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ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

INTENTIONAL RADIATOR CERTIFICATION TO FCC PART 22 SUBPART H, PART 24 SUBPART E and PART 27 SUBPART C & SUBPART L

OF

Product Name: Mobile Hotspot

Brand Name: N/A

Model Name: AirCard 754S

Model Difference: N/A

FCC ID: **N7NAC754S**

Report No.: EH/2011/40003

Issue Date: May. 11, 2011

FCC Rule Part: 2,22H & 24E & 27

Prepared for: Sierra Wireless

13811 Wireless Way Richmond, BC, Canada,

V6V 3A4

Prepared by: SGS Taiwan Ltd.

Electronics & Communication Laboratory

No. 134, Wu Kung Rd., Wuku Industrial

Zone, Taipei County, Taiwan.

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VERIFICATION OF COMPLIANCE

Applicant: Sierra Wireless

13811 Wireless Way Richmond, BC, Canada, V6V 3A4

Product Name: Mobile Hotspot

Brand Name: N/A

Model No.: AirCard 754S

Model Difference: N/A

FCC ID: N7NAC754S

File Number: EH/2011/40003

Date of test: Apr. 07, 2011 ~ May. 11, 2011

Date of EUT Received: Apr. 07, 2011

We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd. Electronics & Communication Laboratory The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in TIA/EIA-603-C-2004 and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rule FCC PART 22 subpart H, PART 24 subpart E and PART 27.

The test results of this report relate only to the tested sample identified in this report.

Test By:	Lazz Huang	Date:	May. 11, 2011
Prepared By:	Jazz Huang / Engineer Tiffany Kao	Date:	May. 11, 2011
Approved By:	Jim Chang / Supervisor	Date:	May. 11, 2011

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Version

Version No.	Date	Description
00	May. 11, 2011	Initial creation of document

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1. GENERAL PRODUCT INFORMATION

General:

General.					
Product Name:	Mobile Hots	Mobile Hotspot			
Brand Name:	N/A				
Model Name:	AirCard 754	lS .			
Model Difference:	N/A				
Data Cable (USB):	M/N: SSW-2012, Supplier: Xiamen Hung's Co. Ltd.				
3.7 Vdc re-chargeable battery or 5.2Vdc by AC/DC power adapt					
Power Supply: Battery:		M/N: W-1, Supplier: Sierra Wireless			
	Adapter:	M/N: SSW-2012A, Supplier: Sierra Wireless			

GSM / WCDMA LTE:

ODM/ WCDM/LIL.					
	GSM / GPRS 850, Class 10	824.2 MHz– 848.8 MHz	33 dBm		
	EDGE 850, Class 12	824.2 MHz– 848.8 MHz	27 dBm		
	GSM / GPRS 1900, Class 10	1850.2MHz – 1909.8MHz	30 dBm		
	EDGE 1900, Class 12	1850.2MHz – 1909.8MHz	26 dBm		
Cellular Phone Stan- dards Frequency	WCDMA/HSUPA/HSDPA /HSPA+ Band II	1852.4MHz – 1907.6MHz	24 dBm		
Range:	WCDMA/HSUPA/HSDPA /HSPA+ Band V 826.4MHz - 846.6MHz		24 dBm		
	5MHz BW LTE-Band 4	1712.5MHz – 1752.5MHz	23 dBm		
	10MHz BW LTE-Band 4	1715MHz – 1750MHz	23 dBm		
	5MHz BW LTE-Band 17	706.5MHz – 713.5MHz	23 dBm		
	10MHz BW LTE-Band 17	709MHz - 711MHz	23 dBm		
IMEI:	001027009999998				
Hardware Version:	N/A				
Software Version:	N/A				

This test report applies for 850 /1900 GSM / GPRS/EDGE / WCDMA / HSDPA / HSUPA and LTE Band 4 and 17.

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Final Amplifier Voltage and Current Information:

Test Mode	DC voltage (V)	DC current (mA)
GPRS 850	3.7 Vdc	290
GPRS 1900	3.7 Vdc	280
EDGE 850	3.7 Vdc	220
EDGE 1900	3.7 Vdc	250
WCDMA B2	3.7 Vdc	650
WCDMA B5	3.7 Vdc	580
HSDPA B2	3.7 Vdc	640
HSDPA B5	3.7 Vdc	590
HSUPA B2	3.7 Vdc	650
HSUPA B5	3.7 Vdc	580
LTE B4 5M QPSK	3.7 Vdc	750
LTE B4 5M 16QAM	3.7 Vdc	700
LTE B4 10M QPSK	3.7 Vdc	770
LTE B4 10M 16QAM	3.7 Vdc	730
LTE B17 5M QPSK	3.7 Vdc	630
LTE B17 5M 16QAM	3.7 Vdc	610
LTE B17 10M QPSK	3.7 Vdc	670
LTE B17 10M 16QAM	3.7 Vdc	640

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1.1. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for **FCC ID:** <u>N7NAC754S</u> filing to comply with Section Part 22 subpart H, Part 24 subpart E and Part27 subpart C & subpart L of the FCC CFR 47 Rules.

1.2. Test Methodology

Both conducted and radiated testing were performed according to the procedures document of TIA/EIA 603C and FCC CFR 47.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055 and 2.1057.

The Output power Procedure of KDB941225 (SAR Measurement Procedures for 3G devices, WCDMA / HSPA / LTE) was used for EUT and Base station setting.

1.3. Test Facility

The measurement facilities used to collect the 3m Radiated Emission and AC power line conducted data are located on the address of SGS Taiwan Ltd. Electronics & Communication Laboratory No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei Country, Taiwan which are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4: 2003. FCC Registration Number are: 990257 and 236194, Canada Registration Number: 4620A-4

The 10 m Open Area Test Sites located on the address of SGS Taiwan Ltd. Electronics & Communication Laboratory No. 29, Pau-Tou-Tsuo Valley Chia-Pau Tsuen, Linkou Hsiang, Taipei county, which is constructed and calibrated to meet the CISPR 22/EN 55022 requirements. SGS Site No. 1(3 & 10 meters) and FCC Registration Number: 94644.

All equipment is calibrated externally and traceable to SI (International System of Unit).

1.4. Special Accessories

Not available for this EUT intended for grant.

1.5. Equipment Modifications

Not available for this EUT intended for grant.

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2. SYSTEM TEST CONFIGURATION

2.1. EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

2.2. EUT Exercise

The EUT (Transmitter) was operated in the engineering mode to fix the Tx frequency which was for the purpose of the measurements.

2.3. Test Procedure

2.3.1 AC Power Line Conducted Emissions

The EUT is placed on a turn table which is 0.8 m above ground plane. According to the requirements in Section 7 and 13 of ANSI C63.4: 2003. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and Average detector mode.

2.3.2 Conducted Measurement at Antenna Port:

According to measurement procured TIA/EIA 603C, the EUT is placed on a turn table which is 0.8 m above ground plane. A low loss of RF cable was used to connect the antenna port of EUT to measurement equipment.

2.3.3 Radiated Emissions (ERP/EIRP):

The EUT is a placed on as turn table which is 80 cm above ground plane. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both Horizontal and Vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes and measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made "while keeping the antenna in the 'cone of radiation' from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response." is still within the 3dB illumination BW of the measurement antenna according to the requirements in Section 2 of TIA/EIA 603C.

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2.4. Measurement Equipment Used:

Conducted Emission Test Site					
EQUIPMENT	MFR	MODEL	SERIAL	LAST	CAL DUE.
TYPE		NUMBER	NUMBER	CAL.	
Spectrum Analyzer	Agilent	E4446A	MY43360126	04/19/2010	04/18/2012
Spectrum Analyzer	Agilent	E4440A	US41160416	01/23/2010	01/22/2012
Radio Communication Analyzer	R&S	CMU200	102189	05/13/2010	05/13/2012
800 – 1000MHz Filter	Micro-Tronics	BRM13462	001	01/05/2011	01/04/2012
1800 – 2000MHz Filter	Micro-Tronics	BRM13463	001	01/05/2011	01/04/2012
Temperature Chamber	TERCHY	MHG-120LF	911009	04/14/2010	04/13/2012
Temperature Chamber	GIANT FORCE	GTH-150-40- CP-AR	MAA0512-018	02/05/2010	02/04/2012
DC Block	Agilent	BLK-18	155452	07/05/2010	07/04/2011
Attenuator	Mini-Circuit	BW-S20W5	N/A	07/05/2010	07/04/2011
Attenuator	Mini-Circuit	BW-S10W5	N/A	07/05/2010	07/04/2011
Attenuator	Mini-Circuit	BW-S6W5	N/A	07/05/2010	07/04/2011
Splitter	Agilent	11636B	N/A	07/05/2010	07/04/2011
DC Power Supply	HP	6038A	2929A-07548	06/27/2010	06/26/2011
DC Power Supply	Topward	3303D	981327	10/26/2010	10/25/2011
Power Meter	Anritsu	ML2495A	1005007	02/17/2010	02/16/2012
Power Sensor	Anritsu	MA2411B	917032	01/21/2010	01/20/2012

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ERP, EIRP MEASUREMENT EQUIPMENT List 966 Chamber					
EQUIPMENT	MFR	MODEL	SERIAL	LAST	CAL DUE.
TYPE		NUMBER	NUMBER	CAL.	
Spectrum Analyzer	R&S	FSP 40	100034	02/12/2010	02/11/2012
Bilog Antenna	SCHWAZBECK	VULB9160	9160-3136	11/15/2010	11/14/2011
Dipole Antenna	SCHWAZBECK	VHAP	908/909	07/10/2010	07/09/2012
Dipole Antenna	SCHWAZBECK	UHAP	891/892	07/10/2010	07/09/2012
Horn antenna	SCHWAZBECK	BBHA 9120D	309/320	01/22/2010	01/21/2012
Horn antenna	SCHWAZBECK	BBHA 9120D	9120D-673	05/09/2010	05/08/2012
Signal Generator	R&S	SMR40	100210	01/22/2010	01/21/2012
Signal Generator	Agilent	E4438C	MY45093613	06/11/2010	06/10/2011
Pre-Amplifier	Agilent	8447D	1937A02834	11/30/2010	11/29/2011
Pre-Amplifier	Agilent	8449B	3008A01973	01/05/2011	01/04/2012
Attenuator	Mini-Circuit	BW-S20W5	001	07/05/2010	07/04/2011
Attenuator	Mini-Circuit	BW-S10W5	001	07/05/2010	07/04/2011
Attenuator	Mini-Circuit	BW-S6W5	001	07/05/2010	07/04/2011
Radio Communication Analyzer	R&S	CMU200	102189	05/13/2010	05/12/2012
Turn Table	HD	DT420	N/A	N.C.R	N.C.R
Antenna Tower	HD	MA240-N	240/657	N.C.R	N.C.R
Controller	HD	HD100	N/A	N.C.R	N.C.R
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA-10M	10m	01/05/2011	01/04/2012
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA-3M	3m	01/05/2011	01/04/2012
Filter 800-1000	Micro-Tronics	BRM13462	1	01/05/2011	01/04/2012
Filter 1800-2000	Micro-Tronics	BRM13463	1	01/05/2011	01/04/2012
3m Site	SGS	966 chamber	N/A	11/08/2010	11/09/2011

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2.5. Configuration of Tested System

Fig. 2-1 Configuration of Tested System (Fixed Channel)

EUT

Remote Side

CMU200 CMW500 8960

Table 2-1 Equipment Used in Tested System

Item	Equipment	Mfr/Brand	Model/ Type No.	Series No.	Data Cable	Power Cord
1.	Universal Radio Com- munication Tester	R&S	CMU200	102189	shielded	Un-shielded
2.	Wireless communica- tions Test set	Agilent	8960	GB47050617	shielded	Un-shielded
3.	Universal Radio Communication Tester	R&S	CMW500	12010002K50	shielded	Un-shielded

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3. SUMMARY OF TEST RESULTS

FCC Rules	Description Of Test	Result	
§2.1046(a)			
§22.913(a)(2)			
§24.232(c)	RF Power Output	Compliant	
§27.50(c)(10)			
§27.50(d)(4)			
§2.1046(a)			
§22.913(a)(2)			
§24.232(c)	ERP/ EIRP measurement	Compliant	
§27.50(c)(10)			
§27.50(d)(4)			
§2.1049(h)	99% Occupied Bandwidth	Compliant	
§2.1051	Out of Band Emissions at Antenna		
§22.917(a)	Terminals and	Compliant	
§24.238(a)	Band Edge		
§27.53(g)	Band Edge		
§2.1053			
§22.917(a)			
§24.238(a)	Field Strength of Spurious Radiation	Compliant	
§27.53(c)(2)	Tield Strength of Sparious Radiation	Compilant	
§27.53(g)			
§27.53(h)			
§27.50(i)	Peak to Average Ratio	Compliant	
§27.53f	Spurious emission in 1559 -1610MHz Band	N/A	
§2.1055(a)(1)			
§22.355	Eraguanay Stability va Tamparatura	Compliant	
§24.235	Frequency Stability vs. Temperature	Compilant	
§27.54			
§2.1055(d)(2)			
§22.355	Frequency Stability vs. Voltage	Compliant	
§24.235	1 requeries stability vs. voltage	Compilant	
§27.54			

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Max ERP/EIRP measurement result:

	dBm		W
GPRS 850 Band	33.30	ERP	2.138
GPRS 1900 Band	27.52	EIRP	0.565
EDGE 850 Band	29.60	ERP	0.912
EDGE 1900 Band	26.76	EIRP	0.474
WCDMA Band II	25.63	EIRP	0.366
WCDMA Band V	26.57	ERP	0.454
HSUPA Band II	24.21	EIRP	0.264
HSUPA Band V	25.01	ERP	0.317
LTE Band 4/5MMz /QPSK RB 12 Offset 6	17.62	EIRP	0.058
LTE Band 4/5MMz /16QAM RB 12 Offset	17.76	EIRP	0.060
LTE Band 4/5MMz /QPSK RB 25 Offset 0	20.20	EIRP	0.105
LTE Band 4/5MMz /16QAM RB 25 Offset	16.30	EIRP	0.043
LTE Band 4/5MMz /QPSK RB 1 Offset 24	18.99	EIRP	0.079
LTE Band 4/5MMz /16QAM RB 1 Offset	18.94	EIRP	0.078
LTE Band 4/5MMz /QPSK RB 1 Offset 0	18.49	EIRP	0.071
LTE Band 4/5MMz /16QAM RB 1 Offset 0	18.76	EIRP	0.075
LTE Band 4/10MMz /QPSK RB 25 Offset	21.19	EIRP	0.132
LTE Band 4/10MMz /16QAM RB 25	21.27	EIRP	0.134
LTE Band 4/10MMz /QPSK RB 50 Offset	19.57	EIRP	0.091
LTE Band 4/10MMz /16QAM RB 50	19.26	EIRP	0.084
LTE Band 4/10MMz /QPSK RB 1 Offset	24.25	EIRP	0.266
LTE Band 4/10MMz /16QAM RB 1 Offset	23.50	EIRP	0.224
LTE Band 4/10MMz /QPSK RB 1 Offset 0	23.33	EIRP	0.215
LTE Band 4/10MMz /16QAM RB 1 Offset	23.90	EIRP	0.245

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	dBm		W
LTE Band 17/5MMz /QPSK RB 12 Offset	20.43	ERP	0.110
LTE Band 17/5MMz /16QAM RB 12	20.09	ERP	0.102
LTE Band 17/5MMz /QPSK RB 25 Offset	17.75	ERP	0.060
LTE Band 17/5MMz /16QAM RB 25	18.09	ERP	0.064
LTE Band 17/5MMz /QPSK RB 1 Offset	20.72	ERP	0.118
LTE Band 17/5MMz /16QAM RB 1 Offset	21.02	ERP	0.126
LTE Band 17/5MMz /QPSK RB 1 Offset 0	20.80	ERP	0.120
LTE Band 17/5MMz /16QAM RB 1 Offset	21.17	ERP	0.131
LTE Band 17/10MMz /QPSK RB 25 Offset	20.60	ERP	0.115
LTE Band 17/10MMz /16QAM RB 25	20.64	ERP	0.116
LTE Band 17/10MMz /QPSK RB 50 Offset	18.27	ERP	0.067
LTE Band 17/10MMz /16QAM RB 50	18.72	ERP	0.074
LTE Band 17/10MMz /QPSK RB 1 Offset	23.43	ERP	0.220
LTE Band 17/10MMz /16QAM RB 1	23.69	ERP	0.234
LTE Band 17/10MMz /QPSK RB 1 Offset	23.36	ERP	0.217
LTE Band 17/10MMz /16QAM RB 1	23.77	ERP	0.238

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4. DESCRIPTION OF TEST MODES

The EUT has been tested under operating condition.

EUT staying in continuous transmitting mode. Channel Low, Mid and High for each type band with rated data rate were chosen for full testing.

The field strength of spurious radiation emission was measured as EUT stand-up position(H mode)and lie down position (E1, E2 mode) for GSM/EDGE and WCDMA Band II and V with power adaptor. The worst-case of E2 position for GSM850/ GSM1900/ WCDMA Band II Band V and LTE Band 4 and 17 were reported.

In comparison among the RSE data of the all modulations (GPRS/EDGE/WCDMA/HSPA/HSPA+) we found that while the radiation is in GPRS mode, the spurious emission is found to be the worst, and therefore documenting the data of radiated spurious emission on GPRS 850/1900 mode would be representative sufficiently.

The RSE Data for all combinations have been measured, and only the results being measured close to the required limit are shown on the report by correlation.

In comparison among all CSE data of the variety of combination on LTE band 4 & 17, respectively, It's found to generate the highest emission at 5MHz and 10 MHz Transmission Bandwidth while RB size = 1 with 0 offset. Be aware of that only CSE data that yields the worst measurement with supported modulation scheme (QPSK, 16QAM) are shown on the corresponding section.

For Peak to Average Ratio test, all combination (RB arrangement with different modulation scheme) has been evaluated, the data with the following setting: RB number = 25; Offset = 0 for 5MHz with 16QAM, and RB number = 50; Offset = 0 for 10MHz with 16QAM are shown as representative plot on the report.

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For Band edge, all combinations has been assessed and measured, only data output the emission close to limit are presented on the corresponding section of this report. The following lists the combinational setting of measurement representation as documents on the report.

Band 4 OPSK					
	Low Channel	High Channel			
5MHz	RB Size = 1 ; Offset = 0	RB Size = 1; Offset = 24			
10MHz	RB Size = 1 ; Offset = 0	RB Size = 1 ; Offset = 49			

Band 4 16QAM					
	Low Channel	High Channel			
5MHz	RB Size = 1 ; Offset = 0	RB Size = 1 ; Offset = 24			
10MHz	RB Size = 1 ; Offset = 0	RB Size = 1 ; Offset = 49			

Band 17 QPSK					
	Low Channel	High Channel			
5MHz	RB Size = 1; Offset = 0	RB Size = 1; Offset = 24			
10MHz	RB Size = 1; Offset = 0	RB Size = 1; Offset = 49			

Band 17 16QAM					
Low Channel High Channel					
5MHz	RB Size = 1; Offset = 0	RB Size = 1; Offset = 24			
10MHz	RB Size = 1 ; Offset = 0	RB Size = 1; Offset = 49			

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5. RF POWER OUTPUT MEASUREMENT

5.1. Standard Applicable:

According to FCC §2.1046.

FCC 22.913(a) Mobile station are limited to 7W.

FCC 24.232(c) Peak Power Measurement limited to 2W

Part 27, 50(c)(10) Portable stations are limited to 3W

Part 27, 50(d)(4) Portable stations are limited to 1W

According to IC RSS-133 §6.4

The peak e.i.r.p. for transmitters operating in the band 1850-1910 MHz shall not exceed the limits 2W which given in SRSP-510.

According to issue 2 of RSS 132, section 4.4. The transmitter output power shall not exceed the limits given in SRSP-503.

3GPP Power limitation for HSDPA and HSUPA

Maximum Output Powers for HSDPA

Sub-test in ta-	Power (Class 3	Power Class 4		
ble C.10.1.4	Power (dBm)	Tol (dB)	Power (dBm)	Tol (dB)	
1	+24	+1.7/-3.7	+21	+2.7/-2.7	
2	+24	+1.7/-3.7	+21	+2.7/-2.7	
3	+23.5	+2.2/-3.7	+20.5	+3.2/-2.7	
4	+23.5	+2.2/-3.7	+20.5	+3.2/-2.7	

Maximum Output Powers for HSUPA

Sub-test in table	Power	Class 3	Power Class 4		
C.11.1.3	Power Tol (dBm) (dB)		Power (dBm)	Tol (dB)	
1	+24	+1.7/-6.7	+21	+2.7/-5.7	
2	+22	+3.7/-5.2	+19	+4.7/-4.2	
3	+23	+2.7/-5.2	+20	+3.7/-4.2	
4	+22	+3.7/-5.2	+19	+4.7/-4.2	
5	+24	+1.7/-6.7	+21	+2.7/-5.7	

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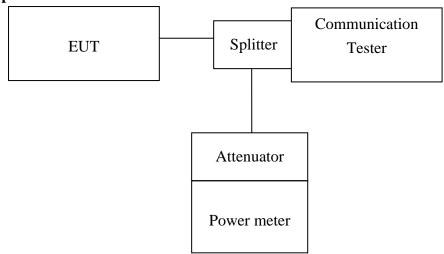
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5.2. Test Set-up:



Note: Measurement setup for testing on Antenna connector

5.3. Measurement Procedure:

The transmitter output was connected to a calibrated attenuator, the other end of which was connected to a power meter. Transmitter output was read off the power meter in dBm. The power output at the transmitter antenna port was determined by adding the value of the attenuator to the power meter reading. The Procedure of KDB941225 (SAR Measurement Procedures for 3G devices, WCDMA/HSPA/LTE) was used for EUT and Base station setting. RMC 12.2kps is used for this testing

5.4. Measurement Equipment Used:

Refer to section 2.4 in this report

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5.5. Measurement Result:

5.5.1. RF Conducted Output Power

5.5.1.1.: GSM/EDGE (**GMSK**; **8-PSK**)

Result:

Result.			1 Tim	e Slot		2 Time Slot			
Frequency (MHz) CH		GMSK Mode		8-PSK Mode		GMSK Mode		8-PSK Mode	
	Peak Power (dBm)	AV Power (dBm)	Peak Power (dBm)	AV Power (dBm)	Peak Power (dBm)	AV Power (dBm)	Peak Power (dBm)	AV Power (dBm)	
824.2	128	32.30	32.00	28.90	25.50	28.60	28.50	28.70	25.40
836.6	190	32.70	32.40	29.00	25.60	28.70	28.60	28.70	25.40
848.8	251	33.00	32.60	29.00	25.60	28.60	28.50	28.70	25.40
1850.2	512	29.60	29.50	28.50	25.20	29.00	28.80	28.10	25.00
1880.0	661	30.00	29.90	28.80	25.60	28.80	28.60	28.50	25.20
1909.8	810	29.90	29.80	28.90	25.60	28.90	28.70	28.60	25.40

			ne Slot	4 Time Slot		
Frequency (MHz)	СН	Peak Power (dBm)	AV Power (dBm)	Peak Power (dBm)	AV Power (dBm)	
824.2	128	28.50	25.20	28.40	25.10	
836.6	190	28.50	25.20	28.30	25.00	
848.8	251	28.50	25.20	28.30	25.00	
1850.2	512	27.60	24.40	27.60	24.30	
1880.0	661	28.00	24.70	28.00	24.70	
1909.8	810	28.10	24.80	28.00	24.80	

offset: 850:0.3 dBm, 1900:0.6 dBm

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5.5.1.2.: WCDMA mode

The following tests were completed according to the test requirements outlined in section 5.2 of the 3GPP TS34.121-1 V8.4.0 specification. The EUT supports power Class 3, which has a nominal maximum output power of 24 dBm (+1.7/-3.7). RMC 12.2kps is used for this testing.

Results:

EUT Mode	Frequency (MHz)	СН	Peak Power (dBm)	Avg. Power (dBm)
WCDMA Band II	1852.4	9262	26.60	23.10
	1880.0	9400	26.11	22.46
	1907.6	9538	25.91	22.91

EUT Mode	Frequency (MHz)	СН	Peak Power (dBm)	Avg. Power (dBm)
WCDMA Band V	826.4	4132	26.33	22.90
	836.6	4183	26.50	23.06
	846.6	4233	26.41	23.01

offset: b2:0.6 dbm b5:0.3 dbm

Note: The results above reflect max power with all up bits.

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5.5.1.3.: MPR Table

LTE Band 4 _5 MHz

BW	36 11 2	CI 1	Frequency	DD G:	RB	Conducted	Target	MPR Tar-
(MHz)	Modulation	Channel	(MHz)	RB Size	Offset	power(dBm)	Power(dBm)	get(dB)
			1	24	23.52	23.5	0	
		10075	1710.5	1	0	23.74	23.5	0
		19975	1712.5	12	6	22.29	23.5	1
				25	0	22.20	23.5	1
				1	24	23.41	23.5	0
_	ODGIZ	20175	1722 5	1	0	23.36	23.5	0
5	QPSK	20175	1732.5	12	6	22.09	23.5	1
				25	0	22.01	23.5	1
				1	24	23.33	23.5	0
		20375	1750 5	1	0	23.48	23.5	0
			1752.5	12	6	22.06	23.5	1
				25	0	22.04	23.5	1
		19975		1	24	22.76	23.5	1
			1712.5	1	0	22.75	23.5	1
			1712.5	12	6	21.11	23.5	2
				25	0	21.21	23.5	2
				1	24	22.80	23.5	1
5	16 OAM	20175	1732.5	1	0	22.95	23.5	1
)	16 QAM	20173	1/32.3	12	6	21.03	23.5	2
				25	0	20.86	23.5	2
				1	24	22.65	23.5	1
		20275	1750.5	1	0	22.91	23.5	1
		20375	1752.5	12	6	21.04	23.5	2
				25	0	20.94	23.5	2

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LTE Band 4_10 MHz

BW		~.	Frequency	a	RB	Conducted	Target	MPR
(MHz)	Modulation	Channel	(MHz)	RB Size	Offset	power(dBm)	Power(dBm)	Target(dB)
				1	49	23.53	23.5	0
		20000		1	0	23.75	23.5	0
		20000	1715	25	12	22.33	23.5	1
				50	0	22.21	23.5	1
				1	49	23.45	23.5	0
10	ODGIZ	20175	1722.5	1	0	23.37	23.5	0
10	QPSK	20175	1732.5	25	12	22.17	23.5	1
				50	0	22.05	23.5	1
		20350	1750	1	49	23.35	23.5	0
				1	0	23.49	23.5	0
				25	12	22.11	23.5	1
				50	0	22.08	23.5	1
			1715	1	49	22.83	23.5	1
		2000		1	0	22.76	23.5	1
				25	12	21.16	23.5	2
				50	0	21.38	23.5	2
				1	49	23.10	23.5	1
10	16 OAM	20175	1720 5	1	0	22.99	23.5	1
10	16 QAM	20175	1732.5	25	12	21.17	23.5	2
				50	0	21.15	23.5	2
				1	49	22.72	23.5	1
		20250	1750	1	0	22.91	23.5	1
		20350	1750	25	12	21.15	23.5	2
				50	0	21.14	23.5	2

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LTE Band 17 _5 MHz

BW			Frequency		RB	Conducted	Target	MPR
(MHz)	Modulation	Channel	(MHz)	RB Size			Power(dBm)	
(WITIE)			(IVIIIZ)	1	24	23.23	23.5	0
				1	0	23.21	23.5	0
		23755	706.5	12	6	22.10	23.5	1
				25	0	22.15	23.5	1
				1	24	23.24	23.5	0
				1	0	23.24	23.5	0
5	QPSK	23790	710	12	6	22.04	23.5	
								1
		23825		25	0	22.17	23.5	1
			713.5	1	24	23.25	23.5	0
				1	0	23.36	23.5	0
				12	6	22.06	23.5	1
				25	0	22.27	23.5	1
			706.5	1	24	22.77	23.5	1
		23755		1	0	22.53	23.5	1
				12	6	21.04	23.5	2
				25	0	20.90	23.5	2
				1	24	22.67	23.5	1
5	16 QAM	23790	710	1	0	22.55	23.5	1
)	10 QAM	23170	/10	12	6	21.03	23.5	2
				25	0	21.10	23.5	2
				1	24	22.99	23.5	1
		23825	713.5	1	0	22.92	23.5	1
				12	6	21.15	23.5	2
				25	0	21.01	23.5	2

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LTE Band 17 _10 MHz

BW	N. 1.1.4	CI 1	Frequency	DD G:	RB	Conducted	Target	MPR
(MHz)	Modulation	Channel	(MHz)	RB Size	Offset	power(dBm)	Power(dBm)	Target(dB)
				1	49	23.34	23.5	0
		22700	700	1	0	23.75	23.5	0
		23780	709	25	12	22.26	23.5	1
				50	0	22.29	23.5	1
				1	49	23.25	23.5	0
10	ODGIZ	22700	710	1	0	23.30	23.5	0
10	QPSK	23790	/10	25	12	22.21	23.5	1
				50	0	22.19	23.5	1
		23800		1	49	23.31	23.5	0
			711	1	0	23.38	23.5	0
				25	12	22.19	23.5	1
				50	0	22.35	23.5	1
		23780	709	1	49	22.78	23.5	1
				1	0	22.63	23.5	1
				25	12	21.11	23.5	2
				50	0	21.18	23.5	2
				1	49	22.77	23.5	1
10	16 QAM	23790	710	1	0	22.68	23.5	1
10	10 QAM	23790	710	25	12	21.07	23.5	2
				50	0	21.14	23.5	2
				1	49	23.07	23.5	1
		22000	711	1	0	23.04	23.5	1
		23800		25	12	21.21	23.5	2
				50	0	21.23	23.5	2

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5.5.1.4.:HSDPA Release 6 mode

The following 4 Sub-Tests were completed according to the test requirements outlined in section 5.2A of the 3GPP TS34.121-1 V8.4.0 specification. All TX RMS power requirements for Power Class 3 were met according to table 5.2AA.5 and 5.2B.5 All UE channels and power ratio's are set according to table C10.1.4 & C11.1.3 in the 3GPP TS34.121-1 V8.4.0. RMC 12.2kps is used for this testing

HSDPA SUB-TEST Setting

Table C.10.1.4: β values for transmitter characteristics tests with HS-DPCCH(FOR HSDPA)

Sub-test	$eta_{ m c}$	$eta_{ m d}$	$eta_{ m d} (SF)$	β_c/β_d	β _{HS} (Note1, Note 2)	CM (dB) (<i>Note 3</i>)	MPR (dB) (Note 3)	RMC (Kbps)
1	2/15	15/15	64	2/15	4/15	0.0	0.0	12.2
2	12/15 (Note 4)	15/15 (Note 4)	64	12/15 (Note 4)	24/15	1.0	0.0	12.2
3	15/15	8/15	64	15/8	30/15	1.5	0.5	12.2
4	15/15	4/15	64	15/4	30/15	1.5	0.5	12.2

Note: The recommended HSDPA MPRs are implemented as per following sub-tests.

Results:

TODATO:												
Mode	Sub-test	Avg.	Power (di	Bm)	Power Class 3 Limita-	Comments						
		9262	9400	9538	tion (dBm)							
	1	23.39	22.72	23.18	20.3dBm – 25.7dBm	Pass						
HSDPA	2	22.98	22.32	22.76	20.3dBm – 25.7dBm	Pass						
(B2)	3	22.91	22.27	22.65	19.8dBm – 25.7dBm	Pass						
	4	22.98	22.28	22.77	19.8dBm – 25.7dBm	Pass						

Mode	Sub-test	Avg.	Power (di	Bm)	Power Class 3 Limita- tion (dBm)	Comments
		4132	4183	4233	uon (udm)	
	1	23.12	23.26	23.20	20.3dBm – 25.7dBm	Pass
HSDPA	2	22.83	22.90	22.88	20.3dBm – 25.7dBm	Pass
(B5)	3	22.66	22.78	22.71	19.8dBm – 25.7dBm	Pass
	4	22.71	22.82	22.77	19.8dBm – 25.7dBm	Pass

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5.5.1.5.: HSPA (HSDPA & HSUPA) Release 6 mode

The following 5 Sub-Tests were completed according to the test requirements outlined in section 5.2A of the 3GPP TS34.121-1 V8.4.0 specification. All TX RMS power requirements for Power Class 3 were met according to table 5.2AA.5 and 5.2B.5 All UE channels and power ratio's are set according to table C11.1.3 in the 3GPP TS34.121-1 V8.4.0. RMC 12.2kps is used for this testing

HSPA SUB-TEST Setting

Table C.11.1.3: β values for transmitter characteristics tests with HS-DPCCH and E-DCH(FOR HSUPA)

Sub- test	$eta_{ m c}$	$eta_{ m d}$	β _d (SF)	β_c/β_d	$eta_{ m HS}$	$eta_{ m ec}$	$eta_{ m ed}$	β _{ed} (SF)	$\begin{array}{c} \beta_{ed} \\ (Codes) \end{array}$	CM (dB)	MPR (dB)	AG Index	E-TFCI	RMC (Kbps)
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/225	1309/225	4	1	1.0	0.0	20	75	12.2
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67	12.2
3	15/15	9/15	64	15/9	30/15	30/15	β _{ed} 1: 47/15 β _{ed} 2: 47/15	4 4	2	2.0	1.0	15	92	12.2
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71	12.2
5	15/15 (Note 4)	15/15 (Note 4)	64	15/15 (Note 4)	30/15	24/15	134/15	4	1	1.0	0.0	21	81	12.2

Note: The recommended HSUPA MPRs are implemented as per following sub-tests.

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Results:

Mode	Sub-test	Avg.	Power (di	Bm)	Power Class 3 Limita-	Comments	
		9262	9400	9538	tion (dBm)		
	1	23.02	22.44	22.85	18.8dBm – 25.7dBm	Pass	
	2	21.07	20.51	20.89	16.8dBm – 25.7dBm	Pass	
HSUPA(B2)	3	22.08	21.46	21.93	17.8dBm – 25.7dBm	Pass	
	4	21.20	20.56	20.93	16.8dBm – 25.7dBm	Pass	
	5	22.91	22.30	22.76	18.8dBm – 25.7dBm	Pass	

Mode	Sub-test	Avg.	Power (di	Bm)	Power Class 3 Limita-	Comments	
		4132	4183	4233	tion (dBm)		
	1	22.86	22.94	22.93	18.8dBm – 25.7dBm	Pass	
	2	20.92	21.02	20.97	16.8dBm – 25.7dBm	Pass	
HSUPA(B5)	3	21.90	22.00	22.01	17.8dBm – 25.7dBm	Pass	
	4	20.97	21.08	21.05	16.8dBm – 25.7dBm	Pass	
	5	20.97	22.77	22.82	18.8dBm – 25.7dBm	Pass	

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5.5.2. Minimum Communications Power Measurement PCS 1900 band

PCL	0	1	2	3	4	5	6	7	8
Output power (dBm)	29.8	27.7	25.4	23.5	21.6	19.7	17.6	14.9	12.9
PCL	9	10	11	12	13	14	15		
Output power (dBm)	10.9	8.9	6.7	4.9	2.8	0.9	-0.7		

Note: The EUT output power was controlled by simulator. Set Communication Tester CMU200 PCL as above, and get the mobile phone output power reading.

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6. PEAK TO AVERAGE RATIO

6.1. Standard Applicable:

FCC 27.50(i)

Peak transmit power shall be measured over any interval of continuous transmission using instrumentation calibrated in terms of rms-equivalent voltage.

The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, etc., so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.

To measure transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission shall not exceed 13 dB

6.2. Test SET-UP (Block Diagram of Configuration):

Refer to section 2.4 in this report

6.3. Measurement Procedure:

Set resolution/measurement bandwidth ≥ signal's occupied bandwidth; Set the number of counts to a value that stabilizes the measured CCDF curve;

6.4. Measurement Result:

Refer to next page for plot.

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Figure 6-1: 5MHz BW LTE-Band 4(16QAM Number: 25 Offset: 0) Channel Low



Figure 6-2: 5MHz BW LTE-Band 4(16QAM Number: 25 Offset: 0) Channel Mid



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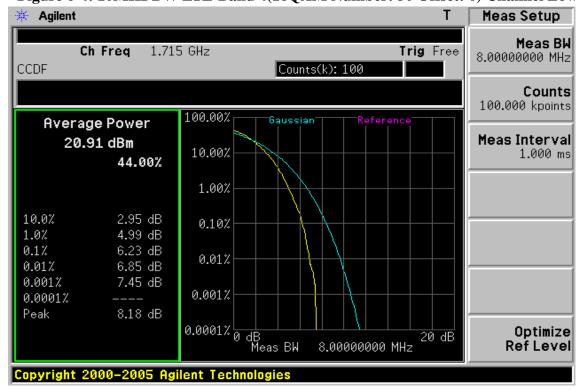


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Figure 6-3: 5MHz BW LTE-Band 4(16QAM Number: 25 Offset: 0) Channel High



Figure 6-4: 10MHz BW LTE-Band 4(16QAM Number: 50 Offset: 0) Channel Low



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Figure 6-5: 10MHz BW LTE-Band 4(16QAM Number: 50 Offset: 0) Channel Mid



Figure 6-6: 10MHz BW LTE-Band 4(16QAM Number: 50 Offset: 0) Channel High



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Figure 6-7: 5MHz BW LTE-Band 17(16QAM Number: 25 Offset: 0) Channel Low



Figure 6-8: 5MHz BW LTE-Band 17(16QAM Number: 25 Offset: 0) Channel Mid



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Figure 6-9: 5MHz BW LTE-Band 17(16QAM Number: 25 Offset: 0) Channel High

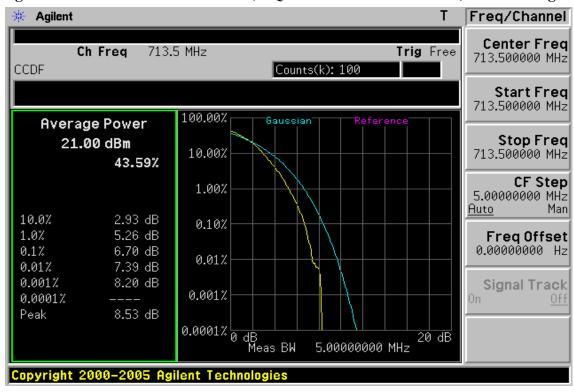


Figure 6-10: 10MHz BW LTE-Band 17(16QAM Number: 50 Offset: 0) Channel Low



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Figure 6-11: 10MHz BW LTE-Band 17(16QAM Number: 50 Offset: 0) Channel Mid



Figure 6-12: 10MHz BW LTE-Band 17(16QAM Number: 50 Offset: 0) Channel High



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7. ERP, EIRP MEASUREMENT

7.1. Standard Applicable:

According to FCC §2.1046

FCC 22.913(a) Mobile station are limited to 7W ERP.

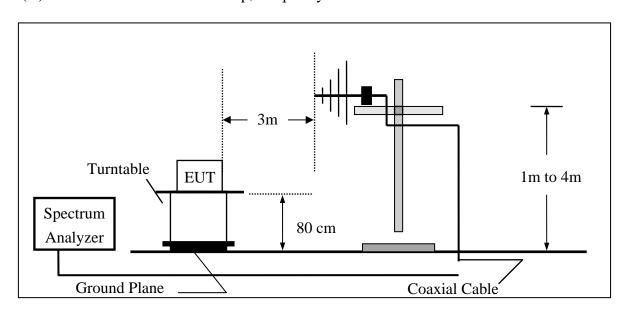
FCC 24.232(b) Mobile station are limited to 2W EIRP.

FCC 27.50(d)(2) Fixed, mobile, and portable (hand-held) stations are limited to 1W EIRP.

FCC 27.50(c)(10) Portable station are limited to 3W ERP.

7.2. Test SET-UP (Block Diagram of Configuration):

(A) Radiated Emission Test Set-Up, Frequency Below 1000MHz



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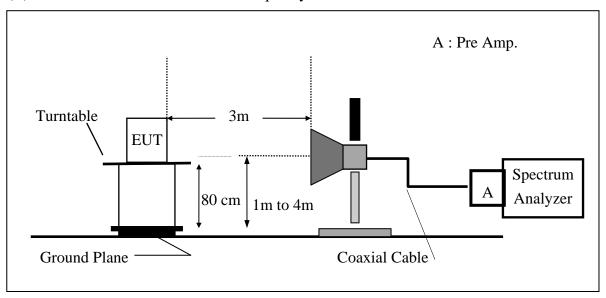
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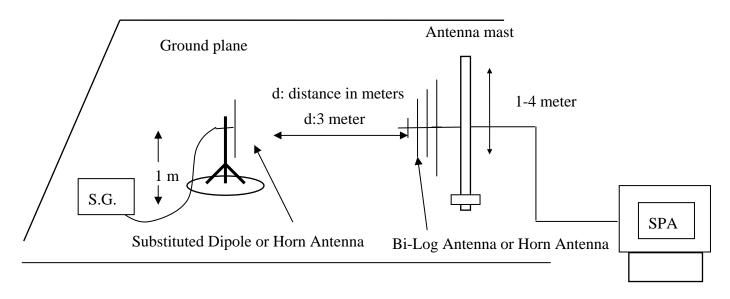
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(B) Radiated Emission Test Set-UP Frequency Over 1 GHz



(C) Substituted Method Test Set-UP



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7.3. Measurement Procedure:

The EUT was placed on an non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer.

During the measurement, the EUT was communication with the station. The highest emission was recorded with the rotation of the turntable and the lowering of the test antenna from 4m to 1m. The reading was recorded and the field strength (E in dBuV/m) was calculated.

ERP in frequency band 698MHz, - 746MHz, 824.2 –848.80MHz were measured using a substitution method. The EUT was replaced by dipole antenna connected, the S.G. output was recorded and ERP was calculated as follows:

EIRP in frequency band 1710-1755MHz and 1850.2 –1909.8MHz were measured using a substitution method. The EUT was replaced by a horn antenna connected, the S.G. output was recorded and EIRP was calculated as follows:

ERP = S.G. output (dBm) + Antenna Gain (dBd) - Cable Loss (dB)

EIRP = S.G. output (dBm) + Antenna Gain <math>(dBi) - Cable Loss (dB)

7.4. Measurement Equipment Used:

Refer to section 2.4 in this report

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7.5. Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
			**	V	117.52	31.13	-7.87	3.62	19.63	38.45
			Н	Н	129.67	43.40	-7.87	3.62	31.90	38.45
	824.20	128	F1	V	121.37	34.98	-7.87	3.62	23.48	38.45
	024.20	120	E1	Н	130.09	43.82	-7.87	3.62	32.32	38.45
			F2	V	129.52	43.13	-7.87	3.62	31.63	38.45
			E2	Н	120.60	34.33	-7.87	3.62	22.83	38.45
				V	118.12	31.87	-7.88	3.65	20.34	38.45
			Н	Н	130.72	44.49	-7.88	3.65	32.96	38.45
GSM 850	836.60	190	F.1	V	120.45	34.20	-7.88	3.65	22.67	38.45
GSW 650	030.00	170	E1	Н	131.06	44.83	-7.88	3.65	33.30	38.45
			F-0	V	130.34	44.09	-7.88	3.65	32.56	38.45
			E2	Н	121.64	35.41	-7.88	3.65	23.88	38.45
			**	V	117.71	31.59	-7.88	3.68	20.03	38.45
			Н	Н	130.78	44.59	-7.88	3.68	33.03	38.45
	848.80	251		V	120.30	34.18	-7.88	3.68	22.62	38.45
	040.00	231	E1	Н	130.92	44.73	-7.88	3.68	33.17	38.45
			F2	V	130.30	44.18	-7.88	3.68	32.62	38.45
			E2	Н	121.86	35.67	-7.88	3.68	24.11	38.45

Remark:

(1) The RBW,VBW of SPA for frequency RBW=300 KHz, VBW=1MHz

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EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
				V	113.20	8.81	9.90	5.56	13.15	33.00
			Н	Н	127.30	23.12	9.90	5.56	27.46	33.00
	1850.20	512	D 1	V	127.57	23.18	9.90	5.56	27.52	33.00
	1630.20	312	E1	Н	124.26	20.08	9.90	5.56	24.42	33.00
			F-0	V	126.26	21.87	9.90	5.56	26.21	33.00
			E2	Н	125.61	21.43	9.90	5.84	25.49	33.00
				V	112.57	8.21	9.99	5.61	12.59	33.00
			Н	Н	125.73	21.59	9.99	5.61	25.96	33.00
GSM 1900	1880.00	661	F.1	V	127.19	22.83	9.99	5.61	27.21	33.00
GSWI 1900	1000.00	001	E1	Н	123.42	19.28	9.99	5.61	23.65	33.00
			F2	V	125.73	21.37	9.99	5.61	25.75	33.00
			E2	Н	124.08	19.94	9.99	5.61	24.31	33.00
			7.7	V	111.62	7.29	10.08	5.66	11.71	33.00
			Н	Н	126.11	22.00	10.08	5.66	26.42	33.00
	1909.80	810	F.1	V	126.32	21.99	10.08	5.66	26.41	33.00
	1707.00	010	E1	Н	122.47	18.36	10.08	5.66	22.78	33.00
			F2	V	123.83	19.50	10.08	5.66	23.92	33.00
1			E2	Н	123.71	19.60	10.08	5.66	24.02	33.00

Remark:

(1) The RBW, VBW of SPA for frequency RBW=300 KHz, VBW=1MHz

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EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
			**	V	113.70	27.31	-7.87	3.62	15.81	38.45
			Н	Н	126.49	40.22	-7.87	3.62	28.72	38.45
	824.20	128	-	V	118.25	31.86	-7.87	3.62	20.36	38.45
	024.20	120	E1	Н	126.91	40.64	-7.87	3.62	29.14	38.45
				V	126.33	39.94	-7.87	3.62	28.44	38.45
			E2	Н	117.57	31.30	-7.87	3.62	19.80	38.45
			**	V	114.79	28.54	-7.88	3.65	17.01	38.45
			Н	Н	127.30	41.07	-7.88	3.65	29.54	38.45
EDGE 850	836.60	190		V	117.09	30.84	-7.88	3.65	19.31	38.45
EDGE 650	830.00	190	E1	Н	125.53	39.30	-7.88	3.65	27.77	38.45
				V	126.67	40.42	-7.88	3.65	28.89	38.45
			E2	Н	118.20	31.97	-7.88	3.65	20.44	38.45
			**	V	112.98	26.86	-7.88	3.68	15.30	38.45
			Н	Н	127.35	41.16	-7.88	3.68	29.60	38.45
	848.80	251	Г1	V	108.63	22.51	-7.88	3.68	10.95	38.45
	040.00	231	E1	Н	127.28	41.09	-7.88	3.68	29.53	38.45
			F2	V	126.67	40.55	-7.88	3.68	28.99	38.45
			E2	Н	118.31	32.12	-7.88	3.68	20.56	38.45

Remark:

(1) The RBW, VBW of SPA for frequency RBW=300 KHz, VBW=1MHz

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EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
				V	111.72	7.33	9.90	5.56	11.67	33.00
			Н	Н	126.60	22.42	9.90	5.56	26.76	33.00
	1850.20	512	D 4	V	123.08	18.69	9.90	5.56	23.03	33.00
	1630.20	312	E1	Н	122.95	18.77	9.90	5.56	23.11	33.00
			F-0	V	124.79	20.40	9.90	5.56	24.74	33.00
			E2	Н	123.75	19.57	9.90	5.84	23.63	33.00
				V	111.25	6.89	9.99	5.61	11.27	33.00
			Н	Н	125.49	21.35	9.99	5.61	25.72	33.00
EDGE 1900	1880.00	661	F.1	V	125.13	20.77	9.99	5.61	25.15	33.00
EDGE 1900	1000.00	001	E1	Н	121.79	17.65	9.99	5.61	22.02	33.00
			F2	V	124.38	20.02	9.99	5.61	24.40	33.00
			E2	Н	123.89	19.75	9.99	5.61	24.12	33.00
			***	V	111.26	6.93	10.08	5.66	11.35	33.00
			Н	Н	125.27	21.16	10.08	5.66	25.58	33.00
	1909.80	810	F1	V	124.31	19.98	10.08	5.66	24.40	33.00
	1707.00	010	E1	Н	120.45	16.34	10.08	5.66	20.76	33.00
			F2	V	122.02	17.69	10.08	5.66	22.11	33.00
			E2	Н	121.76	17.65	10.08	5.66	22.07	33.00

Remark:

(1) The RBW, VBW of SPA for frequency RBW=300 KHz, VBW=1MHz

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EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
			**	V	114.73	10.21	9.48	5.33	14.35	33.00
			Н	Н	125.37	21.04	9.48	5.33	25.18	33.00
	1050 10	02.52	E1	V	124.21	19.69	9.48	5.33	23.83	33.00
	1852.40	9262	EI	Н	121.86	17.53	9.48	5.33	21.67	33.00
			E2	V	122.80	18.28	9.48	5.33	22.42	33.00
			E2	Н	124.63	20.30	9.90	5.84	24.36	33.00
				V	115.37	10.87	9.54	5.36	15.04	33.00
			Н	Н	125.77	21.46	9.54	5.36	25.63	33.00
WCDMA II	1000.00	0.400	E1	V	123.66	19.16	9.54	5.36	23.33	33.00
WCDMAII	1880.00	9400	Li	Н	121.19	16.88	9.54	5.36	21.05	33.00
			E2	V	123.18	18.68	9.54	5.36	22.85	33.00
			LL	Н	125.24	20.93	9.54	5.36	25.10	33.00
				V	111.85	7.37	9.61	5.40	11.57	33.00
			Н	Н	121.90	17.61	9.61	5.40	21.82	33.00
	1007.60	0.520	E1	V	120.50	16.02	9.61	5.40	20.22	33.00
	1907.60	9538	Li	Н	118.12	13.83	9.61	5.40	18.04	33.00
			E2	V	119.17	14.69	9.61	5.40	18.89	33.00
			L:Z	Н	121.37	17.08	9.61	5.40	21.29	33.00

Remark:

(1) The RBW, VBW of SPA for frequency RBW=300 KHz, VBW=1MHz

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EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
			**	V	113.55	9.03	9.48	5.33	13.17	33.00
			Н	Н	124.13	19.80	9.48	5.33	23.94	33.00
	1070 10	00.50	E1	V	123.12	18.60	9.48	5.33	22.74	33.00
	1852.40	9262	151	Н	120.82	16.49	9.48	5.33	20.63	33.00
			E2	V	120.56	16.04	9.48	5.33	20.18	33.00
			EZ	Н	122.73	18.40	9.90	5.84	22.46	33.00
			**	V	113.99	9.49	9.54	5.36	13.66	33.00
			Н	Н	124.35	20.04	9.54	5.36	24.21	33.00
HSUPA	1000.00	0.400	E1	V	122.72	18.22	9.54	5.36	22.39	33.00
Band II	1880.00	9400	151	Н	120.22	15.91	9.54	5.36	20.08	33.00
			E2	V	120.71	16.21	9.54	5.36	20.38	33.00
			E2	Н	122.67	18.36	9.54	5.36	22.53	33.00
			**	V	111.72	7.24	9.61	5.40	11.44	33.00
			Н	Н	121.68	17.39	9.61	5.40	21.60	33.00
	1005 60	0.500	E1	V	120.65	16.17	9.61	5.40	20.37	33.00
	1907.60	9538	151	Н	118.46	14.17	9.61	5.40	18.38	33.00
			E2	V	118.46	13.98	9.61	5.40	18.18	33.00
			L:Z	Н	120.92	16.63	9.61	5.40	20.84	33.00

Remark:

(1) The RBW, VBW of SPA for frequency

RBW=300 KHz, VBW=1MHz

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EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
				V	102.77	16.41	-7.88	3.63	4.90	38.45
			Н	Н	124.07	37.81	-7.88	3.63	26.31	38.45
			E1	V	111.99	25.63	-7.88	3.63	14.12	38.45
	826.40	4132	EI	Н	124.33	38.07	-7.88	3.63	26.57	38.45
			E2	V	122.74	36.38	-7.88	3.63	24.87	38.45
			E2	Н	112.14	25.88	-7.88	3.63	14.38	38.45
			Н	V	108.59	22.33	-7.88	3.65	10.80	38.45
			11	Н	123.83	37.60	-7.88	3.65	26.07	38.45
WCDMA	836.60	4183	E1	V	112.45	26.19	-7.88	3.65	14.66	38.45
Band V	830.00	4163	151	Н	124.40	38.17	-7.88	3.65	26.64	38.45
			E2	V	122.79	36.53	-7.88	3.65	25.00	38.45
			EZ	Н	112.46	26.23	-7.88	3.65	14.70	38.45
			Н	V	109.53	23.38	-7.88	3.67	11.83	38.45
			11	Н	123.57	37.37	-7.88	3.67	25.82	38.45
	846.60	4233	E1	V	113.46	27.30	-7.88	3.67	15.75	38.45
	040.00	74233	151	Н	124.08	37.88	-7.88	3.67	26.33	38.45
			E2	V	122.41	36.26	-7.88	3.67	24.71	38.45
			EZ	Н	112.82	26.62	-7.88	3.67	15.07	38.45

Remark:

(1) The RBW, VBW of SPA for frequency RBW= 5MHz, VBW= 8MHz

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
			11	V	107.52	21.16	-7.88	3.63	9.65	38.45
			Н	Н	122.77	36.51	-7.88	3.63	25.01	38.45
	926.40	4122	E1	V	110.26	23.90	-7.88	3.63	12.39	38.45
	826.40	4132		Н	122.75	36.49	-7.88	3.63	24.99	38.45
			E2	V	121.42	35.06	-7.88	3.63	23.55	38.45
			1.2	Н	111.16	24.90	-7.88	3.63	13.40	38.45
			Н	V	107.20	20.94	-7.88	3.65	9.41	38.45
			11	Н	122.34	36.11	-7.88	3.65	24.58	38.45
HSUPA	836.60	4183	E1	V	110.63	24.37	-7.88	3.65	12.84	38.45
Band V	030.00	7103		Н	122.84	36.61	-7.88	3.65	25.08	38.45
			E2	V	121.34	35.08	-7.88	3.65	23.55	38.45
			122	Н	111.02	24.79	-7.88	3.65	13.26	38.45
			Н	V	105.52	19.37	-7.88	3.67	7.82	38.45
			11	Н	122.09	35.89	-7.88	3.67	24.34	38.45
	846.60	4233	E1	V	111.68	25.52	-7.88	3.67	13.97	38.45
	040.00	1233		Н	122.37	36.17	-7.88	3.67	24.62	38.45
			E2	V	120.98	34.83	-7.88	3.67	23.28	38.45
			1.2	Н	111.76	25.56	-7.88	3.67	14.01	38.45

Remark:

(1) The RBW,VBW of SPA for frequency RBW= 5MHz, VBW= 8MHz

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
			**	V	108.73	4.21	9.48	5.33	8.36	30.00
			Н	Н	116.19	11.86	9.48	5.33	16.01	30.00
	1710.5	10075	F1	V	116.79	12.27	9.48	5.33	16.42	30.00
	1712.5	19975	E1	Н	116.18	11.85	9.48	5.33	16.00	30.00
			F-2	V	117.99	13.47	9.48	5.33	17.62	30.00
			E2	Н	115.87	11.54	9.48	5.84	15.18	30.00
				V	108.88	4.38	9.54	5.37	8.55	30.00
5MHz BW			Н	Н	116.63	12.32	9.54	5.37	16.50	30.00
LTE-Band 4	1722.5	20175	F1	V	113.78	9.28	9.54	5.37	13.45	30.00
(QPSK RB	1732.5	20175	E1	Н	114.18	9.87	9.54	5.37	14.05	30.00
12 Offset 6)			F-2	V	115.39	10.89	9.54	5.37	15.06	30.00
			E2	Н	112.26	7.95	9.54	5.37	12.13	30.00
			**	V	107.36	2.88	9.60	5.40	7.08	30.00
			Н	Н	116.06	11.77	9.60	5.40	15.98	30.00
	1770 7	20275	F.1	V	115.66	11.18	9.60	5.40	15.38	30.00
	1752.5	20375	E1	Н	116.08	11.79	9.60	5.40	16.00	30.00
			F-0	V	117.57	13.09	9.60	5.40	17.29	30.00
			E2	Н	116.67	12.38	9.60	5.40	16.59	30.00

Remark:

(1) The RBW, VBW of SPA for frequency

RBW = 5MHz, VBW = 8MHz

Detector = Peak

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
				V	106.38	1.86	9.48	5.33	6.01	30.00
			Н	Н	115.45	11.12	9.48	5.33	15.27	30.00
	1712.5	10075	F1	V	116.96	12.44	9.48	5.33	16.59	30.00
	1712.5	19975	E1	Н	116.53	12.20	9.48	5.33	16.35	30.00
			F2	V	118.13	13.61	9.48	5.33	17.76	30.00
			E2	Н	116.12	11.79	9.48	5.84	15.43	30.00
				V	109.79	5.29	9.54	5.37	9.46	30.00
5MHz BW			Н	Н	116.70	12.39	9.54	5.37	16.57	30.00
LTE-Band 4	1522.5	20175	F1	V	111.60	7.10	9.54	5.37	11.27	30.00
(16QAM RB	1732.5	20175	E1	Н	110.86	6.55	9.54	5.37	10.73	30.00
12 Offset 6)			F-2	V	115.94	11.44	9.54	5.37	15.61	30.00
			E2	Н	113.06	8.75	9.54	5.37	12.93	30.00
				V	106.37	1.89	9.60	5.40	6.09	30.00
			Н	Н	115.50	11.21	9.60	5.40	15.42	30.00
	1752.5	20275	F1	V	115.40	10.92	9.60	5.40	15.12	30.00
	1752.5	20375	E1	Н	115.47	11.18	9.60	5.40	15.39	30.00
			F2	V	110.89	6.41	9.60	5.40	10.61	30.00
			E2	Н	117.10	12.81	9.60	5.40	17.02	30.00

Remark:

(1) The RBW, VBW of SPA for frequency

RBW = 5MHz, VBW = 8MHz

Detector = Peak

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
				V	106.60	2.08	9.48	5.33	6.23	30.00
			Н	Н	114.27	9.94	9.48	5.33	14.09	30.00
	1712.5	10075	F1	V	114.93	10.41	9.48	5.33	14.56	30.00
	1712.5	19975	E1	Н	114.42	10.09	9.48	5.33	14.24	30.00
			F2	V	116.16	11.64	9.48	5.33	15.79	30.00
			E2	Н	114.01	9.68	9.48	5.84	13.32	30.00
				V	106.62	2.12	9.54	5.37	6.29	30.00
5MHz BW			Н	Н	114.64	10.33	9.54	5.37	14.51	30.00
LTE-Band 4	1722.5	20175	F1	V	113.22	8.72	9.54	5.37	12.89	30.00
(QPSK RB	1732.5	20175	E1	Н	113.62	9.31	9.54	5.37	13.49	30.00
25 Offset 0)			F-2	V	114.96	10.46	9.54	5.37	14.63	30.00
			E2	Н	111.96	7.65	9.54	5.37	11.83	30.00
				V	104.25	-0.23	9.60	5.40	3.97	30.00
			Н	Н	112.71	8.42	9.60	5.40	12.63	30.00
	1750.5	20275	F1	V	120.48	16.00	9.60	5.40	20.20	30.00
	1752.5	20375	E1	Н	113.71	9.42	9.60	5.40	13.63	30.00
			F2	V	115.89	11.41	9.60	5.40	15.61	30.00
			E2	Н	115.18	10.89	9.60	5.40	15.10	30.00

Remark:

The RBW, VBW of SPA for frequency (1)

RBW = 5MHz, VBW = 8MHz

Detector = Peak

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
			**	V	107.12	2.60	9.48	5.33	6.75	30.00
			Н	Н	115.14	10.81	9.48	5.33	14.96	30.00
	1710.5	10075	F1	V	115.50	10.98	9.48	5.33	15.13	30.00
	1712.5	19975	E1	Н	114.81	10.48	9.48	5.33	14.63	30.00
			F2	V	116.67	12.15	9.48	5.33	16.30	30.00
			E2	Н	114.54	10.21	9.48	5.84	13.85	30.00
			**	V	107.73	3.23	9.54	5.37	7.40	30.00
5MHz BW			Н	Н	115.06	10.75	9.54	5.37	14.93	30.00
LTE-Band 4	1522.5	20175	Е1	V	111.89	7.39	9.54	5.37	11.56	30.00
(16QAM RB	1732.5	20175	E1	Н	111.13	6.82	9.54	5.37	11.00	30.00
25 Offset 0)			F-2	V	115.33	10.83	9.54	5.37	15.00	30.00
			E2	Н	112.70	8.39	9.54	5.37	12.57	30.00
				V	104.59	0.11	9.60	5.40	4.31	30.00
			Н	Н	113.41	9.12	9.60	5.40	13.33	30.00
	1752.5	20275	F1	V	113.77	9.29	9.60	5.40	13.49	30.00
	1752.5	20375	E1	Н	113.71	9.42	9.60	5.40	13.63	30.00
			F-0	V	109.13	4.65	9.60	5.40	8.85	30.00
			E2	Н	115.14	10.85	9.60	5.40	15.06	30.00

Remark:

(1) The RBW, VBW of SPA for frequency

RBW = 5MHz, VBW = 8MHz

Detector = Peak

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
			**	V	109.86	5.34	9.48	5.33	9.49	30.00
			Н	Н	117.40	13.07	9.48	5.33	17.22	30.00
	1710.5	10075	F1	V	117.86	13.34	9.48	5.33	17.49	30.00
	1712.5	19975	E1	Н	117.33	13.00	9.48	5.33	17.15	30.00
			F-2	V	119.36	14.84	9.48	5.33	18.99	30.00
			E2	Н	117.07	12.74	9.48	5.84	16.38	30.00
				V	109.87	5.37	9.54	5.37	9.54	30.00
5MHz BW			Н	Н	117.39	13.08	9.54	5.37	17.26	30.00
LTE-Band 4	1500.5	20175	Е1	V	113.85	9.35	9.54	5.37	13.52	30.00
(QPSK RB 1	1732.5	20175	E1	Н	114.46	10.15	9.54	5.37	14.33	30.00
Offset 24)			F-2	V	114.73	10.23	9.54	5.37	14.40	30.00
			E2	Н	111.62	7.31	9.54	5.37	11.49	30.00
				V	106.22	1.74	9.60	5.40	5.94	30.00
			Н	Н	114.81	10.52	9.60	5.40	14.73	30.00
	1770 7	52.5 20275	F1	V	114.03	9.55	9.60	5.40	13.75	30.00
	1752.5 20375	E1	Н	112.82	8.53	9.60	5.40	12.74	30.00	
		7.0	V	118.86	14.38	9.60	5.40	18.58	30.00	
			E2	Н	118.06	13.77	9.60	5.40	17.98	30.00

Remark:

The RBW, VBW of SPA for frequency (1)

RBW = 5MHz, VBW = 8MHz

Detector = Peak

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
				V	109.75	5.23	9.48	5.33	9.38	30.00
			Н	Н	117.37	13.04	9.48	5.33	17.19	30.00
	1712.5	10075	F1	V	118.65	14.13	9.48	5.33	18.28	30.00
	1712.5	19975	E1	Н	117.74	13.41	9.48	5.33	17.56	30.00
			F2	V	119.31	14.79	9.48	5.33	18.94	30.00
			E2	Н	117.21	12.88	9.48	5.84	16.52	30.00
			11	V	110.37	5.87	9.54	5.37	10.04	30.00
5MHz BW			Н	Н	117.85	13.54	9.54	5.37	17.72	30.00
LTE-Band 4	1722.5	20175	F1	V	111.76	7.26	9.54	5.37	11.43	30.00
(16QAM RB	1732.5	20175	E1	Н	111.14	6.83	9.54	5.37	11.01	30.00
1 Offset 24)			F-2	V	115.66	11.16	9.54	5.37	15.33	30.00
			E2	Н	112.62	8.31	9.54	5.37	12.49	30.00
			**	V	106.39	1.91	9.60	5.40	6.11	30.00
			Н	Н	115.11	10.82	9.60	5.40	15.03	30.00
	1752.5	1752 5 20275	F1	V	116.75	12.27	9.60	5.40	16.47	30.00
	1752.5 20375	E1	Н	116.71	12.42	9.60	5.40	16.63	30.00	
			V	112.49	8.01	9.60	5.40	12.21	30.00	
			E2	Н	117.76	13.47	9.60	5.40	17.68	30.00

Remark:

(1) The RBW, VBW of SPA for frequency

RBW = 5MHz, VBW = 8MHz

Detector = Peak

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
			**	V	109.54	5.02	9.48	5.33	9.17	30.00
			Н	Н	117.40	13.07	9.48	5.33	17.22	30.00
	1710.5	10075	F.1	V	117.56	13.04	9.48	5.33	17.19	30.00
	1712.5	19975	E1	Н	116.97	12.64	9.48	5.33	16.79	30.00
			F-0	V	118.86	14.34	9.48	5.33	18.49	30.00
			E2	Н	116.68	12.35	9.48	5.84	15.99	30.00
51411 5111			**	V	110.37	5.87	9.54	5.37	10.04	30.00
5MHz BW			Н	Н	117.79	13.48	9.54	5.37	17.66	30.00
LTE-Band 4	1500.5	20175		V	116.38	11.88	9.54	5.37	16.05	30.00
(QPSK RB 1	1732.5	20175	175 E1	Н	116.16	11.85	9.54	5.37	16.03	30.00
Offset 0)				V	114.98	10.48	9.54	5.37	14.65	30.00
			E2	Н	111.96	7.65	9.54	5.37	11.83	30.00
			**	V	106.64	2.16	9.60	5.40	6.36	30.00
			Н	Н	115.35	11.06	9.60	5.40	15.27	30.00
	1550.5	20275	D 1	V	117.07	12.59	9.60	5.40	16.79	30.00
	_	5 E1	Н	116.00	11.71	9.60	5.40	15.92	30.00	
			V	118.61	14.13	9.60	5.40	18.33	30.00	
			E2	Н	118.01	13.72	9.60	5.40	17.93	30.00

Remark:

The RBW, VBW of SPA for frequency (1)

RBW = 5MHz, VBW = 8MHz

Detector = Peak

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
			**	V	109.61	5.09	9.48	5.33	9.24	30.00
			Н	Н	117.71	13.38	9.48	5.33	17.53	30.00
	1710.5	10075	F1	V	117.84	13.32	9.48	5.33	17.47	30.00
	1712.5	19975	E1	Н	117.57	13.24	9.48	5.33	17.39	30.00
			F2	V	119.13	14.61	9.48	5.33	18.76	30.00
			E2	Н	116.87	12.54	9.48	5.84	16.18	30.00
			**	V	111.34	6.84	9.54	5.37	11.01	30.00
5MHz BW			Н	Н	118.58	14.27	9.54	5.37	18.45	30.00
LTE-Band 4	1500.5	20175	Е1	V	118.14	13.64	9.54	5.37	17.81	30.00
(16QAM RB	1732.5	20175	20175 E1	Н	116.35	12.04	9.54	5.37	16.22	30.00
1 Offset 0)			F-2	V	115.74	11.24	9.54	5.37	15.41	30.00
			E2	Н	112.83	8.52	9.54	5.37	12.70	30.00
			**	V	106.57	2.09	9.60	5.40	6.29	30.00
			Н	Н	115.54	11.25	9.60	5.40	15.46	30.00
	1770 7	1752 5 20275	F.1	V	116.27	11.79	9.60	5.40	15.99	30.00
	1752.5 20375	6 E1	Н	116.56	12.27	9.60	5.40	16.48	30.00	
			V	118.69	14.21	9.60	5.40	18.41	30.00	
			E2	Н	118.11	13.82	9.60	5.40	18.03	30.00

Remark:

(1) The RBW, VBW of SPA for frequency

RBW = 5MHz, VBW = 8MHz

Detector = Peak

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
			**	V	110.47	2.95	9.49	5.34	10.10	30.00
			Н	Н	118.52	11.19	9.49	5.34	18.34	30.00
	1715	20000	F.1	V	116.93	9.41	9.49	5.34	16.56	30.00
	1715	20000	E1	Н	116.94	9.61	9.49	5.34	16.76	30.00
			F-2	V	119.86	12.34	9.49	5.34	19.49	30.00
			E2	Н	121.87	14.54	9.49	5.84	21.19	30.00
101411 DW			**	V	110.17	2.67	9.54	5.37	9.84	30.00
10MHz BW			Н	Н	117.69	10.38	9.54	5.37	17.56	30.00
LTE-Band 4	1500.5	20155		V	116.82	9.32	9.54	5.37	16.49	30.00
(QPSK RB	1732.5	20175	E1	Н	116.56	9.25	9.54	5.37	16.43	30.00
25 Offset 12)			F-2	V	119.68	12.18	9.54	5.37	19.35	30.00
			E2	Н	120.38	13.07	9.54	5.37	20.25	30.00
			**	V	108.35	0.86	9.60	5.40	8.06	30.00
			Н	Н	117.19	9.90	9.60	5.40	17.10	30.00
	1750 20350	20250	F.1	V	116.80	9.32	9.60	5.40	16.52	30.00
		20350 E1	EI	Н	116.79	9.50	9.60	5.40	16.70	30.00
			F-0	V	120.07	12.59	9.60	5.40	19.79	30.00
			E2	Н	120.79	13.50	9.60	5.40	20.70	30.00

Remark:

(1) The RBW, VBW of SPA for frequency

RBW = 10MHz, VBW = 10MHz

Detector = Peak

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
			**	V	109.81	5.29	9.49	5.34	9.44	30.00
			Н	Н	118.04	13.71	9.49	5.34	17.86	30.00
	1715	20000	F1	V	117.83	13.31	9.49	5.34	17.46	30.00
	1715	20000	E1	Н	118.05	13.72	9.49	5.34	17.87	30.00
			F2	V	120.13	15.61	9.49	5.34	19.76	30.00
			E2	Н	121.05	16.72	9.49	5.84	20.37	30.00
101411 DW				V	107.19	2.69	9.54	5.37	6.86	30.00
10MHz BW			Н	Н	119.84	15.53	9.54	5.37	19.71	30.00
LTE-Band 4	1522.5	20175	F.1	V	117.20	12.70	9.54	5.37	16.87	30.00
(16QAM RB		20175	E1	Н	117.03	12.72	9.54	5.37	16.90	30.00
25 Offset 12)			F-2	V	120.05	15.55	9.54	5.37	19.72	30.00
			E2	Н	121.40	17.09	9.54	5.37	21.27	30.00
			**	V	110.21	5.72	9.60	5.40	9.92	30.00
			Н	Н	117.42	13.13	9.60	5.40	17.33	30.00
	1750 20350	20250	F.1	V	117.58	13.10	9.60	5.40	17.30	30.00
) E1	Н	117.73	13.44	9.60	5.40	17.64	30.00
				V	120.55	16.07	9.60	5.40	20.27	30.00
			E2	Н	120.86	16.57	9.60	5.40	20.77	30.00

Remark:

(1) The RBW, VBW of SPA for frequency

RBW = 10MHz, VBW = 10MHz

Detector = Peak

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
				V	109.23	4.71	9.49	5.34	8.86	30.00
			Н	Н	117.09	12.76	9.49	5.34	16.91	30.00
	1715	20000	E1	V	115.88	11.36	9.49	5.34	15.51	30.00
	1715	20000	E1	Н	115.45	11.12	9.49	5.34	15.27	30.00
			F2	V	118.31	13.79	9.49	5.34	17.94	30.00
			E2	Н	120.25	15.92	9.49	5.84	19.57	30.00
101411 DW				V	108.41	3.91	9.54	5.37	8.08	30.00
10MHz BW			Н	Н	116.27	11.96	9.54	5.37	16.14	30.00
LTE-Band 4	1722.5	20157	F.1	V	114.80	10.30	9.54	5.37	14.47	30.00
(QPSK RB	1732.5	20175	E1	Н	114.42	10.11	9.54	5.37	14.29	30.00
50 Offset 0)			F-2	V	117.82	13.32	9.54	5.37	17.49	30.00
			E2	Н	118.46	14.15	9.54	5.37	18.33	30.00
				V	106.61	2.13	9.60	5.40	6.33	30.00
			Н	Н	115.73	11.44	9.60	5.40	15.64	30.00
	1750 20350	F.1	V	115.12	10.64	9.60	5.40	14.84	30.00	
		350 E1	Н	115.28	10.99	9.60	5.40	15.19	30.00	
			F-0	V	118.83	14.35	9.60	5.40	18.55	30.00
			E2	Н	119.11	14.82	9.60	5.40	19.02	30.00

Remark:

(1) The RBW, VBW of SPA for frequency

RBW = 10MHz, VBW = 10MHz

Detector = Peak

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
				V	109.43	4.91	9.49	5.34	9.06	30.00
			Н	Н	117.08	12.75	9.49	5.34	16.90	30.00
	1715	20000	F.1	V	116.56	12.04	9.49	5.34	16.19	30.00
	1715	20000	E1	Н	116.36	12.03	9.49	5.34	16.18	30.00
			F2	V	118.95	14.43	9.49	5.34	18.58	30.00
			E2	Н	119.25	14.92	9.49	5.84	18.57	30.00
101411 DW			**	V	108.75	4.25	9.54	5.37	8.42	30.00
10MHz BW			Н	Н	116.32	12.01	9.54	5.37	16.19	30.00
LTE-Band 4	1722.5	20175	F1	V	115.85	11.35	9.54	5.37	15.52	30.00
(16QAM RB 50 Offset 0)	1732.5	20175	E1	Н	115.87	11.56	9.54	5.37	15.74	30.00
30 Offset 0)			F-2	V	118.12	13.62	9.54	5.37	17.79	30.00
			E2	Н	119.39	15.08	9.54	5.37	19.26	30.00
			**	V	108.93	4.45	9.60	5.40	8.65	30.00
			Н	Н	116.04	11.75	9.60	5.40	15.95	30.00
	1750	1750 20350	F1	V	115.77	11.29	9.60	5.40	15.49	30.00
	1/50		350 E1	Н	116.09	11.80	9.60	5.40	16.00	30.00
				V	119.12	14.64	9.60	5.40	18.84	30.00
			E2	Н	119.35	15.06	9.60	5.40	19.26	30.00

Remark:

(1) The RBW, VBW of SPA for frequency

RBW = 10MHz, VBW = 10MHz

Detector = Peak

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
			**	V	113.24	8.72	9.49	5.34	12.87	30.00
			Н	Н	120.95	16.62	9.49	5.34	20.77	30.00
	1715	20000	F1	V	120.03	15.51	9.49	5.34	19.66	30.00
	1715	20000	E1	Н	119.93	15.60	9.49	5.34	19.75	30.00
			F-2	V	122.67	18.15	9.49	5.34	22.30	30.00
			E2	Н	124.93	20.60	9.49	5.84	24.25	30.00
101411 DIV			**	V	112.81	8.31	9.54	5.37	12.48	30.00
10MHz BW			Н	Н	120.45	16.14	9.54	5.37	20.32	30.00
LTE-Band 4	1500.5	5 20175		V	111.87	7.37	9.54	5.37	11.54	30.00
(QPSK RB 1	1732.5	201/5	0175 E1	Н	109.27	4.96	9.54	5.37	9.14	30.00
Offset 49)			F-2	V	103.81	-0.69	9.54	5.37	3.48	30.00
			E2	Н	118.06	13.75	9.54	5.37	17.93	30.00
			**	V	112.21	7.72	9.60	5.40	11.93	30.00
			Н	Н	119.72	15.43	9.60	5.40	19.63	30.00
	1770	1750 20250	F.1	V	117.21	12.73	9.60	5.40	16.93	30.00
	1750 20350	O E1	Н	117.11	12.82	9.60	5.40	17.02	30.00	
			V	122.20	17.72	9.60	5.40	21.92	30.00	
			E2	Н	122.95	18.66	9.60	5.40	22.86	30.00

Remark:

(1) The RBW, VBW of SPA for frequency

RBW = 10MHz, VBW = 10MHz

Detector = Peak

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)		
			**	V	114.18	9.66	9.49	5.34	13.81	30.00		
			Н	Н	121.53	17.20	9.49	5.34	21.35	30.00		
	1715	20000	F1	V	120.36	15.84	9.49	5.34	19.99	30.00		
	1715	20000	E1	Н	120.58	16.25	9.49	5.34	20.40	30.00		
			F-2	V	123.00	18.48	9.49	5.34	22.63	30.00		
			E2	Н	124.18	19.85	9.49	5.84	23.50	30.00		
101411 DW			**	V	113.34	8.84	9.54	5.37	13.01	30.00		
10MHz BW			Н	Н	120.70	16.39	9.54	5.37	20.57	30.00		
LTE-Band 4	1500.5	20175	20175	20175		V	120.64	16.14	9.54	5.37	20.31	30.00
(16QAM RB	1732.5	20175	E1	Н	119.66	15.35	9.54	5.37	19.53	30.00		
1 Offset 49)			F-2	V	122.49	17.99	9.54	5.37	22.16	30.00		
			E2	Н	123.52	19.21	9.54	5.37	23.39	30.00		
			**	V	112.56	8.08	9.60	5.40	12.28	30.00		
			Н	Н	120.24	15.95	9.60	5.40	20.15	30.00		
	1550	750 20250		V	119.26	14.78	9.60	5.40	18.98	30.00		
	1750 20350	E1	Н	118.67	14.38	9.60	5.40	18.58	30.00			
		F-2	V	123.50	19.02	9.60	5.40	23.22	30.00			
			E2	Н	123.10	18.81	9.60	5.40	23.01	30.00		

Remark:

(1) The RBW, VBW of SPA for frequency

RBW = 10MHz, VBW = 10MHz

Detector = Peak

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
			**	V	111.95	7.43	9.49	5.34	11.58	30.00
			Н	Н	120.68	16.35	9.49	5.34	20.50	30.00
	1715	20000	F1	V	119.82	15.30	9.49	5.34	19.45	30.00
	1715	20000	E1	Н	119.91	15.58	9.49	5.34	19.73	30.00
			F-2	V	122.09	17.57	9.49	5.34	21.72	30.00
			E2	Н	123.14	18.81	9.49	5.84	22.46	30.00
101411 DIV			**	V	113.10	8.60	9.54	5.37	12.77	30.00
10MHz BW			Н	Н	120.59	16.28	9.54	5.37	20.46	30.00
LTE-Band 4	1500.5	20175		V	119.80	15.30	9.54	5.37	19.47	30.00
(QPSK RB 1	1732.5		175 E1	Н	119.84	15.53	9.54	5.37	19.71	30.00
Offset 0)			F-0	V	122.80	18.30	9.54	5.37	22.47	30.00
			E2	Н	123.46	19.15	9.54	5.37	23.33	30.00
			**	V	112.21	7.72	9.60	5.40	11.93	30.00
			Н	Н	119.45	15.16	9.60	5.40	19.36	30.00
	1750	1750 20250	F1	V	117.09	12.61	9.60	5.40	16.81	30.00
	1750 20350) E1	Н	116.93	12.64	9.60	5.40	16.84	30.00	
		F-0	V	122.40	17.92	9.60	5.40	22.12	30.00	
			E2	Н	123.04	18.75	9.60	5.40	22.95	30.00

Remark:

The RBW, VBW of SPA for frequency (1)

RBW = 10MHz, VBW = 10MHz

Detector = Peak

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
				V	112.63	8.11	9.49	5.34	12.26	30.00
			Н	Н	120.91	16.58	9.49	5.34	20.73	30.00
	1715	20000	F.1	V	120.08	15.56	9.49	5.34	19.71	30.00
	1715	20000	E1	Н	120.17	15.84	9.49	5.34	19.99	30.00
			F2	V	122.36	17.84	9.49	5.34	21.99	30.00
			E2	Н	123.32	18.99	9.49	5.84	22.64	30.00
101411 DW			**	V	113.61	9.11	9.54	5.37	13.28	30.00
10MHz BW			Н	Н	120.90	16.59	9.54	5.37	20.77	30.00
LTE-Band 4	1500.5	20175	E1	V	120.57	16.07	9.54	5.37	20.24	30.00
(16QAM RB	1732.5	20175	El	Н	120.10	15.79	9.54	5.37	19.97	30.00
1 Offset 0)			F-2	V	122.90	18.40	9.54	5.37	22.57	30.00
			E2	Н	124.03	19.72	9.54	5.37	23.90	30.00
			**	V	112.45	7.97	9.60	5.40	12.17	30.00
			Н	Н	119.52	15.23	9.60	5.40	19.43	30.00
	1750	1750 20250	F.1	V	118.52	14.04	9.60	5.40	18.24	30.00
	1750 20350	50 E1	Н	117.84	13.55	9.60	5.40	17.75	30.00	
			V	122.90	18.42	9.60	5.40	22.62	30.00	
			E2	Н	123.05	18.76	9.60	5.40	22.96	30.00

Remark:

(1) The RBW, VBW of SPA for frequency

RBW = 10MHz, VBW = 10MHz

Detector = Peak

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
			Н	V	110.57	21.43	-7.86	3.31	10.26	34.77
				Н	119.33	30.48	-7.86	3.31	19.31	34.77
	706.5	22755	F.1	V	109.99	20.85	-7.86	3.31	9.68	34.77
	700.3	23755	E1	Н	116.07	27.22	-7.86	3.31	16.05	34.77
			F2	V	117.94	28.80	-7.86	3.31	17.63	34.77
			E2	Н	110.38	21.53	-7.86	5.84	7.83	34.77
	710	23790	Н	V	110.51	21.54	-7.86	3.33	10.35	34.77
5MHz BW				Н	118.52	29.02	-7.86	3.33	17.83	34.77
LTE-Band 17			E1	V	107.66	18.69	-7.86	3.33	7.50	34.77
(QPSK RB				Н	117.04	27.54	-7.86	3.33	16.35	34.77
12 Offset 6)				V	120.59	31.62	-7.86	3.33	20.43	34.77
			E2	Н	112.90	23.40	-7.86	3.33	12.21	34.77
				V	109.93	21.12	-7.86	3.34	9.92	34.77
			Н	Н	119.62	29.47	-7.86	3.34	18.26	34.77
	712.5	22025	F1	V	110.85	22.04	-7.86	3.34	10.84	34.77
	713.5	23825	E1	Н	117.15	27.00	-7.86	3.34	15.79	34.77
				V	118.69	29.88	-7.86	3.34	18.68	34.77
			E2	Н	111.24	21.09	-7.86	3.34	9.88	34.77

Remark:

(1) The RBW, VBW of SPA for frequency

RBW = 5MHz, VBW = 8MHz

Detector = Peak

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
			**	V	110.22	21.08	-7.86	3.31	9.91	34.77
			H	Н	119.09	30.24	-7.86	3.31	19.07	34.77
	706.5	22755	F:1	V	110.08	20.94	-7.86	3.31	9.77	34.77
	700.3	23755	E1	Н	116.09	27.24	-7.86	3.31	16.07	34.77
			F2	V	120.10	30.96	-7.86	3.31	19.79	34.77
			E2	Н	112.63	23.78	-7.86	5.84	10.08	34.77
CMIL DW	710	23790	**	V	110.72	21.75	-7.86	3.33	10.56	34.77
5MHz BW			Н	Н	118.87	29.37	-7.86	3.33	18.18	34.77
LTE-Band 17			E1	V	107.87	18.90	-7.86	3.33	7.71	34.77
(16QAM RB 12 Offset 6)				Н	116.86	27.36	-7.86	3.33	16.17	34.77
12 Offset 0)				V	120.25	31.28	-7.86	3.33	20.09	34.77
			E2	Н	112.53	23.03	-7.86	3.33	11.84	34.77
				V	109.81	21.00	-7.86	3.34	9.80	34.77
			Н	Н	119.05	28.90	-7.86	3.34	17.69	34.77
	712.5	22025	F1	V	109.89	21.08	-7.86	3.34	9.88	34.77
	713.5	23825	E1	Н	117.38	27.23	-7.86	3.34	16.02	34.77
				V	118.37	29.56	-7.86	3.34	18.36	34.77
			E2	Н	111.33	21.18	-7.86	3.34	9.97	34.77

Remark:

(1) The RBW, VBW of SPA for frequency

RBW = 5MHz, VBW = 8MHz

Detector = Peak

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
			Н	V	108.40	19.26	-7.86	3.31	8.09	34.77
				Н	117.30	28.45	-7.86	3.31	17.28	34.77
	706.5	22755	F.1	V	108.03	18.89	-7.86	3.31	7.72	34.77
	700.3	23755	E1	Н	114.33	25.48	-7.86	3.31	14.31	34.77
			F2	V	116.04	26.90	-7.86	3.31	15.73	34.77
			E2	Н	108.14	19.29	-7.86	5.84	5.59	34.77
		23790	Н	V	108.51	19.54	-7.86	3.33	8.35	34.77
5MHz BW	710			Н	116.78	27.28	-7.86	3.33	16.09	34.77
LTE-Band 17			E1	V	105.65	16.68	-7.86	3.33	5.49	34.77
(QPSK RB				Н	114.64	25.14	-7.86	3.33	13.95	34.77
25 Offset 0)				V	117.91	28.94	-7.86	3.33	17.75	34.77
			E2	Н	110.38	20.88	-7.86	3.33	9.69	34.77
			**	V	107.74	18.93	-7.86	3.34	7.73	34.77
			Н	Н	117.50	27.35	-7.86	3.34	16.14	34.77
	712.5	22025	F.1	V	110.60	21.79	-7.86	3.34	10.59	34.77
	713.5	23825	E1	Н	115.31	25.16	-7.86	3.34	13.95	34.77
				V	116.55	27.74	-7.86	3.34	16.54	34.77
			E2	Н	109.49	19.34	-7.86	3.34	8.13	34.77

Remark:

(1) The RBW, VBW of SPA for frequency

RBW= 5MHz, VBW= 8MHz

Detector = Peak

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
			**	V	108.72	19.58	-7.86	3.31	8.41	34.77
			Н	Н	117.45	28.60	-7.86	3.31	17.43	34.77
	706.5	22755	F.1	V	108.51	19.37	-7.86	3.31	8.20	34.77
	700.3	23755	E1	Н	114.57	25.72	-7.86	3.31	14.55	34.77
			F2	V	118.29	29.15	-7.86	3.31	17.98	34.77
			E2	Н	110.85	22.00	-7.86	5.84	8.30	34.77
		23790	Н	V	109.54	20.57	-7.86	3.33	9.38	34.77
5MHz BW				Н	117.42	27.92	-7.86	3.33	16.73	34.77
LTE-Band 17			E1	V	106.29	17.32	-7.86	3.33	6.13	34.77
(16QAM RB 25 Offset 0)	710			Н	115.08	25.58	-7.86	3.33	14.39	34.77
23 Offset 0)				V	118.25	29.28	-7.86	3.33	18.09	34.77
			E2	Н	109.02	19.52	-7.86	3.33	8.33	34.77
				V	108.38	19.57	-7.86	3.34	8.37	34.77
			Н	Н	117.67	27.52	-7.86	3.34	16.31	34.77
	712.5	22025	F1	V	108.34	19.53	-7.86	3.34	8.33	34.77
	713.5	23825	E1	Н	116.08	25.93	-7.86	3.34	14.72	34.77
				V	116.96	28.15	-7.86	3.34	16.95	34.77
			E2	Н	109.15	19.00	-7.86	3.34	7.79	34.77

Remark:

(1) The RBW, VBW of SPA for frequency

RBW = 5MHz, VBW = 8MHz

Detector = Peak

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
			Н	V	112.10	22.96	-7.86	3.31	11.79	34.77
				Н	120.47	31.62	-7.86	3.31	20.45	34.77
	706.5	22755	F.1	V	111.34	22.20	-7.86	3.31	11.03	34.77
	700.3	23755	E1	Н	117.89	29.04	-7.86	3.31	17.87	34.77
			F2	V	119.38	30.24	-7.86	3.31	19.07	34.77
			E2	Н	111.40	22.55	-7.86	5.84	8.85	34.77
		23790	Н	V	111.39	22.42	-7.86	3.33	11.23	34.77
5MHz BW				Н	119.61	30.11	-7.86	3.33	18.92	34.77
LTE-Band 17				V	108.64	19.67	-7.86	3.33	8.48	34.77
(QPSK RB 1	710			Н	117.52	28.02	-7.86	3.33	16.83	34.77
Offset 24)				V	120.88	31.91	-7.86	3.33	20.72	34.77
			E2	Н	113.41	23.91	-7.86	3.33	12.72	34.77
				V	110.52	21.71	-7.86	3.34	10.51	34.77
			Н	Н	119.96	29.81	-7.86	3.34	18.60	34.77
	712.5	22025	F1	V	111.99	23.18	-7.86	3.34	11.98	34.77
	713.5	23825	E1	Н	117.98	27.83	-7.86	3.34	16.62	34.77
				V	119.24	30.43	-7.86	3.34	19.23	34.77
			E2	Н	111.95	21.80	-7.86	3.34	10.59	34.77

Remark:

The RBW, VBW of SPA for frequency (1)

RBW = 5MHz, VBW = 8MHz

Detector = Peak

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
			Н	V	112.25	23.11	-7.86	3.31	11.94	34.77
				Н	120.61	31.76	-7.86	3.31	20.59	34.77
	706.5	22755	F.1	V	111.77	22.63	-7.86	3.31	11.46	34.77
	706.5	23755	E1	Н	118.20	29.35	-7.86	3.31	18.18	34.77
			F2	V	121.33	32.19	-7.86	3.31	21.02	34.77
			E2	Н	114.30	25.45	-7.86	5.84	11.75	34.77
		23790	Н	V	112.46	23.49	-7.86	3.33	12.30	34.77
5MHz BW				Н	120.43	30.93	-7.86	3.33	19.74	34.77
LTE-Band 17			E1	V	109.04	20.07	-7.86	3.33	8.88	34.77
(16QAM RB	710			Н	117.84	28.34	-7.86	3.33	17.15	34.77
1 Offset 24)				V	120.84	31.87	-7.86	3.33	20.68	34.77
			E2	Н	112.04	22.54	-7.86	3.33	11.35	34.77
			**	V	111.14	22.33	-7.86	3.34	11.13	34.77
			Н	Н	120.42	30.27	-7.86	3.34	19.06	34.77
	710.5	22025	F.1	V	111.43	22.62	-7.86	3.34	11.42	34.77
	713.5	23825	E1	Н	118.39	28.24	-7.86	3.34	17.03	34.77
				V	119.65	30.84	-7.86	3.34	19.64	34.77
			E2	Н	112.25	22.10	-7.86	3.34	10.89	34.77

Remark:

(1) The RBW, VBW of SPA for frequency

RBW = 5MHz, VBW = 8MHz

Detector = Peak

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
			Н	V	110.70	21.56	-7.86	3.31	10.39	34.77
				Н	119.48	30.63	-7.86	3.31	19.46	34.77
	706.5	22755	F1	V	110.62	21.48	-7.86	3.31	10.31	34.77
	700.3	23755	E1	Н	116.47	27.62	-7.86	3.31	16.45	34.77
			F2	V	118.22	29.08	-7.86	3.31	17.91	34.77
			E2	Н	110.32	21.47	-7.86	5.84	7.77	34.77
		23790	Н	V	111.40	22.43	-7.86	3.33	11.24	34.77
5MHz BW				Н	119.68	30.18	-7.86	3.33	18.99	34.77
LTE-Band 17			E1	V	108.57	19.60	-7.86	3.33	8.41	34.77
(QPSK RB 1 Offset 0)	710			Н	117.49	27.99	-7.86	3.33	16.80	34.77
Offset 0)				V	120.96	31.99	-7.86	3.33	20.80	34.77
			E2	Н	113.39	23.89	-7.86	3.33	12.70	34.77
				V	111.05	22.24	-7.86	3.34	11.04	34.77
			Н	Н	120.28	30.13	-7.86	3.34	18.92	34.77
	712.5	22025	F1	V	112.20	23.39	-7.86	3.34	12.19	34.77
	713.5	23825	E1	Н	118.41	28.26	-7.86	3.34	17.05	34.77
				V	119.55	30.74	-7.86	3.34	19.54	34.77
			E2	Н	112.46	22.31	-7.86	3.34	11.10	34.77

Remark:

The RBW, VBW of SPA for frequency (1)

RBW = 5MHz, VBW = 8MHz

Detector = Peak

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
			Н	V	111.04	21.90	-7.86	3.31	10.73	34.77
				Н	119.78	30.93	-7.86	3.31	19.76	34.77
	706.5	22755	F1	V	110.88	21.74	-7.86	3.31	10.57	34.77
	706.5	23755	E1	Н	116.96	28.11	-7.86	3.31	16.94	34.77
			F2	V	120.94	31.80	-7.86	3.31	20.63	34.77
			E2	Н	113.55	24.70	-7.86	5.84	11.00	34.77
		23790	Н	V	112.10	23.13	-7.86	3.33	11.94	34.77
5MHz BW	5 10			Н	119.99	30.49	-7.86	3.33	19.30	34.77
LTE-Band 17			E1	V	108.73	19.76	-7.86	3.33	8.57	34.77
(16QAM RB	710			Н	117.98	28.48	-7.86	3.33	17.29	34.77
1 Offset 0)				V	121.33	32.36	-7.86	3.33	21.17	34.77
			E2	Н	113.70	24.20	-7.86	3.33	13.01	34.77
			**	V	111.39	22.58	-7.86	3.34	11.38	34.77
			Н	Н	120.72	30.57	-7.86	3.34	19.36	34.77
	710.5	22025	F1	V	111.76	22.95	-7.86	3.34	11.75	34.77
	713.5	23825	E1	Н	118.90	28.75	-7.86	3.34	17.54	34.77
				V	120.08	31.27	-7.86	3.34	20.07	34.77
			E2	Н	112.76	22.61	-7.86	3.34	11.40	34.77

Remark:

(1) The RBW, VBW of SPA for frequency

RBW = 5MHz, VBW = 8MHz

Detector = Peak

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
				V	112.14	23.12	-7.86	3.32	11.94	34.77
			H	Н	118.56	29.25	-7.86	3.32	18.06	34.77
	709	22790	F1	V	109.04	20.02	-7.86	3.32	8.84	34.77
	709	23780	E1	Н	117.89	28.58	-7.86	3.32	17.39	34.77
			F2	V	120.48	31.46	-7.86	3.32	20.28	34.77
			E2	Н	111.67	22.36	-7.86	5.84	8.66	34.77
101411 DW		23790	Н	V	113.64	24.67	-7.86	3.33	13.48	34.77
10MHz BW	710			Н	119.19	29.69	-7.86	3.33	18.50	34.77
LTE-Band 17			E1	V	114.26	25.29	-7.86	3.33	14.10	34.77
(QPSK RB				Н	118.38	28.88	-7.86	3.33	17.69	34.77
25 Offset 12)				V	120.03	31.06	-7.86	3.33	19.87	34.77
			E2	Н	111.61	22.11	-7.86	3.33	10.92	34.77
				V	112.92	23.99	-7.86	3.33	12.80	34.77
			Н	Н	119.00	29.31	-7.86	3.33	18.12	34.77
	711	22000	F1	V	112.57	23.64	-7.86	3.33	12.45	34.77
	711	23800	E1	Н	118.19	28.50	-7.86	3.33	17.31	34.77
				V	120.72	31.79	-7.86	3.33	20.60	34.77
			E2	Н	113.11	23.42	-7.86	3.33	12.23	34.77

Remark:

(1) The RBW, VBW of SPA for frequency

RBW = 10MHz, VBW = 10MHz

Detector = Peak

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
			**	V	112.37	23.35	-7.86	3.32	12.17	34.77
			Н	Н	118.90	29.59	-7.86	3.32	18.40	34.77
	700	22700	F1	V	109.19	20.17	-7.86	3.32	8.99	34.77
	709	23780	E1	Н	117.99	28.68	-7.86	3.32	17.49	34.77
			F2	V	120.39	31.37	-7.86	3.32	20.19	34.77
			E2	Н	111.37	22.06	-7.86	5.84	8.36	34.77
101411 DW		23790	**	V	114.29	25.32	-7.86	3.33	14.13	34.77
10MHz BW			Н	Н	119.10	29.60	-7.86	3.33	18.41	34.77
LTE-Band 17			E1	V	113.78	24.81	-7.86	3.33	13.62	34.77
(16QAM RB	710			Н	119.68	30.18	-7.86	3.33	18.99	34.77
25 Offset 12)				V	120.80	31.83	-7.86	3.33	20.64	34.77
			E2	Н	116.94	27.44	-7.86	3.33	16.25	34.77
			**	V	113.18	24.25	-7.86	3.33	13.06	34.77
			Н	Н	119.50	29.81	-7.86	3.33	18.62	34.77
711	711	22000	F.1	V	111.92	22.99	-7.86	3.33	11.80	34.77
	/11	23800	E1	Н	118.46	28.77	-7.86	3.33	17.58	34.77
			E2	V	120.64	31.71	-7.86	3.33	20.52	34.77
				Н	111.75	22.06	-7.86	3.33	10.87	34.77

Remark:

(1) The RBW, VBW of SPA for frequency

RBW = 10MHz, VBW = 10MHz

Detector = Peak

)

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
			**	V	109.40	20.38	-7.86	3.32	9.20	34.77
			Н	Н	116.01	26.70	-7.86	3.32	15.51	34.77
	700	22700	Е1	V	106.40	17.38	-7.86	3.32	6.20	34.77
	709	23780	E1	Н	115.43	26.12	-7.86	3.32	14.93	34.77
			F-2	V	118.25	29.23	-7.86	3.32	18.05	34.77
			E2	Н	107.93	18.62	-7.86	5.84	4.92	34.77
101411 DW		23790	**	V	111.01	22.04	-7.86	3.33	10.85	34.77
10MHz BW			Н	Н	116.30	26.80	-7.86	3.33	15.61	34.77
LTE-Band 17				V	112.40	23.43	-7.86	3.33	12.24	34.77
(QPSK RB	710			Н	116.47	26.97	-7.86	3.33	15.78	34.77
50 Offset 0)				V	117.59	28.62	-7.86	3.33	17.43	34.77
			E2	Н	108.75	19.25	-7.86	3.33	8.06	34.77
			**	V	110.03	21.10	-7.86	3.33	9.91	34.77
			Н	Н	116.06	26.37	-7.86	3.33	15.18	34.77
711	711	22000	F.1	V	109.72	20.79	-7.86	3.33	9.60	34.77
	7/11	23800	E1	Н	115.07	25.38	-7.86	3.33	14.19	34.77
				V	118.39	29.46	-7.86	3.33	18.27	34.77
			E2	Н	110.58	20.89	-7.86	3.33	9.70	34.77

Remark:

The RBW, VBW of SPA for frequency (1)

RBW = 10MHz, VBW = 10MHz

Detector = Peak

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
			V	110.43	21.41	-7.86	3.32	10.23	34.77	
			Н	Н	117.07	27.76	-7.86	3.32	16.57	34.77
	700	22700	F:1	V	107.19	18.17	-7.86	3.32	6.99	34.77
	709	23780	E1	Н	116.43	27.12	-7.86	3.32	15.93	34.77
			F2	V	118.92	29.90	-7.86	3.32	18.72	34.77
			E2	Н	110.30	20.99	-7.86	5.84	7.29	34.77
101411 DW			**	V	111.56	22.59	-7.86	3.33	11.40	34.77
10MHz BW		23790	Н	Н	117.11	27.61	-7.86	3.33	16.42	34.77
LTE-Band 17			E1	V	112.14	23.17	-7.86	3.33	11.98	34.77
(16QAM RB 50 Offset 0)	710			Н	117.42	27.92	-7.86	3.33	16.73	34.77
30 Offset 0)				V	118.57	29.60	-7.86	3.33	18.41	34.77
			E2	Н	114.91	25.41	-7.86	3.33	14.22	34.77
				V	110.75	21.82	-7.86	3.33	10.63	34.77
			Н	Н	117.13	27.44	-7.86	3.33	16.25	34.77
711	22000	F1	V	109.93	21.00	-7.86	3.33	9.81	34.77	
	23800	E1	Н	115.85	26.16	-7.86	3.33	14.97	34.77	
				V	118.34	29.41	-7.86	3.33	18.22	34.77
			E2	Н	109.69	20.00	-7.86	3.33	8.81	34.77

Remark:

(1) The RBW, VBW of SPA for frequency

RBW = 10MHz, VBW = 10MHz

Detector = Peak

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
			Н	V	117.08	28.06	-7.86	3.32	16.88	34.77
				Н	119.68	30.37	-7.86	3.32	19.18	34.77
	709	22700	F.1	V	111.54	22.52	-7.86	3.32	11.34	34.77
	709	23780	E1	Н	120.75	31.44	-7.86	3.32	20.25	34.77
			F2	V	123.63	34.61	-7.86	3.32	23.43	34.77
			E2	Н	115.01	25.70	-7.86	5.84	12.00	34.77
101411 DW		23790		V	117.44	28.47	-7.86	3.33	17.28	34.77
10MHz BW			Н	Н	121.60	32.10	-7.86	3.33	20.91	34.77
LTE-Band 17			E1	V	116.79	27.82	-7.86	3.33	16.63	34.77
(QPSK RB 1	710			Н	120.58	31.08	-7.86	3.33	19.89	34.77
Offset 49)			F-2	V	122.79	33.82	-7.86	3.33	22.63	34.77
			E2	Н	114.37	24.87	-7.86	3.33	13.68	34.77
			**	V	115.65	26.72	-7.86	3.33	15.53	34.77
			Н	Н	121.86	32.17	-7.86	3.33	20.98	34.77
	711	22000	F.1	V	114.33	25.40	-7.86	3.33	14.21	34.77
		23800	E1	Н	120.68	30.99	-7.86	3.33	19.80	34.77
				V	122.78	33.85	-7.86	3.33	22.66	34.77
			E2	Н	115.33	25.64	-7.86	3.33	14.45	34.77

Remark:

(1) The RBW, VBW of SPA for frequency

RBW = 10MHz, VBW = 10MHz

Detector = Peak

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
			V	115.09	26.07	-7.86	3.32	14.89	34.77	
			Н	Н	121.72	32.41	-7.86	3.32	21.22	34.77
	700	22790	F1	V	112.00	22.98	-7.86	3.32	11.80	34.77
	709	23780	E1	Н	121.25	31.94	-7.86	3.32	20.75	34.77
			F2	V	123.89	34.87	-7.86	3.32	23.69	34.77
			E2	Н	115.16	25.85	-7.86	5.84	12.15	34.77
101411 DW		23790	11	V	116.57	27.60	-7.86	3.33	16.41	34.77
10MHz BW			Н	Н	121.98	32.48	-7.86	3.33	21.29	34.77
LTE-Band 17			E1	V	116.82	27.85	-7.86	3.33	16.66	34.77
(16QAM RB 1 Offset 49)	710			Н	122.32	32.82	-7.86	3.33	21.63	34.77
1 Offset 49)				V	123.59	34.62	-7.86	3.33	23.43	34.77
			E2	Н	119.44	29.94	-7.86	3.33	18.75	34.77
				V	116.17	27.24	-7.86	3.33	16.05	34.77
			Н	Н	121.83	32.14	-7.86	3.33	20.95	34.77
711	22000	F1	V	114.62	25.69	-7.86	3.33	14.50	34.77	
	/11	23800	E1	Н	119.89	30.20	-7.86	3.33	19.01	34.77
				V	123.75	34.82	-7.86	3.33	23.63	34.77
			E2	Н	116.68	26.99	-7.86	3.33	15.80	34.77

Remark:

(1) The RBW, VBW of SPA for frequency

RBW = 10MHz, VBW = 10MHz

Detector = Peak

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
			Н	V	115.46	26.44	-7.86	3.32	15.26	34.77
				Н	120.88	31.57	-7.86	3.32	20.38	34.77
	709	22700	F1	V	111.66	22.64	-7.86	3.32	11.46	34.77
	709	23780	E1	Н	119.71	30.40	-7.86	3.32	19.21	34.77
			F-2	V	122.48	33.46	-7.86	3.32	22.28	34.77
			E2	Н	113.79	24.48	-7.86	5.84	10.78	34.77
101411 DW		23790		V	116.44	27.47	-7.86	3.33	16.28	34.77
10MHz BW			Н	Н	120.97	31.47	-7.86	3.33	20.28	34.77
LTE-Band 17			E1	V	115.74	26.77	-7.86	3.33	15.58	34.77
(QPSK RB 1	710			Н	120.24	30.74	-7.86	3.33	19.55	34.77
Offset 0)				V	122.56	33.59	-7.86	3.33	22.40	34.77
			E2	Н	113.74	24.24	-7.86	3.33	13.05	34.77
			**	V	115.23	26.30	-7.86	3.33	15.11	34.77
			Н	Н	121.41	31.72	-7.86	3.33	20.53	34.77
	711	22000	F.1	V	115.32	26.39	-7.86	3.33	15.20	34.77
		23800	E1	Н	120.58	30.89	-7.86	3.33	19.70	34.77
				V	123.48	34.55	-7.86	3.33	23.36	34.77
			E2	Н	115.45	25.76	-7.86	3.33	14.57	34.77

Remark:

(1) The RBW, VBW of SPA for frequency

RBW = 10MHz, VBW = 10MHz

Detector = Peak

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
			Н	V	114.94	25.92	-7.86	3.32	14.74	34.77
				Н	121.34	32.03	-7.86	3.32	20.84	34.77
	709	22700	F.1	V	111.32	22.30	-7.86	3.32	11.12	34.77
	709	23780	E1	Н	120.32	31.01	-7.86	3.32	19.82	34.77
			F2	V	122.86	33.84	-7.86	3.32	22.66	34.77
			E2	Н	113.91	24.60	-7.86	5.84	10.90	34.77
101411 DW				V	116.02	27.05	-7.86	3.33	15.86	34.77
10MHz BW		23790	Н	Н	121.86	32.36	-7.86	3.33	21.17	34.77
LTE-Band 17			E1	V	116.00	27.03	-7.86	3.33	15.84	34.77
(16QAM RB	710			Н	122.07	32.57	-7.86	3.33	21.38	34.77
1 Offset 0)				V	123.93	34.96	-7.86	3.33	23.77	34.77
			E2	Н	120.24	30.74	-7.86	3.33	19.55	34.77
			**	V	115.79	26.86	-7.86	3.33	15.67	34.77
			Н	Н	122.10	32.41	-7.86	3.33	21.22	34.77
	711	22000	F.1	V	113.11	24.18	-7.86	3.33	12.99	34.77
		23800	E1	Н	119.02	29.33	-7.86	3.33	18.14	34.77
				V	123.71	34.78	-7.86	3.33	23.59	34.77
			E2	Н	115.78	26.09	-7.86	3.33	14.90	34.77

Remark:

(1) The RBW, VBW of SPA for frequency

RBW = 10MHz, VBW = 10MHz

Detector = Peak

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8. 99% OCCUPIED BANDWIDTH MEASUREMENT

8.1. Standard Applicable:

According to §FCC 2.1049.

8.2. Test Set-up:

Refer to section 5.2 in this report

8.3. Measurement Procedure:

The EUT's output RF connector was connected with a short cable to the spectrum analyzer, RBW (10/30KHz) was set to about 1% of emission BW, VBW= 3 times RBW(30/100KHz), -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.

8.4. Measurement Equipment Used:

Refer to section 2.4 in this report

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
	824.20	128	0.2400
GSM 850	836.60	190	0.2438
	848.80	251	0.2418

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
	1850.20	512	0.2448
PCS 1900	1880.00	661	0.2430
	1909.80	810	0.2435

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
	824.20	128	0.2434
EDGE 850	836.60	190	0.2462
	848.80	251	0.2426

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
	1850.20	512	0.2507
EDGE 1900	1880.00	661	0.2465
	1909.80	810	0.2487

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EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
	1852.40	9262	4.1357
WCDMA II	1880.00	9400	4.1421
	1907.60	9538	4.1362

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
WCDMA V	826.40	4132	4.1373
	836.00	4180	4.1394
	846.60	4233	4.1338

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
HSUPA II	1852.4	9262	4.1655
	1880.0	9400	4.1460
	1907.6	9538	4.1268

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
	826.40	4132	4.1743
HSUPA V	836.60	4183	4.1647
	846.60	4233	4.1529

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EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
5MHz BW	1712.5	19975	4.5185
LTE-Band 4 (QPSK	1732.5	20175	4.5220
RB Number: 25 Offset: 0)	1752.5	20375	4.5019

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
5MHz BW	1712.5	19975	4.5224
LTE-Band 4 (16QAM	1732.5	20175	4.5110
RB Number: 25 Offset: 0)	1752.5	20375	4.5310

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
10MHz BW	1715	20000	8.9736
LTE-Band 4 (QPSK	1732.5	20175	8.9732
RB Number: 50 Offset: 0)	1750	20350	9.0059

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
10MHz BW	1715	20000	8.9867
LTE-Band 4 (16QAM	1732.5	20175	8.9848
RB Number: 50 Offset: 0)	1750	20350	8.9829

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EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
5MHz BW	706.5	23755	4.5229
LTE-Band 17 (QPSK	710	23790	4.5027
RB Number: 25 Offset: 0)	713.5	23835	4.5193

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
5MHz BW	706.5	23755	4.5208
LTE-Band 17 (16QAM	710	23790	4.5053
RB Number: 25 Offset: 0)	713.5	23835	4.5301

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
10MHz BW	709	23780	8.9845
LTE-Band 17 (QPSK	710	23790	8.9826
RB Number: 50 Offset: 0)	711	23800	8.9728

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
10MHz BW	709	23780	8.9994
LTE-Band 4 (16QAM	710	23790	8.9866
RB Number: 50 Offset: 0)	711	23800	8.9674

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Figure 7-1: GSM 850 Channel Low

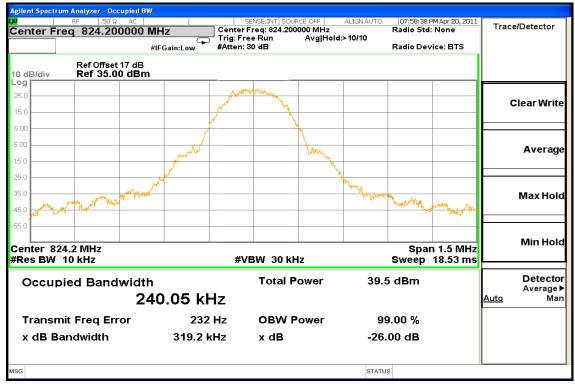
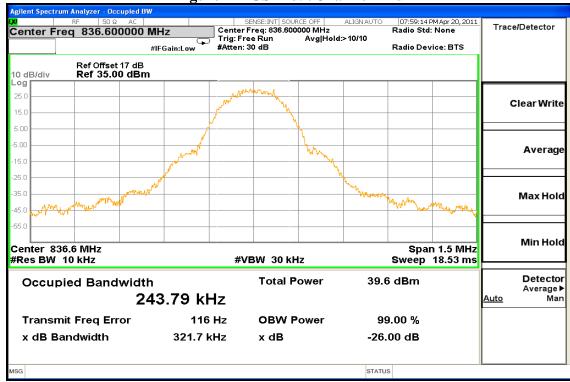


Figure 7-2 GSM 850Channel Mid



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GPRS Figure 7-3: GSM 850 Channel High

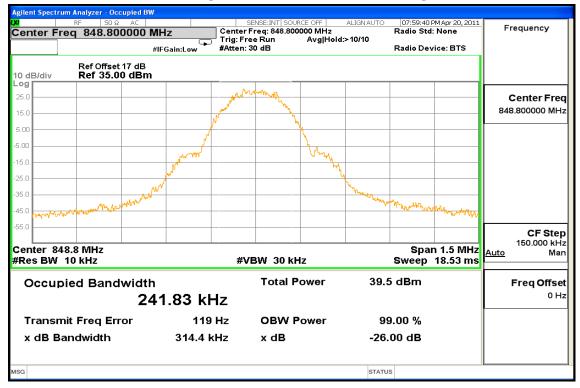
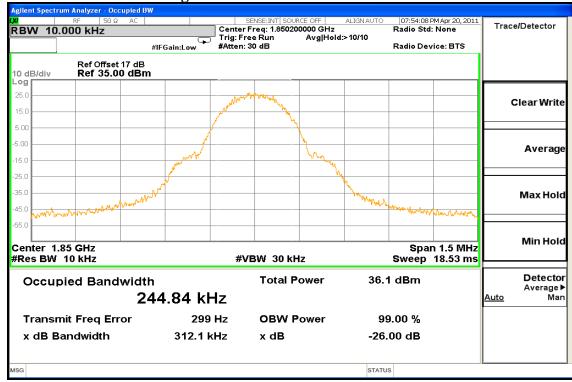


Figure 7-4: GSM 1900 Channel Low



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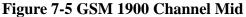
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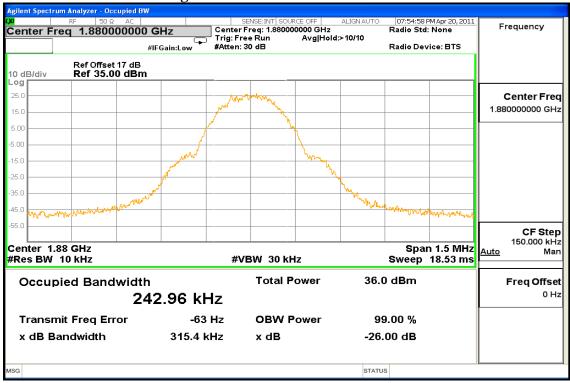
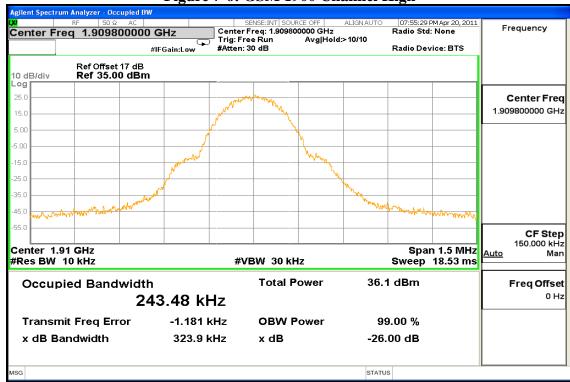


Figure 7-6: GSM 1900 Channel High



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Figure 7-7: EDGE 850 Channel Low

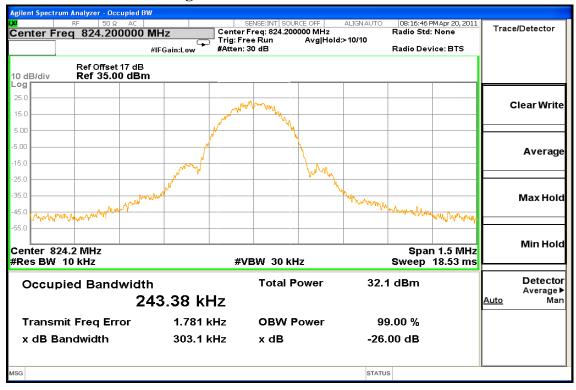
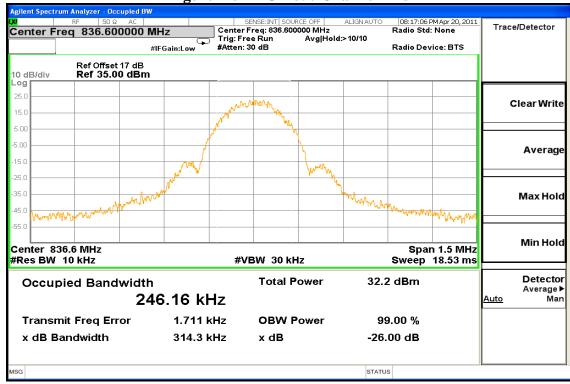


Figure 7-8 EDGE 850 Channel Mid



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GPRS Figure 7-9: EDGE 850 Channel High

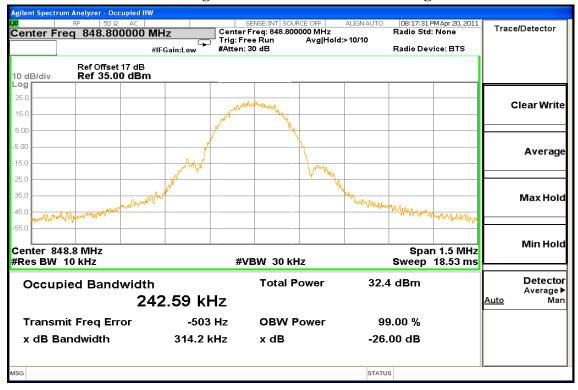
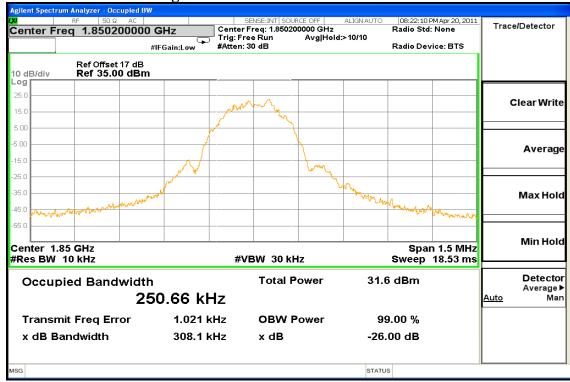


Figure 7-10: EDGE 1900 Channel Low



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Figure 7-11 EDGE 1900 Channel Mid

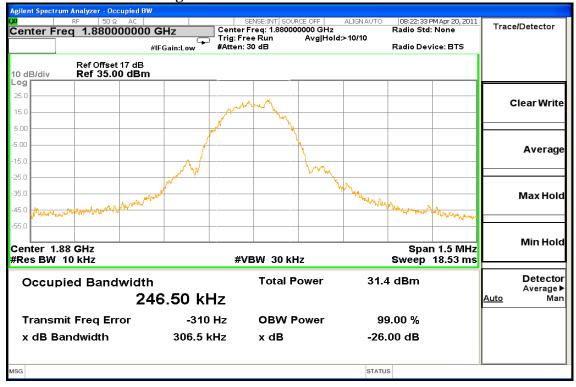
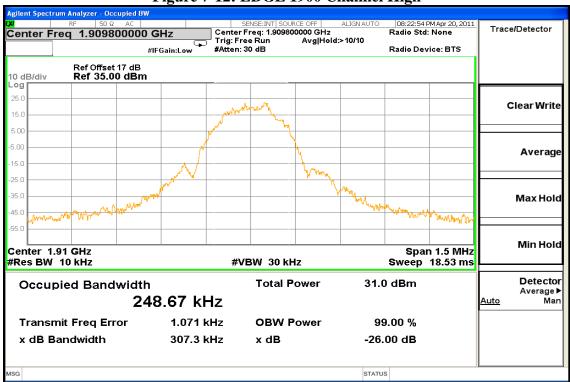


Figure 7-12: EDGE 1900 Channel High



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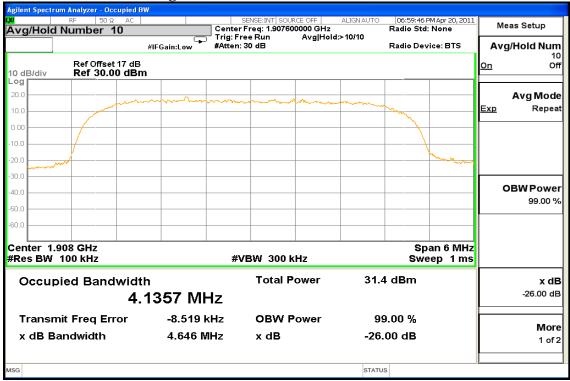
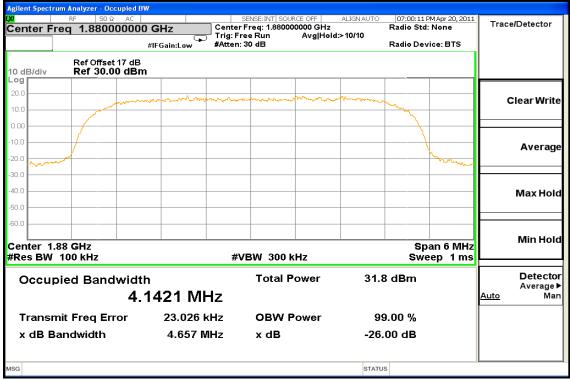


Figure 7-14 WCDMA II Channel Mid



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Figure 7-15: WCDMA II Channel High

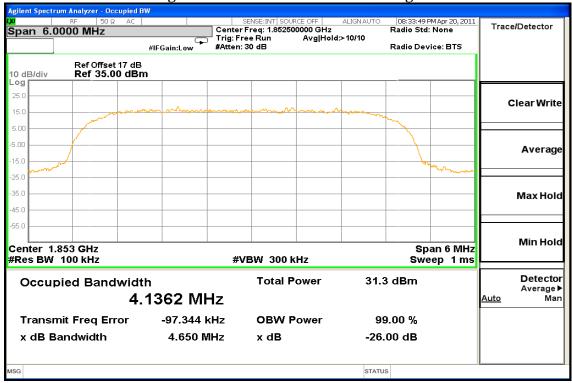
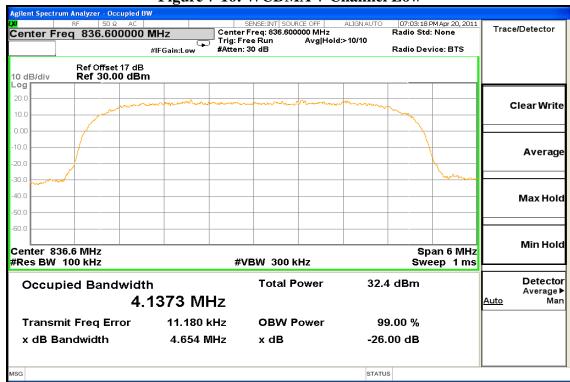


Figure 7-16: WCDMA V Channel Low



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Figure 7-17: WCDMA II Channel Mid

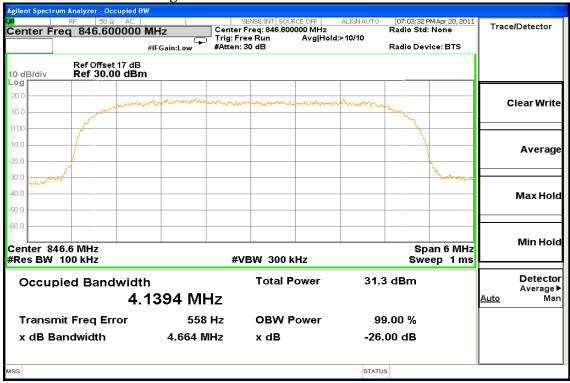
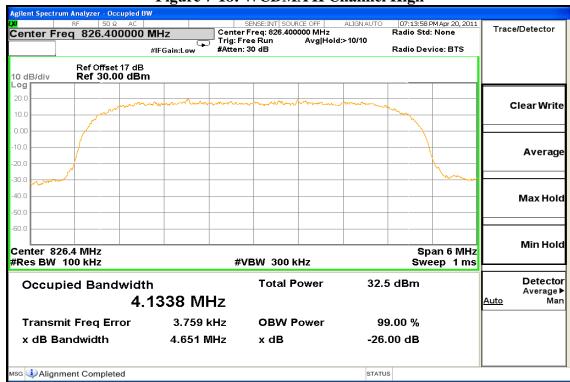


Figure 7-18: WCDMA II Channel High



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Figure 7-19: HSUPA II Channel Low

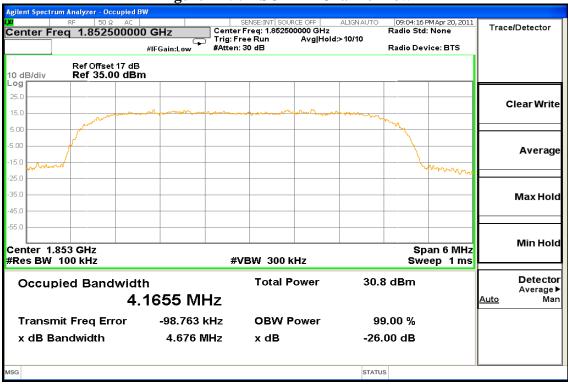
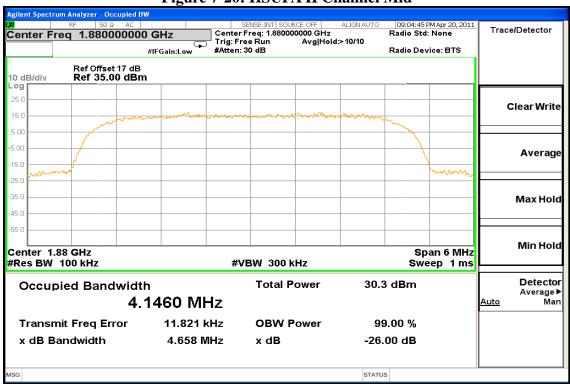


Figure 7-20: HSUPA II Channel Mid



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Figure 7-21: HSUPA II Channel High

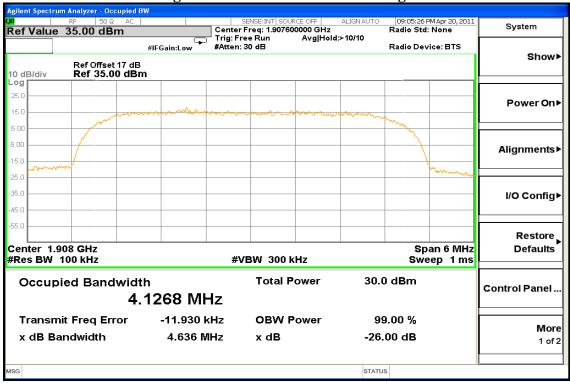
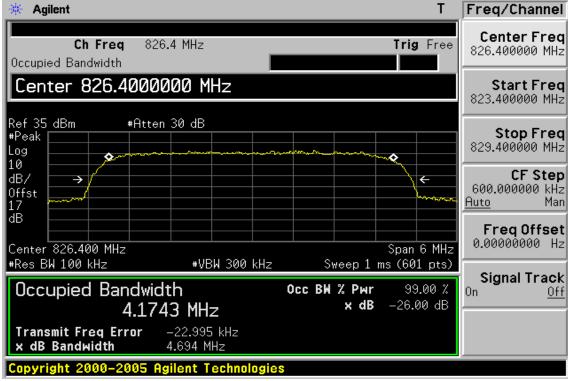


Figure 7-22: HSUPA V Channel Low



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Figure 7-23: HSUPA V Channel Mid

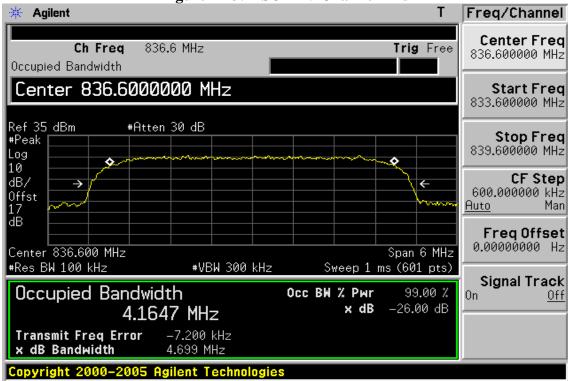
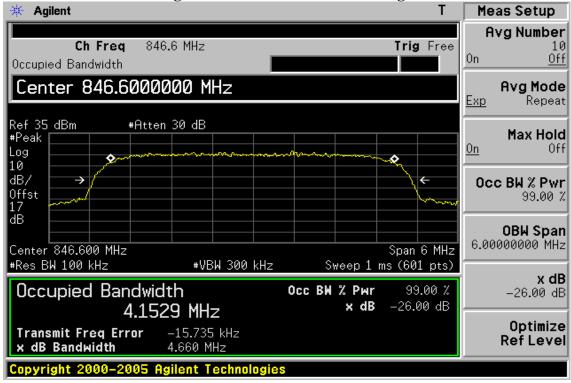


Figure 7-24: HSUPA V Channel High



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Figure 7-25: 5MHz BW LTE-Band 4(QPSK RB Number: 25 Offset: 0) Channel Low

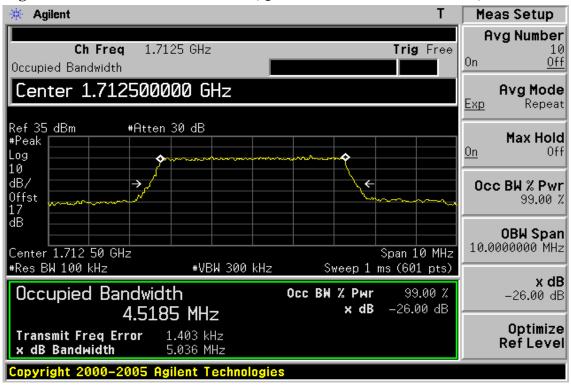
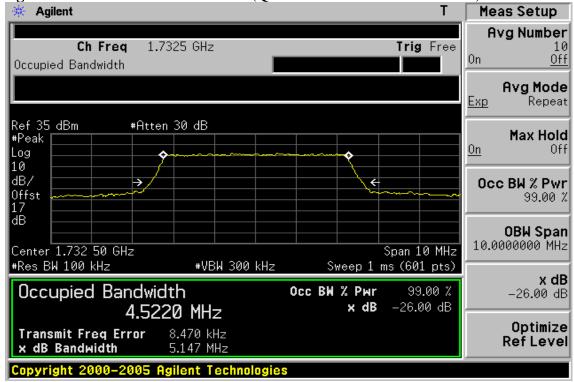


Figure 7-26: 5MHz BW LTE-Band 4(QPSK RB Number: 25 Offset: 0) Channel Mid



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Figure 7-27: 5MHz BW LTE-Band 4(QPSK RB Number: 25 Offset: 0) Channel High

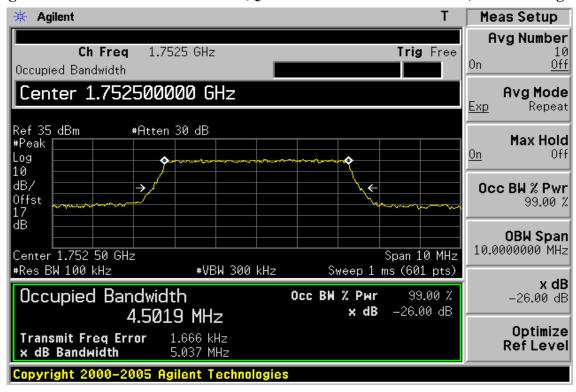
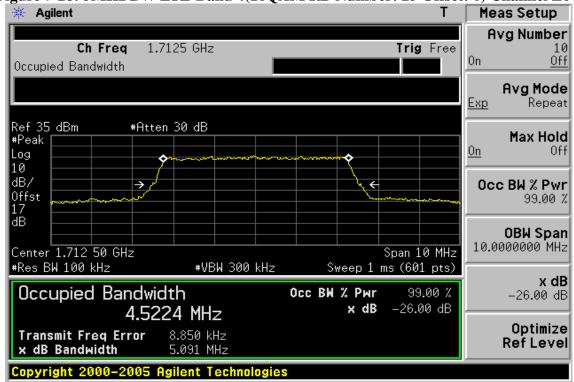


Figure 7-28: 5MHz BW LTE-Band 4(16QAM RB Number: 25 Offset: 0) Channel Low



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Figure 7-29: 5MHz BW LTE-Band 4(16QAM RB Number: 25 Offset: 0) Channel Mid

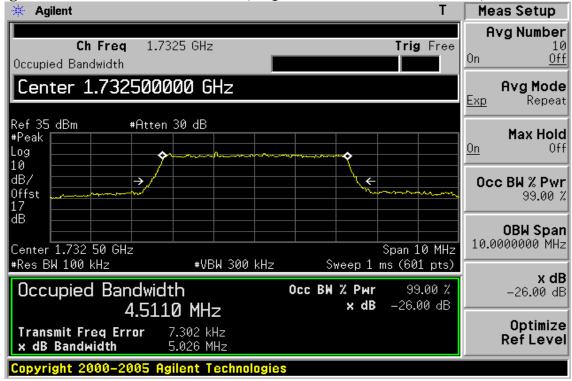
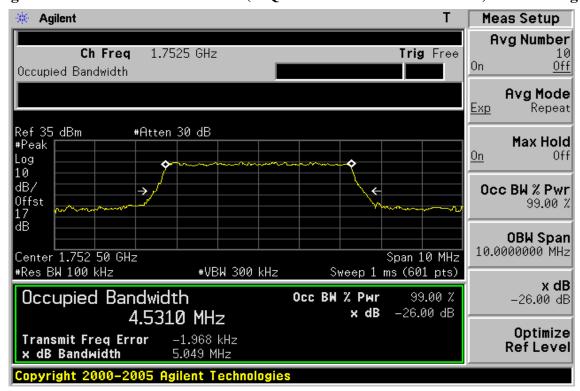


Figure 7-30: 5MHz BW LTE-Band 4(16QAM RB Number: 25 Offset: 0) Channel High



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Figure 7-31: 10MHz BW LTE-Band 4(QPSK RB Number: 50 Offset: 0) Channel Low

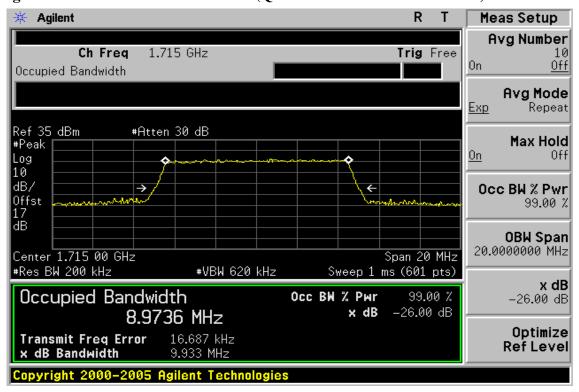


Figure 7-32: 10MHz BW LTE-Band 4(QPSK RB Number: 50 Offset: 0) Channel Mid



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Figure 7-33: 10MHz BW LTE-Band 4(QPSK RB Number: 50 Offset: 0) Channel High

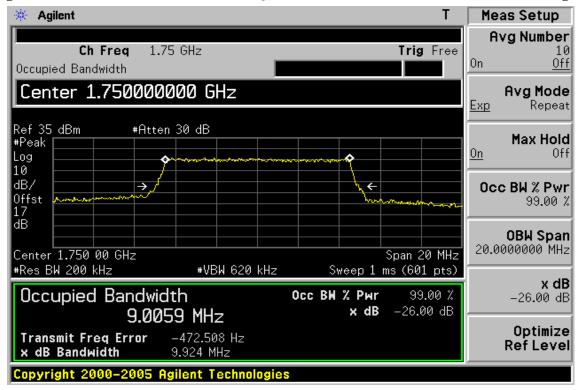
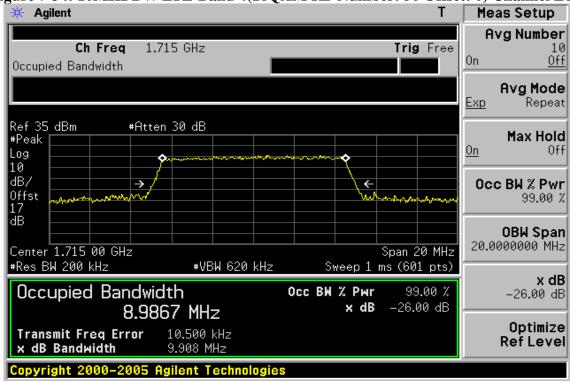


Figure 7-34: 10MHz BW LTE-Band 4(16QAM RB Number: 50 Offset: 0) Channel Low



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Figure 7-35: 10MHz BW LTE-Band 4(16QAM RB Number: 50 Offset: 0) Channel Mid

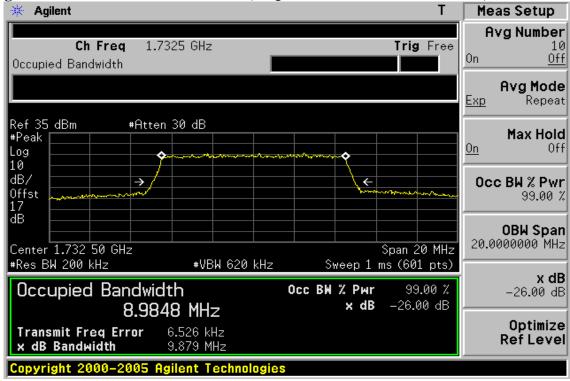
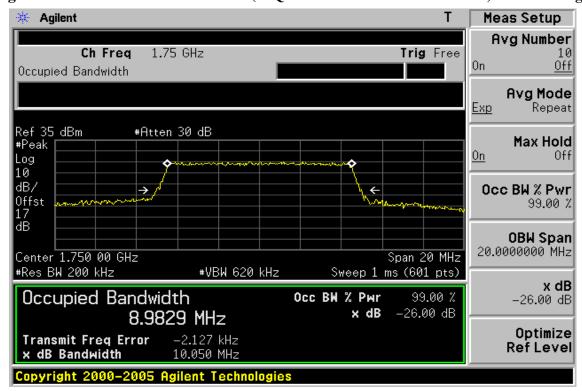


Figure 7-36: 10MHz BW LTE-Band 4(16QAM RB Number: 50 Offset: 0) Channel High



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Figure 7-37: 5MHz BW LTE-Band 17(QPSK RB Number: 25 Offset: 0) Channel Low

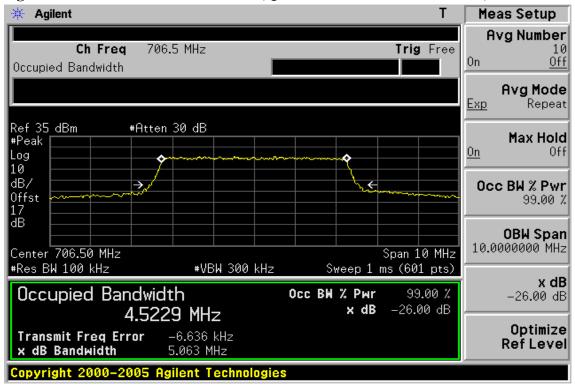
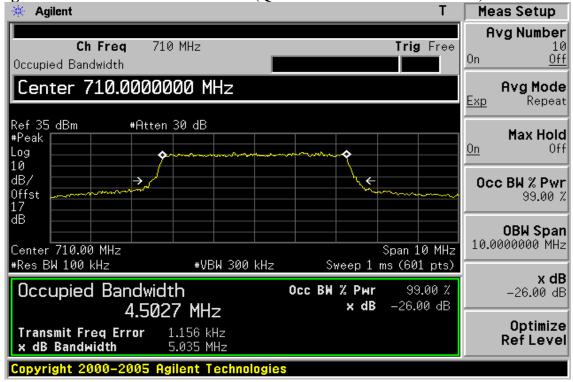


Figure 7-38: 5MHz BW LTE-Band 17(QPSK RB Number: 25 Offset: 0) Channel Mid



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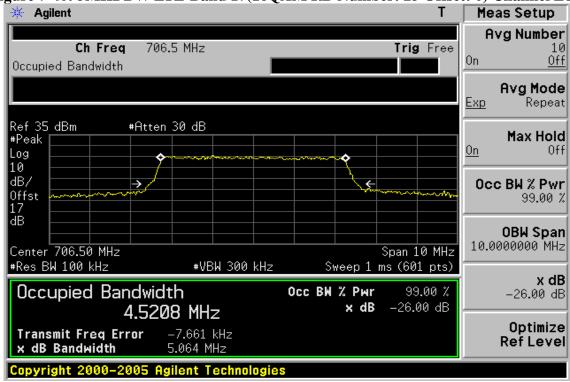
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Figure 7-39: 5MHz BW LTE-Band 17(QPSK RB Number: 25 Offset: 0) Channel High



Figure 7-40: 5MHz BW LTE-Band 17(16QAM RB Number: 25 Offset: 0) Channel Low



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Figure 7-41: 5MHz BW LTE-Band 17(16QAM RB Number: 25 Offset: 0) Channel Mid

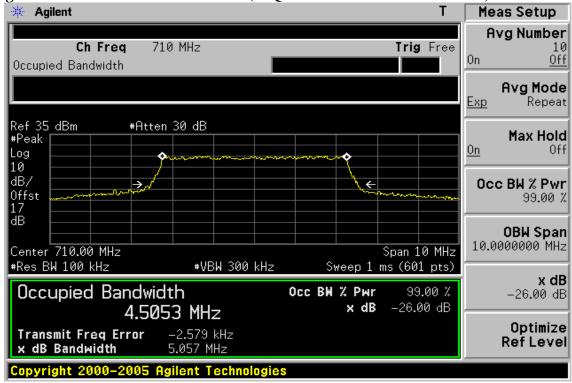
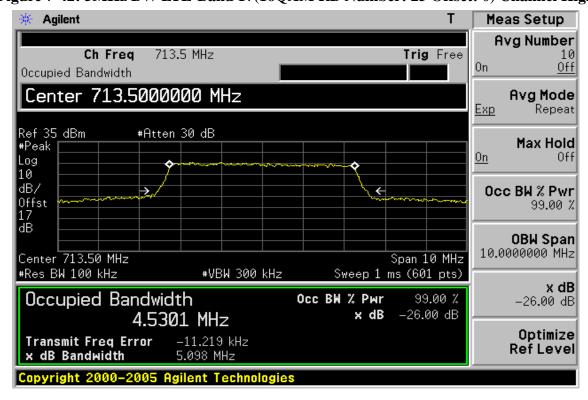


Figure 7-42: 5MHz BW LTE-Band 17(16QAM RB Number: 25 Offset: 0) Channel High



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Figure 7-43: 10MHz BW LTE-Band 17(QPSK RB Number: 50 Offset: 0) Channel Low

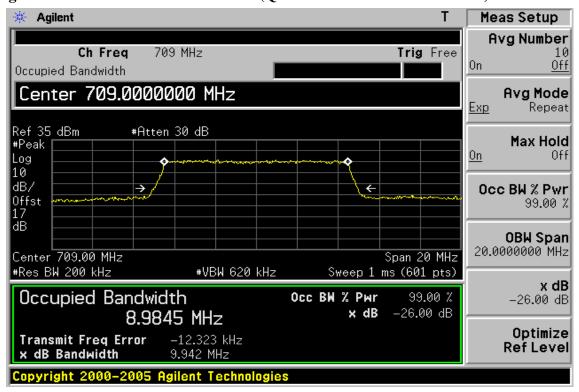
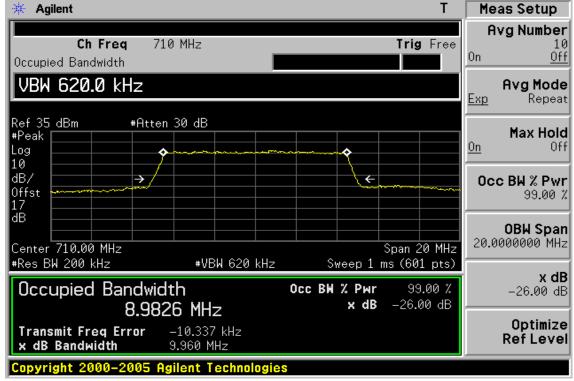


Figure 7-44: 10MHz BW LTE-Band 17(QPSK RB Number: 50 Offset: 0) Channel Mid



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Figure 7-45: 10MHz BW LTE-Band 17(QPSK RB Number: 50 Offset: 0) Channel High

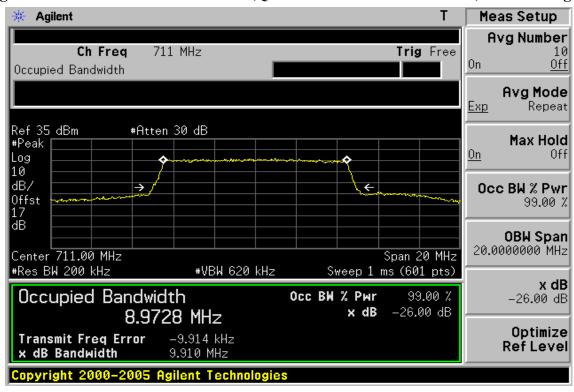
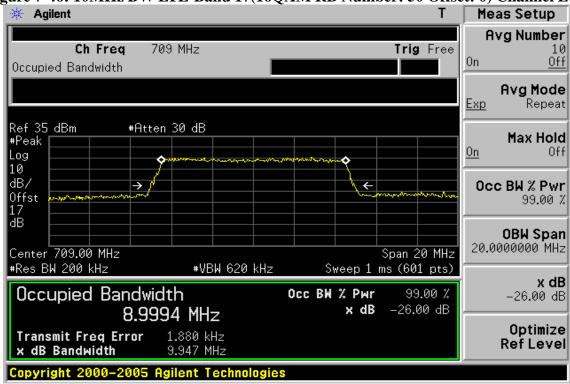


Figure 7-46: 10MHz BW LTE-Band 17(16QAM RB Number: 50 Offset: 0) Channel Low



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Figure 7-47: 10MHz BW LTE-Band 17(16QAM RB Number: 50 Offset: 0) Channel Mid

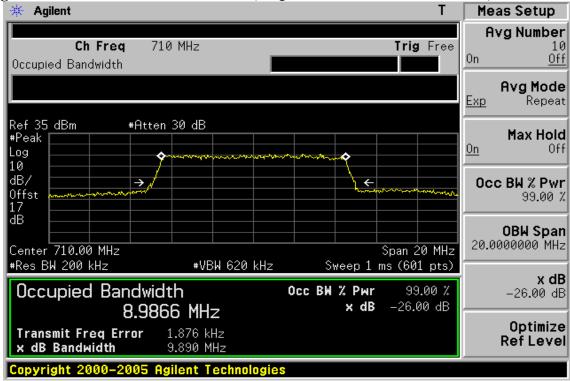
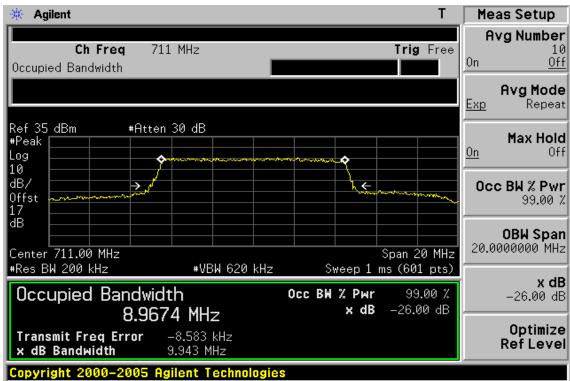


Figure 7-48: 10MHz BW LTE-Band 17(16QAM RB Number: 50 Offset: 0) Channel High



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9. OUT OF BAND EMISSION AT ANTENNA TERMINALS

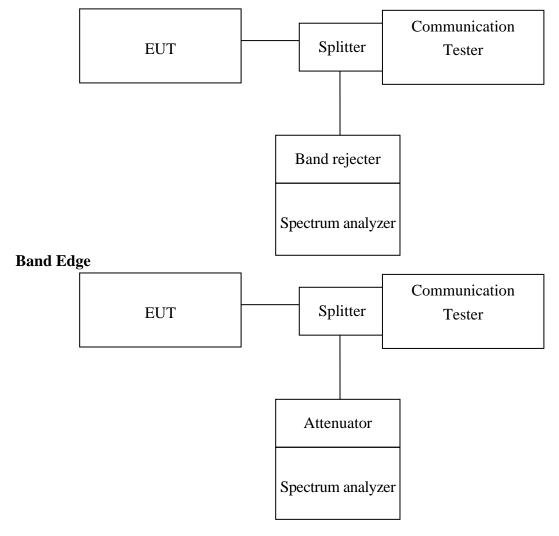
9.1. Standard Applicable:

According to FCC §2.1051.

FCC $\S22.917(a),\S24.238(a)$, $\S27.53(g)$ the magnitude of each spurious and harmonic emission that can be detected when the equipment is operated under the conditions specified in the instruction manual and/ or alignment procedure, shall not be less than $43 + 10 \log$ (mean output power in watts) dBc below the mean power output outside a license's frequency block (-13dBm)

9.2. Test SET-UP:

Out of band emission



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9.3. Measurement Procedure:

The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation The resolution bandwidth of the spectrum analyzer was set at 1MHz, sufficient scans were taken to show the out of band Emissions if any up to 10th harmonic.

For the out of band: Set the RBW, VBW = 1MHz, Start=30MHz, Stop= 10 th harmonic. Limit = -13dBm

Band Edge Requirements: In the 1 MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 1 percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to measure the out of band Emissions. Limit, -13dBm.

For operations in the 698–746 MHz band, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed. Limit, -13dBm.

Conducted Emission:

- 1 · To connect Antenna Port of EUT to Spectrum.
- 2 · Set RBW = 1MHz & VBW = 1MHz on Spectrum.
- 3 Sweep the frequency to determine spurious emission as seen on spectrum from span of 30 to 1G, 1G to 2.5G, 2.5G to 7.5G, 7.5G to 10G, 10G to 15G and 15G to 20GHz
- 4 Via Software, combine 6 spans of frequency range into one plot

9.4. Measurement Equipment Used:

Refer to section 2.4 in this report

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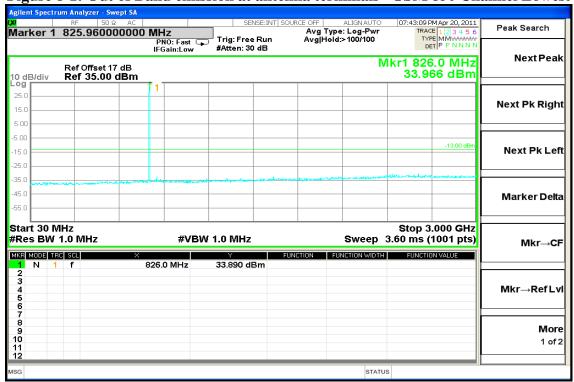


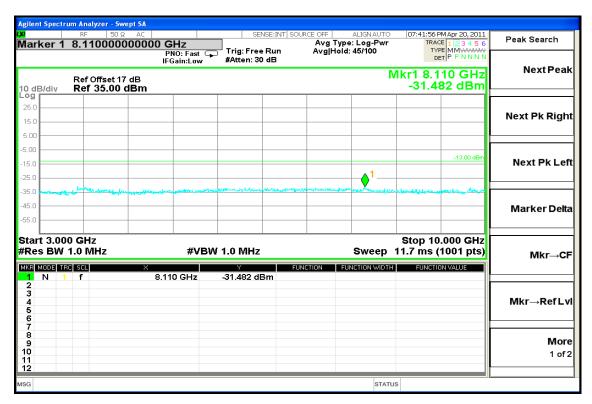
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9.5. Measurement Result:

Figure 8-1: Out of Band emission at antenna terminals-GSM 850 Channel Lowest





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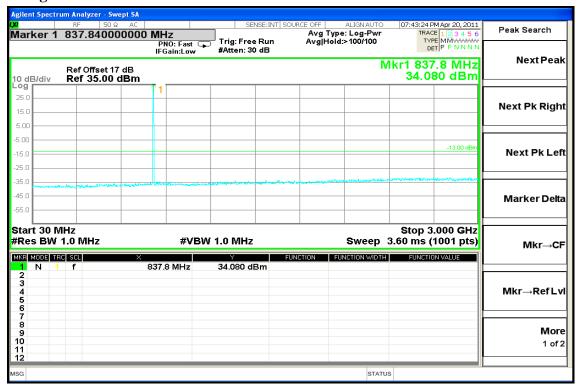
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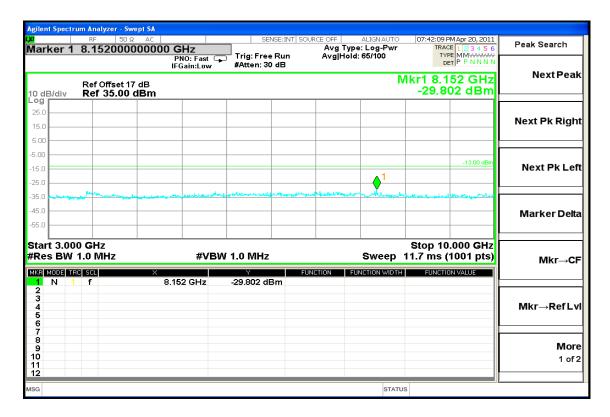


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Figure 8-2: Out of Band emission at antenna terminals -GSM 850 Channel Mid





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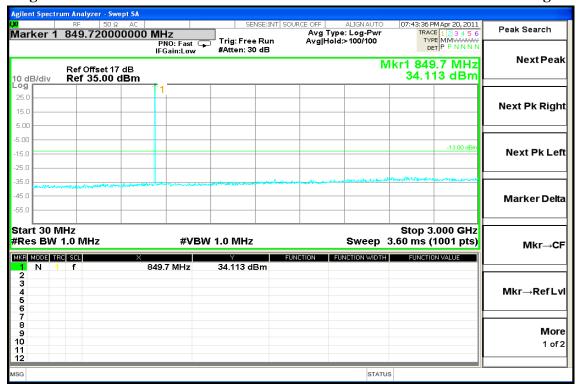
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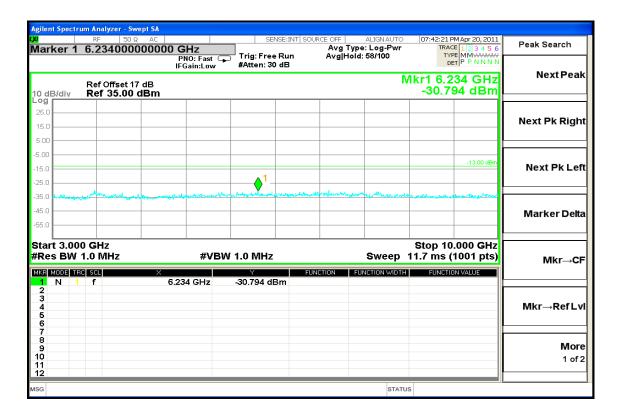


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Figure 8-3: Out of Band emission at antenna terminals-GSM 850 Channel Highest





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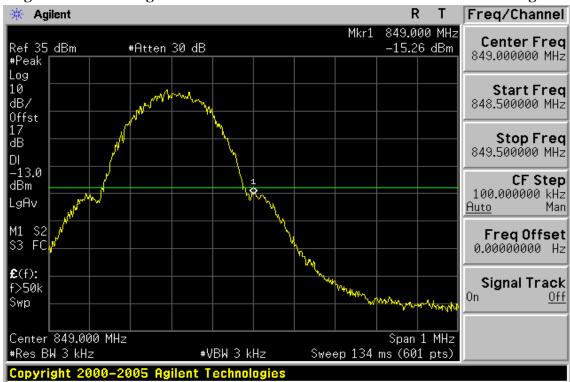
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Figure 8-4: Band edge emission at antenna terminals –GSM 850 Channel Lowest



Figure 8-5: Band edge emission at antenna terminals –GSM 850 Channel Highest



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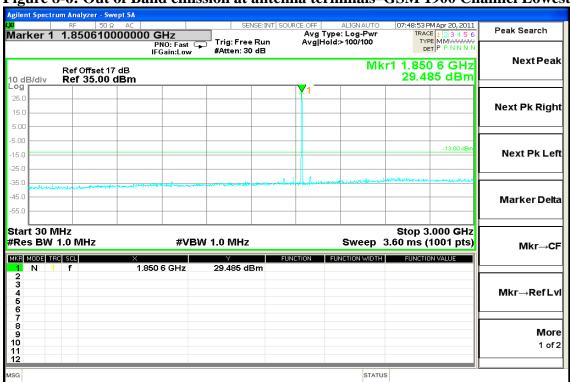
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Figure 8-6: Out of Band emission at antenna terminals-GSM 1900 Channel Lowest





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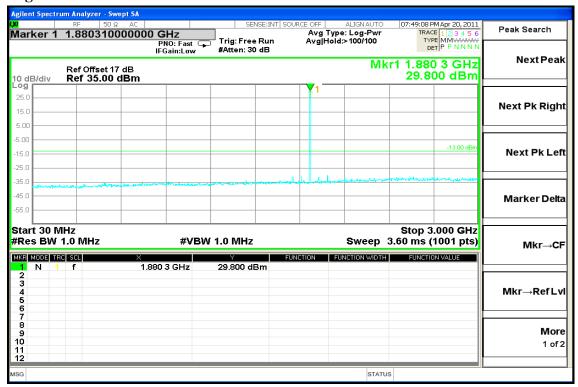
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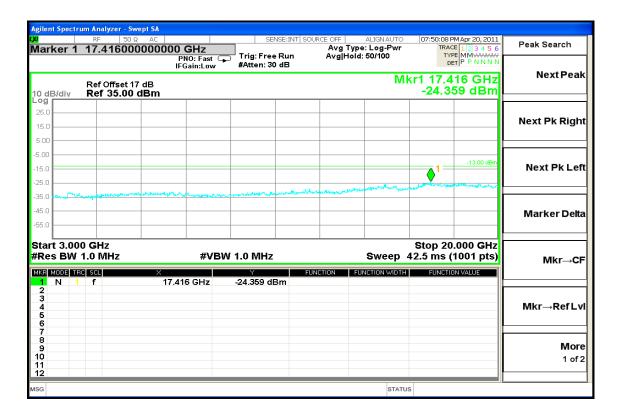


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Figure 8-7: Out of Band emission at antenna terminals -GSM 1900 Channel Mid





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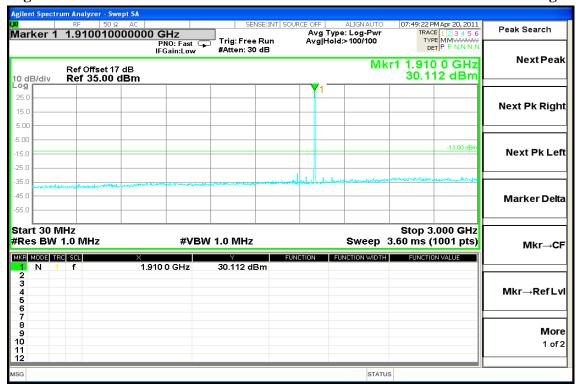
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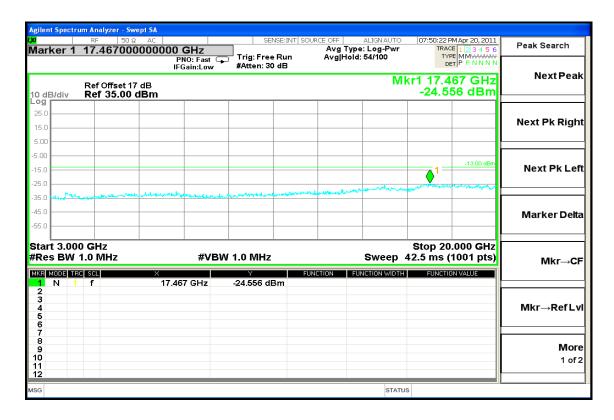


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Figure 8-8: Out of Band emission at antenna terminals -GSM 1900 Channel Highest





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Figure 8-9: Bad edge emission at antenna terminals -GSM 1900 Channel Lowest

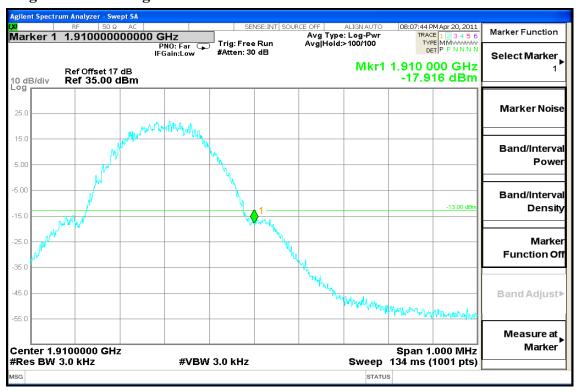
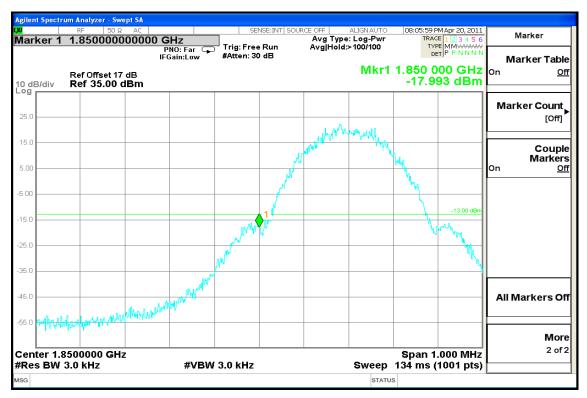


Figure 8-10: Band edge emission at antenna terminals -GSM 1900 Channel Highest



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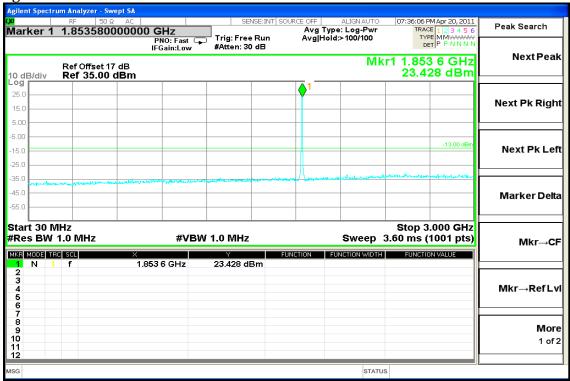
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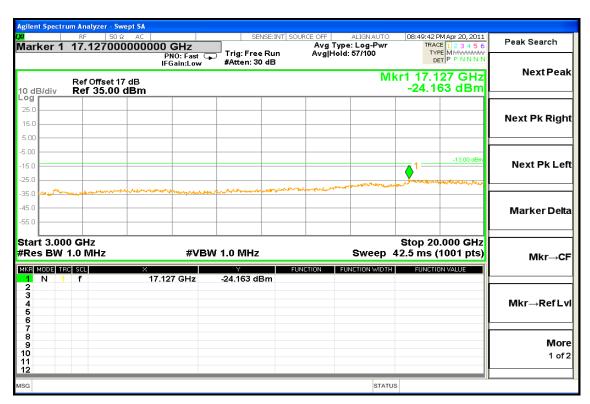


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Figure 8-11: Out of Band emission at antenna terminals-WCDMA II Channel Lowest





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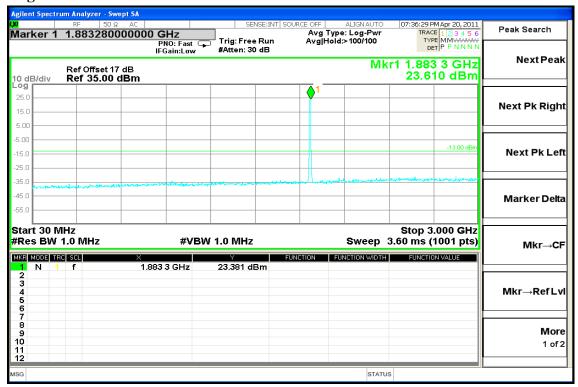
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Figure 8-12: Out of Band emission at antenna terminals –WCDMA II Channel Mid





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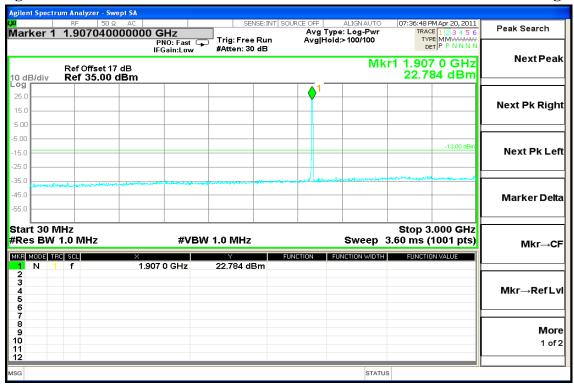
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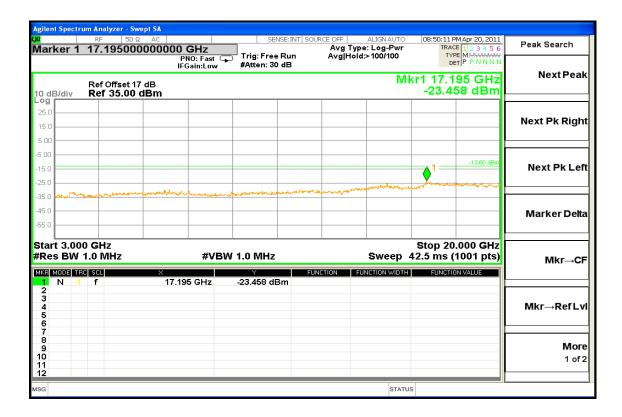


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Figure 8-13: Out of Band emission at antenna terminals-WCDMA II Channel Highest





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Figure 8-14: Bad edge emission at antenna terminals –WCDMA II Channel Lowest

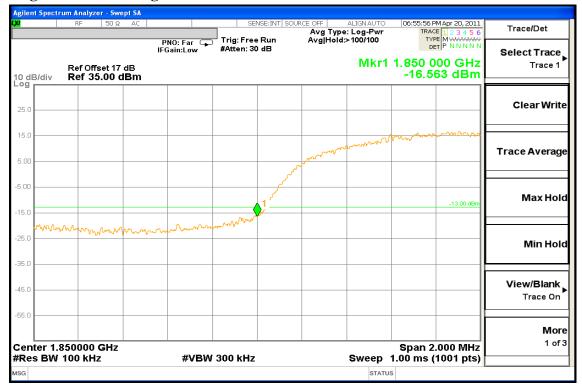


Figure 8-15: Band edge emission at antenna terminals –WCDMA II Channel Highest



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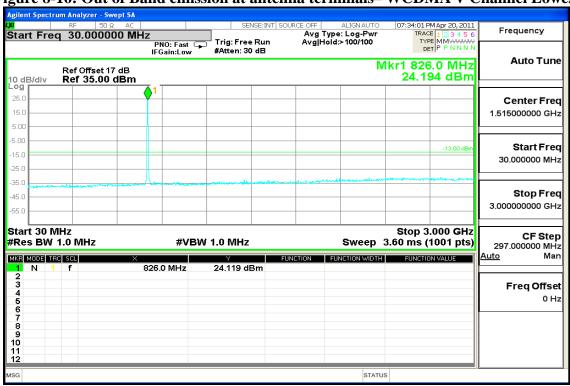
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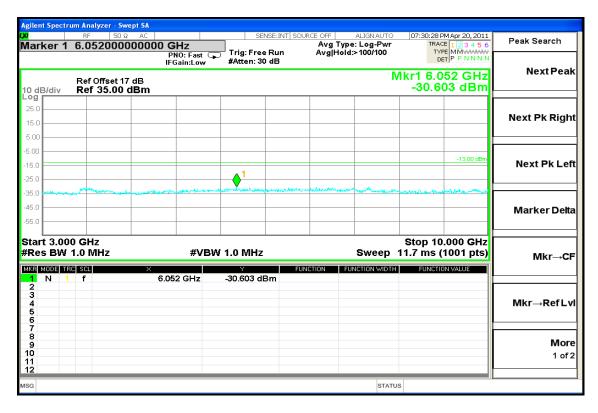


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Figure 8-16: Out of Band emission at antenna terminals-WCDMA V Channel Lowest





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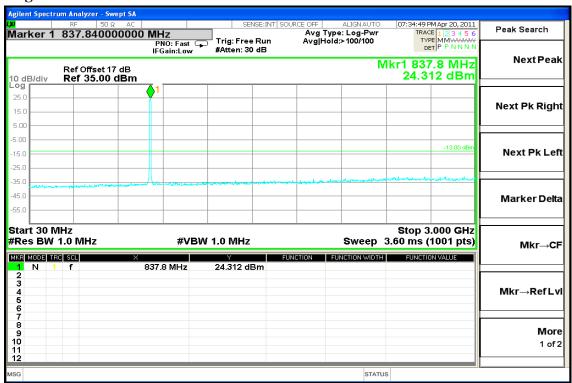
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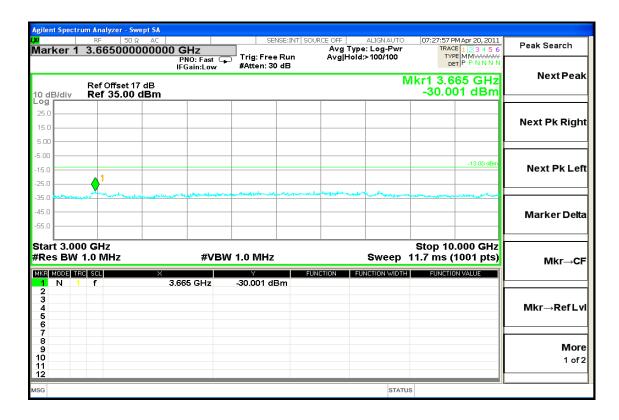


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Figure 8-17: Out of Band emission at antenna terminals -WCDMA V Channel Mid





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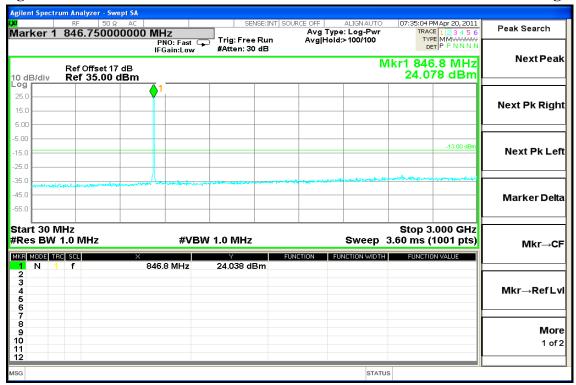
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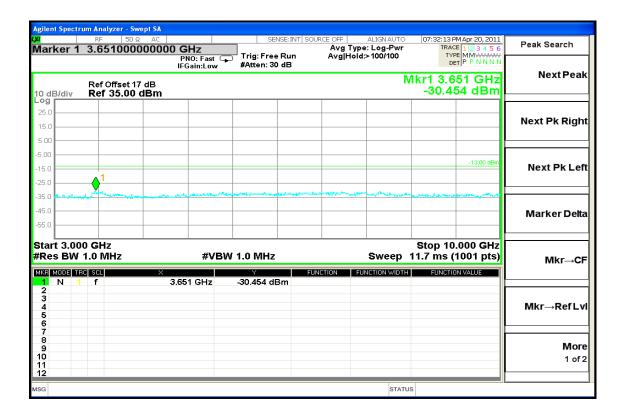


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Figure 8-18: Out of Band emission at antenna terminals-WCDMA V Channel Highest





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Figure 8-19: Bad edge emission at antenna terminals –WCDMA V Channel Lowest

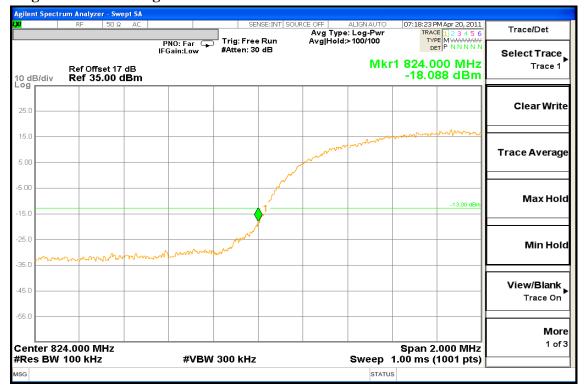


Figure 8-20: Band edge emission at antenna terminals –WCDMA V Channel Highest



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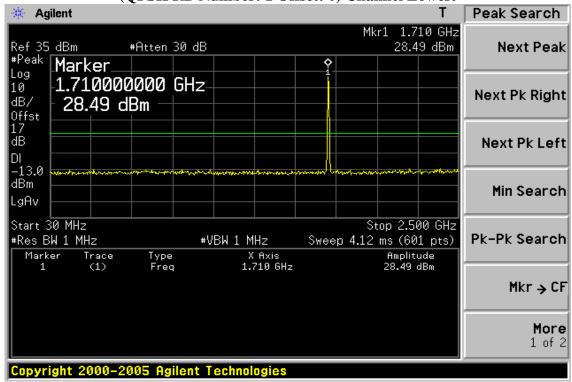


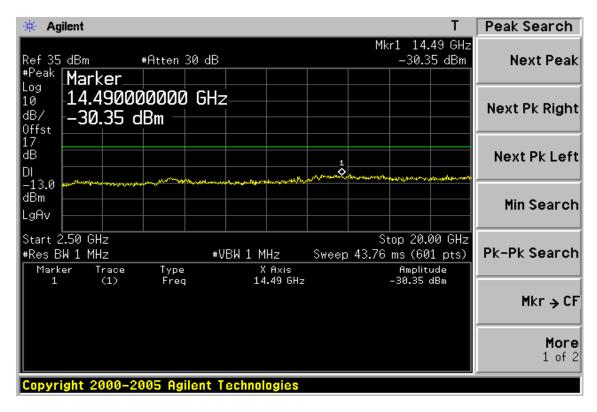


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Figure 8-21: Out of Band emission at antenna terminals–5MHz BW LTE-Band 4 (QPSK RB Number: 1 Offset: 0) Channel Lowest





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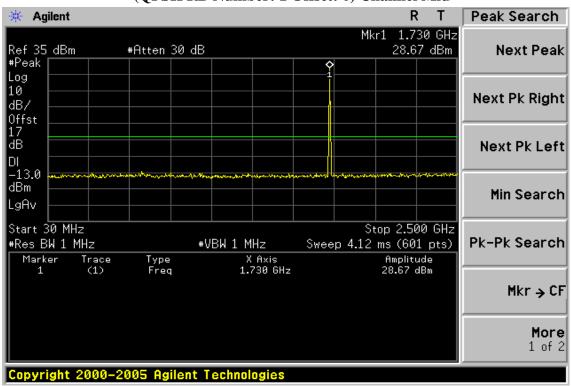
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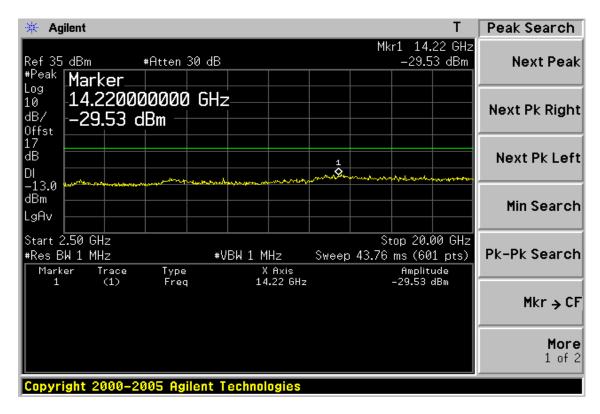


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Figure 8-22: Out of Band emission at antenna terminals –5MHz BW LTE-Band 4 (QPSK RB Number: 1 Offset: 0) Channel Mid





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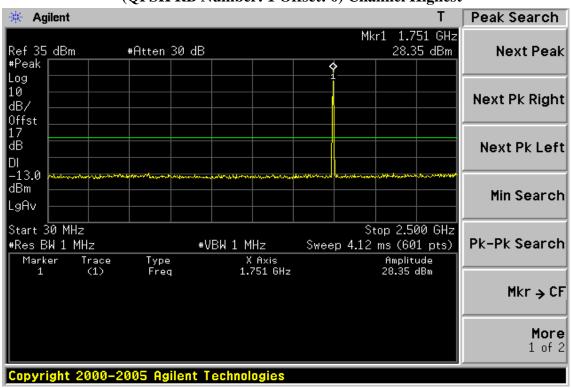
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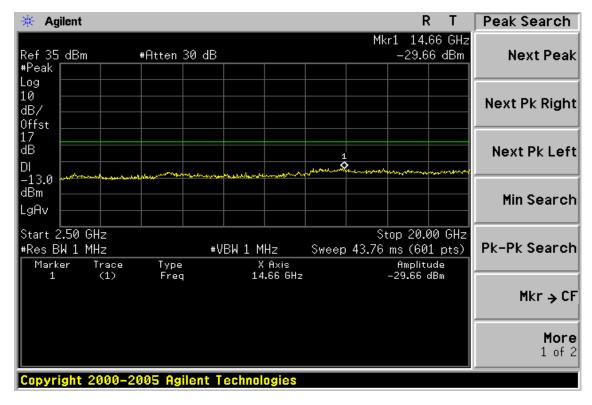


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Figure 8-23: Out of Band emission at antenna terminals–5MHz BW LTE-Band 4 (QPSK RB Number: 1 Offset: 0) Channel Highest





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Figure 8-24: Band edge emission at antenna terminals –5MHz BW LTE-Band 4 (QPSK RB Number: 1 Offset: 0) Channel Lowest

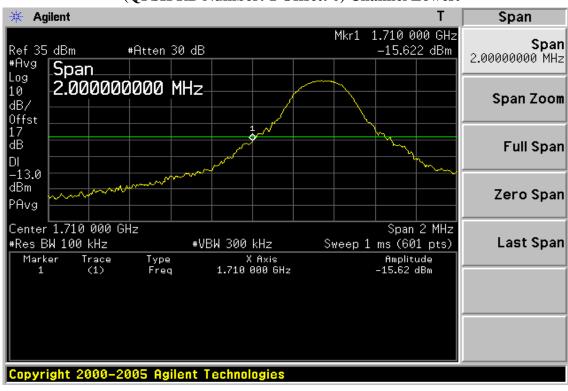


Figure 8-25: Band edge emission at antenna terminals –5MHz BW LTE-Band 4 (QPSK RB Number: 1 Offset: 24) Channel Highest



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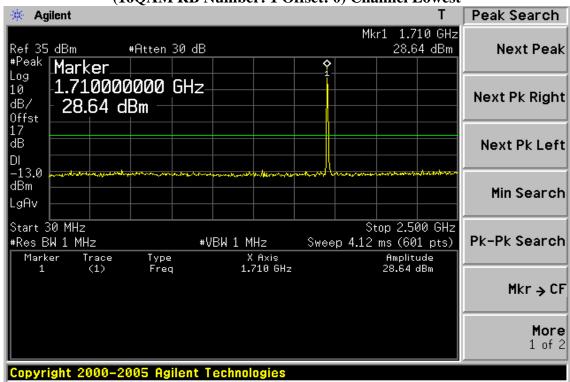
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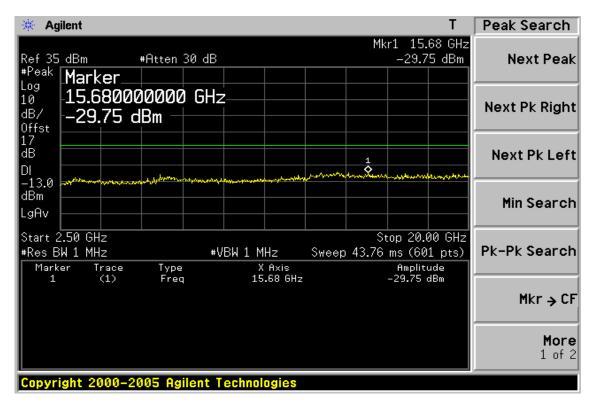


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Figure 8-26: Out of Band emission at antenna terminals–5MHz BW LTE-Band 4 (16OAM RB Number: 1 Offset: 0) Channel Lowest





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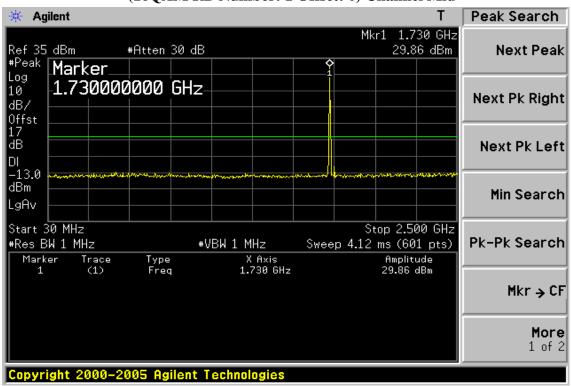
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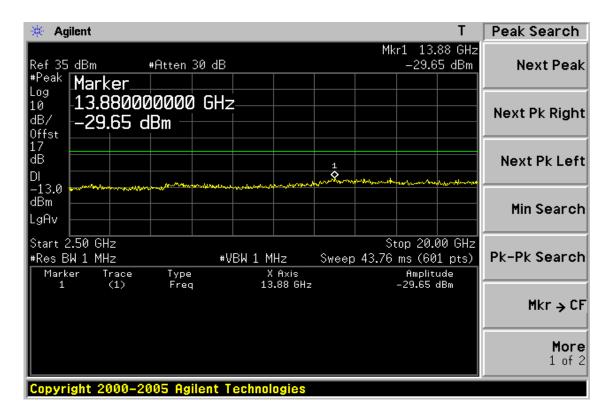


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Figure 8-27: Out of Band emission at antenna terminals –5MHz BW LTE-Band 4 (16QAM RB Number: 1 Offset: 0) Channel Mid





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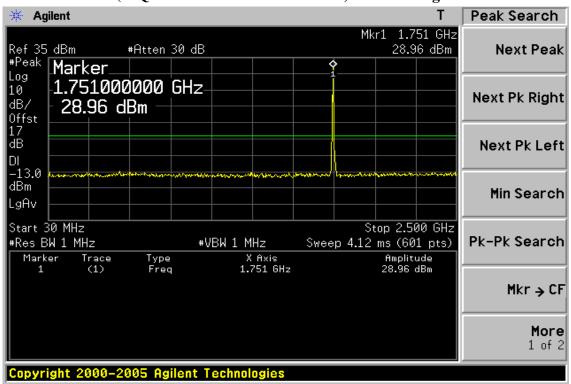
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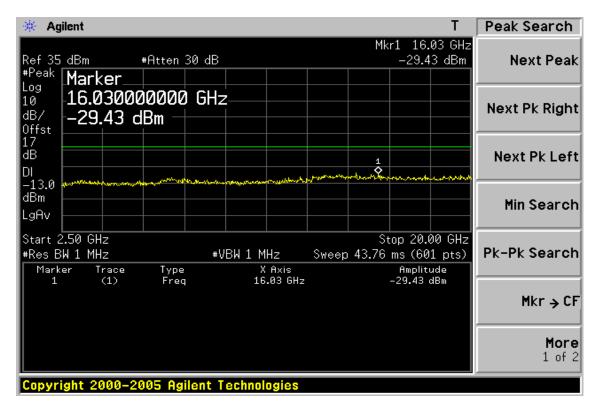


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Figure 8-28: Out of Band emission at antenna terminals–5MHz BW LTE-Band 4 (16QAM RB Number: 1 Offset: 0) Channel Highest





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Figure 8-29: Band edge emission at antenna terminals –5MHz BW LTE-Band 4 (16QAM RB Number: 1 Offset: 0) Channel Lowest

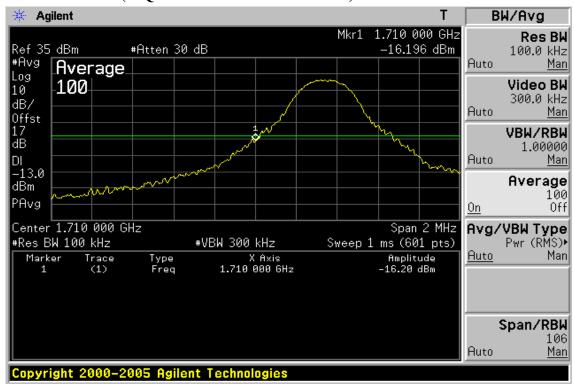


Figure 8-30: Band edge emission at antenna terminals –5MHz BW LTE-Band 4 (16QAM RB Number: 1 Offset: 24) Channel Highest



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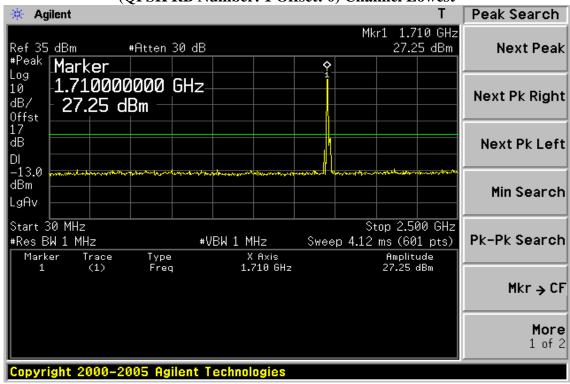


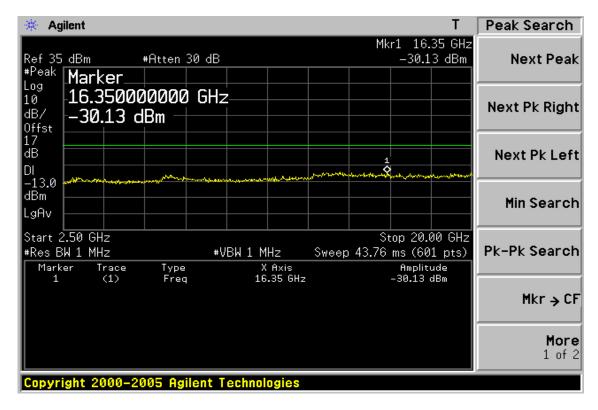


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Figure 8-31: Out of Band emission at antenna terminals—10MHz BW LTE-Band 4 (QPSK RB Number: 1 Offset: 0) Channel Lowest





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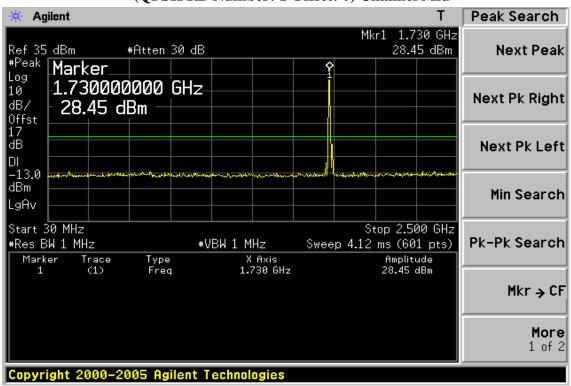
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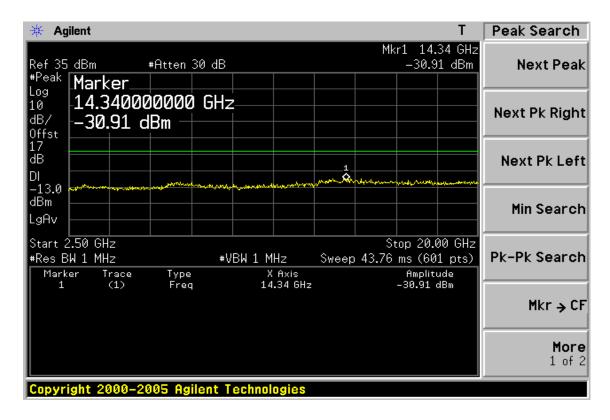


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Figure 8-32: Out of Band emission at antenna terminals –10MHz BW LTE-Band 4 (QPSK RB Number: 1 Offset: 0) Channel Mid





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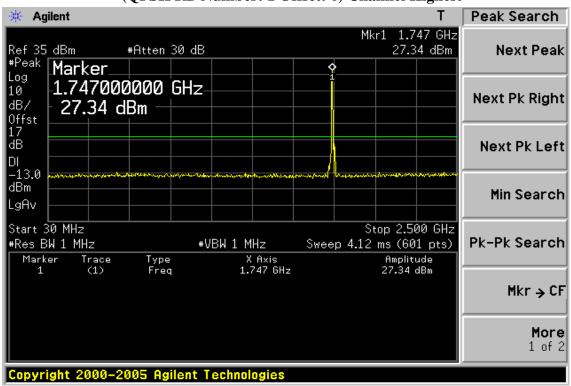
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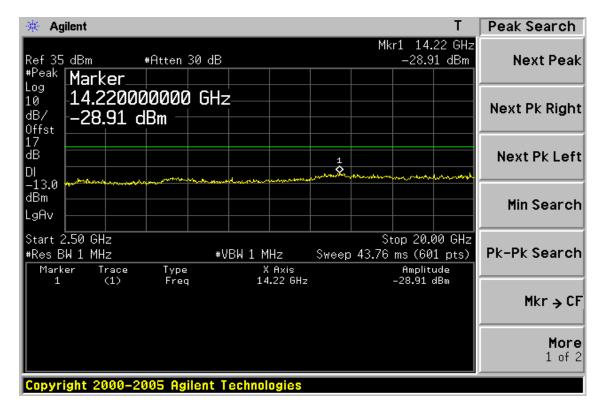


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Figure 8-33: Out of Band emission at antenna terminals–10MHz BW LTE-Band 4 (QPSK RB Number: 1 Offset: 0) Channel Highest





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Figure 8-34: Band edge emission at antenna terminals –10MHz BW LTE-Band 4 (QPSK RB Number: 1 Offset: 0) Channel Lowest

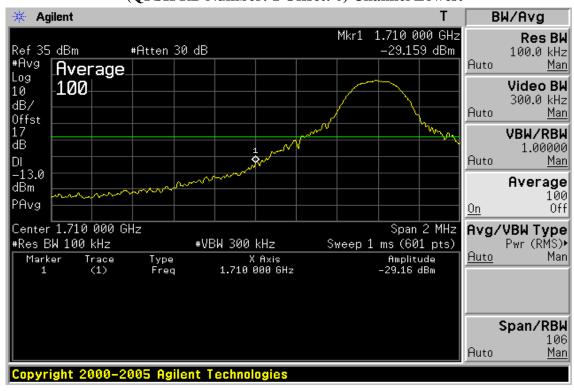
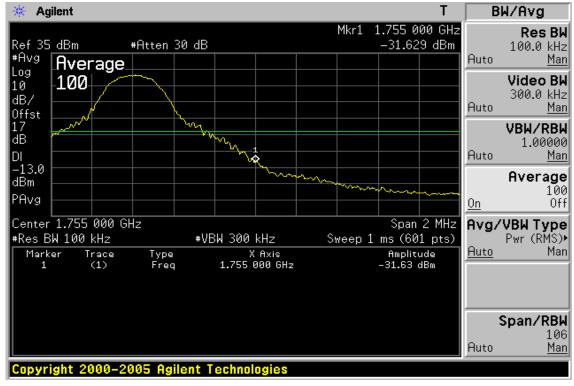


Figure 8-35: Band edge emission at antenna terminals –10MHz BW LTE-Band 4 (QPSK RB Number: 1 Offset:49) Channel Highest



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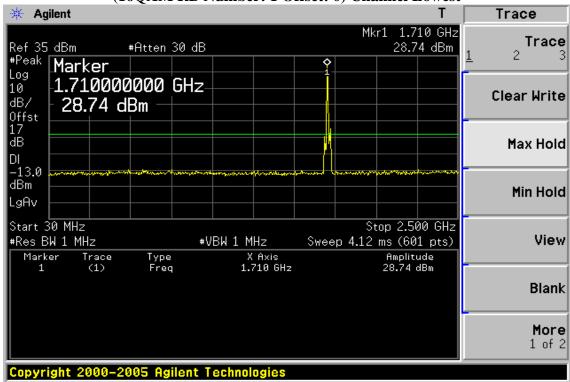
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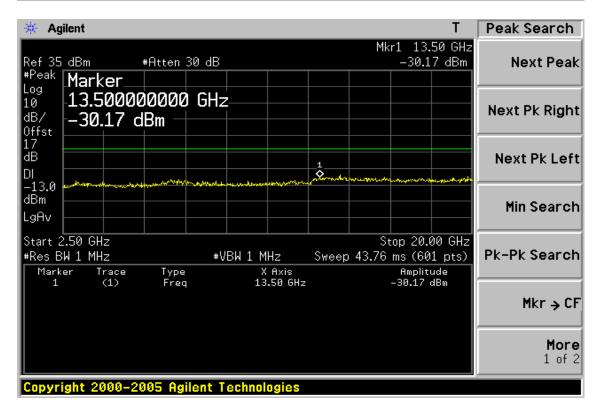


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Figure 8-36: Out of Band emission at antenna terminals-10MHz BW LTE-Band 4 (16QAM RB Number: 1 Offset: 0) Channel Lowest





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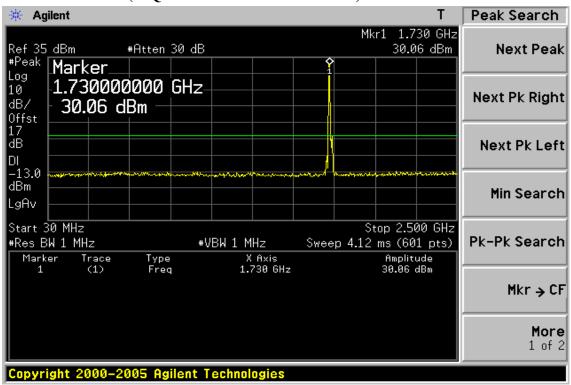
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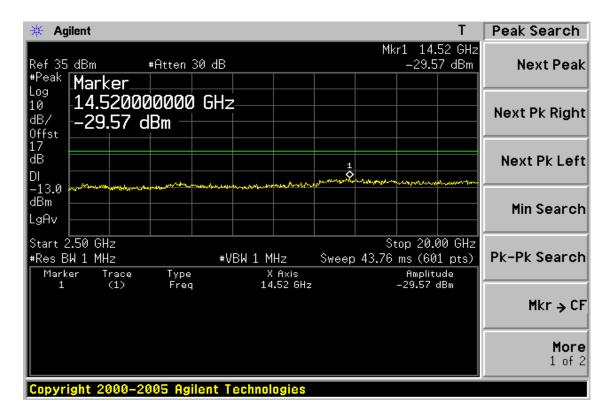


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Figure 8-37: Out of Band emission at antenna terminals –10MHz BW LTE-Band 4 (16QAM RB Number: 1 Offset: 0) Channel Mid





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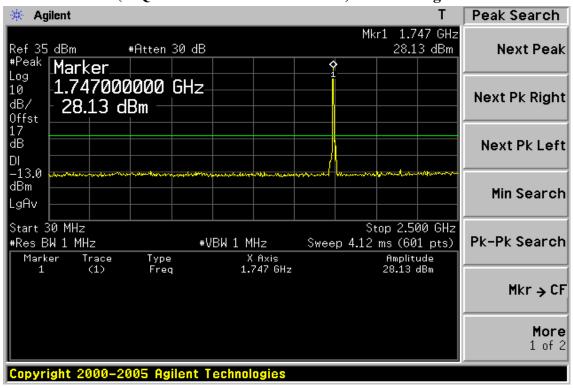
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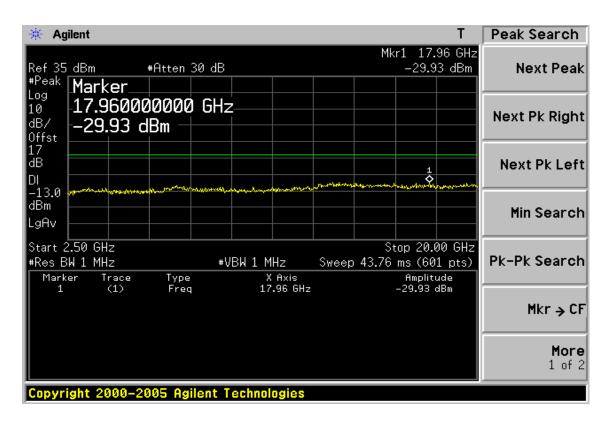


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Figure 8-38: Out of Band emission at antenna terminals–10MHz BW LTE-Band 4 (16QAM RB Number: 1 Offset: 0) Channel Highest





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Figure 8-39: Band edge emission at antenna terminals -10MHz BW LTE-Band 4 (16QAM RB Number: 1 Offset: 0) Channel Lowest



Figure 8-40: Band edge emission at antenna terminals -10MHz BW LTE-Band 4 (16QAM RB Number: 1 Offset: 49) Channel Highest



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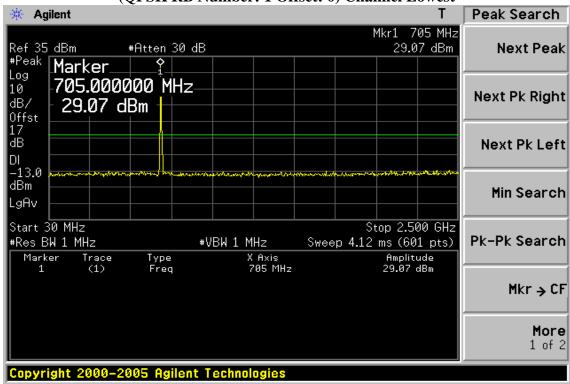


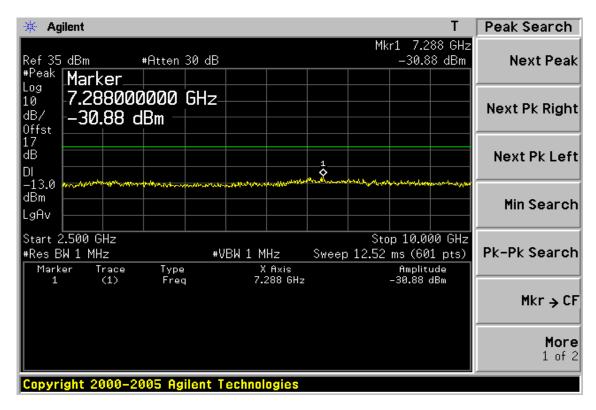


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Figure 8-41: Out of Band emission at antenna terminals–5MHz BW LTE-Band 17 (QPSK RB Number: 1 Offset: 0) Channel Lowest





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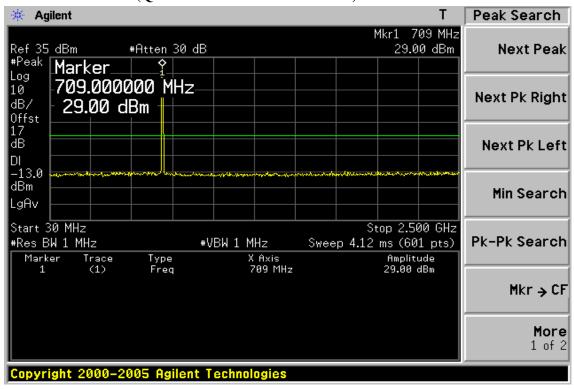
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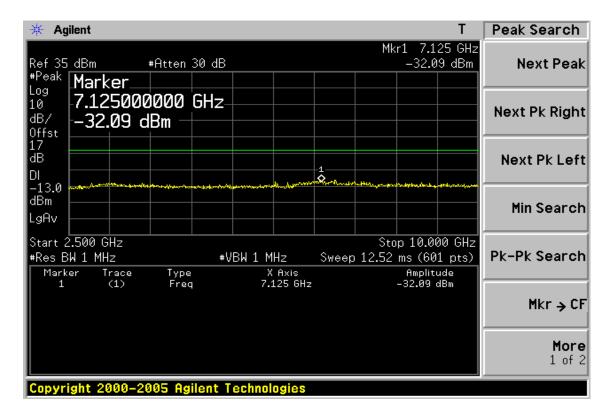


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Figure 8-42: Out of Band emission at antenna terminals –5MHz BW LTE-Band 17 (QPSK RB Number: 1 Offset: 0) Channel Mid





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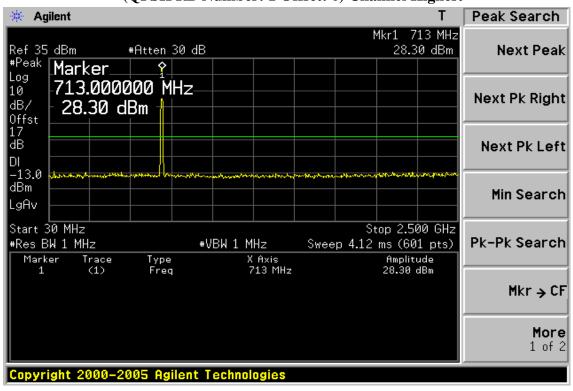
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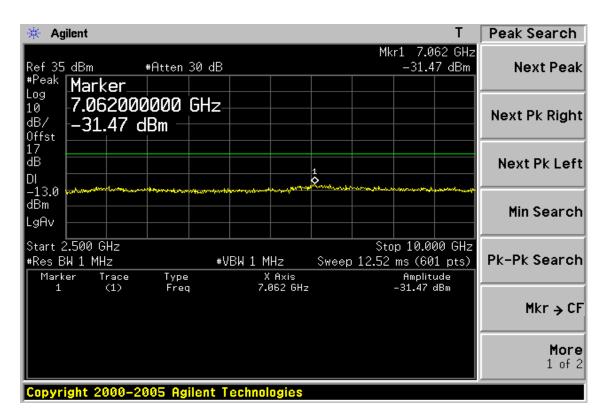


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Figure 8-43: Out of Band emission at antenna terminals-5MHz BW LTE-Band 17 (QPSK RB Number: 1 Offset: 0) Channel Highest





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Figure 8-44: Band edge emission at antenna terminals –5MHz BW LTE-Band 17 (QPSK RB Number: 1 Offset: 0) Channel Lowest

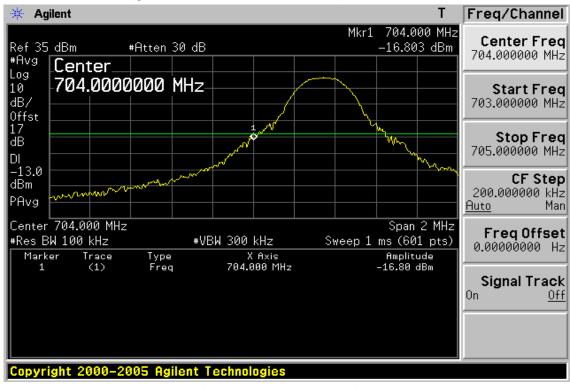
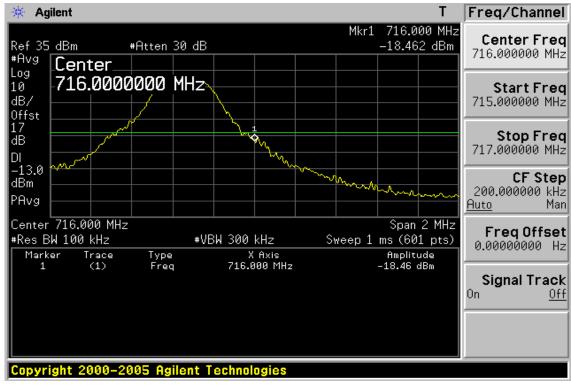


Figure 8-45: Band edge emission at antenna terminals –5MHz BW LTE-Band 17 (QPSK RB Number: 1 Offset: 24) Channel Highest



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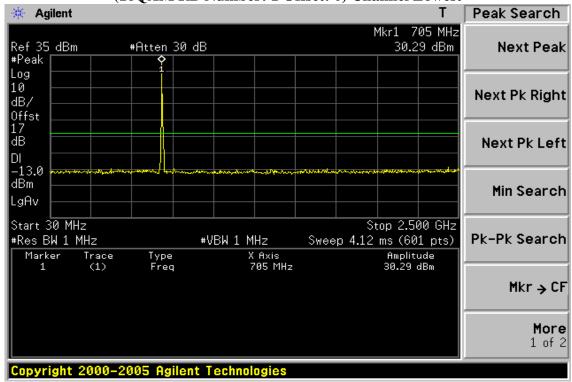


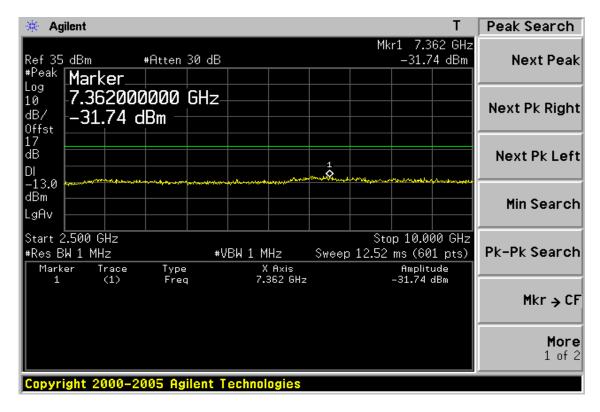


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Figure 8-46: Out of Band emission at antenna terminals–5MHz BW LTE-Band 17 (16QAM RB Number: 1 Offset: 0) Channel Lowest





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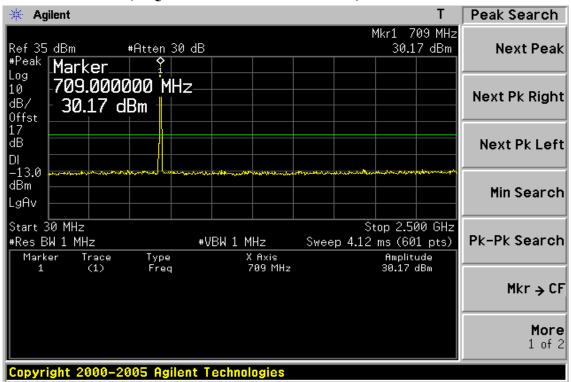
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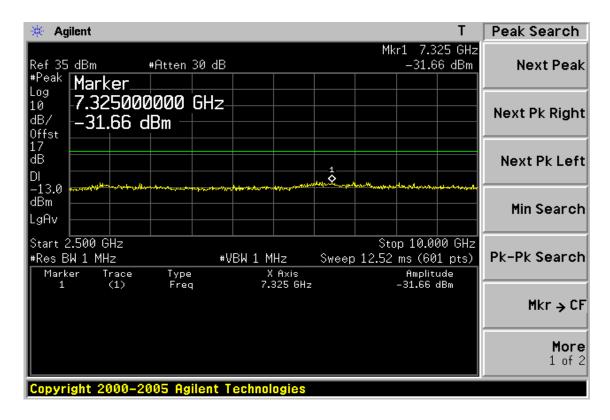


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Figure 8-47: Out of Band emission at antenna terminals –5MHz BW LTE-Band 17 (16QAM RB Number: 1 Offset: 0) Channel Mid





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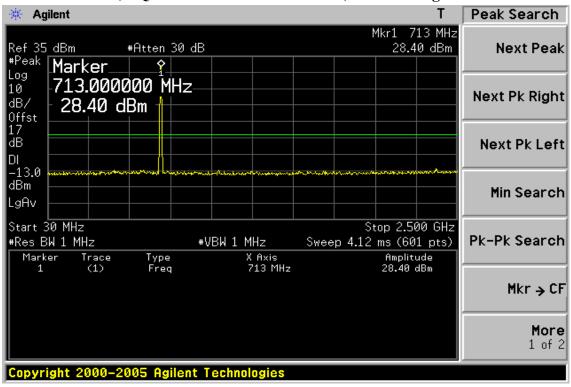
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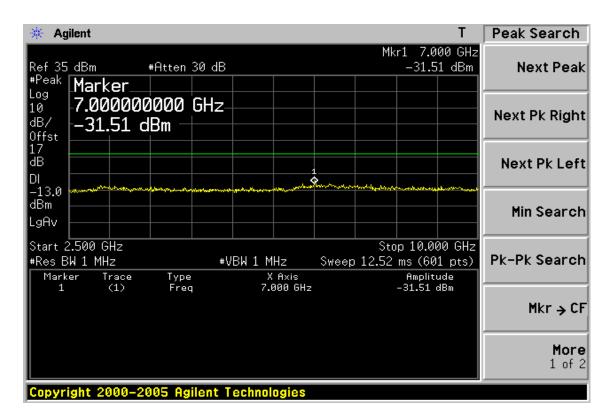


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Figure 8-48: Out of Band emission at antenna terminals-5MHz BW LTE-Band 17 (16QAM RB Number: 1 Offset: 0) Channel Highest





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Figure 8-49 Band edge emission at antenna terminals –5MHz BW LTE-Band 17 (16QAM RB Number: 1 Offset: 0) Channel Lowest

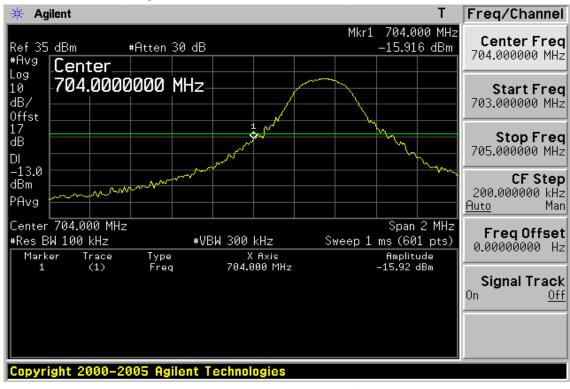


Figure 8-50: Band edge emission at antenna terminals –5MHz BW LTE-Band 17 (16QAM RB Number: 1 Offset: 24) Channel Highest



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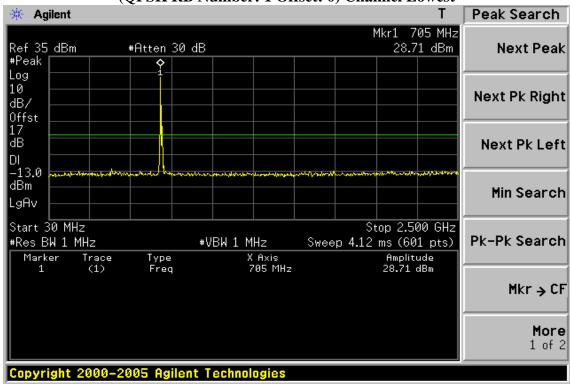


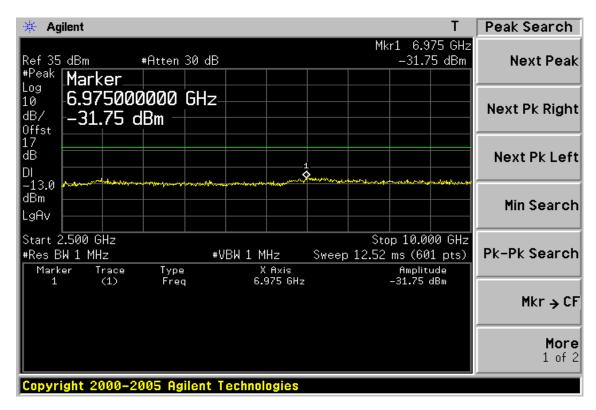


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Figure 8-51: Out of Band emission at antenna terminals-10MHz BW LTE-Band 17 (QPSK RB Number: 1 Offset: 0) Channel Lowest





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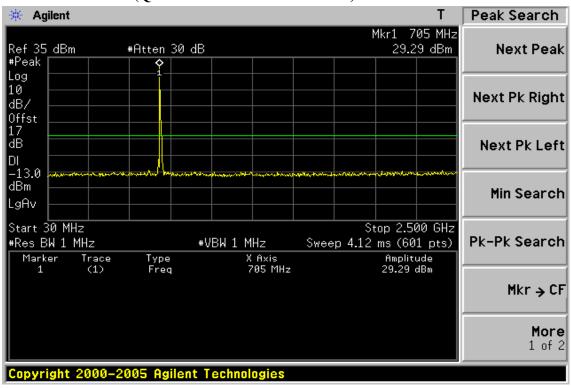
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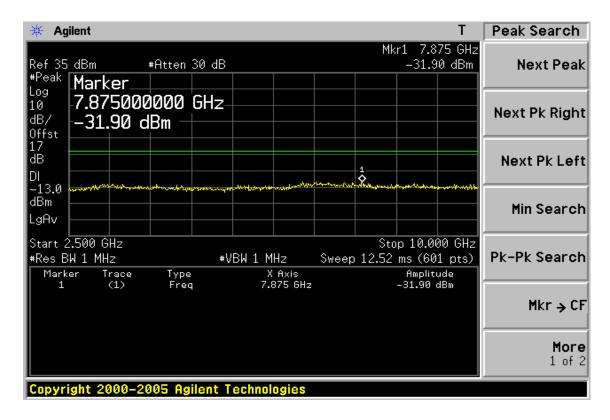


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Figure 8-52: Out of Band emission at antenna terminals –10MHz BW LTE-Band 17 (QPSK RB Number: 1 Offset: 0) Channel Mid





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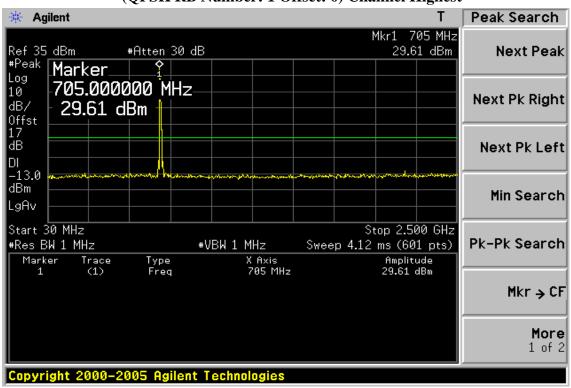
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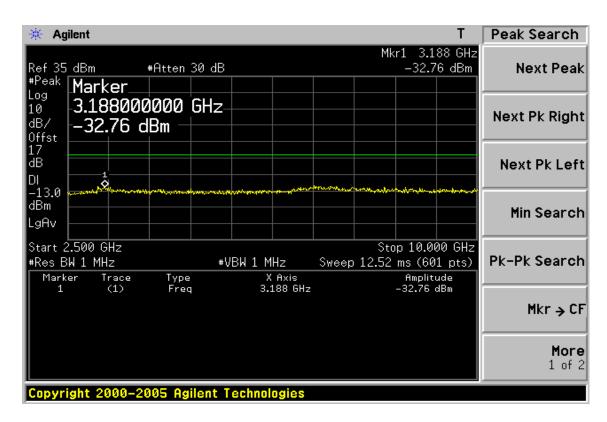


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Figure 8-53: Out of Band emission at antenna terminals–10MHz BW LTE-Band 17 (QPSK RB Number: 1 Offset: 0) Channel Highest





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Figure 8-54: Band edge emission at antenna terminals –10MHz BW LTE-Band 17 (QPSK RB Number: 1 Offset: 0) Channel Lowest

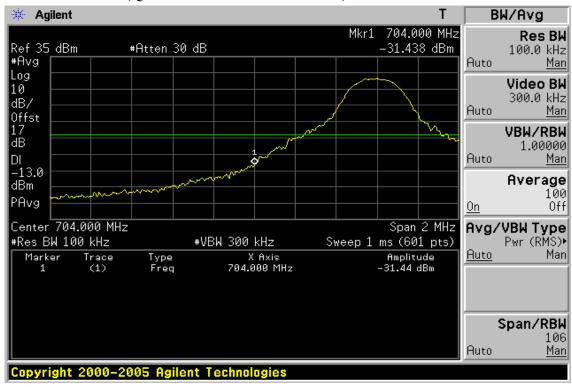
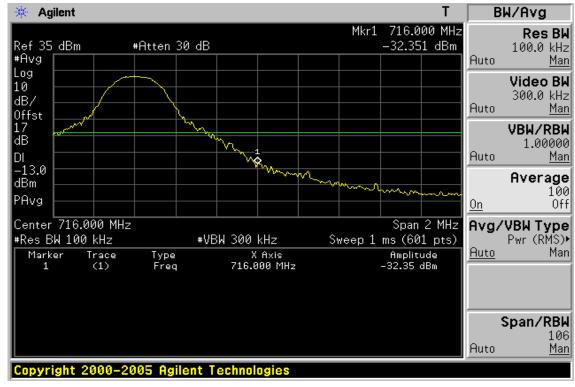


Figure 8-55: Band edge emission at antenna terminals –10MHz BW LTE-Band 17 (QPSK RB Number: 1 Offset: 49) Channel Highest



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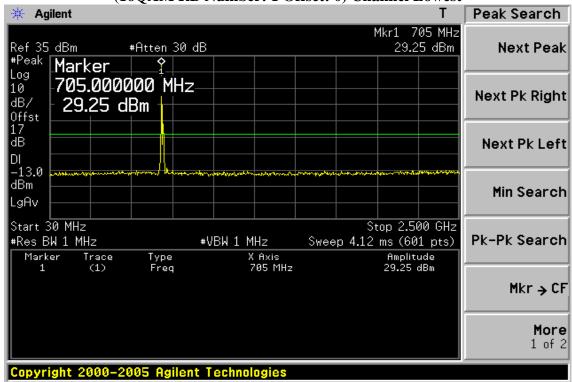
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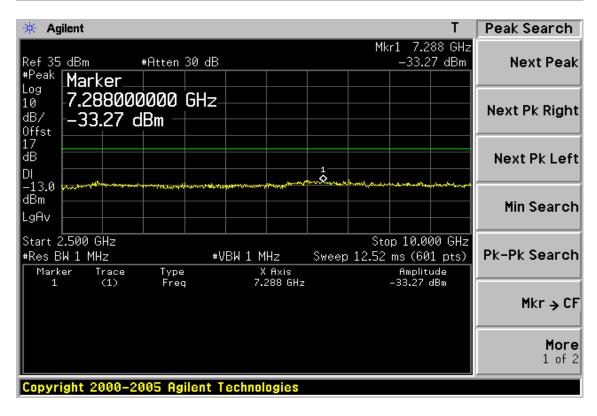


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Figure 8-56: Out of Band emission at antenna terminals–10MHz BW LTE-Band 17 (16QAM RB Number: 1 Offset: 0) Channel Lowest





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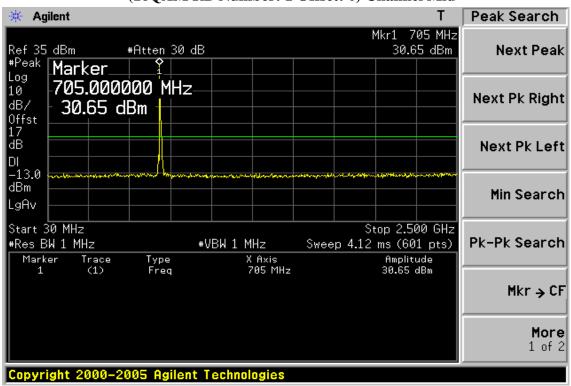
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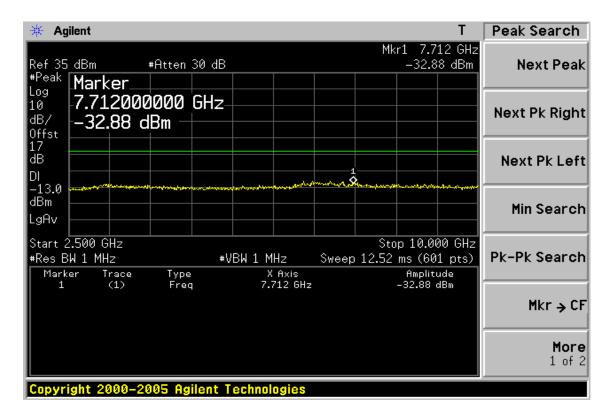


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Figure 8-57: Out of Band emission at antenna terminals –10MHz BW LTE-Band 17 (16QAM RB Number: 1 Offset: 0) Channel Mid





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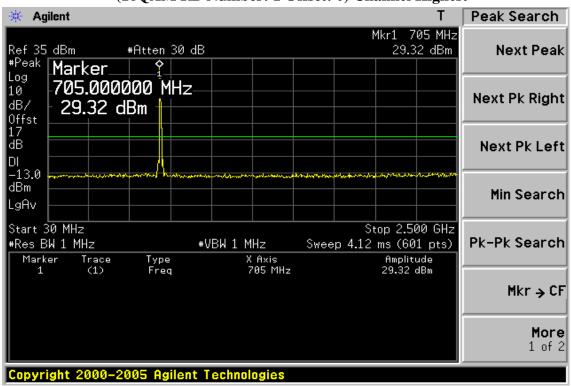
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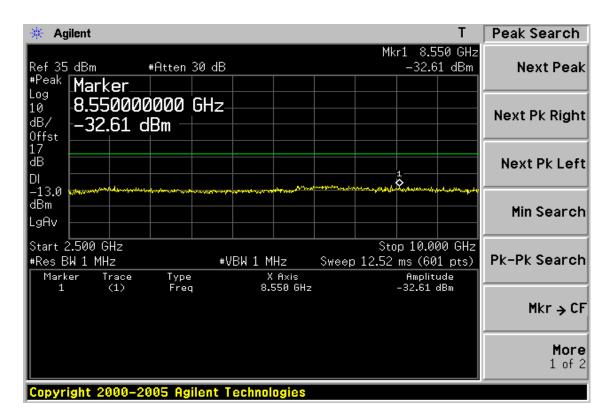


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Figure 8-58: Out of Band emission at antenna terminals—10MHz BW LTE-Band 17 (16QAM RB Number: 1 Offset: 0) Channel Highest





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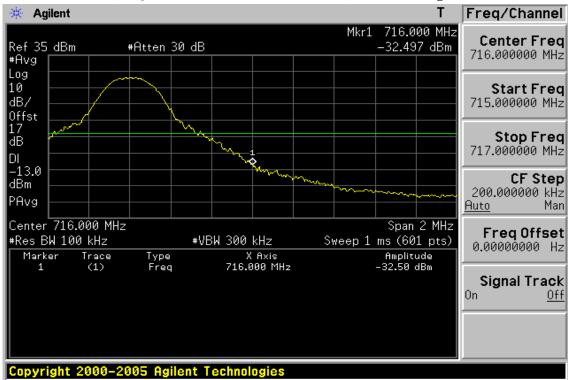
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Figure 8-59: Band edge emission at antenna terminals –10MHz BW LTE-Band 17 (16QAM RB Number: 1 Offset: 0) Channel Lowest



Figure 8-60: Band edge emission at antenna terminals –10MHz BW LTE-Band 17 (16QAM RB Number: 1 Offset: 49) Channel Highest



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10. FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT

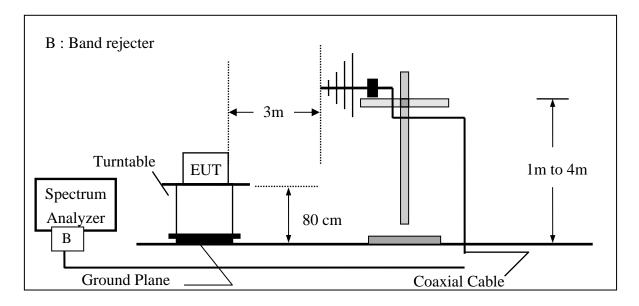
10.1. Standard Applicable:

According to FCC §2.1053,

FCC $\S22.917(a),\S24.238(a)$, $\S27.53(g)$ the magnitude of each spurious and harmonic emission that can be detected when the equipment is operated under the conditions specified in the instruction manual and/ or alignment procedure, shall not be less than $43 + 10 \log$ (mean output power in watts) dBc below the mean power output outside a license's frequency block (-13dBm)

10.2. EUT Setup (Block Diagram of Configuration):

Radiated Emission Test Set-Up, Frequency Below 1000MHz



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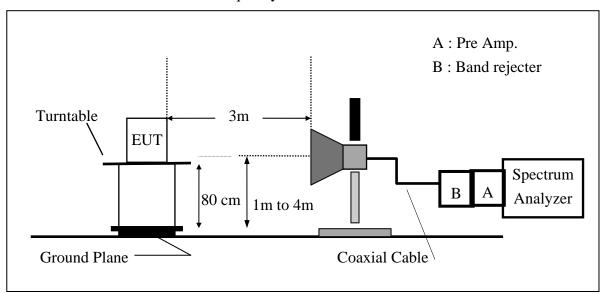
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Radiated Emission Test Set-UP Frequency Over 1 GHz



10.3. Measurement Procedure:

The EUT was placed on a non-conductive; The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

The frequency range up to tenth harmonic was investigated for each of three fundamental frequency (low, middle and high channels). Once spurious emission was identified, the power of the emission was determined using the substitution method.

The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency.

ERP= S.G. output (dBm) + Antenna Gain (dBd) – Cable Loss (dB)

EIRP = S.G. output (dBm) + Antenna Gain(dBi) – Cable Loss (dB)

10.4. Measurement Equipment Used:

Refer to section 2.4 in this report

10.5. Measurement Result:

Refer to attach tabular data sheets.

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Radiated Spurious Emission Measurement Result: GSM 850 Mode

Operation Mode : TX CH Low Mode Test Date: Apr. 23, 2011

Fundamental Frequency : 824.20 MHz Test By: Jazz Ver Temperature Pol: : 25°℃

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
187.14	50.92	V	-49.71	-7.83	1.68	-59.21	-13.00	-46.21
297.95	48.52	V	-49.80	-7.92	2.16	-59.88	-13.00	-46.88
322.94	45.50	V	-52.47	-7.79	2.26	-62.51	-13.00	-49.51
398.60	38.42	V	-57.14	-7.66	2.51	-67.30	-13.00	-54.30
621.70	32.75	V	-56.54	-7.80	3.09	-67.42	-13.00	-54.42
736.16	33.24	V	-54.51	-7.87	3.42	-65.80	-13.00	-52.80
824.00	71.58	V	-14.81	-7.87	3.62	-26.31	-13.00	-13.31
1648.40	50.20	V	-54.38	9.29	5.23	-50.32	-13.00	-37.32
2472.60		V		10.08	6.53		-13.00	
3296.80		V		12.17	7.71		-13.00	
4121.00		V		12.61	8.86		-13.00	
4945.20		V		12.65	9.74		-13.00	
5769.40		V		13.55	10.54		-13.00	
6593.60		V		12.05	11.30		-13.00	
7417.80		V		11.49	12.10		-13.00	
8242.00		V		11.48	12.71		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark"---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dBd/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: GSM 850 Mode

Operation Mode : TX CH Low Mode Test Date: Apr. 23, 2011

Fundamental Frequency : 824.20 MHz Test By: Jazz Temperature : 25° C Pol: Hor

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out- put (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
251.16	45.32	Н	-53.86	-7.89	1.99	-63.75	-13.00	-50.75
322.94	46.48	Н	-50.97	-7.79	2.26	-61.02	-13.00	-48.02
398.60	35.14	Н	-61.31	-7.66	2.51	-71.48	-13.00	-58.48
485.74	33.51	Н	-60.07	-7.71	2.76	-70.54	-13.00	-57.54
621.70	32.80	Н	-57.47	-7.80	3.09	-68.36	-13.00	-55.36
704.15	33.43	Н	-54.98	-7.86	3.30	-66.14	-13.00	-53.14
824.00	82.56	Н	-3.71	-7.87	3.62	-15.21	-13.00	-2.21
1648.40	46.10	Н	-58.30	9.29	5.23	-54.24	-13.00	-41.24
2472.60		Н		10.08	6.53		-13.00	
3296.80		Н		12.17	7.71		-13.00	
4121.00		Н		12.61	8.86		-13.00	
4945.20		Н		12.65	9.74		-13.00	
5769.40		Н		13.55	10.54		-13.00	
6593.60		Н		12.05	11.30		-13.00	
7417.80		Н		11.49	12.10		-13.00	
8242.00		Н		11.48	12.71		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark"---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dBd/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: GSM 850 Mode

: TX CH Mid Mode Operation Mode Test Date: Apr. 23, 2011

Fundamental Frequency: 836.60 MHz Test By: Jazz Temperature Pol: Ver : 25℃

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
257.95	49.33	V	-50.30	-7.89	2.02	-60.21	-13.00	-47.21
325.85	45.53	V	-52.40	-7.78	2.27	-62.44	-13.00	-49.44
396.66	38.18	V	-57.46	-7.66	2.50	-67.62	-13.00	-54.62
524.70	32.39	V	-60.93	-7.74	2.88	-71.55	-13.00	-58.55
616.85	32.72	V	-56.63	-7.80	3.07	-67.50	-13.00	-54.50
694.45	33.74	V	-55.64	-7.85	3.28	-66.77	-13.00	-53.77
1673.20	51.68	V	-52.88	9.36	5.27	-48.78	-13.00	-35.78
1686.00	50.39	V	-54.16	9.40	5.29	-50.04	-13.00	-37.04
2509.80		V		10.09	6.58		-13.00	
3346.40		V		12.28	7.79		-13.00	
4183.00		V		12.62	8.93		-13.00	
5019.60		V		12.67	9.81		-13.00	
5856.20		V		13.68	10.62		-13.00	
6692.80		V		11.95	11.39		-13.00	
7529.40		V		11.45	12.20		-13.00	
8366.00		V		11.59	12.81		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belongs to narrowband spurious emission.
- 2 Remark"---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dBd/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: GSM 850 Mode

Operation Mode : TX CH Mid Mode Test Date: Apr. 23, 2011

Fundamental Frequency : 836.60 MHz Test By: Jazz Temperature : 25° C Pol: Hor

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
253.10	45.47	Н	-53.65	-7.89	2.00	-63.55	-13.00	-50.55
322.94	45.15	Н	-52.30	-7.79	2.26	-62.35	-13.00	-49.35
398.60	35.27	Н	-61.18	-7.66	2.51	-71.35	-13.00	-58.35
461.65	32.47	Н	-61.32	-7.70	2.69	-71.71	-13.00	-58.71
612.00	32.52	Н	-57.94	-7.79	3.06	-68.80	-13.00	-55.80
730.34	33.43	Н	-59.87	-7.87	3.40	-71.14	-13.00	-58.14
1673.20		Н		9.36	5.27		-13.00	
1840.00	42.88	Н	-61.31	9.87	5.54	-56.99	-13.00	-43.99
2509.80		Н		10.09	6.58		-13.00	
3346.40		Н		12.28	7.79		-13.00	
4183.00		Н		12.62	8.93		-13.00	
5019.60		Н		12.67	9.81		-13.00	
5856.20		Н		13.68	10.62		-13.00	
6692.80		Н		11.95	11.39		-13.00	
7529.40		Н		11.45	12.20		-13.00	
8366.00		Н		11.59	12.81		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark"---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dBd/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: GSM 850 Mode

: TX CH High Mode Operation Mode Test Date: Apr. 23, 2011

Fundamental Frequency: 848.80 MHz Test By: Jazz Temperature : 25°C Pol: Ver

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
255.04	48.53	V	-51.19	-7.89	2.01	-61.10	-13.00	-48.10
322.94	45.19	V	-52.78	-7.79	2.26	-62.82	-13.00	-49.82
396.66	38.11	V	-57.53	-7.66	2.50	-67.69	-13.00	-54.69
466.50	33.94	V	-60.06	-7.71	2.71	-70.47	-13.00	-57.47
529.55	34.63	V	-58.53	-7.74	2.89	-69.17	-13.00	-56.17
697.36	33.49	V	-55.92	-7.86	3.28	-67.06	-13.00	-54.06
850.00	73.14	V	-12.97	-7.88	3.68	-24.53	-13.00	-11.53
1697.60	54.83	V	-49.71	9.44	5.31	-45.58	-13.00	-32.58
2546.40		V		10.20	6.63		-13.00	
3395.20		V		12.38	7.87		-13.00	
4244.00		V		12.63	9.00		-13.00	
5092.80		V		12.74	9.88		-13.00	
5941.60		V		13.81	10.70		-13.00	
6790.40		V		11.86	11.48		-13.00	
7639.20		V		11.40	12.27		-13.00	
8488.00		V		11.70	12.91		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark"---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dBd/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: GSM 850 Mode

: TX CH High Mode Operation Mode Test Date: Apr. 23, 2011

Fundamental Frequency: 848.80 MHz Test By: Jazz Temperature : 25°C Pol: Hor

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
253.10	46.57	Н	-52.55	-7.89	2.00	-62.45	-13.00	-49.45
325.85	45.12	Н	-52.30	-7.78	2.27	-62.35	-13.00	-49.35
398.60	36.44	Н	-60.01	-7.66	2.51	-70.18	-13.00	-57.18
519.85	32.62	Н	-60.14	-7.74	2.86	-70.74	-13.00	-57.74
582.90	32.58	Н	-58.47	-7.78	3.01	-69.25	-13.00	-56.25
699.30	33.91	Н	-53.75	-7.86	3.29	-64.90	-13.00	-51.90
850.00	82.84	Н	-3.35	-7.88	3.68	-14.91	-13.00	-1.91
1697.60	46.99	Н	-57.36	9.44	5.31	-53.23	-13.00	-40.23
2546.40		Н		10.20	6.63		-13.00	
3395.20		Н		12.38	7.87		-13.00	
4244.00		Н		12.63	9.00		-13.00	
5092.80		Н		12.74	9.88		-13.00	
5941.60		Н		13.81	10.70		-13.00	
6790.40		Н		11.86	11.48		-13.00	
7639.20		Н		11.40	12.27		-13.00	
8488.00		Н		11.70	12.91		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark"---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dBd/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: GSM 1900 Mode

: TX CH Low Mode Operation Mode Test Date: Apr. 23, 2011

Fundamental Frequency: 1850.20MHz Test By: Jazz Temperature : 25°C Pol: Ver

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
185.20	45.84	V	-54.61	-7.83	1.67	-64.11	-13.00	-51.11
253.10	45.48	V	-54.31	-7.89	2.00	-64.20	-13.00	-51.20
325.85	41.12	V	-56.81	-7.78	2.27	-66.85	-13.00	-53.85
393.75	34.88	V	-60.89	-7.66	2.49	-71.04	-13.00	-58.04
612.00	33.14	V	-56.27	-7.79	3.06	-67.13	-13.00	-54.13
972.84	79.25	V	-4.84	-8.00	3.95	-16.79	-13.00	-3.79
3700.40	39.92	V	-58.01	12.61	8.31	-53.71	-13.00	-40.71
5550.60		V		13.23	10.33		-13.00	
7400.80		V		11.50	12.08		-13.00	
9251.00		V		11.92	13.50		-13.00	
11101.20		V		11.66	15.11		-13.00	
12951.40		V		13.63	16.60		-13.00	
14801.60		V		12.76	17.95		-13.00	
16651.80		V		15.92	19.14		-13.00	
18502.00		V		18.75	10.40		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark"---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dBd/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: GSM 1900 Mode

: TX CH Low Mode Operation Mode Test Date: Apr. 23, 2011

Fundamental Frequency: 1850.20MHz Test By: Jazz Temperature : 25°C Pol: Hor

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
187.14	45.39	Н	-55.26	-7.83	1.68	-64.77	-13.00	-51.77
253.10	41.43	Н	-57.69	-7.89	2.00	-67.59	-13.00	-54.59
321.00	40.65	Н	-56.82	-7.80	2.25	-66.87	-13.00	-53.87
451.65	33.00	Н	-60.88	-7.70	2.66	-71.24	-13.00	-58.24
515.00	32.32	Н	-60.61	-7.73	2.85	-71.19	-13.00	-58.19
660.50	32.59	Н	-56.69	-7.82	3.19	-67.70	-13.00	-54.70
1850.00	77.81	Н	-26.37	9.90	5.56	-22.03	-13.00	-9.03
3700.40	47.19	Н	-50.85	12.61	8.31	-46.55	-13.00	-33.55
5550.60		Н		13.23	10.33		-13.00	
7400.80		Н		11.50	12.08		-13.00	
9251.00		Н		11.92	13.50		-13.00	
11101.20		Н		11.66	15.11		-13.00	
12951.40		Н		13.63	16.60		-13.00	
14801.60		Н		12.76	17.95		-13.00	
16651.80		Н		15.92	19.14		-13.00	
18502.00		Н		18.75	10.40		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark"---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dBd/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: GSM 1900 Mode

Operation Mode : TX CH Mid Mode Test Date: Apr. 23, 2011

Fundamental Frequency: 1880MHz Test By: Jazz Temperature Pol: Ver : 25℃

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
257.95	43.57	V	-56.06	-7.89	2.02	-65.97	-13.00	-52.97
325.85	40.80	V	-57.13	-7.78	2.27	-67.17	-13.00	-54.17
398.60	34.68	V	-60.88	-7.66	2.51	-71.04	-13.00	-58.04
546.04	31.65	V	-60.97	-7.76	2.95	-71.67	-13.00	-58.67
619.76	32.78	V	-56.53	-7.80	3.08	-67.41	-13.00	-54.41
804.06	32.22	V	-54.39	-7.87	3.58	-65.84	-13.00	-52.84
3760.00	38.90	V	-58.76	12.60	8.39	-54.54	-13.00	-41.54
5640.00		V		13.36	10.41		-13.00	
7520.00		V		11.45	12.19		-13.00	
9400.00		V		11.93	13.61		-13.00	
11280.00		V		11.92	15.27		-13.00	
13160.00		V		13.33	16.71		-13.00	
15040.00		V		13.76	18.15		-13.00	
16920.00		V		15.27	19.32		-13.00	
18800.00		V		18.68	16.58		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark"---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dBd/dBi) Cable loss (dB)

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Report No.: EH/2011/40003 Issue Date: May. 11, 2011

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Radiated Spurious Emission Measurement Result: GSM 1900 Mode

Operation Mode : TX CH Mid Mode Test Date: Apr. 23, 2011

Fundamental Frequency : 1880 MHz Test By: Jazz Temperature : 25°C Pol: Hor

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
253.10	40.45	Н	-58.67	-7.89	2.00	-68.57	-13.00	-55.57
322.94	41.24	Н	-56.21	-7.79	2.26	-66.26	-13.00	-53.26
429.64	32.75	Н	-62.17	-7.68	2.60	-72.46	-13.00	-59.46
548.95	31.99	Н	-59.77	-7.76	2.96	-70.48	-13.00	-57.48
604.24	33.94	Н	-56.68	-7.79	3.04	-67.51	-13.00	-54.51
738.10	32.34	Н	-62.41	-7.87	3.43	-73.71	-13.00	-60.71
3760.00	45.57	Н	-52.20	12.60	8.39	-47.99	-13.00	-34.99
5640.00	41.52	Н	-49.23	13.36	10.41	-46.28	-13.00	-33.28
7520.00		Н		11.45	12.19		-13.00	
9400.00		Н		11.93	13.61		-13.00	
11280.00		Н		11.92	15.27		-13.00	
13160.00		Н		13.33	16.71		-13.00	
15040.00		Н		13.76	18.15		-13.00	
16920.00		Н		15.27	19.32		-13.00	
18800.00		Н		18.68	16.58		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark"---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dBd/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: GSM 1900 Mode

Operation Mode : TX CH High Mode Test Date: Apr. 23, 2011

Fundamental Frequency: 1909.8 MHz Test By: Jazz Temperature Pol: Ver : 25℃

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
185.20	46.23	V	-54.22	-7.83	1.67	-63.72	-13.00	-50.72
253.10	42.95	V	-56.84	-7.89	2.00	-66.73	-13.00	-53.73
322.94	42.15	V	-55.82	-7.79	2.26	-65.86	-13.00	-52.86
400.54	34.56	V	-60.92	-7.66	2.51	-71.10	-13.00	-58.10
568.35	33.38	V	-58.04	-7.77	2.99	-68.80	-13.00	-55.80
668.26	32.77	V	-56.34	-7.83	3.21	-67.38	-13.00	-54.38
1910.00	77.63	V	-26.70	10.08	5.66	-22.28	-13.00	-9.28
3819.60	36.69	V	-60.70	12.60	8.47	-56.57	-13.00	-43.57
5729.40		V		13.49	10.50		-13.00	
7639.20		V		11.40	12.27		-13.00	
9549.00		V		11.95	13.74		-13.00	
11458.80		V		12.17	15.43		-13.00	
13368.60		V		12.97	16.82		-13.00	
15278.40		V		15.00	18.29		-13.00	
17188.20		V		14.47	19.52		-13.00	
19098.00		V		18.66	20.78		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark"---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dBd/dBi) Cable loss (dB)

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Report No.: EH/2011/40003 Issue Date: May. 11, 2011

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Radiated Spurious Emission Measurement Result: GSM 1900 Mode

Operation Mode : TX CH High Mode Test Date: Apr. 23, 2011

Fundamental Frequency: 1909.8 MHz Test By: Jazz Temperature Pol: Hor : 25℃

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
257.95	41.07	Н	-57.90	-7.89	2.02	-67.82	-13.00	-54.82
328.76	39.33	Н	-58.07	-7.76	2.28	-68.10	-13.00	-55.10
447.10	32.22	Н	-61.82	-7.70	2.65	-72.17	-13.00	-59.17
558.65	32.99	Н	-58.55	-7.77	2.97	-69.29	-13.00	-56.29
660.50	32.56	Н	-56.72	-7.82	3.19	-67.73	-13.00	-54.73
844.80	32.42	Н	-53.79	-7.88	3.67	-65.33	-13.00	-52.33
1910.00	76.54	Н	-27.57	10.08	5.66	-23.15	-13.00	-10.15
3819.60	37.78	Н	-59.73	12.60	8.47	-55.59	-13.00	-42.59
5729.40		Н		13.49	10.50		-13.00	
7639.20		Н		11.40	12.27		-13.00	
9549.00		Н		11.95	13.74		-13.00	
11458.80		Н		12.17	15.43		-13.00	
13368.60		Н		12.97	16.82		-13.00	
15278.40		Н		15.00	18.29		-13.00	
17188.20		Н		14.47	19.52		-13.00	·
19098.00		Н		18.66	20.78		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark"---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dBd/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: WCDMA II Mode

: TX CH Low Mode Operation Mode Test Date: Apr. 23, 2011

Fundamental Frequency: 1852.4MHz Test By: Jazz Temperature : 25°C Pol: Ver

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
134.76	39.59	V	-59.11	-7.79	1.52	-68.42	-13.00	-55.42
270.56	40.09	V	-59.13	-7.90	2.06	-69.09	-13.00	-56.09
386.96	37.09	V	-58.97	-7.65	2.47	-69.09	-13.00	-56.09
403.45	36.42	V	-58.97	-7.66	2.52	-69.15	-13.00	-56.15
584.84	32.79	V	-57.67	-7.78	3.01	-68.46	-13.00	-55.46
648.86	33.44	V	-55.49	-7.81	3.16	-66.46	-13.00	-53.46
1850.00	66.41	V	-37.98	9.90	5.56	-33.64	-13.00	-20.64
3704.80	37.31	V	-60.60	12.61	8.31	-56.31	-13.00	-43.31
5557.20		V		13.24	10.33		-13.00	
7409.60		V		11.49	12.09		-13.00	
9262.00		V		11.92	13.51		-13.00	
11114.40		V		11.68	15.12		-13.00	
12966.80		V		13.62	16.61		-13.00	
14819.20		V		12.83	17.96		-13.00	
16671.60		V		15.87	19.15		-13.00	
18524.00		V		18.74	10.86		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark "---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: WCDMA II Mode

: TX CH Low Mode Operation Mode Test Date: Apr. 23, 2011

Fundamental Frequency: 1852.4MHz Test By: Jazz Temperature Pol: Hor : 25℃

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out- put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
107.60	43.39	Н	-58.82	-7.77	1.39	-67.98	-13.00	-54.98
141.55	34.74	Н	-63.91	-7.79	1.55	-73.26	-13.00	-60.26
322.94	32.46	Н	-64.99	-7.79	2.26	-75.04	-13.00	-62.04
471.35	32.25	Н	-61.45	-7.71	2.72	-71.88	-13.00	-58.88
561.56	32.92	Н	-58.56	-7.77	2.98	-69.31	-13.00	-56.31
730.34	32.22	Н	-61.08	-7.87	3.40	-72.35	-13.00	-59.35
1850.00	74.44	Н	-29.74	9.90	5.56	-25.40	-13.00	-12.40
3704.80		Н		12.61	8.31		-13.00	
3716.00	36.46	Н	-61.51	12.61	8.33	-57.24	-13.00	-44.24
5557.20		Н		13.24	10.33		-13.00	
7409.60		Н		11.49	12.09		-13.00	
9262.00		Н		11.92	13.51		-13.00	
11114.40		Н		11.68	15.12		-13.00	
12966.80		Н		13.62	16.61		-13.00	
14819.20		Н		12.83	17.96		-13.00	
16671.60		Н		15.87	19.15		-13.00	
18524.00		Н		18.74	10.86		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark "---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: WCDMA II Mode

Operation Mode : TX CH Mid Mode Test Date: Apr. 23, 2011

Fundamental Frequency : 1880 MHz Test By: Jazz Temperature : 25°C Pol: Ver

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
141.55	39.28	V	-58.79	-7.79	1.55	-68.14	-13.00	-55.14
199.75	35.72	V	-66.04	-7.84	1.71	-75.59	-13.00	-62.59
303.54	36.05	V	-62.16	-7.90	2.18	-72.24	-13.00	-59.24
447.10	32.17	V	-61.85	-7.70	2.65	-72.20	-13.00	-59.20
602.30	32.69	V	-56.85	-7.79	3.04	-67.68	-13.00	-54.68
689.60	33.32	V	-56.01	-7.85	3.26	-67.12	-13.00	-54.12
3760.00	35.28	V	-62.38	12.60	8.39	-58.16	-13.00	-45.16
5640.00		V		13.36	10.41		-13.00	
7520.00		V		11.45	12.19		-13.00	
9400.00		V		11.93	13.61		-13.00	
11280.00		V		11.92	15.27		-13.00	
13160.00		V		13.33	16.71		-13.00	
15040.00		V		13.76	18.15		-13.00	
16920.00		V		15.27	19.32		-13.00	
18800.00		V		18.68	16.58		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark "---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: WCDMA II Mode

: TX CH Mid Mode Operation Mode Test Date: Apr. 23, 2011

Fundamental Frequency: 1880MHz Test By: Jazz Temperature Pol: Hor : 25℃

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
107.60	42.83	Н	-59.38	-7.77	1.39	-68.54	-13.00	-55.54
141.55	33.98	Н	-64.67	-7.79	1.55	-74.02	-13.00	-61.02
260.86	32.93	Н	-65.95	-7.90	2.03	-75.88	-13.00	-62.88
374.35	32.37	Н	-64.46	-7.65	2.43	-74.54	-13.00	-61.54
463.59	31.91	Н	-61.86	-7.71	2.70	-72.26	-13.00	-59.26
631.40	33.48	Н	-56.60	-7.80	3.11	-67.52	-13.00	-54.52
3760.00	34.16	Н	-63.61	12.60	8.39	-59.40	-13.00	-46.40
5640.00		Н		13.36	10.41		-13.00	
7520.00		Н		11.45	12.19		-13.00	
9400.00		Н		11.93	13.61		-13.00	
11280.00		Н		11.92	15.27		-13.00	
13160.00		Н		13.33	16.71		-13.00	
15040.00		Н		13.76	18.15		-13.00	
16920.00		Н		15.27	19.32		-13.00	
18800.00		Н		18.68	16.58		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark "---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: WCDMA II Mode

Operation Mode : TX CH High Mode Test Date: Apr. 23, 2011

Fundamental Frequency : 1907.6 MHz Test By: Jazz Temperature : 25°C Pol: Ver

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
107.60	46.94	V	-54.28	-7.77	1.39	-63.44	-13.00	-50.44
180.35	41.70	V	-58.32	-7.82	1.66	-67.80	-13.00	-54.80
386.96	32.38	V	-63.68	-7.65	2.47	-73.80	-13.00	-60.80
449.04	32.20	V	-61.76	-7.70	2.66	-72.12	-13.00	-59.12
648.86	32.95	V	-55.98	-7.81	3.16	-66.95	-13.00	-53.95
759.44	31.88	V	-55.14	-7.87	3.49	-66.50	-13.00	-53.50
1910.00	65.27	V	-39.06	10.08	5.66	-34.64	-13.00	-21.64
3815.20	35.09	V	-62.32	12.60	8.46	-58.18	-13.00	-45.18
5722.80		V		13.48	10.49		-13.00	
7630.40		V		11.41	12.27		-13.00	
9538.00		V		11.95	13.73		-13.00	
11445.60		V		12.15	15.42		-13.00	
13353.20		V		13.00	16.81		-13.00	
15260.80		V		14.91	18.28		-13.00	
17168.40		V		14.53	19.50		-13.00	
19076.00		V		18.65	20.76		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark "---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: WCDMA II Mode

Operation Mode : TX CH High Mode Test Date: Apr. 23, 2011

Fundamental Frequency : 1907.6 MHz Test By: Jazz Temperature : 25°C Pol: Hor

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out- put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
107.60	43.28	Н	-58.93	-7.77	1.39	-68.09	-13.00	-55.09
156.10	33.79	Н	-64.45	-7.80	1.60	-73.86	-13.00	-60.86
284.14	33.37	Н	-64.78	-7.91	2.11	-74.81	-13.00	-61.81
641.65	32.37	Н	-57.51	-7.81	3.14	-68.46	-13.00	-55.46
607.15	32.92	Н	-57.64	-7.79	3.05	-68.48	-13.00	-55.48
662.44	32.86	Н	-56.34	-7.82	3.19	-67.35	-13.00	-54.35
1910.00	70.78	Н	-33.33	10.08	5.66	-28.91	-13.00	-15.91
3815.20	33.47	Н	-64.06	12.60	8.46	-59.92	-13.00	-46.92
5722.80		Н		13.48	10.49		-13.00	
7630.40		Н		11.41	12.27		-13.00	
9538.00		Н		11.95	13.73		-13.00	
11445.60		Н		12.15	15.42		-13.00	
13353.20		Н		13.00	16.81		-13.00	
15260.80		Н		14.91	18.28		-13.00	
17168.40		Н		14.53	19.50		-13.00	
19076.00		Н		18.65	20.76		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark "---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: WCDMA V Mode

Operation Mode : TX CH Low Mode Test Date: Apr. 23, 2011

Fundamental Frequency : 826.4 MHz Test By: Jazz Temperature : 25°C Pol: Ver

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
107.60	46.48	V	-54.74	-7.77	1.39	-63.90	-13.00	-50.90
194.90	36.12	V	-65.20	-7.84	1.70	-74.74	-13.00	-61.74
377.26	33.61	V	-62.86	-7.65	2.44	-72.95	-13.00	-59.95
495.60	32.48	V	-61.64	-7.72	2.79	-72.15	-13.00	-59.15
553.80	32.95	V	-59.32	-7.76	2.97	-70.05	-13.00	-57.05
648.75	33.50	V	-55.44	-7.81	3.16	-66.40	-13.00	-53.40
823.00	60.41	V	-25.99	-7.87	3.62	-37.49	-13.00	-24.49
936.95	33.53	V	-51.12	-7.99	3.86	-62.97	-13.00	-49.97
1651.00	35.56	V	-69.02	9.30	5.23	-64.96	-13.00	-51.96
1652.80		V		9.30	5.23		-13.00	
2479.20		V		10.07	6.54		-13.00	
3305.60		V		12.19	7.73		-13.00	
4132.00		V		12.62	8.87		-13.00	
4958.40		V		12.65	9.75		-13.00	
5784.80		V		13.58	10.55		-13.00	
6611.20		V		12.03	11.31		-13.00	
7437.60		V		11.48	12.12		-13.00	
8264.00		V		11.50	12.73		-13.00	

	30MHz - 80MHz: 5.04dB		
Measurement uncertainty	80MHz -1000MHz: 3.76dB		
	1GHz - 13GHz: 4.45dB		

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark "---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: WCDMA V Mode

: TX CH Low Mode Operation Mode Test Date: Apr. 23, 2011

Fundamental Frequency: 826.4MHz Test By: Jazz Temperature Pol: Hor : 25℃

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
107.60	42.92	Н	-59.29	-7.77	1.39	-68.45	-13.00	-55.45
148.34	33.52	Н	-64.42	-7.80	1.58	-73.80	-13.00	-60.80
366.59	31.47	Н	-65.47	-7.65	2.41	-75.53	-13.00	-62.53
464.56	32.80	Н	-60.96	-7.71	2.70	-71.37	-13.00	-58.37
532.46	32.81	Н	-59.52	-7.75	2.90	-70.17	-13.00	-57.17
704.15	34.13	Н	-54.28	-7.86	3.30	-65.44	-13.00	-52.44
823.00	67.32	Н	-18.95	-7.87	3.62	-30.45	-13.00	-17.45
932.10	34.10	Н	-50.34	-7.98	3.85	-62.17	-13.00	-49.17
1652.80	36.47	Н	-67.93	9.30	5.23	-63.86	-13.00	-50.86
2479.20		Н		10.07	6.54		-13.00	
3305.60		Н		12.19	7.73		-13.00	
4132.00		Н		12.62	8.87		-13.00	
4958.40		Н		12.65	9.75		-13.00	
5784.80		Н		13.58	10.55		-13.00	
6611.20		Н		12.03	11.31		-13.00	
7437.60		Н		11.48	12.12		-13.00	
8264.00		Н		11.50	12.73		-13.00	

	30MHz - 80MHz: 5.04dB		
Measurement uncertainty	80MHz -1000MHz: 3.76dB		
	1GHz - 13GHz: 4.45dB		

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark "---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: WCDMA V Mode

Operation Mode : TX CH Mid Mode Test Date: Apr. 23, 2011

Fundamental Frequency : 836.6 MHz Test By: Jazz Temperature : 25° C Pol: Ver

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
185.20	36.44	V	-64.01	-7.83	1.67	-73.51	-13.00	-60.51
257.95	38.01	V	-61.62	-7.89	2.02	-71.53	-13.00	-58.53
384.05	35.24	V	-60.94	-7.65	2.46	-71.06	-13.00	-58.06
470.38	32.34	V	-61.68	-7.71	2.72	-72.10	-13.00	-59.10
629.46	33.00	V	-56.19	-7.80	3.11	-67.10	-13.00	-54.10
704.15	34.57	V	-54.68	-7.86	3.30	-65.84	-13.00	-52.84
1673.20	36.36	V	-68.20	9.36	5.27	-64.10	-13.00	-51.10
2509.80		V		10.09	6.58		-13.00	
3346.40		V		12.28	7.79		-13.00	
4183.00		V		12.62	8.93		-13.00	
5019.60		V		12.67	9.81		-13.00	
5856.20		V		13.68	10.62		-13.00	
6692.80		V		11.95	11.39		-13.00	
7529.40		V		11.45	12.20		-13.00	
8366.00		V		11.59	12.81		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark "---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: WCDMA V Mode

Operation Mode : TX CH Mid Mode Test Date: Apr. 23, 2011

Fundamental Frequency: 836.6MHz Test By: Jazz Temperature Pol: Hor : 25℃

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
105.66	43.27	Н	-59.14	-7.76	1.39	-68.29	-13.00	-55.29
156.10	33.36	Н	-64.88	-7.80	1.60	-74.29	-13.00	-61.29
214.30	34.19	Н	-66.77	-7.85	1.79	-76.41	-13.00	-63.41
390.84	32.29	Н	-64.28	-7.66	2.48	-74.42	-13.00	-61.42
485.90	32.75	Н	-60.82	-7.71	2.76	-71.30	-13.00	-58.30
619.76	32.88	Н	-57.43	-7.80	3.08	-68.31	-13.00	-55.31
1673.20	35.14	Н	-69.24	9.36	5.27	-65.14	-13.00	-52.14
2509.80		Н		10.09	6.58		-13.00	
3346.40		Н		12.28	7.79		-13.00	
4183.00		Н		12.62	8.93		-13.00	
5019.60		Н		12.67	9.81		-13.00	
5856.20		Н		13.68	10.62		-13.00	
6692.80		Н		11.95	11.39		-13.00	
7529.40		Н		11.45	12.20		-13.00	
8366.00		Н		11.59	12.81		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark "---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: WCDMA V Mode

Operation Mode : TX CH High Mode Test Date: Apr. 23, 2011

Fundamental Frequency: 846.6MHz Test By: Jazz Temperature Pol: Ver : 25℃

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
141.55	36.97	V	-61.10	-7.79	1.55	-70.45	-13.00	-57.45
262.80	39.03	V	-60.44	-7.90	2.04	-70.37	-13.00	-57.37
354.95	37.68	V	-59.74	-7.64	2.37	-69.76	-13.00	-56.76
478.14	32.62	V	-61.43	-7.71	2.74	-71.88	-13.00	-58.88
575.14	32.41	V	-58.61	-7.78	3.00	-69.38	-13.00	-56.38
652.74	32.46	V	-56.49	-7.81	3.17	-67.47	-13.00	-54.47
850.00	57.94	V	-28.17	-7.88	3.68	-39.73	-13.00	-26.73
1693.20		V		9.42	5.30		-13.00	
2539.80	39.30	V	-61.37	10.18	6.62	-57.82	-13.00	-44.82
3386.40		V		12.36	7.85		-13.00	
4233.00		V		12.63	8.99		-13.00	
5079.60		V		12.73	9.87		-13.00	
5926.20		V		13.79	10.69		-13.00	
6772.80		V		11.87	11.47		-13.00	
7619.40		V		11.41	12.26		-13.00	
8466.00		V		11.68	12.89		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark "---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: WCDMA V Mode

Operation Mode : TX CH High Mode Test Date: Apr. 23, 2011

Fundamental Frequency : 846.6 MHz Test By: Jazz Temperature : $25^{\circ}C$ Pol: Hor

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
105.66	43.60	Н	-58.81	-7.76	1.39	-67.96	-13.00	-54.96
146.40	33.24	Н	-64.91	-7.80	1.57	-74.28	-13.00	-61.28
338.46	32.37	Н	-64.94	-7.70	2.32	-74.96	-13.00	-61.96
471.35	33.65	Н	-60.05	-7.71	2.72	-70.48	-13.00	-57.48
594.54	32.80	Н	-58.01	-7.79	3.02	-68.82	-13.00	-55.82
655.65	33.04	Н	-56.44	-7.82	3.17	-67.43	-13.00	-54.43
850.00	65.57	Н	-20.62	-7.88	3.68	-32.18	-13.00	-19.18
1693.20	38.19	Н	-66.16	9.42	5.30	-62.04	-13.00	-49.04
2539.80		Н		10.18	6.62		-13.00	
2855.00	38.00	Н	-61.72	11.10	7.05	-57.68	-13.00	-44.68
3386.40		Н		12.36	7.85		-13.00	
4233.00		Н		12.63	8.99		-13.00	
5079.60		Н		12.73	9.87		-13.00	
5926.20		Н		13.79	10.69		-13.00	
6772.80		Н		11.87	11.47		-13.00	
7619.40		Н		11.41	12.26		-13.00	
8466.00		Н		11.68	12.89		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark "---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: 5MHz BW LTE-Band 4

(16QAM RB 1 Offset 24) (Worst case for each band)

peration Mode : TX CH Low Mode Test Date: Apr. 23, 2011

Fundamental Frequency: 1712.5MHz Test By: Jazz Temperature Ver Pol: : 25°℃

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
158.04	37.31	V	-60.70	-7.81	1.61	-70.12	-13.00	-57.12
250.19	37.34	V	-62.54	-7.89	1.99	-72.42	-13.00	-59.42
321.00	41.56	V	-56.43	-7.80	2.25	-66.48	-13.00	-53.48
500.45	35.60	V	-58.53	-7.72	2.80	-69.05	-13.00	-56.05
622.44	33.11	V	-56.17	-7.80	3.09	-67.06	-13.00	-54.06
972.84	32.41	V	-51.68	-8.00	3.95	-63.63	-13.00	-50.63
3425.00	48.19	V	-50.65	12.47	7.93	-46.11	-13.00	-33.11
5137.50		V		12.79	9.92		-13.00	
6850.00		V		11.80	11.54		-13.00	
8562.50		V		11.73	12.97		-13.00	
10275.00		V		11.85	14.50		-13.00	
11987.50		V		13.16	15.91		-13.00	
13700.00		V		12.32	17.04		-13.00	
15412.50		V		15.70	18.36		-13.00	
17125.00		V		14.67	19.47		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark "---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: 5MHz BW LTE-Band 4

(16QAM RB 1 Offset 24)

Operation Mode : TX CH Low Mode Test Date: Apr. 23, 2011

Fundamental Frequency : 1712.5 MHz Test By: Jazz Temperature : 25°C Pol: Hor

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
151.25	39.22	Н	-58.65	-7.80	1.59	-68.04	-13.00	-55.04
243.40	36.60	Н	-62.94	-7.88	1.95	-72.78	-13.00	-59.78
319.06	42.20	Н	-55.28	-7.81	2.24	-65.34	-13.00	-52.34
553.80	32.71	Н	-58.93	-7.76	2.97	-69.66	-13.00	-56.66
655.65	33.39	Н	-56.09	-7.82	3.17	-67.08	-13.00	-54.08
972.84	33.29	Н	-50.78	-8.00	3.95	-62.73	-13.00	-49.73
3425.00	47.01	Н	-51.99	12.47	7.93	-47.44	-13.00	-34.44
5137.50		Н		12.79	9.92		-13.00	
6850.00		Н		11.80	11.54		-13.00	
8562.50		Н		11.73	12.97		-13.00	
10275.00		Н		11.85	14.50		-13.00	
11987.50		Н		13.16	15.91		-13.00	
13700.00		Н		12.32	17.04		-13.00	
15412.50		Н		15.70	18.36		-13.00	
17125.00		Н		14.67	19.47		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark "---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: 5MHz BW LTE-Band 4

(16QAM RB 1 Offset 24)

Operation Mode : TX CH Mid Mode Test Date: Apr. 23, 2011

Fundamental Frequency: 1732.5MHz Test By: Jazz Temperature Ver Pol: : 25℃

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
167.74	38.02	V	-60.86	-7.81	1.63	-70.31	-13.00	-57.31
241.46	36.41	V	-63.80	-7.88	1.94	-73.63	-13.00	-60.63
319.06	43.04	V	-54.97	-7.81	2.24	-65.03	-13.00	-52.03
500.45	35.29	V	-58.84	-7.72	2.80	-69.36	-13.00	-56.36
639.16	33.32	V	-55.74	-7.81	3.13	-66.68	-13.00	-53.68
961.20	32.42	V	-51.94	-8.00	3.91	-63.85	-13.00	-50.85
3465.00	42.75	V	-56.09	12.53	7.98	-51.53	-13.00	-38.53
5197.50		V		12.85	9.98		-13.00	
6930.00		V		11.72	11.61		-13.00	
8662.50		V		11.77	13.05		-13.00	
10395.00		V		11.75	14.59		-13.00	
12127.50		V		13.35	16.03		-13.00	
13860.00		V		11.98	17.16		-13.00	
15592.50		V		16.35	18.47		-13.00	
17325.00		V		14.02	19.62		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark "---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: 5MHz BW LTE-Band 4

(16QAM RB 1 Offset 24)

Operation Mode : TX CH Mid Mode Test Date: Apr. 23, 2011

Fundamental Frequency: 1732.5MHz Test By: Jazz Temperature Hor Pol: : 25℃

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
150.28	39.51	Н	-58.28	-7.80	1.59	-67.67	-13.00	-54.67
241.46	38.00	Н	-61.64	-7.88	1.94	-71.46	-13.00	-58.46
319.06	37.42	Н	-60.06	-7.81	2.24	-70.12	-13.00	-57.12
555.74	33.42	Н	-58.18	-7.76	2.97	-68.91	-13.00	-55.91
613.94	33.44	Н	-56.99	-7.80	3.07	-67.85	-13.00	-54.85
956.35	32.60	Н	-51.57	-8.00	3.90	-63.47	-13.00	-50.47
3465.00	38.52	Н	-60.46	12.53	7.98	-55.90	-13.00	-42.90
5197.50		Н		12.85	9.98		-13.00	
6930.00		Н		11.72	11.61		-13.00	
8662.50		Н		11.77	13.05		-13.00	
10395.00		Н		11.75	14.59		-13.00	
12127.50		Н		13.35	16.03		-13.00	
13860.00		Н		11.98	17.16		-13.00	
15592.50		Н		16.35	18.47		-13.00	
17325.00		Н		14.02	19.62		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark "---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: 5MHz BW LTE-Band 4

(16QAM RB 1 Offset 24)

Operation Mode : TX CH High Mode Test Date: Apr. 23, 2011

Fundamental Frequency : 1752.5 MHz Test By: Jazz Temperature : 25°C Pol: Ver

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out- put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
167.74	39.11	V	-59.77	-7.81	1.63	-69.22	-13.00	-56.22
250.19	41.20	V	-58.68	-7.89	1.99	-68.56	-13.00	-55.56
319.06	41.20	V	-56.81	-7.81	2.24	-66.87	-13.00	-53.87
497.54	35.54	V	-58.59	-7.72	2.79	-69.10	-13.00	-56.10
650.80	33.19	V	-55.74	-7.81	3.16	-66.71	-13.00	-53.71
978.66	32.53	V	-51.43	-7.99	3.97	-63.39	-13.00	-50.39
3505.00	49.26	V	-49.55	12.61	8.04	-44.97	-13.00	-31.97
5257.50		V		12.91	10.04		-13.00	
7010.00		V		11.65	11.69		-13.00	
8762.50		V		11.80	13.13		-13.00	
10515.00		V		11.66	14.68		-13.00	
12267.50		V		13.54	16.14		-13.00	
14020.00		V		11.67	17.28		-13.00	
15772.50		V		16.74	18.60		-13.00	
17525.00		V		13.22	19.76		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark "---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: 5MHz BW LTE-Band 4

(16QAM RB 1 Offset 24)

Operation Mode : TX CH High Mode Test Date: Apr. 23, 2011

Fundamental Frequency: 1752.5MHz Test By: Jazz Temperature Hor Pol: : 25℃

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
151.25	39.50	Н	-58.37	-7.80	1.59	-67.76	-13.00	-54.76
245.34	36.20	Н	-63.25	-7.89	1.96	-73.10	-13.00	-60.10
322.94	39.08	Н	-58.37	-7.79	2.26	-68.42	-13.00	-55.42
555.74	32.64	Н	-58.96	-7.76	2.97	-69.69	-13.00	-56.69
652.74	32.60	Н	-57.01	-7.81	3.17	-67.99	-13.00	-54.99
985.45	32.35	Н	-51.65	-7.99	3.99	-63.63	-13.00	-50.63
3505.00	45.63	Н	-53.30	12.61	8.04	-48.72	-13.00	-35.72
5257.50		Н		12.91	10.04		-13.00	
7010.00		Н		11.65	11.69		-13.00	
8762.50		Н		11.80	13.13		-13.00	
10515.00		Н		11.66	14.68		-13.00	
12267.50		Н		13.54	16.14		-13.00	
14020.00		Н		11.67	17.28		-13.00	
15772.50		Н		16.74	18.60		-13.00	
17525.00		Н		13.22	19.76		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark "---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: 5MHz BW LTE-Band 17

(16QAM RB 1 Offset 24) (Worst case for each band)

peration Mode : TX CH Low Mode Test Date: Apr. 23, 2011

Fundamental Frequency : 706.5 MHz Test By: Jazz Temperature : 25°C Pol: Ver

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
158.04	37.65	V	-60.36	-7.81	1.61	-69.78	-13.00	-56.78
250.19	35.49	V	-64.39	-7.89	1.99	-74.27	-13.00	-61.27
319.06	41.46	V	-56.55	-7.81	2.24	-66.61	-13.00	-53.61
500.45	35.43	V	-58.70	-7.72	2.80	-69.22	-13.00	-56.22
697.36	33.03	V	-56.38	-7.86	3.28	-67.52	-13.00	-54.52
972.84	33.76	V	-50.33	-8.00	3.95	-62.28	-13.00	-49.28
1413.00		V		8.34	4.11		-13.00	
2119.50		V		10.28	5.99		-13.00	
2826.00		V		11.01	7.01		-13.00	
3532.50		V		12.61	8.07		-13.00	
4239.00		V		12.63	9.00		-13.00	
4945.50		V		12.65	9.74		-13.00	
5652.00		V		13.38	10.43		-13.00	
6358.50		V		12.64	11.08		-13.00	
7065.00		V		11.63	11.75		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark "---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: 5MHz BW LTE-Band 17

(16QAM RB 1 Offset 24)

Operation Mode : TX CH Low Mode Test Date: Apr. 23, 2011

Fundamental Frequency : 706.5 MHz Test By: Jazz Temperature : 25°C Pol: Hor

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
154.16	41.70	Н	-56.39	-7.80	1.60	-65.80	-13.00	-52.80
243.40	37.67	Н	-61.87	-7.88	1.95	-71.71	-13.00	-58.71
319.06	41.38	Н	-56.10	-7.81	2.24	-66.16	-13.00	-53.16
359.80	37.33	Н	-59.72	-7.64	2.39	-69.75	-13.00	-56.75
662.44	32.68	Н	-56.52	-7.82	3.19	-67.53	-13.00	-54.53
972.84	32.42	Н	-51.65	-8.00	3.95	-63.60	-13.00	-50.60
1413.00		Н		8.34	4.11		-13.00	
2119.50	39.31	Н	-63.92	10.28	5.99	-59.63	-13.00	-46.63
2826.00		Н		11.01	7.01		-13.00	
3532.50		Н		12.61	8.07		-13.00	
4239.00		Н		12.63	9.00		-13.00	
4945.50		Н		12.65	9.74		-13.00	
5652.00		Н		13.38	10.43		-13.00	
6358.50		Н		12.64	11.08		-13.00	
7065.00		Н		11.63	11.75		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark "---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: 5MHz BW LTE-Band 17

(16QAM RB 1 Offset 24)

Operation Mode : TX CH Mid Mode Test Date: Apr. 23, 2011

Fundamental Frequency: 710MHz Test By: Jazz Temperature Ver Pol: : 25℃

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
160.95	37.13	V	-61.14	-7.81	1.62	-70.57	-13.00	-57.57
250.19	35.75	V	-64.13	-7.89	1.99	-74.01	-13.00	-61.01
319.06	40.93	V	-57.08	-7.81	2.24	-67.14	-13.00	-54.14
500.45	35.70	V	-58.43	-7.72	2.80	-68.95	-13.00	-55.95
697.36	34.25	V	-55.16	-7.86	3.28	-66.30	-13.00	-53.30
966.05	32.64	V	-51.61	-8.00	3.93	-63.54	-13.00	-50.54
1420.00		V		8.38	4.18		-13.00	
2130.00		V		10.27	6.01		-13.00	
2840.00		V		11.05	7.03		-13.00	
3550.00		V		12.61	8.10		-13.00	
4260.00		V		12.63	9.02		-13.00	
4970.00		V		12.65	9.76		-13.00	
5680.00		V		13.42	10.45		-13.00	
6390.00		V		12.53	11.11		-13.00	
7100.00		V		11.61	11.78		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark "---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: 5MHz BW LTE-Band 17

(16QAM RB 1 Offset 24)

Operation Mode : TX CH Mid Mode Test Date: Apr. 23, 2011

Fundamental Frequency: 710MHz Test By: Jazz Temperature Hor Pol: : 25℃

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
151.25	41.27	Н	-56.60	-7.80	1.59	-65.99	-13.00	-52.99
243.40	38.74	Н	-60.80	-7.88	1.95	-70.64	-13.00	-57.64
282.20	40.54	Н	-57.68	-7.91	2.11	-67.69	-13.00	-54.69
352.04	37.23	Н	-59.94	-7.64	2.37	-69.95	-13.00	-56.95
691.54	33.15	Н	-54.83	-7.85	3.27	-65.95	-13.00	-52.95
978.66	33.00	Н	-51.04	-7.99	3.97	-63.00	-13.00	-50.00
1420.00		Н		8.38	4.18		-13.00	
2130.00		Н		10.27	6.01		-13.00	
2840.00		Н		11.05	7.03		-13.00	
3550.00		Н		12.61	8.10		-13.00	
4260.00		Н		12.63	9.02		-13.00	
4970.00		Н		12.65	9.76		-13.00	
5680.00		Н		13.42	10.45		-13.00	
6390.00		Н		12.53	11.11		-13.00	
7100.00		Н		11.61	11.78		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark "---" means that the emission level is too low to be measured
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- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: 5MHz BW LTE-Band 17

(16QAM RB 1 Offset 24)

Operation Mode : TX CH High Mode Test Date: Apr. 23, 2011

Fundamental Frequency : 713.5MHz Test By: Jazz Temperature : 25° C Pol: Ver

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
156.10	37.61	V	-60.23	-7.80	1.60	-69.64	-13.00	-56.64
245.34	37.07	V	-63.00	-7.89	1.96	-72.85	-13.00	-59.85
321.00	41.56	V	-56.43	-7.80	2.25	-66.48	-13.00	-53.48
500.45	35.77	V	-58.36	-7.72	2.80	-68.88	-13.00	-55.88
655.65	33.31	V	-55.67	-7.82	3.17	-66.66	-13.00	-53.66
978.66	32.66	V	-51.30	-7.99	3.97	-63.26	-13.00	-50.26
1427.00		V		8.42	4.25		-13.00	
2140.50		V		10.27	6.02		-13.00	
2854.00		V		11.09	7.05		-13.00	
3567.50		V		12.61	8.12		-13.00	
4281.00		V		12.63	9.05		-13.00	
4994.50		V		12.65	9.78		-13.00	
5708.00		V		13.46	10.48		-13.00	
6421.50		V		12.42	11.14		-13.00	
7135.00		V		11.60	11.82	_	-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark "---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: 5MHz BW LTE-Band 17

(16QAM RB 1 Offset 24)

Operation Mode : TX CH High Mode Test Date: Apr. 23, 2011

Fundamental Frequency : 713.5MHz Test By: Jazz Temperature : 25° C Pol: Hor

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
154.16	40.13	Н	-57.96	-7.80	1.60	-67.37	-13.00	-54.37
241.46	36.67	Н	-62.97	-7.88	1.94	-72.79	-13.00	-59.79
321.00	41.66	Н	-55.81	-7.80	2.25	-65.86	-13.00	-52.86
526.64	33.04	Н	-59.49	-7.74	2.89	-70.11	-13.00	-57.11
655.65	33.29	Н	-56.19	-7.82	3.17	-67.18	-13.00	-54.18
985.45	32.25	Н	-51.75	-7.99	3.99	-63.73	-13.00	-50.73
1427.00		Н		8.42	4.25		-13.00	
2140.50		Н		10.27	6.02		-13.00	
2854.00		Н		11.09	7.05		-13.00	
3567.50		Н		12.61	8.12		-13.00	
4281.00		Н		12.63	9.05		-13.00	
4994.50		Н		12.65	9.78		-13.00	
5708.00		Н		13.46	10.48		-13.00	
6421.50		Н		12.42	11.14		-13.00	
7135.00		Н		11.60	11.82		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark:

- 1 The emission behaviors belong to narrowband spurious emission.
- 2 Remark "---" means that the emission level is too low to be measured
- 3 The result basic equation calculation is as follows:
- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) Cable loss (dB)

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11. FREQUENCY STABILITY V.S. TEMPERATURE MEASUREMENT

11.1. Standard Applicable:

According to FCC §2.1055(a) (1)

Frequency Tolerance: +/-2.5ppm for 850MHz band

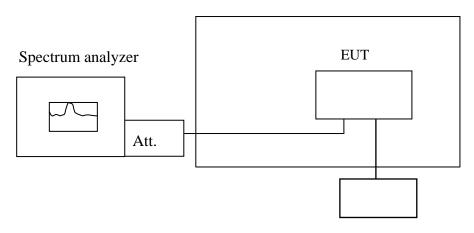
+/-2.5ppm for 1900MHz band

+/-2.5ppm for 1700MHz band

+/-2.5ppm for 700MHz band

11.2. Test Set-up:

Temperature Chamber



Variable DC Power Supply

Note: Measurement setup for testing on Antenna connector

11.3. Measurement Procedure:

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating 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. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

11.4. Measurement Equipment Used:

Refer to section 2.4 in this report

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11.5. Measurement Result:

Re	Reference Frequency: GSM Mid Channel 836.6 MHz @ 25°C							
	Limit: +/- 2.5 ppm = 2091 Hz							
Power Supply	Environment	Frequency	Dolto (Hg)	Limit (Hz)				
Vdc	Temperature ($^{\circ}$ C)	(MHz)	Delta (Hz)	Limit (Hz)				
3.70	-30	836.599995	15.00	2091				
3.70	-20	836.599999	11.00	2091				
3.70	-10	836.599998	12.00	2091				
3.70	0	836.600012	-2.00	2091				
3.70	10	836.600008	2.00	2091				
3.70	20	836.600010	0.00	2091				
3.70	30	836.600005	5.00	2091				
3.70	40	836.600006	4.00	2091				
3.70	50	836.600013	-3.00	2091				

Reference Frequency: PCS Mid Channel 1880 MHz @ 25°C								
	Limit: +/- 2.5 ppm = 4700 Hz							
Power Supply	Environment	Frequency	Delta (Hz)	Limit (Hz)				
Vdc	Temperature ($^{\circ}$ C)	(MHz)	Della (112)	Lillit (112)				
3.70	-30	1880.000035	-8.00	4700				
3.70	-20	1880.000037	-10.00	4700				
3.70	-10	1880.000025	2.00	4700				
3.70	0	1880.000027	0.00	4700				
3.70	10	1880.000028	-1.00	4700				
3.70	20	1880.000023	4.00	4700				
3.70	30	1880.000020	7.00	4700				
3.70	40	1880.000011	16.00	4700				
3.70	50	1880.000019	8.00	4700				

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Reference Frequency: WCDMA II Mid Channel 1880 (ARFCN9400) MHz @ 20°C								
	Limit: +/- 2.5 ppm = 4700 Hz							
Power Supply	Environment	Frequency	Delta (Hz)	Limit (Hz)				
Vdc	Temperature ($^{\circ}$ C)	(MHz)	Della (HZ)	Lillit (HZ)				
3.70	-30	1880.000008	-5.00	4700				
3.70	-20	1880.000009	-6.00	4700				
3.70	-10	1880.000003	0.00	4700				
3.70	0	1880.000005	-2.00	4700				
3.70	10	1880.000006	-3.00	4700				
3.70	20	1880.000003	0.00	4700				
3.70	30	1880.000009	-6.00	4700				
3.70	40	1880.000006	-3.00	4700				
3.70	50	1880.000004	-1.00	4700				

Reference Frequency: WCDMA V Mid Channel 836.6 (ARFCN4183) MHz @ 20°C								
	Limit: +/- 2.5 ppm = 2090 Hz							
Power Supply	Environment	Frequency	Dalta (II-) Limit (II-)					
Vdc	Temperature (°ℂ)	(MHz)	Delta (Hz)	Limit (Hz)				
3.7	-30	836.600004	-6.00	2091				
3.7	-20	836.600002	-4.00	2091				
3.7	-10	836.600003	-5.00	2091				
3.7	0	836.599991	7.00	2091				
3.7	10	836.599995	3.00	2091				
3.7	20	836.599998	0.00	2091				
3.7	30	836.599996	2.00	2091				
3.7	40	836.600001	-3.00	2091				
3.7	50	836.600001	-3.30	2091				

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	Reference Frequency: LTE B4 Mid Channel 1732.5 MHz 5M QPSK CH 20175						
	Limit: +/- 2.5 ppm = Hz						
Power Supply	Environment	Frequency	2				
Vdc	Temperature $(^{\circ}\mathbb{C})$	(MHz)	Delta (Hz)	Limit (Hz)			
3.7	-30	1732.49999500	8.80	4331			
3.7	-20	1732.49999600	7.80	4331			
3.7	-10	1732.49999800	5.80	4331			
3.7	0	1732.49999900	4.80	4331			
3.7	10	1732.50000230	1.50	4331			
3.7	20	1732.50000380	0.00	4331			
3.7	30	1732.50000180	2.00	4331			
3.7	40	1732.50000050	3.30	4331			
3.7	50	1732.50000130	2.50	4331			

	Reference Frequency: LTE B4 Mid Channel 1732.5 MHz 5M 16QAM CH 20175					
		Limit: +/- 2.5 ppm =	Hz			
Power Supply	Environment	Frequency	Dolto (Uz)	Limit (Hg)		
Vdc	Temperature $(^{\circ}\mathbb{C})$	(MHz)	Delta (Hz)	Limit (Hz)		
3.7	-30	1732.49999660	0.40	4331		
3.7	-20	1732.49999690	0.10	4331		
3.7	-10	1732.49999790	-0.90	4331		
3.7	0	1732.49999990	-2.90	4331		
3.7	10	1732.50000160	-4.60	4331		
3.7	20	1732.49999700	0.00	4331		
3.7	30	1732.50000008	-3.08	4331		
3.7	40	1732.49999500	2.00	4331		
3.7	50	1732.49999600	1.00	4331		

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	Reference Frequency: LTE B4 Mid Channel 1732.5 MHz 10M QPSK CH 20175						
	Limit: ± -2.5 ppm = Hz						
Power Supply	Environment			Limit (He)			
Vdc	Temperature $(^{\circ}\mathbb{C})$	(MHz)	Delta (Hz)	Limit (Hz)			
3.7	-30	1732.49999300	7.70	4331			
3.7	-20	1732.49999500	5.70	4331			
3.7	-10	1732.49999700	3.70	4331			
3.7	0	1732.49999900	1.70	4331			
3.7	10	1732.49999990	0.80	4331			
3.7	20	1732.50000070	0.00	4331			
3.7	30	1732.50000170	-1.00	4331			
3.7	40	1732.49999960	1.10	4331			
3.7	50	1732.50000290	-2.20	4331			

Reference Frequency: LTE B4 Mid Channel 1732.5 MHz 10M 16QAM CH 20175							
	Limit: ± -2.5 ppm = Hz						
Power Supply	Environment	Frequency	Frequency				
Vdc	Temperature $(^{\circ}\mathbb{C})$	(MHz)	Delta (Hz)	Limit (Hz)			
3.7	-30	1732.49999960	4.20	4331			
3.7	-20	1732.49999890	4.90	4331			
3.7	-10	1732.49999920	4.60	4331			
3.7	0	1732.50000020	3.60	4331			
3.7	10	1732.50000060	3.20	4331			
3.7	20	1732.50000380	0.00	4331			
3.7	30	1732.50000120	2.60	4331			
3.7	40	1732.50000200	1.80	4331			
3.7	50	1732.50000700	-3.20	4331			

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Ref	Reference Frequency: LTE B17 Mid Channel 710 MHz @ 5M QPSK CH 23790					
		Limit: +/- 2.5	ppm = Hz			
Power Supply	Environment	Frequency	• •			
Vdc	Temperature (°C)	(MHz) Delta (Hz)		Limit (Hz)		
3.7	-30	710.00000180	-1.80	1775		
3.7	-20	710.00000150	-1.50	1775		
3.7	-10	710.00000120	-1.20	1775		
3.7	0	710.00000250	-2.50	1775		
3.7	10	710.00000180	-1.80	1775		
3.7	20	710.00000000	0.00	1775		
3.7	30	709.99999900	1.00	1775		
3.7	40	710.00000220	-2.20	1775		
3.7	50	710.00000060	-0.60	1775		

Refe	Reference Frequency: LTE B17 Mid Channel 710 MHz 5M 16QAM CH 23790						
	Limit: +/- 2.5 ppm = Hz						
Power Supply	Environment	Frequency	Dolto (Hz)	Limit (Hz)			
Vdc	Temperature $(^{\circ}\mathbb{C})$	(MHz)	Delta (Hz)	Limit (Hz)			
3.7	-30	709.99999300	8.10	1775			
3.7	-20	709.99999500	6.10	1775			
3.7	-10	709.99999600	5.10	1775			
3.7	0	709.99999990	1.20	1775			
3.7	10	709.99999980	1.30	1775			
3.7	20	710.00000110	0.00	1775			
3.7	30	710.00000190	-0.80	1775			
3.7	40	710.00000020	0.90	1775			
3.7	50	710.00000030	0.80	1775			

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Ref	Reference Frequency: LTE B17 Mid Channel 710 MHz 10M QPSK CH 23790					
		Limit: +/- 2.5	5 ppm = Hz			
Power Supply	Environment	Frequency	* *			
Vdc	Temperature (°C)	(MHz)	Delta (Hz)	Limit (Hz)		
3.7	-30	710.00000150	-1.16	1775		
3.7	-20	710.00000100	-0.66	1775		
3.7	-10	710.00000090	-0.56	1775		
3.7	0	710.00000004	0.30	1775		
3.7	10	710.00000024	0.10	1775		
3.7	20	710.00000034	0.00	1775		
3.7	30	710.00000045	-0.11	1775		
3.7	40	710.00000055	-0.21	1775		
3.7	50	710.00000290	-2.56	1775		

Refe	Reference Frequency: LTE B17 Mid Channel 710 MHz 10M 16QAM CH 23790						
	Limit: +/- 2.5 ppm = Hz						
Power Supply	Environment	Frequency	Dolto (Hz)	Limit (Ha)			
Vdc	Temperature $(^{\circ}\mathbb{C})$	(MHz)	Delta (Hz)	Limit (Hz)			
3.7	-30	710.00000210	-0.10	1775			
3.7	-20	710.00000200	0.00	1775			
3.7	-10	710.00000100	1.00	1775			
3.7	0	710.00000090	1.10	1775			
3.7	10	710.00000100	1.00	1775			
3.7	20	710.00000200	0.00	1775			
3.7	30	709.99999800	4.00	1775			
3.7	40	709.99999600	6.00	1775			
3.7	50	709.99999400	8.00	1775			

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12. FREQUENCY STABILITY V.S. VOLTAGE MEASUREMENT

12.1. Standard Applicable:

According to FCC §2.1055(a) (1)

Frequency Tolerance: +/-2.5ppm for 850MHz band

+/-2.5ppm for 1900MHz band

+/-2.5ppm for 1700MHz band

+/-2.5ppm for 700MHz band

12.2. Test Set-up:

Refer to section 10.2 in this report

12.3. Measurement Procedure:

Set chamber temperature to 25° C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specified extreme voltage variation (+/- 15%) and endpoint, record the maximum frequency change.

12.4. Measurement Equipment Used:

Refer to section 2.4 in this report

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12.5. Measurement Result:

Reference Frequency: GSM Mid Channel 836.6 MHz @ 25°C					
	Limit	: +/- 2.5 ppm = 209	91 Hz		
Power Supply	Environment	Frequency	Dolto (Hz)	Limit (Hz)	
Vdc	Temperature (°C)	(MHz)	Delta (Hz)	Limit (Hz)	
4.20	25.00	836.600013	-3.00	2091.00	
3.70	25.00	836.600010	0.00	2091.00	
3.15	25.00	836.600011	-1.00	2091.00	
3.145	25.00	926 600012	1.00	2001.00	
(Endpoint)	25.00	836.600012	1.00	2091.00	

Reference Frequency: PCS Mid Channel 1880 MHz @ 25°℃					
	Limit	: +/- 2.5 ppm = 470	00 Hz		
Power Supply	Environment	Frequency	Dolto (Uz)	Limit (Uz)	
Vdc	Temperature (°C)	(MHz)	Delta (Hz)	Limit (Hz)	
4.20	25	1880.000022	1.00	4700	
3.70	25	1880.000023	0.00	4700	
3.15	25	1880.000027	-4.00	4700	
3.145	25	1000 000026	2.00	4700	
(Endpoint)	25	1880.000026	-3.00	4700	

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Reference Frequency: WCDMA II Mid Channel 1880 (ARFCN9400) MHz						
	Limit: +/- 2.5 ppm = 4700 Hz					
Power Supply	Power Supply Environment Frequency D. L. (H.)					
Vdc	Temperature ($^{\circ}$ C)	(MHz)	Delta (Hz)	Limit (Hz)		
4.20	25	1880.000003	0.00	4700		
3.70	25	1880.000003	0.00	4700		
3.15	25	1880.000002	1.00	4700		
3.145	25	1000 00000	1.00	4700		
(Endpoint)	25	1880.000002	1.00	4700		

Referenc	Reference Frequency: WCDMA V Mid Channel 836.6 (ARFCN4183) MHz					
	Limit	:: +/- 2.5 ppm = 209	90 Hz			
Power Supply	wer Supply Environment Frequency					
Vdc	Temperature (°C)	(MHz)	Delta (Hz)	Limit (Hz)		
4.20	25.00	836.599999	-1.00	2091.00		
3.70	25.00	836.599998	0.00	2091.00		
3.15	25.00	836.599999	-1.00	2091.00		
3.145	25.00	926 500000	1.00	2001.00		
(Endpoint)	25.00	836.599999	-1.00	2091.00		

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Reference Frequency: LTE B4 Mid Channel 1732.5 MHz @ 25°C 5M QPSK CH					
		20175			
		Limit: +/- 2.5 ppn	n = Hz		
Power Supply	wer Supply Environment Frequency				
Vdc	Temperature $(^{\circ}\mathbb{C})$	(MHz)	Delta (Hz)	Limit (Hz)	
4.2	25.00	1732.5000012	2.60	4331	
3.7	25.00	1732.5000038	0.00	4331	
3.2	25.00	1732.5000015	2.30	4331	
3.2 (End Point)	25.00	1732.5000014	2.40	4331	

Reference Frequency: LTE B4 Mid Channel 1732.5 MHz @ 25°C 5M 16QAM CH						
	20175					
		Limit: +/- 2.5 ppm	n = Hz			
Power Supply	Environment	Frequency				
Vdc	Temperature $(^{\circ}\mathbb{C})$	(MHz)	Delta (Hz)	Limit (Hz)		
4.2	25	1732.4999930	4.00	4331		
3.7	25	1732.4999970	6.80	4331		
3.2	25	1732.4999915	5.50	4331		
3.2 (End Point)	25	1732.4999910	6.00	4331		

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Reference Frequency: LTE B4 Mid Channel 1732.5 MHz @ 25°C 10M QPSK CH					
		20175	**************************************		
	I	Limit: +/- 2.5 ppm =	= 2091 Hz	T	
Power Supply	Environment	Frequency			
Vdc	Temperature $(^{\circ}\mathbb{C})$	(MHz)	Delta (Hz)	Limit (Hz)	
4.2	25.00	1732.5000001	0.56	4331	
3.7	25.00	1732.5000007	0.00	4331	
3.2	25.00	1732.5000001	0.65	4331	
3.2 (End Point)	25.00	1732.5000001	0.65	4331	

Reference Frequency: LTE B4 Mid Channel 1732.5 MHz @ 25°C 10M 16QAM CH						
	20175					
		Limit: +/- 2.5 ppm	n = Hz			
Power Supply	Environment	Frequency				
Vdc	Temperature $(^{\circ}\mathbb{C})$	(MHz)	Delta (Hz)	Limit (Hz)		
4.2	25	1732.5000035	0.30	4331		
3.7	25	1732.5000038	0.00	4331		
3.2	25	1732.5000040	-0.20	4331		
3.2 (End Point)	25	1732.5000039	-0.10	4331		

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Reference Frequency: LTE B17 Mid Channel 710 MHz @ 25°C 5M QPSK CH 23790						
	Limit: +/- 2.5 ppm = Hz					
Power Supply	Environment	Frequency	D. I. (II.)	1		
Vdc	Temperature $(^{\circ}\mathbb{C})$	(MHz)	Delta (Hz)	Limit (Hz)		
4.2	25.00	709.9999985	1.50	1775		
3.7	25.00	710.0000000	0.00	1775		
3.2	25.00	710.0000004	-0.40	1775		
3.2 (End Point)	25.00	709.9999998	0.25	1775		

Reference Frequency: LTE B17 Mid Channel 710 MHz @ 25°C 5M 16QAM CH 23790						
	Limit: +/- 2.5 ppm = Hz					
Power Supply	upply Environment Frequency					
Vdc	Temperature $(^{\circ}\mathbb{C})$	(MHz)	Delta (Hz)	Limit (Hz)		
4.2	25	710.0000010	0.20	1775		
3.7	25	710.0000012	0.00	1775		
3.2	25	710.0000013	-0.10	1775		
3.2 (End Point)	25	710.0000018	-0.60	1775		

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Reference Frequency: LTE B17 Mid Channel 710 MHz @ 25°C 10M QPSK CH					
		23790			
	I	Limit: +/- 2.5 ppm =	= 2091 Hz		
Power Supply	Environment	Frequency			
Vdc	Temperature $(^{\circ}\mathbb{C})$	(MHz)	Delta (Hz)	Limit (Hz)	
4.2	25.00	709.9999995	0.84	1775	
3.7	25.00	710.0000003	0.00	1775	
3.2	25.00	710.0000016	-1.28	1775	
3.2 (End Point)	25.00	709.9999990	1.34	1775	

Reference Frequency: LTE B17 Mid Channel 710 MHz @ 25°C 10M 16QAM CH						
	23790					
		Limit: +/- 2.5 ppm	n = Hz			
Power Supply	Environment	Frequency	Dolto (Hz)	Limit (Ha)		
Vdc	Temperature $(^{\circ}\mathbb{C})$	(MHz)	Delta (Hz)	Limit (Hz)		
4.2	25	710.0000001	1.90	1775		
3.7	25	710.0000020	0.00	1775		
3.2	25	710.0000003	1.71	1775		
3.2 (End Point)	25	710.0000004	1.65	1775		

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