

Appendix C. Attachment of Report for Update Version of the Standards

The equipment of this attachment is the same as the Equipment under Test of original test report no. **EC932703**, except for the following difference.

Equipment : AC/DC ADAPTER

**Model No. : GT-41052-1305, GT-41052-1506-XX, GT-41052-1057-XX,
GT-41052-1509-XX, GT-41052-1512-XX,
GT-41052-1515-XX, GT-41052-1518-XX,
GT-41052-1520-XX, GT-41052-1524-XX
GT-41052-1548-12.0, GT-41052-1548-XX**

Applicant : GlobTec, Inc

186 Veterans Dr. Northvale, NJ 07647, USA 07647

Additional Information:

1) The following test items are retested to comply with the new version of the standards requirement:

Test Item	Original Standard	Update Standard
■ Current Harmonics	EN 61000-3-2:2006	EN 61000-3-2:2006/A1:2009/A2:2009
■ Voltage Fluctuations	EN 61000-3-3:1995/A1:2001/A2:2005	EN 61000-3-3:2008
■ ESD	IEC 61000-4-2:1995/A1:1998/A2:2000	IEC 61000-4-2:2008
■ RS	IEC 61000-4-11:2004	IEC 61000-4-3:2006/A1:2007/A2:2010
■ EFT	IEC 61000-4-4:2004	IEC 61000-4-4:2004
■ Surge	IEC 61000-4-5:2005	IEC 61000-4-5:2005
■ CS	IEC 61000-4-6:2003/A1:2004/A2:2006	IEC 61000-4-6:2008
■ Magnetic Field	IEC 61000-4-8:1993/A1:2000	IEC 61000-4-8:2009
■ Voltage Dips and Interruptions	IEC 61000-4-11:2004	IEC 61000-4-11:2004

This attachment should be filed together with original test report, Report No.: **EC932703** for reference.


Castries Huang

Supervisor

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Page No. : C1 of C5

Issued Date : May 20, 2011

B.1. Electrostatic Discharge Immunity Test (ESD)

- Final Test Result : **PASS**
- Pass Performance Criteria : **A**
- Required Performance Criteria : B
- Basic Standard : IEC 61000-4-2:2008
- Product Standard : EN 55024:1998/A1:2001/A2:2003
- Level : 3 for air discharge
: 2 for contact discharge
- Test Voltage : $\pm 2 / \pm 4 / \pm 8$ KV for air discharge
: $\pm 2 / \pm 4$ KV for contact discharge
- Temperature : 22 °C
- Relative Humidity : 40 %
- Atmospheric Pressure : 103 kPa
- Test Date : May 18, 2011
- Test Engineer : Jack
- Observation : Normal.

B.1.1 Test Points**B.1.1.1 Test Result of Air Discharge**

Test Point	Voltage	Tested No.	Test Result
CASE	$\pm 2 / \pm 4 / \pm 8$ kV	BY 10	<u>PASS</u>
DC INPUT JACK	$\pm 2 / \pm 4 / \pm 8$ kV	BY 10	<u>PASS</u>

B.1.1.2 Test Result of Contact Discharge

Test Point	Voltage	Tested No.	Test Result
HCP (At Front)	$\pm 2 / \pm 4$ kV	BY 25	<u>PASS</u>
HCP (At Left)	$\pm 2 / \pm 4$ kV	BY 25	<u>PASS</u>
HCP (At Right)	$\pm 2 / \pm 4$ kV	BY 25	<u>PASS</u>
HCP (At Rear)	$\pm 2 / \pm 4$ kV	BY 25	<u>PASS</u>
VCP (At Front)	$\pm 2 / \pm 4$ kV	BY 25	<u>PASS</u>
VCP (At Left)	$\pm 2 / \pm 4$ kV	BY 25	<u>PASS</u>
VCP (At Right)	$\pm 2 / \pm 4$ kV	BY 25	<u>PASS</u>
VCP (At Rear)	$\pm 2 / \pm 4$ kV	BY 25	<u>PASS</u>

B.1.2 Photographs of Electrostatic Discharge Immunity Test

FRONT VIEW



REAR VIEW



B.2. List of Measuring Equipment Used

<EMS>

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
ESD Simulator	Key Tek	MINIZAP	707242	±0.5 kV~15 kV	Aug. 09, 2010	ESD

Calibration Interval of instruments listed above is one year.

Appendix B. Attachment of Report for Additional Model, Measurement Data and EUT Photo

The equipment of this attachment is the same as the Equipment under Test of original test report no. **EC932703**, except for the following difference.

Equipment : AC/DC ADAPTER

**Model No. : GT-41052-1305, GT-41052-1506-XX, GT-41052-1057-XX,
GT-41052-1509-XX, GT-41052-1512-XX,
GT-41052-1515-XX, GT-41052-1518-XX,
GT-41052-1520-XX, GT-41052-1524-XX**

Applicant : GlobTec, Inc

186 Veterans Dr.Northvale, NJ 07647.

Additional Information:

Model No. : GT-41052-1548-12.0, GT-41052-1548-XX

This attachment should be filed together with original test report, Report No.: **EC932703** for reference.


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B.1. Test Configuration of Equipment under Test

B.1.1 Test Manner

- a. During testing, the interface cables and equipment positions were varied according to European Standard EN 55022.
- b. The complete test system included YESO Dummy Load and EUT for EMI test.
- c. The complete test system included SPORTON Dummy Load, BROTHER Multi-meter and EUT for EMS test.
- d. The EUT and dummy load were placed in the metal enclosure.
- e. Frequency range investigated: conduction 150 kHz to 30 MHz, radiation 30 MHz to 1000MHz.

B.1.2 Description of Test System

< EMI >

Support Unit 1. – Dummy Load (YESO)

Spec. : FULL LOAD

< EMS >

Support Unit 1. – Dummy Load (Delta)

Spec. : FULL LOAD

Support Unit 2. -- Multi-meter (Brother)

Model No. : YH-370

Serial No. : SP1078

B.2. Test of Conducted Powerline

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 kHz and return leads of the EUT according to the methods defined in European Standard EN 55022 Clause 9. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in section 5.3. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position producing maximum conducted emissions.

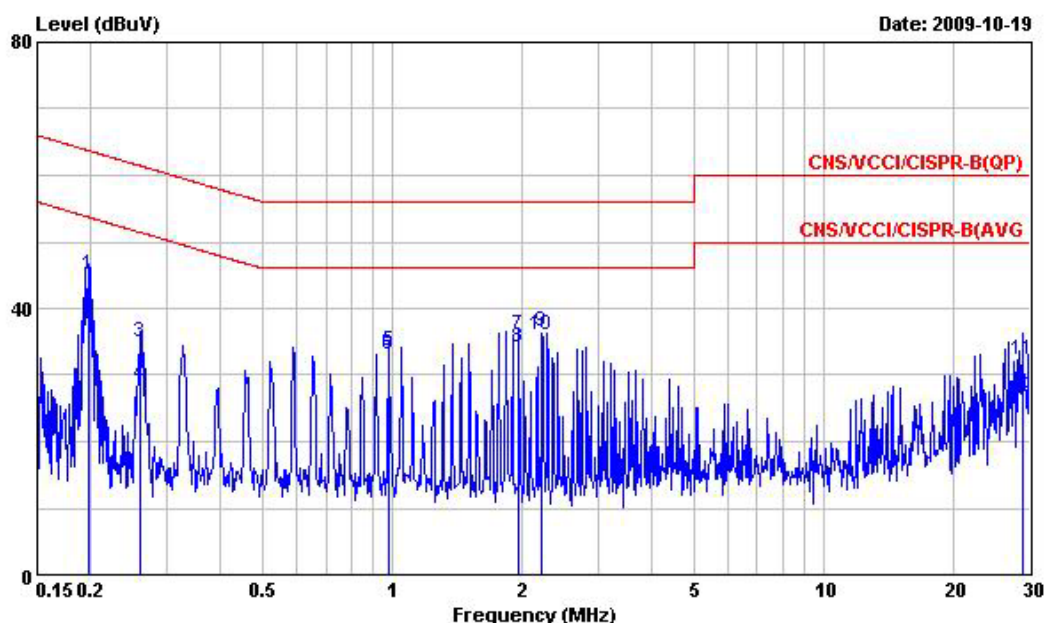
B.2.1 Description of Major Test Instruments

- Test Receiver (R&S ESCS 30)
 - Attenuation 10 dB
 - Start Frequency 0.15 MHz
 - Stop Frequency 30 MHz
 - IF Bandwidth 9 kHz

B.2.2 Test Result of AC Powerline Conducted Emission

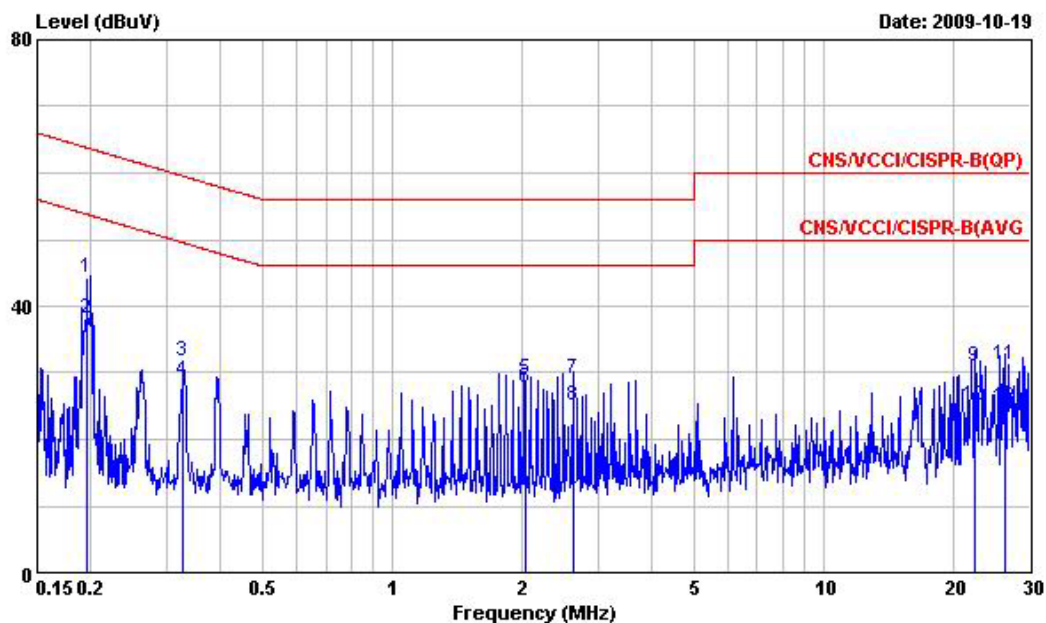
- Frequency Range of Test : from 0.15 MHz to 30 MHz
- Temperature : 25
- Relative Humidity : 49 %
- Corrected Reading (dBuV) = LISN Factor + Cable Loss + Read Level = Level
- All emissions not reported here are more than 10 dB below the prescribed limit.

The test was passed at the minimum margin that marked by the frame in the following test record




Site : LK-C001
 Condition : LISN 98087_20091008 LINE
 EUT : ADAPTER
 MODEL :
 POWER : 230VAC/50Hz
 MEMO : FULL LOAD

	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.197	45.10	-18.64	63.74	44.90	0.16	0.04	QP
2	0.197	38.35	-15.39	53.74	38.15	0.16	0.04	Average
3	0.260	34.86	-26.57	61.43	34.66	0.16	0.04	QP
4	0.260	28.46	-22.97	51.43	28.26	0.16	0.04	Average
5	0.979	33.62	-22.38	56.00	33.38	0.19	0.05	QP
6	0.979	32.95	-13.05	46.00	32.71	0.19	0.05	Average
7	1.960	36.10	-19.90	56.00	35.81	0.21	0.08	QP
8	1.960	34.20	-11.80	46.00	33.91	0.21	0.08	Average
9	2.220	36.60	-19.40	56.00	36.30	0.22	0.08	QP
10	2.220	35.88	-10.12	46.00	35.58	0.22	0.08	Average
11	28.750	32.40	-27.60	60.00	30.77	1.26	0.37	QP
12	28.750	26.75	-23.25	50.00	25.12	1.26	0.37	Average



Site : LK-C001
Condition : LISN_98087_20091008 NEUTRAL
EUT : ADAPTER
MODEL :
POWER : 230VAC/50Hz
MEMO : FULL LOAD

	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.195	44.32	-19.51	63.83	44.06	0.22	0.04	QP
2	0.195	38.14	-15.69	53.83	37.88	0.22	0.04	Average
3	0.328	31.64	-27.87	59.51	31.38	0.21	0.05	QP
4	0.328	28.93	-20.58	49.51	28.67	0.21	0.05	Average
5	2.026	28.98	-27.02	56.00	28.64	0.26	0.08	QP
6	2.026	27.60	-18.40	46.00	27.26	0.26	0.08	Average
7	2.614	29.17	-26.83	56.00	28.81	0.28	0.08	QP
8	2.614	25.00	-21.00	46.00	24.64	0.28	0.08	Average
9	22.344	30.80	-29.20	60.00	29.44	1.09	0.27	QP
10	22.344	25.14	-24.86	50.00	23.78	1.09	0.27	Average
11	26.267	31.29	-28.71	60.00	29.70	1.27	0.32	QP
12	26.267	24.70	-25.30	50.00	23.11	1.27	0.32	Average

Test Engineer : 
Alex Wu

B.2.3 Photographs of Conducted Powerline Test Configuration

- The photographs show the configuration that generates the maximum emission.

FRONT VIEW



REAR VIEW



B.3. Test of Radiated Emission

Radiated emissions from 30 MHz to 1000 MHz were measured with a bandwidth of 120 kHz according to the methods defines in European Standard EN 55022, Clause 10. The EUT was placed on a nonmetallic stand, 0.8 meter above the ground plane, as shown in section 6.3. The interface cables and equipment positions were varied within limits of reasonable applications to determine the positions producing maximum radiated emissions.

B.3.1 Description of Major Test Instruments

- Amplifier (HP 87405A)
 - RF Gain 25 dB
 - Signal Input 0.1 MHz - 1.3 GHz

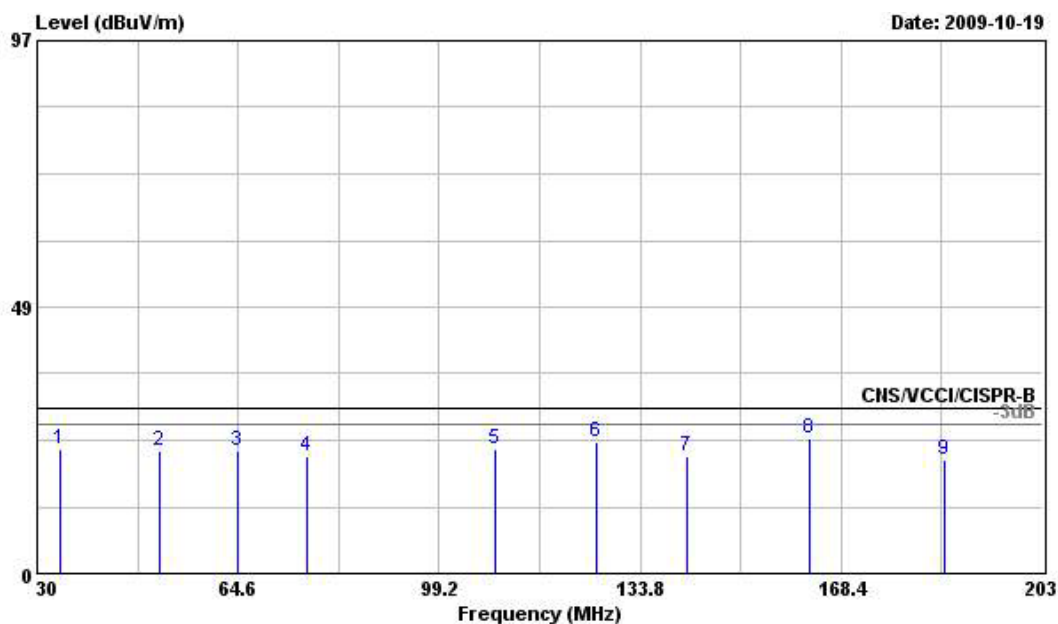
- Spectrum Analyzer (R&S FSP)
 - Attenuation 10 dB
 - Start Frequency 30 MHz
 - Stop Frequency 1000 MHz
 - Resolution Bandwidth 120 kHz
 - Signal Input 9 kHz - 7 GHz

- Test Receiver (R&S ESCS 30)
 - Resolution Bandwidth 120 kHz
 - Frequency Band 9 kHz - 2.75 GHz
 - Quasi-Peak Detector ON for Quasi-Peak Mode
OFF for Peak Mode

B.3.2 Test Result of Radiated Emission

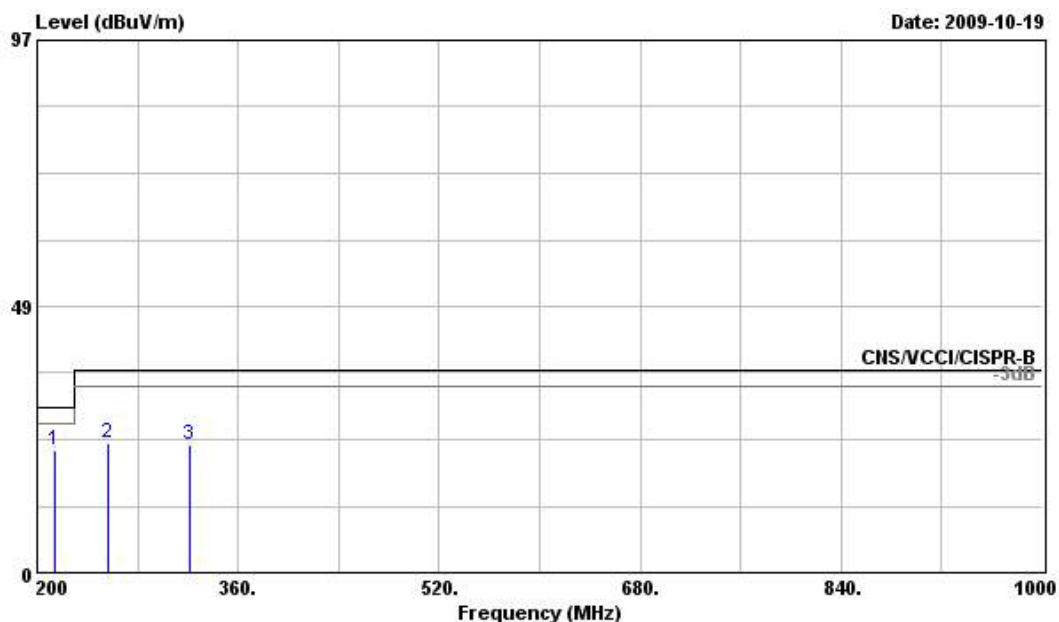
- Frequency Range of Test : from 30 MHz to 1000 MHz
- Temperature : 25
- Relative Humidity : 40 %
- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Corrected Reading : Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

The test was passed at the minimum margin that marked by the frame in the following test record



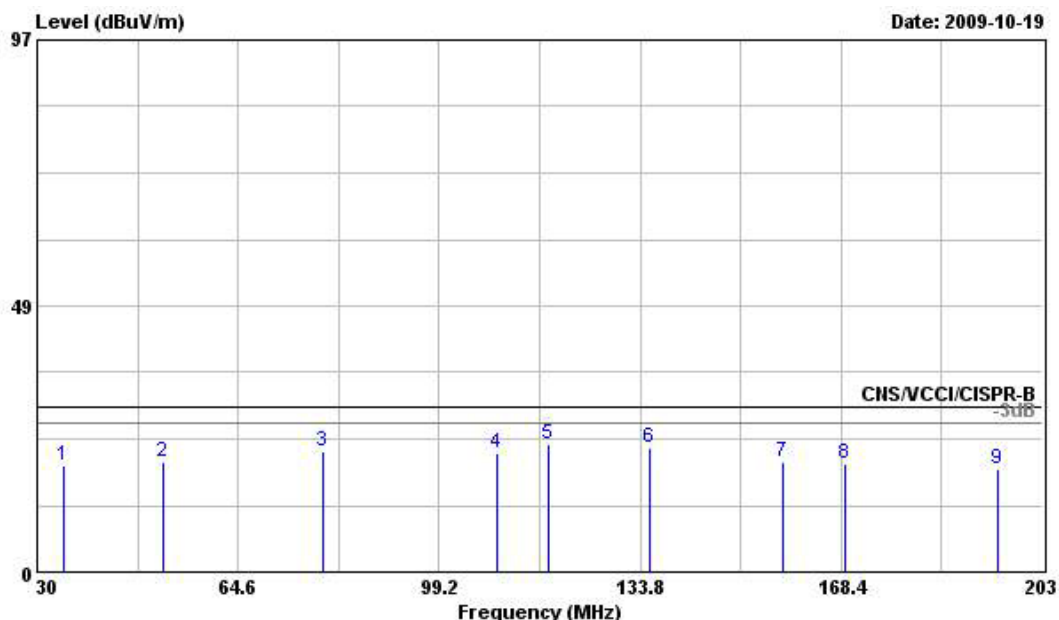
Site : LK-OS02
 Condition : CNS/VCCI/CISPR-B 10m 6111C2715/2009/05/01 VERTICAL
 EUT :
 POWER : 230VAC/50Hz
 MEMO : FULL LOAD(48V/0.31A/155 ohm)

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamp Loss Factor	Remark	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	deg	cm
1	33.910	22.74	-7.26	30.00	29.46	16.43	0.97	24.12	Peak	---
2	51.110	22.24	-7.76	30.00	36.80	8.30	1.03	23.89	Peak	---
3	64.470	22.17	-7.83	30.00	38.33	6.43	1.16	23.75	Peak	---
4	76.550	21.26	-8.74	30.00	36.37	7.26	1.33	23.70	Peak	---
5	108.940	22.62	-7.38	30.00	33.89	10.66	1.67	23.60	Peak	---
6	126.320	24.04	-5.96	30.00	34.16	11.65	1.83	23.60	Peak	---
7	141.880	21.23	-8.77	30.00	31.63	11.37	1.83	23.60	Peak	---
8 @	162.920	24.55	-5.45	30.00	35.97	10.10	2.05	23.57	Peak	360
9	186.160	20.57	-9.43	30.00	33.01	8.83	2.26	23.53	Peak	---



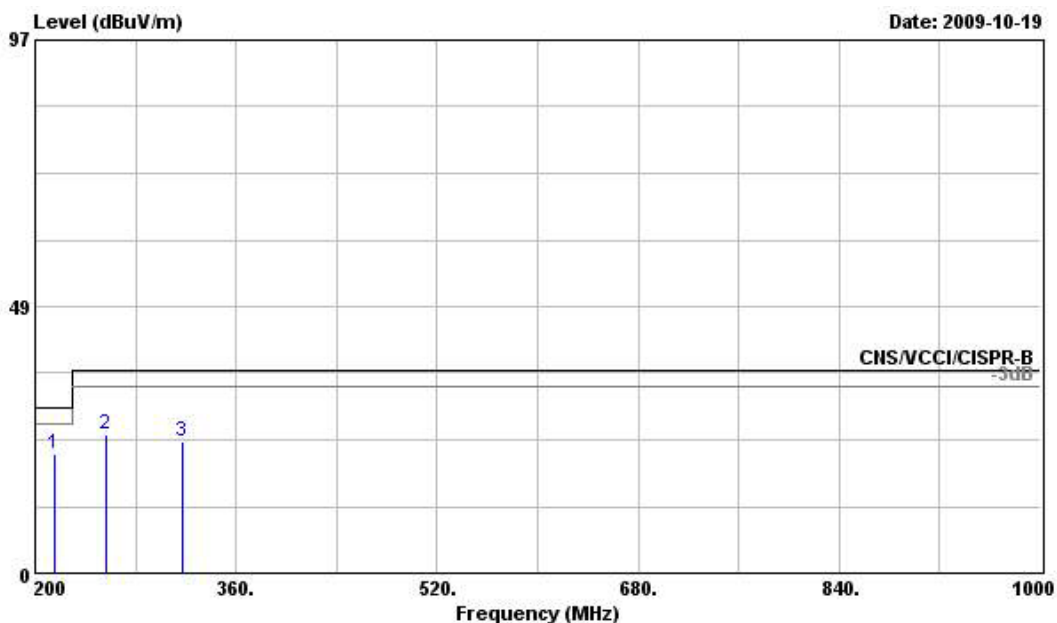
Site : LK-OS02
Condition : CNS/VCCI/CISPR-B 10m 6111C2715/2009/05/01 VERTICAL
EUT :
POWER : 230VAC/50Hz
MEMO : FULL LOAD(48V/0.31A/155 ohm)

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp		Table	Ant
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	deg	cm
1	214.400	22.15	-7.85	30.00	33.33	9.89	2.43	23.50 Peak	---	---
2	256.800	23.57	-13.43	37.00	31.50	12.68	2.88	23.49 Peak	---	---
3	321.600	23.38	-13.62	37.00	29.34	13.94	3.48	23.38 Peak	---	---



Site : LK-OS02
Condition : CNS/VCCI/CISPR-B 10m 6111C2715/2009/05/01 HORIZONTAL
EUT :
POWER : 230VAC/50Hz
MEMO : FULL LOAD(48V/0.31A/155 ohm)

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp		Table	Ant
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	deg	cm
1	34.670	19.25	-10.75	30.00	26.47	15.88	1.00	24.10 Peak	---	---
2	51.630	19.99	-10.01	30.00	34.55	8.30	1.03	23.89 Peak	---	---
3	79.130	21.83	-8.17	30.00	36.67	7.53	1.33	23.70 Peak	---	---
4	109.230	21.81	-8.19	30.00	33.01	10.73	1.67	23.60 Peak	---	---
5	118.060	23.27	-6.73	30.00	33.76	11.30	1.81	23.60 Peak	---	---
6	135.530	22.73	-7.27	30.00	32.99	11.51	1.83	23.60 Peak	---	---
7	158.370	19.97	-10.03	30.00	31.12	10.46	1.97	23.58 Peak	---	---
8	169.090	19.58	-10.42	30.00	31.37	9.63	2.14	23.56 Peak	---	---
9	195.390	18.80	-11.20	30.00	31.16	8.81	2.34	23.51 Peak	---	---



Site : LK-OS02
Condition : CNS/VCCI/CISPR-B 10m 6111C2715/2009/05/01 HORIZONTAL
EUT :
POWER : 230VAC/50Hz
MEMO : FULL LOAD(48V/0.31A/155 ohm)

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp		Table	Ant
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		deg	cm
1	215.200	21.82	-8.18	30.00	32.92	9.96	2.44	23.50	Peak	---	---
2	256.800	25.07	-11.93	37.00	33.00	12.68	2.88	23.49	Peak	---	---
3	317.600	23.90	-13.10	37.00	30.02	13.81	3.45	23.38	Peak	---	---

Test Engineer :

Kenny Chuang

B.3.3 Photographs of Radiated Emission Test Configuration

- The photographs show the configuration that generates the maximum emission.

FRONT VIEW



REAR VIEW



B.4. Harmonics Test

As specified on clause 7 and figure Z1 of EN 61000-3-2:2006, the limits are not specified for equipment with a rated power of 75W or less.

The EUT meets the above condition, so it conforms to EN 61000-3-2.

B.5. Voltage Fluctuations Test

B.5.1 Standard

- Product Standard : EN 61000-3-3:1995/A1:2001/A2:2005

B.5.2 Test Procedure

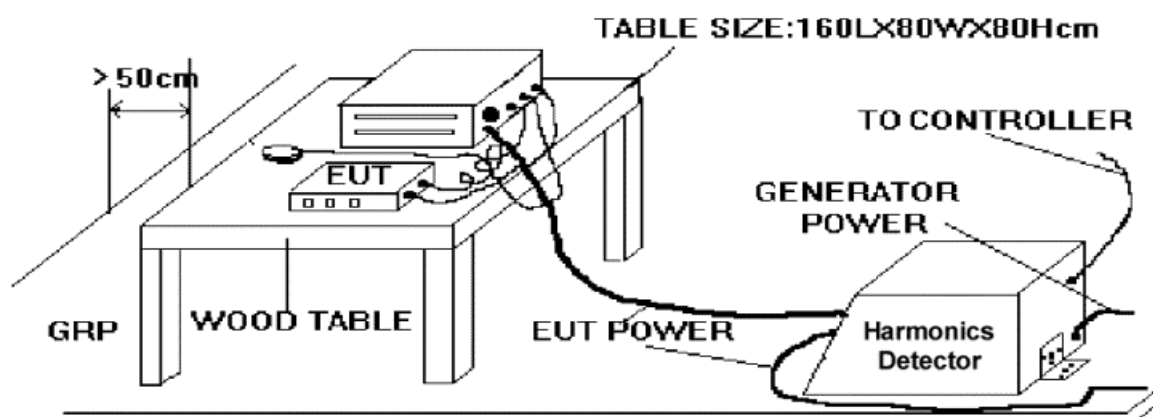
The equipment shall be tested under the conditions of **Clause 5**.

The total impedance of the test circuit, excluding the appliance under test, but including the internal impedance of the supply source, shall be equal to the reference impedance. The stability and tolerance of the reference impedance shall be adequate to ensure that the overall accuracy of $\pm 8\%$ is achieved during the whole assessment procedure.

B.5.3 Test Equipment Settings

- Line Voltage: 230 V
- Line Frequency: 50 Hz
- Measurement Delay: 10.0 seconds
- Pst Integration Time: 10 minutes
- Pst Integration Periods: 1
- Test Duration: 00:10:00 minutes

B.5.4 Test Setup



B.5.5 Test Result of Voltage Fluctuation and Flicker Test

B.5.5.1 Test Data of Voltage Fluctuation and Flicker

- Final Test Result : **PASS**
- Temperature : 24
- Relative Humidity : 44 % RH
- Test Date : Oct. 21, 2009

Urms = 230.1V Freq = 49.987 Range: 1 A
Irms = 0.173A Ipk = 0.708A cf = 4.082
P = 18.65W Pap = 39.89A pf = 0.468

Test - Time : 1 x 10min = 10min (100 %)

LIN (Line Impedance Network) : SLIN 0.24ohm +j0.15ohm N:0.16ohm +j0.10ohm

Limits : Plt : 0.65 Pst : 1.00
dmax : 4.00 % dc : 3.30 %
dtLim: 3.30 % dt>Lim: 500ms

Test completed, Result: PASSED

Test Engineer: Tony Hsu

Tony Hsu

Tony Hsu

B.5.6 Photographs of Harmonics Test, Voltage Fluctuation and Flicker Test

FRONT VIEW



REAR VIEW



B.6. Electrostatic Discharge Immunity Test (ESD)

- FINAL TEST RESULT : **PASS**
- Pass Performance Criteria : A
- Required Performance Criteria : B
- Basic Standard : IEC 61000-4-2:1995/A1:1998/A2:2000
- Product Standard : EN 55024:1998/A1:2001/A2:2003
- Level : 3 for air discharge,
: 2 for contact discharge
- Tested voltage : $\pm 2 / \pm 4 / \pm 8$ KV for air discharge,
: $\pm 2 / \pm 4$ KV for contact discharge
- Temperature : 24
- Relative Humidity : 44 %
- Atmospheric Pressure : 103 kPa
- Test Date : Oct. 21, 2009
- Observation : Normal.

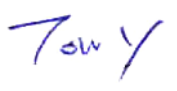
B.6.1 Test Points

B.6.1.1 Test Result of Air Discharge

Test Point	Voltage	Tested No.
CASE	$\pm 2 / \pm 4 / \pm 8$ KV	BY 10
DC INPUT JACK	$\pm 2 / \pm 4 / \pm 8$ KV	BY 10

B.6.1.2 Test Result of Contact Discharge

Polarity	Voltage	Tested No.
HCP (At Front)	$\pm 2 / \pm 4$ KV	BY 25
HCP (At Left)	$\pm 2 / \pm 4$ KV	BY 25
HCP (At Right)	$\pm 2 / \pm 4$ KV	BY 25
HCP (At Rear)	$\pm 2 / \pm 4$ KV	BY 25
VCP (At Front)	$\pm 2 / \pm 4$ KV	BY 25
VCP (At Left)	$\pm 2 / \pm 4$ KV	BY 25
VCP (At Right)	$\pm 2 / \pm 4$ KV	BY 25
VCP (At Rear)	$\pm 2 / \pm 4$ KV	BY 25

Test Engineer: 

Tony Hsu

B.6.2 Photographs of Electrostatic Discharge Immunity Test

FRONT VIEW



REAR VIEW



B.7. Radio Frequency Electromagnetic Field Immunity Test (RS)

- FINAL TEST RESULT : **PASS**
- Pass Performance Criteria : A
- Required Performance Criteria : A
- Basic Standard : IEC 61000-4-3:2006/A1:2007
- Product Standard : EN 55024:1998/A1:2001/A2:2003
- Level : 3
- Frequency Range : 80-1000 MHz
- Additional Selection Frequency : 80, 120, 160, 230, 434, 460, 600, 863, 900MHz
- Dwell Time : 2.9 seconds
- Field Strength : 10 V/m (unmodulated, r.m.s) 80% AM (1 kHz)
- Temperature : 24 °C
- Relative Humidity : 44 %
- Atmospheric Pressure : 103 kPa
- Test Date : Oct. 21, 2009
- Observation : Normal.

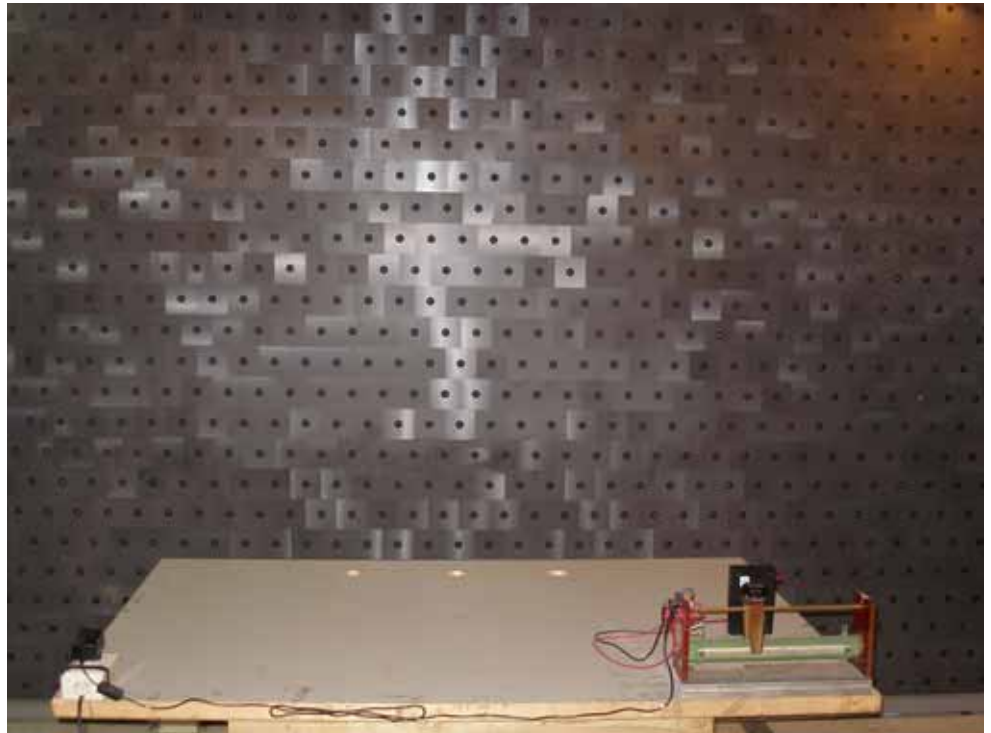
Test Engineer: _____

Tony Y

Tony Hsu

B.7.1 Photographs of Radio Frequency Electromagnetic Field Immunity Test

FRONT VIEW



REAR VIEW



B.8. Electrical Fast Transient/Burst Immunity Test (EFT/BURST)

- FINAL TEST RESULT : **PASS**
- Pass Performance Criteria : A
- Required Performance Criteria : B
- Basic Standard : IEC 61000-4-4:2004
- Product Standard : EN 55024:1998/A1:2001/A2:2003
- Level : on Input power ports -- 2
- Test Voltage : on Input power ports -- $\pm 0.5 / \pm 1.0$ KV
- Temperature : 24 °C
- Relative Humidity : 44 %
- Atmospheric Pressure : 103 kPa
- Test Date : Oct. 21, 2009
- Observation : Normal.

Test Engineer: _____

Tony Hsu

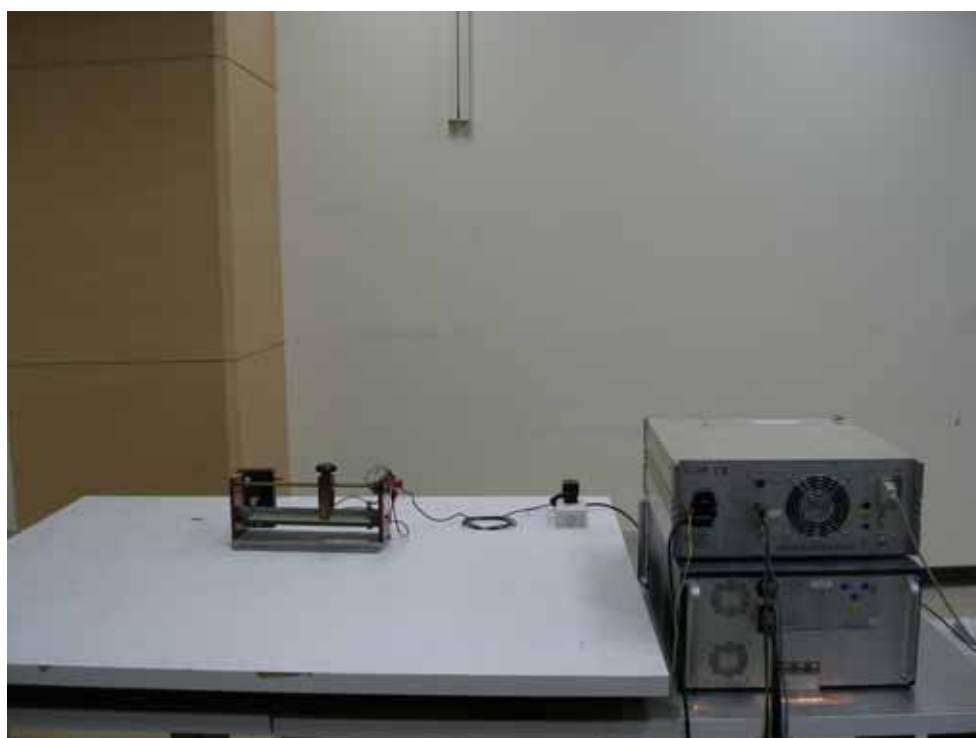
Tony Hsu

B.8.1 Photographs of Electrical Fast Transient/Burst Immunity Test

FRONT VIEW



REAR VIEW



B.9. Surge Immunity Test

- FINAL TEST RESULT : **PASS**
- Pass Performance Criteria : A
- Required Performance Criteria : B
- Basic Standard : IEC 61000-4-5:2005
- Product Standard : EN 55024:1998/A1:2001/A2:2003
- Surge Wave Form (Tr/Th) : 1, 2/50 (8/20) μ s
- Level : on Input power ports -- 3
- Test Voltage : on Input power ports -- $\pm 1.0 / \pm 2.0$ kV
- Temperature : 24 °C
- Relative Humidity : 44 %
- Atmospheric Pressure : 103 kPa
- Test Date : Oct. 21, 2009
- Observation : Normal.

B.9.1 Test Record

Voltage (kV)	Test Location	Polarity	Phase Angle				Test Result
			0°	90°	180°	270°	
1 kV	L - N	+	A	A	A	A	<u>PASS</u>
		-	A	A	A	A	<u>PASS</u>
2 kV	L - PE	+	A	A	A	A	<u>PASS</u>
		-	A	A	A	A	<u>PASS</u>
	N - PE	+	A	A	A	A	<u>PASS</u>
		-	A	A	A	A	<u>PASS</u>

⊕ Remark : PE = Earth reference

Test Engineer:

Tony

Tony Hsu

B.9.2 Photographs of Surge Immunity Test

FRONT VIEW




REAR VIEW



B.10. Conducted Disturbances Induced by Radio-Frequency Field Immunity Test (CS)

- FINAL TEST RESULT : **PASS**
- Pass Performance Criteria : A
- Required Performance Criteria : A
- Basic Standard : IEC 61000-4-6:2003/A1:2004/A2:2006
- Product Standard : EN 55024:1998/A1:2001/A2:2003
- Level : 2
- Test Voltage : 3 V (unmodulated, r.m.s) 80% AM (1 kHz)
- Frequency Range : 0.15 MHz to 80 MHz
- Additional Selection Frequency : 0.2, 1, 7.1, 13.56, 21, 27.12, 40.68MHz
- Dwell Time : 2.9 seconds
- Frequency Step Size : 1 %
- Coupling mode : CDN-M16 SW M3
- Temperature : 24 °C
- Relative Humidity : 44 %
- Atmospheric Pressure : 103 kPa
- Test Date : Oct. 21, 2009
- Observation : Normal.

Test Engineer: 

Tony Hsu

B.10.1 Photographs of CS Immunity Test

FRONT VIEW



REAR VIEW



B.11. Power Frequency Magnetic Field immunity tests

- FINAL TEST RESULT : **PASS**
- Pass Performance Criteria : A
- Required Performance Criteria : A
- Basic Standard : IEC 61000-4-8:1993/A1:2000
- Product Standard : EN 55024:1998/A1:2001/A2:2003
- Temperature : 24 °C
- Relative Humidity : 44 %
- Atmospheric Pressure : 103 kPa
- Test Date : Oct. 21, 2009
- Observation : Normal.

B.11.1 Test Record

Power Frequency Magnetic Field	Testing duration	Coil Orientation	Results	Remark
50Hz, 1A/m	1.0 Min	X-axis	Pass	Normal
50Hz, 1A/m	1.0 Min	Y-axis	Pass	Normal
50Hz, 1A/m	1.0 Min	Z-axis	Pass	Normal

Test Engineer: Tony Hsu

Tony Hsu

Tony Hsu

B.11.2 Photographs of Power Frequency Magnetic Field immunity tests

FRONT VIEW



REAR VIEW



B.12. Voltage Dips and Voltage Interruptions Immunity Tests

- FINAL TEST RESULT : **PASS**
- Pass Performance Criteria : C for voltage interruption, A for voltage dips
- Required Performance Criteria : C for voltage interruption, C/B for voltage dips
- Basic Standard : IEC 61000-4-11:2004
- Product Standard : EN 55024:1998/A1:2001/A2:2003
- Test Port : Input power ports
- Temperature : 24 °C
- Relative Humidity : 44 %
- Atmospheric Pressure : 103 kPa
- Test Date : Oct. 21, 2009
- Observation : Normal.

B.12.1 Test Record of Voltage Interruption

Voltage (V)	Phase Angle		% Reduction	Duration (periods)	Observation
	0 °	180 °			
100/240	C	C	>95%	250	After the interruption, the power of EUT reset automatically.

B.12.2 Test Record of Voltage Dips

Voltage (V)	Phase Angle		% Reduction	Duration (periods)	Observation
	0 °	180 °			
100/240	A	A	30	25	Normal
100/240	A	A	>95 %	0.5	Normal

Test Engineer: Tony Hsu

B.12.3 Photographs of Voltage Dips and Voltage Interruption Immunity Tests

FRONT VIEW



REAR VIEW



B.13. List of Measuring Equipment Used

<EMI>

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Receiver	R&S	ESCS 30	838251/003	9 kHz - 2.75 GHz	Mar. 26, 2009	Conduction (CO01-LK)
LISN	Rolf Heine	NNB-2/16Z	98087	9 kHz - 30 MHz	Oct. 07, 2009	Conduction (CO01-LK)
RF Cable-CON	Suhner Switzerland	RG223/U	CB017	9 kHz - 30 MHz	Nov. 29, 2008	Conduction (CO01-LK)
Open Area Test Site	SPORTON	OATS-10	OS02-LK	30 MHz - 1 GHz 10m, 3m	Sep. 19, 2009	Radiation (OS02-LK)
Amplifier	HP	87405A	3950M00135	0.1MHz – 1.3GHz	Mar. 18, 2009	Radiation (OS02-LK)
Spectrum Analyzer	R&S	FSP	100641	9 kHz – 7 GHz	Nov. 10, 2008	Radiation (OS02-LK)
Receiver	R&S	ESCS 30	847793/003	9 kHz - 2.75 GHz	Oct. 21, 2009	Radiation (OS02-LK)
Bilog Antenna	CHASE	CBL6111C	2715C	30 MHz - 1 GHz	May 01, 2009	Radiation (OS02-LK)
Turn Table	EMCO	2080	9711-1090	0 - 360 degree	N/A	Radiation (OS02-LK)
Antenna Mast	EMCO	2075	9711-2114	1 m - 4 m	N/A	Radiation (OS02-LK)
RF Cable-R10m	BELDEN	RG8/U	CB007	30 MHz - 1 GHz	Jan. 23, 2009	Radiation (OS02-LK)

Calibration Interval of instruments listed above is one year.

<EMS>

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
ESD Simulator	KEYTEK	MZ-15/EC	0302197	Air: 0 KV - 15 KV Contact: 0 KV -8KV	Apr. 09, 2009	ESD
Probe	Wandel& Goltermann	EMR-20	AR-0188	-	N/A	RS
Amplifier	AMPLIFIER& RESEARCH	250W1000A	0325368	80M~1GHz	Sep. 08, 2009	RS
DUAL DIRECTIONAL COUPLER	FARNKONIA	FLH200/100	1127	80-1GHz	Sep. 08, 2009	RS
S.G.	ROHDE& SCHWARZ	SML03	103349	9kHz~3.3GHz	Sep. 03, 2009	RS
METER	HP	438A	3513U0405 0	100 kHz~26.5 GHz	Sep. 08, 2009	RS
POWER Sensor	HP	8481D	3318A13140	10MHz~18GHz	Sep. 08, 2009	RS
POWER Sensor	HP	8482A	3318A26464	100 kHz~4.2GHz	Sep. 08, 2009	RS
Attenuator	HP	8491A	53603	3dB	Sep. 04, 2009	RS
EFT Generator	KEYTEK	EMCPRO	0609221	0 KV - 4.4 KV	Sep. 07, 2009	EFT
SURGE Generator Bi-Wave	KEYTEK	EMCPRO	0609221	0 KV -6 KV/2 0KV-500V/12	Sep. 07, 2009	SURGE
SURGE/CDN	KEYTEK	EMCPRO	0303189	0 KV -4 KV/2 0KV-500V/12	Sep.07, 2009	SURGE
SURGE Generator Ring-Wave	KEYTEK	EMCPRO	0609221	0 KV -6 KV/2 0KV-500V/12	Sep. 07, 2009	SURGE
Conducted Immunity Test System	SCHAFFNER	NSG2070	1091	100KHz ~ 250MHz FM 1KHZ 80%	Jun. 04, 2009	CS
Koppel- Eutkoppelnetzwerk	FRANKONIA	CDN M2+M3	A3011018	150k~230MHz	Jun. 05, 2009	CS
Magnetic Field Antenna	FCC	F-1000-4-8/9/10-L-1M	9830	0~125A	Apr. 10, 2009	Magnetic
Magnetic Generator	FCC	F-1000-4-8-G-125A	05004	0~125A	Apr. 10, 2009	Magnetic
PQF Generator	KEYTEK	EMCPRO	0609221	230VA/50Hz/60Hz 0%Open/5S 0%Short/5S 40%0.10S 70%/0.01S	Sep. 07, 2009	DIP
Harmonic/Flicker Test System	EMC PARTNER	Harmonics -1000	088	4000VA 16A PEAK	Sep. 03, 2009	Harmonics, Flicker

Calibration Interval of instruments listed above is one year.

B.14. Photographs of EUT









