



# Variant FCC RF Test Report

**APPLICANT** : Yulong Computer Telecommunication  
Scientific (Shenzhen) Co., Ltd.  
**EQUIPMENT** : Mobile Phone  
**BRAND NAME** : Vodafone Smart 4G  
**MODEL NAME** : Coolpad 8860U  
**MARKETING NAME** : Vodafone Smart 4G  
**FCC ID** : R38YL8860UO  
**STANDARD** : 47 CFR Part 2, 27(M)  
**CLASSIFICATION** : PCS Licensed Transmitter Held to Ear (PCE)

This is a variant report which is only valid together with the original test report. The product was received on Aug. 29, 2013 and testing was completed on Sep. 16, 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 C63.4-2003 and 47 CFR FCC Part 27 Subpart M and shown to be compliant 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.**



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### SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	§2.1033 §2.1046 §27.50	Maximum Output Power	Output Power < 2 Watts	PASS	-
3.1	§27.50	Equivalent Isotropic Radiated Power	< 33 dBW + 10 log(X/Y) dBW + 10 log(360/beamwidth) dBW	PASS	-
3.2	§2.1053 §27.53	Field Strength of Spurious Radiation	-25 dBm	PASS	Under limit 15.45 dB at 12848.000 MHz



# 1 General Description

## 1.1 Applicant

**Yulong Computer Telecommunication Scientific (Shenzhen) Co., Ltd.**

Coolpad Information Harbor, 2nd Mengxi Road, Northern Part of Science&Technology Park, Nanshan district, Shenzhen, P.R.China

## 1.2 Manufacturer

**Yulong Computer Telecommunication Scientific (Shenzhen) Co., Ltd.**

Coolpad Information Harbor, 2nd Mengxi Road, Northern Part of Science&Technology Park, Nanshan district, Shenzhen, P.R.China

## 1.3 Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Phone
Brand Name	Vodafone Smart 4G
Model Name	Coolpad 8860U
Marketing Name	Vodafone Smart 4G
FCC ID	R38YL8860UO
EUT supports Radios application	GSM/GPRS/EGPRS/LTE/WLAN 802.11abgn HT 20/ Bluetooth v3.0 + EDR/Bluetooth v4.0
HW Version	T3
SW Version	082.12.T3.130819.CP8860U
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	2506.5 MHz ~ 2534.5 MHz, 2562.5 MHz ~ 2567.5 MHz
Rx Frequency	2626.5 MHz ~ 2654.5 MHz, 2666.5 MHz ~ 2697.5 MHz
Bandwidth	5MHz/10MHz/15MHz/20MHz
Maximum Output Average Power to Antenna	20.59 dBm
Antenna Type	PIFA Antenna
Type of Modulation	QPSK / 16QAM



### 1.5 Modification of EUT

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

### 1.6 Maximum EIRP Power

FCC Rule	System	Type of Modulation	BW	Maximum EIRP
Part 27	LTE Band 7	QPSK	20MHz	0.1349
Part 27	LTE Band 7	16QAM	20MHz	0.1380

## 1.7 Testing Site

<b>Test Site</b>	SPORTON INTERNATIONAL (SHENZHEN) INC.			
<b>Test Site Location</b>	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			
<b>Test Site No.</b>	<b>Sporton Site No.</b>			<b>FCC Registration No.</b>
	TH01-SZ	03CH01-SZ	OTA01-SZ	831040

## 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, 27(M)
- ♦ ANSI C63.4-2003
- ♦ ANSI TIA-603-C-2004

**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.

Frequency range investigated for radiated emission: 30MHz to 26000 MHz.

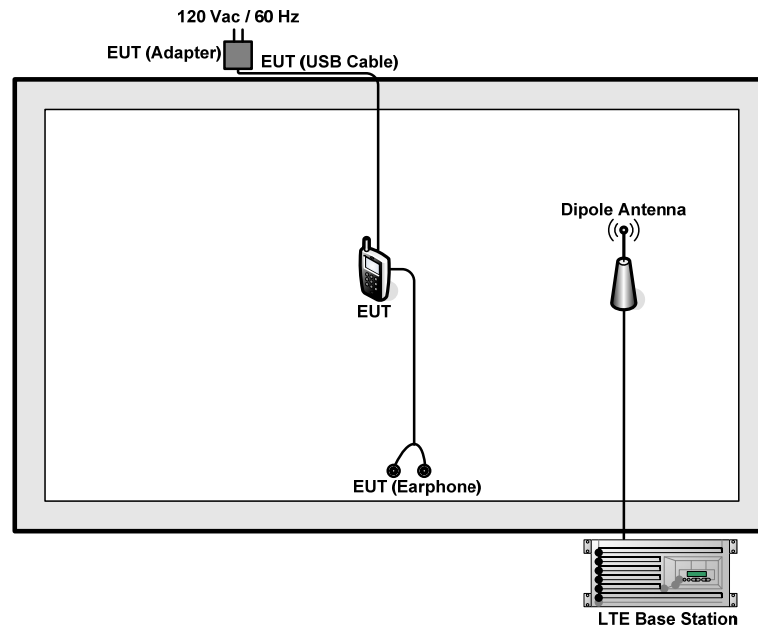
Test Modes			
Band		Radiated TCs	EIRP TCs
		Modulation : QPSK	Modulation : QPSK / 16QAM
LTE Band 7	BW 5MHz	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1, RB Offset 24) QPSK Link</li> </ul>	-
	BW 20MHz	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1, RB Offset 0) QPSK Link</li> </ul>	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1, RB Offset 99) QPSK Link</li> <li>■ LTE (RB Size 50, RB Offset 0) QPSK Link</li> <li>■ LTE (RB Size 50, RB Offset 49) 16QAM Link</li> <li>■ LTE (RB Size 100, RB Offset 0) 16QAM Link</li> </ul>

**Note:**

1. For RSE test, only BW 5MHz (which is the worst case of the original test report) and BW 20MHz (which conducted power is different from the original test report) are chosen to test, and all the test modes are performed with Battery 1.
2. For EIRP test, only BW 20MHz is chosen for testing.



## 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.	LTE Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	DC Power Supply	TOPWORD	3303DR	N/A	N/A	Unshielded, 1.8 m



### 3 Test Result

#### 3.1 Maximum Output Power and Effective Isotropic Radiated Power Measurement

##### 3.1.1 Limit

For mobile and other user stations, mobile stations are limited to 2.0 watts EIRP and all user stations are limited to 2.0 watts transmitter output power. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (p) by a factor of mobile digital stations, the attenuation factor shall be not less than  $43 + 10 \log (p)$  dB at the channel edge and  $55 + 10 \log (p)$  dB at 5.5 MHz from the channel edges.

##### 3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

##### 3.1.3 Test Procedures

###### For Conducted Power Measurement:

1. The RF output of the transmitter was connected to base station simulator.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set EUT at maximum average power by base station simulator.
4. Measure lowest, middle, and highest channels for each bandwidth and different modulation.

###### For Effective Isotropic Radiated Power Measurement:

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. LTE 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 EIRP.
6. Taking the record of maximum 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 EIRP of the substitution antenna.
10.  $EIRP = P_s + E_t - E_s + G_s = P_s + R_t - R_s + G_s$   
Ps (dBm) : Input power to substitution antenna.

Gs (dBi or dBd) : Substitution antenna Gain.

$E_t = R_t + AF$

$E_s = R_s + AF$

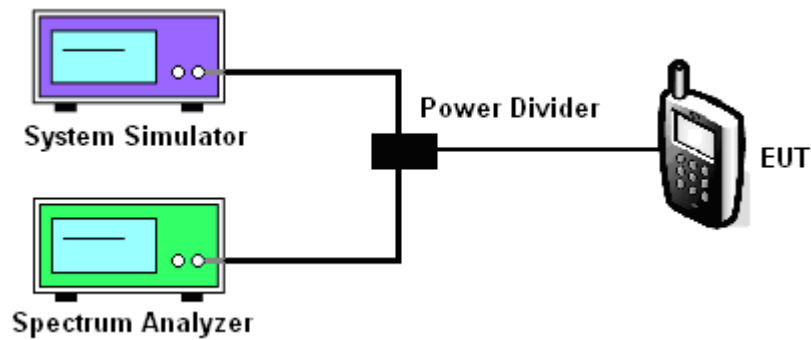
AF (dB/m) : Receive antenna factor

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

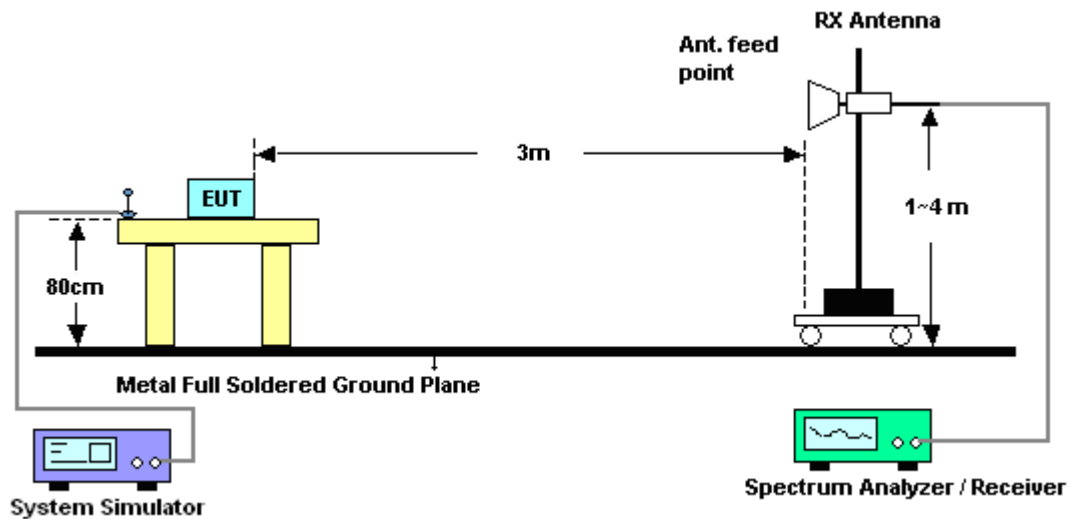
$R_s$  : The highest received signal in spectrum analyzer for substitution antenna.

### 3.1.4 Test Setup

#### <Conducted Power Measurement>



#### <Effective Isotropic Radiated Power Measurement>





3.1.5 Test Result of Conducted Output Power

Mode	Band Width	Channel	Frequency (MHz)	Modulation	RB Configuration		Average Power (dBm)	Average Power (Watts)	
					RB Size	RB Offset			
LTE Band 7	5MHz	20815	2506.5	QPSK	1	0	20.15	0.1035	
					1	12	20.36	0.1086	
					1	24	20.39	0.1094	
					12	0	19.26	0.0843	
					12	6	19.14	0.0820	
					12	11	19.22	0.0836	
				16-QAM	25	0	19.25	0.0841	
					1	0	19.48	0.0887	
					1	12	19.32	0.0855	
					1	24	19.49	0.0889	
					12	0	18.35	0.0684	
					12	6	18.26	0.0670	
		21095	2534.5	QPSK	2567.5	12	11	18.35	0.0684
						25	0	18.40	0.0692
						1	0	20.23	0.1054
						1	12	20.14	0.1033
						1	24	20.15	0.1035
						12	0	19.41	0.0873
				16-QAM	12	6	19.30	0.0851	
					12	11	19.31	0.0853	
					25	0	19.29	0.0849	
					1	0	19.64	0.0920	
					1	12	19.63	0.0918	
					1	24	19.28	0.0847	
		21425	2567.5	QPSK	2567.5	12	0	18.25	0.0668
						12	6	18.25	0.0668
						12	11	18.01	0.0632
						25	0	18.20	0.0661
						1	0	20.21	0.1050
						1	12	20.34	0.1081
16-QAM	1			24	20.40	0.1096			
	12			0	19.79	0.0953			
	12			6	19.81	0.0957			
	12			11	19.93	0.0984			
	25			0	19.69	0.0931			
	1			0	19.57	0.0906			
16-QAM	1	12	21.16	0.1306					
	1	24	19.88	0.0973					
	12	0	18.86	0.0769					
	12	6	18.93	0.0782					
	12	11	18.93	0.0782					
	25	0	18.69	0.0740					



Mode	Band Width	Channel	Frequency (MHz)	Modulation	RB Configuration		Average Power (dBm)	Average Power (Watts)
					RB Size	RB Offset		
LTE Band 7	10MHz	20840	2509	QPSK	1	0	20.18	0.1042
					1	24	20.31	0.1074
					1	49	20.48	0.1117
					25	0	20.04	0.1009
					25	12	20.12	0.1028
					25	24	20.01	0.1002
				16-QAM	50	0	20.06	0.1014
					1	0	19.42	0.0875
					1	24	19.56	0.0904
					1	49	19.84	0.0964
					25	0	18.22	0.0664
					25	12	18.23	0.0665
		21070	2532	QPSK	25	24	18.16	0.0655
					50	0	18.17	0.0656
					1	0	20.25	0.1059
					1	24	20.08	0.1019
					1	49	20.17	0.1040
					25	0	19.38	0.0867
				16-QAM	25	12	19.39	0.0869
					25	24	19.16	0.0824
					50	0	19.36	0.0863
					1	0	19.75	0.0944
					1	24	19.71	0.0935
					1	49	19.40	0.0871
		21400	2565	QPSK	25	0	18.31	0.0678
					25	12	18.35	0.0684
					25	24	18.17	0.0656
					50	0	18.37	0.0687
					1	0	20.24	0.1057
					1	24	20.32	0.1076
16-QAM	1			49	20.34	0.1081		
	25			0	19.27	0.0845		
	25			12	19.35	0.0861		
	25			24	19.63	0.0918		
	50			0	19.34	0.0859		
	1			0	19.51	0.0893		
16-QAM	1	24	19.57	0.0906				
	1	49	20.12	0.1028				
	25	0	18.43	0.0697				
	25	12	18.44	0.0698				
	25	24	18.62	0.0728				
	50	0	18.23	0.0665				



Mode	Band Width	Channel	Frequency (MHz)	Modulation	RB Configuration		Average Power (dBm)	Average Power (Watts)
					RB Size	RB Offset		
LTE Band 7	15MHz	20865	2511.5	QPSK	1	0	20.24	0.1057
					1	37	20.54	0.1132
					1	74	20.50	0.1122
					36	0	19.80	0.0955
					36	18	19.77	0.0948
					36	37	19.76	0.0946
					75	0	19.75	0.0944
		16-QAM	1	0	19.83	0.0962		
			1	37	20.16	0.1038		
			1	74	19.71	0.0935		
			36	0	18.21	0.0662		
			36	18	18.20	0.0661		
			36	37	18.24	0.0667		
			75	0	18.15	0.0653		
	21045	2529.5	QPSK	1	0	20.45	0.1109	
				1	37	20.37	0.1089	
				1	74	20.13	0.1030	
				36	0	19.31	0.0853	
				36	18	19.52	0.0895	
				36	37	19.38	0.0867	
				75	0	19.42	0.0875	
	16-QAM	1	0	20.10	0.1023			
		1	37	20.08	0.1019			
		1	74	19.82	0.0959			
		36	0	18.25	0.0668			
		36	18	18.44	0.0698			
		36	37	18.46	0.0701			
		75	0	18.32	0.0679			
21375	2562.5	QPSK	1	0	20.12	0.1028		
			1	37	20.21	0.1050		
			1	74	20.38	0.1091		
			36	0	19.38	0.0867		
			36	18	19.31	0.0853		
			36	37	19.43	0.0877		
			75	0	19.34	0.0859		
	16-QAM	1	0	19.35	0.0861			
		1	37	19.52	0.0895			
		1	74	19.97	0.0993			
		36	0	18.45	0.0700			
		36	18	18.46	0.0701			
		36	37	18.35	0.0684			
		75	0	18.35	0.0684			



Mode	Band Width	Channel	Frequency (MHz)	Modulation	RB Configuration		Average Power (dBm)	Average Power (Watts)
					RB Size	RB Offset		
LTE Band 7	20MHz	20890	2514	QPSK	1	0	20.30	0.1072
					1	49	20.47	0.1114
					1	99	20.52	0.1127
					50	0	19.95	0.0989
					50	24	19.93	0.0984
					50	49	19.80	0.0955
		100	0	19.92	0.0982			
		16-QAM	1	0	19.65	0.0923		
			1	49	19.96	0.0991		
			1	99	19.37	0.0865		
			50	0	18.14	0.0652		
			50	24	18.21	0.0662		
	50		49	18.11	0.0647			
	100	0	18.26	0.0670				
	21020	2527	QPSK	1	0	20.59	0.1146	
				1	49	20.51	0.1125	
				1	99	20.21	0.1050	
				50	0	19.64	0.0920	
				50	24	19.49	0.0889	
				50	49	19.55	0.0902	
		100	0	19.34	0.0859			
		16-QAM	1	0	20.42	0.1102		
			1	49	20.32	0.1076		
			1	99	20.16	0.1038		
50			0	18.87	0.0771			
50			24	18.77	0.0753			
50	49		18.65	0.0733				
100	0	18.64	0.0731					

Note: Maximum average power for LTE.



3.1.6 Test Result of Effective Isotropic Radiated Power

LTE Band 7 Radiated Power EIRP								
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	EIRP (W)	H/V
			RB Size	RB Offset				
7	20	QPSK	1	99	2514	21.05	0.1274	H
7	20	QPSK	1	0	2527	21.30	0.1349	H
7	20	QPSK	1	99	2514	21.04	0.1271	V
7	20	QPSK	1	0	2527	21.25	0.1334	V
7	20	16QAM	1	49	2514	21.26	0.1337	H
7	20	16QAM	1	0	2527	19.62	0.0916	H
7	20	16QAM	1	49	2514	21.40	0.1380	V
7	20	16QAM	1	0	2527	19.63	0.0918	V



## 3.2 Radiated Emissions Measurement

### 3.2.1 Description of Radiated Emissions Measurement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of mobile digital stations, the attenuation factor shall be not less than  $55 + 10 \log (P)$  dB at 5.5 MHz from the channel edges. It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10<sup>th</sup> harmonic.

### 3.2.2 Measuring Instruments

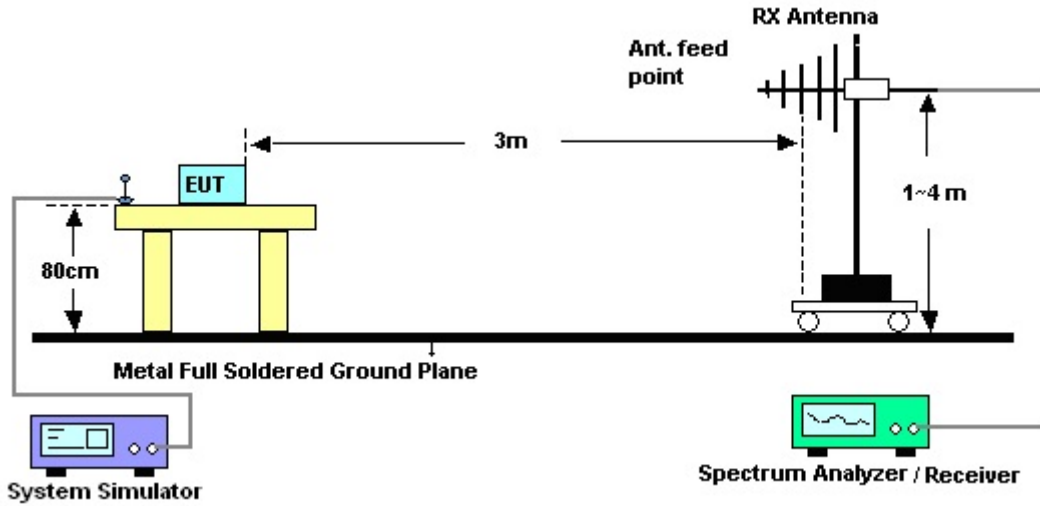
See list of measuring instruments of this test report.

### 3.2.3 Test Procedures

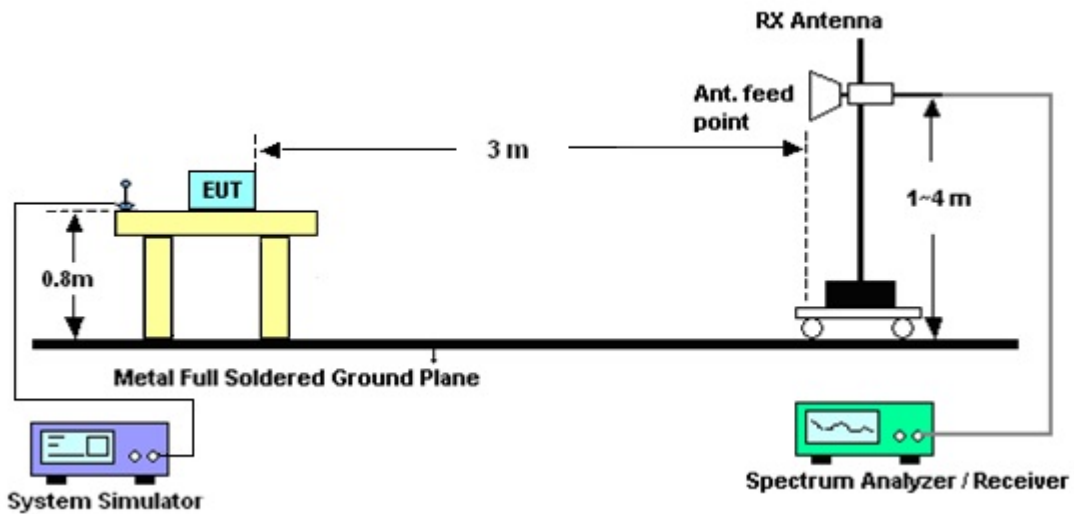
1. The EUT was placed on a rotatable wooden table with 0.8 meter above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving 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 = 1MHz, Sweep = 500ms, 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. Emission level (dBm) = output power + substitution Gain.

### 3.2.4 Test Setup

For radiated emissions from 30MHz to 1GHz



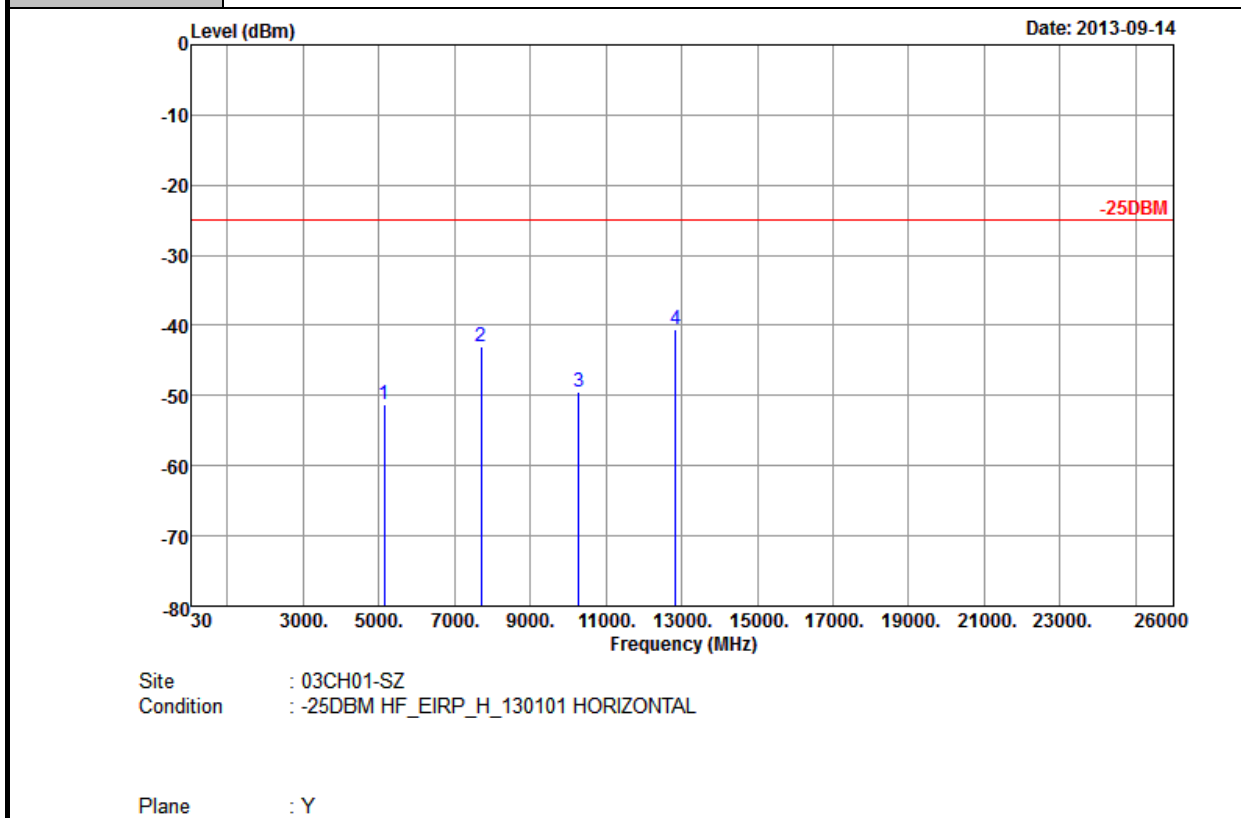
For radiated emissions above 1GHz





3.2.5 Test Result of Radiated Emissions

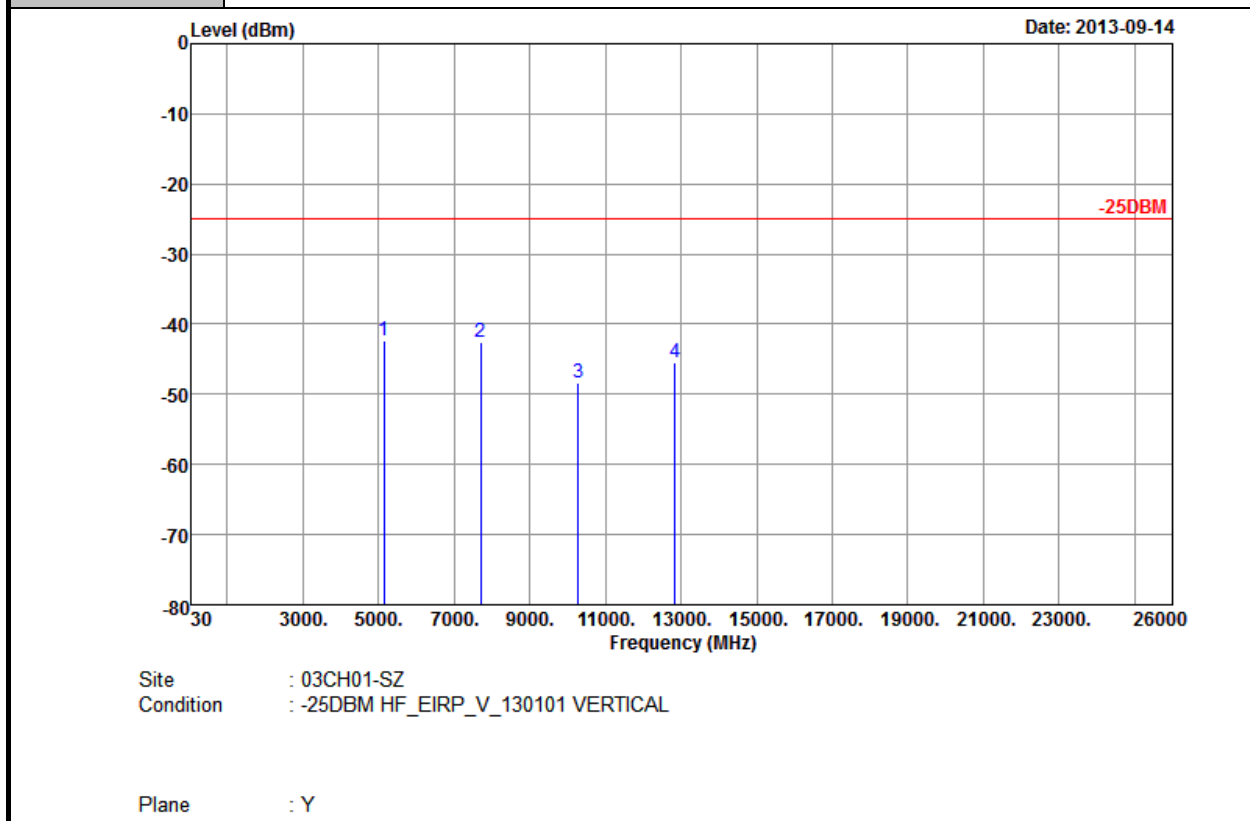
<b>Band :</b>	LTE Band 7	<b>Temperature :</b>	24~25°C
<b>Test Mode :</b>	5MHz, QPSK RB Size 1, RB Offset 24	<b>Relative Humidity :</b>	48~49%
<b>Test Engineer :</b>	Leo Liao	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



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
5140.00	-51.31	-25	-26.31	-62.39	-38.20	1.15	7.54	H	Pass
7708.00	-42.91	-25	-17.91	-61.88	-68.60	1.51	9.80	H	Pass
10280.00	-49.50	-25	-24.50	-73.12	-67.90	1.75	11.51	H	Pass
12848.00	-40.45	-25	-15.45	-66.71	-58.70	1.97	12.86	H	Pass



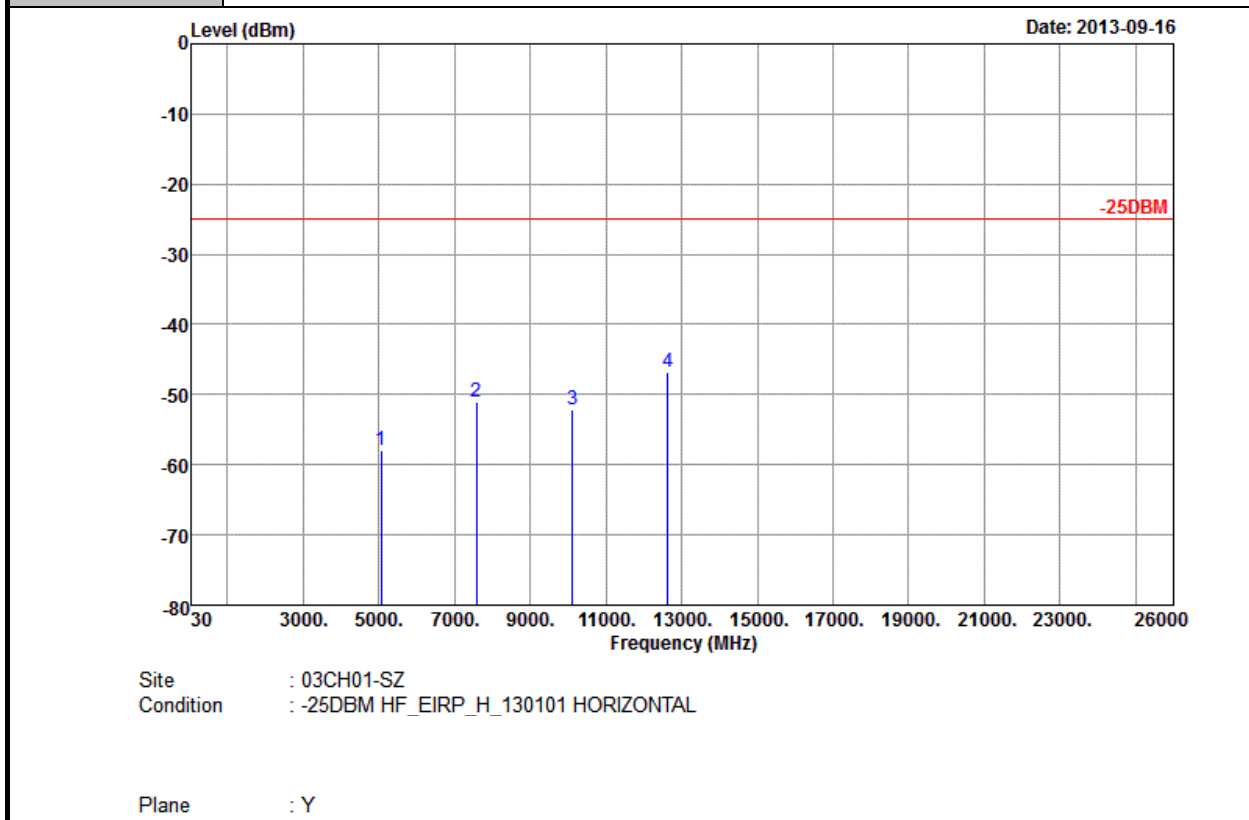
<b>Band :</b>	LTE Band 7	<b>Temperature :</b>	24~25°C
<b>Test Mode :</b>	5MHz, QPSK RB Size 1, RB Offset 24	<b>Relative Humidity :</b>	48~49%
<b>Test Engineer :</b>	Leo Liao	<b>Polarization :</b>	Vertical
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



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
5140	-42.41	-25	-17.41	-56.9	-43.20	1.15	7.54	V	Pass
7708	-42.50	-25	-17.50	-61.9	-70.30	1.51	9.80	V	Pass
10280	-48.28	-25	-23.28	-71.61	-64.60	1.75	11.51	V	Pass
12848	-45.49	-25	-20.49	-71.39	-56.60	1.97	12.86	V	Pass



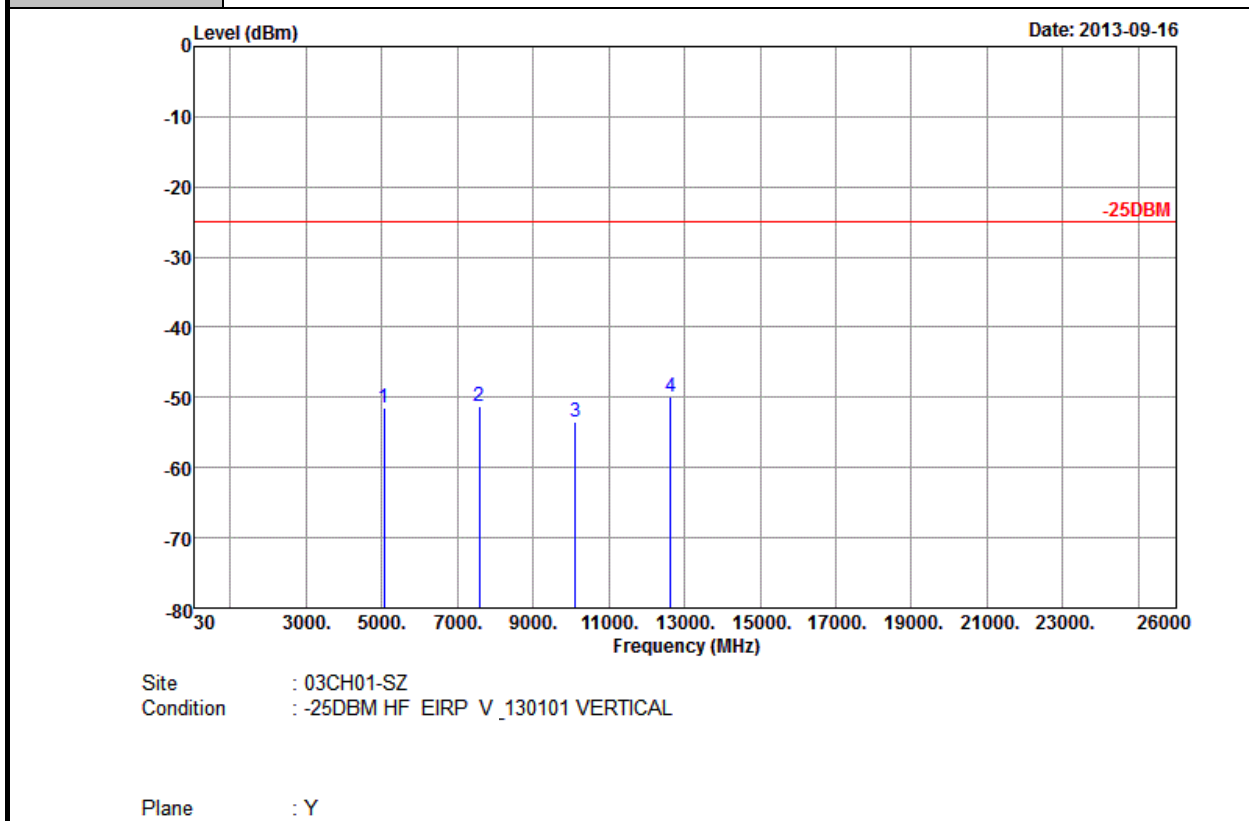
<b>Band :</b>	LTE Band 7	<b>Temperature :</b>	24~25°C
<b>Test Mode :</b>	20MHz, QPSK, RB Size 1, RB Offset 0	<b>Relative Humidity :</b>	48~49%
<b>Test Engineer :</b>	Leo Liao	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



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
5054.00	-57.96	-25	-32.96	-69.04	-38.20	1.15	7.54	H	Pass
7581.00	-51.05	-25	-26.05	-70.01	-68.60	1.51	9.80	H	Pass
10108.00	-52.11	-25	-27.11	-75.73	-67.90	1.75	11.51	H	Pass
12635.00	-46.75	-25	-21.75	-73.01	-58.70	1.97	12.86	H	Pass



<b>Band :</b>	LTE Band 7	<b>Temperature :</b>	24~25°C
<b>Test Mode :</b>	20MHz, QPSK, RB Size 1, RB Offset 0	<b>Relative Humidity :</b>	48~49%
<b>Test Engineer :</b>	Leo Liao	<b>Polarization :</b>	Vertical
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



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
5054	-51.40	-25	-26.40	-64.26	-43.20	1.15	7.54	V	Pass
7581	-51.19	-25	-26.19	-70.59	-70.30	1.51	9.80	V	Pass
10108	-53.41	-25	-28.41	-76.74	-64.60	1.75	11.51	V	Pass
12635	-49.94	-25	-24.94	-75.84	-56.60	1.97	12.86	V	Pass



**3.2.6 List of Measuring Equipment**

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSP30	101400	9kHz~30GHz	Mar. 28, 2013	Sep. 14, 2013	Mar. 27, 2014	Conducted (TH01-SZ)
Spectrum Analyzer	R&S	FSV30	100845	9kHz~30GHz	Nov. 06, 2012	Sep. 14, 2013	Nov. 05, 2013	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1218010	N/A	Mar. 28, 2013	Sep. 14, 2013	Mar. 27, 2014	Conducted (TH01-SZ)
Power Sensor	Anritsu	MA2411B	1207253	N/A	Mar. 28, 2013	Sep. 14, 2013	Mar. 27, 2014	Conducted (TH01-SZ)
Spectrum Analyzer	Agilent Technologies	N9038A	MY52260185	20Hz~26.5GHz	Apr. 04, 2013	Sep. 16, 2013	Apr. 03, 2014	Radiation (03CH01-SZ)
Bilog Antenna	SCHAFFNER	CBL6112B	2614	30MHz~2GHz	Nov. 03, 2012	Sep. 16, 2013	Nov. 02, 2013	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS Lindgren	3117	00119436	1GHz~18GHz	Oct. 12, 2012	Sep. 16, 2013	Oct. 11, 2013	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9kHz~3GHz Gain 30dB	Mar. 28, 2013	Sep. 16, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
Amplifier	Yiai	AV3860B	04030	2GHz~26.5GHz	Mar. 28, 2013	Sep. 16, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
SHF-EHF-Horn	Schwarzbeck	BBHA9170	BBHA9170249	14GHz~40GHz	Nov. 23, 2012	Sep. 16, 2013	Nov. 22, 2013	Radiation (03CH01-SZ)
Turn Table	EM Electronics	EM 1000	N/A	0 ~ 360 degree	N/A	Sep. 16, 2013	N/A	Radiation (03CH01-SZ)
Antenna Mast	EM Electronics	EM 1000	N/A	1 m ~ 4 m	N/A	Sep. 16, 2013	N/A	Radiation (03CH01-SZ)
Spectrum Analyzer	R&S	FSP 7	100818	9kHz~7GHz	Aug. 21, 2013	Sep. 14, 2013	Aug. 20, 2014	EIRP (OTA01-SZ)
Quad-Ridged Horn	ETS-Lindgren	3164-08	00102954	700MHz~10000 MHz	N/A	Sep. 14, 2013	N/A	EIRP (OTA01-SZ)
Multi-Devices Controller	ETS-Lindgren	2090-OPT1	00108147	N/A	N/A	Sep. 14, 2013	N/A	EIRP (OTA01-SZ)
Switch Control Mainframe	Agilent	3499A	MY42005451	N/A	N/A	Sep. 14, 2013	N/A	EIRP (OTA01-SZ)



## 4 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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