



FCC REPORT Report Reference No.....: TRE1709005801 R/C.....: 59343 FCC ID.....: **QRP-AZUMIKIREI45D** Applicant's name: Azumi S.A Avenida Aquilino de la Guardia con Calle 47, PH Ocean Plaza, Address..... Piso 16 of. 16-01, Marbella, Ciudad de Panama, Panama Manufacturer....: AZUMI HK LTD FLAT/RM 18 BLK 1 14/F GOLDEN INDUSTRIAL BUILDING 16-Address..... 26 KWAI TAK STREET KWAI CHUNG, HK **3G Mobile Phone** Test item description: AZUMI Trade Mark Model/Type reference.....: **KIREI A45 D** Listed Model(s) FCC Part 22: PUBLIC MOBILE SERVICES Standard:: FCC Part 24: PERSONAL COMMUNICATIONS SERVICES FCC Part 27: MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES Date of receipt of test sample...... Sep.11, 2017 Date of testing.....: Sep.12, 2017- Sep.21, 2017 Date of issue..... Sep.22, 2017 Result.....: Pass Candy Live, Bolward.pan Mours rue Compiled by (position+printedname+signature)...: File administrators Candy Liu Supervised by (position+printedname+signature)....: Project Engineer : Edward Pan Approved by (position+printedname+signature)....: Manager Hans Hu Testing Laboratory Name: Shenzhen Huatongwei International Inspection Co., Ltd. Address..... 1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China

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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 Report version

1.1. Applicable Standards

The tests were performed according to following standards:

FCC Part 22: PRIVATE LAND MOBILE RADIO SERVICES.

FCC Part 24: PUBLIC MOBILE SERVICES

FCC Part 27: MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES

TIA/EIA 603 D June 2010: Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.

FCC Part 2: FREQUENCY ALLOCA-TIONS AND RADIO TREATY MAT-TERS; GENERAL RULES AND REG-ULATIONS

<u>971168 D01 Power Meas License Digital Systems v02r02</u>: provides a methodology for fully characterizing the fundamental power of wideband (> 1 MHz) digitally modulated RF signals acceptable to the FCC for demonstrating compliance for licensed transmitters.

1.2. Report version

Version No.	Date of issue	Description
00	Sep.22, 2017	Original

2. Test Description

Test Item	Section in CFR 47	Result
RF Output Power	Part 2.1046 Part 22.913(a) Part 24.232(c) Part 27.50	Pass
99% & -26 dB Occupied Bandwidth	Part 2.1049 Part 22.917(b) Part 24.238(b)	Pass
Conducted Spurious Emissions	Part 2.1051 Part 22.917 Part 24.238 Part 27.53	Pass
Band Edge	Part 2.1051 Part 22.917 Part 24.238 Part 27.53	Pass
ERP and EIRP	Part 22.913(a) Part 24.232(b)	Pass
Radiated Spurious Emissions	Part 2.1053 Part 22.917 Part 24.238 Part 27.53	Pass
Frequency stability vs. temperature	Part 2.1055(a)(1)(b) Part 22.255 Part 24.235 Part 27.54	Pass
Frequency stability vs. voltage	Part 2.1055(d)(1)(2) Part 22.255 Part 24.235 Part 27.54	Pass
Peak-Average Ratio	Part 24.232 Part 27.50	Pass

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

3. SUMMARY

3.1. Client Information

Applicant:	Azumi S.A	
Address:	Avenida Aquilino de la Guardia con Calle 47, PH Ocean Plaza, Piso 16 of. 16-01, Marbella, Ciudad de Panama, Panama	
Manufacturer:	AZUMI HK LTD	
Address:	FLAT/RM 18 BLK 1 14/F GOLDEN INDUSTRIAL BUILDING 16-26 KWAI TAK STREET KWAI CHUNG,HK	

3.2. Product Description

Name of EUT:	3G Mobile Phone		
Trade Mark:	AZUMI		
Model No.:	KIREI A45 D		
Listed Model(s):	-		
IMEI:	358103080004645		
Power supply:	DC 3.8V From internal battery		
Adapter information:	Input: 100-240Va.c., 50/60Hz, 0.2A Output: 5Vd.c., 1A		
Hardware version:	AZUMI_KIREI_A45_D_Hardware_V1.0		
Software version:	AZUMI_KIREI_A45_D_PE_V01		
2G:			
Support Network:	GSM, GPRS, EGPRS		
Support Band:	GSM850, PCS1900		
Modulation:	GSM/GPRS/EGPRS: GMSK		
Transmit Frequency:	GSM850: 824.20MHz-848.80MHz PCS1900: 1850.20MHz-1909.80MHz		
Receive Frequency:	GSM850: 869.20MHz-893.80MHz PCS1900: 1930.20MHz-1989.80MHz		
GPRS Class:	12		
EGPRS Class:	12		
Antenna type:	FPC Antenna		
Antenna gain:	GSM850: -2.6dBi PCS1900: -1.8dBi		
3G:			
Operation Band:	FDD Band II and FDD Band IV, FDD Band V		
Power Class:	Power Class 3		
Modilation Type:	QPSK/16QAM/64QAM/HSUPA/HSDPA		
DC-HSUPA Release Version:	Not Supported		
Antenna type:	FPC Antenna		
Antenna gain: Band II: -1.8dBi, Band IV: -1.6dBi ,Band V: -2.6dBi			

3.3. Operation state

Test frequency list

GSM850		PCS1900	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
128	824.20	512	1850.20
190	836.60	661	1880.00
251	848.80	810	1909.80

FDD Band II		FDD Band IV		FDD Band V	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
9262	1852.4	1313	1712.6	4132	826.40
9400	1880.0	1450	1740.0	4183	836.60
9538	1907.6	1512	1752.4	4233	846.60

➢ <u>Test mode</u>

For RF test items

The EUT has been tested under typical operating condition. The Applicant providessoftware to control the EUT for staying in continoustransmitting and receiving mode for testing.

The Test EUT support two SIM card(SIM1,SIM2), so all the tests are performed at each SIM card (SIM1,SIM2) mode, the datum recorded is the worst case for all the mode at SIM1 Card mode.

3.4. EUT configuration

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

- - supplied by the manufacturer
- supplied by the lab

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

3.5. Modifications

No modifications were implemented to meet testing criteria.

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4. TEST ENVIRONMENT

4.1. Address of the test laboratory

Laboratory:Shenzhen Huatongwei International Inspection Co., Ltd. Address: 1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China Phone: 86-755-26748019 Fax: 86-755-26748089

4.2. Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L1225

Shenzhen Huatongwei International Inspection Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories.

A2LA-Lab Cert. No.: 3902.01

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

FCC-Registration No.: 762235

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration 762235

IC-Registration No.: 5377B-1

Two 3m Alternate Test Site of Shenzhen Huatongwei International Inspection Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 5377B-1.

ACA

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our A2LA accreditation.

4.3. Equipments Used during the Test

	Power(Conducted) &Occu		ssionBandwidt	h&Band Edge	
No.	Equipment	Manufacturer	Model No.	SerialNo.	Last Cal.
1	UNIVERSAL RADIO COMMUNICATION	Rohde&Schwarz	CMU200	112012	2016/11/13
2	WIDEB.RADIO COMM.TESRER	Rohde&Schwarz	CMW500	1201.0002K50	2016/11/13
3	Spectrum Analyzer	Rohde&Schwarz	FSU26	201141	2016/11/13
4	MXA Signal Analyzer	Agilent Technologies	N9020A	MY5050187	2016/11/13
5	Splitter	Mini-Circuit	ZAPD-4	400059	2016/11/13
- reque	ncy Stability				
No.	Equipment	Manufacturer	Model No.	SerialNo.	Last Cal.
1	UNIVERSAL RADIO COMMUNICATION	Rohde&Schwarz	CMU200	112012	2016/11/13
2	Spectrum Analyzer	Rohde&Schwarz	FSU26	201141	2016/11/13
3	Climate Chamber	ESPEC	EL-10KA	05107008	2016/11/13
4	Splitter	Mini-Circuit	ZAPD-4	400059	2016/11/13
0	Device (Dedicted) & Dedicte				
	Power (Radiated) & Radiate		Madal Na	QarialNa	Lest Oal
No.	Equipment	Manufacturer	Model No.	SerialNo.	Last Cal.
1	UNIVERSAL RADIO COMMUNICATION	Rohde&Schwarz	CMU200	112012	2016/11/13
2	Spectrum Analyzer	Rohde&Schwarz	FSU26	201141	2016/11/13
3	HORNANTENNA	ShwarzBeck	9120D	1012	2016/11/13
4	HORNANTENNA	ShwarzBeck	9120D	1011	2016/11/13
5	Ultra-Broadband Antenna	ShwarzBeck	VULB9163	538	2016/11/13
6	Ultra-Broadband Antenna	ShwarzBeck	VULB9163	539	2016/11/13
7	TURNTABLE	MATURO	TT2.0		N/A
8	ANTENNA MAST	MATURO	TAM-4.0-P		N/A
9	EMI Test Software	Audix	E3	N/A	N/A
10	EMI Test Receiver	Rohde&Schwarz	ESIB 26	100009	2016/11/13
11	RF Test Panel	Rohde&Schwarz	TS / RSP	335015/ 0017	2016/11/13
12	High pass filter	Compliance Direction systems	BSU-6	34202	2016/11/13
13	Splitter	Mini-Circuit	ZAPD-4	400059	2016/11/13
14	Horn Antenna	SCHWARZBECK	BBHA9170	25841	2016/11/13
15	Horn Antenna	SCHWARZBECK	BBHA9170	25842	2016/11/13
16	Preamplifier	ShwarzBeck	BBV 9718	BBV 9718	2016/11/13
17	Broadband Preamplifier	ShwarzBeck	BBV743	9743-0079	2016/11/13
18	Signal Generator	Rohde&Schwarz	SMF100A	101932	2016/11/13
19	Amplifer	Compliance Direction systems	PAP1-4060	120	2016/11/13
20	TURNTABLE	ETS	2088	2149	2016/11/13
21	ANTENNA MAST	ETS	2075	2346	2016/11/13
22	HORNANTENNA	Rohde&Schwarz	HF906	100068	2016/11/13
23	HORNANTENNA	Rohde&Schwarz	HF906	100039	2016/11/13

The calibration interval was one year.

4.4. Environmental conditions

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

Normal Temperature/Tnor:	15~35°C
lative Humidity	30~60 %
Air Pressure	950-1050 hPa

4.5. 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 compatibilityand Radio spectrum Matters (ERM);Uncertainties in the measurementof mobile radio equipment characteristics;Part 1"and TR-100028-02 "Electromagnetic compatibilityand Radio spectrum Matters (ERM);Uncertainties in the measurement Matters (ERM);Uncertainties in the measurement of mobile radio equipment characteristics;Part 2 " and is documented in the Shenzhen Huatongwei International Inspection 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.

Hereafter the best measurement capability for Shenzhen Huatongwei laboratory is reported:

Test Items	Measurement Uncertainty	Notes
Frequency stability	25 Hz	(1)
Transmitter power conducted	0.57 dB	(1)
Transmitter power Radiated	2.20 dB	(1)
Conducted spurious emission 9KHz-12.75 GHz	1.60 dB	(1)
Conducted Emission 9KHz-30MHz	3.39 dB	(1)
Radiated Emission 30~1000MHz	4.24 dB	(1)
Radiated Emission 1~18GHz	5.16 dB	(1)
Radiated Emission 18-40GHz	5.54 dB	(1)
Occupied Bandwidth		(1)
Emission Mask		(1)
Modulation Characteristic		(1)
Transmitter Frequency Behavior		(1)

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

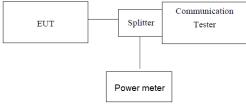
5. TEST CONDITIONS AND RESULTS

5.1. Conducted Output Power

LIMIT

N/A

TEST CONFIGURATION



Note: Measurement setup for testing on Antenna connector

TEST PROCEDURE

- 1. The transmitter output port was connected to base station.
- 2. The RF output of EUT was connected to the power meter by RF cable and attenuator, the path loss was compensated to the results for each measurement.
- 3. Set EUT at maximum power through base station.
- 4. Select lowest, middle, and highest channels for each band and different modulation.
- 5. Measure the maximum burst average power.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

☑ Passed □ Not Applicable

Page

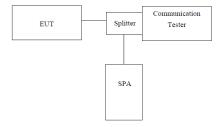
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EUT Mode	Channel	Frequency (MHz)	Power (dBm)
GSM 850 (GMSK)	128	824.20	32.78
	190	836.60	32.87
(Cimory)	251	848.80	32.98
	128	824.20	32.81
GPRS850 (GMSK,1Slot)	190	836.60	32.92
	251	848.80	32.99
	512	1850.20	28.39
PCS1900 (GMSK)	661	1880.00	28.02
(Cimory)	810	1909.80	27.79
	512	1850.20	28.54
GPRS1900 (GMSK,1Slot)	661	1880.00	28.14
	810	1909.80	27.94
	9262	1852.40	23.08
WCDMA Band II	9400	1880.00	23.06
	9538	1907.60	22.74
	1313	1712.6	23.47
WCDMA Band IV	1450	1740.0	23.32
	1512	1752.4	23.02
	4132	826.40	23.20
WCDMA Band V	4183	836.60	23.31
	4233	846.60	23.17

5.2. 99% & -26 dB Occupied Bandwidth

N/A

TEST CONFIGURATION



Note: Measurement setup for testing on Antenna connector

TEST PROCEDURE

- 1. The EUT's output RF connector was connected with a short cable to the spectrum analyzer
- 2. RBWwas set to about 1% of emission BW, VBW= 3 times RBW.
- 3. -26dBc display line was placed on the screen (or 99% bandwidth), the occupied bandwidth is the delta frequency between the two points where the display line intersects the signal trace.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

☑ Passed □ Not Applicable

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EUT Mode	Channel	Frequency (MHz)	99% Occupy bandwidth (KHz)	-26dB bandwidth (KHz)
	128	824.20	245.75	320.20
GSM 850 (GMSK)	190	836.60	243.75	320.80
(Civility)	251	848.80	243.75	321.30
	128	824.20	245.75	321.20
GPRS850 (GMSK,1Slot)	190	836.60	244.75	316.90
	251	848.80	243.75	319.30
	512	1850.20	245.75	318.20
PCS1900 (GMSK)	661	1880.00	243.75	322.50
(Civicity)	810	1909.80	244.75	321.30
	512	1850.20	244.75	318.30
GPRS1900 (GMSK,1Slot)	661	1880.00	243.75	318.30
	810	1909.80	242.75	320.20
	9262	1852.40	4175.82	4739.00
WCDMA Band II	9400	1880.00	4155.84	4709.00
	9538	1907.60	4155.84	4707.00
	1313	1712.60	4135.86	4748.00
WCDMA Band IV	1450	1740.00	4145.85	4721.00
	1512	1752.40	4155.84	4960.00
	4132	826.40	4175.82	4698.00
WCDMA Band V	4183	836.60	4155.84	4685.00
	4233	846.60	4225.77	4683.00

			GSM85	0 For G	MSK Mo	oudlation	า		
MultiView									~
Ref Level Att	36.00 dBm Off 38 dB SW Bandwidth	set 8.00 I 419 µs (~7.3) dB • RBW 10 ms) • VBW 30	kHz kHz Mode Aut	o FFT				• 1Pk Max
30 dBm	H1 30.800 dBm			0	man A				5.00 dBm 24.039600 MHz
20 dBm								D1[1]	-0.01 dB 320.200 kHz
			, AND			1 K			
10 dBm	H2 4.80) dBm	M1			Q 1			
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-10 dBm							may		
-20 dBm		\downarrow						h	
-30 dBm	~~~~							Lange Contraction of the second secon	
-40 dBm	~~~~								
-50 dBm									
-60 dBm									
CF 824.2 M			1001 p	:s	10	0.0 kHz/			Span 1.0 MHz
	Ref Trc	X-Value		Y-Value		Function		Function R	esult
M1 T1 T2	1	824.0396 824.077123 824.322877	MHz	5.00 dBm 16.34 dBm 17.16 dBm	Occ Bw		2	45.7542457	754 kHz
	M1 1	320.2	kHz	-0.01 dB				() 40	19.09.2017 10:27:09
Dato: 10 SED	2017 10:27:09						measuring		10:27:09
Date. 19.5EP.	2017 10.27:00			Char	ol 100				
(Martinet	encata	<u> </u>		Chanr	nel 128				
Ref Level			dB • RBW 10	kHz	o FET				▽
Att 1 Occupied	Bandwidth	419 µs (~7.3	ms) = VBW 30	KHZ Mode Aut				M1[1]	●1Pk Max 5.53 dBm
30 dBm	H1 31.290 dBm			James Car	for the second			D1[1] 8	36.439000 MHz 0.38 dB
20 dBm			¥			Ve			320,800 kHz
10 dBm			мі			Q1			
0 dBm	H2 5.29) dBm							
-10 dBm			\sim				m		
							\sim		
-20 dBm	1	X							
-30 dBm	- And							- John	
-40-dBm									
-50 dBm									
-60 dBm									
CF 836.6 M 2 Marker Ta			1001 pt	S	10	0.0 kHz/			Span 1.0 MHz
Type F M1	Ref Trc	X-Value 836.439 I	1Hz	Y-Value 5.53 dBm		Function		Function R	
T1 T2 D1	1 1 M1 1	836.478122 836.721878 320.8	MHZ MHZ KHZ	17.93 dBm 17.27 dBm 0.38 dB	Occ Bw		2	43.756243	756 KHZ
							Measuring		19.09.2017 10:29:00
Date: 19.SEP.	2017 10:29:00								
				Chanr	nel 190				
MultiView									
Att Occupied	36.00 dBm Offe 38 dB SW Bandwidth	et 8.00 F 419 µs (~7.3 i	ms) • VBW 30	kHz Mode Aut	o FFT				●1Pk Max
30 dBm	H1 31.470 dBm-			James	m				5.05 dBm 48.638600 MHz
20 dBm			Ţ,,/	~	- ¹	~ <u>12</u>		D1[1]	0.46 dB 321.300 kHz
10 dBm						\square			
	H2 5.47) dBm	My			A L			
0 dBm		1	\checkmark				~~		
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-20 dBm		X							
-30 dBm								<u> </u>	L
-40-dBm	1								-
-50 dBm									
-60 dBm									
CF 848.8 M			1001 p	is is it is	10	10.0 kHz/			Span 1.0 MHz
2 Marker Ta Type F M1		X-Value 848.6386 I	4H7	Y-Value 5.05 dBm		Function		Function R	esult
T1 T2	1	848.678122 848.921878	MHz MHz	18.00 dBm 17.97 dBm	Occ Bw		2	43.7562437	756 kHz
D1	M1 1	321.3	KHZ	0.46 dB			Measuring		19.09.2017
Date: 19.SEP.	2017 10:32:31								10:32:31
				Charr	nel 251				
				Unaill	101 201				

		G	SPRS85	50 For G	MSK M	oudlatio	n		
MultiView		ı)							
 Att 1 Occupied Ba 		et 8.00 419 µs (~7.3 i	ms) • VBW 30	kHz Mode Aut	> FFT		1		• 1Pk Max
30 dBm	H1 31.200 dBm				mon			M1[1] D1[1]	4.96 dBm 24.039100 MHz 0.22 dB
20 dBm			7	~~		T2 Y			321.200 kHz
10 dBm			MI			Q 1			
0 dBm	H2 5.200	dBm				- Ž			
-10 dBm		استر	ν				hand		
-20 dBm									
-30 dBm		1						~~~~	
-40 dBm								~~~	
-50 dBm									
-60 dBm									
CF 824.2 MHz 2 Marker Tab			1001 p	ts	10	10.0 kHz/			Span 1.0 MHz
Type Re M1	f Trc 1	X-Value 824.0391	1Hz	Y-Value 4.96 dBm		Function		Function R	
T1 T2 D1 M1	1	824.077123 824.322877 321.2	MHz MHz	16.95 dBm 16.94 dBm 0.22 dB	Occ Bw		2	45.7542457	54 kHz
							Measuring		19.09.2017 10:39:53
Date: 19.SEP.20	17 10:39:53								
				Chanr	nel 128				
	Spectrum		dB • RBW 10	VH7					
 Att 1 Occupied Ba 	38 dB SWT	419 µs (~7.3	ms) • VBW 30	kHz Mode Aut	o FFT				●1Pk Max
30 dBm	H1 31.790 dBm				mont			M1[1] D1[1]	5.96 dBm 36.441000 MHz 0.26 dB
20 dBm			L.	[~	A.			316.900 kHz
10 dBm	H2 5.790	d9 m	M						
0 dBm	Hz 3.790	ubiii	-/						
-10 dBm			\sim			~	my		
-20 dBm		/							
-30 dBm		1						Low	
AQ.dBm	<u> </u>								
-50 dBm									
-60 dBm									
CF 836.6 MHz 2 Marker Tab			1001 p	ts	10	0.0 kHz/			Span 1.0 MHz
Type Re M1	1	X-Value 836.441	1Hz	Y-Value 5.96 dBm	00	Function		Function Re	
T1 T2 D1 M1	1 1 1	836.477123 836.721878 316.9	MHz KHZ	17.55 dBm 17.61 dBm 0.26 dB	Occ Bw		2	44.7332447	55 KH2
][Measuring		19.09.2017 10:38:01
Date: 19.SEP.20	17 10:38:01			~.					
	🗄 Spectrum			Chanr	nel 190				⊽
Ref Level 36 Att		()	dB • RBW 10	kHz kHz Mada Aut	FET				Ľ
1 Occupied Ba	andwidth							M1[1]	●1Pk Max 5.37 dBm
30 dBm	H1 31.150 dBm		_					D1[1]	48.640700 MHz 0.27 dB 319.300 kHz
20 dBm						NE L			
10 dBm	H2 5.150	dBm	Mp			1			
0 dBm							h_{\sim}		
-10 dBm									
-20 dBm		*						~	
-30 dBm								<u> </u>	
-40 dBm		1							
-40 dBm									
-50 dBm			1001 ~	te		0.0 6437			Spap 1.0 Mit-
-50 dBm	le	X-Value	1001 p		10	0.0 kHz/			Span 1.0 MHz
-50 d8m	le	X-Value 848.6407 1 848.678122	1H7	Y-Value 5-37 dBm	10 Occ Bw	0.0 kHz/ Function	2	Function R 43.7562437	esult
-50 dBm	le f Trc 1 1 1	X-Value 848.6407 I 848.678122 848.921878 319.3	1H7				-	Function R 43.7562437	esult 756 kHz 19.09.2017
-50 d8m -60 d8m 2 Marker Tab Type Re M1 T1 T2 D1 M1	le f Trc 1 1 1 1	X-Value 848.6407 848.678122 848.921878 319.3	1H7	Y-Value 5-37 dBm			-	Function R	esult 756 kHz
-50 dBm -60 dBm <u>CF 848.8 MHz</u> 2 Marker Tab Type Re M1 T1 T2	le f Trc 1 1 1 1	X-Value 848.64071 848.67812 848.921878 319.3	1H7	Y-Value 5.37 dBm 18.11 dBm 17.78 dBm 0.27 dB			-	Function R 43.7562437	esult 756 kHz 19.09.2017

		F	PCS190	0 For G	MSK Mo	oudlatio	n		
MultiView		L L	dB B DBW 10						
 Att 1 Occupied B 	5.00 dBm Offse 38 dB SWT andwidth	419 µs (~7.3 r	ns) • VBW 30	kHz Mode Auto	> FFT				●1Pk Max
30 dBm	H1 27.500 dBm-							M1[1] 1.8 	1.92 dBm 50041100 GHz -0.05 dB
20 dBm					m			01[1]	318.200 kHz
10 dBm			, T1/	, 		T2 V			
0 dBm	H2 1.500 (18m	My			Q1			
-10 dBm							h		
		مستمير					Jun		
-20 dBm		/						~	
-30 dBm	m							~~~~	·
-40 dBm									
-50 dBm									
-60 dBm	12		1001 pt	'e	10	0.0 kHz/			Span 1.0 MHz
2 Marker Tab Type Re	le	X-Value	1001 pr	Y-Value	10	Function		Function R	
M1 T1	1 1	1.8500411 0	GHz GHz	1.92 dBm 13.10 dBm	Occ Bw		2	45.7542457	
T2 D1 M1		1.85007712 1.85032288 318.2	GHz KHZ	13.73 dBm -0.05 dB			<u>\</u>		19.09.2017
	JL						Measuring		19.09.2017 09:55:35
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Multivia	🖽 Spectrum	<u> </u>		Chann					▼
Ref Level 36 Att	5.00 dBm Offse	t 8.00	dB • RBW 10	kHz kHz Mode Auto	FET				Ľ
1 Occupied B	andwidth			Mode Auto				M1[1]	1Pk Max 1.66 dBm
30 dBm	H1 27.220 dBm							D1[1]	79840400 GHz -0.42 dB 322.500 kHz
20 dBm			Ţ1	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	<u>مر</u>	T2			322,300 KHZ
10 dBm			MI						
0 dBm	H2 1.220 (18m				<u> </u>			
-10 dBm							~		
-20 dBm									
-30 dBm		r						1 mg	
-40 dBm								hm	m
-50 dBm									
-60 dBm									
CF 1.88 GHz 2 Marker Tab			1001 pt	:s	10	0.0 kHz/			Span 1.0 MHz
Type Re M1	f Trc 1	X-Value L.8798404 G	iHz	Y-Value 1.66 dBm		Function		Function R	esult
T1 T2 D1 M1	1	1.87987812 1.88012188 322.5	GHz GHz	13.50 dBm 14.18 dBm -0.42 dB	Occ Bw		2	43.7562437	756 kH z
		522101		0112.00			Measuring	() 40	19.09.2017 09:56:42
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				Chann	el 661				
Ref Level 3	5.00 dBm Offse 38 dB SWT		dB • RBW 10	kHz					
 Att 1 Occupied B 	38 dB SWT	419 µs (~7.3 r	ns) = VBW 30	kHz Mode Auto) FFT			M41E47	• 1Pk Max
30 dBm	H1 27.060 dBm				mun .n			M1[1] 1.9 	1.42 dBm 09639900 GHz -0.06 dB
20 dBm			ŢŢ~			T2			321.300 kHz
10 dBm						A.			
0 dBm	H2 1.060 (IBm	Mir			<u><u><u></u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u>			
-10 dBm		سر				L	h~		
-20 dBm		~~~					- my		
-30 dBm		٢							
	- Martin							~~~~	
-40 dBm									and the second s
-50 dBm									
-60 dBm	lz	<u> </u>	1001 pt	s	10	0.0 kHz/	<u> </u>	<u> </u>	Span 1.0 MHz
2 Marker Tab Type Re	le	X-Value		Y-Value 1.42 dBm		Function		Function R	
M1 T1 T2	1 1	1.90967812	GHz	1.42 dBm 13.26 dBm 13.69 dBm	Occ Bw		2	44.7552447	
D1 M:	1	1.90992288 321.3 P	KHZ	-0.06 dB		1	Measuring	()	19.09.2017
	1								09:57:36
	117 09:57:36						Jinousunigin		09:57:36
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MultiView		G	PRS190	00 For C	JMSK M	loudlatio	on		
Ref Level 36 Att 1 Occupied B	5.00 dBm Offse 38 dB SWT	t 8.00 419 µs (~7.3 r	dB • RBW 10 ns) • VBW 30	<hz KHz Mode Aut</hz 	o FFT				1 Dk May
30 dBm								M1[1]	1.60 dBm 350041000 GHz
	H1 27.340 dBm			Am	m			D1[1]	0.01 dB 318.300 kHz
20 dBm			T1 Y			T2 R			
10 dBm			му						
0 dBm	H2 1.340 c	Bm							
-10 dBm			V			~	m		
-20 dBm		<u></u>							
-30 dBm		1					~	<u></u>	
-40 dBm	m							~~	
-50 dBm									
-60 dBm	z		1001 pt	s	10	0.0 kHz/			Span 1.0 MHz
2 Marker Tab Type Re	le	X-Value		Y-Value 1.60 dBm		Function		Function R	
M1 T1	1	X-Value 1.850041 0 1.85007812 1.85032288	GHz GHz	1.60 dBm 13.66 dBm	Occ Bw		2	44.7552447	
T2 D1 M1	1	1.85032288 318.3 I	GHZ (HZ	13.66 dBm 13.82 dBm 0.01 dB			<u>, </u>		10.00.3017
	_ال						Measuring	40	19.09.2017 10:22:38
Date: 19.SEP.20	17 10:22:38			<u>_</u> .					
				Chanr	nel 512				
	Spectrum		dB = BBW 101	(Hz					
Att Occupied B	38 dB SWT	419 µs (~7.3 r	ns) • VBW 301	kHz kHz Mode Aut	o FFT				●1Pk Max
30 dBm	H1 27.880 dBm-								2.05 dBm 379841100 GHz 0.00 dB
20 dBm				- And a	- market			D1[1]	318.300 kHz
10 dBm			T1			T2			
	H2 1.880 c	Bm	My			Q 1			
0 dBm			1						
-10 dBm			~			V	and the second		
-20 dBm		7							
-30 dBm		,						La contra	
	<u>~~</u> ‴							"have	m
-50 dBm									
-60 dBm									
CF 1.88 GHz			1001 pt	s	10	0.0 kHz/			Span 1.0 MHz
2 Marker Tab Type Re	f Trc	X-Value		Y-Value 2.05 dBm		Function		Function R	esult
M1 T1 T2	1 1	1.87987812	GHz	14.55 dBm 14.02 dBm 0.00 dB	Occ Bw		2	43.756243	756 kHz
 D1	. 1 Y	1.88012188 318.3	Hz	0.00 dB			Measuring		19.09.2017 10:21:26
Date: 19.SEP.20	17 10:21:26						J		10:21:26
				Chanr	nel 661				
(🗄 Spectrum			Onam					▽
MultiView			dB • RBW 10	<hz< td=""><td></td><td></td><td></td><td></td><td></td></hz<>					
Ref Level 36 Att	5.00 dBm Offse 38 dB SWT	t 8.00 <u>419 µs (</u> ~7.3 r	<u>ns) 🖷 VBW</u> 301	Hz Mode Aut	o FFT				
Ref Level 30 Att 1 Occupied B	5.00 dBm Offse 38 dB SWT andwidth	t 8.00 419 µs (~7.3 r	ns) - VBW 301	KHz Mode Aut	o FFT			M1[1]	 1Pk Max 2.10 dBm
Ref Level 3 Att 1 Occupied B 30 dBm-	5.00 dBm Offse 38 dB SWT andwidth H1 27.590 dBm	t 8.00 419 µs (~7.3 r	ns) = VBW 301	KHZ Mode Aut	o FFT			M1[1] 1.5 D1[1]	2.10 dBm 09640000 GHz -0.32 dB
Ref Level 30 Att 1 Occupied B	andwidth	t 8.00 419 μs (~7.3 r	ns) • VBW 301	Hz Mode Aut		12		1.9	2.10 dBm 09640000 GHz
Ref Level 3 Att 1 Occupied B 30 dBm-	andwidth	t 8.00 419 µs (~7.3 r		Hz Mode Aut	o FFT	12		1.9	2.10 dBm 09640000 GHz -0.32 dB
Ref Level 34 Att 1 Occupited B 30 dBm- 20 dBm-	andwidth	t 8.00 419 µs (~7.3 r		Hz Mode Aut	o FFT	12 12 1		1.9	2.10 dBm 09640000 GHz -0.32 dB
Ref Level 34 Att 1 Occupied B3 30 dBm	andwidth H1 27.590 dBm	8.00 419 μs (~7.3 r		CHZ Mode Aut		P1 P2		1.9	2.10 dBm 09640000 GHz -0.32 dB
Ref Level 30 Att 1 Occupied B 30 dBm 20 dBm 10 dBm 0 dBm -10 dBm	andwidth H1 27.590 dBm	8.00 419 µs (~7.3 r		Aut		P1		1.9	2.10 dBm 09640000 GHz -0.32 dB
Ref Level 30 Att Occupied B 30 dBm 20 dBm 10 dBm 0 dBm -20 dBm -20 dBm	andwidth H1 27.590 dBm	8.00 419 µs (~7.3 r		CHZ Mode Aut		122 122		1.9	2.10 dBm 09640000 GHz -0.32 dB
Ref Level 30 Att Occupied B 30 dBm 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm	andwidth H1 27.590 dBm	8.00 419 µs (~7.3 r		Hz Mode Aut		128 V-128 V-128		1.9	2.10 dBm 09640000 GHz -0.32 dB 320.200 kHz
Ref Level 30 Att I Occupied B 30 dBm 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm		8.00 419 µs (~7.3 r		Aut Mode Aut		P1	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	1.9	2.10 dBm 09640000 GHz -0.32 dB
Ref Level 30 Att Occupied B 30 dBm 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm		8.00 419 µs (~7.3 r		Aut Mode Aut		P1		1.9	2.10 dBm 09640000 GHz -0.32 dB 320.200 kHz
Ref Level 34 1 Occupied B 30 dBm 20 dBm 10 dBm 10 dBm -10 dBm -20 dBm -30 dBm -30 dBm -30 dBm -60 dBm		8.00 419 µs (~7.3 r	MI					1.9	2.10 dBm 09640000 GHz -0.32 dB 320.200 kHz
Ref [evel 30 e Att I Occupici B 30 dBm 20 dBm 10 dBm 0 dBm -0 dBm		\$m		5 S		0.0 kHz/			2.10 dBm 009640000 GHz -0.32 dB 320.200 kHz
Pef Level 30 Att I Occupied B 20 dBm 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm -60 dBm -50 dBm -60 dBm MI		3m 	1001 pt	S Y-Value 2.10 dBm				Function R	2.10 dBm 009640000 GHz -0.32 dB 320.200 kHz 520.200 kHz Span 1.0 MHz esult
Ref Level 30 • Att 1 Occupied B 20 dBm 10 dBm 10 dBm -10 dBm -20 dBm -30 dBm -30 dBm -30 dBm -60 dBm -50 dBm -60 dBm -70 dBm -70 dB	andwidth ++1 27,590 dBm ++12 1,590 c ++12 1,590 c 	×-Value 1.90964 C 1.9096712	1001 pt	s Y-Value 2.10 dBm 14 30 fBm		0.0 kHz/	2		2.10 dBm 009640000 GHz -0.32 dB 320.200 kHz 520.200 kHz Span 1.0 MHz esult
Ref Level 3/4 • Att 1 Occupied B: 30 dBm 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm -50 dBm -60 dBm -50 dBm -51 Type Re M1 T1	andwidth ++1 27,590 dBm ++12 1,590 c ++12 1,590 c 	X-Value 1.90964 (2	1001 pt	S Y-Value 2.10 dBm		0.0 kHz/		Function R	2.10 dBm 009640000 GHz -0.32 dB 320.200 kHz 320.200 kHz Span 1.0 MHz esult 757 kHz
Ref [evel 30] e Att I Occupici B 30 dBm 20 dBm 10 dBm 0 dBm -0 dBm -10 dBm -10 dBm	andwidth +1 27,590 dbm +12 1,590 c +12 1,590 c 	×-Value 1.90964 C 1.9096712	1001 pt	s Y-Value 2.10 dBm 14 30 fBm		0.0 kHz/		Function R	2.10 dBm 09640000 GH2 -0.32 dB 320.200 kH2 320.200 kH2 Span 1.0 MHz esult 757 kHz
Ref [evel 30] Att I Occupied B: 30 dBm 20 dBm 10 dBm 0 dBm -0 dBm -10 dBm <td>andwidth +1 27,590 dbm +12 1,590 c +12 1,590 c </td> <td>×-Value 1.90964 C 1.9096712</td> <td>1001 pt</td> <td>Y-Value 2:10 dBm 14.39 dBm 13.68 dBm -0.32 dB</td> <td></td> <td>0.0 kHz/</td> <td></td> <td>Function R</td> <td>2.10 dBm 09640000 GH2 -0.32 dB 320.200 kH2 320.200 kH2 Span 1.0 MHz esult 757 kHz</td>	andwidth +1 27,590 dbm +12 1,590 c +12 1,590 c 	×-Value 1.90964 C 1.9096712	1001 pt	Y-Value 2:10 dBm 14.39 dBm 13.68 dBm -0.32 dB		0.0 kHz/		Function R	2.10 dBm 09640000 GH2 -0.32 dB 320.200 kH2 320.200 kH2 Span 1.0 MHz esult 757 kHz

			,	WCDMA	A Band I				
MultiView	😑 Spectrum	7							
Att	6.00 dBm Offse 38 dB SWT	t 8.00 dB = RE 1.01 ms = VB	₩ 100 kHz ₩ 300 kHz №	lode Auto Sweep					
1 Occupied B	andwidth							M1[1]	●1Pk Max -6.05 dBm .85003100 GHz
								D1[1]	-0.29 dB 4.73900 MHz
-20-dBm	H1 19.500 dBm	Ţ1	· · · · · · · · · · · · · · · · · · ·	- Marine		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	т2		
10 dBm							Ϋ́,		
0 dBm		M					91		
-10 dBm	H2 -6.500	dBm					1		
-20.dBm		han					~~~~~		mon
-30 dBm									
-40 dBm									
-50 dBm									
-60 dBm									
CF 1.8524 GH			1001 p	ts	1	.0 MHz/			Span 10.0 MHz
2 Marker Tab Type Re M1	ef Trc	X-Value 1.850031 G	H7	Y-Value -6.05 dBm		Function		Function R	esult
T1 T2	1	1.8503021 (1.8544779 (6Hz 6Hz	11.13 dBm 10.47 dBm	Occ Bw			4.17582417	6 MHz
D1 M	1 1	4.739 M	Hz	-0.29 dB			Measuring		19.09.2017
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MultiView	🖽 Spectrum			Onann	01 0202				
			00 dB • RBW 1 9 ms) • VBW 3	.00 kHz 300 kHz Mode /	Auto FFT				
1 Occupied B	andwidth							M1[1]	 1Pk Max -7.31 dBm
30 dBm								D1[1]	.87763800 GHz 0.50 dB 4.70900 MHz
20 dBm	H1 18.810 dBm	т1	m	· · · · · · · · · · · · · · · · · · ·		m	T 2		
10 dBm							¥		
0 dBm		м					<u></u>		
-10 dBm	H2 -7.190	dBm					1		
-20 dBm		m						home	~
-30 dBm									m
-40 dBm									
-50 dBm									
-60 dBm			1001 p	ts	1	.0 MHz/		5	Span 10.0 MHz
2 Marker Tab Type Re	ef Trc	X-Value		Y-Value		Function		Function R	esult
M1 T1 T2	1	1.877638 G 1.8779121 (1.8820679 (4.709 M		-7.31 dBm 10.45 dBm 9.99 dBm	Occ Bw			4.15584415	6 MHz
D1 M		4.709 M	Hz	0.50 dB			Measuring		19.09.2017
Date: 19.SEP.20	017 09:00:49								09:00:49
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	B Spectrum								
Ref Level 3 Att	6.00 dBm Offse 38 dB SWT	t 8.0 41.84 µs (~6.9	00 dB • RBW 1 9 ms) • VBW 3	.00 kHz 300 kHz Mode /	Auto FFT				
1 Occupied B	andwidth							M1[1]	● 1Pk Max -6.73 dBm .90524600 GHz
								D1[1]	-0.35 dB 4.70700 MHz
20 dBm	H1 18.900 dBm	τı	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			harrow and the second s	Т2		
10 dBm		/						1	
0 dBm		M					d'i		
-10 dBm	H2 -7.100	asm					1		
-20 dBm	+						h	<u> </u>	
-30 dBm									
-40 dBm				-					
-50 dBm									
-60 dBm									
CF 1.9076 GH			1001 p	ts	1	.0 MHz/			Span 10.0 MHz
2 Marker Tab Type Re	ef Trc	X-Value	U-7	Y-Value -6.73 dBm		Function		Function R	esult
M1 T1 T2	1 1	1.905246 G 1.9055121 (1.9096679 (iHz iHz	10.27 dBm 9.80 dBm	Occ Bw			4.15584415	6 MHz
D1 M	1 1 Y	4.707 M	Hz	-0.35 dB		1	Measuring		19.09.2017
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				Chann	el 9238				

Report Template Version: H00 (2016-08)

Specifie X-Value Y-Value M1 1 1.7105225 GHz -6.57 dBm T1 1 1.7105021 GHz 10.46 dBm Occ Bw T1 1 1.7105021 GHz 10.46 dBm Occ Bw D1 M1 1 4.748 MHz -0.06 dB D1 M1 4.748 MHz -0.06 dB ex 19.SEP.2017 09:14:41 Channel 1313 MultiView Spectrum 8.00 dB RBW 100 kHz Ref Level 36.00 dBm 00 dBm 9.80 WBW 300 kHz Mode Auto FFT Occupied Bandwidth 41.84 µs (~6.9 ms) VBW 300 kHz Mode Auto FFT Occupied Bandwidth 11.44 µs (~6.9 ms) VBW 300 kHz Mode Auto FFT Occupied Bandwidth 11.44 µs (~6.9 ms) VBW 300 kHz Mode Auto FFT Occupied Bandwidth 11.44 µs (~6.9 ms) VBW Mode Auto FFT Occupied Bandwidth 11.44 µs (~6.9 ms) VBW Mode Auto FFT Odm 11.84 µs (~6.9 ms) VBW Mode Auto FFT Odm 11.44 µs (~6.9 ms)	1.0 MHz/ 	12 12 1	DI[1]	76 MHz
Ref Level 35.00 dm Offset: 8.00 dm Mode Auto FFT Occurated Bandwidth dm Mode Auto FFT Mode Auto FFT Occurated Bandwidth dm dm Mode Auto FFT dm dm dm dm dm dm dm dm dm dm dm dm dm dm dm dm dm dm dm dm dm dm dm dm dm dm dm dm dm dm dm dm	Function	12 12 13 14 14 15 15 15 15 15 15 15 15 15 15	PI[1]	- 6.57 dB - 0.06 dl - 0.06 dl 4.74800 MH 4.74800 MH 5.00 MH 5.00 MH 5.00 MH 7.00 MH 7.00 MH 7.00 MH 7.00 MH 7.00 MH 7.00 MH 7.59 dB 1.73763300 GH 0.59 dB
Cocupied Bandwidth dtm dtm dtm dtm dtm dtm dtm	Function	12 13 14 14 15 15 15 15 15 15 15 15 15 15	PI[1]	- 6.57 dB - 0.06 dl - 0.06 dl 4.74800 MH 4.74800 MH 5.00 MH 5.00 MH 5.00 MH 7.00 MH 7.00 MH 7.00 MH 7.00 MH 7.00 MH 7.00 MH 7.59 dB 1.73763300 GH 0.59 dB
dBm 11 19.450 dbm 11 dBm 10 10 dBm 10 1001 pts Marker Table V-Value V-Value Varker Table V-Value 10.46 dBm DI MI 1 1.710522 GHz Octo BW Offset 8.00 dB BBW DI MI 1.710521 GHz Node Auto PTI Octo BW Octo BW Octo BW Octo BW DI MI 1.8194 (ref. 9.00 BW YWBW 300 Hz Mode Auto PTI OdBm 11.737633 GHz <	Function	12 11 1	PI[1]	
dBm 1 1 dBm 100 100 jBm 100 100 </td <td>Function</td> <td>12 11 1</td> <td>Function f 4.1758241</td> <td>4.74800 MH 4.74800 MH 5.900 MH 5.900 MH 7.900 MH 7.59 dBn 1.73763300 GH 0.59 dBn 0.59 dBn 0.59 dBn</td>	Function	12 11 1	Function f 4.1758241	4.74800 MH 4.74800 MH 5.900 MH 5.900 MH 7.900 MH 7.59 dBn 1.73763300 GH 0.59 dBn 0.59 dBn 0.59 dBn
dbm 12 -0.550 dbm 1 dbm 1 1 1 dbm 1 1 1 dbm 1 <	Function	12 1	Function f 4.1758241	Result 76 MHz 19.09,2017 09.14:41 ▼ ↓ PK Max -7.59 dBn 1.73763300 GH 0.59 db 0.59 db
#8n H2 -0.550 dem H 0 dem 0 dem 0 0 0 dem 0 0 0 0 0 dem 0 0 0 0 0 0 dem 0 0 0 0 0 0 0 dem 0 0 0 0 0 0 0 0 dem 0 0 0 0 0 0 0 0 11.7120525 GHz 1001 pts 1001 pts 0	Function	Measuring.	Function f 4.1758241	Result 76 MHz 19.09,2017 09.14:41 ▼ ↓ PK Max -7.59 dBn 1.73763300 GH 0.59 db 0.59 db
12 -0.500 dbm 1 10 dbm 1 1 11 1 1 1 11 1 1 1 11 1 1 1 11 1 1 1 11 1 1 1 1 11 1 1 1 1 1 11 1 1 1 1 1 1 11 1	Function	Measuring.	Function f 4.1758241	Result 76 MHz 19.09,2017 09.14:41 ▼ ↓ PK Max -7.59 dBn 1.73763300 GH 0.59 db 0.59 db
0 Bm 0 Bm 0 Bm 0 Bm 0 Bm 1 0 01 pts Varker Table V. Value Warker Table X. Value Y. Value Occ BW D1 M1 1 1.710225 GHz -6.57 dBm Occ BW D1 M1 1 4.748 MHz -0.06 dB Occ BW D1 M1 1 4.748 MHz -0.06 dB Occ BW D1 M1 1 4.748 MHz -0.06 dB Occ BW D1 M1 1 4.748 MHz -0.06 dB Occ BW D1 M1 1 4.748 MHz -0.06 dB Occ BW D2 Bm Mater Table BRW 100 kHz Mode Auto FFT Occupics Bandwidth BR BRW 100 kHz Mode Auto FFT Occupics Bandwidth International State International State International State OBm H2 7.000 Bm 1 1.737633 GHz -7.59 dB International State OBm International State <td>Function</td> <td>Measuring.</td> <td>Function f 4.1758241</td> <td>Result 76 MHz 19.09,2017 09.14:41 ▼ ↓ PK Max -7.59 dBn 1.73763300 GH 0.59 db 0.59 db</td>	Function	Measuring.	Function f 4.1758241	Result 76 MHz 19.09,2017 09.14:41 ▼ ↓ PK Max -7.59 dBn 1.73763300 GH 0.59 db 0.59 db
0 d8m	Function	Measuring.	Function f 4.1758241	Result 76 MHz 19.09,2017 09.14:41 ▼ ↓ PK Max -7.59 dBn 1.73763300 GH 0.59 db 0.59 db
d8m	Function	Measuring.	Function f 4.1758241	Result 76 MHz 19.09,2017 09.14:41 ▼ ↓ PK Max -7.59 dBn 1.73763300 GH 0.59 db 0.59 db
d8m	Function	Measuring.	Function f 4.1758241	Result 76 MHz 19.09,2017 09.14:41 ▼ ↓ PK Max -7.59 dBn 1.73763300 GH 0.59 db 0.59 db
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DI MI 1 4.721 MHZ U.59 8B (19.SEP.2017 09:16:10 Channel 1450 IulitiView C Spectrum Ref Level 36.00 dBm Offset 8.00 dB • RBW 100 kHz Att 38 dB SWT 41.84 µs (~6.9 ms) • VBW 300 kHz Mode Auto FFT Occupied Bandwidth			Function F	
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Occupied Bandwidth				
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Varker Table Y-Value Y-Value Type Ref Trc X-Value Y-Value			Function F	Result
Marker Table Type Ref Trc X-Value Y-Value			Function F	Result 26 MHz
Marker Table X-Value Y-Value Type Ref Trc X-Value Y-Value M1 1 1.749908 GHz -5.85 dBm T1 1 1.750479 GHz 10.05 dBm Occ Bw T2 1 1.750479 GHz 9.95 dBm Odd Bm		Measuring.		Result 26 MHz
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MultiView CR Ref Level 36.0 Att 1 Occupied Ban 30 dBm	\sim			NCDMA	v pano v	/			
Att Occupied Ban Jo dBm	Spectrum								
30 dBm	00 dBm Offset 38 dB SWT	ε 8.0 41.84 μs (~6.9	0 dB • RBW 1 (ms) • VBW 3	00 kHz 00 kHz Mode A	Auto FFT				
	lawiath							M1[1]	-5.90 dBm 324.05300 MHz
0.0 - 10								D1[1]	-0.65 dB 4.69800 MHz
20 0811	41 19.700 dBm		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	m		m			4.03000 Minz
10 dBm							2 2		
0 dBm									
	H2 -6.300 d	iBm M							
-10 dBm									
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-30 dBm									- m
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-50 dBm									
-60 dBm			1001						10.01415
CF 826.4 MHz 2 Marker Table			1001 pt		1	.0 MHz/			Span 10.0 MHz
Type Ref M1	1	X-Value 824.053 M	Hz	Y-Value -5.90 dBm		Function		Function Re	
T1 T2	1	824.32208 N 828.45794 N	1Hz 1Hz	11.30 dBm 10.74 dBm	Occ Bw			4.13586413	6 MHZ
D1 M1	1	4.698 M	HZ	-0.65 dB			Measuring		19.09.2017
 Date: 19.SEP.2017	09:08:49								09:08:50
	~			Cnann	el 4132				
MultiView B			0 dB = RRW +	00 kHz					▽
 Att 1 Occupied Ban 	38 dB SWT	41.84 µs (~6.9	ms) • VBW 3	00 kHz 00 kHz Mode A	Auto FFT				●1Pk Max
30 dBm								M1[1]	-5.97 dBm 334.25400 MHz
								D1[1]	0.47 dB 4.68500 MHz
20 dBm	41 20.040 dBm	T1	m	m		m	T2		
10 dBm			r				R		
0 dBm		M							
-10 dBm-	H2 -5.960 (iBm							
-20 dBm	~~~~~						- m		m
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-50 dBm									
-60 dBm CF 836.6 MHz			1001 pt	rs	1	.0 MHz/			span 10.0 MHz
2 Marker Table		V Value	1001 pt						
Type Ref M1 T1	1	X-Value 834.254 M		Y-Value -5.97 dBm	Occ Bw	Function		Function Re	
T2	1	834.52208 N 838.66793 N 4.685 M	1Hz	11.03 dBm 10.84 dBm 0.47 dB	OUL BW			1.14565414	U FIIIZ
							Measuring	40	19.09.2017 09:10:08
D1 M1	7 09:10:08								
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D1 M1				Chann	<u>ما 4183</u>				
D1 M1	~			Channe	el 4183				
D1 M1 Date: 19.SEP.2017 MultiView 8	Spectrum		00 dB • RBW 1						▽
D1 M1 Date: 19.SEP.2017 MultiView 8	Spectrum	= 8.0 41.84 µs (~6.9	00 dB ● RBW 1 9 ms) ● VBW 3	Channe OO KHz OO KHZ Mode A					• 1Pk Max
D1 M1 Date: 19.SEP.2017 MultiView # Ref Level 36.0 Att	Spectrum	= 8.0 41.84 μs (~6.5	00 dB ● RBW 1 9 ms) ● VBW 3						● 1Pk Max -5.85 dBm 344.25200 MHz
D1 M1 D2ete; 19.SEP.2017 MultiView Ref Level 36.0 Att Coccupied Ban 30 dBm	Spectrum O dBm Offse 38 dB SWT dwidth	ε <u>8.(</u> 41.84 μs (~6.5	00 dB ● RBW 1 9 ms) ● VBW 3					M1[1] { 	●1Pk Max -5.85 dBm
D1 M1 Date: 19.SEP.2017 MultiView S Ref Level 36.C Att Occupied Ban 30 dbm 20.dbm	Spectrum	ε <u>8.</u> 41.84 μs (~6.5	00 dB • RBW 1 9 ms) • VBW 3				12		• 1Pk Max -5.85 dBm 344,25200 MHz -0,45 dB
D1 M1 D2ete; 19.SEP.2017 MultiView Ref Level 36.0 Att Coccupied Ban 30 dBm	Spectrum O dBm Offse 38 dB SWT dwidth		00 dB • RBW 1 ms) • VBW 3				12 7		• 1Pk Max -5.85 dBm 344,25200 MHz -0,45 dB
D1 M1 Date: 19.SEP.2017 MultiView S Ref Level 36.C Att Occupied Ban 30 dbm 20.dbm	Spectrum Do dBm Offse 38 dB SWT dwidth 41 19.660 dBm	M	00 dB • RBW 1 ms) • VBW 3				T2 V		• 1Pk Max -5.85 dBm 344,25200 MHz -0,45 dB
D1 M1 Date: 19.SEP.2017 MultiView 8 Ref Level 36.C Att Cocupied Ban 20.dBm 10.dBm	Spectrum O dBm Offse 38 dB SWT dwidth	M	00 dB • RBW 1 ms) • VBW 3						• 1Pk Max -5.85 dBm 344,25200 MHz -0,45 dB
D1 M1 Date: 19,SEP.2017 MultiView S Ref Level 36.0 Att 1 Occupied Ban 30 dBm 20 dBm -10 dBm -10 dBm	Spectrum Do dBm Offse 38 dB SWT dwidth 41 19.660 dBm	M	00 dB • RBW 1 p ms) • VBW 3						• 1Pk Max -5.85 dBm 344,25200 MHz -0,45 dB
D1 M1 Date: 19.SEP.2017 MultiView 32 Ref Level 36.G Att 10 Occupied Ban 10 dBm 0 dBm -10 dBm	Spectrum Do dBm Offse 38 dB SWT dwidth 41 19.660 dBm	M	00 dB • RBW 1 P ms) • VBW 3						• 1Pk Max -5.85 dBm 344,25200 MHz -0,45 dB
D1 M1 Date: 19,SEP.2017 MultiView S Ref Level 36.0 Att 1 Occupied Ban 30 dBm 20 dBm -10 dBm -10 dBm	Spectrum Do dBm Offse 38 dB SWT dwidth 41 19.660 dBm	M	00 dB • RBW 1 P ms) • VBW 3						• 1Pk Max -5.85 dBm 344,25200 MHz -0,45 dB
D1 M1 Date: 19.SEP.2017 MultiView 32 Ref Level 36.G Att 10 Occupied Ban 10 dBm 0 dBm -10 dBm	Spectrum Do dBm Offse 38 dB SWT dwidth 41 19.660 dBm	M	00 dB • RBW 1 P ms) • VBW 3						• 1Pk Max -5.85 dBm 344,25200 MHz -0,45 dB
D1 M1 Date: 19.SEP.2017 MultiView BR Ref Level 36.C. Att 10 20 dBm 10 10 dBm 0 -10 dBm -20 dBm -30 dBm -30 dBm	Spectrum Do dBm Offse 38 dB SWT dwidth 41 19.660 dBm	M	00 dB • RBW 1 P ms) • VBW 3				T2 Y d1		• 1Pk Max -5.85 dBm 344,25200 MHz -0,45 dB
D1 M1 Date: 19.SEP.2017 MultiView Secondary Ref Level 36.0 Att Secondary 10 dBm Secondary -10 dBm Secondary -30 dBm Secondary -40 dBm Secondary -30 dBm Secondary -30 dBm Secondary -30 dBm Secondary	Spectrum Do dBm Offse 38 dB SWT dwidth 41 19.660 dBm	M	00 dB • RBW 1 P ms) • VBW 3				T2 Y d1		• 1Pk Max -5.85 dBm 344,25200 MHz -0,45 dB
D1 M1 Date: 19,SEP.2017 MultiView 32 Ref Level 36.0 1 Occupied Ban 30 dBm 20 dBm 10 dBm -10 dBm	Spectrum Do dBm Offse 38 dB SWT dwidth 41 19.660 dBm	M		00 kHz 00 kHz Mode A	Auto FFT	0 MHz/	T2 V d1	D1[1]	• 12k Max • 12k Max - 5.85 dBm - 6.45 dB - 6.45 dB - 6.45 dD MHz
D1 M1 Date: 19.SEP.2017 MultiView Secondary Ref Level 36.0 Att IO dBm 30 dBm 10 dBm 40 dBm -20 dBm -30 dBm -30 dBm -30 dBm -30 dBm -60 dBm -50 dBm -60 dBm -20 dBm -20 dBm -30 dBm -20 dBm -30 dBm -60 dBm -20 dBm -20 dBm -30 dBm -20 dBm -20 dBm -70 dBm -20 dBm -70 dBm -20 dBm -70 dBm -20 dBm -70 dBm	Spectrum 0 dBm Offse 38 dB SWT dwidth 41 19.660 dBm +12 -6.340 dBm	iBm M	1001 pt	00 kHz Mode A	Auto FFT	.0 MHz/	T2 V d1	6 D1[1]	■10k Max -5.85 dBm -0.45 dB -0.45 dB -0.4
D1 M1 Date: 19.SEP.2017 MultiView Secondary Ref Level 36.0 Att Secondary 20.dBm 30.0 20.dBm 30.0 20.dBm 30.0 -10.0 dBm -20.0 dBm -30.0 dBm -30.0 dBm -30.0 dBm -30.0 dBm -30.0 dBm -50.0 dBm -50.0 dBm -60.0 dBm -50.0 MI	Spectrum 0 dBm Offse 38 dB SWT dwidth 41 19.660 dBm +12 -6.340 dBm	11 16m M	1001 pt	00 kHz Mode A	Auto FFT	.0 MHz/ Function			• 10k Max - 5.85 dBm - 0.45 dB - 0.45 dB
D1 M1 Date: 19.SEP.2017 MultiView Be Ref Level 36.C Att 10 20 dBm 30 20 dBm 9 10 dBm 0 -10 dBm -0 -30 dBm	Spectrum 00 dBm Offset 38 dB SWI Idwidth Idwidth Idwidth Idwidth Idwidth Idwidth	iBm M	1001 pt	00 kHz Mode A	Auto FFT			6 D1[1]	• 10k Max - 5.85 dBm - 0.45 dB - 0.45 dB
D1 M1 Date: 19.SEP.2017 MultiView Secondary Ref Level 36.0 Att Secondary 10 dBm 30 dBm -10 dBm	Spectrum 0 dBm Offse 38 dB SWT dwidth 41 19.660 dBm +12 -6.340 	x-Value 844.252 M 848.6793 N	1001 pt	00 kHz 00 kHz Mode A 00 kHz 00 kHz	Auto FFT				• 10k Max • 10k Max - 5.85 dBm - 0.45 dB - 0.45 dB

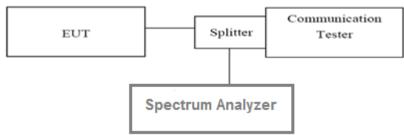
5.3. Conducted Spurious Emissions

LIMIT

Part 24.238, Part 22.917 and Part 27.53 specify that the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

The specification that emissions shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm. At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 dBm. At 0.001 W (0 dBm) the minimum attenuation is 13 dB, which again yields a limit of -13 dBm. In this way a translation of the specification from relative to absolute terms is carried out.

TEST CONFIGURATION



TEST PROCEDURE

- 1. The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation.
- 2. The resolution bandwidth of the spectrum analyzer was set at 1MHz, sufficientscans were taken to show the out of band Emissions if any up to 10th harmonic.
- 3. For the out of band: Set the RBW= 1MHz, VBW = 3MHz, Start=30MHz, Stop= 10th harmonic.

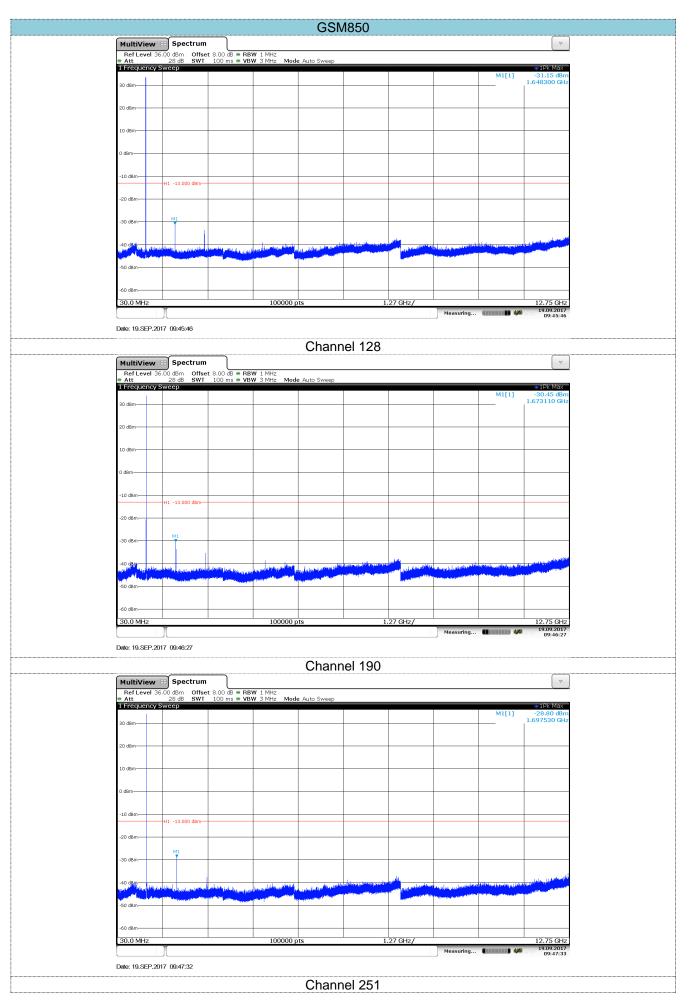
TEST MODE:

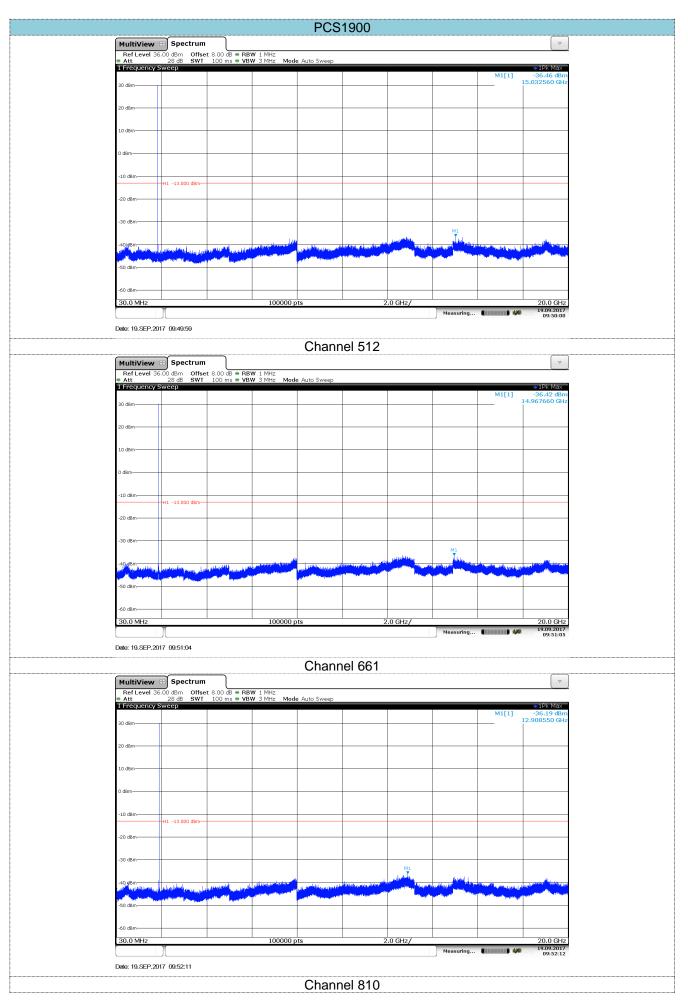
Please refer to the clause 3.3

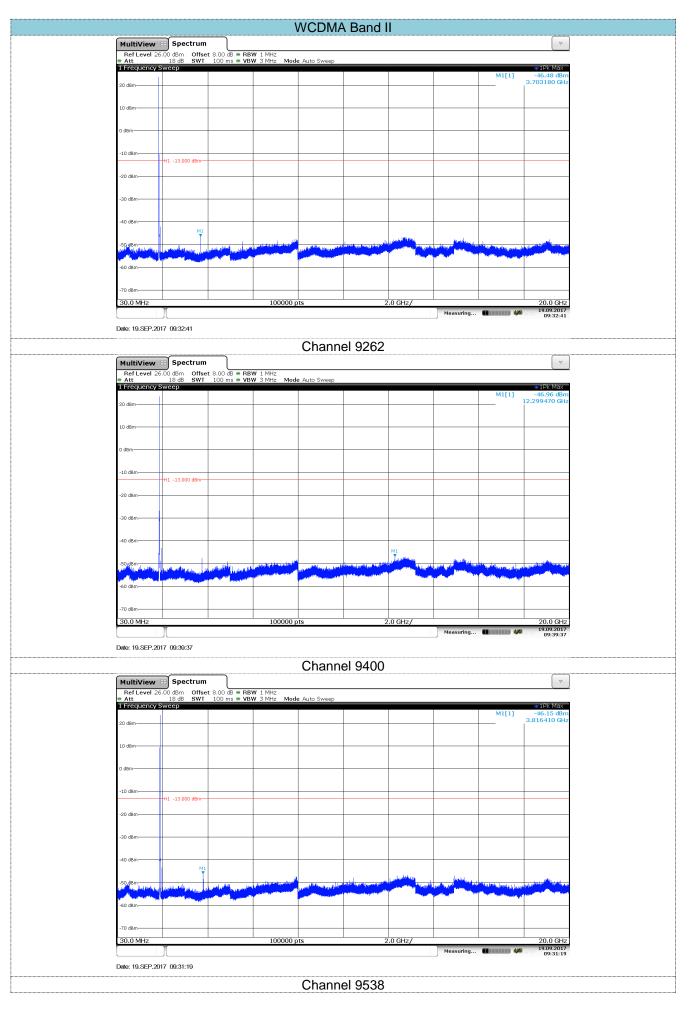
TEST RESULTS

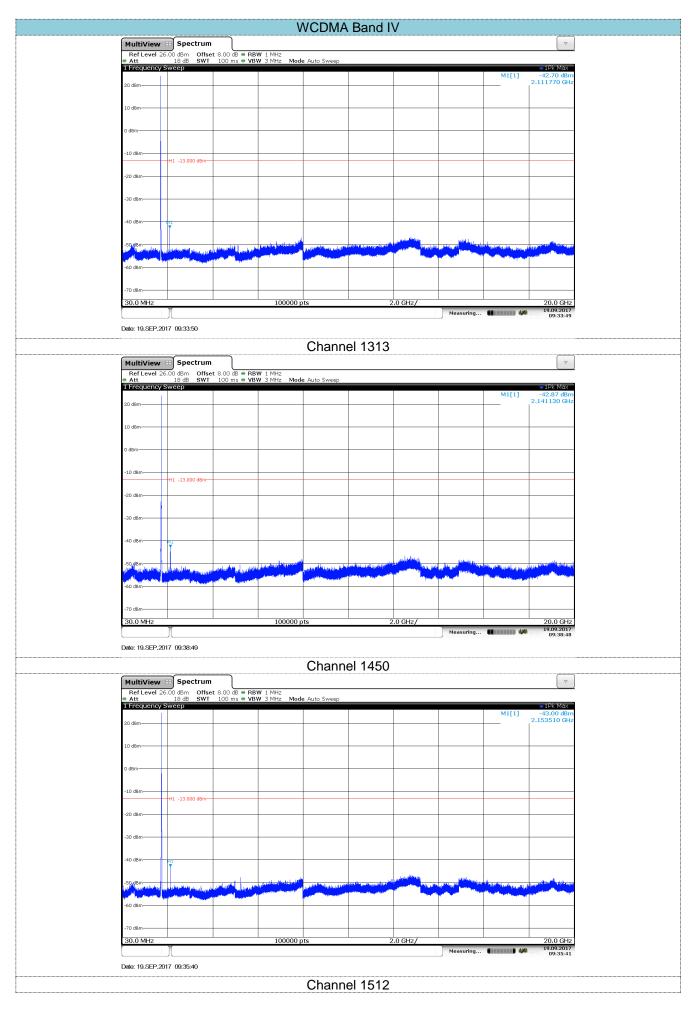
☑ Passed □ Not Applicable

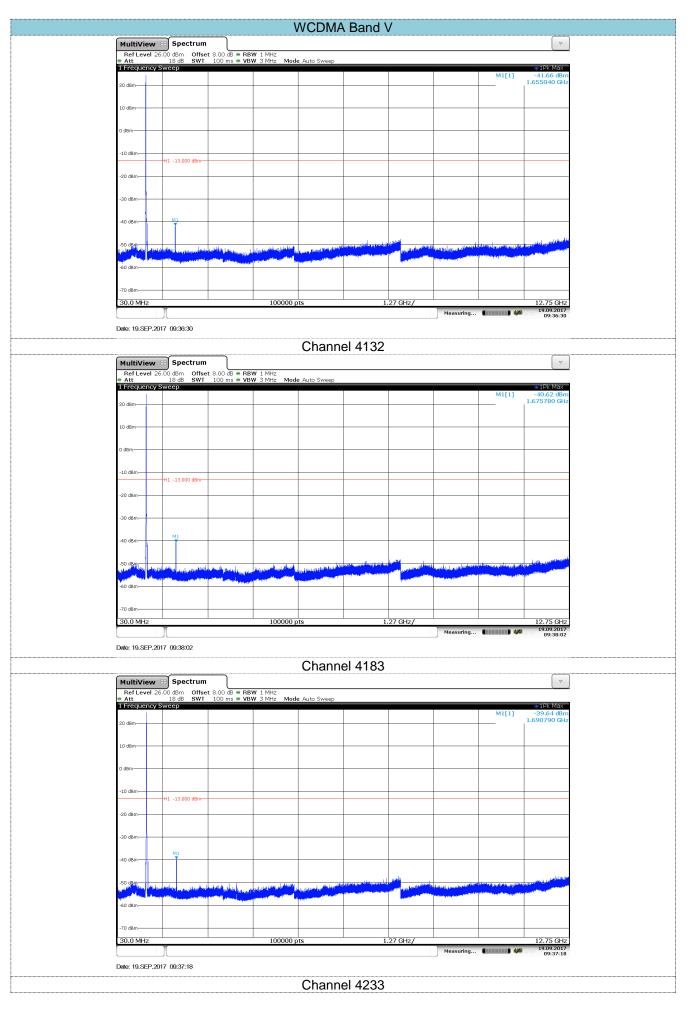
Note:Worst case at GSM850/PCS1900











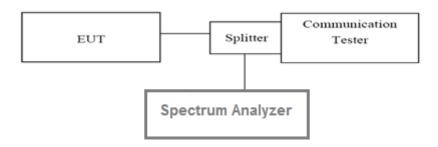
5.4. Band Edge

LIMIT

Part 24.238, Part 22.917 and Part 27.53 specify that the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

The specification that emissions shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm. At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 dBm. At 0.001 W (0 dBm) the minimum attenuation is 13 dB, which again yields a limit of -13 dBm. In this way a translation of the specification from relative to absolute terms is carried out.

TEST CONFIGURATION



TEST PROCEDURE

- 1. The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation.
- 2. For the bandedge: 2G:Set the RBW=3KHz, VBW = 10KHz, Sweep time= Auto

3G: Set the RBW=100KHz, VBW = 300KHz, Sweep time= Auto

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

☑ Passed □ Not Applicable

Page: 28 of 62

		GSN	//850		
Channel	Frequency	Measureme	nt Results	Limit	Verdict
Number	(MHz)	Frequency(MHz)	Values(dBm)	(dBm)	verdict
128	824.2	824	-17.11	-13.00	Pass
251	848.8	849	-14.86	-13.00	Pass

		GPR	S850		
Channel	Frequency	Measureme	nt Results	Limit	Verdict
Number	(MHz)	Frequency(MHz)	Values(dBm)	(dBm)	verdict
128	824.2	824	-15.01	-13.00	Pass
251	848.8	849	-15.39	-13.00	Pass

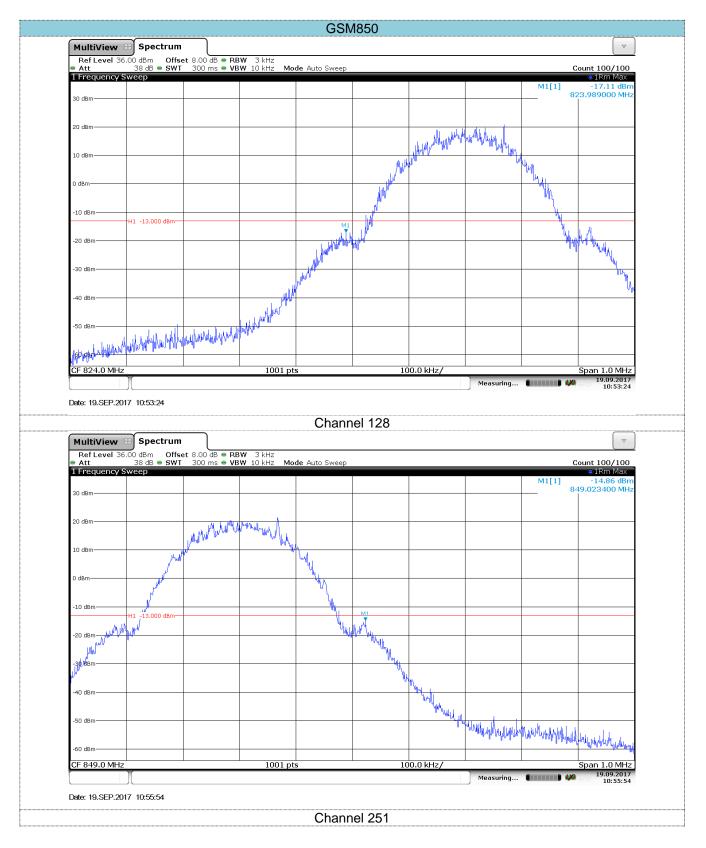
		PCS	1900		
Channel	Frequency	Measureme	nt Results	Limit	Verdict
Number	(MHz)	Frequency(MHz)	Values(dBm)	(dBm)	verdict
512	1850.2	1850	-14.22	-13.00	Pass
810	1909.8	1910	-15.79	-13.00	Pass

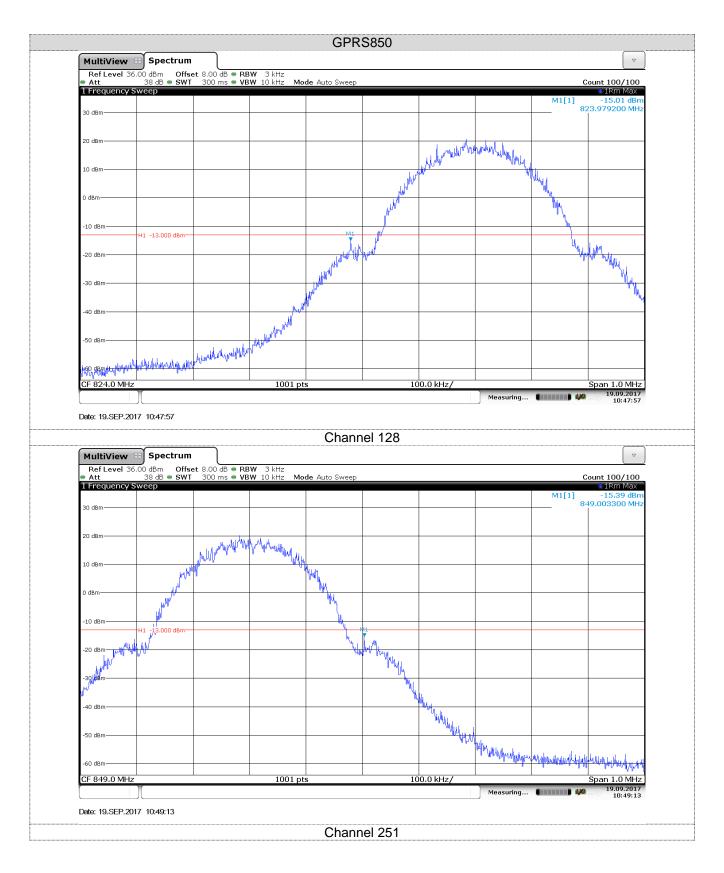
		GPR	S1900		
Channel	Frequency	Measureme	nt Results	Limit	Verdict
Number	(MHz)	Frequency(MHz)	Values(dBm)	(dBm)	verdict
512	1850.2	1850	-16.14	-13.00	Pass
810	1909.8	1910	-14.59	-13.00	Pass

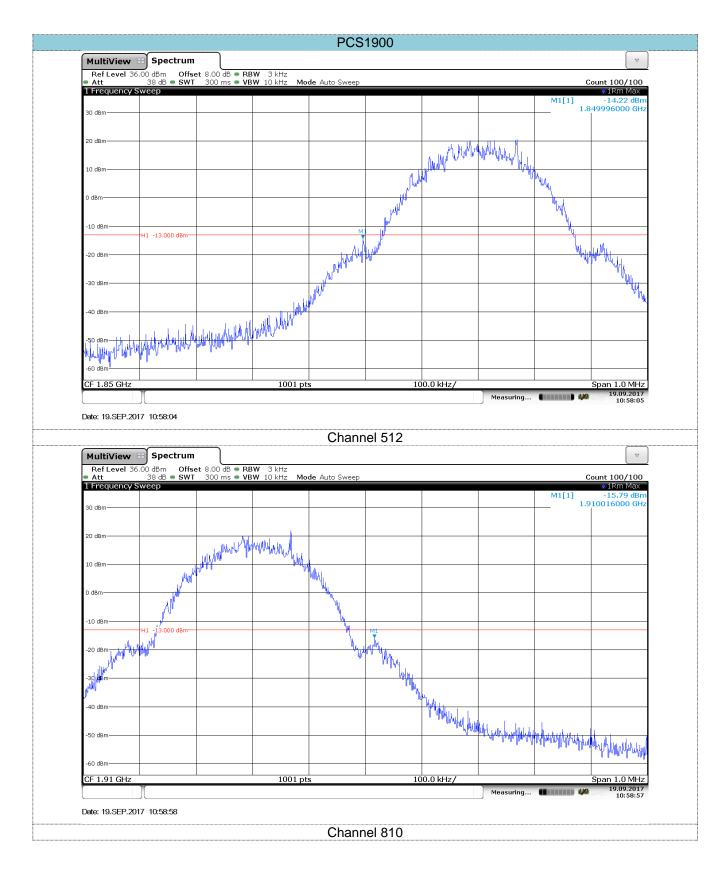
		WCDM	A Band II		
Channel	Frequency	Measureme	nt Results	Limit	Verdict
Number	(MHz)	Frequency(MHz)	Values(dBm)	(dBm)	Veruici
9262	1852.4	1850	-16.62	-13.00	Pass
9538	1907.6	1910	-20.24	-13.00	Pass

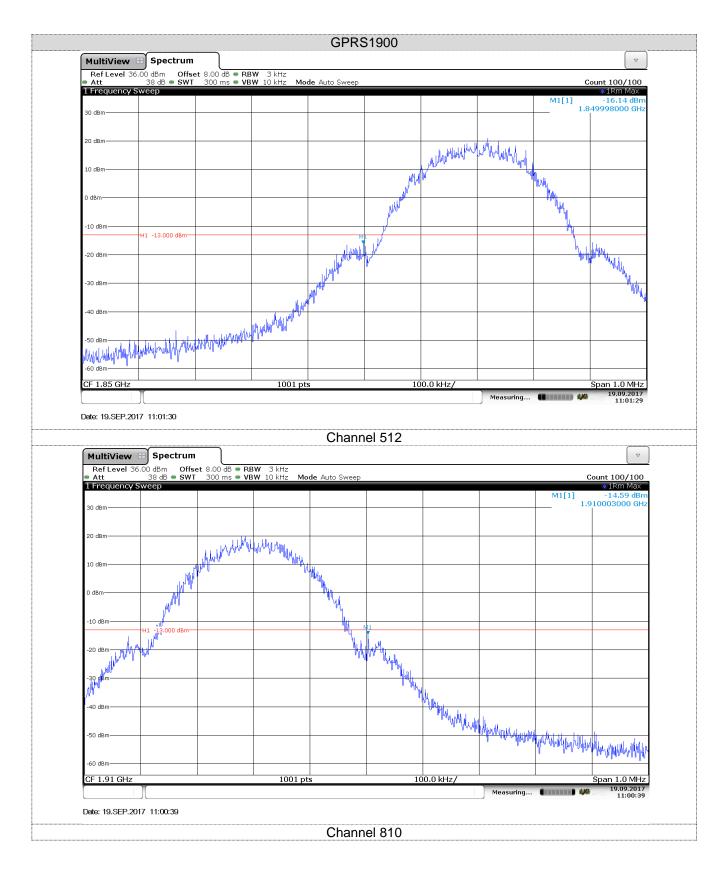
		WCDMA	Band IV		
Channel	Frequency	Measureme	nt Results	Limit	Verdict
Number	(MHz)	Frequency(MHz)	Values(dBm)	(dBm)	verdict
1313	1712.6	1710	-20.36	-13.00	Pass
1512	1752.4	1755	-21.30	-13.00	Pass

		WCDMA	A Band V		
Channel	Frequency	Measureme	nt Results	Limit	Verdict
Number	(MHz)	Frequency(MHz)	Values(dBm)	(dBm)	verdict
4132	826.4	824	-20.75	-13.00	Pass
4233	846.6	849	-15.92	-13.00	Pass









		1							
MultiView									\bigtriangledown
Att		t 8.00 dB 🖷 RI 300 ms 🖷 VI	BWI 100 kHz BWI 300 kHzIMI	lode Auto Sweep)				Count 100/100
1 Frequency S	weep							M1[1]	1Rm Max -16.62 dBn
30 dBm								+	1.8500000 GH
20 dBm									
10 dBm						- mar and the second	month	<u></u>	warmen .
0 dBm									
-10 dBm									
10 0011	H1 -13.000 dBm				4				+
-20 dBm					A				+
			mounderder	mandrow					
-30 dBm	Manager	und have and							
40.dBm	- used								
-50 dBm									
-60 dBm									
CF 1.85 GHz			1001 pt	rs		1.0 MHz/			Span 10.0 MHz
GI 1100 GH2	1		1001 pt			110 101127	Measuring	() 4	19.09.2017
	~			Chann	el 9262				09:27:39
Date: 19.SEP.201	Spectrum		PW 100 /	Chann	el 9262				
MultiView 8 Ref Level 36.	Spectrum 00 dBm Offse 38 dB ● SWT	t 8.00 dB • R 300 ms • VI	BW 100 kHz BW 300 kHz M						⊽ Count 100/100
MultiView 8 Ref Level 36.	Spectrum 00 dBm Offse 38 dB ● SWT	t 8.00 dB • R 300 ms • VI	BW 100 kHz 3W 300 kHz M					M1[1]	⊂ Count 100/100 ● 1Rm Max -20.24 dBn
MultiView 8 Ref Level 36.	Spectrum 00 dBm Offse 38 dB ● SWT	t 8.00 dB ● R 300 ms ● VI	BW 100 kHz BW 300 kHz M					M1[1]	⊂ Count 100/100 ●1Rm Max
MultiView 8 Ref Level 36. Att 1 Frequency S 30 dBm	Spectrum 00 dBm Offse 38 dB ● SWT	t 8.00 dB ● R 300 ms ● VI	BW 100 kHz 3W 300 kHz M					M1[1]	⊂ Count 100/100 ● 1Rm Max -20.24 dBn
MultiView Ref Level 36. Att 1 Frequency S	Spectrum 00 dBm Offse 38 dB ● SWT	t 9.00 dB • R 300 ms • VI	BW 100 kHz BW 300 kHz M					M1[1]	⊂ Count 100/100 ● 1Rm Max -20.24 dBn
MultiView P Ref Level 36. Att I Frequency S 30 dBm	OO dBm Offse 38 dB SWT weep	300 ms • VI	300 kHz M	lode Auto Sweep				M1[1]	⊂ Count 100/100 ● 1Rm Max -20.24 dBn
MultiView 8 Ref Level 36. Att 1 Frequency S 30 dBm	OO dBm Offse 38 dB SWT weep	300 ms • VI	BW 100 kHz M 300 kHz M	lode Auto Sweep				M1[1]	⊂ Count 100/100 ● 1Rm Max -20.24 dBn
MultiView P Ref Level 36. Att I Frequency S 30 dBm	OO dBm Offse 38 dB SWT weep	300 ms • VI	300 kHz M	lode Auto Sweep				M1[1]	⊂ Count 100/100 ● 1Rm Max -20.24 dBn
MultiView P Ref Level 36. Att I Frequency S 30 dBm 20 dBm 10 dBm	OO dBm Offse 38 dB SWT weep	300 ms • VI	300 kHz M	lode Auto Sweep				M1[1]	⊂ Count 100/100 ● 1Rm Max -20.24 dBn
MultiView P Ref Level 36. Att I Frequency S 30 dBm 20 dBm 10 dBm 0 dBm	O dBm Offse 38 dB ● SWT weep	300 ms • VI	300 kHz M	lode Auto Sweep				M1[1]	⊂ Count 100/100 ● 1Rm Max -20.24 dBn
MultiView Ref Level 36. Att 1 Frequency S 30 dBm 30 dBm 20 dBm 90 dBm 10 dBm 90 dBm	OO dBm Offse 38 dB SWT weep	300 ms • VI	300 kHz M	lode Auto Sweep				M1[1]	⊂ Count 100/100 ● 1Rm Max -20.24 dBn
MultiView Ref Level 36. Att 1 Frequency S 30 dBm 30 dBm 20 dBm 90 dBm 10 dBm 90 dBm	O dBm Offse 38 dB ● SWT weep	300 ms • VI	300 kHz M	lode Auto Sweep				M1[1]	⊂ Count 100/100 ● 1Rm Max -20.24 dBn
MultiView E Ref Level 36. Att I Frequency S 30 d8m 20 d8m 0 10 d8m 0 -10 d8m	O dBm Offse 38 dB ● SWT weep	300 ms • VI	300 kHz M	lode Auto Sweep				M1[1]	⊂ Count 100/100 ● 1Rm Max -20.24 dBn
MultiView Ref Level 36. Att 1 Frequency S 30 dBm 30 dBm 20 dBm 90 dBm 10 dBm 90 dBm	O dBm Offse 38 dB ● SWT weep	300 ms • VI	300 kHz M	lode Auto Sweep				M1[1]	⊂ Count 100/100 ● 1Rm Max -20.24 dBn
MultiView E Ref Level 36. Att I Frequency S 30 dBm 20 dBm 30 dBm 10 dBm 0 dBm -10 dBm	O dBm Offse 38 dB ● SWT weep	300 ms • VI	300 kHz M	lode Auto Sweep				M1[1]	⊂ Count 100/100 ● 1Rm Max -20.24 dBn
MultiView Ref Level 36. Att I Frequency S 30 dBm 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm	O dBm Offse 38 dB ● SWT weep	300 ms • VI	300 kHz M	lode Auto Sweep				M1[1]	Count 100/100 IRm Max -20.24 dBn 1.91000000 GH
MultiView Ref Level 36. Att I Frequency S 30 dBm 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm	O dBm Offse 38 dB ● SWT weep	300 ms • VI	300 kHz M	lode Auto Sweep				M1[1]	⊂ Count 100/100 ● 1Rm Max -20.24 dBn
MultiView Ref Level 36. Att I Frequency S 30 dBm 20 dBm 10 dBm -10 dBm -30 dBm -30 dBm	O dBm Offse 38 dB ● SWT weep	300 ms • VI	300 kHz M	lode Auto Sweep				M1[1]	Count 100/100 IRm Max -20.24 dBn 1.91000000 GH
MultiView Ref Level 36. Att I Frequency S 30 dBm 20 dBm 10 dBm -10 dBm -30 dBm -30 dBm	O dBm Offse 38 dB ● SWT weep	300 ms • VI	300 kHz M	lode Auto Sweep				M1[1]	Count 100/100 IRm Max -20.24 dBn 1.91000000 GH
MultiView Ref Level 36. Att Irrequency S 30 d8m 20 d8m 20 d8m	O dBm Offse 38 dB ● SWT weep	300 ms • VI	300 kHz M						Count 100/100 IRm Max -20.24 dBn 1.91000000 GH
MultiView Ref Level 36. Att Irrequency S 30 d8m 30 d8m 20 d8m 9 10 d8m 9 -10 d8m 9 -30 d8m 9 -50 d8m 9 -60 d8m 60 d8m	O dBm Offse 38 dB ● SWT weep	300 ms • VI	300 kHz M					M1[1]	Count 100/100 IRm Max -20.24 dBn 1.91000000 GH
MultiView Ref Level 36. Att Irrequency S 30 d8m 30 d8m 20 d8m 9 10 d8m 9 -10 d8m 9 -30 d8m 9 -50 d8m 9 -60 d8m 60 d8m	Spectrum O dBm Offse 38 dB SWT weep	300 ms • VI	300 kHz M						Count 100/100

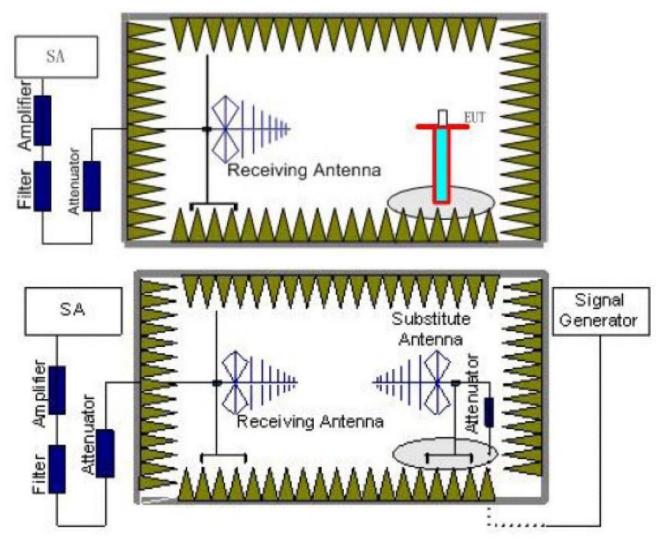
	<u> </u>	1						
MultiView 8		(
Att		et 8.00 dB 🖷 R 300 ms 🖷 V	RBW 100 kHz /BW 300 kHz №	lode Auto Sweep	1			Count 100/100
1 Frequency S	weep						M1[1]	1Rm Max -20.75 dBn
30 dBm								1.70997000 GH
20 dBm								
10 dBm								1
					and the second s			and the second sec
0 dBm								- V
-10 dBm								
10 0.011	H1 -13.000 dBm							
-20 dBm				м				
20 0011			1 martine martine	munin	<u>u</u>			
-30 dBm	مبر	and and and						
	and the form							
-40 dBm	- martin							
.o dom								
-50 dBm								
50 april								
-60 dBm								
CF 1.71 GHz					<u> </u>	L.0 MHz/		Epop 10 0 M/
CF 1.71 GHZ	Y		1001 pi	ls			 	Span 10.0 MHz 19.09.2017
	~			Chann	el 1313			
MultiView 8	B Spectrum			Chann	el 1313			♥ 23.10
Ref Level 36. Att	Spectrum 00 dBm Offse 38 dB • SWT	et 8.00 dB 🖷 R	NBW 100 kHz /BW 300 kHz M					
MultiView 8 Ref Level 36. Att	Spectrum 00 dBm Offse 38 dB • SWT	et 8.00 dB 🖷 R	RBW 100 kHz / BW 300 kHz M			1	MIEII	Count 100/100 ● 1Rm Max
MultiView 8 Ref Level 36. Att	Spectrum 00 dBm Offse 38 dB • SWT	et 8.00 dB 🖷 R	RBW 100 kHz BW 300 kHz M				M1[1]	Count 100/100
MultiView Ref Level 36. Att 1 Frequency S	Spectrum 00 dBm Offse 38 dB • SWT	et 8.00 dB 🖷 R	88W 100 kHz 18W 300 kHz M				M1[1]	Count 100/100 ● 1Rm Max -15,92 dBn
MultiView Ref Level 36. Att 1 Frequency S	Spectrum 00 dBm Offse 38 dB • SWT	et 8.00 dB 🖷 R	88W 100 kHz 18W 300 kHz M				M1[1]	Count 100/100 ● 1Rm Max -15,92 dBn
MultiView 8 Ref Level 36. Att 1 Frequency S 30 dBm	Spectrum 00 dBm Offse 38 dB • SWT	et 8.00 dB 🖷 R	88W 100 kHz 18W 300 kHz M				MI[1]	Count 100/100 ● 1Rm Max -15,92 dBn
MultiView 8 Ref Level 36. Att 1 Frequency S 30 dBm	Spectrum 00 dBm Offse 38 dB • SWT	et 8.00 dB 🖷 R	XBW 100 kHz M /BW 300 kHz M				MI[1]	Count 100/100 ● 1Rm Max -15,92 dBn
MultiView P Ref Level 36. Att 1 Frequency S 30 dBm 20 dBm	Spectrum 00 dBm Offse 38 dB • SWT	et 8.00 dB 🖷 R	RBW 100 kHz M				M1[1]	Count 100/100 ● 1Rm Max -15,92 dBn
MultiView P Ref Level 36. Att 1 Frequency S 30 dBm 20 dBm	Spectrum 00 dBm Offse 38 dB • SWT	et 8.00 dB 🖷 R	RBW 100 kHz M BW 300 kHz M				M1[1]	Count 100/100 ● 1Rm Max -15,92 dBn
MultiView P Ref Level 36. Att I Frequency S 30 dBm 20 dBm 10 dBm	Spectrum 00 dBm Offse 38 dB • SWT	et 8.00 dB 🖷 R	RBW 100 kHz M BW 300 kHz M				M1[1]	Count 100/100 ● 1Rm Max -15,92 dBn
MultiView Ref Level 36. Att Frequency S 30 dBm 20 dBm 10 dBm 10 dBm 10 dBm	Spectrum OO dBm Offse 38 dB • SWT weep	et 8.00 dB 🖷 R	RBW 100 kHz M BW 300 kHz M				M1[1]	Count 100/100 ● 1Rm Max -15,92 dBn
MultiView Ref Level 36. Att Frequency S 30 dBm 20 dBm 10 dBm 10 dBm 10 dBm	Spectrum 00 dBm Offse 38 dB • SWT	et 8.00 dB 🖷 R	RBW 100 kHz M BW 300 kHz M				M1[1]	Count 100/100 ● 1Rm Max -15,92 dBn
MultiView Ref Level 36. Att Frequency S 30 dBm 20 dBm 10 dBm 10 dBm 10 dBm	Spectrum OO dBm Offse 38 dB • SWT weep	et 8.00 dB 🖷 R	RBW 100 kHz M BW 300 kHz M	lode Auto Sweep				Count 100/100 ● 1Rm Max -15,92 dBn
MultiView P Ref Level 36. Att 1 Frequency S 30 dBm 20 dBm 10 dBm 0 dBm 10 dBm	Spectrum OO dBm Offse 38 dB • SWT weep	et 8.00 dB 🖷 R	RBW 100 kHz M	lode Auto Sweep				Count 100/100 ● 1Rm Max -15,92 dBn
MultiView P Ref Level 36. Att 1 Frequency S 30 dBm 20 dBm 10 dBm 0 dBm 10 dBm	Spectrum OO dBm Offse 38 dB • SWT weep	et 8.00 dB 🖷 R	RBW 100 kHz M	lode Auto Sweep				Count 100/100 ● 1Rm Max -15,92 dBn
MultiView P Ref Level 36. Att 1 Frequency S 30 dBm 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm	Spectrum OO dBm Offse 38 dB • SWT weep	et 8.00 dB 🖷 R	RBW 100 kHz M	lode Auto Sweep				Count 100/100 ● IRm Max - 15.92 dBn 1.75500000 GH
MultiView P Ref Level 36. Att 1 Frequency S 30 dBm 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm	Spectrum OO dBm Offse 38 dB • SWT weep	et 8.00 dB 🖷 R	RBW 100 kHz M	lode Auto Sweep				Count 100/100 ● 1Rm Max -15,92 dBn
MultiView Ref Level 36. Att I Frequency S 30 dBm 20 dBm 10 dBm -10 dBm -20 dBm -20 dBm -30 dBm	Spectrum OO dBm Offse 38 dB • SWT weep	et 8.00 dB 🖷 R	RBW 100 kHz M	lode Auto Sweep				Count 100/100 ● IRm Max - 15.92 dBn 1.75500000 GH
MultiView P Ref Level 36. Att I Frequency S 30 dBm 20 dBm 10 dBm -10 dBm -20 dBm -20 dBm -30 dBm	Spectrum OO dBm Offse 38 dB • SWT weep	et 8.00 dB 🖷 R	RBW 100 kHz M	lode Auto Sweep				Count 100/100 ● IRm Max - 15.92 dBn 1.75500000 GH
MultiView Ref Level 36. Att I Frequency S 30 dBm 20 dBm 10 dBm -10 dBm -20 dBm -20 dBm -40 dBm	Spectrum OO dBm Offse 38 dB • SWT weep	et 8.00 dB 🖷 R	RBW 100 kHz M	lode Auto Sweep				Count 100/100 ● IRm Max - 15.92 dBn 1.75500000 GH
MultiView Ref Level 36. Att I Frequency S 30 dBm 20 dBm 10 dBm -10 dBm -20 dBm -20 dBm -40 dBm	Spectrum OO dBm Offse 38 dB • SWT weep	et 8.00 dB 🖷 R	RBW 100 kHz M	lode Auto Sweep				Count 100/100 ● IRm Max ● 15.92 dBn 1.75500000 GH
MultiView Ref Level 36. Att 1 Frequency S 30 dBm 20 dBm 10 dBm 0 dBm -20 dBm -30 dBm -30 dBm -30 dBm -50 dBm	Spectrum OO dBm Offse 38 dB • SWT weep	et 8.00 dB 🖷 R	RBW 100 kHz M BW 300 kHz M					Count 100/100 ■ 1Rm Max - 15.92 dBn 1.75500000 GH
MultiView Ref Level 36. Att 1 Frequency S 30 dBm 20 dBm 10 dBm 0 dBm -20 dBm -30 dBm -30 dBm -50 dBm -60 dBm	Spectrum OO dBm Offse 38 dB • SWT weep	et 8.00 dB 🖷 R						Count 100/100 ■ 1Rm Max - 15.92 dBn 1.75500000 GH
MultiView Ref Level 36. Att 1 Frequency S 30 dBm 20 dBm 10 dBm 0 dBm -20 dBm -30 dBm -30 dBm -50 dBm -60 dBm	Spectrum 00 dBm Offse 38 dB SWT weep	et 8.00 dB 🖷 R						Count 100/100 Count 100/100 IRm Max -15,500000 GH Span 10.0 MHz 19,09,2017

MultiView 😁 Spectrum								▽
Ref Level 36.00 dBm Offs Att 38 dB SW1	set 8.00 dB ● RBW T 300 ms ● VBW	NY 100 kHz Ny 300 kHz M∢	ode Auto Sweep					Count 100/100
1 Frequency Sweep							M1[1]	1Rm Max -20.36 dBn
30 dBm	+							824.00000 MH
20 dBm	++							
10 dBm				and			and the contraction of the	and have been a second
0 dBm				1				
-10 dBm								
H1 -13.000 dBm-	++			/				
-20 dBm			M					
-30 dBm	++	manufaneralitierer	wannowy					\
a all have	and menor wer were	www.						
-40 dBm	+ +							
and the marked and the state of								
-50 dBm	+ +							
-60 dBm								
CF 824.0 MHz		1001 pts			L.0 MHz/			Span 10.0 MHz
		1001 pts	,		10 1411 127	Monsuring	(1	19.09.2017
Date: 19.SEP.2017 09:25:25			Channe	el 4132		measuring		
Date: 19.SEP.2017 09:25:25 MultiView 😁 Spectrum		N 100 kHz	Channe	el 4132		measuring		09:25:24
MultiView Spectrum Ref Level 36.00 dBm Offs Att 38 dB SWI		₩ 100 kHz ¥ 300 kHz Mo				measuring		Count 100/100
Date: 19.SEP.2017 09:25:25 MultiView B Spectrum Ref Level 36.00 dBm Offs	set 8.00 dB = RBW	♥ 100 kHz ♥ 300 kHz Md						Count 100/100 ● 1Rm Max -21.30 dBn
MultiView Spectrum Ref Level 36.00 dBm Offs Att 38 dB SWI	set 8.00 dB = RBW	♥ 100 kHz ♥ 300 kHz Mo						Count 100/100 ●1Rm Max
Date: 19.SEP.2017 09:25:25 MultiView Spectrum Ref Level 36.00 dBm Att 38.db Sweep 30 dBm	set 8.00 dB = RBW	₩ 100 kHz ₩ 300 kHz M4						Count 100/100 ● 1Rm Max -21.30 dBn
Date: 19.SEP.2017 09:25:25 MultiView B Spectrum Ref Level 36.00 dBm Offs Att 38 dB • SW1 1 Frequency Sweep	set 8.00 dB = RBW	♥ 100 kHz ♥ 300 kHz Mo						Count 100/100 ● 1Rm Max -21.30 dBn
Date: 19.SEP.2017 09:25:25 MultiView Spectrum Ref Level 36.00 dBm Offs Att 38.db SWI 1 Frequency Sweep 30 dBm	set 8.00 dB = RBW	V 100 kHz V 300 kHz Mo						Count 100/100 ● 1Rm Max -21.30 dBn
Date: 19.SEP.2017 09:25:25 MultiView Spectrum Ref Level 36.00 dBm Att 38.db Sweep 30 dBm	set 8.00 dB = RBW	V 100 kHz V 300 kHz Ma						Count 100/100 ● 1Rm Max -21.30 dBn
Date: 19.SEP.2017 09:25:25 MultiView Spectrum Ref Level 36.00 dBm Offs Att 38.db SWI 1 Frequency Sweep 30 dBm	set 8.00 dB = RBW	♥ 100 kHz ♥ 300 kHz Μα						Count 100/100 ● 1Rm Max -21.30 dBn
Date: 19.SEP.2017 09:25:25 MultiView Spectrum Ref Level 36.00 dBm Offs Att 38 dB SWI 1 Frequency Sweep 30 dBm 20 dBm 10 dBm 400 dBm	set 8.00 dB = RBW	V 100 kHz Me V 300 kHz Me						Count 100/100 ● 1Rm Max -21.30 dBn
Date: 19.SEP.2017 09:25:25 MultiView B Spectrum Ref Level 36.00 dBm Offs Att 38 dB SWI I Frequency Sweep 30 dBm 10 dBm 0 dBm 10 dBm	set 8.00 dB = RBW	V 100 kHz M V 300 kHz M						Count 100/100 ● 1Rm Max -21.30 dBn
MultiView Spectrum Ref Level 36.00 dBm Offs Att 38 dB SWI I Frequency Sweep 30 dBm 30 dBm 20 dBm 0 dBm 10 dBm 10 dBm H1 -13.000 dBm H1 -13.000 dBm	set 8.00 dB = RBW	V 100 kHz V 300 kHz M						Count 100/100 ● 1Rm Max -21.30 dBn
Date: 19.SEP.2017 09:25:25 MultiView B Spectrum Ref Level 36.00 dBm Offs Att 38 dB SWI I Frequency Sweep 30 dBm 10 dBm 0 dBm 10 dBm	set 8.00 dB = RBW	V 100 kHz V 300 kHz Ma						Count 100/100 ● 1Rm Max -21.30 dBn
MultiView Spectrum Ref Level 36.00 dbm Offs Att 38 db SW1 1 Frequency Sweep 30 dbm 30 dbm 20 dbm 10 dbm H1 -13.000 dbm -20 dbm H1 -13.000 dbm H1 -13.000 dbm	set 8.00 dB = RBW	 ✓ 100 kHz ✓ 300 kHz Mathematical Mathematical Mathematic						Count 100/100 ● 1Rm Max -21.30 dBn
Spectrum Ref Level 36.00 dBm Spectrum 1 Frequency Sweep 30 dBm 20 dBm 10 dBm 10 dBm H1 -13.000 dBm	set 8.00 dB = RBW	V 100 kHz Mc						Count 100/100 ● 1Rm Max -21.30 dBn
MultiView Spectrum Ref Level 36.00 dBm Offs Att 38 dB SW1 1 Frequency Sweep 30 dBm 0 20 dBm 0 dBm 411 -13.000 dBm -10 dBm H1 -13.000 dBm -20 dBm	set 8.00 dB = RBW	V 100 kHz Me						Count 100/100 ● 1Rm Max -21.30 dBn
MultiView Spectrum Ref Level 36.00 dBm 38 dB • SW1 1 Frequency Sweep 30 dBm 20 dBm 90 dBm 10 dBm 41 -13.000 dBm -20 dBm 41 -13.000 dBm	set 8.00 dB = RBW	V 100 kHz Me						Count 100/100 ● 1Rm Max -21.30 dBn
MultiView Spectrum Ref Level 36.00 dBm 38 dB • SW1 1 Frequency Sweep 30 dBm 20 dBm 90 dBm 10 dBm 41 -13.000 dBm -20 dBm 41 -13.000 dBm	set 8.00 dB = RBW	V 100 kHz Me						Count 100/100 ● 1Rm Max -21.30 dBn
MultiView Spectrum Ref Level 36.00 dBm System 1 Frequency Sweep 38 dB • SW1 20 dBm 30 dBm 10 dBm H1 -13.000 dBm -10 dBm H1 -13.000 dBm -20 dBm H1 -13.000 dBm	set 8.00 dB = RBW	V 100 kHz M V 300 kHz M						Count 100/100 ● 1Rm Max -21.30 dBn
Date: 19.SEP.2017 09:25:25 MultiView 3 Spectrum Ref Level 36.00 dbm 0ffs Att 38 db = SW1 1 Frequency Sweep 30 dbm 20 dbm 10 dbm -10 dbm +10 dbm -20 dbm -50 dbm -60 dbm	set 8.00 dB = RBW	V 300 kHz Mc	ode Auto Sweep	1			M1[1]	Count 100/100 ● 1Rm Max -2.1.30 dBn 849.00000 MH
Date: 19.SEP.2017 09:25:25 MultiView B Spectrum Ref Level 36.00 dBm Offs Att 38 dB = SW1 1 Frequency Sweep 30 dBm 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -10 dBm -20 dBm -50 dBm	set 8.00 dB = RBW	V 100 kHz Mc	ode Auto Sweep	1			M1[1]	Count 100/100 ● IRm Max -21.30 dBn 849.00000 MH

5.5. ERP and EIRP

LIMIT GSM850/WCDMA Band V: 7W ERP PCS1900/WCDMA Band II: 2W EIRP WCDMA Band IV: 1W EIRP

TEST CONFIGURATION



TEST PROCEDURE

- EUT was placed on a 0.8 meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna is 1.0m. Detected emissions were maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all transmit frequencies in three channels (High, Middle, Low) were measured with peak detector.
- 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.
- 3. The EUT is then put into continuously transmitting mode at its maximum power level during the test.Set Test Receiver or Spectrum RBW=1MHz,VBW=3MHz for above 1GHz and RBW=100kHz,VBW=300kHz for 30MHz to 1GHz,, And the maximum value of the receiver should be recorded as (Pr).
- 4. The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the

frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest isconnected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (PMea) is applied to the input of the substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.

- A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (Pcl) ,the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should be recorded after test.
- The measurement results are obtained as described below: Power(EIRP)=PMea- PAg - Pcl + Ga We used SMF100A micowave signal generator which signal level can up to 33dBm,so we not used power Amplifier for substituation test; The measurement results are amend as described below: Power(EIRP)=PMea- Pcl + Ga
- This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power.
 ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP-2.15dBi.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

☑ Passed □ Not Applicable

Mode	Channel	Antenna Pol.	ERP	Limit (dBm)	Result
	128	V	28.59		
	120	Н	27.43		
GSM850	190	V	28.94	38.45	Pass
0010000	130	Н	27.75	38.45 27.75 29.36	F 855
	251	V	29.36		
		Н	28.45		
	128	V	28.42	38.45	Pass
		Н	27.32		
GPRS850	190	V	28.52		
011(0000	130	Н	26.94		1 435
	251	V	29.13		
	201	Н	28.33		

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Mode	Channel	Antenna Pol.	EIRP	Limit (dBm)	Result
	512	V	27.45		
	512	Н	26.84		
PCS1900	661	V	27.25	33.00	Pass
FC31900	001	Н	26.98	33.00	1 435
	810	V	28.43		
	810	Н	27.42		
	512	V	27.25	33.00	
		Н	26.52		Deer
GPRS1900	661	V	27.59		
GFK31900	001	Н	25.85		Pass
	810	V	29.32		
	010	Н	28.43		

Mode	Channel	Antenna Pol.	EIRP	Limit (dBm)	Result
Modo					
	9262	V	20.52		
	5262	Н	20.43	33.00	Pass
WCDMA Band II	9400 9538	V	20.59		
		Н	19.82		1 400
		V	20.62		
		Н	19.87		

Mode	Channel	Antenna Pol.	EIRP	Limit (dBm)	Result
	1010	V	21.35		Pass
	1313	Н	19.27		
WCDMA Band IV	1450 1512 -	V	21.20	30.00	
		Н	19.48		
		V	21.29		
		Н	19.67		

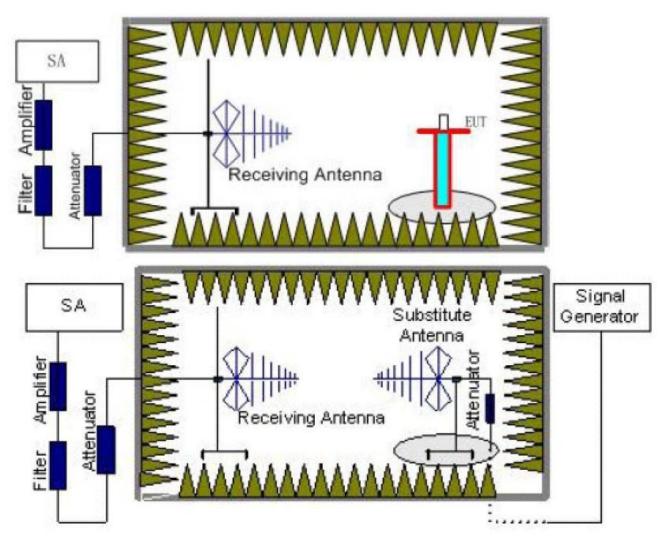
Mode	Channel	Antenna Pol.	ERP	Limit (dBm)	Result
	4132	V	20.43		Pass
	4132	Н	19.42		
WCDMA Band V	4183 4233	V	20.74	- 38.45	
		Н	19.88		
		V	20.32		
		Н	19.85		

5.6. Radiated Spurious Emission

LIMIT

-13dBm

TEST CONFIGURATION



TEST RESULTS

- EUT was placed on a 0.8 meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna is 1.0m. Detected emissions were maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all transmit frequencies in three channels (High, Middle, Low) were measured with peak detector.
- 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.
- 3. The EUT is then put into continuously transmitting mode at its maximum power level during the test. Set Test Receiver or Spectrum RBW=1MHz, VBW=3MHz for above 1GHz and RBW=100kHz, VBW=300kHz for 30MHz to 1GHz, And the maximum value of the receiver should be recorded as (Pr).
- 4. The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest isconnected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (PMea) is applied to the input of the substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be

performed by rotating the test item and adjusting the receiving antenna polarization.

- 5. A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (PcI) ,the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should be recorded after test.
- The measurement results are obtained as described below: Power(EIRP)=PMea- PAg - Pcl + Ga We used SMF100A micowave signal generator which signal level can up to 33dBm,so we not used power Amplifier for substituation test; The measurement results are amend as described below: Power(EIRP)=PMea- Pcl + Ga
- This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power.
 ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP-2.15dBi.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

☑ Passed □ Not Applicable

Note: Worst case at GSM850/PCS1900/WCDMA B2/B4/B5

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		GS	M850		
01	Frequency	Spurious	Emission		D It
Channel	(MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
	182.21	Vertical	-62.26		
	259.91	V	-51.03		
	1764.70	V	-36.44	40.00	
	2472.57	V	-46.47	-13.00	Pass
	$ \begin{array}{ c c c c c c } \hline 3411.82 & \lor & -52.53 \\ \hline 11028.75 & \lor & -43.09 \\ \hline 83.18 & Horizontal & -70.32 \\ \hline 200.36 & H & -61.32 \\ \hline 1259.49 & H & -61.32 \\ \hline 1259.49 & H & -49.46 \\ \hline 1747.34 & H & -42.47 \\ \hline 3295.11 & H & -49.21 \\ \hline 6824.17 & H & -49.24 \\ \hline 61.69 & \lor rtical & -67.59 \\ \hline 259.91 & \lor & -49.00 \\ \hline 1674.06 & \lor & -47.13 \\ \hline 2510.89 & \lor & -36.26 \\ \hline 3343.25 & \lor & -50.88 \\ \hline 9595.37 & \lor & -45.42 \\ \hline 41.61 & Horizontal & -62.90 \\ \hline 312.06 & H & -60.45 \\ \end{array} $				
100	11028.75	V	-43.09		
128	83.18	Horizontal	-70.32		
	200.36	Н	-61.32		
	1259.49	Н	-49.46		_
	1747.34 H -42.47 3295.11 H -49.21 6824.17 H -49.24 61.69 Vertical -67.59 259.91 V -49.00 1674.06 V -47.13 2510.89 V -36.26 3343.25 V -50.88 9595.37 V -45.42	-13.00	Pass		
	3295.11	Н	-49.21		
	6824.17	Н	-49.24		
	61.69	Vertical	-67.59	-13.00	
	259.91	V	-49.00		Pass
	1674.06	V	-47.13		
	2510.89	V	-36.26		
	3343.25	V	-50.88		
100	9595.37	V	-45.42		
190	41.61	Horizontal	-62.90		Pass
	312.06	Н	-60.45		
	1672.22	Н	-52.09	10.00	
	2510.89	Н	-45.37	-13.00	
	$190 \qquad \begin{array}{ c c c c c c } \hline 83.18 & Horizontal & -70.32 \\ \hline 200.36 & H & -61.32 \\ \hline 1259.49 & H & -49.46 \\ \hline 1747.34 & H & -42.47 \\ \hline 3295.11 & H & -49.21 \\ \hline 6824.17 & H & -49.24 \\ \hline 1674.06 & V & -47.13 \\ \hline 259.91 & V & -49.00 \\ \hline 1674.06 & V & -47.13 \\ \hline 2510.89 & V & -36.26 \\ \hline 3343.25 & V & -50.88 \\ \hline 9595.37 & V & -45.42 \\ \hline 41.61 & Horizontal & -62.90 \\ \hline 312.06 & H & -60.45 \\ \hline 1672.22 & H & -52.09 \\ \hline 1672.22 & H & -52.09 \\ \hline 1672.22 & H & -52.09 \\ \hline 2510.89 & H & -45.37 \\ \hline 4179.88 & H & -52.41 \\ \hline 7466.20 & H & -48.77 \\ \hline 33.46 & Vertical & -62.06 \\ \hline 259.91 & V & -48.26 \\ \hline 1698.14 & V & -47.28 \\ \hline 1764.70 & V & -36.85 \\ \hline 3392.09 & V & -48.45 \\ \hline 4113.73 & V & -52.52 \\ \hline \end{array}$				
	7466.20	Н	-48.77		
	33.46	Vertical	-62.06		
	259.91	V	-48.26		
	1698.14	V	-47.28	12.00	Deee
	1764.70	V	-36.85	-13.00	Pass
	3392.09	V	-48.45		
054	4113.73	V	-52.52		
251	156.09	Horizontal	-58.08		
	259.91	Н	-56.20		
	1698.14	н	-47.05	12.00	Daaa
	2547.01	н	-33.02	-13.00	Pass
	4113.73	н	-52.52		
	7697.08	Н	-48.71		

Remark:

1.

The emission behaviour belongs to narrowband spurious emission. The emission levels of not record in the report are very lower than the limit and not show in test report. 2.

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		PCS	S1900		
Channel	Channel Frequency Spurious Emission			Limit (dDm)	Result
Channel	(MHz)	Polarization	Level (dBm)	Limit (abm)	Result
	56.70	Vertical	-66.22		
	259.91	V	-50.77		
	1745.42	V	-41.46	10.00	Dava
		-50.33	-13.00	Pass	
	3700.48	V	-53.16		
512	5554.08	V	-45.55		
512	56.70	Horizontal	-66.22		
	259.91	Н	-49.50		
	1258.11	Н	-52.05	10.00	Daar
	1764.70	Н	-46.56	-13.00	Pass
	4149.68	Н	-56.10		
	5554.08	Н	-47.85		
	182.21	Vertical	-58.78		
	259.91	V	-48.67	-13.00	
	1747.34	V	-41.18		Daar
	2544.21	V	-49.73		Pass
	3759.98	V	-50.65		
004	9429.83	V	-46.21		
661	59.77	Horizontal	-69.15		Pass
	259.91	Н	-48.67		
	1099.09	н	-49.82	12.00	
	1747.34	н	-41.18	-13.00	
	3759.98	Н	-48.32		
	6843.99	Н	-50.06	Limit (dBm) -13.00 -13.00 -13.00 -13.00 -13.00	
	45.91	Vertical	-75.35		
	182.21	V	-61.29		
	1096.68	V	-53.12	12.00	Daga
	2058.11	V	-47.10	-13.00	Pass
	3820.45	V	-51.02		
040	5725.84	V	-44.68		
810	182.21	Horizontal	-61.29		
	400.56	Н	-64.85		
	1263.65	Н	-50.30	40.00	Deec
	2117.75	Н	-50.09	-13.00	Pass
	3820.45	н	-51.02		
	4113.73	Н	-51.90		

Remark:

1.

The emission behaviour belongs to narrowband spurious emission. The emission levels of not record in the report are very lower than the limit and not show in test report. 2.

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		WCDM	A Band II		
Channel	Frequency	Spurious	Emission	Limit (dDm)	Deput
Channel	(MHz)	Polarization	Level (dBm)	Limit (abm)	Result
	68.31	Vertical	-62.46		
	245.69	V	-52.00		
	1340.89	V	-54.12	12.00	Deee
	1854.14	V	-39.93	-13.00	Pass
	1340.89 V -54.12 -13.00				
0000	7401.51	V	-30.51		
9262	67.59	Horizontal	43.60		
	266.39	н	55.71		
	1196.11	н	55.92	10.00	Dava
	1854.14	н	65.67	-13.00	Pass
	3700.48	н	72.11		
	5554.08	Н	72.87		
	44.17	Vertical	-60.76		
	266.39	V	-52.48	-13.00	Paga
	1043.78	V	-52.83		
	1880.81	V	-39.23		Pass
	3754.53	V	-33.57		
0.400	5635.22	V	-28.38		
9400	75.38	Horizontal	-70.28		Pass
	245.69	н	-59.11		
	1878.74	н	-37.77	10.00	
	2580.81	н	-47.32	-13.00	
	1196.11 H 55.92 1854.14 H 65.67 3700.48 H 72.11 5554.08 H 72.87 44.17 Vertical -60.76 266.39 V -52.48 1043.78 V -52.83 1880.81 V -39.23 3754.53 V -33.57 5635.22 V -28.38 75.38 Horizontal -70.28 245.69 H -59.11 1878.74 H -37.77 2580.81 H -47.32 3754.53 H -25.57 68.31 Vertical -63.17 266.39 V -52.16 1905.77 V -44.22 1989.20 V -41.51				
	5635.22	н	-25.57	-13.00	
	68.31	Vertical	-63.17		
	266.39	V	-52.16		
	1905.77	V	-44.22	12.00	Deee
	1989.20	V	-41.51	-13.00	Pass
	3814.91	V	-36.78		
0500	5717.54	V	-31.88		
9538	69.77	Horizontal	-65.74		
	266.39	Н	-63.01		
	1256.73	Н	-50.34	40.00	Dee
	1907.86	Н	-48.87	-13.00	Pass
	5717.54	Н	-29.14		
	7630.40	Н	-29.60		

Remark:

1.

The emission behaviour belongs to narrowband spurious emission. The emission levels of not record in the report are very lower than the limit and not show in test report. 2.

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		WCDM	A Band IV		
Channel	Frequency	Spurious	Emission	Lingit (dDng)	Decult
Channel	(MHz)	Polarization	Level (dBm)	Limit (aBm)	Result
	79.74	Vertical -67.29 V -60.77			
_	266.39	V	-60.77		
	1260.88	V	-50.44	10.00	5
	1711.25	V	-37.42	-13.00	Pass
	5135.72	V	-36.20		
1313	6843.99	V	-30.94		
1313	71.76	Horizontal	-64.36		
	492.92	Н	-61.64		
	1711.25	Н	-41.66	10.00	Dees
2580.81 H -44.92 5135.72 H -35.24 6853.92 H -33.48 44.01 Vertical -62.30 266.39 V -57.37 1262.26 V -48.29 2141.14 V -46.78 3476.76 V -46.06	-13.00	Pass			
	5135.72	Н	-35.24		
	6853.92	Н	-33.48		
	44.01	Vertical	-62.30		
	266.39	V	-57.37	-13.00	Doop
	1262.26	V	-48.29		
	2141.14	V	-46.78		Pass
	3476.76	V	-46.06		
4.450	6954.05	V	-37.57		
1450	70.26	Horizontal	-65.55		Dooo
	184.14	Н	-62.72		
	1101.51	Н	-52.42	10.00	
	2141.14	Н	-46.64	-13.00	Pass
	44.01 Vertical -62.30 266.39 V -57.37 1262.26 V -48.29 2141.14 V -46.78 3476.76 V -46.06 6954.05 V -37.57 70.26 Horizontal -65.55 184.14 H -62.72 1101.51 H -52.42 2141.14 H -46.64 3481.80 H -41.45 5218.30 H -37.56 67.59 Vertical -64.80				
	5218.30	н	-37.56		
	67.59	Vertical	-64.80		
	266.39	V	-51.02		
	1260.88	V	-47.04	40.00	5
	2152.93	V	-42.99	-13.00	Pass
	5256.28	V	-33.15		
	7014.82	V	-32.05		
1512	73.03	Horizontal	-65.06		
	266.39	Н	-60.14		
	1197.42	Н	-53.08		
	2152.93	Н	-49.48	-13.00	Pass
	3502.06	Н	-49.06		
	5263.91	н	-43.80		

Remark:

1. The emission behaviour belongs to narrowband spurious emission.

2. The emission levels of not record in the report are very lower than the limit and not show in test report.

		WCDM	A Band V		
	Frequency	Spurious	Emission		D
Channel	(MHz)	Polarization	Level (dBm)	Limit (aBm)	Result
	68.55	Vertical	-62.91		
-	245.69	V	-51.74		
	1260.88	V	-55.66	10.00	Dava
	1652.13	V	-58.67	-13.00	Pass
	4137.66	V	-50.88		
4400	5775.88	V	-47.85		
4132	71.76	Horizontal	42.55		
	266.39	Н	51.65		
	1650.32	Н	49.69	12.00	Deee
	2440.18	Н	53.32	-13.00	Pass
	4125.68	Н	51.87		
	7843.58	Н	59.80		
	71.51	Vertical	-64.20		
	266.39	V	-59.23	-13.00	Pass
	1546.74	V	-54.27		
	1943.83	V	-43.65		
	5025.20	V	-48.91		
44.00	5851.76	V	-47.32		
4183	68.31	Horizontal	-64.03		Page
	266.39	Н	-51.40		
	1948.11	Н	-41.04	10.00	
	2580.81	Н	-46.01	-13.00	Pass
	5025.20	Н	-44.47		
	5851.76	Н	-46.86	Limit (dBm) -13.00 -13.00 -13.00 -13.00 -13.00	
	43.55	Vertical	-61.41		
	266.39	V	-63.59		
	1100.30	V	-50.98	40.00	
	1513.13	V	-52.90	-13.00	Pass
	3382.26	V	-48.98		
1005	6774.86	V	-44.86		
4233	71.51	Horizontal	-66.07		
	266.39	Н	-58.65		
	1690.69	Н	-48.52		_
	2413.52	Н	-49.52	-13.00	Pass
	3382.26	Н	-48.98		
	4234.80	Н	-51.53		

Remark:

3.

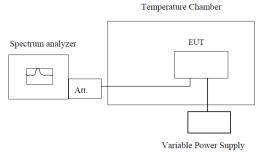
The emission behaviour belongs to narrowband spurious emission. The emission levels of not record in the report are very lower than the limit and not show in test report. 4.

5.7. Frequency stability V.S. Temperature measurement

LIMIT

2.5ppm

TEST CONFIGURATION



Note: Measurement setup for testing on Antenna connector

TEST PROCEDURE

- 1. The equipment under test was connected to an external DC power supply and input rated voltage.
- 2. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators.
- 3. The EUT was placed inside the temperature chamber.
- 4. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°Coperating frequency as reference frequency.
- Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency.
- 6. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

☑ Passed □ Not Applicable

Note:Worst case at GSM850/PCS1900/WCDMA B2/B4/B5 mid channel

Reference Frequency: GSM850 Middle channel=190 channel=836.6MHz							
Power supplied	Temperature (°C)	Frequency error		Limit (ppm)	Result		
(Vdc)	Temperature (C)	Hz	ppm	Linit (ppin)	Result		
	-30	11.46	0.014				
	-20	8.14	0.010	_			
	-10	16.40	0.020				
	0	22.47	0.027				
3.80	10	16.11	0.019	2.50	Pass		
	20	19.95	0.024				
	30	12.58	0.015				
	40	7.66	0.009				
	50	9.85	0.012				
Refe	erence Frequency: PO	CS1900 Middle ch	annel=661 chan	nel=1880MHz			
Power supplied	Temperature (°C)	Frequency error		Limit (ppm)	Result		
(Vdc)		Hz	ppm		Result		
	-30	4.05	0.002				
	-20	8.27	0.004	_			
	-10	2.71	0.001				
	0	5.47	0.003				
3.80	10	3.44	0.002	2.50	Pass		
	20	2.80	0.001				
	30	6.37	0.003				
	40	4.83	0.003				
	50	3.61	0.002				

Reference Frequency: WCDMA Band II Middle channel=9400 channel=1880MHz								
Power supplied	Temperature (°C)	Frequer	cy error	Limit (ppm)	Result			
(Vdc)	Temperature (C)	Hz	ppm	Einin (ppin)	Result			
	-30	11.51	0.006					
	-20	13.67	0.007					
	-10	8.34	0.004					
	0	15.34	0.008					
3.80	10	9.63	0.005	2.50	Pass			
	20	6.00	0.003					
	30	7.41	0.004					
	40	3.68	0.002					
	50	8.55	0.005					
Reference	ce Frequency: WCDM	IA Band IV Middle	e channel=1450 c	hannel=1740MH	z			
Power supplied	Temperature (°C)	Frequency error		Limit (ppm)	Result			
(Vdc)	Temperature (C)	Hz	ppm		Result			
	-30	1.64	0.002					
	-20	1.79	0.002					
	-10	3.41	0.004					
	0	9.85	0.012					
3.80	10	6.75	0.008	2.50	Pass			
	20	1.17	0.001					
	30	1.10	0.001					
	40	8.14	0.010					
	50	2.74	0.003					

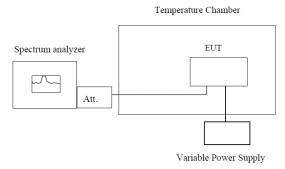
Reference Frequency: WCDMA Band V Middle channel=4182 channel=836.6MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm	Limit (ppm)	Result
	-30	2.67	0.010	2.50	Pass
	-20	5.96	0.008		
	-10	3.68	0.008		
	0	7.51	0.010		
3.80	10	4.36	0.009		
	20	1.71	0.009		
	30	5.94	0.008		
	40	1.87	0.008		
	50	8.26	0.009		

5.8. Frequency stability V.S. Voltage measurement

LIMIT

2.5ppm

TEST CONFIGURATION



Note: Measurement setup for testing on Antenna connector

TEST PROCEDURE

- 1. Set chamber temperature to 25°C. Use a variable DC power source topower the EUT and set the voltage to rated voltage.
- 2. Set the spectrum analyzer RBW lowenough to obtain the desired frequency resolution and recorded the frequency.
- 3. Reduce the input voltage to specified extreme voltage variation (+/- 15%) and endpoint, record the maximum frequency change.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

🛛 Passed

Not Applicable

Note:Worst case at GSM850/PCS1900/WCDMA B2/B4/B5 mid channel

Report No.: TRE1709005801

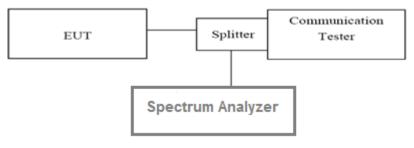
Reference	Frequency: GSM85	0 (GSM link) Midd	le channel=190 (channel=836.6MH	łz	
Temperature (°C)	Power supplied	Frequency error			Desult	
	(Vdc)	Hz	ppm	Limit (ppm)	Result	
25	4.35	19.95	0.024	2.50	Pass	
	3.80	12.58	0.015			
	3.60	7.66	0.009			
Reference Frequency: PCS1900 (GSM link) Middle channel=661 channel=1880MHz						
Temperature (°C)	Power supplied	Frequency error		– Limit (ppm)	Result	
Temperature (C)	(Vdc)	Hz	ppm	Linit (ppin)	Result	
	4.35	2.8	0.001		Pass	
25	3.80	6.37	0.003	2.50		
	3.60	4.83	0.003			
Reference Frequency: WCDMA Band II Middle channel=9400 channel=1880MHz						
Temperature (°C)	Power supplied	Frequency error		Limit (ppm)		
	(Vdc)	Hz	ppm	Res	sult	
	4.35	6	0.003			
25	3.80	7.41	0.004	2.50	Pass	
	3.60	3.68	0.002			
Reference	e Frequency: WCDM	IA Band IV Middle	channel=1450 c	hannel=1740MH	Z	
Temperature (°C)	Power supplied	Frequen	cy error	Limit (ppm)	Result	
	(Vdc)	Hz	ppm	(pp)	rtoour	
	4.35	1.17	0.001	2.50	Pass	
25	3.80	1.1	0.001			
	3.60	8.14	0.010			
Reference Frequency: WCDMA Band V Middle channel=4183 channel=836.6MHz						
Temperature (°C)	Power supplied	Frequen	cy error	Limit (ppm)	Result	
	(Vdc)	Hz	ppm			
	4.35	1.71	0.009	2.50 Pa		
25	3.80	5.94	0.008		Pass	
	3.60	1.87	0.008			

5.9. Peak-Average Ratio

LIMIT

13dB

TEST CONFIGURATION



TEST PROCEDURE

According with KDB 971168

- 1. The signal analyzer's CCDF measurement profile is enabled
- 2. Frequency = carrier center frequency
- 3. Measurement BW > Emission bandwidth of signal
- 4. The signal analyzer was set to collect one million samples to generate the CCDF curve

5. The measurement interval was set depending on the type of signal analyzed. Forcontinuoussignals(>98% duty cycle), the measurement interval was set to 1ms. For bursttransmissions, the spectrum analyzer is set to use an internal " RF Burst" trigger that issynced with an incoming pulse and the measurement interval is set to less than the duration of the " on time" of one burst to ensure that energy is only captured during a time in which the transmitter is operating at maximum power

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

☑ Passed □ Not Applicable

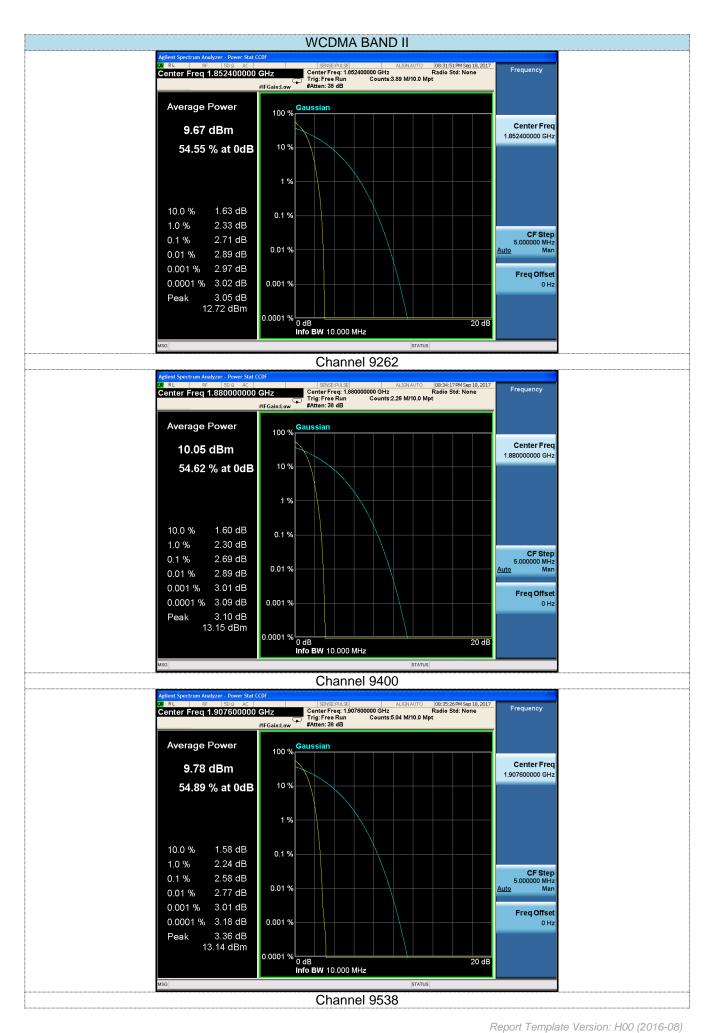
Note:Worst case PCS1900,WCDMA BAND1900, WCDMA BAND1700

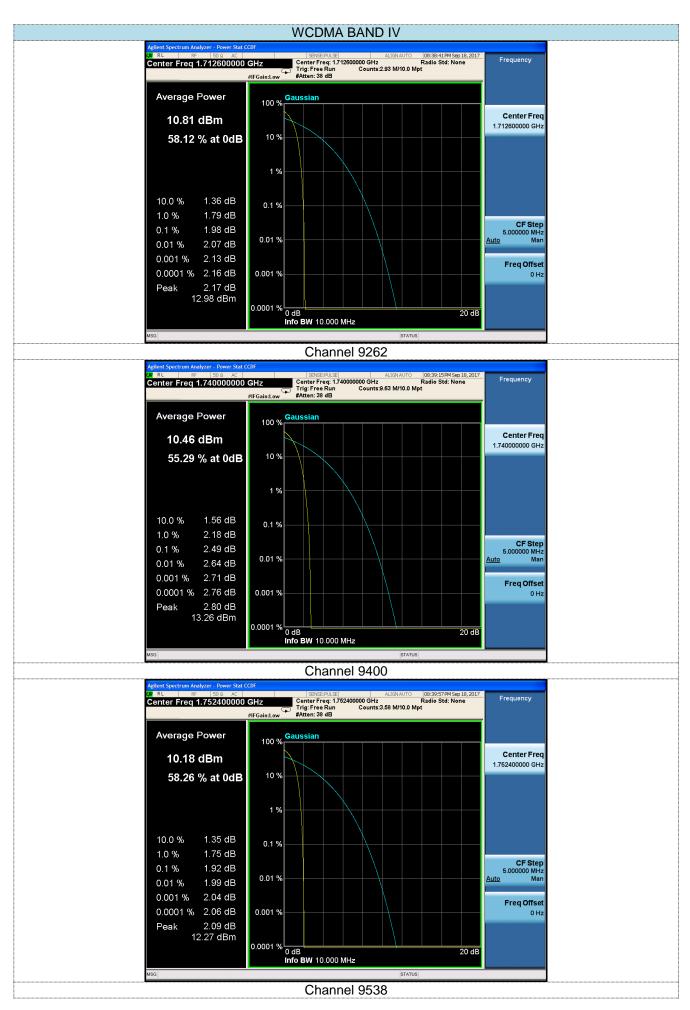
Band	Channel	Frequency(MHz)	PAR	Limit(dB)	Result
PCS1900	512	1850.2	2.64	13.00	Pass
	661	1880.0	2.64	13.00	Pass
	810	1909.8	2.63	13.00	Pass

Band	Channel	Frequency(MHz)	PAR	Limit(dB)	Result
WCDMA BAND II	9262	1852.4	2.71	13.00	Pass
	9400	1880.0	2.69	13.00	Pass
	9538	1907.6	2.58	13.00	Pass

Band	Channel	Frequency(MHz)	PAR	Limit(dB)	Result
WCDMA BAND IV	1313	1712.6	1.98	13.00	Pass
	1450	1740.0	2.49	13.00	Pass
	1512	1752.4	1.92	13.00	Pass

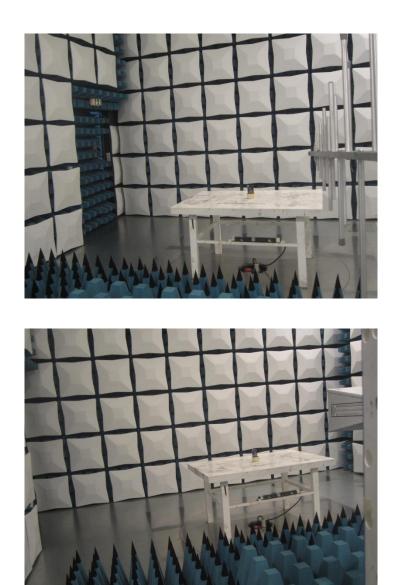






6. Test Setup Photos of the EUT

Radiated emission:



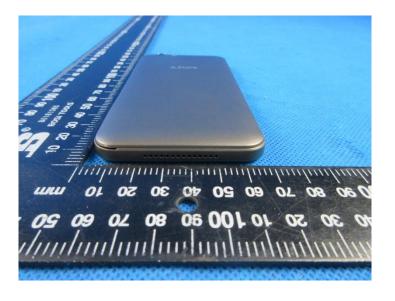
7. External and Internal Photos of the EUT

External photos of the EUT



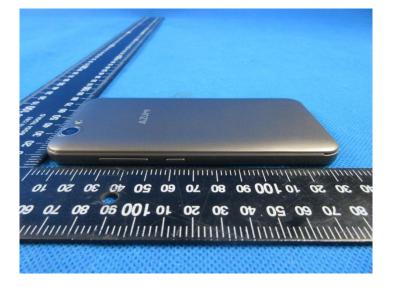


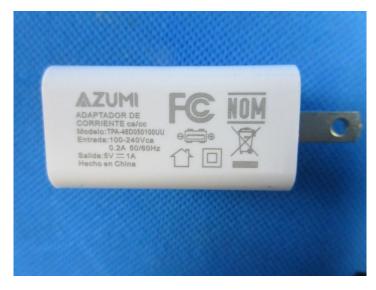










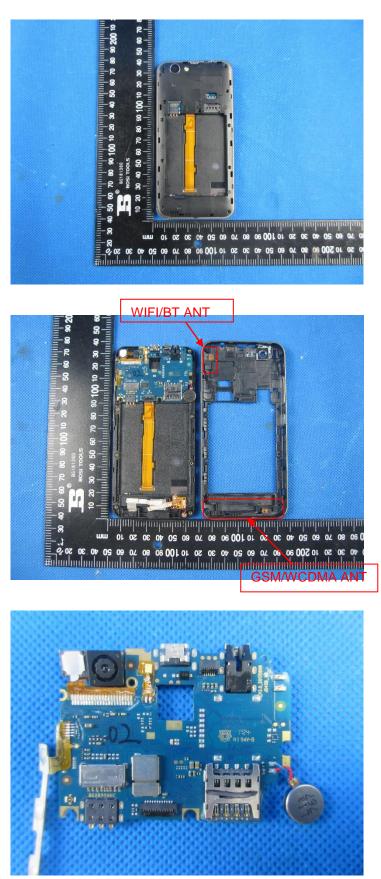


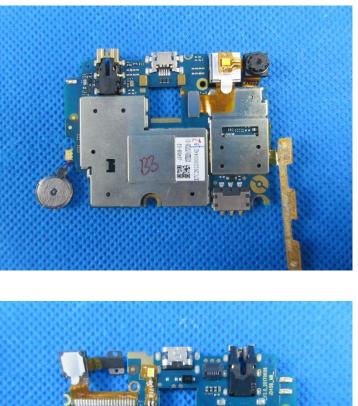
Internal photos of the EUT





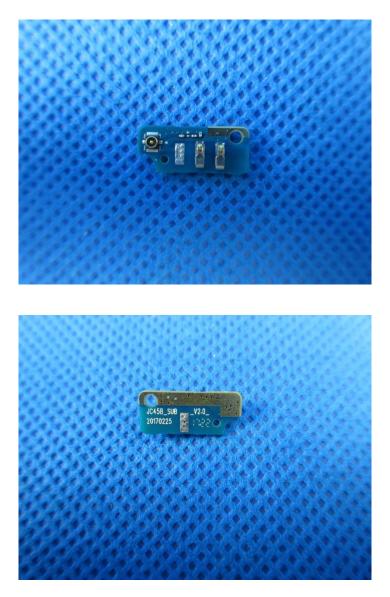












.....End of Report.....