

# FCC Radio Test Report

## FCC ID: QISAGS2-L03

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

**Project No.** : 1808C216  
**Equipment** : HUAWEI MediaPad T5  
**Model Name** : AGS2-L03  
**Series Model** : N/A  
**Applicant** : Huawei Technologies Co., Ltd.  
**Address** : Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, P.R.C

**Date of Receipt** : Aug. 24, 2018  
**Date of Test** : Aug. 27, 2018 ~ Sep. 07, 2018  
**Issued Date** : Sep. 13, 2018  
**Tested by** : BTL Inc.

**Technical Manager** :

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Steven Lu  
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# **B T L I N C .**

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### **Limitation**

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

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### REPORT ISSUED HISTORY

Issued No.	Description	Issued Date
BTL-FCCP-6-1808C216	Original Issue.	Sep. 13, 2018

## 1. CERTIFICATION

Equipment : HUAWEI MediaPad T5  
Brand Name : HUAWEI  
Model Name : AGS2-L03  
Series Model : N/A  
Applicant : Huawei Technologies Co., Ltd.  
Manufacturer : Huawei Technologies Co., Ltd.  
Address : Administration Building, Headquarters of Huawei Technologies Co., Ltd.,  
Bantian, Longgang District, Shenzhen, 518129, P.R.C  
Factory : Huawei Technologies Co., Ltd.  
Address : Administration Building, Headquarters of Huawei Technologies Co., Ltd.,  
Bantian, Longgang District, Shenzhen, 518129, P.R.C  
Date of Test : Aug. 27, 2018 ~ Sep. 07, 2018  
Test Sample : Engineering Sample No.: D180807232 for conducted, D180807229 for  
radiated.  
Standard(s) : 47 CFR FCC Part 24 Subpart E  
47 CFR FCC Part 2  
ANSI/TIA-603-D-2010  
KDB 971168 D01 Power Meas License Digital Systems v03

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCCP-6-1808C216) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of NVLAP according to the ISO-17025 quality assessment standard and technical standard(s).

**Test results included in this report is only for the PCS1900, WCDMA Band II and LTE Band 2 part.**

## 2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

FCC Part 24 Subpart E& Part 2			
Standard(s) Section	Test Item	Judgment	Tested By
2.1046 & 24.232(c)	Radiated power	PASS	Paul Li
2.1046 & 24.232(c)	Maximum Output Power	PASS	Paul Li
2.1049 & 24.238(a)	Occupied Bandwidth	PASS	Paul Li
2.1051 & 24.238(a)	Conducted Spurious Emissions	PASS	Paul Li
2.1053 & 24.238(a)	Radiated Spurious Emissions	PASS	Paul Li
24.238(a)	Band Edge Measurements	PASS	Paul Li
24.232(d)	Peak To Average Ratio	PASS	Paul Li
2.1055 & 24.235	Frequency Stability	PASS	Paul Li

NOTE:

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

## 2.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China.

BTL's test firm number for FCC: 854385

BTL's designation number for FCC: CN5020

## 2.2 MEASUREMENT UNCERTAINTY

The measurement uncertainty figures shall be calculated according the methods described in the ETSI TR 100 028 and shall correspond to an expansion factor (coverage factor)  $k=1.96$  or  $k=2$ (which provide confidence levels of respectively 90% and 95.45% in the case where the distributions characterizing the actual measurement uncertainties are normal (Gaussian)).

Measurement Uncertainty for a Level of Confidence of 95 %,  $U=2xUc(y)$ .

The BTL measurement uncertainty as below table:

### A. Radiated Measurement :

Test Site	Method	Measurement Frequency Range	Ant. H / V	U,(dB)
DG-CB03	CISPR	9KHz ~ 30MHz	V	3.79
		9KHz ~ 30MHz	H	3.57
		30MHz ~ 200MHz	V	3.82
		30MHz ~ 200MHz	H	3.78
		200MHz ~ 1,000MHz	V	4.10
		200MHz ~ 1,000MHz	H	4.06

Test Site	Method	Measurement Frequency Range	Ant. H / V	U,(dB)
DG-CB03	CISPR	1GHz ~ 18GHz	V	3.12
		1GHz ~ 18GHz	H	3.68
		18GHz ~ 40GHz	V	4.15
		18GHz ~ 40GHz	H	4.14

Note: Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.



### 3. GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

Equipment	HUAWEI MediaPad T5			
Brand Name	HUAWEI			
Model Name	AGS2-L03			
Series Model	N/A			
Model Difference(s)	N/A			
Modulation Type	GSM/GPRS	GMSK		
	EDGE	GMSK, 8PSK		
	WCDMA	UL: BPSK DL: QPSK		
	WCDMA(HSDPA/HSUPA)	16QAM		
	LTE	UL: QPSK, 16QAM DL: QPSK, 16QAM		
Operation Frequency	GSM /EDGE/GPRS	1850.2 ~ 1909.8 MHz		
	WCDMA Band II	1852.4 ~ 1907.6 MHz		
	LTE 2 (Channel Bandwidth: 1.4MHz)	1850.7 ~ 1909.3 MHz		
	LTE 2 (Channel Bandwidth: 3MHz)	1851.5 ~ 1908.5 MHz		
	LTE 2 (Channel Bandwidth: 5MHz)	1852.5 ~ 1907.5 MHz		
	LTE 2 (Channel Bandwidth: 10MHz)	1855.0 ~ 1905.0 MHz		
	LTE 2 (Channel Bandwidth: 15MHz)	1857.5 ~ 1902.5 MHz		
	LTE 2 (Channel Bandwidth: 20MHz)	1860.0 ~ 1900.0 MHz		
Max. EIRP Power	GSM/GPRS	GMSK	31.49	dBm
	EDGE	8PSK	27.30	dBm
	WCDMA	BPSK	24.74	dBm
	WCDMA_HSDPA	16QAM	24.62	dBm
	WCDMA_HSUPA	16QAM	24.10	dBm
	LTE 2 (Channel Bandwidth: 1.4MHz)	QPSK	24.20	dBm
		16QAM	23.91	dBm
	LTE 2 (Channel Bandwidth: 3MHz)	QPSK	24.23	dBm
		16QAM	24.04	dBm
	LTE 2 (Channel Bandwidth: 5MHz)	QPSK	24.30	dBm
		16QAM	24.06	dBm
	LTE 2 (Channel Bandwidth: 10MHz)	QPSK	24.32	dBm
		16QAM	24.21	dBm
	LTE 2 (Channel Bandwidth: 15MHz)	QPSK	24.57	dBm
		16QAM	24.37	dBm
	LTE 2 (Channel Bandwidth: 20MHz)	QPSK	24.71	dBm
16QAM		24.55	dBm	

Antenna Type	Internal Antenna	
Antenna Gain	1.6 dBi (PCS1900) 0.9 dBi (WCDMA Band II) 0.9 dBi (LTE Band 2)	
Hardware Version	A6t6e	
Software Version	AGS2-L03 8.0.0.20(C605)	
IMEI No.	Conducted	004401721233332
	Radiated	004401721233373
Power Source	1# DC voltage supplied from AC/DC adapter. Model: HW-050100U01 2# Supplied from battery. Model: HB2899C0ECW-C	
Power Rating	1# I/P: 100-240V~,50/60Hz,0.2A O/P: DC 5V, 1A 2# DC 3.82V, 4980mAh	

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. The EUT contains following accessory devices.

Item	Manufacturer	Factory	Description
Adapter	Huawei Technologies Co., Ltd.	HUIZHOU BYD ELECTRONIC CO., LTD.	PDM Number: 02220780 Model Name: HW-050100U01 Input Voltage : 100-240V ~50/60Hz, 0.2A Output Voltage: DC 5V,1A (The EU and US adapter are the same PCB board of same factory)
		Shenzhen Huntkey Electric Co., Ltd.	
		DONG GUAN PHITEK ELECTRONICS CO., LTD.	
Battery	Huawei Technologies Co.,Ltd.	SCUD (FUJIAN) Electronics Co., Ltd	PDM Number: 24022744 Model Name: HB2899C0ECW-C Rated Voltage: DC 3.82V Rated Capacity: 4980mAh
USB Cable	Huawei Technologies Co.,Ltd.	FOXCONN INTERCONNECT TECHNOLOGY LIMITED	Model Name: 04071002
		HONGLIN TECHNOLOGY CO.,LTD	
		Luxshare Precision Industry Co., Ltd.	

### 3.2 DESCRIPTION OF TEST MODES AND TEST CONDITION

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

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

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

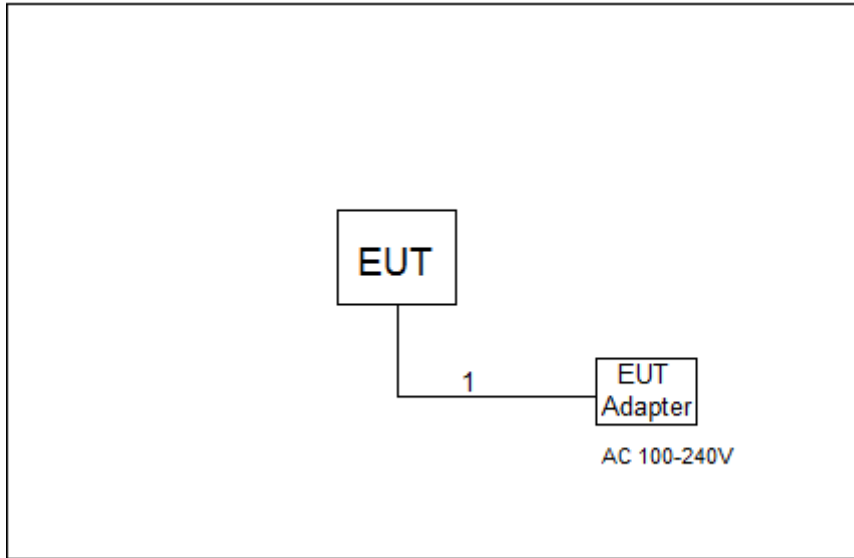
LTE BAND 2 MODE					
Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
EIRP	18607 to 19193	18607, 18900, 19193	1.4MHz	QPSK, 16QAM	1 RB / 0 RB Offset
	18615 to 19185	18615, 18900, 19185	3MHz	QPSK, 16QAM	1 RB / 0 RB Offset
	18625 to 19175	18625, 18900, 19175	5MHz	QPSK, 16QAM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

Band Edge	18607 to 19193	18607	1.4MHz	QPSK	1 RB / 0 RB Offset	
		19193	1.4MHz	QPSK	6 RB / 0 RB Offset	
	18615 to 19185	18615	3MHz	QPSK	1 RB / 5 RB Offset	
		19185	3MHz	QPSK	6 RB / 0 RB Offset	
	18625 to 19175	18625	5MHz	QPSK	1 RB / 0 RB Offset	
		19175	5MHz	QPSK	15 RB / 0 RB Offset	
	18650 to 19150	18650	10MHz	QPSK	1 RB / 14 RB Offset	
		19150	10MHz	QPSK	15 RB / 0 RB Offset	
	18675 to 19125	18675	15MHz	QPSK	1 RB / 0 RB Offset	
		19125	15MHz	QPSK	25 RB / 0 RB Offset	
	18700 to 19100	18700	20MHz	QPSK	1 RB / 24 RB Offset	
		19100	20MHz	QPSK	25 RB / 0 RB Offset	
	Peak To Average Ratio	18607 to 19193	18607, 18900, 19193	1.4MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		18615 to 19185	18615, 18900, 19185	3MHz	QPSK, 16QAM	1 RB / 0 RB Offset
18625 to 19175		18625, 18900, 19175	5MHz	QPSK, 16QAM	1 RB / 0 RB Offset	
18650 to 19150		18650, 18900, 19150	10MHz	QPSK, 16QAM	1 RB / 0 RB Offset	
18675 to 19125		18675, 18900, 19125	15MHz	QPSK, 16QAM	1 RB / 0 RB Offset	
18700 to 19100		18700, 18900, 19100	20MHz	QPSK, 16QAM	1 RB / 0 RB Offset	
Frequency Stability	18607 to 19193	18900	1.4MHz	QPSK	1 RB / 0 RB Offset	
	18615 to 19185	18900	3MHz	QPSK	1 RB / 0 RB Offset	
	18625 to 19175	18900	5MHz	QPSK	1 RB / 0 RB Offset	
	18650 to 19150	18900	10MHz	QPSK	1 RB / 0 RB Offset	
	18675 to 19125	18900	15MHz	QPSK	1 RB / 0 RB Offset	
	18700 to 19100	18900	20MHz	QPSK	1 RB / 0 RB Offset	

**EUT TEST CONDITIONS:**

Test Item	Environmental Conditions	Test Voltage
EIRP	25°C, 60%RH	DC 3.82V
Maximum Output Power	25°C, 65%RH	DC 3.82V
Occupied Bandwidth	25°C, 65%RH	DC 3.82V
Conducted Emission	25°C, 65%RH	DC 3.82V
Radiated Emission	25°C, 60%RH	AC 120V/60Hz
Band Edge	25°C, 65%RH	DC 3.82V
Peak to Average Ratio	25°C, 65%RH	DC 3.82V
Frequency Stability	Normal and Extreme	Normal and Extreme

### 3.3 BLOCKDIGRAMSHOWINGTHECONFIGURATIONOFSYSTEMTESTED FOR RADIATED



### 3.4 DESCRIPTION OF SUPPORT UNITS

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

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.
-	-	-	-	-	-

Item	Shielded Type	Ferrite Core	Length	Note
1	NO	NO	1.2m	DC Cable

## 4. TEST RESULT

### 4.1 OUTPUT POWER MEASUREMENT

#### 4.1.1 LIMIT

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

#### 4.1.2 TEST PROCEDURE

##### EIRP/ERP:

EIRP= Output Power +Antenan gain

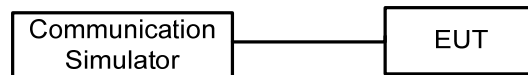
ERP power=EIPR power-2.15dBi.

##### Maximum Output Power:

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

#### 4.1.3 TESTSETUP LAYOUT

Output Power Measurement



#### 4.1.4 TEST DEVIATION

No deviation

#### 4.1.5 TEST RESULTS

Please refer to the Appendix A.

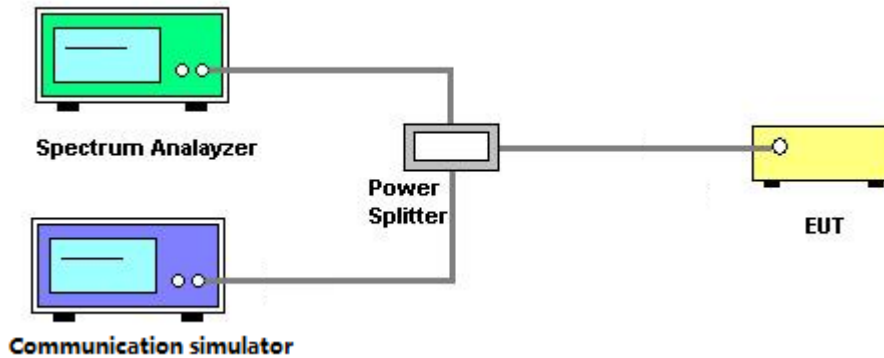


## 4.2 OCCUPIED BANDWIDTH MEASUREMENT

### 4.2.1 TEST PROCEDURE

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

### 4.2.2 TEST SETUP LAYOUT



### 4.2.3 TEST DEVIATION

No deviation

### 4.2.4 TEST RESULTS

Please refer to the Appendix B.

### 4.3 CONDUCTED EMISSIONS MEASUREMENT

#### 4.3.1 LIMIT

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

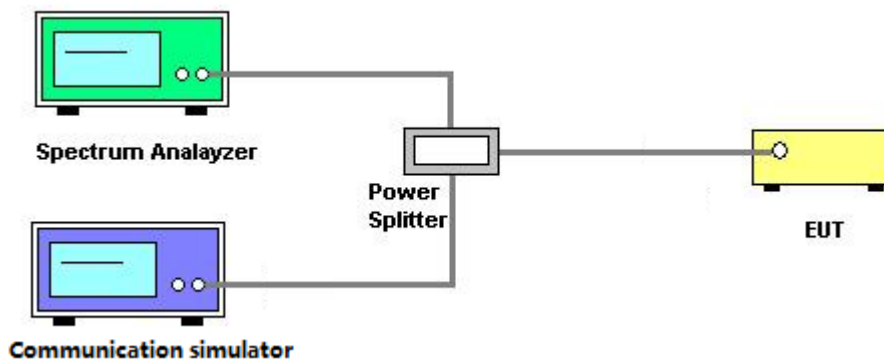
#### 4.3.2 TEST PROCEDURES

1. The testing follows FCC KDB 971168 v03 Section 6.0.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured. Set  $\text{RBW} \geq 1\%$  EBW in the 1MHz band immediately outside and adjacent to the band edge.
4. Set spectrum analyzer with RMS detector.
5. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
6. The limit line is derived from  $43+10\log(P)\text{dB}$  below the transmitter power P(Watts)
 
$$= P(\text{W}) - [43 + 10\log(P)](\text{dB})$$

$$= [30 + 10\log(P)](\text{dBm}) - [43 + 10\log(P)](\text{dB})$$

$$= -13\text{dBm}$$

#### 4.3.3 TESTSETUP LAYOUT



#### 4.3.4 TESTDEVIATION

No deviation

#### 4.3.5 TEST RESULTS

Please refer to the Appendix C.

## 4.4 RADIATED EMISSIONS MEASUREMENT

### 4.4.1 LIMIT

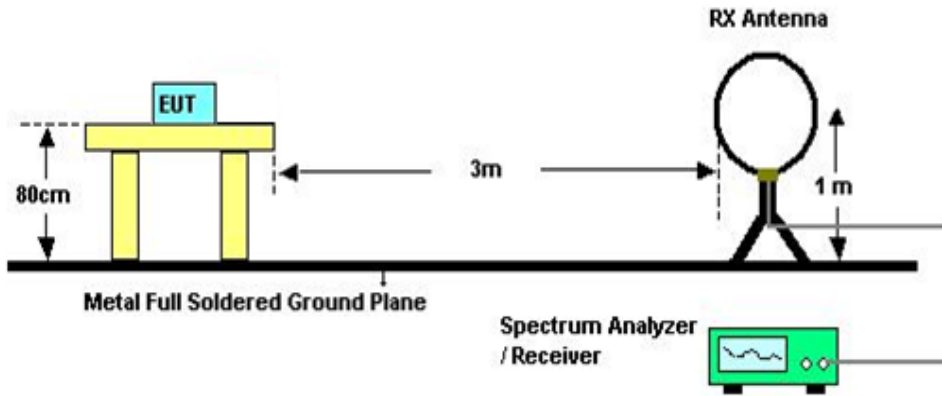
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB. The emission limit equal to -13dBm.

### 4.4.2 TEST PROCEDURES

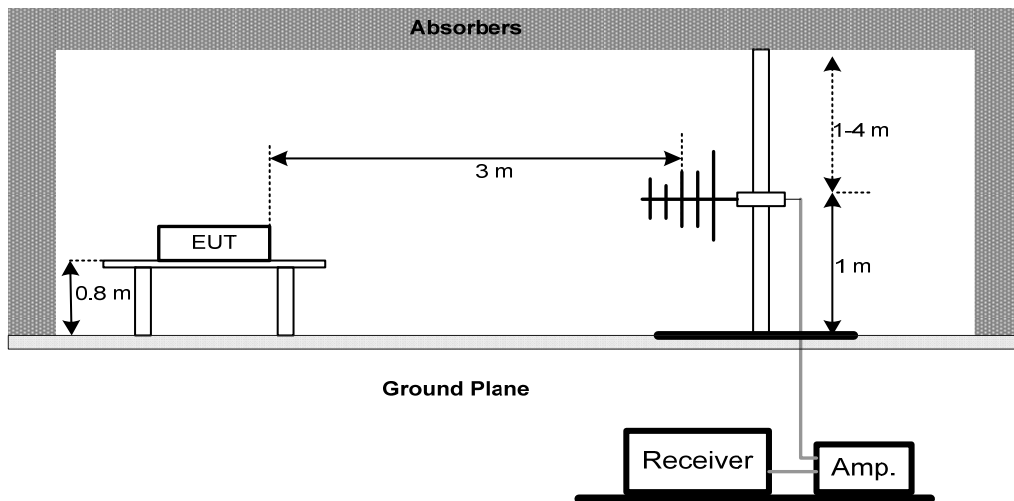
1. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
2. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value " of step a. Record the power level of S.G
3.  $EIRP = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn.}$
4. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole,  $E.R.P \text{ power} = E.I.P.R \text{ power} - 2.15\text{dBi.}$
5. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

### 4.4.3 TESTSETUP LAYOUT

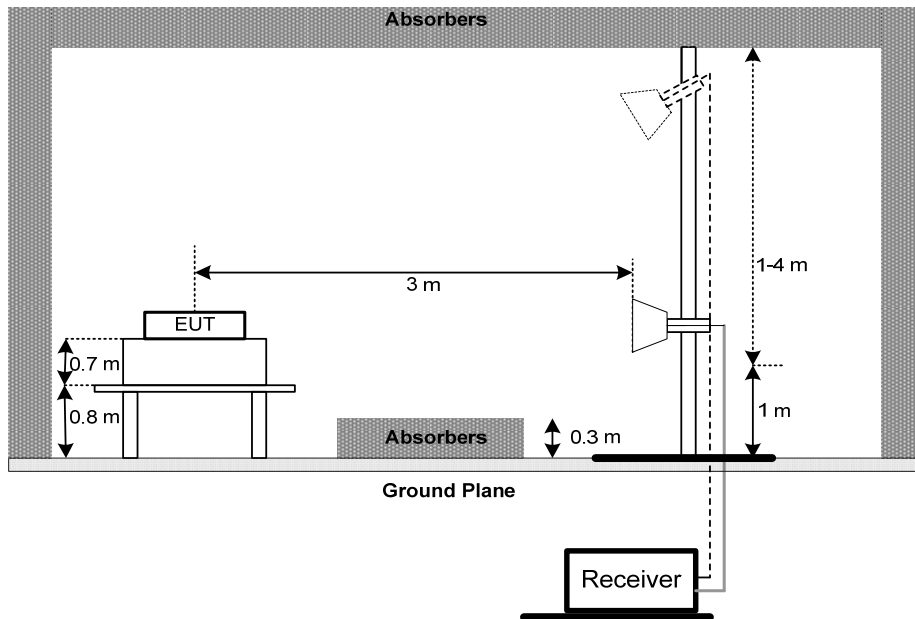
#### Below 30MHz



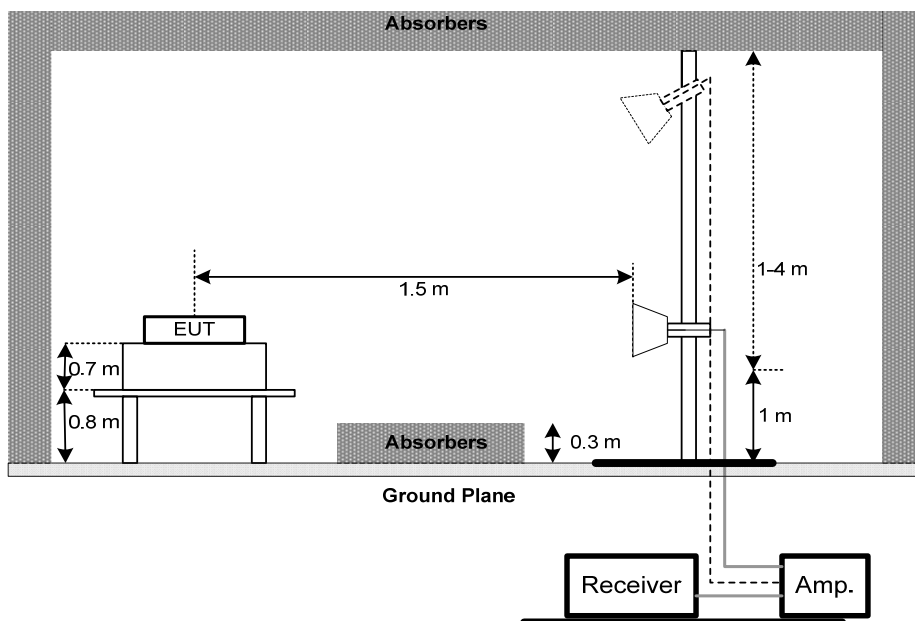
#### Below 1GHz



### 1GHz to 18GHz



### 18GHz to 26.5GHz



#### 4.4.4 TEST DEVIATION

No deviation

#### 4.4.5 TEST RESULTS (9KHZ TO 30MHZ)

Please refer to the Appendix D.

#### 4.4.6 TEST RESULTS (30MHZ TO 1000MHZ)

Please refer to the Appendix E.

#### 4.4.7 TEST RESULTS (ABOVE 1000MHZ)

Please refer to the Appendix F.

## 4.5 BAND EDGE MEASUREMENT

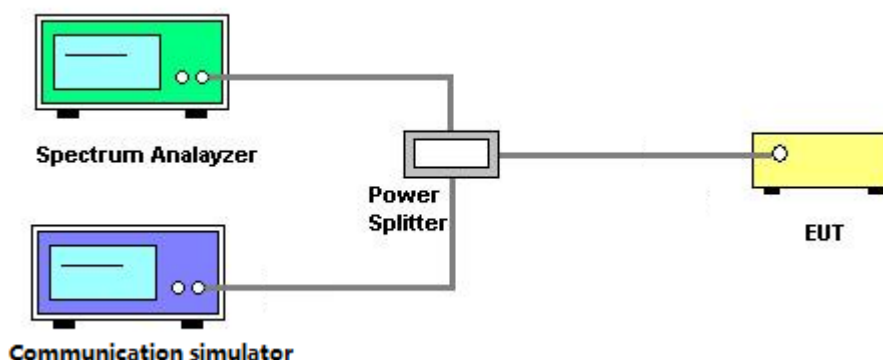
### 4.5.1 LIMIT

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

### 4.5.2 TEST PROCEDURES

1. All measurements were done at low and high operational frequency range.
2. The center frequency of spectrum is the band edge frequency and span is 1.5MHz. RB of the spectrum is 3kHz and VB of the spectrum is 10kHz (GSM/GPRS/EDGE).
3. The center frequency of spectrum is the band edge frequency and span is 10MHz. RB of the spectrum is 100kHz and VB of the spectrum is 300kHz (WCDMA).
4. The center frequency of spectrum is the band edge frequency and span is 2MHz. RB of the spectrum is 15kHz and VB of the spectrum is 43kHz (LTE Bandwidth 1.4MHz).
5. The center frequency of spectrum is the band edge frequency and span is 2MHz. RB of the spectrum is 30kHz and VB of the spectrum is 91kHz (LTE Bandwidth 3MHz).
6. The center frequency of spectrum is the band edge frequency and span is 2MHz. RB of the spectrum is 51kHz and VB of the spectrum is 150kHz (LTE Bandwidth 5MHz).
7. The center frequency of spectrum is the band edge frequency and span is 2MHz. RB of the spectrum is 100kHz and VB of the spectrum is 300kHz (LTE Bandwidth 10MHz).
8. The center frequency of spectrum is the band edge frequency and span is 2MHz. RB of the spectrum is 150kHz and VB of the spectrum is 470kHz (LTE Bandwidth 15MHz).
9. The center frequency of spectrum is the band edge frequency and span is 2MHz. RB of the spectrum is 200kHz and VB of the spectrum is 620kHz (LTE Bandwidth 20MHz).
10. Record the max trace plot into the test report.

### 4.5.3 TESTSETUP LAYOUT



### 4.5.4 TESTDEVIATION

No deviation

### 4.5.5 TEST RESULTS

Please refer to the Appendix G.

## 4.6 PEAK TO AVERAGE RATIO MEASUREMENT

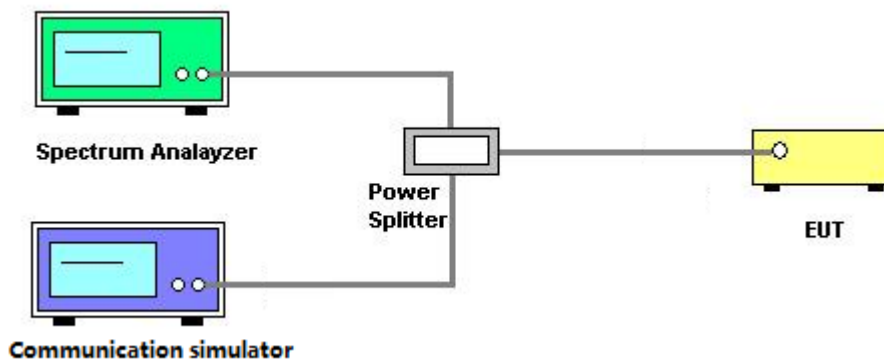
### 4.6.1 LIMIT

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

### 4.6.2 TEST PROCEDURES

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

### 4.6.3 TESTSETUP LAYOUT



### 4.6.4 TESTDEVIATION

No deviation

### 4.6.5 TEST RESULTS

Please refer to the Appendix H.

## 4.7 FREQUENCY STABILITY MEASUREMENT

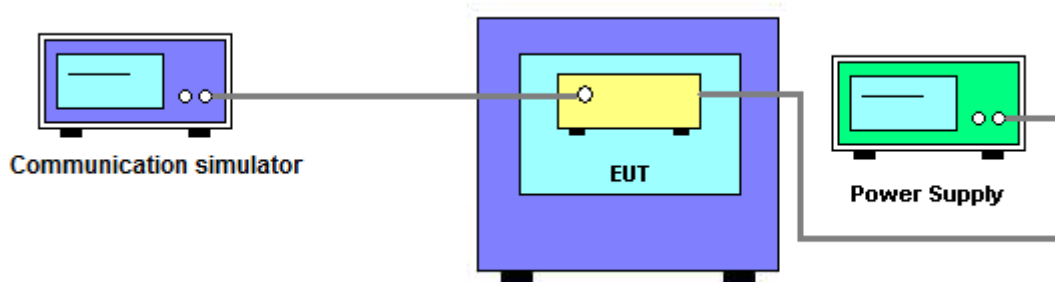
### 4.7.1 LIMIT

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

### 4.7.2 TEST PROCEDURES

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

### 4.7.3 TESTSETUP LAYOUT



### 4.7.4 TESTDEVIATION

No deviation

### 4.7.5 TEST RESULTS

Please refer to the Appendix I.



## 5. LIST OF MEASUREMENT EQUIPMENTS

Radiated Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Antenna	Schwarbeck	VULB9160	9160-3232	Mar. 11, 2019
2	Amplifier	Agilent	8449B	3008A02274	Mar. 11, 2019
3	Amplifier	HP	8447D	2944A09673	Aug. 11, 2019
4	HighPass Filter	Wairwright Instruments Gmbh	WHK 1.5/15G-10ST	11	Mar. 11, 2019
5	Band Reject Filter	Wairwright Instruments Gmbh	WRCG 1710/1785-1690/180 5-60/12SS	38	Mar. 11, 2019
6	Band Reject Filter	Wairwright Instruments Gmbh	WRCG 824/849-810/863-60/ 9SS	7	Mar. 11, 2019
7	Band Reject Filter	Wairwright Instruments Gmbh	WRCG 880/915-860/935-60/ 9SS	14	Mar. 11, 2019
8	Band Reject Filter	Wairwright Instruments Gmbh	WRCG 1850/1910-1830/193 0-60/10SS	17	Mar. 11, 2019
9	HighPass Filter	Wairwright Instruments Gmbh	WHK3.1/18G-10SS	24	Mar. 11, 2019
10	Wireless Communication Test SET	Agilent	E5515C	MY48364183	Mar. 11, 2019
11	Microwave Preamplifier With Adaptor	EMC INSTRUMENT	EMC2654045	980039 & HA01	Mar. 11, 2019
12	Receiver	Agilent	N9038A	MY52130039	Aug. 11, 2019
13	wideband radio communication tester	R&S	CMW500	152372	Mar. 11, 2019
14	Cable	emci	LMR-400(30MHz-1G Hz)(8m+5m)	N/A	May 25, 2019
15	Cable	mitron	B10-01-01-12M	18072744	Jul. 30, 2019
16	Controller	ETS-Lindgren	2090	N/A	N/A
17	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
18	Loop Antenna	EM	EM-6876-1	230	Feb. 07, 2019
19	Double Ridged Guide Antenna	ETS	3115	75789	Mar. 11, 2019
20	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Jun. 30, 2019

Conducted Emission & Band Edge & Occupied Bandwidth Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Wireless Communication Test SET	Agilent	E5515C	MY48364183	Mar. 11, 2019
2	EXA Spectrum Analyzer	Agilent	N9010A	MY50520044	Mar. 11, 2019
3	POWER SPLITTER	Mini-Circuits	ZFRSC-123-S+	331000910-1	Mar. 11, 2019
4	wideband radio communication tester	R&S	CMW500	152372	Mar. 11, 2019
5	Spectrum Analyzer	R&S	FSP40	100185	Aug. 11, 2019

Frequency Stability Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Wireless Communication Test SET	Agilent	E5515C	MY48364183	Mar. 11, 2019
2*	Multi-output DC Power Supply	GW Instek	GPC-3030DN	EK880675	Sep. 26, 2020
3	POWER SPLITTER	Mini-Circuits	ZFRSC-123-S+	331000910-1	Mar. 11, 2019
4	wideband radio communication tester	R&S	CMW500	152372	Mar. 11, 2019

Remark: "N/A" denotes no model name, serial no. or calibration specified.

All calibration period of equipment list is one year.

\*All calibration period of equipment list is three year

## APPENDIX A – MAXIMUM OUTPUT POWER

**Maximum Output Power (dBm):**

PCS1900		Burst Output Power		
		512CH	661CH	810CH
		1850.2MHz	1880MHz	1909.8MHz
GSM (CS)		29.89	29.89	29.73
GPRS/EDGE (GMSK)	1 Tx Slot	29.89	29.88	29.72
	2 Tx Slot	27.75	27.91	27.81
	3 Tx Slot	25.72	25.86	25.80
	4 Tx Slot	24.71	24.88	24.80
EDGE (8PSK)	1 Tx Slot	25.50	25.55	25.70
	2 Tx Slot	23.26	23.35	23.46
	3 Tx Slot	21.56	21.62	21.46
	4 Tx Slot	20.56	20.52	20.96

Modulation	Band	WCDMA Band II		
	Tx Channel	9262CH	9400CH	9538CH
	Frequency	1852.4MHz	1880MHz	1907.6MHz
BPSK	RMC 12.2K	23.67	23.73	23.84
	RMC 64K	23.64	23.70	23.82
	RMC 144K	23.62	23.71	23.72
	RMC 384K	23.65	23.70	23.81
16QAM	HSDPA Subtest-1	23.59	23.61	23.72
	HSDPA Subtest-2	22.00	21.97	21.92
	HSDPA Subtest-3	21.98	21.87	21.98
	HSDPA Subtest-4	22.01	21.94	21.95
16QAM	HSUPA Subtest-1	21.25	20.84	20.95
	HSUPA Subtest-2	19.76	19.81	20.12
	HSUPA Subtest-3	21.18	21.23	21.24
	HSUPA Subtest-4	20.30	19.86	19.95
	HSUPA Subtest-5	23.15	23.11	23.20

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				18607CH	18900CH	19193CH
				1850.7MHz	1880MHz	1909.3MHz
2 / 1.4M	QPSK	1	0	23.26	22.69	22.48
		1	2	23.30	22.76	22.53
		1	5	23.19	22.75	22.44
		3	0	23.25	22.72	22.57
		3	1	23.25	22.72	22.55
		3	2	23.23	22.81	22.56
		6	0	22.98	22.50	22.22
	16QAM	1	0	22.96	22.58	22.11
		1	2	23.01	22.59	22.12
		1	5	22.91	22.54	22.10
		3	0	22.87	22.48	22.19
		3	1	22.88	22.47	22.16
		3	2	22.86	22.51	22.24
		6	0	21.96	21.37	21.31

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				18615CH	18900CH	19185CH
				1851.5MHz	1880MHz	1908.5MHz
2 / 3M	QPSK	1	0	23.14	22.57	22.27
		1	7	23.33	22.87	22.54
		1	14	23.00	22.65	22.33
		8	0	23.03	22.46	22.15
		8	4	23.05	22.49	22.18
		8	7	22.94	22.43	22.15
		15	0	23.02	22.49	22.18
	16QAM	1	0	22.96	22.37	22.08
		1	7	23.14	22.57	22.22
		1	14	22.82	22.43	22.07
		8	0	22.04	21.38	21.19
		8	4	22.06	21.36	21.22
		8	7	21.96	21.30	21.27
		15	0	21.94	21.42	21.20

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				18625CH	18900CH	19175CH
				1852.5MHz	1880MHz	1907.5MHz
2 / 5M	QPSK	1	0	23.29	22.66	22.30
		1	13	23.40	22.99	22.59
		1	24	23.12	22.98	22.52
		12	0	23.23	22.66	22.21
		12	6	23.21	22.74	22.37
		12	11	23.12	22.71	22.31
		25	0	23.09	22.71	22.27
	16QAM	1	0	23.02	22.60	22.11
		1	13	23.16	22.93	22.40
		1	24	22.90	22.91	22.26
		12	0	22.27	21.62	21.20
		12	6	22.24	21.71	21.39
		12	11	22.12	21.68	21.32
		25	0	22.01	21.67	21.26

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				18650CH	18900CH	19150CH
				1855MHz	1880MHz	1905MHz
2 / 10M	QPSK	1	0	23.39	22.75	22.62
		1	25	23.20	22.92	22.37
		1	49	23.30	23.42	22.89
		25	0	22.97	22.39	22.06
		25	13	22.86	22.59	22.02
		25	25	22.73	22.64	22.11
		50	0	22.94	22.47	22.06
	16QAM	1	0	23.31	22.52	22.31
		1	25	23.13	22.70	22.03
		1	49	23.21	23.20	22.54
		25	0	21.94	21.35	21.05
		25	13	21.81	21.50	21.01
		25	25	21.65	21.53	21.10
		50	0	21.79	21.38	21.01

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				18675CH	18900CH	19125CH
				1857.5MHz	1880MHz	1902.5MHz
2 / 15M	QPSK	1	0	23.22	22.41	23.04
		1	38	23.11	22.92	22.37
		1	74	23.00	23.67	22.88
		36	0	22.84	23.67	22.35
		36	18	22.83	22.59	22.08
		36	39	22.23	22.61	22.06
		75	0	22.60	22.48	22.34
	16QAM	1	0	23.02	22.27	22.83
		1	38	22.94	22.68	22.13
		1	74	22.82	23.47	22.72
		36	0	21.78	21.47	21.34
		36	18	21.71	21.50	21.04
		36	39	21.22	21.49	21.02
		75	0	21.56	21.41	21.28

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				18700CH	18900CH	19100CH
				1860MHz	1880MHz	1900MHz
2 / 20M	QPSK	1	0	23.69	22.82	23.81
		1	50	23.03	22.24	22.71
		1	99	22.93	23.68	22.74
		50	0	22.81	22.35	22.76
		50	25	22.69	22.59	22.45
		50	50	22.24	22.67	22.02
		100	0	22.59	22.45	22.62
	16QAM	1	0	23.52	22.76	23.65
		1	50	22.90	22.22	22.73
		1	99	22.83	23.62	22.96
		50	0	21.73	21.29	21.73
		50	25	21.61	21.51	21.39
		50	50	21.22	21.58	21.08
		100	0	21.50	21.37	21.57

**EIRP Power (dBm):**

PCS1900		EIRP Power		
		512CH	661CH	810CH
		1850.2MHz	1880MHz	1909.8MHz
GSM (CS)		31.49	31.49	31.33
GPRS/EDGE (GMSK)	1 Tx Slot	31.49	31.48	31.32
	2 Tx Slot	29.35	29.51	29.41
	3 Tx Slot	27.32	27.46	27.40
	4 Tx Slot	26.31	26.48	26.40
EDGE (8PSK)	1 Tx Slot	27.10	27.15	27.30
	2 Tx Slot	24.86	24.95	25.06
	3 Tx Slot	23.16	23.22	23.06
	4 Tx Slot	22.16	22.12	22.56

Modulation	Band	WCDMA Band II		
	Tx Channel	9262CH	9400CH	9538CH
	Frequency	1852.4MHz	1880MHz	1907.6MHz
BPSK	RMC 12.2K	24.57	24.63	24.74
	RMC 64K	24.54	24.60	24.72
	RMC 144K	24.52	24.61	24.62
	RMC 384K	24.55	24.60	24.71
16QAM	HSDPA Subtest-1	24.49	24.51	24.62
	HSDPA Subtest-2	22.90	22.87	22.82
	HSDPA Subtest-3	22.88	22.77	22.88
	HSDPA Subtest-4	22.91	22.84	22.85
16QAM	HSUPA Subtest-1	22.15	21.74	21.85
	HSUPA Subtest-2	20.66	20.71	21.02
	HSUPA Subtest-3	22.08	22.13	22.14
	HSUPA Subtest-4	21.20	20.76	20.85
	HSUPA Subtest-5	24.05	24.01	24.10



LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				18607CH	18900CH	19193CH
				1850.7MHz	1880MHz	1909.3MHz
2 / 1.4M	QPSK	1	0	24.16	23.59	23.38
		1	2	24.20	23.66	23.43
		1	5	24.09	23.65	23.34
		3	0	24.15	23.62	23.47
		3	1	24.15	23.62	23.45
		3	2	24.13	23.71	23.46
	16QAM	6	0	23.88	23.40	23.12
		1	0	23.86	23.48	23.01
		1	2	23.91	23.49	23.02
		1	5	23.81	23.44	23.00
		3	0	23.77	23.38	23.09
		3	1	23.78	23.37	23.06
		3	2	23.76	23.41	23.14
		6	0	22.86	22.27	22.21

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				18615CH	18900CH	19185CH
				1851.5MHz	1880MHz	1908.5MHz
2 / 3M	QPSK	1	0	24.04	23.47	23.17
		1	7	24.23	23.77	23.44
		1	14	23.90	23.55	23.23
		8	0	23.93	23.36	23.05
		8	4	23.95	23.39	23.08
		8	7	23.84	23.33	23.05
		15	0	23.92	23.39	23.08
	16QAM	1	0	23.86	23.27	22.98
		1	7	24.04	23.47	23.12
		1	14	23.72	23.33	22.97
		8	0	22.94	22.28	22.09
		8	4	22.96	22.26	22.12
		8	7	22.86	22.20	22.17
		15	0	22.84	22.32	22.10

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				18625CH	18900CH	19175CH
				1852.5MHz	1880MHz	1907.5MHz
2 / 5M	QPSK	1	0	24.19	23.56	23.20
		1	13	24.30	23.89	23.49
		1	24	24.02	23.88	23.42
		12	0	24.13	23.56	23.11
		12	6	24.11	23.64	23.27
		12	11	24.02	23.61	23.21
	16QAM	25	0	23.99	23.61	23.17
		1	0	23.92	23.50	23.01
		1	13	24.06	23.83	23.30
		1	24	23.80	23.81	23.16
		12	0	23.17	22.52	22.10
		12	6	23.14	22.61	22.29
		12	11	23.02	22.58	22.22
		25	0	22.91	22.57	22.16

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				18650CH	18900CH	19150CH
				1855MHz	1880MHz	1905MHz
2 / 10M	QPSK	1	0	24.29	23.65	23.52
		1	25	24.10	23.82	23.27
		1	49	24.20	24.32	23.79
		25	0	23.87	23.29	22.96
		25	13	23.76	23.49	22.92
		25	25	23.63	23.54	23.01
		50	0	23.84	23.37	22.96
	16QAM	1	0	24.21	23.42	23.21
		1	25	24.03	23.60	22.93
		1	49	24.11	24.10	23.44
		25	0	22.84	22.25	21.95
		25	13	22.71	22.40	21.91
		25	25	22.55	22.43	22.00
		50	0	22.69	22.28	21.91

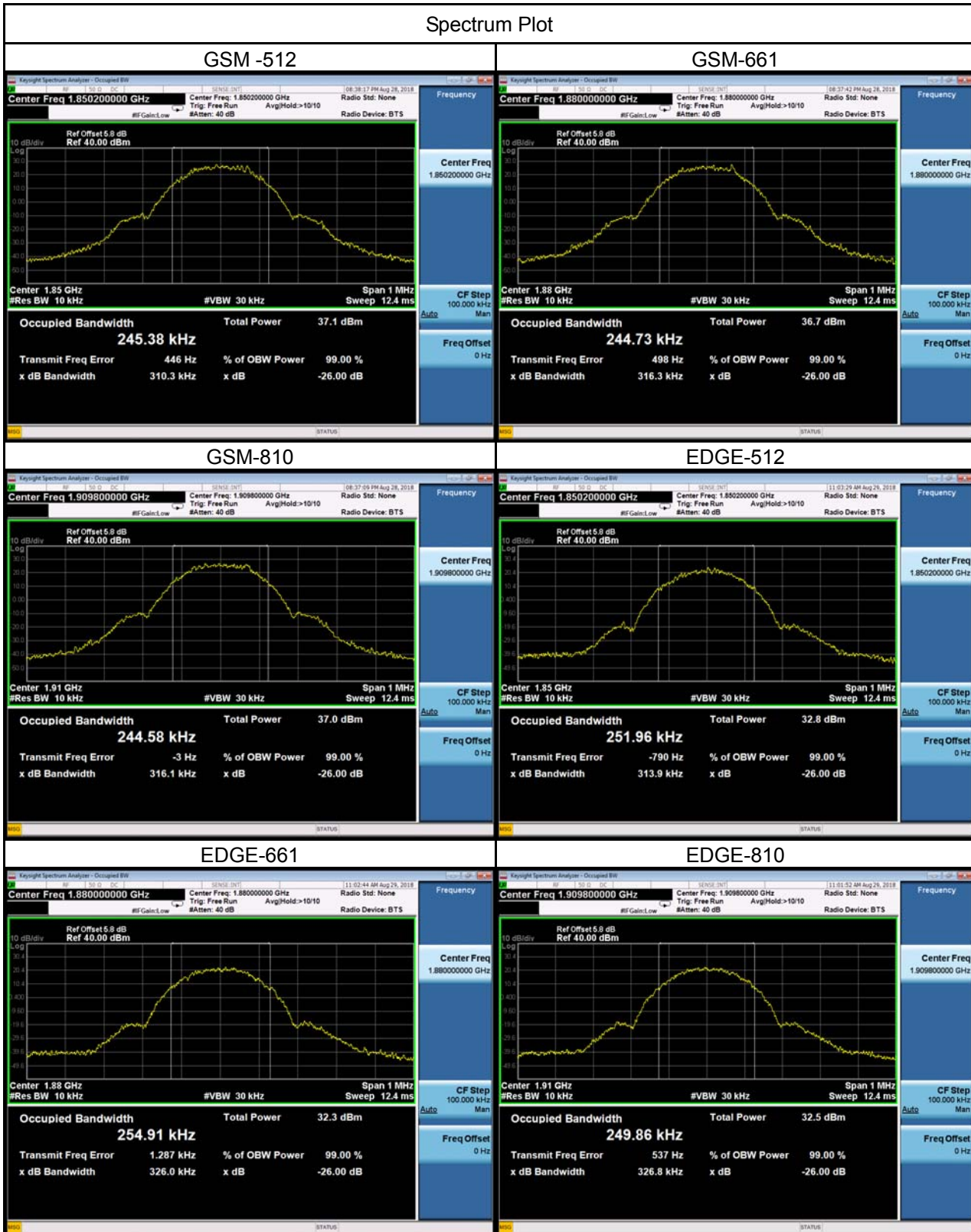
LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				18675CH	18900CH	19125CH
				1857.5MHz	1880MHz	1902.5MHz
2 / 15M	QPSK	1	0	24.12	23.31	23.94
		1	38	24.01	23.82	23.27
		1	74	23.90	24.57	23.78
		36	0	23.74	24.57	23.25
		36	18	23.73	23.49	22.98
		36	39	23.13	23.51	22.96
		75	0	23.50	23.38	23.24
	16QAM	1	0	23.92	23.17	23.73
		1	38	23.84	23.58	23.03
		1	74	23.72	24.37	23.62
		36	0	22.68	22.37	22.24
		36	18	22.61	22.40	21.94
		36	39	22.12	22.39	21.92
		75	0	22.46	22.31	22.18

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				18700CH	18900CH	19100CH
				1860MHz	1880MHz	1900MHz
2 / 20M	QPSK	1	0	24.59	23.72	24.71
		1	50	23.93	23.14	23.61
		1	99	23.83	24.58	23.64
		50	0	23.71	23.25	23.66
		50	25	23.59	23.49	23.35
		50	50	23.14	23.57	22.92
		100	0	23.49	23.35	23.52
	16QAM	1	0	24.42	23.66	24.55
		1	50	23.80	23.12	23.63
		1	99	23.73	24.52	23.86
		50	0	22.63	22.19	22.63
		50	25	22.51	22.41	22.29
		50	50	22.12	22.48	21.98
		100	0	22.40	22.27	22.47

## APPENDIX B - OCCUPIED BANDWIDTH

PCS1900					
GSM			EDGE		
CS			8PSK		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
512	1850.2	0.245	512	1850.2	0.252
661	1880	0.245	661	1880	0.255
810	1909.8	0.245	810	1909.8	0.250
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
512	1850.2	0.310	512	1850.2	0.314
661	1880	0.316	661	1880	0.326
810	1909.8	0.316	810	1909.8	0.327

### Spectrum Plot



WCDMA Band II					
BPSK					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
9262	1852.4	4.152	9262	1852.4	4.705
9400	1880	4.137	9400	1880	4.701
9538	1907.6	4.148	9538	1907.6	4.712



WCDMA_HSDPA Band II					
16QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
9262	1852.4	4.148	9262	1852.4	4.704
9400	1880	4.149	9400	1880	4.708
9538	1907.6	4.151	9538	1907.6	4.739





WCDMA_HSUPA Band II					
16QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
9262	1852.4	4.143	9262	1852.4	4.700
9400	1880	4.144	9400	1880	4.711
9538	1907.6	4.151	9538	1907.6	4.688



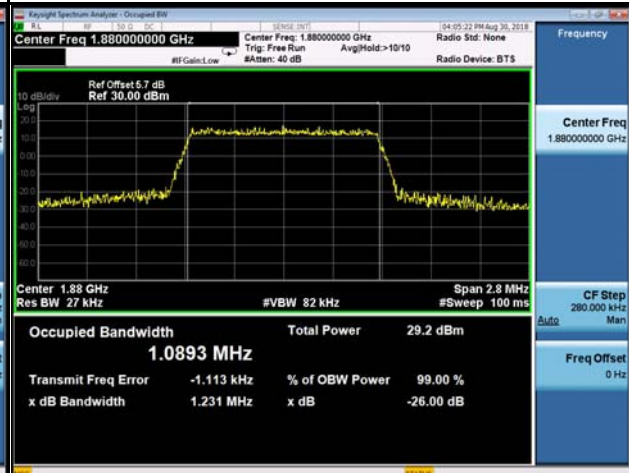
LTE Band 2_1.4M					
QPSK			16QAM		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
18607	1850.7	1.096	18607	1850.7	1.094
18900	1880	1.089	18900	1880	1.092
19193	1909.3	1.089	19193	1909.3	1.094
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
18607	1850.7	1.233	18607	1850.7	1.239
18900	1880	1.231	18900	1880	1.231
19193	1909.3	1.229	19193	1909.3	1.243

### Spectrum Plot

#### QPSK-18607



#### QPSK-18900



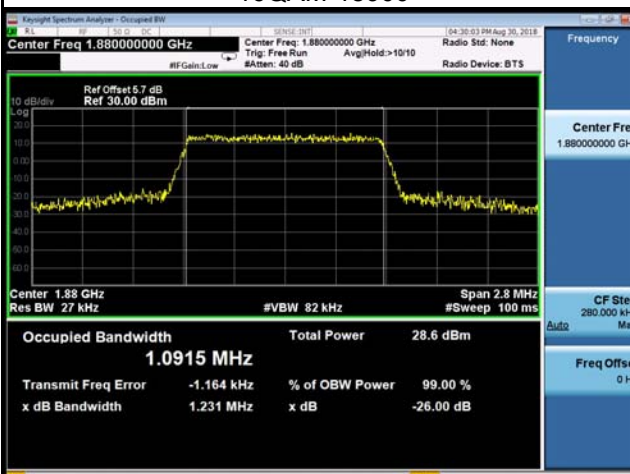
#### QPSK-19193



#### 16QAM-18607



#### 16QAM-18900



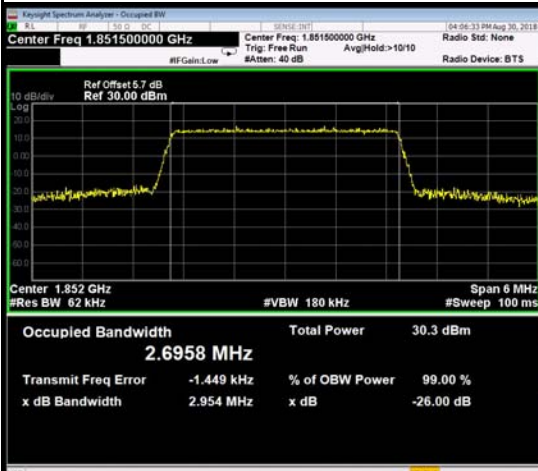
#### 16QAM-19193



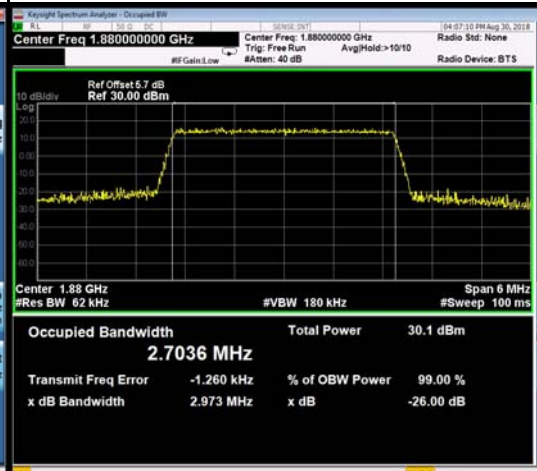
LTE Band 2_3M					
QPSK			16QAM		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
18615	1851.5	2.696	18615	1851.5	2.707
18900	1880	2.704	18900	1880	2.701
19185	1908.5	2.707	19185	1908.5	2.700
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
18615	1851.5	2.954	18615	1851.5	2.984
18900	1880	2.973	18900	1880	2.976
19185	1908.5	2.975	19185	1908.5	2.978

### Spectrum Plot

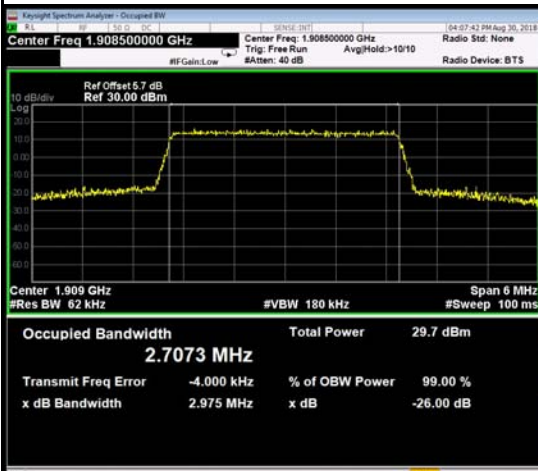
#### QPSK-18615



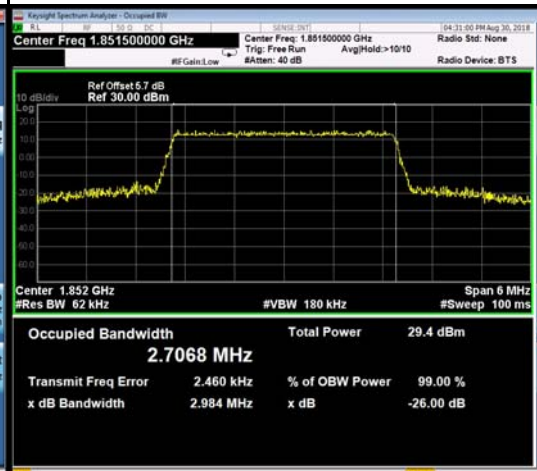
#### QPSK-18900



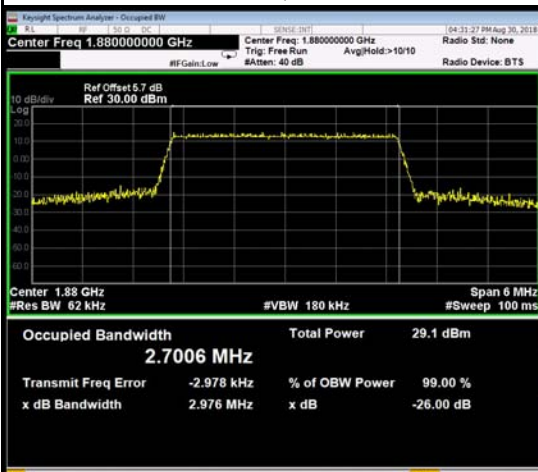
#### QPSK-19185



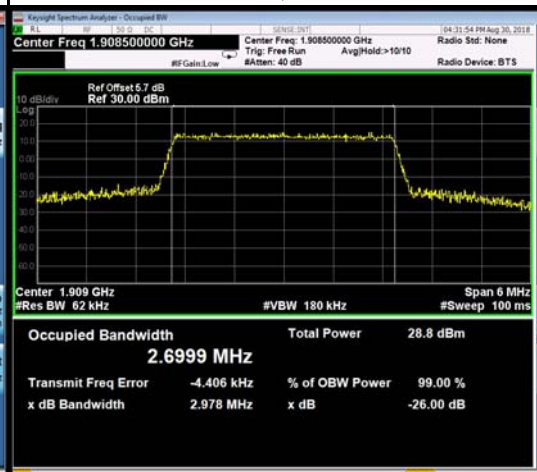
#### 16QAM-18615



#### 16QAM-18900



#### 16QAM-19185



LTE Band 2_5M					
QPSK			16QAM		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
18625	1852.5	4.506	18625	1852.5	4.512
18900	1880	4.504	18900	1880	4.508
19175	1907.5	4.512	19175	1907.5	4.519
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
18625	1852.5	4.924	18625	1852.5	4.961
18900	1880	4.956	18900	1880	4.952
19175	1907.5	4.953	19175	1907.5	4.939

### Spectrum Plot



LTE Band 2_10M					
QPSK			16QAM		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
18650	1855	8.988	18650	1855	8.997
18900	1880	8.974	18900	1880	8.988
19150	1905	8.975	19150	1905	8.979
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
18650	1855	9.877	18650	1855	9.887
18900	1880	9.883	18900	1880	9.834
19150	1905	9.934	19150	1905	9.906



### Spectrum Plot



LTE Band 2_15M					
QPSK			16QAM		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
18675	1857.5	13.468	18675	1857.5	13.437
18900	1880	13.454	18900	1880	13.485
19125	1902.5	13.453	19125	1902.5	13.469
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
18675	1857.5	14.830	18675	1857.5	14.810
18900	1880	14.920	18900	1880	14.890
19125	1902.5	14.960	19125	1902.5	15.070

### Spectrum Plot



LTE Band 2_20M					
QPSK			16QAM		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
18700	1860	17.884	18700	1860	17.913
18900	1880	17.966	18900	1880	17.982
19100	1900	17.879	19100	1900	17.888
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
18700	1860	19.750	18700	1860	19.700
18900	1880	19.770	18900	1880	19.710
19100	1900	19.780	19100	1900	19.640

### Spectrum Plot



## APPENDIX C - CONDUCTED EMISSIONS

PCS1900			
GSM		GSM	
Channel	Frequency(MHz)	Channel	Frequency(MHz)
661	1880	661	1880
GSM		EDGE	
Channel	Frequency(MHz)	Channel	Frequency(MHz)
661	1880	661	1880
EDGE		EDGE	
Channel	Frequency(MHz)	Channel	Frequency(MHz)
661	1880	661	1880

WCDMA Band II

Channel	Frequency(MHz)	Channel	Frequency(MHz)
9400	1880	9400	1880
<p>Date: 1.SEP.2018 17:16:39</p>		<p>Date: 1.SEP.2018 17:16:06</p>	
Channel	Frequency(MHz)	-	-
9400	1880	-	-
<p>Date: 31.AUG.2018 16:58:06</p>		-	



### WCDMA\_HSDPA Band II

Channel	Frequency(MHz)	Channel	Frequency(MHz)
9400	1880	9400	1880
Channel	Frequency(MHz)	-	-
9400	1880	-	-
		-	

WCDMA\_HSUPA Band II

Channel	Frequency(MHz)	Channel	Frequency(MHz)
9400	1880	9400	1880
Channel	Frequency(MHz)	-	-
9400	1880	-	-
		-	

LTE Band 2\_1.4M

Channel	Frequency(MHz)	Channel	Frequency(MHz)
18900	1880	18900	1880
Date: 31.AUG.2018 14:09:30		Date: 31.AUG.2018 14:13:27	
Channel	Frequency(MHz)	-	-
18900	1880	-	-
		-	
Date: 31.AUG.2018 16:29:44			

LTE Band 2\_5M

Channel	Frequency(MHz)	Channel	Frequency(MHz)
18900	1880	18900	1880
Date: 31.AUG.2018 14:11:06		Date: 31.AUG.2018 14:13:53	
Channel	Frequency(MHz)	-	-
18900	1880	-	-
		-	
Date: 31.AUG.2018 16:30:33			

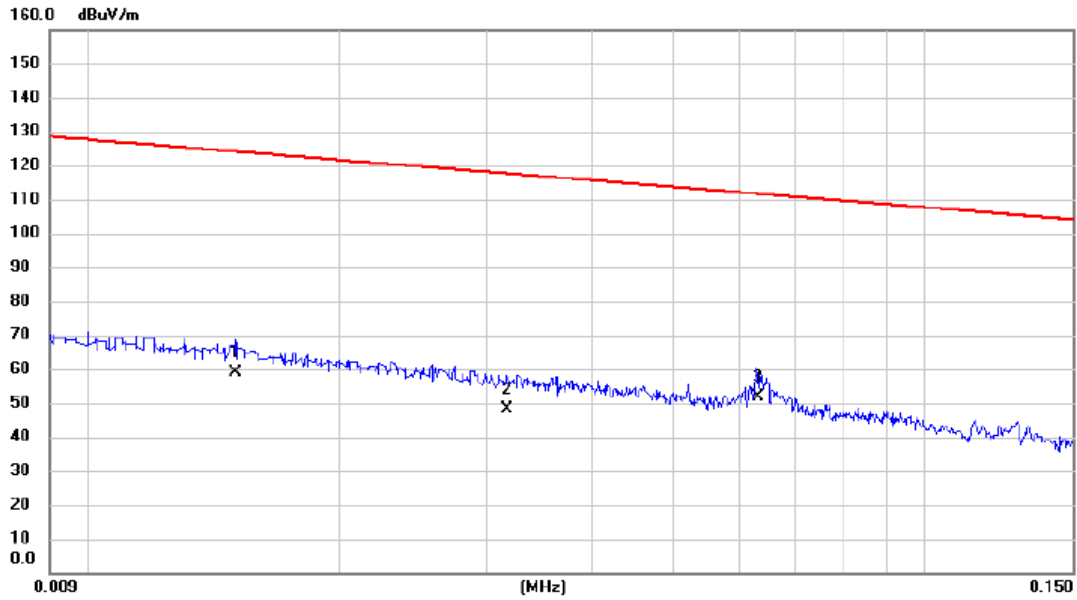
LTE Band 2\_20M

Channel	Frequency(MHz)	Channel	Frequency(MHz)
18900	1880	18900	1880
Date: 31.AUG.2018 14:11:20		Date: 31.AUG.2018 14:14:24	
Channel	Frequency(MHz)	-	-
18900	1880	-	-
		-	
Date: 31.AUG.2018 16:30:54			

## APPENDIX D - RADIATED EMISSION (9KHZ TO 30MHZ)

Test Mode: TX Mode\_Adapter: Huntkey

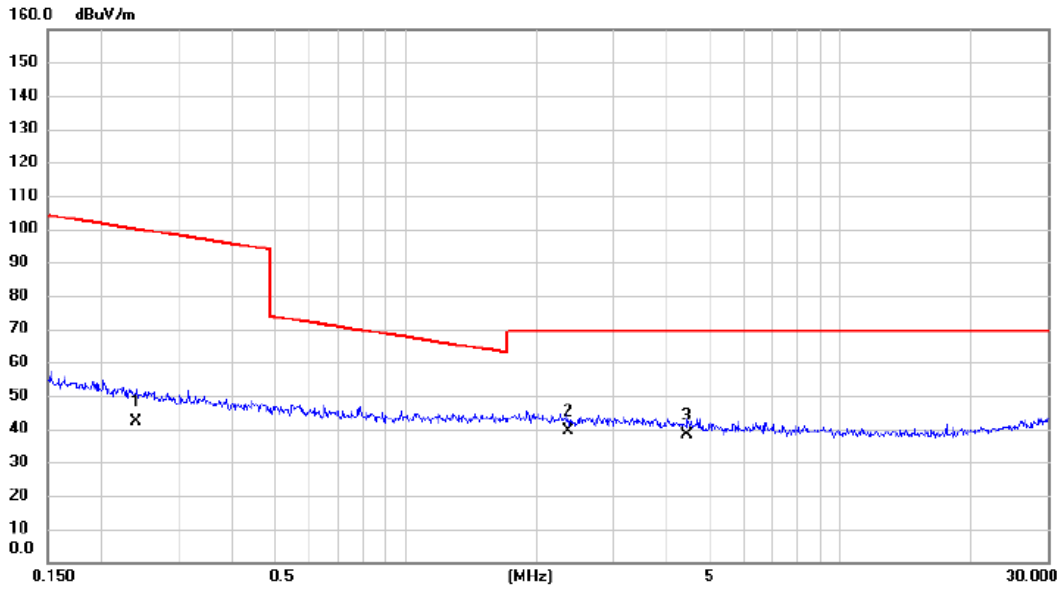
Ant 0°



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		0.0150	38.10	20.72	58.82	124.08	-65.26	AVG	
2		0.0317	28.30	19.82	48.12	117.58	-69.46	AVG	
3	*	0.0631	32.50	19.27	51.77	111.60	-59.83	AVG	

Test Mode: TX Mode\_Adapter: Huntkey

Ant 0°

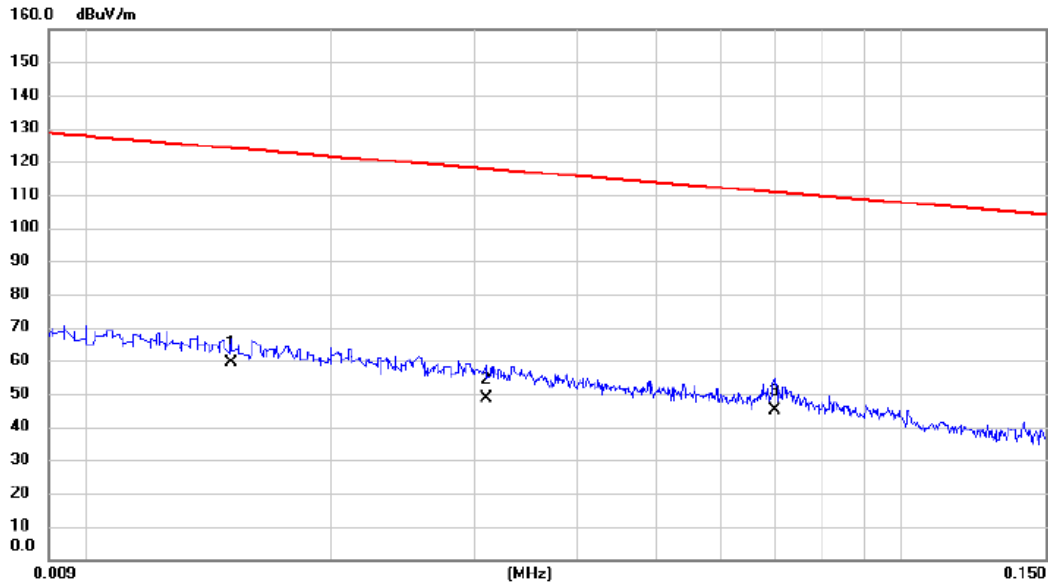


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		0.2404	25.10	17.08	42.18	99.99	-57.81	AVG	
2	*	2.3585	22.70	16.90	39.60	69.54	-29.94	QP	
3		4.4540	22.80	15.49	38.29	69.54	-31.25	QP	



Test Mode: TX Mode\_Adapter: Huntkey

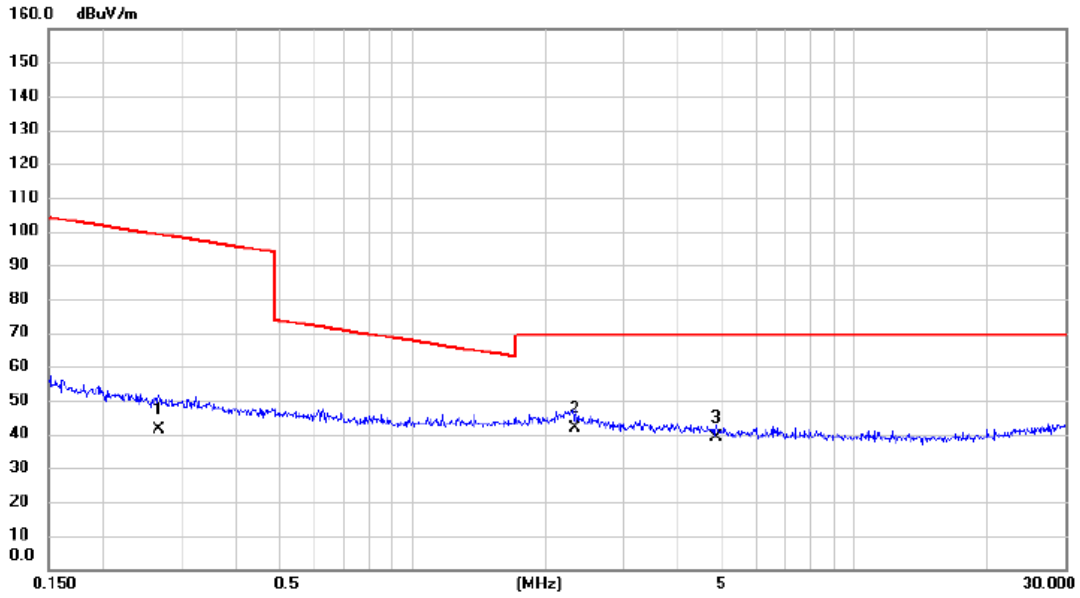
Ant 90°



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	0.0151	38.50	20.71	59.21	124.03	-64.82	AVG	
2		0.0310	28.80	19.84	48.64	117.78	-69.14	AVG	
3		0.0700	25.70	19.13	44.83	110.70	-65.87	AVG	

Test Mode: TX Mode\_Adapter: Huntkey

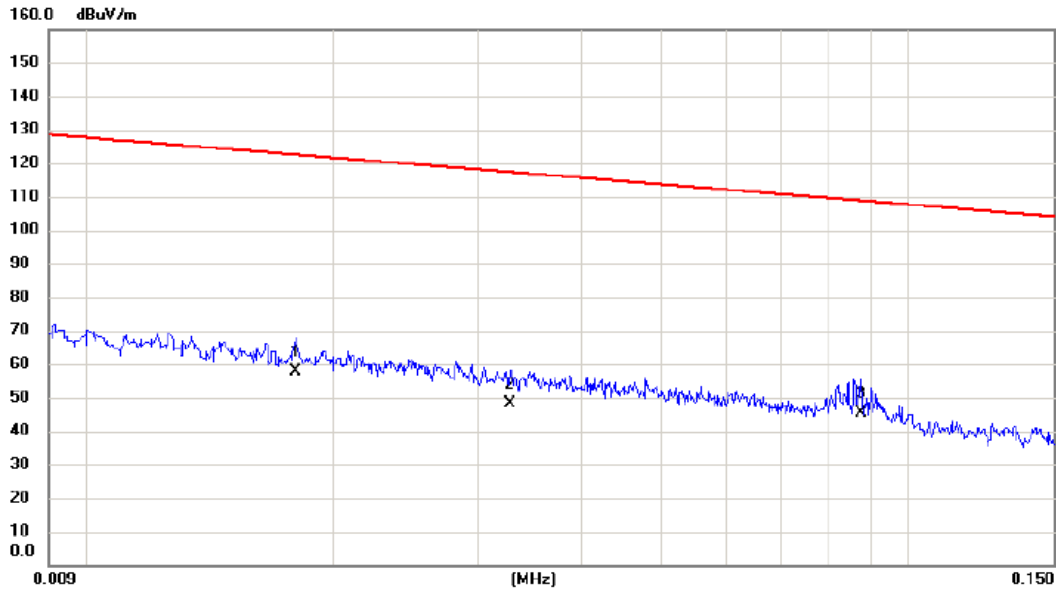
Ant 90°



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		0.2672	24.30	17.05	41.35	99.07	-57.72	AVG	
2	*	2.3336	24.70	16.92	41.62	69.54	-27.92	QP	
3		4.8738	23.60	15.25	38.85	69.54	-30.69	QP	

Test Mode: TX Mode\_Adapter: PHITEK

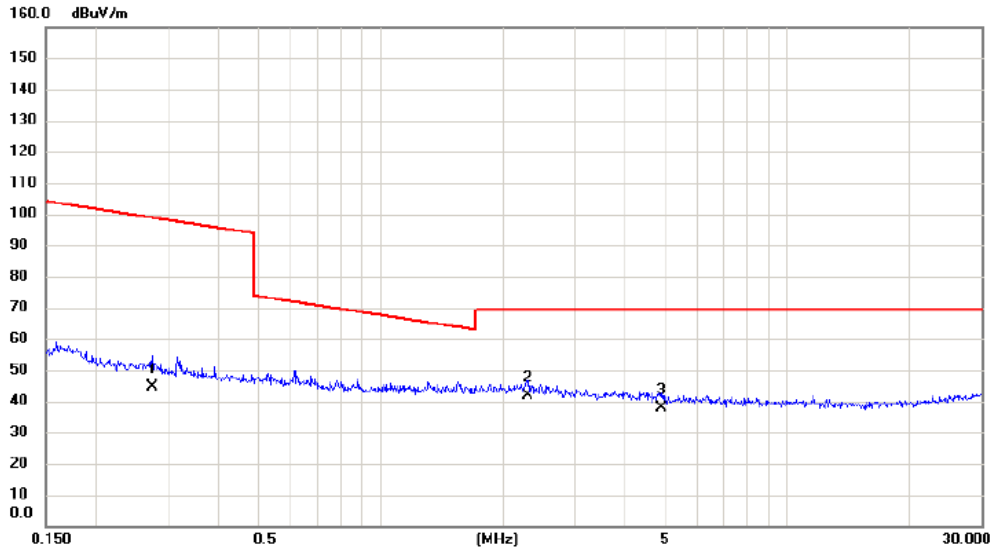
Ant 0°



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		0.0180	37.60	20.30	57.90	122.50	-64.60	AVG	
2		0.0328	28.50	19.81	48.31	117.29	-68.98	AVG	
3	*	0.0875	26.80	18.73	45.53	108.76	-63.23	AVG	

Test Mode: TX Mode\_Adapter: PHITEK

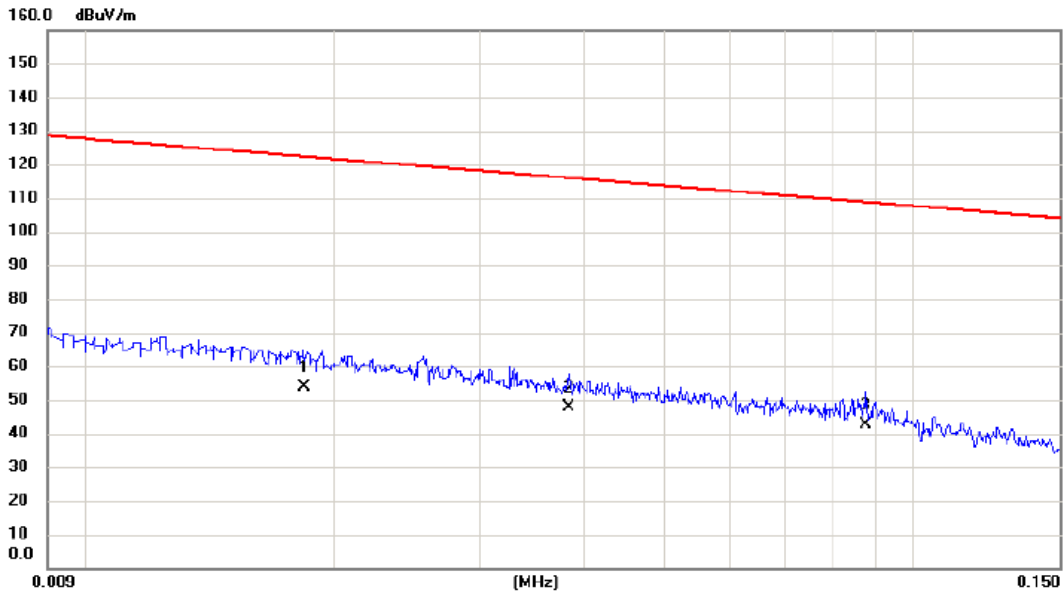
Ant 0°



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		0.2744	27.50	17.05	44.55	98.84	-54.29	AVG	
2	*	2.2968	24.80	16.94	41.74	69.54	-27.80	QP	
3		4.8997	22.40	15.23	37.63	69.54	-31.91	QP	

Test Mode: TX Mode\_Adapter: PHITEK

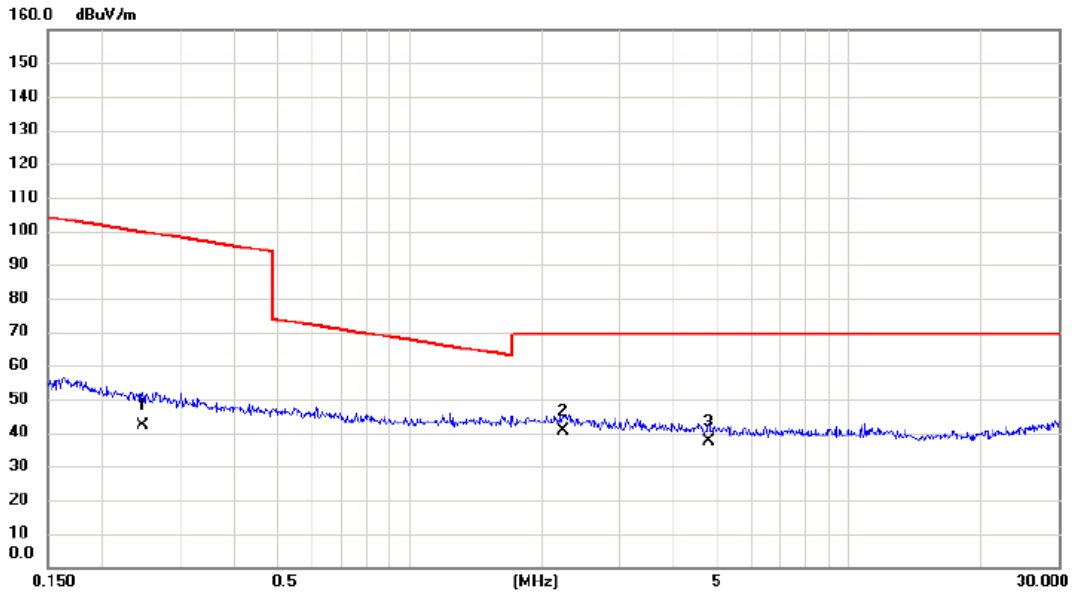
Ant 90°



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		0.0184	33.60	20.24	53.84	122.31	-68.47	AVG	
2		0.0383	28.10	19.72	47.82	115.94	-68.12	AVG	
3	*	0.0875	23.70	18.73	42.43	108.76	-66.33	AVG	

Test Mode: TX Mode\_Adapter: PHITEK

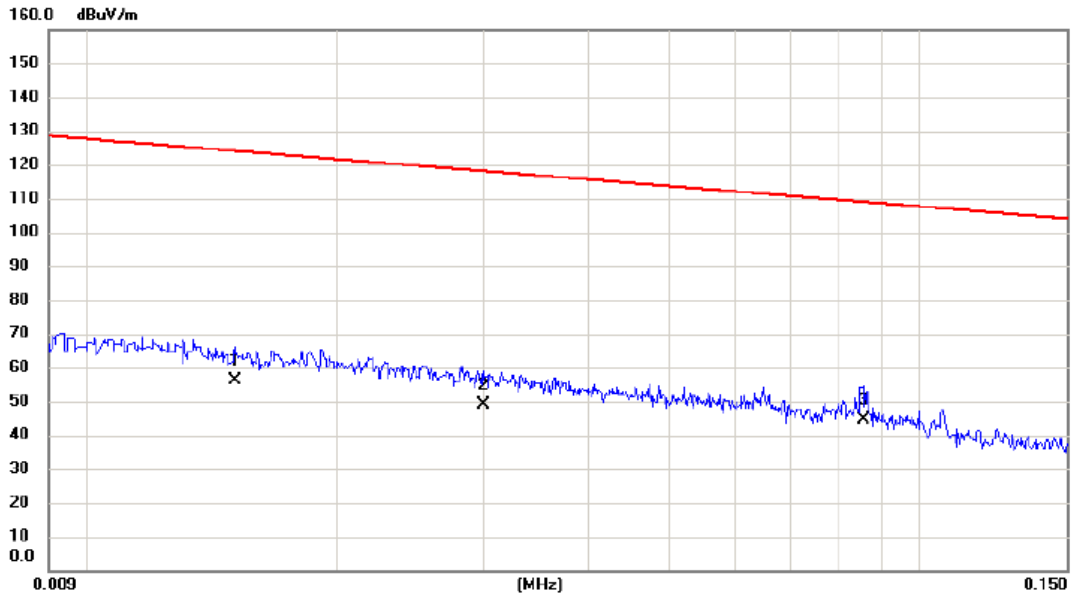
Ant 90°



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		0.2468	25.20	17.07	42.27	99.76	-57.49	AVG	
2	*	2.2367	23.60	16.97	40.57	69.54	-28.97	QP	
3		4.7970	22.20	15.29	37.49	69.54	-32.05	QP	

Test Mode: TX Mode\_Adapter: BYD

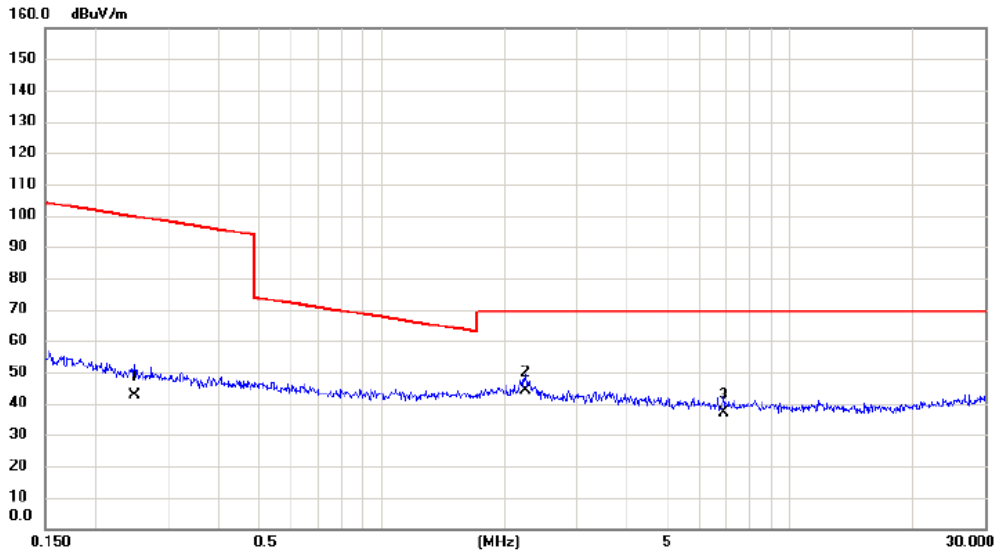
Ant 0°



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		0.0151	35.60	20.71	56.31	124.03	-67.72	AVG	
2		0.0300	29.21	19.85	49.06	118.06	-69.00	AVG	
3	*	0.0857	25.90	18.77	44.67	108.95	-64.28	AVG	

Test Mode: TX Mode\_Adapter: BYD

Ant 0°

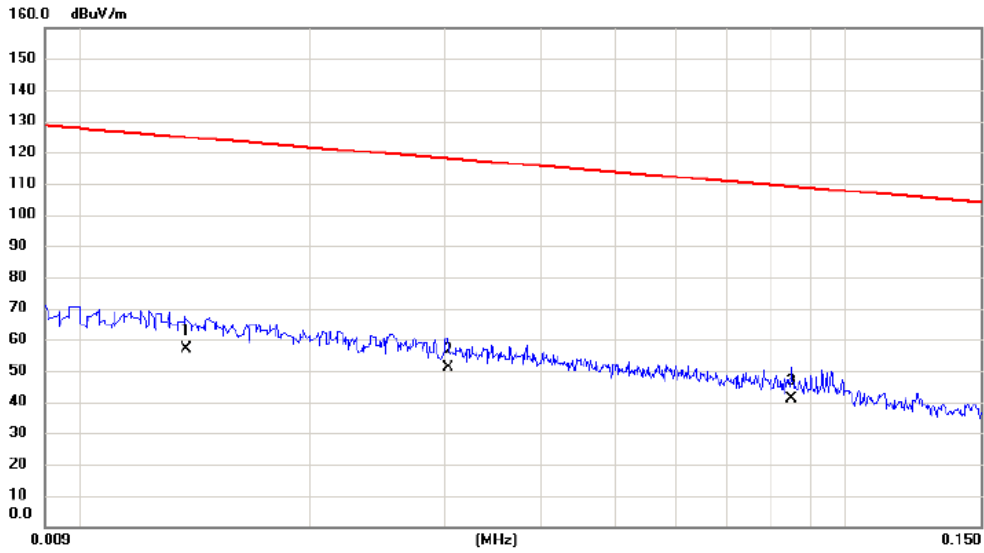


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		0.2481	25.40	17.06	42.46	99.71	-57.25	AVG	
2	*	2.2486	27.30	16.96	44.26	69.54	-25.28	QP	
3		6.8776	22.10	14.86	36.96	69.54	-32.58	QP	



Test Mode: TX Mode\_Adapter: BYD

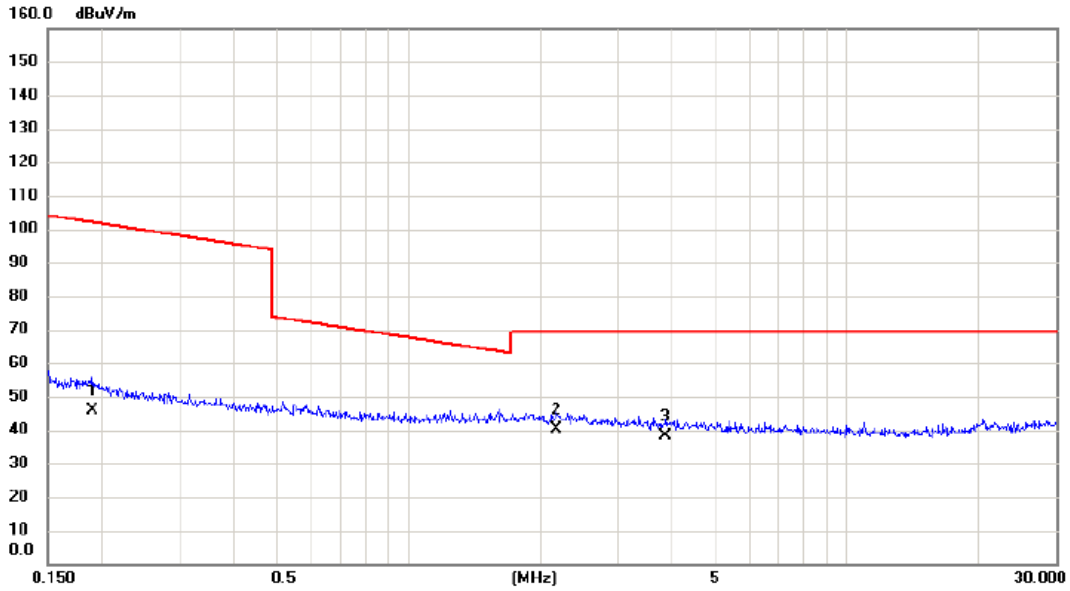
Ant 90°



No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	0.0138	36.30	20.89	57.19	124.81	-67.62	AVG	
2 *	0.0303	31.10	19.85	50.95	117.98	-67.03	AVG	
3	0.0850	22.40	18.79	41.19	109.02	-67.83	AVG	

Test Mode: TX Mode\_Adapter: BYD

Ant 90°

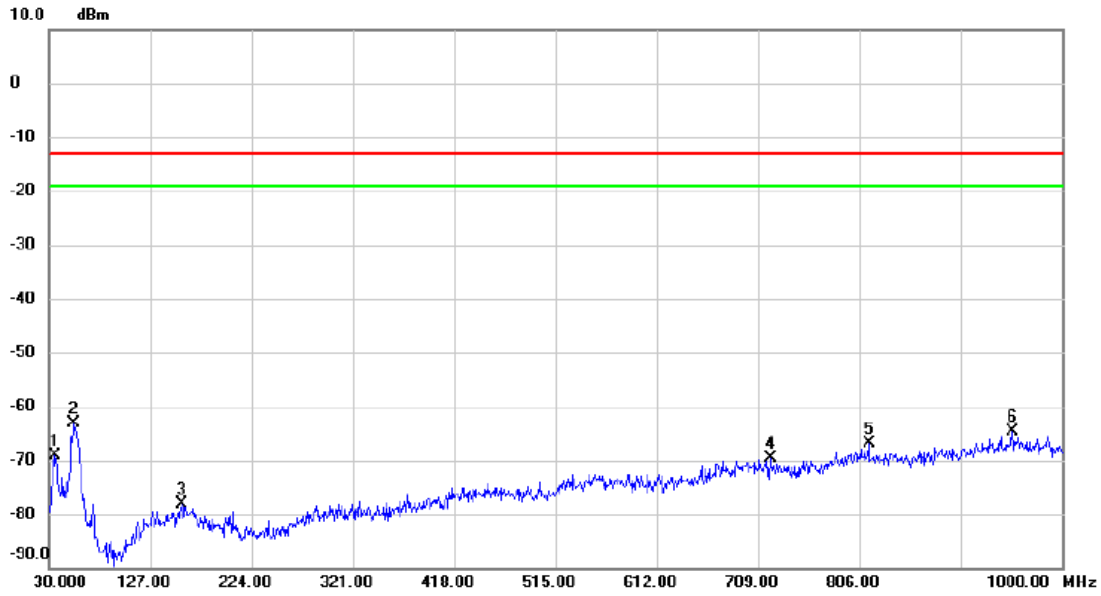


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		0.1894	28.50	17.17	45.67	102.06	-56.39	AVG	
2	*	2.1783	23.40	17.00	40.40	69.54	-29.14	QP	
3		3.8603	22.30	15.86	38.16	69.54	-31.38	QP	

## APPENDIX E - RADIATED EMISSION (30MHZ TO 1GHZ)

Test Mode: PCS1900\_TX CH661\_GSM\_with Earphone

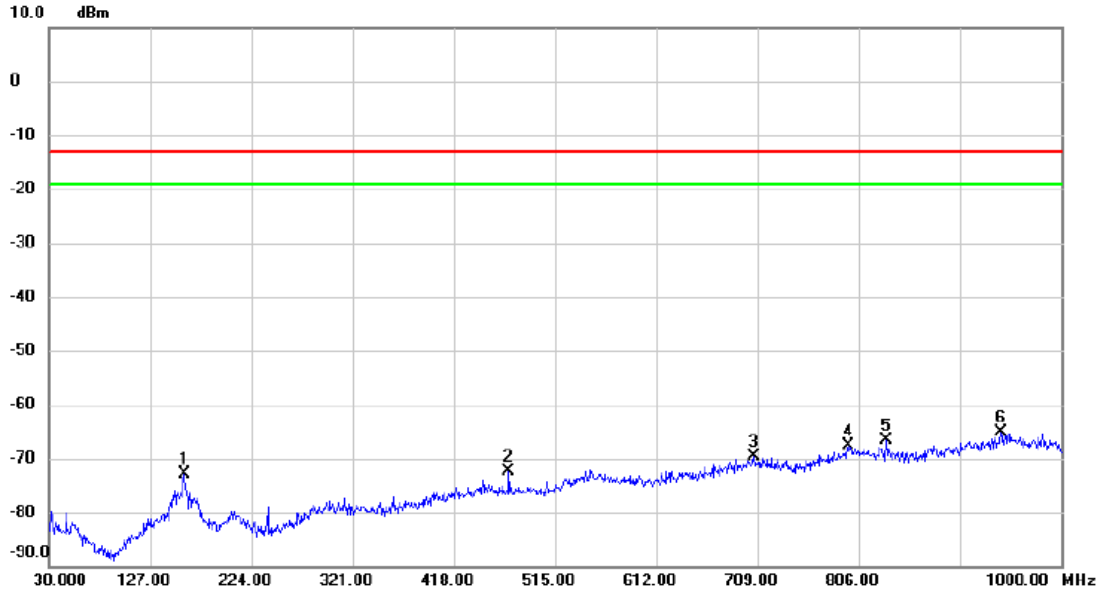
Vertical



No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Margin dB	Detector	Comment
1		35.335	-63.77	-5.34	-69.11	-13.00	-56.11	peak	
2	*	54.250	-57.87	-5.37	-63.24	-13.00	-50.24	peak	
3		157.555	-76.79	-1.23	-78.02	-13.00	-65.02	peak	
4		721.125	-76.02	6.30	-69.72	-13.00	-56.72	peak	
5		815.215	-75.10	8.32	-66.78	-13.00	-53.78	peak	
6		952.470	-75.66	10.94	-64.72	-13.00	-51.72	peak	

Test Mode: PCS1900\_TX CH661\_GSM\_with Earphone

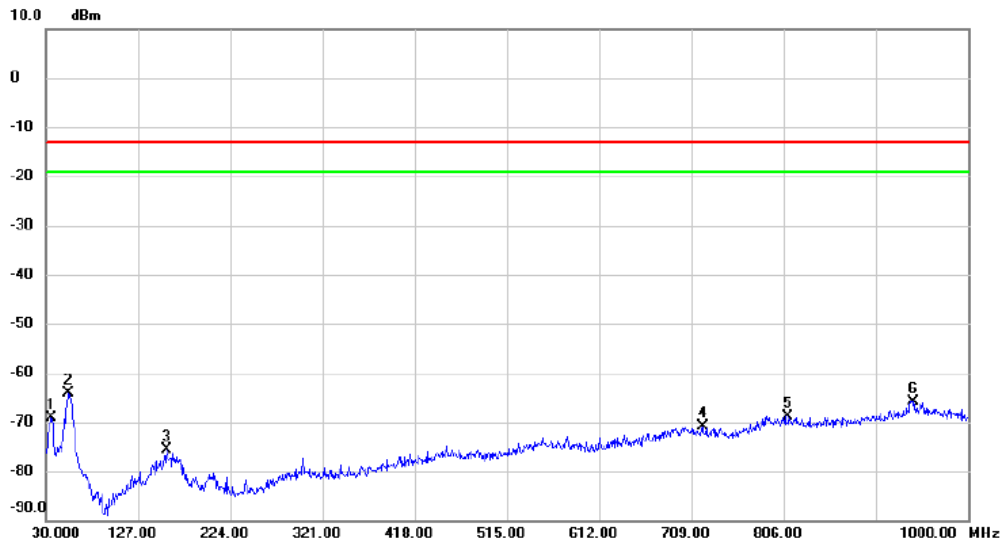
### Horizontal



No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Margin dB	Detector	Comment
1		159.495	-71.72	-1.05	-72.77	-13.00	-59.77	peak	
2		470.380	-74.16	1.73	-72.43	-13.00	-59.43	peak	
3		705.120	-76.23	6.72	-69.51	-13.00	-56.51	peak	
4		795.815	-76.00	8.30	-67.70	-13.00	-54.70	peak	
5		832.190	-74.79	8.05	-66.74	-13.00	-53.74	peak	
6	*	941.800	-75.75	10.66	-65.09	-13.00	-52.09	peak	

Test Mode: PCS1900\_TX CH661\_GSM\_without Earphone

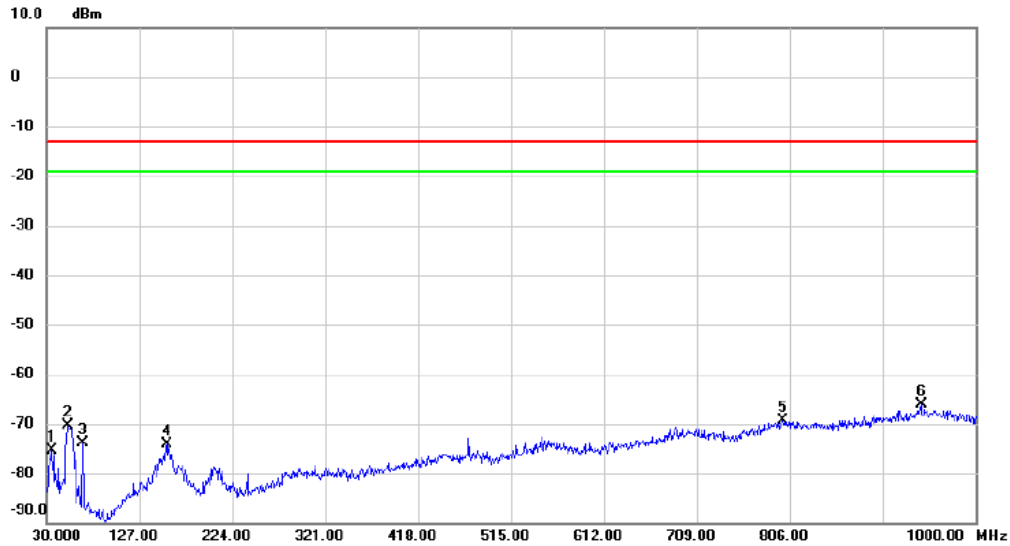
Vertical



No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Margin dB	Detector	Comment
1		35.335	-63.89	-5.34	-69.23	-13.00	-56.23	peak	
2	*	53.765	-58.69	-5.35	-64.04	-13.00	-51.04	peak	
3		157.070	-74.30	-1.27	-75.57	-13.00	-62.57	peak	
4		720.640	-77.29	6.31	-70.98	-13.00	-57.98	peak	
5		810.850	-77.20	8.38	-68.82	-13.00	-55.82	peak	
6		941.800	-76.49	10.66	-65.83	-13.00	-52.83	peak	

Test Mode: PCS1900\_TX CH661\_GSM\_without Earphone

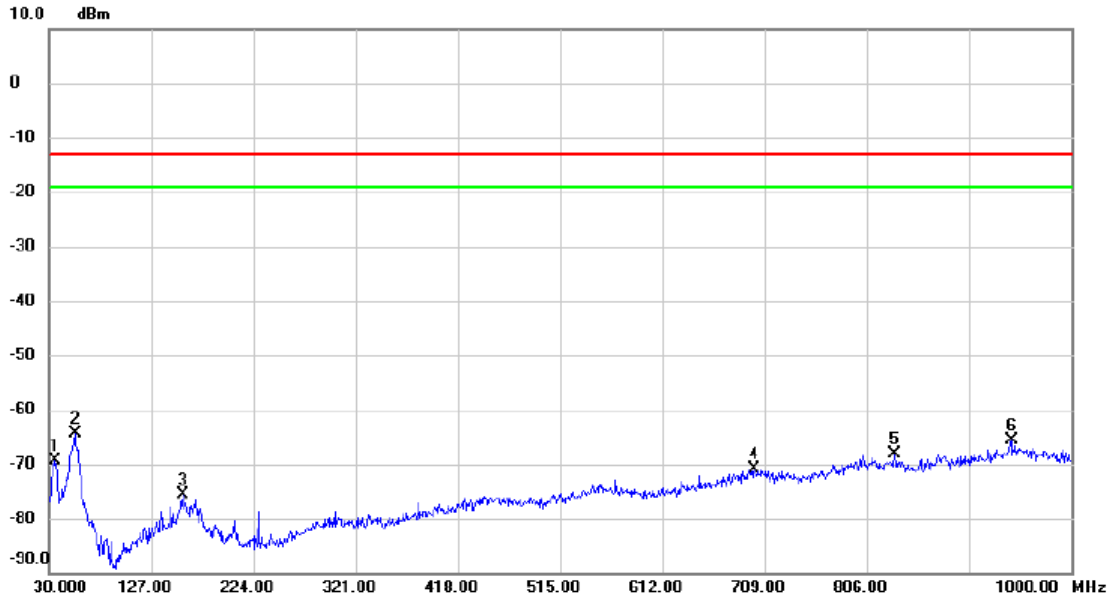
### Horizontal



No. Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Margin dB	Detector	Comment
1	35.820	-69.92	-5.38	-75.30	-13.00	-62.30	peak	
2	52.795	-65.18	-5.31	-70.49	-13.00	-57.49	peak	
3	67.830	-66.52	-7.42	-73.94	-13.00	-60.94	peak	
4	156.585	-72.74	-1.31	-74.05	-13.00	-61.05	peak	
5	798.725	-77.94	8.48	-69.46	-13.00	-56.46	peak	
6 *	943.255	-76.76	10.73	-66.03	-13.00	-53.03	peak	

Test Mode: PCS1900\_TX CH661\_EDGE\_with Earphone

Vertical

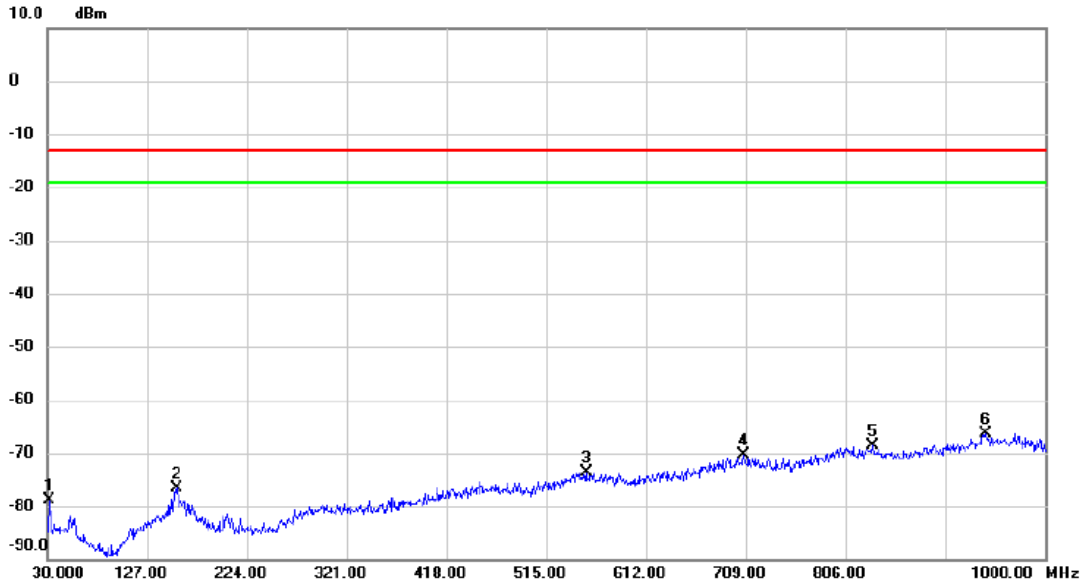


No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Margin dB	Detector	Comment
1		36.305	-64.08	-5.34	-69.42	-13.00	-56.42	peak	
2	*	54.735	-59.08	-5.39	-64.47	-13.00	-51.47	peak	
3		157.070	-74.28	-1.27	-75.55	-13.00	-62.55	peak	
4		699.300	-77.76	6.81	-70.95	-13.00	-57.95	peak	
5		832.675	-76.07	8.04	-68.03	-13.00	-55.03	peak	
6		943.255	-76.25	10.73	-65.52	-13.00	-52.52	peak	



Test Mode: PCS1900\_TX CH661\_EDGE\_with Earphone

### Horizontal



No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Margin dB	Detector	Comment
1		31.455	-73.44	-5.43	-78.87	-13.00	-65.87	peak	
2		156.585	-75.40	-1.31	-76.71	-13.00	-63.71	peak	
3		554.285	-77.63	4.06	-73.57	-13.00	-60.57	peak	
4		707.060	-77.12	6.67	-70.45	-13.00	-57.45	peak	
5		832.675	-76.59	8.04	-68.55	-13.00	-55.55	peak	
6 *		941.800	-77.05	10.66	-66.39	-13.00	-53.39	peak	