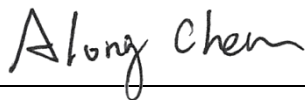


# FCC Test Report

**FCC ID** : MXF-WRTD303NME936  
**Equipment** : LTE Module  
**Model No.** : ME936  
**Brand Name** : Gemtek  
**Applicant** : Gemtek Technology Co., Ltd.  
**Address** : No.15-1 Zhonghua Road, Hsinchu Industrial  
Park, Hukou, Hsinchu, Taiwan, 30352  
**Standard** : 47 CFR FCC Part 27 Subpart L  
**Received Date** : Nov. 12, 2014  
**Tested Date** : Dec. 03 ~ Dec. 23, 2014

We, International Certification Corp., would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It may be duplicated completely for legal use with the approval of the applicant. It shall not be reproduced except in full without the written approval of our laboratory.

Approved & Reviewed by:



Along Chen / Assistant Manager



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## Release Record

Report No.	Version	Description	Issued Date
FG4N1201P27L	Rev. 01	Initial issue	Jan. 21, 2015

## Summary of Test Results

FCC Rules	Test Items	Measured	Result
2.1046 / 27.50(d)(4)	Equivalent Isotropically Radiated Power	Power[dBm]: WCDMA: 24.53 LTE: 24.23	Pass
2.1053 / 27.53(h)	Radiated Emissions	Meet the requirement of limit	Pass
2.1051 / 27.53(h)	Conducted Emissions	Meet the requirement of limit	Pass
27.53(h)	Band Edge Measurement	Meet the requirement of limit	Pass
2.1049 / 27.53(h)	Occupied Bandwidth	Meet the requirement of limit	Pass
27.50(d)(5)	Peak to Average Ratio	Meet the requirement of limit	Pass
2.1055 / 27.54	Frequency Stability	Meet the requirement of limit	Pass

# 1 General Description

## 1.1 Information

### 1.1.1 Specification of the Equipment under Test (EUT)

<b>Operating Frequency (MHz)</b>	WCDMA BAND IV: 1712.4~1752.6 LTE Band 4: Channel Bandwidth: 1.4MHz: 1710.7~1754.3 Channel Bandwidth: 3MHz: 1711.5~1753.5 Channel Bandwidth: 5MHz: 1712.5~1752.5 Channel Bandwidth: 10MHz: 1715~1750 Channel Bandwidth: 15MHz: 1717.5~1747.5 Channel Bandwidth: 20MHz: 1720~1745
<b>Modulation Type</b>	WCDMA / HSDPA / HSUPA Uplink: QPSK Downlink: QPSK , 16QAM , 64QAM  LTE Uplink: QPSK, 16QAM Downlink: QPSK , 16QAM , 64QAM
<b>Duplex Mode</b>	FDD
<b>3GPP Release Version</b>	WCDMA: R7 LTE: 9
<b>H/W Version</b>	V03
<b>S/W Version</b>	1.1.0

Note: The module is certified as limited module that is limited to specific host (refer to section 1.1.2).

### 1.1.2 Specific platform Information

Brand Name	Model Name	Product Name	FCC IC
Gemtek	WRTD-303N	Easy Connect	MXF-WRTD303N

Accessories for Platform		
No.	Equipment	Description
1	AC Adapter 1	Brand Name: AOEM Model Name: ADS0248-W 120200 Power Rating: I/P: 100-240Vac, 50-60Hz, 0.6A O/P: 12Vdc, 2A Power Line: 120cm non-shielded cable with one core
2	AC Adapter 2	Brand Name: APD Model Name: WA-24Q12FU Power Rating: I/P: 100-240Vac, 50-60Hz, 0.6A O/P: 12Vdc, 2A Power Line: 1.8m non-shielded cable with one core
3	AC Adapter 3	Brand Name: MOSO Model Name: MSP-C2000IC12.0-24W-US Power Rating: I/P: 100-240Vac, 50-60Hz, 0.8A O/P: 12Vdc, 2A Power Line: 1.4m non-shielded cable with one core
4	WTE Battery	Model: 303N Rating: 7.4Vdc, 4050mAh (29.97Wh)
5	MAXELL Battery	button cell battery Model: ML2032 Rating: 3Vdc
6	built-in HDD	Brand: TOSHIBA Model: MQ01ABF050 Capacity: 500GB

### 1.1.3 Maximum EIRP, Frequency Tolerance and Emission Designator

System	Modulation	Maximum EIRP(W)	Emission Designator
WCDMA 1700	QPSK	0.284	4M08F9W
LTE Band 4, CB: 1.4MHz	QPSK	0.264	1M09G7D
LTE Band 4, CB: 1.4MHz	16QAM	0.221	1M09W7D
LTE Band 4, CB: 3MHz	QPSK	0.255	2M69G7D
LTE Band 4, CB: 3MHz	16QAM	0.227	2M69W7D
LTE Band 4, CB: 5MHz	QPSK	0.256	4M49G7D
LTE Band 4, CB: 5MHz	16QAM	0.228	4M49W7D
LTE Band 4, CB: 10MHz	QPSK	0.258	9M00G7D
LTE Band 4, CB: 10MHz	16QAM	0.223	8M97W7D
LTE Band 4, CB: 15MHz	QPSK	0.260	13M5G7D
LTE Band 4, CB: 15MHz	16QAM	0.225	13M5W7D
LTE Band 4, CB: 20MHz	QPSK	0.265	18M0G7D
LTE Band 4, CB: 20MHz	16QAM	0.223	18M0W7D

### 1.1.4 Antenna Details

Ant. No.	Type	Gain (dBi)	Connector	Remark
1	PIFA	1.4	UFL	---

### 1.1.5 EUT and Host Operational Condition

#### EUT

<b>Supply Voltage</b>	3.3 Vdc from host		
<b>Operational Climatic</b>	<input checked="" type="checkbox"/> Tnom (20°C)	<input checked="" type="checkbox"/> Tmax (50°C)	<input checked="" type="checkbox"/> Tmin (-30°C)

#### Host

<b>Operational Voltage</b>	<input checked="" type="checkbox"/> Vnom (7.4 Vdc)	<input checked="" type="checkbox"/> Vmax (8.14 Vdc)	<input checked="" type="checkbox"/> Vmin (6.66 Vdc)
----------------------------	--	---	---

### 1.1.6 Operating Channel List

WCDMA BAND IV		
Channel Location	Channel	Frequency (MHz)
Low	1312	1712.4
Middle	1413	1732.6
High	1513	1752.6

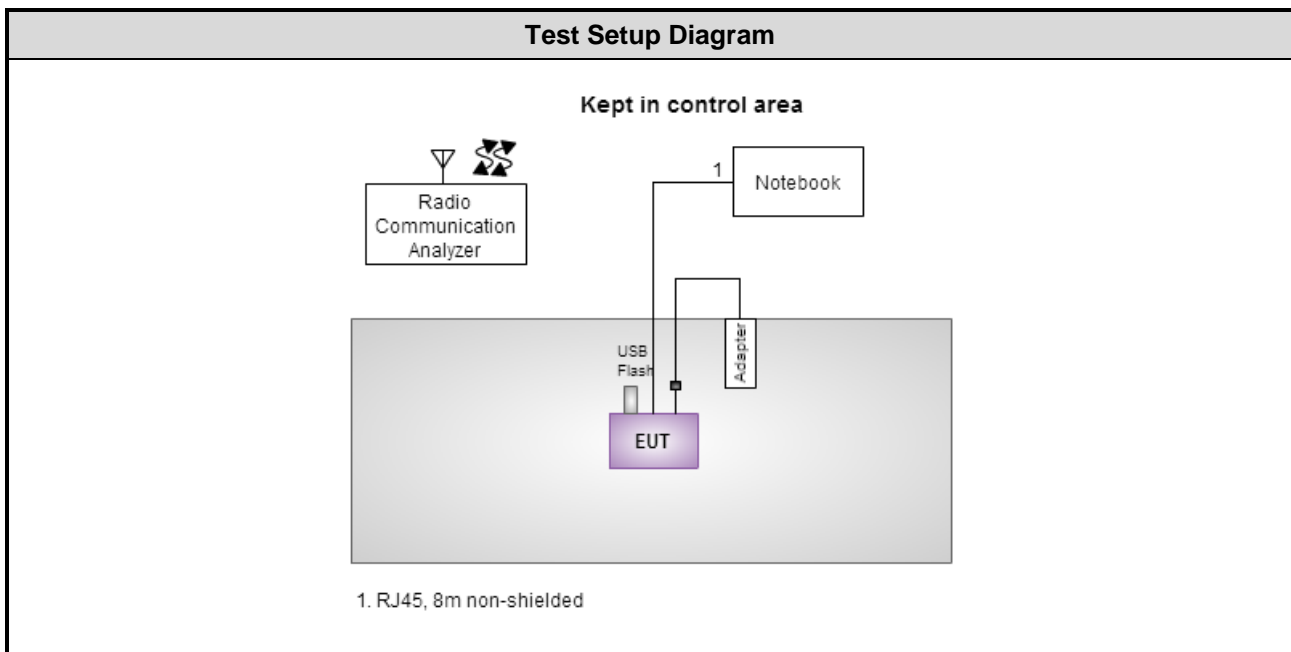
LTE Band 4		
Channel Bandwidth (MHz)	Channel	Frequency (MHz)
1.4	19957	1710.7
1.4	20175	1732.5
1.4	20393	1754.3
3	19965	1711.5
3	20175	1732.5
3	20385	1753.5
5	19975	1712.5
5	20175	1732.5
5	20375	1752.5
10	20000	1715.0
10	20175	1732.5
10	20350	1750.0
15	20025	1717.5
15	20175	1732.5
15	20325	1747.5
20	20050	1720.0
20	20175	1732.5
20	20300	1745.0



## 1.2 Local Support Equipment List

Support Equipment List						
No.	Equipment	Brand	Model	S/N	FCC ID	Signal cable / Length (m)
1	Notebook	DELL	Latitude E6430	J5GB4X1	DoC	RJ45, 8m non-shielded.
2	USB Flash	Kingston	DTSE9	WX9Q6	---	---

## 1.3 Test Setup Chart



Note: The module is certified as limited module that is limited to specific host (refer to section 1.1.2). Thus, test configuration is combined with host not stand-alone

## 1.4 The Equipment List

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101063	Feb. 17, 2014	Feb. 16, 2015
Spectrum Analyzer	Agilent	N9010A	MY53400091	Sep. 16, 2014	Sep. 15, 2015
TEMP&HUMIDITY CHAMBER	GIANT FORCE	GCT-225-40-SP-SD	MAF1212-002	Dec. 03, 2014	Dec. 02, 2015
Power Meter	Anritsu	ML2495A	1241002	Sep. 29, 2014	Sep. 28, 2015
Power Sensor	Anritsu	MA2411B	1207366	Sep. 29, 2014	Sep. 28, 2015
Radio Communication Analyzer	Anritsu	MT8820C	6201240341	Mar. 18, 2014	Mar. 17, 2015
Measurement Software	Sporton	Sporton_1	1.3.30	NA	NA

Note: Calibration Interval of instruments listed above is one year.

Test Item	Radiated Emission				
Test Site	966 chamber1 / (03CH01-WS)				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101499	Feb. 08, 2014	Feb. 07, 2015
Receiver	R&S	ESR3	101658	Nov. 10, 2014	Nov. 09, 2015
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Sep. 05, 2014	Sep. 04, 2015
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1095	Oct. 14, 2014	Oct. 13, 2015
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Nov. 10, 2014	Nov. 09, 2015
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 10, 2014	Nov. 09, 2015
Preamplifier	Burgeon	BPA-530	SN:100219	Sep. 09, 2014	Sep. 08, 2015
Preamplifier	Agilent	83017A	MY39501308	Oct. 09, 2014	Oct. 08, 2015
Preamplifier	EMC	EMC184045B	980192	Aug. 26, 2014	Aug. 25, 2015
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY22620/4	Feb. 19, 2014	Feb. 18, 2015
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY22601/4	Feb. 19, 2014	Feb. 18, 2015
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY22624/4	Feb. 19, 2014	Feb. 18, 2015
LF cable 3M	EMC	EMC8D-NM-NM-3000	131103	Feb. 17, 2014	Feb. 16, 2015
LF cable 10M	EMC	EMC8D-NM-NM-13000	131104	Feb. 17, 2014	Feb. 16, 2015
Measurement Software	AUDIX	e3	6.120210g	NA	NA

Note: Calibration Interval of instruments listed above is one year.

## 1.5 Test Standards

According to the specification of EUT, the EUT must comply with following standards.

47 CFR FCC Part 27 Subpart L

47 CFR FCC Part 2

ANSI C63.4-2003

ANSI / TIA / EIA-603-C -2004

KDB 971168 D01 Power Meas License Digital Systems v02r02

FCC KDB 971168 D02 Misc OOB License Digital Systems v01

KDB 412172 D01 Determining ERP and EIRP v01

## 1.6 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

Measurement Uncertainty	
Parameters	Uncertainty
Bandwidth	±34.134 Hz
Conducted power	±0.808 dB
Frequency error	±34.134 Hz
Temperature	±0.6 °C
Conducted emission	±2.670 dB
AC conducted emission	±2.92 dB
Radiated emission ≤ 1GHz	±3.72 dB
Radiated emission > 1GHz	±5.65 dB

## 2 Test Configuration

### 2.1 Testing Condition and Location Information

Test Item	Test Site	Ambient Condition	Tested By
RF conducted	TH01-WS	21°C / 60-64%	Felix Sung
Radiated Emissions	03CH01-WS	22°C / 63%	Anderson Hong

- FCC site registration No.: 657002
- IC site registration No.: 10807A-1

### 2.2 The Worst Test Modes and Channel Details

#### WCDMA

Test item	Mode	Test channel
E.I.R.P	WCDMA BAND IV	1312, 1413, 1513
Radiated Emission ≤ 1GHz	WCDMA BAND IV	1513
Radiated Emission > 1GHz	WCDMA BAND IV	1312, 1413, 1513
Conducted Emissions	WCDMA BAND IV	1312, 1413, 1513
Band Edge	WCDMA BAND IV	1312, 1513
Occupied Bandwidth	WCDMA BAND IV	1312, 1413, 1513
Peak to average ratio	WCDMA BAND IV	1312, 1413, 1513
Frequency Stability	WCDMA BAND IV	1513

#### Note:

1. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The **X-plane** results were found as the worst case and were shown in this report.
2. Adapter 1, Adapter 2 and Adapter 3 had been pretested and found that **Adapter 1** was the worst case and was selected for final testing (Adapter 1: AOEM adapter; Adapter 2: APD adapter; Adapter 3: MOSO adapter).

## LTE

Test item	Channel Bandwidth	Modulation	Test channel
E.I.R.P	1.4 MHz	QPSK / 16QAM	19957 / 20175 / 20393
Conducted Emissions	3 MHz	QPSK / 16QAM	19965 / 20175 / 20385
Occupied Bandwidth	5 MHz	QPSK / 16QAM	19975 / 20175 / 20375
Peak to Average Ratio	10 MHz	QPSK / 16QAM	20000 / 20175 / 20350
	15 MHz	QPSK / 16QAM	20025 / 20175 / 20325
	20 MHz	QPSK / 16QAM	20050 / 20175 / 20300
Radiated Emission ≤ 1GHz	1.4 MHz	QPSK	20393
	3 MHz	QPSK	20385
	5 MHz	QPSK	20375
	10 MHz	QPSK	20350
	15 MHz	QPSK	20325
	20 MHz	QPSK	20300
Radiated Emission > 1GHz	1.4 MHz	QPSK	19957 / 20175 / 20393
	3 MHz	QPSK	19965 / 20175 / 20385
	5 MHz	QPSK	19975 / 20175 / 20375
	10 MHz	QPSK	20000 / 20175 / 20350
	15 MHz	QPSK	20025 / 20175 / 20325
	20 MHz	QPSK	20050 / 20175 / 20300
Band Edge	1.4 MHz	QPSK / 16QAM	19957 20393
	3 MHz	QPSK / 16QAM	19965 20385
	5 MHz	QPSK / 16QAM	19975 20375
	10 MHz	QPSK / 16QAM	20000 20350
	15 MHz	QPSK / 16QAM	20025 20325
	20 MHz	QPSK / 16QAM	20050 20300
Frequency Stability	1.4 MHz	QPSK	20175
	3 MHz	QPSK	20175
	5 MHz	QPSK	20175
	10 MHz	QPSK	20175
	15 MHz	QPSK	20175
	20 MHz	QPSK	20175

**Note:**

- The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The **X-plane** results were found as the worst case and were shown in this report.
- Adapter 1, Adapter 2 and Adapter 3 had been pretested and found that **Adapter 1** was the worst case and was selected for final testing (Adapter 1: AOEM adapter; Adapter 2: APD adapter; Adapter 3: MOSO adapter).

### 3 Test Results

#### 3.1 Equivalent Isotropically Radiated Power

##### 3.1.1 Limit of Equivalent Isotropically Radiated Power

Mobile and portable stations are limited to 1 watts EIRP.

##### 3.1.2 Test Procedures

For Conducted power measurement

1. The EUT links up with simulator and is set to maximum output power level at low / middle / high channel.
2. Measure the output power of low / middle / high channel of the EUT

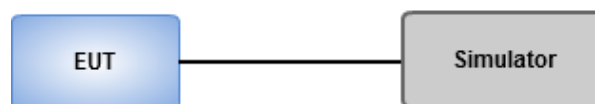
For EIRP measurement

EIPR can be calculated by below formula from KDB 412172 D01

1.  $EIRP = P_T + G_T - L_C$   
 $P_T$  = transmitter output power, in dBm  
 $G_T$  = gain of the transmitting antenna, in dBi (EIRP)  
 $L_C$  = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

##### 3.1.3 Test Setup

###### Conducted Power Measurement



### 3.1.4 Test Result of Conducted power (dBm)

Band	WCDMA BAND IV		
Channel	1312	1413	1513
Frequency (MHz)	1712.4	1732.6	1752.6
RMC 12.2K	23.12	23.10	<b>23.13</b>
HSDPA Subtest-1	22.98	22.94	23.11
HSDPA Subtest-2	22.75	22.69	22.80
HSDPA Subtest-3	22.28	22.25	22.28
HSDPA Subtest-4	21.99	21.97	22.01
HSUPA Subtest-1	22.23	21.74	21.75
HSUPA Subtest-2	20.54	20.41	20.55
HSUPA Subtest-3	21.63	21.50	21.53
HSUPA Subtest-4	20.86	20.71	20.77
HSUPA Subtest-5	22.70	22.61	22.71

Band / Channel Bandwidth			LTE Band 4 / CB: 1.4MHz		
Channel			19957	20175	20393
Frequency (MHz)			1710.7	1732.5	1754.3
Mode	RB	RB Offset	Maximum AV Power (dBm)		
QPSK	1	0	22.51	22.41	22.49
	1	2	22.30	22.42	22.50
	1	5	22.68	22.75	<b>22.82</b>
	3	0	22.42	22.57	22.51
	3	1	22.46	22.52	22.61
	3	2	22.30	22.30	22.72
	6	0	21.89	21.87	21.96
16QAM	1	0	21.87	21.86	21.92
	1	2	21.83	21.89	21.91
	1	5	21.91	21.83	22.04
	3	0	21.92	21.85	21.94
	3	1	21.85	21.89	21.93
	3	2	21.89	21.86	21.90
	6	0	20.84	20.83	20.88

Band / Channel Bandwidth			LTE Band 4 / CB: 3MHz		
Channel			19965	20175	20385
Frequency (MHz)			1711.5	1732.5	1753.5
Mode	RB	RB Offset	Maximum AV Power (dBm)		
QPSK	1	0	22.47	22.44	22.48
	1	7	22.48	22.41	22.53
	1	14	22.43	22.56	<b>22.66</b>
	8	0	21.68	21.69	21.72
	8	4	21.68	21.74	21.76
	8	7	21.84	21.89	21.91
	15	0	21.72	21.73	21.77
16QAM	1	0	21.74	21.82	21.77
	1	7	21.92	21.71	22.16
	1	14	21.87	21.91	22.07
	8	0	20.69	20.72	20.79
	8	4	20.68	20.70	20.82
	8	7	20.73	20.77	20.79
	15	0	20.69	20.71	20.80

Band / Channel Bandwidth			LTE Band 4 / CB: 5MHz		
Channel			19975	20175	20375
Frequency (MHz)			1712.5	1732.5	1752.5
Mode	RB	RB Offset	Maximum AV Power (dBm)		
QPSK	1	0	22.32	22.49	22.57
	1	12	22.24	22.38	22.44
	1	24	22.47	22.58	<b>22.68</b>
	12	0	21.71	21.78	21.85
	12	6	21.69	21.75	21.81
	12	11	21.84	21.88	21.89
	25	0	21.75	21.77	21.80
16QAM	1	0	22.00	21.92	22.17
	1	12	21.86	21.95	21.94
	1	24	21.81	21.98	22.07
	12	0	20.72	20.70	20.79
	12	6	20.73	20.76	20.78
	12	11	20.71	20.75	20.81
	25	0	20.69	20.71	20.74



Band / Channel Bandwidth			LTE Band 4 / CB: 10MHz		
Channel			20000	20175	20350
Frequency (MHz)			1715	1732.5	1750
Mode	RB	RB Offset	Maximum AV Power (dBm)		
QPSK	1	0	22.56	22.56	22.62
	1	24	22.40	22.44	22.47
	1	49	22.58	22.61	<b>22.71</b>
	25	0	21.75	21.76	21.80
	25	12	21.78	21.75	21.83
	25	24	21.81	21.86	21.99
	50	0	21.74	21.78	21.81
16QAM	1	0	21.90	21.88	22.09
	1	24	21.76	21.83	21.79
	1	49	21.73	21.75	21.84
	25	0	20.73	20.79	20.87
	25	12	20.77	20.78	20.83
	25	24	20.84	20.86	20.89
	50	0	20.72	20.77	20.80

Band / Channel Bandwidth			LTE Band 4 / CB: 15MHz		
Channel			20025	20175	20325
Frequency (MHz)			1717.5	1732.5	1747.5
Mode	RB	RB Offset	Maximum AV Power (dBm)		
QPSK	1	0	22.43	22.50	22.68
	1	37	22.41	22.51	22.69
	1	74	22.51	22.65	<b>22.75</b>
	36	0	21.76	21.80	21.81
	36	18	21.84	21.88	21.92
	36	37	21.87	21.89	21.96
	75	0	21.76	21.79	21.83
16QAM	1	0	22.02	22.04	22.08
	1	37	21.84	21.81	21.90
	1	74	22.04	22.05	22.13
	36	0	20.84	20.91	20.96
	36	18	20.76	20.82	20.87
	36	37	20.93	20.99	21.02
	75	0	20.81	20.83	20.86

Band / Channel Bandwidth			LTE Band 4 / CB: 20MHz		
Channel			20050	20175	20300
Frequency (MHz)			1720	1732.5	1745
Mode	RB	RB Offset	Maximum AV Power (dBm)		
QPSK	1	0	22.74	22.76	22.79
	1	49	22.23	22.31	22.40
	1	99	22.69	22.72	<b>22.83</b>
	50	0	21.96	21.92	21.98
	50	24	21.87	21.84	21.86
	50	49	21.88	21.87	21.93
	100	0	21.84	21.86	21.90
16QAM	1	0	22.09	22.02	22.03
	1	49	21.86	22.00	22.01
	1	99	21.89	22.03	22.06
	50	0	20.94	20.84	20.96
	50	24	20.86	20.87	20.95
	50	49	20.84	20.88	20.90
	100	0	20.86	20.92	20.98

### 3.1.5 Test Result of Equivalent Isotropically Radiated Power (dBm)

Mode	WCDMA BAND IV					
Channel	Frequency (MHz)	Conducted Output Power (dBm)	Max Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (dBm)
1312	1712.4	23.12	1.4	24.52	0.283	1
1413	1732.6	23.1	1.4	24.5	0.282	1
1513	1752.6	23.13	1.4	<b>24.53</b>	0.284	1

Mode	LTE Band 4, CB: 1.4MHz, QPSK					
Channel	Frequency (MHz)	Conducted Output Power (dBm)	Max Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (dBm)
19957	1710.7	22.68	1.4	24.08	0.256	1
20175	1732.5	22.75	1.4	24.15	0.260	1
20393	1754.3	22.82	1.4	24.22	0.264	1

Mode	LTE Band 4, CB: 1.4MHz, 16QAM					
Channel	Frequency (MHz)	Conducted Output Power (dBm)	Max Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (dBm)
19957	1710.7	21.92	1.4	23.32	0.215	1
20175	1732.5	21.89	1.4	23.29	0.213	1
20393	1754.3	22.04	1.4	23.44	0.221	1

Mode	LTE Band 4, CB: 3MHz, QPSK					
Channel	Frequency (MHz)	Conducted Output Power (dBm)	Max Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (dBm)
19965	1711.5	22.48	1.4	23.88	0.244	1
20175	1732.5	22.56	1.4	23.96	0.249	1
20385	1753.5	22.66	1.4	24.06	0.255	1

Mode	LTE Band 4, CB: 3MHz, 16QAM					
Channel	Frequency (MHz)	Conducted Output Power (dBm)	Max Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (dBm)
19965	1711.5	21.92	1.4	23.32	0.215	1
20175	1732.5	21.91	1.4	23.31	0.214	1
20385	1753.5	22.16	1.4	23.56	0.227	1

Mode	LTE Band 4, CB: 5MHz, QPSK					
Channel	Frequency (MHz)	Conducted Output Power (dBm)	Max Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (dBm)
19975	1712.5	22.47	1.4	23.87	0.244	1
20175	1732.5	22.58	1.4	23.98	0.250	1
20375	1752.5	22.68	1.4	24.08	0.256	1

Mode	LTE Band 4, CB: 5MHz, 16QAM					
Channel	Frequency (MHz)	Conducted Output Power (dBm)	Max Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (dBm)
19975	1712.5	22	1.4	23.4	0.219	1
20175	1732.5	21.98	1.4	23.38	0.218	1
20375	1752.5	22.17	1.4	23.57	0.228	1

Mode	LTE Band 4, CB: 10MHz, QPSK					
Channel	Frequency (MHz)	Conducted Output Power (dBm)	Max Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (dBm)
20000	1715	22.58	1.4	23.98	0.250	1
20175	1732.5	22.61	1.4	24.01	0.252	1
20350	1750	22.71	1.4	24.11	0.258	1

Mode	LTE Band 4, CB: 10MHz, 16QAM					
Channel	Frequency (MHz)	Conducted Output Power (dBm)	Max Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (dBm)
20000	1715	21.9	1.4	23.3	0.214	1
20175	1732.5	21.88	1.4	23.28	0.213	1
20350	1750	22.09	1.4	23.49	0.223	1

Mode	LTE Band 4, CB: 15MHz, QPSK					
Channel	Frequency (MHz)	Conducted Output Power (dBm)	Max Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (dBm)
20025	1717.5	22.51	1.4	23.91	0.246	1
20175	1732.5	22.65	1.4	24.05	0.254	1
20325	1747.5	22.75	1.4	24.15	0.260	1

Mode	LTE Band 4, CB: 15MHz, 16QAM					
Channel	Frequency (MHz)	Conducted Output Power (dBm)	Max Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (dBm)
20025	1717.5	22.04	1.4	23.44	0.221	1
20175	1732.5	22.05	1.4	23.45	0.221	1
20325	1747.5	22.13	1.4	23.53	0.225	1

Mode	LTE Band 4, CB: 20MHz, QPSK					
Channel	Frequency (MHz)	Conducted Output Power (dBm)	Max Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (dBm)
20050	1720	22.74	1.4	24.14	0.259	1
20175	1732.5	22.76	1.4	24.16	0.261	1
20300	1745	22.83	1.4	<b>24.23</b>	0.265	1

Mode	LTE Band 4, CB: 20MHz, 16QAM					
Channel	Frequency (MHz)	Conducted Output Power (dBm)	Max Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (dBm)
20050	1720	22.09	1.4	23.49	0.223	1
20175	1732.5	22.03	1.4	23.43	0.220	1
20300	1745	22.06	1.4	23.46	0.222	1

## 3.2 Radiated Emissions

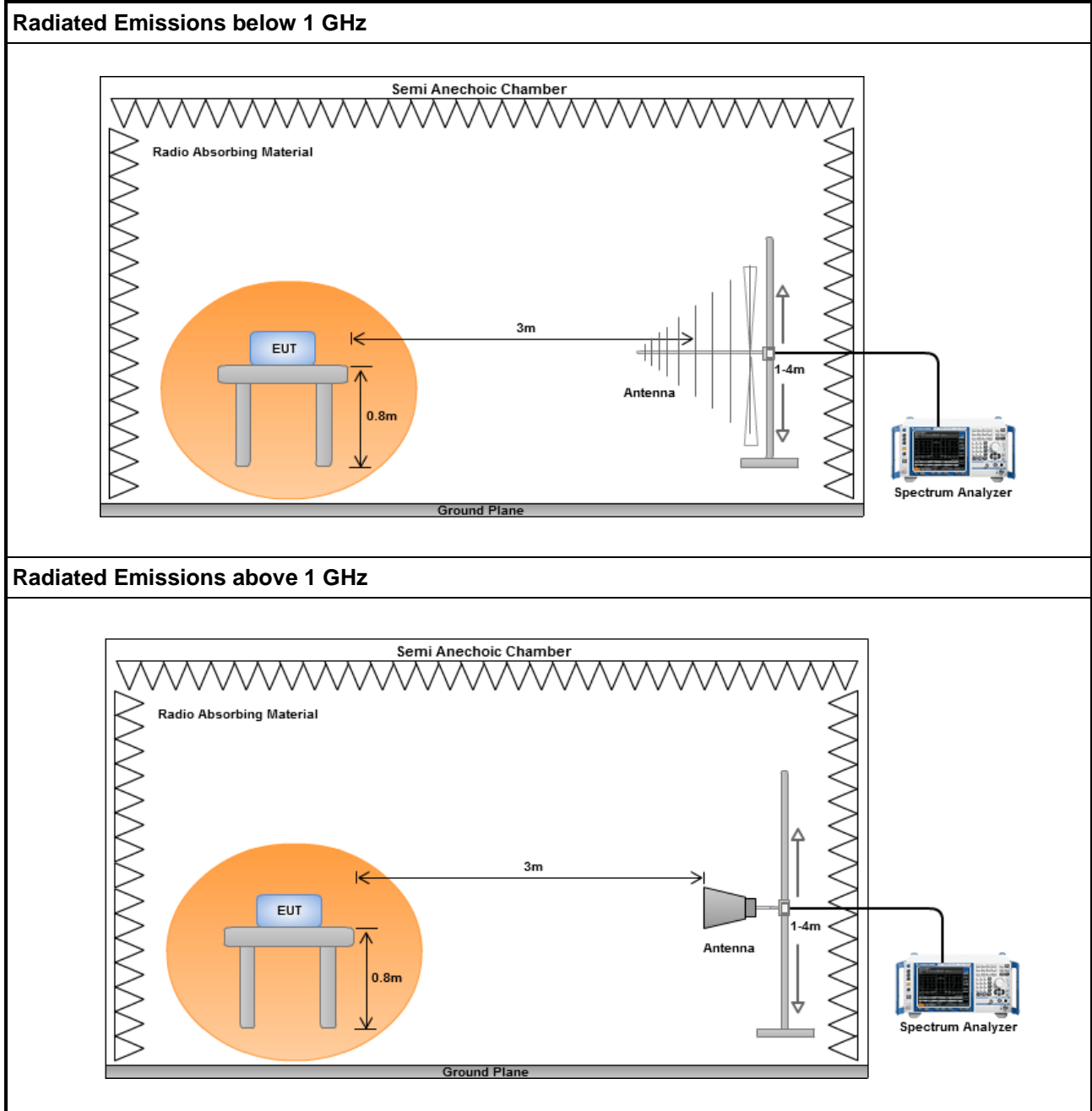
### 3.2.1 Limit of Radiated Emissions

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 equal to -13 dBm.

### 3.2.2 Test Procedures

1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. The EUT is placed at a height of 0.8 m test table above the ground plane.
2. Measurement is made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna is varied in height (1m ~ 4m) above the reference ground plane to obtain the maximum signal strength. Distance between EUT and antenna is 3 m.
3. This investigation is performed with the EUT rotated 360°, the antenna height scanned between 1 m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations.
4. After finding the max radiated emission, substitution method will be used for getting effective radiated power. EUT will be removed and substitution antenna will be placed at same position. Signal generator will output CW signal to substitution antenna through a RF cable. Rotate turntable and move antenna to find maximum radiated emission. Adjust output power of signal generator to let the maximum radiated emission is same as step 3. Record the output power level.
5. E.I.R.P = output power of step 4 + gain of substitution antenna – cable loss of RF cable.

### 3.2.3 Test Setup



### 3.2.4 Test Result of Radiated Emissions below 1GHz

Mode		WCDMA Band IV, Channel: 1513					
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
64.96	H	-57.83	-13	-44.83	-50.23	-50.74	-7.09
120.45	H	-45.36	-13	-32.36	-35.17	-44.64	-0.72
142.71	H	-55.46	-13	-42.46	-46.66	-54.18	-1.28
180.27	H	-64.08	-13	-51.08	-53.69	-66.23	2.15
316.35	H	-62.93	-13	-49.93	-54.22	-67.2	4.27
340.18	H	-60.43	-13	-47.43	-53.03	-64.81	4.38
32.75	V	-53.16	-13	-40.16	-42.07	-39.54	-13.62
41.88	V	-54.26	-13	-41.26	-44.29	-42.23	-12.03
108.54	V	-40.52	-13	-27.52	-31.31	-40.37	-0.15
146.67	V	-56.94	-13	-43.94	-50.17	-55.75	-1.19
278.23	V	-62.51	-13	-49.51	-56.48	-66.78	4.27
309.71	V	-58.72	-13	-45.72	-52.54	-62.96	4.24

Note: EIRP = S.G Power value + Correction factor

Mode		LTE Band 4, CB:1.4MHz, 1RB, Offset 5,Channel:20393					
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
65.42	H	-57.31	-13	-44.31	-49.48	-50.37	-6.94
120.18	H	-46.37	-13	-33.37	-36.16	-45.65	-0.72
142.31	H	-55.62	-13	-42.62	-46.82	-54.33	-1.29
180.29	H	-64.53	-13	-51.53	-54.14	-66.68	2.15
315.26	H	-62.49	-13	-49.49	-53.72	-66.76	4.27
340.38	H	-61.26	-13	-48.26	-53.87	-65.64	4.38
32.68	V	-53.42	-13	-40.42	-42.38	-39.78	-13.64
42.97	V	-54.35	-13	-41.35	-44.72	-42.48	-11.87
108.32	V	-40.96	-13	-27.96	-31.76	-40.82	-0.14
146.29	V	-56.35	-13	-43.35	-49.55	-55.15	-1.2
278.19	V	-62.47	-13	-49.47	-56.44	-66.74	4.27
310.49	V	-59.38	-13	-46.38	-53.21	-63.63	4.25

Note: EIRP = S.G Power value + Correction factor



Mode	LTE Band 4, CB:3MHz, 1RB, Offset 14,Channel:20385						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
65.89	H	-57.09	-13	-44.09	-49.01	-50.31	-6.78
120.21	H	-46.25	-13	-33.25	-36.04	-45.53	-0.72
141.55	H	-55	-13	-42	-46.2	-53.69	-1.31
180.35	H	-64.17	-13	-51.17	-53.77	-66.33	2.16
315.18	H	-62.82	-13	-49.82	-54.04	-67.09	4.27
340.4	H	-61.83	-13	-48.83	-54.44	-66.21	4.38
32.91	V	-53.65	-13	-40.65	-42.45	-40.07	-13.58
42.61	V	-54.13	-13	-41.13	-44.39	-42.21	-11.92
108.57	V	-40.73	-13	-27.73	-31.52	-40.58	-0.15
146.4	V	-56.03	-13	-43.03	-49.24	-54.84	-1.19
278.32	V	-62.97	-13	-49.97	-56.94	-67.24	4.27
310.33	V	-59.97	-13	-46.97	-53.8	-64.22	4.25

Note: EIRP = S.G Power value + Correction factor

Mode	LTE Band 4, CB:5MHz, 1RB, Offset 24,Channel:20375						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
65.24	H	-57.86	-13	-44.86	-50.13	-50.86	-7
120.37	H	-46.18	-13	-33.18	-35.99	-45.46	-0.72
141.26	H	-55.24	-13	-42.24	-46.44	-53.92	-1.32
180.72	H	-64.35	-13	-51.35	-53.91	-66.55	2.2
315.66	H	-62.89	-13	-49.89	-54.14	-67.16	4.27
340.93	H	-61.52	-13	-48.52	-54.16	-65.9	4.38
32.71	V	-53.84	-13	-40.84	-42.78	-40.21	-13.63
42.56	V	-54.28	-13	-41.28	-44.52	-42.35	-11.93
108.63	V	-40.99	-13	-27.99	-31.78	-40.84	-0.15
146.32	V	-56.47	-13	-43.47	-49.67	-55.27	-1.2
278.41	V	-62.53	-13	-49.53	-56.5	-66.8	4.27
310.25	V	-59.88	-13	-46.88	-53.71	-64.13	4.25

Note: EIRP = S.G Power value + Correction factor

Mode	LTE Band 4, CB:10MHz, 1RB, Offset 49,Channel:20350						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
65.23	H	-57.84	-13	-44.84	-50.11	-50.84	-7
120.38	H	-46.51	-13	-33.51	-36.32	-45.79	-0.72
141.72	H	-55.72	-13	-42.72	-46.92	-54.41	-1.31
180.41	H	-64.27	-13	-51.27	-53.86	-66.44	2.17
315.63	H	-62.97	-13	-49.97	-54.22	-67.24	4.27
340.52	H	-61.76	-13	-48.76	-54.38	-66.14	4.38
32.58	V	-53.49	-13	-40.49	-42.52	-39.82	-13.67
42.73	V	-54.26	-13	-41.26	-44.55	-42.35	-11.91
108.36	V	-40.45	-13	-27.45	-31.25	-40.31	-0.14
146.53	V	-55.89	-13	-42.89	-49.11	-54.7	-1.19
278.63	V	-64.02	-13	-51.02	-57.98	-68.29	4.27
310.26	V	-59.78	-13	-46.78	-53.61	-64.03	4.25

Note: EIRP = S.G Power value + Correction factor

Mode	LTE Band 4, CB:15MHz, 1RB, Offset 74,Channel:20325						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
65.77	H	-57.36	-13	-44.36	-49.34	-50.54	-6.82
120.48	H	-46.19	-13	-33.19	-36	-45.46	-0.73
141.63	H	-54.96	-13	-41.96	-46.16	-53.65	-1.31
180.32	H	-64.53	-13	-51.53	-54.13	-66.69	2.16
315.23	H	-62.96	-13	-49.96	-54.19	-67.23	4.27
340.56	H	-61.47	-13	-48.47	-54.09	-65.85	4.38
32.89	V	-53.91	-13	-40.91	-42.72	-40.33	-13.58
42.39	V	-54.27	-13	-41.27	-44.45	-42.31	-11.96
108.41	V	-40.97	-13	-27.97	-31.77	-40.83	-0.14
146.53	V	-56.44	-13	-43.44	-49.66	-55.25	-1.19
278.68	V	-62.74	-13	-49.74	-56.7	-67.01	4.27
310.29	V	-59.81	-13	-46.81	-53.64	-64.06	4.25

Note: EIRP = S.G Power value + Correction factor

Mode	LTE Band 4, CB:20MHz, 1RB, Offset 99,Channel:20300						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
65.29	H	-57.38	-13	-44.38	-49.62	-50.4	-6.98
120.18	H	-46.41	-13	-33.41	-36.2	-45.69	-0.72
141.63	H	-55.47	-13	-42.47	-46.67	-54.16	-1.31
180.23	H	-64.51	-13	-51.51	-54.12	-66.66	2.15
315.93	H	-62.57	-13	-49.57	-53.84	-66.84	4.27
340.23	H	-61.45	-13	-48.45	-54.05	-65.83	4.38
32.58	V	-53.26	-13	-40.26	-42.29	-39.59	-13.67
42.87	V	-54.34	-13	-41.34	-44.68	-42.45	-11.89
108.41	V	-40.99	-13	-27.99	-31.79	-40.85	-0.14
146.39	V	-55.84	-13	-42.84	-49.05	-54.65	-1.19
278.63	V	-62.41	-13	-49.41	-56.37	-66.68	4.27
310.43	V	-59.46	-13	-46.46	-53.29	-63.71	4.25

Note: EIRP = S.G Power value + Correction factor

### 3.2.5 Test Result of Radiated Emissions above 1GHz

Mode		WCDMA Band IV, Channel: 1312					
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3424.8	H	-57.5	-13	-44.5	-68.24	-64.05	6.55
5137.2	H	-53.16	-13	-40.16	-70.44	-59	5.84
6849.6	H	-54.15	-13	-41.15	-75.01	-57.8	3.65
3424.8	V	-61.93	-13	-48.93	-72.72	-68.48	6.55
5137.2	V	-55.83	-13	-42.83	-71.69	-61.67	5.84
6849.6	V	-56.36	-13	-43.36	-75.64	-60.01	3.65

Mode		WCDMA Band IV, Channel: 1413					
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3465.2	H	-57.27	-13	-44.27	-68.39	-63.83	6.56
5197.8	H	-52.94	-13	-39.94	-70.23	-58.78	5.84
6930.4	H	-54.35	-13	-41.35	-75.71	-57.93	3.58
3465.2	V	-61.24	-13	-48.24	-72.39	-67.8	6.56
5197.8	V	-55.24	-13	-42.24	-71.51	-61.08	5.84
6930.4	V	-55.92	-13	-42.92	-75.73	-59.5	3.58

Mode		WCDMA Band IV, Channel : 1513					
Frequency (MHz)	Antenna Polarity.	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3505.2	H	-57.98	-13	-44.98	-69.48	-64.55	6.57
5257.8	H	-53.35	-13	-40.35	-70.54	-59.21	5.86
7010.4	H	-54.12	-13	-41.12	-75.94	-57.6	3.48
3505.2	V	-61.44	-13	-48.44	-72.93	-68.01	6.57
5257.8	V	-55.11	-13	-42.11	-71.24	-60.97	5.86
7010.4	V	-54.74	-13	-41.74	-75.14	-58.22	3.48

Note: EIRP = S.G Power value + Correction factor

Mode							
LTE Band 4, CB: 1.4MHz, 1RB, Offset 0, Channel : 19957							
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3422.31	H	-54.7	-13	-41.7	-65.41	-61.25	6.55
5133.39	H	-48.09	-13	-35.09	-65.37	-53.93	5.84
6840.88	H	-53.51	-13	-40.51	-74.31	-57.17	3.66
3422.31	V	-58.25	-13	-45.25	-69.02	-64.8	6.55
5133.39	V	-48.55	-13	-35.55	-64.38	-54.39	5.84
6840.88	V	-54.59	-13	-41.59	-73.81	-58.25	3.66

Mode							
LTE Band 4, CB: 1.4MHz, 1RB, Offset 0, Channel : 20175							
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3465.89	H	-55.72	-13	-42.72	-66.85	-62.28	6.56
5198.76	H	-47.38	-13	-34.38	-64.67	-53.22	5.84
6932.3	H	-53.57	-13	-40.57	-74.95	-57.15	3.58
3465.89	V	-59.06	-13	-46.06	-70.21	-65.62	6.56
5198.76	V	-47.36	-13	-34.36	-63.63	-53.2	5.84
6932.3	V	-54.67	-13	-41.67	-74.49	-58.25	3.58

Mode							
LTE Band 4, CB: 1.4MHz, 1RB, Offset 0, Channel : 20393							
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3510.07	H	-55.8	-13	-42.8	-67.34	-62.37	6.57
5264.3	H	-46.41	-13	-33.41	-63.59	-52.27	5.86
7020.47	H	-52.33	-13	-39.33	-74.15	-55.77	3.44
3510.07	V	-57.7	-13	-44.7	-69.23	-64.27	6.57
5264.3	V	-42.95	-13	-29.95	-59.07	-48.81	5.86
7020.47	V	-53.61	-13	-40.61	-74.13	-57.05	3.44

Note: EIRP = S.G Power value + Correction factor

Mode	LTE Band 4, CB: 3MHz, 1RB, Offset 0, Channel : 19965						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3425.6	H	-55.29	-13	-42.29	-66.03	-61.84	6.55
5138.28	H	-48.63	-13	-35.63	-65.91	-54.47	5.84
6850.82	H	-53.41	-13	-40.41	-74.27	-57.06	3.65
3425.6	V	-58.04	-13	-45.04	-68.84	-64.59	6.55
5138.28	V	-48.15	-13	-35.15	-64.01	-53.99	5.84
6850.82	V	-53.89	-13	-40.89	-73.17	-57.54	3.65

Mode	LTE Band 4, CB: 3MHz, 1RB, Offset 0, Channel : 20175						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3467.48	H	-55.58	-13	-42.58	-66.72	-62.14	6.56
5201.21	H	-48.55	-13	-35.55	-65.84	-54.39	5.84
6934.05	H	-52.93	-13	-39.93	-74.32	-56.51	3.58
3467.48	V	-57.98	-13	-44.98	-69.15	-64.54	6.56
5201.21	V	-47.51	-13	-34.51	-63.79	-53.35	5.84
6934.05	V	-53.68	-13	-40.68	-73.51	-57.26	3.58

Mode	LTE Band 4, CB: 3MHz, 1RB, Offset 0, Channel : 20385						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3509.36	H	-55.78	-13	-42.78	-67.32	-62.35	6.57
5264.33	H	-46	-13	-33	-63.18	-51.86	5.86
7019.27	H	-52.38	-13	-39.38	-74.2	-55.83	3.45
3509.36	V	-58.23	-13	-45.23	-69.76	-64.8	6.57
5264.33	V	-43.74	-13	-30.74	-59.86	-49.6	5.86
7019.27	V	-53.28	-13	-40.28	-73.78	-56.73	3.45

Note: EIRP = S.G Power value + Correction factor

Mode							
LTE Band 4, CB: 5MHz, 1RB, Offset 0, Channel : 19975							
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3429.24	H	-54.24	-13	-41.24	-65.02	-60.79	6.55
5144.02	H	-49.43	-13	-36.43	-66.71	-55.27	5.84
6858.61	H	-53.38	-13	-40.38	-74.29	-57.02	3.64
3429.24	V	-58.13	-13	-45.13	-68.96	-64.68	6.55
5144.02	V	-48.31	-13	-35.31	-64.21	-54.15	5.84
6858.61	V	-53.74	-13	-40.74	-73.08	-57.38	3.64

Mode							
LTE Band 4, CB: 5MHz, 1RB, Offset 0, Channel : 20175							
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3469.2	H	-54.27	-13	-41.27	-65.43	-60.83	6.56
5203.98	H	-49.08	-13	-36.08	-66.36	-54.92	5.84
6938.41	H	-53.26	-13	-40.26	-74.68	-56.83	3.57
3469.2	V	-57.54	-13	-44.54	-68.72	-64.1	6.56
5203.98	V	-47.54	-13	-34.54	-63.81	-53.38	5.84
6938.41	V	-53.6	-13	-40.6	-73.46	-57.17	3.57

Mode							
LTE Band 4, CB: 5MHz, 1RB, Offset 0, Channel : 20375							
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3509.26	H	-54.93	-13	-41.93	-66.46	-61.5	6.57
5264	H	-48.8	-13	-35.8	-65.98	-54.66	5.86
7018.62	H	-52.29	-13	-39.29	-74.11	-55.74	3.45
3509.26	V	-57.7	-13	-44.7	-69.23	-64.27	6.57
5264	V	-43.61	-13	-30.61	-59.73	-49.47	5.86
7018.62	V	-52.86	-13	-39.86	-73.35	-56.31	3.45

Note: EIRP = S.G Power value + Correction factor

Mode							
LTE Band 4, CB: 10MHz, 1RB, Offset 0, Channel : 20000							
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3438.88	H	-54.32	-13	-41.32	-65.19	-60.87	6.55
5158.27	H	-47.95	-13	-34.95	-65.23	-53.79	5.84
6877.68	H	-53.48	-13	-40.48	-74.51	-57.1	3.62
3438.88	V	-58.23	-13	-45.23	-69.15	-64.78	6.55
5158.27	V	-47.73	-13	-34.73	-63.73	-53.57	5.84
6877.68	V	-54.19	-13	-41.19	-73.65	-57.81	3.62

Mode							
LTE Band 4, CB: 10MHz, 1RB, Offset 0, Channel : 20175							
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3473.83	H	-54.27	-13	-41.27	-65.47	-60.83	6.56
5210.74	H	-47.76	-13	-34.76	-65.03	-53.6	5.84
6947.71	H	-53.34	-13	-40.34	-74.82	-56.9	3.56
3473.83	V	-58.62	-13	-45.62	-69.84	-65.18	6.56
5210.74	V	-47.8	-13	-34.8	-64.05	-53.64	5.84
6947.71	V	-53.27	-13	-40.27	-73.2	-56.83	3.56

Mode							
LTE Band 4, CB: 10MHz, 1RB, Offset 0, Channel : 20350							
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3508.79	H	-53.65	-13	-40.65	-65.18	-60.22	6.57
5263.22	H	-47.73	-13	-34.73	-64.91	-53.59	5.86
7017.73	H	-53.37	-13	-40.37	-75.2	-56.82	3.45
3508.79	V	-58.05	-13	-45.05	-69.57	-64.62	6.57
5263.22	V	-43.3	-13	-30.3	-59.42	-49.16	5.86
7017.73	V	-52.99	-13	-39.99	-73.48	-56.44	3.45

Note: EIRP = S.G Power value + Correction factor



Mode							
LTE Band 4, CB: 15MHz, 1RB, Offset 0, Channel : 20025							
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3448.24	H	-54.13	-13	-41.13	-65.09	-60.68	6.55
5172.42	H	-48.15	-13	-35.15	-65.43	-53.99	5.84
6896.65	H	-53.42	-13	-40.42	-74.57	-57.03	3.61
3448.24	V	-57.97	-13	-44.97	-68.97	-64.52	6.55
5172.42	V	-48.09	-13	-35.09	-64.18	-53.93	5.84
6896.65	V	-53.67	-13	-40.67	-73.26	-57.28	3.61

Mode							
LTE Band 4, CB: 15MHz, 1RB, Offset 0, Channel : 20175							
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3478.39	H	-54.14	-13	-41.14	-65.38	-60.7	6.56
5217.52	H	-48.58	-13	-35.58	-65.84	-54.43	5.85
6956.49	H	-53.42	-13	-40.42	-74.95	-56.98	3.56
3478.39	V	-58.16	-13	-45.16	-69.42	-64.72	6.56
5217.52	V	-48.33	-13	-35.33	-64.56	-54.18	5.85
6956.49	V	-53.1	-13	-40.1	-73.08	-56.66	3.56

Mode							
LTE Band 4, CB: 15MHz, 1RB, Offset 0, Channel : 20325							
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3508.33	H	-54.68	-13	-41.68	-66.21	-61.25	6.57
5262.49	H	-47.99	-13	-34.99	-65.17	-53.85	5.86
7016.56	H	-52.41	-13	-39.41	-74.24	-55.87	3.46
3508.33	V	-58.05	-13	-45.05	-69.57	-64.62	6.57
5262.49	V	-43.69	-13	-30.69	-59.81	-49.55	5.86
7016.56	V	-53.1	-13	-40.1	-73.58	-56.56	3.46

Note: EIRP = S.G Power value + Correction factor

Mode							
LTE Band 4, CB: 20MHz, 1RB, Offset 0, Channel : 20050							
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3457.87	H	-54.37	-13	-41.37	-65.42	-60.93	6.56
5186.69	H	-48.74	-13	-35.74	-66.03	-54.58	5.84
6915.76	H	-53.27	-13	-40.27	-74.54	-56.86	3.59
3457.87	V	-57.68	-13	-44.68	-68.76	-64.24	6.56
5186.69	V	-48.04	-13	-35.04	-64.23	-53.88	5.84
6915.76	V	-53.94	-13	-40.94	-73.65	-57.53	3.59

Mode							
LTE Band 4, CB: 20MHz, 1RB, Offset 0, Channel : 20175							
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3482.85	H	-54.65	-13	-41.65	-65.93	-61.21	6.56
5224.23	H	-48.47	-13	-35.47	-65.72	-54.32	5.85
6965.23	H	-52.59	-13	-39.59	-74.18	-56.14	3.55
3482.85	V	-57.93	-13	-44.93	-69.23	-64.49	6.56
5224.23	V	-47.8	-13	-34.8	-64.01	-53.65	5.85
6965.23	V	-53.14	-13	-40.14	-73.18	-56.69	3.55

Mode							
LTE Band 4, CB: 20MHz, 1RB, Offset 0, Channel : 20300							
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
3507.68	H	-54.51	-13	-41.51	-66.03	-61.08	6.57
5261.65	H	-47.2	-13	-34.2	-64.39	-53.06	5.86
7015.53	H	-52.2	-13	-39.2	-74.02	-55.66	3.46
3507.68	V	-56.99	-13	-43.99	-68.5	-63.56	6.57
5261.65	V	-43.6	-13	-30.6	-59.72	-49.46	5.86
7015.53	V	-52.83	-13	-39.83	-73.29	-56.29	3.46

Note: EIRP = S.G Power value + Correction factor

## 3.3 Conducted Emissions

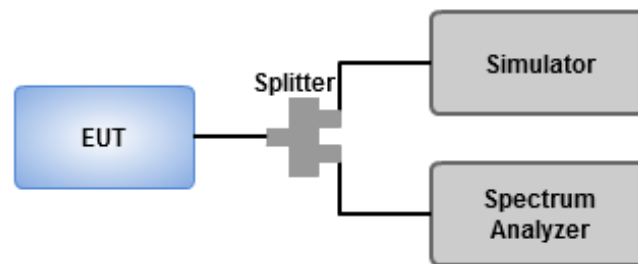
### 3.3.1 Limit of Conducted Emissions

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 equal to -13dBm.

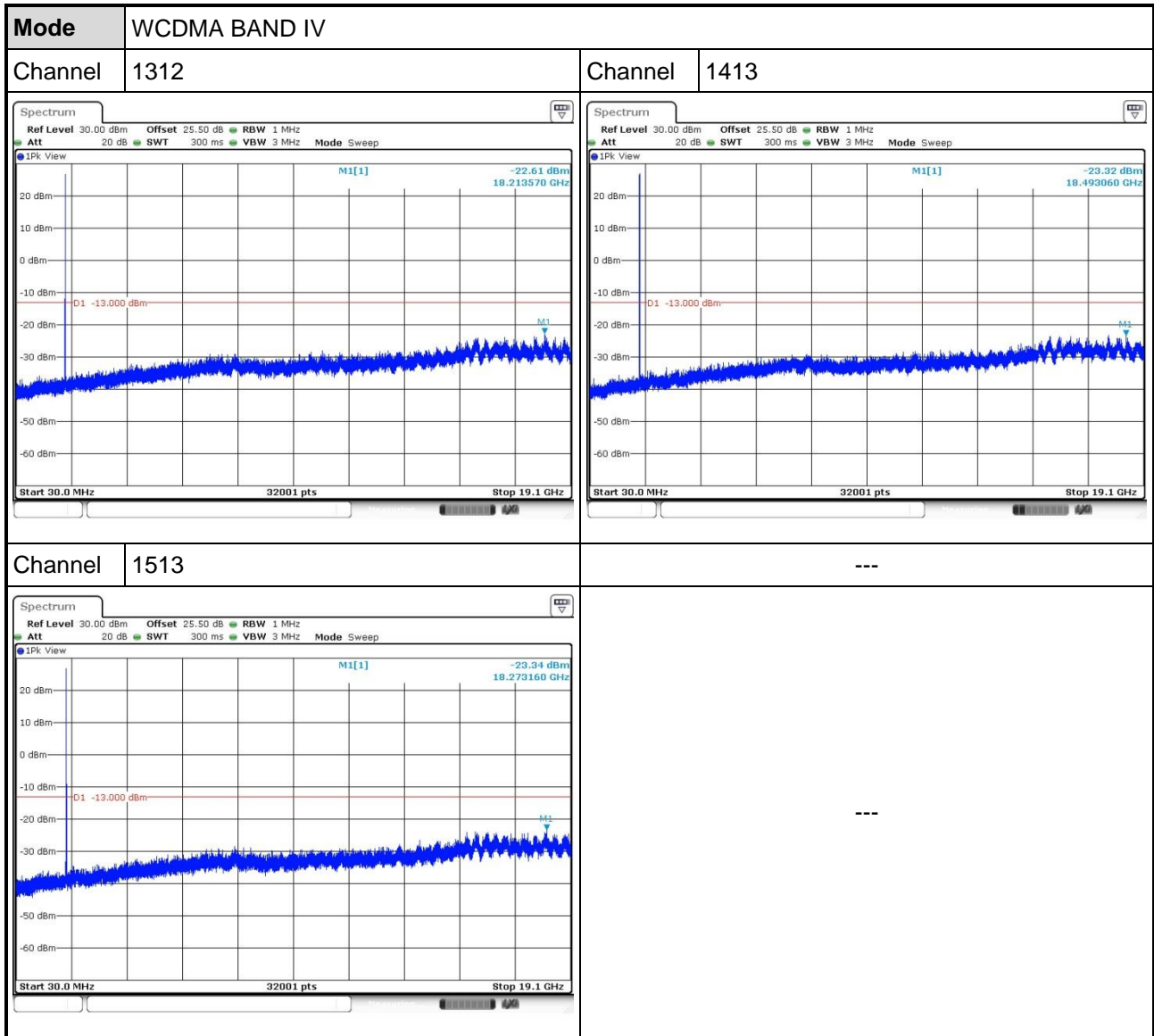
### 3.3.2 Test Procedures

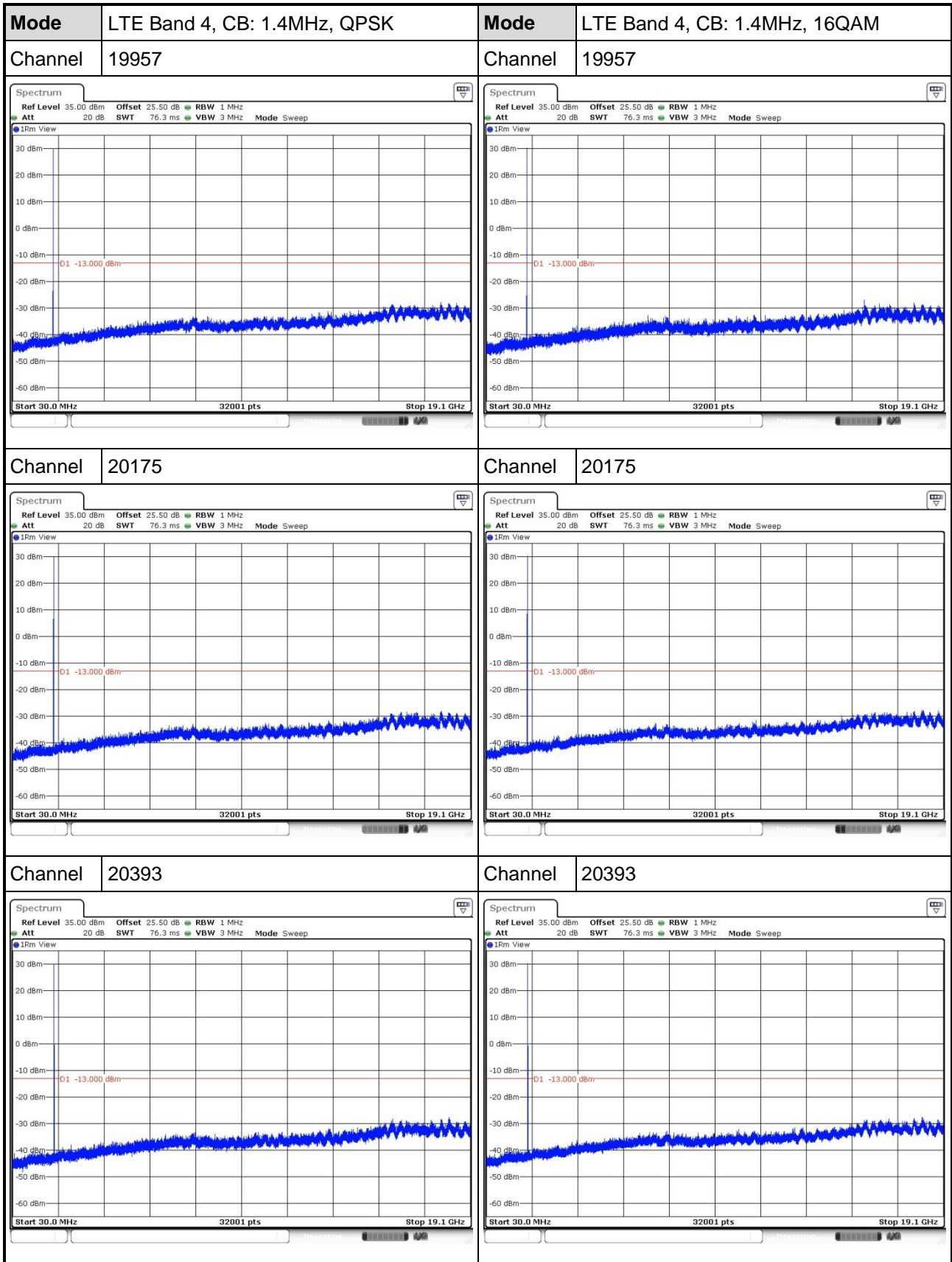
1. Lowest, middle and highest operating channels are tested for this item.
2. Scan frequency range is from 30MHz~19.1GHz.
3. Set RBW = 1MHz, VBW = 3MHz, detector =Peak, sweep time = auto.
4. Record the max trace value and capture the test plot of each sub frequency band.

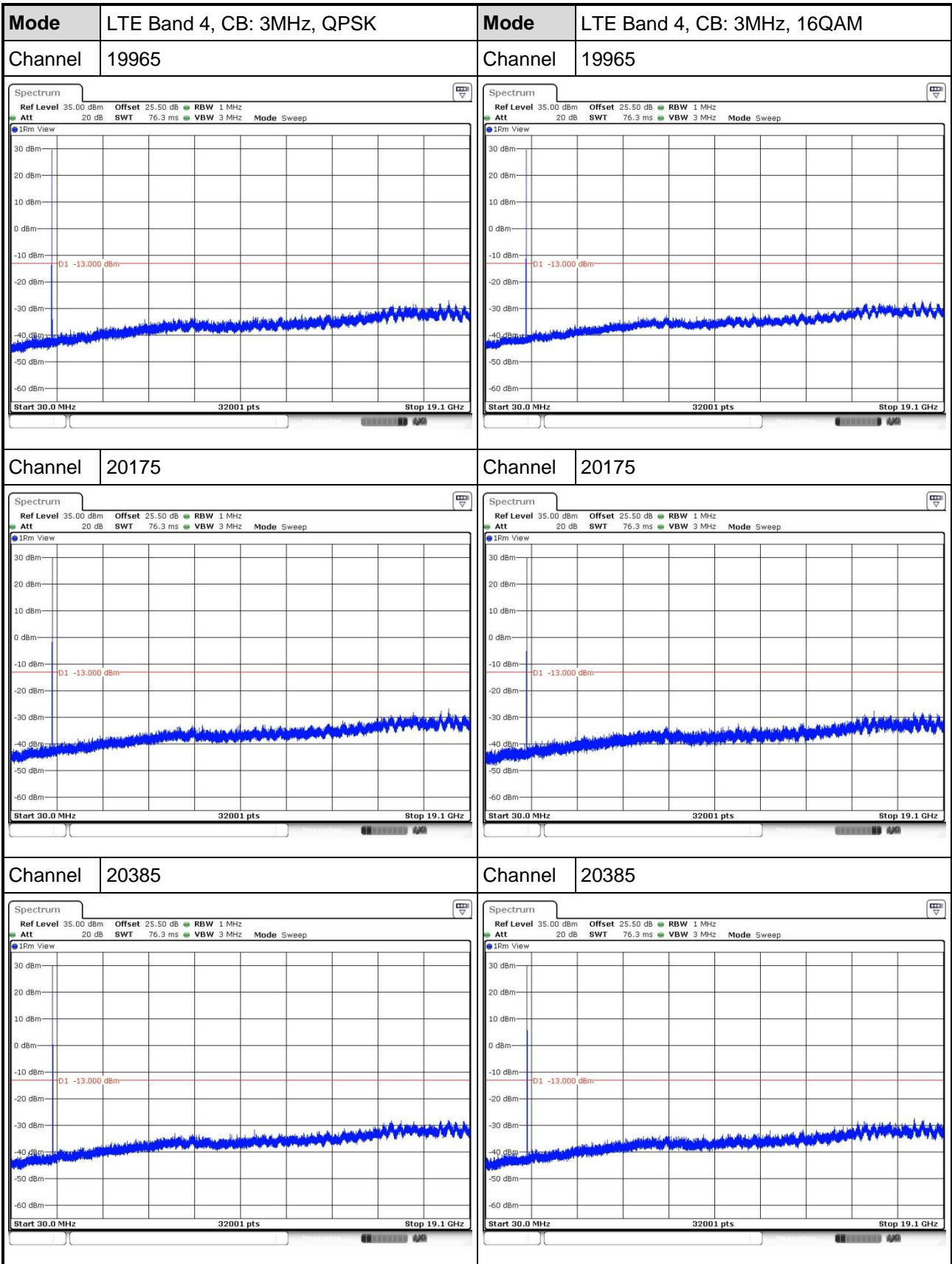
### 3.3.3 Test Setup

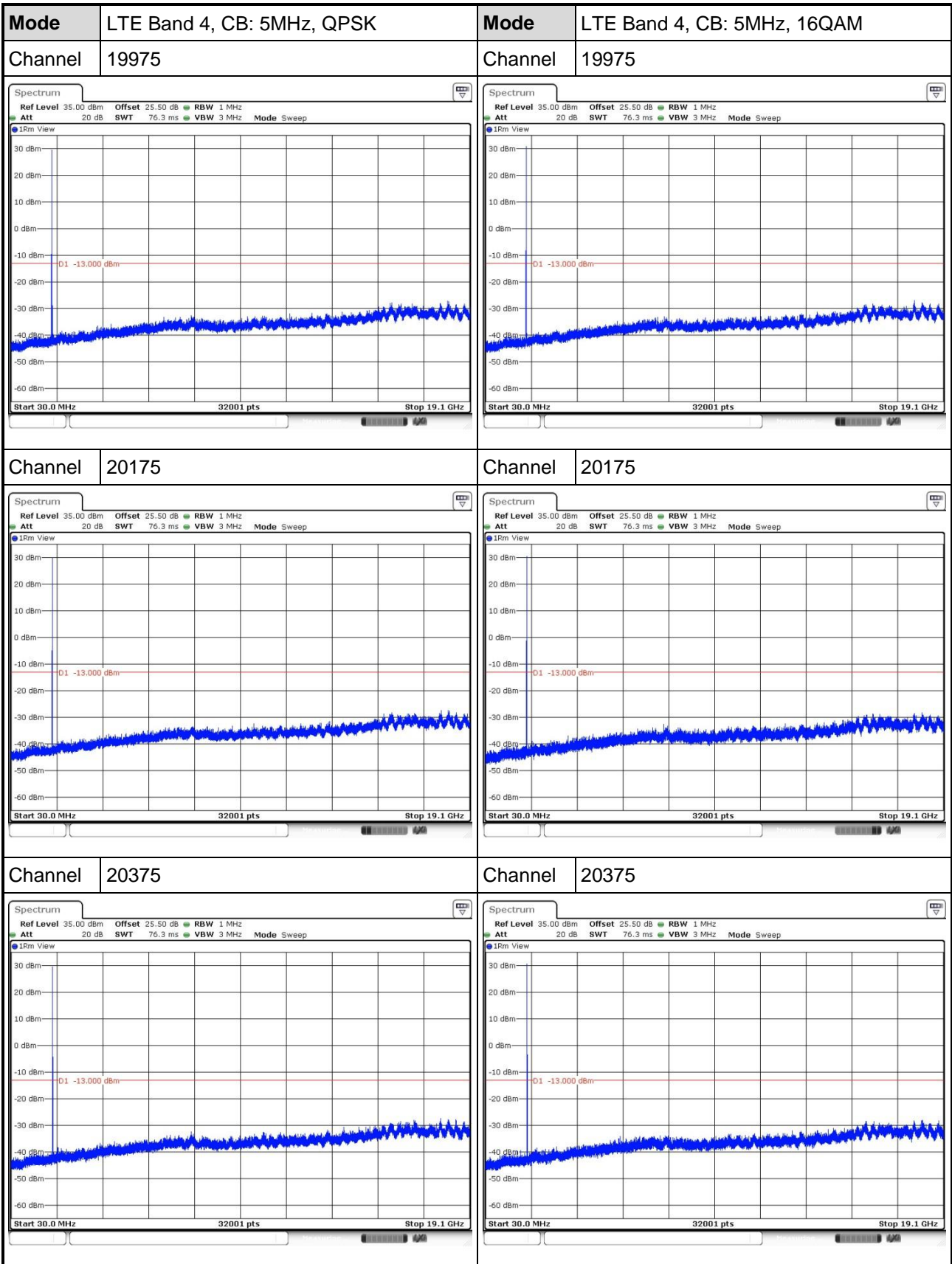


### 3.3.4 Test Result of Conducted Emissions

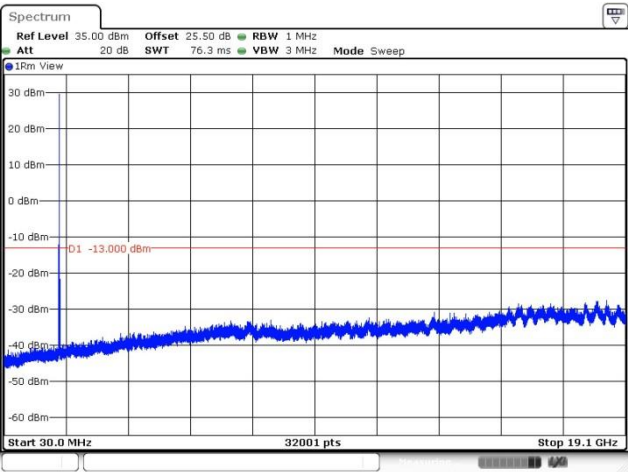
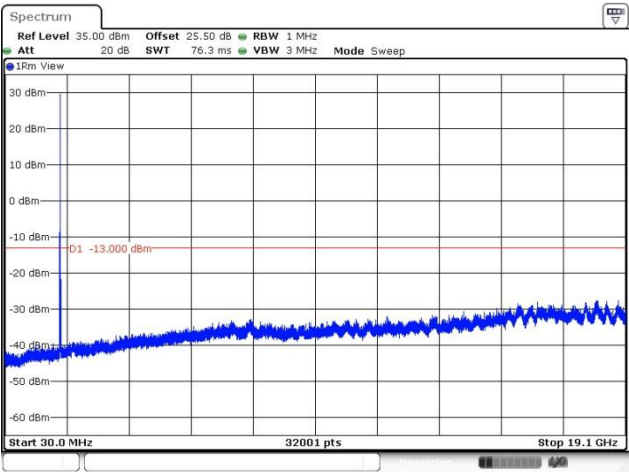
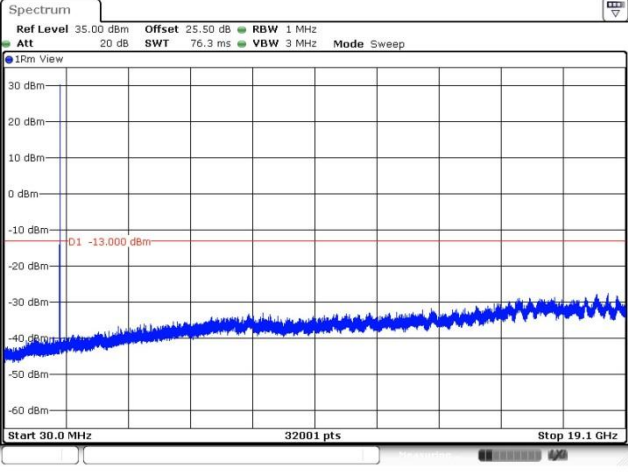
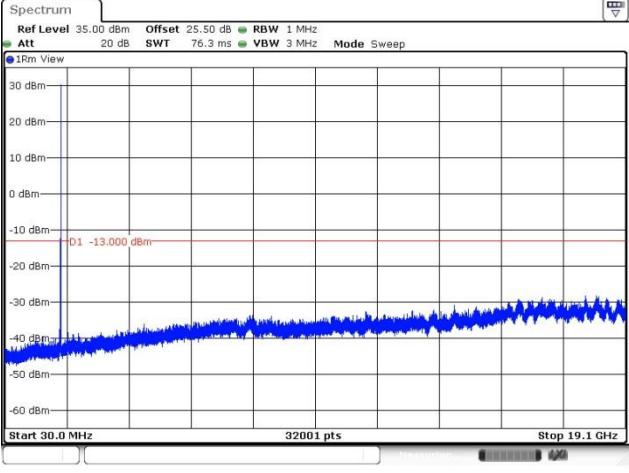










<b>Mode</b>	LTE Band 4, CB: 10MHz, QPSK	<b>Mode</b>	LTE Band 4, CB: 10MHz, 16QAM
<b>Channel</b>	20000	<b>Channel</b>	20000
			
<b>Channel</b>	20175	<b>Channel</b>	20175
			
<b>Channel</b>	20350	<b>Channel</b>	20350
