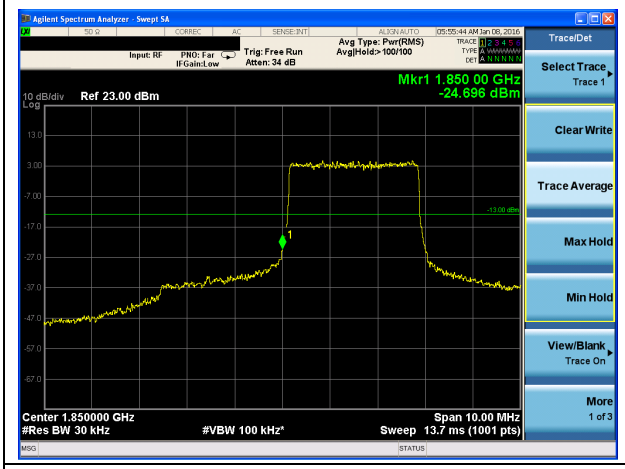
LTE Band 2 3MHz 16QAM 1RB CH18615




LTE Band 2 3MHz 16QAM 1RB CH19185

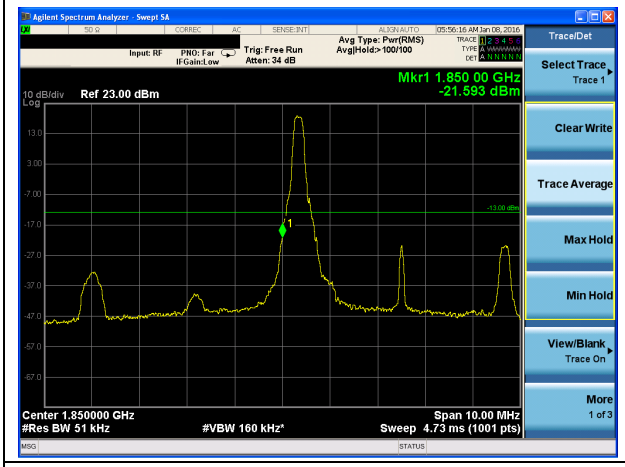



LTE Band 2 3MHz 16QAM 100%RB CH18615

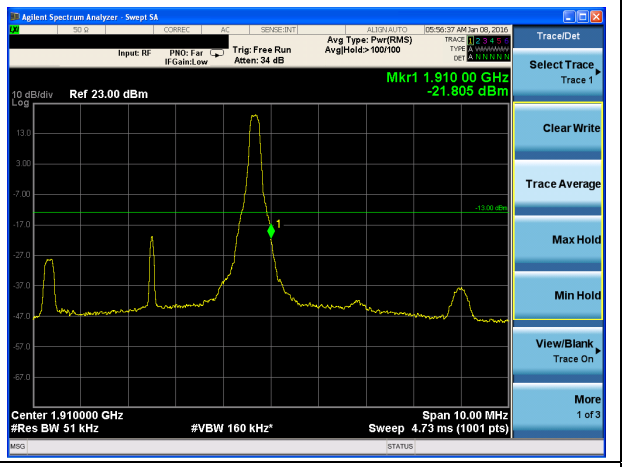



LTE Band 2 3MHz 16QAM 100%RB CH19185

LTE Band 2 5MHz QPSK 1RB CH18625




LTE Band 2 5MHz QPSK 1RB CH19175




LTE Band 2 5MHz QPSK 100%RB CH18625

LTE Band 2 5MHz QPSK 100%RB CH19175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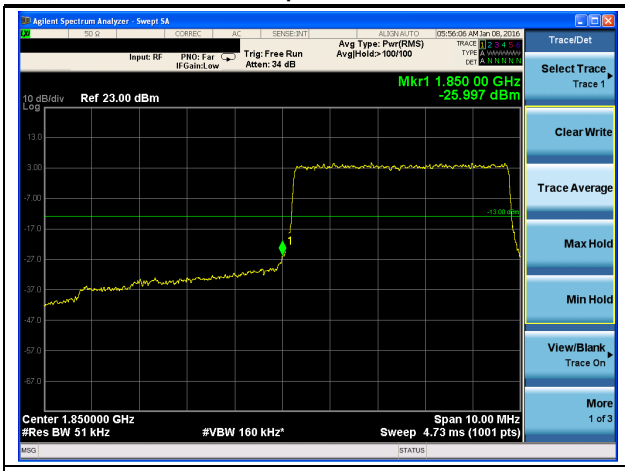
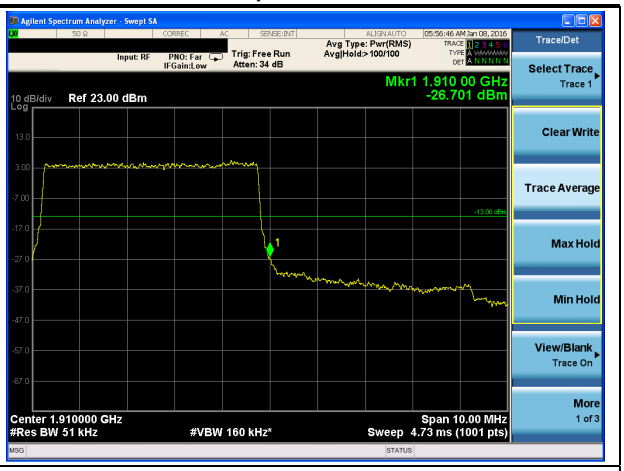
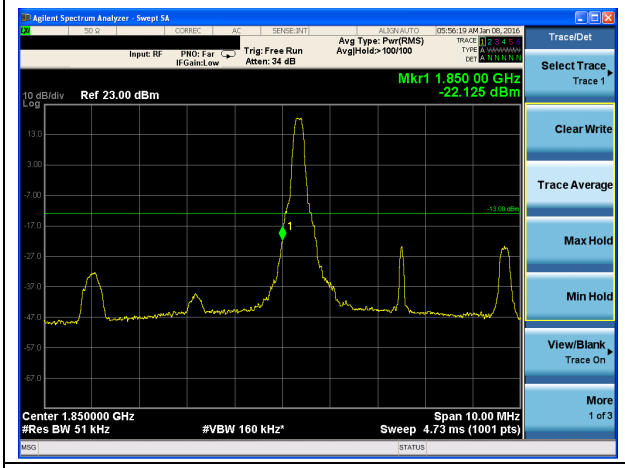
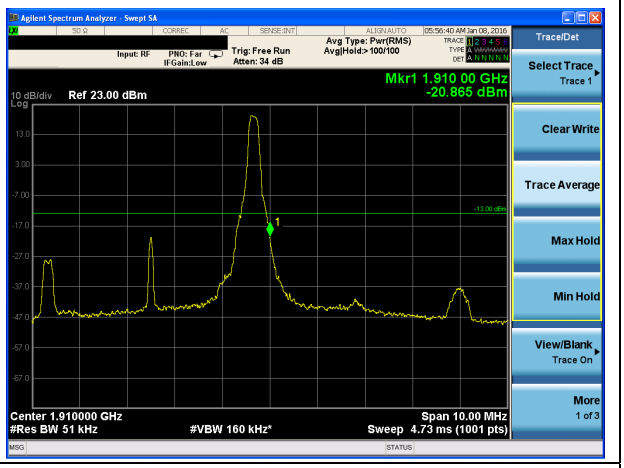


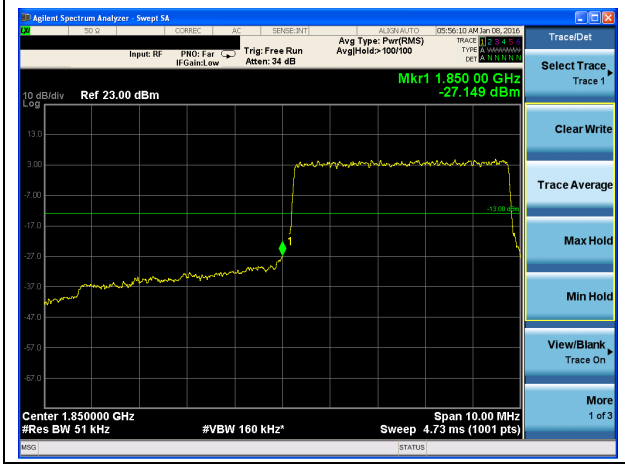

LTE Band 2 5MHz 16QAM 1RB CH18625



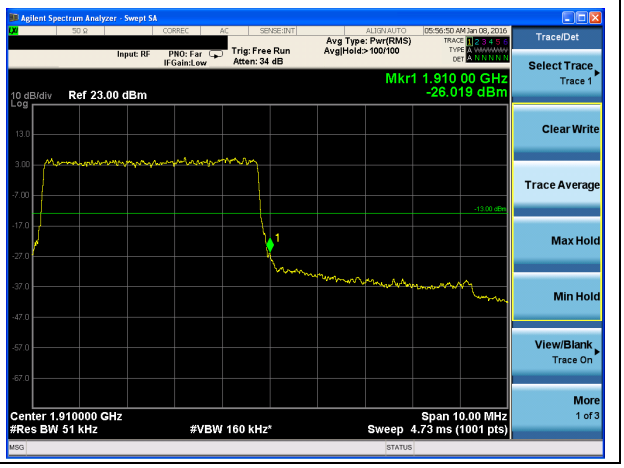

LTE Band 2 5MHz 16QAM 1RB CH19175




LTE Band 2 5MHz 16QAM 100%RB CH18625




LTE Band 2 5MHz 16QAM 100%RB CH19175





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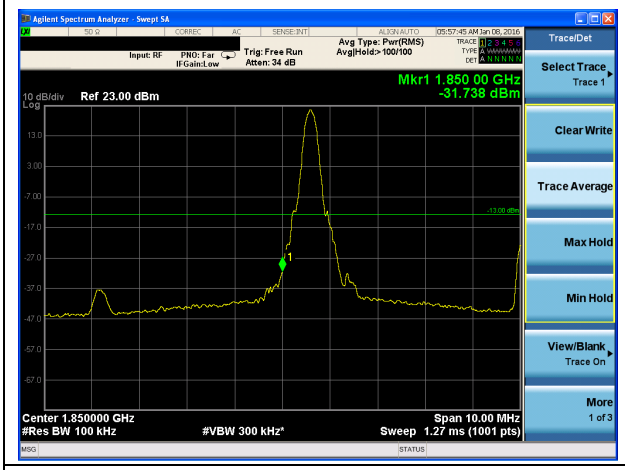
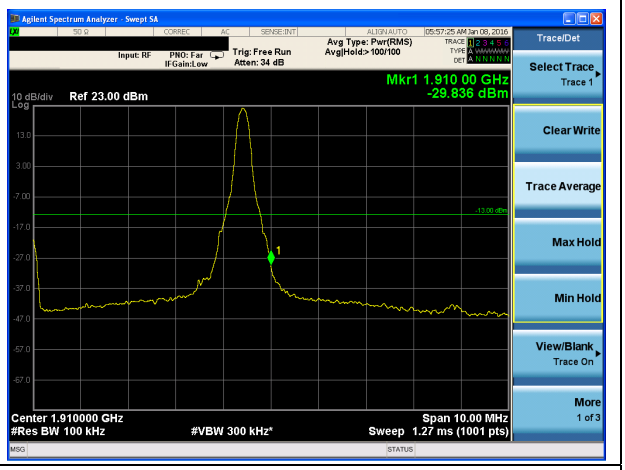
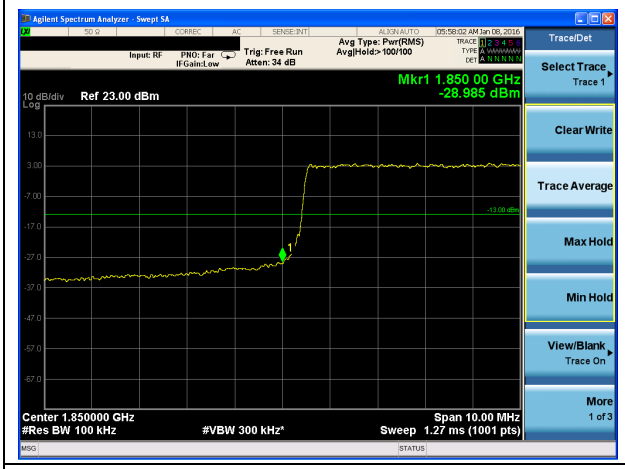
LTE Band 2 10MHz QPSK 1RB CH18650




LTE Band 2 10MHz QPSK 1RB CH19150

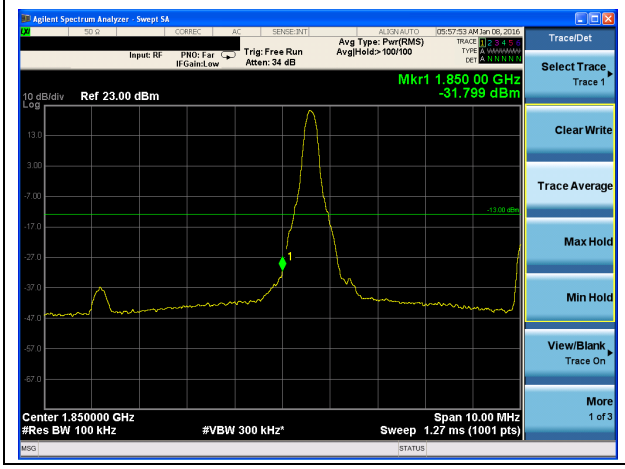



LTE Band 2 10MHz QPSK 100%RB CH18650

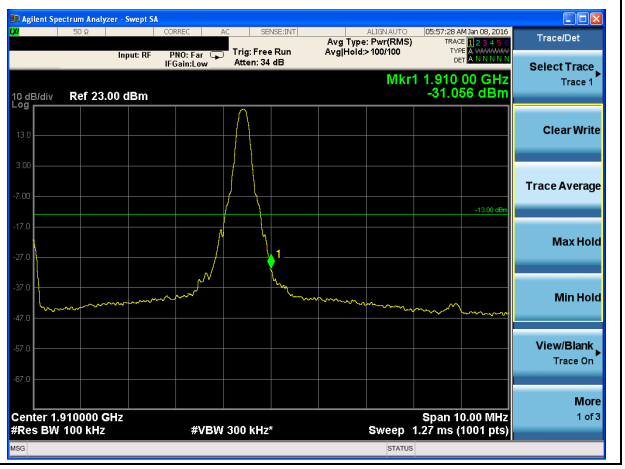



LTE Band 2 10MHz QPSK 100%RB CH19150

LTE Band 2 10MHz 16QAM 1RB CH18650




LTE Band 2 10MHz 16QAM 1RB CH19150





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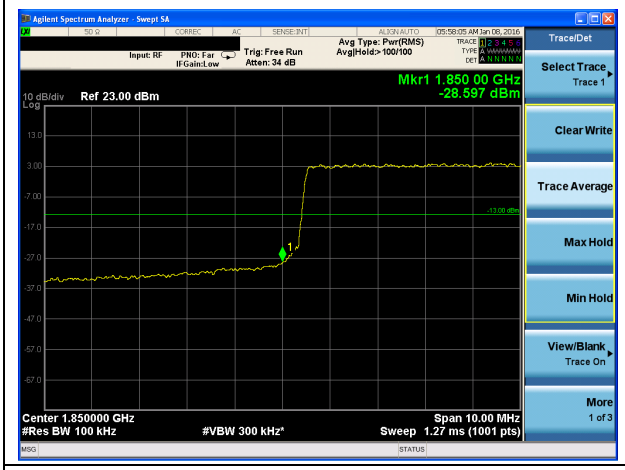
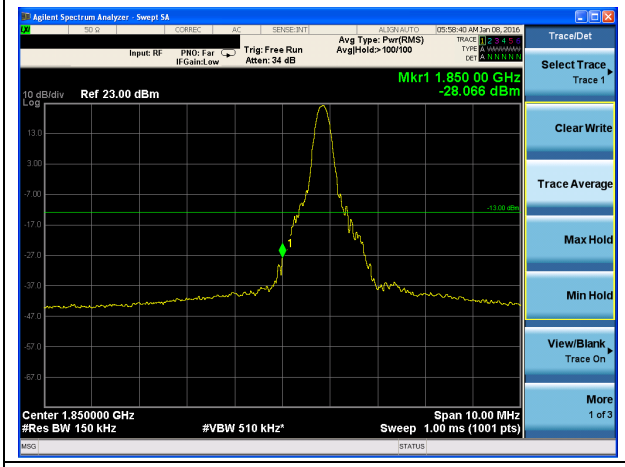
LTE Band 2 10MHz 16QAM 100%RB CH18650

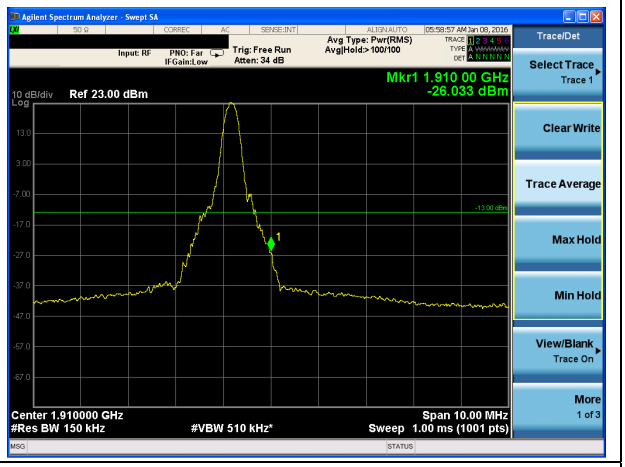



LTE Band 2 10MHz 16QAM 100%RB CH19150

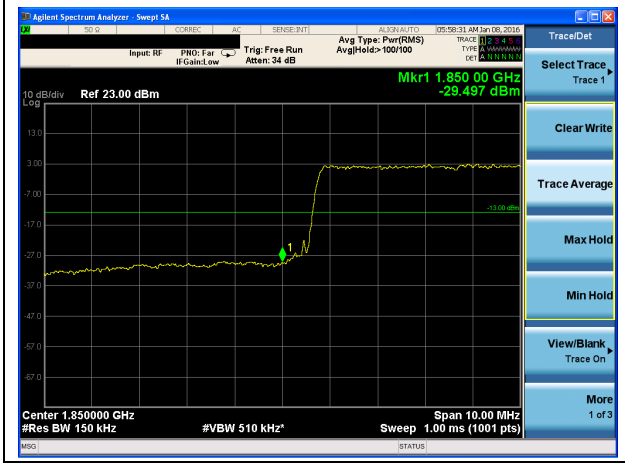
LTE Band 2 15MHz QPSK 1RB CH18675




LTE Band 2 15MHz QPSK 1RB CH19125




LTE Band 2 15MHz QPSK 100%RB CH18675




LTE Band 2 15MHz QPSK 100%RB CH19125

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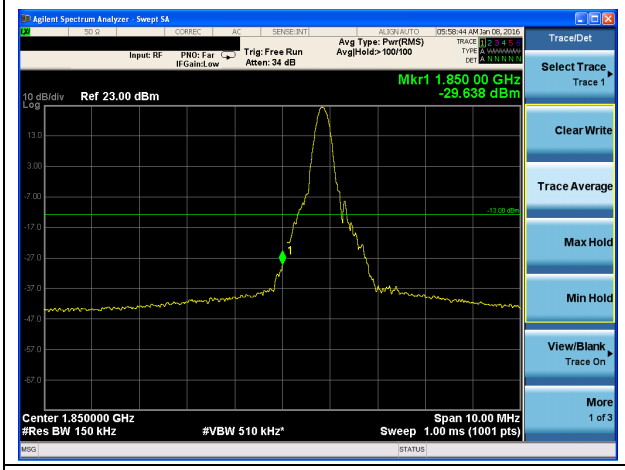
LTE Band 2 15MHz 16QAM 1RB CH18675

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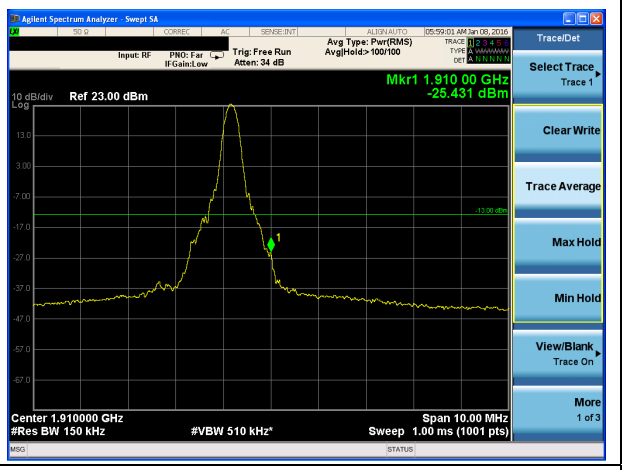
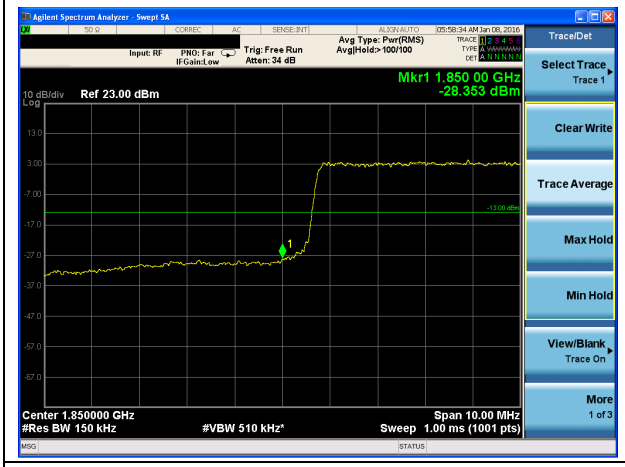
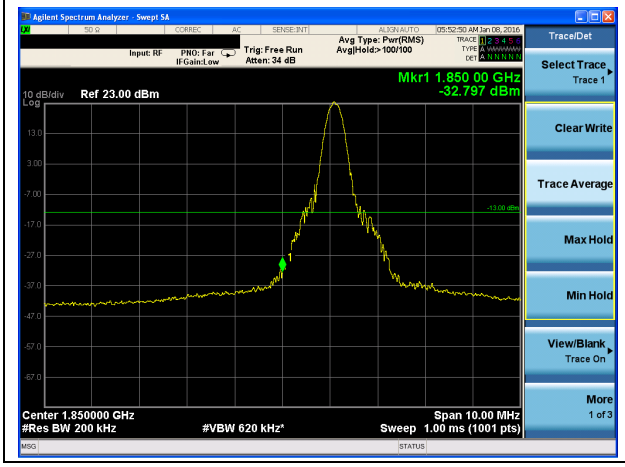



LTE Band 2 15MHz 16QAM 100%RB CH18675

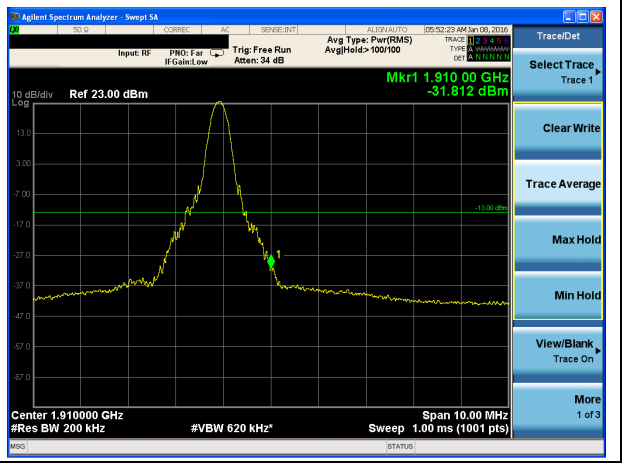



LTE Band 2 15MHz 16QAM 100%RB CH19125

LTE Band 2 20MHz QPSK 1RB CH18700




LTE Band 2 20MHz QPSK 1RB CH19100





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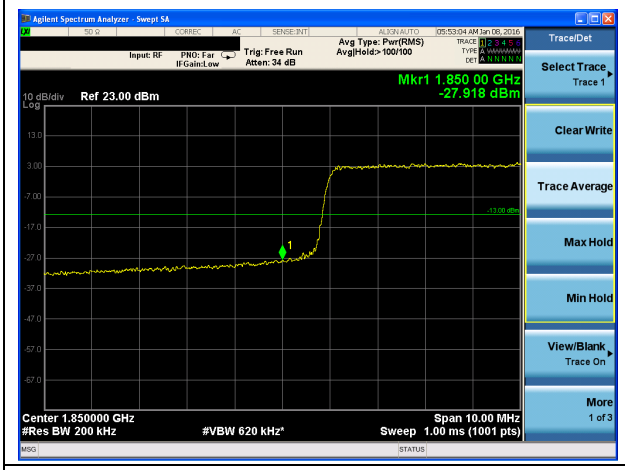
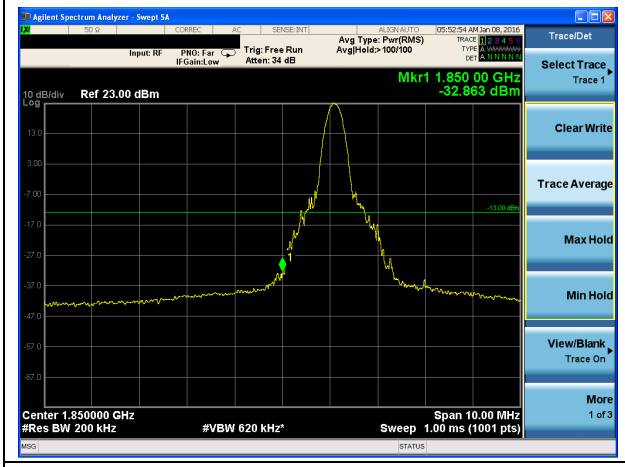
LTE Band 2 20MHz QPSK 100%RB CH18700

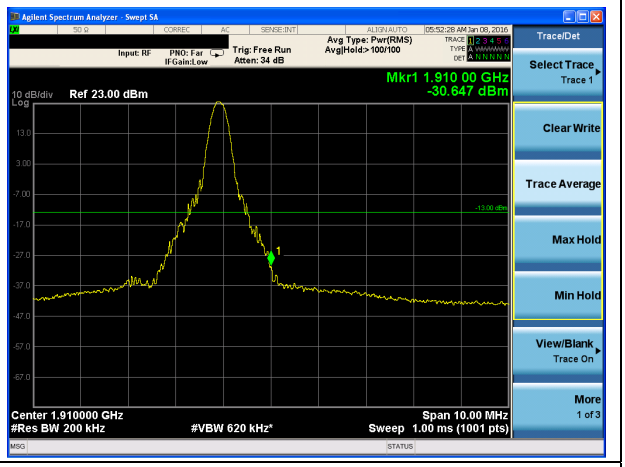



LTE Band 2 20MHz QPSK 100%RB CH19100

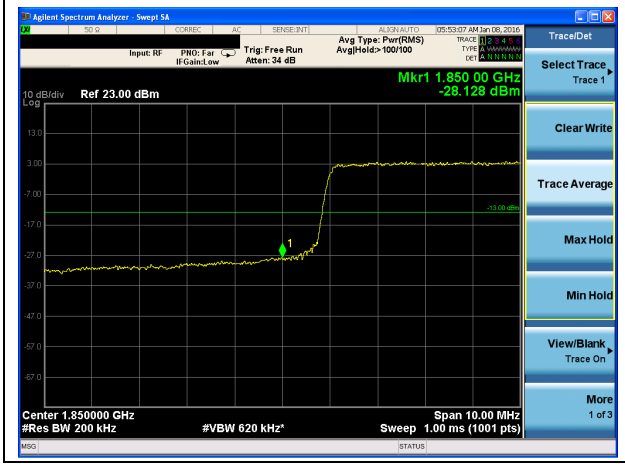
LTE Band 2 20MHz 16QAM 1RB CH18700




LTE Band 2 20MHz 16QAM 1RB CH19100




LTE Band 2 20MHz 16QAM 100%RB CH18700




LTE Band 2 20MHz 16QAM 100%RB CH19100

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