



	FCC TEST REPORT				
47 (	CFR FCC Part 15 Subpart B				
Report Reference No	TRE1312003106 R/C: 34886 YPVITALCOMSKYHD				
Compiled by ( position+printed name+signature): Supervised by ( position+printed name+signature):	File administrators Eric WangEric WangTest Engineer Yuchao WangYuchao.wangManager Wenliang LiWenliang Li				
Approved by ( position+printed name+signature): Date of issue	Manager Wenliang Li Dec 18, 2013				
Testing Laboratory Name	Shenzhen Huatongwei International Inspection Co., Ltd				
Address	Keji Nan No.12 Road, Hi-tech Park, Shenzhen, China				
Applicant's name:	ITALCOM GROUP				
Address	1728 Coral Way,Coral Gables,Miami,Florida,United States				
Test specification:					
Standard:	47 CFR FCC Part 15 Subpart B - Unintentional Radiators				
	ANSI C63.4: 2009				
TRF Originator	Shenzhen Huatongwei International Inspection CO., Ltd				
Master TRF	Dated 2006-06				
This publication may be reproduced in Shenzhen Huatongwei International In the material. Shenzhen Huatongwei In	<b>Inspection Co., Ltd. All rights reserved.</b> whole or in part for non-commercial purposes as long as the spection Co., Ltd is acknowledged as copyright owner and source of ternational Inspection Co., Ltd takes no responsibility for and will not from the reader's interpretation of the reproduced material due to its				
Test item description	mobile phone				
Trade Mark:	NYX				
Model/Type reference:	SKY HD				
Listed Models	1				
Manufacturer	ITALCOM GROUP				
Rating	DC 3.70V				
Hardware version	: 8061-MB-V0.3				
Software version	.: SKY_AMXNYX_V001R				
Android version	4.2.1				
Result	PASS				

# TEST REPORT

Test Report No. :		TRE1312003106	Dec 18, 2013		
		11121312003100	Date of issue		
Equipment under Test	:	mobile Phone			
Model /Type	:	SKY HD			
Listed Models	:	/			
Applicant	:	ITALCOM GROUP			
Address	:	1728 Coral Way,Coral G	ables,Miami,Florida,United States		
Manufacturer		ITALCOM GROUP			
Address	:	1728 Coral Way,Coral G	ables,Miami,Florida,United States		

Test Result	PASS
-------------	------

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

# Contents

<u>1.</u>	TEST STANDARDS	4
<u>2.</u>	SUMMARY	5
2.1.	General Remarks	5
2.2.	Product Description	5
2.3.	Equipment Under Test	5
2.4.	EUT operation mode	5
2.5. 2.6.	Related Submittal(s) / Grant (s)	5 6
2.0. 2.7.	Internal Identification of AE used during the test Modifications	6
2.8.	EUT configuration	6
2.9.	Configuration of Tested System	6
2.10.	NOTE	7
<u>3.</u>	TEST ENVIRONMENT	8
3.1.	Address of the test laboratory	8
3.2.	Test Facility	8
3.3.	Environmental conditions	9
3.4.	Statement of the measurement uncertainty	9
3.5.	Equipments Used during the Test	9
<u>4.</u>	TEST CONDITIONS AND RESULTS	10
4.1.	Conducted Emissions Test	10
4.2.	Radiated Emission Test	12
<u>5.</u>	TEST SETUP PHOTOS OF THE EUT	<u>16</u>
<u>6.</u>	EXTERNAL AND INTERNAL PHOTOS OF THE EUT	17

# 1. <u>TEST STANDARDS</u>

The tests were performed according to following standards:

47 CFR FCC Part 15 Subpart B - Unintentional Radiators

<u>ANSI C63.4: 2009</u> – American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40GHz

# 2. <u>SUMMARY</u>

## 2.1. General Remarks

Date of receipt of test sample	:	Dec 05, 2013
Testing commenced on	:	Dec 06, 2013
Testing concluded on	:	Dec 18, 2013

# 2.2. Product Description

The **ITALCOM GROUP**'s Model: SKY HD or the "EUT" as referred to in this report; more general information as follows, for more details, refer to the user's manual of the EUT.

Name of EUT	mobile Phone
Model Number	SKY HD
FCC ID	YPVITALCOMSKYHD
Modilation Type	QPSK for WCDMA,GMSK for GSM/GPRS/EGPRS
Antenna Type	Internal
Hardware version	8061-MB-V0.3
Software version	SKY_AMXNYX_V001R
Android version	4.2.1
GSM/EDGE/GPRS	Supported GSM/GPRS/EDGE
WCDMA Operation Frequency Band	FDD Band II, FDD Band V
HSDPA Release Version	Release 8
HSUPA Release Version	Release 6
WCDMA Release Version	R99
Extreme temp. Tolerance	-30°C to +60°C
Extreme vol. Limits	3.40VDC to 4.20VDC (nominal: 3.70VDC)
GSM/GPRS Operation Frequency Band	GSM850/PCS1900
GSM Release Version	R99
GPRS operation mode	Class B
GPRS Multislot Class	12
EGPRS Multislot Class	12

## 2.3. Equipment Under Test

#### Power supply system utilised

Power supply voltage	:	0	120V / 60 Hz	0	115V / 60Hz
		0	12 V DC	0	24 V DC
			Other (specified in blank bel	ow	)

DC 3.70V

#### 2.4. EUT operation mode

The EUT has been tested under typical operating condition.

## 2.5. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for FCC ID: YPVITALCOMSKYHD filing to comply with the FCC Part 15, Subpart B Rules.

## 2.6. Internal Identification of AE used during the test

AE ID*	Description
AE1	Battery
AE2	Charger and USB cable

AE1

Model:NYX3000A98X69 Manufacturer: ITALCOM GROUP Capacitance: 3000mAh Nominal Voltage:3.70V

AE2:

Model: SKY HD Manufacturer: ITALCOM GROUP Input: 100-240V~50/60Hz 0.15A Output: OUTPUT: 5.0V DC 1.0A Power Cable Length: 90cm ○ Shielded ● Unshielded

\*AE ID: is used to identify the test sample in the lab internally.

Note: We not used Charger when FCC Part 15B test.

## 2.7. Modifications

No modifications were implemented to meet testing criteria.

# 2.8. EUT configuration

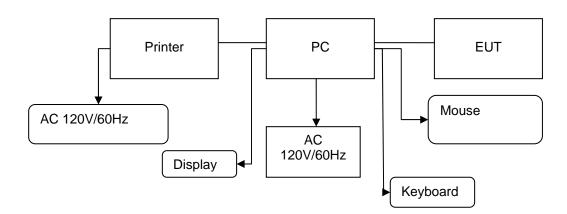
#### The following peripheral devices and interface cables were connected during the measurement:

- - supplied by the manufacturer
- $\odot\,$  supplied by the lab

0	Power Cable	Length (m) :	/
		Shield :	/
		Detachable :	/
0	Multimeter	Manufacturer :	/
		Model No. :	/

# 2.9. Configuration of Tested System

#### **Configuration of Tested System**



#### Page 7 of 24

Equipment Used in Tested System							
No.	Equipment	Manufacturer	Model No.	Serial No.	Length	shielded/unshielded	Notes
1	PC	DELL	DIMEN SION E520	1RNN42X	/	/	DOC
2	Printer	ESPOn	C3990	C3990A	/	/	DOC
3	Mouse	DELL	MO56U OA	G0E02SY7	1.00m	unshielded	DOC
4	Display	DELL	1707FPt	CN-OFC237-71618- 65G-AAKC	/	/	DOC
5	Keyboard	DELL	L100	CNRH65665890726 009L	/	/	DOC
6	USB Cable (EUT to PC)	ITALCOM GROUP	USB 2.0	N/A	0.80m	unshielded	N/A
7	USB Cable (Printer to PC)	Genshuo	USB 2.0	N/A	1.20m	unshielded	N/A
8	Power line	/	/	N/A	1.00m	unshielded	N/A

# 2.10. NOTE

1. The EUT is a mobile Phone WCDMA/HSUPA/HSDPA/GPRS/GSM,WLAN and Bluetooth function,The functions of the EUT listed as below:

	Test Standards	Reference Report
GSM/GPRS/EGPRS	FCC Part 22/FCC Part 24	TRE1311003801
WCDMA/HSUPA/HSDPA	FCC Part 22/FCC Part 24	TRE1311003802
WLAN	FCC Part 15 C 15.247	TRE1311003803
Bluetooth v2.1	FCC Part 15 C 15.247	TRE1311003804
Bluetooth 4.0	FCC Part 15 C 15.247	TRE1311003805
USB Port	FCC Part 15 B	TRE1311003806
SAR	FCC Part 2 §2.1093	TRE1311003807

# 3. <u>TEST ENVIRONMENT</u>

### 3.1. Address of the test laboratory

Shenzhen Huatongwei International Inspection Co., Ltd Keji Nan No.12 Road, Hi-tech Park, Shenzhen, China Phone: 86-755-26715686 Fax: 86-755-26748089

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 (2003) and CISPR Publication 22.

# 3.2. Test Facility

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

## CNAS-Lab Code: L1225

Shenzhen Huatongwei International Inspection Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories, Date of Registration: Mar. 29, 2012. Valid time is until Feb. 28, 2015.

## A2LA-Lab Cert. No. 2243.01

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing. Valid time is until Sept. 30, 2015.

## FCC-Registration No.: 662850

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration 662850, Renewal date June. 01, 2012, valid time is until June. 01, 2015.

## **IC-Registration No.: 5377A**

The 3m Alternate Test Site of Shenzhen Huatongwei International Inspection Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 5377A on Jan. 25, 2011, valid time is until Jan. 24, 2014.

# ACA

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

# VCCI

The 3m Semi-anechoic chamber  $(12.2m \times 7.95m \times 6.7m)$  and Shielded Room  $(8m \times 4m \times 3m)$  of Shenzhen Huatongwei International Inspection Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-292. Date of Registration: Dec. 24, 2010. Valid time is until Dec. 23, 2013.

Main Ports Conducted Interference Measurement of Shenzhen Huatongwei International Inspection Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: C-2726. Date of Registration: Dec. 20, 2009. Valid time is until Dec. 19, 2012.

Telecommunication Ports Conducted Interference Measurement of Shenzhen Huatongwei International Inspection Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: T-1837. Date of Registration: May 07, 2010. Valid time is until May 06, 2013.

## DNV

Shenzhen Huatongwei International Inspection Co., Ltd. has been found to comply with the requirements of DNV towards subcontractor of EMC and safety testing services in conjunction with the EMC and Low voltage Directives and in the voluntary field. The acceptance is based on a formal quality Audit and follow-ups according to relevant parts of ISO/IEC Guide 17025 (2005), in accordance with the requirements of the DNV Laboratory Quality Manual towards subcontractors. Valid time is until Aug. 24, 2016.

#### 3.3. Environmental conditions

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

Temperature:	15-35 ° C
Humidity:	30-60 %
Atmospheric pressure:	950-1050mbar

### 3.4. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 "Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements" and is documented in the Shenzhen Huatongwei International Inspection Co., Ltd quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

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

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	30~1000MHz	4.24 dB	(1)
Radiated Emission	1~18GHz	5.16 dB	(1)
Radiated Emission	18-40GHz	5.54 dB	(1)
Conducted Disturbance	0.15~30MHz	3.39 dB	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

## 3.5. Equipments Used during the Test

Conducted Emission									
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal.Due				
1	EMI TEST RECEIVER	Rohde & Schwarz	ESCI	100106	2014/10/25				
2	ARTIFICIAL MAINS	Rohde & Schwarz	ESH2-Z5	100028	2014/10/25				
3	PULSE LIMITER	Rohde & Schwarz	ESHSZ2	100044	2014/10/25				
4	EMI TEST SOFTWARE	Rohde & Schwarz	ES-K1	N/A	N/A				

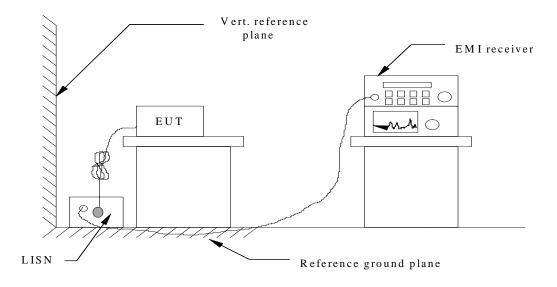
Radia	Radiated Emission							
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal.Due			
1	ULTRA-BROADBAND ANTENNA	ShwarzBeck	VULB9163	538	2014/10/25			
2	EMI TEST RECEIVER	Rohde & Schwarz	ESI 26	100009	2014/10/25			
3	EMI TEST Software	Audix	E3	N/A	N/A			
4	TURNTABLE	MATURO	TT2.0		N/A			
5	ANTENNA MAST	MATURO	TAM-4.0-P		N/A			
6	EMI TEST Software	Rohde & Schwarz	ESK1	N/A	N/A			
7	ULTRA-BROADBAND ANTENNA	Rohde&Schwarz	HL562	100015	2014/10/25			
8	Amplifer	Sonoma	310N	E009-13	2014/10/25			
9	JS amplifer	Rohde & Schwarz	JS4-00101800- 28-5A	F201504	2014/10/25			
11	TURNTABLE	ETS	2088	2149	N/A			
12	ANTENNA MAST	ETS	2075	2346	N/A			
13	HORN ANTENNA	Rohde&Schwarz	HF906	100039	2014/10/25			

The calibration interval was one year.

# 4. TEST CONDITIONS AND RESULTS

### 4.1. Conducted Emissions Test

#### **TEST CONFIGURATION**



#### TEST PROCEDURE

- 1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system; a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.4-2009.
- 2. Support equipment, if needed, was placed as per ANSI C63.4-2009.
- 3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4-2009.
- 4. The EUT received DC 5.0 from USB powered from AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
- 5. All support equipments received AC power from a second LISN, if any.
- 6. The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 7. Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.
- 8. During the above scans, the emissions were maximized by cable manipulation.

#### CONDUCTED POWER LINE EMISSION LIMIT

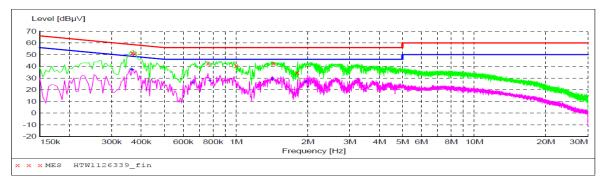
For unintentional device, according to § 15.107(a) Line Conducted Emission Limits is as following :

Eroquonov	Maximum RF Line Voltage (dBµV)						
Frequency (MHz)	CLA	SS A	CLASS B				
	Q.P.	Ave.	Q.P.	Ave.			
0.15 - 0.50	79	66	66-56*	56-46*			
0.50 - 5.00	73	60	56	46			
5.00 - 30.0	73	60	60	50			

\* Decreasing linearly with the logarithm of the frequency

#### TEST RESULTS

SCAN TABLE: "Voltage (9K-30M) FIN" Short Description: 150K-30M Voltage



#### MEASUREMENT RESULT: "HTW1126339\_fin"

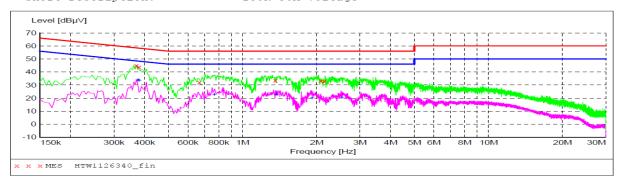
12/09/2013 3:3 Frequency MHz	36PM Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.366000	51.60	10.5	59	7.0	QP	L1	GND
0.375000	50.80	10.5	58	7.6	QP	L1	GND
0.762000	42.30	10.2	56	13.7	QP	L1	GND
1.000500	40.50	10.3	56	15.5	QP	L1	GND
1.437000	42.30	10.3	56	13.7	QP	L1	GND
1.806000	34.60	10.3	56	21.4	QP	L1	GND

#### MEASUREMENT RESULT: "HTW1126339\_fin2"

1

0.361500 37.40 10.5 49 11.3 AV L1 0.366000 37.10 10.5 49 11.5 AV L1 0.658500 26.00 10.3 46 20.0 AV L1 0.775500 27.70 10.2 46 18.3 AV L1	
1.414500 29.00 10.3 46 17.0 AV L1   1.963500 26.80 10.3 46 19.2 AV L1	GND GND GND GND GND GND





#### MEASUREMENT RESULT: "HTW1126340\_fin"

12/09/2013	3:39PM						
Frequenc MH	-	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.37050	0 44.90	10.5	59	13.6	QP	N	GND
0.37950	0 43.80	10.5	58	14.5	QP	N	GND
0.66750	0 32.10	10.3	56	23.9	QP	N	GND
1.36050	0 33.30	10.3	56	22.7	QP	N	GND
2.08500	0 33.10	10.3	56	22.9	QP	N	GND
2.15250	0 32.90	10.3	56	23.1	QP	N	GND

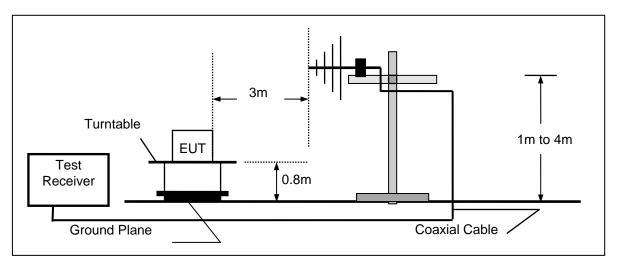
#### MEASUREMENT RESULT: "HTW1126340\_fin2"

12/09/2013 3:39PM Margin Detector Line dB Frequency MHz Level dBµV Transd dB Limit dBµV PE AV AV AV AV AV AV 0.375000 33.70 10.5 48 14.7 GND Ν 14.7 14.7 23.3 23.3 26.1 25.8 33.60 22.70 22.70 19.90 20.20 10.5 10.5 10.2 10.3 10.3 10.3 48 48 46 46 46 46 0.379500 0.766500 1.369500 GND GND N N Ν GND 1.918500 2.530500 GND GND N N

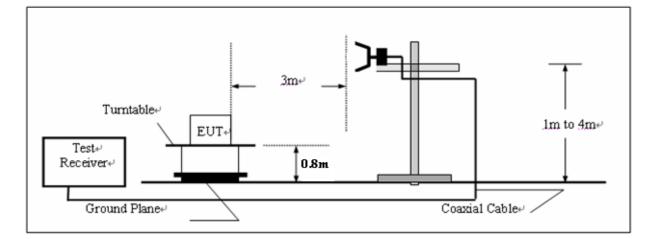
### 4.2. Radiated Emission Test

#### **TEST CONFIGURATION**

a) Radiated Emission Test Set-Up, Frequency below 1000MHz



b) Radiated Emission Test Set-Up, Frequency above 1000MHz



#### TEST PROCEDURE

- 1. The EUT is placed on a turntable, which is 0.8m above ground plane.
- 2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
- 3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
- 4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
- 6. Repeat above procedures until the measurements for all frequencies are complete.
- 7. The maximum operation frequency was 512MHz, the radiated emission test frequency from 30MHz to 18GHz.

#### FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

#### FS = RA + AF + CL - AG

Where FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude	AG = Amplifier Gain
AF = Antenna Factor	

For example

Frequency	FS	RA	AF	CL	AG	Transd
(MHz)	(dBµV/m)	(dBµV/m)	(dB)	(dB)	(dB)	(dB)
300.00	40	58.1	12.2	1.6	31.90	

Transd=AF +CL-AG

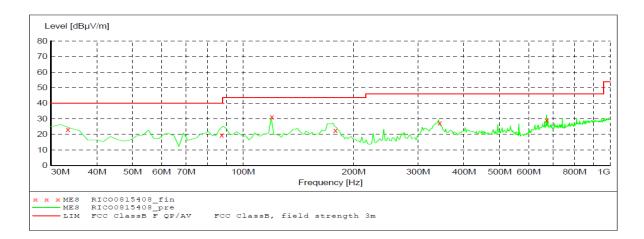
#### **RADIATION LIMIT**

For unintentional device, according to § 15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency (MHz)	Distance (Meters)	Radiated (dBµV/m)	Radiated (µV/m)
30-88	3	40.0	100
88-216	3	43.5	150
216-960	3	46.0	200
Above 960	3	54.0	500

#### **TEST RESULTS**

SCAN TABLE							
Short Description: Field Strength (30M-1G)							
Start	Stop	Step	Detector	Meas.	IF	Transducer	
Frequency	Frequency	Width		Time	Bandw.		
30.0 MHz	1.0 GHz	60.0 kHz	QuasiPeak	1.0 s	120 kHz	HL562 201106	

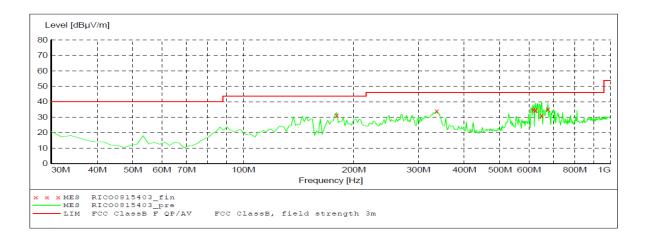


#### MEASUREMENT RESULT: "RICO0815408\_fin"

12/09/2013 7 Frequency MHz	:06PM Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
33.360000 87.600000	9.70 22.10	-11.8 -19.2	40.0 40.0	30.3 17.8	QP QP	150.0 100.0	160.00 0.00	VERTICAL VERTICAL
120.000000	31.20	-17.8	43.5	12.3	QP	101.0	0.00	VERTICAL
178.740000	22.40	-20.7	43.5	21.1	QP	100.0	133.00	VERTICAL
343.740000	21.60	-14.7	46.0	24.4	QP	99.0	180.00	VERTICAL
672.720000	28.00	-7.5	46.0	18.0	QP	100.0	172.00	VERTICAL

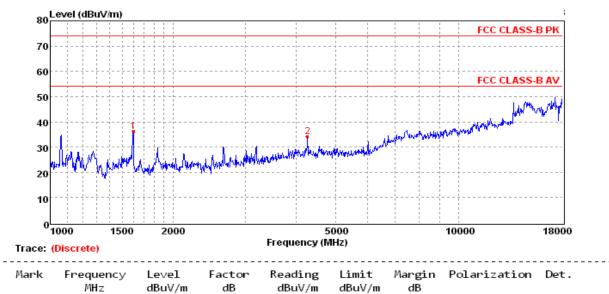
#### SCAN TABLE: "test Field(30M-1G)QP"

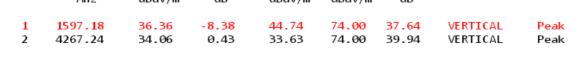
Short Description:			ield Streng			
Start	Stop	Step	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width		Time	Bandw.	
30.0 MHz	1.0 GHz	60.0 kHz	QuasiPeak	1.0 s	120 kHz	HL562 201106

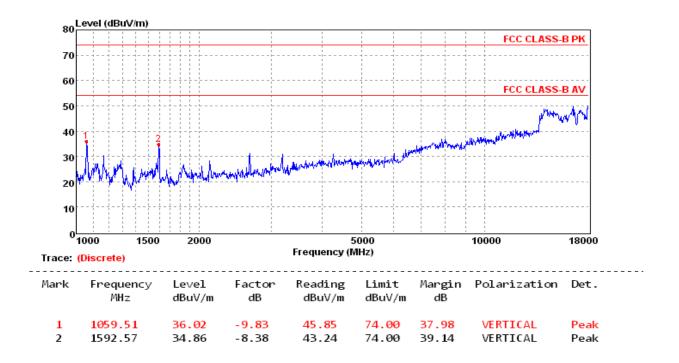


#### MEASUREMENT RESULT: "RICO0815403\_fin"

12/08/2013 6: Frequency MHz	:01PM Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
179.700000 336.780000 617.340000 625.620000 649.140000 676.020000	31.30 33.90 34.70 34.50 31.00 35.10	-20.5 -14.6 -9.3 -9.0 -8.4 -7.5	43.5 46.0 46.0 46.0 46.0 46.0	12.2 12.1 11.3 11.5 15.0 10.9	QP QP	150.0 99.0 101.0 99.0 100.0 100.0	225.00 243.00 155.00 192.00 126.00 159.00	HORIZONTAL HORIZONTAL HORIZONTAL HORIZONTAL HORIZONTAL HORIZONTAL







# 5. Test Setup Photos of the EUT

Conducted Emission (AC Mains)



Radiated Emission (30MHz-1GHz)



Radiated Emission (1GHz-6GHz)



# 6. External and Internal Photos of the EUT

External photos of the EUT













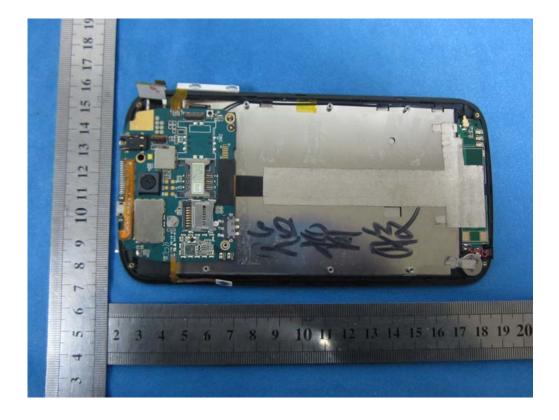


# Internal photos of the EUT

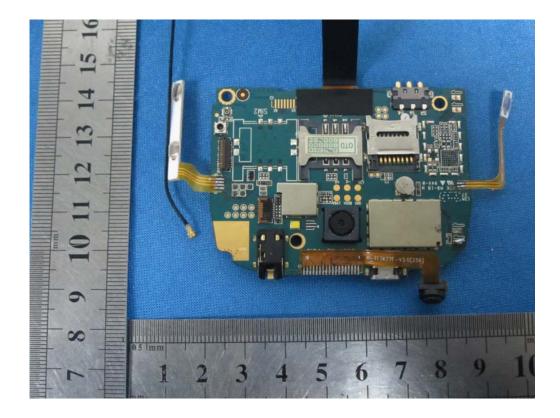


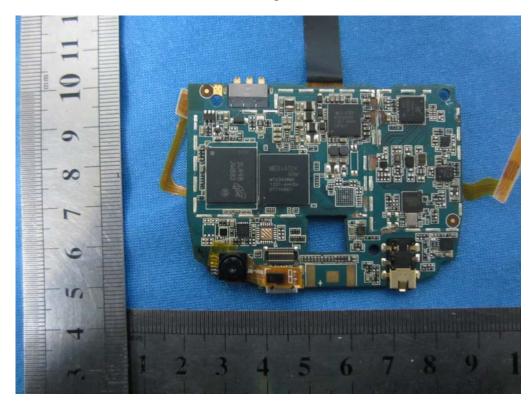


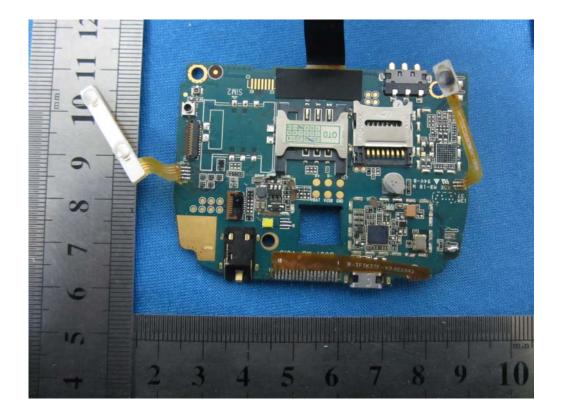


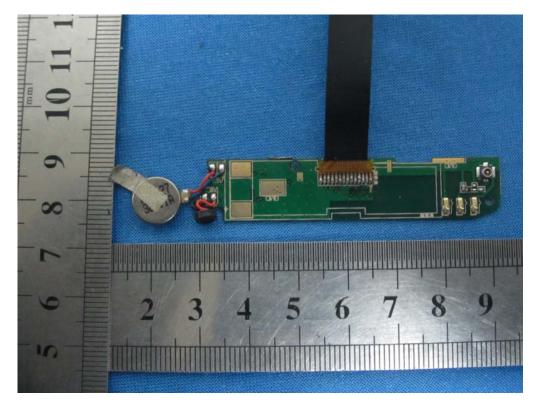


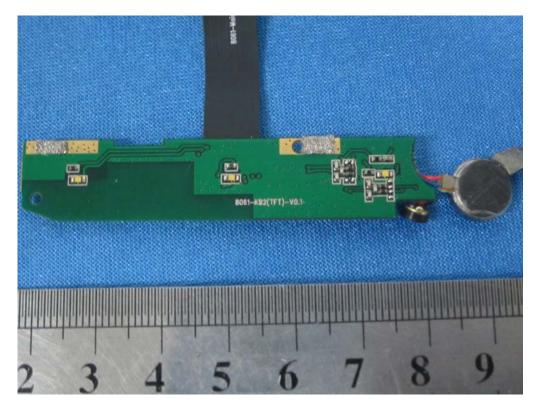












.....End of Report.....