

FCC RF Test Report

APPLICANT : TCT Mobile Limited
EQUIPMENT : Tablet PC
BRAND NAME : ALCATEL
MODEL NAME : ONE TOUCH EVO 7HD / ONE TOUCH E710
(Module: one touch M600Q)
FCC ID : RAD428
STANDARD : FCC 47 CFR Part 2, 22(H), 24(E), 27(L)
CLASSIFICATION : PCS Licensed Transmitter (PCB)

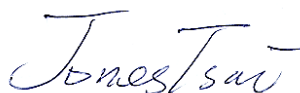
The product was integrated the WWAN Module (Brand Name: ALCATEL, Model Name: one touch M600Q, FCC ID: RAD425) during test.

The product was received on Jul. 19, 2013 and completely tested on Aug. 13, 2013. We, SPORTON INTERNATIONAL (SHENZHEN) INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI / TIA / EIA-603-C-2004 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL (SHENZHEN) INC., the test report shall not be reproduced except in full.



Reviewed by: Joseph Lin / Supervisor



Approved by: Jones Tsai / Manager



SPORTON INTERNATIONAL (SHENZHEN) INC.

No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan warehouse, Nanshan District, Shenzhen, Guangdong, P.R.C.



TABLE OF CONTENTS

REVISION HISTORY..... 3

SUMMARY OF TEST RESULT 4

1 GENERAL DESCRIPTION 5

 1.1 Applicant..... 5

 1.2 Manufacturer 5

 1.3 Feature of Equipment Under Test..... 5

 1.4 Product Specification of Equipment Under Test 6

 1.5 Modification of EUT 6

 1.6 Maximum ERP/EIRP Power..... 7

 1.7 Testing Site 7

 1.8 Applied Standards 8

2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST 9

 2.1 Test Mode..... 9

 2.2 Connection Diagram of Test System 10

 2.3 Support Unit used in test configuration and system..... 10

 2.4 Measurement Results Explanation Example 11

3 TEST RESULT..... 12

 3.1 Effective Radiated Power and Effective Isotropic Radiated Power Measurement 12

 3.2 Field Strength of Spurious Radiation Measurement 17

4 LIST OF MEASURING EQUIPMENT 31

5 UNCERTAINTY OF EVALUATION 32

APPENDIX A. SETUP PHOTOGRAPHS

APPENDIX B. PRODUCT EQUALITY DECLARATION



REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG342211-02	Rev. 01	This is report for ONE TOUCH EVO 7HD / ONE TOUCH E710; (Module: one touch M600Q). The product equality declaration could be referred to Appendix B. All test cases were performed on original report which can be referred to SPORTON Report Number FG342209-01 (FCC ID: RAD425). Based on the original test report, only ERP/EIRP and Radiated Spurious Emission were verified for the difference.	Aug. 20, 2013

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	§22.913(a)(2)	Effective Radiated Power	< 7 Watts	PASS	-
3.1	§24.232(c)	Equivalent Isotropic Radiated Power	< 2 Watts	PASS	-
3.1	§27.50(d)(4)	Equivalent Isotropic Radiated Power	< 1 Watts	PASS	-
3.2	§2.1053 §22.917(a) §24.238(a)	Field Strength of Spurious Radiated	$< 43 + 10 \log_{10}(P[\text{Watts}])$	PASS	Under limit 7.36 dB at 11280.000 MHz



1 General Description

1.1 Applicant

TCT Mobile Limited

5F, C building, No. 232, Liang Jing Road ZhangJiang High-Tech Park, Pudong Area Shanghai, P.R. China.
201203

1.2 Manufacturer

TCL COMMUNICATION TECHNOLOGY HOLDINGS LIMITED

70 Huifeng 4rd., ZhongKai Hi-tech Development District, Huizhou, Guangdong 516006 P.R.China (TCL Mobile Communication Co., LTD. Huizhou)

1.3 Feature of Equipment Under Test

Product Feature	
Equipment	Tablet PC
Brand Name	ALCATEL
Model Name	ONE TOUCH EVO 7HD / ONE TOUCH E710 (Module: one touch M600Q)
FCC ID	RAD428
EUT supports Radios application	GPRS/EGPRS/WCDMA/HSPA/HSPA+(Downlink Only)/ WLAN 11bgn / Bluetooth 3.0
HW Version	V6.0
SW Version	119
EUT Stage	Production Unit

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4 Product Specification of Equipment Under Test

Product Specification subjective to this standard	
Tx Frequency	GPRS850: 824.2 MHz ~ 848.8 MHz GPRS1900: 1850.2 MHz ~ 1909.8MHz WCDMA Band IV : 1712.4 MHz ~ 1752.6 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz
Rx Frequency	GPRS850: 869.2 MHz ~ 893.8 MHz GPRS1900: 1930.2 MHz ~ 1989.8 MHz WCDMA Band IV : 2112.4 MHz ~ 2152.6 MHz WCDMA Band II: 1932.4 MHz ~ 1987.6 MHz
Antenna Type	Monopole Antenna
Antenna Gain	GPRS850 : -3.1 dBi GPRS1900 : -2.8 dBi WCDMA Band IV : -2.6 dBi WCDMA Band II : -2.8 dBi
Type of Modulation	GPRS: GMSK EDGE: GMSK / 8PSK WCDMA: QPSK (Uplink) HSDPA: QPSK (Uplink) HSUPA: QPSK (Uplink) HSPA+: 16QAM (Downlink Only)

1.5 Modification of EUT

No modifications are made to the EUT during all test items.

1.6 Maximum ERP/EIRP Power

FCC Rule	System	Type of Modulation	Maximum ERP/EIRP (W)
Part 22	GPRS850 GPRS class 8	GMSK	1.7655
Part 22	GPRS850 EDGE class 8	8PSK	0.4123
Part 24	GPRS1900 GPRS class 8	GMSK	1.3661
Part 24	GPRS1900 EDGE class 8	8PSK	0.5076
Part 24	WCDMA Band II RMC 12.2Kbps	QPSK	0.2321
Part 27	WCDMA Band IV RMC 12.2Kbps	QPSK	0.2070

1.7 Testing Site

Test Site	SPORTON INTERNATIONAL (SHENZHEN) INC.		
Test Site Location	No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan warehouse, Nanshan District, Shenzhen, Guangdong, P.R.C. TEL: +86-755-3320-2398		
Test Site No.	Sporton Site No.		FCC/IC Registration No.
	03CH01-SZ	OTA01-SZ	831040/4086F-1

1.8 Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ 47 CFR Part 2, 22(H), 24(E), 27(L)
- ♦ ANSI / TIA / EIA-603-C-2004
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v02

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

2.1 Test Mode

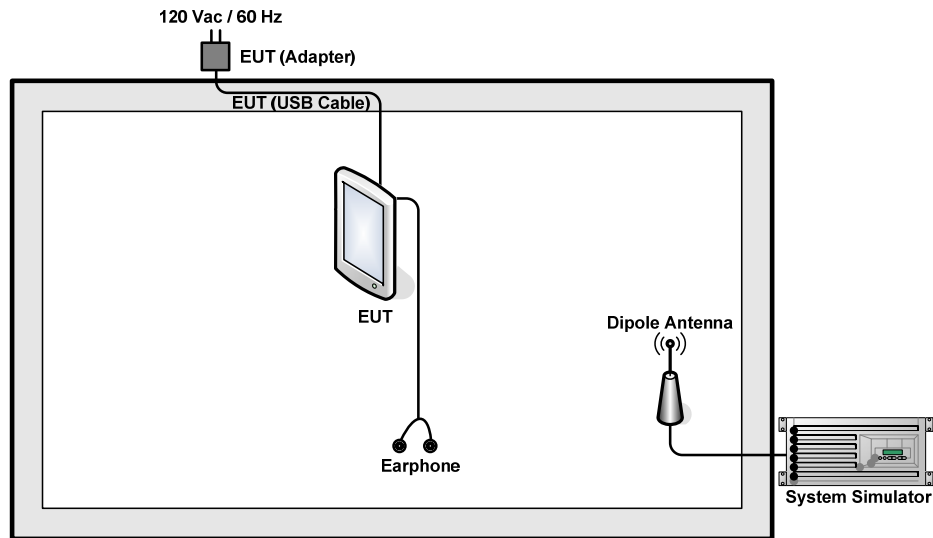
During all testing, EUT is in link mode with base station emulator at maximum power level. The spurious emission measurements were carried out in semi-anechoic chamber with 3-meter test range, and EUT is rotated on three test planes to find out the worst emission (Z plane).

Frequency range investigated for radiated emission is as follows:

1. 30 MHz to 9000 MHz for GPRS850.
2. 30 MHz to 18000 MHz for WCDMA Band IV.
3. 30 MHz to 19000 MHz for GPRS1900 and WCDMA Band II.

Test Modes		
Band	Radiated TCs	Conducted TCs
GPRS850	<ul style="list-style-type: none"> ■ GPRS class 8 Link ■ EDGE class 8 Link 	<ul style="list-style-type: none"> ■ GPRS class 8 Link ■ EDGE class 8 Link
GPRS1900	<ul style="list-style-type: none"> ■ GPRS class 8 Link ■ EDGE class 8 Link 	<ul style="list-style-type: none"> ■ GPRS class 8 Link ■ EDGE class 8 Link
WCDMA Band IV	<ul style="list-style-type: none"> ■ RMC 12.2Kbps Link 	<ul style="list-style-type: none"> ■ RMC 12.2Kbps Link
WCDMA Band II	<ul style="list-style-type: none"> ■ RMC 12.2Kbps Link 	<ul style="list-style-type: none"> ■ RMC 12.2Kbps Link

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	Agilent	E5515C	N/A	N/A	Unshielded, 1.8 m
2.	Earphone	INTOPIC	Jazz-278	FCC DoC	Shielded, 2.2 m	N/A

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.2 dB and 10dB attenuator.

Example :

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)} \\ &= 4.2 + 10 = 14.2 \text{ (dB)} \end{aligned}$$

3 Test Result

3.1 Effective Radiated Power and Effective Isotropic Radiated Power Measurement

3.1.1 Description of the ERP/EIRP Measurement

The substitution method, in ANSI / TIA / EIA-603-C-2004, was used for ERP/EIRP measurement, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems v02. The ERP of mobile transmitters must not exceed 7 Watts and the EIRP of mobile transmitters are limited to 2 Watts.

3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test Procedures

1. The EUT was placed on a turntable with 1.5 meter height in a fully anechoic chamber.
2. The EUT was set at 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. GPRS operating modes: Set RBW= 1MHz, VBW= 3MHz, RMS detector over burst;
UMTS operating modes: Set RBW= 100 kHz, VBW= 300 kHz, RMS detector over frame, and use channel power option with bandwidth=5MHz, per section 4.0 of KDB 971168 D01.
4. The table was rotated 360 degrees to determine the position of the highest radiated power.
5. The height of the receiving antenna is adjusted to look for the maximum ERP/EIRP.
6. Taking the record of maximum ERP/EIRP.
7. A dipole antenna was substituted in place of the EUT and was driven by a signal generator.
8. The conducted power at the terminal of the dipole antenna is measured.
9. Repeat step 3 to step 5 to get the maximum ERP/EIRP of the substitution antenna.
10. $ERP/EIRP = P_s + E_t - E_s + G_s = P_s + R_t - R_s + G_s$

P_s (dBm) : Input power to substitution antenna.

G_s (dBi or dBd) : Substitution antenna Gain.

$E_t = R_t + AF$

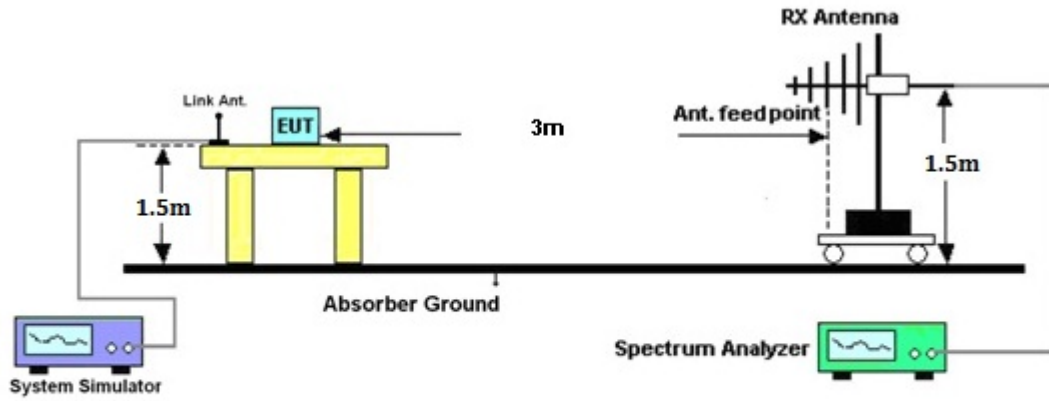
$E_s = R_s + AF$

AF (dB/m) : Receive antenna factor

R_t : The highest received signal in spectrum analyzer for EUT.

R_s : The highest received signal in spectrum analyzer for substitution antenna.

3.1.4 Test Setup



3.1.5 Test Result of ERP

GPRS850 (GPRS class 8) Radiated Power ERP						
Horizontal Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBd)	ERP (dBm)	ERP (W)
824.20	-15.71	-48.12	0.00	-1.08	31.33	1.3573
836.40	-15.01	-48.28	0.00	-0.93	32.34	1.7146
848.80	-15.12	-48.35	0.00	-0.76	32.47	1.7655
Vertical Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBd)	ERP (dBm)	ERP (W)
824.20	-16.11	-47.97	0.00	-1.08	30.78	1.1975
836.40	-15.30	-48.01	0.00	-0.93	31.78	1.5054
848.80	-15.39	-48.05	0.00	-0.76	31.90	1.5472

GPRS850 (EDGE class 8) Radiated Power ERP						
Horizontal Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBd)	ERP (dBm)	ERP (W)
824.20	-21.85	-48.12	0.00	-1.08	25.19	0.3302
836.40	-21.41	-48.28	0.00	-0.93	25.94	0.3923
848.80	-21.44	-48.35	0.00	-0.76	26.15	0.4123
Vertical Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBd)	ERP (dBm)	ERP (W)
824.20	-22.37	-47.97	0.00	-1.08	24.52	0.2832
836.40	-21.36	-48.01	0.00	-0.93	25.72	0.3733
848.80	-21.61	-48.05	0.00	-0.76	25.68	0.3701

3.1.6 Test Result of EIRP

GPRS1900 (GPRS class 8) Radiated Power EIRP						
Horizontal Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	EIRP (dBm)	EIRP (W)
1850.20	-26.29	-51.88	0.00	1.96	27.55	0.5687
1880.00	-26.99	-52.99	0.00	2.00	28.00	0.6313
1909.80	-28.24	-54.28	0.00	1.98	28.02	0.6336
Vertical Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	EIRP (dBm)	EIRP (W)
1850.20	-24.07	-52.13	0.00	1.96	30.02	1.0042
1880.00	-24.30	-53.17	0.00	2.00	30.87	1.2229
1909.80	-24.76	-54.13	0.00	1.98	31.35	1.3661

GPRS1900 (EDGE class 8) Radiated Power EIRP						
Horizontal Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	EIRP (dBm)	EIRP (W)
1850.20	-29.80	-51.88	0.00	1.96	24.04	0.2533
1880.00	-30.97	-52.99	0.00	2.00	24.02	0.2522
1909.80	-32.46	-54.28	0.00	1.98	23.80	0.2401
Vertical Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	EIRP (dBm)	EIRP (W)
1850.20	-27.87	-52.13	0.00	1.96	26.22	0.4191
1880.00	-28.24	-53.17	0.00	2.00	26.93	0.4934
1909.80	-29.05	-54.13	0.00	1.98	27.06	0.5076



WCDMA Band IV (RMC 12.2Kbps) Radiated Power EIRP						
Horizontal Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	EIRP (dBm)	EIRP (W)
1712.40	-32.55	-51.88	0.00	1.96	21.29	0.1346
1732.60	-32.74	-52.99	0.00	2.00	22.25	0.1679
1752.60	-35.14	-54.28	0.00	1.98	21.12	0.1294
Vertical Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	EIRP (dBm)	EIRP (W)
1712.40	-31.75	-52.13	0.00	1.96	22.34	0.1714
1732.60	-32.01	-53.17	0.00	2.00	23.16	0.2070
1752.60	-34.09	-54.13	0.00	1.98	22.02	0.1592

WCDMA Band II (RMC 12.2Kbps) Radiated Power EIRP						
Horizontal Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	EIRP (dBm)	EIRP (W)
1852.40	-34.08	-51.88	0.00	1.96	19.76	0.0947
1880.00	-33.91	-52.99	0.00	2.00	21.08	0.1281
1907.60	-35.42	-54.28	0.00	1.98	20.84	0.1213
Vertical Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	EIRP (dBm)	EIRP (W)
1852.40	-32.04	-52.13	0.00	1.96	22.05	0.1602
1880.00	-31.51	-53.17	0.00	2.00	23.66	0.2321
1907.60	-32.79	-54.13	0.00	1.98	23.32	0.2149

3.2 Field Strength of Spurious Radiation Measurement

3.2.1 Description of Field Strength of Spurious Radiated Measurement

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43 + 10 \log(P)$ dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

3.2.2 Measuring Instruments

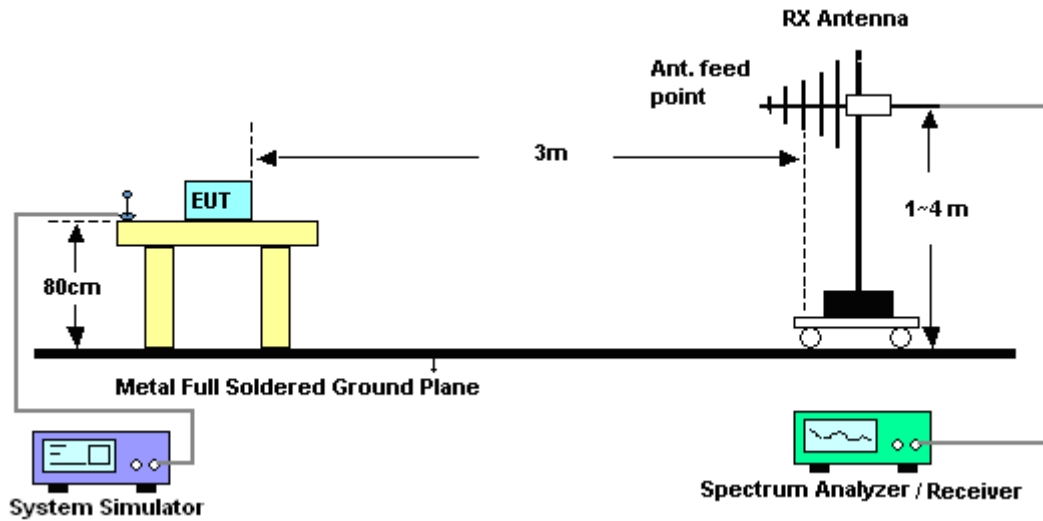
See list of measuring instruments of this test report.

3.2.3 Test Procedures

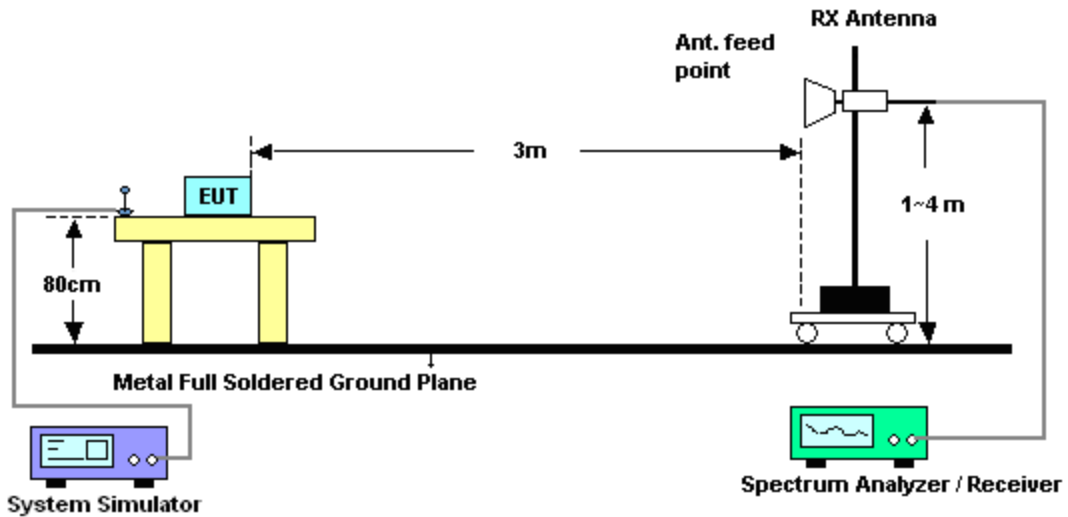
1. The EUT was placed on a rotatable wooden table with 0.8 meter above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
11. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [43 + 10\log(P)]$ (dB)
 $= [30 + 10\log(P)]$ (dBm) - $[43 + 10\log(P)]$ (dB)
 $= -13\text{dBm}$.
12. $\text{EIRP (dBm)} = \text{S.G. Power} - \text{Tx Cable Loss} + \text{Tx Antenna Gain}$
13. $\text{ERP (dBm)} = \text{EIRP} - 2.15$

3.2.4 Test Setup

For radiated emissions from 30MHz to 1GHz



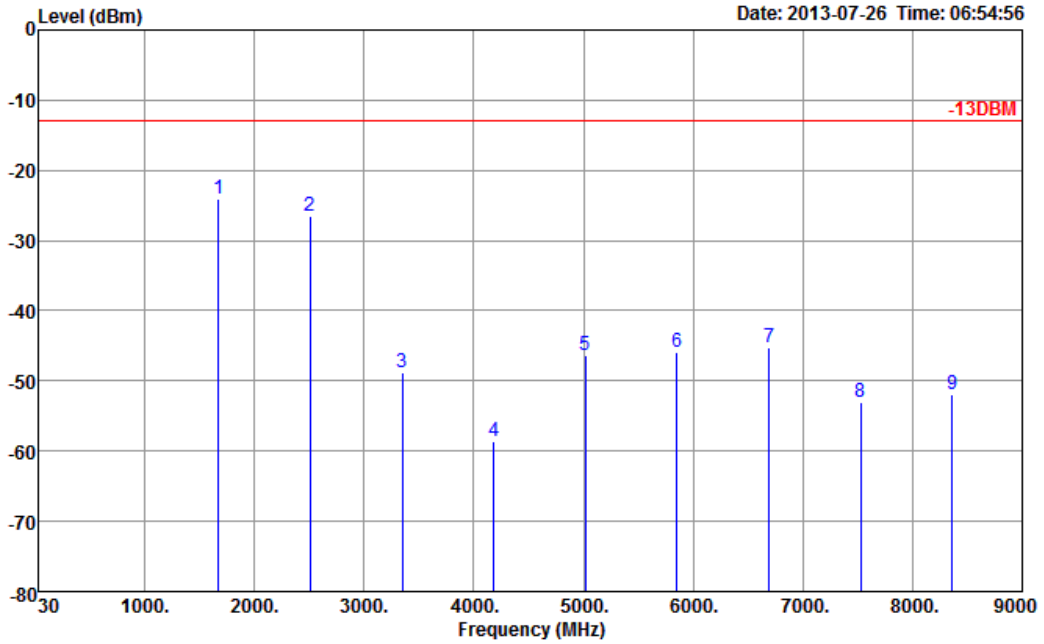
For radiated emissions above 1GHz





3.2.5 Test Result of Field Strength of Spurious Radiated

Band :	GPRS850	Temperature :	24~25°C
Test Mode :	GPRS class 8 Link (GMSK)	Relative Humidity :	51~54%
Test Engineer :	Robin Luo	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

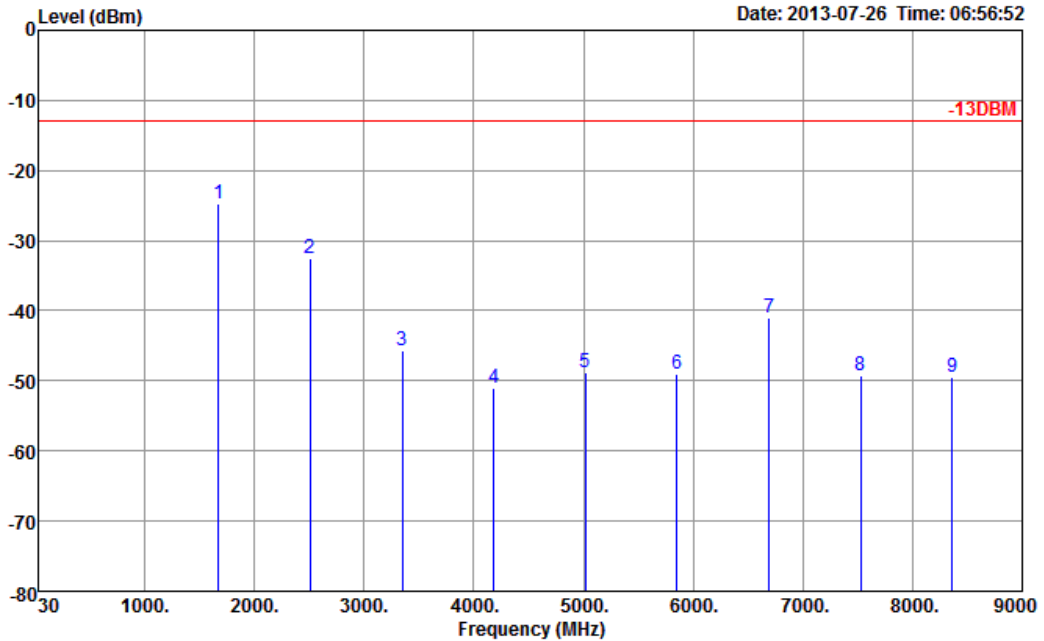


Site : 03CH01-SZ
 Condition : -13DBM HF_EIRP_H_130101 HORIZONTAL
 Project : (FG) 342211-02

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1672	-24.14	-13	-11.14	-40.88	-24.79	0.57	3.37	H	Pass
2510	-26.47	-13	-13.47	-51.97	-28.70	0.78	5.16	H	Pass
3346	-48.73	-13	-35.73	-59.33	-52.37	0.87	6.66	H	Pass
4182	-58.60	-13	-45.60	-73.36	-63.19	0.97	7.71	H	Pass
5018	-46.29	-13	-33.29	-64.58	-51.96	1.09	8.91	H	Pass
5854	-45.81	-13	-32.81	-64.03	-52.25	1.22	9.81	H	Pass
6691	-45.22	-13	-32.22	-66.69	-56.80	1.51	11.23	H	Pass
7528	-53.00	-13	-40.00	-75.85	-49.77	1.79	12.11	H	Pass
8364	-52.01	-13	-39.01	-75.51	-55.23	1.89	12.64	H	Pass



Band :	GPRS850	Temperature :	24~25°C
Test Mode :	GPRS class 8 Link (GMSK)	Relative Humidity :	51~54%
Test Engineer :	Robin Luo	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

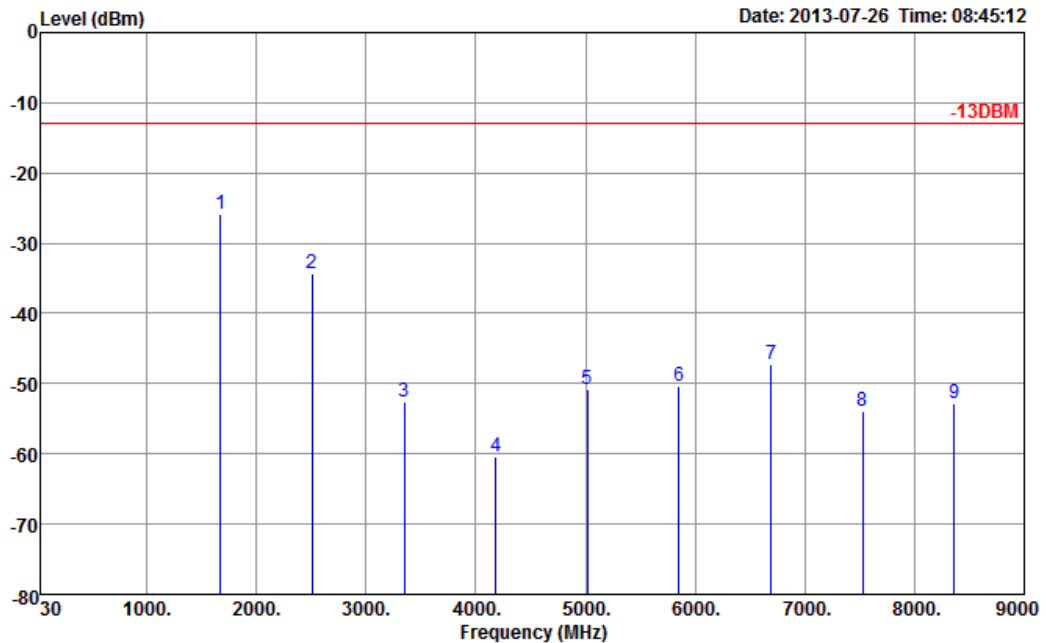


Site : 03CH01-SZ
 Condition : -13DBM HF_EIRP_V_130101 VERTICAL
 Project : (FG) 342211-02

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1672	-24.81	-13	-11.81	-39.08	-25.46	0.57	3.37	V	Pass
2510	-32.56	-13	-19.56	-55.52	-34.79	0.78	5.16	V	Pass
3346	-45.67	-13	-32.67	-58.77	-49.31	0.87	6.66	V	Pass
4182	-51.09	-13	-38.09	-66.31	-55.68	0.97	7.71	V	Pass
5018	-48.82	-13	-35.82	-66.27	-54.49	1.09	8.91	V	Pass
5854	-49.06	-13	-36.06	-66.96	-55.50	1.22	9.81	V	Pass
6691	-40.99	-13	-27.99	-61.95	-42.62	1.51	11.23	V	Pass
7528	-49.22	-13	-36.22	-71.38	-55.15	1.79	12.11	V	Pass
8364	-49.36	-13	-36.36	-72.31	-51.53	1.89	12.64	V	Pass



Band :	GPRS850	Temperature :	24~25°C
Test Mode :	EDGE class 8 Link (8PSK)	Relative Humidity :	51~54%
Test Engineer :	Robin Luo	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

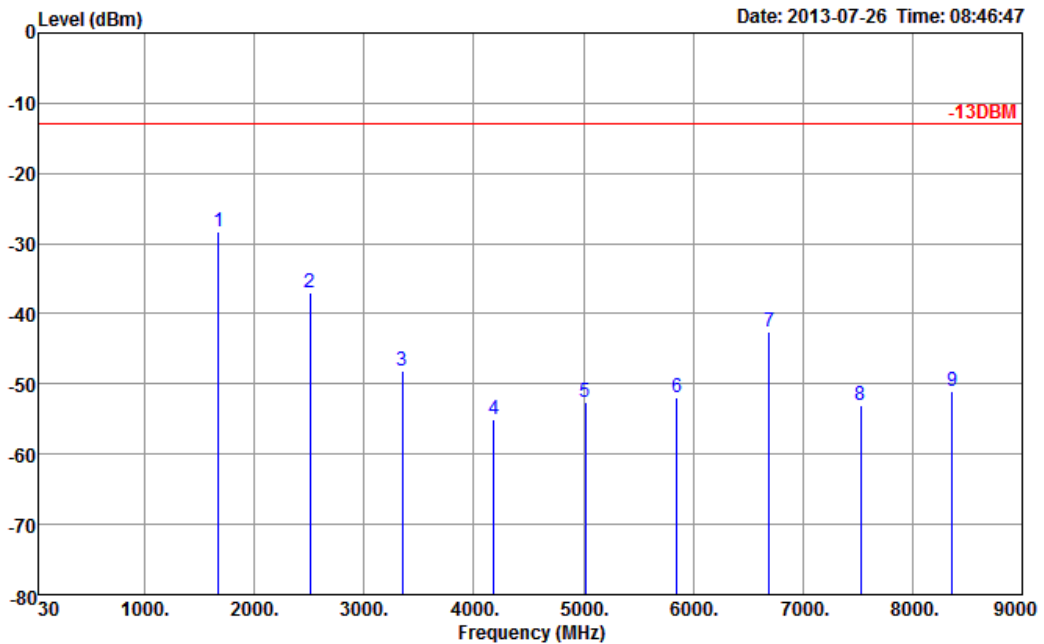


Site : 03CH01-SZ
 Condition : -13DBM HF_EIRP_H_130101 HORIZONTAL
 Project : (FG) 342211-02

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1672	-25.78	-13	-12.78	-42.48	-26.43	0.57	3.37	H	Pass
2510	-34.29	-13	-21.29	-59.26	-36.52	0.78	5.16	H	Pass
3346	-52.54	-13	-39.54	-63.14	-56.18	0.87	6.66	H	Pass
4182	-60.33	-13	-47.33	-75.09	-64.92	0.97	7.71	H	Pass
5018	-50.86	-13	-37.86	-69.15	-56.53	1.09	8.91	H	Pass
5854	-50.44	-13	-37.44	-68.66	-56.88	1.22	9.81	H	Pass
6691	-47.28	-13	-34.28	-68.75	-56.80	1.51	11.23	H	Pass
7528	-54.02	-13	-41.02	-76.87	-49.77	1.79	12.11	H	Pass
8364	-52.87	-13	-39.87	-76.37	-55.23	1.89	12.64	H	Pass



Band :	GPRS850	Temperature :	24~25°C
Test Mode :	EDGE class 8 Link (8PSK)	Relative Humidity :	51~54%
Test Engineer :	Robin Luo	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

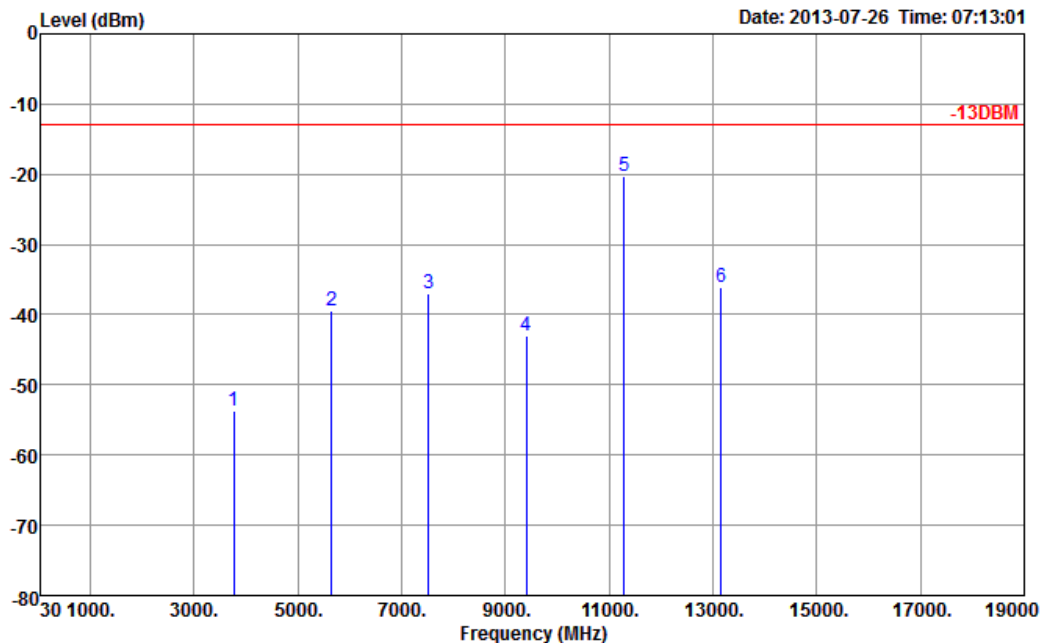


Site : 03CH01-SZ
 Condition : -13DBM HF_EIRP_V_130101 VERTICAL
 Project : (FG) 342211-02

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1672	-28.27	-13	-15.27	-42.36	-28.92	0.57	3.37	V	Pass
2510	-36.92	-13	-23.92	-59.42	-39.15	0.78	5.16	V	Pass
3346	-48.21	-13	-35.21	-60.62	-51.85	0.87	6.66	V	Pass
4182	-55.02	-13	-42.02	-70.24	-59.61	0.97	7.71	V	Pass
5018	-52.51	-13	-39.51	-69.96	-58.18	1.09	8.91	V	Pass
5854	-52.03	-13	-39.03	-69.93	-58.47	1.22	9.81	V	Pass
6691	-42.53	-13	-29.53	-63.49	-42.62	1.51	11.23	V	Pass
7528	-53.01	-13	-40.01	-75.17	-55.15	1.79	12.11	V	Pass
8364	-51.04	-13	-38.04	-73.99	-51.53	1.89	12.64	V	Pass



Band :	GPRS1900	Temperature :	24~25°C
Test Mode :	GPRS class 8 Link (GMSK)	Relative Humidity :	51~54%
Test Engineer :	Robin Luo	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

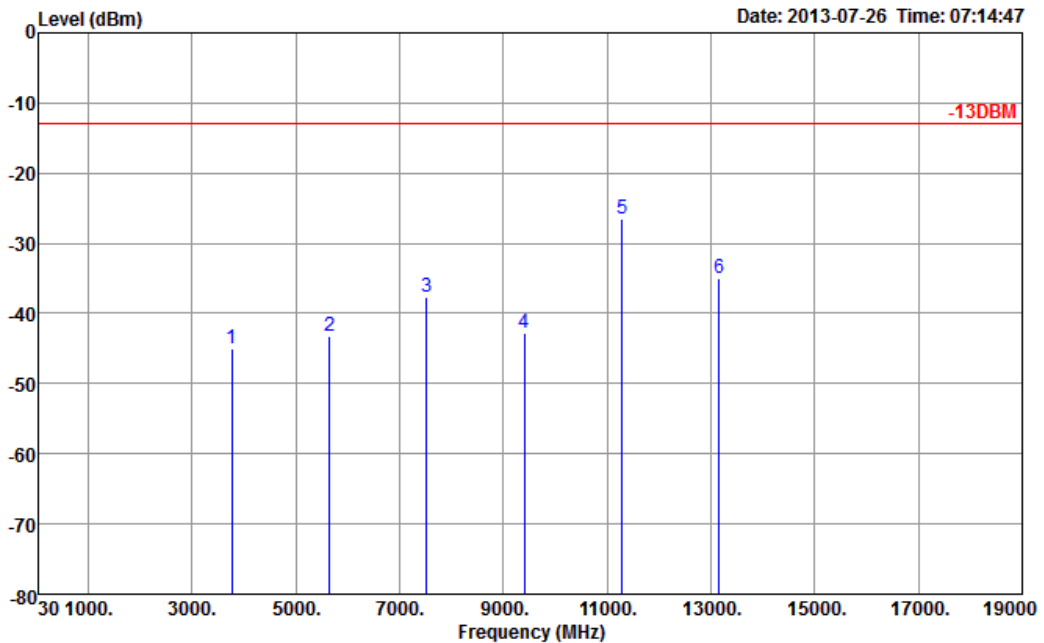


Site : 03CH01-SZ
 Condition : -13DBM HF_EIRP_H_130101 HORIZONTAL
 Project : (FG) 342211-02

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3760	-53.63	-13	-40.63	-65.78	-60.37	1.28	8.02	H	Pass
5640	-39.52	-13	-26.52	-59.62	-47.94	1.58	10.00	H	Pass
7520	-36.89	-13	-23.89	-61.32	-47.21	1.78	12.10	H	Pass
9400	-43.09	-13	-30.09	-65.21	-53.87	2.22	13.00	H	Pass
11280	-20.36	-13	-7.36	-53.23	-31.21	2.16	13.01	H	Pass
13160	-36.18	-13	-23.18	-66.76	-47.24	2.64	13.70	H	Pass



Band :	GPRS1900	Temperature :	24~25°C
Test Mode :	GPRS class 8 Link (GMSK)	Relative Humidity :	51~54%
Test Engineer :	Robin Luo	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

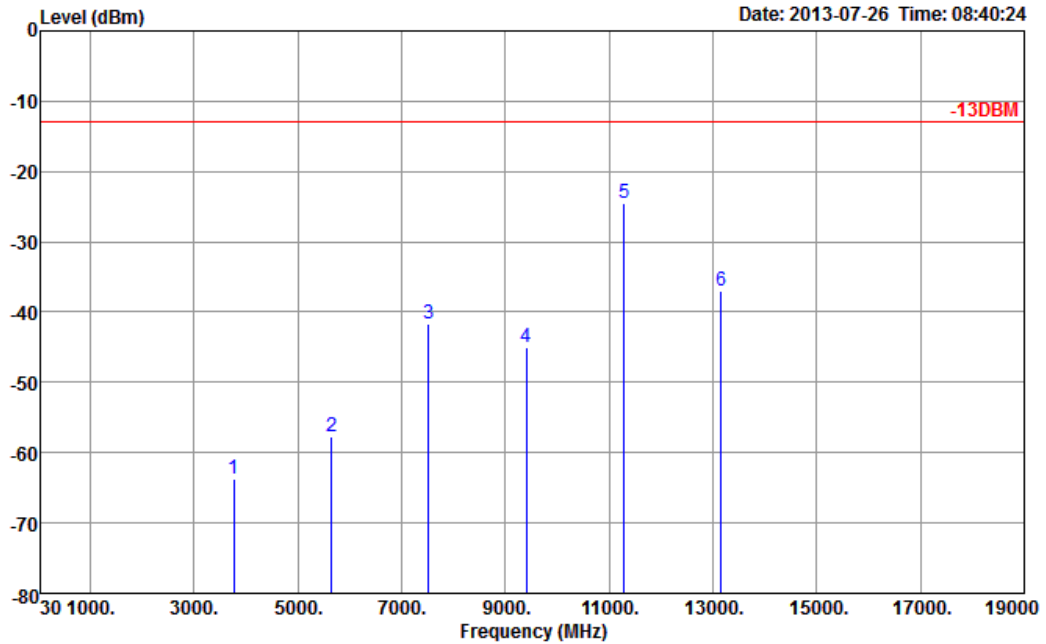


Site : 03CH01-SZ
 Condition : -13DBM HF_EIRP_V_130101 VERTICAL
 Project : (FG) 342211-02

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3760	-45.06	-13	-32.06	-61.18	-51.80	1.28	8.02	V	Pass
5640	-43.16	-13	-30.16	-61.51	-51.58	1.58	10	V	Pass
7520	-37.76	-13	-24.76	-61.42	-48.08	1.78	12.1	V	Pass
9400	-42.71	-13	-29.71	-66.33	-53.49	2.22	13	V	Pass
11280	-26.62	-13	-13.62	-57.6	-37.47	2.16	13.01	V	Pass
13160	-34.90	-13	-21.90	-65.55	-45.96	2.64	13.7	V	Pass



Band :	GPRS1900	Temperature :	24~25°C
Test Mode :	EDGE class 8 Link (8PSK)	Relative Humidity :	51~54%
Test Engineer :	Robin Luo	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

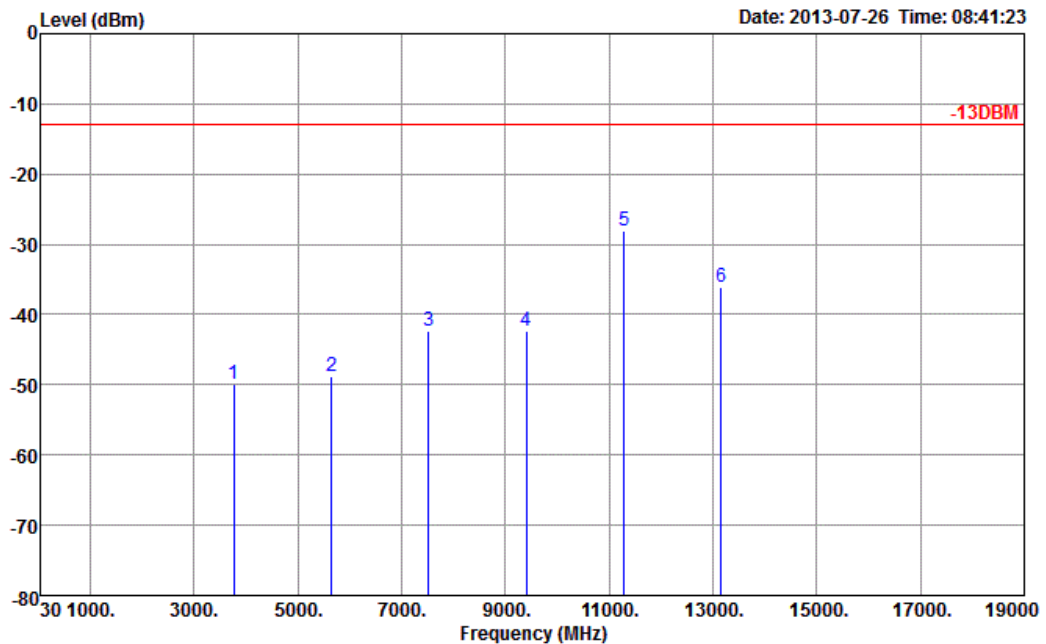


Site : 03CH01-SZ
 Condition : -13DBM HF_EIRP_H_130101 HORIZONTAL
 Project : (FG) 342211-02

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3760	-63.64	-13	-50.64	-75.79	-70.38	1.28	8.02	H	Pass
5640	-57.76	-13	-44.76	-75.75	-66.18	1.58	10.00	H	Pass
7520	-41.61	-13	-28.61	-64.52	-51.93	1.78	12.10	H	Pass
9400	-45.05	-13	-32.05	-67.17	-55.83	2.22	13.00	H	Pass
11280	-24.57	-13	-11.57	-56.94	-35.42	2.16	13.01	H	Pass
13160	-37.05	-13	-24.05	-67.63	-48.11	2.64	13.70	H	Pass



Band :	GPRS1900	Temperature :	24~25°C
Test Mode :	EDGE class 8 Link (8PSK)	Relative Humidity :	51~54%
Test Engineer :	Robin Luo	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

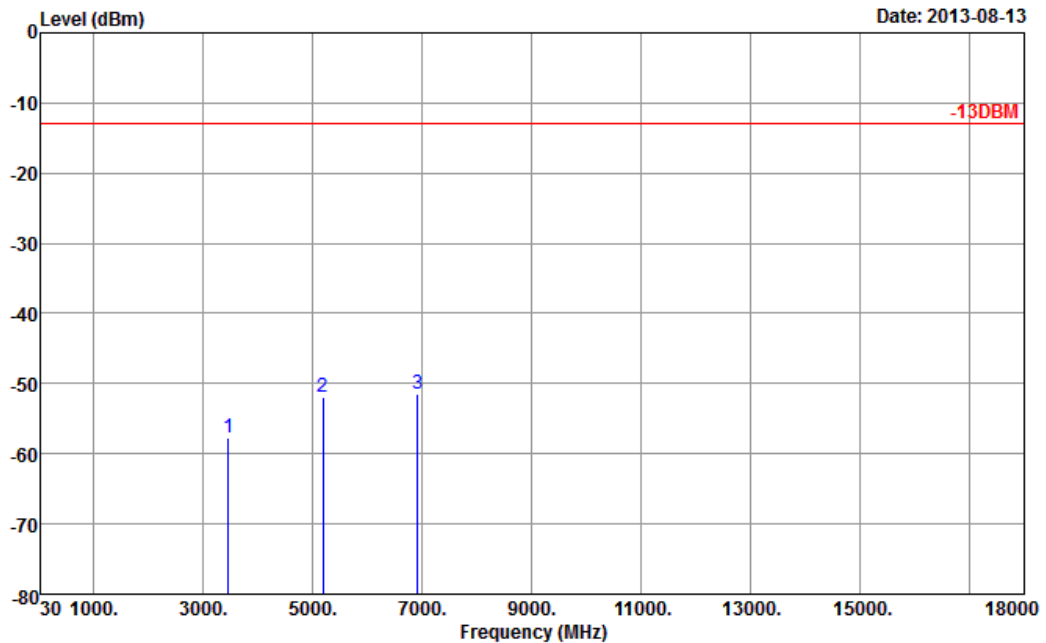


Site : 03CH01-SZ
 Condition : -13DBM HF_EIRP_V_130101 VERTICAL
 Project : (FG) 342211-02

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3760	-49.85	-13	-36.85	-64.88	-56.59	1.28	8.02	V	Pass
5640	-48.75	-13	-35.75	-65.83	-57.17	1.58	10	V	Pass
7520	-42.27	-13	-29.27	-64.52	-52.59	1.78	12.1	V	Pass
9400	-42.33	-13	-29.33	-65.95	-53.11	2.22	13	V	Pass
11280	-28.00	-13	-15.00	-58.76	-38.85	2.16	13.01	V	Pass
13160	-36.72	-13	-23.72	-67.37	-47.78	2.64	13.7	V	Pass



Band :	WCDMA Band IV	Temperature :	24~25°C
Test Mode :	RMC 12.2Kbps Link (QPSK)	Relative Humidity :	51~54%
Test Engineer :	Robin Luo	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

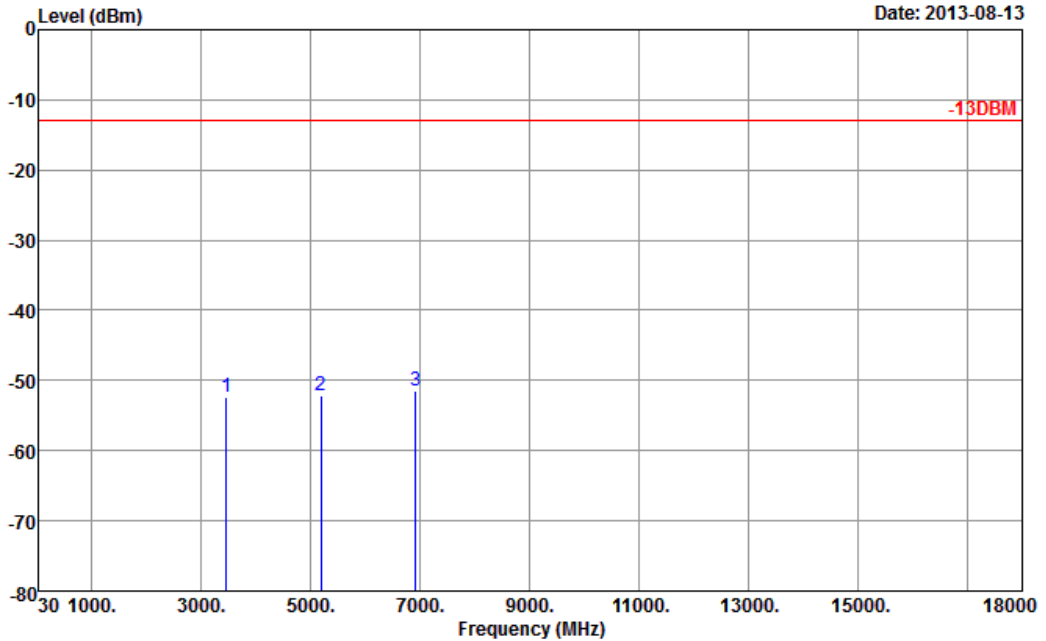


Site : 03CH01-SZ
 Condition : -13DBM HF_EIRP_H_130101 HORIZONTAL
 Project : (FG) 342211-02

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3462.00	-57.72	-13	-44.72	-68.80	-38.20	12.82	7.54	H	Pass
5196.00	-52.03	-13	-39.03	-70.99	-68.60	1.58	9.80	H	Pass
6924.00	-51.54	-13	-38.54	-75.16	-67.90	1.69	11.51	H	Pass



Band :	WCDMA Band IV	Temperature :	24~25°C
Test Mode :	RMC 12.2Kbps Link (QPSK)	Relative Humidity :	51~54%
Test Engineer :	Robin Luo	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

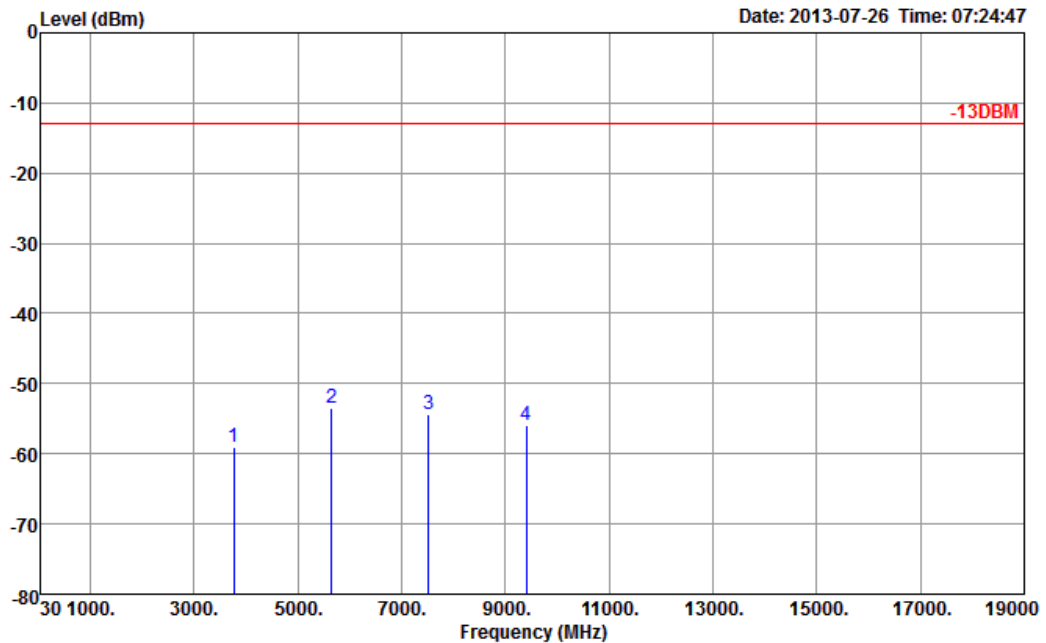


Site : 03CH01-SZ
 Condition : -13DBM HF_EIRP_V_130101 VERTICAL
 Project : (FG) 342211-02

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3462	-52.28	-13	-39.28	-65.14	-43.20	1.42	7.54	V	Pass
5196	-52.20	-13	-39.20	-71.6	-70.30	1.58	9.80	V	Pass
6924	-51.57	-13	-38.57	-74.9	-64.60	1.69	11.51	V	Pass



Band :	WCDMA Band II	Temperature :	24~25°C
Test Mode :	RMC 12.2Kbps Link (QPSK)	Relative Humidity :	51~54%
Test Engineer :	Robin Luo	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

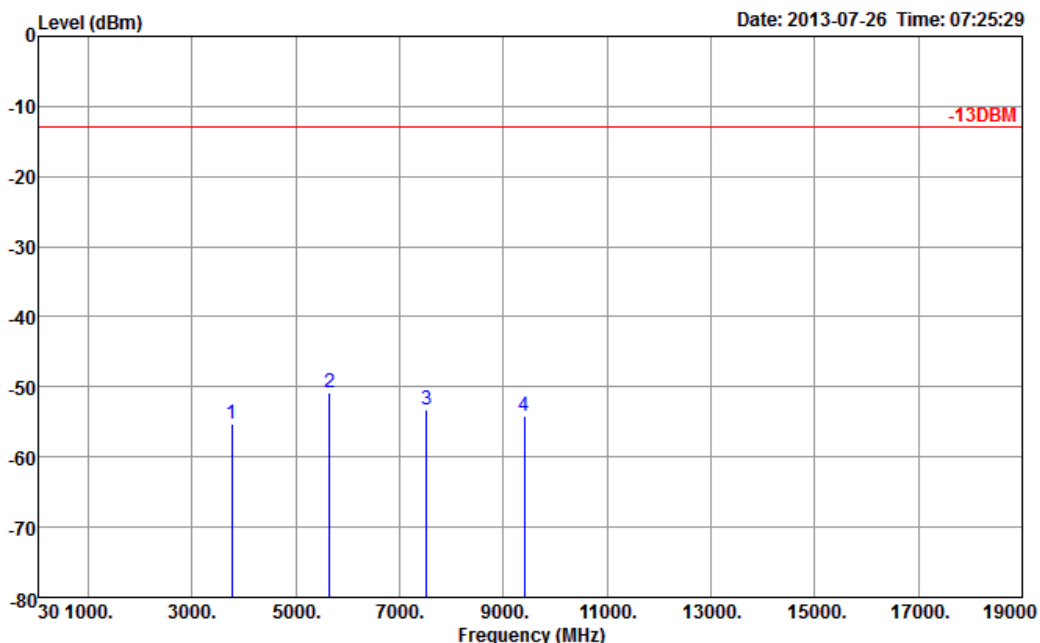


Site : 03CH01-SZ
 Condition : -13DBM HF_EIRP_H_130101 HORIZONTAL
 Project : (FG) 342211-02

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3760	-58.96	-13	-45.96	-71.11	-65.70	1.28	8.02	H	Pass
5640	-53.54	-13	-40.54	-71.53	-61.96	1.58	10.00	H	Pass
7520	-54.43	-13	-41.43	-76.37	-64.75	1.78	12.10	H	Pass
9400	-55.87	-13	-42.87	-77.99	-66.65	2.22	13.00	H	Pass



Band :	WCDMA Band II	Temperature :	24~25°C
Test Mode :	RMC 12.2Kbps Link (QPSK)	Relative Humidity :	51~54%
Test Engineer :	Robin Luo	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH01-SZ
 Condition : -13DBM HF_EIRP_V_130101 VERTICAL
 Project : (FG) 342211-02

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3760	-55.23	-13	-42.23	-70.26	-61.97	1.28	8.02	V	Pass
5640	-50.73	-13	-37.73	-67.81	-59.15	1.58	10	V	Pass
7520	-53.25	-13	-40.25	-75.5	-63.57	1.78	12.1	V	Pass
9400	-54.20	-13	-41.20	-77.82	-64.98	2.22	13	V	Pass



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
ESCI TEST Receiver	R&S	ESCI	100724	9kHz-3GHz	Mar. 28, 2013	Jul. 26, 2013~ Aug. 13, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
Spectrum Analyzer	R&S	FSP30	101362	9kHz~30GHz	Oct. 11, 2012	Jul. 26, 2013~ Aug. 13, 2013	Oct. 10, 2013	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS Lindgren	3117	00119436	1GHz~18GHz	Oct. 12, 2012	Jul. 26, 2013~ Aug. 13, 2013	Oct. 11, 2013	Radiation (03CH01-SZ)
Bilog Antenna	SCHAFFNER	CBL6112B	2614	30MHz~2GHz	Nov. 03, 2012	Jul. 26, 2013~ Aug. 13, 2013	Nov. 02, 2013	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9kHz-3000MHz GAIN 30db	Mar. 28, 2013	Jul. 26, 2013~ Aug. 13, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
Amplifier	Yiai	AV3860B	04030	2GHz~26.5GHz	Mar. 28, 2013	Jul. 26, 2013~ Aug. 13, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
SHF-EHF-Horn	Schwarzbeck	BBHA9170	BBHA9170249	14GHz~40GHz	Nov. 23, 2012	Jul. 26, 2013~ Aug. 13, 2013	Nov. 22, 2013	Radiation (03CH01-SZ)
Turn Table	EM Electronic	EM 1000	N/A	0 ~ 360 degree	N/A	Jul. 26, 2013~ Aug. 13, 2013	N/A	Radiation (03CH01-SZ)
Antenna Mast	EM electronic	EM 1000	N/A	1 m - 4 m	N/A	Jul. 26, 2013~ Aug. 13, 2013	N/A	Radiation (03CH01-SZ)
Spectrum Analyzer	R&S	FSP 7	100818	9kHz~7GHz	Aug. 22, 2012	Jul. 28, 2013	Aug. 21, 2013	Radiation (OTA01-SZ)
Quad-Ridged Horn	ETS-Lindgren	3164-08	00102954	700MHz~10000 MHz	N/A	Jul. 28, 2013	N/A	Radiation (OTA01-SZ)
Multi-Devices Controller	ETS-Lindgren	2090-OPT1	00108147	N/A	N/A	Jul. 28, 2013	N/A	Radiation (OTA01-SZ)
Switch Control Mainframe	Agilent	3499A	MY42005451	N/A	N/A	Jul. 28, 2013	N/A	Radiation (OTA01-SZ)



5 Uncertainty of Evaluation

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.54
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.72
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Appendix B. Product Equality Declaration