RF TEST REPORT

Applicant	Honor Device Co., Ltd.
FCC ID	2AYGCHJC-LX9
Product	Smart Phone
Model	HJC-LX9
Report No.	R2009H0243-R2V1
Issue Date	January 28, 2021

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC CFR47 Part 2 (2019)/ FCC CFR 47 Part 24E (2019)**. 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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Version	Revision description	Issue Date
Rev.0	Initial issue of report.	December 18, 2020
Rev.1	Update FCC ID.	January 28, 2021
Note: This revised report (Report No. R2009H0243-R2V1) supersedes and replaces the previously issued report (Report No. R2009H0243-R2). Please discard or destroy the previously issued report and dispose of it accordingly.		

Summary of measurement results

No.	Test Case	Clause in FCC rules	Verdict
1	RF Power Output and Effective Isotropic Radiated Power	2.1046 24.232(c)	PASS
2	Occupied Bandwidth	2.1049	PASS
3	Band Edge Compliance	2.1051 /24.238(a)	PASS
4	Peak-to-Average Power Ratio	24.232/KDB 971168 D01(5.7)	PASS
5	Frequency Stability	2.1055 / 24.235	PASS
6	Spurious Emissions at Antenna Terminals	2.1051 / 24.238(a)	PASS
7	Radiates Spurious Emission	2.1053 / 24.238(a)	PASS
Date of Testing: September 5, 2020~ September 29, 2020			
Date of Sample Received: September 3, 2020			
Note: PASS: The EUT complies with the essential requirements in the standard. FAIL: The EUT does not comply with the essential requirements in the standard. All indications of Pass/Fail in this report are opinions expressed by TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.			

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.

1.2. Test facility

FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

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

A2LA (Certificate Number: 3857.01)

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

1.3. Testing Location

Company:	TA Technology (Shanghai) Co., Ltd.
Address:	No.145, Jintang Rd, Tangzhen Industry Park, Pudong
City:	Shanghai
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2. General Description of Equipment under Test

2.3. Applicant and Manufacturer Information

Applicant	Honor Device Co., Ltd.
Applicant address	Suite 3401, Unit A, Building 6, Shum Yip Sky Park, No. 8089, Hongli West Road, Xiangmihu Street, Futian District,Shenzhen, Guangdong 518040, People's Republic of China
Manufacturer	Honor Device Co., Ltd.
Manufacturer address	Suite 3401, Unit A, Building 6, Shum Yip Sky Park, No. 8089, Hongli West Road, Xiangmihu Street, Futian District,Shenzhen, Guangdong 518040, People's Republic of China

2.4. General information

EUT Description				
Model	HJC-LX9			
SN	019BRD208E001334			
Hardware Version	HL3JSCM			
Software Version	10.1.1.111(C900E01R1P1)			
Power Supply	Battery/AC adapter			
Antenna Type	Internal Antenna			
Antenna Gain	Band	Frequency (MHz)	Main Antenna (dBi)	Second Antenna (dBi)
	GSM1900 /WCDMA Band II /LTE Band 2	1850	-3.3	-3.4
		1860	-3.0	-3.0
		1870	-2.7	-2.7
		1880	-2.6	-2.4
		1890	-2.5	-2.4
		1900	-2.4	-2.2
		1910	-2.3	-2.2
Test Mode(s)	GSM1900; WCDMA Band II; LTE Band 2;			
Test Modulation	(GSM/GPRS)GMSK, (EGPRS) GMSK/ 8PSK; (WCDMA) BPSK, QPSK,16QAM; (LTE)QPSK, 16QAM,64QAM			
GPRS Multislot Class	12			
EGPRS Multislot Class	12			
LTE Category	7			
Maximum E.I.R.P	GSM 1900:	27.35dBm		
	WCDMA Band II:	21.10dBm		
	LTE Band 2:	21.03dBm		
Rated Power Supply Voltage	3.8V			

Extreme Voltage	Minimum: 3.23V Maximum: 4.37V		
Extreme Temperature	Lowest: -30°C Highest: +50°C		
Operating Voltage	Minimum: 3.6V Maximum: 4.4V		
Operating Temperature	Lowest: 0°C Highest: +35°C		
Operating Frequency Range(s)	Band	Tx (MHz)	Rx (MHz)
	GSM1900	1850 ~ 1910	1930 ~ 1990
	WCDMA Band II	1850 ~ 1910	1930 ~ 1990
	LTE Band 2	1850 ~ 1910	1930 ~ 1990

EUT Accessory

Accessory	Model	Manufacture	No.
Adapter	HW-110600E00	Honor Device Co., Ltd.	1
	HW-110600B00	Honor Device Co., Ltd.	2
	HW-110600U00	Honor Device Co., Ltd.	3
	HW-110600A00	Honor Device Co., Ltd.	4
	HW-110600E02	Honor Device Co., Ltd.	5
	HW-110600B02	Honor Device Co., Ltd.	6
	HW-110600U02	Honor Device Co., Ltd.	7
	HW-110600A02	Honor Device Co., Ltd.	8
	HW-110600C02	Honor Device Co., Ltd.	9
Battery	HB426589EEW	Honor Device Co., Ltd. (Manufacturer: SCUD (FUJIAN) Electronics Co., Ltd.)	1
	HB426589EEW	Honor Device Co., Ltd. (Manufacturer: Sunwoda Electronic Co., Ltd.)	2
USB Cable	213-01011-0	MING JI ELECTRONICS CO., LTD.	1
	L99UC139-CS-H	LUXSHARE Precision Industry Co., Ltd	2
Earphone	MEND1532B528A11	Jiangxi Lianchuang Hongsheng Electronic Co. ,LTD	1
	EPAB542-2WH05-DH	FOXCONN INTERCONNECT TECHNOLOGY LIMITED	2
	1293-3283-3.5mm-339	Boluo County Quancheng Electronic Co. ,LTD	3

Note: 1. The EUT is sent from the applicant to TA and the information of the EUT is declared by the applicant.

2. There is more than one Adapter/USB cable/ Battery/Earphone, each one should be applied throughout the compliance test respectively, and however, only the worst case (Adapter 1/USB cable 2/ Battery 2/Earphone 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:

Test standards:
FCC CFR 47 Part 24E (2019)

ANSI C63.26 (2015)

Reference standard:

FCC CFR47 Part 2 (2019)

KDB 971168 D01 Power Meas License Digital Systems v03r01

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, horizontal polarization) and the worst case was recorded.

All mode and data rates and positions and RB size and modulations were investigated.
Subsequently, only the worst case emissions are reported.
The following testing in GSM/WCDMA/LTE is set based on the maximum RF Output Power.

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

Test items	Modes/Modulation	
	GSM 1900	WCDMA Band II
RF Power Output and Effective Isotropic Radiated Power	GSM GPRS EGPRS	RMC HSDPA/HSUPA DC-HSDPA/HSPA+
Occupied Bandwidth	GSM GPRS(1Tx slot) EGPRS(1Tx slot)	RMC
Band Edge Compliance	GSM GPRS(1Tx slot) EGPRS(1Tx slot)	RMC
Peak-to-Average Power Ratio	GSM GPRS(1Tx slot) EGPRS(1Tx slot)	RMC
Frequency Stability	GSM GPRS(1Tx slot) EGPRS(1Tx slot)	RMC
Spurious Emissions at Antenna Terminals	GSM	RMC
Radiates Spurious Emission	GSM	RMC

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

Test items	Bandwidth (MHz)						Modulation		RB			Test Channel		
	1.4	3	5	10	15	20	QPSK	16QAM	1	50%	100%	L	M	H
RF Power Output and Effective Isotropic Radiated Power	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Occupied Bandwidth	O	O	O	O	O	O	O	O	-	-	O	O	O	O
Band Edge Compliance	O	O	O	O	O	O	O	O	O	-	O	O	-	O
Peak-to-Average Power Ratio	O	O	O	O	O	O	O	O	-	-	O	O	O	O
Frequency Stability	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Conducted Spurious Emissions	O	O	O	O	O	O	O	-	O	-	-	O	O	O
Radiates Spurious Emission	O	-	O	-	-	O	O	-	O	-	-	-	O	-
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 and Effective Isotropic Radiated Power

Ambient condition

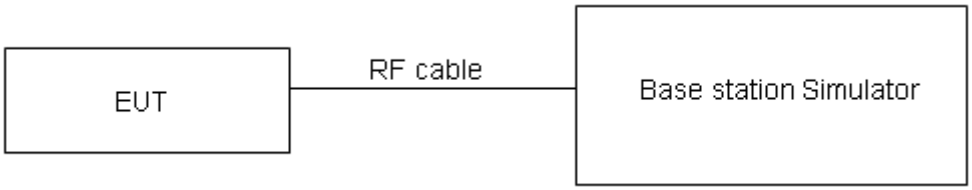
Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Methods of Measurement

During the process of the testing, The EUT was connected to the Base Station Simulator with a known loss. The EUT is controlled by the Base Station Simulator test set to ensure max power transmission with proper modulation.

ERP can then be calculated as follows:
EIRP (dBm) = Output Power (dBm) - Losses (dB) + Antenna Gain (dBi)
where:dBd refers to gain relative to an ideal dipole.
EIRP (dBm) = ERP (dBm) + 2.15 (dB.)

Test Setup



Limits

No specific RF power output requirements in part 2.1046.

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

Limit	≤ 2 W (33 dBm)

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U= 0.4 dB for RF power output, k = 2, U= 1.19 dB for EIRP.

Test Results

GSM 1900		Maximum Output Power (dBm)			EIRP (dBm) Main Antenna			EIRP (dBm) Second Antenna		
		Channel 512	Channel 661	Channel 810	Channel 512	Channel 661	Channel 810	Channel 512	Channel 661	Channel 810
		1850.2 (MHz)	1880 (MHz)	1909.8 (MHz)	1850.2 (MHz)	1880 (MHz)	1909.8 (MHz)	1850.2 (MHz)	1880 (MHz)	1909.8 (MHz)
GSM(GMSK)	Results	29.55	29.56	29.55	26.25	26.96	27.25	26.15	27.16	27.35
GPRS (GMSK)	1TXslot	29.44	29.63	29.48	26.14	27.03	27.18	26.04	27.23	27.28
	2TXslots	26.11	26.39	26.30	22.81	23.79	24.00	22.71	23.99	24.10
	3TXslots	24.06	24.26	24.32	20.76	21.66	22.02	20.66	21.86	22.12
	4TXslots	22.54	22.70	22.68	19.24	20.10	20.38	19.14	20.30	20.48
EGPRS (8PSK)	1TXslot	25.71	25.67	25.58	22.41	23.07	23.28	22.31	23.27	23.38
	2TXslots	22.36	22.33	22.43	19.06	19.73	20.13	18.96	19.93	20.23
	3TXslots	20.62	20.50	20.49	17.32	17.90	18.19	17.22	18.10	18.29
	4TXslots	19.30	19.26	19.33	16.00	16.66	17.03	15.90	16.86	17.13

WCDMA Band II		Maximum Output Power (dBm)			EIRP (dBm) Main Antenna			EIRP (dBm) Second Antenna		
		Channel 9262	Channel 9400	Channel 9538	Channel 9262	Channel 9400	Channel 9538	Channel 9262	Channel 9400	Channel 9538
		1852.4 (MHz)	1880 (MHz)	1907.6 (MHz)	1852.4 (MHz)	1880 (MHz)	1907.6 (MHz)	1852.4 (MHz)	1880 (MHz)	1907.6 (MHz)
RMC		23.24	23.28	23.30	19.94	20.68	21.00	19.84	20.88	21.10
HSDPA	Sub - Test 1	22.66	22.70	22.72	19.36	20.10	20.42	19.26	20.30	20.52
	Sub - Test 2	22.15	22.19	22.21	18.85	19.59	19.91	18.75	19.79	20.01
	Sub - Test 3	21.64	21.68	21.70	18.34	19.08	19.40	18.24	19.28	19.50
	Sub - Test 4	21.63	21.67	21.69	18.33	19.07	19.39	18.23	19.27	19.49
HSUPA	Sub - Test 1	21.32	21.36	21.38	18.02	18.76	19.08	17.92	18.96	19.18
	Sub - Test 2	18.61	18.65	18.67	15.31	16.05	16.37	15.21	16.25	16.47
	Sub - Test 3	20.09	20.14	20.16	16.79	17.54	17.86	16.69	17.74	17.96
	Sub - Test 4	19.08	19.13	19.15	15.78	16.53	16.85	15.68	16.73	16.95
	Sub - Test 5	22.07	22.12	22.14	18.77	19.52	19.84	18.67	19.72	19.94
DC-HSDPA	Sub - Test 1	22.58	22.64	22.64	19.28	20.04	20.34	19.18	20.24	20.44
	Sub - Test 2	22.07	22.13	22.13	18.77	19.53	19.83	18.67	19.73	19.93
	Sub - Test 3	21.65	21.62	21.64	18.35	19.02	19.34	18.25	19.22	19.44
	Sub - Test 4	21.64	21.61	21.63	18.34	19.01	19.33	18.24	19.21	19.43
HSPA+	16QAM	21.13	21.19	21.21	17.83	18.59	18.91	17.73	18.79	19.01

Band	Bandwidth (MHz)	UL Channel	RB Size	RB Position	Modulation	Power (dBm)	EIRP (dBm) Main Antenna	EIRP (dBm) Second Antenna	Verdict
LTE Band2	1.4	18607	1	#0	QPSK	23.31	20.01	19.91	PASS
LTE Band2	1.4	18607	1	#Mid	QPSK	23.46	20.16	20.06	PASS
LTE Band2	1.4	18607	1	#Max	QPSK	23.26	19.96	19.86	PASS
LTE Band2	1.4	18607	3	#0	QPSK	23.28	19.98	19.88	PASS
LTE Band2	1.4	18607	3	#Mid	QPSK	23.23	19.93	19.83	PASS
LTE Band2	1.4	18607	3	#Max	QPSK	23.28	19.98	19.88	PASS
LTE Band2	1.4	18607	6	#0	QPSK	22.27	18.97	18.87	PASS
LTE Band2	1.4	18607	1	#0	QAM16	22.14	18.84	18.74	PASS
LTE Band2	1.4	18607	1	#Mid	QAM16	22.31	19.01	18.91	PASS
LTE Band2	1.4	18607	1	#Max	QAM16	22.10	18.80	18.70	PASS
LTE Band2	1.4	18607	3	#0	QAM16	22.23	18.93	18.83	PASS
LTE Band2	1.4	18607	3	#Mid	QAM16	22.23	18.93	18.83	PASS
LTE Band2	1.4	18607	3	#Max	QAM16	22.22	18.92	18.82	PASS
LTE Band2	1.4	18607	6	#0	QAM16	21.22	17.92	17.82	PASS
LTE Band2	1.4	18607	1	#0	QAM64	22.12	18.82	18.72	PASS
LTE Band2	1.4	18607	1	#Mid	QAM64	22.24	18.94	18.84	PASS
LTE Band2	1.4	18607	1	#Max	QAM64	22.06	18.76	18.66	PASS
LTE Band2	1.4	18607	3	#0	QAM64	22.20	18.90	18.80	PASS
LTE Band2	1.4	18607	3	#Mid	QAM64	22.15	18.85	18.75	PASS
LTE Band2	1.4	18607	3	#Max	QAM64	22.18	18.88	18.78	PASS
LTE Band2	1.4	18607	6	#0	QAM64	21.17	17.87	17.77	PASS
LTE Band2	1.4	18900	1	#0	QPSK	22.96	20.36	20.56	PASS
LTE Band2	1.4	18900	1	#Mid	QPSK	23.21	20.61	20.81	PASS
LTE Band2	1.4	18900	1	#Max	QPSK	22.96	20.36	20.56	PASS
LTE Band2	1.4	18900	3	#0	QPSK	22.94	20.34	20.54	PASS
LTE Band2	1.4	18900	3	#Mid	QPSK	22.95	20.35	20.55	PASS
LTE Band2	1.4	18900	3	#Max	QPSK	22.95	20.35	20.55	PASS
LTE Band2	1.4	18900	6	#0	QPSK	21.97	19.37	19.57	PASS
LTE Band2	1.4	18900	1	#0	QAM16	21.93	19.33	19.53	PASS
LTE Band2	1.4	18900	1	#Mid	QAM16	22.18	19.58	19.78	PASS
LTE Band2	1.4	18900	1	#Max	QAM16	21.95	19.35	19.55	PASS
LTE Band2	1.4	18900	3	#0	QAM16	22.08	19.48	19.68	PASS
LTE Band2	1.4	18900	3	#Mid	QAM16	22.04	19.44	19.64	PASS
LTE Band2	1.4	18900	3	#Max	QAM16	22.13	19.53	19.73	PASS
LTE Band2	1.4	18900	6	#0	QAM16	20.93	18.33	18.53	PASS
LTE Band2	1.4	18900	1	#0	QAM64	21.85	19.25	19.45	PASS
LTE Band2	1.4	18900	1	#Mid	QAM64	22.19	19.59	19.79	PASS

LTE Band2	1.4	18900	1	#Max	QAM64	21.91	19.31	19.51	PASS
LTE Band2	1.4	18900	3	#0	QAM64	22.10	19.50	19.70	PASS
LTE Band2	1.4	18900	3	#Mid	QAM64	22.09	19.49	19.69	PASS
LTE Band2	1.4	18900	3	#Max	QAM64	22.13	19.53	19.73	PASS
LTE Band2	1.4	18900	6	#0	QAM64	20.91	18.31	18.51	PASS
LTE Band2	1.4	19193	1	#0	QPSK	23.06	20.76	20.86	PASS
LTE Band2	1.4	19193	1	#Mid	QPSK	23.14	20.84	20.94	PASS
LTE Band2	1.4	19193	1	#Max	QPSK	23.05	20.75	20.85	PASS
LTE Band2	1.4	19193	3	#0	QPSK	23.10	20.80	20.90	PASS
LTE Band2	1.4	19193	3	#Mid	QPSK	23.13	20.83	20.93	PASS
LTE Band2	1.4	19193	3	#Max	QPSK	23.12	20.82	20.92	PASS
LTE Band2	1.4	19193	6	#0	QPSK	22.23	19.93	20.03	PASS
LTE Band2	1.4	19193	1	#0	QAM16	22.26	19.96	20.06	PASS
LTE Band2	1.4	19193	1	#Mid	QAM16	22.39	20.09	20.19	PASS
LTE Band2	1.4	19193	1	#Max	QAM16	22.23	19.93	20.03	PASS
LTE Band2	1.4	19193	3	#0	QAM16	22.09	19.79	19.89	PASS
LTE Band2	1.4	19193	3	#Mid	QAM16	22.09	19.79	19.89	PASS
LTE Band2	1.4	19193	3	#Max	QAM16	22.10	19.80	19.90	PASS
LTE Band2	1.4	19193	6	#0	QAM16	21.06	18.76	18.86	PASS
LTE Band2	1.4	19193	1	#0	QAM64	22.21	19.91	20.01	PASS
LTE Band2	1.4	19193	1	#Mid	QAM64	22.34	20.04	20.14	PASS
LTE Band2	1.4	19193	1	#Max	QAM64	22.22	19.92	20.02	PASS
LTE Band2	1.4	19193	3	#0	QAM64	22.08	19.78	19.88	PASS
LTE Band2	1.4	19193	3	#Mid	QAM64	22.08	19.78	19.88	PASS
LTE Band2	1.4	19193	3	#Max	QAM64	22.06	19.76	19.86	PASS
LTE Band2	1.4	19193	6	#0	QAM64	21.03	18.73	18.83	PASS
LTE Band2	3	18615	1	#0	QPSK	23.15	19.85	19.75	PASS
LTE Band2	3	18615	1	#Mid	QPSK	23.16	19.86	19.76	PASS
LTE Band2	3	18615	1	#Max	QPSK	23.09	19.79	19.69	PASS
LTE Band2	3	18615	8	#0	QPSK	22.10	18.80	18.70	PASS
LTE Band2	3	18615	8	#Mid	QPSK	22.14	18.84	18.74	PASS
LTE Band2	3	18615	8	#Max	QPSK	22.17	18.87	18.77	PASS
LTE Band2	3	18615	15	#0	QPSK	22.06	18.76	18.66	PASS
LTE Band2	3	18615	1	#0	QAM16	22.02	18.72	18.62	PASS
LTE Band2	3	18615	1	#Mid	QAM16	22.03	18.73	18.63	PASS
LTE Band2	3	18615	1	#Max	QAM16	21.97	18.67	18.57	PASS
LTE Band2	3	18615	8	#0	QAM16	21.10	17.80	17.70	PASS
LTE Band2	3	18615	8	#Mid	QAM16	21.10	17.80	17.70	PASS
LTE Band2	3	18615	8	#Max	QAM16	21.08	17.78	17.68	PASS
LTE Band2	3	18615	15	#0	QAM16	21.03	17.73	17.63	PASS
LTE Band2	3	18615	1	#0	QAM64	22.00	18.70	18.60	PASS
LTE Band2	3	18615	1	#Mid	QAM64	21.94	18.64	18.54	PASS

LTE Band2	3	18615	1	#Max	QAM64	21.90	18.60	18.50	PASS
LTE Band2	3	18615	8	#0	QAM64	21.05	17.75	17.65	PASS
LTE Band2	3	18615	8	#Mid	QAM64	21.07	17.77	17.67	PASS
LTE Band2	3	18615	8	#Max	QAM64	21.00	17.70	17.60	PASS
LTE Band2	3	18615	15	#0	QAM64	21.02	17.72	17.62	PASS
LTE Band2	3	18900	1	#0	QPSK	22.77	20.17	20.37	PASS
LTE Band2	3	18900	1	#Mid	QPSK	22.80	20.20	20.40	PASS
LTE Band2	3	18900	1	#Max	QPSK	22.83	20.23	20.43	PASS
LTE Band2	3	18900	8	#0	QPSK	21.84	19.24	19.44	PASS
LTE Band2	3	18900	8	#Mid	QPSK	21.83	19.23	19.43	PASS
LTE Band2	3	18900	8	#Max	QPSK	21.87	19.27	19.47	PASS
LTE Band2	3	18900	15	#0	QPSK	21.81	19.21	19.41	PASS
LTE Band2	3	18900	1	#0	QAM16	22.16	19.56	19.76	PASS
LTE Band2	3	18900	1	#Mid	QAM16	22.09	19.49	19.69	PASS
LTE Band2	3	18900	1	#Max	QAM16	22.10	19.50	19.70	PASS
LTE Band2	3	18900	8	#0	QAM16	20.87	18.27	18.47	PASS
LTE Band2	3	18900	8	#Mid	QAM16	20.83	18.23	18.43	PASS
LTE Band2	3	18900	8	#Max	QAM16	20.85	18.25	18.45	PASS
LTE Band2	3	18900	15	#0	QAM16	20.72	18.12	18.32	PASS
LTE Band2	3	18900	1	#0	QAM64	22.06	19.46	19.66	PASS
LTE Band2	3	18900	1	#Mid	QAM64	22.10	19.50	19.70	PASS
LTE Band2	3	18900	1	#Max	QAM64	22.09	19.49	19.69	PASS
LTE Band2	3	18900	8	#0	QAM64	20.82	18.22	18.42	PASS
LTE Band2	3	18900	8	#Mid	QAM64	20.84	18.24	18.44	PASS
LTE Band2	3	18900	8	#Max	QAM64	20.91	18.31	18.51	PASS
LTE Band2	3	18900	15	#0	QAM64	20.72	18.12	18.32	PASS
LTE Band2	3	19185	1	#0	QPSK	23.04	20.74	20.84	PASS
LTE Band2	3	19185	1	#Mid	QPSK	23.02	20.72	20.82	PASS
LTE Band2	3	19185	1	#Max	QPSK	22.99	20.69	20.79	PASS
LTE Band2	3	19185	8	#0	QPSK	22.12	19.82	19.92	PASS
LTE Band2	3	19185	8	#Mid	QPSK	22.11	19.81	19.91	PASS
LTE Band2	3	19185	8	#Max	QPSK	22.10	19.80	19.90	PASS
LTE Band2	3	19185	15	#0	QPSK	22.05	19.75	19.85	PASS
LTE Band2	3	19185	1	#0	QAM16	22.15	19.85	19.95	PASS
LTE Band2	3	19185	1	#Mid	QAM16	22.21	19.91	20.01	PASS
LTE Band2	3	19185	1	#Max	QAM16	22.12	19.82	19.92	PASS
LTE Band2	3	19185	8	#0	QAM16	21.09	18.79	18.89	PASS
LTE Band2	3	19185	8	#Mid	QAM16	21.08	18.78	18.88	PASS
LTE Band2	3	19185	8	#Max	QAM16	21.06	18.76	18.86	PASS
LTE Band2	3	19185	15	#0	QAM16	20.91	18.61	18.71	PASS
LTE Band2	3	19185	1	#0	QAM64	22.20	19.90	20.00	PASS
LTE Band2	3	19185	1	#Mid	QAM64	22.18	19.88	19.98	PASS

LTE Band2	3	19185	1	#Max	QAM64	22.13	19.83	19.93	PASS
LTE Band2	3	19185	8	#0	QAM64	21.09	18.79	18.89	PASS
LTE Band2	3	19185	8	#Mid	QAM64	21.06	18.76	18.86	PASS
LTE Band2	3	19185	8	#Max	QAM64	21.06	18.76	18.86	PASS
LTE Band2	3	19185	15	#0	QAM64	20.86	18.56	18.66	PASS
LTE Band2	5	18625	1	#0	QPSK	22.88	19.58	19.48	PASS
LTE Band2	5	18625	1	#Mid	QPSK	23.03	19.73	19.63	PASS
LTE Band2	5	18625	1	#Max	QPSK	22.79	19.49	19.39	PASS
LTE Band2	5	18625	12	#0	QPSK	22.03	18.73	18.63	PASS
LTE Band2	5	18625	12	#Mid	QPSK	22.01	18.71	18.61	PASS
LTE Band2	5	18625	12	#Max	QPSK	22.00	18.70	18.60	PASS
LTE Band2	5	18625	25	#0	QPSK	22.02	18.72	18.62	PASS
LTE Band2	5	18625	1	#0	QAM16	22.24	18.94	18.84	PASS
LTE Band2	5	18625	1	#Mid	QAM16	22.31	19.01	18.91	PASS
LTE Band2	5	18625	1	#Max	QAM16	22.06	18.76	18.66	PASS
LTE Band2	5	18625	12	#0	QAM16	21.03	17.73	17.63	PASS
LTE Band2	5	18625	12	#Mid	QAM16	21.02	17.72	17.62	PASS
LTE Band2	5	18625	12	#Max	QAM16	21.02	17.72	17.62	PASS
LTE Band2	5	18625	25	#0	QAM16	20.96	17.66	17.56	PASS
LTE Band2	5	18625	1	#0	QAM64	22.15	18.85	18.75	PASS
LTE Band2	5	18625	1	#Mid	QAM64	22.25	18.95	18.85	PASS
LTE Band2	5	18625	1	#Max	QAM64	22.09	18.79	18.69	PASS
LTE Band2	5	18625	12	#0	QAM64	21.02	17.72	17.62	PASS
LTE Band2	5	18625	12	#Mid	QAM64	21.07	17.77	17.67	PASS
LTE Band2	5	18625	12	#Max	QAM64	21.01	17.71	17.61	PASS
LTE Band2	5	18625	25	#0	QAM64	20.98	17.68	17.58	PASS
LTE Band2	5	18900	1	#0	QPSK	22.66	20.06	20.26	PASS
LTE Band2	5	18900	1	#Mid	QPSK	22.84	20.24	20.44	PASS
LTE Band2	5	18900	1	#Max	QPSK	22.71	20.11	20.31	PASS
LTE Band2	5	18900	12	#0	QPSK	21.83	19.23	19.43	PASS
LTE Band2	5	18900	12	#Mid	QPSK	21.74	19.14	19.34	PASS
LTE Band2	5	18900	12	#Max	QPSK	21.79	19.19	19.39	PASS
LTE Band2	5	18900	25	#0	QPSK	21.85	19.25	19.45	PASS
LTE Band2	5	18900	1	#0	QAM16	22.01	19.41	19.61	PASS
LTE Band2	5	18900	1	#Mid	QAM16	22.14	19.54	19.74	PASS
LTE Band2	5	18900	1	#Max	QAM16	21.97	19.37	19.57	PASS
LTE Band2	5	18900	12	#0	QAM16	20.73	18.13	18.33	PASS
LTE Band2	5	18900	12	#Mid	QAM16	20.79	18.19	18.39	PASS
LTE Band2	5	18900	12	#Max	QAM16	20.81	18.21	18.41	PASS
LTE Band2	5	18900	25	#0	QAM16	20.84	18.24	18.44	PASS
LTE Band2	5	18900	1	#0	QAM64	21.96	19.36	19.56	PASS
LTE Band2	5	18900	1	#Mid	QAM64	22.16	19.56	19.76	PASS

LTE Band2	5	18900	1	#Max	QAM64	22.05	19.45	19.65	PASS
LTE Band2	5	18900	12	#0	QAM64	20.75	18.15	18.35	PASS
LTE Band2	5	18900	12	#Mid	QAM64	20.74	18.14	18.34	PASS
LTE Band2	5	18900	12	#Max	QAM64	20.82	18.22	18.42	PASS
LTE Band2	5	18900	25	#0	QAM64	20.83	18.23	18.43	PASS
LTE Band2	5	19175	1	#0	QPSK	22.92	20.62	20.72	PASS
LTE Band2	5	19175	1	#Mid	QPSK	23.05	20.75	20.85	PASS
LTE Band2	5	19175	1	#Max	QPSK	22.91	20.61	20.71	PASS
LTE Band2	5	19175	12	#0	QPSK	22.05	19.75	19.85	PASS
LTE Band2	5	19175	12	#Mid	QPSK	22.01	19.71	19.81	PASS
LTE Band2	5	19175	12	#Max	QPSK	22.03	19.73	19.83	PASS
LTE Band2	5	19175	25	#0	QPSK	22.00	19.70	19.80	PASS
LTE Band2	5	19175	1	#0	QAM16	22.12	19.82	19.92	PASS
LTE Band2	5	19175	1	#Mid	QAM16	22.20	19.90	20.00	PASS
LTE Band2	5	19175	1	#Max	QAM16	22.06	19.76	19.86	PASS
LTE Band2	5	19175	12	#0	QAM16	20.92	18.62	18.72	PASS
LTE Band2	5	19175	12	#Mid	QAM16	20.99	18.69	18.79	PASS
LTE Band2	5	19175	12	#Max	QAM16	20.87	18.57	18.67	PASS
LTE Band2	5	19175	25	#0	QAM16	20.93	18.63	18.73	PASS
LTE Band2	5	19175	1	#0	QAM64	22.05	19.75	19.85	PASS
LTE Band2	5	19175	1	#Mid	QAM64	22.16	19.86	19.96	PASS
LTE Band2	5	19175	1	#Max	QAM64	22.05	19.75	19.85	PASS
LTE Band2	5	19175	12	#0	QAM64	20.99	18.69	18.79	PASS
LTE Band2	5	19175	12	#Mid	QAM64	20.96	18.66	18.76	PASS
LTE Band2	5	19175	12	#Max	QAM64	20.92	18.62	18.72	PASS
LTE Band2	5	19175	25	#0	QAM64	20.93	18.63	18.73	PASS
LTE Band2	10	18650	1	#0	QPSK	23.02	20.02	20.02	PASS
LTE Band2	10	18650	1	#Mid	QPSK	23.04	20.04	20.04	PASS
LTE Band2	10	18650	1	#Max	QPSK	22.82	19.82	19.82	PASS
LTE Band2	10	18650	25	#0	QPSK	22.04	19.04	19.04	PASS
LTE Band2	10	18650	25	#Mid	QPSK	22.05	19.05	19.05	PASS
LTE Band2	10	18650	25	#Max	QPSK	22.04	19.04	19.04	PASS
LTE Band2	10	18650	50	#0	QPSK	22.03	19.03	19.03	PASS
LTE Band2	10	18650	1	#0	QAM16	22.33	19.33	19.33	PASS
LTE Band2	10	18650	1	#Mid	QAM16	22.30	19.30	19.30	PASS
LTE Band2	10	18650	1	#Max	QAM16	22.11	19.11	19.11	PASS
LTE Band2	10	18650	25	#0	QAM16	21.05	18.05	18.05	PASS
LTE Band2	10	18650	25	#Mid	QAM16	21.06	18.06	18.06	PASS
LTE Band2	10	18650	25	#Max	QAM16	21.09	18.09	18.09	PASS
LTE Band2	10	18650	50	#0	QAM16	20.96	17.96	17.96	PASS
LTE Band2	10	18650	1	#0	QAM64	22.33	19.33	19.33	PASS
LTE Band2	10	18650	1	#Mid	QAM64	22.28	19.28	19.28	PASS

LTE Band2	10	18650	1	#Max	QAM64	22.06	19.06	19.06	PASS
LTE Band2	10	18650	25	#0	QAM64	20.99	17.99	17.99	PASS
LTE Band2	10	18650	25	#Mid	QAM64	21.04	18.04	18.04	PASS
LTE Band2	10	18650	25	#Max	QAM64	21.14	18.14	18.14	PASS
LTE Band2	10	18650	50	#0	QAM64	20.96	17.96	17.96	PASS
LTE Band2	10	18900	1	#0	QPSK	22.75	20.15	20.35	PASS
LTE Band2	10	18900	1	#Mid	QPSK	22.95	20.35	20.55	PASS
LTE Band2	10	18900	1	#Max	QPSK	22.80	20.20	20.40	PASS
LTE Band2	10	18900	25	#0	QPSK	21.86	19.26	19.46	PASS
LTE Band2	10	18900	25	#Mid	QPSK	21.83	19.23	19.43	PASS
LTE Band2	10	18900	25	#Max	QPSK	21.90	19.30	19.50	PASS
LTE Band2	10	18900	50	#0	QPSK	21.87	19.27	19.47	PASS
LTE Band2	10	18900	1	#0	QAM16	21.95	19.35	19.55	PASS
LTE Band2	10	18900	1	#Mid	QAM16	22.07	19.47	19.67	PASS
LTE Band2	10	18900	1	#Max	QAM16	21.97	19.37	19.57	PASS
LTE Band2	10	18900	25	#0	QAM16	20.85	18.25	18.45	PASS
LTE Band2	10	18900	25	#Mid	QAM16	20.85	18.25	18.45	PASS
LTE Band2	10	18900	25	#Max	QAM16	20.94	18.34	18.54	PASS
LTE Band2	10	18900	50	#0	QAM16	20.83	18.23	18.43	PASS
LTE Band2	10	18900	1	#0	QAM64	21.97	19.37	19.57	PASS
LTE Band2	10	18900	1	#Mid	QAM64	22.14	19.54	19.74	PASS
LTE Band2	10	18900	1	#Max	QAM64	21.99	19.39	19.59	PASS
LTE Band2	10	18900	25	#0	QAM64	20.85	18.25	18.45	PASS
LTE Band2	10	18900	25	#Mid	QAM64	20.83	18.23	18.43	PASS
LTE Band2	10	18900	25	#Max	QAM64	20.93	18.33	18.53	PASS
LTE Band2	10	18900	50	#0	QAM64	20.83	18.23	18.43	PASS
LTE Band2	10	19150	1	#0	QPSK	23.10	20.80	20.90	PASS
LTE Band2	10	19150	1	#Mid	QPSK	23.20	20.90	21.00	PASS
LTE Band2	10	19150	1	#Max	QPSK	23.02	20.72	20.82	PASS
LTE Band2	10	19150	25	#0	QPSK	22.08	19.78	19.88	PASS
LTE Band2	10	19150	25	#Mid	QPSK	22.06	19.76	19.86	PASS
LTE Band2	10	19150	25	#Max	QPSK	22.01	19.71	19.81	PASS
LTE Band2	10	19150	50	#0	QPSK	22.03	19.73	19.83	PASS
LTE Band2	10	19150	1	#0	QAM16	21.91	19.61	19.71	PASS
LTE Band2	10	19150	1	#Mid	QAM16	22.00	19.70	19.80	PASS
LTE Band2	10	19150	1	#Max	QAM16	21.78	19.48	19.58	PASS
LTE Band2	10	19150	25	#0	QAM16	21.11	18.81	18.91	PASS
LTE Band2	10	19150	25	#Mid	QAM16	21.07	18.77	18.87	PASS
LTE Band2	10	19150	25	#Max	QAM16	21.01	18.71	18.81	PASS
LTE Band2	10	19150	50	#0	QAM16	20.96	18.66	18.76	PASS
LTE Band2	10	19150	1	#0	QAM64	21.96	19.66	19.76	PASS
LTE Band2	10	19150	1	#Mid	QAM64	21.99	19.69	19.79	PASS

LTE Band2	10	19150	1	#Max	QAM64	21.83	19.53	19.63	PASS
LTE Band2	10	19150	25	#0	QAM64	21.05	18.75	18.85	PASS
LTE Band2	10	19150	25	#Mid	QAM64	21.10	18.80	18.90	PASS
LTE Band2	10	19150	25	#Max	QAM64	20.97	18.67	18.77	PASS
LTE Band2	10	19150	50	#0	QAM64	20.98	18.68	18.78	PASS
LTE Band2	15	18675	1	#0	QPSK	22.96	19.96	19.96	PASS
LTE Band2	15	18675	1	#Mid	QPSK	22.97	19.97	19.97	PASS
LTE Band2	15	18675	1	#Max	QPSK	22.65	19.65	19.65	PASS
LTE Band2	15	18675	36	#0	QPSK	22.02	19.02	19.02	PASS
LTE Band2	15	18675	36	#Mid	QPSK	22.00	19.00	19.00	PASS
LTE Band2	15	18675	36	#Max	QPSK	22.01	19.01	19.01	PASS
LTE Band2	15	18675	75	#0	QPSK	22.01	19.01	19.01	PASS
LTE Band2	15	18675	1	#0	QAM16	22.26	19.26	19.26	PASS
LTE Band2	15	18675	1	#Mid	QAM16	22.22	19.22	19.22	PASS
LTE Band2	15	18675	1	#Max	QAM16	21.90	18.90	18.90	PASS
LTE Band2	15	18675	36	#0	QAM16	20.96	17.96	17.96	PASS
LTE Band2	15	18675	36	#Mid	QAM16	20.94	17.94	17.94	PASS
LTE Band2	15	18675	36	#Max	QAM16	20.92	17.92	17.92	PASS
LTE Band2	15	18675	75	#0	QAM16	20.93	17.93	17.93	PASS
LTE Band2	15	18675	1	#0	QAM64	22.27	19.27	19.27	PASS
LTE Band2	15	18675	1	#Mid	QAM64	22.18	19.18	19.18	PASS
LTE Band2	15	18675	1	#Max	QAM64	21.87	18.87	18.87	PASS
LTE Band2	15	18675	36	#0	QAM64	20.97	17.97	17.97	PASS
LTE Band2	15	18675	36	#Mid	QAM64	20.96	17.96	17.96	PASS
LTE Band2	15	18675	36	#Max	QAM64	20.93	17.93	17.93	PASS
LTE Band2	15	18675	75	#0	QAM64	20.92	17.92	17.92	PASS
LTE Band2	15	18900	1	#0	QPSK	22.69	20.09	20.29	PASS
LTE Band2	15	18900	1	#Mid	QPSK	22.77	20.17	20.37	PASS
LTE Band2	15	18900	1	#Max	QPSK	22.74	20.14	20.34	PASS
LTE Band2	15	18900	36	#0	QPSK	21.86	19.26	19.46	PASS
LTE Band2	15	18900	36	#Mid	QPSK	21.91	19.31	19.51	PASS
LTE Band2	15	18900	36	#Max	QPSK	22.06	19.46	19.66	PASS
LTE Band2	15	18900	75	#0	QPSK	21.94	19.34	19.54	PASS
LTE Band2	15	18900	1	#0	QAM16	21.97	19.37	19.57	PASS
LTE Band2	15	18900	1	#Mid	QAM16	21.97	19.37	19.57	PASS
LTE Band2	15	18900	1	#Max	QAM16	21.96	19.36	19.56	PASS
LTE Band2	15	18900	36	#0	QAM16	20.95	18.35	18.55	PASS
LTE Band2	15	18900	36	#Mid	QAM16	20.85	18.25	18.45	PASS
LTE Band2	15	18900	36	#Max	QAM16	20.94	18.34	18.54	PASS
LTE Band2	15	18900	75	#0	QAM16	20.90	18.30	18.50	PASS
LTE Band2	15	18900	1	#0	QAM64	21.90	19.30	19.50	PASS
LTE Band2	15	18900	1	#Mid	QAM64	22.00	19.40	19.60	PASS

LTE Band2	15	18900	1	#Max	QAM64	22.03	19.43	19.63	PASS
LTE Band2	15	18900	36	#0	QAM64	20.89	18.29	18.49	PASS
LTE Band2	15	18900	36	#Mid	QAM64	20.87	18.27	18.47	PASS
LTE Band2	15	18900	36	#Max	QAM64	20.98	18.38	18.58	PASS
LTE Band2	15	18900	75	#0	QAM64	20.86	18.26	18.46	PASS
LTE Band2	15	19125	1	#0	QPSK	23.17	20.77	20.97	PASS
LTE Band2	15	19125	1	#Mid	QPSK	23.14	20.74	20.94	PASS
LTE Band2	15	19125	1	#Max	QPSK	23.09	20.69	20.89	PASS
LTE Band2	15	19125	36	#0	QPSK	22.21	19.81	20.01	PASS
LTE Band2	15	19125	36	#Mid	QPSK	22.23	19.83	20.03	PASS
LTE Band2	15	19125	36	#Max	QPSK	22.20	19.80	20.00	PASS
LTE Band2	15	19125	75	#0	QPSK	22.25	19.85	20.05	PASS
LTE Band2	15	19125	1	#0	QAM16	21.99	19.59	19.79	PASS
LTE Band2	15	19125	1	#Mid	QAM16	22.09	19.69	19.89	PASS
LTE Band2	15	19125	1	#Max	QAM16	21.94	19.54	19.74	PASS
LTE Band2	15	19125	36	#0	QAM16	21.20	18.80	19.00	PASS
LTE Band2	15	19125	36	#Mid	QAM16	21.25	18.85	19.05	PASS
LTE Band2	15	19125	36	#Max	QAM16	21.09	18.69	18.89	PASS
LTE Band2	15	19125	75	#0	QAM16	21.14	18.74	18.94	PASS
LTE Band2	15	19125	1	#0	QAM64	22.01	19.61	19.81	PASS
LTE Band2	15	19125	1	#Mid	QAM64	22.07	19.67	19.87	PASS
LTE Band2	15	19125	1	#Max	QAM64	22.04	19.64	19.84	PASS
LTE Band2	15	19125	36	#0	QAM64	21.17	18.77	18.97	PASS
LTE Band2	15	19125	36	#Mid	QAM64	21.21	18.81	19.01	PASS
LTE Band2	15	19125	36	#Max	QAM64	21.12	18.72	18.92	PASS
LTE Band2	15	19125	75	#0	QAM64	21.16	18.76	18.96	PASS
LTE Band2	20	18700	1	#0	QPSK	22.90	19.90	19.90	PASS
LTE Band2	20	18700	1	#Mid	QPSK	23.04	20.04	20.04	PASS
LTE Band2	20	18700	1	#Max	QPSK	22.49	19.49	19.49	PASS
LTE Band2	20	18700	50	#0	QPSK	21.82	18.82	18.82	PASS
LTE Band2	20	18700	50	#Mid	QPSK	21.82	18.82	18.82	PASS
LTE Band2	20	18700	50	#Max	QPSK	21.76	18.76	18.76	PASS
LTE Band2	20	18700	100	#0	QPSK	21.82	18.82	18.82	PASS
LTE Band2	20	18700	1	#0	QAM16	22.12	19.12	19.12	PASS
LTE Band2	20	18700	1	#Mid	QAM16	22.20	19.20	19.20	PASS
LTE Band2	20	18700	1	#Max	QAM16	21.71	18.71	18.71	PASS
LTE Band2	20	18700	50	#0	QAM16	20.84	17.84	17.84	PASS
LTE Band2	20	18700	50	#Mid	QAM16	20.89	17.89	17.89	PASS
LTE Band2	20	18700	50	#Max	QAM16	20.80	17.80	17.80	PASS
LTE Band2	20	18700	100	#0	QAM16	20.83	17.83	17.83	PASS
LTE Band2	20	18700	1	#0	QAM64	22.15	19.15	19.15	PASS
LTE Band2	20	18700	1	#Mid	QAM64	22.20	19.20	19.20	PASS

LTE Band2	20	18700	1	#Max	QAM64	21.66	18.66	18.66	PASS
LTE Band2	20	18700	50	#0	QAM64	20.97	17.97	17.97	PASS
LTE Band2	20	18700	50	#Mid	QAM64	20.84	17.84	17.84	PASS
LTE Band2	20	18700	50	#Max	QAM64	20.79	17.79	17.79	PASS
LTE Band2	20	18700	100	#0	QAM64	20.77	17.77	17.77	PASS
LTE Band2	20	18900	1	#0	QPSK	22.84	20.24	20.44	PASS
LTE Band2	20	18900	1	#Mid	QPSK	23.04	20.44	20.64	PASS
LTE Band2	20	18900	1	#Max	QPSK	22.75	20.15	20.35	PASS
LTE Band2	20	18900	50	#0	QPSK	21.90	19.30	19.50	PASS
LTE Band2	20	18900	50	#Mid	QPSK	21.90	19.30	19.50	PASS
LTE Band2	20	18900	50	#Max	QPSK	22.04	19.44	19.64	PASS
LTE Band2	20	18900	100	#0	QPSK	21.89	19.29	19.49	PASS
LTE Band2	20	18900	1	#0	QAM16	21.69	19.09	19.29	PASS
LTE Band2	20	18900	1	#Mid	QAM16	22.01	19.41	19.61	PASS
LTE Band2	20	18900	1	#Max	QAM16	21.71	19.11	19.31	PASS
LTE Band2	20	18900	50	#0	QAM16	20.98	18.38	18.58	PASS
LTE Band2	20	18900	50	#Mid	QAM16	20.98	18.38	18.58	PASS
LTE Band2	20	18900	50	#Max	QAM16	21.01	18.41	18.61	PASS
LTE Band2	20	18900	100	#0	QAM16	21.02	18.42	18.62	PASS
LTE Band2	20	18900	1	#0	QAM64	21.68	19.08	19.28	PASS
LTE Band2	20	18900	1	#Mid	QAM64	22.00	19.40	19.60	PASS
LTE Band2	20	18900	1	#Max	QAM64	21.73	19.13	19.33	PASS
LTE Band2	20	18900	50	#0	QAM64	20.95	18.35	18.55	PASS
LTE Band2	20	18900	50	#Mid	QAM64	20.99	18.39	18.59	PASS
LTE Band2	20	18900	50	#Max	QAM64	21.04	18.44	18.64	PASS
LTE Band2	20	18900	100	#0	QAM64	21.01	18.41	18.61	PASS
LTE Band2	20	19100	1	#0	QPSK	22.86	20.46	20.66	PASS
LTE Band2	20	19100	1	#Mid	QPSK	23.23	20.83	21.03	PASS
LTE Band2	20	19100	1	#Max	QPSK	22.96	20.56	20.76	PASS
LTE Band2	20	19100	50	#0	QPSK	22.26	19.86	20.06	PASS
LTE Band2	20	19100	50	#Mid	QPSK	22.22	19.82	20.02	PASS
LTE Band2	20	19100	50	#Max	QPSK	22.03	19.63	19.83	PASS
LTE Band2	20	19100	100	#0	QPSK	22.22	19.82	20.02	PASS
LTE Band2	20	19100	1	#0	QAM16	21.76	19.36	19.56	PASS
LTE Band2	20	19100	1	#Mid	QAM16	22.10	19.70	19.90	PASS
LTE Band2	20	19100	1	#Max	QAM16	21.70	19.30	19.50	PASS
LTE Band2	20	19100	50	#0	QAM16	21.28	18.88	19.08	PASS
LTE Band2	20	19100	50	#Mid	QAM16	21.30	18.90	19.10	PASS
LTE Band2	20	19100	50	#Max	QAM16	21.06	18.66	18.86	PASS
LTE Band2	20	19100	100	#0	QAM16	21.13	18.73	18.93	PASS
LTE Band2	20	19100	1	#0	QAM64	21.78	19.38	19.58	PASS
LTE Band2	20	19100	1	#Mid	QAM64	22.11	19.71	19.91	PASS

LTE Band2	20	19100	1	#Max	QAM64	21.68	19.28	19.48	PASS
LTE Band2	20	19100	50	#0	QAM64	21.29	18.89	19.09	PASS
LTE Band2	20	19100	50	#Mid	QAM64	21.32	18.92	19.12	PASS
LTE Band2	20	19100	50	#Max	QAM64	21.05	18.65	18.85	PASS
LTE Band2	20	19100	100	#0	QAM64	21.17	18.77	18.97	PASS

5.2. Occupied Bandwidth

Ambient condition

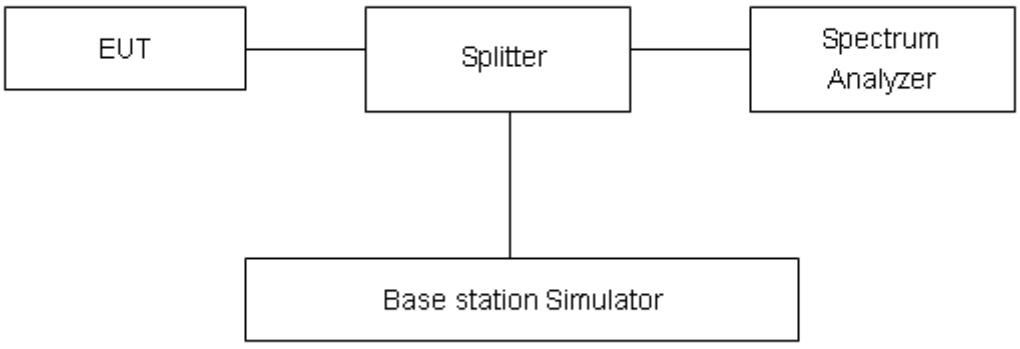
Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The occupied bandwidth is measured using spectrum analyzer.
RBW is set to 3kHz, VBW is set to 10kHz for GSM 1900,
RBW is set to 51 kHz, VBW is set to 160kHz for WCDMA Band II,
RBW is set to 30 kHz, VBW is set to 91kHz for LTE Band 2 (1.4MHz),
RBW is set to 62 kHz, VBW is set to 180 kHz for LTE Band 2 (3MHz),
RBW is set to 100 kHz, VBW is set to 300 kHz for LTE Band 2 (5MHz),
RBW is set to 200 kHz, VBW is set to 620kHz for LTE Band 2 (10MHz),
RBW is set to 300kHz,VBW is set to 910kHz for LTE Band 2 (15MHz).
RBW is set to 430kHz,VBW is set to 1.2MHz for LTE Band 2 (20MHz).

99% power and -26dBc occupied bandwidths are recorded. Spectrum analyzer plots are included on the following pages.

Test Setup



Limits

No specific occupied bandwidth requirements in part 2.1049.

Measurement Uncertainty

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

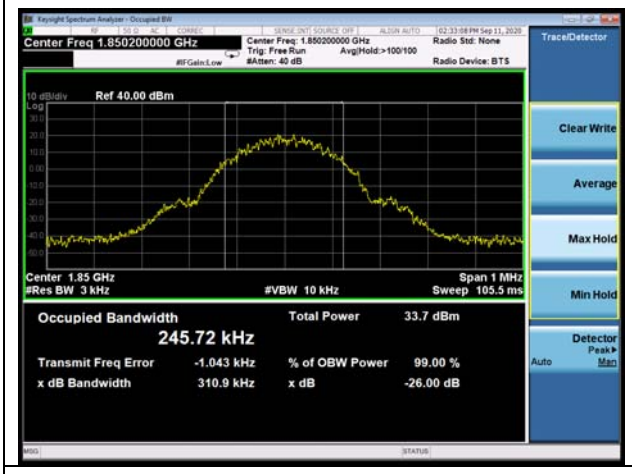
Test Result

Mode	Channel	Frequency (MHz)	99% Power Bandwidth (MHz)	-26dBc Bandwidth(MHz)
GSM 1900 (GMSK)	512	1850.2	0.2457	0.3109
	661	1880.0	0.2439	0.3184
	810	1909.8	0.2470	0.3096
GPRS 1900 (GMSK)	512	1850.2	0.2450	0.3102
	661	1880.0	0.2497	0.3208
	810	1909.8	0.2460	0.3113
EGPRS 1900 (8PSK)	512	1850.2	0.2463	0.3052
	661	1880.0	0.2563	0.3140
	810	1909.8	0.2473	0.3167
WCDMA Band II (RMC)	9262	1852.4	4.1632	4.6840
	9400	1880	4.1698	4.6750
	9538	1907.6	4.1677	4.6920

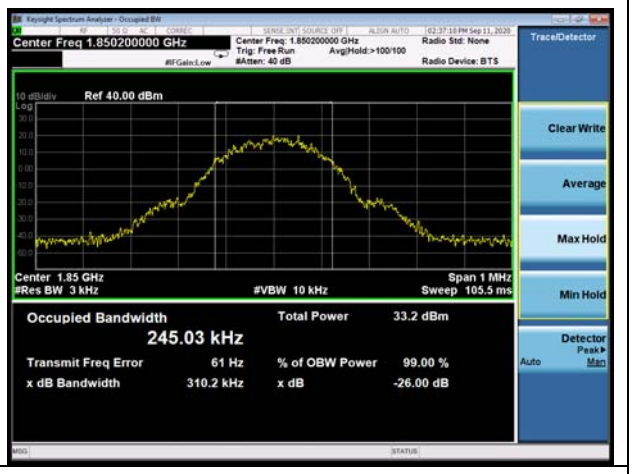
LTE Band 2					
Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	99% Power Bandwidth(MHz)	-26dBc Bandwidth(MHz)
QPSK	1.4	18607	1850.7	1.1006	1.2770
		18900	1880.0	1.0902	1.2780
		19193	1909.3	1.0980	1.2990
	3	18615	1851.5	2.6891	2.9080
		18900	1880	2.6940	2.9240
		19185	1908.5	2.6852	2.9370
	5	18625	1852.5	4.5031	4.8510
		18900	1880	4.5118	4.8650
		19175	1907.5	4.4968	4.8550
	10	18650	1855	9.0075	9.6650
		18900	1880	8.9835	9.7100
		19150	1905	8.9950	9.6890
	15	18675	1857.5	13.4320	14.5000
		18900	1880	13.4660	14.4600
		19125	1902.5	13.4500	14.5800
	20	18700	1860	17.9610	19.4400

		18900	1880	17.9350	19.2200
		19100	1900	17.8610	19.1300
16QAM	1.4	18607	1850.7	1.0967	1.2900
		18900	1880.0	1.0936	1.2830
		19193	1909.3	1.0909	1.2820
	3	18615	1851.5	2.6962	2.9280
		18900	1880	2.6848	2.9340
		19185	1908.5	2.6920	2.9110
	5	18625	1852.5	4.4986	4.9050
		18900	1880	4.5073	4.9290
		19175	1907.5	4.5058	4.9430
	10	18650	1855	8.9742	9.6000
		18900	1880	9.0012	9.6540
		19150	1905	9.0067	9.7570
	15	18675	1857.5	13.4620	14.4900
		18900	1880	13.4520	14.5000
		19125	1902.5	13.4530	14.3900
	20	18700	1860	17.9380	19.2700
		18900	1880	17.9440	19.1600
		19100	1900	17.9650	19.2600
64QAM	1.4	18607	1850.7	1.0976	1.2940
		18900	1880.0	1.0979	1.3200
		19193	1909.3	1.0898	1.2750
	3	18615	1851.5	2.6929	2.9060
		18900	1880	2.6929	2.9170
		19185	1908.5	2.6913	2.9210
	5	18625	1852.5	4.5053	4.9110
		18900	1880	4.5242	4.8680
		19175	1907.5	4.5138	4.9520
	10	18650	1855	9.0153	9.7240
		18900	1880	8.9928	9.6370
		19150	1905	8.9945	9.7500
	15	18675	1857.5	13.4730	14.5300
		18900	1880	13.4690	14.6000
		19125	1902.5	13.4900	14.5800
	20	18700	1860	17.9220	19.1700
		18900	1880	18.1070	19.3500
		19100	1900	17.9010	19.2100

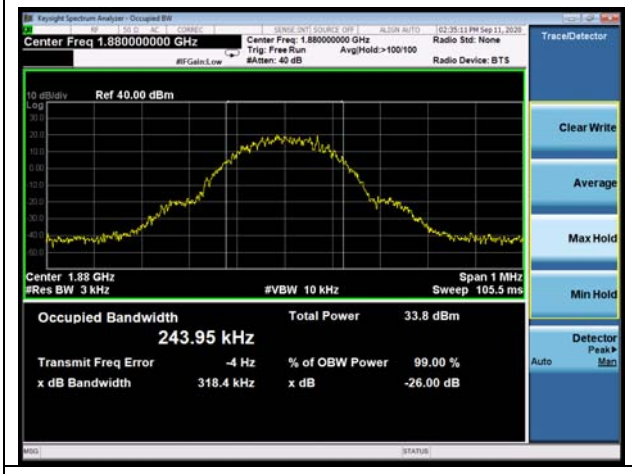
GSM1900 GSM CH-Low



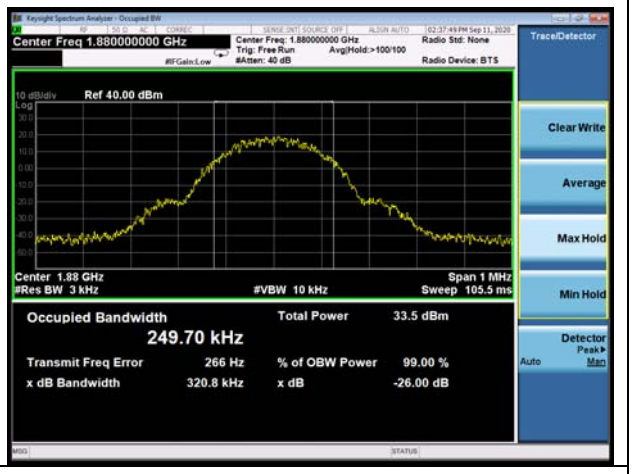
GSM1900 GPRS CH-Low



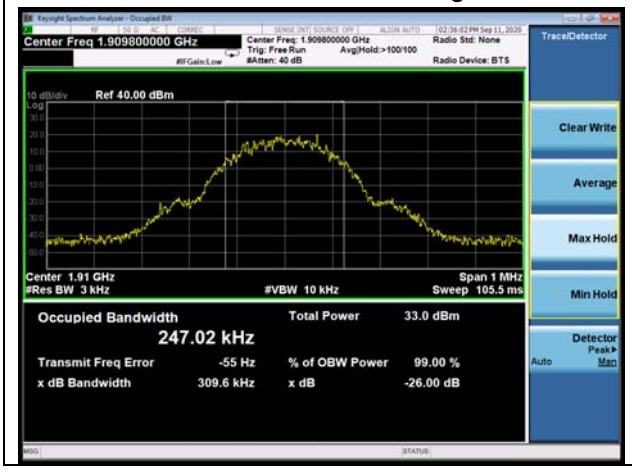
GSM 1900 GSM CH-Middle



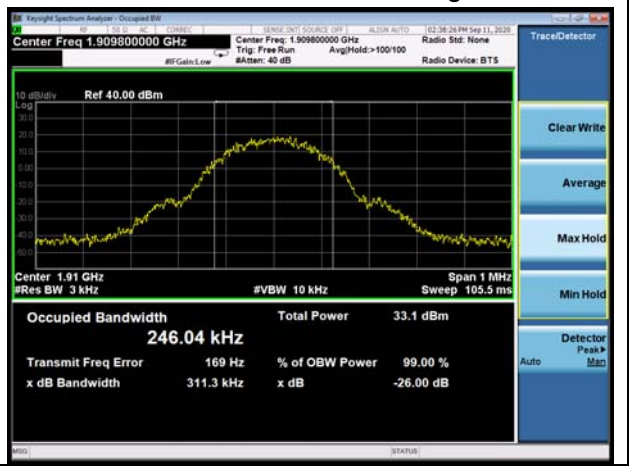
GSM 1900 GPRS CH-Middle



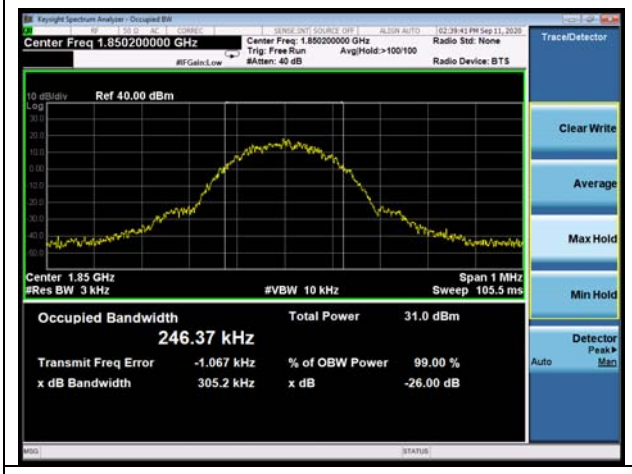
GSM 1900 GSM CH-High



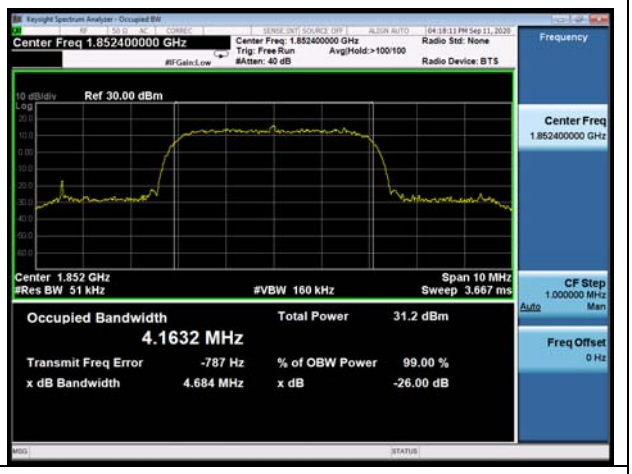
GSM 1900 GPRS CH-High



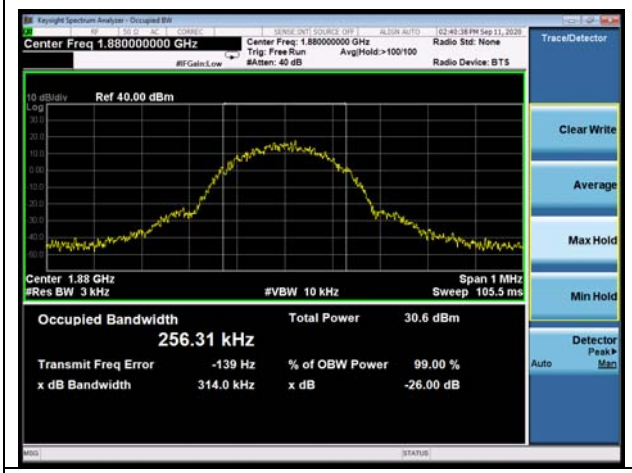
GSM1900 EGPRS CH-Low



WCDMA Band II RMC CH-LOW

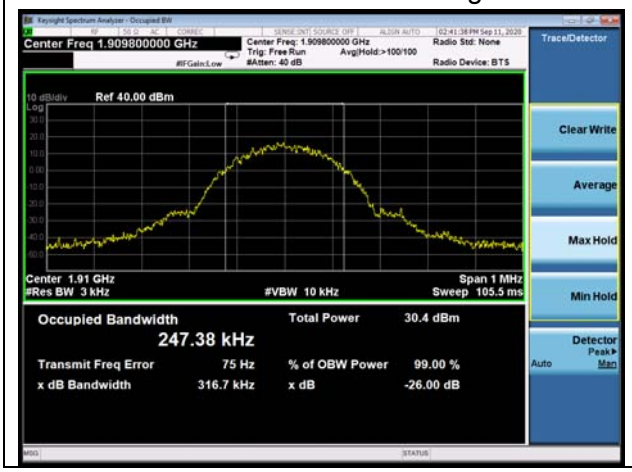


GSM 1900 EGPRS CH-Middle



WCDMA Band II RMC CH-Middle

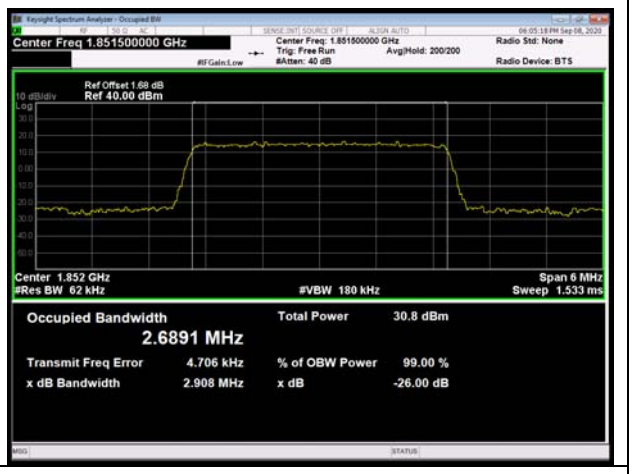
GSM 1900 EGPRS CH-High



WCDMA Band II RMC CH-High

LTE Band 2 1.4MHz QPSK CH-Low

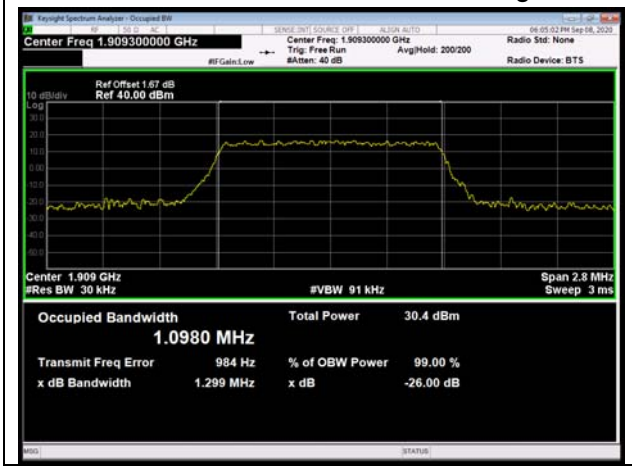
LTE Band 2 3MHz QPSK CH-Low



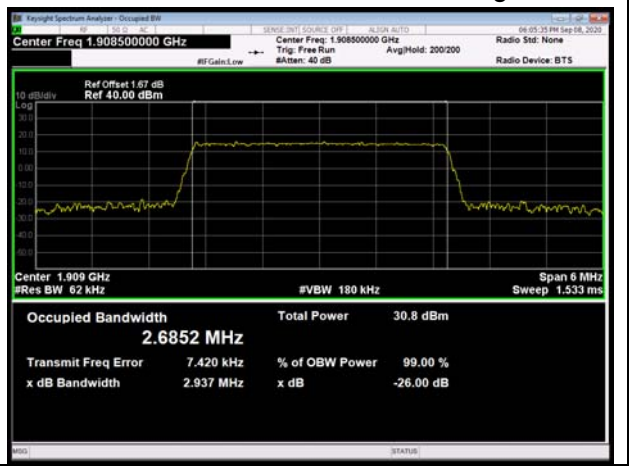
LTE Band 2 1.4MHz QPSK CH-Middle

LTE Band 2 3MHz QPSK CH-Middle

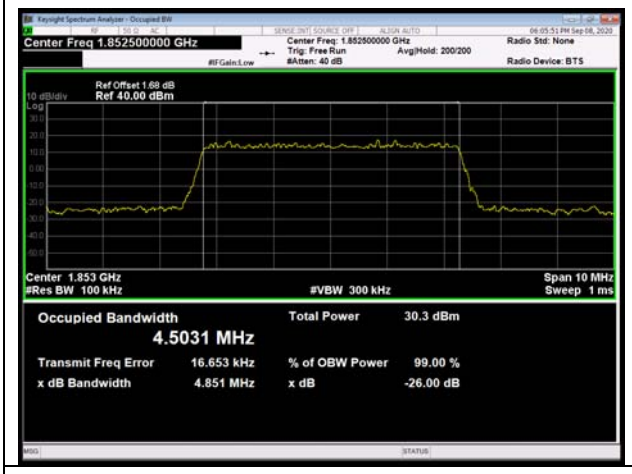
LTE Band 2 1.4MHz QPSK CH-High



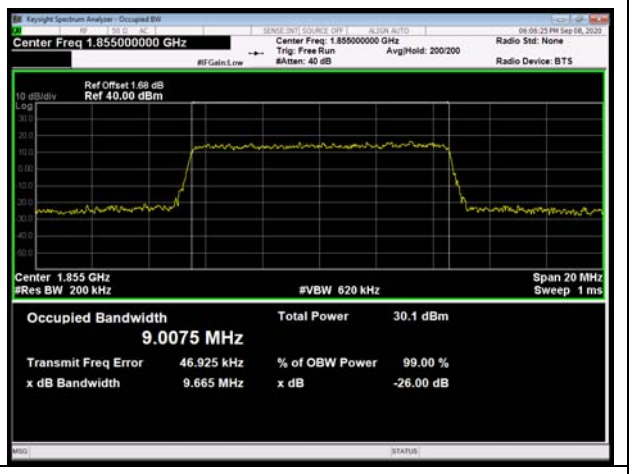
LTE Band 2 3MHz QPSK CH-High



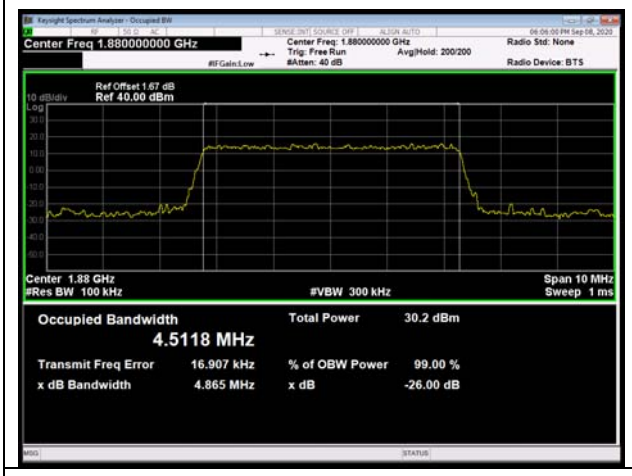
LTE Band 2 5MHz QPSK CH-Low



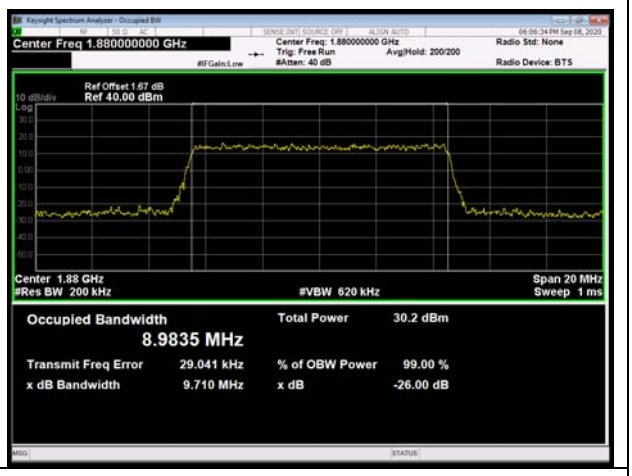
LTE Band 2 10MHz QPSK CH-Low



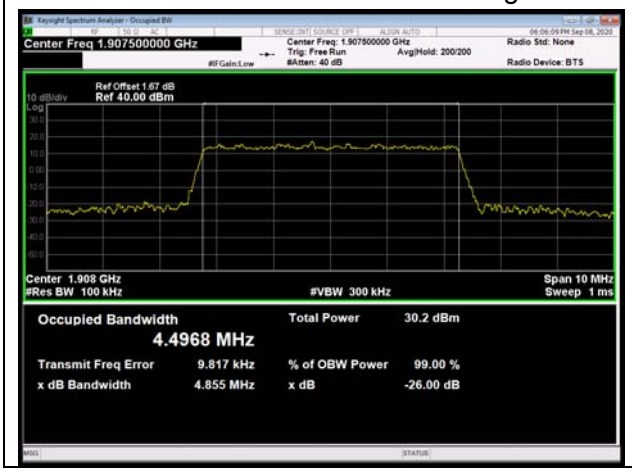
LTE Band 2 5MHz QPSK CH-Middle



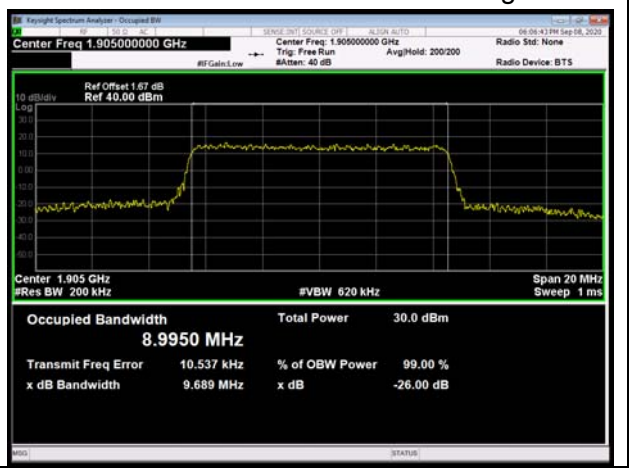
LTE Band 2 10MHz QPSK CH-Middle



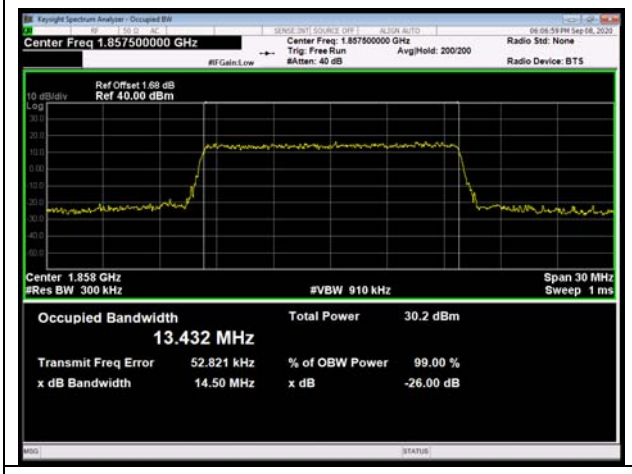
LTE Band 2 5MHz QPSK CH-High



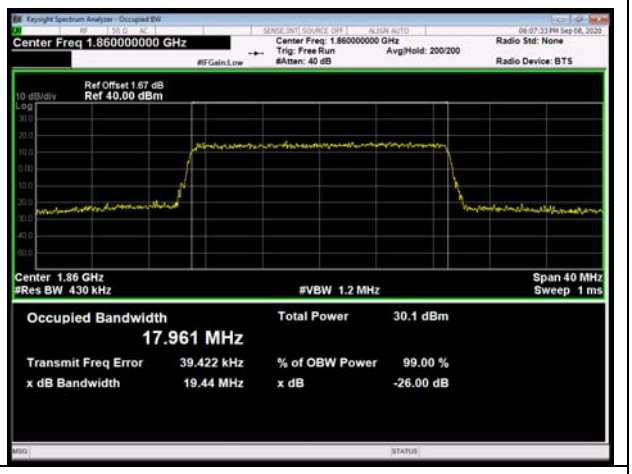
LTE Band 2 10MHz QPSK CH-High



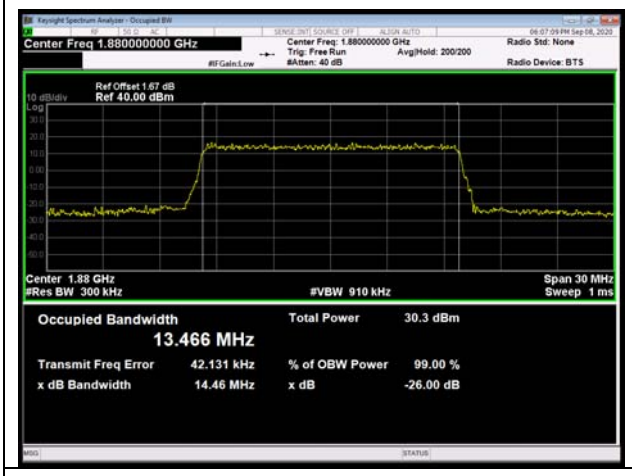
LTE Band 2 15MHz QPSK CH-Low



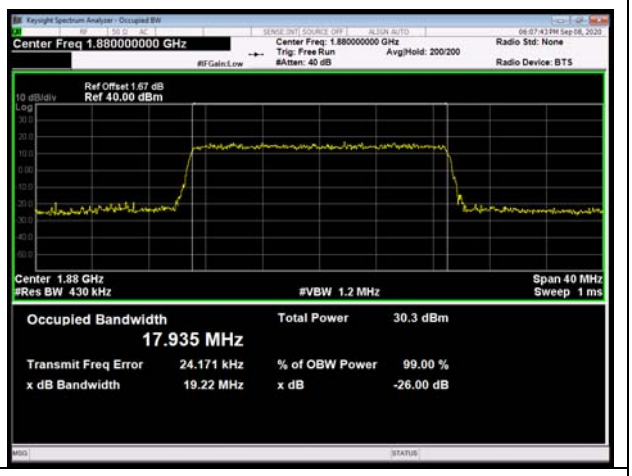
LTE Band 2 20MHz QPSK CH-Low



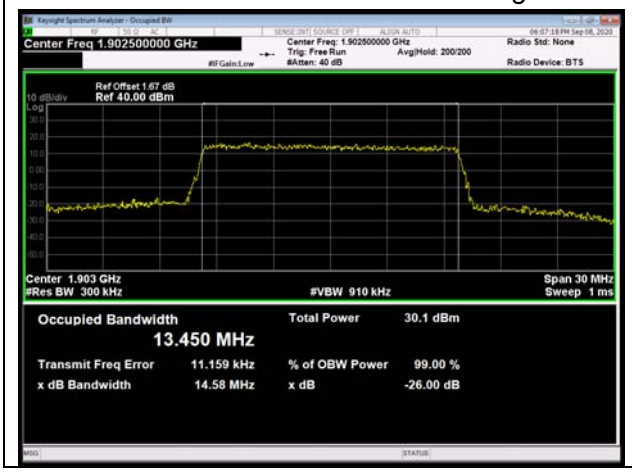
LTE Band 2 15MHz QPSK CH-Middle



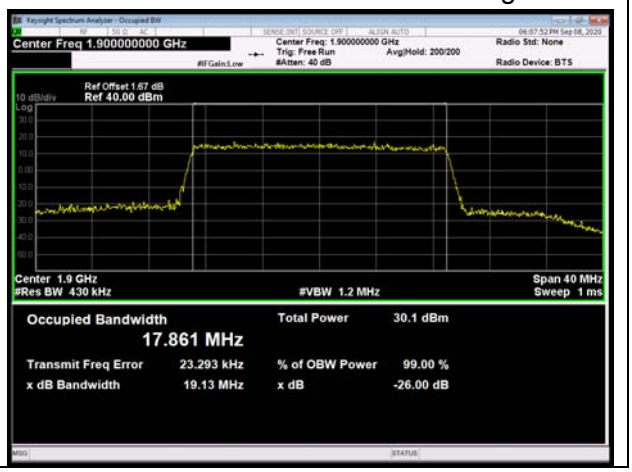
LTE Band 2 20MHz QPSK CH-Middle



LTE Band 2 15MHz QPSK CH-High

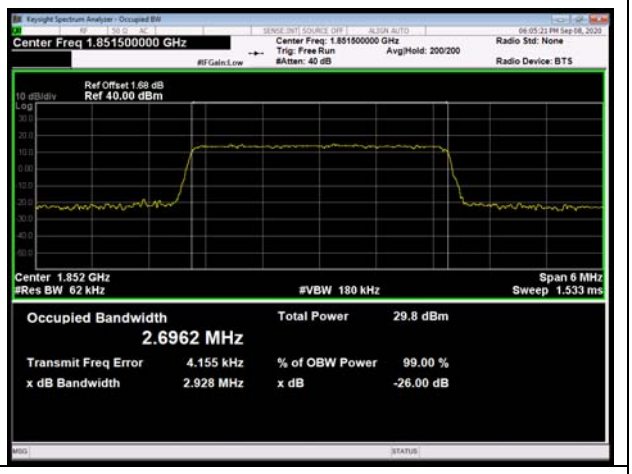


LTE Band 2 20MHz QPSK CH-High



LTE Band 2 1.4MHz 16QAM CH-Low

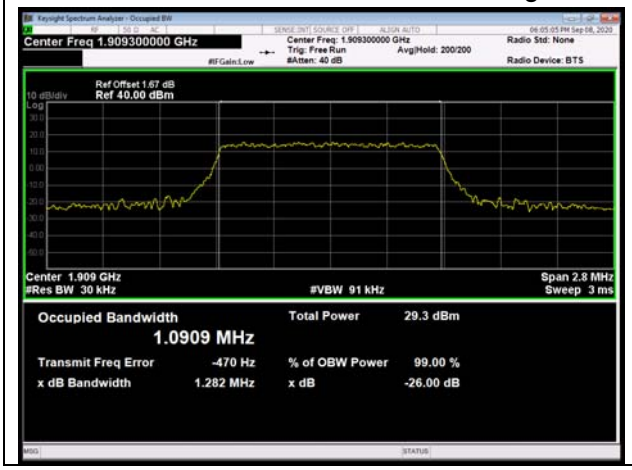
LTE Band 2 3MHz 16QAM CH-Low



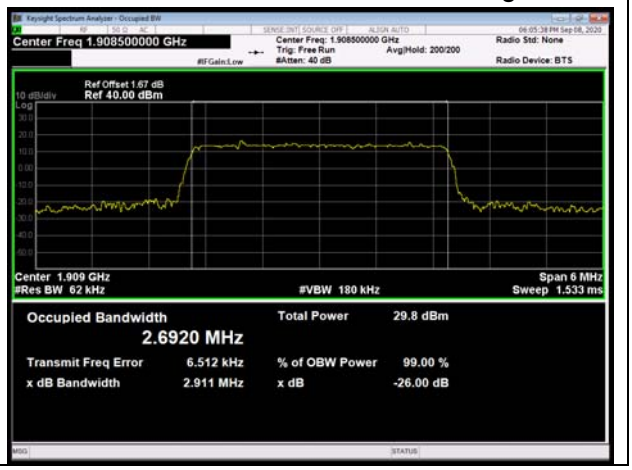
LTE Band 2 1.4MHz 16QAM CH-Middle

LTE Band 2 3MHz 16QAM CH-Middle

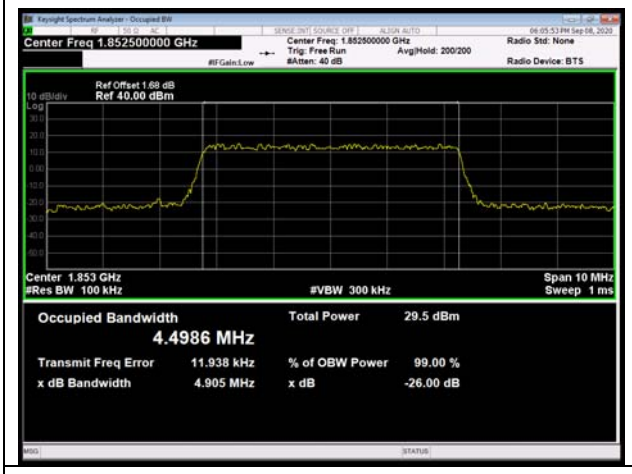
LTE Band 2 1.4MHz 16QAM CH-High



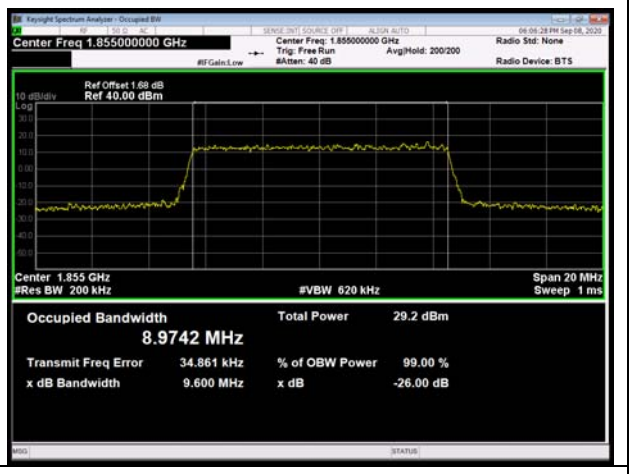
LTE Band 2 3MHz 16QAM CH-High



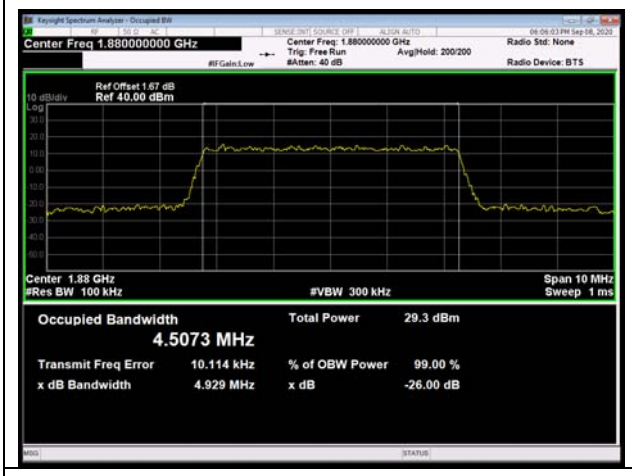
LTE Band 2 5MHz 16QAM CH-Low



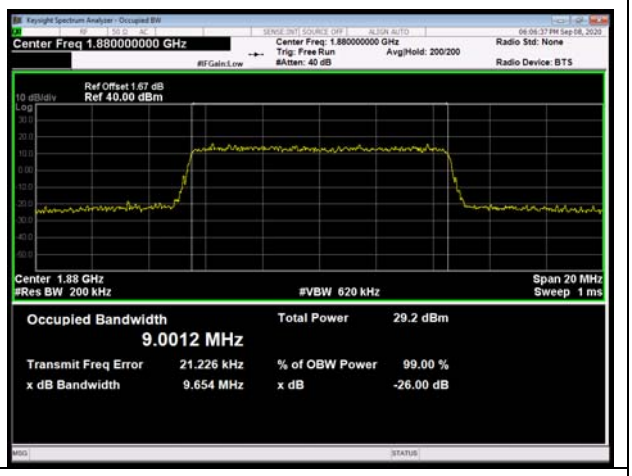
LTE Band 2 10MHz 16QAM CH-Low



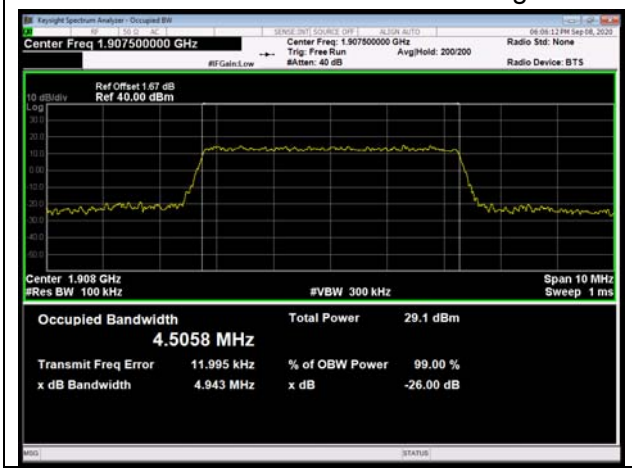
LTE Band 2 5MHz 16QAM CH-Middle



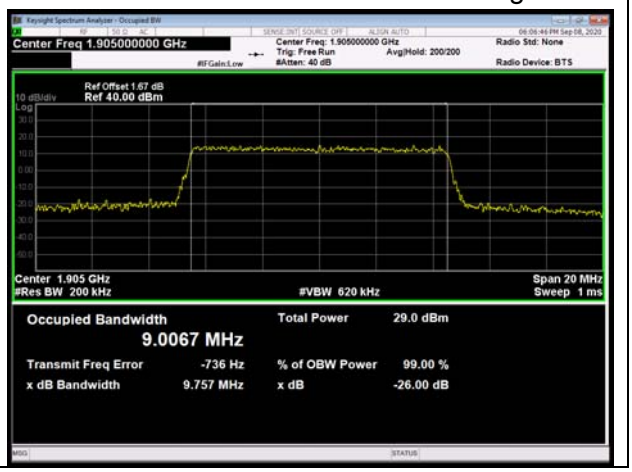
LTE Band 2 10MHz 16QAM CH-Middle



LTE Band 2 5MHz 16QAM CH-High

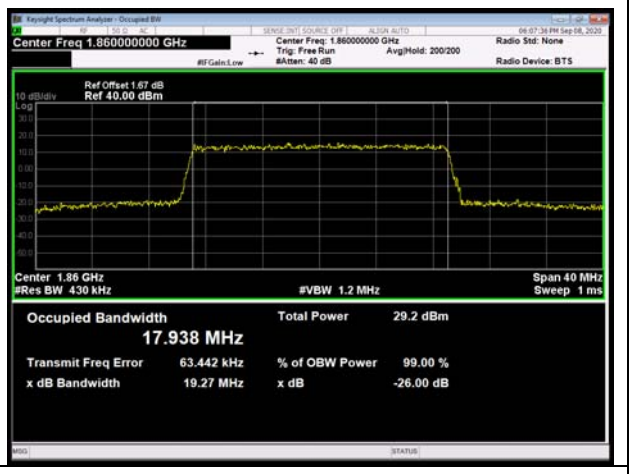


LTE Band 2 10MHz 16QAM CH-High

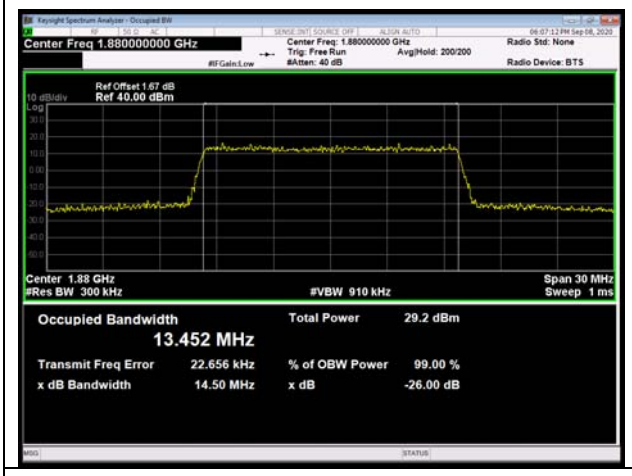


LTE Band 2 15MHz 16QAM CH-Low

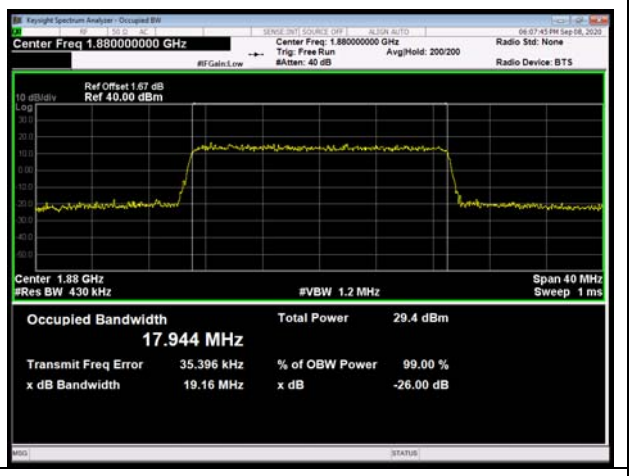
LTE Band 2 20MHz 16QAM CH-Low



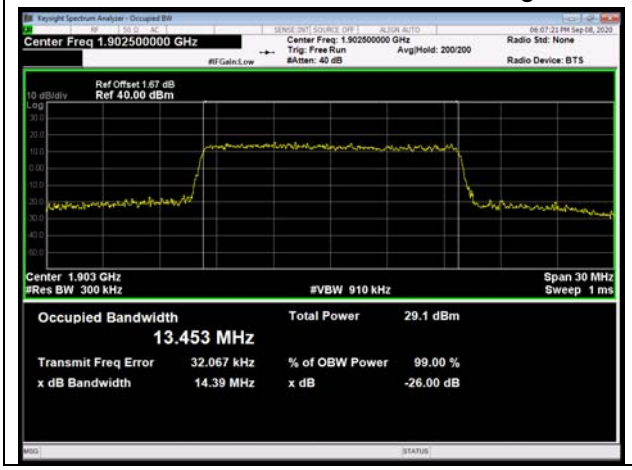
LTE Band 2 15MHz 16QAM CH-Middle



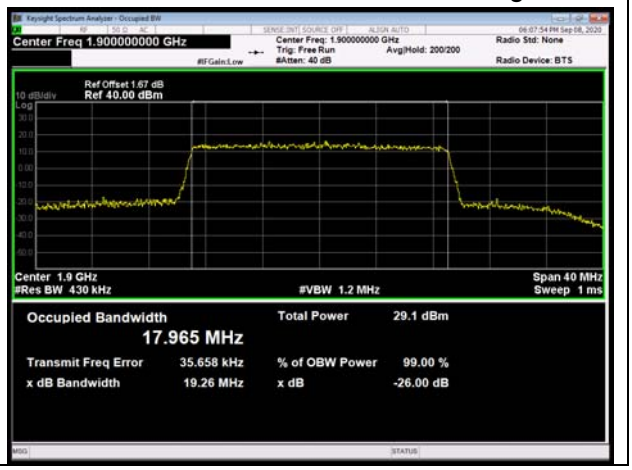
LTE Band 2 20MHz 16QAM CH-Middle



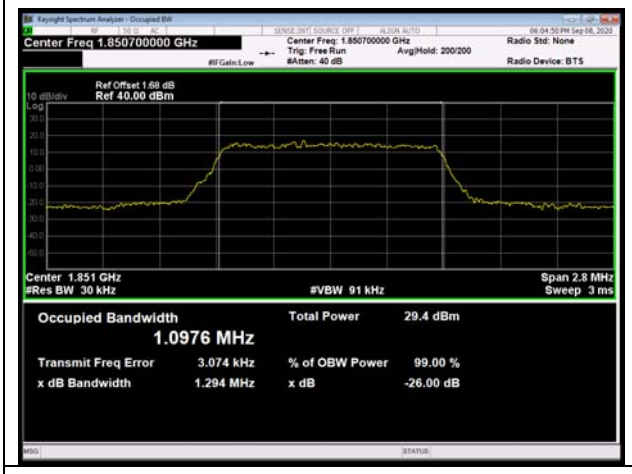
LTE Band 2 15MHz 16QAM CH-High



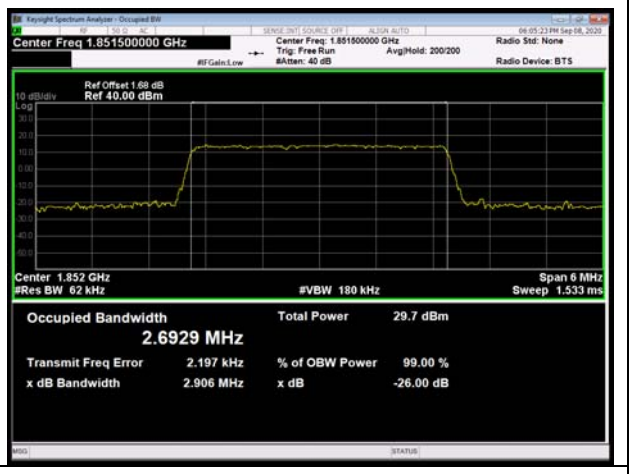
LTE Band 2 20MHz 16QAM CH-High



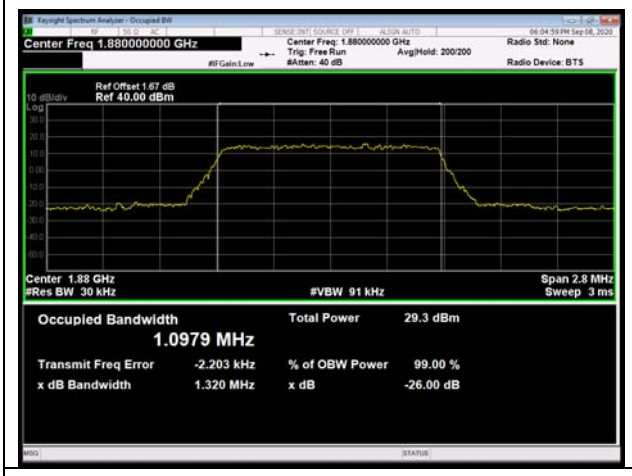
LTE Band 2 1.4MHz 64QAM CH-Low



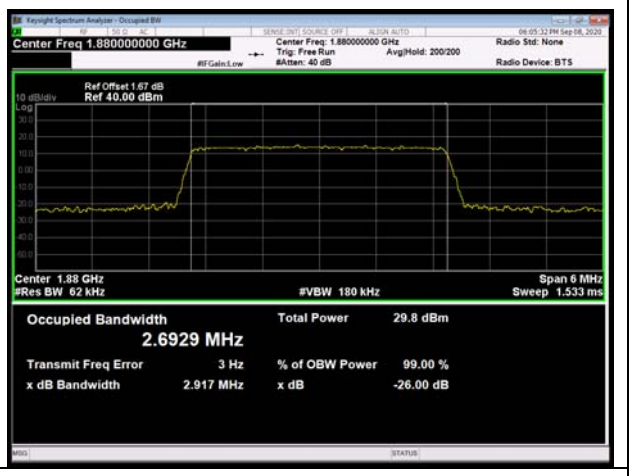
LTE Band 2 3MHz 64QAM CH-Low



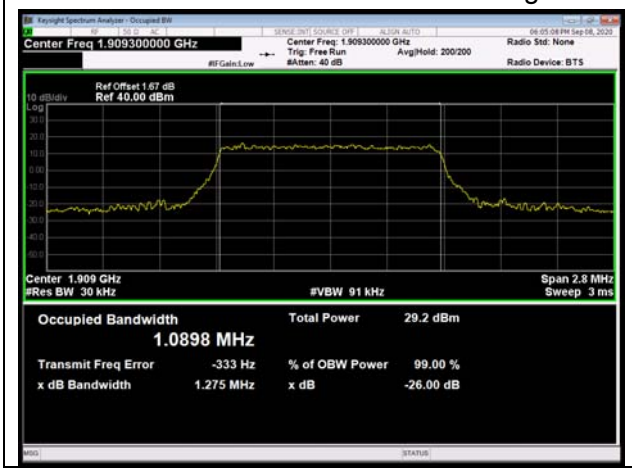
LTE Band 2 1.4MHz 64QAM CH-Middle



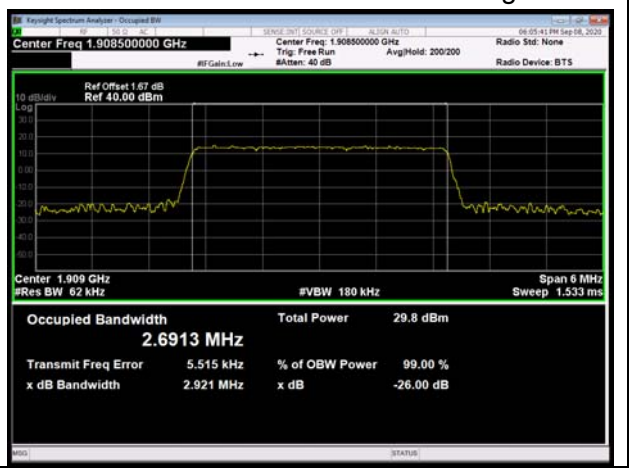
LTE Band 2 3MHz 64QAM CH-Middle



LTE Band 2 1.4MHz 64QAM CH-High

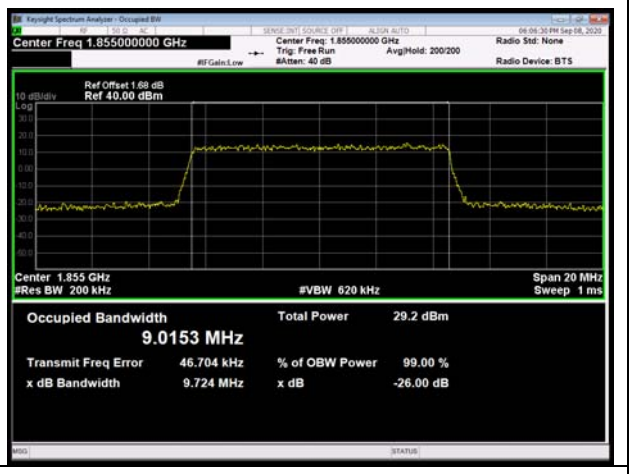


LTE Band 2 3MHz 64QAM CH-High

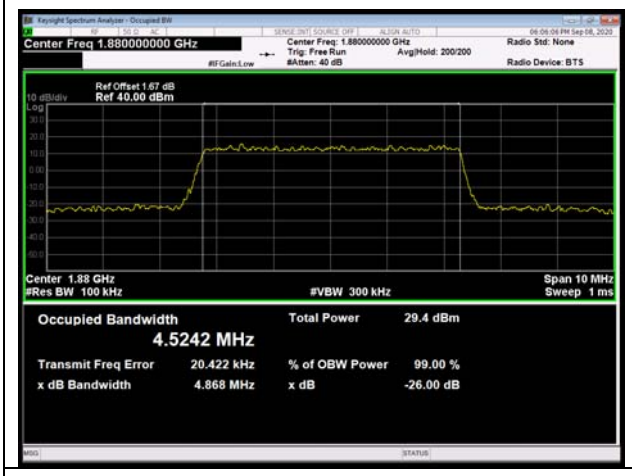


LTE Band 2 5MHz 64QAM CH-Low

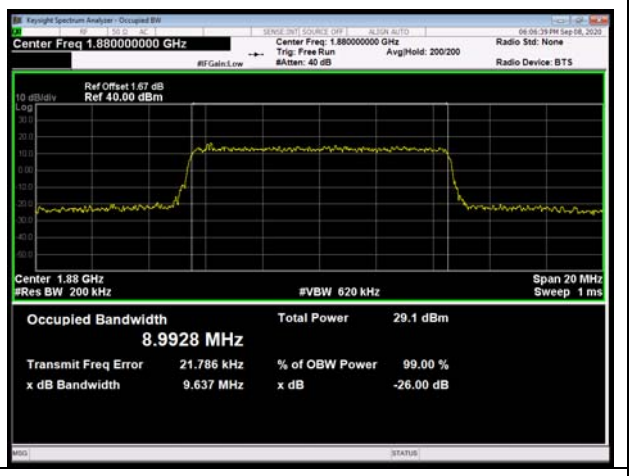
LTE Band 2 10MHz 64QAM CH-Low



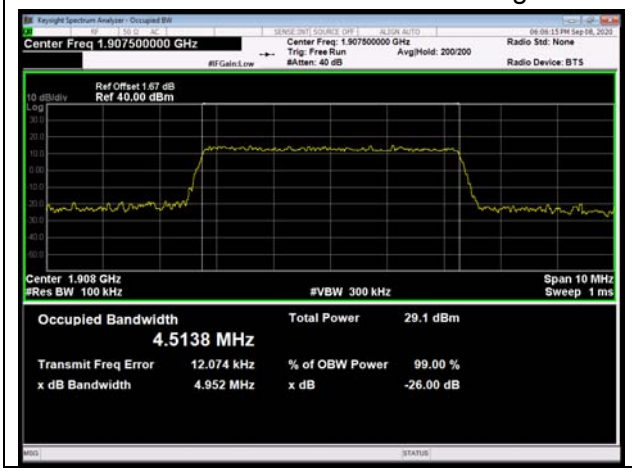
LTE Band 2 5MHz 64QAM CH-Middle



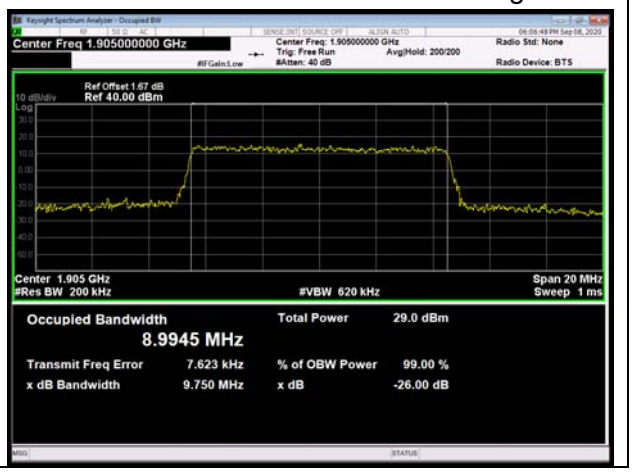
LTE Band 2 10MHz 64QAM CH-Middle



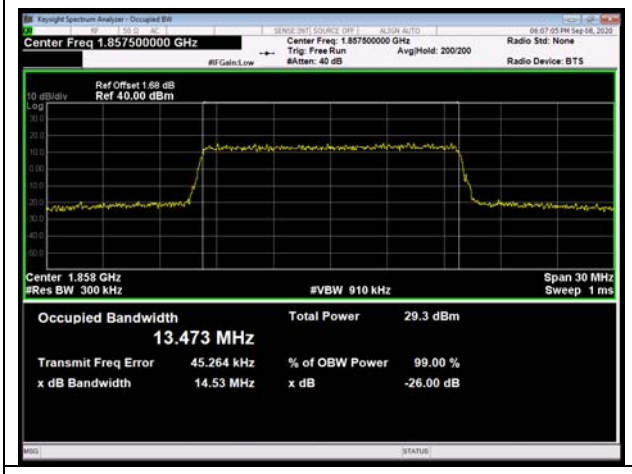
LTE Band 2 5MHz 64QAM CH-High



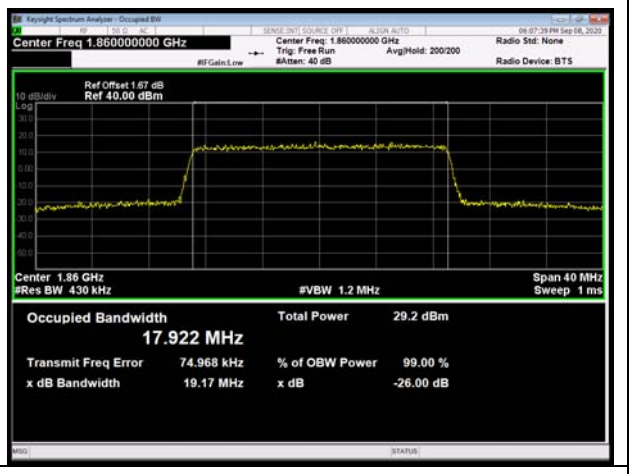
LTE Band 2 10MHz 64QAM CH-High



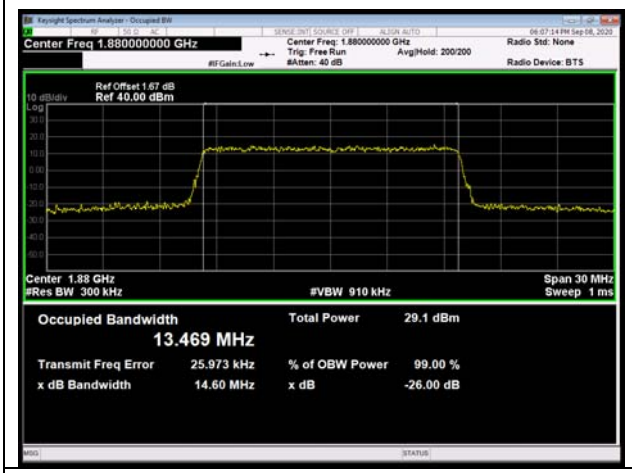
LTE Band 2 15MHz 64QAM CH-Low



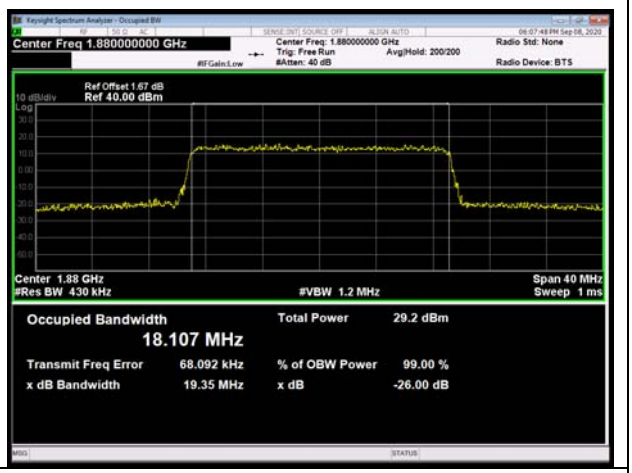
LTE Band 2 20MHz 64QAM CH-Low



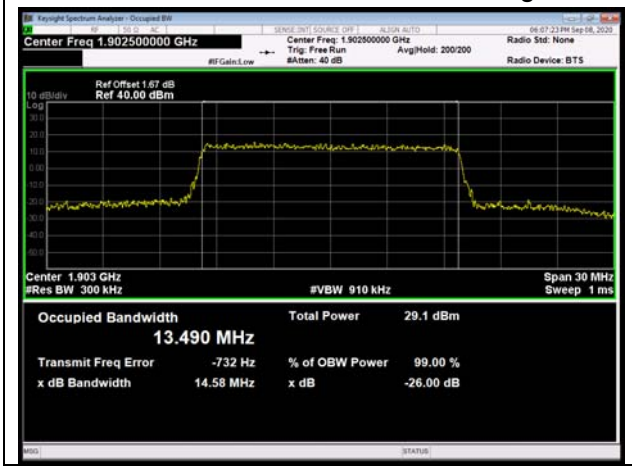
LTE Band 2 15MHz 64QAM CH-Middle



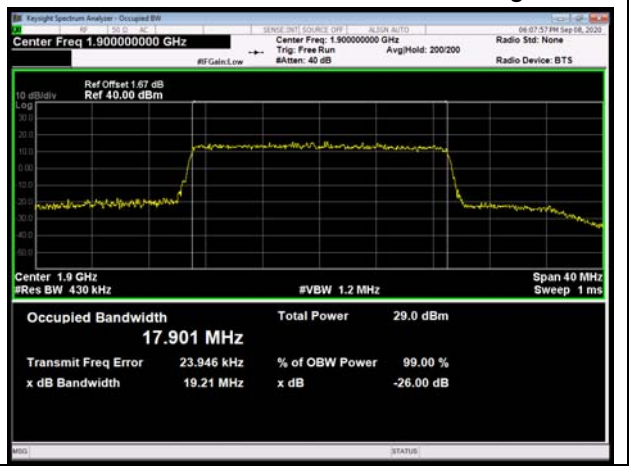
LTE Band 2 20MHz 64QAM CH-Middle



LTE Band 2 15MHz 64QAM CH-High



LTE Band 2 20MHz 64QAM CH-High



5.3. Band Edge Compliance

Ambient condition

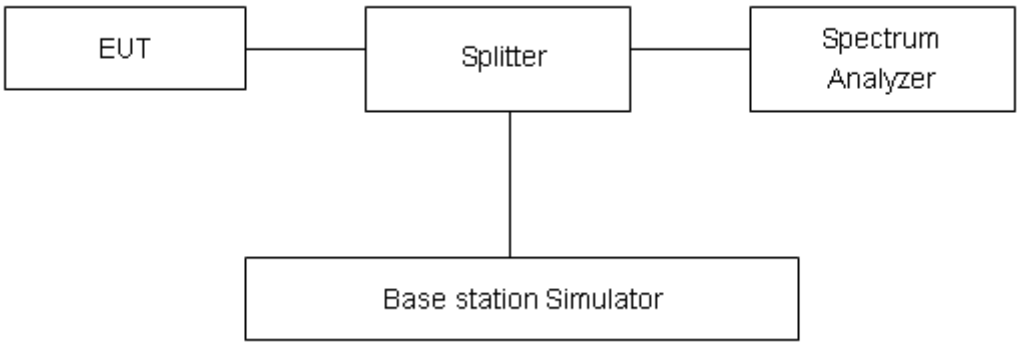
Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The band edge of the lowest and highest channels were measured. The Average detector is used and
RBW is set to 3kHz, VBW is set to 10kHz for GSM 1900,
RBW is set to 51kHz, VBW is set to 160kHz for WCDMA Band II,
RBW is set to 15kHz, VBW is set to 43kHz for LTE Band 2 (1.4MHz),
RBW is set to 30kHz,VBW is set to 91kHz for LTE Band 2 (3MHz),
RBW is set to 51kHz,VBW is set to 150kHz for LTE Band 2 (5MHz),
RBW is set to 100kHz,VBW is set to 300kHz for LTE Band 2 (10MHz),
RBW is set to 150kHz,VBW is set to 470kHz for LTE Band 2 (15MHz),
RBW is set to 200kHz,VBW is set to 620kHz for LTE Band 2 (20MHz).

Spectrum analyzer plots are included on the following pages.

Test Setup



Limits

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

Limit	-13 dBm

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is

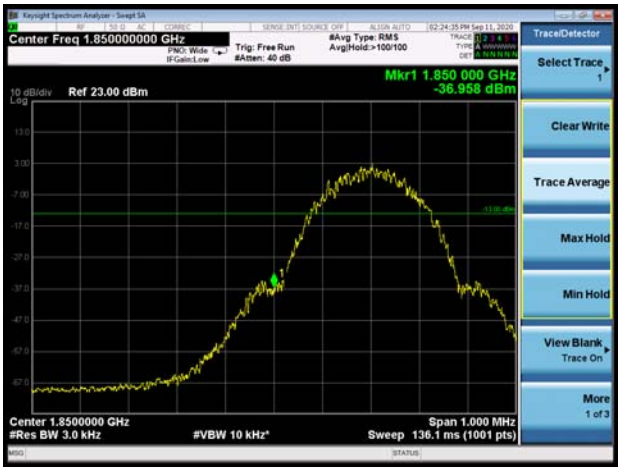
with the coverage factor k = 1.96, U=0.684dB.

Test Result:

GSM1900 GSM CH-Low

GSM 1900 GSM CH-High

GSM1900 GPRS CH-Low



GSM 1900 GPRS CH-High

GSM1900 EGPRS CH-Low

GSM 1900 EGPRS CH-High

WCDMA Band II RMC CH-Low

WCDMA Band II RMC CH-High

LTE Band 2 1.4MHz QPSK 1RB CH-Low

LTE Band 2 1.4MHz QPSK 1RB CH-High

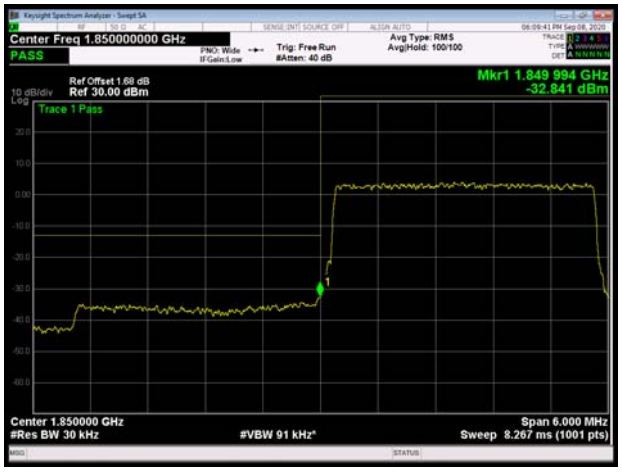
LTE Band 2 1.4MHz QPSK 100%RB CH-Low

LTE Band 2 1.4MHz QPSK 100%RB CH-High

LTE Band 2 3MHz QPSK 1RB CH-Low

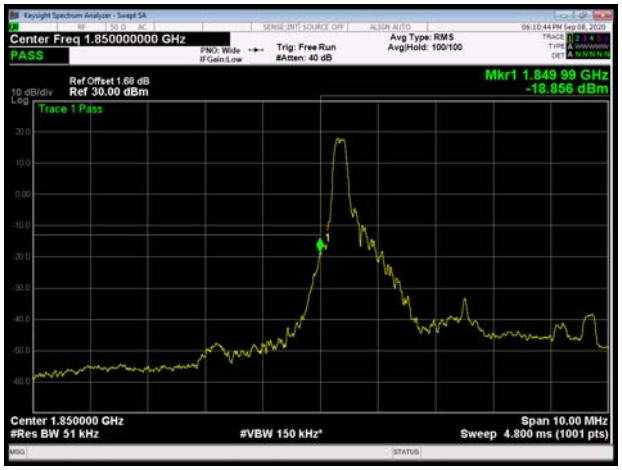
LTE Band 2 3MHz QPSK 1RB CH-High

LTE Band 2 3MHz QPSK 100%RB CH-Low



LTE Band 2 3MHz QPSK 100%RB CH-High

LTE Band 2 5MHz QPSK 1RB CH-Low



LTE Band 2 5MHz QPSK 1RB CH-High

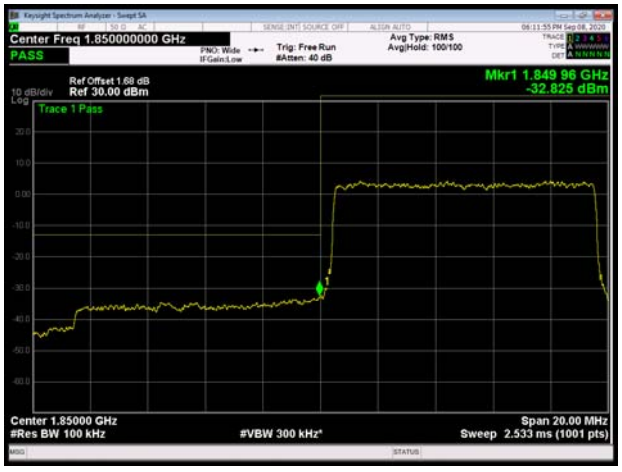
LTE Band 2 5MHz QPSK 100%RB CH-Low

LTE Band 2 5MHz QPSK 100%RB CH-High

LTE Band 2 10MHz QPSK 1RB CH-Low

LTE Band 2 10MHz QPSK 1RB CH-High

LTE Band 2 10MHz QPSK 100%RB CH-Low

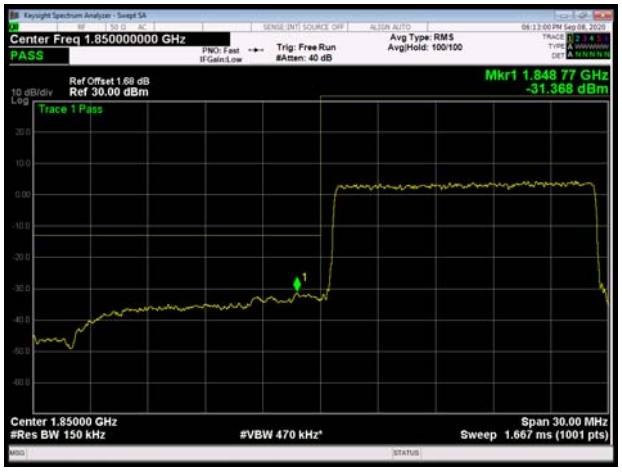


LTE Band 2 10MHz QPSK 100%RB CH-High

LTE Band 2 15MHz QPSK 1RB CH-Low

LTE Band 2 15MHz QPSK 1RB CH-High

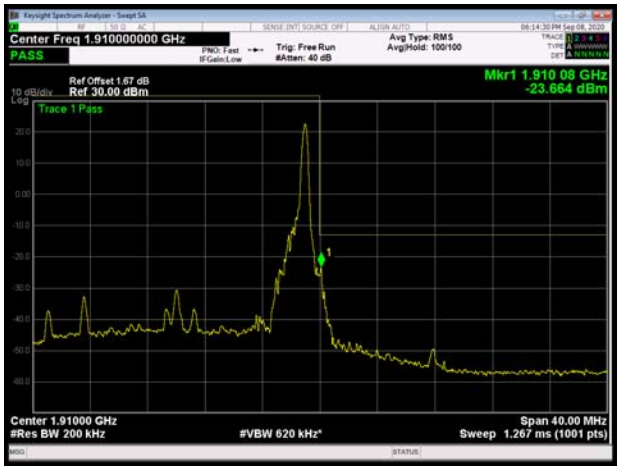
LTE Band 2 15MHz QPSK 100%RB CH-Low



LTE Band 2 15MHz QPSK 100%RB CH-High

LTE Band 2 20MHz QPSK 1RB CH-Low

LTE Band 2 20MHz QPSK 1RB CH-High

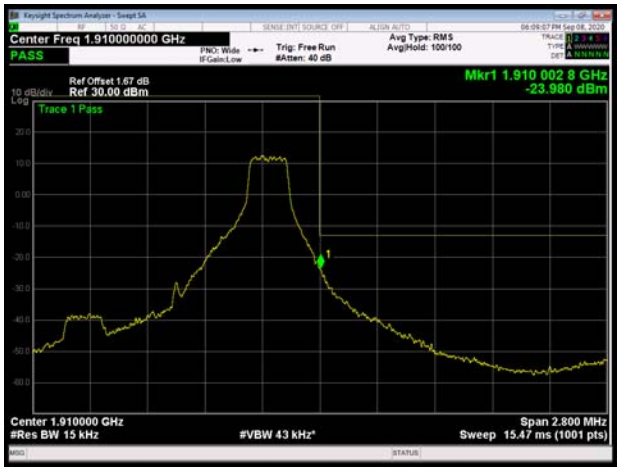


LTE Band 2 20MHz QPSK 100%RB CH-Low

LTE Band 2 20MHz QPSK 100%RB CH-High

LTE Band 2 1.4MHz 16QAM 1RB CH-Low

LTE Band 2 1.4MHz 16QAM 1RB CH-High



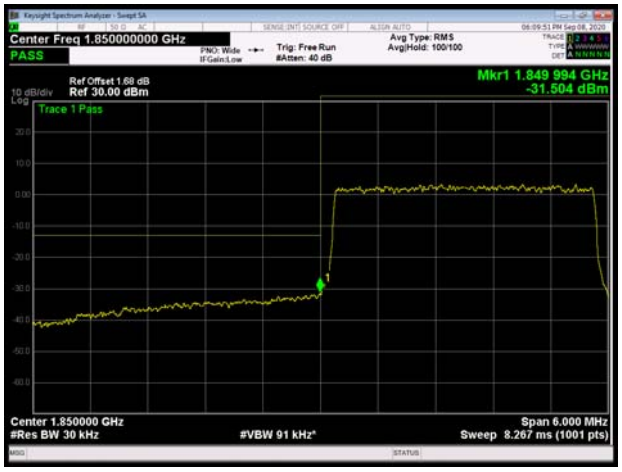
LTE Band 2 1.4MHz 16QAM 100%RB CH-Low

LTE Band 2 1.4MHz 16QAM 100%RB CH-High

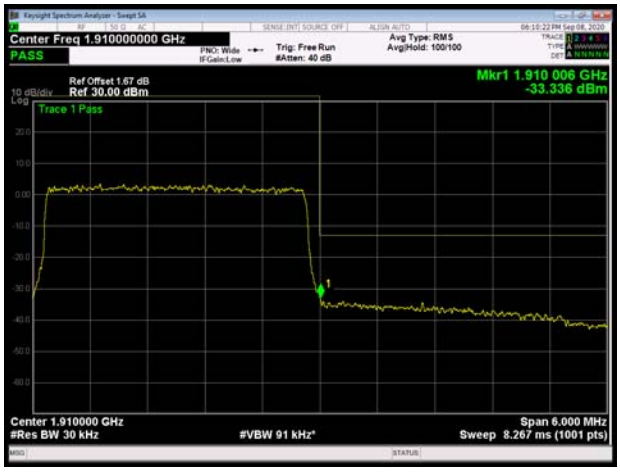
LTE Band 2 3MHz 16QAM 1RB CH-Low

LTE Band 2 3MHz 16QAM 1RB CH-High

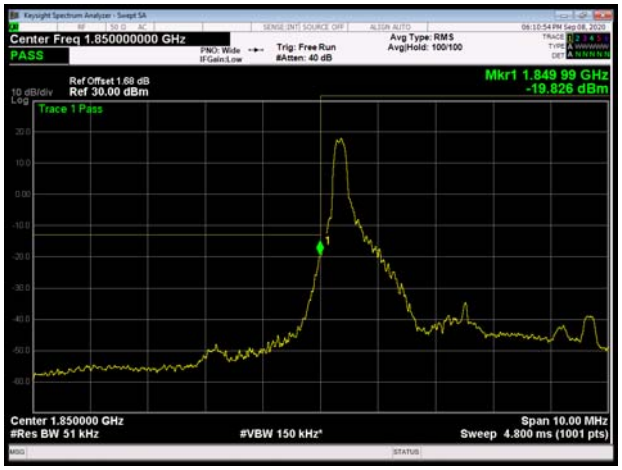
LTE Band 2 3MHz 16QAM 100%RB CH-Low



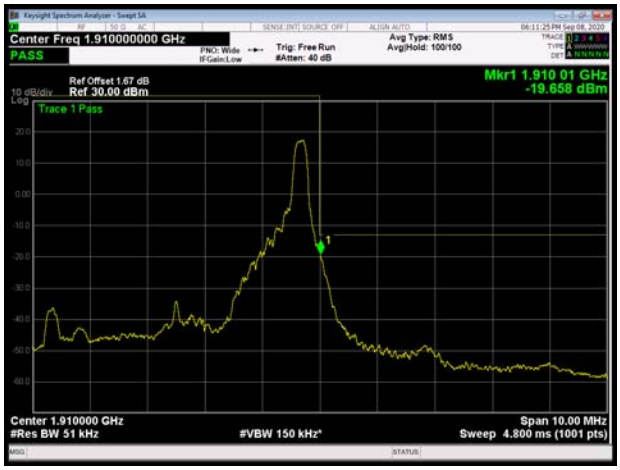
LTE Band 2 3MHz 16QAM 100%RB CH-High



LTE Band 2 5MHz 16QAM 1RB CH-Low



LTE Band 2 5MHz 16QAM 1RB CH-High



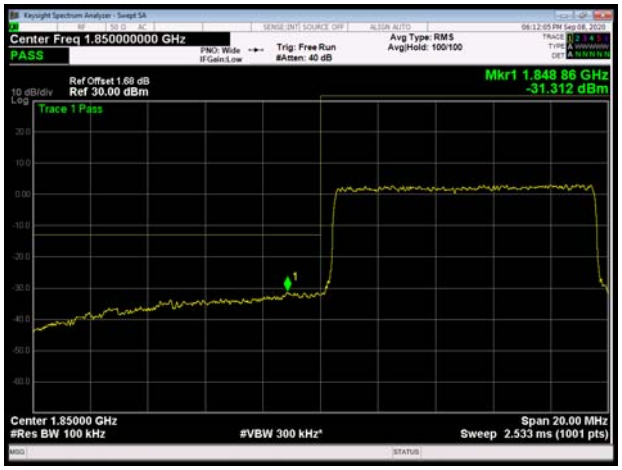
LTE Band 2 5MHz 16QAM 100%RB CH-Low

LTE Band 2 5MHz 16QAM 100%RB CH-High

LTE Band 2 10MHz 16QAM 1RB CH-Low

LTE Band 2 10MHz 16QAM 1RB CH-High

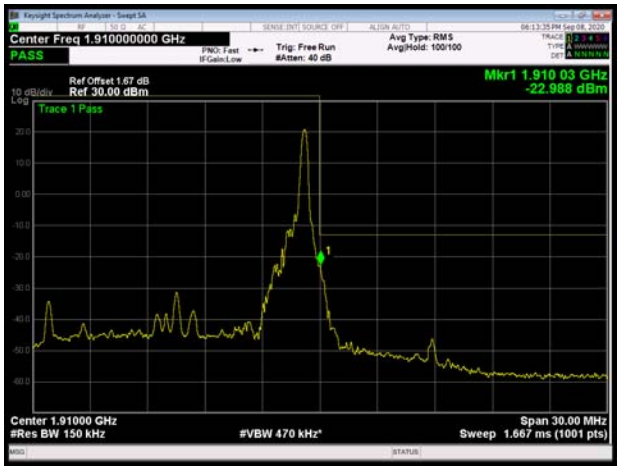
LTE Band 2 10MHz 16QAM 100%RB CH-Low



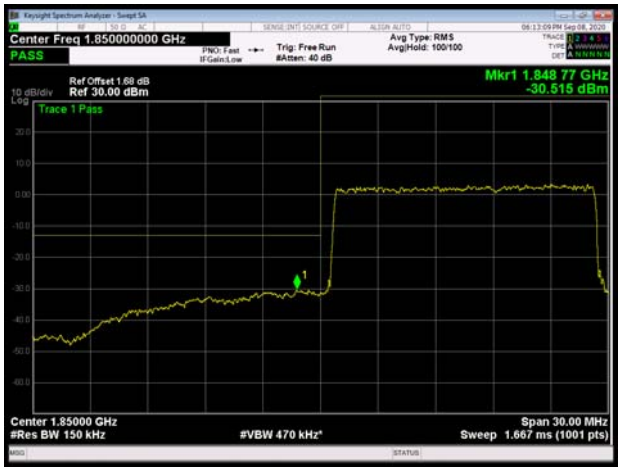
LTE Band 2 10MHz 16QAM 100%RB CH-High

LTE Band 2 15MHz 16QAM 1RB CH-Low

LTE Band 2 15MHz 16QAM 1RB CH-High



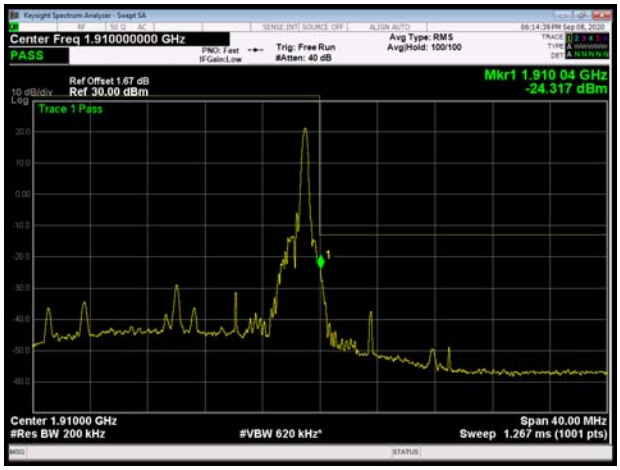
LTE Band 2 15MHz 16QAM 100%RB CH-Low



LTE Band 2 15MHz 16QAM 100%RB CH-High

LTE Band 2 20MHz 16QAM 1RB CH-Low

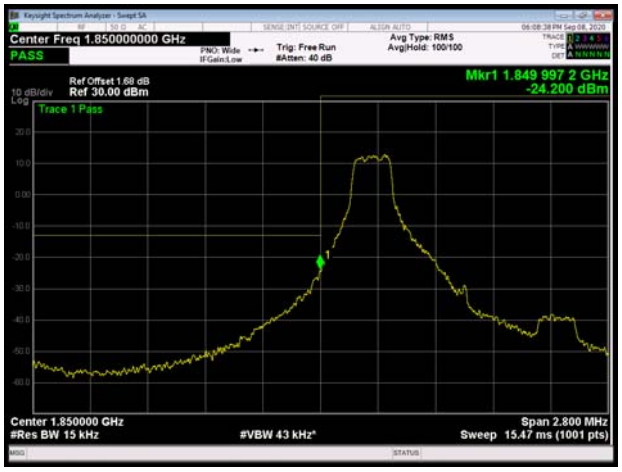
LTE Band 2 20MHz 16QAM 1RB CH-High



LTE Band 2 20MHz 16QAM 100%RB CH-Low

LTE Band 2 20MHz 16QAM 100%RB CH-High

LTE Band 2 1.4MHz 64QAM 1RB CH-Low



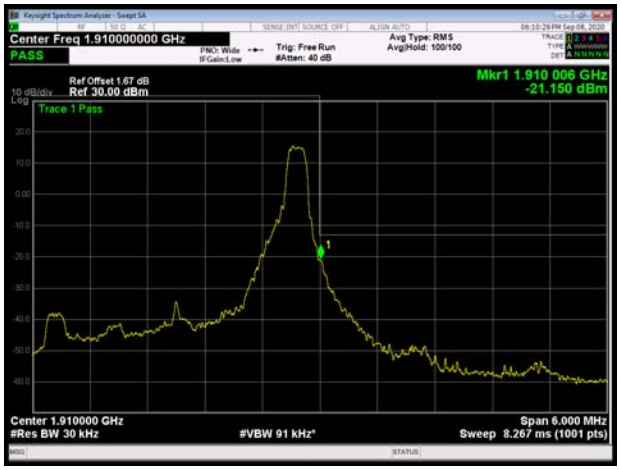
LTE Band 2 1.4MHz 64QAM 1RB CH-High

LTE Band 2 1.4MHz 64QAM 100%RB CH-Low

LTE Band 2 1.4MHz 64QAM 100%RB CH-High

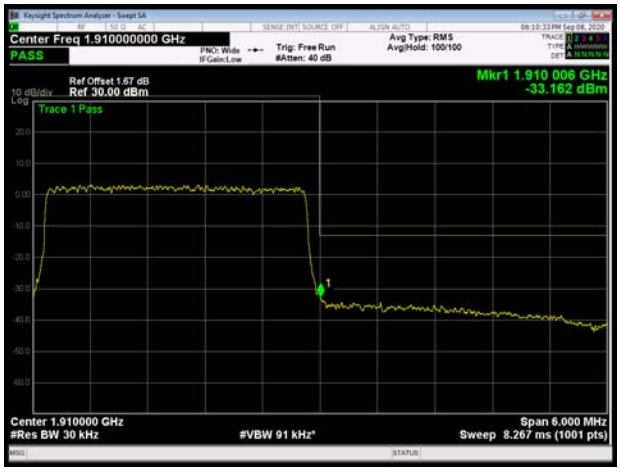
LTE Band 2 3MHz 64QAM 1RB CH-Low

LTE Band 2 3MHz 64QAM 1RB CH-High

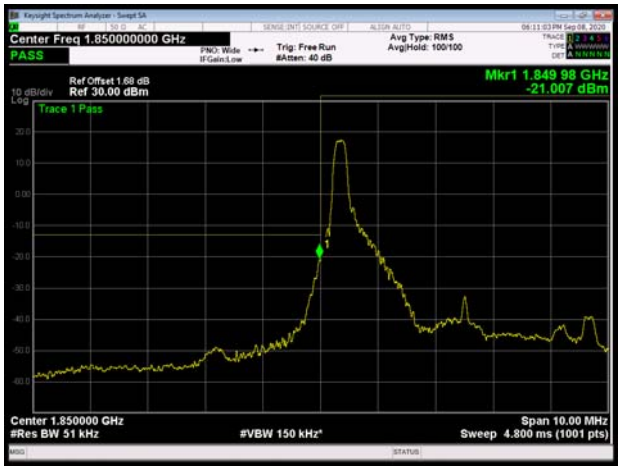


LTE Band 2 3MHz 64QAM 100%RB CH-Low

LTE Band 2 3MHz 64QAM 100%RB CH-High



LTE Band 2 5MHz 64QAM 1RB CH-Low



LTE Band 2 5MHz 64QAM 1RB CH-High

LTE Band 2 5MHz 64QAM 100%RB CH-Low

LTE Band 2 5MHz 64QAM 100%RB CH-High

LTE Band 2 10MHz 64QAM 1RB CH-Low

LTE Band 2 10MHz 64QAM 1RB CH-High

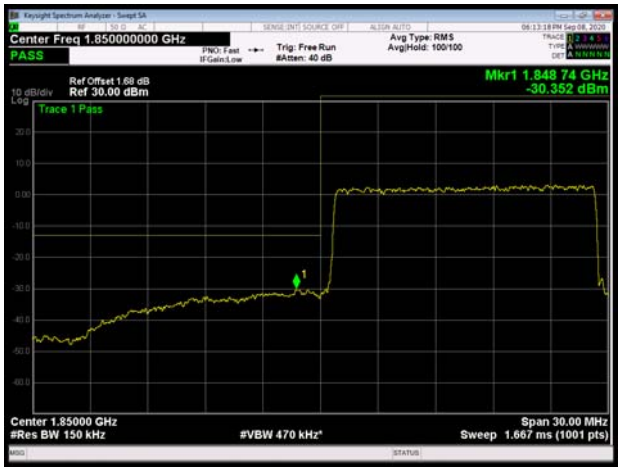
LTE Band 2 10MHz 64QAM 100%RB CH-Low

LTE Band 2 10MHz 64QAM 100%RB CH-High

LTE Band 2 15MHz 64QAM 1RB CH-Low

LTE Band 2 15MHz 64QAM 1RB CH-High

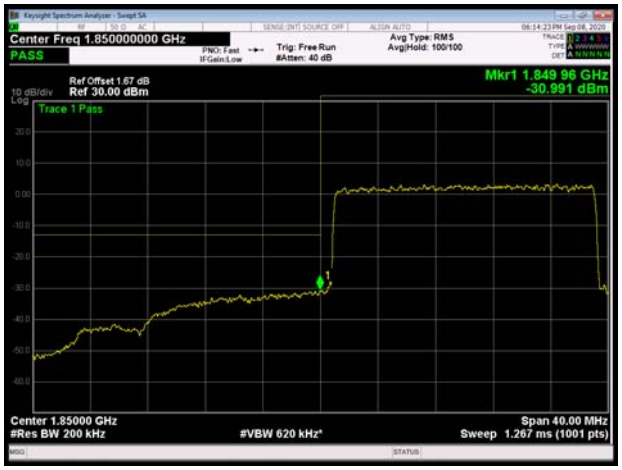
LTE Band 2 15MHz 64QAM 100%RB CH-Low



LTE Band 2 15MHz 64QAM 100%RB CH-High

LTE Band 2 20MHz 64QAM 1RB CH-Low

LTE Band 2 20MHz 64QAM 1RB CH-High

LTE Band 2 20MHz 64QAM 100%RB CH-Low	LTE Band 2 20MHz 64QAM 100%RB CH-High
	

5.4. Peak-to-Average Power Ratio (PAPR)

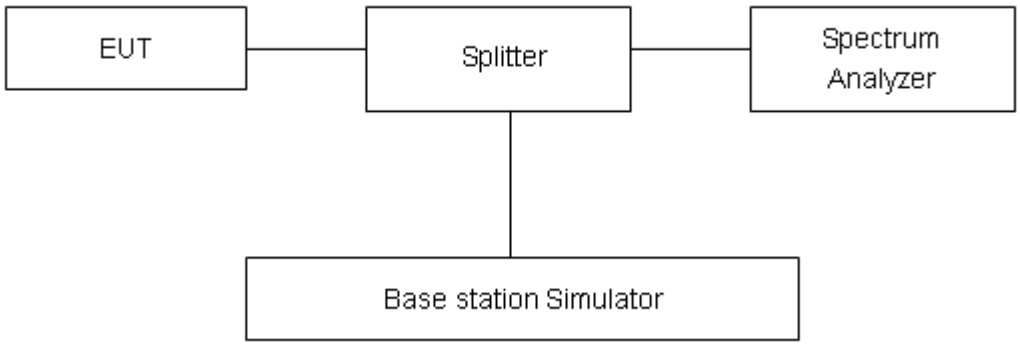
Ambient condition

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

Methods of Measurement

Measure the total peak power and record as PPk. And measure the total average power and record as PAvg. Both the peak and average power levels must be expressed in the same logarithmic units (*e.g.*, dBm). Determine the PAPR from:
PAPR (dB) = PPk (dBm) - PAvg (dBm).

Test Setup



Limits

In measuring transmissions in this band using an average power technique, the peakto-average ratio (PAR) of the transmission may not exceed 13 dB in 24.232(d).

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

Mode	Channel	Frequency (MHz)	Peak(dBm)	Avg(dBm)	PAPR(dB)	Limit(dB)	Conclusion
GSM 1900 (GMSK)	512	1850.2	31.41	29.55	1.86	≤13	PASS
	661	1880	31.40	29.56	1.84	≤13	PASS
	810	1909.8	31.28	29.55	1.73	≤13	PASS
GPRS 1900 (GMSK)	512	1850.2	31.35	29.44	1.91	≤13	PASS
	661	1880	31.45	29.63	1.82	≤13	PASS
	810	1909.8	31.33	29.48	1.85	≤13	PASS
EGPRS 1900 (8PSK)	512	1850.2	27.95	25.71	2.24	≤13	PASS
	661	1880	27.83	25.67	2.16	≤13	PASS
	810	1909.8	27.89	25.58	2.31	≤13	PASS
WCDMA Band II (RMC)	9262	1852.4	24.60	21.69	2.91	≤13	PASS
	9400	1880	24.64	21.70	2.94	≤13	PASS
	9538	1907.6	24.33	21.47	2.86	≤13	PASS

LTE Band 2								
Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	Peak (dBm)	Avg (dBm)	PAPR (dB)	Limit (dB)	Conclusion
QPSK	1.4	18607	1850.7	27.56	22.34	5.22	≤13	PASS
		18900	1880.0	27.59	22.28	5.31	≤13	PASS
		19193	1909.3	27.10	22.30	4.80	≤13	PASS
	3	18615	1851.5	27.65	22.34	5.31	≤13	PASS
		18900	1880	27.62	22.19	5.43	≤13	PASS
		19185	1908.5	27.17	22.24	4.93	≤13	PASS
	5	18625	1852.5	27.64	22.23	5.41	≤13	PASS
		18900	1880	27.70	22.24	5.46	≤13	PASS
		19175	1907.5	27.21	22.20	5.01	≤13	PASS
	10	18650	1855	27.70	22.30	5.40	≤13	PASS
		18900	1880	27.78	22.27	5.51	≤13	PASS
		19150	1905	27.26	22.21	5.05	≤13	PASS
	15	18675	1857.5	28.03	22.35	5.68	≤13	PASS
		18900	1880	28.13	22.32	5.81	≤13	PASS
		19125	1902.5	27.59	22.26	5.33	≤13	PASS
	20	18700	1860	27.65	22.21	5.44	≤13	PASS
		18900	1880	27.81	22.28	5.53	≤13	PASS
		19100	1900	27.39	22.09	5.30	≤13	PASS
16QAM	1.4	18607	1850.7	27.49	21.35	6.14	≤13	PASS

		18900	1880.0	27.36	21.22	6.14	≤13	PASS
		19193	1909.3	26.98	21.29	5.69	≤13	PASS
	3	18615	1851.5	27.44	21.26	6.18	≤13	PASS
		18900	1880	27.38	21.18	6.20	≤13	PASS
		19185	1908.5	26.99	21.20	5.79	≤13	PASS
	5	18625	1852.5	27.33	21.20	6.13	≤13	PASS
		18900	1880	27.45	21.23	6.22	≤13	PASS
		19175	1907.5	27.04	21.19	5.85	≤13	PASS
	10	18650	1855	27.50	21.27	6.23	≤13	PASS
		18900	1880	27.51	21.26	6.25	≤13	PASS
		19150	1905	27.11	21.19	5.92	≤13	PASS
	15	18675	1857.5	27.62	21.31	6.31	≤13	PASS
		18900	1880	27.65	21.27	6.38	≤13	PASS
		19125	1902.5	27.21	21.18	6.03	≤13	PASS
	20	18700	1860	27.45	21.20	6.25	≤13	PASS
		18900	1880	27.58	21.24	6.34	≤13	PASS
		19100	1900	27.16	21.10	6.06	≤13	PASS
64QAM	1.4	18607	1850.7	27.53	21.33	6.20	≤13	PASS
		18900	1880.0	27.41	21.23	6.18	≤13	PASS
		19193	1909.3	27.04	21.28	5.76	≤13	PASS
	3	18615	1851.5	27.43	21.24	6.19	≤13	PASS
		18900	1880	27.39	21.19	6.20	≤13	PASS
		19185	1908.5	27.06	21.19	5.87	≤13	PASS
	5	18625	1852.5	27.37	21.21	6.16	≤13	PASS
		18900	1880	27.48	21.24	6.24	≤13	PASS
		19175	1907.5	27.03	21.17	5.86	≤13	PASS
	10	18650	1855	27.48	21.26	6.22	≤13	PASS
		18900	1880	27.51	21.27	6.24	≤13	PASS
		19150	1905	27.07	21.18	5.89	≤13	PASS
	15	18675	1857.5	27.60	21.30	6.30	≤13	PASS
		18900	1880	27.65	21.27	6.38	≤13	PASS
		19125	1902.5	27.21	21.19	6.02	≤13	PASS
	20	18700	1860	27.46	21.19	6.27	≤13	PASS
		18900	1880	27.58	21.26	6.32	≤13	PASS
		19100	1900	27.19	21.10	6.09	≤13	PASS

5.5. Frequency Stability

Ambient condition

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

Method of Measurement

Frequency Stability (Temperature Variation)

The temperature inside the climate chamber is varied from -30°C to +50°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 +50°C. Allow at least 1.5 hours at each temperature, un-powered, before making measurements.

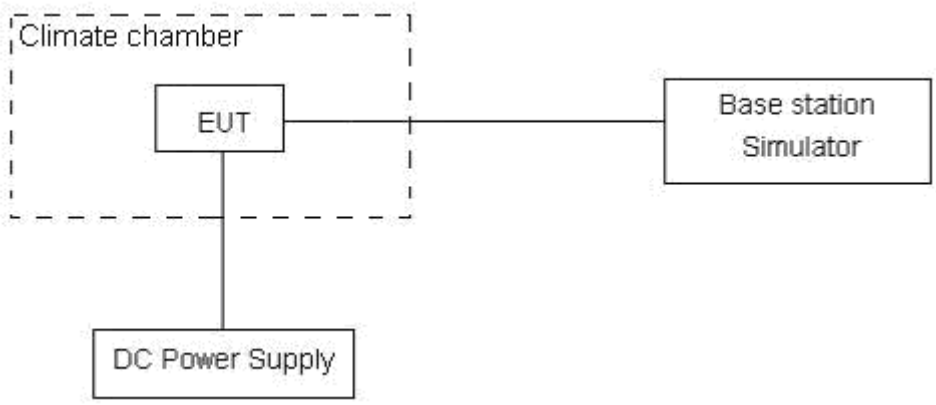
Frequency Stability (Voltage Variation)

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

Primary Supply Voltage: The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced 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 3.23 V and 4.37 V, with a nominal voltage of 3.8V.

Test setup



Limits

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block

Measurement Uncertainty

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

Test Result

GSM1900						
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability （ppm）	Frequency Stability （ppm）	Verdict
Temperature	Voltage	GMSK	8PSK	GMSK	8PSK	
Normal（25℃）	Normal	14.16	4.96	0.00753	0.00264	PASS
Extreme（50℃）		9.07	16.45	0.00482	0.00875	PASS
Extreme（40℃）		15.20	6.03	0.00809	0.00321	PASS
Extreme（30℃）		1.73	11.51	0.00092	0.00612	PASS
Extreme（20℃）		8.58	12.49	0.00457	0.00665	PASS
Extreme（10℃）		14.54	1.20	0.00774	0.00064	PASS
Extreme（0℃）		13.14	12.45	0.00699	0.00662	PASS
Extreme（-10℃）		7.56	3.99	0.00402	0.00212	PASS
Extreme（-20℃）		16.23	3.61	0.00863	0.00192	PASS
Extreme（-30℃）		12.65	7.73	0.00673	0.00411	PASS
25℃	LV	15.13	4.44	0.00805	0.00236	PASS
	HV	12.26	8.36	0.00652	0.00445	PASS

WCDMA Band II						
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability （ppm）	Frequency Stability （ppm）	Verdict
Temperature	Voltage	BPSK	QPSK	BPSK	QPSK	
Normal（25℃）	Normal	7.00	6.86	0.00372	0.00365	PASS
Extreme（50℃）		12.04	17.49	0.00640	0.00930	PASS
Extreme（40℃）		8.05	6.68	0.00428	0.00355	PASS
Extreme（30℃）		1.77	8.80	0.00094	0.00468	PASS
Extreme（20℃）		5.56	17.91	0.00296	0.00953	PASS
Extreme（10℃）		8.16	4.31	0.00434	0.00229	PASS
Extreme（0℃）		7.66	17.15	0.00407	0.00912	PASS
Extreme（-10℃）		8.10	17.18	0.00431	0.00914	PASS
Extreme（-20℃）		15.29	12.44	0.00813	0.00662	PASS
Extreme（-30℃）		6.01	15.37	0.00320	0.00817	PASS
25℃	LV	4.44	4.40	0.00236	0.00234	PASS
	HV	13.61	6.10	0.00724	0.00325	PASS

LTE Band2								
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability （ppm）	Frequency Stability （ppm）	Frequency Stability （ppm）	Verdict
BANDWIDTH	1.4MHz							
Temperature	Voltage	64QAM	16QAM	QPSK	64QAM	16QAM	QPSK	
Normal（25℃）	Normal	14.89	7.42	15.17	0.00792	0.00395	0.00807	PASS
Extreme（50℃）		11.29	11.60	7.29	0.00601	0.00617	0.00388	PASS
Extreme（40℃）		3.83	1.05	2.57	0.00204	0.00056	0.00137	PASS
Extreme（30℃）		6.65	7.66	9.63	0.00354	0.00408	0.00512	PASS
Extreme（20℃）		11.00	13.58	8.05	0.00585	0.00722	0.00428	PASS
Extreme（10℃）		16.37	4.20	10.49	0.00871	0.00223	0.00558	PASS
Extreme（0℃）		11.67	4.72	11.00	0.00621	0.00251	0.00585	PASS
Extreme（-10℃）		10.24	16.07	5.89	0.00545	0.00855	0.00313	PASS
Extreme（-20℃）		4.65	14.75	13.99	0.00247	0.00784	0.00744	PASS
Extreme（-30℃）		8.38	2.45	1.62	0.00446	0.00130	0.00086	PASS
25℃	LV	14.37	3.26	17.53	0.00764	0.00173	0.00933	PASS
	HV	1.12	17.93	8.57	0.00060	0.00954	0.00456	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability （ppm）	Frequency Stability （ppm）	Frequency Stability （ppm）	Verdict
BANDWIDTH	3MHz							
Temperature	Voltage	64QAM	16QAM	QPSK	64QAM	16QAM	QPSK	
Normal（25℃）	Normal	5.96	1.41	13.92	0.00317	0.00075	0.00740	PASS
Extreme（50℃）		1.42	10.66	7.80	0.00076	0.00567	0.00415	PASS
Extreme（40℃）		9.29	15.25	8.32	0.00494	0.00811	0.00443	PASS
Extreme（30℃）		16.52	12.52	10.16	0.00879	0.00666	0.00540	PASS
Extreme（20℃）		3.81	11.73	8.24	0.00203	0.00624	0.00438	PASS
Extreme（10℃）		13.22	4.79	6.54	0.00703	0.00255	0.00348	PASS
Extreme（0℃）		7.33	7.85	9.05	0.00390	0.00417	0.00481	PASS
Extreme（-10℃）		13.80	6.10	10.80	0.00734	0.00325	0.00574	PASS
Extreme（-20℃）		2.72	3.48	10.60	0.00144	0.00185	0.00564	PASS
Extreme（-30℃）		14.10	10.16	2.01	0.00750	0.00540	0.00107	PASS
25℃	LV	12.72	9.07	2.49	0.00677	0.00483	0.00133	PASS
	HV	4.52	12.78	6.15	0.00240	0.00680	0.00327	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability （ppm）	Frequency Stability （ppm）	Frequency Stability （ppm）	Verdict
BANDWIDTH	5MHz							
Temperature	Voltage	64QAM	16QAM	QPSK	64QAM	16QAM	QPSK	
Normal（25℃）	Normal	9.37	11.16	10.83	0.00498	0.00594	0.00576	PASS
Extreme（50℃）		3.64	5.96	13.06	0.00194	0.00317	0.00695	PASS
Extreme（40℃）		2.20	17.64	7.33	0.00117	0.00939	0.00390	PASS
Extreme（30℃）		8.75	17.81	9.24	0.00466	0.00947	0.00491	PASS

Extreme（20℃）		1.73	5.44	10.97	0.00092	0.00289	0.00583	PASS
Extreme（10℃）		14.56	16.40	14.73	0.00774	0.00872	0.00784	PASS
Extreme（0℃）		1.92	7.64	7.62	0.00102	0.00407	0.00405	PASS
Extreme（-10℃）		8.02	1.02	12.09	0.00427	0.00054	0.00643	PASS
Extreme（-20℃）		15.95	3.83	11.30	0.00849	0.00204	0.00601	PASS
Extreme（-30℃）		16.94	10.87	14.17	0.00901	0.00578	0.00754	PASS
25℃	LV	3.93	4.95	14.52	0.00209	0.00263	0.00772	PASS
	HV	16.95	15.73	12.73	0.00902	0.00836	0.00677	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability（ppm）	Frequency Stability（ppm）	Frequency Stability（ppm）	Verdict
BANDWIDTH	10MHz							
Temperature	Voltage	64QAM	16QAM	QPSK	64QAM	16QAM	QPSK	
Normal（25℃）	Normal	10.20	16.13	11.19	0.00543	0.00858	0.00595	PASS
Extreme（50℃）		1.23	2.64	12.94	0.00065	0.00140	0.00688	PASS
Extreme（40℃）		17.36	4.23	14.35	0.00923	0.00225	0.00763	PASS
Extreme（30℃）		4.01	3.39	7.64	0.00213	0.00180	0.00406	PASS
Extreme（20℃）		2.82	8.73	3.44	0.00150	0.00464	0.00183	PASS
Extreme（10℃）		13.97	17.58	3.17	0.00743	0.00935	0.00169	PASS
Extreme（0℃）		8.28	9.75	13.89	0.00440	0.00518	0.00739	PASS
Extreme（-10℃）		1.10	12.78	7.92	0.00059	0.00680	0.00421	PASS
Extreme（-20℃）		8.45	13.83	7.20	0.00449	0.00736	0.00383	PASS
Extreme（-30℃）		4.56	6.16	1.47	0.00243	0.00328	0.00078	PASS
25℃	LV	1.98	12.86	1.91	0.00105	0.00684	0.00102	PASS
	HV	2.32	5.02	17.94	0.00123	0.00267	0.00954	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability（ppm）	Frequency Stability（ppm）	Frequency Stability（ppm）	Verdict
BANDWIDTH	15MHz							
Temperature	Voltage	64QAM	16QAM	QPSK	64QAM	16QAM	QPSK	
Normal（25℃）	Normal	17.36	5.75	15.54	0.00923	0.00306	0.00826	PASS
Extreme（50℃）		6.40	8.82	13.01	0.00340	0.00469	0.00692	PASS
Extreme（40℃）		12.35	16.04	10.49	0.00657	0.00853	0.00558	PASS
Extreme（30℃）		1.25	4.88	8.60	0.00067	0.00260	0.00457	PASS
Extreme（20℃）		6.24	1.52	1.31	0.00332	0.00081	0.00070	PASS
Extreme（10℃）		12.67	10.68	17.48	0.00674	0.00568	0.00930	PASS
Extreme（0℃）		3.83	10.69	9.58	0.00204	0.00569	0.00509	PASS
Extreme（-10℃）		9.36	6.81	14.94	0.00498	0.00362	0.00795	PASS
Extreme（-20℃）		12.02	8.16	3.90	0.00639	0.00434	0.00208	PASS
Extreme（-30℃）		7.10	16.79	4.68	0.00378	0.00893	0.00249	PASS
25℃	LV	13.37	2.81	11.22	0.00711	0.00149	0.00597	PASS
	HV	6.75	17.19	3.04	0.00359	0.00915	0.00162	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability	Frequency Stability	Frequency Stability	Verdict

BANDWIDTH	20MHz				（ppm）	（ppm）	（ppm）	
Temperature	Voltage	64QAM	16QAM	QPSK	64QAM	16QAM	QPSK	
Normal（25℃）	Normal	6.16	1.73	2.22	0.00327	0.00092	0.00118	PASS
Extreme（50℃）		10.56	17.71	11.53	0.00562	0.00942	0.00613	PASS
Extreme（40℃）		4.30	12.08	4.49	0.00229	0.00642	0.00239	PASS
Extreme（30℃）		16.41	4.63	9.09	0.00873	0.00246	0.00484	PASS
Extreme（20℃）		6.63	8.72	2.94	0.00353	0.00464	0.00157	PASS
Extreme（10℃）		9.16	5.74	1.33	0.00487	0.00305	0.00071	PASS
Extreme（0℃）		9.40	14.25	1.82	0.00500	0.00758	0.00097	PASS
Extreme（-10℃）		3.85	13.83	11.71	0.00205	0.00735	0.00623	PASS
Extreme（-20℃）		15.33	6.92	9.02	0.00815	0.00368	0.00480	PASS
Extreme（-30℃）		2.59	3.03	17.55	0.00138	0.00161	0.00933	PASS
25℃	LV	7.79	2.00	2.14	0.00414	0.00106	0.00114	PASS
	HV	6.27	16.54	8.91	0.00333	0.00880	0.00474	PASS

5.6. Spurious Emissions at Antenna Terminals

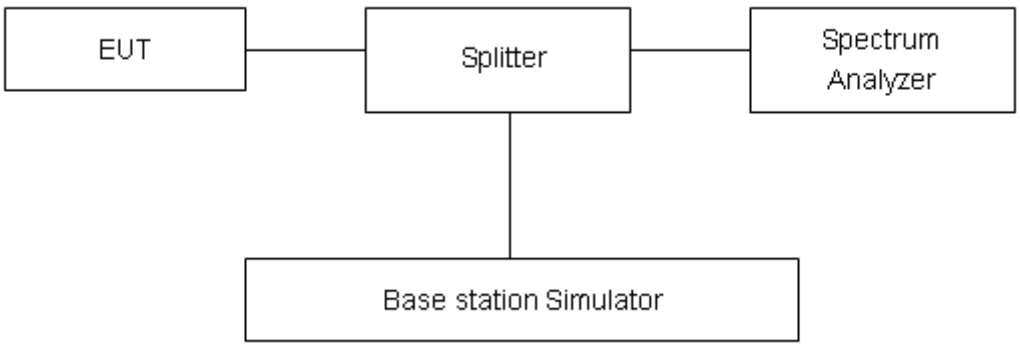
Ambient condition

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

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The measurement is carried out using a spectrum analyzer. The spectrum analyzer scans from 9kHz to the 10th harmonic of the carrier. The peak detector is used.
RBW is set to 1 kHz (0.009MHz~ 0.15 MHz)
RBW is set to 10 kHz (0.15 MHz~ 30 MHz)
RBW is set to 100 kHz (30MHz~1000 MHz)
RBW is set to 1000 kHz (above 1000MHz)
Sweep is set to ATUO.
The modulation mode and RB allocation refer to section 5.1, using the maximum output power configuration.

Test setup



Limits

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

Limit	-13 dBm

Measurement Uncertainty

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

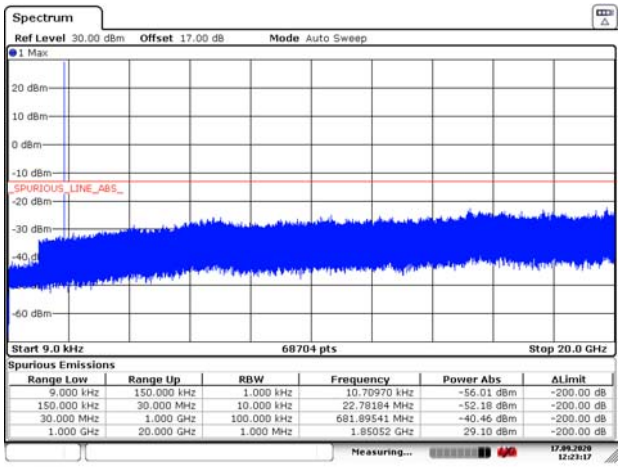
Frequency	Uncertainty
9kHz-1GHz	0.684 dB
1GHz-20GHz	1.407 dB

Test Result

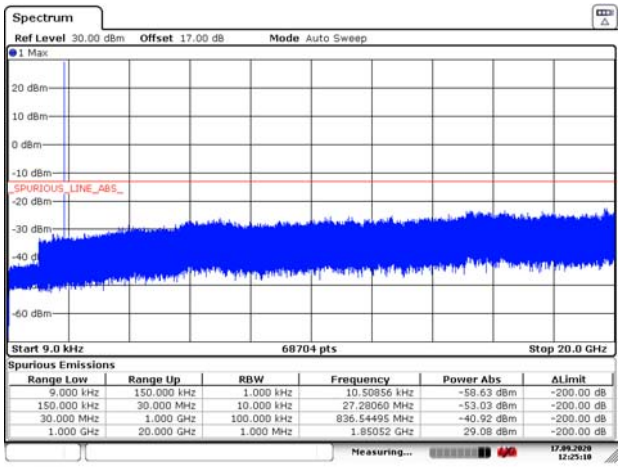
Sweep the whole frequency band through the range from 9kHz to the 10th harmonic of the carrier, the emissions more than 20 dB below the limit are not reported.

The signal beyond the limit is carrier.

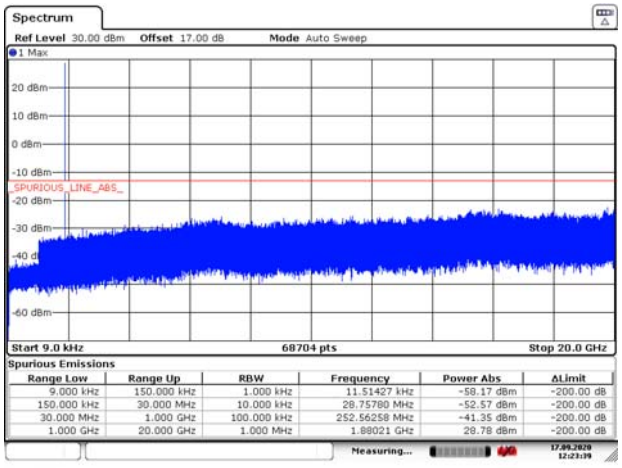
GSM 1900 CH-Low 9kHz ~ 20GHz



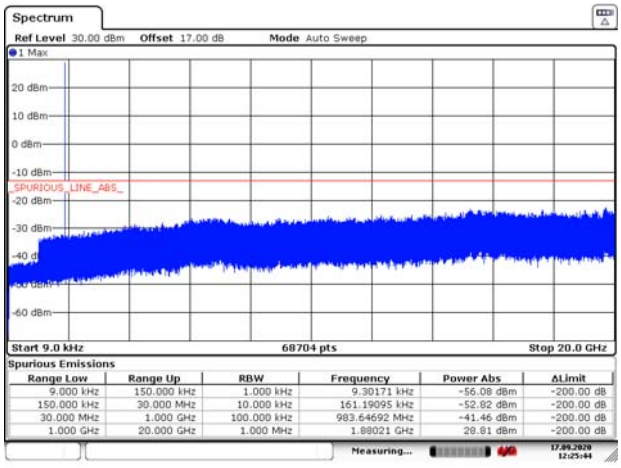
GPRS 1900 CH-Low 9kHz ~ 20GHz



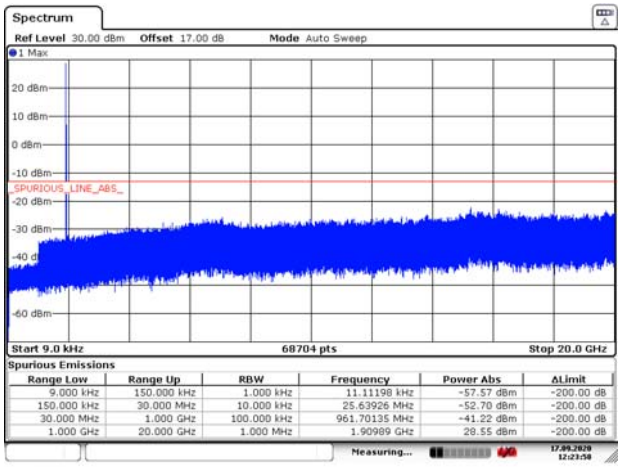
GSM 1900 CH- Middle 9kHz ~ 20GHz



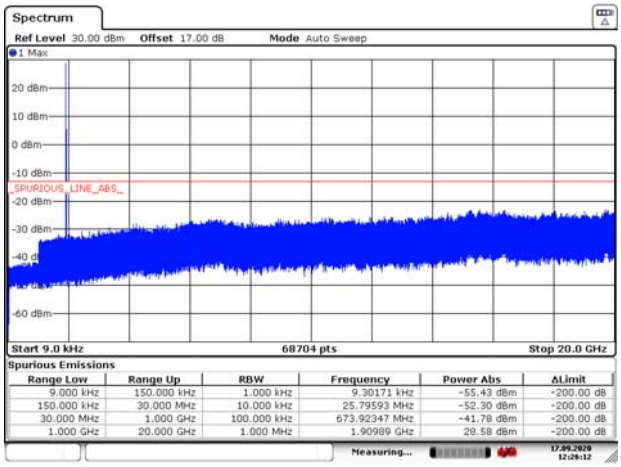
GPRS 1900 CH- Middle 9kHz ~ 20GHz



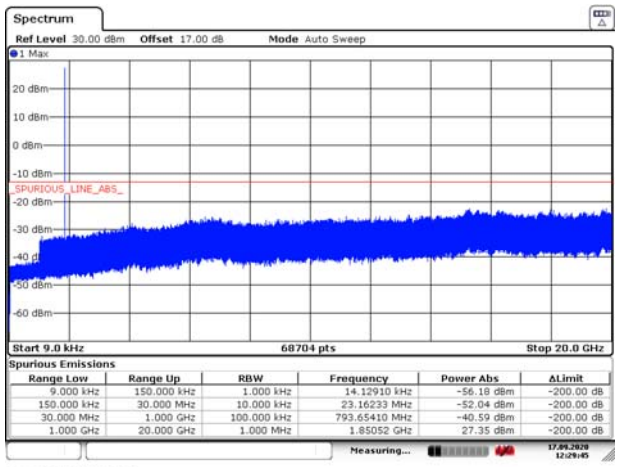
GSM 1900 CH-High 9kHz ~ 20GHz



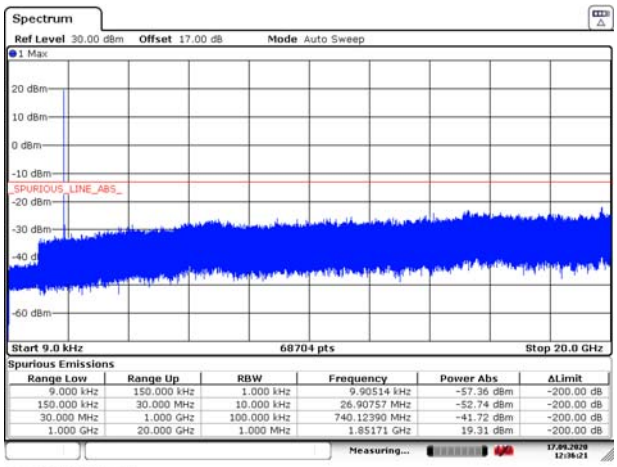
GPRS 1900 CH-High 9kHz ~ 20GHz



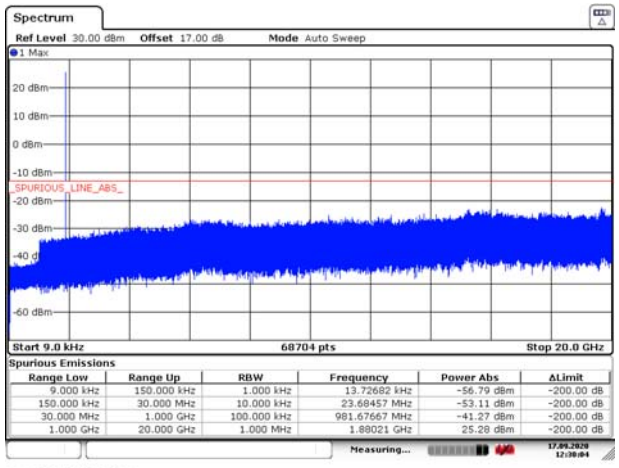
EGPRS 1900 CH-Low 9kHz ~ 20GHz



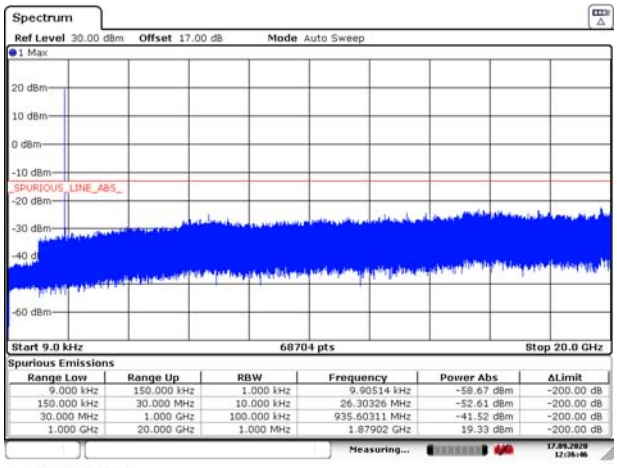
WCDMA BAND II CH-Low 9kHz ~ 20GHz



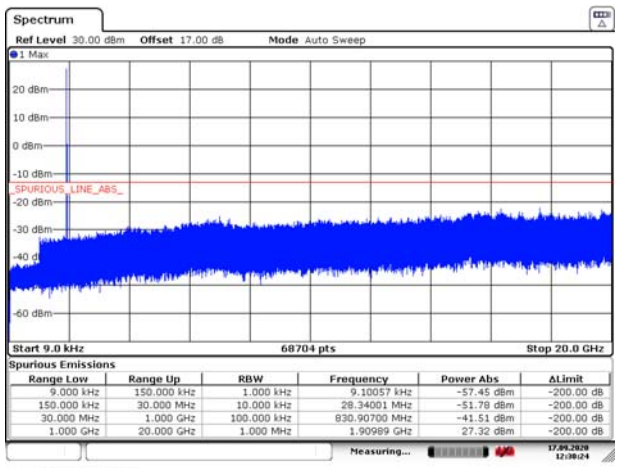
EGPRS 1900 CH- Middle 9kHz ~ 20GHz



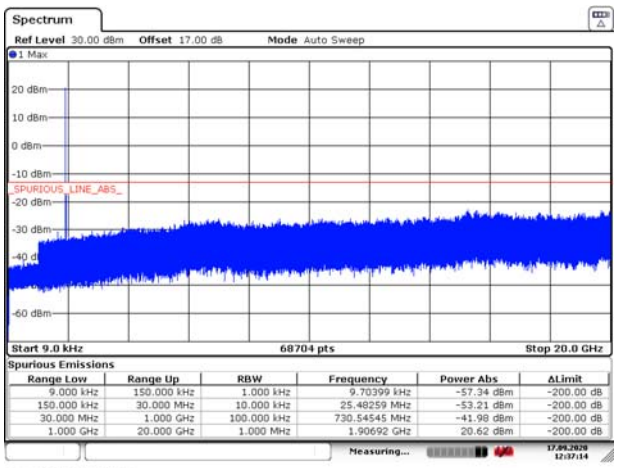
WCDMA BAND II CH- Middle 9kHz ~ 20GHz



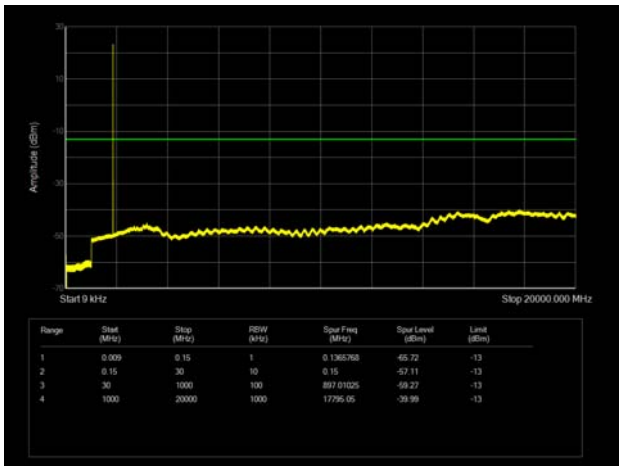
EGPRS 1900 CH-High 9kHz ~ 20GHz



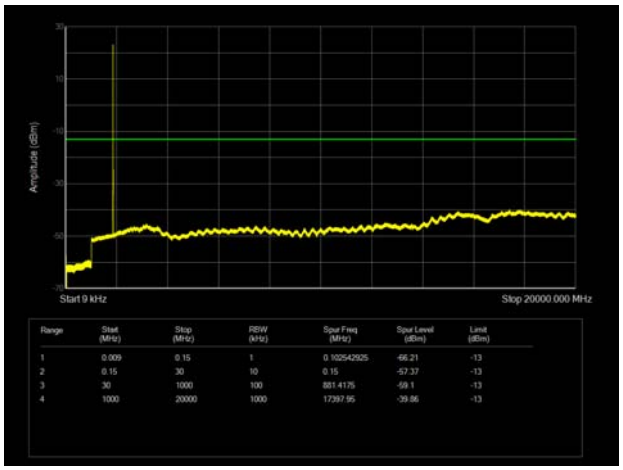
WCDMA BAND II CH-High 9kHz ~ 20GHz



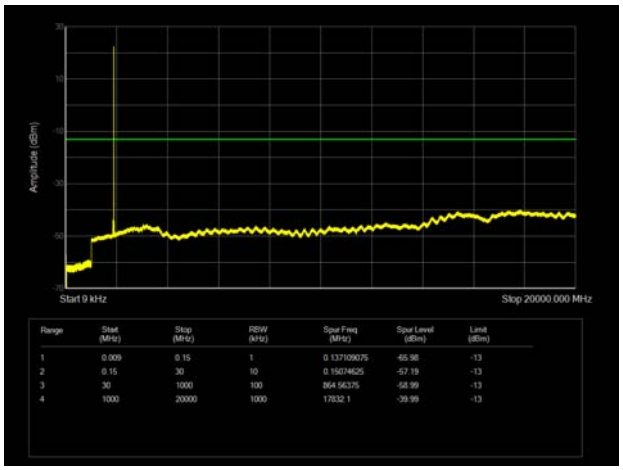
LTE Band 2 1.4MHz CH-Low 9kHz~20GHz



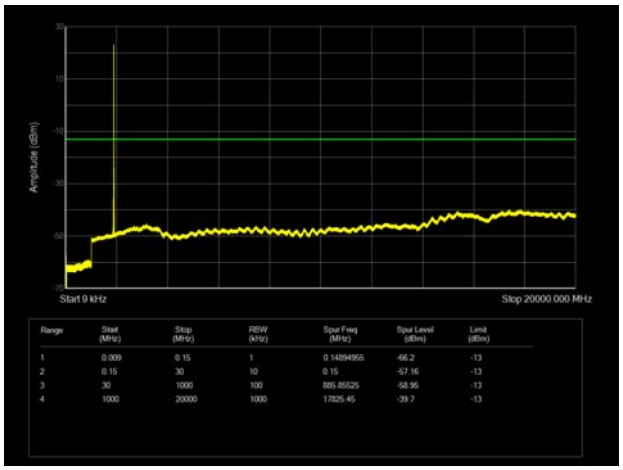
LTE Band 2 3MHz CH-Low 9kHz~20GHz



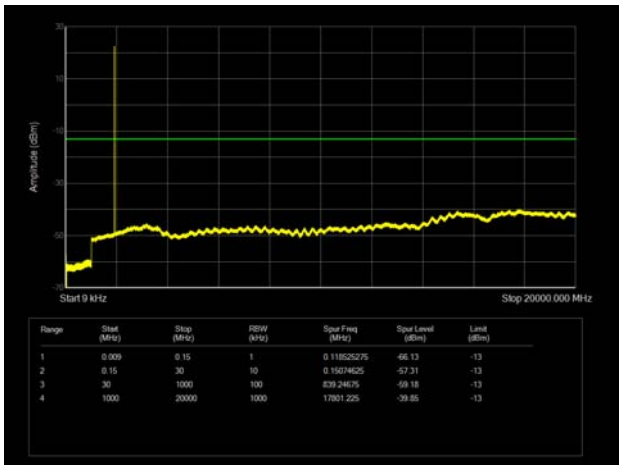
LTE Band 2 1.4MHz CH-Middle 9kHz~20GHz



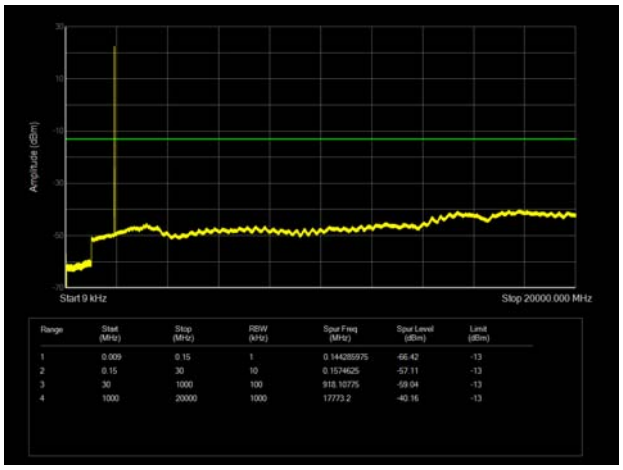
LTE Band 2 3MHz CH-Middle 9kHz~20GHz



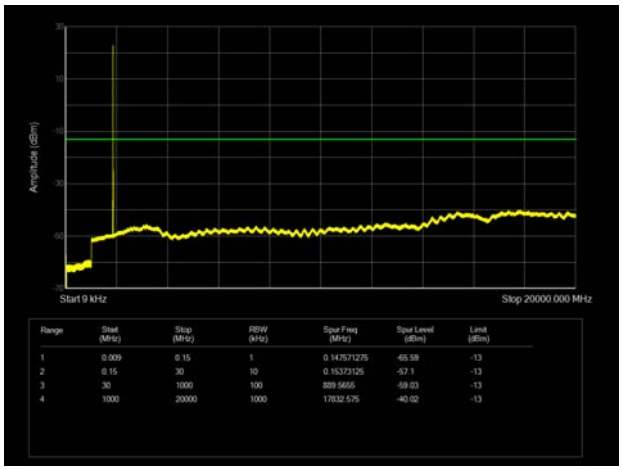
LTE Band 2 1.4MHz CH-High 9kHz~20GHz



LTE Band 2 3MHz CH-High 9kHz~20GHz

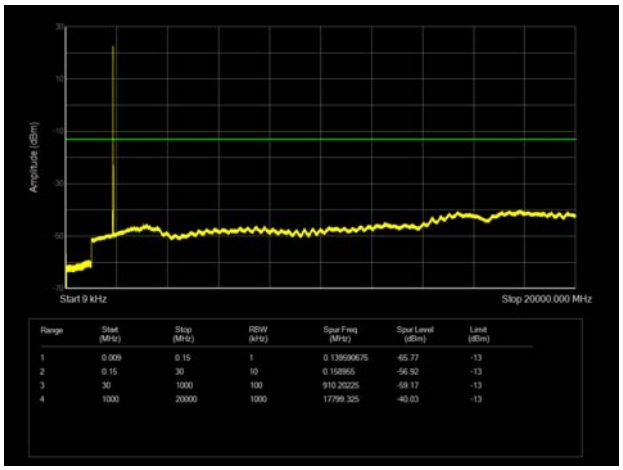


LTE Band 2 5MHz CH-Low 9kHz~20GHz



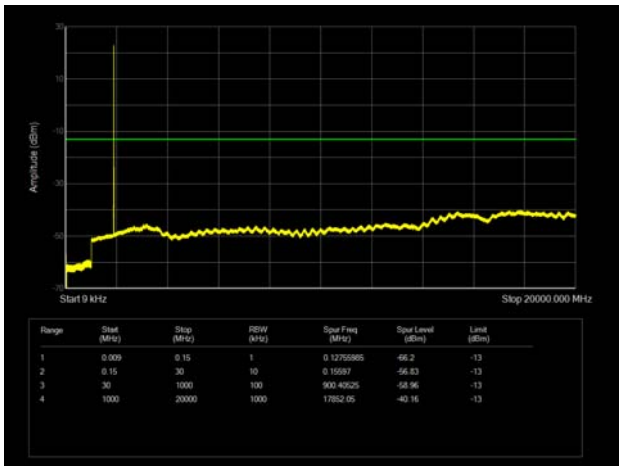
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.147571275	-65.59	-13
2	0.15	30	10	0.15373125	-57.1	-13
3	30	1000	100	889.5655	-59.03	-13
4	1000	20000	1000	17832.575	-40.02	-13

LTE Band 2 10MHz CH-Low 9kHz~20GHz



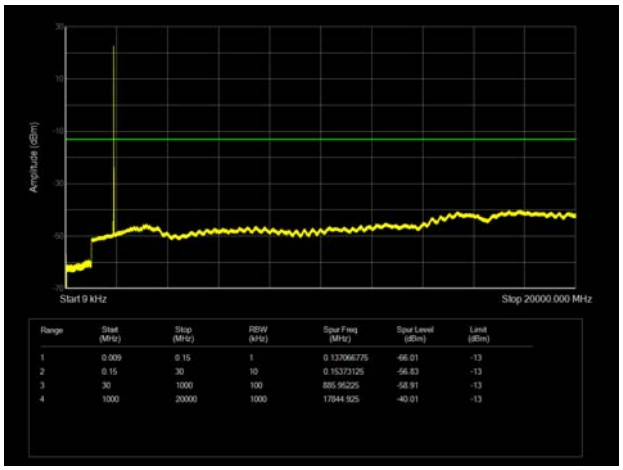
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.139590675	-65.77	-13
2	0.15	30	10	0.158955	-56.92	-13
3	30	1000	100	910.20225	-59.17	-13
4	1000	20000	1000	17799.325	-40.03	-13

LTE Band 2 5MHz CH-Middle 9kHz~20GHz



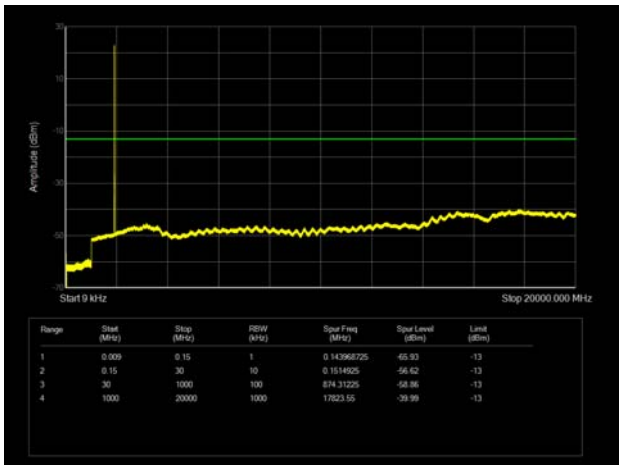
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.12755865	-66.2	-13
2	0.15	30	10	0.15597	-56.83	-13
3	30	1000	100	900.40525	-58.96	-13
4	1000	20000	1000	17852.05	-40.16	-13

LTE Band 2 10MHz CH-Middle 9kHz~20GHz



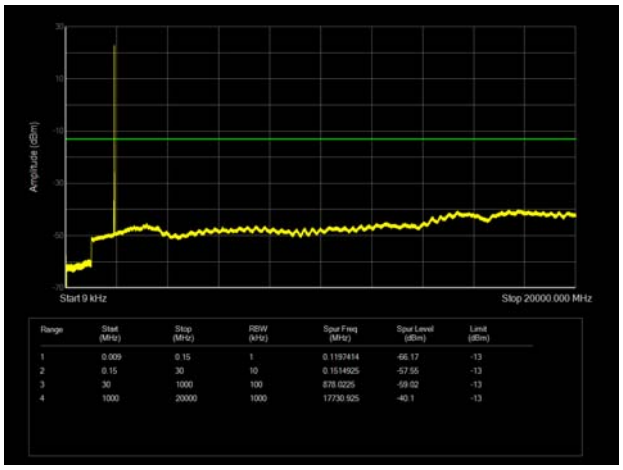
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.137066775	-66.01	-13
2	0.15	30	10	0.15373125	-56.83	-13
3	30	1000	100	885.95225	-58.91	-13
4	1000	20000	1000	17844.925	-40.01	-13

LTE Band 2 5MHz CH-High 9kHz~20GHz



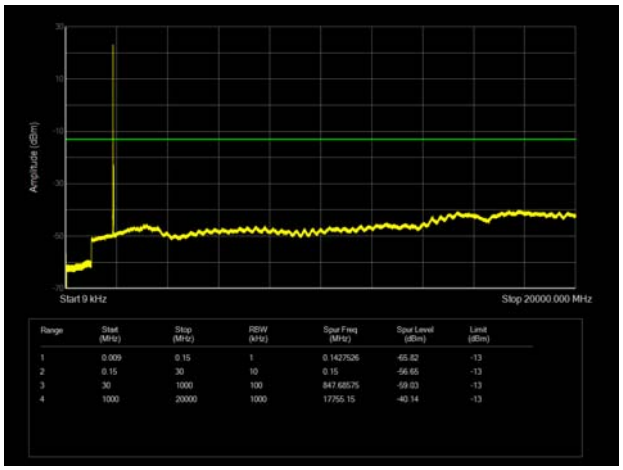
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.143968725	-65.93	-13
2	0.15	30	10	0.1514925	-56.62	-13
3	30	1000	100	874.31225	-58.86	-13
4	1000	20000	1000	17823.55	-39.99	-13

LTE Band 2 10MHz CH-High 9kHz~20GHz

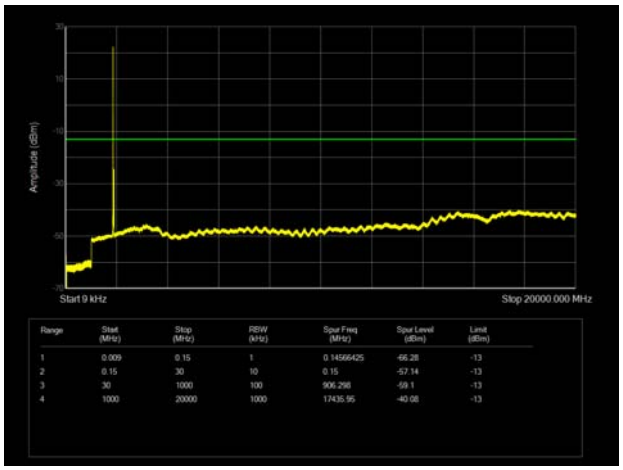


Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.1197414	-66.17	-13
2	0.15	30	10	0.1514925	-57.55	-13
3	30	1000	100	878.0225	-59.02	-13
4	1000	20000	1000	17730.925	-40.1	-13

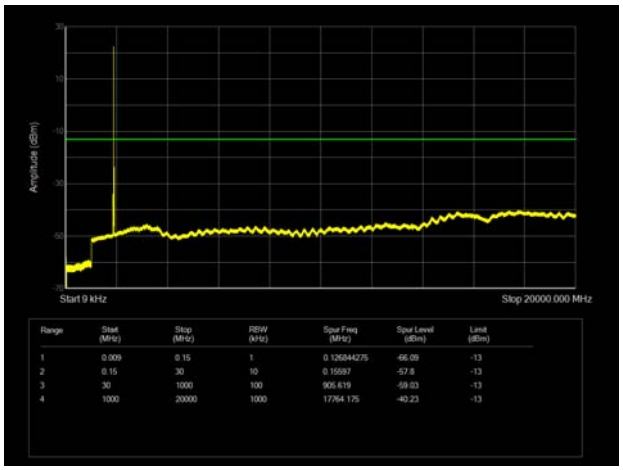
LTE Band 2 15MHz CH-Low 9kHz~20GHz



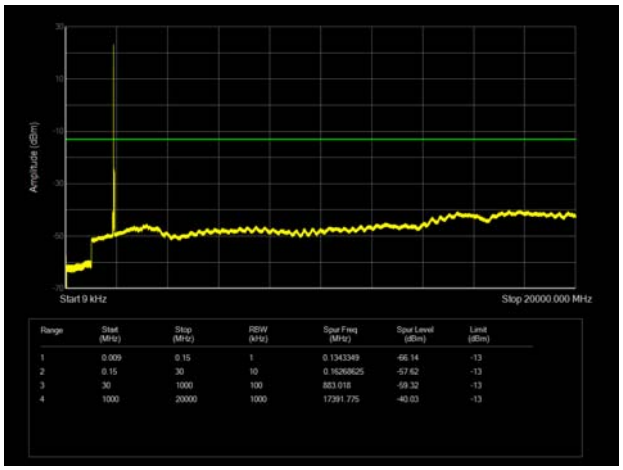
LTE Band 2 20MHz CH-Low 9kHz~20GHz



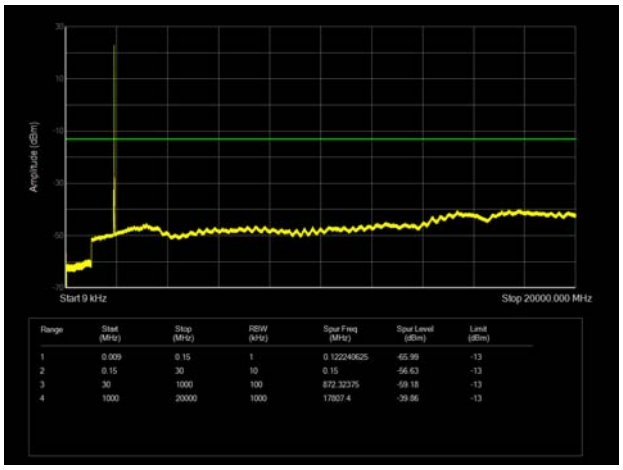
LTE Band 2 15MHz CH-Middle 9kHz~20GHz



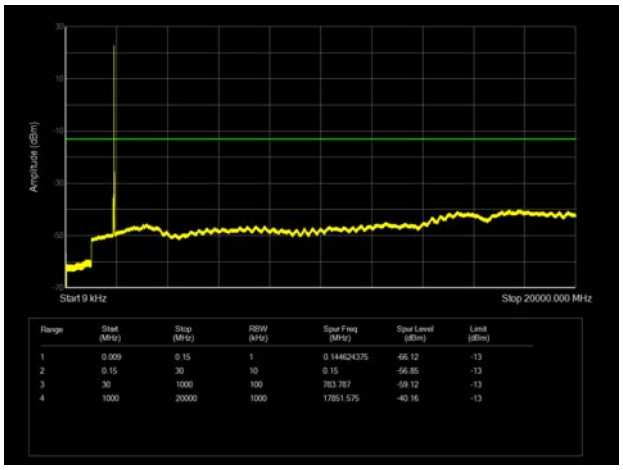
LTE Band 2 20MHz CH-Middle 9kHz~20GHz



LTE Band 2 15MHz CH-High 9kHz~20GHz



LTE Band 2 20MHz CH-High 9kHz~20GHz



5.7. Radiates Spurious Emission

Ambient condition

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

Method of Measurement

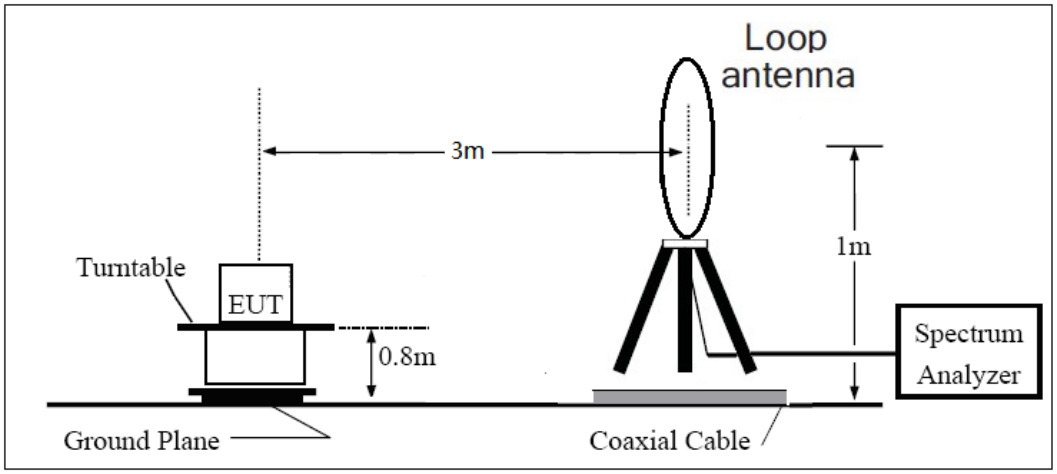
1. The testing follows FCC KDB 971168 v03r01 Section 5.8 and ANSI C63.26 (2015).
2. Below 1GHz: The EUT is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H). Above 1GHz: (Note: the FCC's permission to use 1.5m as an alternative per TCBC Conf call of Dec. 2, 2014.) The EUT is placed on a turntable 1.5 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H).
3. A loop antenna, A log-periodic antenna or horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
4. The EUT is then put into continuously transmitting mode at its maximum power level during the test. Set Test Receiver or Spectrum RBW=200Hz,VBW=600Hz for 9kHz-150kHz , RBW=10kHz, VBW=30kHz 150kHz-30MHz , RBW=100kHz,VBW=300kHz for 30MHz to 1GHz and RBW=1MHz, VBW=3MHz for above 1GHz, And the maximum value of the receiver should be recorded as (Pr).
5. The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (PMea) is applied to the input of the substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
6. A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (Pcl) ,the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should be recorded after test.
7. The measurement results are obtained as described below:
Power(EIRP)=PMea- PAg - Pcl + Ga
The measurement results are amend as described below:
Power(EIRP)=PMea- Pcl + Ga
8. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi)

and known input power. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP-2.15dBi.

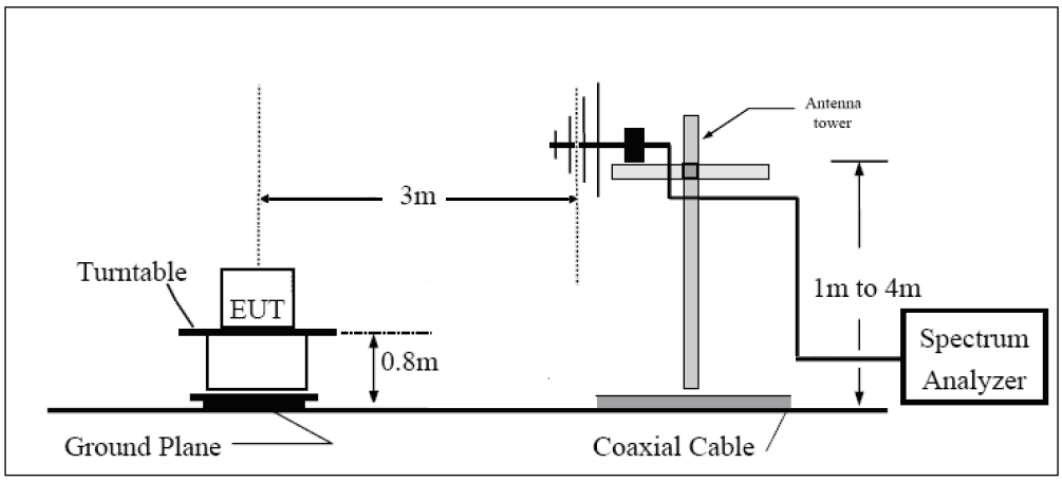
The modulation mode and RB allocation refer to section 5.1, using the maximum output power configuration.

Test setup

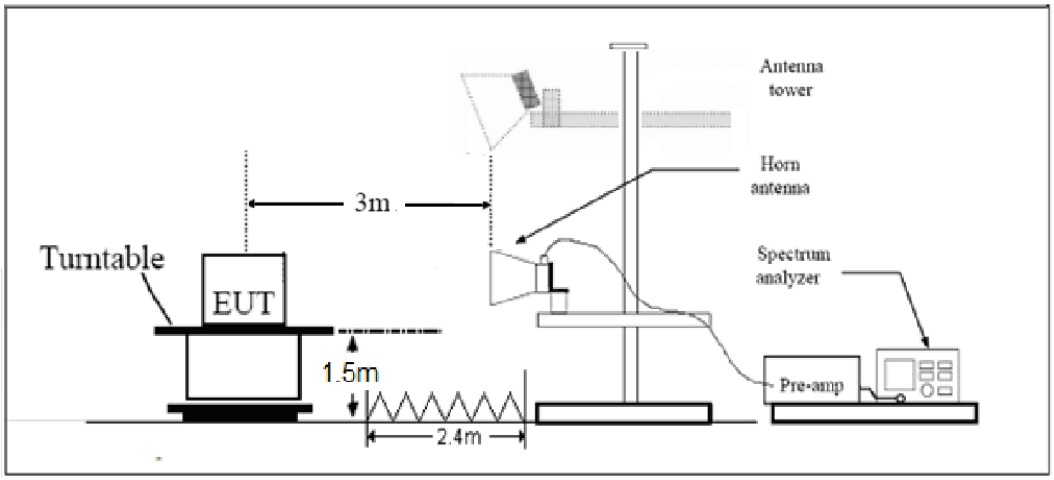
9KHz ~ 30MHz



30MHz ~ 1GHz



Above 1GHz



Note: Area side: 2.4mX3.6m

Limits

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

Limit	-13 dBm

Measurement Uncertainty

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

Test Result

Sweep the whole frequency band through the range from 9kHz to the 10th harmonic of the carrier, the emissions below the noise floor will not be recorded in the report.

Main Antenna

GSM 1900 CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3760.0	-56.46	5.10	11.05	Horizontal	-50.51	-13.00	37.51	0
3	5640.0	-57.28	5.42	12.65	Horizontal	-50.05	-13.00	37.05	45
4	7520.0	-54.95	6.70	13.85	Horizontal	-47.80	-13.00	34.80	315
5	9400.0	-55.65	7.01	14.75	Horizontal	-47.91	-13.00	34.91	270
6	11280.0	-52.34	7.48	15.95	Horizontal	-43.87	-13.00	30.87	180
7	13160.0	-51.87	7.51	16.55	Horizontal	-42.83	-13.00	29.83	0
8	15040.0	-49.38	8.24	15.35	Horizontal	-42.27	-13.00	29.27	45
9	16920.0	-45.78	8.41	14.95	Horizontal	-39.24	-13.00	26.24	135
10	18800.0	-	-	-	-	-	-	-	-
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 Horizontal position.									

WCDMA Band II CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3760.0	-58.24	5.10	11.05	Horizontal	-52.29	-13.00	39.29	90
3	5640.0	-57.79	5.42	12.65	Horizontal	-50.56	-13.00	37.56	0
4	7520.0	-56.77	6.70	13.85	Horizontal	-49.62	-13.00	36.62	315
5	9400.0	-54.96	7.01	14.75	Horizontal	-47.22	-13.00	34.22	0
6	11280.0	-54.50	7.48	15.95	Horizontal	-46.03	-13.00	33.03	225
7	13160.0	-52.48	7.51	16.55	Horizontal	-43.44	-13.00	30.44	0
8	15040.0	-49.35	8.24	15.35	Horizontal	-42.24	-13.00	29.24	45
9	16920.0	-46.84	8.41	14.95	Horizontal	-40.30	-13.00	27.30	315
10	18800.0	-	-	-	-	-	-	-	-
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 Horizontal position.									

LTE Band 2 1.4MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3759.0	-56.45	5.10	11.05	Horizontal	-50.50	-13.00	37.50	315
3	5638.9	-57.16	5.42	12.65	Horizontal	-49.93	-13.00	36.93	90
4	7520.0	-56.06	6.70	13.85	Horizontal	-48.91	-13.00	35.91	180
5	9400.0	-54.67	7.01	14.75	Horizontal	-46.93	-13.00	33.93	45
6	11280.0	-53.09	7.48	15.95	Horizontal	-44.62	-13.00	31.62	270
7	13160.0	-52.39	7.51	16.55	Horizontal	-43.35	-13.00	30.35	135
8	15040.0	-48.35	8.24	15.35	Horizontal	-41.24	-13.00	28.24	90
9	16920.0	-46.58	8.41	14.95	Horizontal	-40.04	-13.00	27.04	315
10	18800.0	-	-	-	-	-	-	-	-
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 Horizontal position.									

LTE Band 2 5MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3755.6	-56.02	5.10	11.05	Horizontal	-50.07	-13.00	37.07	45
3	5633.6	-57.93	5.42	12.65	Horizontal	-50.70	-13.00	37.70	315
4	7520.0	-56.40	6.70	13.85	Horizontal	-49.25	-13.00	36.25	90
5	9400.0	-56.10	7.01	14.75	Horizontal	-48.36	-13.00	35.36	270
6	11280.0	-53.62	7.48	15.95	Horizontal	-45.15	-13.00	32.15	180
7	13160.0	-51.23	7.51	16.55	Horizontal	-42.19	-13.00	29.19	45
8	15040.0	-49.94	8.24	15.35	Horizontal	-42.83	-13.00	29.83	315
9	16920.0	-47.51	8.41	14.95	Horizontal	-40.97	-13.00	27.97	45
10	18800.0	-	-	-	-	-	-	-	-
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 Horizontal position.									

LTE Band 2 20MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3742.1	-58.37	5.10	11.05	Horizontal	-52.42	-13.00	39.42	315
3	5613.4	-57.80	5.42	12.65	Horizontal	-50.57	-13.00	37.57	45
4	7484.6	-55.90	6.70	13.85	Horizontal	-48.75	-13.00	35.75	90
5	9400.0	-54.33	7.01	14.75	Horizontal	-46.59	-13.00	33.59	270
6	11280.0	-52.90	7.48	15.95	Horizontal	-44.43	-13.00	31.43	45
7	13160.0	-51.10	7.51	16.55	Horizontal	-42.06	-13.00	29.06	270
8	15040.0	-49.87	8.24	15.35	Horizontal	-42.76	-13.00	29.76	90
9	16920.0	-46.75	8.41	14.95	Horizontal	-40.21	-13.00	27.21	315
10	18800.0	-	-	-	-	-	-	-	-
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 Horizontal position.									

Second Antenna

GSM 1900 CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3760.0	-58.61	5.10	11.05	Horizontal	-52.66	-13.00	39.66	180
3	5640.0	-57.27	5.42	12.65	Horizontal	-50.04	-13.00	37.04	315
4	7520.0	-56.09	6.70	13.85	Horizontal	-48.94	-13.00	35.94	135
5	9400.0	-54.86	7.01	14.75	Horizontal	-47.12	-13.00	34.12	45
6	11280.0	-52.57	7.48	15.95	Horizontal	-44.10	-13.00	31.10	90
7	13160.0	-51.03	7.51	16.55	Horizontal	-41.99	-13.00	28.99	45
8	15040.0	-48.93	8.24	15.35	Horizontal	-41.82	-13.00	28.82	315
9	16920.0	-45.70	8.41	14.95	Horizontal	-39.16	-13.00	26.16	225
10	18800.0	-	-	-	-	-	-	-	-
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 Horizontal position.									

WCDMA Band II CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3760.0	-58.70	5.10	11.05	Horizontal	-52.75	-13.00	39.75	0
3	5640.0	-58.76	5.42	12.65	Horizontal	-51.53	-13.00	38.53	270
4	7520.0	-57.14	6.70	13.85	Horizontal	-49.99	-13.00	36.99	135
5	9400.0	-54.54	7.01	14.75	Horizontal	-46.80	-13.00	33.80	180
6	11280.0	-53.33	7.48	15.95	Horizontal	-44.86	-13.00	31.86	90
7	13160.0	-51.28	7.51	16.55	Horizontal	-42.24	-13.00	29.24	315
8	15040.0	-49.79	8.24	15.35	Horizontal	-42.68	-13.00	29.68	180
9	16920.0	-47.82	8.41	14.95	Horizontal	-41.28	-13.00	28.28	45
10	18800.0	-	-	-	-	-	-	-	-
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 Horizontal position.									

LTE Band 2 1.4MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3759.0	-58.29	5.10	11.05	Horizontal	-52.34	-13.00	39.34	225
3	5638.9	-58.41	5.42	12.65	Horizontal	-51.18	-13.00	38.18	45
4	7520.0	-56.23	6.70	13.85	Horizontal	-49.08	-13.00	36.08	90
5	9400.0	-54.40	7.01	14.75	Horizontal	-46.66	-13.00	33.66	315
6	11280.0	-52.32	7.48	15.95	Horizontal	-43.85	-13.00	30.85	0
7	13160.0	-50.64	7.51	16.55	Horizontal	-41.60	-13.00	28.60	225
8	15040.0	-49.14	8.24	15.35	Horizontal	-42.03	-13.00	29.03	135
9	16920.0	-46.59	8.41	14.95	Horizontal	-40.05	-13.00	27.05	180
10	18800.0	-	-	-	-	-	-	-	-
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 Horizontal position.									

LTE Band 2 5MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3755.6	-58.96	5.10	11.05	Horizontal	-53.01	-13.00	40.01	270
3	5633.6	-58.31	5.42	12.65	Horizontal	-51.08	-13.00	38.08	135
4	7520.0	-56.15	6.70	13.85	Horizontal	-49.00	-13.00	36.00	180
5	9400.0	-54.77	7.01	14.75	Horizontal	-47.03	-13.00	34.03	90
6	11280.0	-53.01	7.48	15.95	Horizontal	-44.54	-13.00	31.54	225
7	13160.0	-51.32	7.51	16.55	Horizontal	-42.28	-13.00	29.28	315
8	15040.0	-48.81	8.24	15.35	Horizontal	-41.70	-13.00	28.70	180
9	16920.0	-45.89	8.41	14.95	Horizontal	-39.35	-13.00	26.35	45
10	18800.0	-	-	-	-	-	-	-	-
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 Horizontal position.									

LTE Band 2 20MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3742.1	-58.52	5.10	11.05	Horizontal	-52.57	-13.00	39.57	90
3	5613.4	-56.70	5.42	12.65	Horizontal	-49.47	-13.00	36.47	180
4	7484.6	-56.47	6.70	13.85	Horizontal	-49.32	-13.00	36.32	225
5	9400.0	-54.34	7.01	14.75	Horizontal	-46.60	-13.00	33.60	315
6	11280.0	-53.62	7.48	15.95	Horizontal	-45.15	-13.00	32.15	135
7	13160.0	-52.70	7.51	16.55	Horizontal	-43.66	-13.00	30.66	45
8	15040.0	-48.91	8.24	15.35	Horizontal	-41.80	-13.00	28.80	180
9	16920.0	-48.06	8.41	14.95	Horizontal	-41.52	-13.00	28.52	135
10	18800.0	-	-	-	-	-	-	-	-
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 Horizontal position.									

6. Main Test Instruments

Name	Manufacturer	Type	Serial Number	Calibration Date	Expiration Date
Base Station Simulator	R&S	CMU200	118133	2020-05-17	2021-05-16
Base Station Simulator	R&S	CMW500	113824	2020-05-18	2021-05-17
Power Splitter	Hua Xiang	SHX-GF2-2-13	10120101	/	/
Spectrum Analyzer	Key sight	N9010A	MY50210259	2020-05-18	2021-05-17
Universal Radio Communication Tester	Key sight	E5515C	MY48367192	2020-05-27	2021-05-26
Signal Analyzer	R&S	FSV30	100815	2019-12-15	2020-12-14
Loop Antenna	SCHWARZBECK	FMZB1519	1519-047	2020-04-02	2023-04-01
Trilog Antenna	SCHWARZBECK	VULB 9163	391	2019-12-16	2021-12-15
Horn Antenna	R&S	HF907	102723	2018-08-11	2021-08-10
Horn Antenna	ETS-Lindgren	3160-09	00102643	2018-06-20	2021-06-19
Signal generator	R&S	SMB 100A	102594	2020-05-18	2021-05-17
Climatic Chamber	ESPEC	SU-242	93000506	2017-12-17	2020-12-16
Preampflier	R&S	SCU18	102327	2020-05-18	2021-05-17
MOB COMMS DC SUPPLY	Keysight	66319D	MY43004105	2020-05-18	2021-05-17
RF Cable	Agilent	SMA 15cm	0001	2020-06-12	2020-12-11
Software	R&S	EMC32	9.26.0	/	/

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

ANNEX A: The EUT Appearance

The EUT Appearance are submitted separately.

ANNEX B: Test Setup Photos

The Test Setup Photos are submitted separately.