FCC Radio Test Report

FCC ID: QISME919BS-567BN

This report concerns (check one): ☒Original Grant ☐Class II Change

Project No.	: 1702C029
Equipment	: LTE Module
Model Name	: ME919Bs-567bN
Applicant	: Huawei Technologies Co.,Ltd.
Address	: Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District Shenzhen China

Date of Receipt	: Feb. 08, 2017
Date of Test	: Feb. 08, 2017 ~ Feb. 15, 2017
Issued Date	: Feb. 16 2017
Tested by	: BTL Inc.

Technical Engineer : Shawn xiao
(Shawn Xiao)

Authorized Signatory : Steven Lu
(Steven Lu)

B T L I N C .

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Declaration

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

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BTL's laboratory quality assurance procedures are in compliance with the **ISO Guide17025** requirements, and accredited by the conformity assessment authorities listed in this test report.

Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

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REPORT ISSUED HISTORY

Issued No.	Description	Issued Date
BTL-FCCP-2-1702C029	Original Issue.	Feb. 16 2017

1. CERTIFICATION

Equipment	:	LTE Module
Brand Name	:	HUAWEI
Model Name	:	ME919Bs-567bN
Applicant	:	Huawei Technologies Co.,Ltd.
Manufacturer	:	Huawei Technologies Co.,Ltd.
Address	:	Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District Shenzhen China
Factory	:	Huawei Technologies Co.,Ltd.
Address	:	Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District Shenzhen China
Date of Test	:	Feb. 08, 2017 ~ Feb. 15, 2017
Test Sample	:	Engineering Sample
Standard(s)	:	47 CFR FCC Part 24 Subpart E 47 CFR FCC Part 2 ANSI/TIA-603-D-2010 KDB 971168 D01 Power Meas License Digital Systems v02r02

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.
The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCCP-2-1702C029) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s).

Test results included in this report is only for the DCS1900, WCDMA Band 2 and LTE Band 2 part.

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

FCC Part 22 Subpart H& Part 2			
Standard(s) Section	Test Item	Judgment	Tested By
2.1046 24.232(c)	Radiated power	PASS	Paul Li
2.1046 24.232(c)	Conducted Output Power	PASS	Paul Li
2.1049 24.238(a)	Occupied Bandwidth	PASS	Paul Li
2.1051 24.238(a)	Conducted Spurious Emissions	PASS	Paul Li
2.1053 24.238(a)	Radiated Spurious Emissions	PASS	Shaohua Peng
24.238(a)	Band Edge Measurements	PASS	Paul Li
24.232(d)	Peak To Average Ratio	PASS	Paul Li
2.1055 24.235	Frequency Stability	PASS	Paul Li

NOTE:

(1)" N/A" denotes test is not applicable to this device.

2.1 TEST FACILITY

Conducted: No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China.

Radiated: No.2 New City Avenue Songshan Lake Sci. &Tech. Industry Park, Dongguan, Guangdong, P.R.C

BTL's test firm number for FCC: 319330

HUAWEI's test firm number for FCC: 97456

2.2 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. The BTL / HUAWEI measurement uncertainty is less than the CISPR 16-4-2 U_{cispr} requirement.

The reported uncertainty of measurement **y** ± **U**, where expanded uncertainty **U** is based on astandard uncertainty multiplied by a coverage factor of **k=2**, providing a level of confidence of approximately **95**%.

System Measurement Uncertainty	
Items	Extended Uncertainty
RE(9KHz-30MHz)	U(E)=4.2, k=2
RSE(30MHz-26.5GHz)	U=4.9,k=2

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	LTE Module		
Brand Name	HUAWEI		
Model Name	ME919Bs-567bN		
Model Difference	N/A		
Modulation Type	GSM/GPRS	GMSK	
	EDGE	GMSK, 8PSK	
	WCDMA	Uplink: BPSK Downlink: QPSK	
	WCDMA(HSDPA/HSUPA/HSPA+/DC-HSDPA/DC-HSUPA)	16QAM	
	LTE	QPSK, 16QAM	
Operation Frequency	GSM /EDGE/GPRS	1850.2 ~ 1909.8 MHz	
	WCDMA Band 2	1852.4 ~ 1907.6 MHz	
	LTE 2 (Channel Bandwidth: 1.4MHz)	1850.7 ~ 1909.3 MHz	
	LTE 2 (Channel Bandwidth: 3MHz)	1851.5 ~ 1908.5 MHz	
	LTE 2 (Channel Bandwidth: 5MHz)	1852.5 ~ 1907.5 MHz	
	LTE 2 (Channel Bandwidth: 10MHz)	1855.0 ~ 1905.0 MHz	
	LTE 2 (Channel Bandwidth: 15MHz)	1857.5 ~ 1902.5 MHz	
	LTE 2 (Channel Bandwidth: 20MHz)	1860.0 ~ 1900.0 MHz	
Max. EIRP Power	GSM/GPRS	GMSK	26.92 dBm
	EDGE	8PSK	25.72 dBm
	WCDMA	BPSK	21.18 dBm
	WCDMA_HSDPA	16QAM	21.12 dBm
	WCDMA_HSUPA	16QAM	21.12 dBm
	LTE 2 (Channel Bandwidth: 1.4MHz)	QPSK	20.60 dBm
		16QAM	19.80 dBm
	LTE 2 (Channel Bandwidth: 3MHz)	QPSK	20.70 dBm
		16QAM	19.84 dBm
	LTE 2 (Channel Bandwidth: 5MHz)	QPSK	20.83 dBm
		16QAM	20.08 dBm
	LTE 2 (Channel Bandwidth: 10MHz)	QPSK	21.07 dBm
		16QAM	20.35 dBm
	LTE 2 (Channel Bandwidth: 15MHz)	QPSK	20.87 dBm
		16QAM	20.21 dBm
	LTE 2 (Channel Bandwidth: 20MHz)	QPSK	21.09 dBm
		16QAM	20.53 dBm

Antenna Type	External Antenna	
Antenna Gain	2.5 dBi for GSM, 2.5 dBi for WCDMA, 2.5 dBi for LTE	
Hardware Version	RM1ME919BSTM	
Softwarre Version	11.670.05.00.1400	
IMEI No.1	Radiated	863663030004896
	Conducted	863663030007800
Power Source	#1 Supplied from PC USB port or adapter. #2 Battery Supplied.	
Power Rating	#1 100-240V~ 50/60Hz #2 ⎓4.0V	

3.2 DESCRIPTION OF TEST MODES AND TEST CONDITION

Following channel(s) was (were) selected for the final test as listed below:

GSM MODE			
Test Item	Available Channel	Tested Channel	Mode
EIRP	512 to 810	512, 661, 810	GSM, EDGE
Conducted Output Power	512 to 810	512, 661, 810	GSM, EDGE
Occupied Bandwidth	512 to 810	512, 661, 810	GSM, EDGE
Condcudeted Emission	512 to 810	661	GSM, EDGE
Radiated Emission	512 to 810	661	GSM, EDGE
Band Edge	512 to 810	512, 810	GSM, EDGE
Peak to Average Ratio	512 to 810	512, 661, 810	GSM, EDGE
Frequency Stability	512 to 810	661	GSM, EDGE

WCDMA MODE			
Test Item	Available Channel	Tested Channel	Mode
EIRP	9262 to 9538	9262, 9400, 9538	WCDMA, HSDPA,HSUPA
Conducted Output Power	9262 to 9538	9262, 9400, 9538	WCDMA, HSDPA,HSUPA
Condcudeted Emission	9262 to 9538	9400	WCDMA, HSDPA, HSUPA
Radiated Emission	9262 to 9538	9400	WCDMA, HSDPA, HSUPA
Band Edge	9262 to 9538	9262, 9538	WCDMA, HSDPA, HSUPA
Peak to Average Ratio	9262 to 9538	9262, 9400, 9538	WCDMA, HSDPA, HSUPA
Frequency Stability	9262 to 9538	9262	WCDMA, HSDPA, HSUPA

Note: This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in **QPSK** modulation.

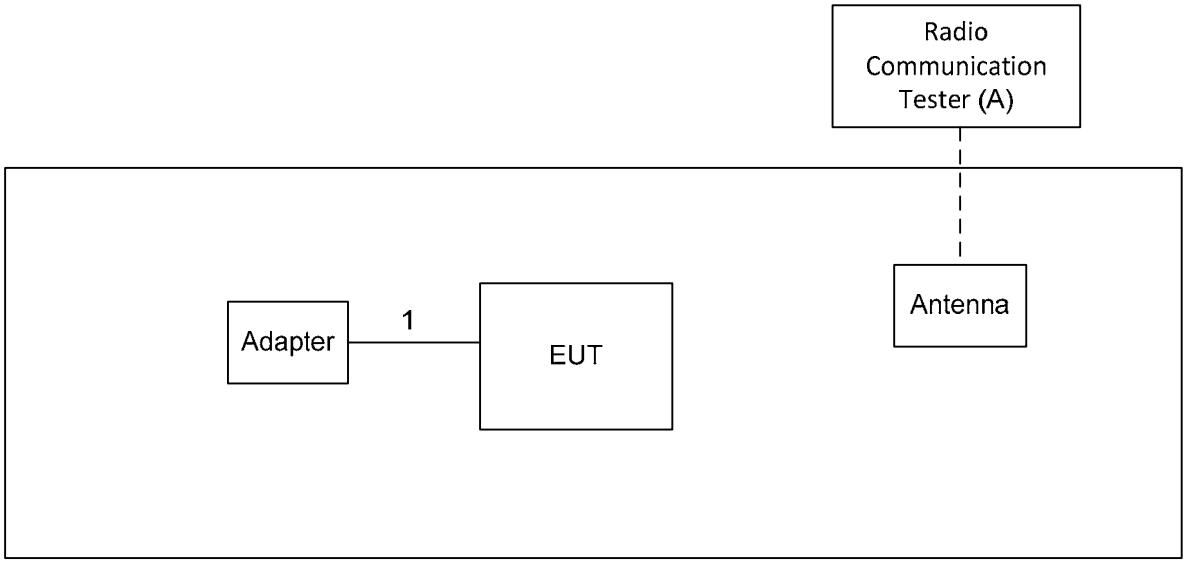
LTE BAND 2 MODE					
Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
EIRP	18607 to 19193	18607, 18900, 19193	1.4MHz	QPSK, 16QAM	1 RB / 0 RB Offset
	18615 to 19185	18615, 18900, 19185	3MHz	QPSK, 16QAM	1 RB / 0 RB Offset
	18625 to 19175	18625, 18900, 19175	5MHz	QPSK, 16QAM	1 RB / 0 RB Offset
	18650 to 19150	18650, 18900, 19150	10MHz	QPSK, 16QAM	1 RB / 0 RB Offset
	18675 to 19125	18675, 18900, 19125	15MHz	QPSK, 16QAM	1 RB / 0 RB Offset
	18700 to 19100	18700, 18900, 19100	20MHz	QPSK, 16QAM	1 RB / 0 RB Offset
Occupied Bandwidth	18607 to 19193	18607, 18900, 19193	1.4MHz	QPSK, 16QAM	6 RB / 0 RB Offset
	18615 to 19185	18615, 18900, 19185	3MHz	QPSK, 16QAM	15 RB / 0 RB Offset
	18625 to 19175	18625, 18900, 19175	5MHz	QPSK, 16QAM	25 RB / 0 RB Offset
	18650 to 19150	18650, 18900, 19150	10MHz	QPSK, 16QAM	50 RB / 0 RB Offset
	18675 to 19125	18675, 18900, 19125	15MHz	QPSK, 16QAM	75 RB / 0 RB Offset
	18700 to 19100	18700, 18900, 19100	20MHz	QPSK, 16QAM	100 RB / 0 RB Offset
Conducted Emission	18607 to 19193	18900	1.4MHz	QPSK	1 RB / 0 RB Offset
	18615 to 19185	18900	3MHz	QPSK	1 RB / 0 RB Offset
	18625 to 19175	18900	5MHz	QPSK	1 RB / 0 RB Offset
	18650 to 19150	18900	10MHz	QPSK	1 RB / 0 RB Offset
	18675 to 19125	18900	15MHz	QPSK	1 RB / 0 RB Offset
	18700 to 19100	18900	20MHz	QPSK	1 RB / 0 RB Offset
Radiated Emission	18607 to 19193	18900	1.4MHz	QPSK	1 RB / 0 RB Offset
	18700 to 19100	18900	20MHz	QPSK	1 RB / 0 RB Offset

LTE BAND 2 MODE					
Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
Band Edge	18607 to 19193	18607	1.4MHz	QPSK	1 RB / 0 RB Offset
					6 RB / 0 RB Offset
		19193	1.4MHz	QPSK	1 RB / 5 RB Offset
					6 RB / 0 RB Offset
	18615 to 19185	18615	3MHz	QPSK	1 RB / 0 RB Offset
					15 RB / 0 RB Offset
		19185	3MHz	QPSK	1 RB / 14 RB Offset
					15 RB / 0 RB Offset
	18625 to 19175	18625	5MHz	QPSK	1 RB / 0 RB Offset
					25 RB / 0 RB Offset
		19175	5MHz	QPSK	1 RB / 24 RB Offset
					25 RB / 0 RB Offset
	18650 to 19150	18650	10MHz	QPSK	1 RB / 0 RB Offset
					50 RB / 0 RB Offset
		19150	10MHz	QPSK	1 RB / 49 RB Offset
					50 RB / 0 RB Offset
	18675 to 19125	18675	15MHz	QPSK	1 RB / 0 RB Offset
					75 RB / 0 RB Offset
		19125	15MHz	QPSK	1 RB / 74 RB Offset
					75 RB / 0 RB Offset
	18700 to 19100	18700	20MHz	QPSK	1 RB / 0 RB Offset
					100 RB / 0 RB Offset
		19100	20MHz	QPSK	1 RB / 99 RB Offset
					100 RB / 0 RB Offset
Peak To Average Ratio	18607 to 19193	18607, 18900, 19193	1.4MHz	QPSK, 16QAM	1 RB / 0 RB Offset
	18615 to 19185	18615, 18900, 19185	3MHz	QPSK, 16QAM	1 RB / 0 RB Offset
	18625 to 19175	18625, 18900, 19175	5MHz	QPSK, 16QAM	1 RB / 0 RB Offset
	18650 to 19150	18650, 18900, 19150	10MHz	QPSK, 16QAM	1 RB / 0 RB Offset
	18675 to 19125	18675, 18900, 19125	15MHz	QPSK, 16QAM	1 RB / 0 RB Offset
	18700 to 19100	18700, 18900, 19100	20MHz	QPSK, 16QAM	1 RB / 0 RB Offset
Frequency Stability	18607 to 19193	18900	1.4MHz	QPSK	1 RB / 0 RB Offset
	18615 to 19185	18900	3MHz	QPSK	1 RB / 0 RB Offset
	18625 to 19175	18900	5MHz	QPSK	1 RB / 0 RB Offset
	18650 to 19150	18900	10MHz	QPSK	1 RB / 0 RB Offset
	18675 to 19125	18900	15MHz	QPSK	1 RB / 0 RB Offset
	18700 to 19100	18900	20MHz	QPSK	1 RB / 0 RB Offset

EUT TEST CONDITIONS:

Test Item	Environmental Conditions	Test Voltage
EIRP	25°C, 60%RH	DC 4.0V
Conducted Output Power	25°C, 65%RH	DC 4.0V
Occupied Bandwidth	25°C, 65%RH	DC 4.0V
Conducted Emission	25°C, 65%RH	DC 4.0V
Radiated Emission	25°C, 60%RH	AC 120V/60Hz
Band Edge	25°C, 65%RH	DC 4.0V
Peak to Average Ratio	25°C, 65%RH	DC 4.0V
Frequency Stability	25°C, 65%RH	DC 4.0V

3.3 BLOCKDIGRAMSHOWINGTHECONFIGURATIONOFSYSTEMTESTED FOR RADIATED



3.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.
A	Radio Communication Tester	R&S	CMU200	N/A	3608082535
		Anritsu	MT8820C	N/A	A110518805
B	Adaptor	Huawei	HW-050200U3W	N/A	HWHKA8G62400013

Item	Shielded Type	Ferrite Core	Length	Note
1	YES	NO	1m	USB cable

4. TEST RESULT

4.1 OUTPUT POWER MEASUREMENT

4.1.1 LIMIT

Mobile / Portable station are limited to 2 watts e.i.r.p.

4.1.2 TEST PROCEDURE

EIRP/ERP:

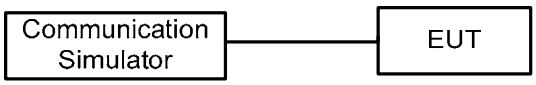
EIRP= Conducted Power +Antenan gain
ERP power=EIPR power-2.15dBi.

Conducted Power:

The EUT was set up for the maximum power with GSM, GPRS, EDGE, WCDMA, CDMA, and LTE link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

4.1.3 TESTSETUP LAYOUT

Conducted Power Measurement



4.1.4 TEST DEVIATION

No deviation

4.1.5 TEST RESULTS

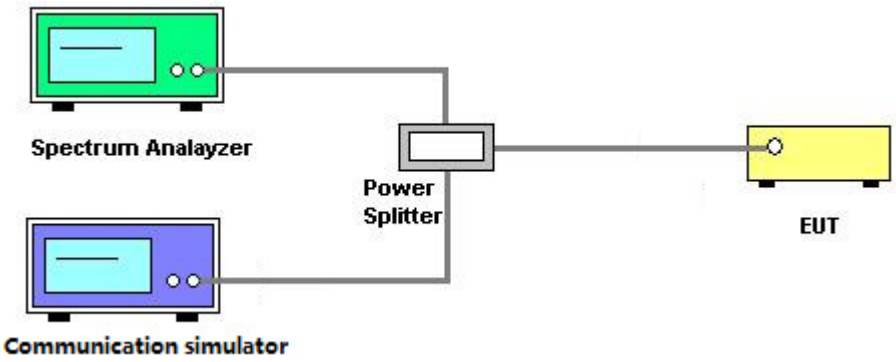
Please refer to the Attachment A.

4.2 OCCUPIED BANDWIDTH MEASUREMENT

4.2.1 TEST PROCEDURE

The EUT makes a call to the communication simulator. All measurements were done at low, middle and high operational frequency range. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth and 26dB bandwidth.

4.2.2 TEST SETUP LAYOUT



4.2.3 TEST DEVIATION

No deviation

4.2.4 TEST RESULTS

Please refer to the Attachment B.

4.3 CONDUCTED EMISSIONS MEASUREMENT

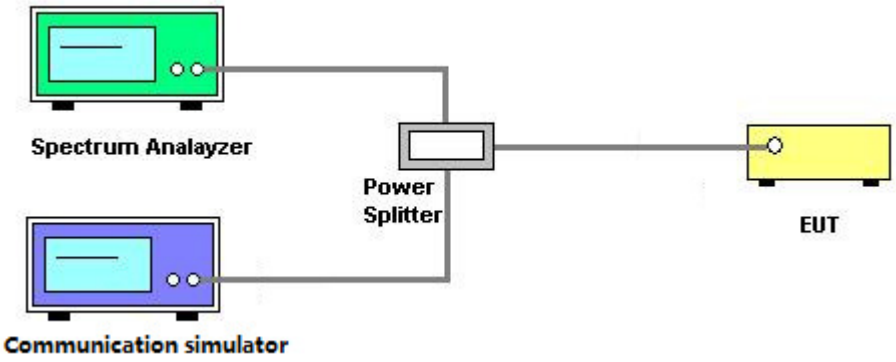
4.3.1 LIMIT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to -13dBm.

4.3.2 TEST PROCEDURES

1. The testing follows FCC KDB 971168 v02r02 Section 6.0.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured. Set RBW>=1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
4. Set spectrum analyzer with RMS detector.
5. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
6. The limit line is derived from 43+10log(P)dB below the transmitter power P(Watts)
   =P(W)-[43+10log(P)](dB)
   =[30+10log(P)](dBm)-[43+10log(P)](dB)
   =-13dBm

4.3.3 TESTSETUP LAYOUT



4.3.4 TESTDEVIATION

No deviation

4.3.5 TEST RESULTS

Please refer to the Attachment C.

4.4 RADIATED EMISSIONS MEASUREMENT

4.4.1 LIMIT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to -13dBm.

4.4.2 TEST PROCEDURES

1. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m 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 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
2. 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
3. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn.
4. 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.P.R power - 2.15dBi.
5. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

4.4.3 TESTSETUP LAYOUT

This test setup layout is the same as that shown in **section 4.1.3.**

4.4.4 TESTDEVIATION

No deviation

4.4.5 TEST RESULTS

Please refer to the Attachment D.

4.5 BAND EDGE MEASUREMENT

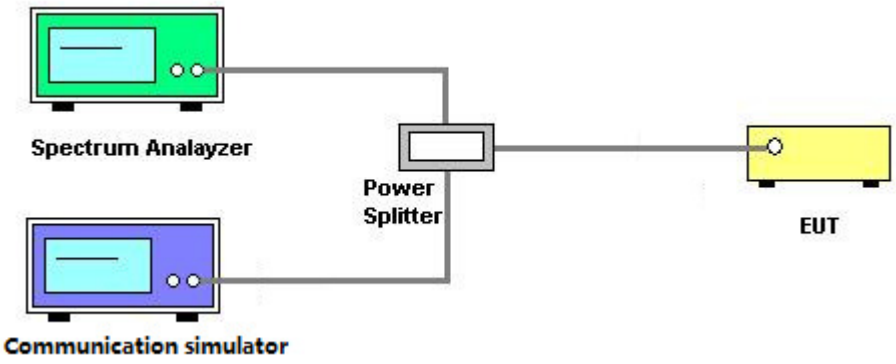
4.5.1 LIMIT

A Power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

4.5.2 TEST PROCEDURES

1. All measurements were done at low and high operational frequency range.
2. The center frequency of spectrum is the band edge frequency and span is 1MHz. RB of the spectrum is 3kHz and VB of the spectrum is 10kHz (GSM/GPRS/EDGE).
3. The center frequency of spectrum is the band edge frequency and span is 5MHz. RB of the spectrum is 100kHz and VB of the spectrum is 300kHz (WCDMA).
4. The center frequency of spectrum is the band edge frequency and span is 1MHz. RB of the spectrum is 13kHz and VB of the spectrum is 51kHz (LTE Bandwidth 1.4MHz).
5. The center frequency of spectrum is the band edge frequency and span is 1MHz. RB of the spectrum is 30kHz and VB of the spectrum is 100kHz (LTE Bandwidth 3MHz).
6. The center frequency of spectrum is the band edge frequency and span is 1MHz. RB of the spectrum is 100kHz and VB of the spectrum is 300kHz (LTE Bandwidth 5MHz/10MHz).
7. Record the max trace plot into the test report.

4.5.3 TESTSETUP LAYOUT



4.5.4 TESTDEVIATION

No deviation

4.5.5 TEST RESULTS

Please refer to the Attachment E.

4.6 PEAK TO AVERAGE RATIO MEASUREMENT

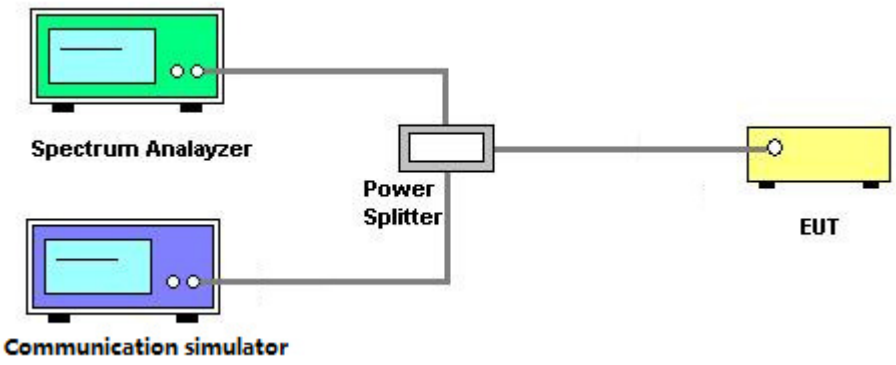
4.6.1 LIMIT

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 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%.

4.6.3 TESTSETUP LAYOUT



4.6.4 TESTDEVIATION

No deviation

4.6.5 TEST RESULTS

Please refer to the Attachment F.

4.7 FREQUENCY STABILITY MEASUREMENT

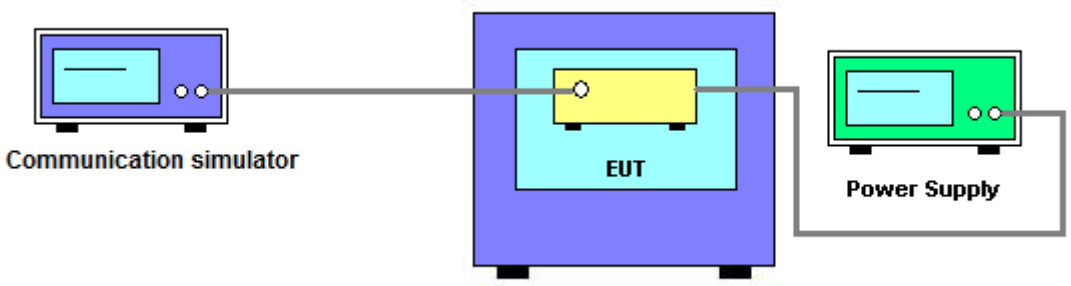
4.7.1 LIMIT

1.5 ppm is for base and fixed station. 2.5 ppm is for mobile station.

4.7.2 TEST PROCEDURES

1. Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.
2. EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.
3. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the ±0.5°C during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.
4. The frequency error was recorded frequency error from the communication simulator.

4.7.3 TESTSETUP LAYOUT



4.7.4 TESTDEVIATION

No deviation

4.7.5 TEST RESULTS

Please refer to the Attachment G.

5. LIST OF MEASUREMENT EQUIPMENTS

Radiated Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Test receiver	R&S	ESU26	100387	Jul. 21, 2017
2	LOOP Antennas(9kHz-30MHz)	R&S	HFH2-Z2	100263	Apr. 29, 2017
3	Spectrum analyzer	R&S	FSU3	200474	May 24, 2017
4	Spectrum analyzer	R&S	FSU43	100144	Jun. 02, 2017
5	Trilog Broadband Antenna (30M~3GHz)	SCHWARZBECK	VULB 9163	9163-521	Apr. 08, 2017
6	Double-Ridged Waveguide Horn Antenna (1G~18GHz)	R&S	HF907	100304	Apr. 29, 2017
7	Pyramidal Horn Antenna(18GHz-26.5GHz)	ETS-Lindgren	Sep-60	5140299	Jul. 14, 2017
8	Radio Communication Tester	R&S	CMU200	3608082535	Mar. 30, 2017
9	Radio Communication Tester	Anritsu	MT8820C	A110518805	May 23, 2017

Conducted Emission & Band Edge & Occupied Bandwidth Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Wireless Communication Test SET	Agilent	E5515C	MY48364183	Mar. 27, 2017
2	EXA Spectrum Analyzer	Agilent	N9010A	MY50520044	Mar. 27, 2017
3	POWER SPLITTER	Mini-Circuits	ZFRSC-123-S+	331000910-1	Feb. 26, 2017
4	wideband radio communication tester	R&S	CMW500	152372	Mar. 27, 2017
5	Cable	N/A	RG316(0.3m)	N/A	Jul. 06, 2017
6	Cable	N/A	RG316(0.3m)	N/A	Jul. 06, 2017

Frequency Stability Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Wireless Communication Test SET	Agilent	E5515C	MY48364183	Mar. 27, 2017
2	DC power supply	GW Instek	GPC-3030DN	EK880675	Oct. 13, 2017
3	POWER SPLITTER	Mini-Circuits	ZFRSC-123-S+	331000910-1	Feb. 26, 2017
4	wideband radio communication tester	R&S	CMW500	152372	Mar. 27, 2017
5	Const Temp,& Humidity Chamber	Giant?Force	ITH-225-20-S	IAB0309-001	Sep. 04, 2017
6	Cable	N/A	RG316(0.3m)	N/A	Jul. 06, 2017

Remark: ”N/A” denotes no model name, serial no. or calibration specified.
All calibration period of equipment list is one year.

ATTACHMENT A - OUTPUT POWER

Conducted Power:

DCS1900 (Capsensor Off)	Burst Conducted Power (dBm)		
	512CH	661CH	810CH
	1850.2MHz	1880MHz	1909.8MHz
GSM (CS)	-	-	-
GPRS/EDGE (GMSK)	28.97	29.00	29.07
	27.22	27.31	27.41
	26.34	26.29	26.44
	24.21	24.16	24.39
EDGE (8PSK)	25.74	25.88	26.10
	24.21	24.47	24.47
	23.17	23.07	23.34
	20.76	21.39	21.01

Modulation	Band	WCDMA Band 2(Capsensor Off)		
	Tx Channel	9262CH	9400CH	9538CH
	Rx Channel	9662CH	9800CH	9938CH
	Frequency	1852.4MHz	1880MHz	1907.6MHz
BPSK	RMC 12.2K	23.23	23.10	23.33
	RMC 64K	23.17	23.04	23.27
	RMC 144K	23.20	23.07	23.28
	RMC 384K	23.21	23.10	23.25
16QAM	HSDPA Subtest-1	23.18	23.05	23.27
	HSDPA Subtest-2	22.67	22.56	22.76
	HSDPA Subtest-3	22.15	22.03	22.27
	HSDPA Subtest-4	22.13	22.02	22.24
16QAM	HSUPA Subtest-1	23.18	22.52	22.75
	HSUPA Subtest-2	23.18	23.07	23.27
	HSUPA Subtest-3	22.16	22.06	22.26
	HSUPA Subtest-4	23.19	23.07	23.27
	HSUPA Subtest-5	23.14	23.03	23.22

LTE Band / BW	Modulation	RB Sizet	RB Offset	Low CH	Mid CH	High CH
				18607 CH	18900 CH	19193 CH
				1850.7 MHz	1880 MHz	1909.3 MHz
2 / 1.4M	QPSK	1	0	22.04	22.68	22.05
		1	2	22.15	22.68	21.99
		1	5	22.06	22.71	21.88
		3	0	22.12	22.68	21.93
		3	1	22.24	22.69	21.94
		3	3	22.23	22.75	21.92
		6	0	21.33	21.77	21.15
	16QAM	1	0	21.34	21.93	21.18
		1	2	21.43	21.93	21.21
		1	5	21.35	21.95	21.11
		3	0	21.31	21.82	21.11
		3	1	21.32	21.83	21.11
		3	3	21.31	21.87	21.10
		6	0	20.32	20.73	20.21

LTE Band / BW	Modulation	RB Sizet	RB Offset	Low CH	Mid CH	High CH
				18615 CH	18900 CH	19185 CH
				1851.5 MHz	1880 MHz	1908.5 MHz
2 / 3M	QPSK	1	0	22.03	22.68	22.05
		1	7	22.38	22.85	22.10
		1	14	22.11	22.72	21.79
		8	0	21.38	21.76	21.30
		8	3	21.44	21.85	21.24
		8	7	21.36	21.84	21.09
		15	0	21.40	21.84	21.22
	16QAM	1	0	21.16	21.83	21.36
		1	7	21.51	21.99	21.38
		1	14	21.22	21.90	21.08
		8	0	20.31	20.72	20.35
		8	3	20.38	20.80	20.27
		8	7	20.30	20.80	20.12
		15	0	20.35	20.75	20.22

LTE Band / BW	Modulation	RB Sizet	RB Offset	Low CH	Mid CH	High CH
				18625 CH	18900 CH	19175 CH
				1852.5 MHz	1880 MHz	1907.5 MHz
2 / 5M	QPSK	1	0	22.38	22.79	22.31
		1	12	22.41	22.85	22.16
		1	24	22.53	22.98	22.01
		12	0	21.43	21.82	21.48
		12	6	21.54	21.86	21.45
		12	13	21.48	21.89	21.26
		25	0	21.44	21.83	21.30
	16QAM	1	0	21.52	22.16	21.62
		1	12	21.64	22.06	21.41
		1	24	21.77	22.23	21.21
		12	0	20.42	20.74	20.48
		12	6	20.53	20.80	20.45
		12	13	20.48	20.83	20.25
		25	0	20.41	20.78	20.28

LTE Band / BW	Modulation	RB Sizet	RB Offset	Low CH	Mid CH	High CH
				18650 CH	18900 CH	19150 CH
				1855 MHz	1880 MHz	1905 MHz
2 / 10M	QPSK	1	0	22.37	22.79	22.53
		1	24	22.61	22.90	22.37
		1	49	23.22	22.97	22.11
		25	0	21.42	21.76	21.78
		25	12	21.71	21.94	21.63
		25	25	21.89	22.01	21.30
		50	0	21.67	21.84	21.62
	16QAM	1	0	21.64	22.17	21.79
		1	24	21.94	22.14	21.64
		1	49	22.50	22.35	21.26
		25	0	20.29	20.64	20.76
		25	12	20.52	20.83	20.54
		25	25	20.77	20.91	20.32
		50	0	20.49	20.81	20.52

LTE Band / BW	Modulation	RB Sizet	RB Offset	Low CH	Mid CH	High CH
				18675 CH	18900 CH	19125 CH
				1857.5 MHz	1880 MHz	1902.5 MHz
2 / 15M	QPSK	1	0	22.12	22.48	22.33
		1	37	22.88	22.88	22.43
		1	74	23.02	22.55	21.76
		36	0	21.54	22.55	21.59
		36	19	21.96	21.84	21.61
		36	39	22.18	21.89	21.32
		75	0	21.92	21.79	21.69
	16QAM	1	0	21.29	21.82	21.59
		1	37	22.20	22.02	21.84
		1	74	22.36	21.84	21.00
		36	0	20.39	21.84	20.52
		36	19	20.83	20.74	20.55
		36	39	21.14	20.81	20.22
		75	0	20.81	20.71	20.61

LTE Band / BW	Modulation	RB Sizet	RB Offset	Low CH	Mid CH	High CH
				18700 CH	18900 CH	19100 CH
				1860 MHz	1880 MHz	1900 MHz
2 / 20M	QPSK	1	0	21.94	22.57	22.21
		1	50	23.24	22.21	22.47
		1	99	22.59	22.15	21.56
		50	0	21.66	21.60	21.53
		50	25	22.20	21.91	21.82
		50	50	22.21	21.74	21.46
		100	0	22.03	21.76	21.50
	16QAM	1	0	21.23	21.97	21.61
		1	50	22.68	21.12	21.74
		1	99	22.09	21.58	20.89
		50	0	20.53	20.45	20.41
		50	25	21.15	20.76	20.77
		50	50	21.12	20.61	20.38
		100	0	20.89	20.64	20.43

EIRP Power

DCS1900 (Capsensor Off)	EIRP Power (dBm)		
	512CH	661CH	810CH
	1850.2MHz	1880MHz	1909.8MHz
GSM (CS)	-	-	-
GPRS/EDGE (GMSK)	26.82	26.85	**26.92**
	25.07	25.16	25.26
	24.19	24.14	24.29
	22.06	22.01	22.24
EDGE (8PSK)	23.59	23.73	**23.95**
	22.06	22.32	22.32
	21.02	20.92	21.19
	18.61	19.24	18.86

Modulation	Band	WCDMA Band 2(Capsensor Off)		
	Tx Channel	9262CH	9400CH	9538CH
	Rx Channel	9662CH	9800CH	9938CH
	Frequency	1852.4MHz	1880MHz	1907.6MHz
BPSK	RMC 12.2K	21.08	20.95	**21.18**
	RMC 64K	21.02	20.89	21.12
	RMC 144K	21.05	20.92	21.13
	RMC 384K	21.06	20.95	21.10
16QAM	HSDPA Subtest-1	21.03	20.90	**21.12**
	HSDPA Subtest-2	20.52	20.41	20.61
	HSDPA Subtest-3	20.00	19.88	20.12
	HSDPA Subtest-4	19.98	19.87	20.09
16QAM	HSUPA Subtest-1	21.03	20.37	20.60
	HSUPA Subtest-2	21.03	20.92	21.12
	HSUPA Subtest-3	20.01	19.91	20.11
	HSUPA Subtest-4	21.04	20.92	**21.12**
	HSUPA Subtest-5	20.99	20.88	21.07

LTE Band / BW	Modulation	RB Sizet	RB Offset	Low CH	Mid CH	High CH
				18607 CH	18900 CH	19193 CH
				1850.7 MHz	1880 MHz	1909.3 MHz
		1	0	19.89		
	QPSK					
2 / 1.4M						

LTE Band / BW	Modulation	RB Sizet	RB Offset	Low CH	Mid CH	High CH
				18650 CH	18900 CH	19150 CH
				1855 MHz	1880 MHz	1905 MHz
		1	0	20.22		

QPSK

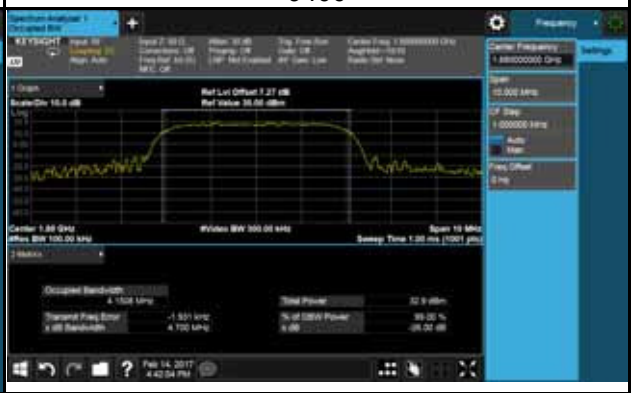
2 / 10M

ATTACHMENT B - OCCUPIED BANDWIDTH

DCS1900					
GSM			EDGE		
CS			8PSK		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
512	1850.2	0.248	512	1850.2	0.251
661	1880	0.249	661	1880	0.256
810	1909.8	0.245	810	1909.8	0.248
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
512	1850.2	0.314	512	1850.2	0.312
661	1880	0.317	661	1880	0.317
810	1909.8	0.312	810	1909.8	0.310

Spectrum Plot	
GSM -512	GSM-661
	
GSM-810	EDGE-512
	
EDGE-661	EDGE-810
	

WCDMA Band 2					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
9262	1852.4	4.150	9262	1852.4	4.702
9400	1880	4.151	9400	1880	4.700
9538	1907.6	4.142	9538	1907.6	4.725

Spectrum Plot	
9262	9400
	
9538	-
	-

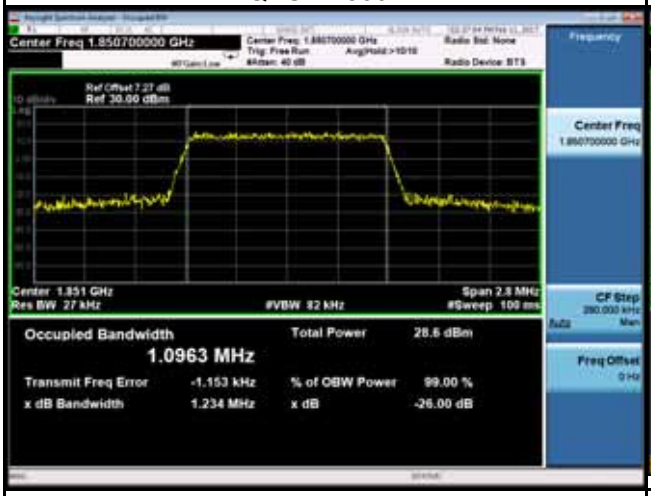
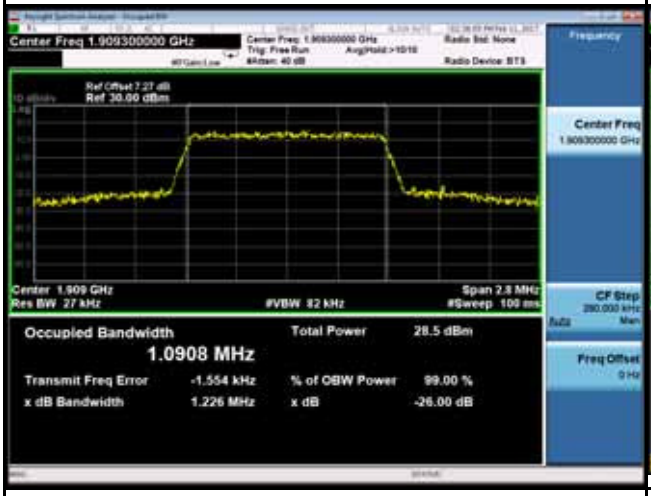
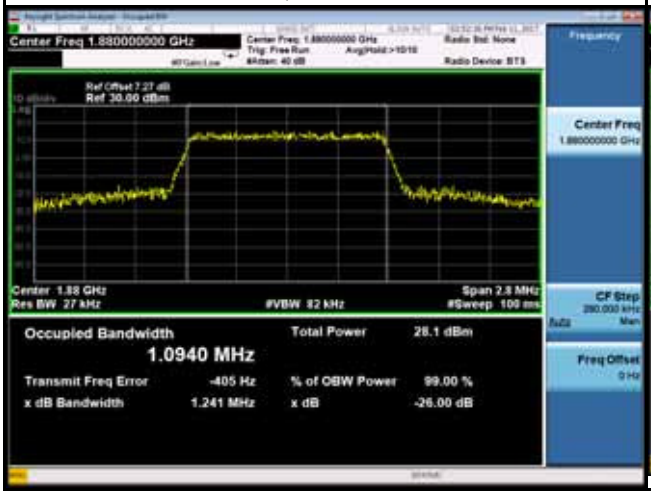
WCDMA_HSDPA Band 2					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
9262	1852.4	4.140	9262	1852.4	4.707
9400	1880	4.145	9400	1880	4.735
9538	1907.6	4.160	9538	1907.6	4.710

Spectrum Plot	
9262	9400
	
9538	-
	-

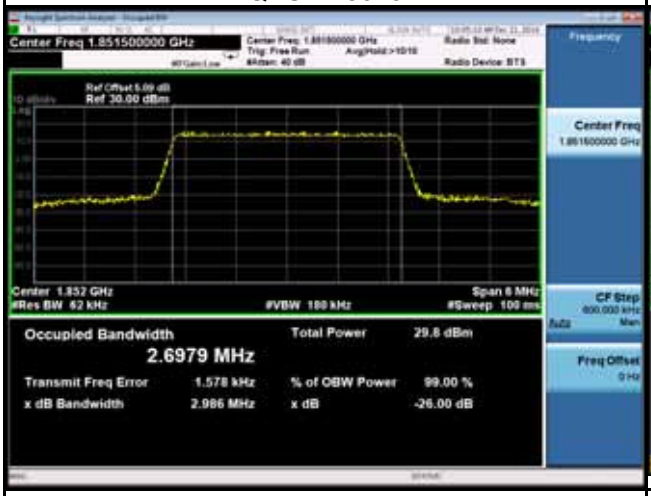
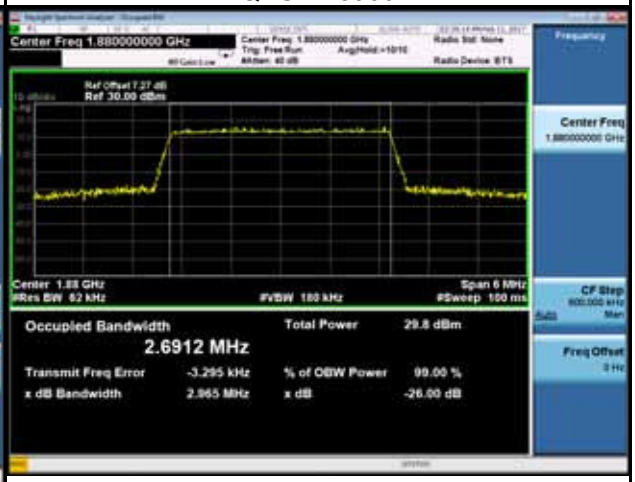
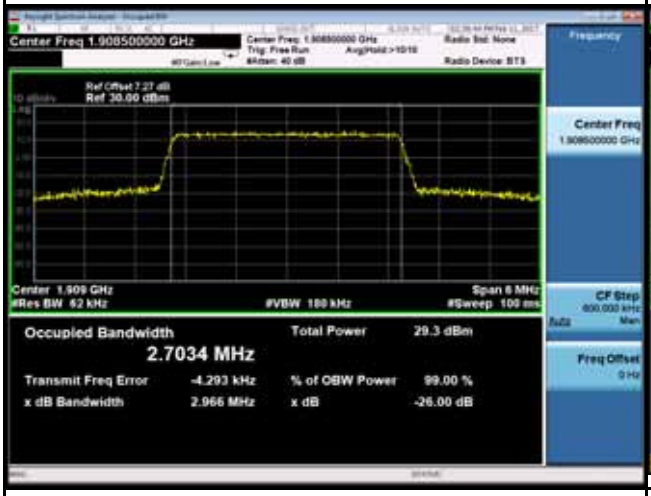
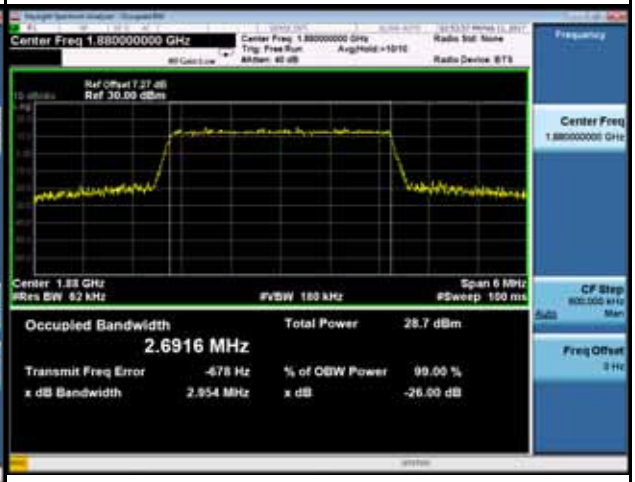
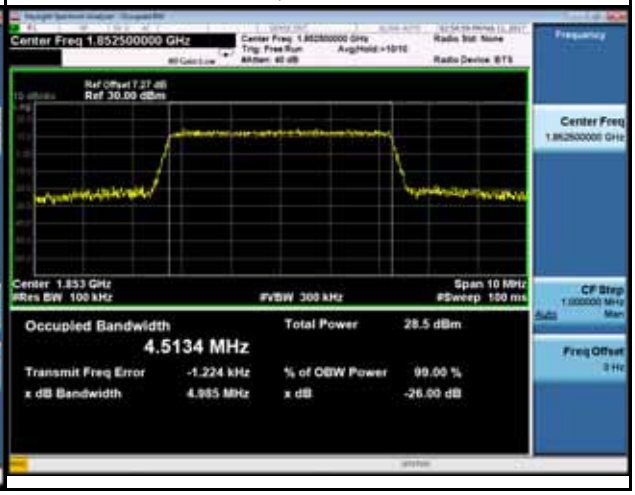
WCDMA_HSUPA Band 2					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
9262	1852.4	4.133	9262	1852.4	4.725
9400	1880	4.141	9400	1880	4.707
9538	1907.6	4.145	9538	1907.6	4.718

Spectrum Plot	
9262	9400
	
9538	-
	-

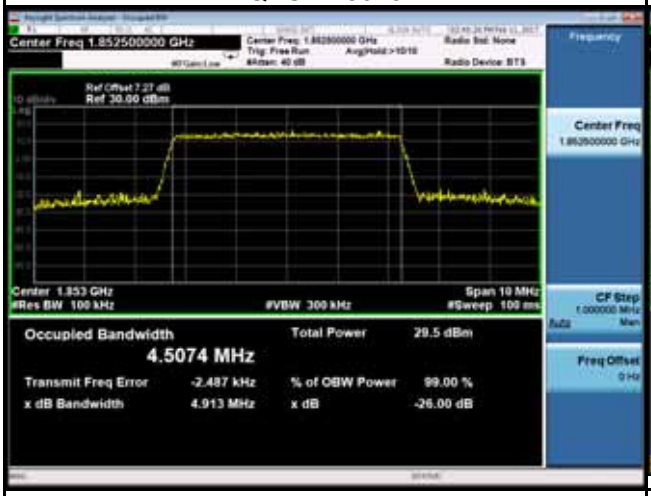
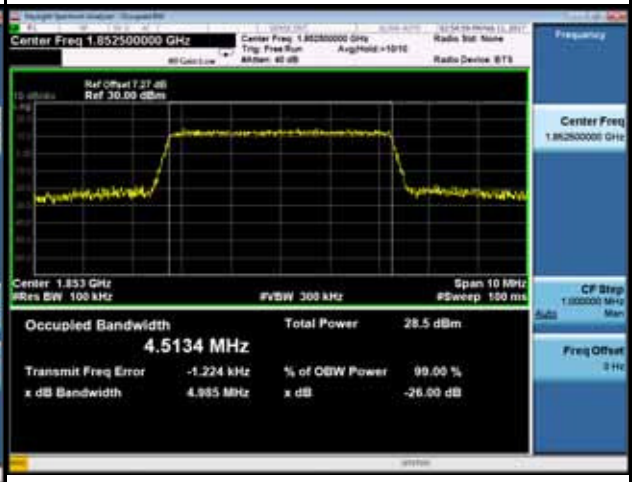
LTE Band 2_1.4M					
QPSK			16QAM		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
18607	1850.7	1.096	18607	1850.7	1.090
18900	1880	1.096	18900	1880	1.094
19193	1909.3	1.091	19193	1909.3	1.098
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
18607	1850.7	1.234	18607	1850.7	1.225
18900	1880	1.241	18900	1880	1.241
19193	1909.3	1.226	19193	1909.3	1.240

Spectrum Plot	
QPSK-18607	QPSK-18900
	
QPSK-19193	16QAM-18607
	
16QAM-18900	16QAM-19193
	

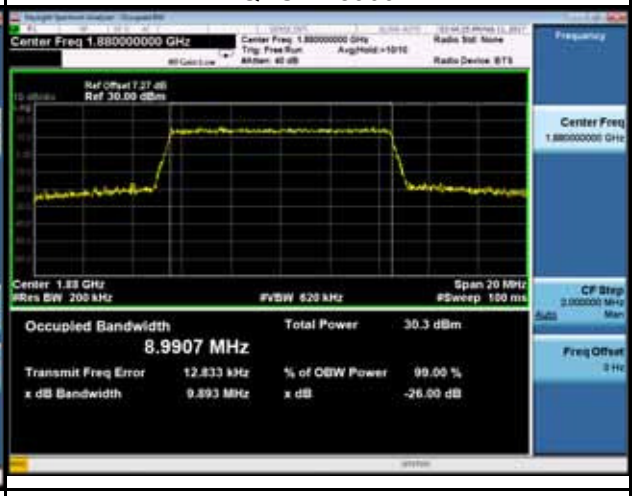
LTE Band 2_3M					
QPSK			16QAM		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
18615	1851.5	2.700	18615	1851.5	2.706
18900	1880	2.691	18900	1880	2.692
19185	1908.5	2.703	19185	1908.5	2.705
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
18615	1851.5	2.940	18615	1851.5	2.975
18900	1880	2.965	18900	1880	2.954
19185	1908.5	2.966	19185	1908.5	2.964

Spectrum Plot	
QPSK-18615	QPSK-18900
	
QPSK-19185	16QAM-18615
	
16QAM-18900	16QAM-19185
	

LTE Band 2_5M					
QPSK			16QAM		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
18625	1852.5	4.507	18625	1852.5	4.513
18900	1880	4.505	18900	1880	4.500
19175	1907.5	4.507	19175	1907.5	4.506
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
18625	1852.5	4.913	18625	1852.5	4.985
18900	1880	4.965	18900	1880	4.930
19175	1907.5	4.958	19175	1907.5	4.977

Spectrum Plot	
QPSK-18625	QPSK-18900
	
QPSK-19175	16QAM-18625
	
16QAM-18900	16QAM-19175
	

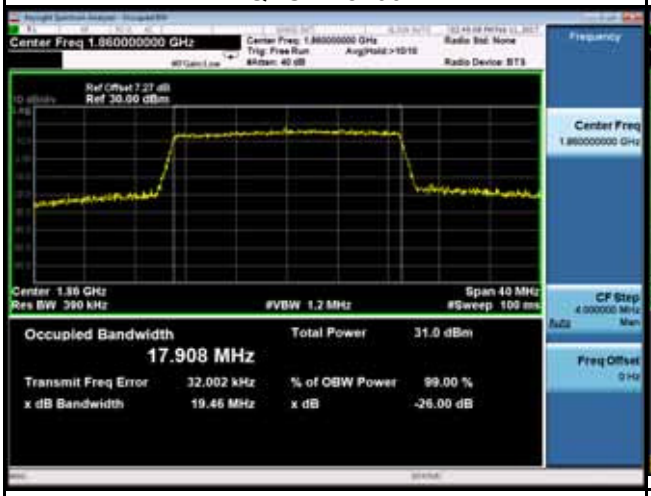
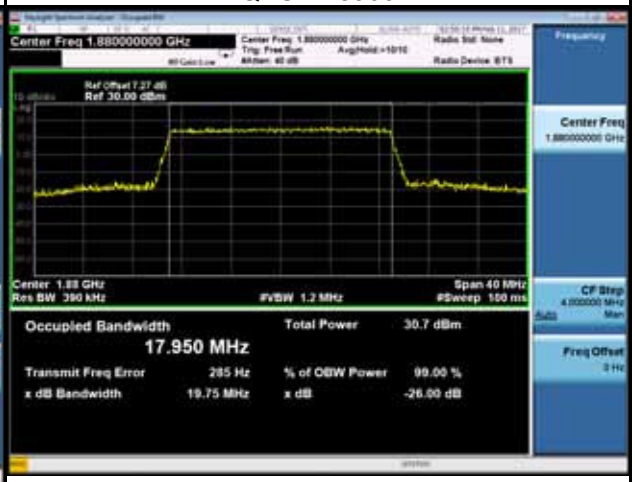
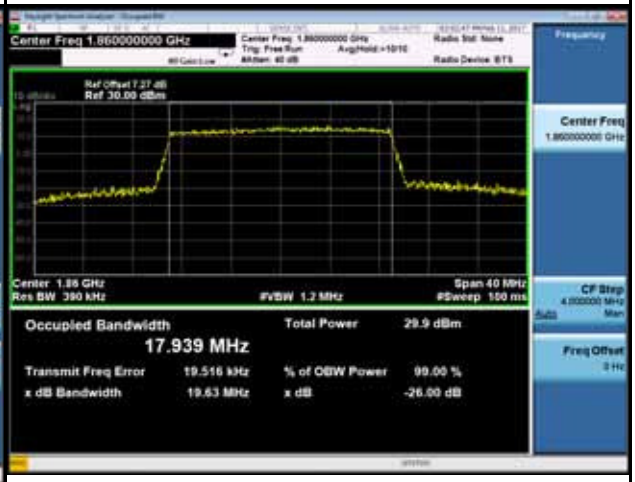
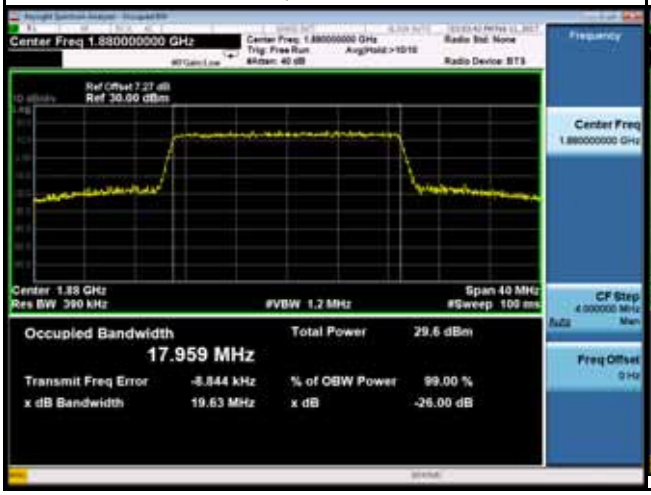
LTE Band 2_10M					
QPSK			16QAM		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
18650	1855	8.993	18650	1855	9.002
18900	1880	8.991	18900	1880	8.976
19150	1905	8.998	19150	1905	9.002
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
18650	1855	9.850	18650	1855	9.884
18900	1880	9.893	18900	1880	9.866
19150	1905	9.901	19150	1905	9.946

Spectrum Plot	
QPSK-18650	QPSK-18900
	
QPSK-19150	16QAM-18650
	
16QAM-18900	16QAM-19150
	

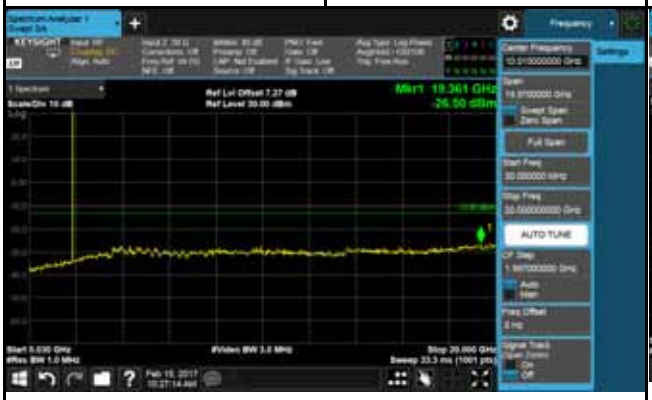
LTE Band 2_15M					
QPSK			16QAM		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
18675	1857.5	13.463	18675	1857.5	13.516
18900	1880	13.466	18900	1880	13.482
19125	1902.5	13.441	19125	1902.5	13.459
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
18675	1857.5	14.920	18675	1857.5	14.960
18900	1880	14.880	18900	1880	14.960
19125	1902.5	14.810	19125	1902.5	14.950

Spectrum Plot	
QPSK-18675	QPSK-18900
	
QPSK-19125	16QAM-18675
	
16QAM-18900	16QAM-19125
	

LTE Band 2_20M					
QPSK			16QAM		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
18700	1860	17.908	18700	1860	17.939
18900	1880	17.950	18900	1880	17.959
19100	1900	18.178	19100	1900	17.960
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
18700	1860	19.460	18700	1860	19.630
18900	1880	19.750	18900	1880	19.630
19100	1900	20.410	19100	1900	19.820

Spectrum Plot	
QPSK-18700	QPSK-18900
	
QPSK-19100	16QAM-18700
	
16QAM-18900	16QAM-19100
	

ATTACHMENT C - CONDUCTED EMISSIONS

DCS1900			
GSM		GSM	
Channel	Frequency(MHz)	Channel	Frequency(MHz)
661	1880	661	1880
			
GSM		EDGE	
Channel	Frequency(MHz)	Channel	Frequency(MHz)
661	1880	661	1880
			
EDGE		EDGE	
Channel	Frequency(MHz)	Channel	Frequency(MHz)
661	1880	661	1880
			

<table>
<tr><td colspan="4">WCDMA Band 2</td></tr>
<tr><td>Channel</td><td>Frequency(MHz)</td><td>Channel</td><td>Frequency(MHz)</td></tr>
<tr><td>9400</td><td>1880</td><td>9400</td><td>1880</td></tr>
<tr><td>  </td><td></td><td>  </td><td></td></tr>
<tr><td>Channel</td><td>Frequency(MHz)</td><td>-</td><td>-</td></tr>
<tr><td>9400</td><td>1880</td><td>-</td><td>-</td></tr>
<tr><td>  </td><td></td><td>-</td><td></td></tr>
</table>

WCDMA_HSDPA Band 2			
Channel	Frequency(MHz)	Channel	Frequency(MHz)
9400	1880	9400	1880
			
Channel	Frequency(MHz)	-	-
9400	1880	-	-
		-	

WCDMA_HSUPA Band 2			
Channel	Frequency(MHz)	Channel	Frequency(MHz)
9400	1880	9400	1880
			
Channel	Frequency(MHz)	-	-
9400	1880	-	-
		-	

LTE Band 2_1.4M			
Channel	Frequency(MHz)	Channel	Frequency(MHz)
18900	1880	18900	1880
			
Channel	Frequency(MHz)	-	-
18900	1880	-	-
		-	

LTE Band 2_3M			
Channel	Frequency(MHz)	Channel	Frequency(MHz)
18900	1880	18900	1880
			
Channel	Frequency(MHz)	-	-
18900	1880	-	-
		-	

LTE Band 2_5M			
Channel	Frequency(MHz)	Channel	Frequency(MHz)
18900	1880	18900	1880
			
Channel	Frequency(MHz)	-	-
18900	1880	-	-
		-	

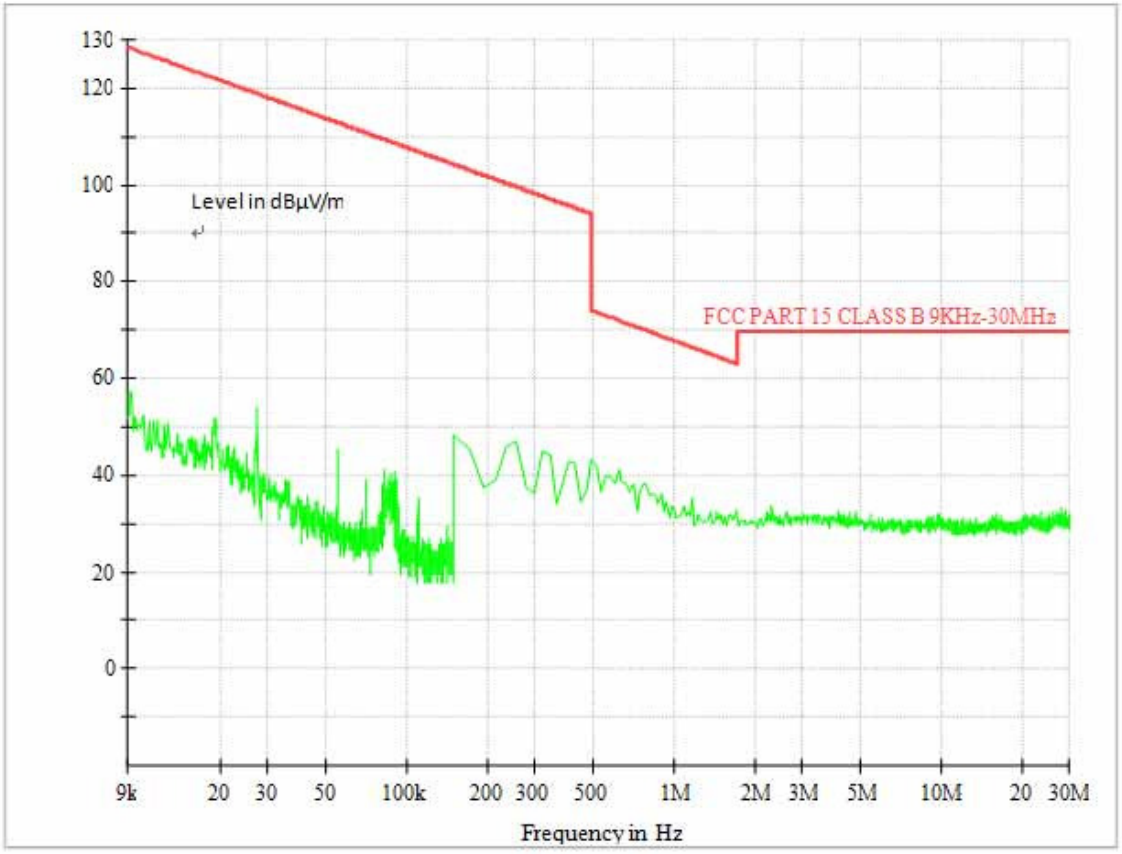
LTE Band 2_10M			
Channel	Frequency(MHz)	Channel	Frequency(MHz)
18900	1880	18900	1880
			
Channel	Frequency(MHz)	-	-
18900	1880	-	-
		-	

LTE Band 2_15M			
Channel	Frequency(MHz)	Channel	Frequency(MHz)
18900	1880	18900	1880
			
Channel	Frequency(MHz)	-	-
18900	1880	-	-
		-	

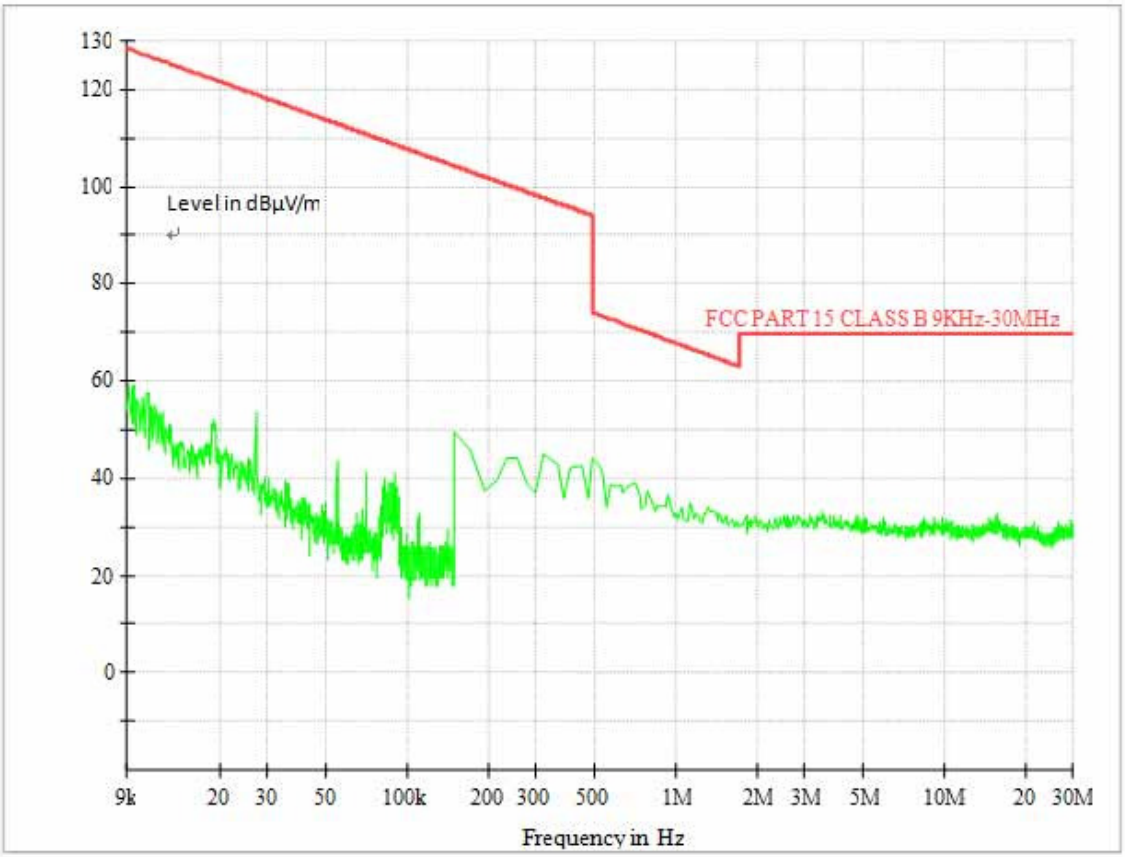
LTE Band 2_20M			
Channel	Frequency(MHz)	Channel	Frequency(MHz)
18900	1880	18900	1880
			
Channel	Frequency(MHz)	-	-
18900	1880	-	-
		-	

ATTACHMENT D - RADIATED EMISSION

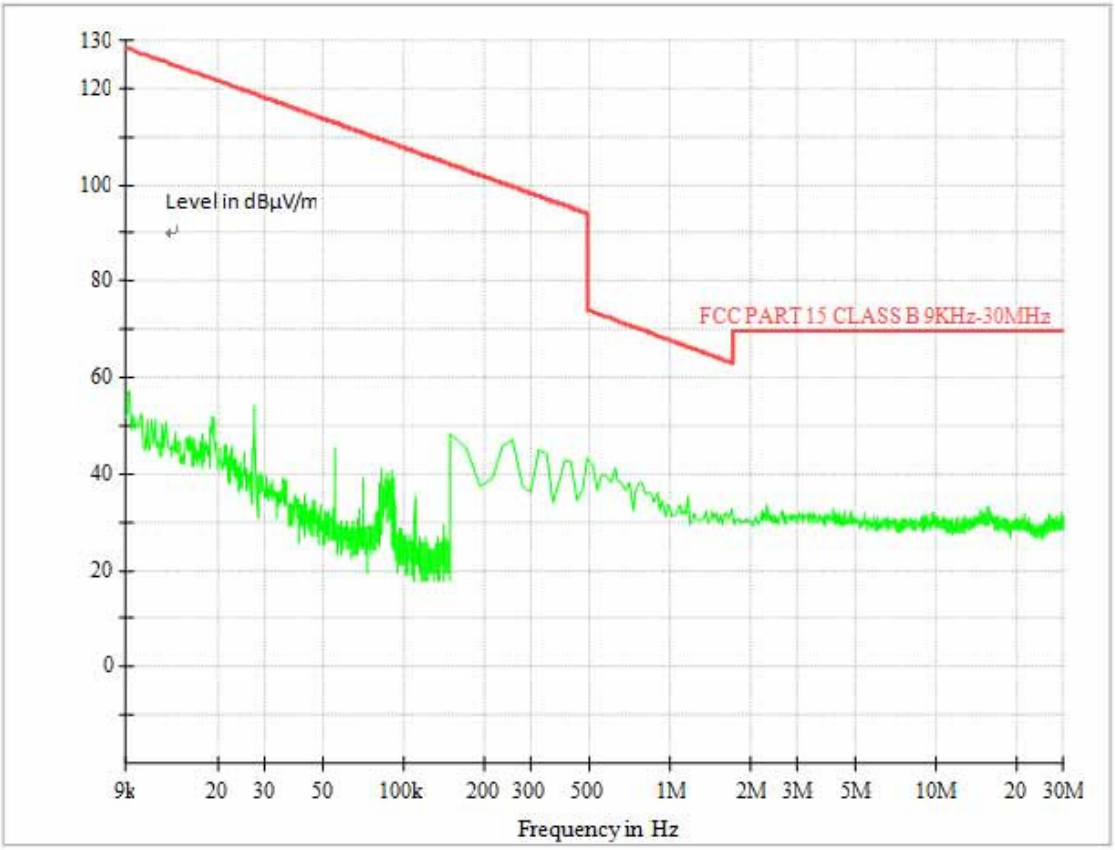
Test Mode:	TX Mode_ DCS1900



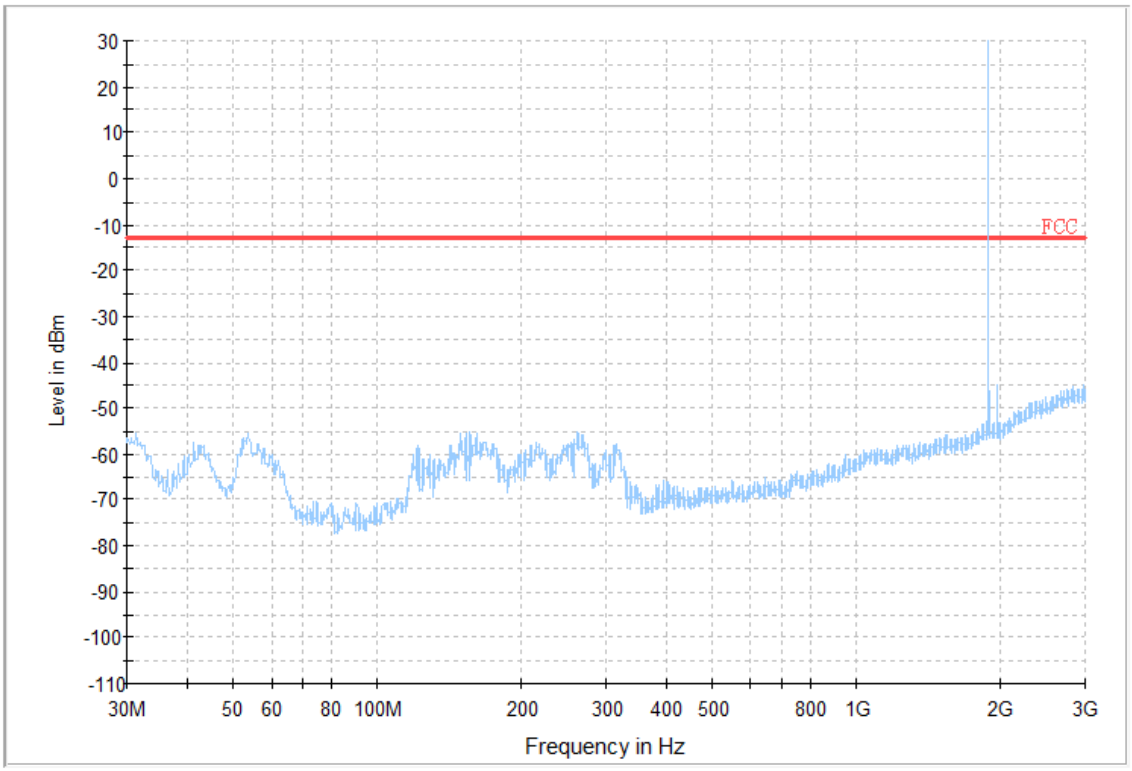
Test Mode:	TX Mode_WCDMABand 2

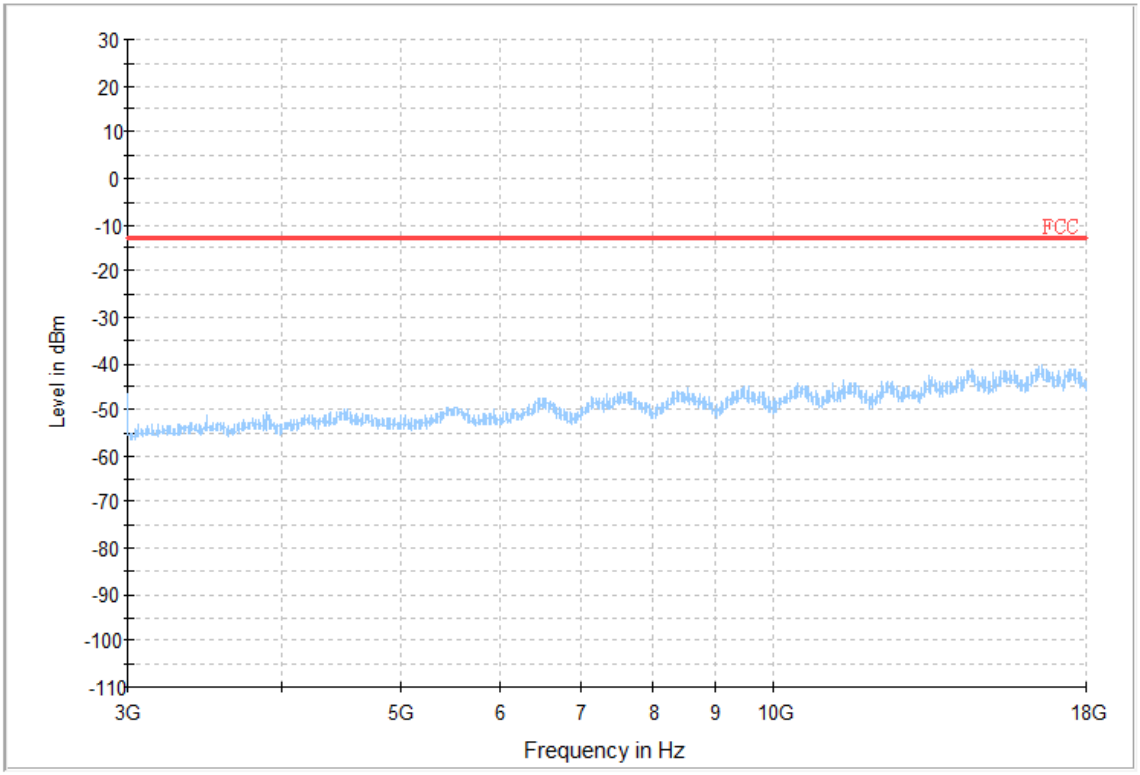


Test Mode:	TX Mode_LTEBand 2

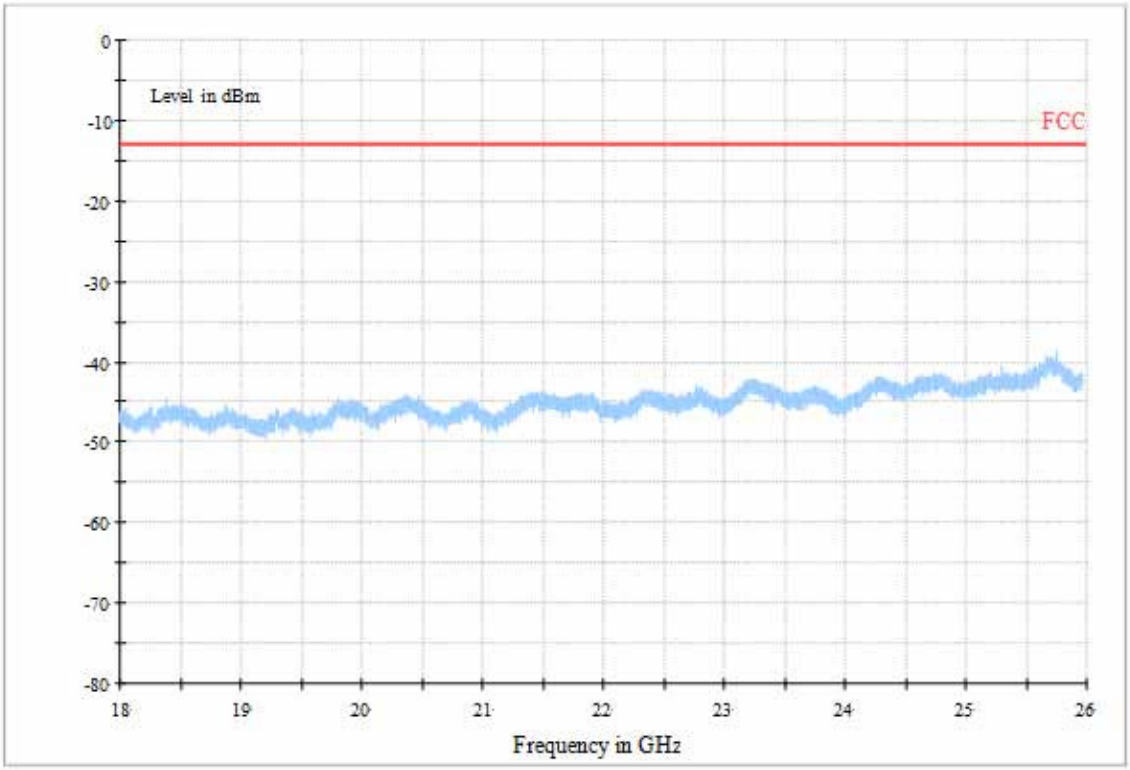


Test Mode:	DCS1900_TX CH661_GSM

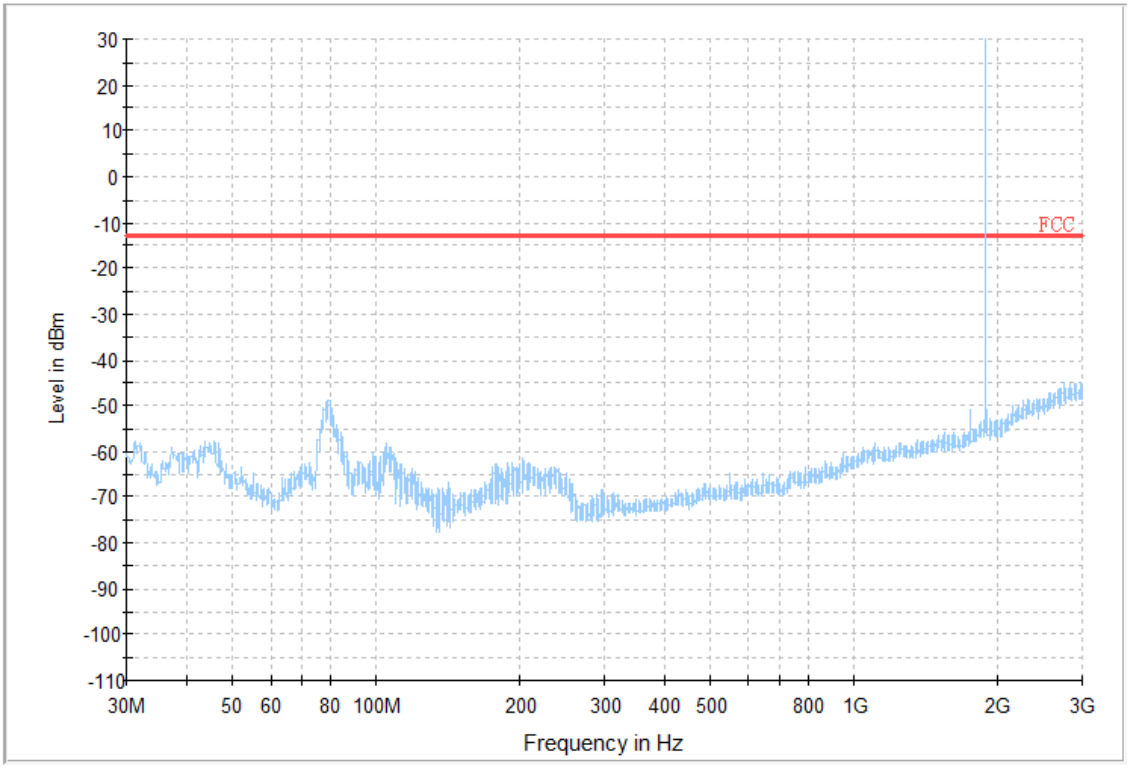


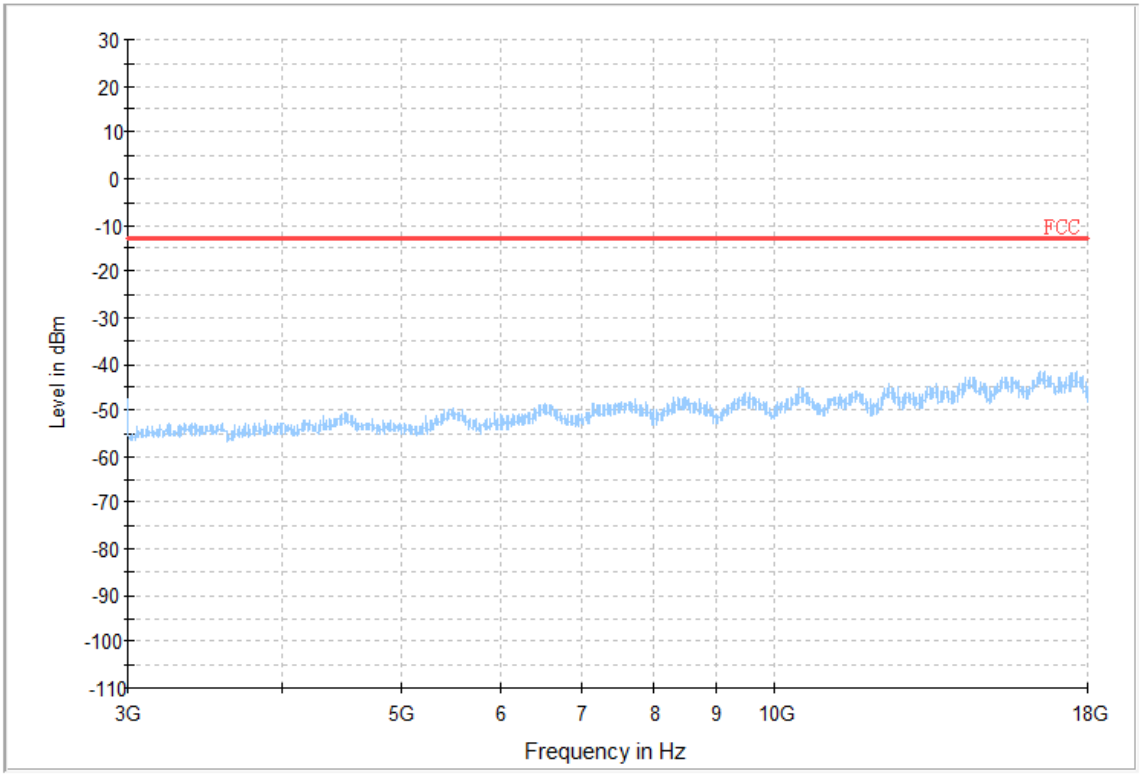


Test Mode:	DCS1900_TX CH661_GSM

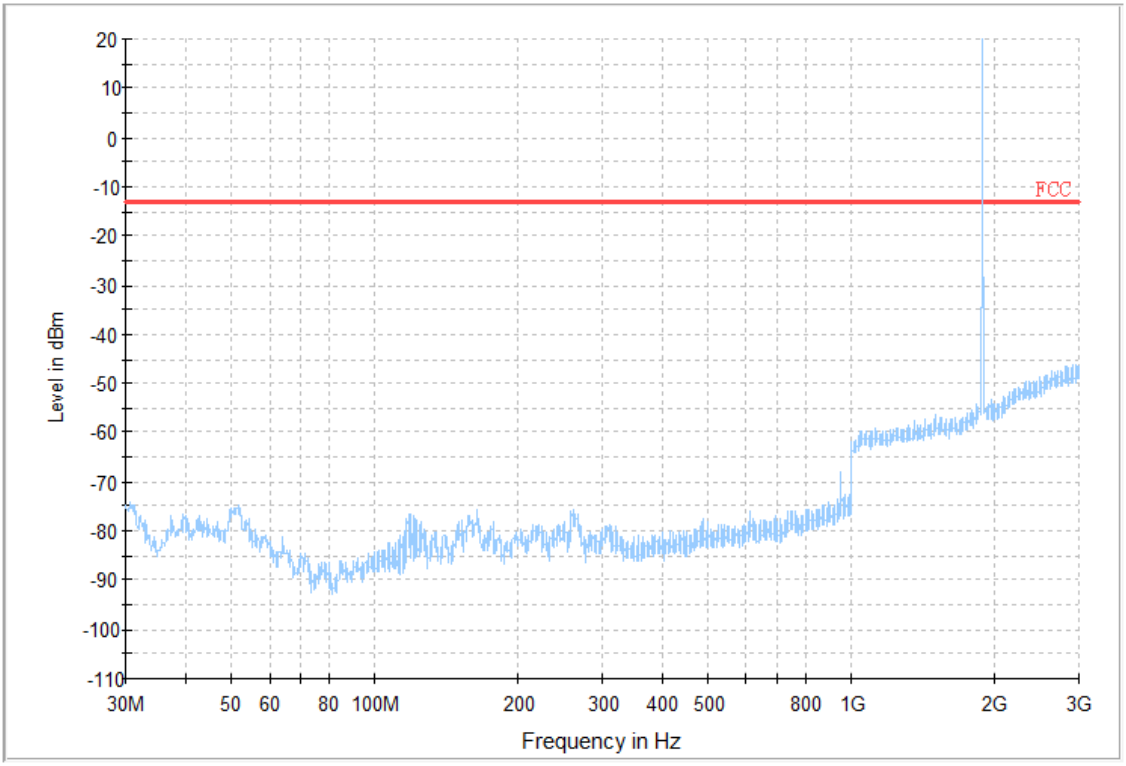


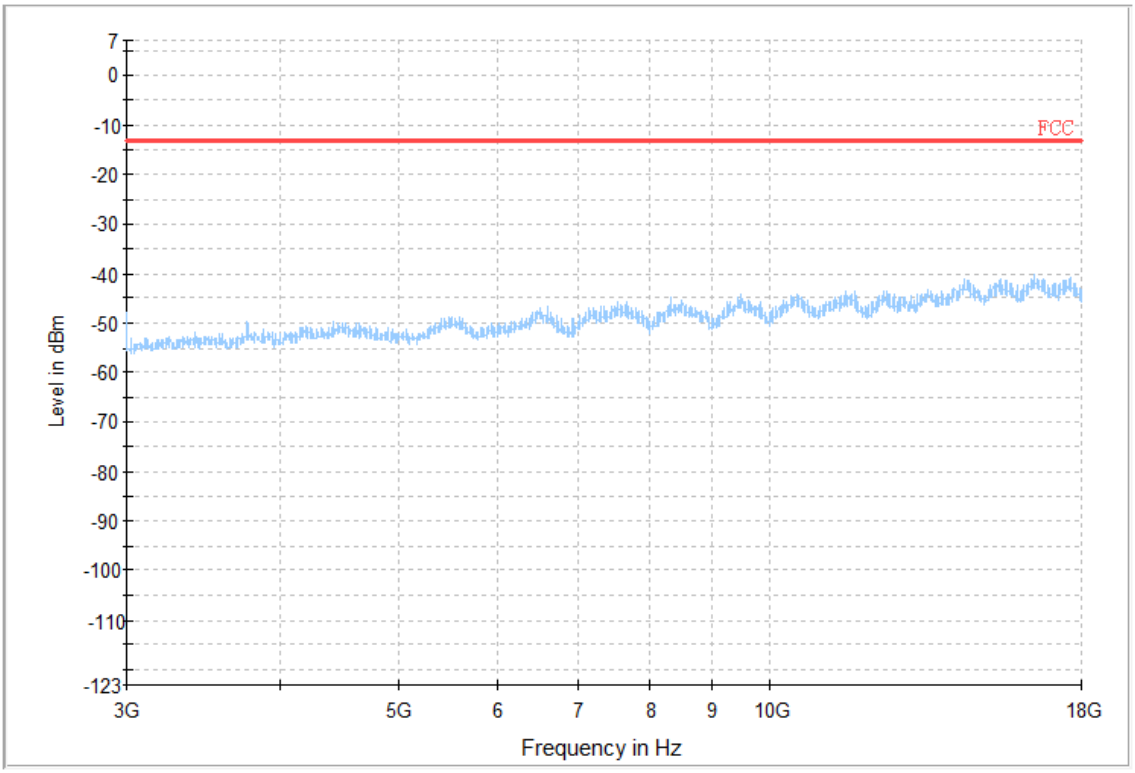
Test Mode:	DCS1900_TX CH661_EDGE



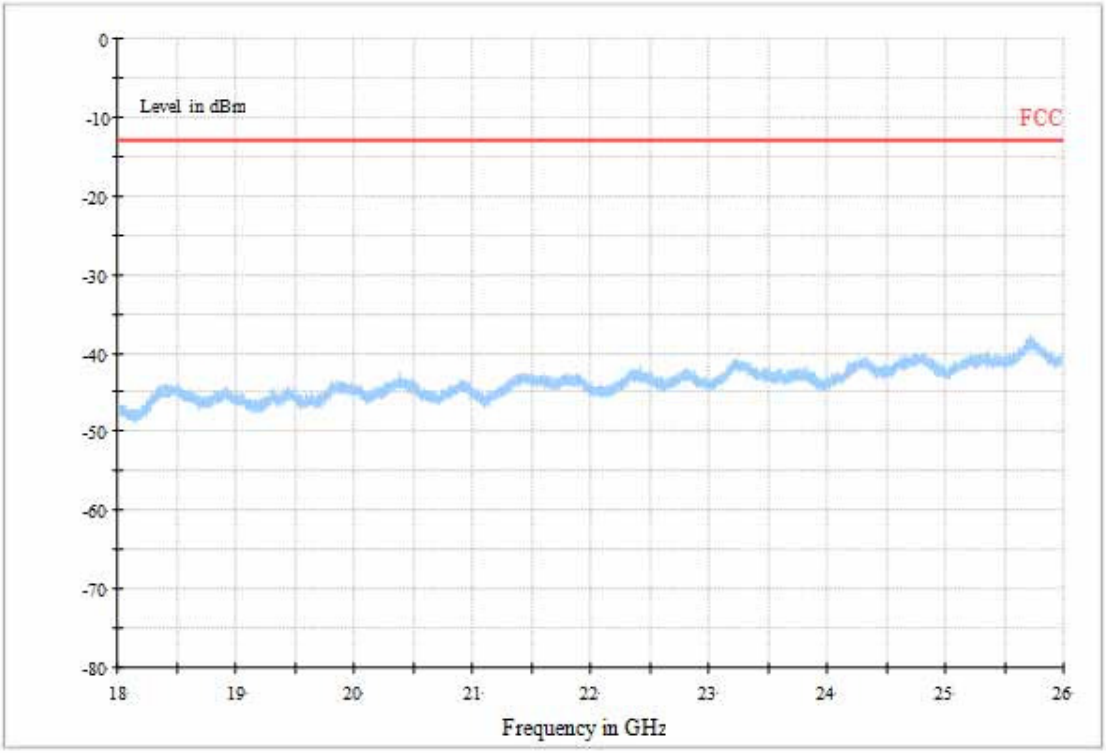


Test Mode:	WCDMA Band 2_TX CH9400

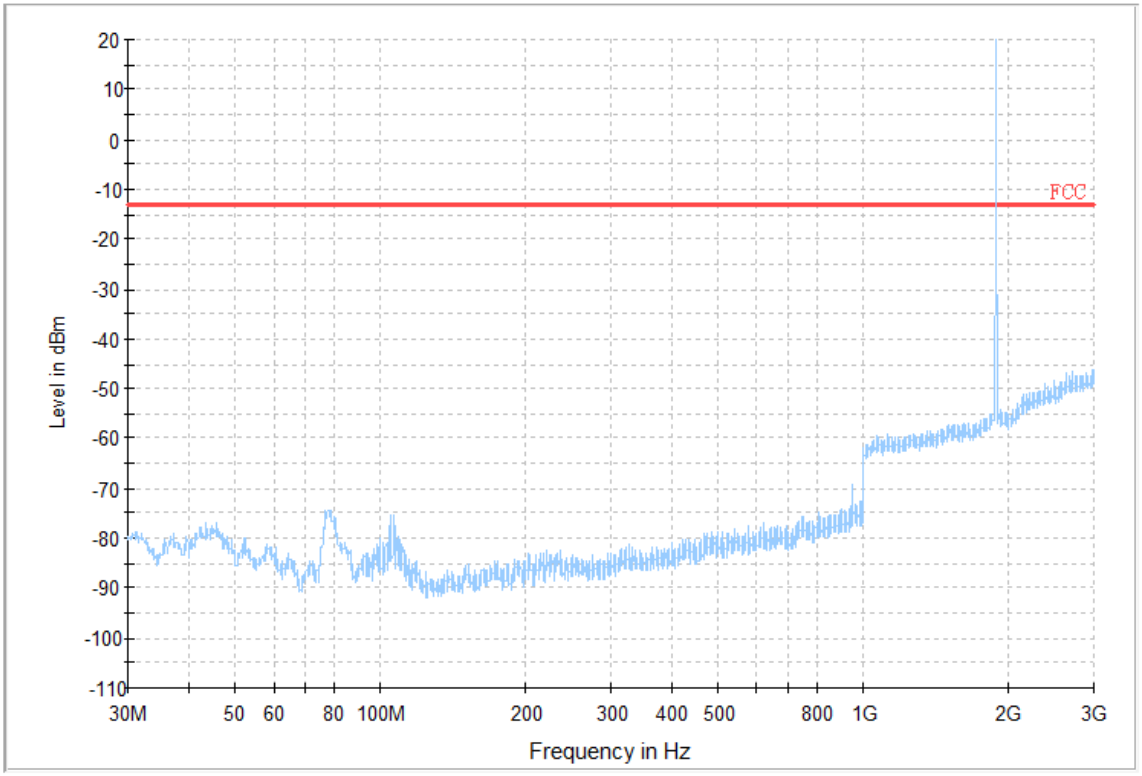


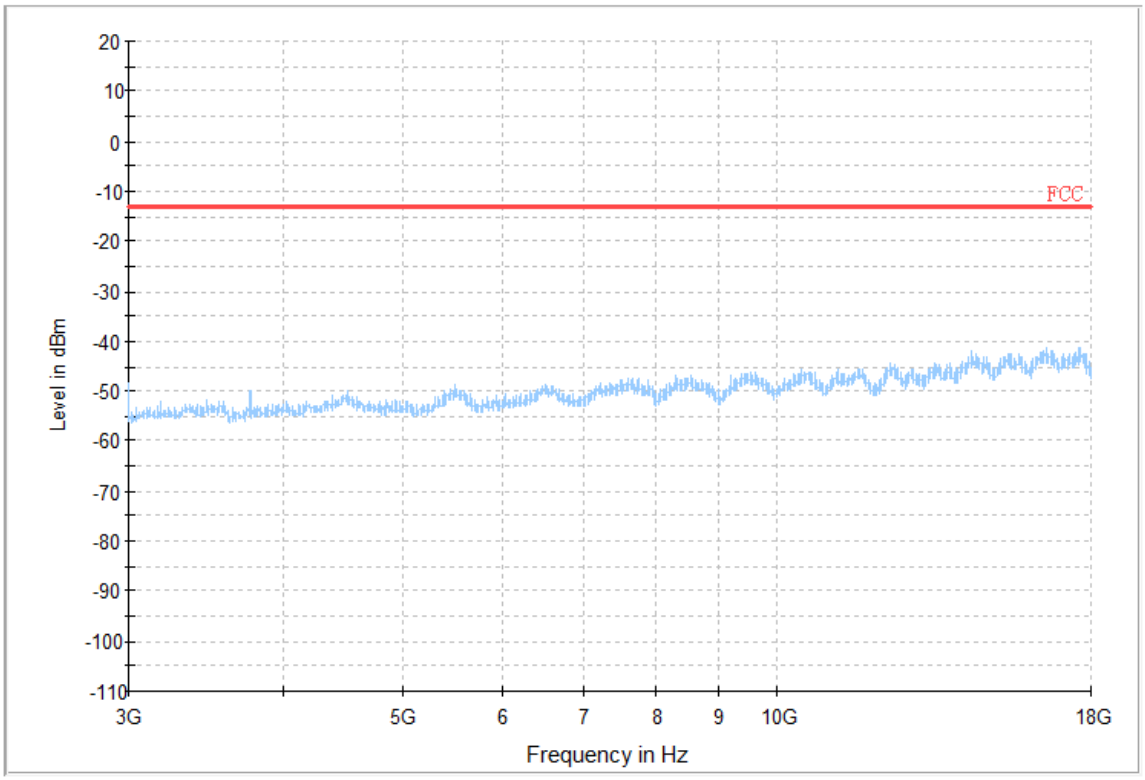


Test Mode:	WCDMA Band 2_TX CH9400

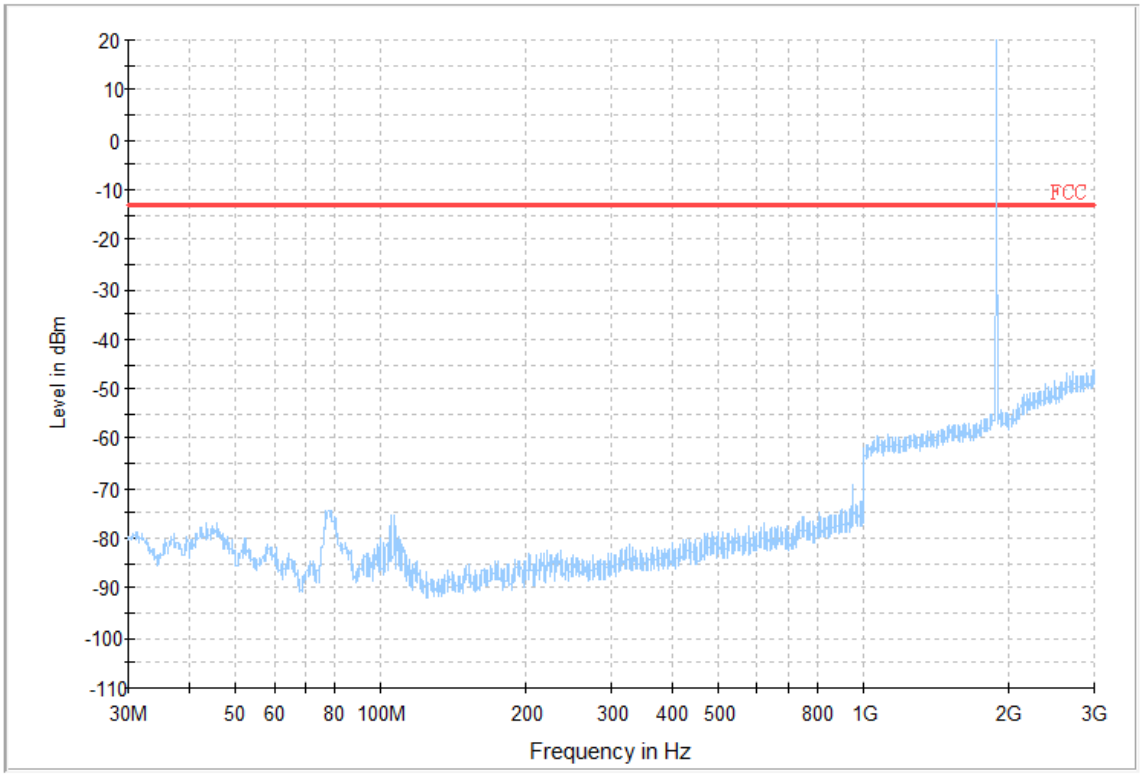


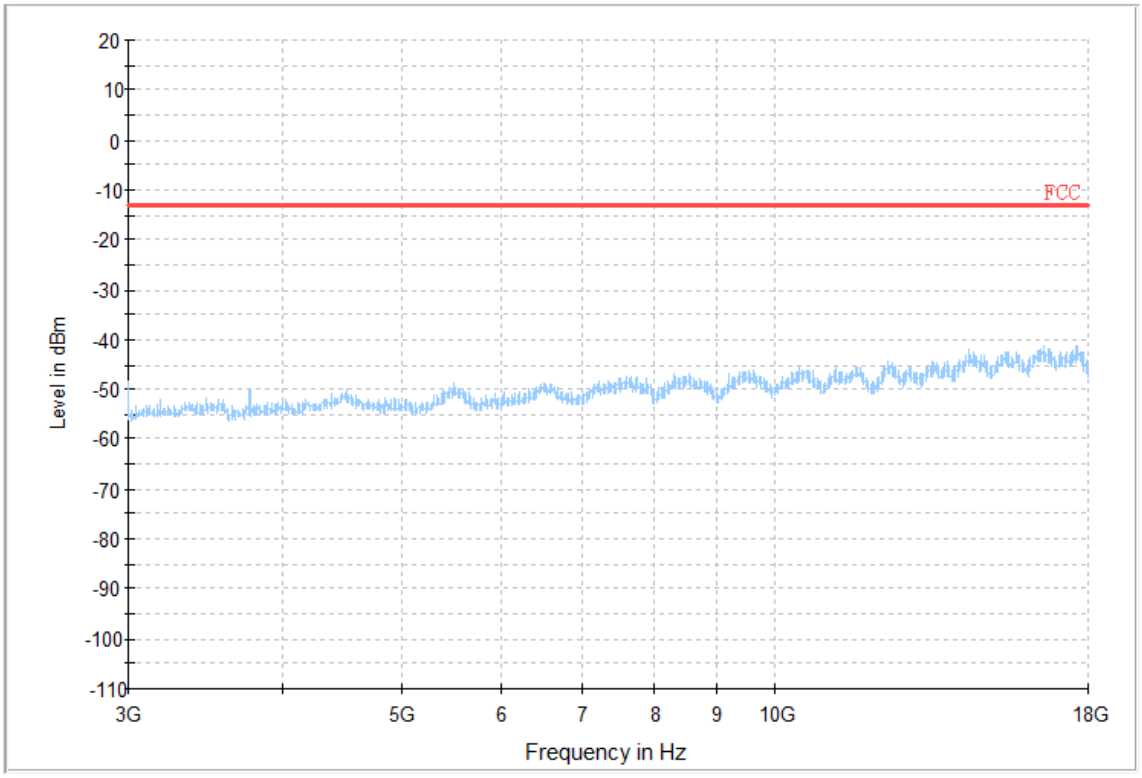
Test Mode:	HSUPA Band 2_TX CH9400



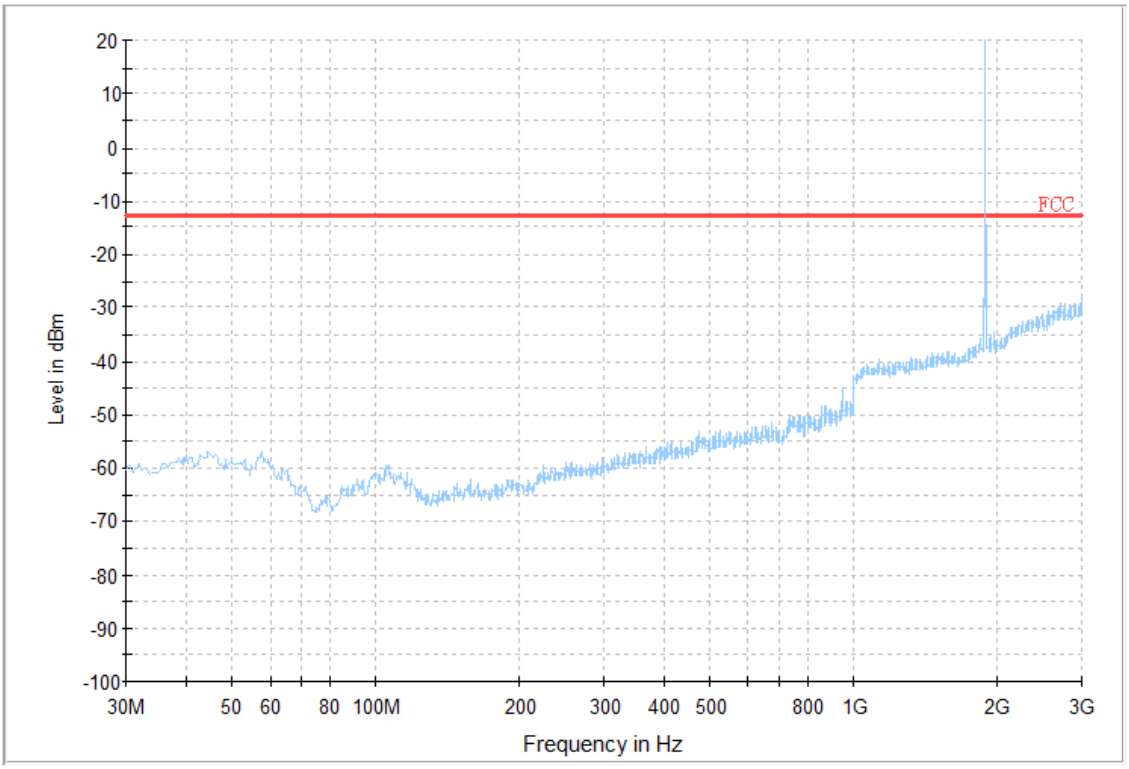


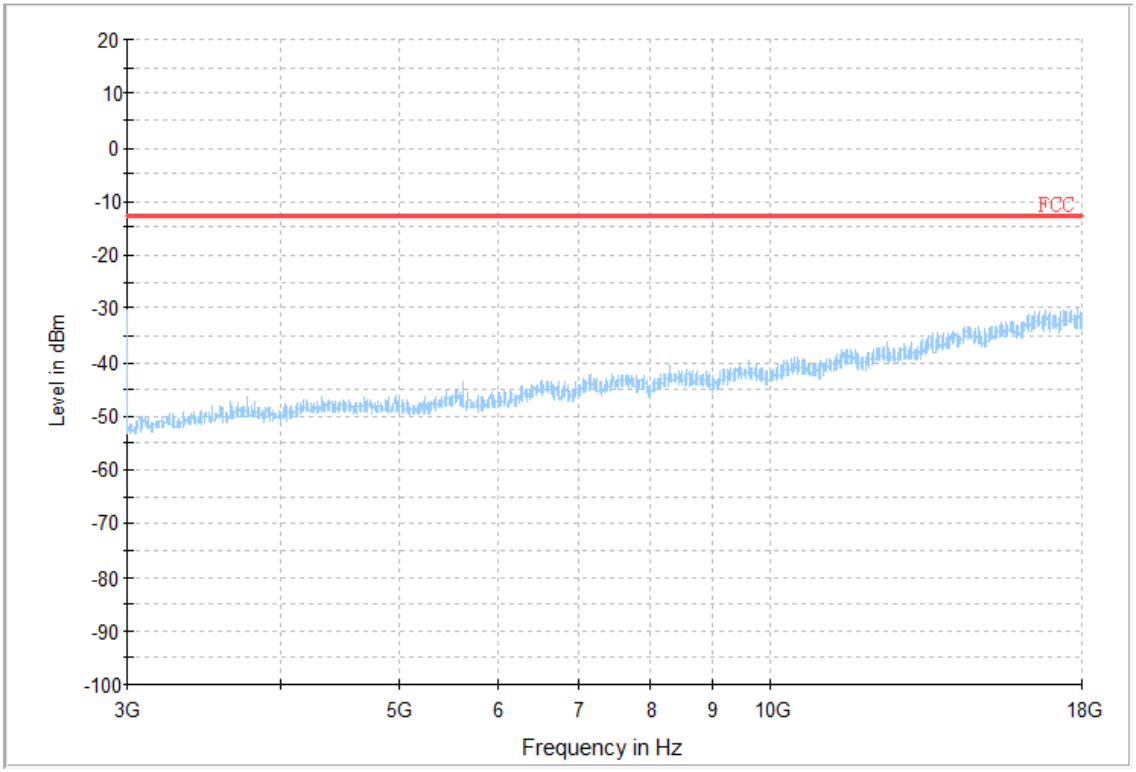
Test Mode:	HSDPA Band 2_TX CH9400



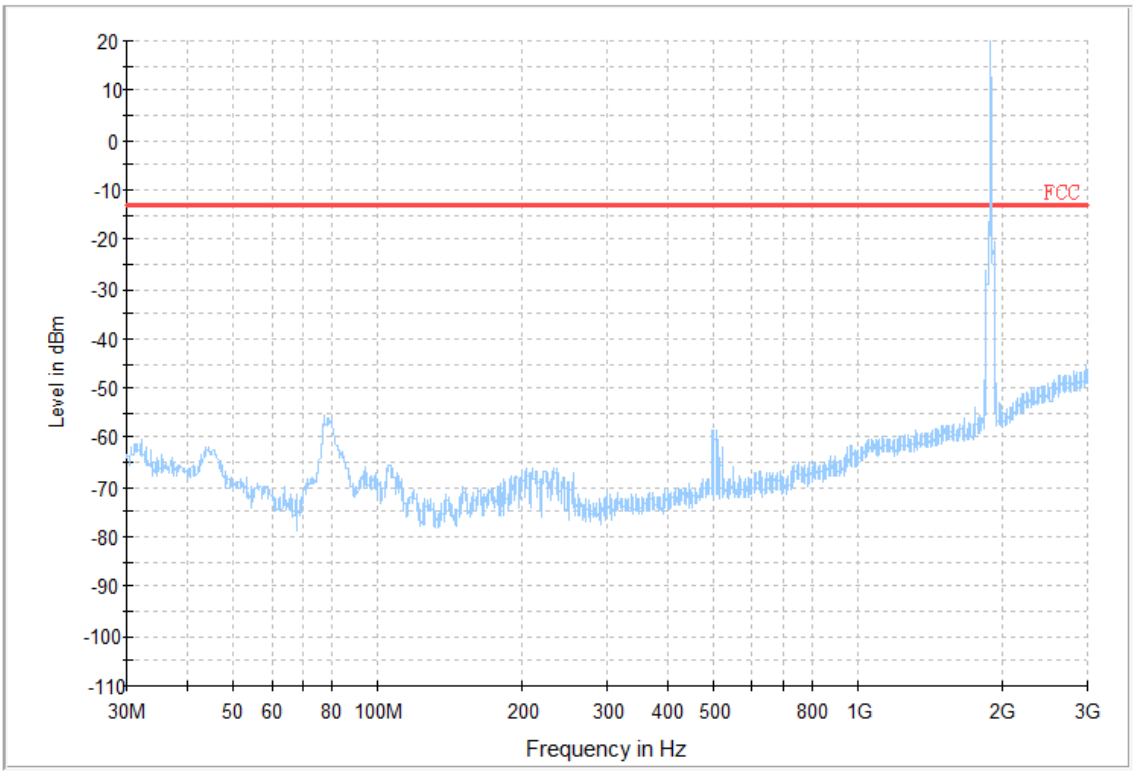


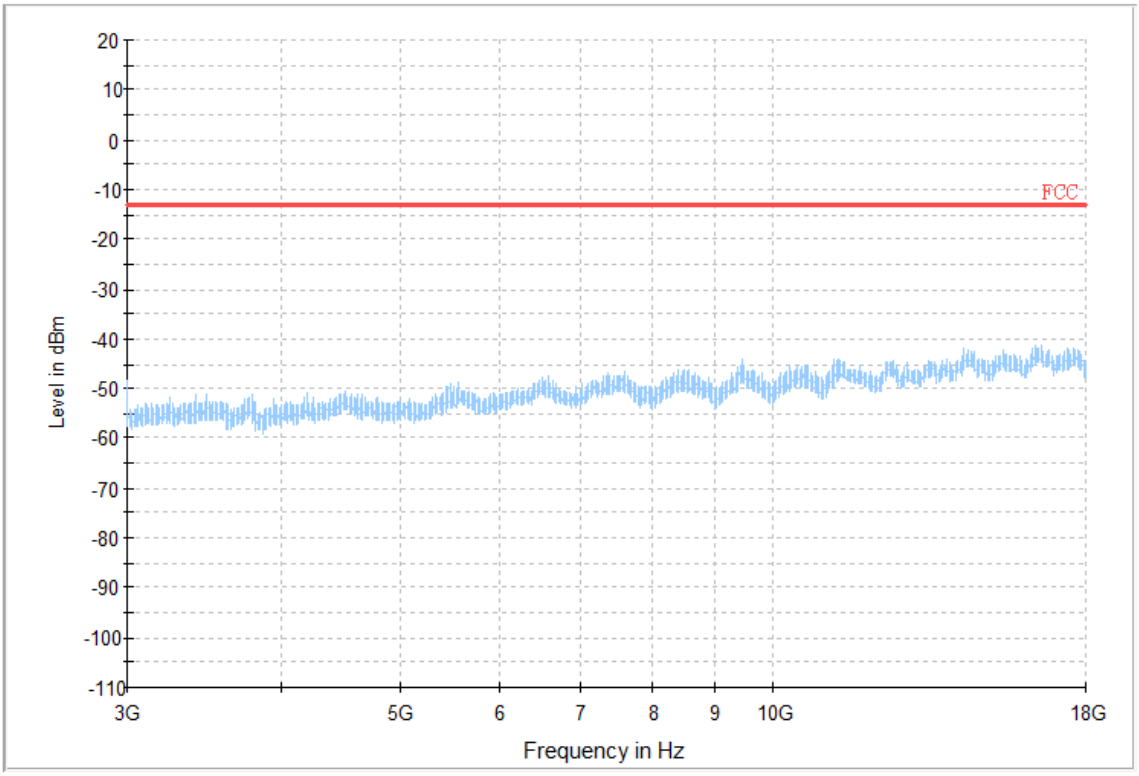
Test Mode:	LTE Band 2_TX CH18900_1.4M



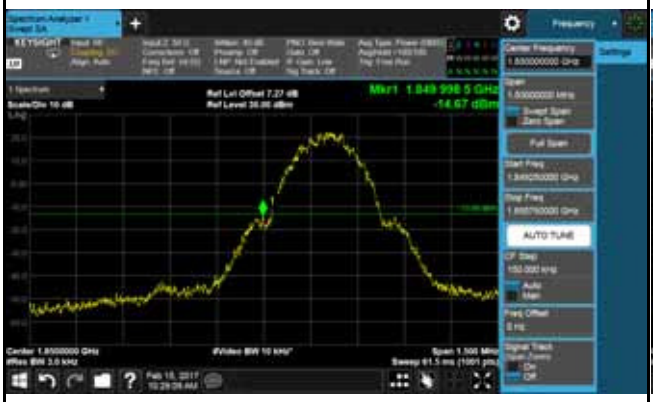
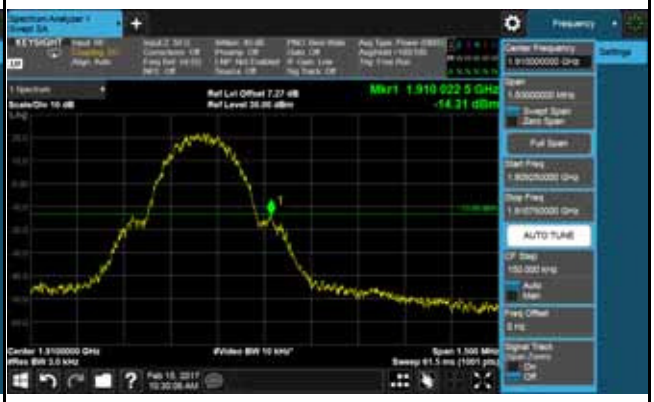
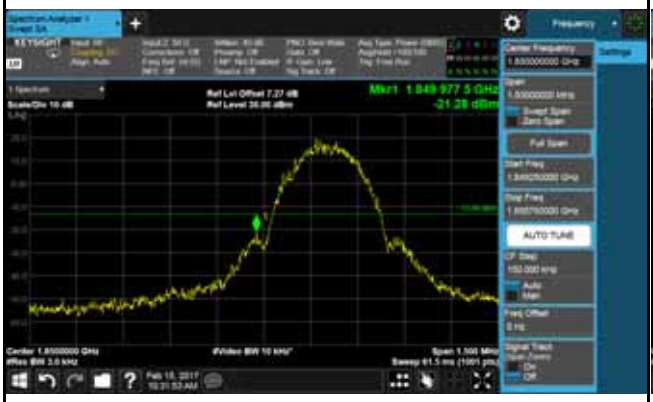
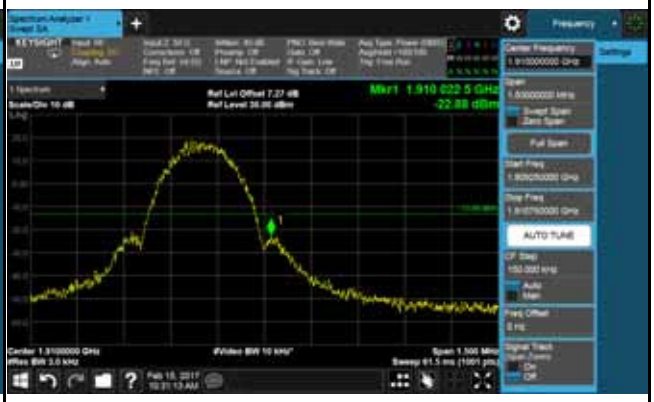


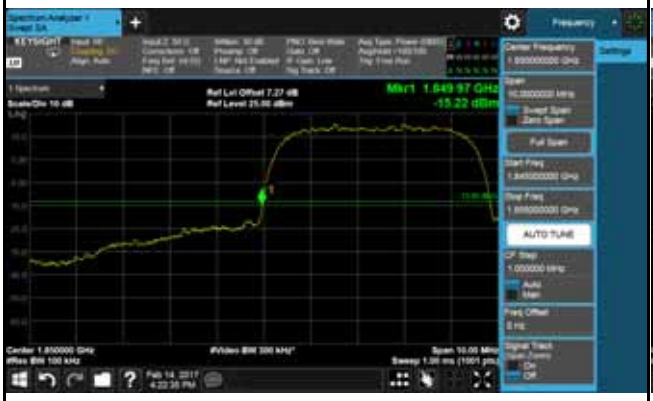
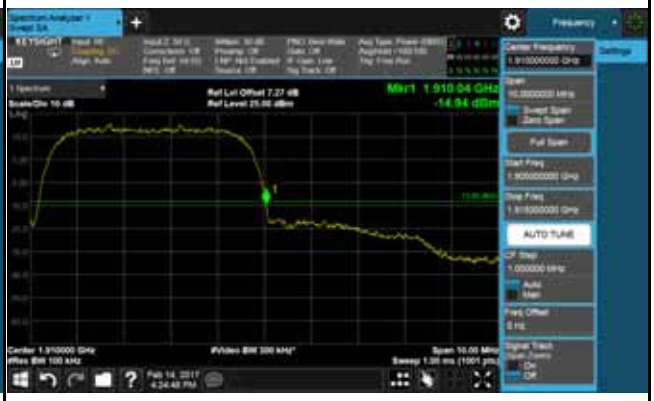
Test Mode:	LTE Band 2_TX CH18900_20M

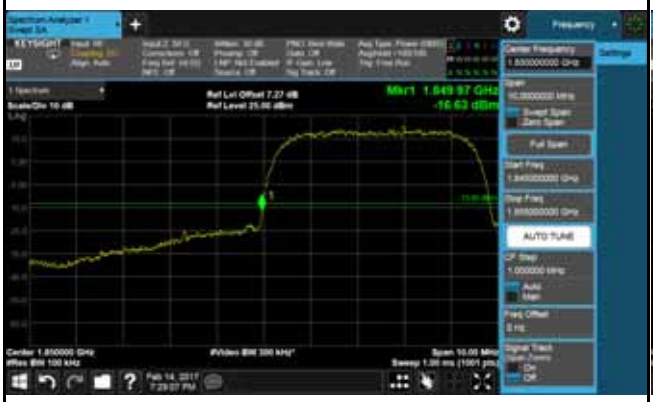
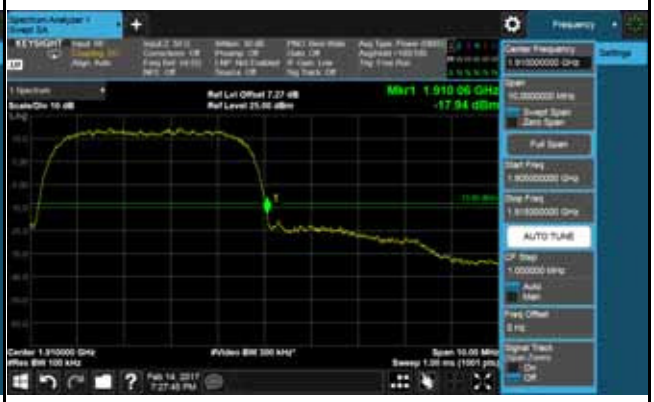


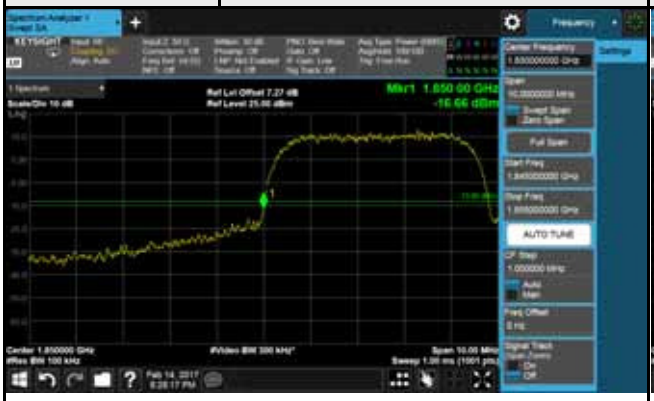


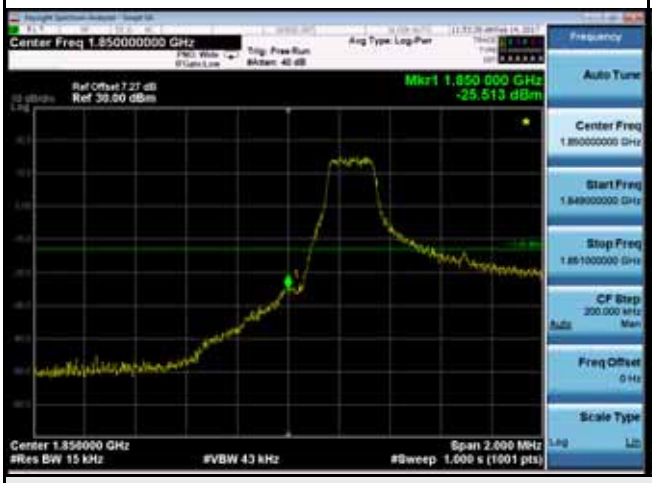
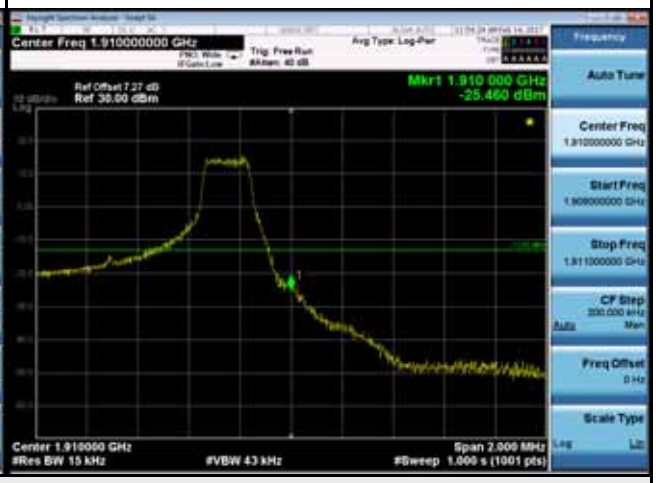
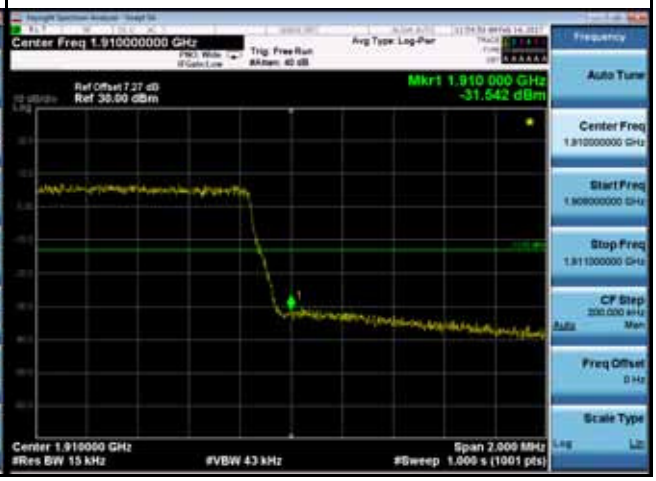
ATTACHMENT E - BAND EDGE

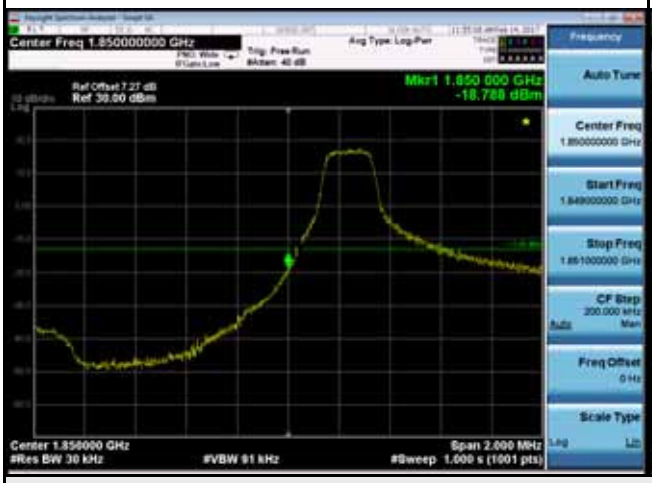
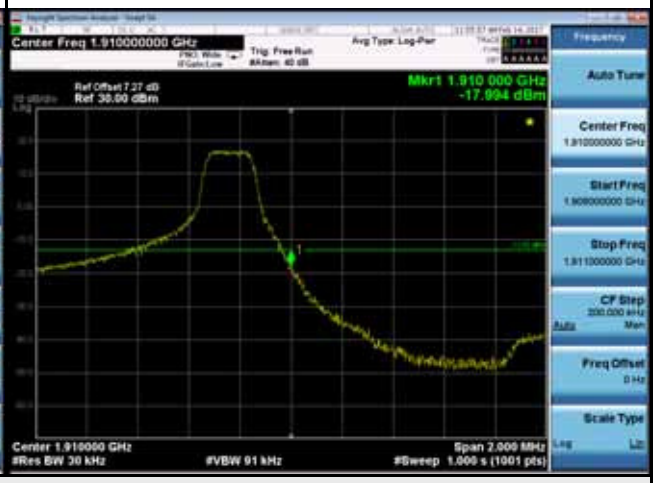
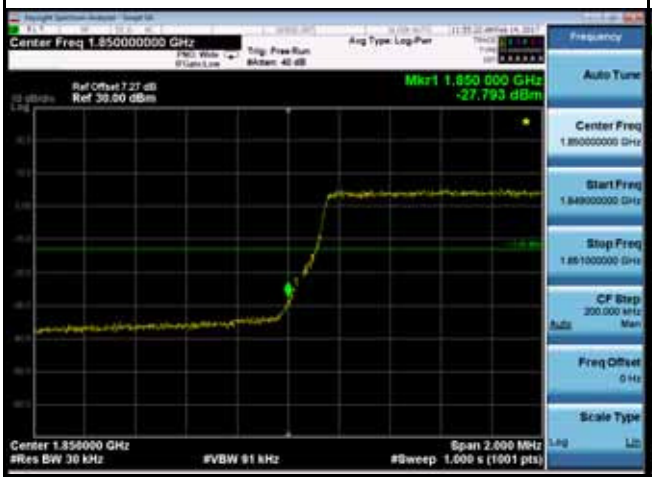
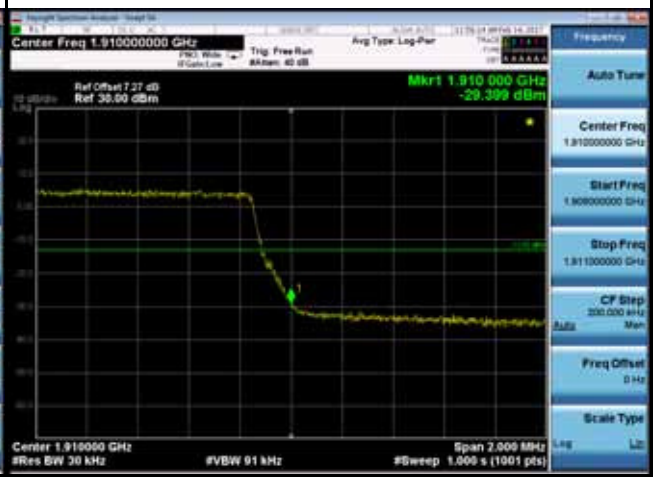
DCS1900			
GSM			
Channel	512	Channel	810
			
EDGE			
Channel	512	Channel	810
			

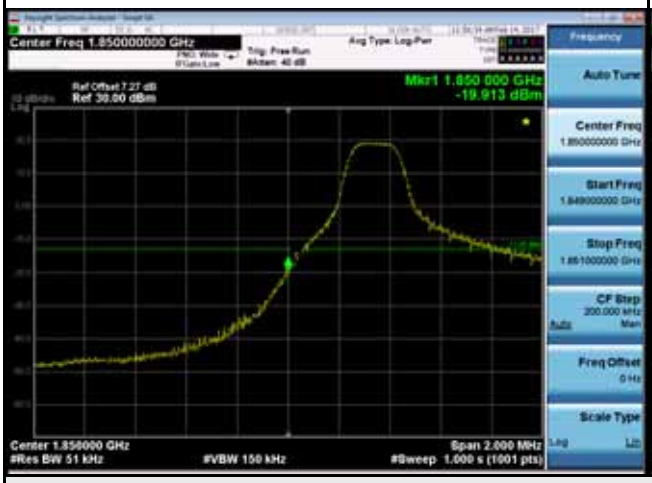
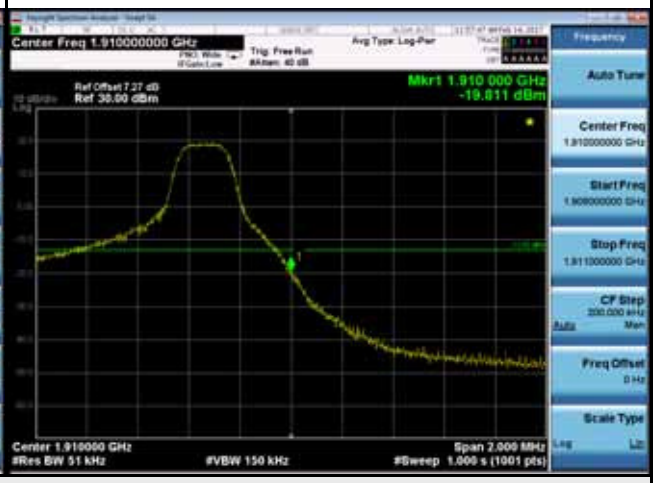
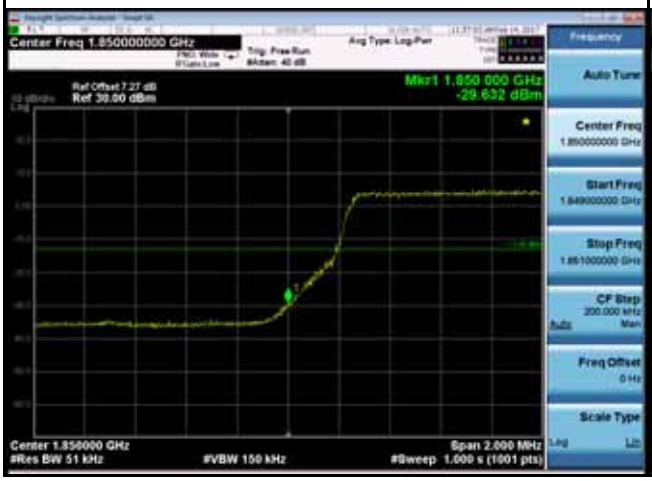
WCDMA Band 2			
Channel	9262	Channel	9538
			

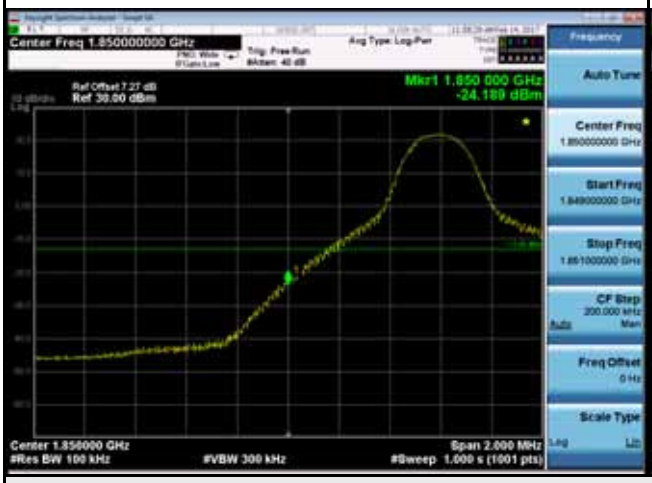
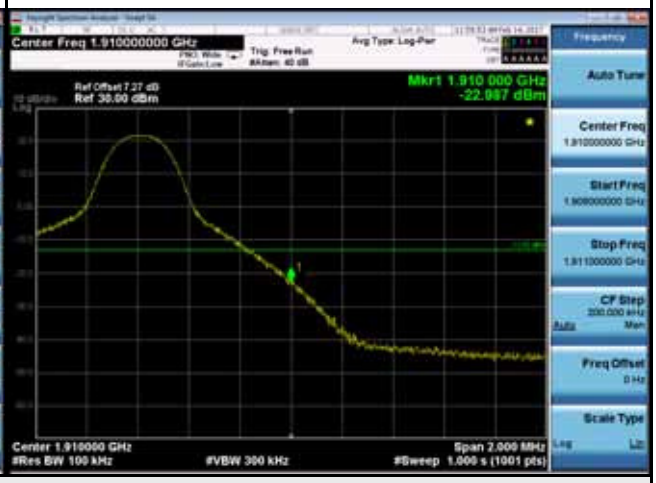
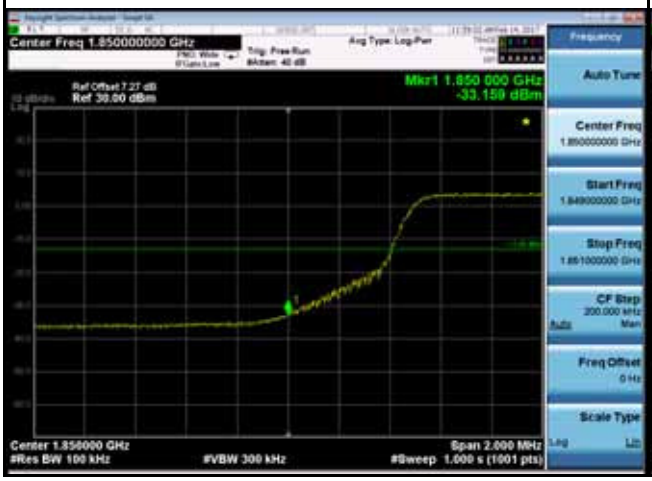
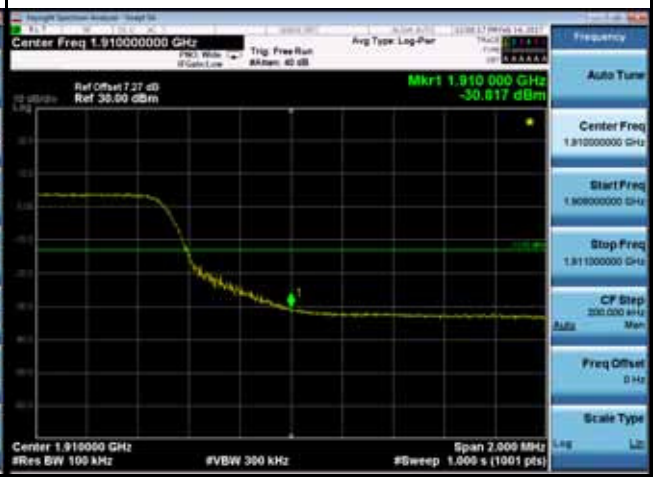
WCDMA_HSDPA Band 2			
Channel	9262	Channel	9538
			

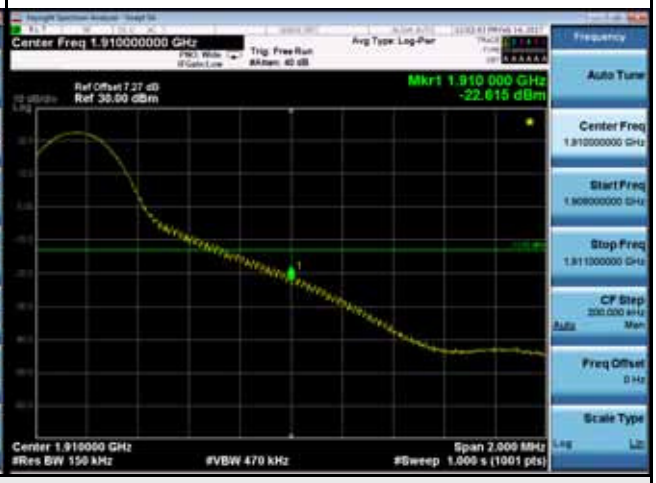
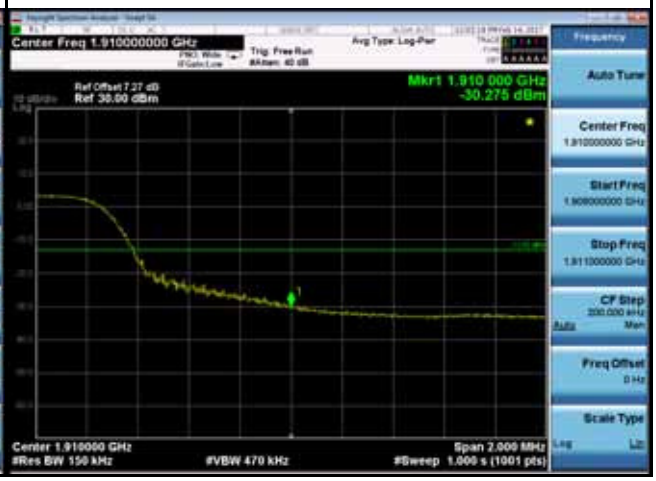
WCDMA_HSUPA Band 2			
Channel	9262	Channel	9538
			

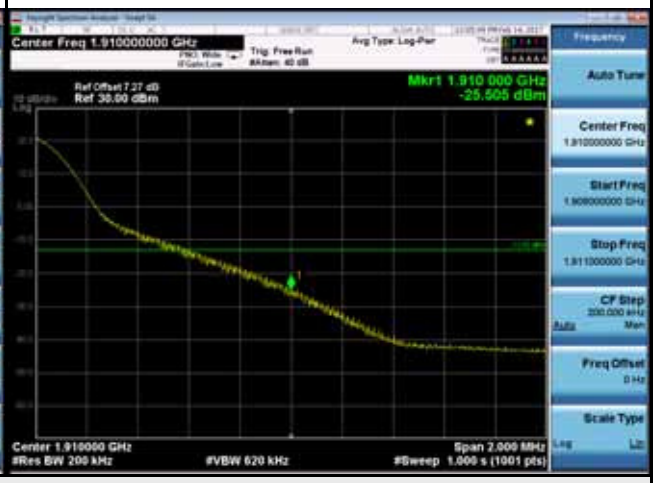
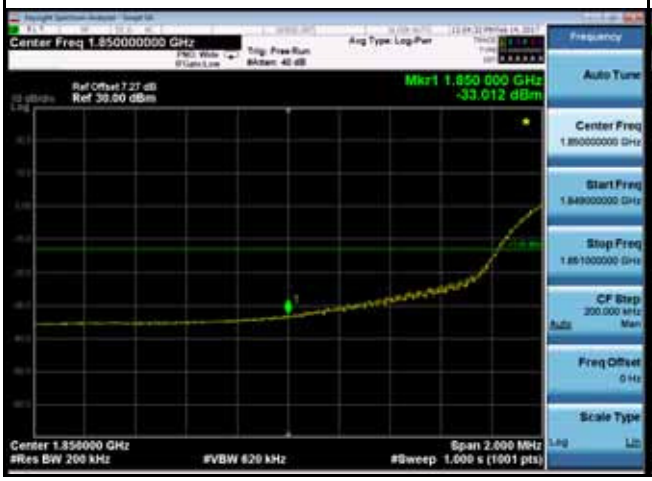
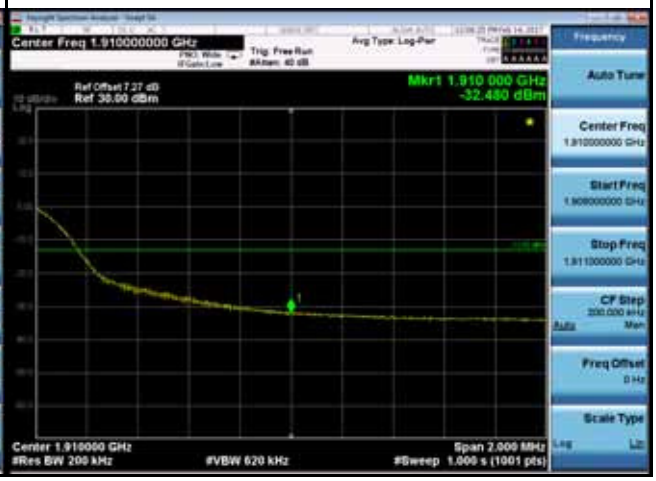
LTE Band 2_1.4M			
1RB0		1RB5	
Channel	18607	Channel	19193
			
6RB0			
Channel	18607	Channel	19193
			

LTE Band 2_3M			
1RB0		1RB14	
Channel	18615	Channel	19185
			
15RB0			
Channel	18615	Channel	19185
			

LTE Band 2_5M			
1RB0		1RB24	
Channel	18625	Channel	19175
			
25RB0			
Channel	18625	Channel	19175
			

LTE Band 2_10M			
1RB0		1RB49	
Channel	18650	Channel	19150
			
50RB0			
Channel	18650	Channel	19150
			

LTE Band 2_15M			
1RB0		1RB74	
Channel	18675	Channel	19125
			
75RB0			
Channel	18675	Channel	19125
			

LTE Band 2_20M			
1RB0		1RB99	
Channel	18700	Channel	19100
			
100RB0			
Channel	18700	Channel	19100
			

ATTACHMENT F - PEAK TO AVERAGE RATIO

<table>
<tr><th colspan="2">DCS1900 Spectrum Plot</th></tr>
<tr><td>GSM -512</td><td>GSM-661</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>GSM-810</td><td>EDGE-512</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>EDGE-661</td><td>EDGE-810</td></tr>
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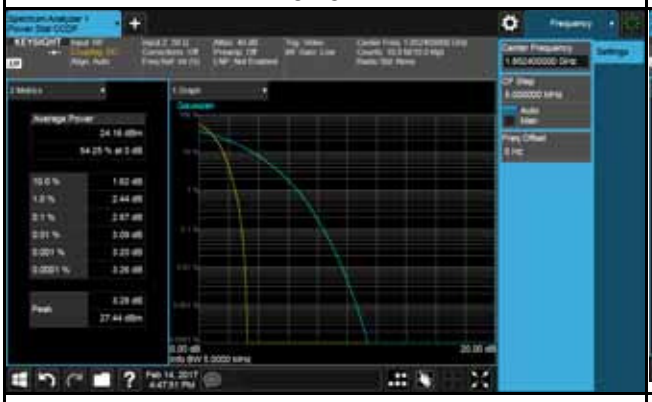
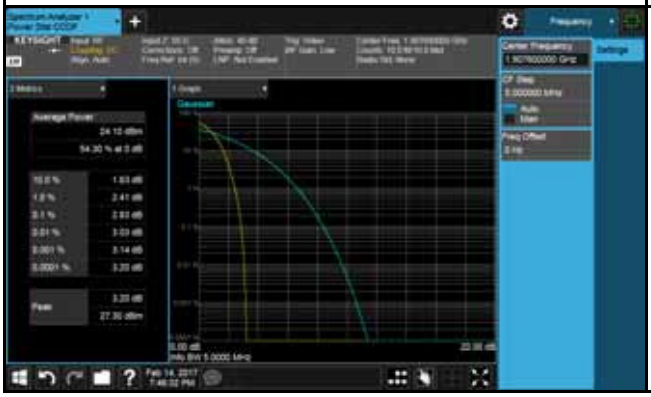
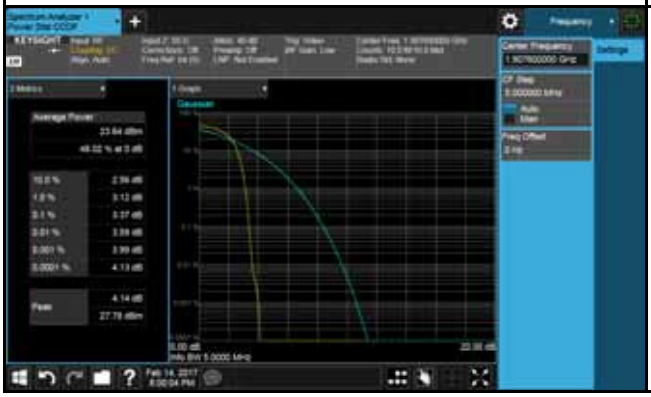
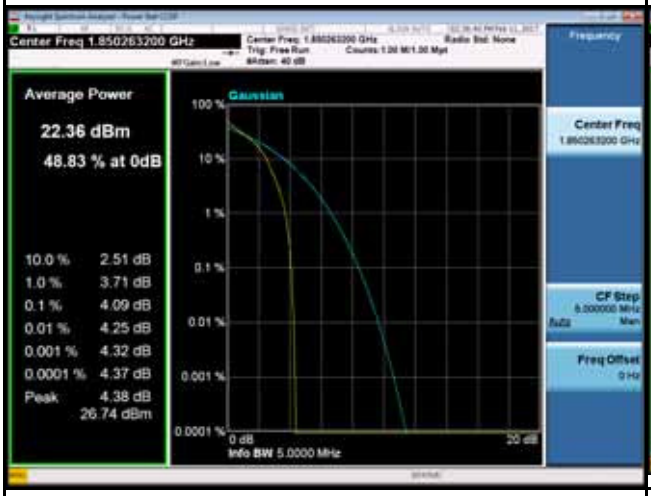
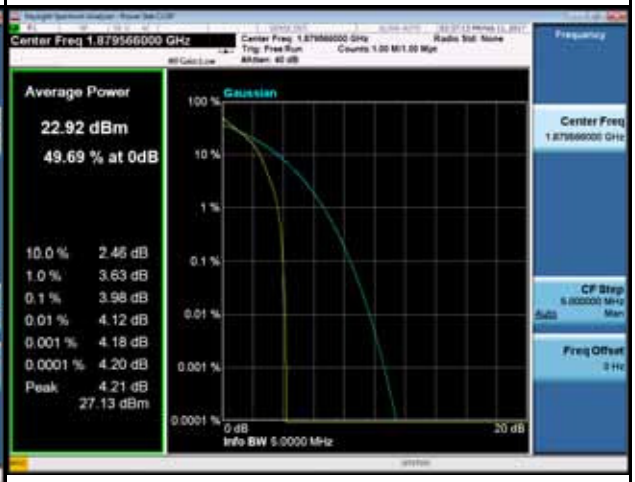
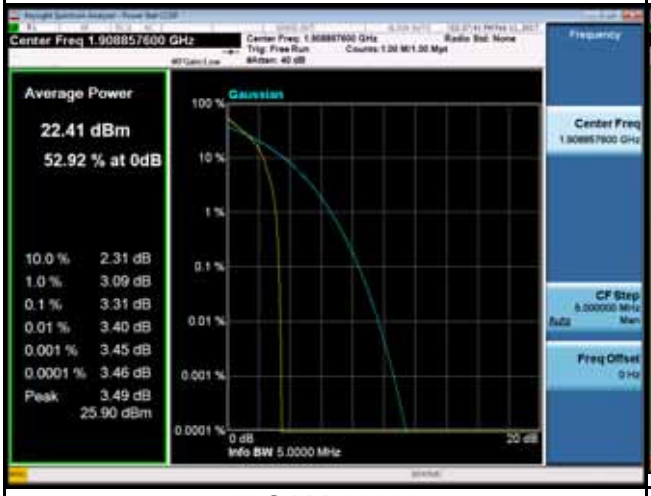
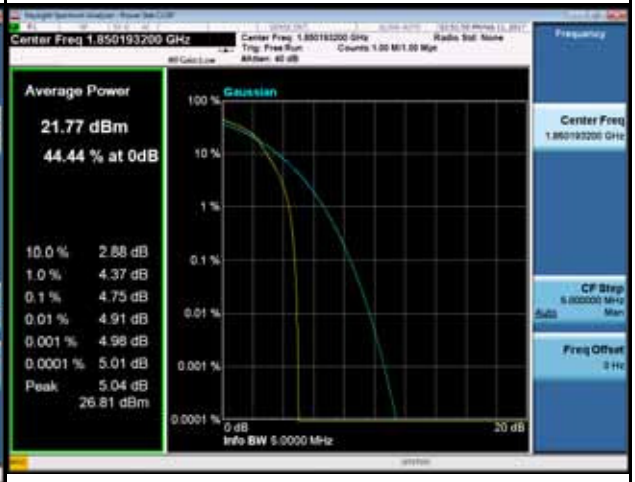
WCDMA Band 2 Spectrum Plot	
9262	9400
	
9538	-
	-

WCDMA_HSDPA Band 2 Spectrum Plot	
9262	9400
	
9538	-
	-

WCDMA_HSUPA Band 2 Spectrum Plot	
9262	9400
	
9538	-
	-

LTE Band 2 Spectrum Plot_1.4M	
QPSK-18607	QPSK-18900
	
QPSK-19193	16QAM-18607
	
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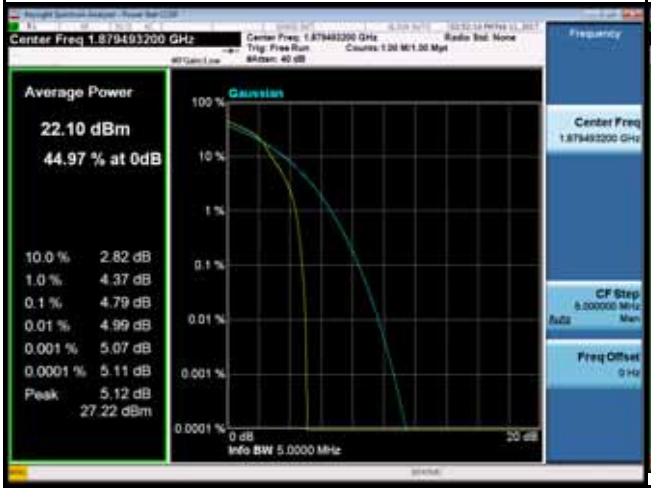
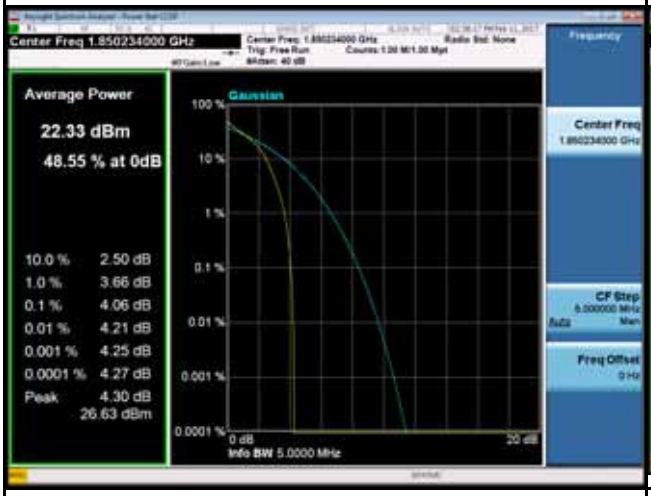
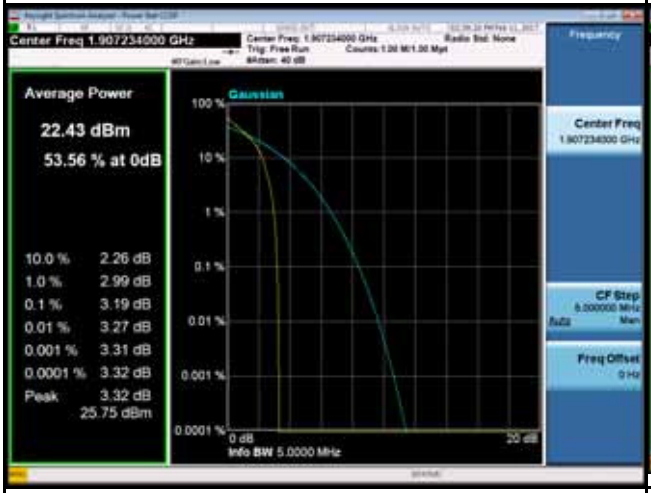
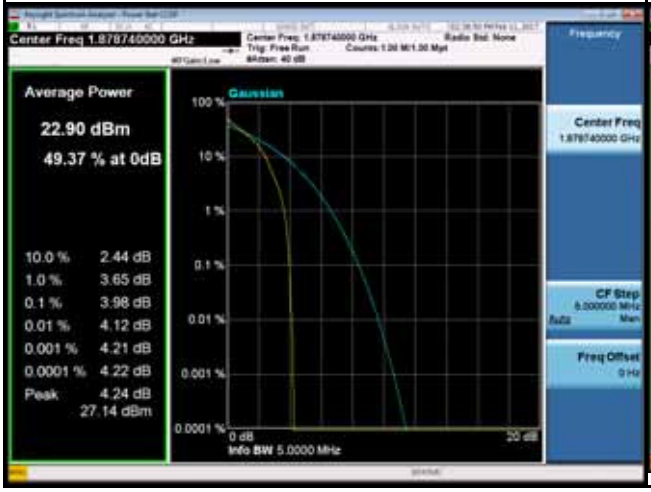
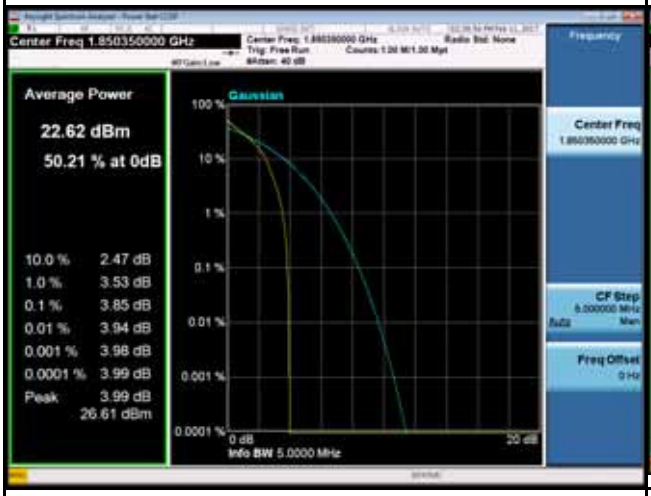
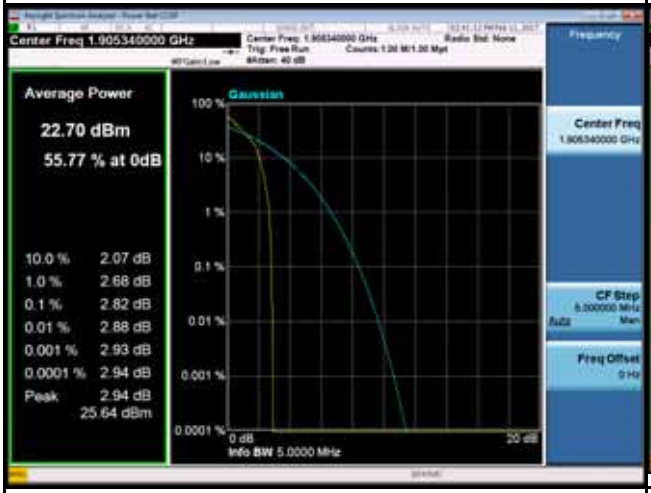
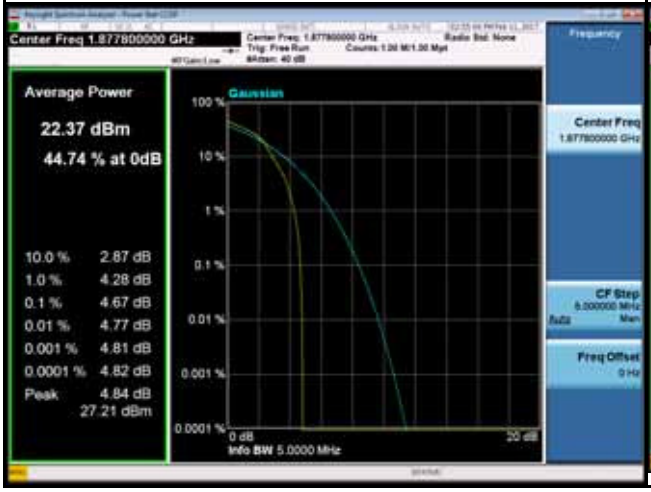
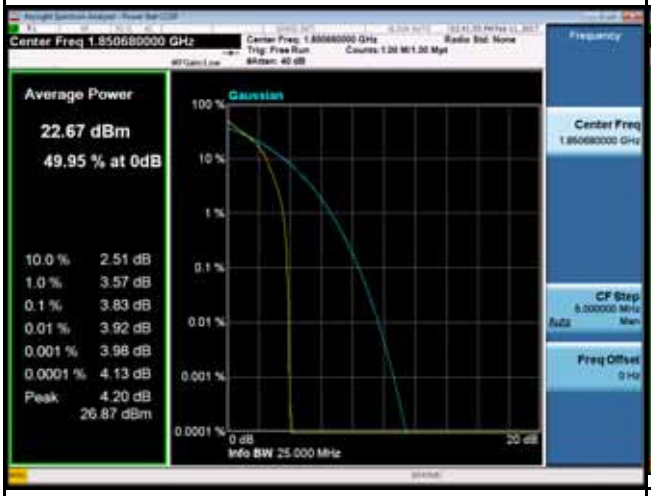
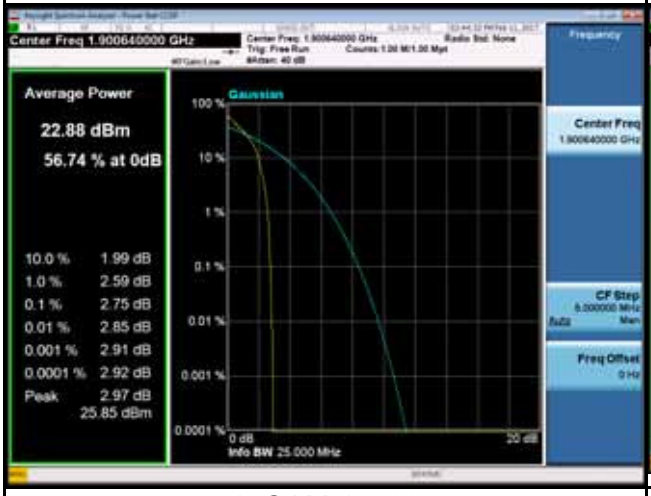
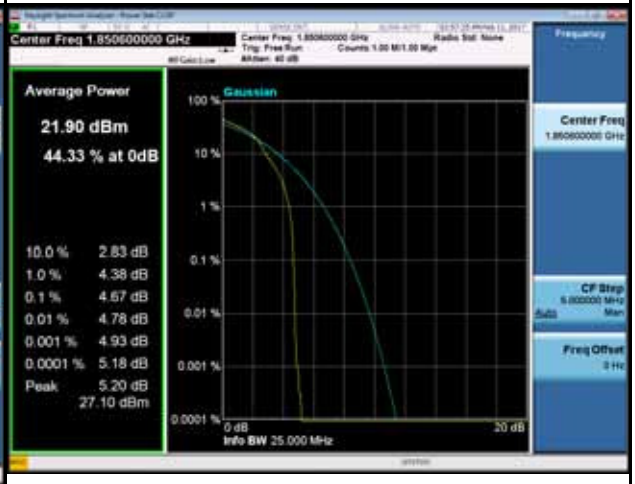
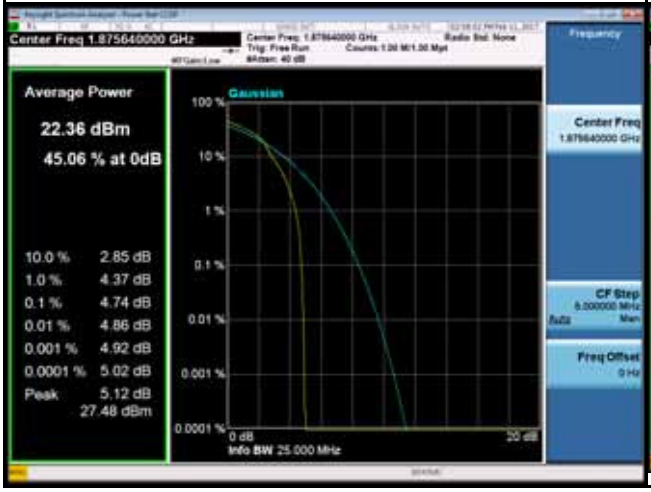
	

LTE Band 2 Spectrum Plot_3M	
QPSK-18615	QPSK-18900
	
QPSK-19185	16QAM-18615
	
16QAM-18900	16QAM-19185
	

LTE Band 2 Spectrum Plot_5M	
QPSK-18625	QPSK-18900
	
QPSK-19175	16QAM-18625
	
16QAM-18900	16QAM-19175
	

LTE Band 2 Spectrum Plot_10M	
QPSK-18650	QPSK-18900
	
QPSK-19150	16QAM-18650
	
16QAM-18900	16QAM-19150
	

LTE Band 2 Spectrum Plot_15M	
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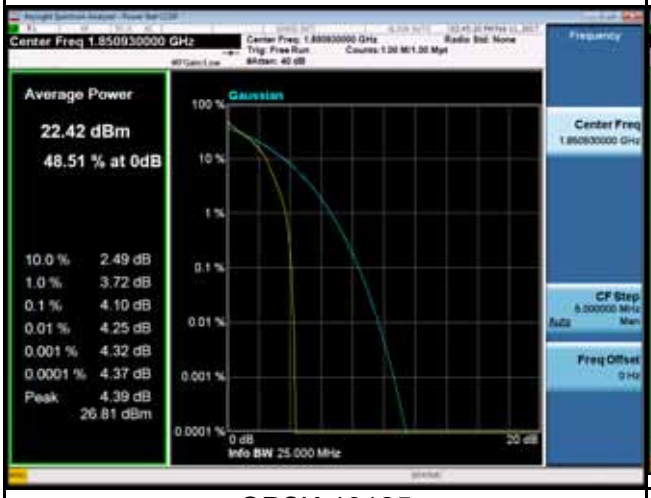
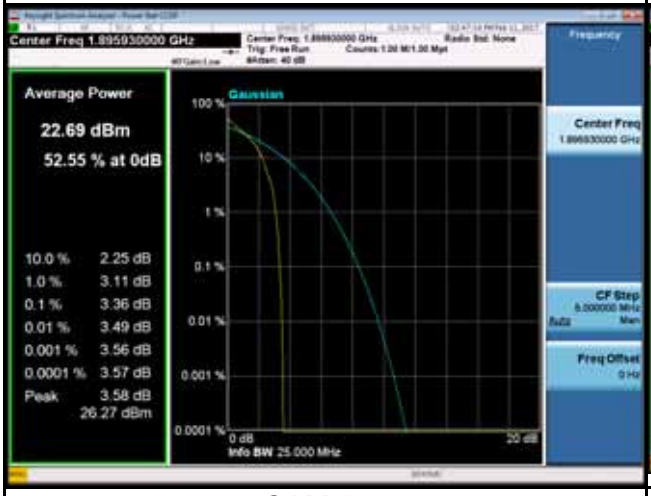
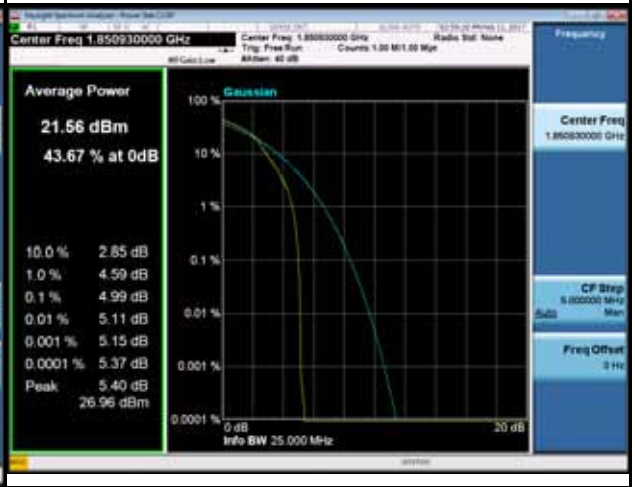
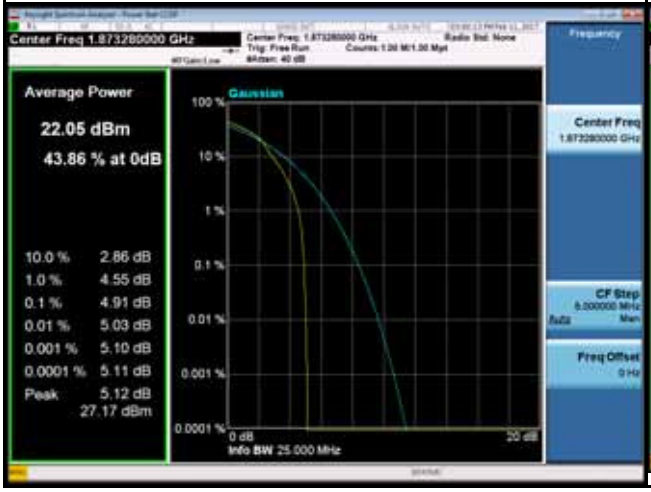
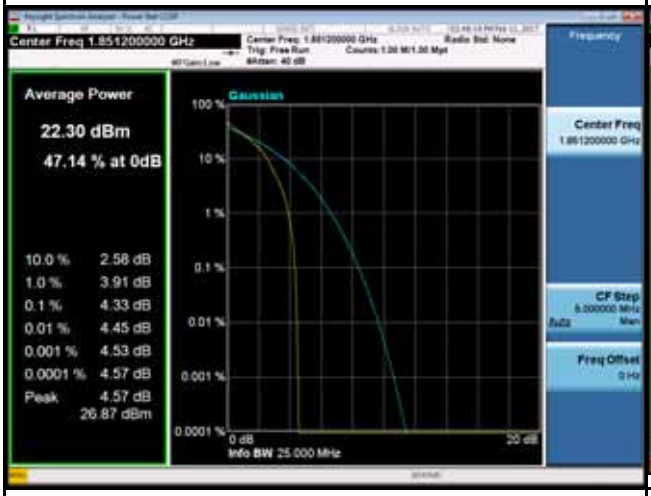
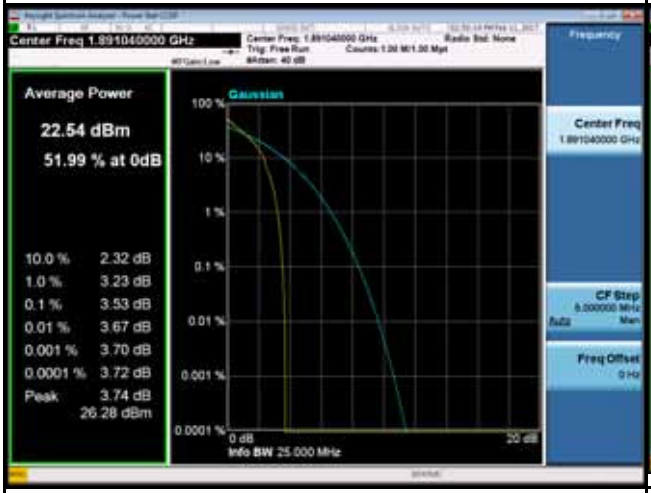
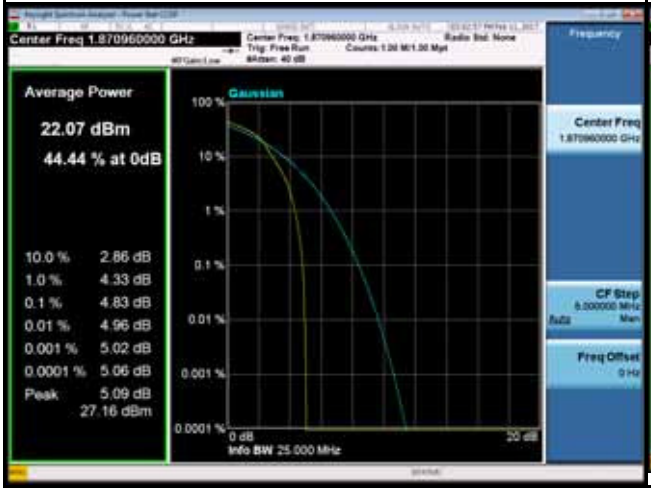
	
QPSK-19125	16QAM-18675
	
16QAM-18900	16QAM-19125
	

LTE Band 2 Spectrum Plot_20M	
QPSK-18700	QPSK-18900
	
QPSK-19100	16QAM-18700
	
16QAM-18900	16QAM-19100
	

ATTACHMENT G - FREQUENCY STABILITY

Test Mode:	DCS1900_CH661

Temperature vs. Frequency Stabiility

Temperature(

Test Mode:	WCDMA Band 2_CH9400

Temperature vs. Frequency Stabiility

Temperature(

Test Mode:	LTE Band 2_CH18900_1.4M

Temperature vs. Frequency Stabiility

Temperature(

Test Mode:	LTE Band 2_CH18900_3M

Temperature vs. Frequency Stabiility

Temperature(

Test Mode:	LTE Band 2_CH18900_5M

Temperature vs. Frequency Stabiility

Temperature(

Test Mode:	LTE Band 2_CH18900_10M

Temperature vs. Frequency Stabiility

Temperature(

Test Mode:	LTE Band 2_CH18900_15M

Temperature vs. Frequency Stabiility

Temperature(

Test Mode:	LTE Band 2_CH18900_20M

Temperature vs. Frequency Stabiility

Temperature(