Variant FCC RF Test Report

APPLICANT	:	Acer Incorporated
EQUIPMENT	:	Smart HandHeld _ Android
BRAND NAME	:	Acer
MODEL NAME	:	S100
FCC ID	:	HLZSHS100CE
STANDARD	:	FCC 47 CFR Part 2, 22(H), 24(E)
CLASSIFICATION	:	PCS Licensed Transmitter Held to Ear (PCE)
Tx/Rx FREQUENCY RANGE	:	GSM850 : 824.2 ~ 848.8 MHz / 869.2 ~ 893.8 MHz GSM1900 : 1850.2 ~ 1909.8 MHz / 1930.2 ~ 1989.8 MHz WCDMA Band II : 1852.4 ~ 1907.6 MHz / 1932.4 ~ 1987.6 MHz
MAX. ERP/EIRP POWER	:	GSM850 (GSM) : 0.76 W for Sample A GSM850 (GSM) : 0.85 W for Sample B GSM1900(GSM) : 0.74 W for Sample A GSM1900 (GSM) : 0.57 W for Sample B

This is a variant report which is only valid combined with the original report. The product was received on May 12, 2010 and completely tested on Jun. 11, 2010. We, SPORTON INTERNATIONAL 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 INC., the test report shall not be reproduced except in full.

Reviewed by:

Roy Wu / Manager

Testing Laboratory 1190

SPORTON INTERNATIONAL INC.
No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG982009-16	Rev. 01	This is a variant report which can be referred to appendix C for change note. All the test cases were performed on original report which can be referred to Sporton Report Number FG982009-10 as appendix D; only worst case of Radiated Emission and ERP/EIRP were verified.	Jun. 11, 2010

SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	§22.913(a)(2)	RSS-132(4.4) SRSP-503(5.1.3)	Effective Radiated Power	< 7 Watts	PASS	-
3.1	§24.232(c)	RSS-133 (6.4) SRSP-510(5.1.2)	Equivalent Isotropic Radiated Power	< 2 Watts	PASS	-
3.2	§2.1053 §22.917(a) §24.238(a)	RSS-132 (4.5.1) RSS-133 (6.5.1)	Field Strength of Spurious Radiation	< $43+10\log_{10}$(P[Watts])	PASS	Under limit 6.15 dB at 6690 MHz

1 General Description

1.1 Applicant

Acer Incorporated
8F., No. 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan

1.2 Manufacturer

Compal Communication (Nanjing)
Nanjing Jingning Export Processing Zone (South Area) No. 68-2 Suyuan Street

1.3 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	Smart HandHeld _ Android
Brand Name	Acer
Model Name	S100
FCC ID	HLZSHS100CE
Sample A	EUT with 2nd camera module
Sample B	EUT remove camera module
Tx Frequency	GSM850 : 824 MHz ~ 849 MHz GSM1900 : 1850 MHz ~ 1910 MHz WCDMA Band II : 1850 MHz ~ 1910 MHz
Rx Frequency	GSM850 : 869 MHz ~ 894 MHz GSM1900 : 1930 MHz ~ 1990 MHz WCDMA Band II : 1930 MHz ~ 1990 MHz
Maximum Output Power to Antenna	GSM850 : 32.05 dBm GSM1900 : 28.68 dBm WCDMA Band II : 23.23 dBm
Maximum ERP/EIRP	GSM850 : 0.76 W (28.79 dBm) for Sample A GSM850 : 0.85 W (29.30 dBm) for Sample B GSM1900 : 0.74 W (28.69 dBm) for Sample A GSM1900 : 0.57 W (27.56 dBm) for Sample B
Antenna Type	Fixed Internal Antenna
HW Version	V1.3
SW Version	Modem : A1-03.14.03 OS : a1_genericl-eng2.1-update1 ÉCLAIR eng.alpine.20100415.192237 test-keys
Type of Modulation	GSM / GPRS : GMSK EDGE : 8PSK WCDMA : QPSK HSDPA : QPSK / 16QAM HSUPA : BPSK
EUT Stage	Identical Prototype

Remark:

1. This test report recorded only product characteristics and test results of PCS Licensed Transmitter Held to Ear (PCE).

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

1.4 Testing Site

Test Site	SPORTON INTERNATIONAL INC.	
Test Site Location	No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978	
Test Site No.	**Sporton Site No.**	**FCC/IC Registration No.**
	03CH07-HY	TW1022/4086B-1

1.5 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
- IC RSS-132 Issue 2
- IC RSS-133 Issue 5

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 (DoC), recorded in a separate test report.

1.6 Ancillary Equipment List

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU200	N/A	N/A	Unshielded, 1.8 m

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 is as follows:

1. 30 MHz to 9000 MHz for GSM850.
2. 30 MHz to 19000 MHz for GSM1900.

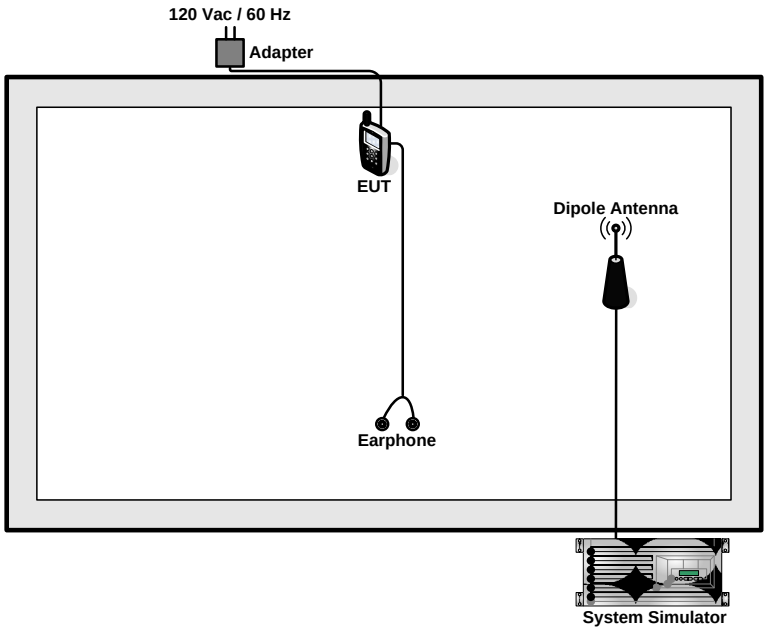
Test Modes	
Band	**Radiated TCs**
GSM 850	■ Sample A + GSM Link + Adapter 3 ■ Sample B + GSM Link + Adapter 3
GSM 1900	■ Sample A + GSM Link + Adapter 3 ■ Sample B + GSM Link + Adapter 3

The conducted power tables are as follows:

Conducted Power (*Unit: dBm)						
Band	**GSM850**			**GSM1900**		
Channel	**128**	**189**	**251**	**512**	**661**	**810**
Frequency	**824.2**	**836.4**	**848.8**	**1850.2**	**1880.0**	**1909.8**
GSM	**32.05**	31.85	31.53	28.57	**28.68**	28.46
GPRS 8	32.05	31.84	31.52	28.51	28.64	28.43
GPRS 10	31.99	31.80	31.48	28.49	28.60	28.35
GPRS 12	31.93	31.71	31.37	28.49	28.52	28.31
EGPRS 8	**26.58**	26.40	26.10	25.11	25.32	25.01
EGPRS 10	26.54	26.37	26.08	**25.80**	25.19	24.98
EGPRS 12	26.53	26.37	26.10	25.02	25.12	24.92

Conducted Power (*Unit: dBm)			
Band	**WCDMA Band II**		
Channel	**9262**	**9400**	**9538**
Frequency	**1852.4**	**1880.0**	**1907.6**
RMC 12.2K	**23.23**	22.85	22.63
HSDPA Subtest-1	23.16	22.80	22.56
HSDPA Subtest-2	23.07	22.74	22.47
HSDPA Subtest-3	22.73	22.32	22.19
HSDPA Subtest-4	22.71	22.26	22.18
HSUPA Subtest-1	22.94	22.44	22.59
HSUPA Subtest-2	21.45	21.24	20.90
HSUPA Subtest-3	22.02	21.54	21.04
HSUPA Subtest-4	21.65	21.32	20.99
HSUPA Subtest-5	22.73	22.36	22.52

2.2 Connection Diagram of Test System



3 Test Result

3.1 Effective Radiated Power and Effective Isotropic Radiated Power Measurement

3.1.1 Description of the ERP/EIRP Measurement

ERP/EIRP is measured by substitution method according to
ANSI / TIA / EIA-603-C-2004. The ERP of mobile transmitters must not exceed 7 Watts and the EIRP of mobile transmitters are limited to 2 Watts.

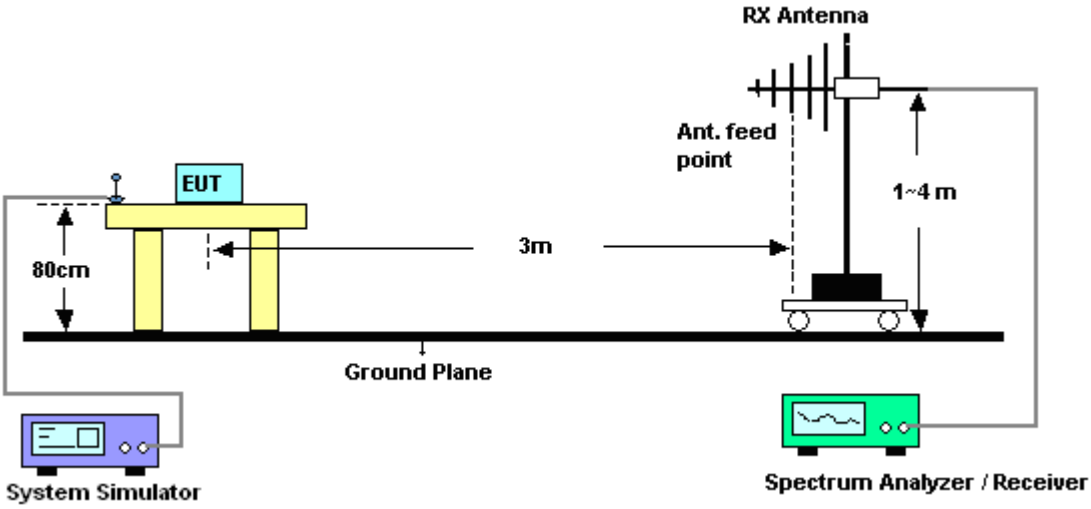
3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test Procedures

1. The EUT was placed on an non-conductive rotating platform with 0.8 meter height in a semi-anechoic chamber. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer with RBW= 3MHz,VBW= 3MHz, and peak detector settings.
2. During the measurement, the EUT was enforced in maximum power and linked with a base station. The highest emission was recorded from analyzer power level (LVL) from the 360 degrees rotation of the turntable and the test antenna raised and lowered over a range from 1 to 4 meters in both horizontally and vertically polarized orientations.
3. Effective Isotropic Radiated Power (EIRP) was measured by substitution method according to TIA/EIA-603-C. The EUT was replaced by dipole antenna (substitution antenna) at same location, and then a known power from S.G. was applied into the dipole antenna through a Tx cable, and then recorded the maximum Analyzer reading through raised and lowered the test antenna. The correction factor (in dB) = S.G. - Tx Cable loss + Substitution antenna gain - Analyzer reading. Then the EUT's EIRP was calculated with the correction factor, EIRP= LVL + Correction factor and ERP = EIRP – 2.15 .

3.1.4 Test Setup



3.1.5 Test Result of ERP

GSM850 (GSM) Radiated Power ERP for Sample A				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
824.2	-1.03	31.97	28.79	0.76
836.4	-1.97	32.44	28.32	0.68
848.8	-2.84	32.63	27.64	0.58
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
824.2	-11.52	35.39	21.72	0.15
836.4	-12.59	35.2	20.46	0.11
848.8	-12.48	35.69	21.06	0.13

* ERP = LVL (dBm) + Correction Factor (dB) – 2.15

GSM850 (GSM) Radiated Power ERP for Sample B				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
824.2	-0.56	31.97	29.26	0.84
836.4	-0.99	32.44	29.3	0.85
848.8	-1.42	32.63	29.06	0.81
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
824.2	-10.29	35.39	22.95	0.20
836.4	-9.70	35.2	23.35	0.22
848.8	-9.80	35.69	23.74	0.24

* ERP = LVL (dBm) + Correction Factor (dB) – 2.15

3.1.6 Test Result of EIRP

GSM1900 (GSM) Radiated Power EIRP for Sample A				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1850.2	-14.50	41.24	26.74	0.47
1880.0	-13.64	41.46	27.82	0.61
1909.8	-12.52	41.21	28.69	0.74
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1850.2	-20.99	41.52	20.53	0.11
1880.0	-21.32	43.1	21.78	0.15
1909.8	-19.73	42.73	23.00	0.20

* EIRP = LVL (dBm) + Correction Factor (dB)

GSM1900 (GSM) Radiated Power EIRP for Sample B				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1850.2	-21.00	41.24	20.24	0.11
1880.0	-18.56	41.46	22.90	0.19
1909.8	-19.40	41.21	21.81	0.15
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1850.2	-15.53	41.52	25.99	0.40
1880.0	-16.39	43.1	26.71	0.47
1909.8	-15.17	42.73	27.56	0.57

* EIRP = LVL (dBm) + Correction Factor (dB)

3.2 Field Strength of Spurious Radiation Measurement

3.2.1 Description of Field Strength of Spurious Radiated Measurement

The radiated spurious emission was measured by substitution method according to ANSI / TIA / EIA-603-C-2004. 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.

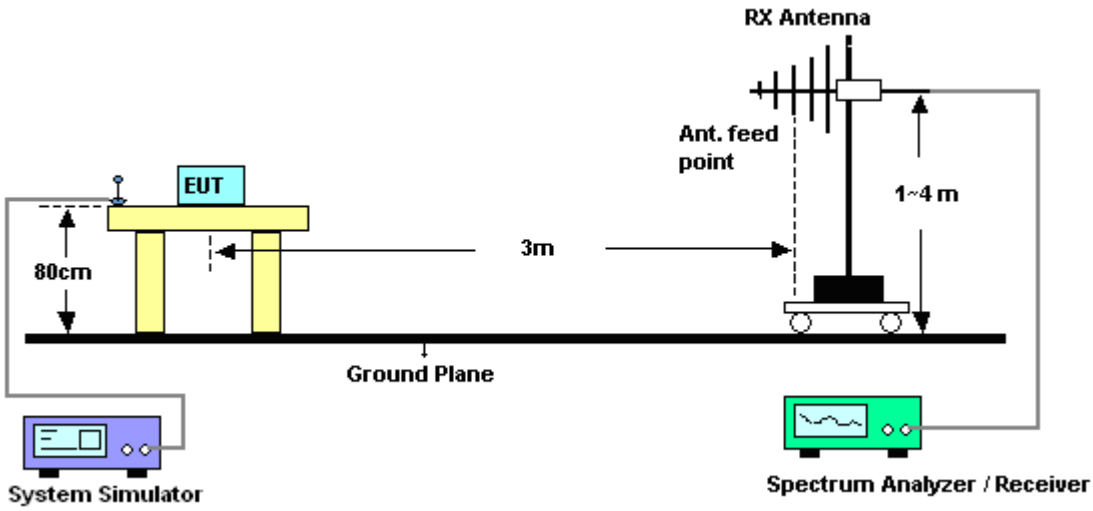
3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

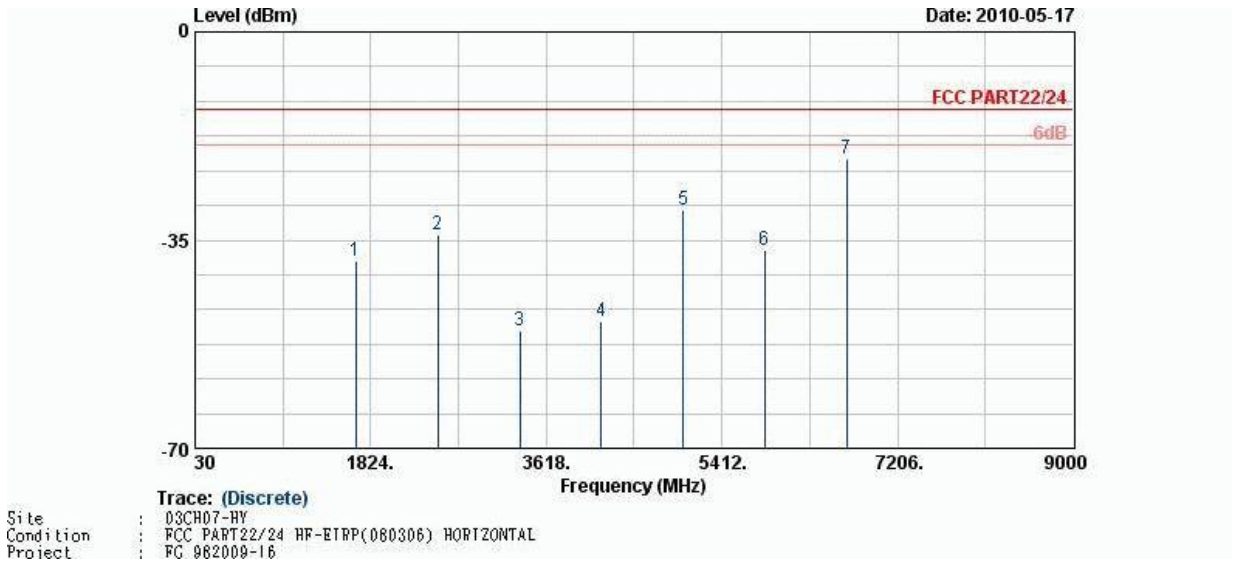
4. The EUT was placed on a rotatable wooden table with 0.8 meter about ground.
5. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
6. The table was rotated 360 degrees to determine the position of the highest spurious emission.
7. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
8. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, Sweep = 500ms, Taking the record of maximum spurious emission.
9. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
10. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
11. Taking the record of output power at antenna port.
12. Repeat step 7 to step 8 for another polarization.
13. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
14. ERP (dBm) = EIRP - 2.15

3.2.4 Test Setup



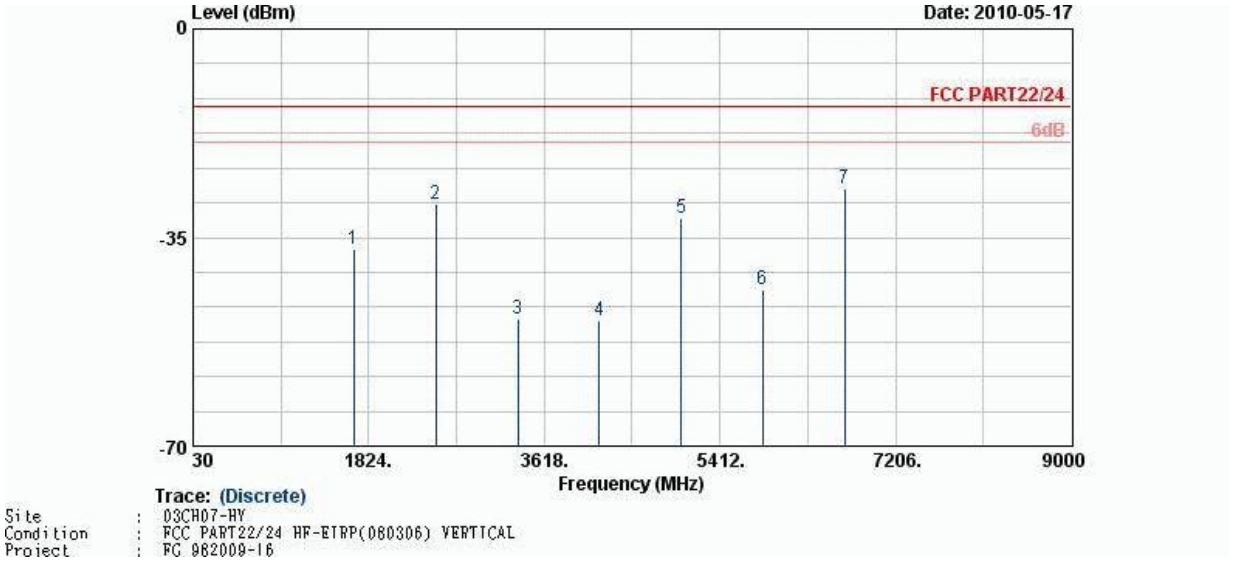
3.2.5 Test Result of Field Strength of Spurious Radiated

Band :	GSM850	**Temperature :**	23~29°C
Test Mode :	Sample A + GSM Link + Adapter 3	**Relative Humidity :**	43~50%
Test Engineer :	Duncan Lin	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



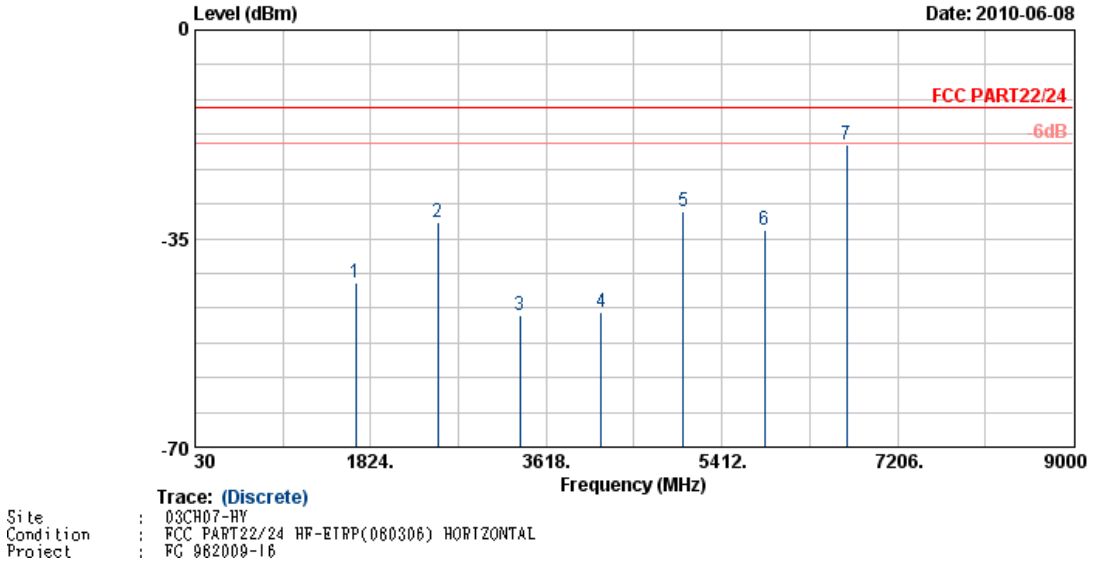
Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1669	-38.62	-13	-25.62	-47.59	-38.47	3.39	5.39	H	Pass
2509	-34.21	-13	-21.21	-42.85	-34.47	3.71	6.12	H	Pass
3346	-50.28	-13	-37.28	-61.23	-53	3.13	8.00	H	Pass
4175	-48.79	-13	-35.79	-61.89	-52.63	3.01	9.00	H	Pass
5015	-29.99	-13	-16.99	-46.47	-34.96	2.61	9.73	H	Pass
5850	-36.61	-13	-23.61	-54.55	-40.48	4.38	10.40	H	Pass
6690	-21.35	-13	-8.35	-42.72	-25.13	5.22	11.15	H	Pass

Band :	GSM850	Temperature :	23~29°C
Test Mode :	Sample A + GSM Link + Adapter 3	Relative Humidity :	43~50%
Test Engineer :	Duncan Lin	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



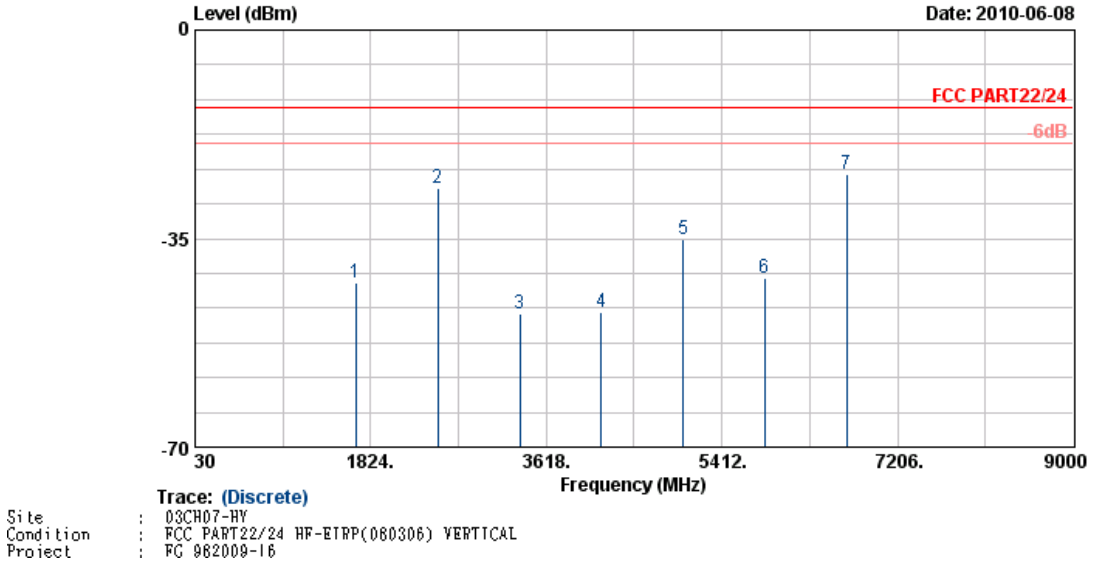
Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1669	-36.86	-13	-23.86	-45.95	-36.71	3.39	5.39	V	Pass
2509	-29.52	-13	-16.52	-41.75	-29.78	3.71	6.12	V	Pass
3346	-48.56	-13	-35.56	-61	-51.28	3.13	8.00	V	Pass
4175	-49.02	-13	-36.02	-62.95	-52.86	3.01	9.00	V	Pass
5015	-31.86	-13	-18.86	-49.48	-36.83	2.61	9.73	V	Pass
5850	-43.61	-13	-30.61	-58.45	-47.48	4.38	10.40	V	Pass
6690	-26.86	-13	-13.86	-45.76	-30.64	5.22	11.15	V	Pass

Band :	GSM850	Temperature :	23~29°C
Test Mode :	Sample B + GSM Link + Adapter 3	Relative Humidity :	43~50%
Test Engineer :	Duncan Lin	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



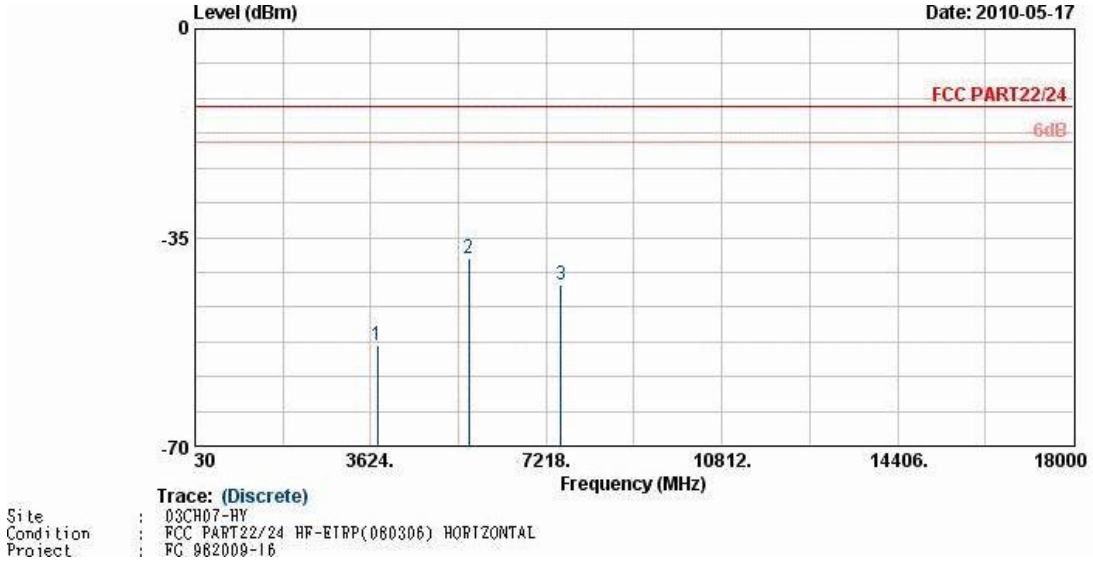
Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1669	-42.47	-13	-29.47	-50.86	-42.32	3.39	5.39	H	Pass
2509	-32.21	-13	-19.21	-40.93	-32.47	3.71	6.12	H	Pass
3346	-47.91	-13	-34.91	-56.12	-50.63	3.13	8.00	H	Pass
4175	-47.24	-13	-34.24	-58.78	-51.08	3.01	9.00	H	Pass
5015	-30.35	-13	-17.35	-46.83	-35.32	2.61	9.73	H	Pass
5850	-33.47	-13	-20.47	-51.87	-37.34	4.38	10.40	H	Pass
6690	-19.15	-13	-6.15	-40.96	-22.93	5.22	11.15	H	Pass

Band :	GSM850	Temperature :	23~29°C
Test Mode :	Sample B + GSM Link + Adapter 3	Relative Humidity :	43~50%
Test Engineer :	Duncan Lin	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



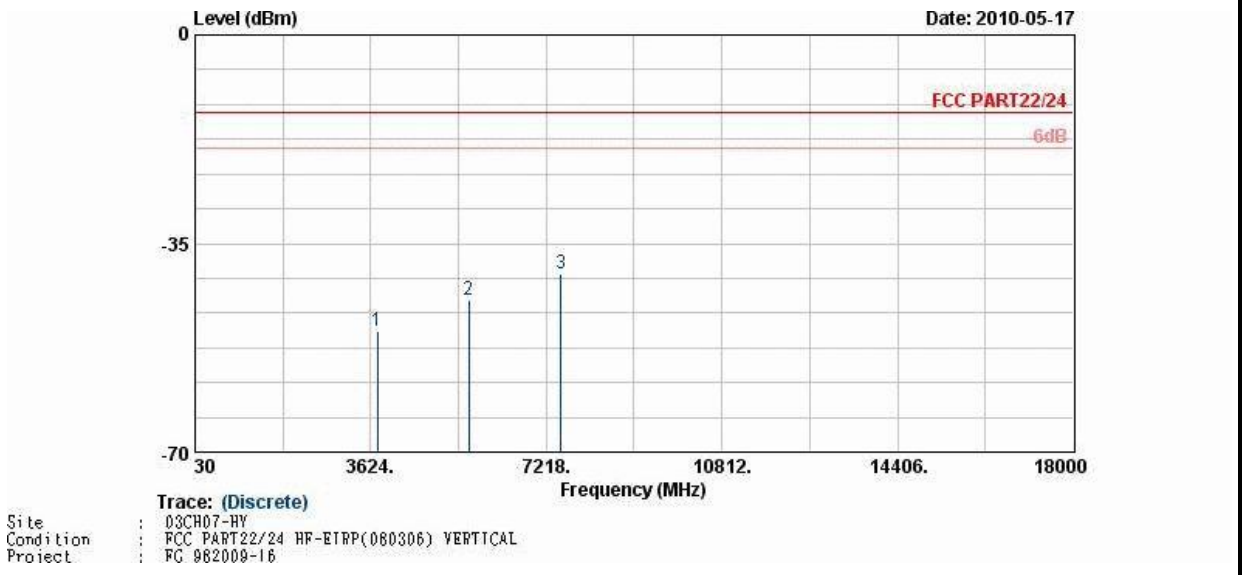
Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1669	-42.32	-13	-29.32	-50.94	-42.17	3.39	5.39	V	Pass
2509	-26.52	-13	-13.52	-38.83	-26.78	3.71	6.12	V	Pass
3346	-47.70	-13	-34.70	-60.14	-50.42	3.13	8.00	V	Pass
4175	-47.44	-13	-34.44	-61.37	-51.28	3.01	9.00	V	Pass
5015	-35.21	-13	-22.21	-50.12	-40.18	2.61	9.73	V	Pass
5850	-41.65	-13	-28.65	-59.77	-45.52	4.38	10.40	V	Pass
6690	-24.22	-13	-11.22	-45.44	-28	5.22	11.15	V	Pass

Band :	GSM1900	Temperature :	23~29°C
Test Mode :	Sample A + GSM Link + Adapter 3	Relative Humidity :	43~50%
Test Engineer :	Duncan Lin	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



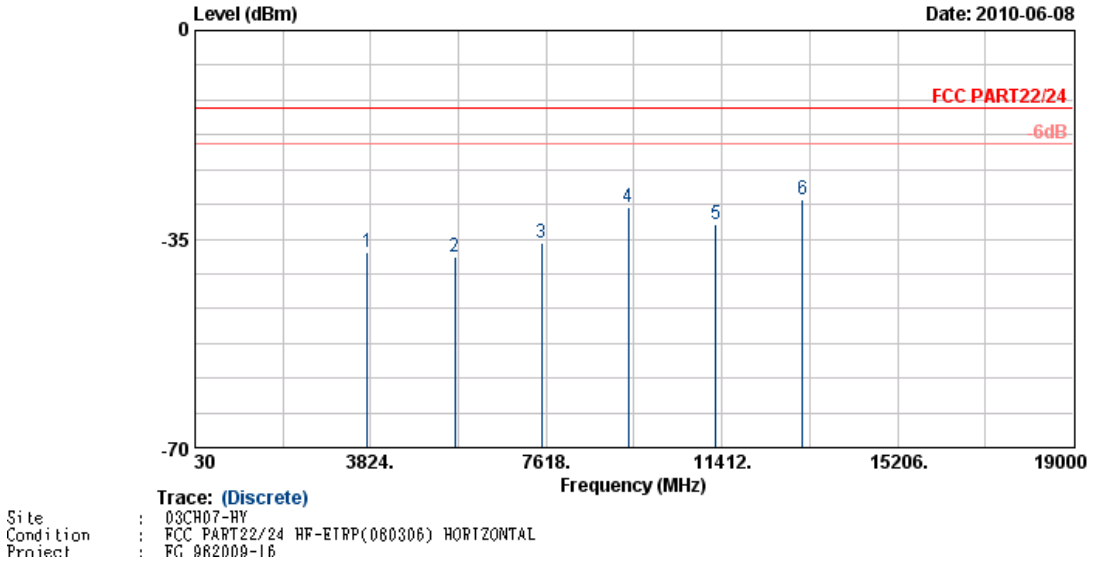
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3760	-53.10	-13	-40.10	-63.62	-55.62	4.88	7.40	H	Pass
5636	-38.53	-13	-25.53	-58.24	-41.79	5.55	8.81	H	Pass
7520	-42.87	-13	-29.87	-63.68	-45.94	6.64	9.71	H	Pass

Band :	GSM1900	**Temperature :**	23~29°C
Test Mode :	Sample A + GSM Link + Adapter 3	**Relative Humidity :**	43~50%
Test Engineer :	Duncan Lin	**Polarization :**	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



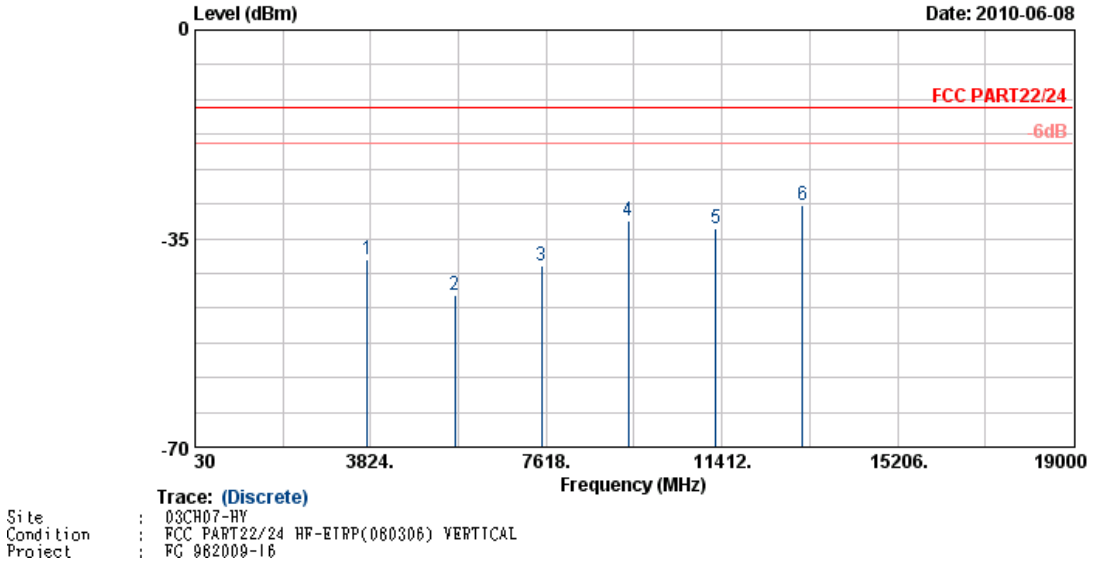
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3760	-49.64	-13	-36.64	-63.96	-52.67	4.88	7.91	V	Pass
5636	-44.38	-13	-31.38	-63.1	-48.6	5.55	9.77	V	Pass
7520	-39.97	-13	-26.97	-66.02	-44.14	6.64	10.81	V	Pass

Band :	GSM1900	Temperature :	23~29°C
Test Mode :	Sample B + GSM Link + Adapter 3	Relative Humidity :	43~50%
Test Engineer :	Duncan Lin	Polarization :	Horizontal
Remark :	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
3760	-37.18	-13	-24.18	-51.75	-39.7	4.88	7.40	H	Pass
5636	-37.91	-13	-24.91	-57.69	-41.17	5.55	8.81	H	Pass
7520	-35.65	-13	-22.65	-61.92	-38.72	6.64	9.71	H	Pass
9396	-29.74	-13	-16.74	-54.63	-33.55	6.91	10.72	H	Pass
11280	-32.41	-13	-19.41	-60.81	-35.94	7.23	10.76	H	Pass
13156	-28.36	-13	-15.36	-60.81	-30.59	8.8	11.03	H	Pass

Band :	GSM1900	**Temperature :**	23~29°C
Test Mode :	Sample B + GSM Link + Adapter 3	**Relative Humidity :**	43~50%
Test Engineer :	Duncan Lin	**Polarization :**	Vertical
Remark :	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
3760	-38.51	-13	-25.51	-55.24	-41.54	4.88	7.91	V	Pass
5636	-44.58	-13	-31.58	-63.3	-48.8	5.55	9.77	V	Pass
7520	-39.61	-13	-26.61	-65.66	-43.78	6.64	10.81	V	Pass
9396	-32.08	-13	-19.08	-57.46	-36.69	6.91	11.52	V	Pass
11280	-33.34	-13	-20.34	-61.01	-37.47	7.23	11.36	V	Pass
13156	-29.29	-13	-16.29	-59.76	-32.65	8.8	12.16	V	Pass

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
Bilog Antenna	SCHAFFNER	CBL6111C	2726	30MHz ~ 1GHz	Oct. 31, 2009	Oct. 30, 2010	Radiation (03CH07-HY)
Spectrum Analyzer	R&S	FSP	101067	9KHz ~ 30GHz	Dec. 04, 2009	Dec. 03, 2010	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Aug. 20, 2009	Aug. 19, 2010	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	15GHz- 40GHz	Oct. 14, 2009	Oct. 13, 2010	Radiation (03CH07-HY)
Pre Amplifier	Agilent	8449B	3008A02362	1GHz~ 26.5GHz	Dec.09,2009	Dec. 08, 2010	Radiation (03CH07-HY)
Pre Amplifier	COM-POWER	PA-103A	161241	10-1000MHz.32dB. GAIN	Mar. 27, 2010	Mar. 26, 2011	Radiation (03CH07-HY)
System Simulator	R&S	CMU200	117997	N/A	May 14, 2009	May 13, 2011	Radiation (03CH07-HY)

5 Uncertainty of Evaluation

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

Contribution	Uncertainty of X_i		$u(X_i)$
	dB	Probability Distribution	
Receiver Reading	0.41	Normal (k=2)	0.21
Antenna Factor Calibration	0.83	Normal (k=2)	0.42
Cable Loss Calibration	0.25	Normal (k=2)	0.13
Pre-Amplifier Gain Calibration	0.27	Normal (k=2)	0.14
RCV/SPA Specification	2.50	Rectangular	0.72
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29
Site Imperfection	1.43	Rectangular	0.83
Mismatch	+0.39 / -0.41	U-Shape	0.28
Combined Standard Uncertainty Uc(y)	**1.27**		
Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.54**		

Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Contribution	Uncertainty of X_i		$u(X_i)$	C_i	$C_i * u(X_i)$
	dB	Probability Distribution			
Receiver Reading	±0.10	Normal (k=2)	0.10	1	0.10
Antenna Factor Calibration	±1.70	Normal (k=2)	0.85	1	0.85
Cable Loss Calibration	±0.50	Normal (k=2)	0.25	1	0.25
Receiver Correction	±2.00	Rectangular	1.15	1	1.15
Antenna Factor Directional	±1.50	Rectangular	0.87	1	0.87
Site Imperfection	±2.80	Triangular	1.14	1	1.14
Mismatch Receiver VSWR Γ1 = 0.197 Antenna VSWR Γ2 = 0.194 Uncertainty = 20Log(1-Γ1*Γ2)	+0.34 / -0.35	U-Shape	0.244	1	0.244
Combined Standard Uncertainty Uc(y)	**2.36**				
Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.72**				

Appendix A. Photographs of EUT

Please refer to Sporton report number EP982009-16 as below.

Appendix C. Change Note

acer

Change Note

We, Acer, declare on our sole responsibility that the product difference for HW and SW change.

Model Name : S100
Old HW version : V1.0
Old SW version : Modem : A1-00.18.10
OS : Acer_A1_0.020.01_EN_G

New HW version : V1.3
New SW version : Modem : A1-03.14.03
OS : a1_generic1-eng2.1-update1 ÉCLAIR
eng.alpine.20100415.192237 test-keys

The difference between these version is:

1. H/W
   A.) For large memory size extension, add one trace between CPU & MCP.
   B.) For EOS rejection enhance, add Zener diode on VBUS trace.
   C.) For Voltage-ripple improve, add bypass cap on CPU power line.
   D.) For ESD enhance on side key, add more ESD protection component on side key trace.
   E.) For EOS rejection enhance on USB connection, add one diode on USB_ID pin.
   F.) For some Audio distortion coming form Speaker, Amp chip-solution change.

2. SW
   Google has upgrade software version to Android v2.0 from v1.6

Point of contact

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Company Name	Acer Incorporated
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E-mail	Ben_Chen@acer.com.tw

Ben Chen
(Signature)

acer

Change Note

We, Acer, declare on our sole responsibility that the product difference for HW and SW change.

Model Name : S100
HW version : V1.3
SW version : Modem : A1-03.14.03
OS : a1_generic1-eng2.1-update1 ÉCLAIR
eng.alpine.20100415.192237 test-keys

The difference between these version is:

1. HW (The HW version keeps the same)
   - Add 2nd Camera module
   - Remove Camera module (Camera module is option)
2. SW
   - No change

Point of contact

Name of Contact	Ben Chen
Department	TM
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Telephone	02-66063131
E-mail	Ben_chen@acer.com.tw
Date	June 7, 2010

(Signature)

Appendix D. Original Report

Please refer to Sporton report number FG982009-10 as below.