



Variant FCC RF Test Report

APPLICANT : Cellon Communications Technology Co., Ltd.
EQUIPMENT : GSM850/900/1800/1900 UMTS850/1900 GPRS.
BRAND NAME : enspire, Claro, Ring; D-mobile
MODEL NAME : C3021, A1028, 1028CA, 1028EN, 1028EC,
DM3021K
FCC ID : T38PCD3031
STANDARD : FCC 47 CFR Part 2, 22(H), 24(E)
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)

This is a variant report which is only valid together with the original report. The product was received on Apr. 12, 2013 and completely tested on Jun. 21, 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:

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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REVISION HISTORY



SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	§2.1046	Conducted Output Power	N/A	PASS	-
3.2	§22.913(a)(2)	Effective Radiated Power	< 7 Watts	PASS	-
3.2	§24.232(c)	Equivalent Isotropic Radiated Power	< 2 Watts	PASS	-
3.3	§2.1053 §22.917(a) §24.238(a)	Field Strength of Spurious Radiated	< $43+10\log_{10}(P[\text{Watts}])$	PASS	Under limit 31.69 dB at 1672.000 MHz



1 General Description

1.1 Applicant

Cellon Communications Technology Co., Ltd.

11f, Skyworth C Buuilding, Gaoxin S.Ave.1., Hi-Tech Industrial Park, Nanshan.Shenzhen

1.2 Manufacturer

Cellon Communications Technology Co., Ltd.

11f, Skyworth C Buuilding, Gaoxin S.Ave.1., Hi-Tech Industrial Park, Nanshan.Shenzhen

1.3 Feature of Equipment Under Test

Product Feature	
Equipment	GSM850/900/1800/1900 UMTS850/1900 GPRS. EDGE. BT mobile phone
Brand Name	enspire, Claro, Ring; D-mobile
Model Name	C3021, A1028, 1028CA, 1028EN, 1028EC, DM3021K
FCC ID	T38PCD3031
EUT supports Radios application	GSM/GPRS/EGPRS/WCDMA/Bluetooth
HW Version	V1.0
SW Version	V1.0
EUT Stage	Identical Prototype

Remark:

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. The different brand names and model names are identical on hardware. The only difference is the label of different branding for different customer.



1.4 Product Specification of Equipment Under Test

Product Specification subjective to this standard	
Tx Frequency	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8MHz WCDMA Band V: 826.4 MHz ~ 846.6 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz
Rx Frequency	GSM850: 869.2 MHz ~ 893.8 MHz GSM1900: 1930.2 MHz ~ 1989.8 MHz WCDMA Band V: 871.4 MHz ~ 891.6 MHz WCDMA Band II: 1932.4 MHz ~ 1987.6 MHz
Maximum Output Power to Antenna	GSM850 : 31.31 dBm GSM1900 : 28.30 dBm WCDMA Band V : 21.86 dBm WCDMA Band II : 22.78 dBm
Antenna Type	Fixed Internal Antenna
Type of Modulation	GSM: GMSK GPRS: GMSK EDGE: GMSK / 8PSK (Downlink Only) WCDMA: QPSK (Uplink)



1.5 Maximum ERP/EIRP Power

FCC Rule	System	Type of Modulation	Maximum ERP/EIRP (W)
Part 22	GSM850 GSM	GMSK	0.5306
Part 22	WCDMA Band V RMC 12.2Kbps	QPSK	0.0591
Part 24	GSM1900 GSM	GMSK	0.7089
Part 24	WCDMA Band II RMC 12.2Kbps	QPSK	0.2285

1.6 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.	Sportun Site No.		FCC/IC Registration No.
	TH01-SZ	03CH01-SZ	831040/4086F-1

1.7 Applied Standards

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

- Preliminary Guidance for Receiving Applications for Certification of 3G Device. May 9, 2006.
- FCC 47 CFR Part 2, 22(H), 24(E)
- ANSI / TIA / EIA-603-C-2004
- FCC KDB 971168 D01 Power Meas. License Digital Systems v01

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 (Y plane).

Frequency range investigated for radiated emission is as follows:

1. 30 MHz to 9000 MHz for WCDMA Band V.
2. 30 MHz to 19000 MHz for WCDMA Band II.

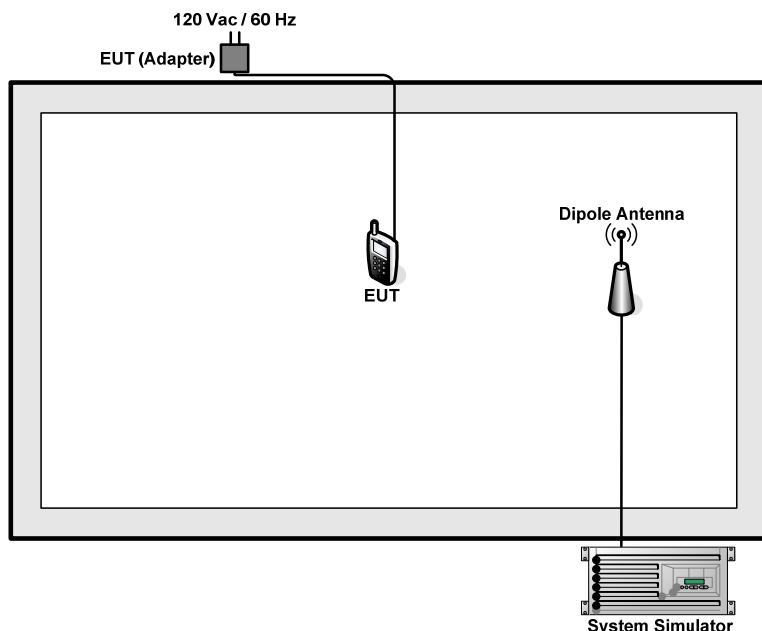
Band	Test Modes
GSM 850	<ul style="list-style-type: none">■ GSM Link for Conducted Power■ GSM Link for ERP
GSM 1900	<ul style="list-style-type: none">■ GSM Link for Conducted Power■ GSM Link for EIRP
WCDMA Band V	<ul style="list-style-type: none">■ RMC 12.2Kbps Link for Conducted Power■ RMC 12.2Kbps Link for ERP■ RMC 12.2Kbps Link for Radiated Spurious Emissions
WCDMA Band II	<ul style="list-style-type: none">■ RMC 12.2Kbps Link for Conducted Power■ RMC 12.2Kbps Link for EIRP■ RMC 12.2Kbps Link for Radiated Spurious Emissions

The conducted power tables are as follows:

Conducted Power (*Unit: dBm)						
Band	GPRS850			GPRS1900		
Channel	128	189	251	512	661	810
Frequency	824.2	836.4	848.8	1850.2	1880.0	1909.8
GSM (GMSK, 1 Tx slot)	31.27	31.30	31.31	28.30	28.11	28.06
GPRS (GMSK, 1 Tx slot) – CS1	31.25	31.27	31.29	28.09	27.91	27.95
GPRS (GMSK, 2 Tx slots) – CS1	30.76	30.79	30.84	27.45	27.27	27.13
GPRS (GMSK, 3 Tx slots) – CS1	28.44	28.43	28.48	25.80	25.55	25.45
GPRS (GMSK, 4 Tx slots) – CS1	27.50	27.53	27.57	24.98	24.79	24.70

Conducted Power (*Unit: dBm)						
Band	WCDMA Band V			WCDMA Band II		
Channel	4132	4182	4233	9262	9400	9538
Frequency	826.4	836.4	846.6	1852.4	1880.0	1907.6
AMR	21.81	21.72	21.85	22.70	22.38	22.76
RMC 12.2K	21.83	21.74	21.86	22.72	22.42	22.78

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	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	DC Power Supply	GWINSTEK	GPS-3030D	N/A	N/A	Unshielded, 1.8 m



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 Conducted Output Power Measurement

3.1.1 Description of the Conducted Output Power Measurement

A base station simulator was used to establish communication with the EUT. Its parameters were set to transmit the maximum power on the EUT. The measured power in the radio frequency on the transmitter output terminals shall be reported.

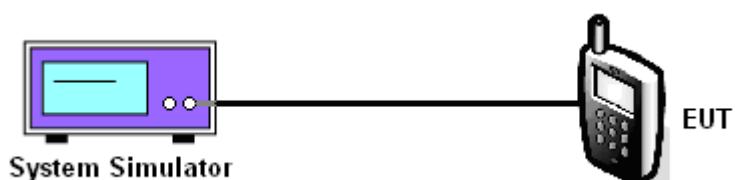
3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test Procedures

1. The transmitter output port was connected to base station.
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 power through base station.
4. Select lowest, middle, and highest channels for each band and different modulation.
5. Measure the maximum burst average power for GSM and maximum average power for other modulation signal.

3.1.4 Test Setup





3.1.5 Test Result of Conducted Output Power

Cellular Band						
Modes	GSM850 (GSM)			WCDMA Band V (RMC 12.2Kbps)		
Channel	128 (Low)	189 (Mid)	251 (High)	4132 (Low)	4182 (Mid)	4233 (High)
Frequency (MHz)	824.2	836.4	848.8	826.4	836.4	846.6
Conducted Power (dBm)	31.27	31.30	31.31	21.83	21.74	21.86
Conducted Power (Watts)	1.34	1.35	1.35	0.15	0.15	0.15

PCS Band						
Modes	GSM1900 (GSM)			WCDMA Band II (RMC 12.2Kbps)		
Channel	512 (Low)	661 (Mid)	810 (High)	9262 (Low)	9400 (Mid)	9538 (High)
Frequency (MHz)	1850.2	1880	1909.8	1852.4	1880	1907.6
Conducted Power (dBm)	28.30	28.11	28.06	22.72	22.42	22.78
Conducted Power (Watts)	0.68	0.65	0.64	0.19	0.17	0.19

Note: maximum burst average power for GSM, and maximum average power for WCDMA.



3.2 Effective Radiated Power and Effective Isotropic Radiated Power Measurement

3.2.1 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 v01. The ERP of mobile transmitters must not exceed 7 Watts and the EIRP of mobile transmitters are limited to 2 Watts.

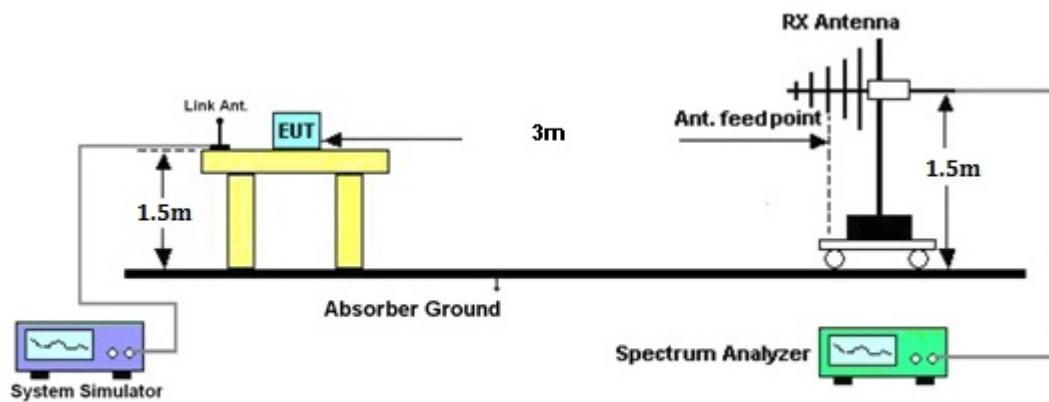
3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

1. The EUT was placed on a 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. GSM 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. $ERP/EIRP = Ps + Et - Es + Gs = Ps + Rt - Rs + Gs$
Ps (dBm) : Input power to substitution antenna.
Gs (dBi or dBd) : Substitution antenna Gain.
 $Et = Rt + AF$
 $Es = Rs + AF$
AF (dB/m) : Receive antenna factor
Rt : The highest received signal in spectrum analyzer for EUT.
Rs : The highest received signal in spectrum analyzer for substitution antenna.

3.2.4 Test Setup





3.2.5 Test Result of ERP

GSM850 (GSM) Radiated Power ERP						
Horizontal Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBd)	ERP (dBm)	ERP (W)
824.20	-21.13	-48.12	0.00	-1.08	25.91	0.3898
836.40	-20.65	-48.28	0.00	-0.93	26.70	0.4679
848.80	-20.34	-48.35	0.00	-0.76	27.25	0.5306

Vertical Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBd)	ERP (dBm)	ERP (W)
824.20	-35.39	-47.97	0.00	-1.08	11.50	0.0141
836.40	-34.46	-48.01	0.00	-0.93	12.62	0.0183
848.80	-33.60	-48.05	0.00	-0.76	13.69	0.0234

WCDMA Band V (RMC 12.2Kbps) Radiated Power ERP						
Horizontal Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBd)	ERP (dBm)	ERP (W)
826.40	-30.07	-48.12	0.00	-1.08	16.97	0.0498
836.40	-29.64	-48.28	0.00	-0.93	17.71	0.0591
846.60	-29.91	-48.35	0.00	-0.76	17.68	0.0587

Vertical Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBd)	ERP (dBm)	ERP (W)
826.40	-44.09	-47.97	0.00	-1.08	2.80	0.0019
836.40	-42.89	-48.01	0.00	-0.93	4.19	0.0026
846.60	-42.76	-48.05	0.00	-0.76	4.53	0.0028



3.2.6 Test Result of EIRP

GSM1900 (GSM) Radiated Power EIRP						
Horizontal Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	EIRP (dBm)	EIRP (W)
1850.20	-26.30	-51.88	0.00	1.96	27.54	0.5677
1880.00	-27.29	-52.99	0.00	2.00	27.70	0.5890
1909.80	-27.75	-54.28	0.00	1.98	28.51	0.7089
Vertical Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	EIRP (dBm)	EIRP (W)
1850.20	-29.28	-52.13	0.00	1.96	24.81	0.3028
1880.00	-30.45	-53.17	0.00	2.00	24.72	0.2967
1909.80	-30.74	-54.13	0.00	1.98	25.37	0.3446

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	-31.15	-51.88	0.00	1.96	22.69	0.1859
1880.00	-33.15	-52.99	0.00	2.00	21.84	0.1527
1907.60	-32.67	-54.28	0.00	1.98	23.59	0.2285
Vertical Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	EIRP (dBm)	EIRP (W)
1852.40	-34.45	-52.13	0.00	1.96	19.64	0.0921
1880.00	-36.47	-53.17	0.00	2.00	18.70	0.0741
1907.60	-35.63	-54.13	0.00	1.98	20.48	0.1116



3.3 Field Strength of Spurious Radiated Measurement

3.3.1 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.

3.3.2 Measuring Instruments

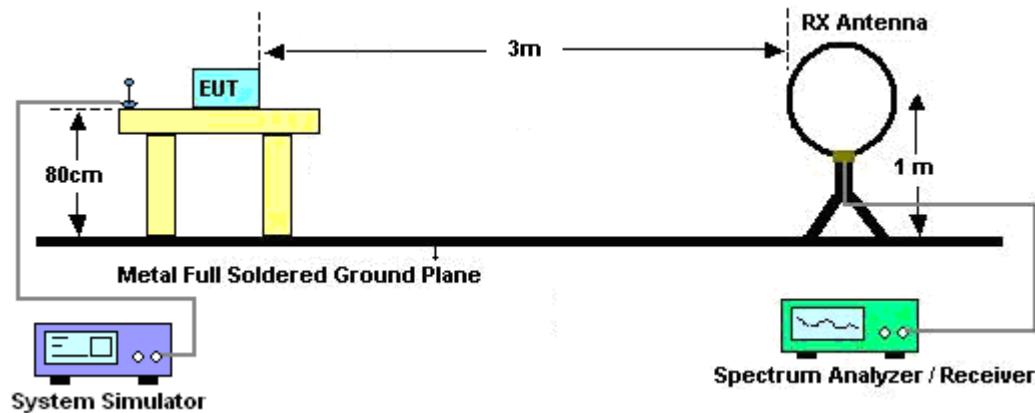
See list of measuring instruments of this test report.

3.3.3 Test Procedures

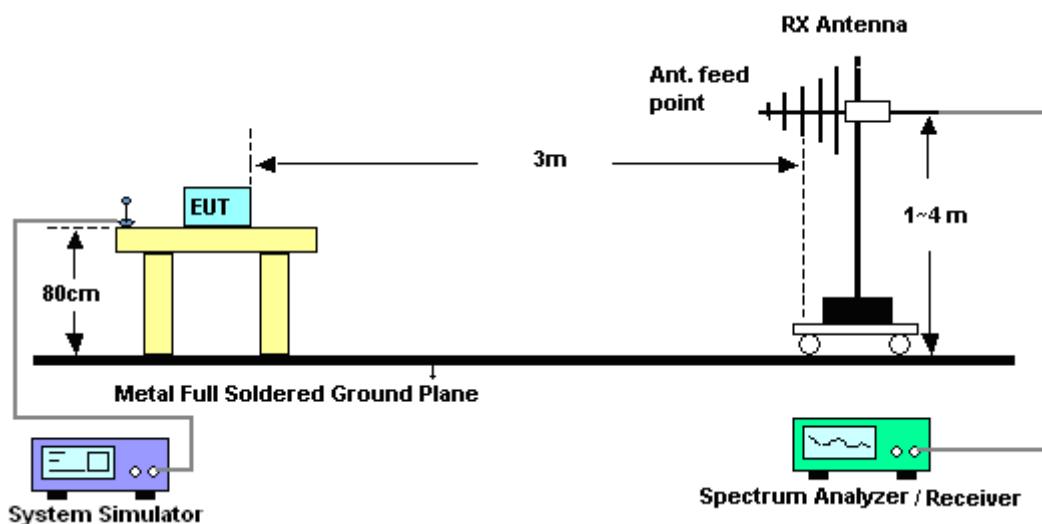
1. The EUT was placed on a rotatable wooden table with 0.8 meter above ground.
1. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
2. The table was rotated 360 degrees to determine the position of the highest spurious emission.
3. The height of the receiving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

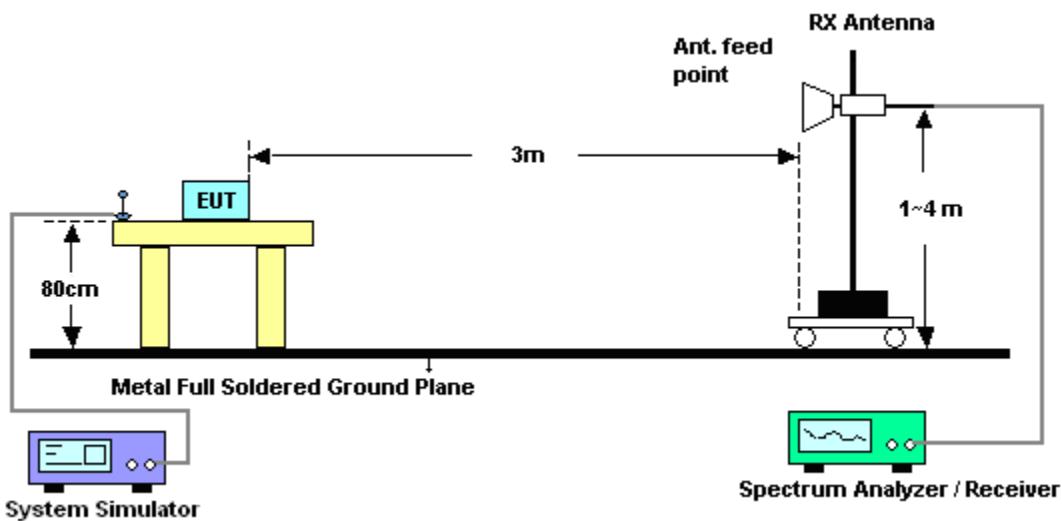
3.3.4 Test Setup

For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



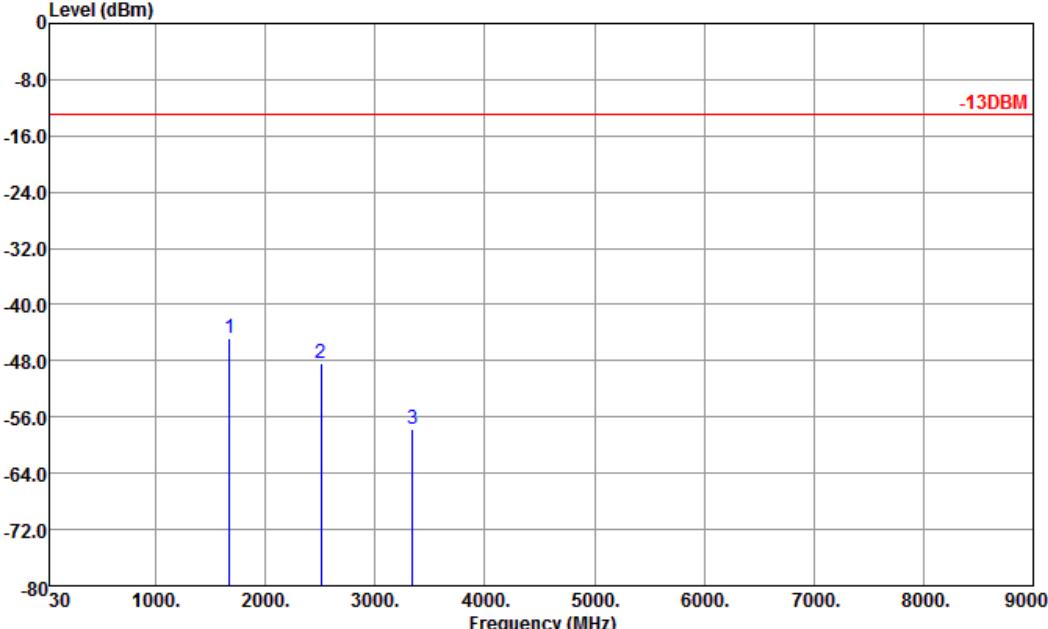
For radiated emissions above 1GHz

3.3.5 Test Results of Radiated Emissions (9 KHz ~ 30 MHz)

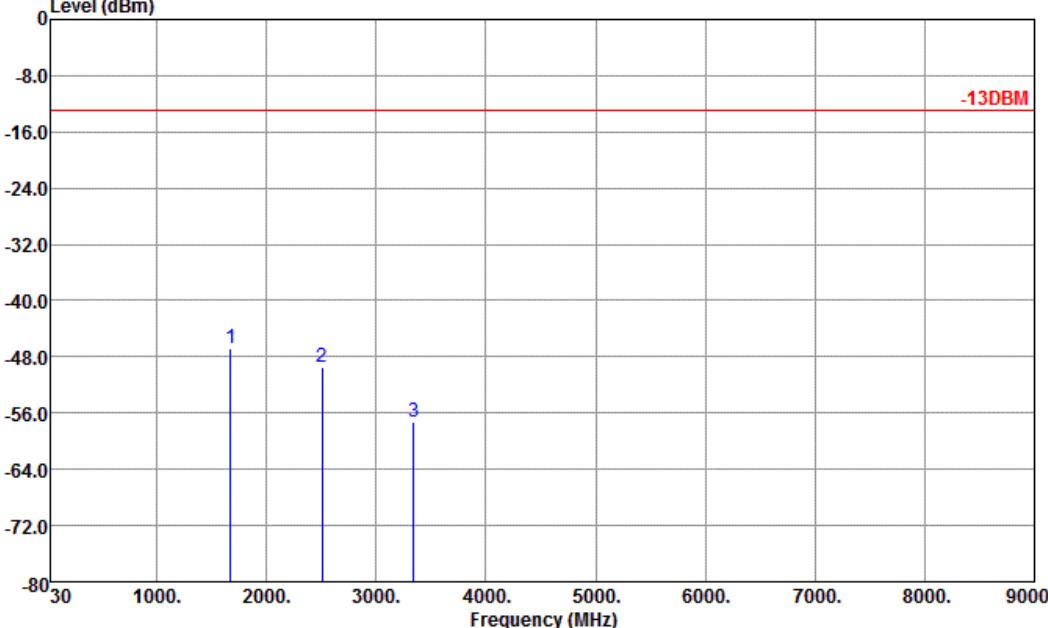
The low frequency, which started from 9 KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.



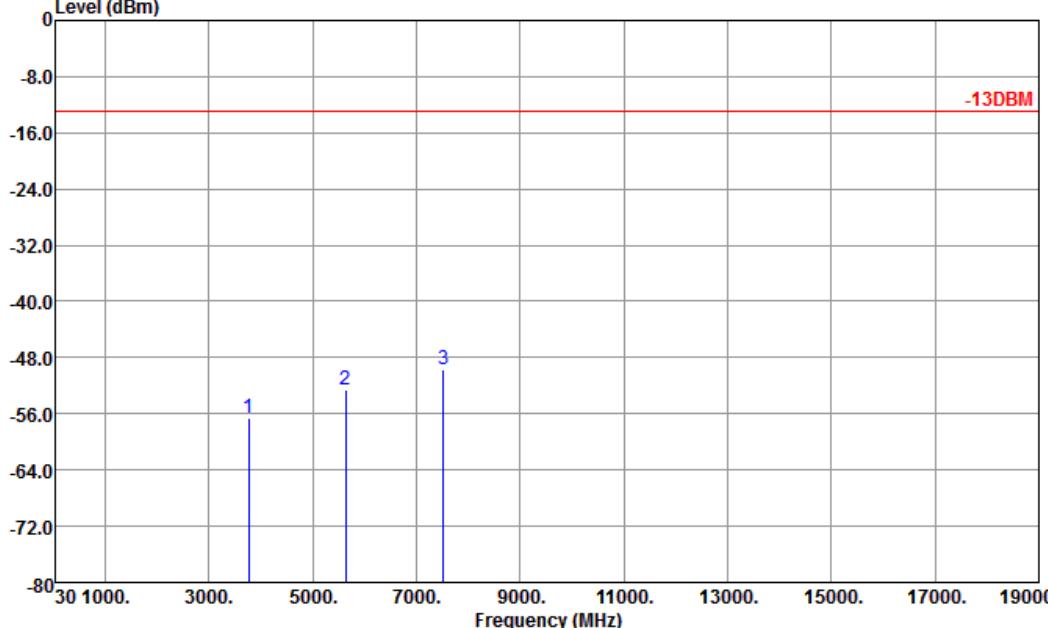
3.3.6 Test Result of Field Strength of Spurious Radiated

Band :	WCDMA Band V			Temperature :	23~24°C					
Test Mode :	RMC 12.2Kbps Link			Relative Humidity :	49~50%					
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) 341202									
Frequency	ERP	Limit	Over Limit	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result	
(MHz)	(dBm)	(dBm)	(dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)		
1672	-44.69	-13	-31.69	-60.66	-50.67	1.62	5.49	H	Pass	
2510	-48.43	-13	-35.43	-70.24	-32.89	2.1	6.22	H	Pass	
3345	-57.66	-13	-44.66	-68.26	-55.74	3.03	8.07	H	Pass	

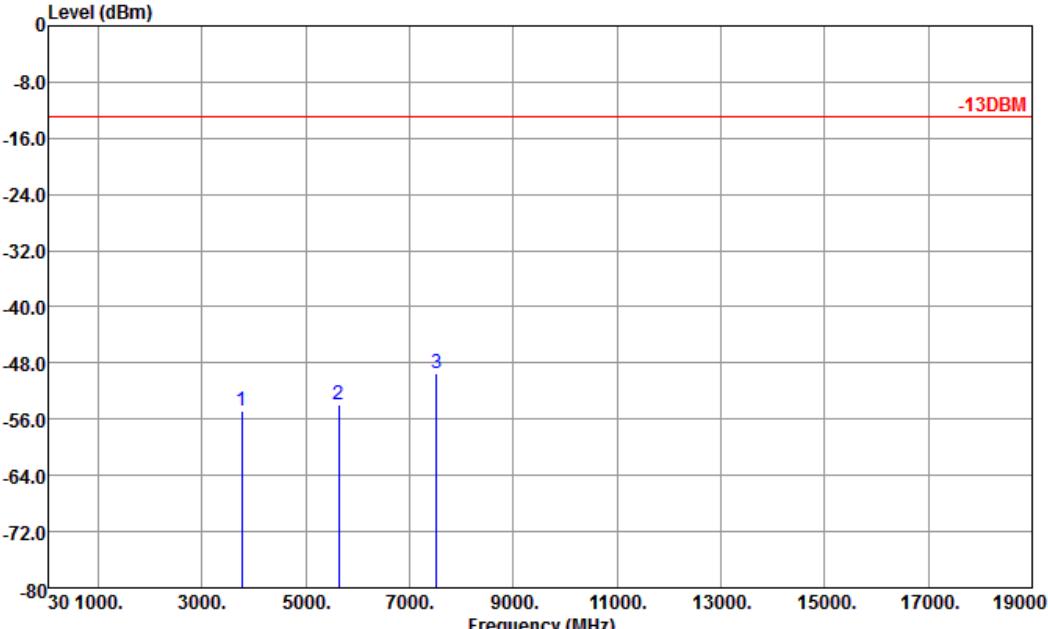


Band :	WCDMA Band V			Temperature :	23~24°C					
Test Mode :	RMC 12.2Kbps Link			Relative Humidity :	49~50%					
Test Engineer :	Robin Luo			Polarization :	Vertical					
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.									
										
Site	: 03CH01-SZ									
Condition	: -13DBM HF_EIRP_V_130101 VERTICAL									
Project	: (FG) 341202									
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	-46.24	-13	-33.24	-59.41	-49.64	1.62	5.49	V	Pass	
2510	-49.50	-13	-36.50	-69.59	-38.85	2.1	6.22	V	Pass	
3345	-57.34	-13	-44.34	-69.17	-54.44	3.03	8.07	V	Pass	



Band :	WCDMA Band II		Temperature :	23~24°C								
Test Mode :	RMC 12.2Kbps Link		Relative Humidity :	49~50%								
Test Engineer :	Robin Luo		Polarization :	Horizontal								
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.											
												
<p>Site : 03CH01-SZ Condition : -13DBM HF_EIRP_H_130101 HORIZONTAL Project : (FG) 341202</p>												
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	-56.56	-13	-43.56	-68.71	-48.69	1.28	8.02	H	Pass			
5636	-52.59	-13	-39.59	-70.58	-57.17	1.58	10.00	H	Pass			
7520	-49.66	-13	-36.66	-71.6	-54.14	1.78	12.10	H	Pass			



Band :	WCDMA Band II		Temperature :	23~24°C								
Test Mode :	RMC 12.2Kbps Link		Relative Humidity :	49~50%								
Test Engineer :	Robin Luo		Polarization :	Vertical								
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.											
 <p>The figure is a spectral plot with 'Frequency (MHz)' on the x-axis (ranging from 30 to 19000) and 'Level (dBm)' on the y-axis (ranging from 0 to -80). A horizontal red line at -13 dBm represents the limit. Three vertical blue lines indicate spurious emissions at 3760 MHz (labeled 1), 5636 MHz (labeled 2), and 7520 MHz (labeled 3), all falling significantly below the -13 dBm limit.</p>												
<p>Site : 03CH01-SZ Condition : -13DBM HF_EIRP_V_130101 VERTICAL Project : (FG) 341202</p>												
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	-54.78	-13	-41.78	-69.81	-54.59	1.28	8.02	V	Pass			
5636	-53.96	-13	-40.96	-71.04	-56.27	1.58	10.00	V	Pass			
7520	-49.52	-13	-36.52	-71.77	-54.24	1.78	12.10	V	Pass			



4 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	Jun. 21, 2013	Mar. 27, 2014	Conducted (TH01-SZ)
Thermal Chamber	Hongzhan	LP-150U	HD20120425	N/A	Mar. 28, 2013	Jun. 21, 2013	Mar. 27, 2014	Conducted (TH01-SZ)
EMI Test Receiver	R&S	ESCI	100724	9kHz~3GHz	Mar. 28, 2013	Jun. 01, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
Spectrum Analyzer	R&S	FSP30	101362	9kHz~30GHz	Oct. 11, 2012	Jun. 01, 2013	Oct. 10, 2013	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS Lindgren	3117	00119436	1GHz~18GHz	Oct. 12, 2012	Jun. 01, 2013	Oct. 11, 2013	Radiation (03CH01-SZ)
Bilog Antenna	SCHAFFNER	CBL6112B	2614	30MHz~2GHz	Nov. 03, 2012	Jun. 01, 2013	Nov. 02, 2013	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9kHz~3GHz Gain 30dB	Mar. 28, 2013	Jun. 01, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
Amplifier	Yiai	AV3860B	04030	2GHz~26.5GHz	Mar. 28, 2013	Jun. 01, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
SHF-EHF -Horn	Schwarzbeck	BBHA9170	BBHA9170249	14GHz~40GHz	Nov. 23, 2012	Jun. 01, 2013	Nov. 22, 2013	Radiation (03CH01-SZ)
Loop Antenna	R&S	HFH2-Z2	100321	9KHz~30MHz	Oct. 22, 2012	Jun. 01, 2013	Oct. 21, 2013	Radiation (03CH01-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 A. Photographs of EUT

Please refer to Sporton report number EP341202 as below.



Appendix C. Product Equality Declaration

Cellon Communications Technology Co., Ltd

11F, Skyworth C Building, Gaoxin S.Ave.1., Hi-Tech Industrial Park, Nanshan, Shenzhen

Date: June 21, 2013

Product Equality Declaration

We, Cellon, declare on our sole responsibility for the product of C3021 A1028 as below:

The differences between C3021 A1028 and previous model C3031 are as below:

1. MD Difference

A. C3031 is black painting on the front housing

C3021 A1028 have not painting, is raw material black color on the front housing

B. C3031 Keypad have a silver decorate loop on the navigation key;

C3021 A1028 Keypad have not decorate loop on the navigation key, is whole rubber keypad;

C. C3031 is Movistar logo on the Lens and Battery cover;

C3021 A1028 is enspire logo on the Lens and Battery cover;

2. SW Difference

SW version name changed for Model name;

3. Accessory Difference

A. C3031 Charger Model is ASTC20-050065; PCD logo;

C3021 A1028 Charger Model is KSA50500; enspire logo;

B. C3031 Battery Model is BTR380 for 720mAh; PCD logo;

C3021 A1028 Battery Model is BTR1238 for 550mAh; enspire logo;

C. C3031 Headset is dual sound channel;

C3021 A1028 Headset is single sound channel;

4. Memory Difference

C3031 memory is ST NANDA8R4N4AZBB5;

C3021(A1028) memory is Samsung K521H57ACB-B060;

Except listings above, the others are all the same as previous version.

Should you have any questions or comments regarding this matter, please have my best attention.

Sincerely yours,



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