FCC DoC
TEST REPORT

for

AC Adapter

MODEL: KTPS36-0940DT 3P; KTPS40-1233DT 3P; KTPS45-0950DT 3P; KTPS50-1242DT 3P; KTPS50-1533DT 3P; KTPS50-1827DT 3P; KTPS50-1926DT 3P; KTPS-50-2025DT 3P; KTPS50-2421DT 3P; KTPS50-4810DT 3P

Test Report Number:
T110909102-D

Issued to:

KAGA ELECTRONICS (USA) INC.
SUITE 100 2480 N FIRST ST., SAN JOSE, CA, 95131-1030, USA

Issued by:

Compliance Certification Services Inc.
Sindian Lab.
No.163-1, Jhongsheng Rd, Sindian City,
Taipei County 23151, Taiwan (R.O.C.)
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Issued Date: September 19, 2011

Testing Laboratory
1108

TESTING CERT #0824.01

Revision History

Rev.		Issue Date		Revisions	Effect Page	Revised By
00		November 26, 2007		Initial Issue	ALL	Wendy Wang
01		September 19, 2011		Copy Report	ALL	Wendy Wang

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1 TEST RESULT CERTIFICATION

Product:	AC Adapter
Model:	KTPS36-0940DT 3P; KTPS40-1233DT 3P; KTPS45-0950DT 3P; KTPS50-1242DT 3P; KTPS50-1533DT 3P; KTPS50-1827DT 3P; KTPS50-1926DT 3P; KTPS-50-2025DT 3P; KTPS50-2421DT 3P; KTPS50-4810DT 3P
Brand:	Volgen
Applicant:	**KAGA ELECTRONICS (USA) INC.** SUITE 100 2480 N FIRST ST., SAN JOSE, CA, 95131-1030, USA
Manufacturer:	**Boayang Electronics Co., Ltd.** Di Feng Gong Ye Qu 2 Hao , Xiasha Liuwu Village, Shipai Town Dong Guan City, Guang Dong Province, China
Tested:	March 12, 2007 ~ March 15, 2007

EMISSION			
Standard	**Item**	**Result**	**Remarks**
FCC 47 CFR Part 15 Subpart B, ICES-003 Issue 4 ANSI C63.4-2009	Conducted (Main Port)	PASS	Meet Class B limit
	Radiated	PASS	Meet Class B limit

Note: *1. The test result judgment is decided by the limit of measurement standard.*
2. The information of measurement uncertainty is available upon the customer's request.

Deviation from Applicable Standard
None

The above equipment has been tested by Compliance Certification Services Inc., and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Approved by:

Sam Hu
Section Manager

Reviewed by:

Vesta Hsu
Supervisor of report document dept.

2 EUT DESCRIPTION

Product	AC Adapter
Brand Name	ADAPTER TECH
Model	KTPS36-0940DT 3P; KTPS40-1233DT 3P; KTPS45-0950DT 3P; KTPS50-1242DT 3P; KTPS50-1533DT 3P; KTPS50-1827DT 3P; KTPS50-1926DT 3P; KTPS-50-2025DT 3P; KTPS50-2421DT 3P; KTPS50-4810DT 3P
Applicant	KAGA ELECTRONICS (USA) INC.
Housing material	Plastic
Serial Number	N/A
Housing material	Plastic
Serial Number	N/A
Received Date	December 7, 2007
AC Power During Test	120VAC/60Hz
DC Power Cable Type	Unshielded, 1.8m (Non-detachable, with a core)

Model Difference

Model		Difference	Power Difference	Tested (Checked)
Original	KTPS36-0940DT 3P	100-240VAC ~ 47-63Hz 1.1A MAX	9V/4.0A	☒
Additional	KTPS40-1233DT 3P		12V/3.3A	☐
	KTPS45-0950DT 3P		9V/5.0A	☐
	KTPS50-1242DT 3P		12V/4.2A	☐
	KTPS50-1533DT 3P		15V/3.3A	☐
	KTPS50-1827DT 3P		18V/2.7A	☒
	KTPS50-1926DT 3P		19V/2.6A	☐
	KTPS50-2025DT 3P		20V/2.5A	☐
	KTPS50-2421DT 3P		24V/2.1A	☐
	KTPS50-4810DT 3P		48V/1.0A	☒

I/O PORT

I/O PORT TYPES	Q'TY	TESTED WITH

Note: *None.*

3 TEST METHODOLOGY

3.1. DECISION OF FINAL TEST MODE

The EUT was tested together with the above additional components, and a configuration, which produced the worst emission levels, was selected and recorded in this report.

The test configuration/ modes are as the following:

Mode(s):

1	**KTPS36-0940DT 3P**	**Full Rating Load Mode**
2	**KTPS50-1827DT 3P**	**Full Rating Load Mode**
3	**KTPS50-4810DT 3P**	**Full Rating Load Mode**
4		**Half Rating Load Mode**

Conduction: Mode 4

Radiation: Mode 3

3.2. EUT SYSTEM OPERATION

1. To adjust variable resistor to test full rated load and half rated load mode.

Note: *Test program is self-repeating throughout the test.*

4 SETUP OF EQUIPMENT UNDER TEST

4.1. DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

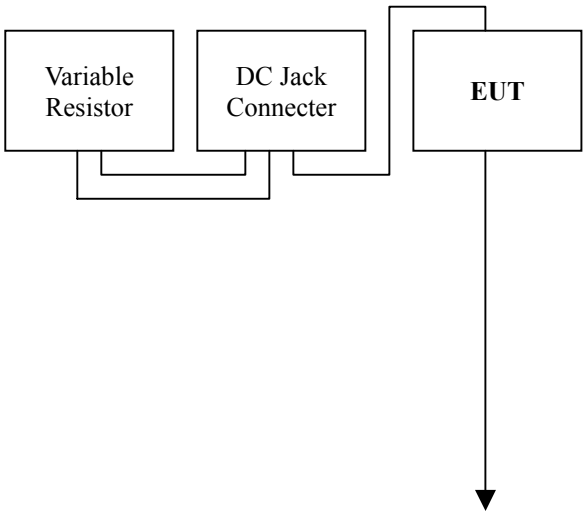
No.	Equipment	Model No.	Serial No.	FCC ID / BSMI ID	Brand Name	Data Cable	Power Cord
1.	Variable Resistor	N/A	N/A	N/A	N/A	Unshielded, 0.3m X2	N/A
2.	DC Jack Connecter	N/A	N/A	N/A	N/A	Unshielded, 1.8m with a core	N/A

Note:

1) All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.

2) Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4.2. CONFIGURATION OF SYSTEM UNDER TEST



5 FACILITIES AND ACCREDITATIONS

5.1. FACILITIES

All measurement facilities used to collect the measurement data are located at CCSrf Taiwan Sindian Lab. at No.163-1, Jhongsheng Rd, Sindian City, Taipei County 23151, Taiwan (R.O.C.).

The sites are constructed in conformance with the requirements of ANSI C63.4 and CISPR Publication 22. All receiving equipment conforms to CISPR 16-1-1, CISPR 16-1-2, CISPR 16-1-3, CISPR 16-1-4 and CISPR 16-1-5.

5.2. ACCREDITATIONS

Our laboratories are accredited and approved by the following accreditation body according to ISO/IEC 17025.

Taiwan	TAF
USA	A2LA

The measuring facility of laboratories has been authorized or registered by the following approval agencies.

Canada	Industry Canada
Norway	Nemko
Japan	VCCI
Taiwan	BSMI
USA	FCC

Copies of granted accreditation certificates are available for downloading from our web site,

http:///www.ccsrf.com

5.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Uncertainty
Conducted emissions	9kHz~30MHz	± 1.7376
Radiated emissions	30MHz ~ 200MHz	± 3.8992
	200MHz ~1000MHz	± 3.8762

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

Consistent with industry standard (e.g. CISPR 22: 2005, clause 11, Measurement Uncertainty) determining compliance with the limits shall be base on the results of the compliance measurement. Consequently the measure emissions being less than the maximum allowed emission result in this be a compliant test or passing test.

The acceptable measurement uncertainty value without requiring revision of the compliance statement is base on conducted and radiated emissions being less than UCISPR which is 3.6dB and 5.2dB respectively. CCS values (called ULab in CISPR 16-4-2) is less than UCISPR as shown in the table above. Therefore, MU need not be considered for compliance.

6 CONDUCTED EMISSION MEASUREMENT

6.1. LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 - 56	56 - 46
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	60	50

***NOTE**:*
(1) The lower limit shall apply at the transition frequencies.
(2) The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.
(3) All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

6.2. TEST INSTRUMENTS

Conducted Emission Room # A				
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
TEST RECEIVER	R&S	ESHS20	840455/006	02/12/2008
LISN (EUT)	SCHWARZBECK	NSLK 8127	8127382	12/06/2007
LISN	SOLAR	8012-50-R-24-BNC	8305114	12/26/2007
BNC CABLE	JYE BAO	RG-223/U	BNC A2	10/10/2007
THERMO-HYGRO METER	TOP	HA-202	9303-1	02/04/2008
Test S/W	EMI 32.exe			

***NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.*
2. N.C.R = No Calibration Request.

6.3. TEST PROCEDURES (please refer to measurement standard or CCS SOP PA-031)

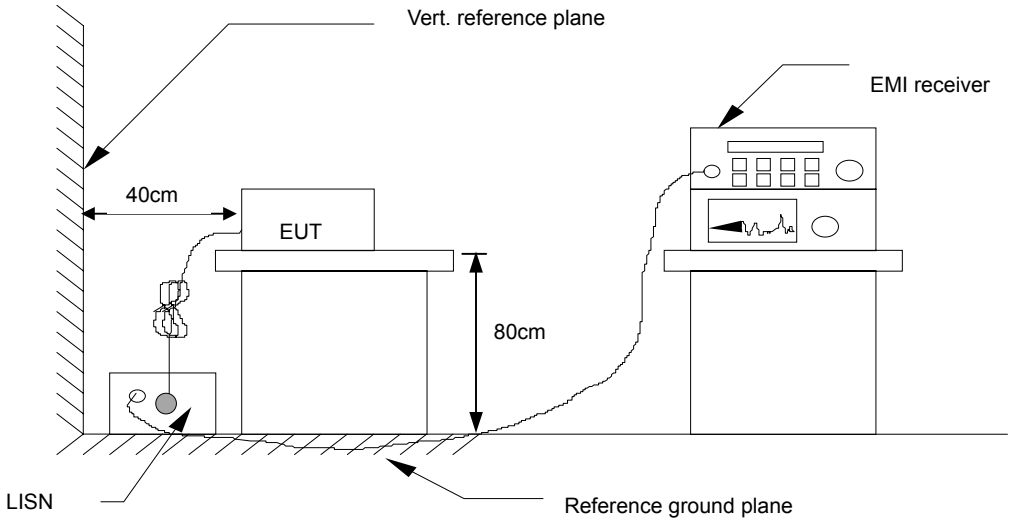
Procedure of Preliminary Test

- The EUT and Support equipment, if needed, was set up as per the test configuration to simulate typical usage per the user's manual. When 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 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor standing equipment, it is placed on the ground plane, which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
- The test equipment EUT installed received AC main power, through a Line Impedance Stabilization Network (LISN), which supplied power source and was grounded to the ground plane.
- All support equipment power received from a second LISN.
- The EUT test program was started. Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.
- The Receiver scanned from 150kHz to 30MHz for emissions in each of the test modes.
- During the above scans, the emissions were maximized by cable manipulation.
- The test mode(s) described in Item 3.1 were scanned during the preliminary test.
- After the preliminary scan, we found the test mode described in Item 3.1 producing the highest emission level.
- The EUT configuration and cable configuration of the above highest emission levels were recorded for reference of the final test.

Procedure of Final Test

- EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test.
- A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit.
- The test data of the worst-case condition(s) was recorded.

6.4. TEST SETUP



- For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

6.5. DATA SAMPLE

Freq. MHz	Read Level dBuV	Factor dB	Level dBuV	Limit dBuV	Over Limit dB	Reading Type (P/Q/A)	Line (L1/L2)
x.xx	42.95	0.55	43.50	56	-12.50	Q	L1

Freq. = Emission frequency in MHz
Read Level = Uncorrected Analyzer/Receiver reading
Factor = Insertion loss of LISN + Cable Loss
Level = Read Level + Factor
Limit = Limit stated in standard
Over Limit = Reading in reference to limit
P = Peak Reading
Q = Quasi-peak Reading
A = Average Reading
L1 = Hot side
L2 = Neutral side

Calculation Formula

Over Limit (dB) = Level (dBuV) – Limit (dBuV)

6.6. TEST RESULTS

Model No.	KTPS50-4810DT 3P	**6dB Bandwidth**	10 KHz
Environmental Conditions	20°C, 70% RH, 1010mbar	**Test Mode**	Mode 4
Tested by	Alex Pan		

(The chart below shows the highest readings taken from the final data.)

Six Highest Conducted Emission Readings							
Frequency Range Investigated				**150 KHz to 30 MHz**			
Freq (MHz)	Read Level (dBuV)	Factor (dB)	Level (dBuV)	Limit Line (dBuV)	Over Limit (dB)	Reading Type (P/Q/A)	Line (L1/L2)
0.168	**58.38**	**0.46**	**58.84**	**65.08**	**-6.24**	**P**	**L1**
0.168	**41.99**	**0.46**	**42.45**	**55.08**	**-12.63**	**A**	**L1**
0.183	**56.14**	**0.41**	**56.55**	**64.33**	**-7.77**	**P**	**L1**
0.183	**37.22**	**0.41**	**37.63**	**54.33**	**-16.69**	**A**	**L1**
3.565	**49.46**	**0.71**	**50.17**	**56.00**	**-5.83**	**P**	**L1**
3.565	**29.40**	**0.71**	**30.11**	**46.00**	**-15.89**	**A**	**L1**
0.168	**56.94**	**0.11**	**57.05**	**65.08**	**-8.03**	**P**	**L2**
0.168	**38.03**	**0.11**	**38.14**	**55.08**	**-16.94**	**A**	**L2**
3.584	**49.24**	**0.29**	**49.53**	**56.00**	**-6.47**	**P**	**L2**
3.584	**28.69**	**0.29**	**28.98**	**46.00**	**-17.02**	**A**	**L2**

NOTE: *1. L1 = Line One (Live Line) / L2 = Line Two (Neutral Line)*
2. Those frequencies only show peak emission level because that was below the Average limit, so no need to check average anymore.

7 RADIATED EMISSION MEASUREMENT

7.1. LIMITS OF RADIATED EMISSION MEASUREMENT

Below 1GHz (for digital device)

FREQUENCY (MHz)	dBuV/m (At 10m)	
	Class A	Class B
30 ~ 230	40	30
230 ~ 1000	47	37

Limit tables for non-digital device:

Class A Radiated Emission limit at 10m (for others)

Frequency (MHZ)	Field Strength Limit (uV/m)Q.P.	Field Strength Limit (dBuV/m)Q.P.
30 - 88	90	39
88 - 216	150	43.5
216 – 960	210	46.4
Above 960	300	49.5

Class B Radiated Emission limit at 3m (for others)

Frequency (MHZ)	Field Strength Limit (uV/m)Q.P.	Field Strength Limit (dBuV/m)Q.P.
30 - 88	100	40
88 - 216	150	43.5
216 – 960	200	46
Above 960	500	54

Above 1GHz(for all device)

Frequency (MHZ)	Class A (dBuV/m) (At 10m)		Class B (dBuV/m) (At 3m)	
	Average	Peak	Average	Peak
Above 1000	49.5	69.5	54	74

NOTE: 1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. The measurement above 1GHz is at close-in distances 3m,and determine the limit L_2 corresponding to the close-in distance d_2 by applying the following relation: $L_2 = L_1 (d_1/d_2)$, where L_1 is the specified limit in microvolts per metre (**uV/m**) at the distance d_1 (**10m**), L_2 is the new limit for distance d_2 (**3m**).
So the new Class A limit above 1GHz at 3m is as following table:

Frequency (MHZ)	Class A (dBuV/m) (At 3m)	
	Average	Peak
Above 1000	60	80

According to FCC Part 15.33 (b), for an unintentional radiator, including a digital device, the spectrum shall be investigated from the lowest radio frequency signal generated or used in the device, without going below the lowest frequency for which a radiated emission limit is specified, up to the frequency shown in the following table:

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.75	30
1.75-108	1000
108-500	2000
500-1000	5000
Above 1000	5^{th} harmonic of the highest frequency or 40GHz, whichever is lower

7.2. TEST INSTRUMENTS

Open Area Test Site # H				
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
SITE NSA	CCS	H Site	N/A	10/08/2007
MEASURE RECEIVER	SCHAFFNER	SCR 3501	341	09/11/2007
SPECTRUM ANALYZER	ADVANTEST	R3132	120900002	No Calibration Required
ANTENNA	SCHAFFNER	CBL 6112B	2801	09/22/2007
AMPLIFIER	SCHAFFNER	CPA9231A	3613	10/10/2007
CABLE	BELDEN	9913	N-TYPE #H3	03/06/2008
THERMO-HYGRO METER	TFA	N/A	NO.1	12/24/2007
Test S/W	Lab VIEW 5.1			

NOTE: *1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.*

2. N.C.R = No Calibration Request.

7.3. TEST PROCEDURES (please refer to measurement standard or CCS SOP PA-031)

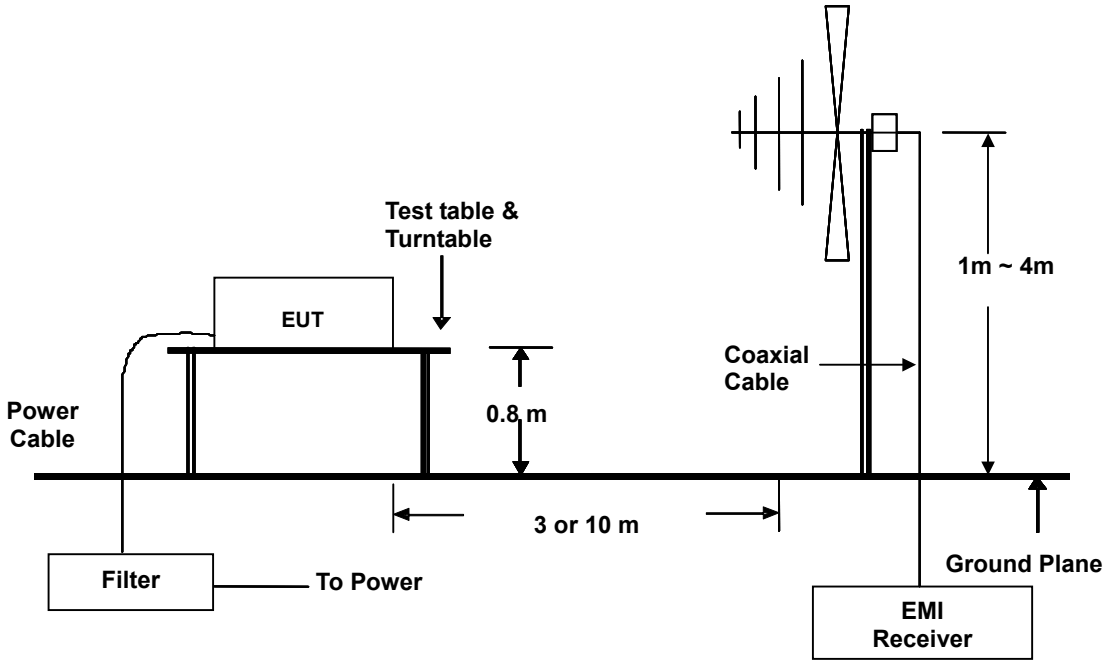
Procedure of Preliminary Test

- The equipment was set up as per the test configuration to simulate typical usage per the user's manual. When the EUT is a tabletop system, a wooden turntable with a height of 0.8 meters is used which is placed on the ground plane. When the EUT is a floor standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- Support equipment, if needed, was placed as per ANSI C63.4.
- All I/O cables were positioned to simulate typical usage as per ANSI C63.4.
- The EUT received AC power source from the outlet socket under the turntable. All support equipment power received from another socket under the turntable.
- The antenna was placed at 10 meter away from the EUT as stated in ANSI C63.4. The antenna connected to the Spectrum Analyzer via a cable and at times a pre-amplifier would be used.
- The Analyzer / Receiver quickly scanned from 30MHz to 40GHz. The EUT test program was started. Emissions were scanned and measured rotating the EUT to 360 degrees and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.
- The test mode(s) described in Item 3.1 were scanned during the preliminary test:
- After the preliminary scan, we found the test mode described in Item 3.1 producing the highest emission level.
- The EUT and cable configuration, antenna position, polarization and turntable position of the above highest emission level were recorded for the final test.

Procedure of Final Test

- EUT and support equipment were set up on the turntable as per the configuration with highest emission level in the preliminary test.
- The Analyzer / Receiver scanned from 30MHz to 40GHz. Emissions were scanned and measured rotating the EUT to 360 degrees, varying cable placement and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.
- Recorded at least the six highest emissions. Emission frequency, amplitude, antenna position, polarization and turntable position were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit and only Q.P. reading is presented.
- The test data of the worst-case condition(s) was recorded.

7.4. TEST SETUP



- For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

7.5. DATA SAMPLE

Below 1GHz

Freq. MHz	Amptd dBuV/m	Margin dB	Limit dBuV/m	Reading dBuV	Factor dB/m	Reading Type (P/Q/A)	Pol. (H/V)
x.xx	26.2	-3.8	30	14	12.2	Q	H

Freq. = Emission frequency in MHz
Read Level = Uncorrected Analyzer/Receiver reading
Factor = Antenna Factor + Cable Loss + Attenuator (3/6/10dB) – Amplifier Gain
Level = Read Level + Factor
Limit = Limit stated in standard
Over Limit = Reading in reference to limit
P = Peak Reading
Q = Quasi-peak Reading
A = Average Reading
H = Antenna Polarization: Horizontal
V = Antenna Polarization: Vertical

Calculation Formula

Over Limit (dB) = Level (dBuV/m) – Limit (dBuV/m)

Above 1GHz

Freq. (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector (P/A)	Pol. (H/V)
x.xx	42.95	0.55	43.50	54	-10.50	A	H

Freq. = Emission frequency in MHz
Reading = Uncorrected Analyzer/Receiver reading
Factor = Antenna Factor + Cable Loss - Amplifier Gain
Result = Reading + Factor
Limit = Limit stated in standard
Margin = Reading in reference to limit
P = Peak Reading
Q = Quasi-peak Reading
A = Average Reading
H = Antenna Polarization: Horizontal
V = Antenna Polarization: Vertical

Calculation Formula

Margin (dB) = Result (dBuV/m) – Limit (dBuV/m)

7.6. TEST RESULTS

Below 1GHz

Model No.	KTPS50-4810DT 3P	**Test Mode**	Mode 3
Environmental Conditions	20°C, 80% RH, 1010mbar	**6dB Bandwidth**	120 KHz
Antenna Pole	Vertical	**Antenna Distance**	10m
Detector Function	Quasi-peak.	**Tested by**	Benson Yang

(The chart below shows the highest readings taken from the final data.)

Six Highest Radiated Emission Readings							
Frequency Range Investigated				**30 MHz to 1000 MHz at 10m**			
Freq. MHz	Amptd dBuV/m	Margin dB	Limit dBuV/m	Reading dBuV	Factor dB/m	Reading Type (P/Q/A)	Pol. (H/V)
42.8800	**22.99**	**-7.01**	**30.00**	**39.90**	**-16.91**	**Q**	**V**
53.0500	**22.31**	**-7.69**	**30.00**	**42.00**	**-19.69**	**Q**	**V**
59.1700	**20.76**	**-9.24**	**30.00**	**42.70**	**-21.94**	**Q**	**V**
112.4700	**24.82**	**-5.18**	**30.00**	**41.00**	**-16.18**	**Q**	**V**
118.5800	**24.68**	**-5.32**	**30.00**	**40.40**	**-15.72**	**Q**	**V**
160.1400	**23.16**	**-6.84**	**30.00**	**39.70**	**-16.54**	**Q**	**V**

REMARKS: *1. 30MHz to 1000MHz test is Applicable CISPR 22 / EN 55022 standard.*
2. The other emission levels were very low against the limit.
3. P= Peak Reading; Q= Quasi-peak Reading A= Average Reading.

Model No.	KTPS50-4810DT 3P	**Test Mode**	Mode 3
Environmental Conditions	20°C, 80% RH, 1010mbar	**6dB Bandwidth**	120 KHz
Antenna Pole	Horizontal	**Antenna Distance**	10m
Detector Function	Quasi-peak.	**Tested by**	Benson Yang

(The chart below shows the highest readings taken from the final data.)

Six Highest Radiated Emission Readings							
Frequency Range Investigated				**30 MHz to 1000 MHz at 10m**			
Freq. MHz	Amptd dBuV/m	Margin dB	Limit dBuV/m	Reading dBuV	Factor dB/m	Reading Type (P/Q/A)	Pol. (H/V)
42.6600	**21.95**	**-8.05**	**30.00**	**38.70**	**-16.75**	**Q**	**H**
52.1800	**18.53**	**-11.47**	**30.00**	**37.90**	**-19.37**	**Q**	**H**
61.2100	**18.87**	**-11.13**	**30.00**	**40.90**	**-22.03**	**Q**	**H**
72.6600	**18.34**	**-11.66**	**30.00**	**38.90**	**-20.56**	**Q**	**H**
112.4400	**22.32**	**-7.68**	**30.00**	**38.50**	**-16.18**	**Q**	**H**
159.8700	**21.37**	**-8.63**	**30.00**	**37.90**	**-16.53**	**Q**	**H**

REMARKS: *1. 30MHz to 1000MHz test is Applicable CISPR 22 / EN 55022 standard.*
2. The other emission levels were very low against the limit.
3. P= Peak Reading; Q= Quasi-peak Reading A= Average Reading

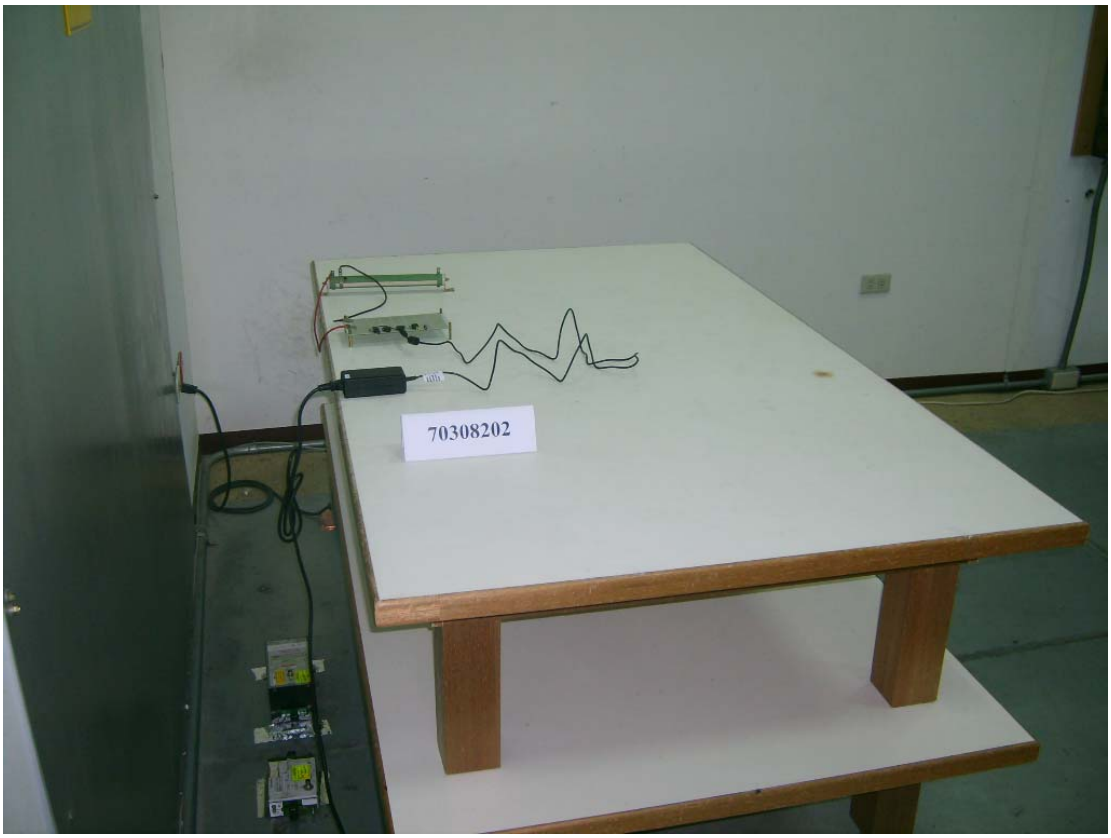
. **Above 1GHz**

Model No.	N/A	**Test Mode**	N/A
Environmental Conditions	N/A	**6dB Bandwidth**	N/A
Antenna Pole	N/A	**Antenna Distance**	N/A
Highest frequency generated or used	75kHz	**Upper frequency**	See note
Detector Function	N/A	**Tested by**	N/A

Note: No applicable, when the highest frequency of the internal sources of the EUT is less than 108MHz, the measurement shall only be made up to 1 GHz.

8 PHOTOGRAPHS OF THE TEST CONFIGURATION

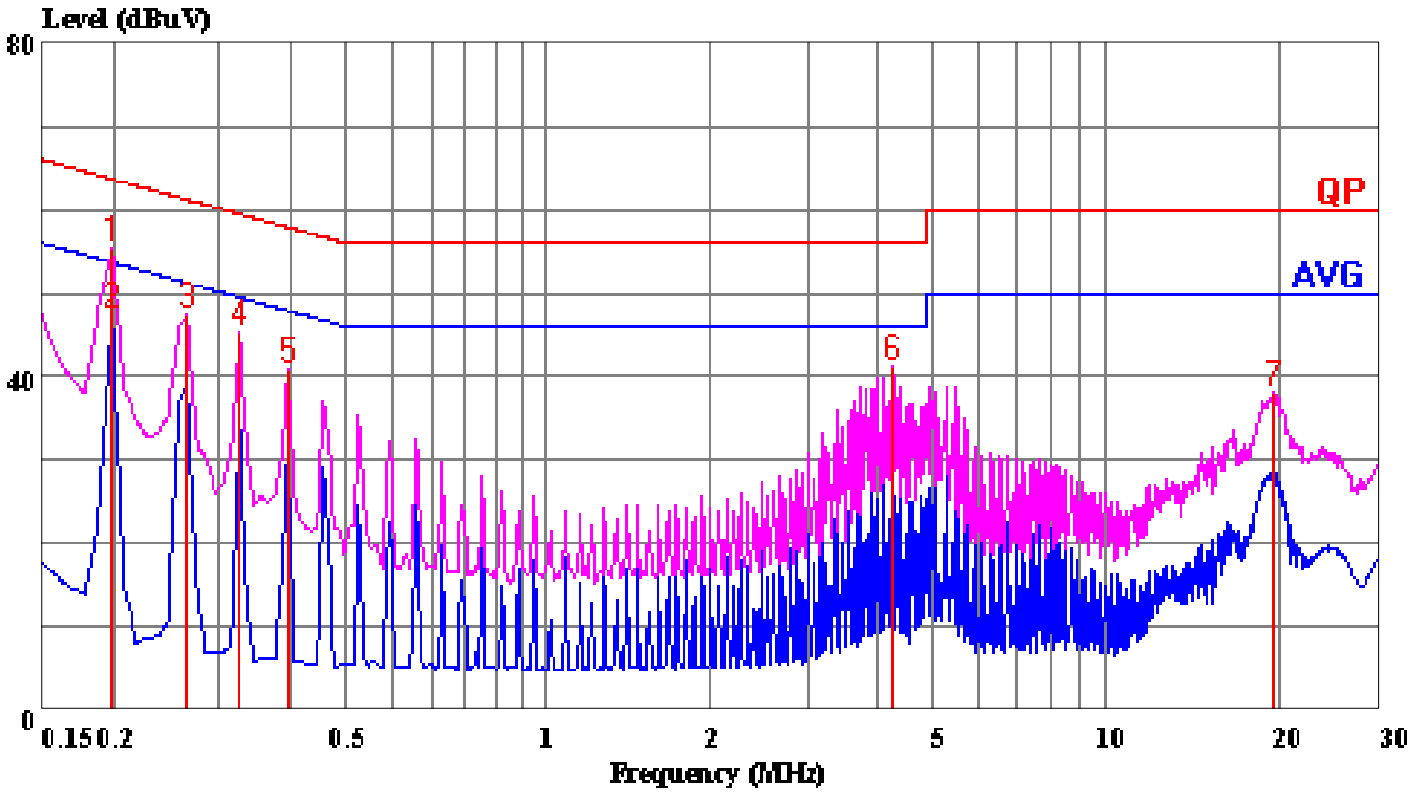
CONDUCTED EMISSION TEST



RADIATED EMISSION TEST

No. 199, Chung Sheng Road,
Hsin Tien City, Taipei,
Taiwan, R.O.C.
Tel:02-2217-0894 Fax:02-2217-1029

Data#: 43 File#: 70308202CA.EMI Date: 2007-03-13 Time: 00:05:20



(Conduction A)

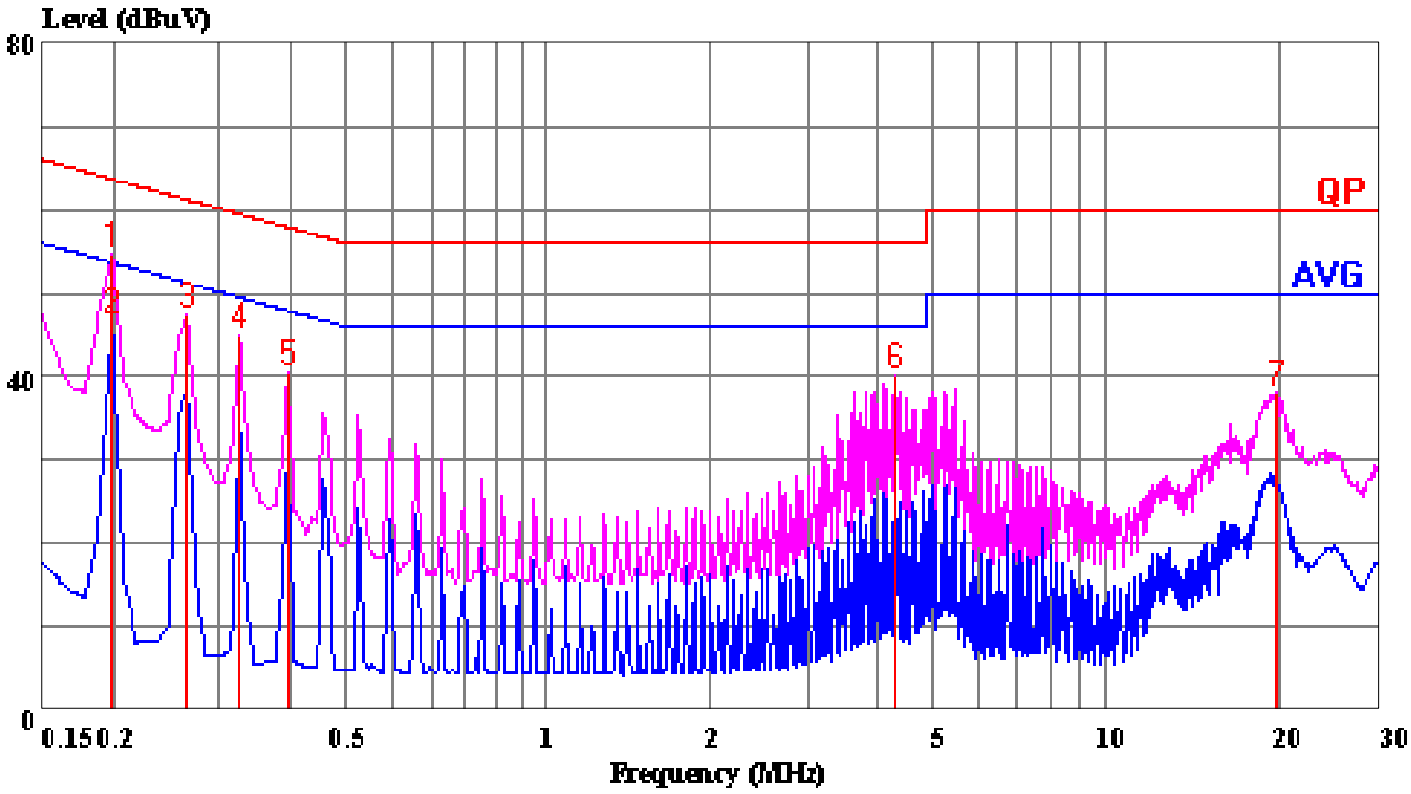
Trace: 39 40 Ref Trace:

Condition: LINE
Report No. : 70308202
Test Engr. : Benson Yang
Company : KAGA ELECTRONICS (USA) INC.
EUT : KTPS50-4810DT 3P
Test Config : EUT / ALL PERIPHERALS
Type of Test: FCC CLASS B
Mode of Op. : Half Rating Load Mode / WORST

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.198	54.90	0.42	55.32	63.71	-8.39	Peak
2	0.198	46.98	0.42	47.40	53.71	-6.31	Average
3	0.267	46.90	0.51	47.41	61.20	-13.79	Peak
4	0.327	44.69	0.58	45.27	59.53	-14.26	Peak
5	0.396	40.20	0.65	40.86	57.95	-17.09	Peak
6	4.315	40.30	0.81	41.11	56.00	-14.89	Peak
7	19.740	36.19	1.73	37.92	60.00	-22.08	Peak

No. 199, Chung Sheng Road,
Hsin Tien City, Taipei,
Taiwan, R.O.C.
Tel:02-2217-0894 Fax:02-2217-1029

Data#: 34 File#: 70308202CA.EMI Date: 2007-03-12 Time: 23:55:40



(Conduction A)

Trace: 30 31 Ref Trace:

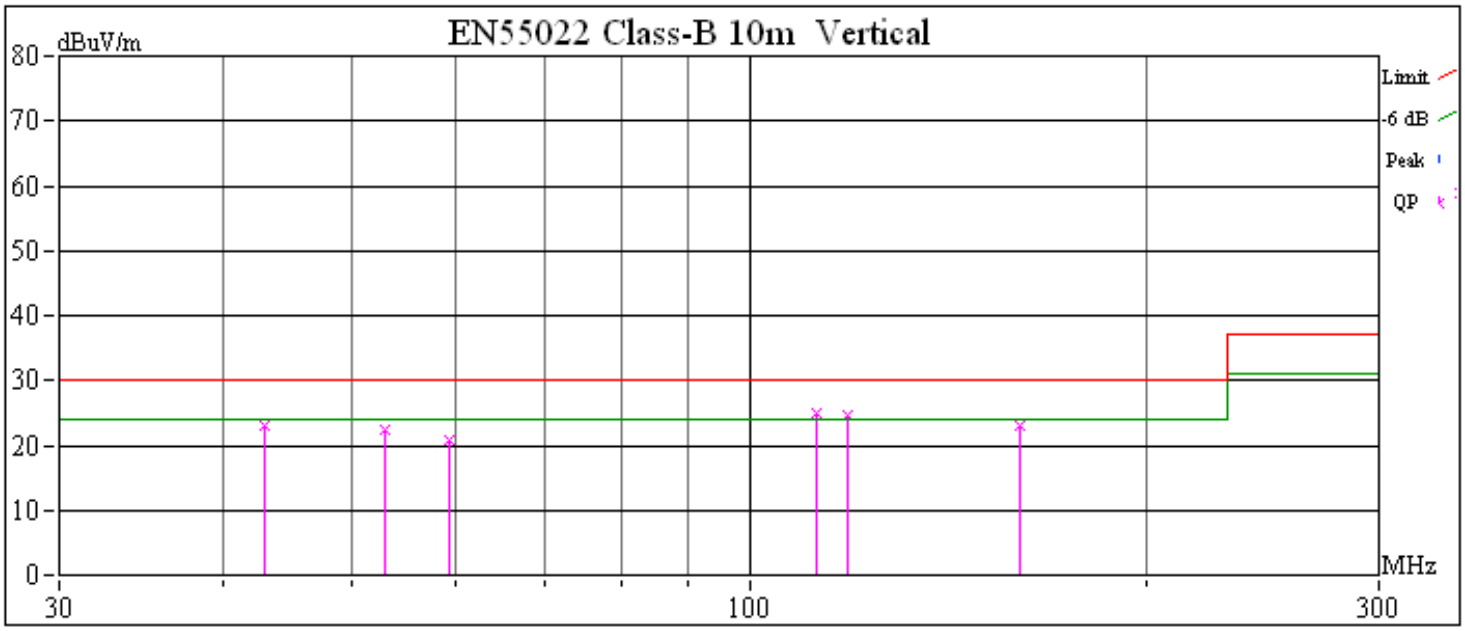
Condition: NEUTRAL
Report No. : 70308202
Test Engr. : Benson Yang
Company : KAGA ELECTRONICS (USA) INC.
EUT : KTPS50-4810DT 3P
Test Config : EUT / ALL PERIPHERALS
Type of Test: FCC CLASS B
Mode of Op. : Half Rating Load Mode / WORST

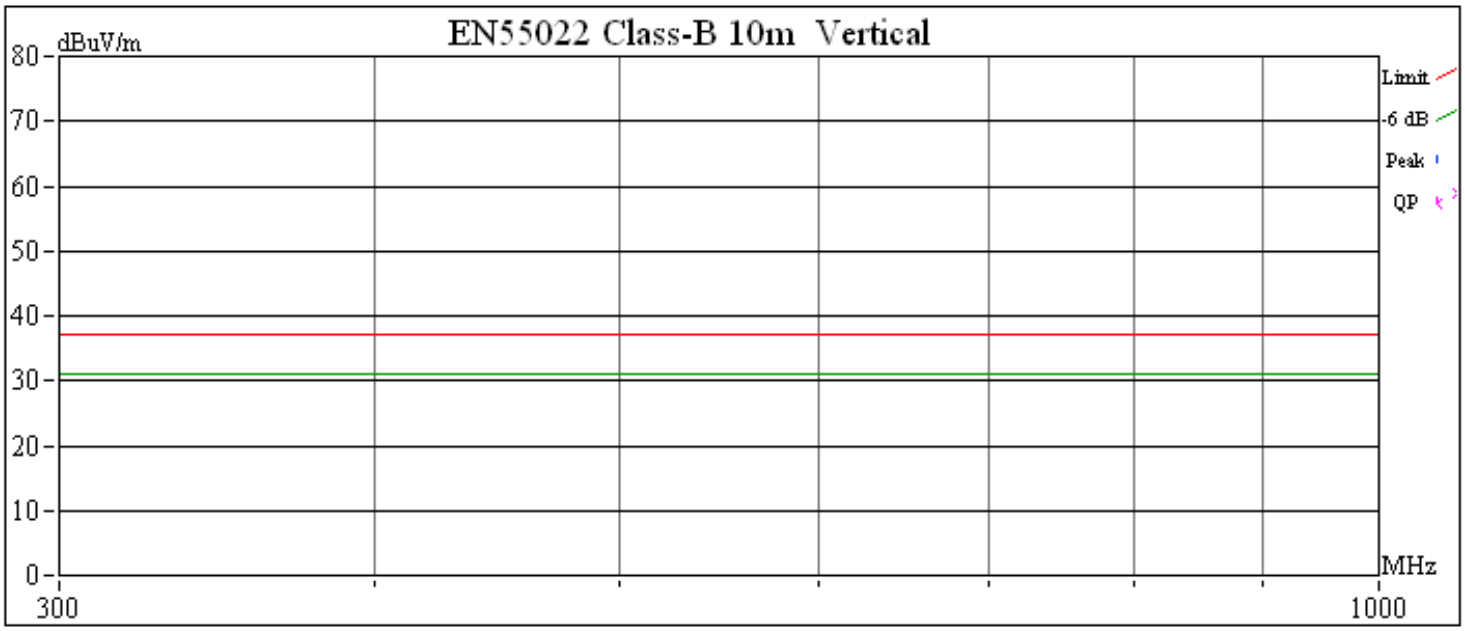
	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.198	54.72	0.15	54.87	63.71	-8.84	Peak
2	0.198	46.44	0.15	46.59	53.71	-7.12	Average
3	0.267	47.37	0.15	47.52	61.20	-13.68	Peak
4	0.327	44.77	0.15	44.92	59.53	-14.61	Peak
5	0.396	40.50	0.16	40.66	57.95	-17.29	Peak
6	4.384	39.81	0.40	40.21	56.00	-15.79	Peak
7	19.950	36.49	1.44	37.93	60.00	-22.07	Peak

Custom Name: KAGA ELECTRONICS (USA) INC.
Model Name: KTPS50-4810DT 3P
Test Mode: Full Rating Load Mode / WORST

Project No.: 70308202
Engineer Name: Benson Yang
Date: 2007-03-12

Index:



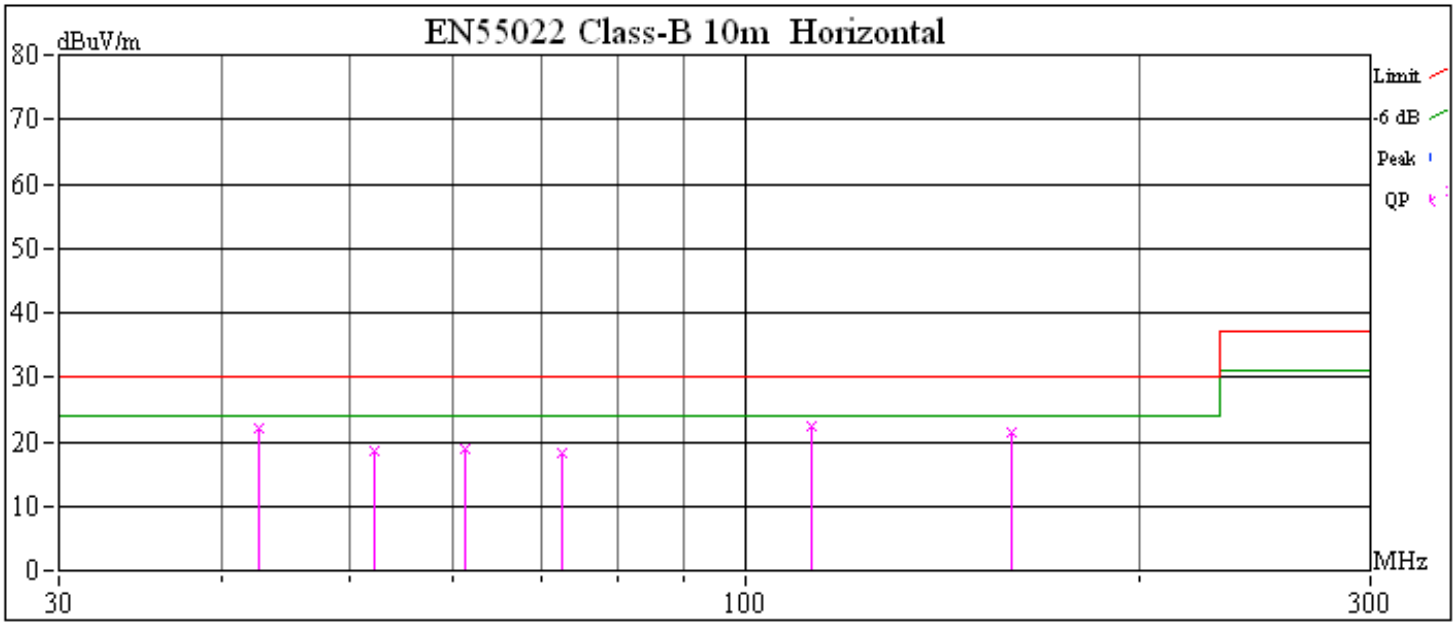


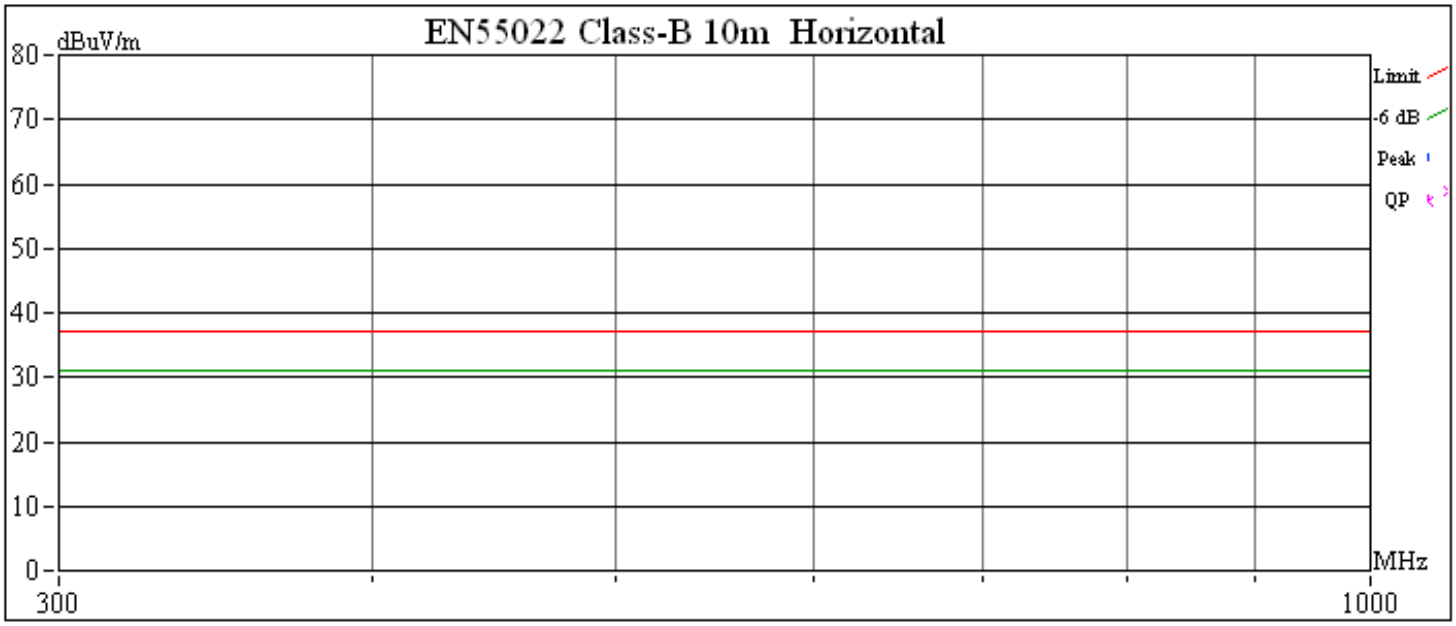
	Freq(MHz)	Peak(dBuV/m)	QP(dBuV/m)	Margin(dB)	Limit(dBuV/m)	Reading(dBuV)	Factor(dB)	Height	Degree	Comment
1	42.8800	-16.91	22.99	-7.01	30.00	39.90	-16.91	100	0	
2	53.0500	-19.69	22.31	-7.69	30.00	42.00	-19.69	100	0	
3	59.1700	-21.94	20.76	-9.24	30.00	42.70	-21.94	100	0	
4	112.4700	-16.18	24.82	-5.18	30.00	41.00	-16.18	100	0	
5	118.5800	-15.72	24.68	-5.32	30.00	40.40	-15.72	100	0	
6	160.1400	-16.54	23.16	-6.84	30.00	39.70	-16.54	100	0	

Custom Name: KAGA ELECTRONICS (USA) INC.
Model Name: KTPS50-4810DT 3P
Test Mode: Full Rating Load Mode / WORST

Project No.: 70308202
Engineer Name: Benson Yang
Date: 2007-03-12

Index:





	Freq(MHz)	Peak(dBuV/m)	QP(dBuV/m)	Margin(dB)	Limit(dBuV/m)	Reading(dBuV)	Factor(dB)	Height	Degree	Comment
1	42.6600	-16.75	21.95	-8.05	30.00	38.70	-16.75	100	0	
2	52.1800	-19.37	18.53	-11.47	30.00	37.90	-19.37	100	0	
3	61.2100	-22.03	18.87	-11.13	30.00	40.90	-22.03	100	0	
4	72.6600	-20.56	18.34	-11.66	30.00	38.90	-20.56	100	0	
5	112.4400	-16.18	22.32	-7.68	30.00	38.50	-16.18	100	0	
6	159.8700	-16.53	21.37	-8.63	30.00	37.90	-16.53	100	0	

PHOTOGRAPHS OF EUT

Model: KTPS50-4810DT 3P


70308202


70308202

Model: KTPS50-2025DT 3P

Model: KTPS50-1242DT 3P

Model: KTPS45-0950DT 3P

Model: KTPS36-0940DT 3P

Model: KTPS50-1926DT 3P

Model: KTPS50-2421DT 3P

Model: KTPS40-1233DT 3P

Model: KTPS50-1533DT 3P

Model: KTPS50-1827DT 3P