



# Dongguan Yaxu (AiT) Technology Limited.

Report No. E-R1706017-4

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## TEST REPORT

### ETSI EN 301 908-1 V11.1.1 (2016-07)/ ETSI EN 301 908-13 V11.1.1 (2016-07)

Compiled by

( position+printed name+signature) .: File administrators Jimmy Wang

Supervised by

( position+printed name+signature) .: Test Engineer Peter Xiao

Approved by

( position+printed name+signature) .: Manager Sam Wang

Date of issue .....: Jun. 26, 2017



Representative Laboratory Name ....: Dongguan Yaxu (AiT) Technology Limited

Address .....: No.22, Jinqianling Third Street, Jitigang, Huangjiang, Dongguan, Guangdong, China

**Applicant's name**.....: Shenzhen xinfengweiye Technology Co., Ltd.

Address .....: 5 floor, 6 Building, Huaxin Rui Ming Industrial Park, langrong Road Longhua District, Shenzhen City, China

**Test specification** .....

Standard .....: **ETSI EN 301 908-1 V11.1.1 (2016-07)**

Standard .....: **ETSI EN 301 908-13 V11.1.1 (2016-07)**

**Test item description** .....: 4G LTE wireless routers

Trade Mark .....: N/A

Manufacturer .....: Shenzhen xinfengweiye Technology Co., Ltd.

Model/Type reference .....: 4G185

List Model .....: 4G180, D523, D921

Operation Frequency Band .....: LTE Band 1 , LTE Band 3 &LTE Band 7, LTE Band8 ,LTE Band 20, LTE Band 38, LTE Band 40

Power Class .....: Power Class 3

Modulation .....: QPSK

Hardware version .....: N/A

Software version.....: N/A

Ratings .....: DC 3.7V

Result .....: **PASS**



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## TEST REPORT

Equipment under Test : 4G LTE wireless routers

Model /Type : 4G185

Listed Models : 4G180, D523, D921

**Applicant** : Shenzhen xinfengweiye Technology Co., Ltd.

Address : 5 floor, 6 Building, Huaxin Rui Ming Industrial Park, langrong Road Longhua District, Shenzhen City, China

**Manufacturer** : Shenzhen xinfengweiye Technology Co., Ltd.

Address : 5 floor, 6 Building, Huaxin Rui Ming Industrial Park, langrong Road Longhua District, Shenzhen City, China

<b>Test Result:</b>	<b>PASS</b>
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The test report merely corresponds to the test sample.  
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.



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# 1. Test standards and Test description

## 1.1. Test Standards

The tests were performed according to following standards:

[ETSI EN 301 908-1 V11.1.1 \(2016-07\)](#)–IMT cellular networks;Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive;Part 1: Introduction and common requirements

[ETSI EN 301 908-13 V11.1.1 \(2016-07\)](#)–IMT cellular networks; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 13: Evolved Universal Terrestrial Radio Access (E-UTRA) User Equipment (UE)

[ETSI TS 136 521-1 \(V14.2.0\) \(07-2013\)](#)–"LTE; Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) conformance specification; Radio transmission and reception; Part 1: Conformance testing (3GPP TS 36.521-1 version 11.1.0 Release 11)"

[ETSI TS 136 508 \(V11.1.1\) \(08-2013\)](#)–"LTE; Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Packet Core (EPC); Common test environments for User Equipment (UE) conformance testing (3GPP TS 36.508 version 11.1.1 Release 11)"

Test Description

Radio Spectrum Matter (RSM) Part of Transmitter		
Test Item	Test require	Result
Radiated emissions (UE)	Clause 4.2.2(EN301 908-1)	Pass
Control and monitoring functions (UE)	Clause 4.2.4(EN301 908-1)	Pass
Transmitter Maximum Output Power	Clause 4.2.2(EN301 908-13)	Pass
Transmitter Spectrum Emission Mask	Clause 4.2.3(EN301 908-13)	Pass
Transmitter Spurious Emissions	Clause 4.2.4(EN301 908-13)	Pass
Transmitter Minimum Output Power	Clause 4.2.5(EN301 908-13)	Pass
Receiver Adjacent Channel Selectivity (ACS)	Clause 4.2.6(EN301 908-13)	Pass
Receiver Blocking Characteristics	Clause 4.2.7(EN301 908-13)	Pass
Receiver Spurious Response	Clause 4.2.8(EN301 908-13)	Pass
Receiver Intermodulation Characteristics	Clause 4.2.9(EN301 908-13)	Pass
Receiver Spurious Emissions	Clause 4.2.10(EN301 90813)	Pass
ransmitter Adjacent Channel Leakage Power Ratio	Clause 4.2.11(EN301 90813)	Pass

Remark: The measurement uncertainty is not included in the test result.



## 2. Summary

### 21. General Remarks

Date of receipt of test sample	:	Jun.16, 2017
Testing commenced on	:	Jun.25, 2017
Testing concluded on	:	Jun.25, 2017

### 22 Product Description

Name of EUT:	4G LTE wireless routers
Trade Mark:	N/A
Model/Type reference:	4G185
List Model:	4G180, D523, D921
Power supply:	DC 3.7V
Adapter Information:	Mode:KA25-0501000EU Input:AC 100-240V 50/60Hz 0.25A Output:DC 5V, 1A
LTE	
Operation Band:	FDD Band 1,FDD Band 3, FDD Band 7, FDD Band 8, FDD Band 20, TDD Band 38, TDD Band 40
Release Version:	R8
Operation frequency:	TX: Band 1:1920-1980MHz,Band 3:1710-1785MHz, ,Band 7:2500-2570MHz, Band 8:880-915MHz,Band 20:832-862MHz,Band 38:2570-2620MHz,Band 40:2300-2400MHz Rx: Band 1:2110-2170MHz,Band 3:1930-1990MHz, Band 7:2620-2690MHz, Band 8:925-960MHz,Band 20:791-821MHz, Band 38:2570-2620MHz Band 40:2300-2400MHz
Power Class:	Power Class 3
Modulation Type:	QPSK , 16-QAM
Antenna type:	Internal Antenna
Antenna gain:	Band 1:-0.8dbi,Band 3:-1.0dbi,Band 7 -0.5dbi,Band 8:-0.5dbi,Band 20:-0.8dbi, Band 38:-0.8dbi, Band 40:-0.8dbi
Hardware version:	N/A
Software version:	N/A



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Operation Frequency List:

Transmit Frequency Range FDD					
Band 3		Band 7		Band 20	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
19207	1710.70	20775	2502.5	24175	834.5
⋮	⋮				
19575	1747.50	21100	2535	24300	847
⋮	⋮				
19943	1784.30	21425	2567.5	24425	859.5

Band 1	
Channel	Frequency (MHz)
18025	1922.5
⋮	⋮
18300	1950
⋮	⋮
18575	1977.5

Transmit Frequency Range TDD					
Band 38		Band 40			
Channel	Frequency (MHz)	Channel	Frequency (MHz)		
37750	2575	38650	2295		
⋮	⋮				
38000	2595	38900	2345		
⋮	⋮				
38249	2615	39649	2395		

## 23. EUT operation mode

The EUT and test equipment were configured for testing according to ETSI EN 301 908-1 V11.1.1 (2016-07), ETSI EN 301 908-13 V11.1.1 (2016-07) where refer to ETSI TS 136 521-1 (V14.2.0)for details.

## 24. EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

- - supplied by the manufacturer
- - supplied by the lab

○ PowerCable	Length (m) :	/
	Shield :	/
	Detachable :	/
○ Multimeter	Manufacturer :	/
	Model No. :	/

## 25. Modifications

No modifications were implemented to meet testing criteria.



### **3. Test Environment**

#### **31. Address of the test laboratory**

Dongguan Yaxu (AiT) Technology Limited  
No.22, Jinqianling Third Street, Jitigang, Huangjiang, Dongguan, Guangdong, China

#### **32. Environmental conditions**

During the measurement the environmental conditions were within the listed ranges:

<b>Temperature</b>	NT: Normal Temperature	25°C
	HT: High Temperature	55°C
	LV: Low Temperature	-10°C
<b>Voltage</b>	NV: Normal Voltage	DC 3.7V
	HV: High Voltage	DC 4.20V
	LV: Low Voltage	DC 3.40V
<b>Other</b>	lative Humidity	55 %
	Air Pressure	989 hPa



### 33. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to TR-100028-01 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 1" and TR-100028-02 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 2" and is documented in the Shenzhen Global Test Service Co., Ltd. quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Frequency error	25 Hz	(1)
Frequency range	25 Hz	(1)
Transmitter power conducted	0.57 dB	(1)
Transmitter power Radiated	2.20 dB	(1)
Adjacent and alternate channel power Conducted	1.20 dB	(1)
Conducted spurious emission	1.60 dB	(1)
Radiated spurious emission	2.20 dB	(1)
Intermodulation attenuation	1.00 dB	(1)
Maximum useable receiver sensitivity	2.80 dB	(1)
Co-channel rejection	2.80 dB	(1)
Adjacent channel selectivity	2.80 dB	(1)
Spurious response rejection	2.80 dB	(1)
Intermodulation response rejection	2.80 dB	(1)
Blcking or desensitization	2.80 dB	(1)

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k=1.96$ .





**34. Equipments Used during the Test**

Radiated emissions				
Item	Test Equipment	Manufacturer	Model No.	Last Cal.
1	ULTRA-ROADBAND ANTENNA	Sunol Sciences Corp.	JB1	2017/06/02
2	Horn Antenna	Sunol Sciences Corp.	DRH-118	2017/05/19
3	EMI Test Receiver	R&S	ESCI	2017/06/02
4	Controller	EM Electronics	Controller EM 1000	2017/05/21
5	Amplifier	Agilent	8349B	2017/05/19
6	Amplifier	Agilent	8447D	2017/05/19
7	Temperature/Humidity Meter	Gangxing	CTH-608	2017/05/20
8	High-Pass Filter	K&L	9SH10-2700/X12750-O/O	2017/05/20
9	High-Pass Filter	K&L	41H10-1375/U12750-O/O	2017/05/20
10	RF Cable	HUBER+SUHNER	RG214	2017/05/20
11	Universal Communication on tester	R&S	CMU200	2017/06/02

Conducted Measurement				
Item	Test Equipment	Manufacturer	Model No.	Last Cal.
1	Universal Communication on tester	R&S	CMW500	2017/06/02
2	EMI TEST RECEIVER	R&S	ESU40	2017/06/02
3	MXA Signal Analyzer	Agilent	N9020A	2017/06/02
4	Power supply	Agilent	E4438C	2017/06/02
5	Signal generator	Agilent	E8257D	2017/06/02
6	Temperature&Humidity Test chamber	ESPEC	LHU-213	2017/06/02
7	electromagnetic vibration generator system	BERIER	BF-LD-F	2017/06/02
8	Fading Simulator	R&S	ABFS	2017/06/02
9	Fading Simulator	R&S	ABFS	2017/06/02

The Cal. Interval was one year



#### 4. Test conditions and Results

Test Item	Test Requirement ESTIEN3019 08-1	Test Method ESTIEN3019 08-1	Test Conditions	Verdict	LTE FDD Band 1	LTE FDD Band 3	LTE FDD Band 7	LTE FDD Band 8	LTE FDD Band 20	Note:
Radiated emissions (UE)	Clause 4.2.2	clause 5.3.1	NT/NV	Pass	5M/10M/15M/20M	1.4M/3M/5M/10M/15M/20M	5M/10M/15M/20M	1.4M/3M/5M/10M/	5M/10M/15M/20M	Reference to the section 4.2.1
Control and monitoring functions (UE)	Clause 4.2.4	clause 5.3.3	NT/NV	Pass	5M/10M/15M/20M	1.4M/3M/5M/10M/15M/20M	5M/10M/15M/20M	1.4M/3M/5M/10M/	5M/10M/15M/20M	
Test Item	Test Requirement ESTIEN3019 0813	Test Method ETSIEN3019 0813	Test Conditions	Verdict		LTE FDD Band 3				Note:
Transmitter Maximum Output Power	Clause 4.2.2	clause 5.3.1	NT/NV	Pass	5M/20M	1.4M/5M/20M	5M/20M	1.4M/5M	5M/20M	Reference to the section 4.1.1
			LT/LV	Pass						
			LT/HV	Pass						
			HT/LV	Pass						
			HT/HV	Pass						
Transmitter Spectrum Emission Mask	Clause 4.2.3	Clause 5.3.2	NT/NV	Pass	5M//10M/20M	1.4M/5M/10M/20M	5M/20M	1.4M/5M	5M/20M	
Transmitter Spurious Emissions	Clause 4.2.4	Clause 5.3.3	NT/NV	Pass	5M/20M	1.4M/5M/20M	5M/20M	1.4M/5M	5M/20M	
Transmitter Minimum Output Power	Clause 4.2.5	Clause 5.3.4	NT/NV	Pass	5M/20M	1.4M/5M/20M	5M/20M	1.4M/5M	5M/20M	
			LT/LV	Pass						
			LT/HV	Pass						
			HT/LV	Pass						
			HT/HV	Pass						
Receiver Adjacent Channel Selectivity (ACS)	Clause 4.2.6	Clause5.3.5	NT/NV	Pass	5M/20M	1.4M/5M/20M	5M/20M	1.4M/5M	5M/20M	
Receiver Blocking Characteristics	Clause 4.2.7	Clause 5.3.6	NT/NV	Pass	5M/20M	1.4M/5M/20M	5M/20M	1.4M/5M	5M/20M	
Receiver Spurious Response	Clause 4.2.8	Clause5.3.7	NT/NV	Pass	5M/20M	1.4M/5M/20M	5M/20M	1.4M/5M	5M/20M	
Receiver Intermodulation Characteristics	Clause 4.2.9	Clause5.3.8	NT/NV	Pass	5M/20M	1.4M/5M/20M	5M/20M	1.4M/5M	5M/20M	
Receiver Spurious Emissions	Clause 4.2.10	Clause 5.3.9	NT/NV	Pass	5M/20M	1.4M/5M/20M	5M/20M	1.4M/5M	5M/20M	
transmitter	Clause 4.2.11	Clause 5.3.10	NT/NV	Pass	5M//10M/20M	1.4M/5M/10M/20M	5M/20M	1.4M/5M	5M/20M	
			LT/LV	Pass						



Adjacent Channel Leakage Power Ratio			LT/HV	Pass						
			HT/LV	Pass						
			HT/HV	Pass						

**41. ETSI EN301908-2 Requirement**

**4.1.1. Transmitter Maximum Output Power**

**LIMIT**

**ETSI EN 301 908-13 Sub-clause 4.2.2.1.2**

E-UTRA Band	Power Class 3 (dBm)	Tolerance (dB)
1	23	±2,7
3	23	±2,7 (see note)
7	23	±2,7 (see note)
8	23	±2,7 (see note)
20	23	±2,7 (see note)
33	23	±2,7
34	23	±2,7
38	23	±2,7
40	23	±2,7
42	23	+3,0/-4,0
43	23	+3,0/-4,0

NOTE: For transmission bandwidths (TS 136 521-1 [1], clause 5) confined within  $F_{UL\_low}$  and  $F_{UL\_low} + 4$  MHz or  $F_{UL\_high} - 4$  MHz and  $F_{UL\_high}$ , the maximum output power requirement is relaxed by reducing the lower tolerance limit by 1,5 dB (tolerance = +2,7/-4,2).

**TEST PROCEDURE**

**ETSI EN 301 908-13 Sub-clause 5.3.1.1.2**

1. Set and send continuously Up power control commands to the UE.
2. SS sends uplink scheduling information for each UL HARQ process via PDCCH DCI format 0 for C\_RNTI to schedule the UL RMC according to table 6.2.2.1.4.1-1 of TS 136 521-1 [1]. Since the UE has no payload and no loopback data to send the UE sends uplink MAC padding bits on the UL RMC
3. Send continuously uplink power control "up" commands in every uplink scheduling information to the UE; allow at least 200 ms for the UE to reach PUMAX level.
4. Measure the mean power of the UE in a bandwidth of at least (1+x) times the channel bandwidth of the radio access mode. The period of measurement shall be at least one (timeslot/frame/TTI).
5. Repeat for applicable test frequencies, channel bandwidths, operating band combinations and environmental conditions.



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## TEST RESULTS

Band :		Band 1	NT/NV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
5MHz	18025	1930	1RB(RB#0 )	22.50	21.28
			1RB(RB#max)	22.49	21.25
			8RB (RB#0 )	22.28	21.09
	18300	1950	1RBlow	23.61	22.41
			1RB(RB#max)	23.62	22.43
			8RB (RB#0 )	23.64	22.39
	18575	1977.5	1RBlow	22.05	20.81
			1RB(RB#max)	22.03	20.82
			8RB (RB#18)	21.84	20.61
20MHz	18100	2502.5	1RB(RB#0 )	22.55	21.32
			1RB(RB#max)	22.60	21.45
			18RB (RB#0 )	22.42	21.19
	18300	1950	1RB(RB#0 )	23.28	22.01
			1RB(RB#max)	23.32	22.12
			18RB (RB#0 )	23.07	21.83
	18500	1970	1RB(RB#0 )	23.07	21.88
			1RB(RB#max)	23.18	20.97
			18RB (RB#83)	22.78	20.89

Band :		Band 1	LT/LV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
5MHz	18025	1930	1RB(RB#0 )	22.40	21.23
			1RB(RB#max)	22.34	21.10
			8RB (RB#0 )	22.13	20.91
	18300	1950	1RBlow	23.60	22.42
			1RB(RB#max)	23.62	22.40
			8RB (RB#0 )	23.46	22.21
	18575	1977.5	1RBlow	21.85	20.64
			1RB(RB#max)	21.96	20.66
			8RB (RB#18)	21.62	20.41
20MHz	18100	2502.5	1RB(RB#0 )	22.44	21.19
			1RB(RB#max)	22.40	21.18
			18RB (RB#0 )	22.22	20.96
	18300	1950	1RB(RB#0 )	23.03	21.83
			1RB(RB#max)	22.96	21.75
			18RB (RB#0 )	22.87	21.56
	18500	1970	1RB(RB#0 )	23.02	21.79
			1RB(RB#max)	22.93	20.83
			18RB (RB#83)	22.64	20.72



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Band :		Band 1	LT/HV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
5MHz	18025	1930	1RB(RB#0 )	22.45	21.16
			1RB(RB#max)	22.51	21.33
			8RB (RB#0 )	22.29	21.13
	18300	1950	1RBlow	23.76	22.61
			1RB(RB#max)	23.81	22.59
			8RB (RB#0 )	23.62	22.42
	18575	1977.5	1RBlow	22.06	20.81
			1RB(RB#max)	22.17	20.91
			8RB (RB#18)	21.75	20.47
20MHz	18100	2502.5	1RB(RB#0 )	22.42	21.21
			1RB(RB#max)	22.62	21.45
			18RB (RB#0 )	22.38	21.11
	18300	1950	1RB(RB#0 )	23.22	22.03
			1RB(RB#max)	23.18	21.87
			18RB (RB#0 )	23.03	21.81
	18500	1970	1RB(RB#0 )	23.07	21.95
			1RB(RB#max)	23.19	20.91
			18RB (RB#83)	22.78	20.93

Band :		Band 1	HT/LV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
5MHz	18025	1930	1RB(RB#0 )	22.49	21.27
			1RB(RB#max)	22.52	21.29
			8RB (RB#0 )	22.32	21.12
	18300	1950	1RBlow	23.75	22.54
			1RB(RB#max)	23.71	22.52
			8RB (RB#0 )	23.60	22.41
	18575	1977.5	1RBlow	21.97	20.72
			1RB(RB#max)	21.94	20.85
			8RB (RB#18)	21.81	20.62
20MHz	18100	2502.5	1RB(RB#0 )	22.49	21.31
			1RB(RB#max)	22.60	21.42
			18RB (RB#0 )	22.43	21.21
	18300	1950	1RB(RB#0 )	23.14	21.95
			1RB(RB#max)	23.22	21.96
			18RB (RB#0 )	23.14	21.93
	18500	1970	1RB(RB#0 )	23.07	21.86
			1RB(RB#max)	23.09	20.95
			18RB (RB#83)	22.82	20.88



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Band :		Band 1	HT/HV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
5MHz	18025	1930	1RB(RB#0 )	22.58	21.27
			1RB(RB#max)	22.62	21.41
			8RB (RB#0 )	22.42	21.22
	18300	1950	1RBlow	23.84	22.57
			1RB(RB#max)	23.79	22.64
			8RB (RB#0 )	23.68	22.42
	18575	1977.5	1RBlow	22.03	20.81
			1RB(RB#max)	22.12	20.89
			8RB (RB#18)	21.91	20.75
20MHz	18100	2502.5	1RB(RB#0 )	22.56	21.34
			1RB(RB#max)	22.48	21.26
			18RB (RB#0 )	22.52	21.27
	18300	1950	1RB(RB#0 )	23.22	22.01
			1RB(RB#max)	23.21	21.96
			18RB (RB#0 )	23.16	21.94
	18500	1970	1RB(RB#0 )	23.19	22.02
			1RB(RB#max)	23.07	21.09
			18RB (RB#83)	22.83	20.86

Band :		Band 3	NT/NV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
1.4MHz	19207	1710.7	1RB(RB#0 )	22.06	21.01
			5RB(RB#0 )	21.95	20.90
	19575	1747.5	1RB(RB#0 )	23.92	22.87
			5RB(RB#0 )	23.85	22.81
	19943	1784.3	1RB(RB#0 )	21.63	20.57
			5RB(RB#0 )	21.66	20.61
5MHz	19225	1712.5	1RB(RB#0 )	22.35	21.30
			1RB(RB#max)	22.33	21.28
			8RB (RB#0 )	22.16	21.11
	19575	1747.5	1RBlow	23.59	22.54
			1RB(RB#max)	23.57	22.52
			8RB (RB#0 )	23.46	22.41
19925	1782.5	1RBlow	21.81	20.76	
		1RB(RB#max)	21.85	20.80	
		8RB (RB#0 )	21.67	20.62	
20MHz	19300	1720	1RB(RB#0 )	22.35	21.31
			1RB(RB#max)	22.33	21.28
			18RB (RB#0 )	22.26	21.21
	19575	1747.5	1RB(RB#0 )	23.01	21.96
			1RB(RB#max)	22.90	21.85
			18RB (RB#0 )	22.91	21.89
19850	1775	1RB(RB#0 )	22.92	21.87	
		1RB(RB#max)	22.83	21.78	
			18RB (RB#0 )	22.66	21.59



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Band :		Band 3	LT/LV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
1.4MHz	19207	1710.7	1RB(RB#0 )	22.01	20.96
			5RB(RB#0 )	21.90	20.85
	19575	1747.5	1RB(RB#0 )	23.87	22.82
			5RB(RB#0 )	23.82	22.77
	19943	1784.3	1RB(RB#0 )	21.56	20.53
			5RB(RB#0 )	21.61	20.56
5MHz	19225	1712.5	1RB(RB#0 )	22.30	21.25
			1RB(RB#max)	22.29	21.24
			8RB (RB#0 )	22.08	21.03
	19575	1747.5	1RBlow	23.54	22.49
			1RB(RB#max)	23.52	22.47
			8RB (RB#0 )	23.41	22.37
	19925	1782.5	1RBlow	21.82	20.76
			1RB(RB#max)	21.85	20.80
			8RB (RB#0 )	21.62	20.57
20MHz	19300	1720	1RB(RB#0 )	22.34	21.29
			1RB(RB#max)	22.38	21.33
			18RB (RB#0 )	22.21	21.16
	19575	1747.5	1RB(RB#0 )	22.99	21.94
			1RB(RB#max)	23.04	22.07
			18RB (RB#0 )	22.86	21.81
	19850	1775	1RB(RB#0 )	22.91	21.84
			1RB(RB#max)	22.94	21.88
			18RB (RB#0 )	22.58	21.54

Band :		Band 3	LT/HV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
1.4MHz	19207	1710.7	1RB(RB#0 )	21.97	20.93
			5RB(RB#0 )	21.86	20.81
	19575	1747.5	1RB(RB#0 )	23.84	22.76
			5RB(RB#0 )	23.76	22.71
	19943	1784.3	1RB(RB#0 )	21.55	20.50
			5RB(RB#0 )	21.58	20.53
5MHz	19225	1712.5	1RB(RB#0 )	22.26	21.21
			1RB(RB#max)	22.24	21.18
			8RB (RB#0 )	22.05	21.00
	19575	1747.5	1RBlow	23.52	22.47
			1RB(RB#max)	23.55	22.50
			8RB (RB#0 )	23.38	22.33
	19925	1782.5	1RBlow	21.78	20.74
			1RB(RB#max)	21.86	20.83
			8RB (RB#0 )	21.55	20.50
20MHz	19300	1720	1RB(RB#0 )	22.28	21.23
			1RB(RB#max)	22.39	21.34
			18RB (RB#0 )	22.18	21.13
	19575	1747.5	1RB(RB#0 )	22.96	21.91
			1RB(RB#max)	22.93	21.88
			18RB (RB#0 )	22.78	21.74
	19850	1775	1RB(RB#0 )	22.88	21.83
			1RB(RB#max)	22.95	21.91
			18RB (RB#0 )	22.54	21.49



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Band :		Band 3	HT/LV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
1.4MHz	19207	1710.7	1RB(RB#0 )	21.97	20.92
			5RB(RB#0 )	21.92	20.87
	19575	1747.5	1RB(RB#0 )	23.84	22.79
			5RB(RB#0 )	23.82	22.77
	19943	1784.3	1RB(RB#0 )	21.53	20.48
			5RB(RB#0 )	21.58	20.53
5MHz	19225	1712.5	1RB(RB#0 )	22.25	21.22
			1RB(RB#max)	22.28	21.26
			8RB (RB#0 )	22.11	21.06
	19575	1747.5	1RBlow	23.51	22.48
			1RB(RB#max)	23.49	22.44
			8RB (RB#0 )	23.38	22.33
	19925	1782.5	1RBlow	21.75	20.70
			1RB(RB#max)	21.73	20.68
			8RB (RB#0 )	21.59	20.54
20MHz	19300	1720	1RB(RB#0 )	22.26	21.24
			1RB(RB#max)	22.38	21.33
			18RB (RB#0 )	22.14	21.13
	19575	1747.5	1RB(RB#0 )	22.93	21.88
			1RB(RB#max)	22.95	21.90
			18RB (RB#0 )	22.87	21.82
	19850	1775	1RB(RB#0 )	22.84	21.79
			1RB(RB#max)	22.85	21.83
			18RB (RB#0 )	22.58	20.95

Band :		Band 3	HT/HV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
1.4MHz	19207	1710.7	1RB(RB#0 )	22.06	21.01
			5RB(RB#0 )	21.94	20.89
	19575	1747.5	1RB(RB#0 )	23.92	22.87
			5RB(RB#0 )	23.83	22.76
	19943	1784.3	1RB(RB#0 )	21.67	20.58
			5RB(RB#0 )	21.66	20.61
5MHz	19225	1712.5	1RB(RB#0 )	22.34	21.29
			1RB(RB#max)	22.33	21.28
			8RB (RB#0 )	22.16	21.11
	19575	1747.5	1RBlow	23.60	22.55
			1RB(RB#max)	23.52	22.52
			8RB (RB#0 )	23.46	22.41
	19925	1782.5	1RBlow	21.81	20.76
			1RB(RB#max)	21.85	20.80
			8RB (RB#0 )	21.63	20.58
20MHz	19300	1720	1RB(RB#0 )	22.34	21.29
			1RB(RB#max)	22.23	21.18
			18RB (RB#0 )	22.26	21.21
	19575	1747.5	1RB(RB#0 )	23.01	21.96
			1RB(RB#max)	22.93	21.88
			18RB (RB#0 )	22.86	21.82
	19850	1775	1RB(RB#0 )	22.92	21.87
			1RB(RB#max)	22.85	21.84
			18RB (RB#0 )	22.64	21.54





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Band :		Band 7	NT/NV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
5MHz	20775	2502.5	1RB(RB#0 )	22.46	21.24
			1RB(RB#max)	22.44	21.21
			8RB (RB#0 )	22.27	21.06
	21100	2535	1RBlow	23.59	22.39
			1RB(RB#max)	23.62	22.42
			8RB (RB#0 )	23.63	22.36
	21425	2567.5	1RBlow	22.02	20.81
			1RB(RB#max)	22.06	20.81
			8RB (RB#0 )	21.78	20.56
20MHz	20775	2502.5	1RB(RB#0 )	22.56	21.32
			1RB(RB#max)	22.54	21.38
			18RB (RB#0 )	22.42	21.16
	21100	2535	1RB(RB#0 )	23.26	22.01
			1RB(RB#max)	23.24	22.05
			18RB (RB#0 )	23.07	21.84
	21425	2567.5	1RB(RB#0 )	23.01	21.80
			1RB(RB#max)	23.15	20.96
			18RB (RB#0 )	22.71	20.82

Band :		Band 7	LT/LV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
5MHz	20775	2502.5	1RB(RB#0 )	22.38	21.18
			1RB(RB#max)	22.28	21.05
			8RB (RB#0 )	22.13	20.91
	21100	2535	1RBlow	23.54	22.42
			1RB(RB#max)	23.62	22.40
			8RB (RB#0 )	23.43	22.17
	21425	2567.5	1RBlow	21.87	20.62
			1RB(RB#max)	21.95	20.65
			8RB (RB#0 )	21.57	20.36
20MHz	20775	2502.5	1RB(RB#0 )	22.44	21.19
			1RB(RB#max)	22.34	21.12
			18RB (RB#0 )	22.22	20.97
	21100	2535	1RB(RB#0 )	23.03	21.83
			1RB(RB#max)	22.91	21.65
			18RB (RB#0 )	22.86	21.56
	21425	2567.5	1RB(RB#0 )	22.94	21.71
			1RB(RB#max)	22.95	20.83
			18RB (RB#0 )	22.57	20.69



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Band :		Band 7	LT/HV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
5MHz	20775	2502.5	1RB(RB#0 )	22.42	21.12
			1RB(RB#max)	22.42	21.27
			8RB (RB#0 )	22.29	21.10
	21100	2535	1RBlow	23.77	22.59
			1RB(RB#max)	23.84	22.55
			8RB (RB#0 )	23.59	22.39
	21425	2567.5	1RBlow	22.06	20.81
			1RB(RB#max)	22.16	20.93
			8RB (RB#0 )	21.73	20.42
20MHz	20775	2502.5	1RB(RB#0 )	22.42	21.21
			1RB(RB#max)	22.57	21.36
			18RB (RB#0 )	22.38	21.14
	21100	2535	1RB(RB#0 )	23.22	22.00
			1RB(RB#max)	23.11	21.82
			18RB (RB#0 )	23.03	21.81
	21425	2567.5	1RB(RB#0 )	23.01	21.84
			1RB(RB#max)	23.19	20.91
			18RB (RB#0 )	22.72	20.86

Band :		Band 7	HT/LV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
5MHz	20775	2502.5	1RB(RB#0 )	22.45	21.23
			1RB(RB#max)	22.47	21.24
			8RB (RB#0 )	22.32	21.11
	21100	2535	1RBlow	23.71	22.52
			1RB(RB#max)	23.73	22.54
			8RB (RB#0 )	23.57	22.38
	21425	2567.5	1RBlow	21.97	20.72
			1RB(RB#max)	21.98	20.85
			8RB (RB#0 )	21.76	20.57
20MHz	20775	2502.5	1RB(RB#0 )	22.49	21.31
			1RB(RB#max)	22.54	21.36
			18RB (RB#0 )	22.43	21.21
	21100	2535	1RB(RB#0 )	23.14	21.93
			1RB(RB#max)	23.17	21.89
			18RB (RB#0 )	23.14	21.93
	21425	2567.5	1RB(RB#0 )	23.01	21.79
			1RB(RB#max)	23.08	20.95
			18RB (RB#0 )	22.75	20.82



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Band :		Band 7	HT/HV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
5MHz	20775	2502.5	1RB(RB#0 )	22.54	21.25
			1RB(RB#max)	22.56	21.36
			8RB (RB#0 )	22.42	21.25
	21100	2535	1RBlow	23.83	22.57
			1RB(RB#max)	23.79	22.64
			8RB (RB#0 )	23.65	22.39
	21425	2567.5	1RBlow	22.03	20.83
			1RB(RB#max)	22.11	20.88
			8RB (RB#0 )	21.87	20.69
20MHz	20775	2502.5	1RB(RB#0 )	22.57	21.34
			1RB(RB#max)	22.42	21.20
			18RB (RB#0 )	22.52	21.27
	21100	2535	1RB(RB#0 )	23.22	22.01
			1RB(RB#max)	23.14	21.88
			18RB (RB#0 )	23.19	21.94
	21425	2567.5	1RB(RB#0 )	23.11	21.92
			1RB(RB#max)	23.08	21.09
			18RB (RB#0 )	22.76	20.79

Band :		Band 8	NT/NV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
1.4MHz	21457	880.7	1RB(RB#0 )	22.14	21.06
			5RB(RB#0 )	21.98	20.94
	21625	897.5	1RB(RB#0 )	24.01	22.96
			5RB(RB#0 )	23.93	22.88
	21793	914.3	1RB(RB#0 )	21.72	20.67
			5RB(RB#0 )	21.75	20.64
5MHz	21475	882.5	1RB(RB#0 )	22.44	21.39
			1RB(RB#max)	22.41	21.36
			8RB (RB#0 )	22.20	21.15
	21625	897.5	1RBlow	23.68	22.63
			1RB(RB#max)	23.60	22.55
			8RB (RB#0 )	23.55	22.50
	21775	912.5	1RBlow	21.90	20.85
			1RB(RB#max)	21.87	20.82
			8RB (RB#0 )	21.76	20.71
10MHz	21500	885	1RB(RB#0 )	22.38	21.33
			1RB(RB#max)	22.42	21.37
			18RB (RB#0 )	22.28	21.23
	21625	897.5	1RB(RB#0 )	23.03	21.98
			1RB(RB#max)	22.95	21.84
			18RB (RB#0 )	22.94	21.89
	21750	910	1RB(RB#0 )	22.98	21.93
			1RB(RB#max)	22.91	21.86
			18RB (RB#0 )	22.72	21.68



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Band :		Band 8	LT/LV	QPSK	16QAM	
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)	
1.4MHz	19207	1710.7	1RB(RB#0 )	22.06	21.01	
			5RB(RB#0 )	21.94	20.87	
	19575	1747.5	1RB(RB#0 )	23.95	22.91	
			5RB(RB#0 )	23.89	22.84	
	19943	1784.3	1RB(RB#0 )	21.67	20.62	
			5RB(RB#0 )	21.67	20.64	
5MHz	19225	1712.5	1RB(RB#0 )	22.39	21.34	
			1RB(RB#max)	22.36	21.32	
			8RB (RB#0 )	22.12	21.07	
	19575	1747.5	1RBlow	23.63	22.56	
			1RB(RB#max)	23.55	22.50	
			8RB (RB#0 )	23.50	22.45	
	19925	1782.5	1RBlow	21.90	20.85	
			1RB(RB#max)	21.87	20.82	
			8RB (RB#0 )	21.71	20.66	
	10MHz	19300	1720	1RB(RB#0 )	22.34	21.30
				1RB(RB#max)	22.47	21.42
				12RB (RB#0 )	22.23	21.18
19575		1747.5	1RB(RB#0 )	23.01	21.96	
			1RB(RB#max)	23.13	22.08	
			12RB (RB#0 )	22.88	21.84	
19850		1775	1RB(RB#0 )	22.97	21.93	
			1RB(RB#max)	23.02	21.95	
			18RB (RB#0 )	21.65	21.67	

Band :		Band 8	LT/HV	QPSK	16QAM	
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)	
1.4MHz	19207	1710.7	1RB(RB#0 )	22.04	20.98	
			5RB(RB#0 )	21.90	20.85	
	19575	1747.5	1RB(RB#0 )	23.93	22.86	
			5RB(RB#0 )	23.85	22.78	
	19943	1784.3	1RB(RB#0 )	21.64	20.52	
			5RB(RB#0 )	21.67	20.59	
5MHz	19225	1712.5	1RB(RB#0 )	22.35	21.32	
			1RB(RB#max)	22.31	21.26	
			8RB (RB#0 )	22.09	21.04	
	19575	1747.5	1RBlow	23.61	22.56	
			1RB(RB#max)	23.58	22.53	
			8RB (RB#0 )	23.44	22.42	
	19925	1782.5	1RBlow	21.87	20.82	
			1RB(RB#max)	21.90	20.87	
			8RB (RB#0 )	21.64	20.59	
	10MHz	19300	1720	1RB(RB#0 )	22.29	21.24
				1RB(RB#max)	22.48	21.43
				18RB (RB#0 )	22.20	21.15
19575		1747.5	1RB(RB#0 )	22.97	21.93	
			1RB(RB#max)	22.96	21.92	
			18RB (RB#0 )	22.82	21.76	
19850		1775	1RB(RB#0 )	22.94	21.89	
			1RB(RB#max)	23.02	21.95	
			18RB (RB#0 )	22.60	21.54	



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Band :		Band 8	HT/LV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
1.4MHz	19207	1710.7	1RB(RB#0 )	22.03	20.98
			5RB(RB#0 )	21.95	20.91
	19575	1747.5	1RB(RB#0 )	23.93	22.87
			5RB(RB#0 )	23.87	22.84
	19943	1784.3	1RB(RB#0 )	21.62	20.57
			5RB(RB#0 )	21.64	20.59
5MHz	19225	1712.5	1RB(RB#0 )	22.36	21.31
			1RB(RB#max)	22.36	21.32
			8RB (RB#0 )	22.15	21.10
	19575	1747.5	1RBlow	23.60	22.55
			1RB(RB#max)	23.52	22.47
			8RB (RB#0 )	23.47	22.42
	19925	1782.5	1RBlow	21.84	20.78
			1RB(RB#max)	21.75	20.70
			8RB (RB#0 )	21.66	20.63
10MHz	19300	1720	1RB(RB#0 )	22.30	21.25
			1RB(RB#max)	22.47	21.42
			18RB (RB#0 )	22.20	21.15
	19575	1747.5	1RB(RB#0 )	22.95	21.90
			1RB(RB#max)	22.99	21.94
			18RB (RB#0 )	22.90	21.85
	19850	1775	1RB(RB#0 )	22.94	21.87
			1RB(RB#max)	22.96	21.91
			18RB (RB#0 )	21.56	21.58

Band :		Band 8	HT/HV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
1.4MHz	19207	1710.7	1RB(RB#0 )	22.11	21.06
			5RB(RB#0 )	21.98	20.93
	19575	1747.5	1RB(RB#0 )	24.03	22.95
			5RB(RB#0 )	23.90	22.85
	19943	1784.3	1RB(RB#0 )	21.72	20.68
			5RB(RB#0 )	21.72	20.67
5MHz	19225	1712.5	1RB(RB#0 )	22.43	21.38
			1RB(RB#max)	22.41	21.36
			8RB (RB#0 )	22.20	21.15
	19575	1747.5	1RBlow	23.69	22.64
			1RB(RB#max)	23.60	22.55
			8RB (RB#0 )	23.55	22.50
	19925	1782.5	1RBlow	21.90	20.86
			1RB(RB#max)	21.86	20.82
			8RB (RB#0 )	21.72	20.67
10MHz	19300	1720	1RB(RB#0 )	22.35	21.30
			1RB(RB#max)	22.34	21.27
			18RB (RB#0 )	22.28	21.23
	19575	1747.5	1RB(RB#0 )	23.03	21.97
			1RB(RB#max)	22.97	21.92
			18RB (RB#0 )	22.90	21.85
	19850	1775	1RB(RB#0 )	22.98	21.93
			1RB(RB#max)	22.92	21.92
			18RB (RB#0 )	22.68	21.63



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Band :		Band 20	NT/NV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
5MHz	24175	834.5	1RB(RB#0 )	22.53	21.31
			1RB(RB#max)	22.50	21.27
			8RB (RB#0 )	22.36	21.16
	24300	847	1RBlow	23.64	22.45
			1RB(RB#max)	23.67	22.48
			8RB (RB#0 )	23.70	22.43
	24425	859.5	1RBlow	22.06	20.88
			1RB(RB#max)	22.13	20.84
			8RB (RB#0 )	21.87	20.63
20MHz	24250	842	1RB(RB#0 )	22.63	21.41
			1RB(RB#max)	22.61	21.44
			18RB (RB#0 )	22.49	21.23
	24300	847	1RB(RB#0 )	23.33	22.08
			1RB(RB#max)	23.30	22.12
			18RB (RB#0 )	23.15	21.92
	24350	852	1RB(RB#0 )	23.08	21.87
			1RB(RB#max)	23.24	21.04
			18RB (RB#0 )	22.76	20.85

Band :		Band 20	LT/LV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
5MHz	24175	834.5	1RB(RB#0 )	22.53	21.31
			1RB(RB#max)	22.47	21.22
			8RB (RB#0 )	22.30	21.09
	24300	847	1RBlow	23.75	22.59
			1RB(RB#max)	23.77	22.57
			8RB (RB#0 )	23.60	22.35
	24425	859.5	1RBlow	22.05	20.74
			1RB(RB#max)	22.12	20.82
			8RB (RB#0 )	21.74	20.53
20MHz	24250	842	1RB(RB#0 )	22.63	21.32
			1RB(RB#max)	22.51	21.29
			18RB (RB#0 )	22.39	21.09
	24300	847	1RB(RB#0 )	23.14	22.00
			1RB(RB#max)	23.09	21.82
			18RB (RB#0 )	23.04	21.73
	24350	852	1RB(RB#0 )	23.08	21.86
			1RB(RB#max)	23.12	20.87
			18RB (RB#0 )	22.75	20.88



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Band :		Band 20	LT/HV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
5MHz	24175	834.5	1RB(RB#0 )	22.61	21.12
			1RB(RB#max)	22.63	21.35
			8RB (RB#0 )	22.46	21.19
	24300	847	1RBlow	23.90	22.64
			1RB(RB#max)	23.98	22.66
			8RB (RB#0 )	23.76	22.47
	24425	859.5	1RBlow	22.23	20.88
			1RB(RB#max)	22.35	20.96
			8RB (RB#0 )	21.89	20.41
20MHz	24250	842	1RB(RB#0 )	22.59	21.31
			1RB(RB#max)	22.72	21.43
			18RB (RB#0 )	22.51	21.18
	24300	847	1RB(RB#0 )	23.39	22.07
			1RB(RB#max)	23.28	21.84
			18RB (RB#0 )	23.20	21.83
	24350	852	1RB(RB#0 )	23.16	21.90
			1RB(RB#max)	23.34	21.18
			18RB (RB#0 )	22.85	21.35

Band :		Band 20	HT/LV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
5MHz	24175	834.5	1RB(RB#0 )	22.57	21.40
			1RB(RB#max)	22.62	21.41
			8RB (RB#0 )	22.49	21.24
	24300	847	1RBlow	23.88	22.67
			1RB(RB#max)	23.92	22.69
			8RB (RB#0 )	23.74	22.52
	24425	859.5	1RBlow	22.18	20.86
			1RB(RB#max)	22.18	20.99
			8RB (RB#0 )	21.93	20.74
20MHz	24250	842	1RB(RB#0 )	22.66	21.45
			1RB(RB#max)	22.71	21.53
			18RB (RB#0 )	22.62	21.38
	24300	847	1RB(RB#0 )	23.31	22.10
			1RB(RB#max)	23.32	22.07
			18RB (RB#0 )	23.35	22.10
	24350	852	1RB(RB#0 )	23.18	21.91
			1RB(RB#max)	23.26	21.16
			18RB (RB#0 )	22.81	20.95



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Band :		Band 20	HT/HV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
5MHz	20775	2502.5	1RB(RB#0 )	22.71	21.45
			1RB(RB#max)	22.74	21.53
			8RB (RB#0 )	22.59	21.37
	21100	2535	1RBlow	23.91	22.74
			1RB(RB#max)	23.96	22.81
			8RB (RB#0 )	23.81	22.56
	21425	2567.5	1RBlow	22.20	20.91
			1RB(RB#max)	22.26	21.05
			8RB (RB#0 )	22.03	20.87
20MHz	20775	2502.5	1RB(RB#0 )	22.74	21.51
			1RB(RB#max)	22.58	21.37
			18RB (RB#0 )	22.65	21.44
	21100	2535	1RB(RB#0 )	23.32	22.17
			1RB(RB#max)	23.28	22.06
			18RB (RB#0 )	23.33	22.16
	21425	2567.5	1RB(RB#0 )	23.31	22.09
			1RB(RB#max)	23.27	21.22
			18RB (RB#0 )	22.93	20.95

Band :		Band 38	NT/NV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
10MHz	37800	2575	1RB(RB#0 )	22.15	21.12
			1RB(RB#max)	22.36	21.34
			8RB (RB#0 )	21.98	21.02
	38000	2595	1RBlow	23.42	21.35
			1RB(RB#max)	22.69	22.24
			8RB (RB#0 )	23.70	22.43
	38200	2615	1RBlow	23.16	22.13
			1RB(RB#max)	23.12	21.14
			8RB (RB#0 )	22.35	21.35
20MHz	38000	2580	1RB(RB#0 )	22.17	22.05
			1RB(RB#max)	22.25	22.13
			18RB (RB#0 )	22.31	22.42
	38150	2595	1RB(RB#0 )	22.43	21.36
			1RB(RB#max)	22.15	22.45
			18RB (RB#0 )	22.35	22.15
	38250	2610	1RB(RB#0 )	23.14	22.35
			1RB(RB#max)	23.05	22.72
			18RB (RB#0 )	22.85	22.41

Band :		Band 38	LT/LV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
10MHz	37800	2575	1RB(RB#0 )	22.75	22.14
			1RB(RB#max)	22.45	22.31
			8RB (RB#0 )	22.36	22.45
	38000	2595	1RBlow	22.18	23.35
			1RB(RB#max)	23.62	23.33
			8RB (RB#0 )	23.24	22.75
	38200	2615	1RBlow	23.16	21.14
			1RB(RB#max)	23.55	22.35
			8RB (RB#0 )	22.31	21.42





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20MHz	38000	2580	1RB(RB#0 )	22.35	22.25
			1RB(RB#max)	22.75	22.16
			18RB (RB#0 )	23.15	22.36
	38150	2595	1RB(RB#0 )	23.45	22.15
			1RB(RB#max)	23.62	22.37
			18RB (RB#0 )	23.14	22.35
	38250	2610	1RB(RB#0 )	23.25	21.86
			1RB(RB#max)	23.68	22.14
			18RB (RB#0 )	23.12	22.17

Band :		Band 38	LT/HV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
10MHz	37800	2575	1RB(RB#0 )	23.25	22.45
			1RB(RB#max)	23.56	22.34
			8RB (RB#0 )	23.57	22.16
	38000	2595	1RBlow	2.86	22.58
			1RB(RB#max)	23.99	22.36
			8RB (RB#0 )	23.57	22.17
	38200	2615	1RBlow	22.23	22.85
			1RB(RB#max)	23.15	23.16
			8RB (RB#0 )	22.58	23.27
20MHz	38000	2580	1RB(RB#0 )	23.14	22.89
			1RB(RB#max)	22.36	22.35
			18RB (RB#0 )	23.17	22.18
	38150	2595	1RB(RB#0 )	23.33	23.62
			1RB(RB#max)	22.78	23.14
			18RB (RB#0 )	22.69	23.05
	38250	2610	1RB(RB#0 )	22.54	21.15
			1RB(RB#max)	22.39	21.35
			18RB (RB#0 )	22.75	21.75

Band :		Band 38	HT/LV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
10MHz	37800	2575	1RB(RB#0 )	22.54	22.15
			1RB(RB#max)	22.36	22.35
			8RB (RB#0 )	23.42	22.47
	38000	2595	1RBlow	22.89	22.86
			1RB(RB#max)	22.72	23.12
			8RB (RB#0 )	23.16	22.58
	38200	2615	1RBlow	23.35	21.12
			1RB(RB#max)	22.78	21.45
			8RB (RB#0 )	22.63	21.36
20MHz	38000	2580	1RB(RB#0 )	23.14	22.25
			1RB(RB#max)	23.25	22.32
			18RB (RB#0 )	23.05	22.41
	38150	2595	1RB(RB#0 )	22.78	22.56
			1RB(RB#max)	22.96	22.75
			18RB (RB#0 )	22.57	22.35
	38250	2610	1RB(RB#0 )	23.02	22.17
			1RB(RB#max)	22.87	22.59
			18RB (RB#0 )	22.63	22.34



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Band :		Band 38	HT/HV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
5MHz	37800	2575	1RB(RB#0 )	23.14	22.14
			1RB(RB#max)	23.25	22.36
			8RB (RB#0 )	22.78	22.33
	38000	2595	1RBlow	22.56	22.74
			1RB(RB#max)	22.85	22.36
			8RB (RB#0 )	22.39	23.15
	38200	2615	1RBlow	22.74	22.52
			1RB(RB#max)	22.65	22.31
			8RB (RB#0 )	22.58	22.24
20MHz	38000	2580	1RB(RB#0 )	22.89	22.11
			1RB(RB#max)	22.75	22.57
			18RB (RB#0 )	22.69	22.63
	38150	2595	1RB(RB#0 )	23.15	22.35
			1RB(RB#max)	23.24	22.74
			18RB (RB#0 )	23.65	22.59
	38250	2610	1RB(RB#0 )	23.44	22.36
			1RB(RB#max)	22.89	22.47
			18RB (RB#0 )	23.14	22.16

Band :		Band 40	NT/NV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
10MHz	38650	23000	1RB(RB#0 )	23.14	22.35
			1RB(RB#max)	23.25	22.42
			8RB (RB#0 )	22.37	22.14
	39150	2350	1RBlow	22.78	22.35
			1RB(RB#max)	22.63	22.35
			8RB (RB#0 )	22.58	23.74
	39650	2400	1RBlow	22.37	23.21
			1RB(RB#max)	23.14	22.47
			8RB (RB#0 )	22.56	22.69
20MHz	38850	2320	1RB(RB#0 )	22.35	22.45
			1RB(RB#max)	22.74	22.36
			18RB (RB#0 )	23.14	22.75
	39100	2345	1RB(RB#0 )	22.35	22.31
			1RB(RB#max)	22.75	22.75
			18RB (RB#0 )	22.14	22.33
	39350	2370	1RB(RB#0 )	22.35	22.17
			1RB(RB#max)	22.71	22.35
			18RB (RB#0 )	22.15	22.14

Band :		Band 40	LT/LV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
10MHz	38650	23000	1RB(RB#0 )	23.14	23.24
			1RB(RB#max)	23.27	23.22
			8RB (RB#0 )	23.14	22.72
	39150	2350	1RBlow	22.58	23.14
			1RB(RB#max)	23.14	22.63
			8RB (RB#0 )	23.11	22.85
	39650	2400	1RBlow	23.25	22.14
			1RB(RB#max)	22.78	22.63
			8RB (RB#0 )	22.65	22.22



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20MHz	38850	2320	1RB(RB#0 )	23.71	22.75
			1RB(RB#max)	22.56	22.36
			18RB (RB#0 )	22.45	22.72
	39100	2345	1RB(RB#0 )	22.63	22.63
			1RB(RB#max)	23.71	22.25
			18RB (RB#0 )	22.56	22.36
	39350	2370	1RB(RB#0 )	22.79	22.78
			1RB(RB#max)	23.12	22.66
			18RB (RB#0 )	23.05	22.47

Band :		Band 40	LT/HV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
10MHz	38650	23000	1RB(RB#0 )	22.89	23.63
			1RB(RB#max)	23.14	22.47
			8RB (RB#0 )	22.86	23.11
	39150	2350	1RBlow	22.36	22.85
			1RB(RB#max)	23.14	23.64
			8RB (RB#0 )	23.25	23.33
	39650	2400	1RBlow	22.71	22.54
			1RB(RB#max)	23.33	23.11
			8RB (RB#0 )	23.21	22.78
20MHz	38850	2320	1RB(RB#0 )	22.89	22.26
			1RB(RB#max)	22.67	23.67
			18RB (RB#0 )	22.36	22.45
	39100	2345	1RB(RB#0 )	22.75	23.33
			1RB(RB#max)	22.66	22.78
			18RB (RB#0 )	22.55	23.19
	39350	2370	1RB(RB#0 )	23.14	22.55
			1RB(RB#max)	23.35	22.46
			18RB (RB#0 )	23.05	22.38

Band :		Band 40	HT/LV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
10MHz	38650	23000	1RB(RB#0 )	23.17	23.22
			1RB(RB#max)	23.22	22.17
			8RB (RB#0 )	22.75	23.69
	39150	2350	1RBlow	23.64	22.45
			1RB(RB#max)	22.45	22.22
			8RB (RB#0 )	23.14	23.25
	39650	2400	1RBlow	22.57	22.75
			1RB(RB#max)	22.63	22.16
			8RB (RB#0 )	22.55	22.33
20MHz	38850	2320	1RB(RB#0 )	23.14	23.48
			1RB(RB#max)	22.78	22.29
			18RB (RB#0 )	22.66	23.69
	39100	2345	1RB(RB#0 )	22.35	23.37
			1RB(RB#max)	22.14	23.15
			18RB (RB#0 )	23.11	23.27
	39350	2370	1RB(RB#0 )	23.25	22.15
			1RB(RB#max)	22.89	23.36
			18RB (RB#0 )	23.35	22.75



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Band :		Band 40	HT/HV	QPSK	16QAM
Bandwidth	Channel	Frequency(MHz)	RB Configuration	AveragePower (dBm)	AveragePower (dBm)
5MHz	38650	23000	1RB(RB#0 )	23.12	23.11
			1RB(RB#max)	22.85	23.26
			8RB (RB#0 )	22.46	23.08
	39150	2350	1RBlow	22.88	22.78
			1RB(RB#max)	22.65	23.24
			8RB (RB#0 )	22.79	22.96
	39650	2400	1RBlow	22.46	23.25
			1RB(RB#max)	22.35	22.47
			8RB (RB#0 )	22.58	23.65
20MHz	38850	2320	1RB(RB#0 )	22.49	22.58
			1RB(RB#max)	22.66	23.14
			18RB (RB#0 )	23.14	22.69
	39100	2345	1RB(RB#0 )	23.06	23.14
			1RB(RB#max)	22.78	22.78
			18RB (RB#0 )	22.55	23.62
	39350	2370	1RB(RB#0 )	22.36	23.33
			1RB(RB#max)	23.14	23.81
			18RB (RB#0 )	23.34	22.56

## 42 ETSI EN301908-1 Requirement

### 42.1. Radiated emissions (UE)

#### LIMIT

##### ETSI EN 301 908-1 Sub-clause 4.2.2.2

This test assesses the ability of radio communications equipment and ancillary equipment to limit unwanted emissions from the enclosure port.

This test is applicable to radio communications equipment and ancillary equipment.

This test shall be performed on the radio communications equipment and/or a representative configuration of the ancillary equipment.

The frequency boundary and reference bandwidths for the detailed transitions of the limits between the requirements for out-of-band emissions and spurious emissions are based on ITU-R Recommendations SM.329-10 [3] and SM.1539-1 [4].

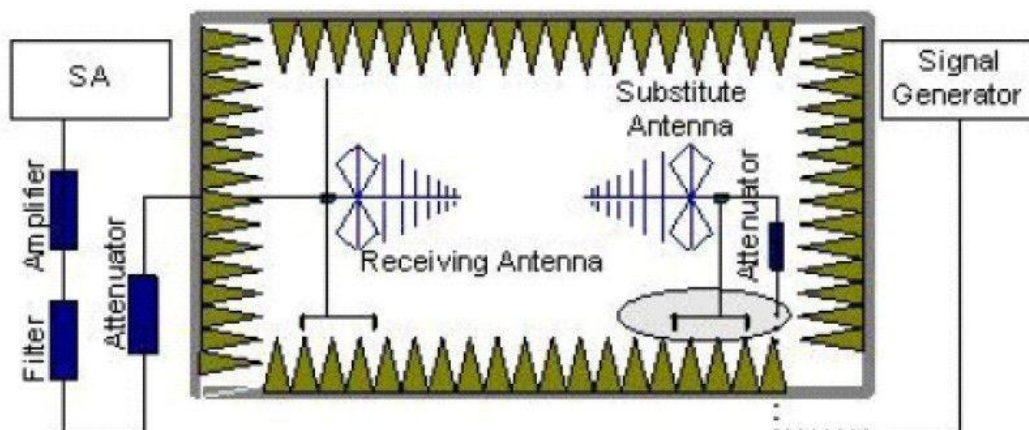
The requirements shown in table 4.2.2.2-1 are only applicable for frequencies in the spurious domain.

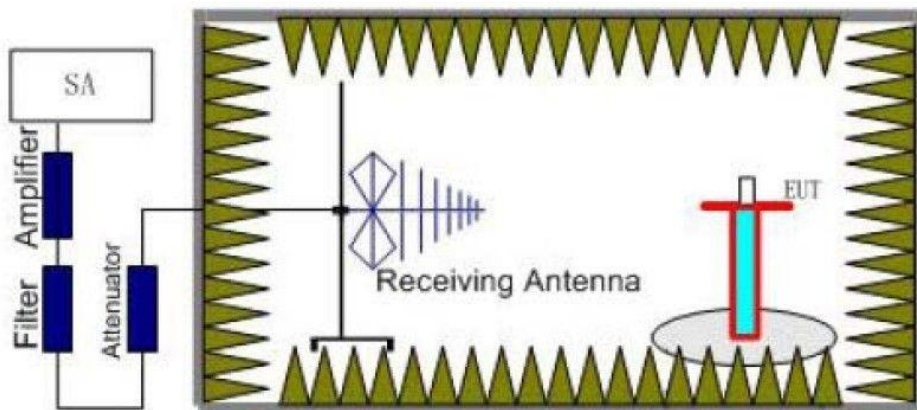
**Table 4.2.2.2-1:** Radiated spurious emissions requirements (UE)

Frequency	Minimum requirement (e.r.p.)/ reference bandwidth idle mode	Minimum requirement (e.r.p.)/ reference bandwidth traffic mode	Applicability
$30 \text{ MHz} \leq f < 1\,000 \text{ MHz}$	-57 dBm/100 kHz	-36 dBm/100 kHz	All
$1 \text{ GHz} \leq f < 12.75 \text{ GHz}$	-47 dBm/1 MHz	-30 dBm/1 MHz	All
$f_c - 2.5 \times 5 \text{ MHz} < f < f_c + 2.5 \times 5 \text{ MHz}$		Not defined	UTRA FDD, UTRA TDD, 3,84 Mcps option, cdma2000, spreading rate 3
$f_c - 2.5 \times \text{BWChannel MHz} < f < f_c + 2.5 \times \text{BWChannel MHz}$		Not defined	E-UTRA FDD, E-UTRA TDD, Mobile WiMAX, UMB
$f_c - 2.5 \times 10 \text{ MHz} < f < f_{c1} + 2.5 \times 10 \text{ MHz}$		Not defined	UTRA TDD, 7,68 Mcps option
$f_c - 4 \text{ MHz} < f < f_c + 4 \text{ MHz}$		Not defined	UTRA TDD, 1,28 Mcps option cdma2000, spreading rate 1
$f_c - 500 \text{ kHz} < f < f_c + 500 \text{ kHz}$		Not defined	UWC 136, 200 kHz option
$f_c - 250 \text{ kHz} < f < f_c + 250 \text{ kHz}$		Not defined	UWC 136, 30 kHz option

NOTE:  $f_c$  is the UE transmit centre frequency.

#### TEST CONFIGURATION





## **TEST PROCEDURE**

**Please refer to ETSI EN 301 908-1**

### **Step 1:**

The measurement is carried out in the fully anechoic chamber. EUT was placed on a 1.50 meter high non-conductive table at a 3 meter test distance from the test receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT. The height of receiving antenna is 1.50 m and varies in certain range to find the maximum power value. Connect the EUT to the BTS simulator via the air interface. The measurement is carried out using a spectrum analyzer or receiver. Then the antenna height and turn table rotation is adjusted till the maximum power value is founded on spectrum analyzer or receiver. A filter is necessary in the band near to the carrier frequency. A filter is needed to avoid the distortion of the testing equipment in the band above the carrier frequency.

### **Step 2:**

A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.

### **Calculation procedure:**

The data of cable loss, antenna gain and air loss has been calibrated in full testing frequency range before the testing.

The power of the Radiated Spurious Emissions is calculated by adding the cable loss, antenna gain and air loss. The basic equation with a sample calculation is as followed:

$$P = P_R + L_C + L_A - G$$

Where

P: Power of the Radiated Spurious Emissions (dBm)

$P_R$ : reading of the receiver (dBm)

$L_C$ : Cable Lose and power amilifer gain and filter cable loss (dB)

$L_A$ : Air loss (dB)

G: Antenna Gain (dBi)

Assumed the reading of the receiver is -60dBm. A cable lose of 10dB, an air lose of 30dB and an antenna gain of 11dBi are added.

$$P = P_R + L_C + L_A - G = -60 + 10 + 30 - 11 = -31 \text{ dBm}$$

## **TEST RESULTS**

This test was carried out in all the test modes (LTE Band 20(5MHz,20MHz), Band 3 (1.4MHz,5MHz,20MHz) Band 7 (5MHz,20MHz), LTE Band 1(5M,10M,20M), LTE Band 8(1.4M,5M,10M), and recorded the worst case at band 1(5MHz)/Band 3(5MHz)/band 7(5MHz), band 8(5MHz), band 20(5MHz),

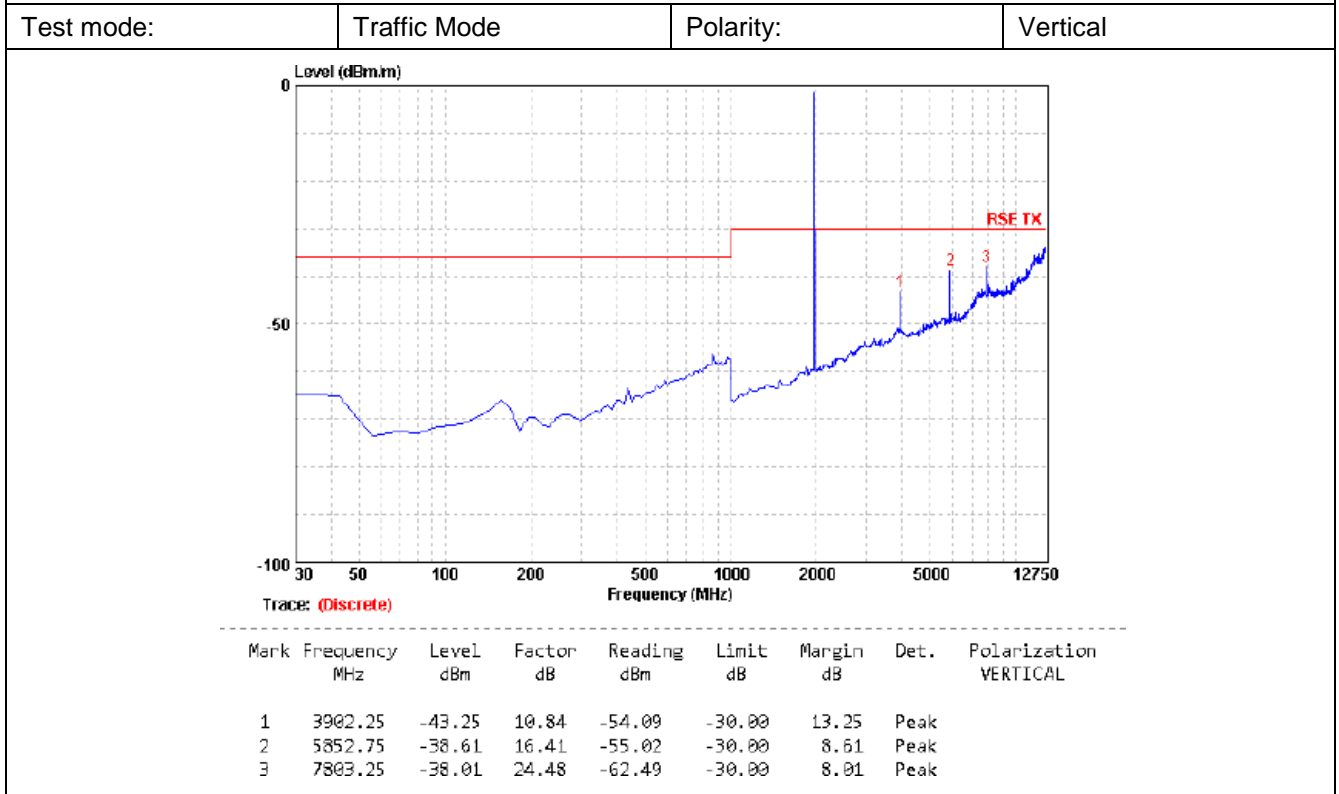
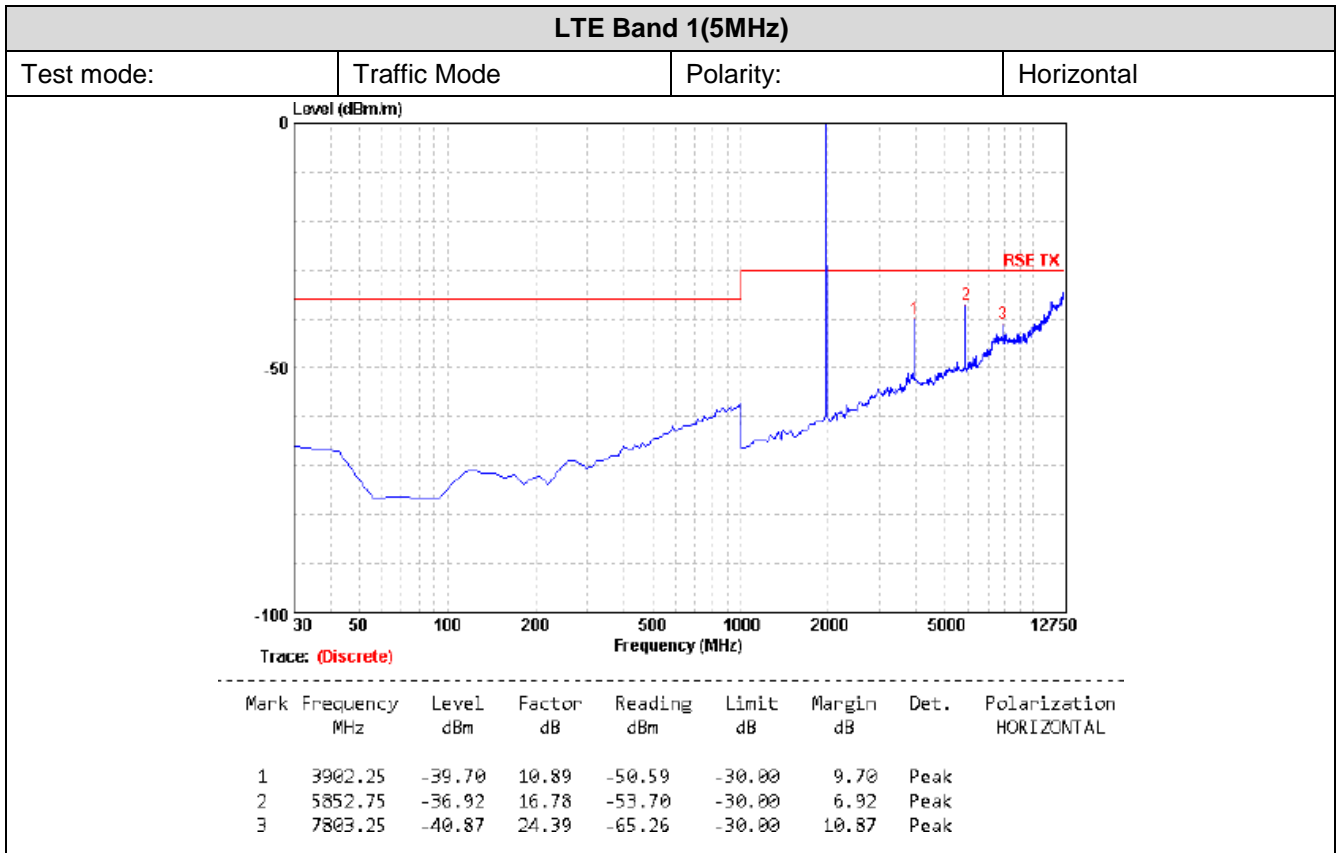
The EUT has met the requirements of 3GPP2 C.S0011-A's requirement.



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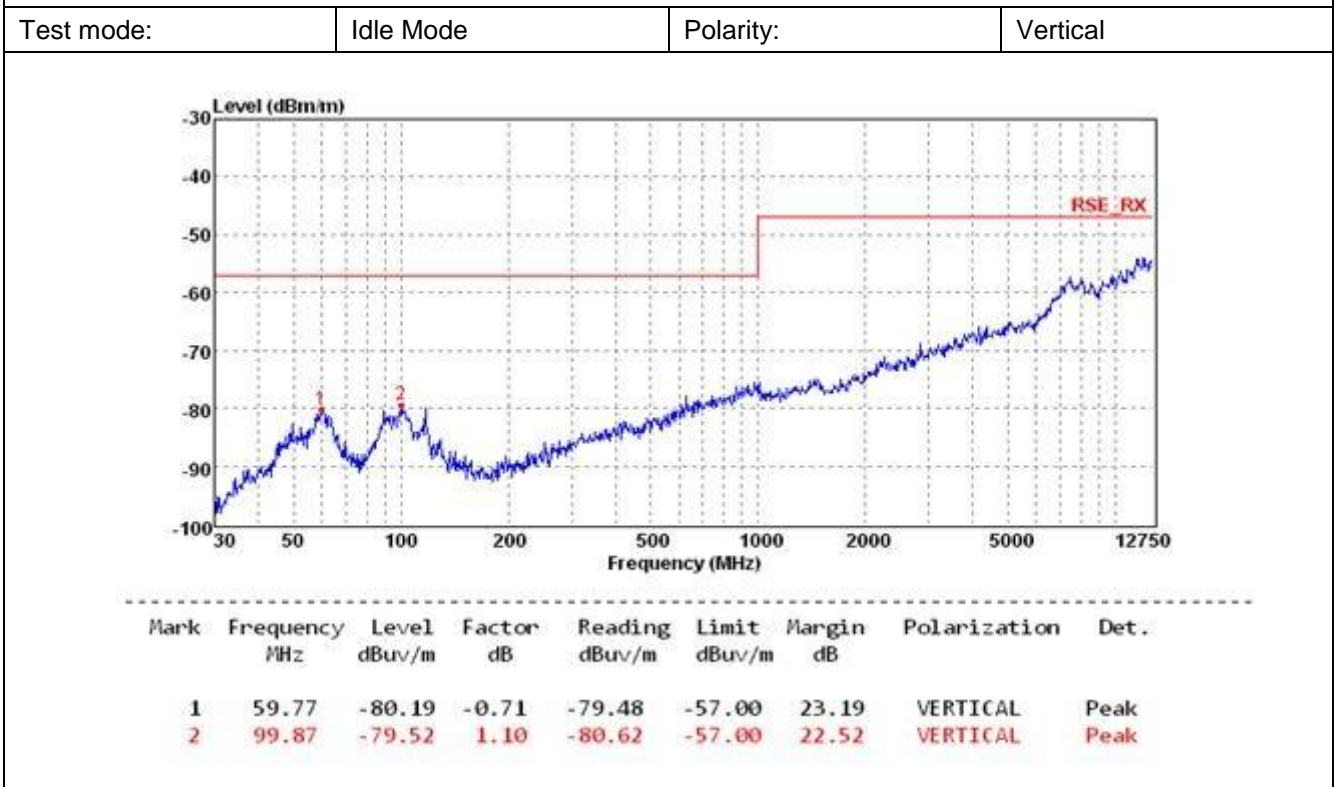
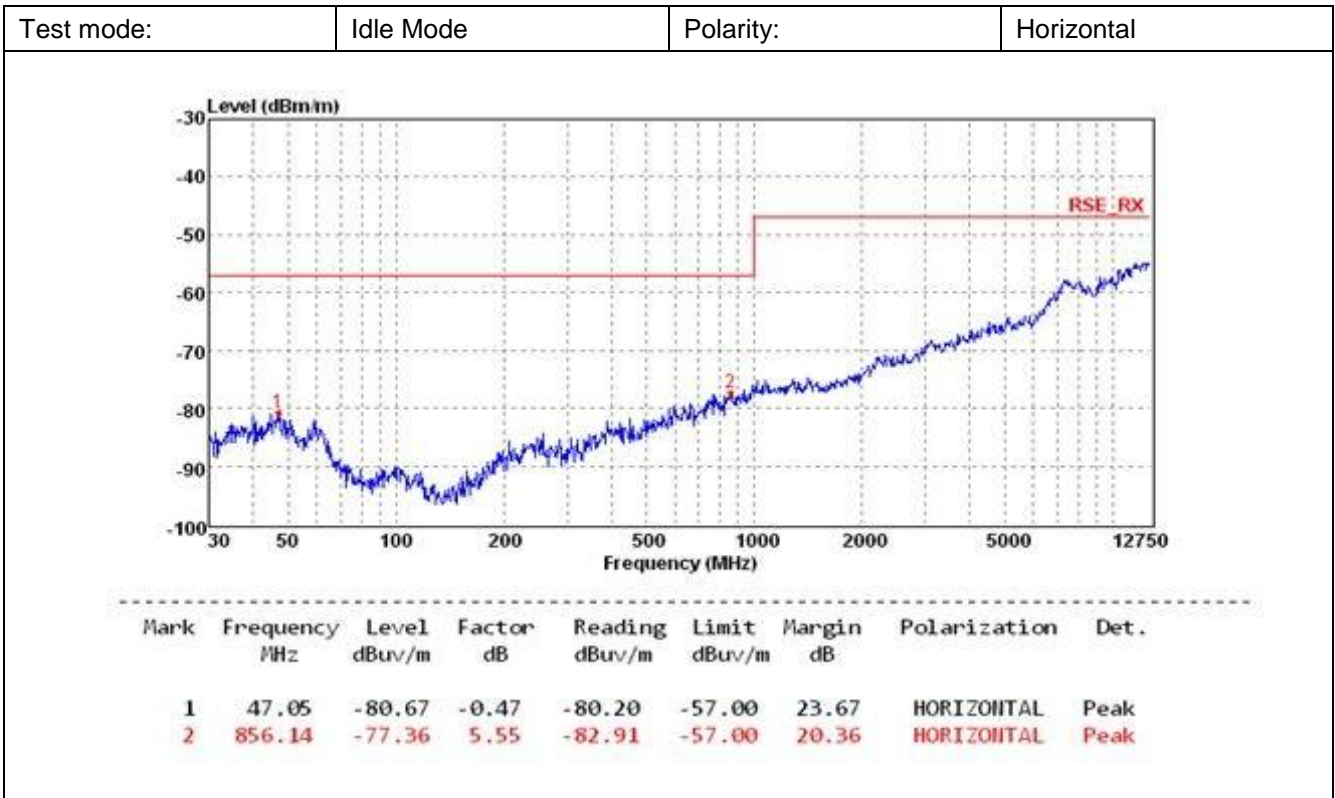




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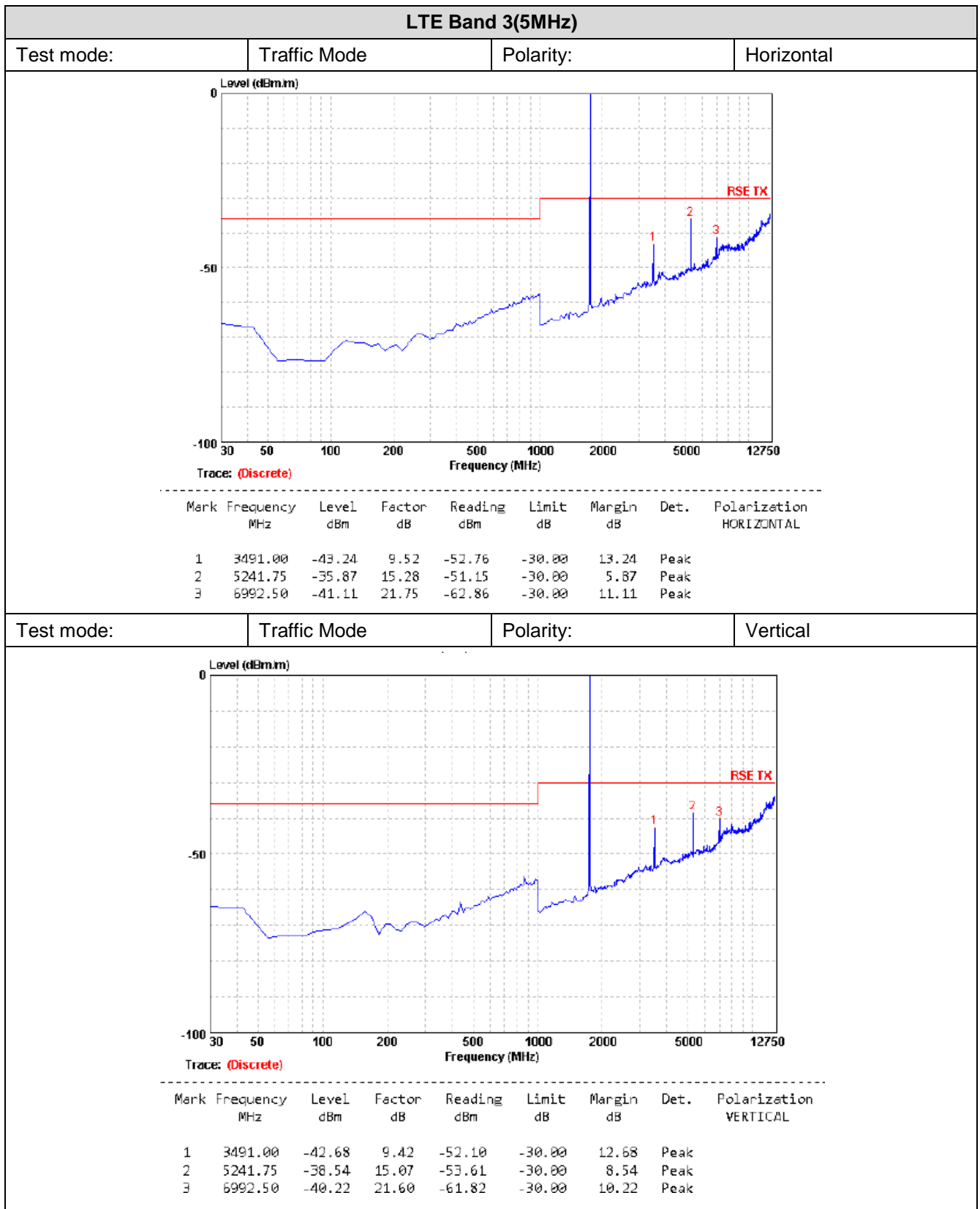




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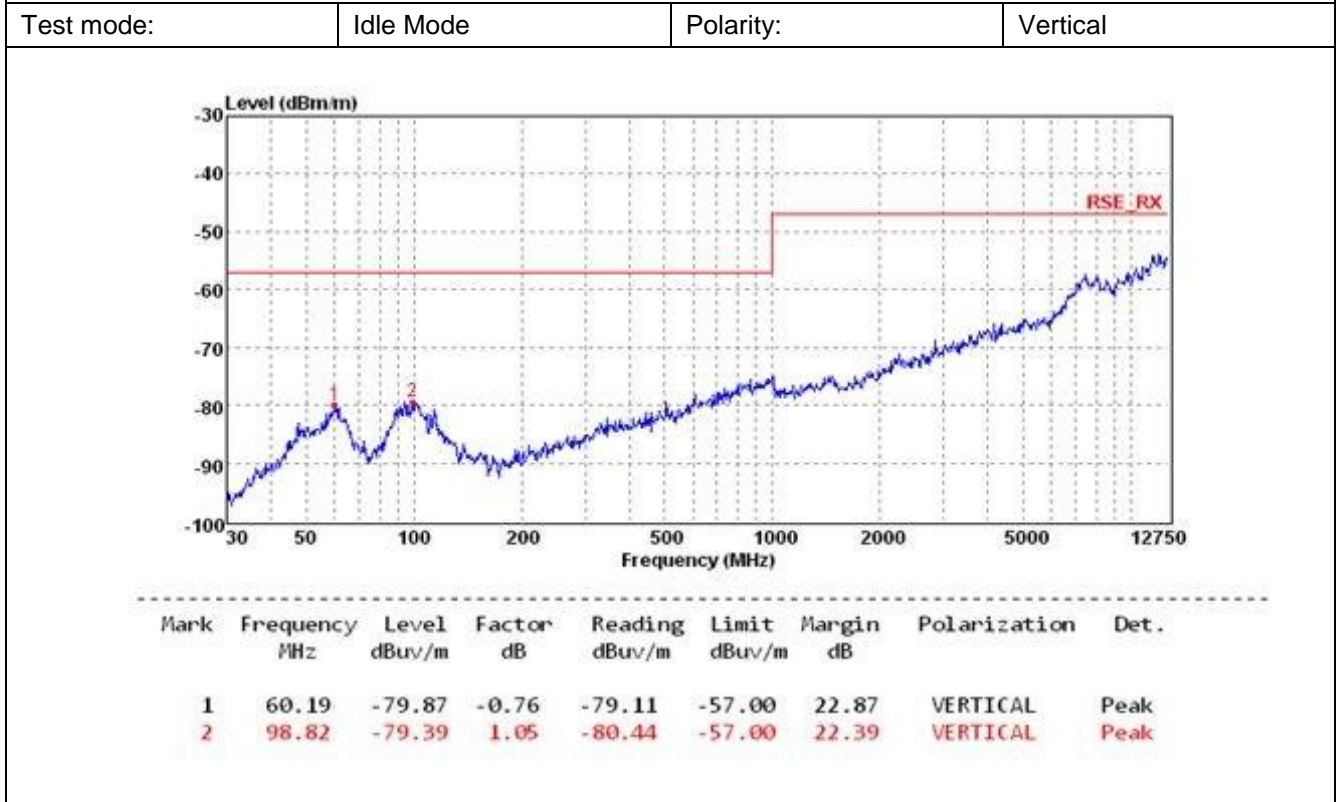
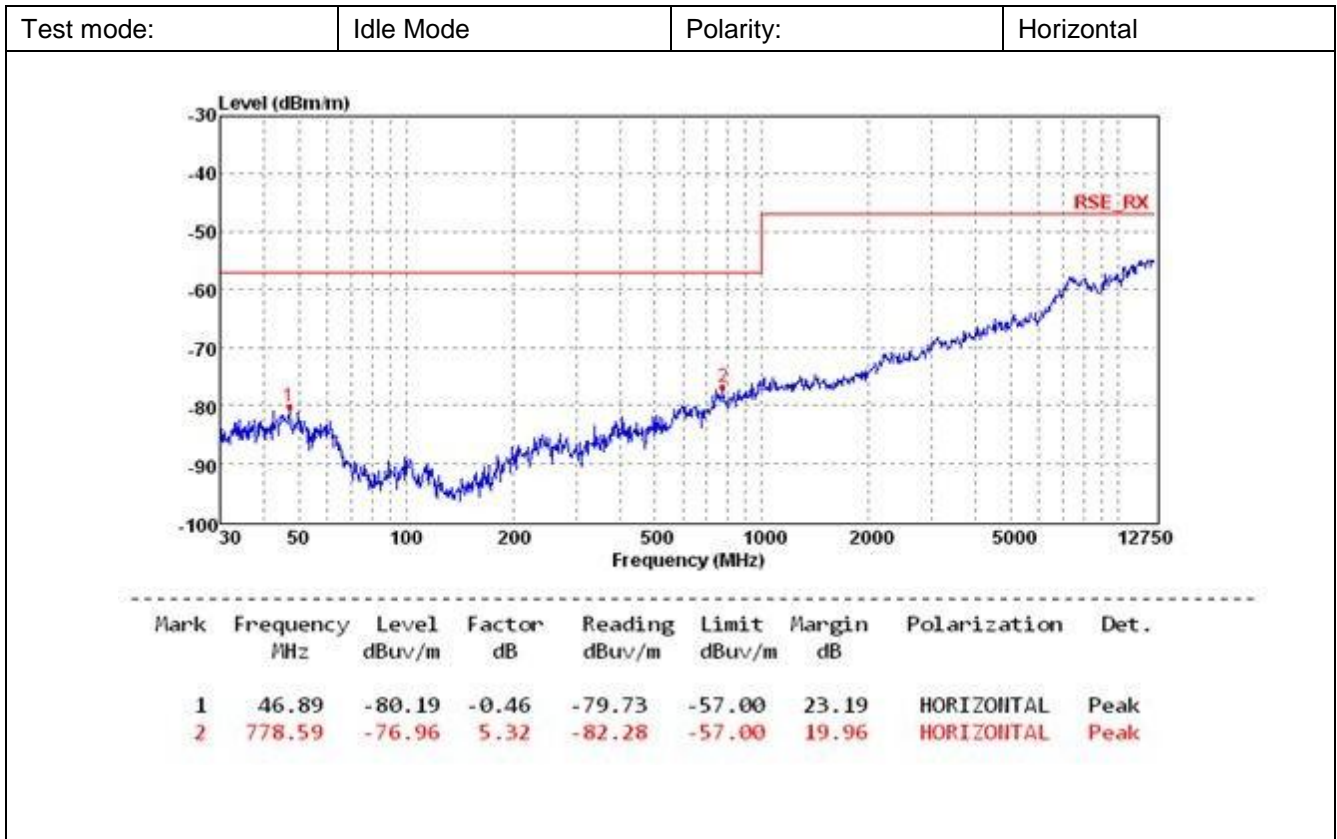




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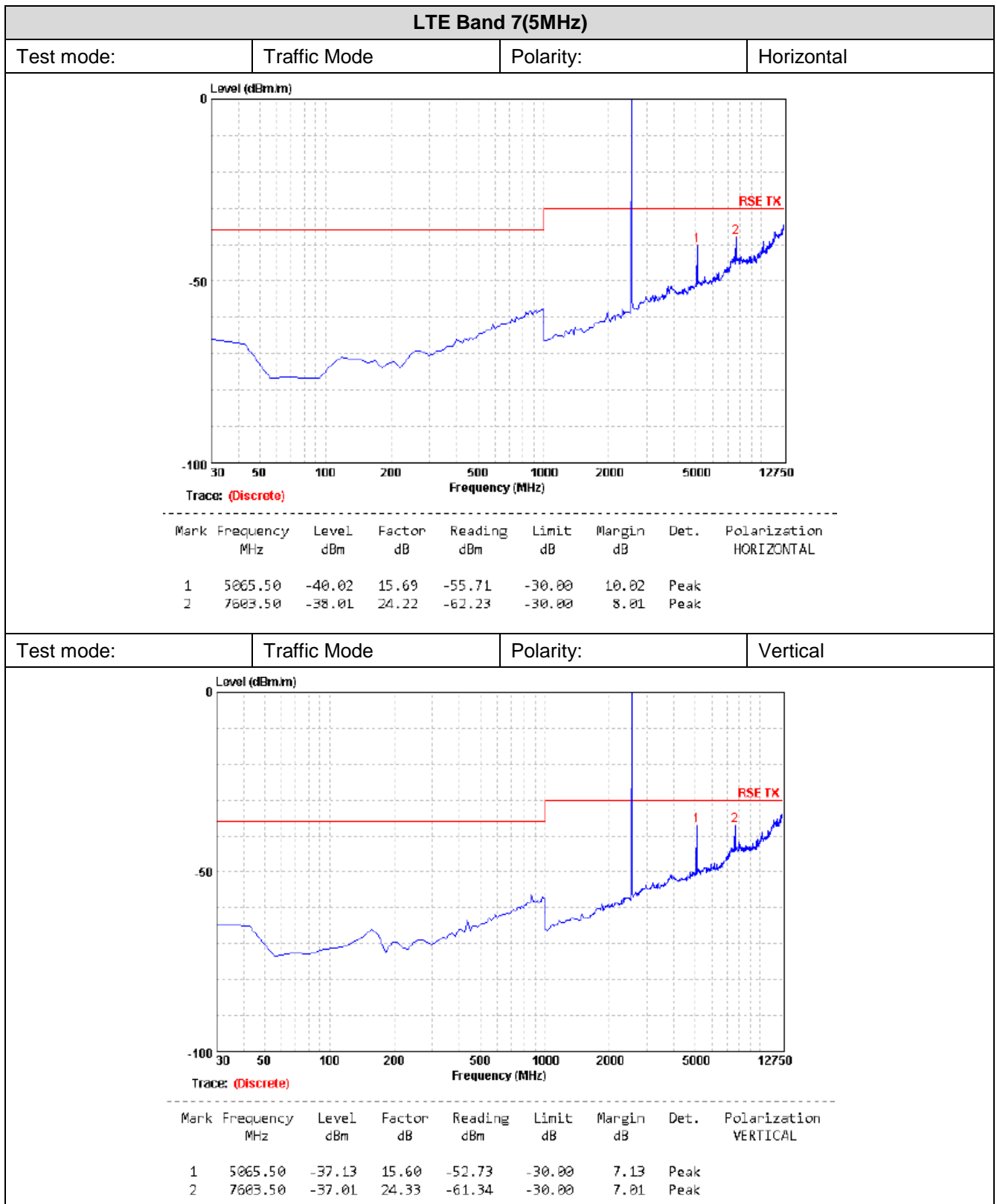




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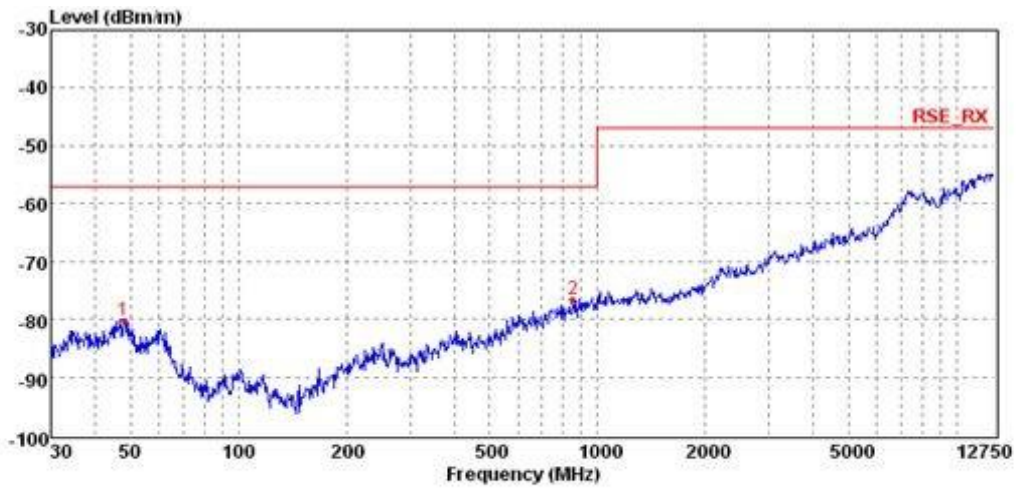


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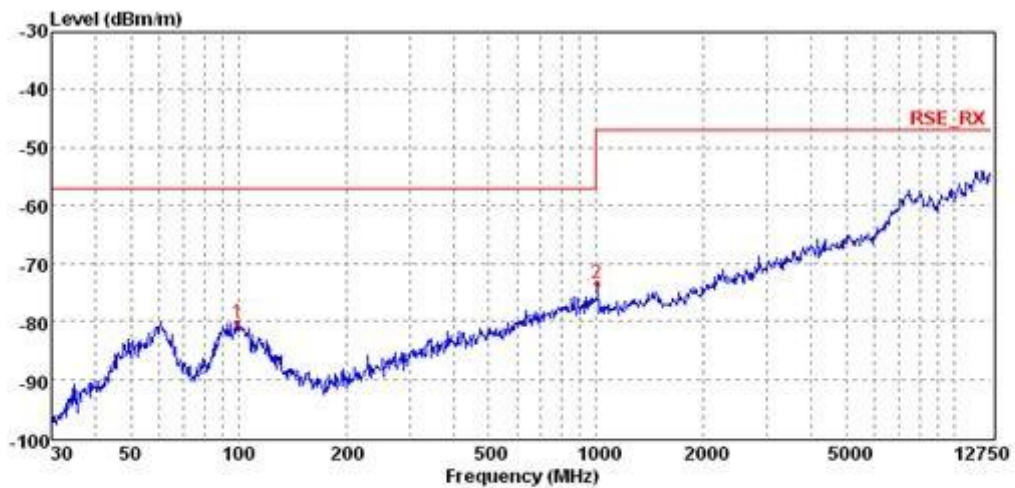
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Test mode:	Idle Mode	Polarity:	Horizontal
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Mark	Frequency MHz	Level dBuV/m	Factor dB	Reading dBuV/m	Limit dBuV/m	Margin dB	Polarization	Det.
1	48.06	-80.10	-0.50	-79.60	-57.00	23.10	HORIZONTAL	Peak
2	853.13	-76.59	5.52	-82.11	-57.00	19.59	HORIZONTAL	Peak

Test mode:	Idle Mode	Polarity:	Vertical
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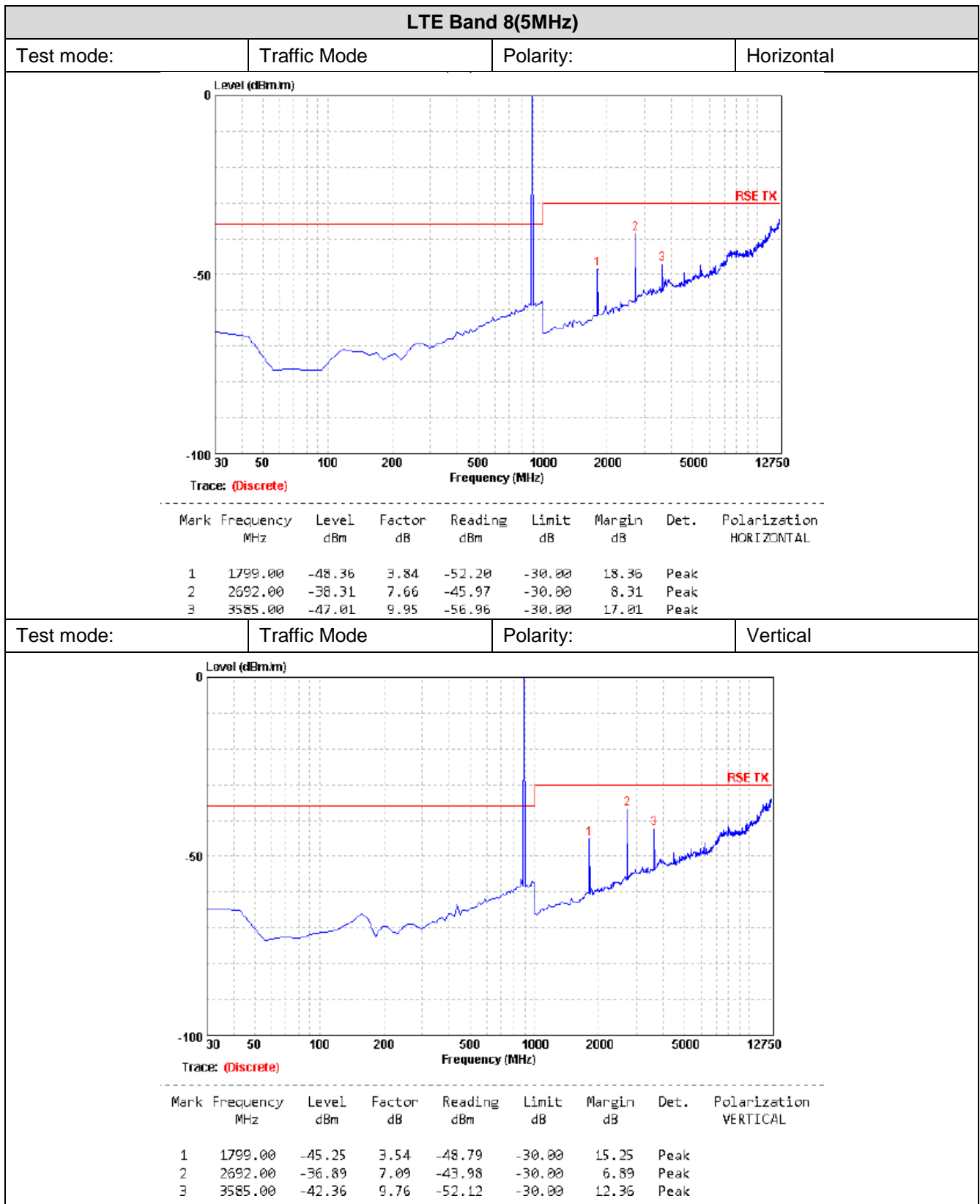
Mark	Frequency MHz	Level dBuV/m	Factor dB	Reading dBuV/m	Limit dBuV/m	Margin dB	Polarization	Det.
1	99.52	-80.35	1.08	-81.43	-57.00	23.35	VERTICAL	Peak
2	1006.46	-73.51	7.80	-81.31	-47.00	26.51	VERTICAL	Peak



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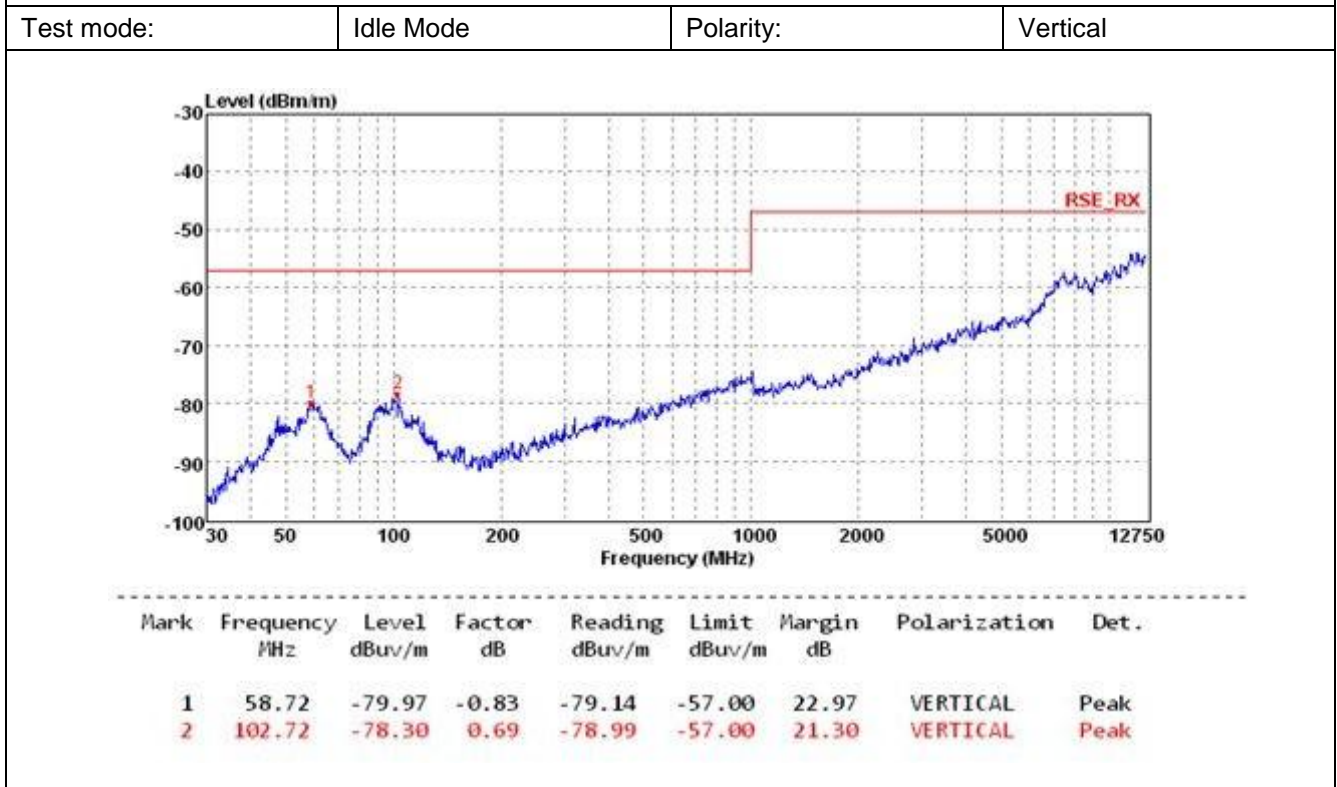




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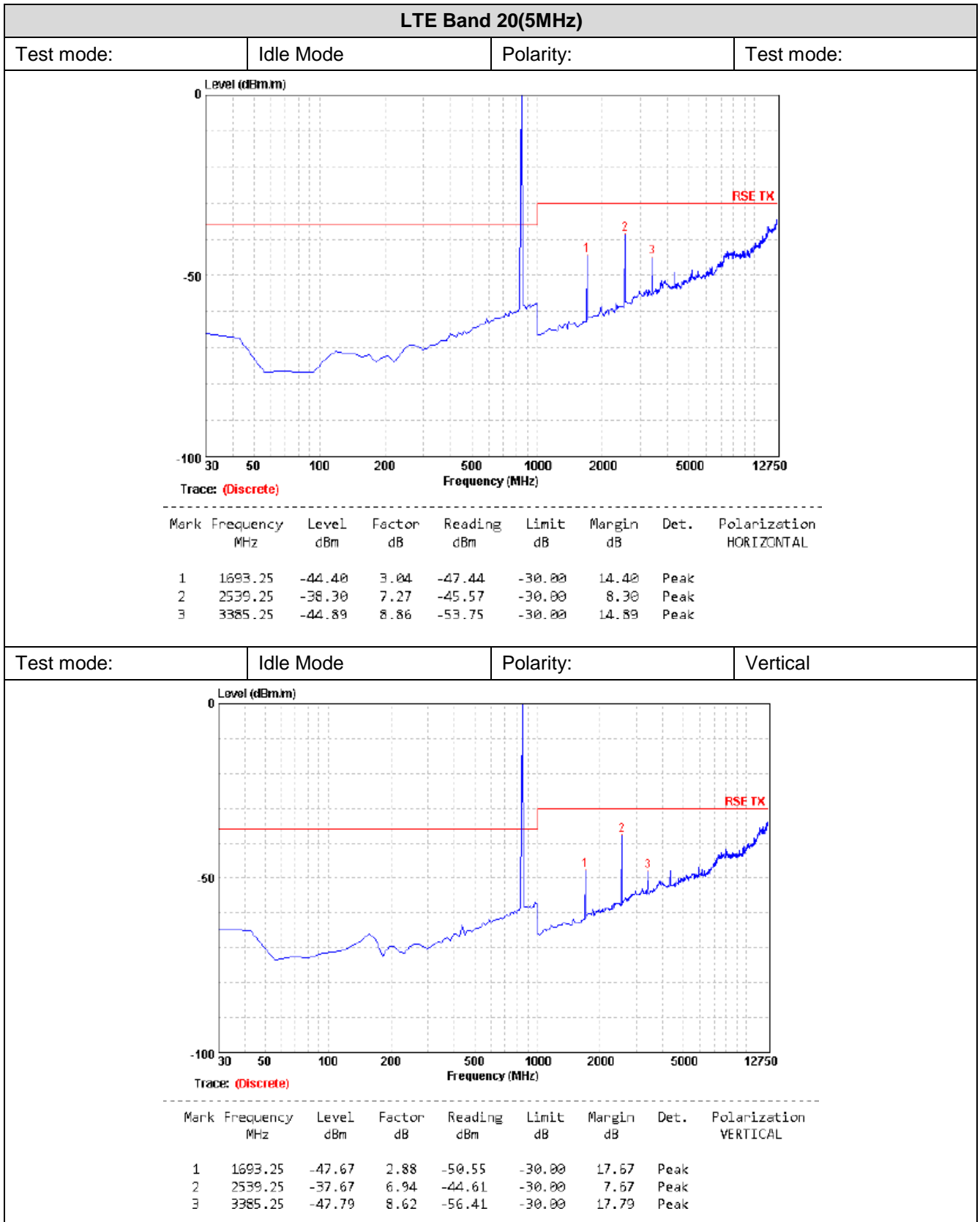




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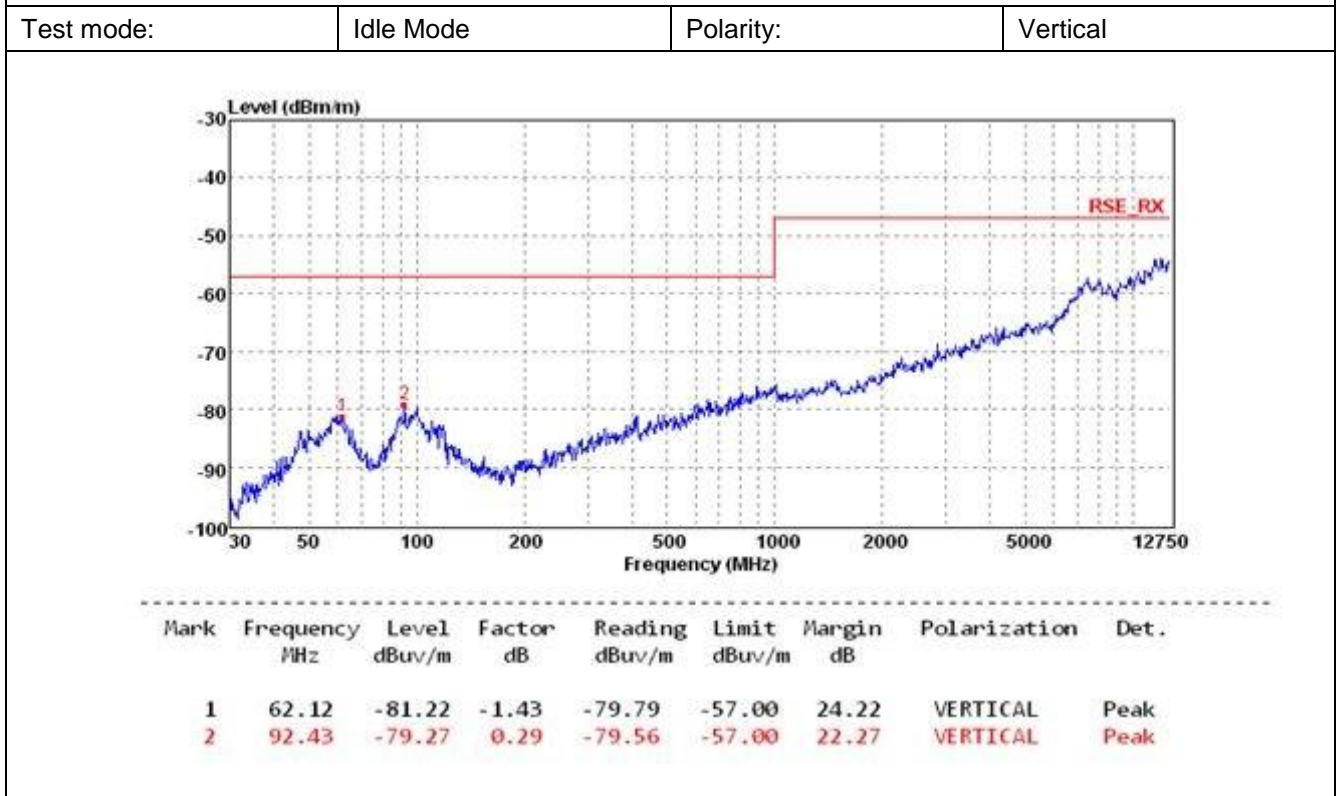
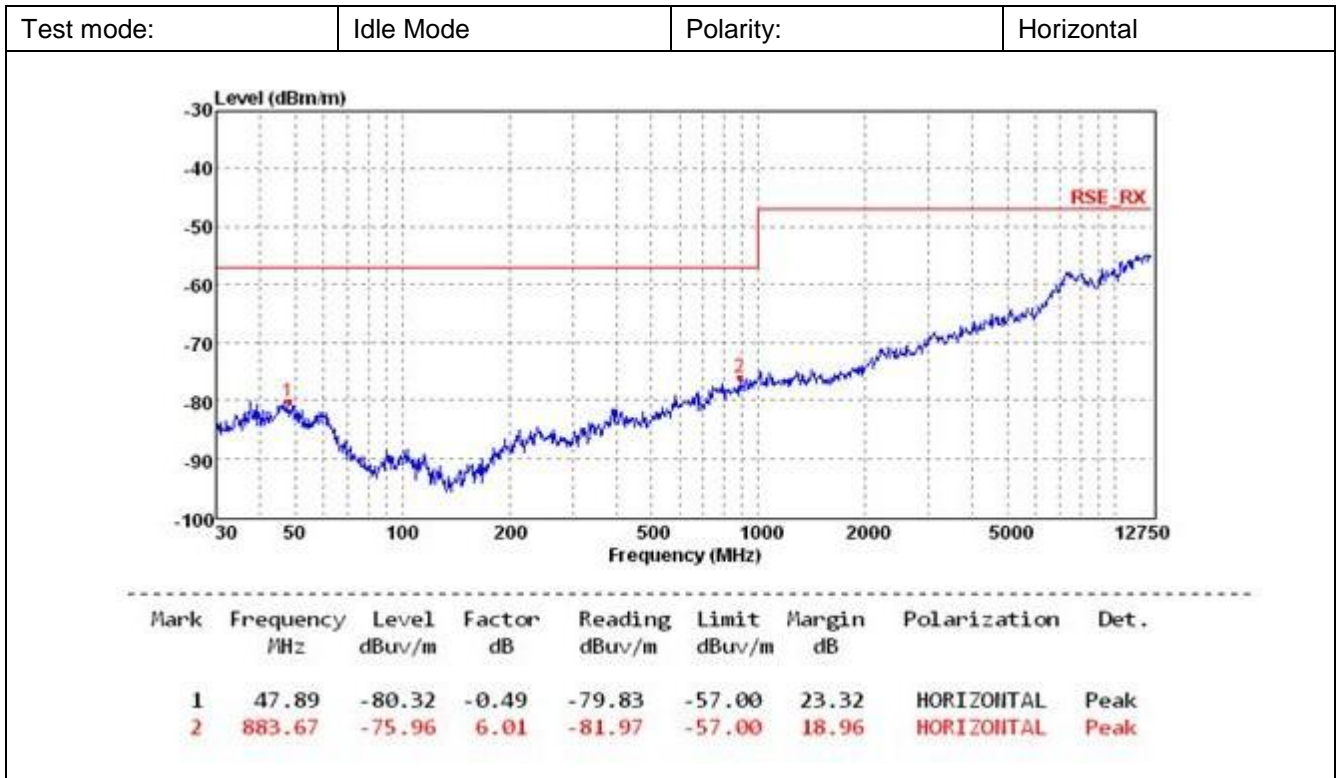




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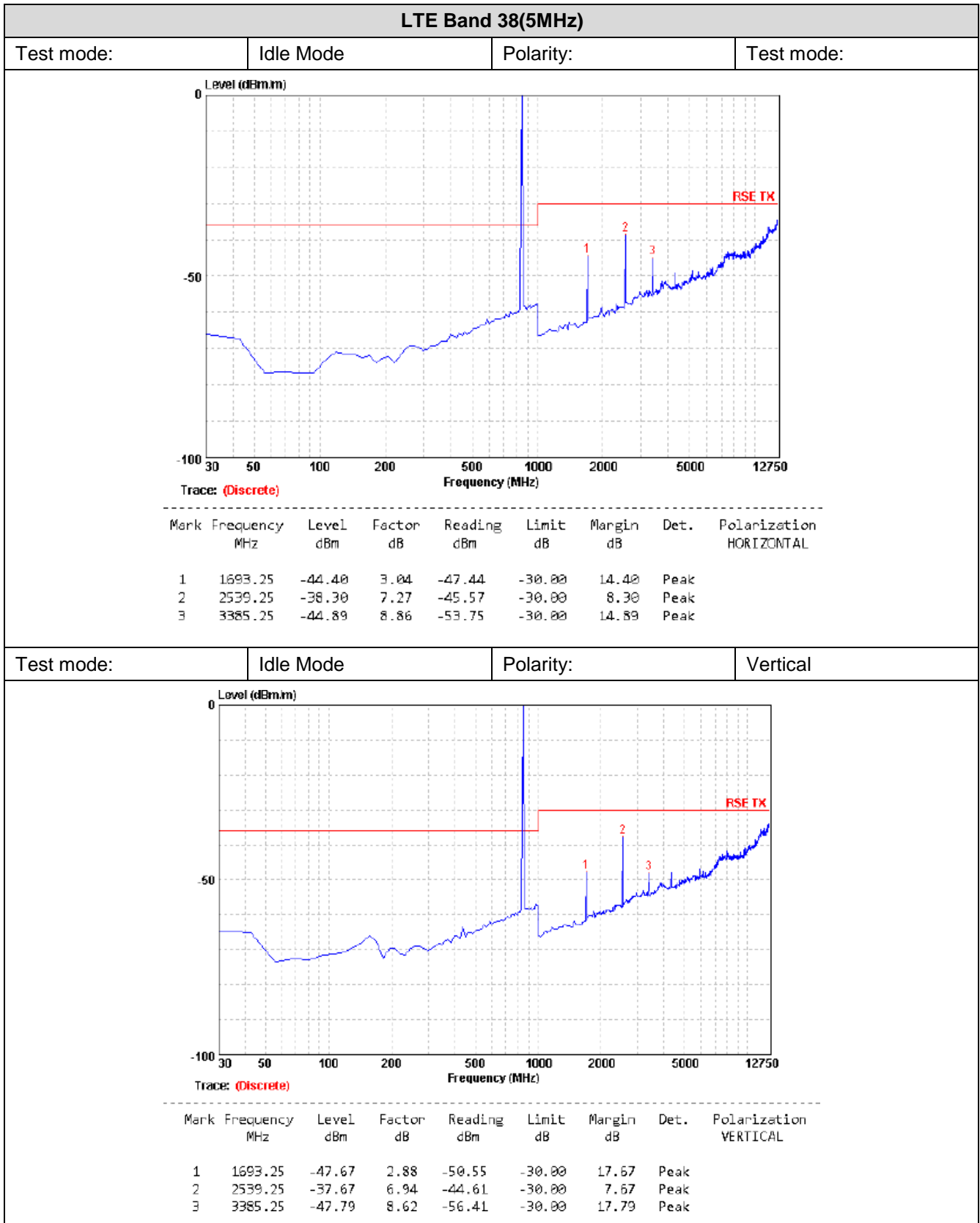




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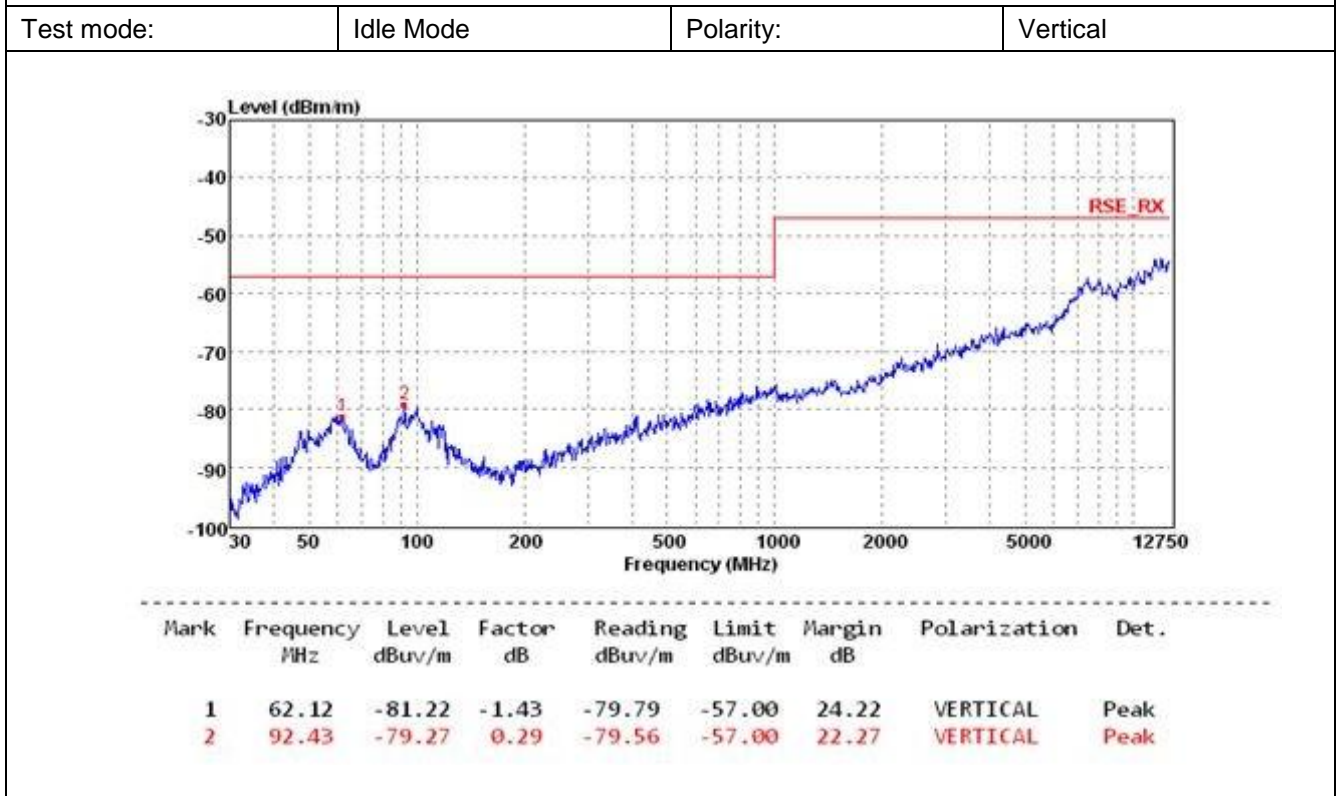
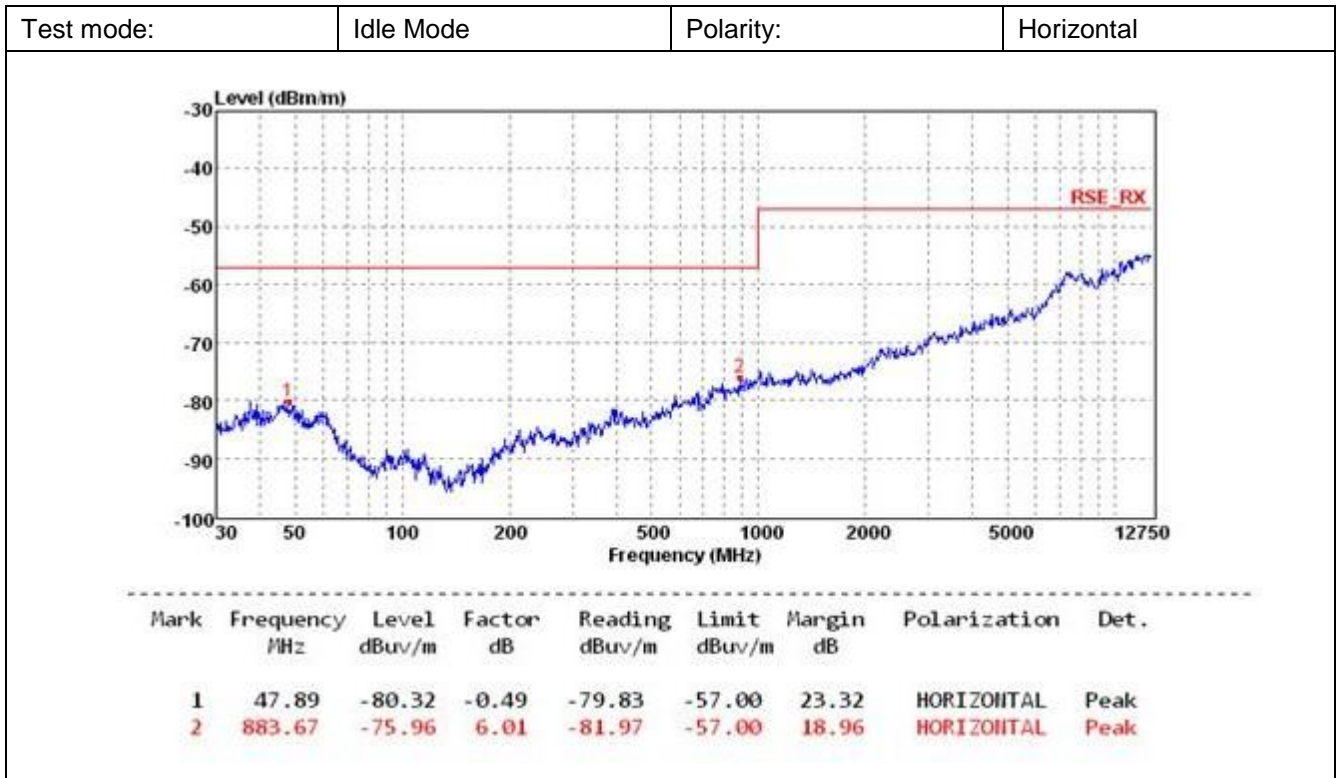




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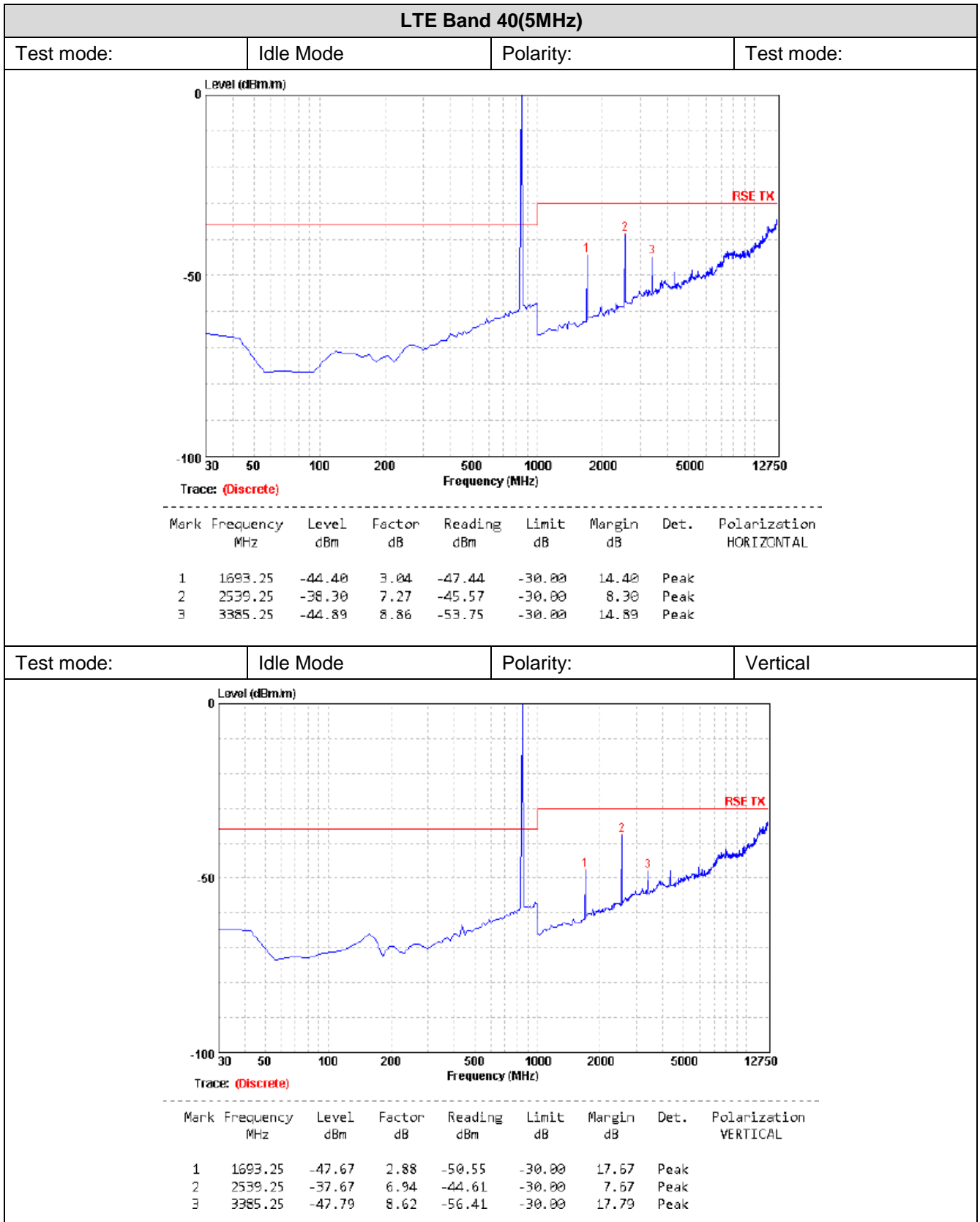




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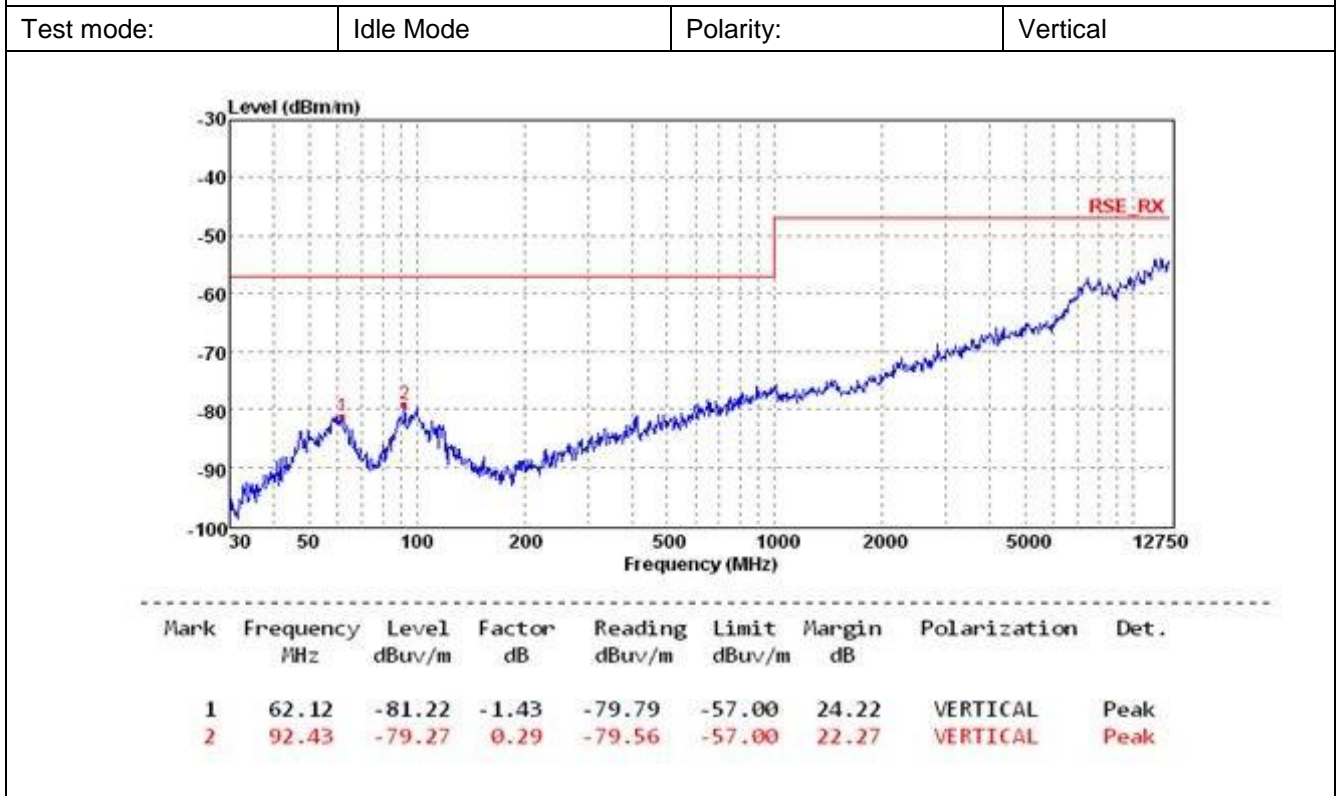
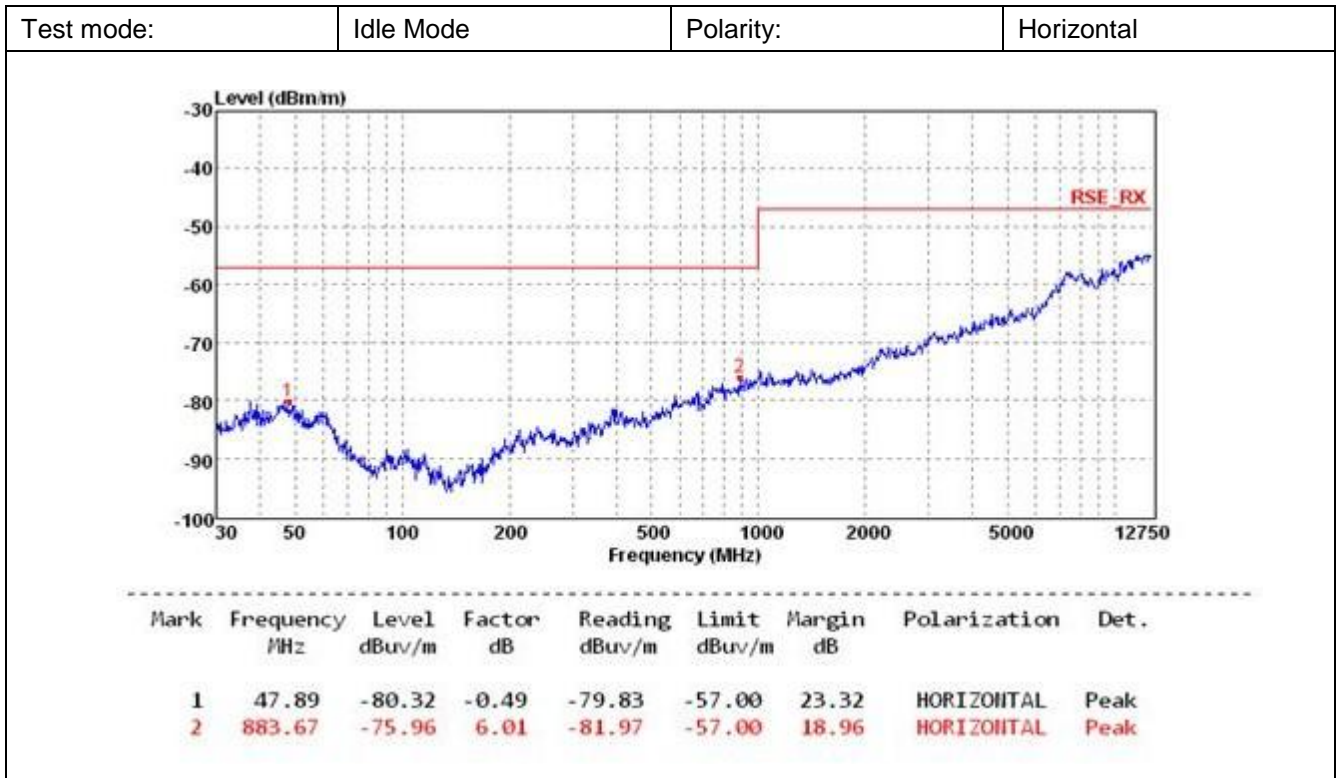




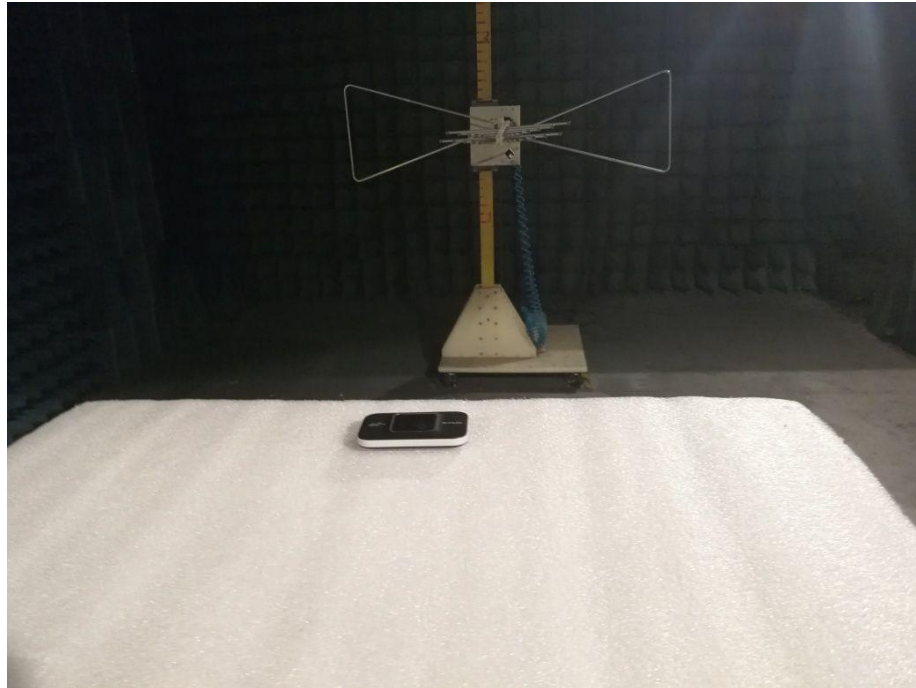
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## 5. Test Setup Photos of the EUT



## 6. External and Internal Photos of the EUT

Reference to the EMC test report

-----End of Report-----