



中国认可
国际互认
检测
TESTING
CNAS L2264

RF TEST REPORT

Applicant	ZTE Corporation
FCC ID	SRQ-ZTEB2017G
Product	LTE/WCDMA/CDMA/GSM(GPRS) Mutil-Mode Digital Mobile Phone
Brand	ZTE
Model	ZTE B2017G
Report No.	RXA1607-0132RF01
Issue Date	September 1, 2016

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC CFR47 Part 2/ FCC CFR 47 Part 22H**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

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Summary of measurement results

No.	Test Type	Clause in FCC rules	Verdict
1	RF power output	2.1046	PASS
2	Effective Radiated Power	22.913(a)(2)	PASS
3	Occupied Bandwidth	2.1049	PASS
4	Band Edge Compliance	2.1051 / 22.917(a)	PASS
5	Frequency Stability	2.1055 / 22.355	PASS
6	Spurious Emissions at Antenna Terminals	2.1051 / 22.917(a)	PASS
7	Radiates Spurious Emission	2.1053 / 22.917 (a)	PASS
Date of Testing: July 10, 2016 ~ August 12, 2016			



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.



1.3. Testing Location

Company: TA Technology (Shanghai) Co., Ltd.
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2. General Description of Equipment under Test

Client Information

Applicant	ZTE Corporation
Applicant address	ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R. China
Manufacturer	ZTE Corporation
Manufacturer address	ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R. China

General Information

EUT Description			
Model:	ZTE B2017G		
Product IMEI:	SIM1:860935030016782 SIM2:860935030018788		
Hardware Version:	uj3A		
Software Version:	ZTE B2017G_USAV1.0.0B01		
Power Supply:	Battery/AC adapter		
Antenna Type:	Internal Antenna		
Test Mode(s):	GSM 850: CDMA BC0; WCDMA Band V;LTE Band 5;		
Test Modulation:	(GSM)GMSK,8PSK; (CDMA)QPSK; (WCDMA)QPSK; (LTE)QPSK 16QAM;		
GPRS/ EGPRS Multislot Class:	10		
HSDPA UE Category:	14		
HSUPA UE Category:	6		
Maximum E.R.P.	GSM 850: 26.89 dBm CDMA BC0: 18.27 dBm WCDMA Band V:16.86 dBm LTE Band 5: 17.38dBm		
Rated Power Supply Voltage:	3.85V		
Extreme Voltage:	Minimum: 3.4V Maximum: 4.4V		
Extreme Temperature:	Lowest: -30°C Highest: +55°C		
Operating Frequency Range(s)	Band	Tx (MHz)	Rx (MHz)
	GSM850	824 ~ 849	869 ~ 894
	CDMA BC0	824 ~ 849	869 ~ 894
	WCDMA Band V	824 ~ 849	869 ~ 894
	LTE Band 5	824 ~ 849	869 ~ 894
EUT Accessory			
Battery 1	Manufacturer: SHENZHEN RUIDE ELECTRONIC INDUSTRIAL CO.,LTD Model: Li3927T44P8h726044		



	Power Rating: 3.85V/2705mAh
Battery 2	Manufacturer: SCUD (Fujian) Electronics Co., Ltd. Model: Li3927T44P8h726044 Power Rating: 3.85V/2705mAh
Earphone	Manufacturer: KINGSTATE ELECTRONICS CORP. Model: KJAG4020AWKCB-2
Adapter	Manufacturer: Salcomp (Shenzhen) Co., Ltd Model: STC-A5915A-Z Input power: 100-240Vac, 50/60Hz, 0.45A Output power: 5.0V, 1.5A/9.0V, 1.5A
Phone cover	Manufacturer: Shenzhen senyuanxiang Technology Co. Ltd. Model: senyuanxiang
Note: 1. The information of the EUT is declared by the manufacturer. Please refer to the specifications or user manual for details. 2. There is more than one battery, each one should be applied throughout the compliance test respectively, however, only the worst case (battery 1) will be recorded in this report.	



3. Applied Standards

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

FCC CFR47 Part 2 (2015)

FCC CFR 47 Part 22H (2015)

ANSI/TIA-603-D (2010)

KDB 971168 D01 Power Meas License Digital Systems v02r02

4. Test Configuration

There is more than one SIM card slot, each one should be applied throughout the compliance test respectively, 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 were investigated.

The following testing in GSM/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 850	WCDMA Band V	CDMA BC0
Conducted Test cases	RF power output	GSM /GPRS /EGPRS	RMC HSDPA HSUPA	1xRTT EV-DO Rev.0 EV-DO Rev.A
	Occupied Bandwidth	GSM /GPRS /EGPRS	RMC	1xRTT
	Band Edge Compliance	GSM /GPRS /EGPRS	RMC	1xRTT
	Peak-to-Average Power Ratio	GSM /GPRS /EGPRS	RMC	1xRTT
	Frequency Stability	GSM /GPRS /EGPRS	RMC	1xRTT
	Spurious Emissions at Antenna Terminals	GSM	RMC	1xRTT
Radiated Test cases	Effective Radiated Power	GSM /GPRS /EGPRS	RMC	1xRTT
	Radiates Spurious Emission	GSM	RMC	1xRTT



Test modes are chosen as the worst case configuration below for LTE Band 5.

Test items	Bandwidth (MHz)				Modulation		RB			Test Channel		
	1.4	3	5	10	QPSK	16QAM	1	50%	100%	L	M	H
RF power output	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
Occupied Bandwidth	O	O	O	O	O	O	-	-	O	O	O	O
Band Edge Compliance	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
Frequency Stability	O	O	O	O	O	O	-	-	O	-	O	-
Spurious Emissions at Antenna Terminals	O	O	O	O	O	-	O	-	-	O	O	O
Radiates Spurious Emission	O	O	O	O	O	-	O	-	-	O	O	O
Note	1. The mark "O" means that this configuration is chosen for testing. 2. The mark "-" means that this configuration is not testing.											

5. Test Case Results

5.1. RF Power Output

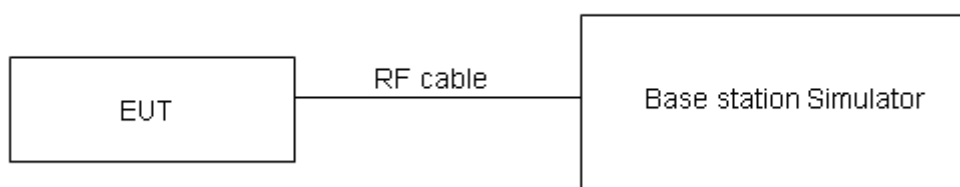
Ambient condition

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

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.

Test Results

GSM 850		Conducted Power(dBm)		
		Channel 128	Channel 190	Channel 251
		824.2 (MHz)	836.6 (MHz)	848.8 (MHz)
GSM	Results	32.61	32.67	32.73
GPRS (GMSK)	1TXslot	32.50	32.58	32.69
	2TXslots	31.72	31.88	31.84
EGPRS (GMSK)	1TXslot	32.54	32.61	32.71
	2TXslots	31.70	31.85	31.80
EGPRS (8PSK)	1TXslot	26.81	26.79	26.83
	2TXslots	24.63	24.72	24.69
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 BC0			Conducted Power(dBm)		
			Channel 1013	Channel 384	Channel 777
			824.7(MHz)	836.52(MHz)	848.31(MHz)
1xRTT	RC1	SO55 (Loopback)	22.66	22.62	22.73
	RC3	SO55 (Loopback)	22.60	22.57	22.66
		TDSO32 (FCH+SCH)	22.64	22.56	22.66
		TDSO32 (FCH)	22.62	22.55	22.70
EV-DO (Rev.0)	RTAP	9.6 kbps	22.54	22.44	22.66
		38.4 kbps	22.46	22.36	22.63
		153.6 kbps	22.36	22.32	22.50
EVDO (Rev.A)	RETAP	128 bits	22.64	22.54	22.65
		2048 bits	22.65	22.56	22.62
		4096 bits	22.60	22.54	22.61
Note: 1) The maximum RF Output Power numbers are marks in bold.					
2) The following testing in 1xRTT based on the maximum RF Output Power.					



WCDMA Band V		Conducted Power(dBm)		
		Channel 4132	Channel 4183	Channel 4233
		826.4(MHz)	836.6(MHz)	846.6(MHz)
RMC		22.74	22.84	22.75
HSDPA	Sub - Test 1	22.64	22.67	22.59
	Sub - Test 2	22.58	22.68	22.58
	Sub - Test 3	22.07	22.28	22.16
	Sub - Test 4	22.08	22.27	22.18
HSUPA	Sub - Test 1	22.57	22.76	22.67
	Sub - Test 2	20.82	20.92	20.83
	Sub - Test 3	21.64	21.74	21.65
	Sub - Test 4	20.83	20.93	20.84
	Sub - Test 5	22.62	22.72	22.63
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.				

LTE FDD Band 5				Conducted Power(dBm)		
BW	Modulation	RB size	RB offset	Channel/Frequency(MHz)		
				20407/824.7	20525/836.5	20643/848.3
1.4MHz	QPSK	1	0	22.99	22.99	22.83
		1	2	22.91	23.07	22.95
		1	5	22.96	22.82	22.86
		3	0	22.89	22.70	22.78
		3	2	23.00	22.98	22.81
		3	3	22.91	22.87	22.99
		6	0	21.86	21.97	21.89
	16QAM	1	0	21.79	21.85	21.92
		1	2	22.01	22.01	21.87
		1	5	21.93	21.83	21.70
		3	0	21.95	21.76	21.90
		3	2	21.78	21.83	21.79
		3	3	21.74	21.91	21.70
		6	0	20.96	21.02	20.94
BW	Modulation	RB size	RB offset	Channel/Frequency(MHz)		
				20415/825.5	20525/836.5	20635/847.5
3MHz	QPSK	1	0	23.01	23.03	22.86
		1	7	22.94	23.12	22.99
		1	14	22.99	22.87	22.90
		8	0	21.99	21.82	21.91
		8	4	22.12	22.08	21.93
		8	7	22.01	21.98	22.09
		15	0	21.89	22.01	21.92
	16QAM	1	0	21.82	21.87	21.95
		1	7	22.04	22.06	21.91
		1	14	21.95	21.87	21.73
		8	0	21.06	20.89	21.02
		8	4	20.89	20.96	20.91
		8	7	21.14	21.03	20.83
		15	0	20.99	21.06	20.97
BW	Modulation	RB size	RB offset	Channel/Frequency(MHz)		
				20425/826.5	20525/836.5	20625/846.5
5MHz	QPSK	1	0	22.99	22.98	22.83



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		1	13	22.93	23.12	22.97
		1	24	22.95	22.81	22.85
		12	0	21.97	21.78	21.88
		12	6	22.10	22.04	21.88
		12	13	21.98	21.97	22.06
		25	0	21.93	21.98	21.89
	16QAM	1	0	21.76	21.84	21.92
		1	13	22.02	22.05	21.89
		1	24	21.92	21.83	21.69
		12	0	21.04	20.88	21.00
		12	6	20.85	20.90	20.86
		12	13	21.12	20.99	20.80
	25	0	20.97	21.02	20.92	
	BW	Modulation	RB size	RB offset	Channel/Frequency(MHz)	
20450/829					20525/836.5	20600/844
10MHz	QPSK	1	0	22.96	22.94	22.80
		1	25	22.92	23.08	22.95
		1	49	22.93	22.80	22.82
		25	0	21.94	21.73	21.84
		25	13	22.08	22.00	21.85
		25	25	21.95	21.92	22.02
		50	0	21.90	21.93	21.85
	16QAM	1	0	21.74	21.80	21.87
		1	25	21.98	22.03	21.85
		1	49	21.90	21.80	21.67
		25	0	21.01	20.84	20.97
		25	13	20.82	20.88	20.83
		25	25	21.09	20.94	20.76
		50	0	20.95	20.98	20.89

5.2. Effective Radiated Power

Ambient condition

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

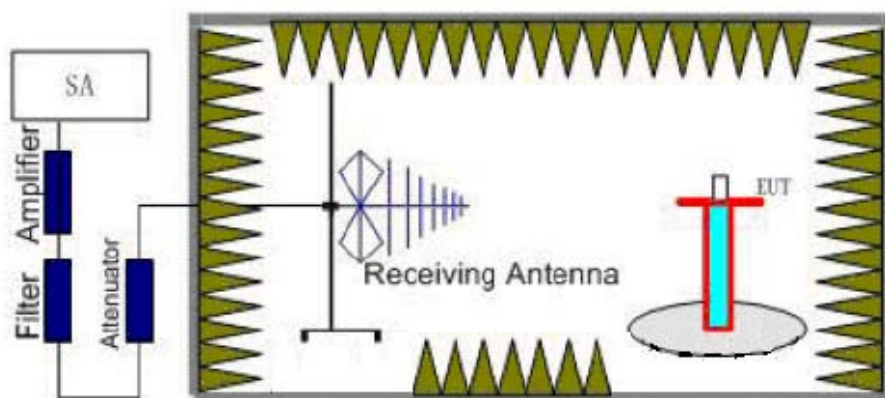
Methods of Measurement

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. $ERP/EIRP = P_s + E_t - E_s + G_s = P_s + R_t - R_s + G_s$
 P_s (dBm) : Input power to substitution antenna.
 G_s (dBi or dBd) : Substitution antenna Gain.
 $E_t = R_t + AF$
 $E_s = R_s + AF$
 AF (dB/m) : Receive antenna factor
 R_t : The highest received signal in spectrum analyzer for EUT.
 R_s : The highest received signal in spectrum analyzer for substitution antenna.

$$EIRP = E.R.P + 2.15$$

Test Setup



Limits

Rule Part 22.913(a) specifies that "Mobile/portable stations are limited to 7 watts ERP".

Limit	$\leq 7 \text{ W}$ (38.45 dBm)
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Measurement Uncertainty

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



Test Results:

Mode	Polarization	Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBd)	ERP (dBm)	Limit (dBm)	Conclusion
GSM 850	H	824.2	-20.14	-45.53	0.00	1.06	26.45	38.45	Pass
	H	836.6	-19.81	-45.38	0.00	1.24	26.81	38.45	Pass
	H	848.8	-19.86	-45.37	0.00	1.38	26.89	38.45	Pass
	V	824.2	-31.90	-45.65	0.00	1.06	14.81	38.45	Pass
	V	836.6	-30.28	-45.46	0.00	1.24	16.42	38.45	Pass
	V	848.8	-29.77	-45.49	0.00	1.38	17.10	38.45	Pass
GPRS 850	H	824.2	-22.78	-45.53	0.00	1.06	23.81	38.45	Pass
	H	836.6	-23.11	-45.38	0.00	1.24	23.51	38.45	Pass
	H	848.8	-23.05	-45.37	0.00	1.38	23.70	38.45	Pass
	V	824.2	-32.11	-45.65	0.00	1.06	14.60	38.45	Pass
	V	836.6	-31.73	-45.46	0.00	1.24	14.97	38.45	Pass
	V	848.8	-31.54	-45.49	0.00	1.38	15.33	38.45	Pass
EGPRS 850	H	824.2	-27.05	-45.53	0.00	1.06	19.54	38.45	Pass
	H	836.6	-27.31	-45.38	0.00	1.24	19.31	38.45	Pass
	H	848.8	-28.08	-45.37	0.00	1.38	18.67	38.45	Pass
	V	824.2	-36.58	-45.65	0.00	1.06	10.13	38.45	Pass
	V	836.6	-36.58	-45.46	0.00	1.24	10.12	38.45	Pass
	V	848.8	-36.35	-45.49	0.00	1.38	10.52	38.45	Pass
WCDMA Band V	H	826.4	-30.07	-45.44	0.00	1.13	16.50	38.45	Pass
	H	836.6	-29.76	-45.38	0.00	1.24	16.86	38.45	Pass
	H	846.6	-30.06	-45.38	0.00	1.35	16.67	38.45	Pass
	V	826.4	-40.93	-45.54	0.00	1.13	5.74	38.45	Pass
	V	836.6	-40.52	-45.46	0.00	1.24	6.18	38.45	Pass
	V	846.6	-40.64	-45.49	0.00	1.35	6.20	38.45	Pass
CDMA BC0	H	824.7	-28.41	-45.53	0.00	1.06	18.18	38.45	Pass
	H	836.52	-28.35	-45.38	0.00	1.24	18.27	38.45	Pass
	H	848.31	-28.63	-45.07	0.00	1.68	18.12	38.45	Pass
	V	824.7	-39.07	-45.69	0.00	1.06	7.68	38.45	Pass
	V	836.52	-38.42	-45.46	0.00	1.24	8.28	38.45	Pass
	V	848.31	-38.03	-45.19	0.00	1.68	8.84	38.45	Pass



LTE Band 5								
bandwidth	Polarization	Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	ERP (dBm)	Conclusion
1.4 MHz (QPSK)	H	824.7	-31.46	-47.61	0.00	1.06	17.21	Pass
	H	836.5	-31.61	-47.75	0.00	1.24	17.38	Pass
	H	848.3	-32.57	-48.23	0.00	1.38	17.04	Pass
	V	824.7	-42.66	-47.29	0.00	1.06	5.70	Pass
	V	836.5	-42.01	-47.15	0.00	1.24	6.38	Pass
	V	848.3	-41.95	-47.48	0.00	1.38	6.91	Pass
1.4 MHz (16QAM)	H	824.7	-32.16	-47.61	0.00	1.06	16.51	Pass
	H	836.5	-32.31	-47.75	0.00	1.24	16.68	Pass
	H	848.3	-33.27	-48.23	0.00	1.38	16.34	Pass
	V	824.7	-43.36	-47.29	0.00	1.06	5.00	Pass
	V	836.5	-42.71	-47.15	0.00	1.24	5.68	Pass
	V	848.3	-42.65	-47.48	0.00	1.38	6.21	Pass
3 MHz (QPSK)	H	825.5	-31.56	-47.59	0.00	1.06	17.10	Pass
	H	836.5	-31.76	-47.75	0.00	1.24	17.23	Pass
	H	847.5	-32.43	-48.18	0.00	1.38	17.13	Pass
	V	825.5	-42.71	-47.26	0.00	1.06	5.62	Pass
	V	836.5	-42.27	-47.15	0.00	1.24	6.12	Pass
	V	847.5	-41.86	-47.44	0.00	1.38	6.97	Pass
3 MHz (16QAM)	H	825.5	-31.96	-47.59	0.00	1.06	16.70	Pass
	H	836.5	-32.16	-47.75	0.00	1.24	16.83	Pass
	H	847.5	-32.83	-48.18	0.00	1.38	16.73	Pass
	V	825.5	-43.11	-47.26	0.00	1.06	5.22	Pass
	V	836.5	-42.67	-47.15	0.00	1.24	5.72	Pass
	V	847.5	-42.26	-47.44	0.00	1.38	6.57	Pass
5 MHz (QPSK)	H	826.5	-31.68	-47.60	0.00	1.13	17.05	Pass
	H	836.5	-31.99	-47.75	0.00	1.24	17.00	Pass
	H	846.5	-32.61	-48.12	0.00	1.38	16.90	Pass
	V	826.5	-51.79	-47.24	0.00	1.13	-3.42	Pass
	V	836.5	-51.78	-47.15	0.00	1.24	-3.39	Pass
	V	846.5	-52.39	-47.40	0.00	1.38	-3.61	Pass
5 MHz (16QAM)	H	826.5	-31.76	-47.60	0.00	1.13	16.97	Pass
	H	836.5	-32.28	-47.75	0.00	1.24	16.71	Pass
	H	846.5	-33.07	-48.12	0.00	1.38	16.44	Pass
	V	826.5	-51.81	-47.24	0.00	1.13	-3.44	Pass
	V	836.5	-52.90	-47.15	0.00	1.24	-4.51	Pass
	V	846.5	-53.50	-47.40	0.00	1.38	-4.72	Pass
10 MHz (QPSK)	H	829	-31.89	-47.61	0.00	1.13	16.85	Pass
	H	836.5	-31.91	-47.75	0.00	1.24	17.08	Pass
	H	844	-32.48	-48.01	0.00	1.33	16.85	Pass



LTE Band 5								
bandwidth	Polarization	Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	ERP (dBm)	Conclusion
	V	829	-52.56	-47.19	0.00	1.13	-4.24	Pass
	V	836.5	-52.19	-47.15	0.00	1.24	-3.80	Pass
	V	844	-52.42	-47.29	0.00	1.33	-3.81	Pass
10 MHz (16QAM)	H	829	-32.39	-47.61	0.00	1.13	16.35	Pass
	H	836.5	-32.41	-47.75	0.00	1.24	16.58	Pass
	H	844	-32.98	-48.01	0.00	1.33	16.35	Pass
	V	829	-53.06	-47.19	0.00	1.13	-4.74	Pass
	V	836.5	-52.69	-47.15	0.00	1.24	-4.30	Pass
	V	844	-52.92	-47.29	0.00	1.33	-4.31	Pass

5.3. Occupied Bandwidth

Ambient condition

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

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 850,

RBW is set to 15kHz, VBW is set to 51kHz for CDMA BC0,

RBW is set to 51kHz, VBW is set to 160kHz for WCDMA Band V,

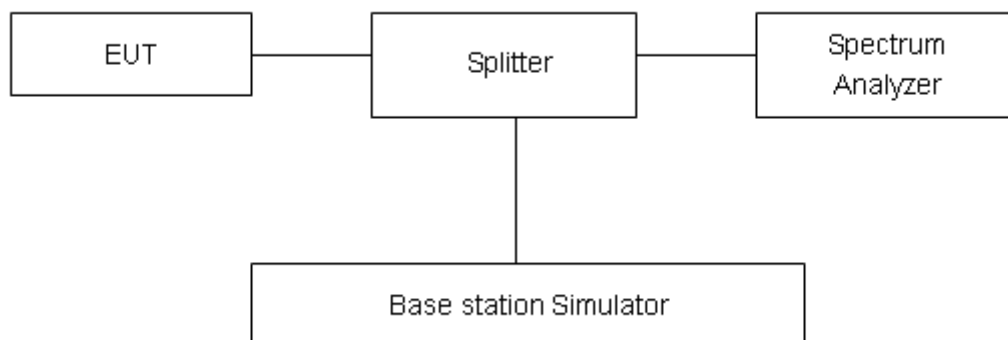
RBW is set to 51kHz, VBW is set to 160kHz for LTE Band 5 (1.4MHz),

RBW is set to 100kHz, VBW is set to 300kHz for LTE Band 5 (3MHz/5MHz),

RBW is set to 300kHz, VBW is set to 1MHz for LTE Band 5 (10MHz).

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 $k = 2$, $U = 624\text{Hz}$.

Test Result

Mode	Channel	Frequency (MHz)	99% Power Bandwidth (kHz)	-26dBc Bandwidth(kHz)
GSM 850 (GSM)	128	824.2	245.52	314.8
	190	836.6	244.75	317.9
	251	848.8	247.90	317.5
GPRS 850 (GMSK)	128	824.2	244.16	303.1
	190	836.6	243.64	306.4
	251	848.8	245.86	302.9
EGPRS 850 (8-PSK)	128	824.2	245.94	308.3
	190	836.6	244.63	309.4
	251	848.8	245.52	307.5

Mode	Channel	Frequency (MHz)	99% Power Bandwidth (MHz)	-26dBc Bandwidth(MHz)
WCDMA Band V (RMC)	4132	826.4	4.1119	4.688
	4183	836.6	4.1177	4.717
	4233	846.6	4.1276	4.683
CDMA BC0 1xRTT	1013	824.7	1.2722	1.422
	384	836.52	1.2741	1.427
	777	848.31	1.2675	1.422



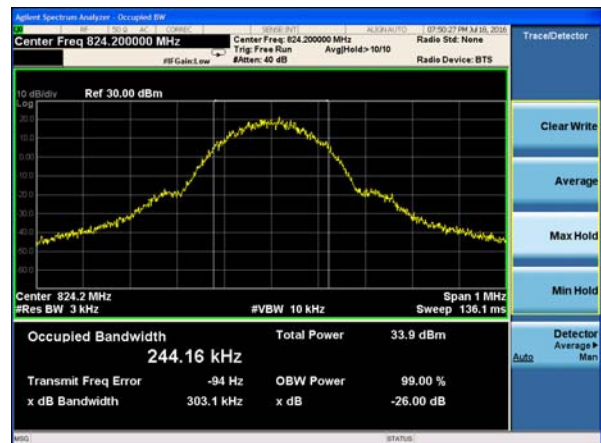
LTE Band 5						
RB	Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	99% Power Bandwidth(MHz)	-26dBc Bandwidth(MHz)
100 %	QPSK	1.4	20407	824.7	1.1304	1.419
			20525	836.5	1.1291	1.335
			20643	848.3	1.1260	1.360
		3	20415	825.5	2.7395	3.068
			20525	836.5	2.7374	3.064
			20635	847.5	2.7359	3.055
		5	20425	826.5	4.5134	4.934
			20525	836.5	4.5114	5.045
			20625	846.5	4.5168	4.907
		10	20450	829	9.0172	10.09
			20525	836.5	9.0601	10.05
			20600	844	9.0321	10.13
	16QAM	1.4	20407	824.7	1.1252	1.339
			20525	836.5	1.1172	1.323
			20643	848.3	1.1255	1.316
		3	20415	825.5	2.7576	3.078
			20525	836.5	2.7384	3.064
			20635	847.5	2.7352	3.072
		5	20425	826.5	4.5218	5.013
			20525	836.5	4.5179	5.022
			20625	846.5	4.4963	5.017
		10	20450	829	9.0264	9.952
			20525	836.5	9.0204	9.935
			20600	844	9.0332	10.05



GSM 850 CH-Low



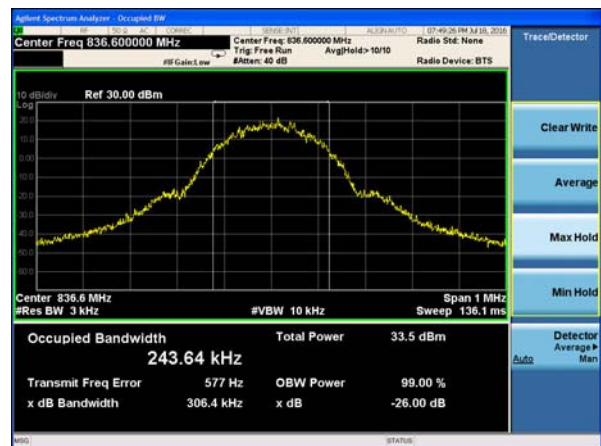
GSM 850 GPRS CH-Low



GSM 850 CH-Middle



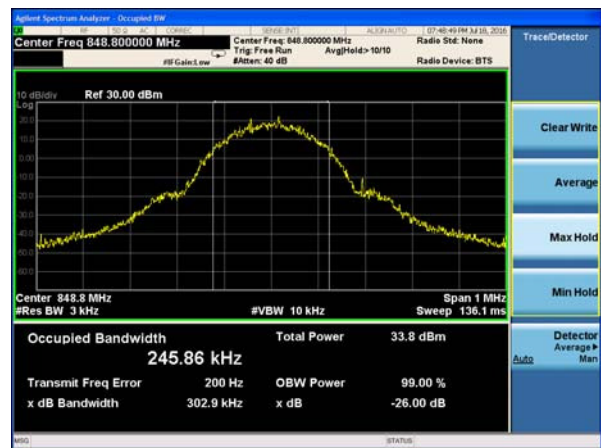
GSM 850 GPRS CH-Middle



GSM 850 CH-High

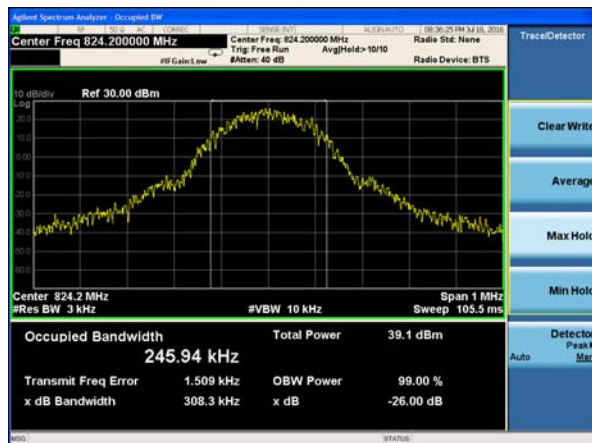


GSM 850 GPRS CH-High

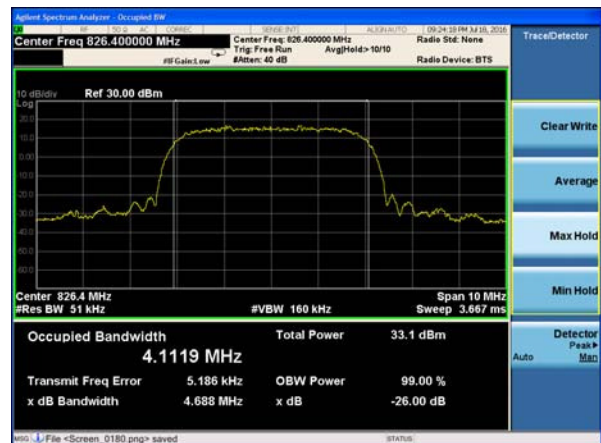




GSM 850 EGPRS CH-Low



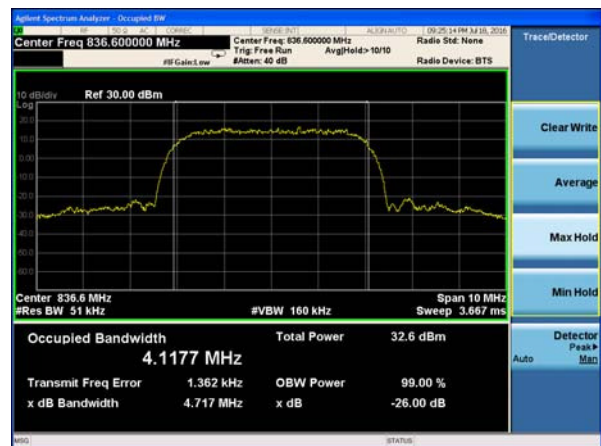
WCDMA Band V CH-Low



GSM 850 EGPRS CH-Middle



WCDMA Band V CH-Middle



GSM 850 EGPRS CH-High



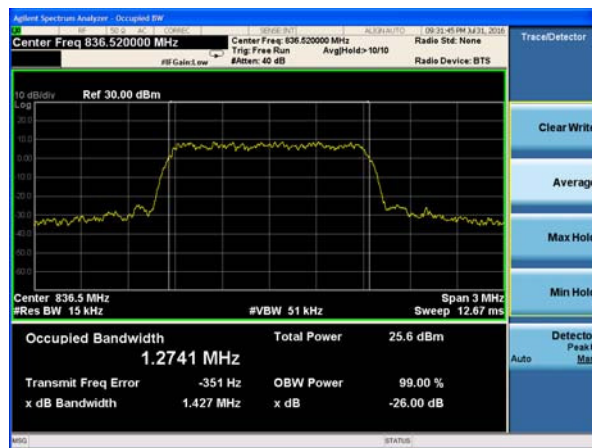
WCDMA Band V CH-High



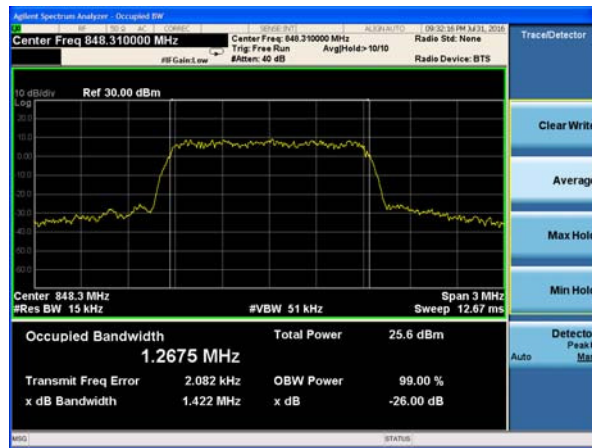
CDMA 1XRTT BC0 CH-Low



CDMA 1XRTT BC0 CH- Middle

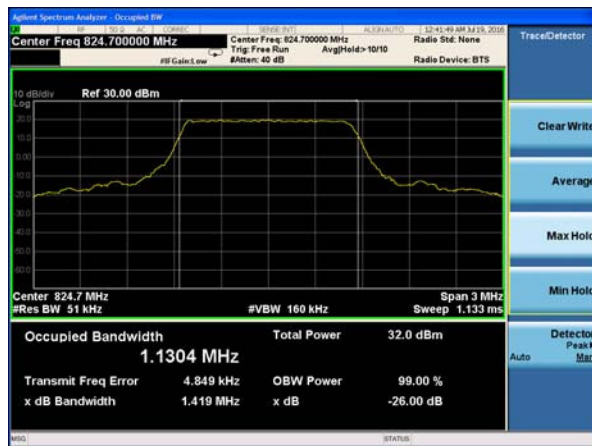


CDMA 1XRTT BC0 CH- High





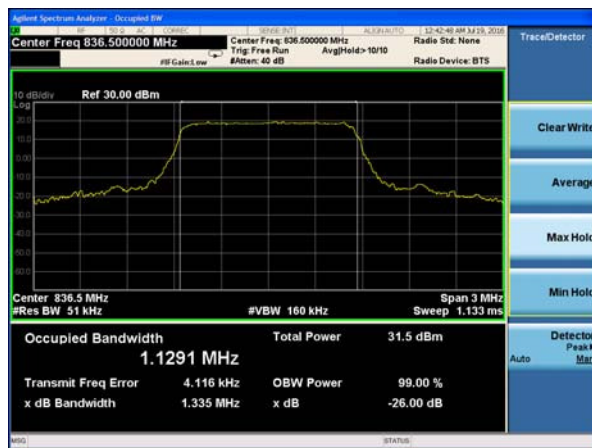
LTE Band 5 QPSK 1.4MHz CH-Low



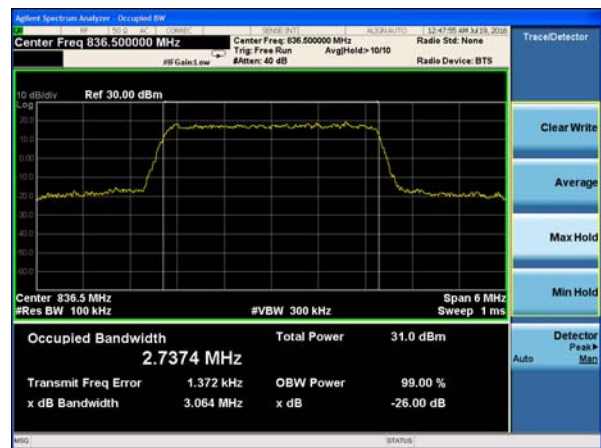
LTE Band 5 QPSK 3MHz CH-Low



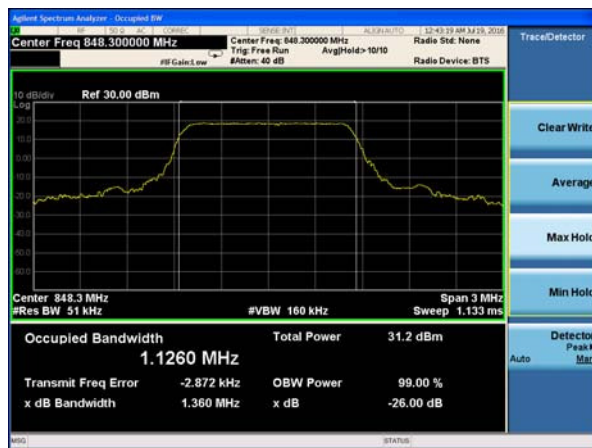
LTE Band 5 QPSK 1.4MHz CH-Middle



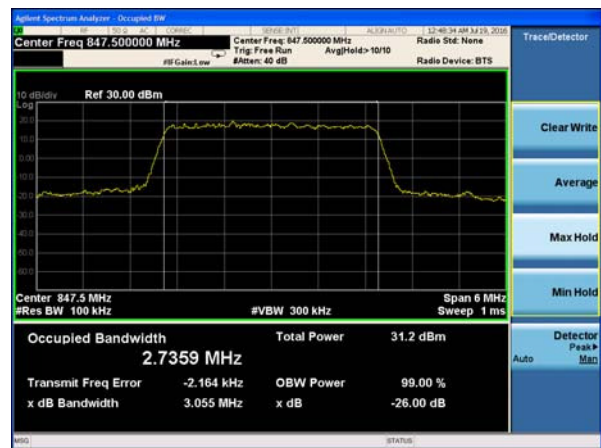
LTE Band 5 QPSK 3MHz CH-Middle



LTE Band 5 QPSK 1.4MHz CH-High

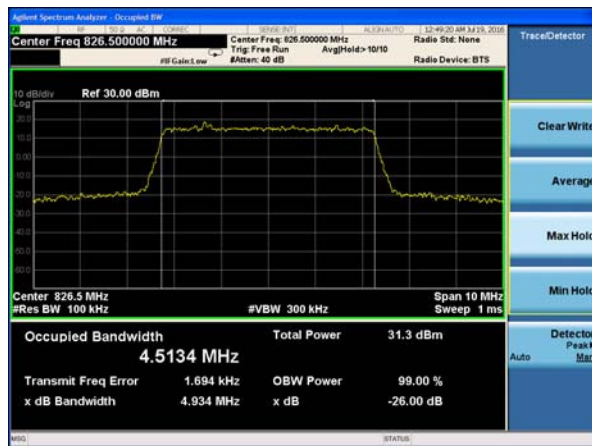


LTE Band 5 QPSK 3MHz CH-High





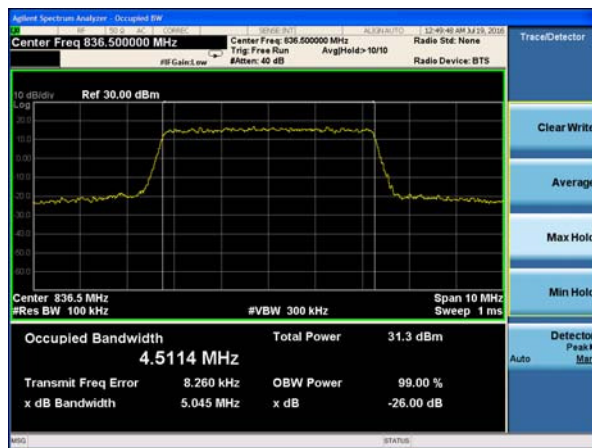
LTE Band 5 QPSK 5MHz CH-Low



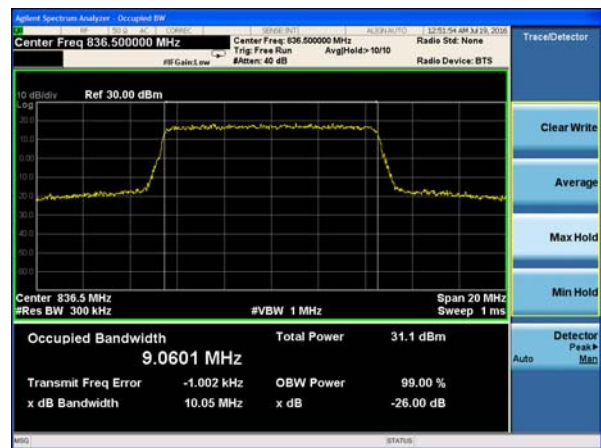
LTE Band 5 QPSK 10MHz CH-Low



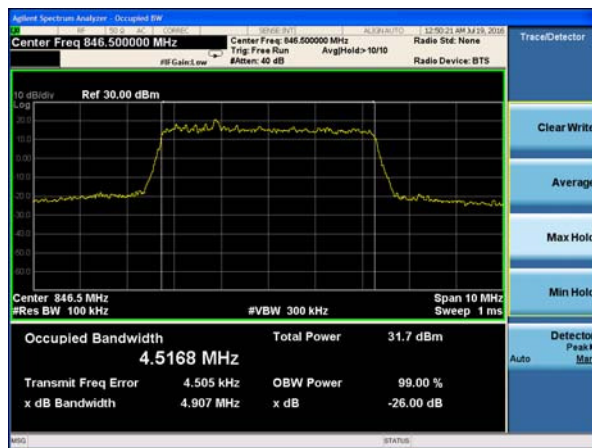
LTE Band 5 QPSK 5MHz CH-Middle



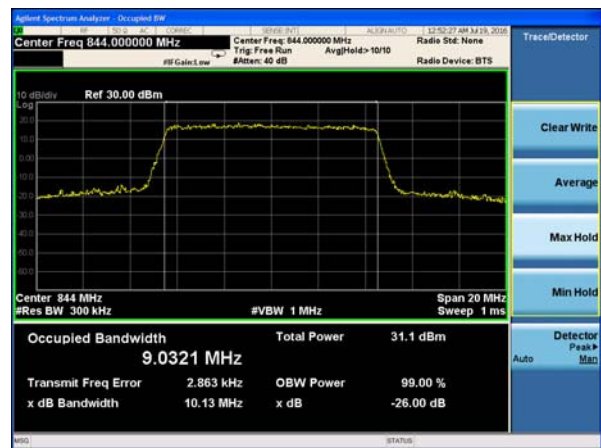
LTE Band 5 QPSK 10MHz CH-Middle



LTE Band 5 QPSK 5MHz CH-High

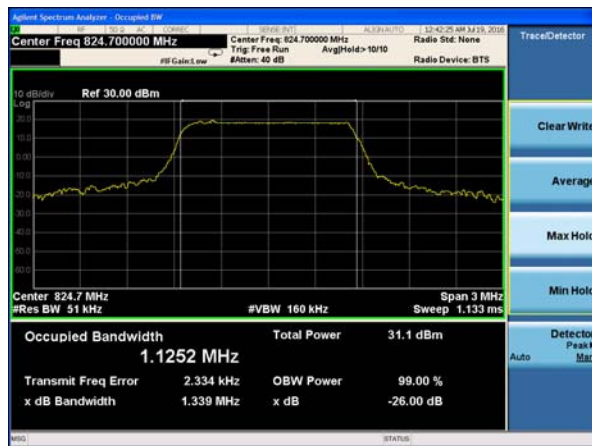


LTE Band 5 QPSK 10MHz CH-High

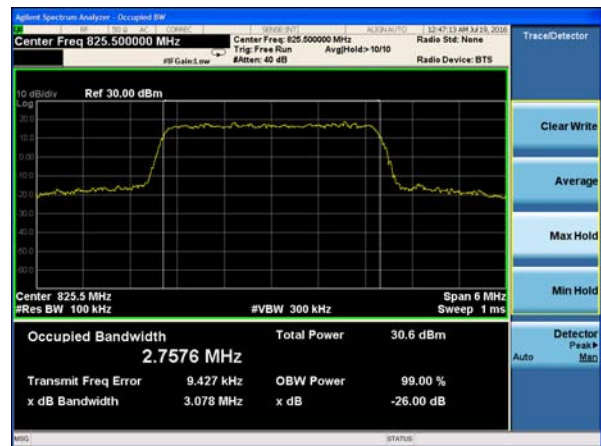




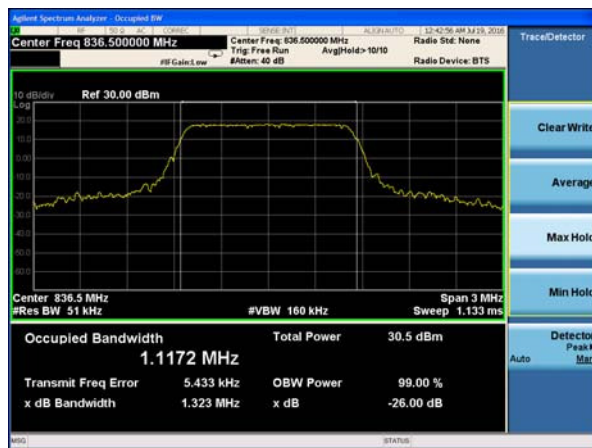
LTE Band 5 16QAM 1.4MHz CH-Low



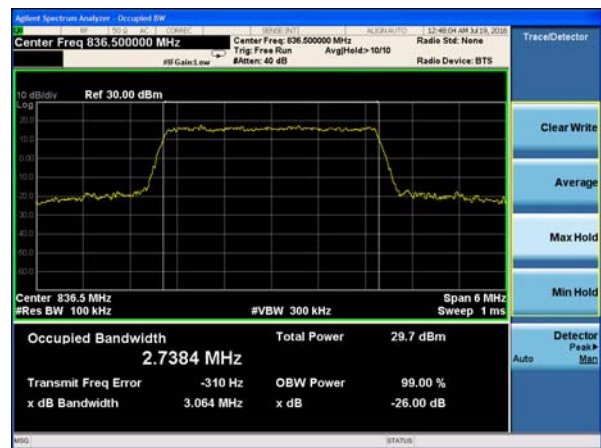
LTE Band 5 16QAM 3MHz CH-Low



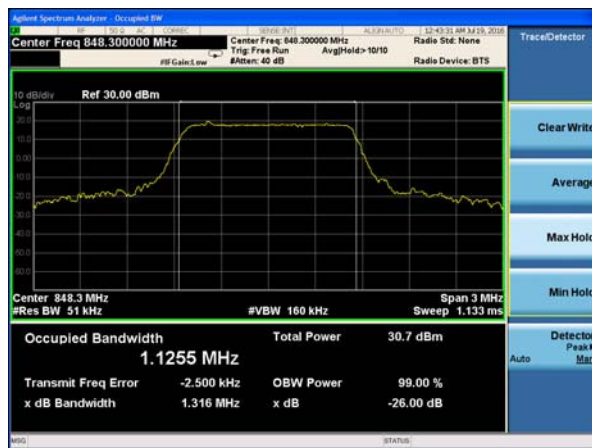
LTE Band 5 16QAM 1.4MHz CH-Middle



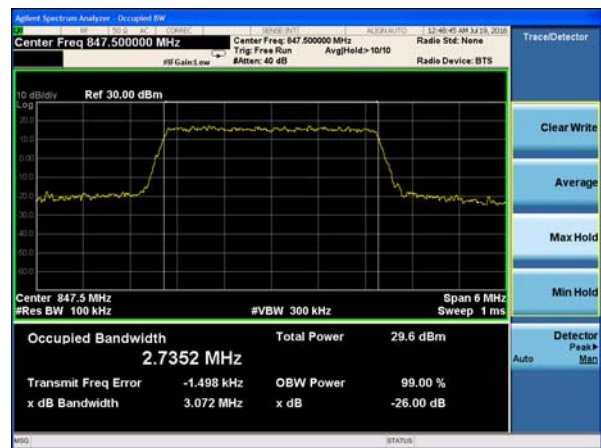
LTE Band 5 16QAM 3MHz CH-Middle



LTE Band 5 16QAM 1.4MHz CH-High

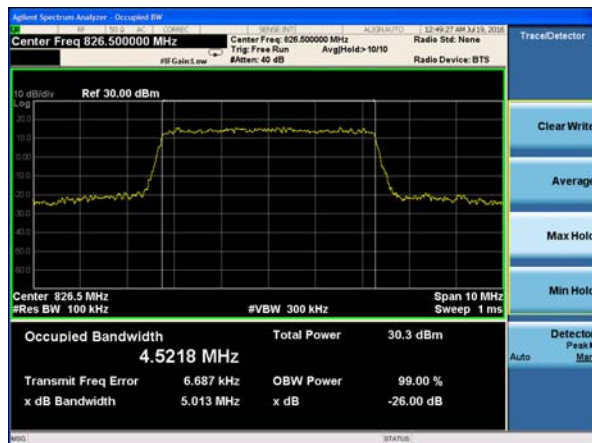


LTE Band 5 16QAM 3MHz CH-High

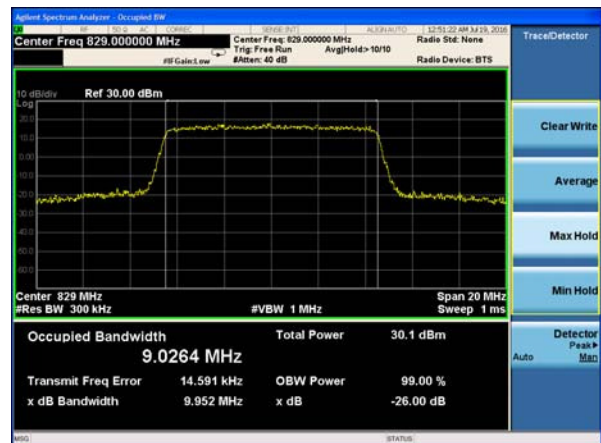




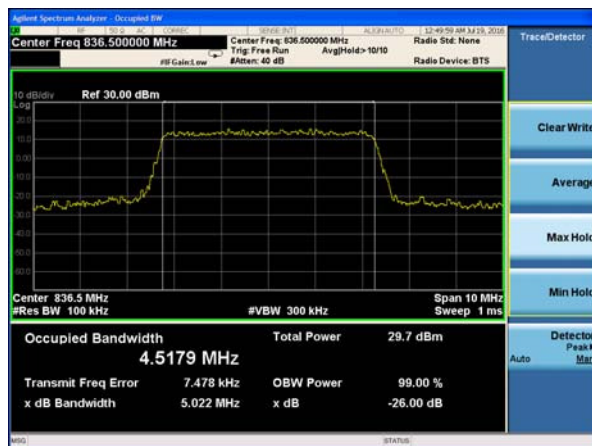
LTE Band 5 16QAM 5MHz CH-Low



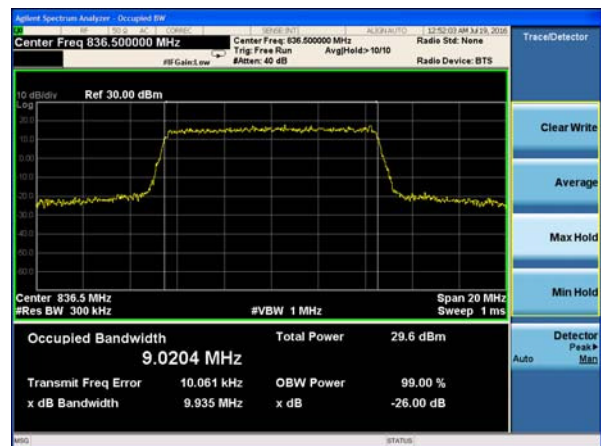
LTE Band 5 16QAM 10MHz CH-Low



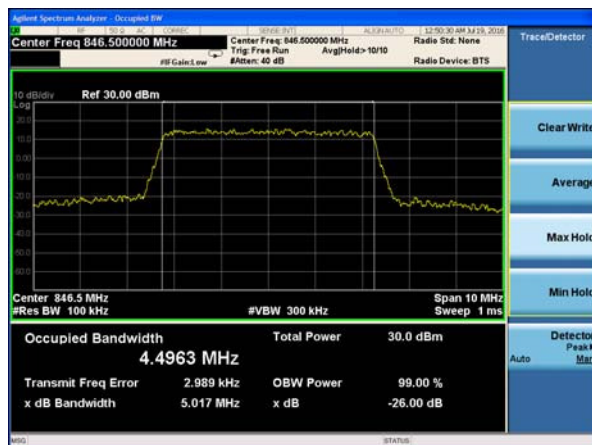
LTE Band 5 16QAM 5MHz CH-Middle



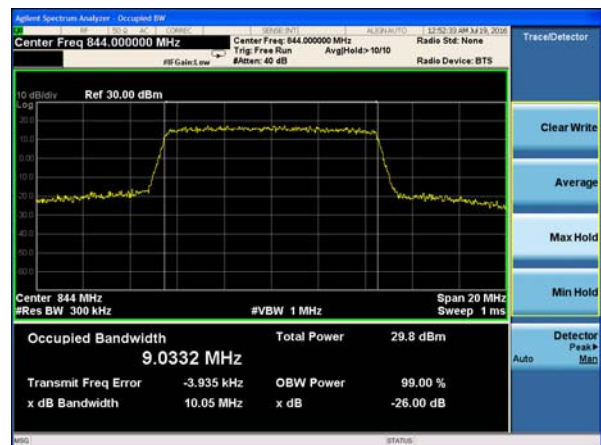
LTE Band 5 16QAM 10MHz CH-Middle



LTE Band 5 16QAM 5MHz CH-High



LTE Band 5 16QAM 10MHz CH-High



5.4. Band Edge Compliance

Ambient condition

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

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.

RBW is set to 3kHz, VBW is set to 10kHz for GSM 850,

RBW is set to 15kHz, VBW is set to 51kHz for CDMA BC0,

RBW is set to 51kHz, VBW is set to 160kHz for WCDMA Band V,

RBW is set to 15kHz, VBW is set to 51kHz for LTE Band 5 (1.4MHz),

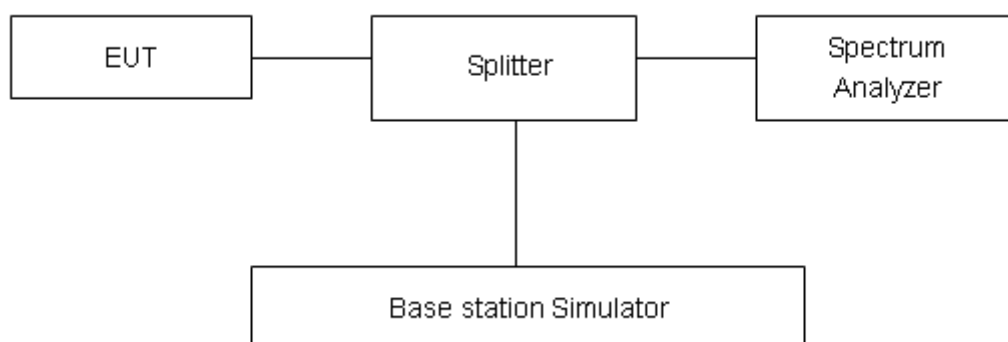
RBW is set to 30kHz, VBW is set to 100kHz for LTE Band 5 (3MHz),

RBW is set to 51kHz, VBW is set to 160kHz for LTE Band 5 (5MHz),

RBW is set to 100kHz, VBW is set to 300kHz for LTE Band 5 (10MHz).

Spectrum analyzer plots are included on the following pages.

Test Setup



Limits

Rule Part 22.917(a) specifies that “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.”

Limit	-13 dBm
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Measurement Uncertainty

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



Test Result:

GSM 850 CH-Low



GSM 850 CH-High



GSM 850 GPRS CH-Low



GSM 850 GPRS CH-High



GSM 850 EGPRS CH-Low



GSM 850 EGPRS CH-High





CDMA 1XRTT BC0 CH1013



CDMA 1XRTT BC0 CH777



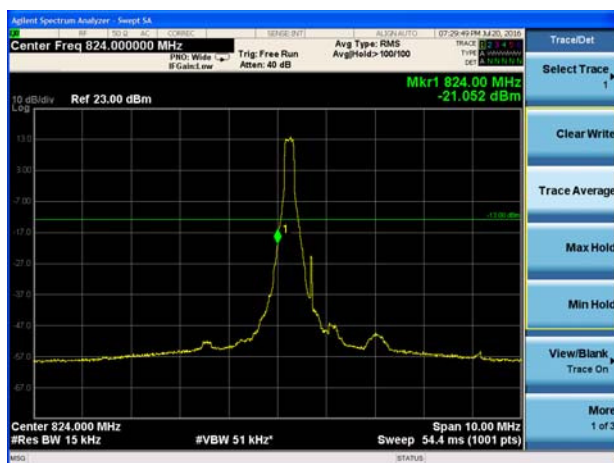
WCDMA Band V CH-Low



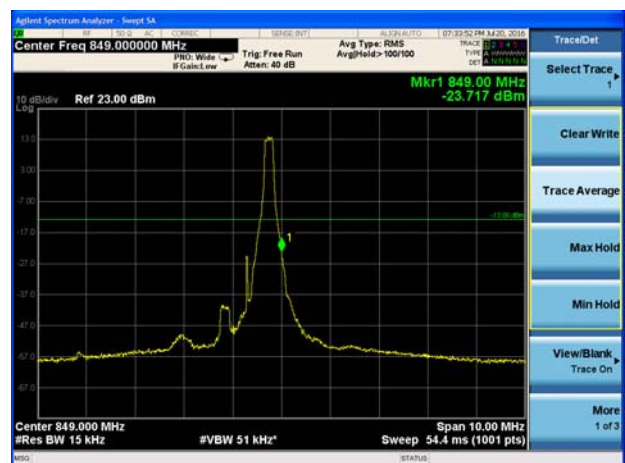
WCDMA Band V CH-High



LTE Band 5 QPSK 1.4MHz CH-Low 1RB



LTE Band 5 QPSK 1.4MHz CH-High 1RB

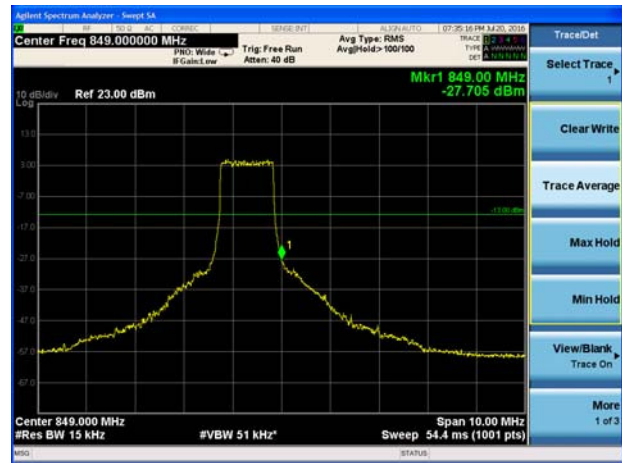




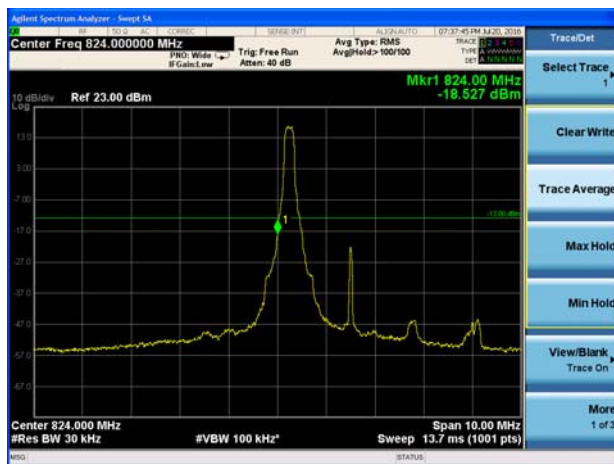
LTE Band 5 QPSK 1.4MHz CH-Low 100%RB



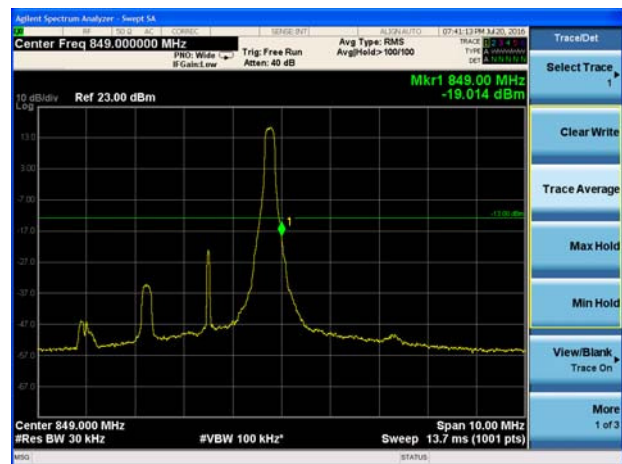
LTE Band 5 QPSK 1.4MHz CH-High 100%RB



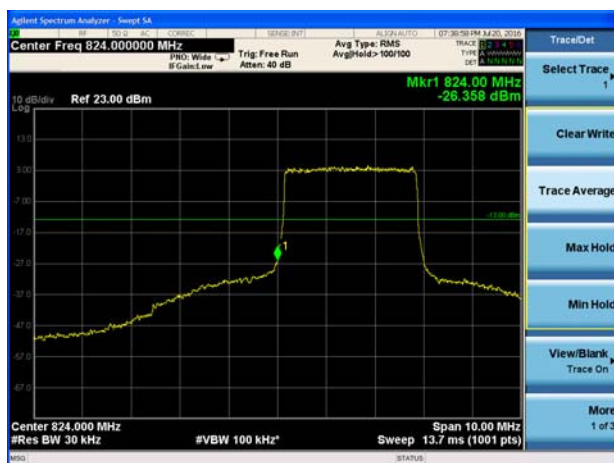
LTE Band 5 QPSK 3MHz CH-Low 1RB



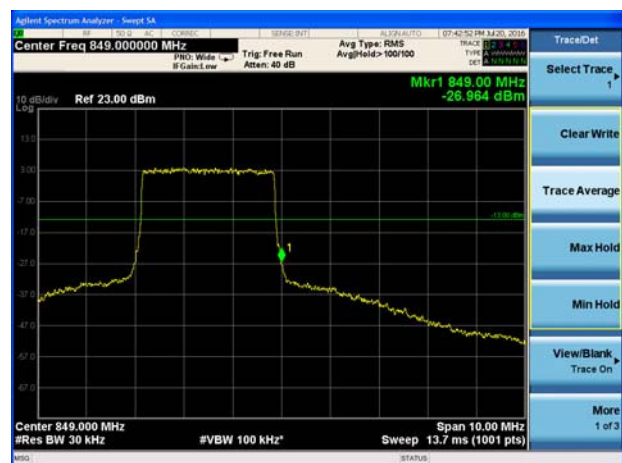
LTE Band 5 QPSK 3MHz CH-High 1RB



LTE Band 5 QPSK 3MHz CH-Low 100%RB

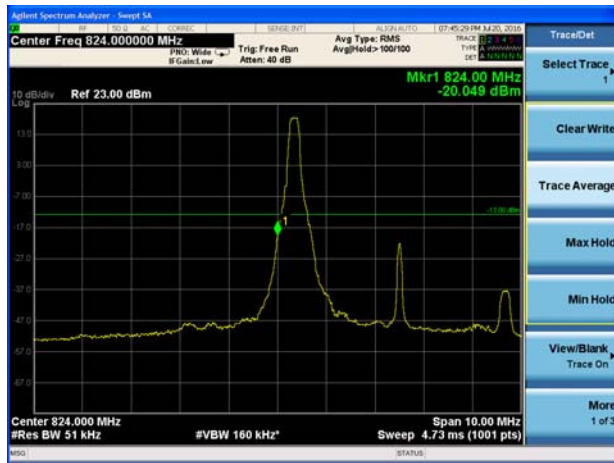


LTE Band 5 QPSK 3MHz CH-High 100%RB

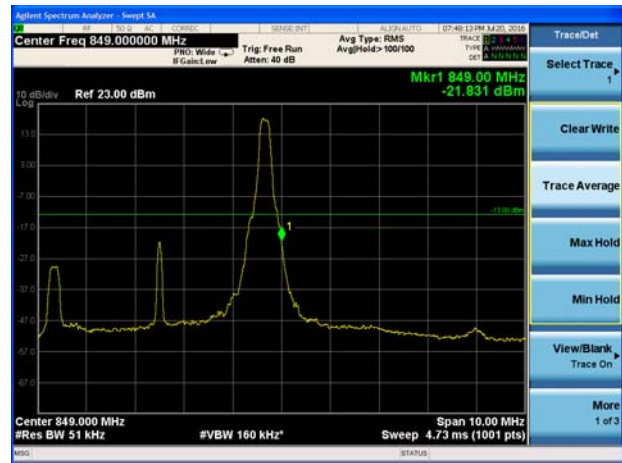




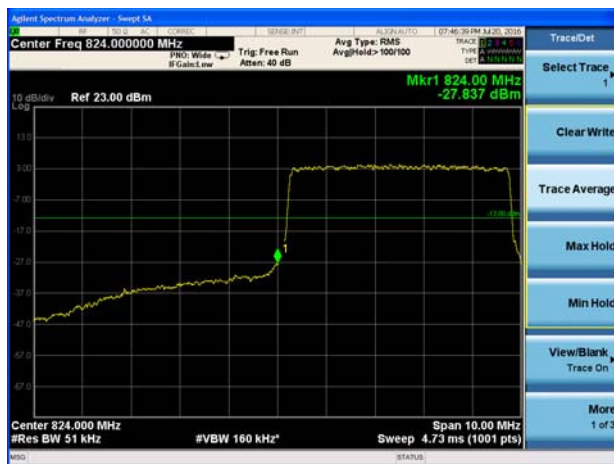
LTE Band 5 QPSK 5MHz CH-Low 1RB



LTE Band 5 QPSK 5MHz CH-High 1RB



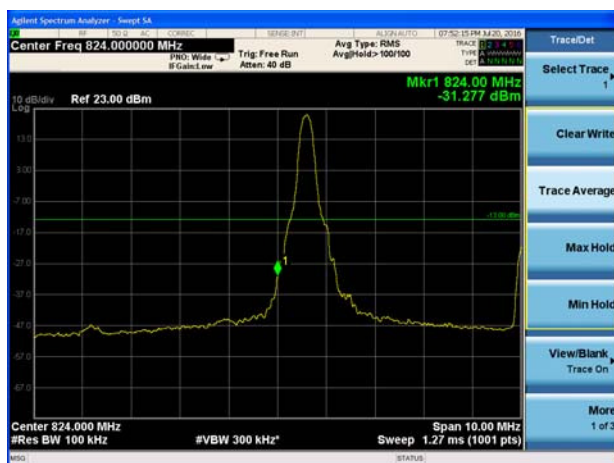
LTE Band 5 QPSK 5MHz CH-Low 100%RB



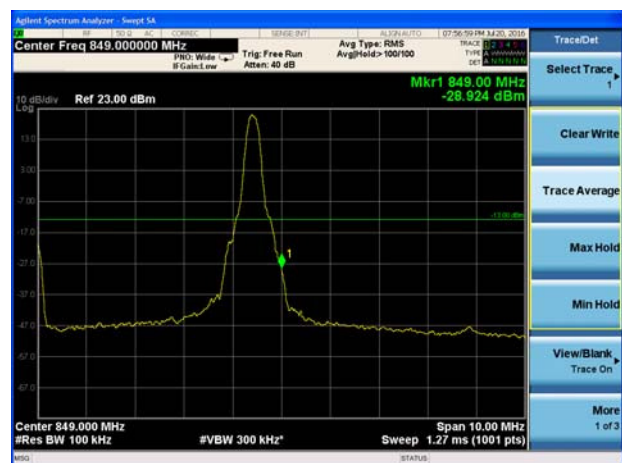
LTE Band 5 QPSK 5MHz CH-High 100%RB



LTE Band 5 QPSK 10MHz CH-Low 1RB



LTE Band 5 QPSK 10MHz CH-High 1RB





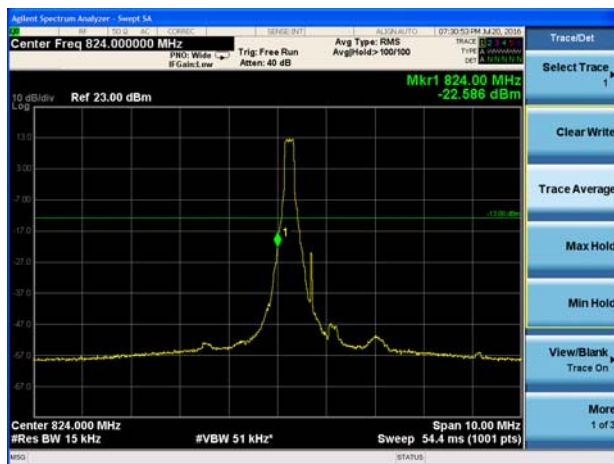
LTE Band 5 QPSK 10MHz CH-Low 100%RB



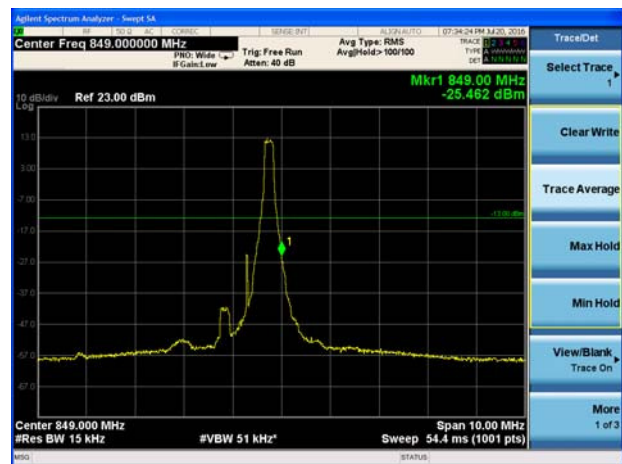
LTE Band 5 QPSK 10MHz CH-High 100%RB



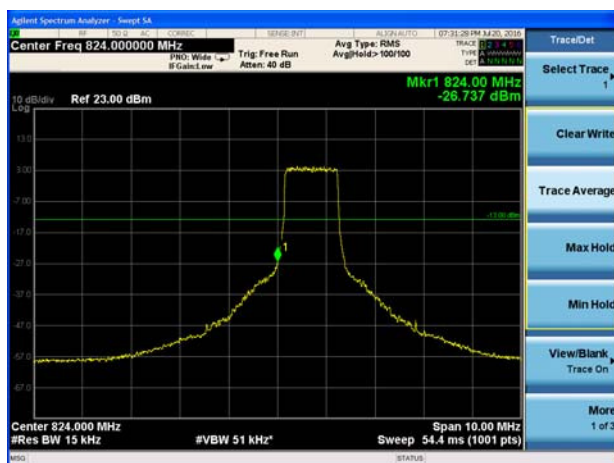
LTE Band 5 16QAM 1.4MHz CH-Low 1RB



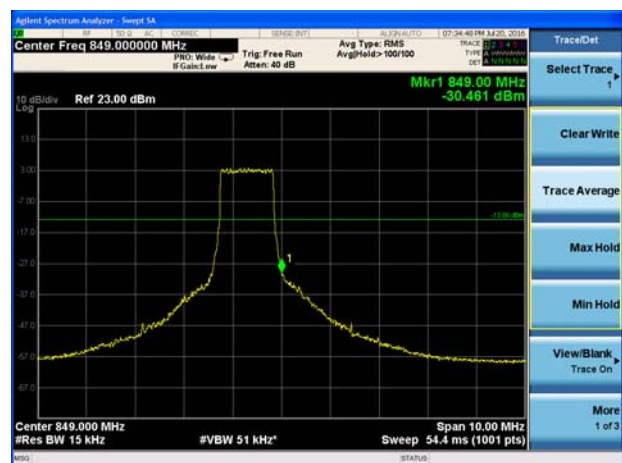
LTE Band 5 16QAM 1.4MHz CH-High 1RB



LTE Band 5 16QAM 1.4MHz CH-Low 100%RB

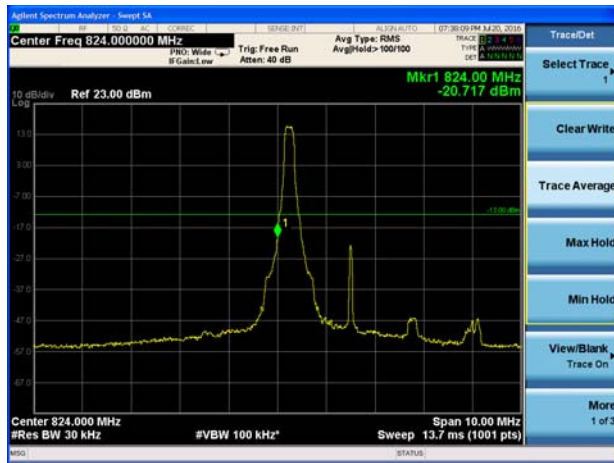


LTE Band 5 16QAM 1.4MHz CH-High 100%RB

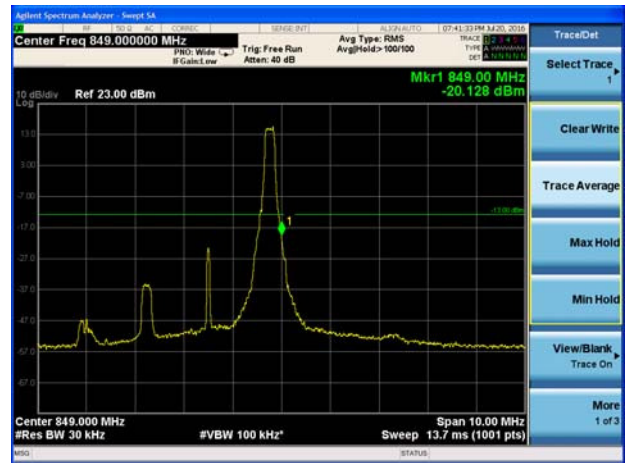




LTE Band 5 16QAM 3MHz CH-Low 1RB



LTE Band 5 16QAM 3MHz CH-High 1RB



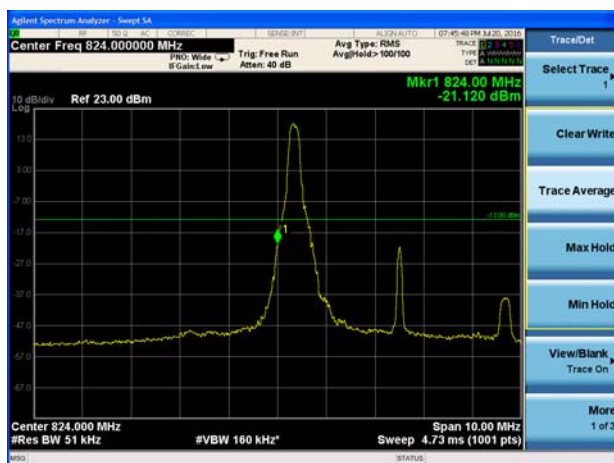
LTE Band 5 16QAM 3MHz CH-Low 100%RB



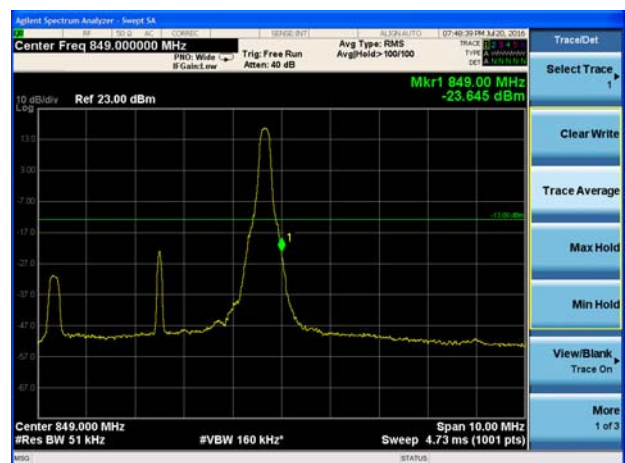
LTE Band 5 16QAM 3MHz CH-High 100%RB



LTE Band 5 16QAM 5MHz CH-Low 1RB



LTE Band 5 16QAM 5MHz CH-High 1RB





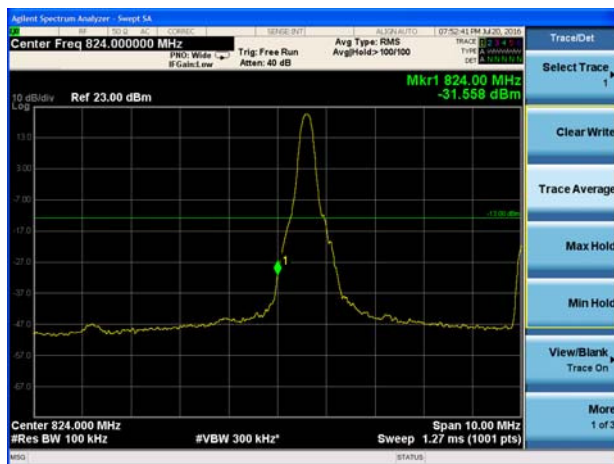
LTE Band 5 16QAM 5MHz CH-Low 100%RB



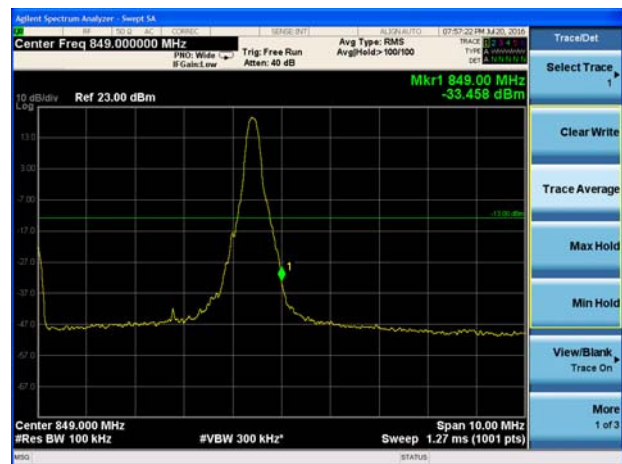
LTE Band 5 16QAM 5MHz CH-High 100%RB



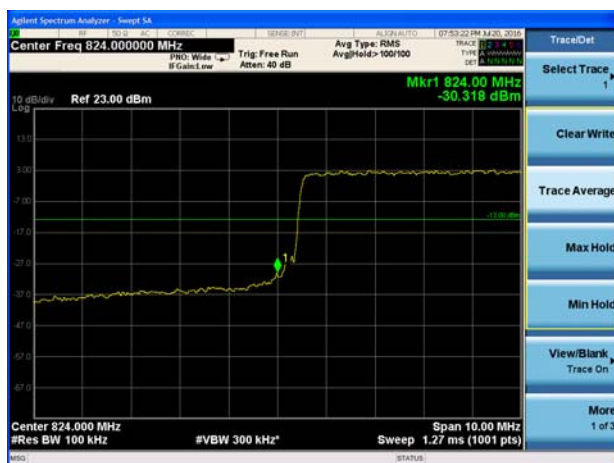
LTE Band 5 16QAM 10MHz CH-Low 1RB



LTE Band 5 16QAM 10MHz CH-High 1RB



LTE Band 5 16QAM 10MHz CH-Low 100%RB



LTE Band 5 16QAM 10MHz CH-High 100%RB



5.5. Frequency Stability

Ambient condition

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

Method of Measurement

1. Frequency Stability (Temperature Variation)

The temperature inside the climate chamber is varied from -30°C to +55°C in 10°C step size,

(1) With all power removed, the temperature was decreased to 0°C and permitted to stabilize for three hours.

(2) Measure the carrier frequency with the test equipment in a “call mode”. These measurements should be made within 1 minute of powering up the mobile station, to prevent significant self warming.

(3) Repeat the above measurements at 10°C increments from -30°C to +55°C. Allow at least 1.5 hours at each temperature, un-powered, before making measurements.

2. Frequency Stability (Voltage Variation)

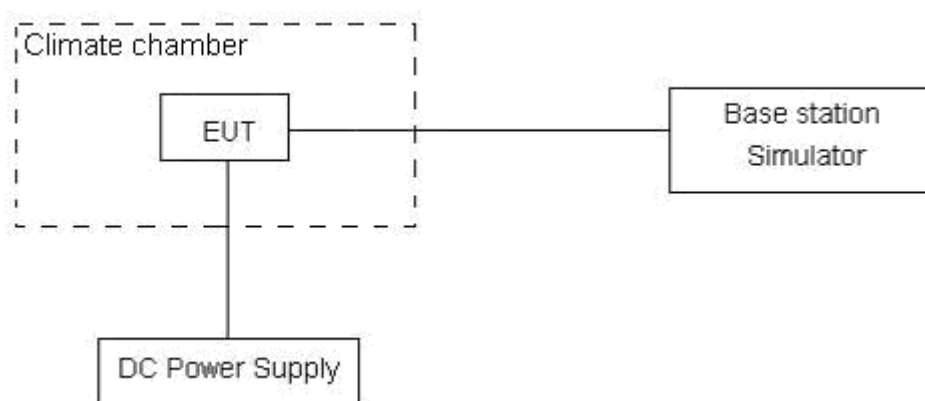
The frequency stability shall be measured with variation of primary supply voltage as follows:

(1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment.

(2) For hand carried, battery powered equipment, reduce primary supply voltage to the battery-operating end point which shall be specified by the manufacturer.

This transceiver is specified to operate with an input voltage of between 3.4 V and 4.4 V, with a nominal voltage of 3.85V.

Test setup



Limits

According to the Sec. 22.355, the frequency stability of the carrier shall be accurate to within 2.5 ppm of the received frequency for mobile stations.

Limits	≤ 2.5 ppm
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Measurement Uncertainty

The assessed measurement uncertainty to ensure 99.75% confidence level for the normal distribution is with the coverage factor $k = 3$, $U = 0.01$ ppm.

Test Result

Mode	Test status	Test Results (ppm)			Limit (ppm)	Conclusion
		GSM (GMSK)	GPRS (GMSK)	EGPRS (8PSK)		
GSM 850 Channel 190	-30°C/3.85 V	0.0123	0.013	0.0078	2.5	PASS
	-20°C/3.85 V	0.0132	0.0124	-0.0069	2.5	PASS
	-10°C/3.85 V	0.005	0.0163	0.0233	2.5	PASS
	0°C/3.85 V	0.0118	0.0258	0.0221	2.5	PASS
	10°C/3.85 V	0.0089	0.0121	0.0198	2.5	PASS
	20°C/3.85 V	-0.0055	0.0174	0.0235	2.5	PASS
	30°C/3.85 V	0.0079	0.0194	0.0204	2.5	PASS
	40°C/3.85 V	0.0073	0.0231	0.0196	2.5	PASS
	50°C/3.85 V	0.0112	0.0101	0.0169	2.5	PASS
	55°C/3.85 V	0.0123	0.0243	0.0276	2.5	PASS
	20°C/3.4 V	0.0201	0.0192	0.0191	2.5	PASS
	20°C/4.4 V	0.0189	0.0101	0.0214	2.5	PASS
/	/	RMC			/	/
WCDMA Band V Channel 4183	-30°C/3.85 V	-0.00013			2.5	PASS
	-20°C/3.85 V	0.00003			2.5	PASS
	-10°C/3.85 V	-0.00019			2.5	PASS
	0°C/3.85 V	0.00014			2.5	PASS
	10°C/3.85 V	0.00019			2.5	PASS
	20°C/3.85 V	-0.00048			2.5	PASS
	30°C/3.85 V	0.00037			2.5	PASS
	40°C/3.85 V	0.00108			2.5	PASS
	50°C/3.85 V	0.00003			2.5	PASS
	55°C/3.85 V	-0.00013			2.5	PASS
	20°C/3.4 V	0.00015			2.5	PASS
	20°C/4.4 V	0.00016			2.5	PASS

Mode	Test status	Test Results (ppm)	Limit (ppm)	Conclusion
		1xRTT		
CDMA BC0 Channel 384	-30°C/3.85 V	0.00063	2.5	PASS
	-20°C/3.85 V	-0.00050	2.5	PASS
	-10°C/3.85 V	-0.00020	2.5	PASS
	0°C/3.85 V	0.00002	2.5	PASS
	10°C/3.85 V	-0.00027	2.5	PASS
	20°C/3.85 V	-0.00014	2.5	PASS
	30°C/3.85 V	-0.00008	2.5	PASS
	40°C/3.85 V	-0.00032	2.5	PASS
	50°C/3.85 V	-0.00041	2.5	PASS
	55°C/3.85 V	-0.00019	2.5	PASS
	20°C/3.4 V	-0.00013	2.5	PASS
	20°C/4.4 V	-0.00011	2.5	PASS

Bandwidth	Test status	LTE Band 5 Channel 20525 Test Results (ppm)		
		QPSK	16QAM	Conclusion
1.4MHz	-30°C/3.85 V	0.00765	0.01148	PASS
	-20°C/3.85 V	0.00658	0.00873	PASS
	-10°C/3.85 V	0.00530	0.00055	PASS
	0°C/3.85 V	0.00317	-0.00047	PASS
	10°C/3.85 V	0.00568	-0.00060	PASS
	20°C/3.85 V	0.00184	-0.00049	PASS
	30°C/3.85 V	0.00277	-0.00044	PASS
	40°C/3.85 V	0.00178	-0.00061	PASS
	50°C/3.85 V	0.00357	-0.00008	PASS
	55°C/3.85 V	0.00106	-0.00071	PASS
	20°C/3.4 V	0.00068	-0.00005	PASS
	20°C/4.4 V	0.00501	-0.00036	PASS
3MHz	-30°C/3.85 V	0.00502	0.01028	PASS
	-20°C/3.85 V	0.00275	0.00741	PASS
	-10°C/3.85 V	0.00031	0.00496	PASS
	0°C/3.85 V	0.00080	0.00361	PASS
	10°C/3.85 V	-0.00001	0.00464	PASS
	20°C/3.85 V	0.00071	0.00194	PASS
	30°C/3.85 V	0.00013	0.00167	PASS



	40°C/3.85 V	-0.00036	0.00173	PASS
	50°C/3.85 V	0.00012	0.00345	PASS
	55°C/3.85 V	-0.00087	0.00099	PASS
	20°C/3.4 V	-0.00016	0.00104	PASS
	20°C/4.4 V	0.00032	0.00463	PASS
5MHz	-30°C/3.85 V	-0.00921	0.00980	PASS
	-20°C/3.85 V	-0.00430	0.01698	PASS
	-10°C/3.85 V	0.00195	-0.00094	PASS
	0°C/3.85 V	0.00115	-0.00122	PASS
	10°C/3.85 V	0.00063	-0.00092	PASS
	20°C/3.85 V	0.00143	0.00342	PASS
	30°C/3.85 V	0.00152	-0.00110	PASS
	40°C/3.85 V	0.00151	0.00124	PASS
	50°C/3.85 V	0.00055	0.00147	PASS
	55°C/3.85 V	0.00163	-0.00286	PASS
	20°C/3.4 V	0.00116	-0.00142	PASS
	20°C/4.4 V	0.00024	-0.00120	PASS
10MHz	-30°C/3.85 V	-0.01375	0.00658	PASS
	-20°C/3.85 V	-0.00526	0.01040	PASS
	-10°C/3.85 V	0.00250	0.00008	PASS
	0°C/3.85 V	0.00617	-0.00094	PASS
	10°C/3.85 V	-0.00074	0.00103	PASS
	20°C/3.85 V	0.00360	0.00051	PASS
	30°C/3.85 V	-0.00188	-0.00020	PASS
	40°C/3.85 V	0.00292	0.00031	PASS
	50°C/3.85 V	0.00212	0.00043	PASS
	55°C/3.85 V	-0.00099	-0.00012	PASS
	20°C/3.4 V	-0.00756	0.00063	PASS
	20°C/4.4 V	0.00457	-0.00065	PASS

5.6. Spurious Emissions at Antenna Terminals

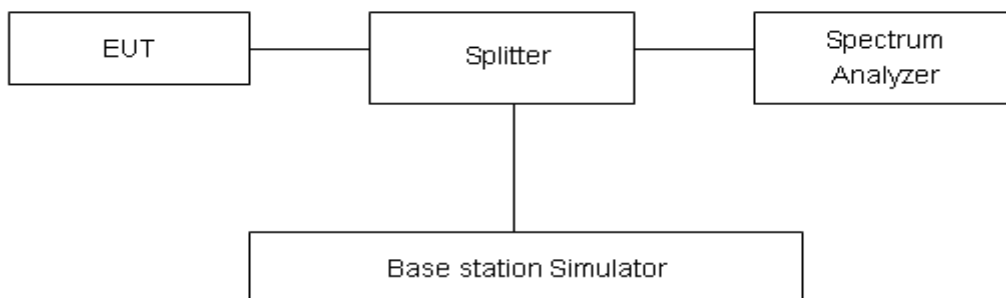
Ambient condition

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

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The measurement is carried out using a spectrum analyzer. The spectrum analyzer scans from 30MHz to the 10th harmonic of the carrier. The peak detector is used. RBW and VBW are set to 100 kHz, Sweep is set to ATUO.

Test setup



Limits

Rule Part 22.917(a) specifies that “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.”

Limit	-13 dBm
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Measurement Uncertainty

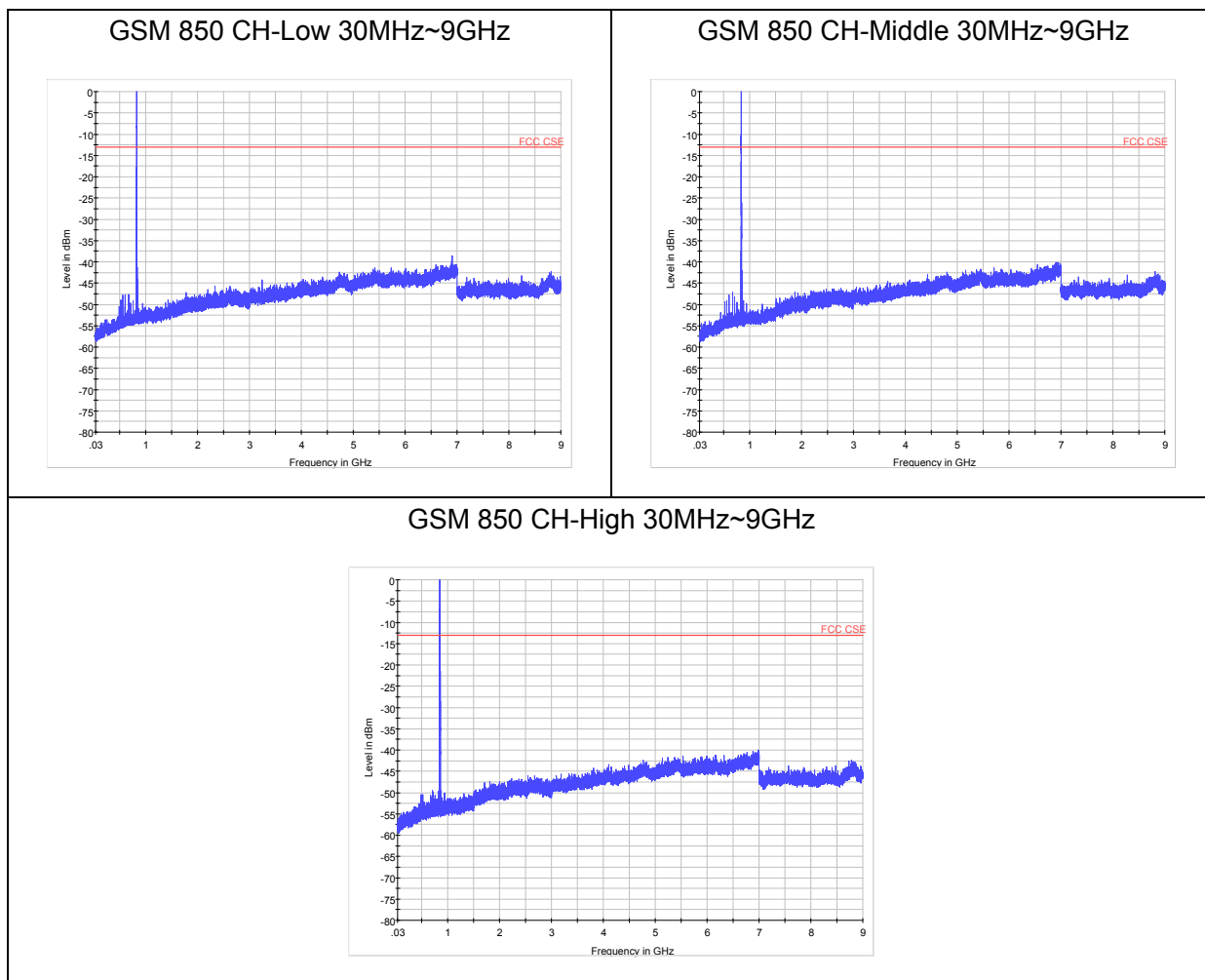
The assessed measurement uncertainty to ensure 99.75% confidence level for the normal distribution is with the coverage factor $k = 1.96$.

Frequency	Uncertainty
100kHz-2GHz	0.684 dB
2GHz-12.75GHz	1.407 dB

Test Result

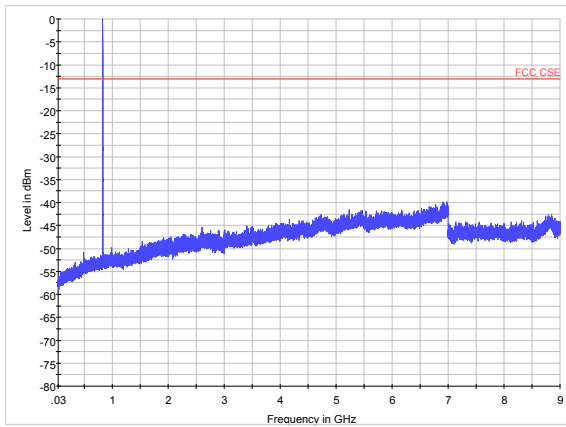
Sweep from 9 kHz to 30MHz, and the emissions more than 20 dB below the permissible value are not reported.

If disturbances were found more than 20dB below limit line, the mark is not required for the EUT.
The signal beyond the limit is carrier.

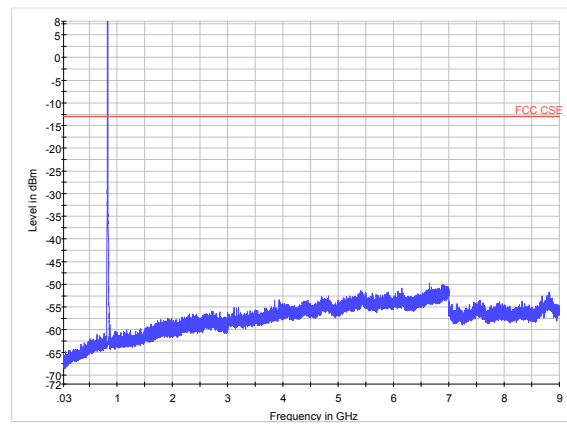




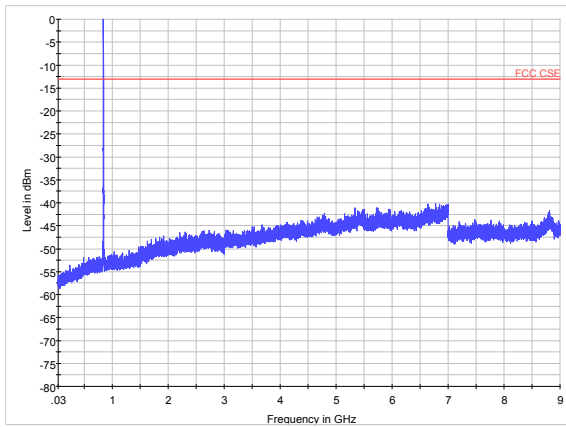
CDMA 1XRTT BC0 CH1013 30MHz~9GHz



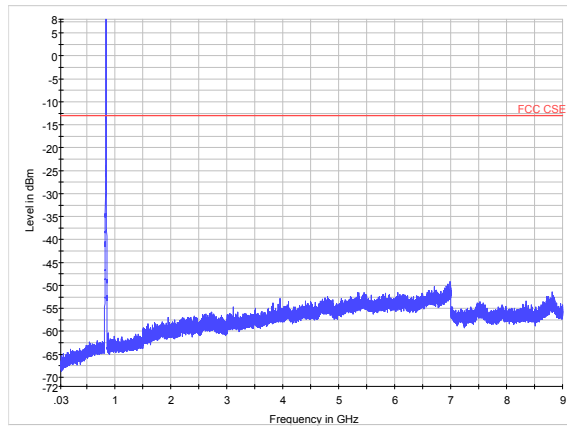
WCDMA Band V CH-Low 30MHz~9GHz



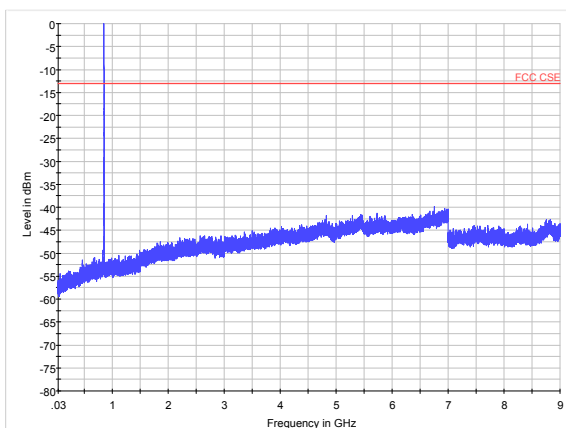
CDMA 1XRTT BC0 CH384 30MHz~9GHz



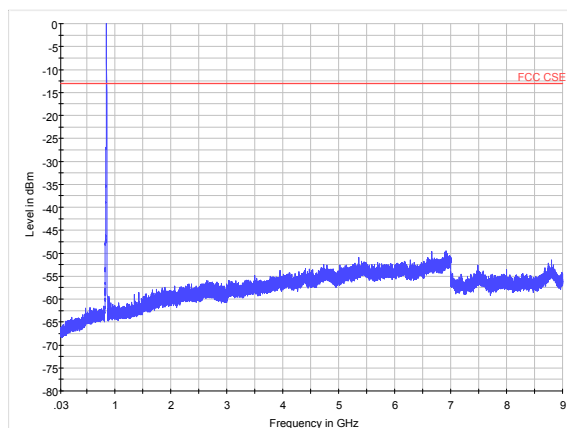
WCDMA Band V CH-Middle 30MHz~9GHz



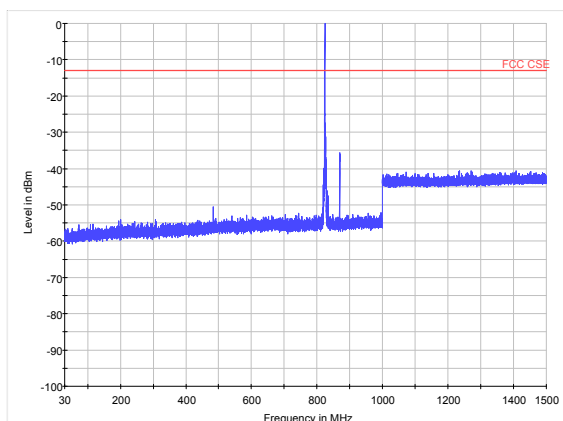
CDMA 1XRTT BC0 CH777 30MHz~9GHz



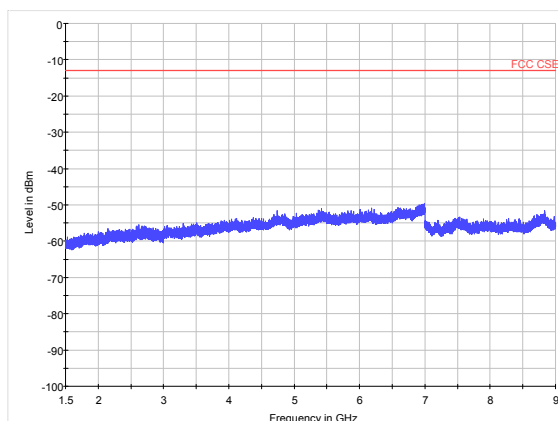
WCDMA Band V CH-High 30MHz~9GHz



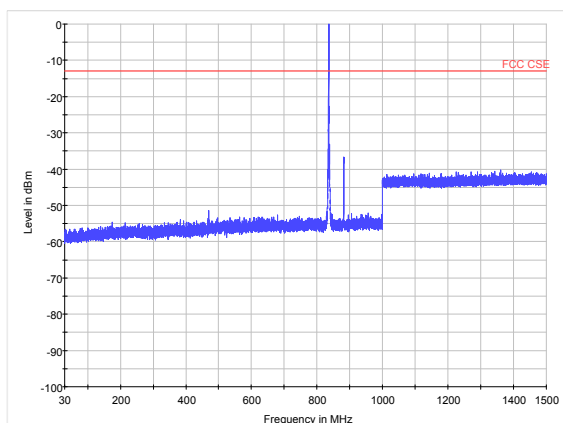
LTE Band 5 1.4MHz CH-Low 30MHz~1.5GHz



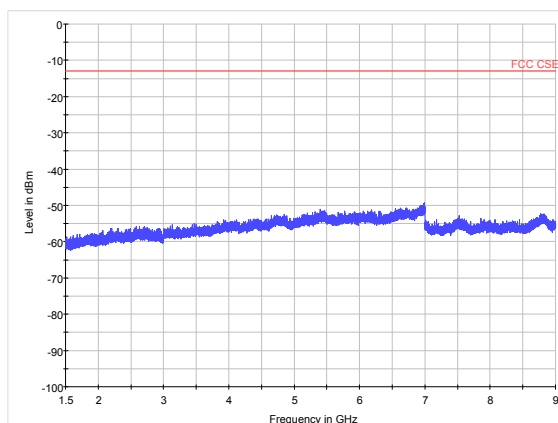
LTE Band 5 1.4MHz CH-Low 1.5GHz~9GHz



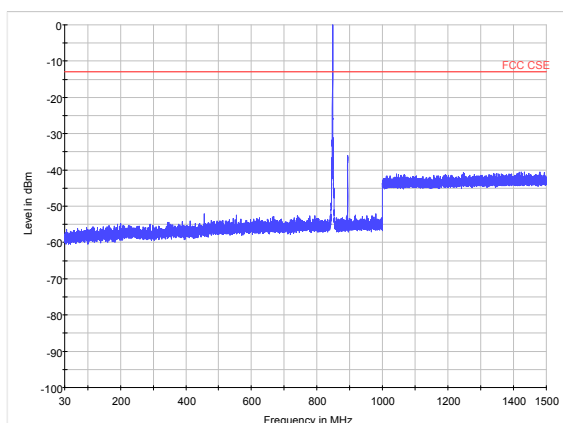
LTE Band 5 1.4MHz CH-Middle 30MHz~1.5GHz



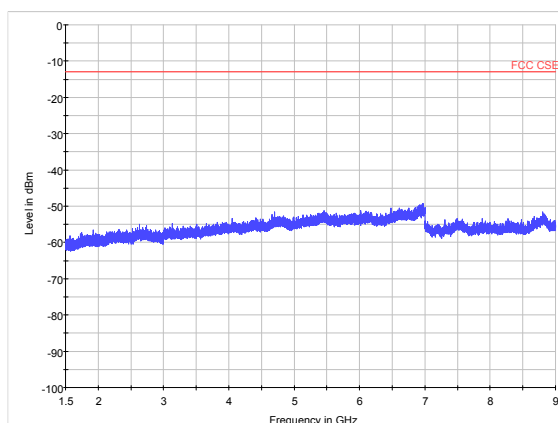
LTE Band 5 1.4MHz CH-Middle 1.5GHz~9GHz



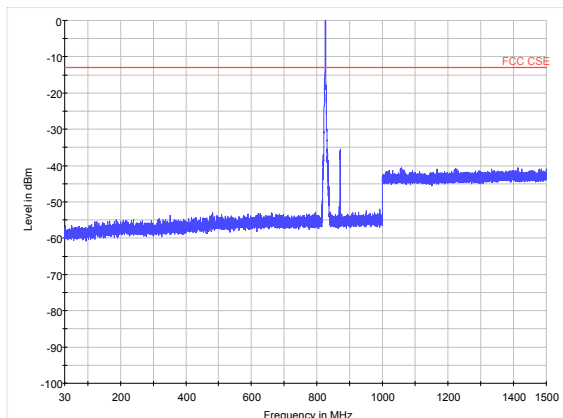
LTE Band 5 1.4MHz CH-High 30MHz~1.5GHz



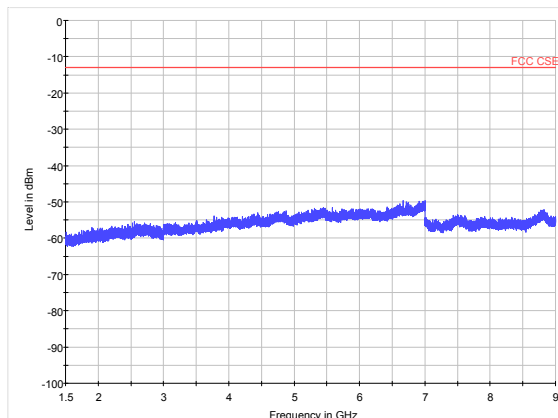
LTE Band 5 1.4MHz CH-High 1.5GHz~9GHz



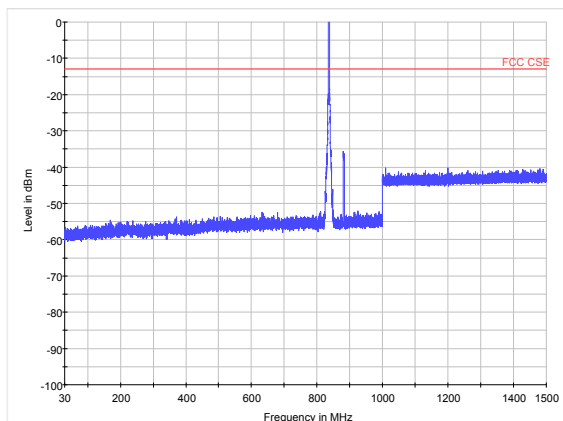
LTE Band 5 3MHz CH-Low 30MHz~1.5GHz



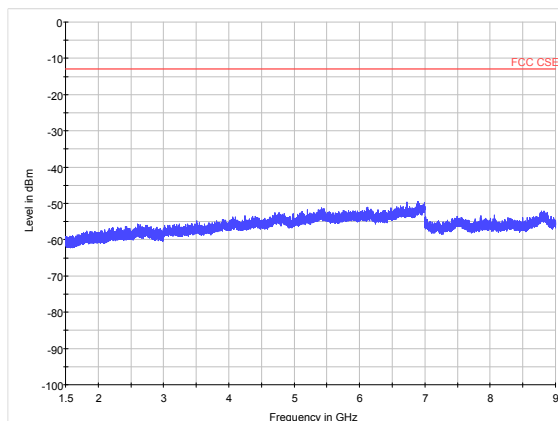
LTE Band 5 3MHz CH-Low 1.5GHz~9GHz



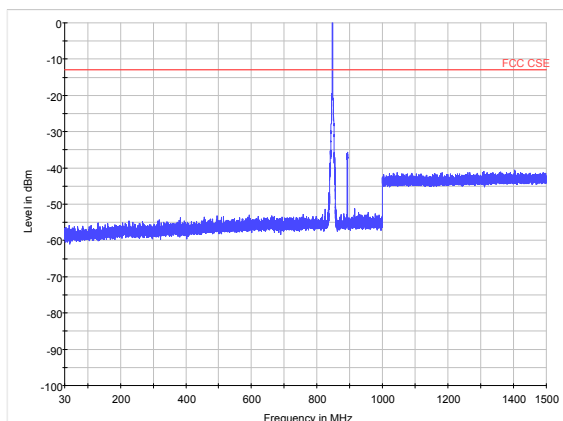
LTE Band 5 3MHz CH-Middle 30MHz~1.5GHz



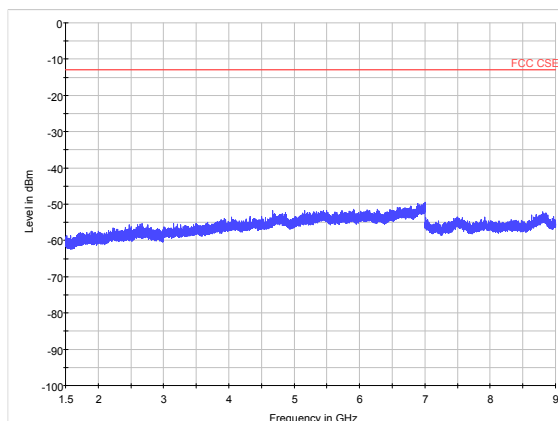
LTE Band 5 3MHz CH-Middle 1.5GHz~9GHz



LTE Band 5 3MHz CH-High 30MHz~1.5GHz

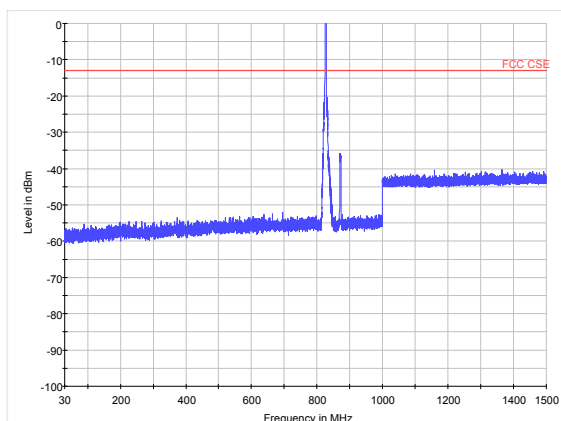


LTE Band 5 3MHz CH-High 1.5GHz~9GHz

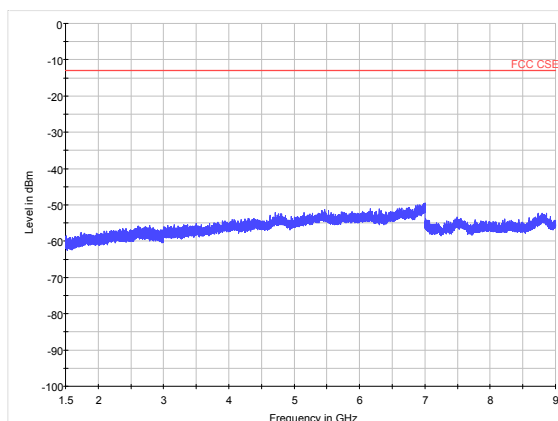




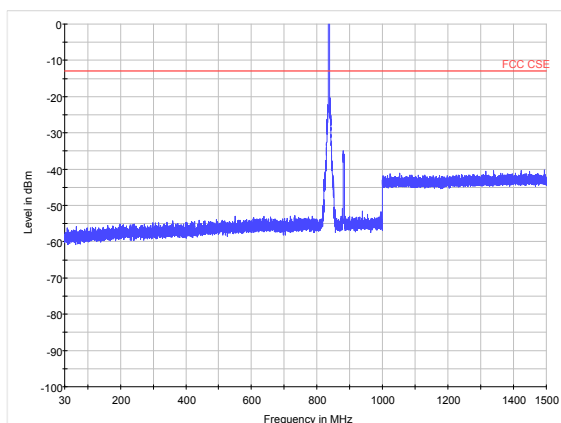
LTE Band 5 5MHz CH-Low 30MHz~1.5GHz



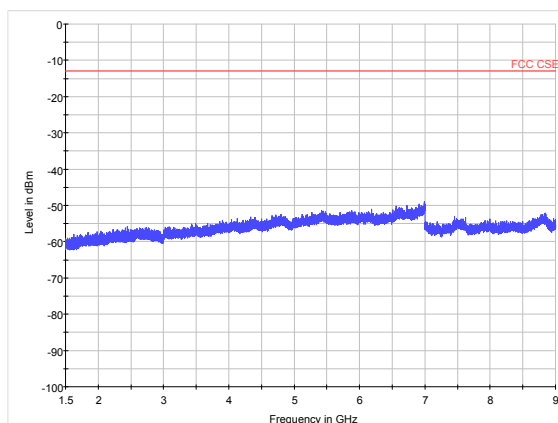
LTE Band 5 5MHz CH-Low 1.5GHz~9GHz



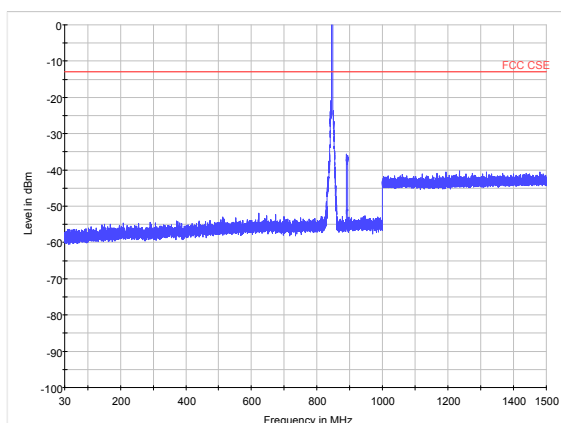
LTE Band 5 5MHz CH-Middle 30MHz~1.5GHz



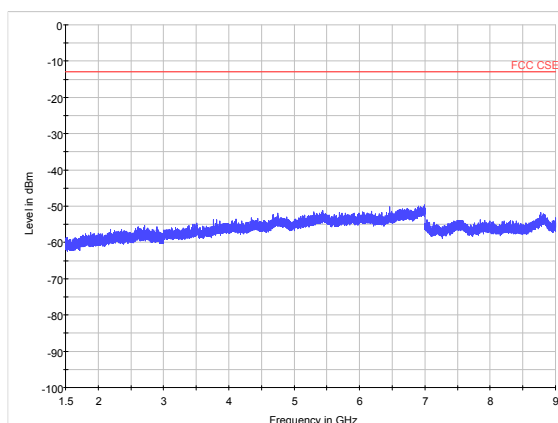
LTE Band 5 5MHz CH-Middle 1.5GHz~9GHz



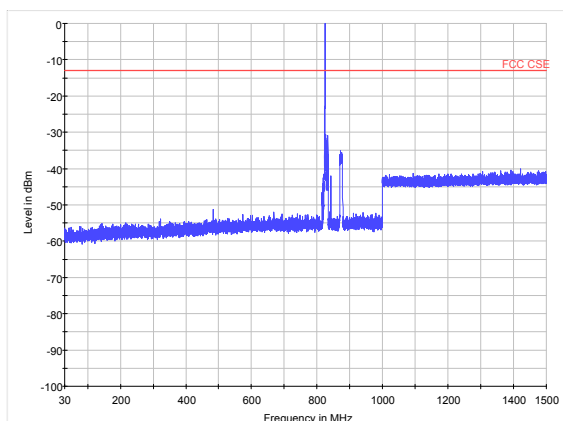
LTE Band 5 5MHz CH-High 30MHz~1.5GHz



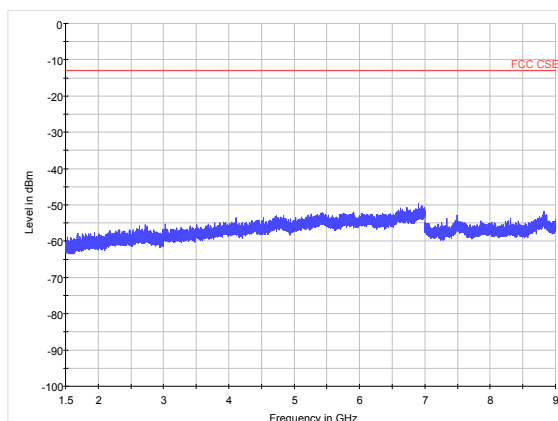
LTE Band 5 5MHz CH-High 1.5GHz~9GHz



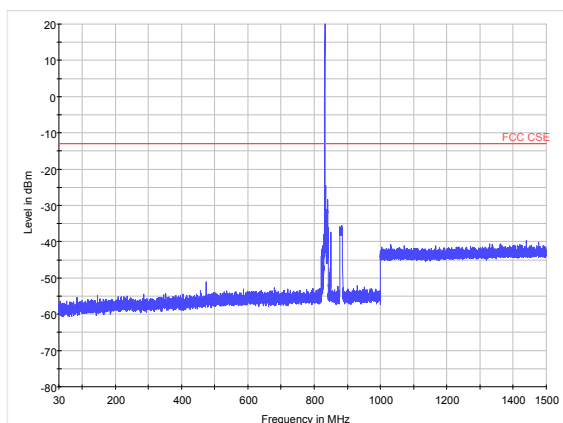
LTE Band 5 10MHz CH-Low 30MHz~1.5GHz



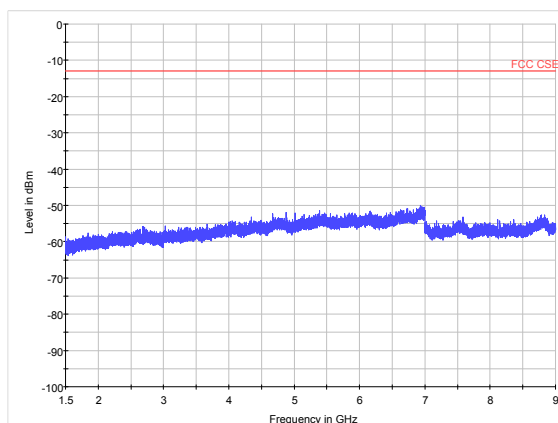
LTE Band 5 10MHz CH-Low 1.5GHz~9GHz



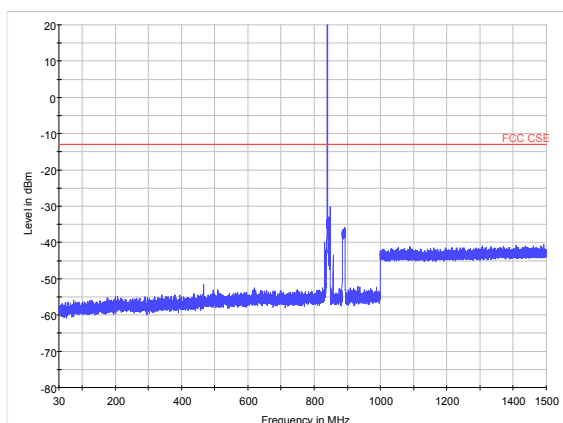
LTE Band 5 10MHz CH-Middle 30MHz~1.5GHz



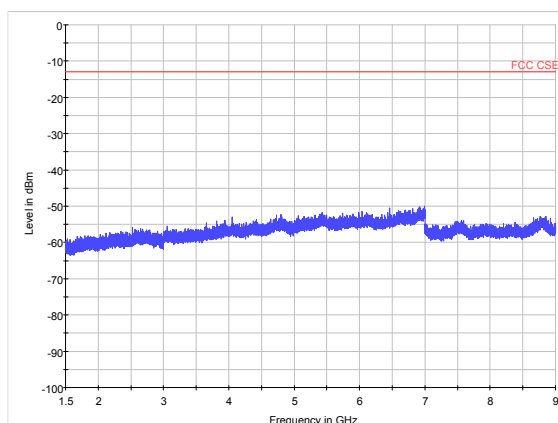
LTE Band 5 10MHz CH-Middle 1.5GHz~9GHz



LTE Band 5 10MHz CH-High 30MHz~1.5GHz



LTE Band 5 10MHz CH-High 1.5GHz~9GHz



5.7. Radiates Spurious Emission

Ambient condition

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

Method of Measurement

The measurements procedures in TIA -603-D are used.

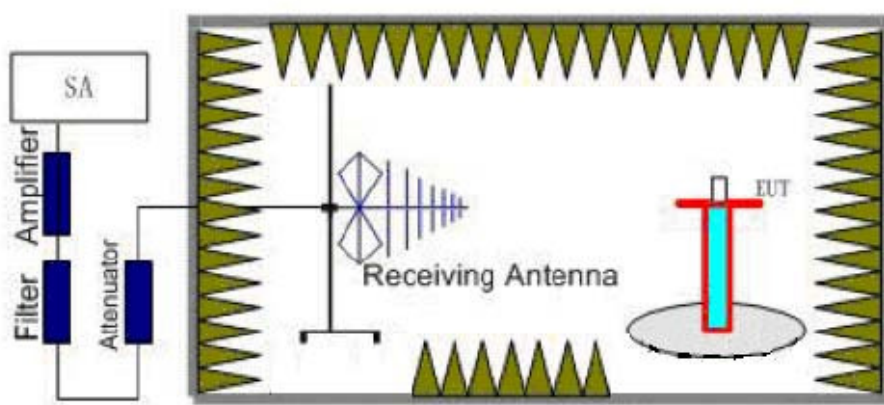
The spectrum was scanned from 30 MHz to the 10th harmonic of the highest frequency generated within the equipment.

The emissions less than 20 dB below the permissible value are reported.

The procedure of Radiates Spurious Emission is as follows:

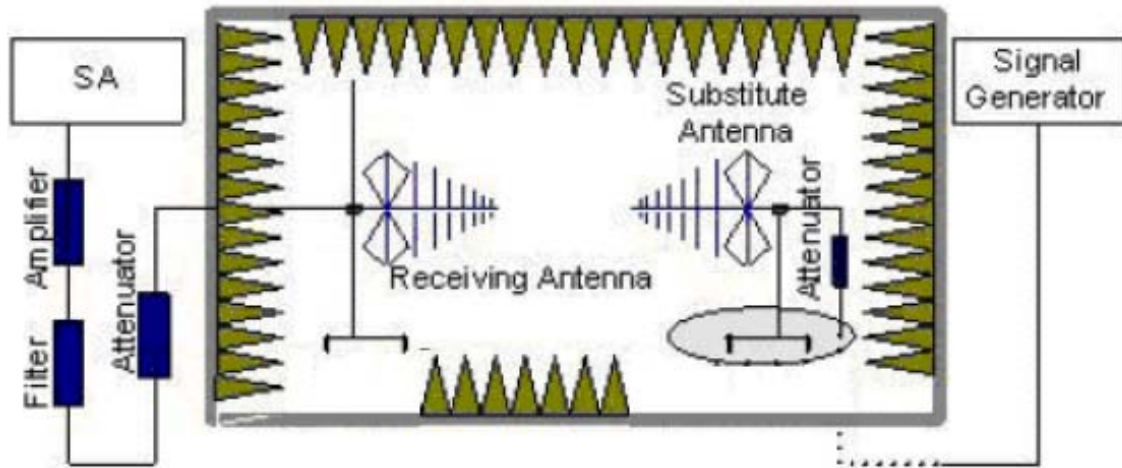
Step 1:

The measurement is carried out in the semi-anechoic chamber. EUT was placed on a 1.5 meters high non-conductive table at a 3 meters test distance from the test receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT. A radio link shall be established between EUT and Tester. The output power of the cell signal of the tester will be decreased until the output power of the EUT reach a maximum value. A peak detector is used while RBW and VBW are both set to 100kHz. During the measurement, the highest emission was recorded from analyzer power level (LVL) from the 360 degrees rotation of the turntable and the test antenna moved up and down over a range from 1 to 4 meters in both horizontally and vertically polarized orientations. The test setup refers to figure below.



Step 2:

A dipole antenna shall be substituted in place of the EUT. The antenna will be driven by a signal generator with a adjustable S.G. applied through a Tx cable. Adjust the level of the signal generator output until the value of the receiver reach the previously recorded analyzer power level (LVL). Then The E.R.P. /E.I.R.P. of the EUT can be calculated through the level of the signal generator, Tx cable loss and the gain of the substitution antenna. The test setup refers to figure below.



E.R.P (peak power) =S.G. - Tx Cable loss + Substitution antenna gain – 2.15.

EIRP= E.R.P+2.15

Limits

Rule Part 22.917(a) specifies that “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.”

Limit	-13 dBm
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Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$, $U = 3.55$ dB.

Test Result

Receiver antenna polarization (horizontal and vertical), the worst emission was found in vertical polarization, and the worst case in vertical polarization was recorded.

GSM 850 CH-Low

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1648	-61.73	2	10.15	Vertical	-53.58	-13.00	40.58	0
3	2473	-55.74	2.51	11.35	Vertical	-46.90	-13.00	33.90	180
4	3297	-63.6	4.2	10.85	Vertical	-56.95	-13.00	43.95	0
5	4121	-59.38	5.2	11.35	Vertical	-53.23	-13.00	40.23	45
6	4945	-60.46	5.5	11.95	Vertical	-54.51	-13.00	41.51	180
7	5769	-61.34	5.7	13.55	Vertical	-53.49	-13.00	40.49	90
8	6594	-59.39	6.3	13.75	Vertical	-51.94	-13.00	38.94	225
9	7418	-59.32	6.8	13.85	Vertical	-52.27	-13.00	39.27	270
10	8242	-58.87	6.9	14.25	Vertical	-51.52	-13.00	38.52	180

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

GSM 850 CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1673	-61.15	2	10.75	Vertical	-52.40	-13.00	39.40	90
3	2498	-53.93	2.51	11.05	Vertical	-45.39	-13.00	32.39	225
4	3346	-63.07	4.2	11.15	Vertical	-56.12	-13.00	43.12	135
5	4183	-60.26	5.2	11.15	Vertical	-54.31	-13.00	41.31	0
6	5020	-59.56	5.5	11.95	Vertical	-53.11	-13.00	40.11	45
7	5856	-61.66	5.7	13.55	Vertical	-53.81	-13.00	40.81	90
8	6693	-59.50	6.3	13.75	Vertical	-52.05	-13.00	39.05	180
9	7529	-60.82	6.8	13.85	Vertical	-53.77	-13.00	40.77	90
10	8366	-60.08	6.9	14.25	Vertical	-52.73	-13.00	39.73	225

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.



GSM 850 CH-High

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1698	-61.58	2	10.15	Vertical	-53.43	-13.00	40.43	270
3	2546	-54.12	2.51	11.05	Vertical	-45.58	-13.00	32.58	135
4	3395	-62.81	4.2	11.15	Vertical	-55.86	-13.00	42.86	270
5	4244	-61.27	5.2	11.15	Vertical	-55.32	-13.00	42.32	0
6	5093	-60.76	5.5	11.95	Vertical	-54.31	-13.00	41.31	180
7	5942	-60.86	5.7	13.55	Vertical	-53.01	-13.00	40.01	90
8	6790	-60.86	6.3	13.75	Vertical	-53.41	-13.00	40.41	225
9	7639	-61.48	6.8	13.85	Vertical	-54.43	-13.00	41.43	270
10	8488	-61.09	6.9	14.25	Vertical	-53.74	-13.00	40.74	135

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

CDMA BC0 CH-Low

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1649.40	-70.25	2	10.15	Vertical	-62.1	-13.00	49.1	135
3	2474.10	-64.14	2.51	11.35	Vertical	-55.3	-13.00	42.3	225
4	3298.80	-66.85	4.2	10.85	Vertical	-60.2	-13.00	47.2	315
5	4123.50	-62.95	5.2	11.35	Vertical	-56.8	-13.00	43.8	270
6	4948.20	-61.65	5.5	11.95	Vertical	-55.2	-13.00	42.2	225
7	5772.90	46.05	5.7	13.55	Vertical	53.9	-13.00	-66.9	0
8	6597.60	-61.45	6.3	13.75	Vertical	-54.0	-13.00	41.0	45
9	7422.30	-59.75	6.8	13.85	Vertical	-52.7	-13.00	39.7	270
10	8247.00	-59.15	6.9	14.25	Vertical	-51.8	-13.00	38.8	180

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

CDMA BC0 CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1673.04	-69.85	2	10.75	Vertical	-61.1	-13.00	48.1	45
3	2509.56	-64.14	2.51	11.05	Vertical	-55.6	-13.00	42.6	45
4	3346.08	-67.25	4.2	11.15	Vertical	-60.3	-13.00	47.3	135
5	4182.60	-62.65	5.2	11.15	Vertical	-56.7	-13.00	43.7	225
6	5019.12	-62.45	5.5	11.95	Vertical	-56.0	-13.00	43.0	315
7	5855.64	-62.45	5.7	13.55	Vertical	-54.6	-13.00	41.6	270
8	6692.16	-59.75	6.3	13.75	Vertical	-52.3	-13.00	39.3	225
9	7528.68	-60.85	6.8	13.85	Vertical	-53.8	-13.00	40.8	0
10	8365.20	-59.25	6.9	14.25	Vertical	-51.9	-13.00	38.9	45

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

CDMA BC0 CH-High

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1696.62	-69.95	2	10.15	Vertical	-61.8	-13.00	48.80	180
3	2544.93	-63.34	2.51	11.05	Vertical	-54.8	-13.00	41.80	225
4	3393.24	-66.05	4.2	11.15	Vertical	-59.1	-13.00	46.10	45
5	4241.55	-63.05	5.2	11.15	Vertical	-57.1	-13.00	44.10	135
6	5089.86	-61.45	5.5	11.95	Vertical	-55.0	-13.00	42.00	225
7	5938.17	-63.35	5.7	13.55	Vertical	-55.5	-13.00	42.50	315
8	6786.48	-60.35	6.3	13.75	Vertical	-52.9	-13.00	39.90	270
9	7634.79	-60.25	6.8	13.85	Vertical	-53.2	-13.00	40.20	225
10	8483.10	-59.55	6.9	14.25	Vertical	-52.2	-13.00	39.20	0

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

WCDMA Band V CH-Low

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1653	-67.15	2	10.15	Vertical	-59.0	-13.00	46.0	315
3	2479	-61.84	2.51	11.35	Vertical	-53.0	-13.00	40.0	90
4	3306	-67.25	4.2	10.85	Vertical	-60.6	-13.00	47.6	180
5	4132	-63.65	5.2	11.35	Vertical	-57.5	-13.00	44.5	135
6	4958	-62.75	5.5	11.95	Vertical	-56.3	-13.00	43.3	270
7	5785	-61.15	5.7	13.55	Vertical	-53.3	-13.00	40.3	0
8	6611	-60.45	6.3	13.75	Vertical	-53.0	-13.00	40.0	45
9	7438	-60.35	6.8	13.85	Vertical	-53.3	-13.00	40.3	90
10	8264	-59.95	6.9	14.25	Vertical	-52.6	-13.00	39.6	270

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

WCDMA Band V CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1673	-67.95	2	10.75	Vertical	-59.2	-13.00	46.2	315
3	2510	-60.64	2.51	11.05	Vertical	-52.1	-13.00	39.1	225
4	3346	-66.15	4.2	11.15	Vertical	-59.2	-13.00	46.2	135
5	4183	-62.55	5.2	11.15	Vertical	-56.6	-13.00	43.6	225
6	5020	-61.45	5.5	11.95	Vertical	-55.0	-13.00	42.0	315
7	5856	-61.65	5.7	13.55	Vertical	-53.8	-13.00	40.8	90
8	6693	-61.05	6.3	13.75	Vertical	-53.6	-13.00	40.6	180
9	8366	-60.05	6.8	13.85	Vertical	-53.0	-13.00	40.0	135
10	3346	-59.25	6.9	14.25	Vertical	-51.9	-13.00	38.9	270

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

WCDMA Band V CH-High

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1693	-69.75	2	10.15	Vertical	-61.6	-13.00	48.6	0
3	2540	-62.14	2.51	11.05	Vertical	-53.6	-13.00	40.6	45
4	3386	-65.35	4.2	11.15	Vertical	-58.4	-13.00	45.4	90
5	4233	-63.75	5.2	11.15	Vertical	-57.8	-13.00	44.8	270
6	5080	-61.65	5.5	11.95	Vertical	-55.2	-13.00	42.2	315
7	5926	-62.15	5.7	13.55	Vertical	-54.3	-13.00	41.3	225
8	6773	-60.25	6.3	13.75	Vertical	-52.8	-13.00	39.8	315
9	7619	-61.85	6.8	13.85	Vertical	-54.8	-13.00	41.8	270
10	8466	-59.25	6.9	14.25	Vertical	-51.9	-13.00	38.9	45

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

LTE Band 5 1.4MHz CH-Low

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1649.4	-70.65	2.00	10.75	vertical	-61.9	-13.00	48.9	0
3	2474.1	-63.84	2.51	11.05	vertical	-55.3	-13.00	42.3	45
4	3298.8	-62.75	4.20	11.15	vertical	-55.8	-13.00	42.8	225
5	4123.5	-62.15	5.20	11.15	vertical	-56.2	-13.00	43.2	45
6	4948.2	-61.35	5.50	11.95	vertical	-54.9	-13.00	41.9	90
7	5772.9	-61.45	5.70	13.55	vertical	-53.6	-13.00	40.6	225
8	6597.6	-59.65	6.30	13.75	vertical	-52.2	-13.00	39.2	135
9	7422.3	-59.95	6.80	13.85	vertical	-52.9	-13.00	39.9	270
10	8247.0	-59.65	6.90	14.25	vertical	-52.3	-13.00	39.3	180

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is vertical position.

LTE Band 5 1.4MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1673.0	-68.35	2.00	10.75	vertical	-59.6	-13.00	46.6	225
3	2509.5	-59.84	2.51	11.05	vertical	-51.3	-13.00	38.3	45
4	3346.0	-59.35	4.20	11.15	vertical	-52.4	-13.00	39.4	0
5	4182.5	-60.05	5.20	11.15	vertical	-54.1	-13.00	41.1	0
6	5019.0	-60.65	5.50	11.95	vertical	-54.2	-13.00	41.2	45
7	5855.5	-61.65	5.70	13.55	vertical	-53.8	-13.00	40.8	270
8	6692.0	-59.35	6.30	13.75	vertical	-51.9	-13.00	38.9	225
9	7528.5	-58.75	6.80	13.85	vertical	-51.7	-13.00	38.7	135
10	8365.0	-58.95	6.90	14.25	vertical	-51.6	-13.00	38.6	225

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is vertical position.

LTE Band 5 1.4MHz CH-High

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1696.6	-70.45	2.00	10.75	vertical	-61.7	-13.00	48.7	90
3	2544.9	-62.64	2.51	11.05	vertical	-54.1	-13.00	41.1	0
4	3393.2	-59.15	4.20	11.15	vertical	-52.2	-13.00	39.2	45
5	4241.5	-61.45	5.20	11.15	vertical	-55.5	-13.00	42.5	90
6	5089.8	-60.95	5.50	11.95	vertical	-54.5	-13.00	41.5	135
7	5938.1	-61.05	5.70	13.55	vertical	-53.2	-13.00	40.2	90
8	6786.4	-59.85	6.30	13.75	vertical	-52.4	-13.00	39.4	0
9	7634.7	-58.05	6.80	13.85	vertical	-51.0	-13.00	38.0	45
10	8483.0	-58.85	6.90	14.25	vertical	-51.5	-13.00	38.5	225

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is vertical position.



LTE Band 5 3MHz CH-Low

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1648.3	-69.65	2.00	10.75	vertical	-60.9	-13.00	47.9	135
3	2476.5	-64.64	2.51	11.05	vertical	-56.1	-13.00	43.1	270
4	3302.0	-63.05	4.20	11.15	vertical	-56.1	-13.00	43.1	180
5	4127.5	-62.45	5.20	11.15	vertical	-56.5	-13.00	43.5	225
6	4953.0	-61.05	5.50	11.95	vertical	-54.6	-13.00	41.6	45
7	5778.5	-61.55	5.70	13.55	vertical	-53.7	-13.00	40.7	0
8	6604.0	-58.85	6.30	13.75	vertical	-51.4	-13.00	38.4	0
9	7429.5	-57.45	6.80	13.85	vertical	-50.4	-13.00	37.4	45
10	8255.0	-59.95	6.90	14.25	vertical	-52.6	-13.00	39.6	270

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is vertical position.

LTE Band 5 3MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1670.3	-70.15	2.00	10.75	vertical	-61.4	-13.00	48.4	225
3	2509.5	-62.94	2.51	11.05	vertical	-54.4	-13.00	41.4	135
4	3346.0	-60.55	4.20	11.15	vertical	-53.6	-13.00	40.6	225
5	4182.5	-61.75	5.20	11.15	vertical	-55.8	-13.00	42.8	90
6	5019.0	-60.65	5.50	11.95	vertical	-54.2	-13.00	41.2	0
7	5855.5	-60.25	5.70	13.55	vertical	-52.4	-13.00	39.4	45
8	6692.0	-59.95	6.30	13.75	vertical	-52.5	-13.00	39.5	90
9	7528.5	-57.25	6.80	13.85	vertical	-50.2	-13.00	37.2	135
10	8365.0	-59.75	6.90	14.25	vertical	-52.4	-13.00	39.4	90

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is vertical position.



LTE Band 5 3MHz CH-High

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1692.5	-69.75	2.00	10.75	vertical	-61.0	-13.00	48.0	0
3	2542.5	-62.24	2.51	11.05	vertical	-53.7	-13.00	40.7	45
4	3390.0	-59.95	4.20	11.15	vertical	-53.0	-13.00	40.0	225
5	4237.5	-61.55	5.20	11.15	vertical	-55.6	-13.00	42.6	45
6	5085.0	-61.25	5.50	11.95	vertical	-54.8	-13.00	41.8	90
7	5932.5	-61.15	5.70	13.55	vertical	-53.3	-13.00	40.3	225
8	6780.0	-59.95	6.30	13.75	vertical	-52.5	-13.00	39.5	135
9	7627.5	-58.85	6.80	13.85	vertical	-51.8	-13.00	38.8	270
10	8475.0	-59.25	6.90	14.25	vertical	-51.9	-13.00	38.9	180

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is vertical position.

LTE Band 5 5MHz CH-Low

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1649.6	-69.85	2.00	10.75	vertical	-61.1	-13.00	48.1	0
3	2479.5	-62.34	2.51	11.05	vertical	-53.8	-13.00	40.8	45
4	3306.0	-62.75	4.20	11.15	vertical	-55.8	-13.00	42.8	270
5	4132.5	-62.25	5.20	11.15	vertical	-56.3	-13.00	43.3	225
6	4959.0	-60.65	5.50	11.95	vertical	-54.2	-13.00	41.2	135
7	5785.5	-61.05	5.70	13.55	vertical	-53.2	-13.00	40.2	225
8	6612.0	-59.95	6.30	13.75	vertical	-52.5	-13.00	39.5	90
9	7438.5	-59.75	6.80	13.85	vertical	-52.7	-13.00	39.7	0
10	8265.0	-59.25	6.90	14.25	vertical	-51.9	-13.00	38.9	45

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is vertical position.



LTE Band 5 5MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1673.0	-69.55	2.00	10.75	vertical	-60.8	-13.00	47.8	90
3	2509.5	-62.04	2.51	11.05	vertical	-53.5	-13.00	40.5	135
4	3346.0	-60.25	4.20	11.15	vertical	-53.3	-13.00	40.3	90
5	4182.5	-61.25	5.20	11.15	vertical	-55.3	-13.00	42.3	0
6	5019.0	-60.45	5.50	11.95	vertical	-54.0	-13.00	41.0	45
7	5855.5	-60.75	5.70	13.55	vertical	-52.9	-13.00	39.9	225
8	6692.0	-60.05	6.30	13.75	vertical	-52.6	-13.00	39.6	45
9	7528.5	-58.95	6.80	13.85	vertical	-51.9	-13.00	38.9	90
10	8365.0	-59.75	6.90	14.25	vertical	-52.4	-13.00	39.4	225

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is vertical position.

LTE Band 5 5MHz CH-High

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1693.0	-68.95	2.00	10.75	vertical	-60.2	-13.00	47.2	135
3	2539.5	-63.74	2.51	11.05	vertical	-55.2	-13.00	42.2	270
4	3386.0	-61.95	4.20	11.15	vertical	-55.0	-13.00	42.0	180
5	4232.5	-61.25	5.20	11.15	vertical	-55.3	-13.00	42.3	225
6	5079.0	-60.95	5.50	11.95	vertical	-54.5	-13.00	41.5	45
7	5925.5	-61.05	5.70	13.55	vertical	-53.2	-13.00	40.2	0
8	6772.0	-59.55	6.30	13.75	vertical	-52.1	-13.00	39.1	0
9	7618.5	-58.85	6.80	13.85	vertical	-51.8	-13.00	38.8	45
10	8465.0	-57.55	6.90	14.25	vertical	-50.2	-13.00	37.2	270

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is vertical position.



LTE Band 5 10MHz CH-Low

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1658.0	-70.25	2.00	10.75	vertical	-61.5	-13.00	48.5	90
3	2487.0	-61.84	2.51	11.05	vertical	-53.3	-13.00	40.3	0
4	3316.0	-62.65	4.20	11.15	vertical	-55.7	-13.00	42.7	45
5	4145.0	-62.45	5.20	11.15	vertical	-56.5	-13.00	43.5	90
6	4974.0	-61.25	5.50	11.95	vertical	-54.8	-13.00	41.8	135
7	5803.0	-61.95	5.70	13.55	vertical	-54.1	-13.00	41.1	90
8	6632.0	-59.55	6.30	13.75	vertical	-52.1	-13.00	39.1	0
9	7461.0	-58.85	6.80	13.85	vertical	-51.8	-13.00	38.8	45
10	8290.0	-59.25	6.90	14.25	vertical	-51.9	-13.00	38.9	225

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is vertical position.

LTE Band 5 10MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1673.0	-68.95	2.00	10.75	vertical	-60.2	-13.00	47.2	45
3	2509.5	-60.84	2.51	11.05	vertical	-52.3	-13.00	39.3	90
4	3346.0	-61.05	4.20	11.15	vertical	-54.1	-13.00	41.1	225
5	4182.5	-62.15	5.20	11.15	vertical	-56.2	-13.00	43.2	135
6	5019.0	-60.85	5.50	11.95	vertical	-54.4	-13.00	41.4	270
7	5855.5	-59.55	5.70	13.55	vertical	-51.7	-13.00	38.7	180
8	6692.0	-59.35	6.30	13.75	vertical	-51.9	-13.00	38.9	225
9	7528.5	-58.65	6.80	13.85	vertical	-51.6	-13.00	38.6	45
10	8365.0	-58.25	6.90	14.25	vertical	-50.9	-13.00	37.9	0

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is vertical position.

LTE Band 5 10MHz CH-High

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1688.0	-70.05	2.00	10.75	vertical	-61.3	-13.00	48.3	0
3	2532.0	43.76	2.51	11.05	vertical	52.3	-13.00	-65.3	45
4	3376.0	-61.05	4.20	11.15	vertical	-54.1	-13.00	41.1	270
5	4220.0	-62.25	5.20	11.15	vertical	-56.3	-13.00	43.3	225
6	5064.0	-61.35	5.50	11.95	vertical	-54.9	-13.00	41.9	135
7	5908.0	-62.45	5.70	13.55	vertical	-54.6	-13.00	41.6	225
8	6752.0	-59.75	6.30	13.75	vertical	-52.3	-13.00	39.3	90
9	7596.0	-58.45	6.80	13.85	vertical	-51.4	-13.00	38.4	0
10	8440.0	-58.65	6.90	14.25	vertical	-51.3	-13.00	38.3	45

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is vertical position.

6. Main Test Instruments

Name	Type	Manufacturer	Serial Number	Calibration Date	Expiration Time
Base Station Simulator	CMW500	R&S	113645	2016-05-21	2017-05-20
Power Splitter	SHX-GF2-2-13	Hua Xiang	10120101	NA	NA
Spectrum Analyzer	N9010A	Agilent	MY47191109	2016-05-21	2017-05-20
Universal Radio Communication Tester	E5515C	Agilent	MY48367192	2016-05-21	2017-05-20
Signal Analyzer	FSV30	R&S	100815	2015-12-17	2016-12-16
Signal generator	SMB 100A	R&S	102594	2016-05-22	2017-05-21
Signal generator	SMR27	R&S	100365	2016-05-22	2017-05-21
EMI Test Receiver	ESCI	R&S	100948	2016-06-01	2017-05-31
Trilog Antenna	VUBL 9163	SCHWARZBECK	9163-201	2014-12-06	2017-12-05
Trilog Antenna	VUBL 9163	SCHWARZBECK	9163-391	2014-12-06	2017-12-05
Horn Antenna	HF907	R&S	100126	2014-12-06	2017-12-05
Horn Antenna	HF907	R&S	100125	2014-12-06	2017-12-05
Climatic Chamber	PT-30B	Re Ce	20101891	2015-07-18	2018-07-17
RF Cable	SMA 15cm	Agilent	0001	2016-06-06	2016-09-05

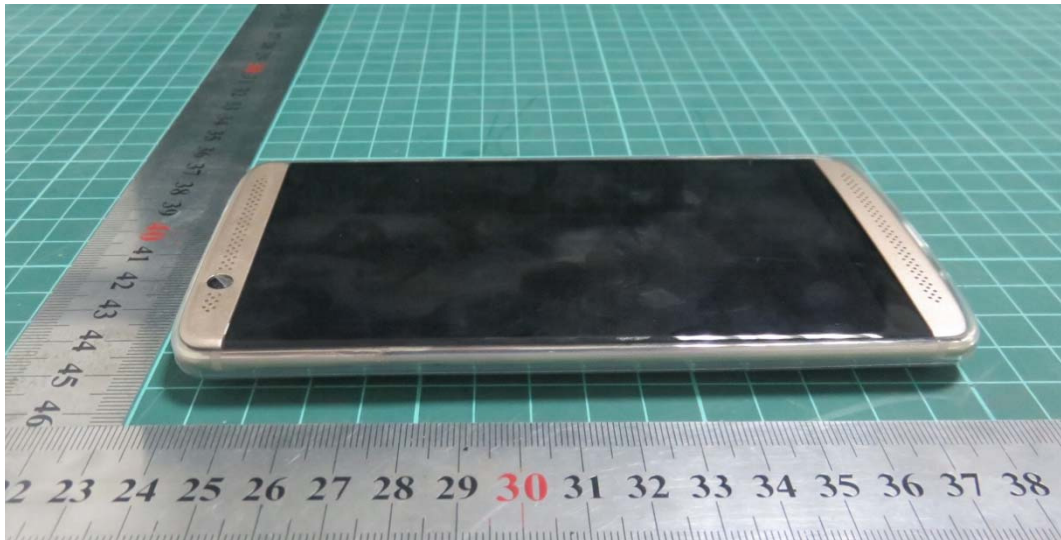
*****END OF REPORT *****

ANNEX A: EUT Appearance and Test Setup

A.1 EUT Appearance

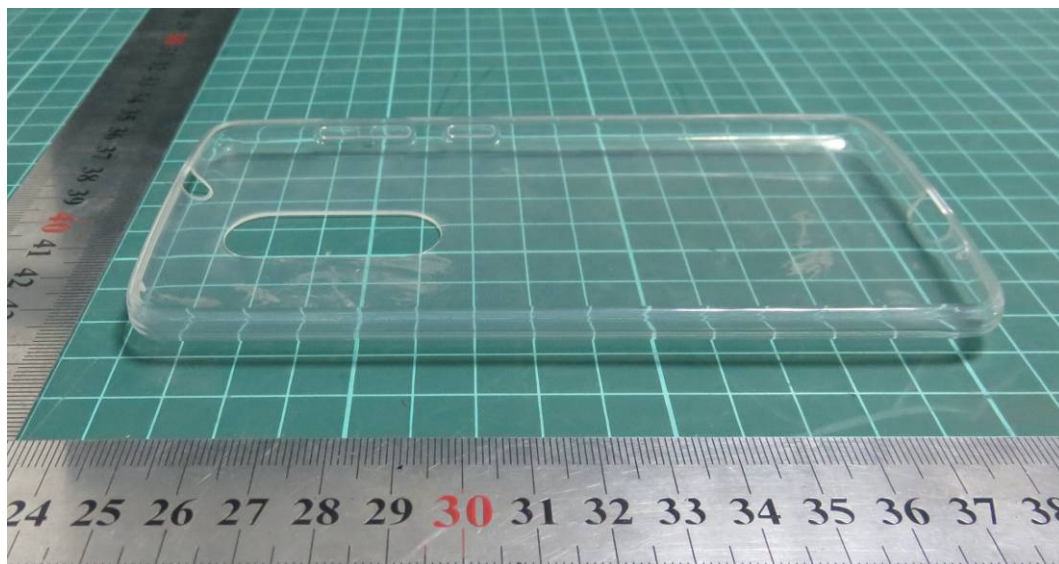


a1: EUT

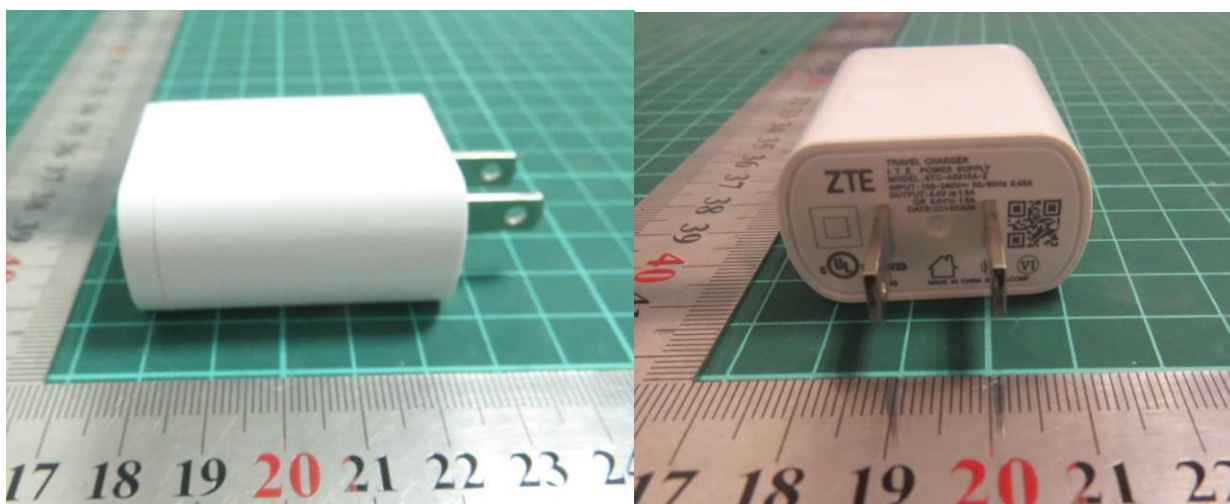


a2: EUT with Phone cover

a: EUT



Phone cover



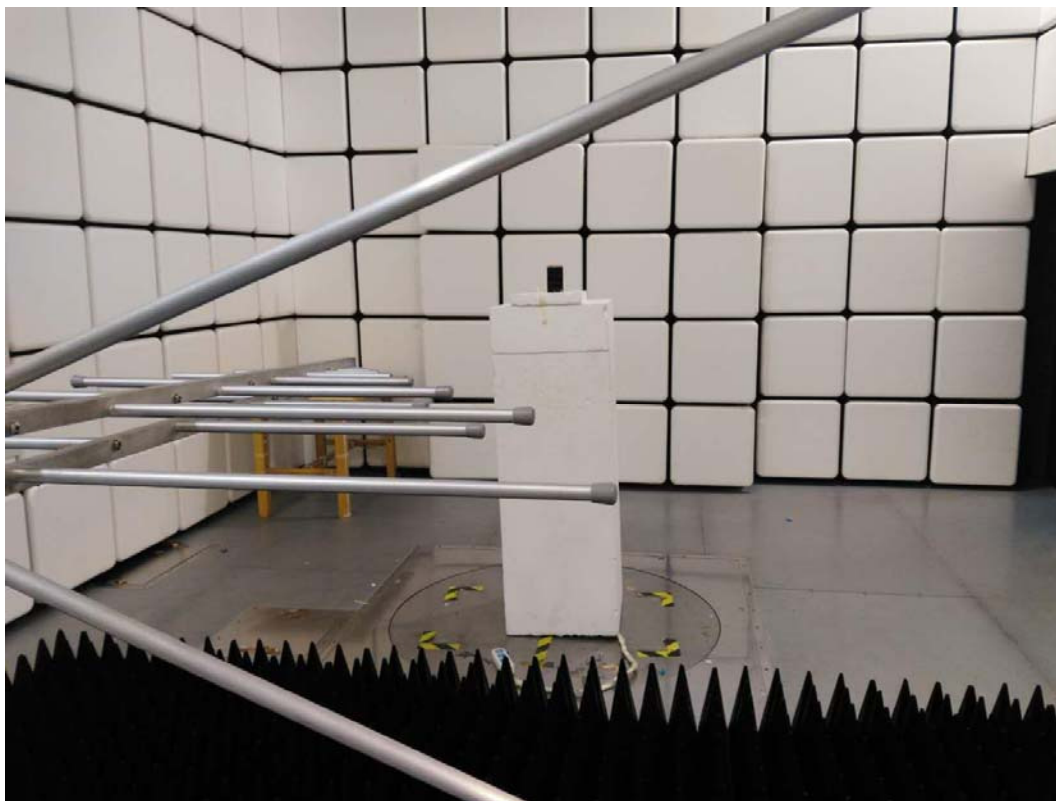
Adapter



Earphone

Picture 1 Constituents of EUT

A.2 Test Setup



Picture 2: Radiated Spurious Emissions Test setup