

Report No: CCIS15070055101

FCC REPORT

Applicant: Verykool USA Inc

Address of Applicant: 3636 Nobel Drive, Suite 325, San Diego, CA92122 USA

Equipment Under Test (EUT)

Product Name: Mobile Phone

Model No.: s4006

FCC ID: WA6S4006

FCC CFR Title 47 Part 2

Applicable standards: FCC CFR Title 47 Part 22 Subpart H

FCC CFR Title 47 Part 24 Subpart E

FCC CFR Title 47 Part 27 Subpart L

Date of sample receipt: 09 Jul., 2015

Date of Test: 09 Jul., to 21 Jul., 2015

Date of report issued: 21 Jul., 2015

Test Result: PASS *

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Bruce Zhang Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the CCIS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.





2. Version

Version No.	Date	Description
00	21 Jul., 2015	Original

May Liu
Report Clerk Prepared by: 21 Jul., 2015 Date:

21 Jul., 2015 Reviewed by: Date:

Project Engineer





3. Contents

			Page
1.	COV	/ER PAGE	1
2.	VER	SION	2
3.	CON	NTENTS	3
4.	TES	T SUMMARY	4
5.	GEN	NERAL INFORMATION	5
5	5.1	CLIENT INFORMATION	5
5	.2	GENERAL DESCRIPTION OF E.U.T.	
5	.3	TEST MODES	
5	.4	RELATED SUBMITTAL(S) / GRANT (S)	
_	.5	TEST METHODOLOGY	
_	.6	LABORATORY FACILITY	
_	.7	LABORATORY LOCATION	
5	8.8	TEST INSTRUMENTS LIST	9
6.	SYS	TEM TEST CONFIGURATION	10
6	5.1	EUT CONFIGURATION	10
6	.2	EUT Exercise	10
6	3.3	CONFIGURATION OF TESTED SYSTEM	10
_	.4	DESCRIPTION OF TEST MODES	
_	5.5	CONDUCTED OUTPUT POWER	
_	6.6	OCCUPY BANDWIDTH	
•	5.7	PEAK-TO-AVERAGE RATIO	
_	5.8 5.9	MODULATION CHARACTERISTIC OUT OF BAND EMISSION AT ANTENNA TERMINALS	
_	5.10	ERP, EIRP MEASUREMENT	
_	5.11	FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT	
_	5.12	FREQUENCY STABILITY V.S. TEMPERATURE MEASUREMENT	
_	.13	FREQUENCY STABILITY V.S. VOLTAGE MEASUREMENT	
7	TES	T SETUP PHOTO	
8		CONSTRUCTIONAL DETAILS	62





4. Test Summary

Test Item	Section in CFR 47	Result
RF Exposure (SAR)	Part 1.1307 Part 2.1093	Passed* (Please refer to SAR Report)
RF Output Power	Part 2.1046 Part 22.913 (a)(2) Part 24.232 (c) Part 27.50 (d)(4)	Pass
Modulation Characteristics	Part 2.1047	Pass
99% & -26 dB Occupied Bandwidth	Part 2.1049 Part 22.917(b) Part 24.238(b) Part 27.53(h)	Pass
Spurious Emissions at Antenna Terminal	Part 2.1051 Part 22.917 (a) Part 24.238 (a) Part 27.53 (h)	Pass
Field Strength of Spurious Radiation	Part 2.1053 Part 22.917 (a) Part 24.238 (a) Part 27.53 (h)	Pass
Out of band emission, Band Edge	Part 22.917 (a) Part 24.238 (a) Part 27.53 (h)	Pass
Frequency stability vs. temperature	Part 2.1055(a)(1)(b)	Pass
Frequency stability vs. voltage	Part 2.1055(d)(1)(2)	Pass

Pass: The EUT complies with the essential requirements in the standard.



Report No: CCIS15070055101

5. General Information

5.1 Client Information

Applicant:	Verykool USA Inc
Address of Applicant:	3636 Nobel Drive, Suite 325, San Diego, CA92122 USA
Manufacturer:	Verykool USA Inc
Address of Manufacturer:	3636 Nobel Drive, Suite 325, San Diego, CA92122 USA

5.2 General Description of E.U.T.

Product Name:	Mobile Phone
Model No.:	s4006
Operation Frequency range:	GSM 850: 824.20MHz-848.80MHz
	PCS1900: 1850.20MHz-1909.80MHz
	WCDMA Band V:826.4MHz-846.6MHz
	WCDMA Band II:1852.4 MHz -1907.6 MHz
	WCDMA Band IV:1712.4 MHz -1752.6 MHz
Modulation type:	GSM/GPRS:GMSK, UMTS:QPSK
Antenna type:	Internal Antenna
Antenna gain:	GSM 850: 1.6 dBi
	PCS 1900: 3.8 dBi
	WCDMA 850: 1.7 dBi
	WCDMA 1900: 3.8 dBi
	WCDMA 1700: 3.7 dBi
AC adapter:	Model: SC050075-US
	Input:100-240V AC,50/60Hz 0.4A
	Output:5.5V DC MAX 750mA
Power supply:	Rechargeable Li-ion Battery DC3.8V-1450mAh





G	SM 850	PC	CS1900
Channel:	Frequency (MHz)	Channel:	Frequency (MHz)
128	824.20	512	1850.20
129	824.40	513	1850.40
		••••	
189	836.40	660	1879.80
190	836.60	661	1880.00
191	836.80	662	1880.20
250	848.60	809	1909.60
251	848.80	810	1909.80
WCD	MA Band V	WCD	MA Band II
Channel:	Frequency (MHz)	Channel:	Frequency (MHz
4132	826.40	9262	1852.40
4133	826.60	9263	1852.60
4182	836.40	9399	1879.80
4183	836.60	9400	1880.00
4184	836.80	9401	1880.20
4232	846.40	9537	1907.40
4233	846.60	9538	1907.60
WCDI	MA Band IV		
Channel:	Frequency (MHz)		
1312	1712.40		
1313	1712.60		
1412	1732.40		
1413	1732.60		
1414	1732.80		
1512	1752.40		

1752.60

1513



Report No: CCIS15070055101

Regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

	GSM850			PCS1900	
	Channel	Frequency(MHz)		Channel	Frequency(MHz)
Lowest channel	128	824.20	Lowest channel	512	1850.20
Middle channel	190	836.60	Middle channel	661	1880.00
Highest channel	251	848.80	Highest channel	810	1909.80
,	WCDMA Band	J V	,	WCDMA Band	II
	Channel	Frequency(MHz)		Channel	Frequency(MHz)
Lowest channel	4132	826.40	Lowest channel	9262	1852.40
Middle channel	4183	836.60	Middle channel	9400	1880.00
Highest channel	4233	846.60	Highest channel	9538	1907.60
\	VCDMA Band	IV			
	Channel	Frequency(MHz)			
Lowest channel	1312	1712.40			
Middle channel	1413	1732.60			
Highest channel	1513	1752.60			



5.3 Test modes

Communicate mode (GSM850)	Keep the EUT in communicating mode on GSM 850 band.
Data mode (GPRS850)	Keep the EUT in data communicating mode on GPRS 850 band.
Communicate mode (PCS1900)	Keep the EUT in communicating mode on PCS1900 band.
Data mode (GPRS1900)	Keep the EUT in data communicating mode on GPRS1900 band.
Communicate mode (UMTS 850)	Keep the EUT in communicating mode on UMTS 850 band.
Communicate mode (UMTS 1900)	Keep the EUT in communicating mode on UMTS 1900 band.
Data mode (RMC UMTS 850)	Keep the EUT in data communicating mode on RMC in UMTS 850 (12.2 kbps, 64 kbps, 144 kbps & 384 kbps).
Data mode (HSDPA UMTS 850)	Keep the EUT in data communicating mode on HSDPA in UMTS 850(Sub-test 1~Sub-test 4).
Data mode (HSUPA UMTS 850)	Keep the EUT in data communicating mode on HSDPA in UMTS 850(Sub-test 1~Sub-test 5).
Data mode (RMC UMTS 1700)	Keep the EUT in data communicating mode on RMC in UMTS 1700 (12.2 kbps, 64 kbps, 144 kbps & 384 kbps).
Data mode (HSDPA UMTS 1700)	Keep the EUT in data communicating mode on HSDPA in UMTS 1700(Sub-test 1~Sub-test 4).
Data mode (HSUPA UMTS 1700)	Keep the EUT in data communicating mode on HSDPA in UMTS 1700(Sub-test 1~Sub-test 5).
Data mode (RMC UMTS 1900)	Keep the EUT in data communicating mode on RMC in UMTS 850 (12.2 kbps, 64 kbps, 144 kbps & 384 kbps).
Data mode (HSDPA UMTS 1900)	Keep the EUT in data communicating mode on HSDPA in UMTS 1900. (Sub-test 1~Sub-test 4).
Data mode (HSUPA UMTS 1900)	Keep the EUT in data communicating mode on HSDPA in UMTS 1900. (Sub-test 1~Sub-test 5).
Remark :	Pre-test output power of all modes, and found GSM 850, PCS 1900, UMTS 850 12.2 kbps RMC & UMTS 1900 12.2 kbps RMC were the worst case. The details please refer to section 6.5.

5.4 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is filing to comply with Section Part 22 subpart H and Part 24 subpart E and Part 27 subpart L of the FCC CFR 47 Rules.

5.5 Test Methodology

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

5.6 Laboratory Facility

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

• FCC - Registration No.: 817957

Shenzhen Zhongjian Nanfang Testing Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in out files. Registration 817957, February 27, 2012.

• IC - Registration No.: 10106A-1

The 3m Semi-anechoic chamber of Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

• CNAS - Registration No.: CNAS L6048

Shenzhen Zhongjian Nanfang Testing Co., Ltd. is accredited to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L6048.

Project No.: CCIS150700551RF

Report No: CCIS15070055101



Report No: CCIS15070055101

5.7 Laboratory Location

Shenzhen Zhongjian Nanfang Testing Co., Ltd.

Address: No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road,

Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755-23118282 Fax: +86-755-23116366

5.8 Test Instruments list

Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
3m Semi- Anechoic Chamber	SAEMC	9(L)*6(W)* 6(H)	CCIS0001	08-23-2014	08-22-2017
BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	CCIS0005	03-28-2015	03-28-2016
Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	CCIS0006	03-28-2015	03-28-2016
EMI Test Software	AUDIX	E3	N/A	N/A	N/A
Amplifier (10kHz-1.3GHz)	HP	8447D	CCIS0003	04-01-2015	03-31-2016
Amplifier (1GHz-18GHz)	Compliance Direction Systems Inc.	PAP-1G18	CCIS0011	04-01-2015	03-31-2016
Pre-amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	04-01-2015	03-31-2016
Horn Antenna	ETS-LINDGREN	3160	GTS217	04-01-2015	03-31-2016
Printer	HP	HP LaserJet P1007	N/A	N/A	N/A
Positioning Controller	UC	UC3000	CCIS0015	N/A	N/A
Spectrum analyzer 9k-30GHz	Rohde & Schwarz	FSP 30	CCIS0023	03-28-2015	03-28-2016
EMI Test Receiver	Rohde & Schwarz	ESPI	CCIS0022	03-28-2015	03-28-2016
Loop antenna	Laplace instrument	RF300	EMC0701	04-01-2015	03-31-2016
Universal radio communication tester	Rhode & Schwarz	CMU200	CCIS0069	03-28-2015	03-28-2016
Signal Analyzer	Rohde & Schwarz	FSIQ3	CCIS0088	04-08-2015	04-08-2016



6. System test configuration

6.1 EUT Configuration

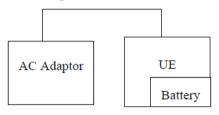
The EUT configuration for testing is installed on RF field strength measurement to meet the commission's requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

6.2 EUT Exercise

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

Report No: CCIS15070055101

6.3 Configuration of Tested System



Remote Side

CMU200

6.4 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 three modes (GSM850, PCS1900, WCDMA Band V, WCDMA Band IV and WCDMA Band II) with power adaptor, earphone and Data cable. The worst-case H mode for GSM850, PCS1900, UMTS 850, UMTS 1700 and UMTS 1900.





6.5 Conducted Output Power

Test Requirement:	FCC part 22.913(a), FCC part 24.232(b) and FCC part 27.50(d)				
Test Method:	FCC part 2.1046				
Limit:	GSM 850: 7W PCS 1900: 2W WCDMA Band V: 7W WCDMA Band II: 2W WCDMA Band IV: 1W				
Test setup:	EUT ATT Communication Tester Note: Measurement setup for testing on Antenna connector				
Test Procedure:	The transmitter output was connected to a calibrated attenuator, the other end of which was connected to the CMU200. Transmitter output power was read off in dBm.				
Test Instruments:	Refer to section 5.8 for details				
Test mode:	Refer to section 5.3 for details				
Test results:	Passed				

Measurement Data





EUT Mode	Channel	Frequency (MHz)	Burst Average power (dBm)	Limit(dBm)	Result
	128	824.20	31.91		
GSM 850	190	836.60	31.90		
	251	848.80	31.88		
GPRS 850	128	824.20	31.98		
(1 Uplink slot)	190	836.60	31.89		
(1 Opilitik slot)	251	848.80	31.88		
GPRS 850	128	824.20	31.24		
(2 Uplink slots)	190	836.60	31.31	38.45	Pass
(2 Opinik Gloto)	251	848.80	31.36		
GPRS 850	128	824.20	29.50		
(3 Uplink slots)	190	836.60	29.55		
(6 6 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	251	848.80	29.58		
GPRS 850	128	824.20	28.41		
(4 Uplink slots)	190	836.60	28.48		
(1 0 p 01010)	251	848.80	28.49		
	512	1850.20	29.67		
PCS 1900	661	1880.00	29.60		
	810	1909.80	29.63		
0000 4000	512	1850.20	29.65		
GPRS 1900 (1 Uplink slot)	661	1880.00	29.30		
(1 Opilitik Slot)	810	1909.80	29.25		
0000 4000	512	1850.20	28.90		
GPRS 1900 (2 Uplink slots)	661	1880.00	28.60	33.00	Pass
(2 Opinik Siots)	810	1909.80	28.52		
	512	1850.20	27.17		
GPRS 1900 (3 Uplink slots)	661	1880.00	26.88		
	810	1909.80	26.87		
ODDC 4000	512	1850.20	26.48		
GPRS 1900 (4 Uplink slots)	661	1880.00	25.78		
(4 Opilitik Siots)	810	1909.80	25.80		





EUT M	ode	Channel	Frequency (MHz)	Burst Average power (dBm)	Limit(dBm)	Result
		4132	826.40	21.58		
	Subtest 1	4183	836.00	21.35		
		4233	846.60	21.12		
		4132	826.40	21.12		
	Subtest 2	4183	836.00	20.94		
UMTS 850		4233	846.60	20.59		
HSDPA		4132	826.40	19.42		
	Subtest 3	4183	836.00	19.29		
		4233	846.60	19.06		
		4132	826.40	19.44		
	Subtest 4	4183	836.00	19.36		Pass
		4233	846.60	18.94		
		4132	826.40	21.39		
	Subtest 1	4183	836.00	21.27	38.45	
		4233	846.60	20.96		
	Subtest 2	4132	826.40	21.47		
		4183	836.00	21.25		
		4233	846.60	21.04		1 433
LINATO 050	Subtest 3	4132	826.40	19.38		
UMTS 850		4183	836.00	19.25		
HSUPA		4233	846.60	19.00		
	Subtest 4	4132	826.40	19.53		
		4183	836.00	21.08		
		4233	846.60	21.33		
		4132	826.40	20.37		
	Subtest 5	4183	836.00	20.30		
		4233	846.60	19.95		
LIMTO OFC		4132	826.40	22.55]	
UMTS 850	12.2kbps	4183	836.00	22.32]	
RMC		4233	846.60	22.08		
LIMTO OFC		4132	826.40	22.39]	
UMTS 850	12.2kbps	4183	836.00	22.21		
AMR		4233	846.60	21.92]	





EUT Mode		Channel	Frequency (MHz)	Burst Average power (dBm)	Limit(dBm)	Result
	Subtest 1	9262	1852.40	22.06		Pass
		9400	1880.00	21.92		
		9538	1907.60	21.73		
	Subtest 2	9262	1852.40	21.66		
		9400	1880.00	21.54		
UMTS1900		9538	1907.60	21.30		
HSDPA		9262	1852.40	20.03		
	Subtest 3	9400	1880.00	19.88		
		9538	1907.60	19.58		
		9262	1852.40	19.83		
	Subtest 4	9400	1880.00	19.90		
		9538	1907.60	19.73]	
		9262	1852.40	22.00]	
	Subtest 1	9400	1880.00	21.81	33.00	
		9538	1907.60	21.64		
	Subtest 2	9262	1852.40	22.04		
		9400	1880.00	21.88		
		9538	1907.60	21.63		
	Subtest 3	9262	1852.40	20.06		
UMTS1900 HSUPA		9400	1880.00	19.68		
HISOFA		9538	1907.60	19.74		
	Subtest 4	9262	1852.40	22.04		
		9400	1880.00	21.91		
		9538	1907.60	21.65		
	Subtest 5	9262	1852.40	21.03		
		9400	1880.00	20.87		
		9538	1907.60	20.76	1	
UMTS1900 RMC	12.2kbps	9262	1852.40	23.05]	
		9400	1880.00	22.89		
		9538	1907.60	22.65]	
		9262	1852.40	22.99]	
UMTS1900	12.2kbps	9400	1880.00	22.88		
AMR		9538	1907.60	22.63]	



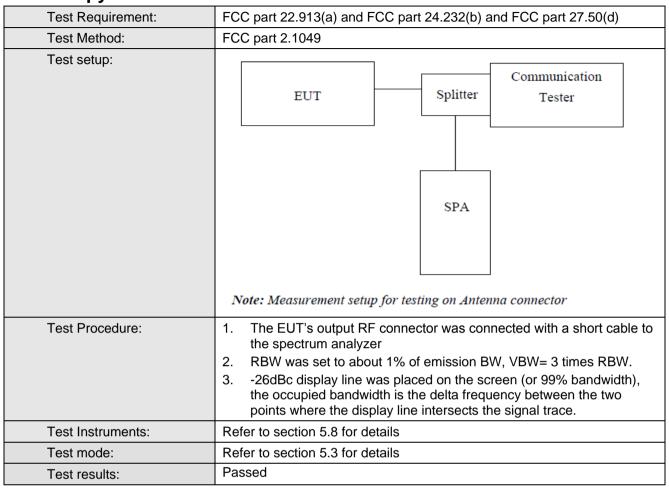


EUT Mode		Channel	Frequency (MHz)	Burst Average power (dBm)	Limit(dBm)	Result
	Subtest 1	1312	1712.40	22.55		
		1412	1732.40	22.64		
		1513	1752.60	22.49		
	Subtest 2	1312	1712.40	22.18		
		1412	1732.40	22.18		
UMTS 1700		1513	1752.60	22.05		
HSDPA		1312	1712.40	20.58		
HODEA	Subtest 3	1412	1732.40	20.59		
		1513	1752.60	20.31		
		1312	1712.40	20.54		
	Subtest 4	1412	1732.40	20.57		
		1513	1752.60	20.44	1	
	Subtest 1	1312	1712.40	22.48	30.00	Pass
		1412	1732.40	22.49		
		1513	1752.60	22.36		
	Subtest 2	1312	1712.40	22.52		
		1412	1732.40	22.61		
		1513	1752.60	22.41		
	Subtest 3	1312	1712.40	19.51		
UMTS 1700		1412	1732.40	20.49		
HSUPA		1513	1752.60	20.39		
	Subtest 4	1312	1712.40	22.55		
		1412	1732.40	22.67		
		1513	1752.60	22.46	1	
		1312	1712.40	21.57	1	
	Subtest 5	1412	1732.40	21.53	1	
		1513	1752.60	20.94	1	
UMTS 1700 RMC	12.2kbps	1312	1712.40	23.77	1	
		1412	1732.40	23.83	1	
	'	1513	1752.60	23.82	1	
		1312	1712.40	23.64	1	
UMTS 1700	12.2kbps	1412	1732.40	23.74	-	
AMR		1513	1752.60	23.68	1	





6.6 Occupy Bandwidth



Measurement Data





EUT Mode	Channel	Frequency (MHz)	99% Occupy bandwidth (kHz)	-26dB bandwidth (kHz)
	128	824.2	246	324
GSM 850	190	836.6	246	314
	251	848.8	244	316
PCS 1900	512	1850.2	242	318
	661	1880.0	248	314
	810	1909.8	246	322
LIMTOOFO	4132	824.40	4180	4680
UMTS850 12.2k RMC	4183	836.00	4180	4700
12.2K KIVIC	4233	846.60	4180	4700
UMTS1900 12.2k RMC	9262	1852.40	4180	4700
	9400	1880.00	4160	4680
	9538	1907.60	4180	4720
LIMTOAZOO	1312	1712.40	4180	4720
UMTS1700 12.2k RMC	1413	1732.60	4180	4760
	1513	1752.60	4180	4700

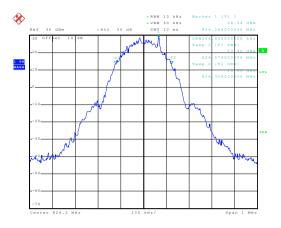
Note: GSM & GPRS use the same modulation technical (GMSK), and with the same channels, so the 99% OBW and the -26dB of GPRS not performed.

Test plot as follows:



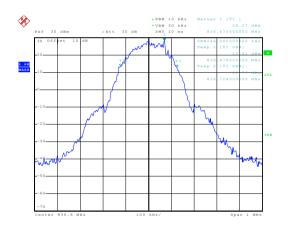
99% Occupy bandwidth

GSM850



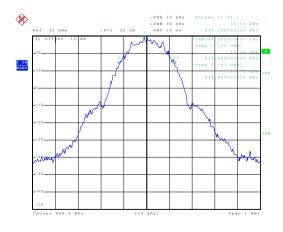
Date: 10.JUL.2015 22:52:32

Lowest channel



Date: 10.JUL.2015 22:52:13

Middle channel



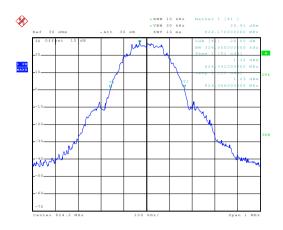
Date: 10..THT..2015 22:51:55

Highest channel



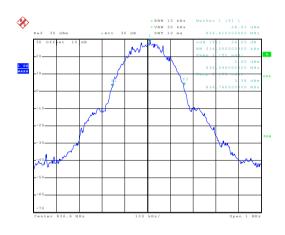
26dB Emission Bandwidth

GSM850



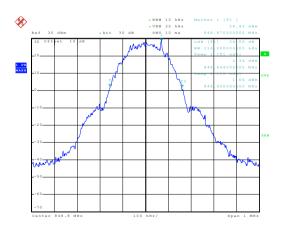
Date: 10.JUL.2015 22:52:47

Lowest channel



Date: 10..TIIT..2015 22:53:06

Middle channel



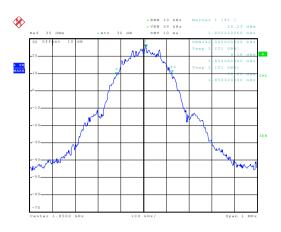
Date: 10.JUL.2015 22:53:24

Highest channel



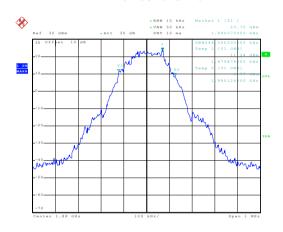
99% Occupy bandwidth

PCS 1900



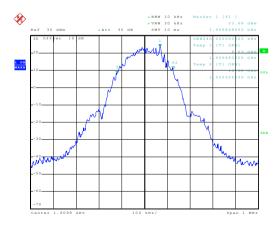
Date: 10.JUL.2015 22:58:43

Lowest channel



Date: 10.JUL.2015 22:58:23

Middle channel



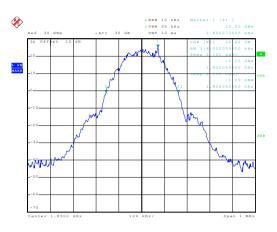
Date: 10..THT..2015 22:58:07

Highest channel



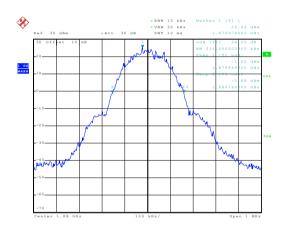
26dB Emission Bandwidth

PCS 1900



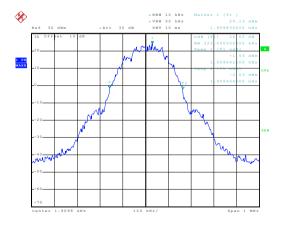
Date: 10.JUL.2015 22:58:58

Lowest channel



Date: 10..TIII..2015 22:59:15

Middle channel



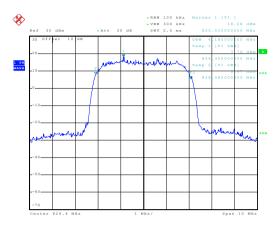
Date: 10.JUL.2015 22:59:33

Highest channel



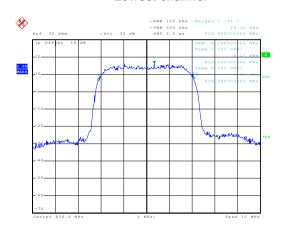
99% Occupy bandwidth

UMTS 850 12.2k RMC



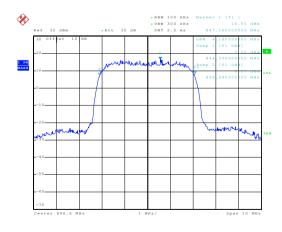
Date: 10.JUL.2015 22:35:41

Lowest channel



Date: 10.JUL.2015 22:35:17

Middle channel



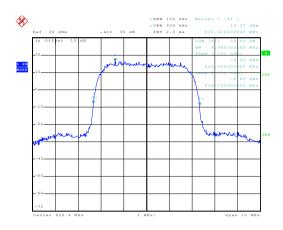
Date: 10..THT..2015 22:34:58

Highest channel



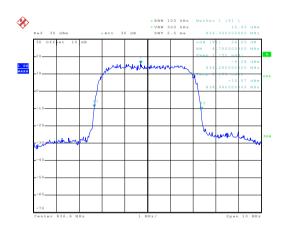
26dB Emission Bandwidth

UMTS 850 12.2k RMC



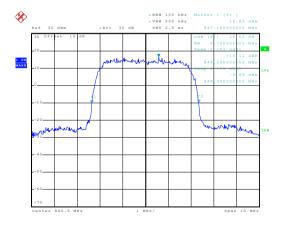
Date: 10.JUL.2015 22:35:59

Lowest channel



Date: 10..TIIT..2015 22:36:17

Middle channel



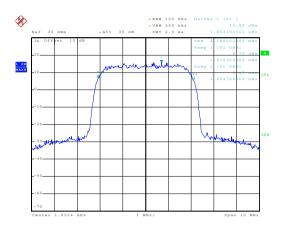
Date: 10.JUL.2015 22:36:35

Highest channel



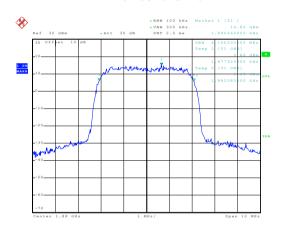
99% Occupy bandwidth

UMTS 1900 12.2k RMC



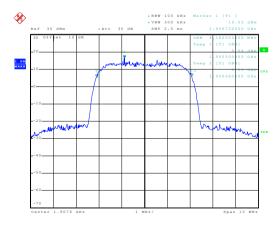
Date: 10.JUL.2015 22:42:37

Lowest channel



Date: 10.JUL.2015 22:42:20

Middle channel



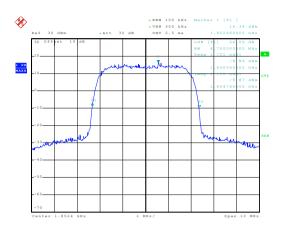
Date: 10..THT..2015 22:41:55

Highest channel



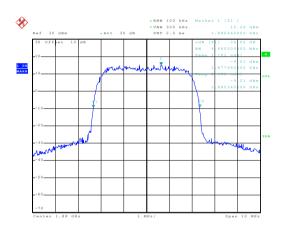
26dB Emission Bandwidth

UMTS 1900 12.2k RMC



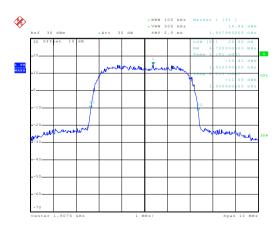
Date: 10.JUL.2015 22:43:45

Lowest channel



Date: 10..TIIT..2015 22:43:59

Middle channel



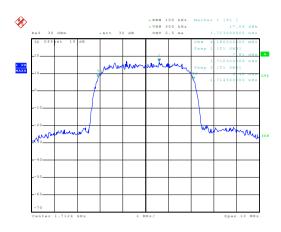
Date: 10.JUL.2015 22:44:22

Highest channel



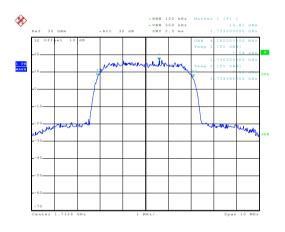
99% Occupy bandwidth

UMTS 1700 12.2k RMC



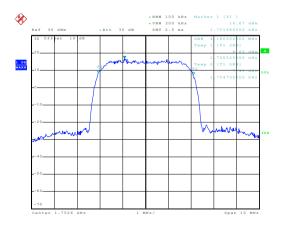
Date: 10.JUL.2015 22:29:30

Lowest channel



Date: 10.JUL.2015 22:29:06

Middle channel



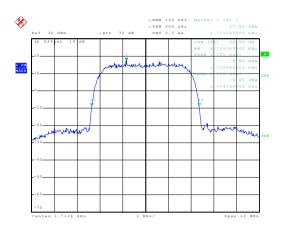
Date: 10..THT..2015 22:27:59

Highest channel



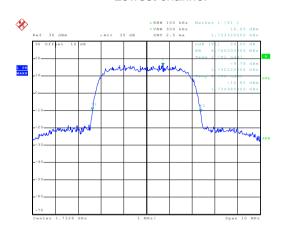
26dB Emission Bandwidth

UMTS 1700 12.2k RMC



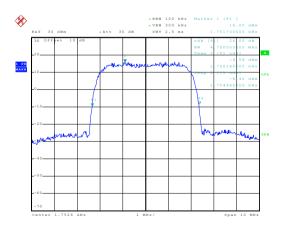
Date: 10.JUL.2015 22:29:49

Lowest channel



Date: 10..TIIT..2015 22:30:08

Middle channel



Date: 10.JUL.2015 22:30:24

Highest channel





6.7 Peak-to-Average Ratio

Test Requirement:	FCC part 24.232(d)		
Limit:	The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.		
Test setup:	EUT Splitter Communication Tester ATT SPA		
Test Procedure:	 Note: Measurement setup for testing on Antenna connector The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation. Set the CCDF option in spectrum analyzer, RBW ≥ OBW, Set the EUT working in highest power level, measured and recorded the 0.1% as PAPR level. Repeat step 1~3 at other frequency and modulations. 		
Test Instruments:	Refer to section 5.8 for details		
Test mode:	Refer to section 5.3 for details		
Test results:	Passed		

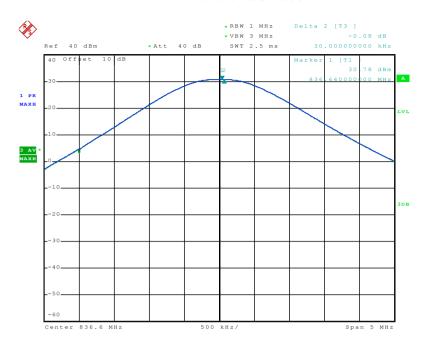
Measurement Data (worst case)

Modulation	Test channel	PAPR	
GSM 850	190	0.08	
PCS 1900	661	0.10	
UMTS 850 RMC	4183	3.24	
UMTS1900 RMC	9400	3.00	
UMTS1700 RMC	1413	2.00	



Test plots as below:

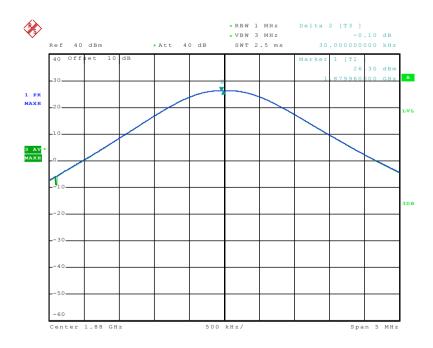
Middle channel Modulation:GSM 850



Date: 17.JUL.2015 20:07:08

Middle channel

Modulation: PCS 1900

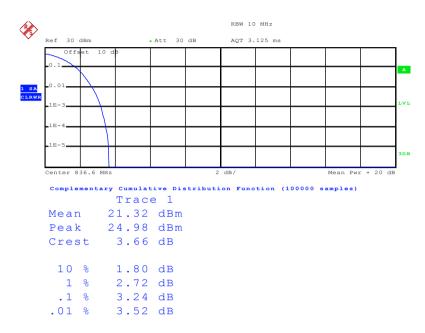


Date: 17.JUL.2015 20:06:18



Middle channel

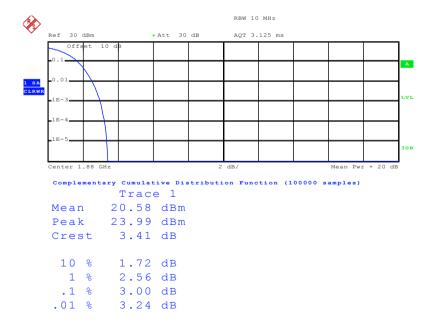
Modulation: UMTS 850 RMC



Date: 17.JUL.2015 19:55:26

Middle channel

Modulation: UMTS1900 RMC

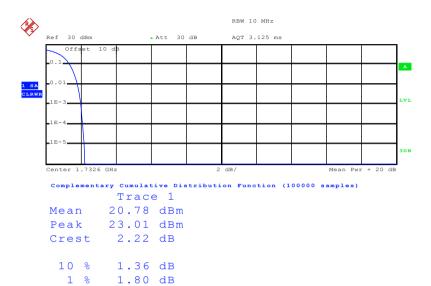


Date: 17.JUT. 2015 19:59:17



Middle channel

Modulation: UMTS1700 RMC



Date: 17.JUL.2015 19:57:39

2.00 dB

2.12 dB

.1 %

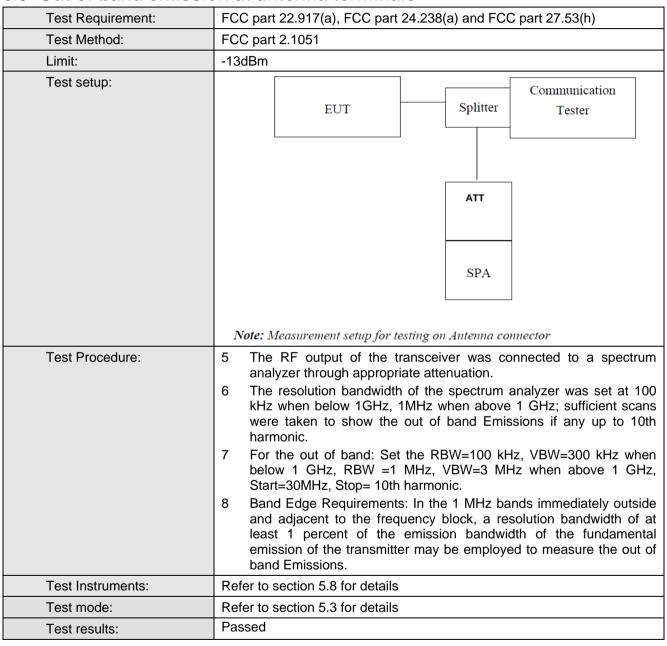
.01 %



6.8 Modulation Characteristic

According to FCC § 2.1047(d), Part 22H & 24E & 27L there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.

6.9 Out of band emission at antenna terminals



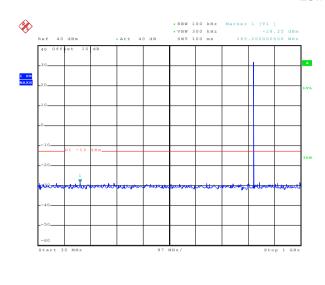
Test plots as follows:

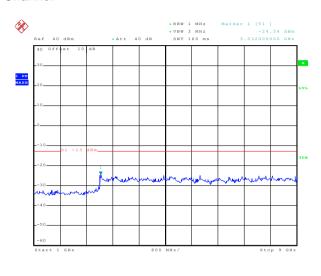


Spurious emission

GSM 850

Lowest Channel





Date: 10.JUL.2015 22:55:00

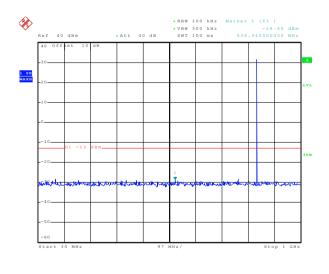
30MHz~1GHz

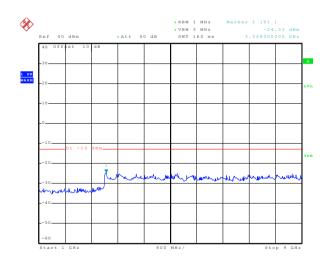
1GHz~9GHz

Date: 10.JUL.2015 22:55:22

Date: 10.JUL.2015 22:55:30

Middle channel





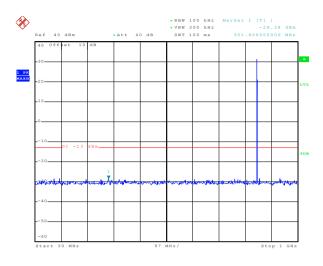
Date: 10.JUL.2015 22:54:38

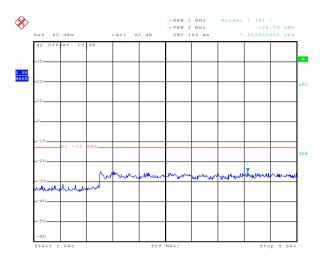
30MHz~1GHz

1GHz~9GHz



Highest Channel





Date: 10.JUL.2015 22:54:21

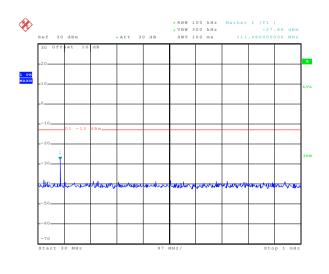
30MHz~1GHz

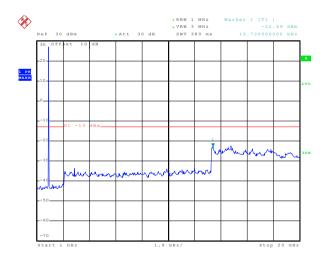
Date: 10.JUL.2015 22:55:39

1GHz~9GHz

PCS 1900

Lowest Channel





Date: 10.JUL.2015 23:00:40

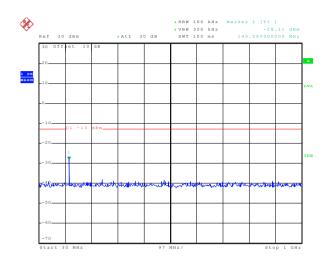
30MHz~1GHz

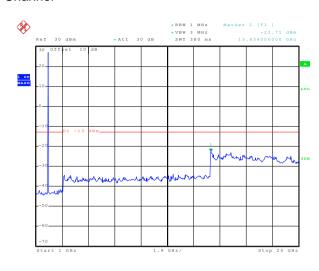
Date: 10.JUL.2015 23:01:11

1GHz~20GHz



Middle Channel

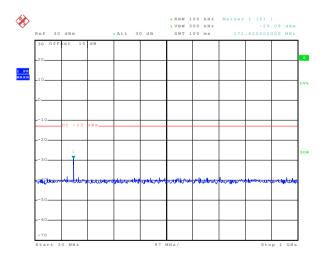


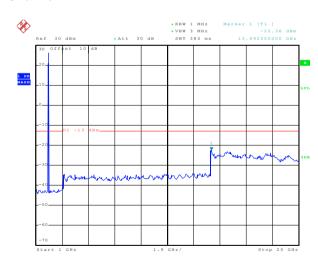


Date: 10.JUL.2015 23:00:23

30MHz~1GHz

Highest Channel





Date: 10.JUL.2015 23:00:08

30MHz~1GHz

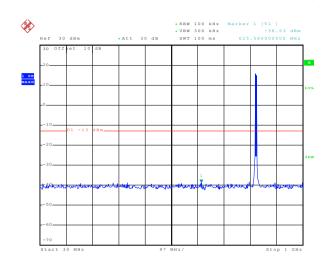
Date: 10.JUL.2015 23:02:19

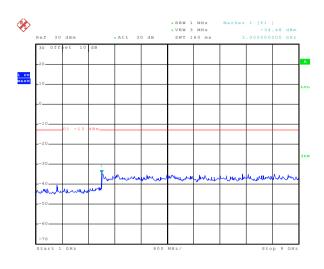
1GHz~20GHz



UMTS 850 12.2k RMC

Lowest Channel





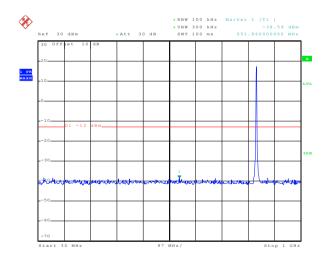
Date: 10.JUL.2015 22:37:54

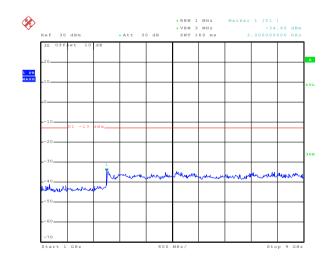
30MHz~1GHz

Date: 10.JUL.2015 22:38:24

1GHz~9GHz

Middle Channel





Date: 10..TUT..2015 22:37:29

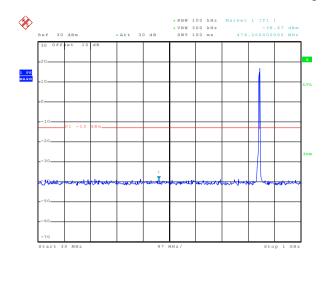
30MHz~1GHz

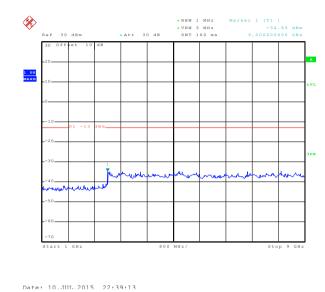
Date: 10.JUL.2015 22:38:41

1GHz~9GHz



Highest Channel





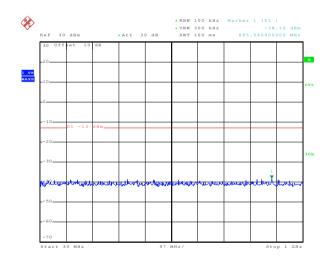
Date: 10.JUL.2015 22:37:08

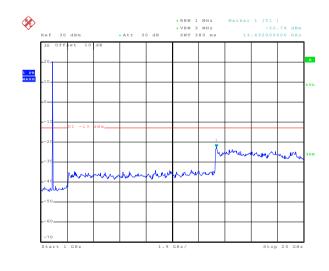
30MHz~1GHz

1GHz~9GHz

UMTS 1900 12.2k RMC

Lowest Channel





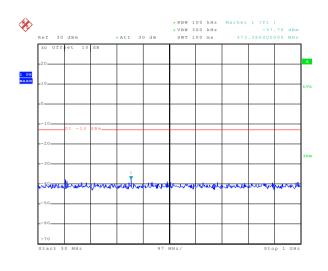
Date: 10.JUL.2015 22:45:07

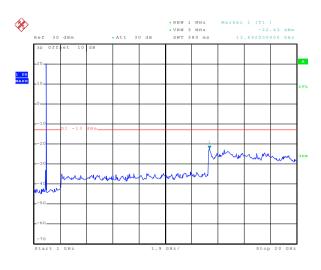
30MHz~1GHz





Middle Channel

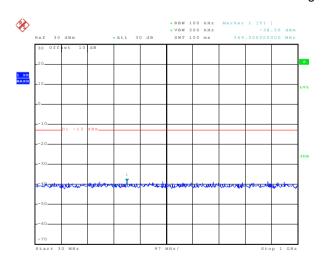


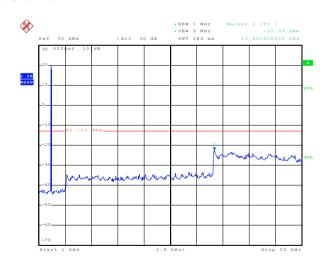


Date: 10..TIII..2015 22:44:56

30MHz~1GHz

Highest Channel





Date: 10.JUL.2015 22:44:46

30MHz~1GHz

Date: 10.JUL.2015 22:45:49

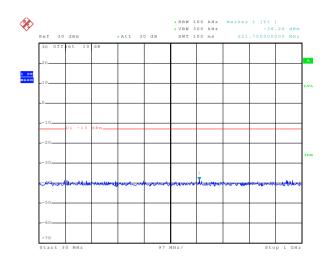
1GHz~20GHz

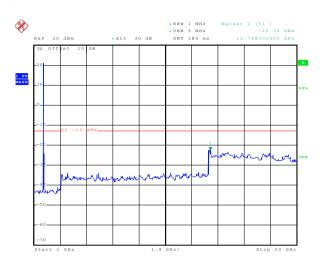




UMTS 1700 12.2k RMC

Lowest Channel





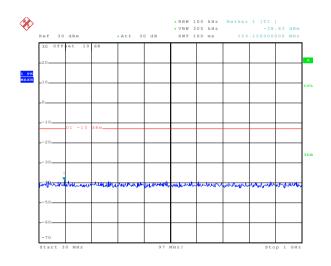
Date: 10.JUL.2015 22:31:27

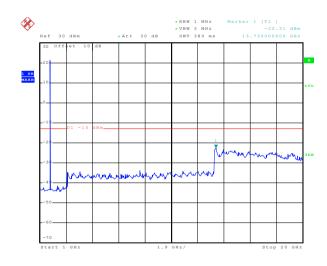
30MHz~1GHz

Date: 10.JUL.2015 22:31:48

1GHz~20GHz

Middle Channel





Date: 10.JUL.2015 22:31:10

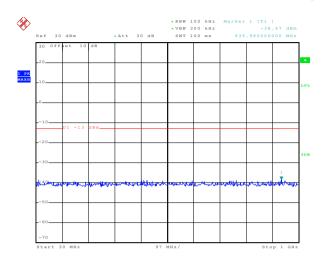
30MHz~1GHz

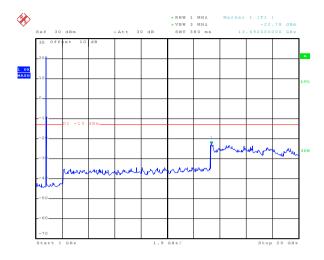
Date: 10.JUL.2015 22:32:14

1GHz~20GHz



Highest Channel





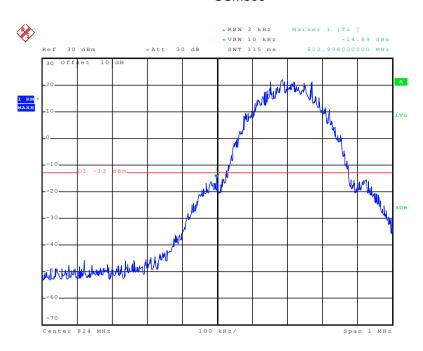
Date: 10.JUL.2015 22:30:53

30MHz~1GHz



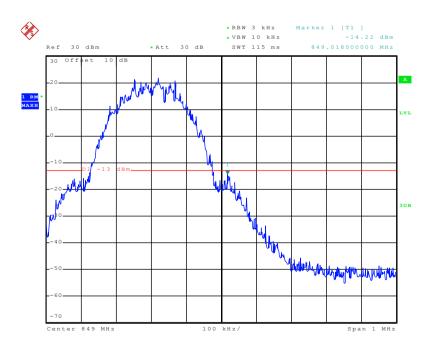
Band edge emission

GSM850



Date: 10.JUL.2015 22:49:05

Lowest channel

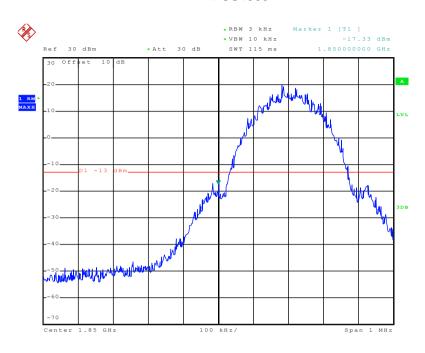


Date: 10.JUL.2015 22:50:11

Highest channel

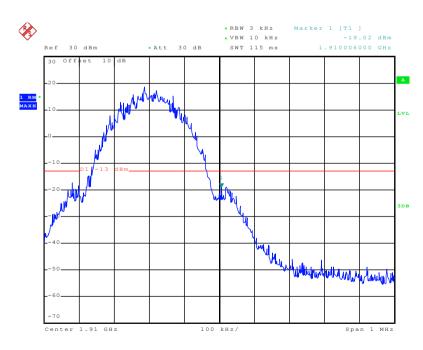


PCS1900



Date: 10.JUL.2015 22:56:57

Lowest channel

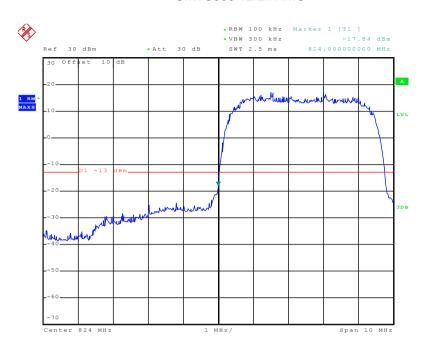


Date: 10.JUL.2015 22:57:29

Highest channel

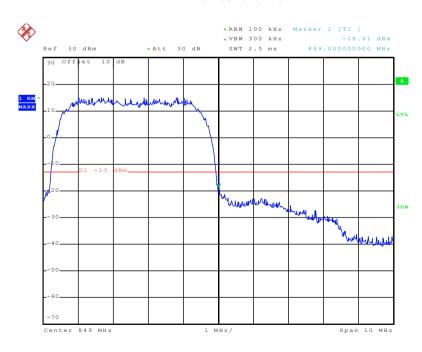


UMTS850 12.2k RMC



Date: 10.JUL.2015 22:34:04

Lowest channel

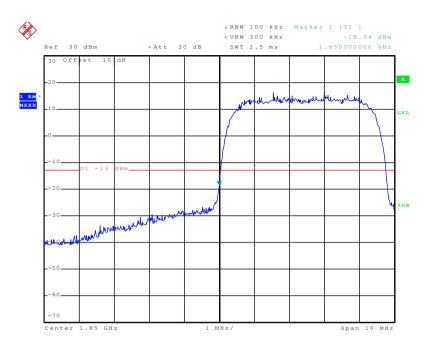


Date: 10.JUL.2015 22:34:23

Highest channel

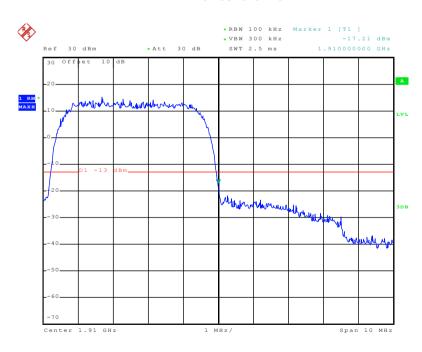


UMTS 1900 12.2k RMC



Date: 10.JUL.2015 22:40:39

Lowest channel

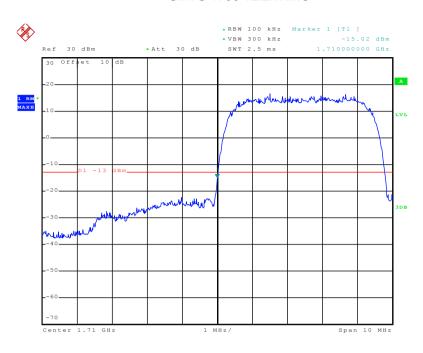


Date: 10.JUT.2015 22:41:04

Highest channel

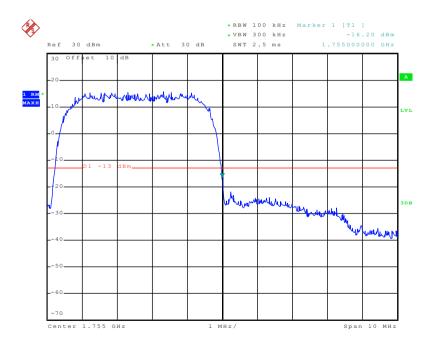


UMTS 1700 12.2k RMC



Date: 10.JUL.2015 22:26:25

Lowest channel



Date: 10.JUL.2015 22:27:12

Highest channel





6.10 ERP. EIRP Measurement

6.10 ERP, EIRP Meas	Surement
Test Requirement:	FCC part 22.913(a), FCC part 24.232(b) and FCC part 27.50(d)
Test Method:	FCC part 2.1046
Limit:	GSM850 7W ERP PCS1900 2W EIRP WCDMA Band V: 7W ERP WCDMA Band II: 2W EIRP WCDMA Band IV: 1W EIRP
Test setup:	Below 1GHz
	Antenna Tower Search Antenna RF Test Receiver Ground Plane Above 1GHz Antenna Tower Horn Antenna
	4m Spectrum Analyzer Turn 0.8m 1m Amplifier 0.8m Amplifier
	Substituted method:
	Ground plane d: distance in meters d:3 meter 1-4 meter S.G. Substituted Dipole or Horn Antenna Bi-Log Antenna or Horn Antenna





Test Procedure:	1. 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.
	3. ERP in frequency band 824.2 –848.80.8MHz 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:
	ERP = S.G. output (dBm) + Antenna Gain (dBd) - Cable Loss (dB)
	4. EIRP in frequency band 1850.2 –1909.8MHz were measured using a substitution method. The EUT was replaced by or horn antenna connected, the S.G. output was recorded and EIRP was calculated as follows:
	EIRP = S.G. output (dBm) + Antenna Gain (dBi) – Cable Loss (dB)
	5. The worse case was relating to the conducted output power.
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data (worst case)



Report No: CCIS15070055101

EUT mode	Channel	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
0011050	50 128 H	V	29.63	38.45	Pass	
GSM850 128		Н	29.76			

EUT mode	Channel	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
PCS1900 512	Н	V	28.16	33.00	Pass	
	17	Н	22.38	33.00	F d 5 5	

EUT mode	Channel	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
UMTS 850	Δ132	Н	V	20.89	20.45	
12.2k RMC		П	Н	20.44	38.45	Pass

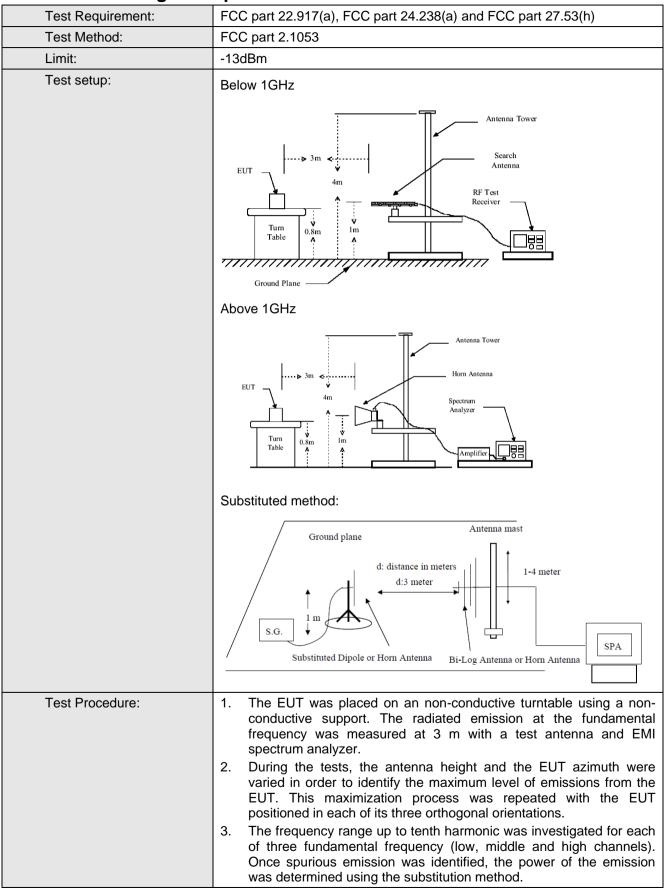
EUT mode	Channel	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
UMTS 1900	1 9262		V	23.60	22.00	Pass
12.2k RMC		Н	Н	17.51	33.00	

EUT mode	Channel	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
UMTS 1700	1.110	ш	V	22.90	22.00	Door
12.2k RMC	1413	Н	Н	14.89	33.00	Pass





6.11 Field strength of spurious radiation measurement





Report No: CCIS15070055101

	The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency. ERP / EIRP = S.G. output (dBm) + Antenna Gain(dB/dBi) – Cable Loss (dB)
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details. Based on the ERP/EIRP results, we selected GSM850, PCS1900, UMTS RMC 850, UMTS RMC 1700 and UMTS RMC 1900 for Radiated spurious emission test, other modes were not test.
Test results:	Passed

Measurement Data as below (worst case):





Test mode:	GSI	GSM850		Lowest	
Farmer (MILL)	Spurious	Emission	L':'((JD)	D It	
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
1648.40	Vertical	-43.93			
2472.60	V	-43.29			
3296.80	V	-47.79			
4121.00	V	-46.17	40.00	Dana	
1648.40	Horizontal	-46.24	-13.00	Pass	
2472.60	Н	-41.24			
3296.80	Н	-46.67			
4121.00	Н	-45.22			
Test mode:	GSI	/1850	Test channel:	Middle	
Frague par (MIII-)	Spurious	Emission			
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
1673.20	Vertical	-46.51			
2509.80	V	-42.74		Pass	
3346.40	V	-46.37			
4183.00	V	-48.08			
1673.20	Horizontal	-49.48	-13.00		
2509.80	Н	-43.31			
3346.40	Н	-46.86			
4183.00	Н	-47.53			
Test mode:	GSI	/1850	Test channel:	Highest	
Frequency (MHz)	Spurious	Emission	Limit (dBm)	Result	
riequency (MHZ)	Polarization	Level (dBm)	Limit (dbin)	Result	
1697.60	Vertical	-44.32			
2546.40	V	-43.80			
3395.20	V	-43.52			
4244.00	V	-46.50	12.00	Desir	
1697.60	Horizontal	-47.04	-13.00	Pass	
2546.40	Н	-42.92			
3395.20	Н	-43.40			
4244.00	Н	-45.74			

1. The emission levels of below 1 GHz are very lower than the limit and not show in test report.





Test mode:	PCS	1900	Test channel:	Lowest	
(NALL_)	Spurious	Emission	Limit (dDm)	Danish	
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
3700.40	Vertical	-30.81			
5550.60	V	-32.91			
7400.80	V	-37.19			
9251.00	V	-35.26	10.00	Dana	
3700.40	Horizontal	-35.80	-13.00	Pass	
5550.60	Н	-33.21			
7400.80	Н	-38.16			
9251.00	Н	-36.55			
Test mode:	PCS	1900	Test channel:	Middle	
[Spurious	Emission	Limit (JD)	Desult	
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
3760.00	Vertical	-29.31			
5640.00	V	-37.37			
7520.00	V	-36.92		Pass	
9400.00	V	-35.80	-13.00		
3760.00	Horizontal	-35.91	-13.00		
5640.00	Н	-40.72			
7520.00	Н	-38.62			
9400.00	Н	-36.11			
Test mode:	PCS	1900	Test channel:	Highest	
Frequency (MHz)	Spurious	Emission	Limit (dBm)	Result	
1 requeries (ivii iz)	Polarization	Level (dBm)	Limit (dbin)	result	
3819.60	Vertical	-32.33			
5729.40	V	-41.07			
7639.20	V	-38.24			
9549.00	V	-36.17	-13.00	Pass	
3819.60	Horizontal	-37.93		. 400	
5729.40	Н	-42.74			
7639.20	Н	-38.82			
9549.00	Н	-36.08			

1. The emission levels of below 1 GHz are very lower than the limit and not show in test report.





Test mode:	UMTS850	12.2k RMC	Test channel:	Lowest	
	Spurious	Emission	Lineit (dDne)	Danult	
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
1652.80	Vertical	-50.62			
2479.20	V	-45.90			
3305.60	V	-48.53			
4132.00	V	-48.14	-13.00	Pass	
1652.80	Horizontal	-50.60	-13.00	F 455	
2479.20	Н	-49.09			
3305.60	Н	-48.16			
4132.00	Н	-45.60			
Test mode:	UMTS850	12.2k RMC	Test channel:	Middle	
Fraguenov (MHz)	Spurious	Emission	Limit (dPm)	Result	
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
1673.20	Vertical	-44.04			
2509.80	V	-45.84			
3346.40	V	-48.51		Pass	
4183.00	V	-47.04	-13.00		
1673.20	Horizontal	-50.40	10.00		
2509.80	Н	-49.54			
3346.40	Н	-50.07			
4183.00	Н	-47.02			
Test mode:	UMTS850	12.2k RMC	Test channel:	Highest	
Frequency (MHz)	Spurious	Emission	Limit (dBm)	Result	
1 requeries (ivil 12)	Polarization	Level (dBm)	Limit (dbin)	resuit	
1693.20	Vertical	-53.93			
2539.80	V	-44.44			
3386.40	V	-47.94			
4233.00	V	-45.49	-13.00	Pass	
1693.20	Horizontal	-56.05	10.00	1 400	
2539.80	Н	-44.96			
3386.40	Н	-48.82			
4233.00	Н	-44.51			

1. The emission levels of below 1 GHz are very lower than the limit and not show in test report.





Test mode:	UMTS 1900 12.2k RMC		Test channel:	Lowest	
[Spurious	Emission	Lineit (dDne)	Desult	
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
3704.80	Vertical	-48.59			
5557.20	V	-42.39			
7409.60	V	-37.06			
9262.00	V	-36.22	-13.00	Pass	
3704.80	Horizontal	-48.87	-13.00	F455	
5557.20	Н	-42.89			
7409.60	Н	-38.46			
9262.00	Н	-35.00			
Test mode:	UMTS 1900	12.2k RMC	Test channel:	Middle	
Fraguency (MHz)	Spurious	Emission	Limit (dDm)	Dogult	
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
3760.00	Vertical	-48.99			
5640.00	V	-42.67			
7520.00	V	-39.71		Pass	
9400.00	V	-36.83	-13.00		
3760.00	Horizontal	-48.23	-13.00		
5640.00	Н	-41.92			
7520.00	Н	-38.67			
9400.00	Н	-36.52			
Test mode:	UMTS 1900	12.2k RMC	Test channel:	Highest	
	Spurious	Emission			
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
3815.20	Vertical	-47.25			
5722.80	V	-39.36			
7630.40	V	-37.25			
9538.00	V	-35.83		_	
3815.20	Horizontal	-48.82	-13.00	Pass	
5722.80	Н	-42.10			
7630.40	Н	-38.41			
9538.00	Н	-36.11			

1. The emission levels of below 1 GHz are very lower than the limit and not show in test report.





Test mode:	UMTS 1700 12.2k RMC		Test channel:	Lowest	
- (141)	Spurious Emission		l: ': (ID)		
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
3424.80	Vertical	-43.73			
4566.40	V	-45.67		Dage	
6088.50	V	-40.58			
8562.00	V	-36.84	10.00		
3424.80	Horizontal	-45.09	-13.00	Pass	
4566.40	Н	-42.81			
6088.50	Н	-38.88			
8562.00	Н	-37.24			
Test mode:	UMTS 1700	12.2k RMC	Test channel:	Middle	
Fragues ov (MHz)	Spurious Emission		Limit (dDm)	Decult	
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
3465.20	Vertical	-47.06		Pass	
5197.80	V	-44.52			
6930.40	V	-38.6			
8663.00	V	-37.24	-13.00		
3465.20	Horizontal	-47.34	-13.00		
5197.80	Н	-43.61			
6930.40	Н	-38.89			
8663.00	Н	-36.05			
Test mode:	UMTS 1700	12.2k RMC	Test channel:	Highest	
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result	
Frequency (IVII 12)	Polarization	Level (dBm)	Lillill (dBill)	Result	
3505.20	Vertical	-47.63			
5257.80	V	-41.81			
7010.40	V	-36.35			
8763.00	V	-38.84	-13.00	Pass	
3505.20	Horizontal	-48.01	-13.00		
5257.80	Н	-39.90			
7010.40	Н	-36.84			
8763.00	Н	-35.62			

1. The emission levels of below 1 GHz are very lower than the limit and not show in test report.



6.12 Frequency stability V.S. Temperature measurement

Test Requirement:	FCC Part 2.1055(a)(1)(b)			
Test Method:	FCC Part 2.1055(a)(1)(b)			
Limit:	2.5 ppm			
Test setup:	Temperature Chamber Spectrum analyzer EUT Att. Variable Power Supply			
	Note: Measurement setup for testing on Antenna connector			
Test procedure:	 Note: Measurement setup for testing on Antenna connector The equipment under test was connected to an external 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 			
Test Instruments:	Refer to section 5.8 for details			
Test mode:	Refer to section 5.3 for details			
Test results:	Passed			
Remark:	All three channels of all modulations have been tested, but only the worst channel and the worst modulation show in this test item.			





Measurement Data:

easurement Data:					
Re	ference Frequency: G	SM850 Midd	dle channel=190 channel	el=836.6MHz	
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
	remperature (C)	Hz	ppm	Еппі (рріп)	Nesuit
	-30	175	0.209180	2.5	Pass
	-20	104	0.124313		
	-10	154	0.184078		
	0	120	0.143438		
3.70	10	95	0.113555		
	20	91	0.108774		
	30	100	0.119531		
	40	117	0.139852		
	50	134	0.160172		
Re	ference Frequency: P0	CS1900 Mid	dle channel=661 chanr	nel=1880MHz	
Power supplied	To read or returns (°C)	Frequency error		Limit (mmm)	Dooult
(Vdc)	Temperature (℃)	Hz	ppm	Limit (ppm)	Result
	-30	174	0.092553	2.5 Pa	
	-20	93	0.049468		
3.70	-10	155	0.082447		Pass
	0	154	0.081915		
	10	132	0.070213		
	20	144	0.076596		
	30	94	0.050000		
	40	101	0.053723		
	50	103	0.054787	1	

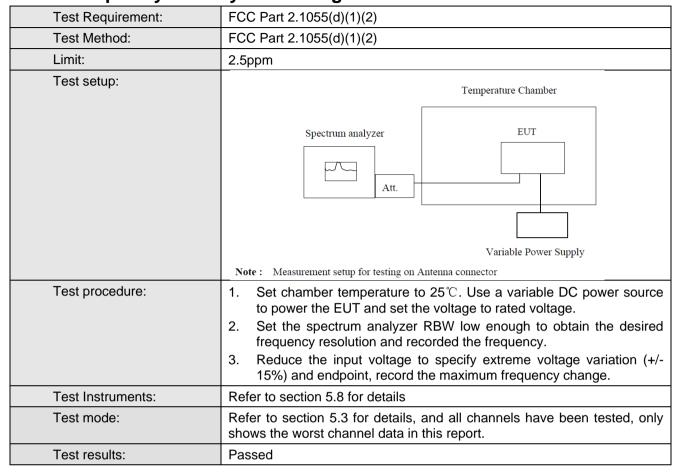




Reference	Frequency: UMTS85	0 12.2k RM0	C Middle channel=418	3 channel=836.6N	ЛHz
Power supplied	Temperature (°C)	Tomporature (°C) Frequency error			
(Vdc)	remperature (C)	Hz	ppm	Limit (ppm)	Result
	-30	147	0.175711		Pass
	-20	130	0.155391		
	-10	105	0.125508		
	0	94	0.112360		
3.70	10	77	0.092039	2.5	
	20	103	0.123117		
	30	104	0.124313		
	40	88	0.105188		
	50	82	0.098016		
Reference	Frequency: UMTS190	00 12.2k RM	IC Middle channel=940	00 channel=1880 l	ИНz
Power supplied	Tomporature (°C)	Frequency error		Limit (nnm)	Dogult
(Vdc)	Temperature (℃)	Hz	ppm	Limit (ppm)	Result
	-30	134	0.092553	2.5	Pass
	-20	74	0.049468		
	-10	98	0.082447		
	0	75	0.081915		
3.70	10	81	0.070213		
	20	63	0.076596		
	30	94	0.050000		
	40	75	0.053723		
	50	94	0.054787		
Reference I	Frequency: UMTS170	0 12.2k RM0	C Middle channel=141	3 channel=1732.6	6MHz
Power supplied	Tomporeture (°C)	Fr	equency error	Limit (nnm)	Result
(Vdc)	Temperature (℃)	Hz	ppm	Limit (ppm)	
	-30	127	0.073300		Pass
	-20	61	0.035207		
3.70	-10	74	0.042710	2.5 Pa	
	0	81	0.046751		
	10	73	0.042133		
	20	94	0.054254		
	30	105	0.060603		
	40	80	0.046173	1	
	50	94	0.054254	1	



6.13 Frequency stability V.S. Voltage measurement



Measurement Data (the worst channel):





Reference Frequency: GSM850 Middle channel=190 channel=836.6MHz							
Temperature (°C)	Power supplied	Frequency error					
remperature (C)	(Vdc)	Hz	ppm	Limit (ppm)	Result		
	4.25	105	0.125508				
25	3.70	64	0.076500	2.5	Pass		
	3.40	93	0.111164				
Refe	Reference Frequency: PCS1900 Middle channel=661 channel=1880MHz						
Temperature (°C)	Power supplied	Frequer	cy error	Limit (ppm)	Result		
Temperature (C)	(Vdc)	Hz	ppm	Еппи (ррпп)	Nesuit		
	4.25	97	0.051596				
25	3.70	54	0.028723	2.5	Pass		
	3.40	62	0.032979				
Reference F	requency: UMTS 85	0 12.2k RMC Mide	dle channel=4183	3 channel=836.6	ИHz		
Temperature (°C)	Power supplied	Frequer	cy error	- Limit (ppm)	Result		
Temperature (C)	(Vdc)	Hz	ppm				
	4.25	97	0.115945	2.5			
25	3.70	71	0.084867		Pass		
	3.40	55	0.065742				
Reference F	requency: UMTS 190	00 12.2k RMC Mid	ddle channel=940	00 channel=1880	MHz		
Temperature (°C)	Power supplied	Frequer	cy error	Limit (ppm)	Result		
Temperature (C)	(Vdc)	Hz	ppm	Еппи (ррпп)	Result		
	4.25	99	0.052660		Pass		
25	3.70	74	0.039362	2.5			
	3.40	81	0.043085				
Reference Frequency: UMTS1700 12.2k RMC Middle channel=1413 channel=1732.6MHz							
Temperature (℃)	Power supplied	Frequen	Frequency error		Dogult		
	(Vdc)	Hz	ppm	Limit (ppm)	Result		
	4.25	70	0.040402	2.5 F			
25	3.70	64	0.036939		Pass		
	3.40	60	0.034630				