ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

UN-INTENTIONAL RADIATOR CERTIFICATION TO FCC PART 15 SUBPART B CERTIFICATION REQUIREMENT

OF

Product Name:	**CDMA TSY01**
Brand Name:	**N/A**
Model Name:	**KD48**
Model Difference:	**N/A**
Report No.:	**EI/2009/40001**
Issue Date:	**Apr. 14, 2009**
FCC Rule Part:	**Part 15 B, Class B**
Filing Type:	**Certification**
Prepared for:	**Toshiba Corporation, Mobile Communications Co., Quality Management Division** **1-1, Asahigaoka 3-Chome, Hino-Shi, Tokyo, 191-8555,Japan**
Prepared by:	**SGS Taiwan Ltd.** **Electronics & Communication Laboratory** **No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan**

Testing Laboratory 0513

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VERIFICATION OF COMPLIANCE

Applicant:	Toshiba Corporation, Mobile Communications Co., Quality Management Division 1-1, Asahigaoka 3-Chome, Hino-Shi, Tokyo, 191-8555, Japan
Manufacturer:	Toshiba Corporation, Mobile Communications Co., Quality Management Division 1-1, Asahigaoka 3-Chome, Hino-Shi, Tokyo, 191-8555, Japan
Product Name:	CDMA TSY01
Brand Name:	N/A
Model Name:	KD48
Model Difference:	N/A
File Number:	EI/2009/40001
Date of test:	Apr. 02, 2009 ~ Apr. 13, 2009
Date of EUT Receive:	Apr. 02, 2009

We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 (2003) and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rules Part 15B, Class B. The test results of this report relate only to the tested sample identified in this report.

Test By:	Sky Wang	***Date:***	Apr. 14, 2009
	Sky Wang / Asst. Supervisor		
Prepared By:	Alex Hsieh	***Date:***	Apr. 14, 2009
	Alex Hsieh / Sr. Engineer		
Approved By:	Vincent Su	***Date:***	Apr. 14, 2009
	Vincent Su / Manager		

Version

Version No.	Date	Description
00	Apr. 14, 2009	Initial creation of document

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1. GENERAL INFORMATION

1.1 Product Description

Type Name:	CDMA TSY01	
Brand Name:	N/A	
Marketing Name:	biblio	
Model Difference:	N/A	
Data Cable (USB)	N/A	
Simple Hands-free (SHF)	N/A	
Power Supply:	3.7 Vdc re-chargeable battery	
	Battery Model:	1UF463450F-TBH2-S, Brand: SANYO

CDMA 2000:

DUT Standards and Power:	CDMA2000	Frequency Range		Maximum Output Power	
	Cellular Band	TX:	824.70-848.31 MHz	24.76	dBm
		RX:	869.70-893.37 MHz		
Final Amplifier Voltage and Current Information			DC voltage (V)	DC current (mA)	
		CDMA 2000 Cellular	3.7Vdc	760	
Type of Emission	1M28F9W				
MEID	A1000006EF0683				
Software Version	N/A				
Hardware Version	Ver.2.0				
Antenna Type	PIFA				

Bluetooth:

Bluetooth Version	☐ V1.1 (GFSK) ☐ V1.2 (GFSK) ☐ V2.0 (GFSK) ☐ V2.0 + EDR (GFSK + π/4DQPSK + 8DPSK) ☒ V2.1 + EDR (GFSK + π/4DQPSK + 8DPSK)
Frequency Range	2402 – 2480MHz
Channel number	79 channels max., 1MHz step
Rated Power	0.36 dBm (Peak)
Modulation type	Frequency Hopping Spread Spectrum
Antenna Designation	Metal Antenna / 1dBi.
Type of Emission	1M27F1D

The EUT is compliance with Bluetooth 2.1 with EDR

1.2 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for **FCC ID: WVS-RN10-J01** filing to comply with Part15 Subpart B, class B of the FCC CFR 47 Rules.

1.3 Test Methodology

Both conducted and radiated testing was performed according to the procedures in ANSI C63.4 (2003). Radiated testing was performed at an antenna to EUT distance 3 meters.

1.4 Test Facility

The measurement facilities used to collect the 3m Radiated Emission and AC power line conducted data are located on the address of SGS Taiwan Ltd. Electronics & Communication Laboratory No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei Country, Taiwan which are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4: 2003. FCC Registration Number are: 990257 and 236194, Canada Registration Number: 4600A-1

The 10 m Open Area Test Sites located on the address of SGS Taiwan Ltd. Electronics & Communication Laboratory No. 29, Pau-Tou-Tsuo Valley Chia-Pau Tsuen, Linkou Hsiang, Taipei county, which is constructed and calibrated to meet the CISPR 22/EN 55022 requirements. SGS Site No. 1(3 &10 meters) and FCC Registration Number: 94644

1.5 Special Accessories

Not available for this EUT intended for grant.

1.6 Equipment Modifications

Not available for this EUT intended for grant.

2. System Test Configuration

2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

2.2 EUT Exercise

The Toshiba CDMA cellular phone FCC ID: WVS-TM7-N01 was tested with a computer connected via USB interface port. The Phone drivers were installed on the computer to be able to communicate with the phone by continuously sending a querying text file (AT commands) to the phone using HyperTerminal . For more information please see section 5.4 and section 6.5 for test data and APPENDIX 1 for set-up photographs.

2.3 Test Procedure

2.3.1 Conducted Emissions

The EUT is a placed on as turn table which is 0.8 m above ground plane. According to the requirements in Section 7 of ANSI C63.4-2003. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and average detector mode.

2.3.2 Radiated Emissions

The EUT is placed on a turn table which is 0.8 m above ground plane. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter(EUT) was rotated through three orthogonal axes according to the requirements in Section 8 of ANSI C63.4-2003.

2.4 Limitation

(1) Conducted Emission

According to section 15.107(a), Conducted Emission Class B Limits is as following.

Frequency range MHz	Class B Limits dB (uV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50
Note 1.The lower limit shall apply at the transition frequencies 2.The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.		

(2) Radiated Emission

According to section 15.109(a), Radiated Emission Class B Limits is as following:

Frequency (MHz)	Field strength μV/m	Distance (m)	Field strength at 3m dBμV/m
30-88	100	3	40
88-216	150	3	43.5
216-960	200	3	46
Above 960	500	3	54

Remark: 1. Emission level in dBuV/m=20 log (uV/m)
2. Measurement was performed at an antenna to the closed point of EUT distance of 3 meters.

2.5 Configuration of Tested System

Fig. 2-1 Configuration of Tested System (Charge Mode)

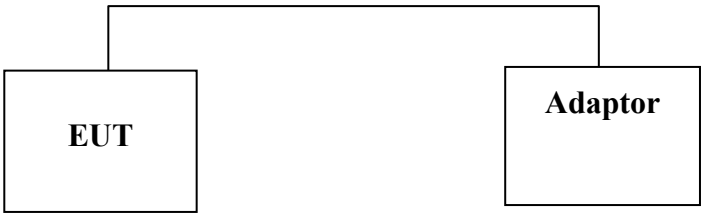


Fig. 2-2 Configuration of Tested System (Play Mode)

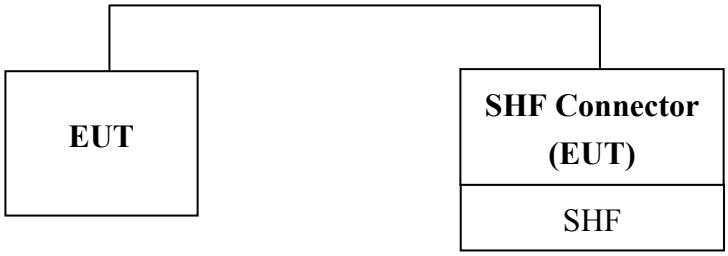


Fig. 2-3 Configuration of Tested System (Data Link Mode)

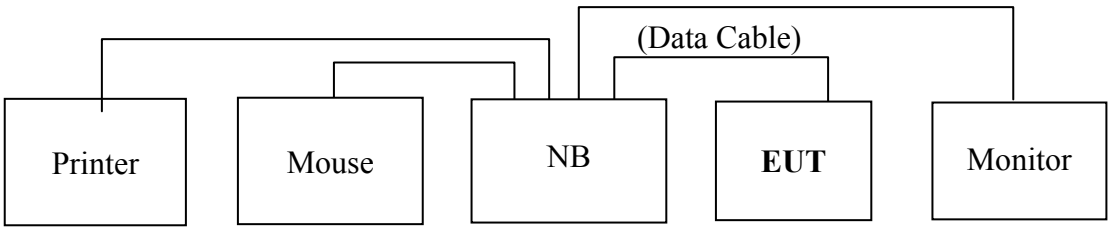


Fig. 2-4 Configuration of Tested System (Remote Side)

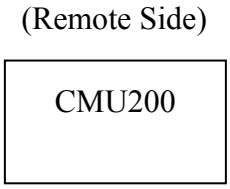


Table 2-1 Equipment Used in Tested System

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Data Cable	Power Cord
1.	EUT	N/A	KD48	N/A	N/A	N/A
2.	SHF Connector	N/A	N/A	N/A	Un-shielded, 0.15m	N/A
3.	Battery	SANYO	1UF463450F-TB H2-S	N/A	N/A	N/A
4.	Adaptor	KDDI	MT-WDA	N/A	N/A	Un-shielded, 0.15m

Table 2-2 Support Equipment Used in Tested System

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Data Cable	Power Cord
1.	SHF	N/A	N/A	N/A	Un-shielded	N/A
2.	Printer	HP	DJ640C	TH12QE110Y	Shielded	Un-shielded
3.	Mouse	HP	P8131-D	K023302209	Shielded	N/A
4.	Notebook	IBM	T43	L3LHHN6	N/A	Un-shielded
5.	Monitor	HP	Vf51	TWTFG01092	N/A	Un-shielded
6.	Radio Communication Analyzer	R&S	CMU200	102189	N/A	Un-shielded

3. Summary of Test Results

FCC Rules	Description Of Test	Result
§15.107	Conducted Emission Class B	Compliant
§15.109	Radiated Emission Class B	Compliant

4. Description of test modes

The EUT was stayed in normal operation mode with CMU200.

The data cable was connected to notebook PC and data transferred by program.

Test Plan
AC Power Line Conducted Emission
1. Charge Mode
2. Data Link Mode

Radiated Emission
1. Charge Mode
2. EUT + SHF (playing 1KHz)
3. Data Link Mode

The Mid channel of cellular band was worst case for both AC Power Link Conducted Emission and Radiated Emission test.

5. Conducted Emissions Test

5.1 Measurement Procedure:

1. The EUT was placed on a table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured were complete.

5.2 Test SET-UP (Block Diagram of Configuration)

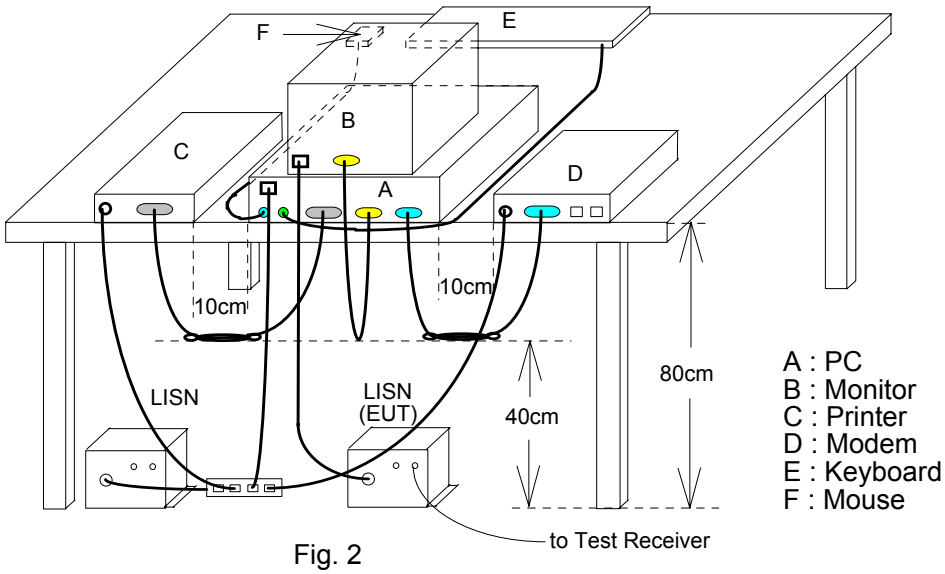


Fig. 2

5.3 Measurement Equipment Used:

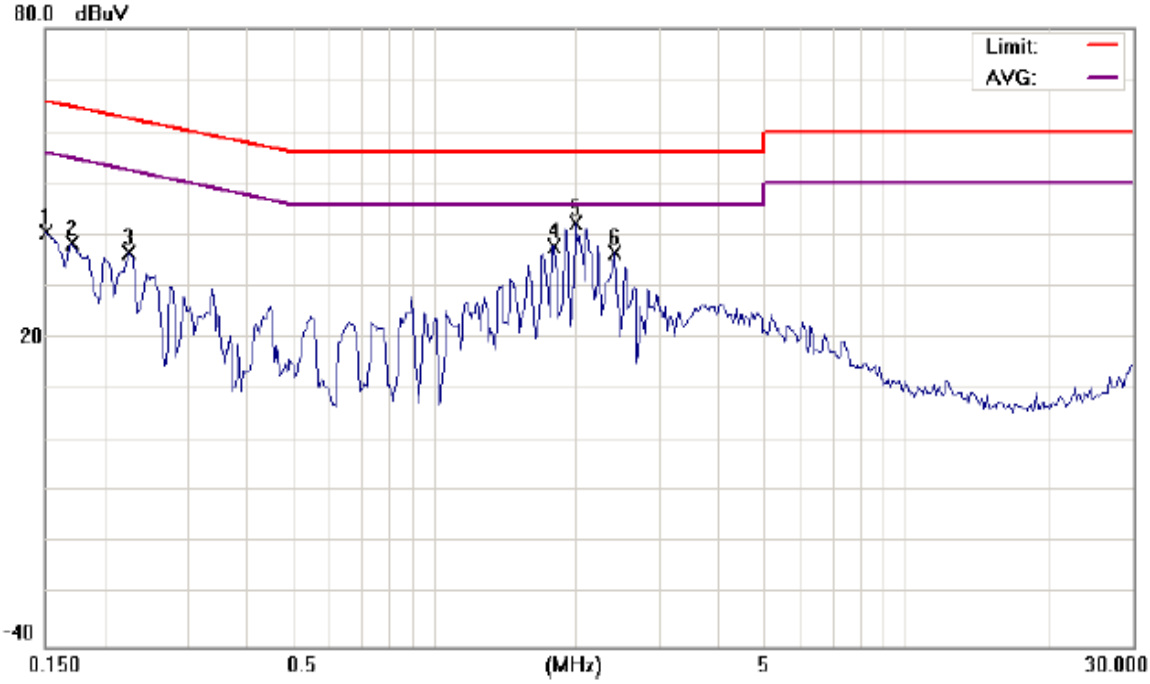
Conducted Emission Test Site					
EQUIPMENT TYPE	**MFR**	**MODEL NUMBER**	**SERIAL NUMBER**	**LAST CAL.**	**CAL DUE.**
EMI Test Receiver	R&S	ESCS30	828985/004	09/16/2008	09/15/2009
LISN	Rolf-Heine	NNB-2/16Z	99012	04/28/2008	04/27/2009
LISN	FCC	FCC-LISN-50/250-25-2-01	04034	04/28/2008	04/27/2009
Transient Limiter	R&S	ESH3Z2	357.8810.52	05/19/2008	05/18/2009
50 Ohms terminator	N/A	EMC-049-1	N/A	06/04/2008	06/03/2009
Coaxial Cables	N/A	WK CE Cable	N/A	10/30/2008	10/29/2009

5.4 Measurement Result

The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range. Significant peaks are then marked as shown on the following data page, and these signals are then quasi-peaked.

AC POWER LINE CONDUCTED EMISSION TEST DATA

Operation Mode:	Charge Mode			Test Date:	Apr. 12, 2009
Temperature:	23 ℃	Humidity:	60 %	Test By:	Sky

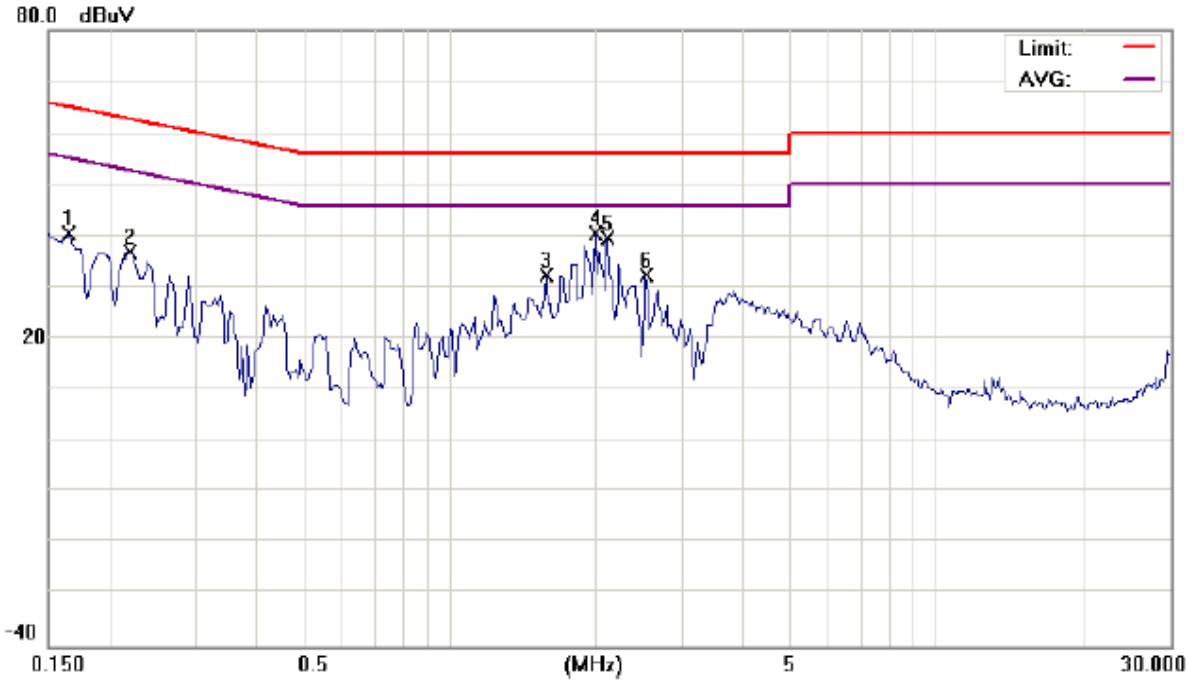


Site SGS CONDUCTED #1
Limit: CISPR22 Class B Conduction(QP)
EUT: biblio
M/N: KD48
Note: Charge mode

Phase: L1
Power: AC 120V/60Hz
Distance:

Temperature: 23 ℃
Humidity: 60 %
Air Pressure: hpa

No.	Mk.	Freq.	Reading Level	Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	40.43	0.18	40.61	66.00	-25.39	peak	
2		0.1700	38.43	0.16	38.59	64.96	-26.37	peak	
3		0.2250	36.47	0.13	36.60	62.63	-26.03	peak	
4		1.7900	37.86	0.12	37.98	56.00	-18.02	peak	
5	*	2.0000	42.10	0.13	42.23	56.00	-13.77	peak	
6		2.4200	36.56	0.14	36.70	56.00	-19.30	peak	



Site SGS CONDUCTED #1
Limit: CISPR22 Class B Conduction(QP)
EUT: biblio
M/N: KD48
Note: Charge mode

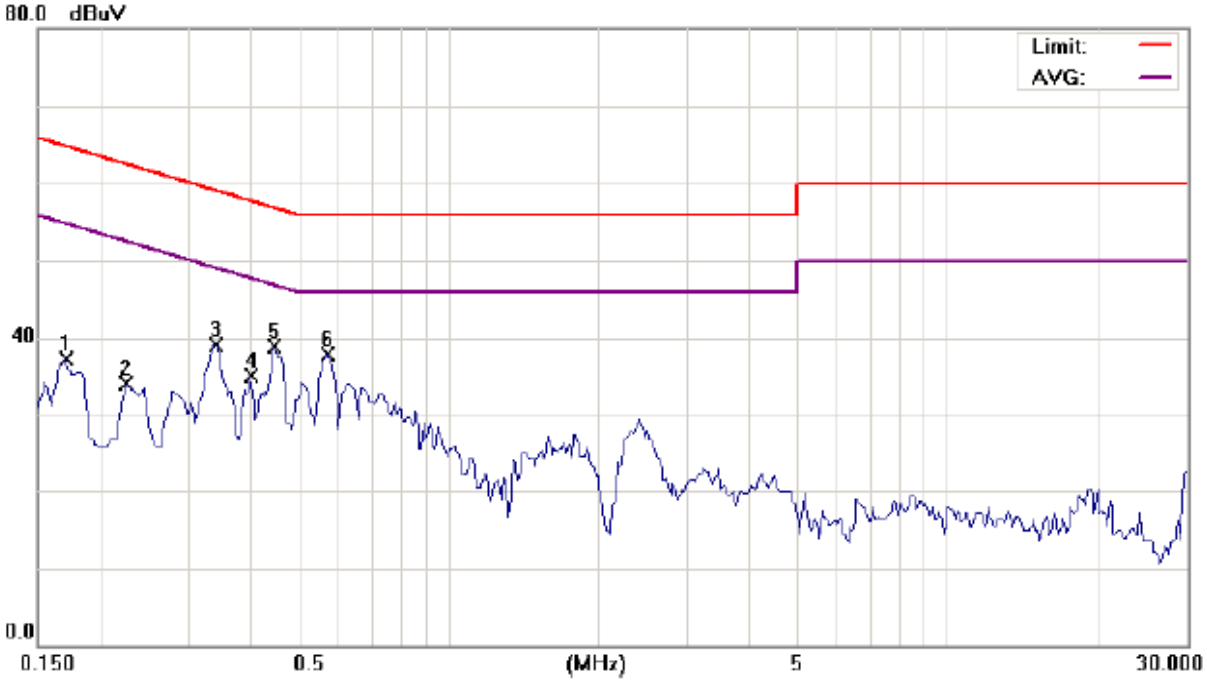
Phase: N
Power: AC 120V/60Hz
Distance:

Temperature: 23 ℃
Humidity: 60 %
Air Pressure: hpa

No.	Mk.	Freq.	Reading Level	Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1650	40.34	0.17	40.51	65.21	-24.70	peak	
2		0.2200	36.91	0.13	37.04	62.82	-25.78	peak	
3		1.5800	32.25	0.12	32.37	56.00	-23.63	peak	
4	*	2.0000	40.30	0.13	40.43	56.00	-15.57	peak	
5		2.1100	39.39	0.13	39.52	56.00	-16.48	peak	
6		2.5300	32.41	0.14	32.55	56.00	-23.45	peak	

AC POWER LINE CONDUCTED EMISSION TEST DATA

Operation Mode:	Data Link Mode			Test Date:	Apr. 14, 2009
Temperature:	22 ℃	Humidity:	61 %	Test By:	Sky

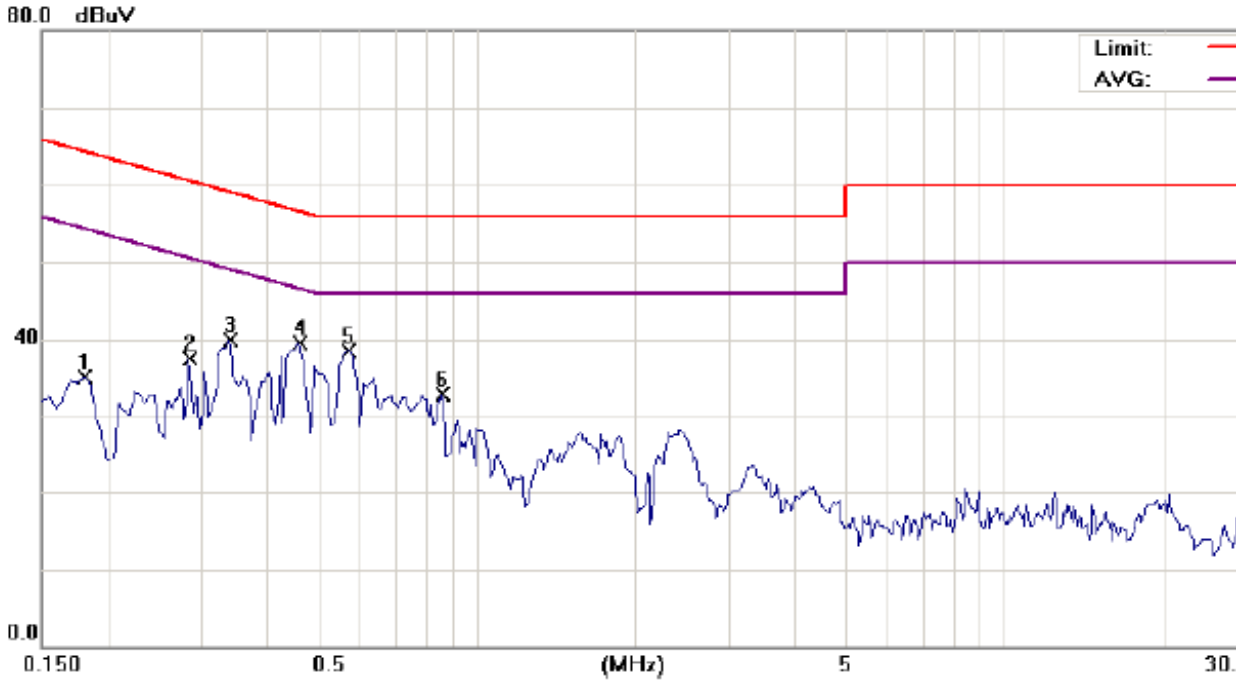


Site SGS CONDUCTED #1
Limit: CISPR22 Class B Conduction(QP)
EUT: biblio
M/N: KD48
Note: DATA LINK

Phase: L1
Power: AC 120V/60Hz
Distance:

Temperature: 22 ℃
Humidity: 61 %
Air Pressure: hpa

No.	Mk.	Freq.	Reading Level	Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1700	37.08	0.15	37.23	64.96	-27.73	peak	
2		0.2250	33.91	0.12	34.03	62.63	-28.60	peak	
3		0.3400	39.11	0.09	39.20	59.20	-20.00	peak	
4		0.4000	34.93	0.08	35.01	57.85	-22.84	peak	
5	*	0.4450	38.73	0.08	38.81	56.97	-18.16	peak	
6		0.5700	37.75	0.07	37.82	56.00	-18.18	peak	



Site SGS CONDUCTED #1
Limit: CISPR22 Class B Conduction(QP)
EUT: biblio
M/N: KD48
Note: DATA LINK

Phase: N
Power: AC 120V/60Hz
Distance:

Temperature: 22
Humidity: 61 %
Air Pressure: hp

No.	Mk.	Freq.	Reading Level	Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1800	34.99	0.14	35.13	64.49	-29.36	peak	
2		0.2850	37.47	0.10	37.57	60.67	-23.10	peak	
3		0.3400	39.76	0.09	39.85	59.20	-19.35	peak	
4	*	0.4600	39.34	0.07	39.41	56.69	-17.28	peak	
5		0.5700	38.42	0.07	38.49	56.00	-17.51	peak	
6		0.8600	32.83	0.08	32.91	56.00	-23.09	peak	

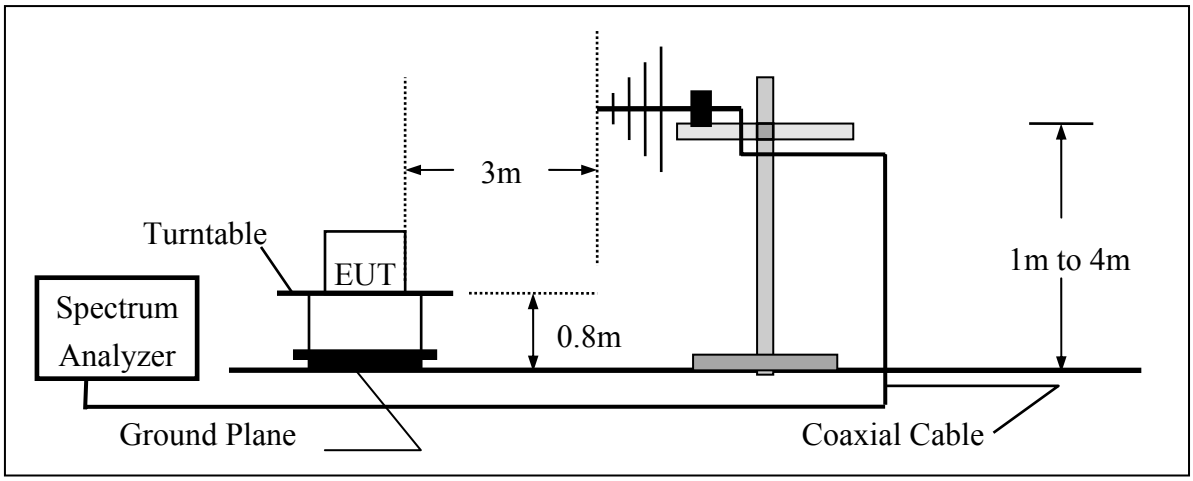
6. Radiated Emission Test

6.1 Measurement Procedure

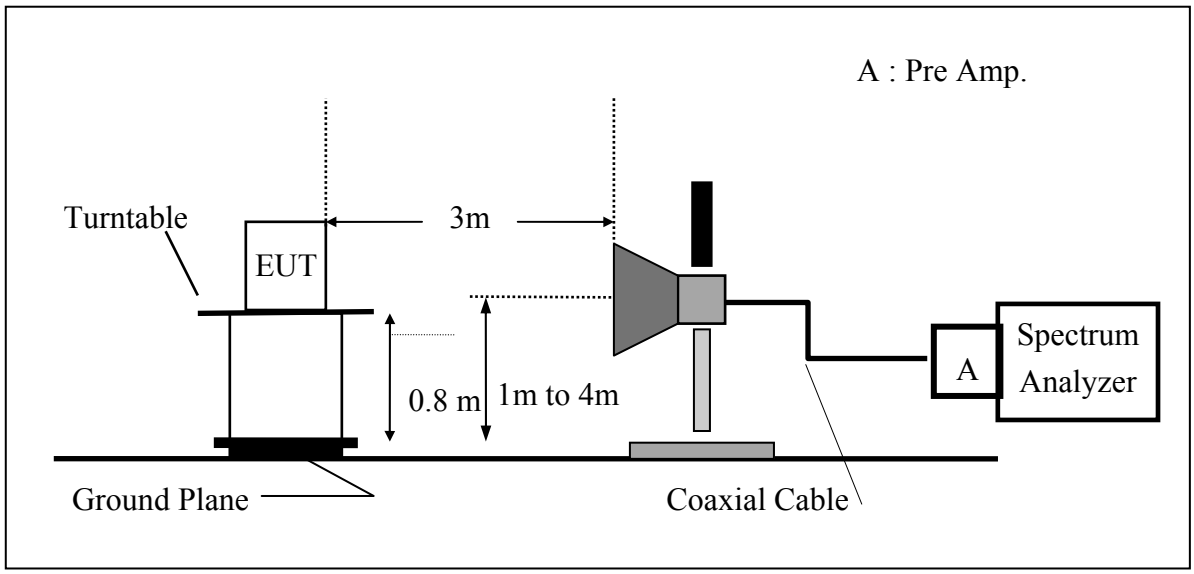
1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
4. Repeat above procedures until all frequency measured were complete.

6.2 Test SET-UP (Block Diagram of Configuration)

(A) Radiated Emission Test Set-Up, Frequency Below 1000MHz



(B) Radiated Emission Test Set-UP Frequency Over 1 GHz



6.3 Measurement Equipment Used:

966 Chamber					
EQUIPMENT TYPE	**MFR**	**MODEL NUMBER**	**SERIAL NUMBER**	**LAST CAL.**	**CAL DUE.**
Spectrum Analyzer	R&S	FSP 40	100034	02/12/2009	02/11/2010
Bilog Antenna	SCHWAZBECK	VULB9160	9160-3136	11/15/2008	11/14/2009
Horn antenna	SCHWAZBECK	BBHA 9120D	9120D-320	03/14/2009	03/13/2010
Pre-Amplifier	Agilent	8447D	1937A02834	11/30/2008	11/29/2009
Pre-Amplifier	Agilent	8449B	3008A01973	01/05/2009	01/04/2010
Turn Table	HD	DT420	N/A	N.C.R	N.C.R
Antenna Tower	HD	MA240-N	240/657	N.C.R	N.C.R
Controller	HD	HD100	N/A	N.C.R	N.C.R
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA-10M	10m	01/05/2009	01/04/2010
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA-3M	3m	01/05/2009	01/04/2010

6.4 Field Strength Calculation

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

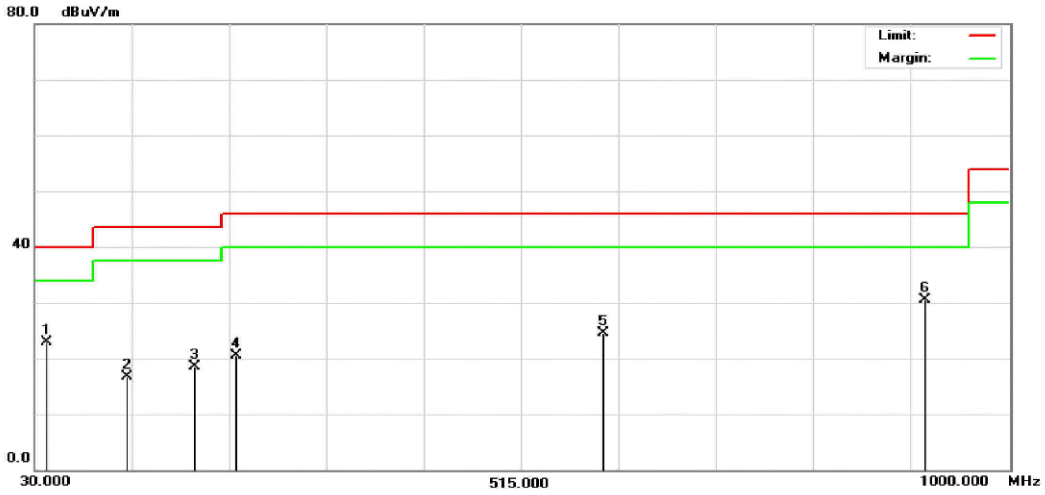
FS = RA + AF + CL - AG

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

6.5 Measurement Result (below 1G)

Test Mode: Charge Mode
Frequency Range: 30MHz-1GHz
Temperature : 24 ℃

Test Date : Apr. 09, 2009
Test By: Sky
Humidity : 61 %



Site :966 Chamber
Limit: FCC Class B 3M Radiation
EUT: biblio
M/N: KD48
Note: Chargemode

Polarization: Vertical
Power: AC120V/60Hz
Distance: 3m

Temperature: 24 ℃
Humidity: 61%
Air Pressure: hpa

No.	Mk.	Freq.	Reading Level	Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		42.1250	37.11	-14.13	22.98	40.00	-17.02	QP	
2		122.1500	30.42	-13.67	16.75	43.50	-26.75	QP	
3		190.0500	32.65	-14.21	18.44	43.50	-25.06	QP	
4		231.2750	33.88	-13.32	20.56	46.00	-25.44	QP	
5		597.4500	28.85	-4.38	24.47	46.00	-21.53	QP	
6	*	917.5500	29.33	1.19	30.52	46.00	-15.48	QP	

Remark：

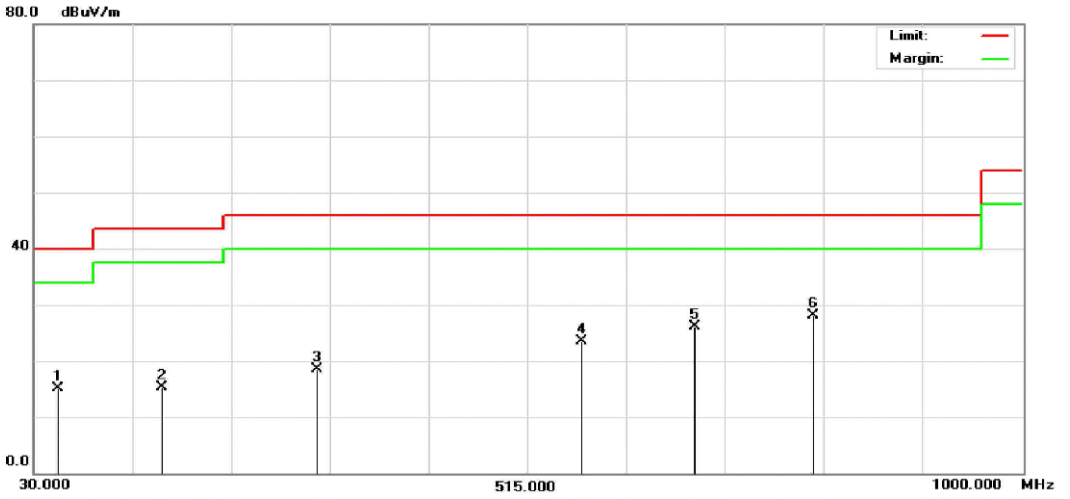
(1) Measuring frequencies from 30 MHz to the 10GHz。

(2) All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurement as necessary.

(3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

Test Mode: Charge Mode
Frequency Range: 30MHz-1GHz
Temperature : 24 ℃

Test Date : Apr. 09, 2009
Test By: Sky
Humidity : 61 %



Site :966 Chamber
Limit: FCC Class B 3M Radiation
EUT: biblio
M/N: KD48
Note: Chargemode

Polarization: *Horizontal*
Power: AC 120V/60Hz
Distance: 3m

Temperature: 24 ℃
Humidity: 61%
Air Pressure: hpa

No.	Mk.	Freq.	Reading Level	Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		54.2500	29.12	-13.95	15.17	40.00	-24.83	QP	
2		156.1000	28.16	-12.82	15.34	43.50	-28.16	QP	
3		308.8750	29.48	-11.01	18.47	46.00	-27.53	QP	
4		568.3500	28.87	-5.37	23.50	46.00	-22.50	QP	
5		679.9000	28.44	-2.35	26.09	46.00	-19.91	QP	
6	*	796.3000	27.92	0.20	28.12	46.00	-17.88	QP	

Remark：

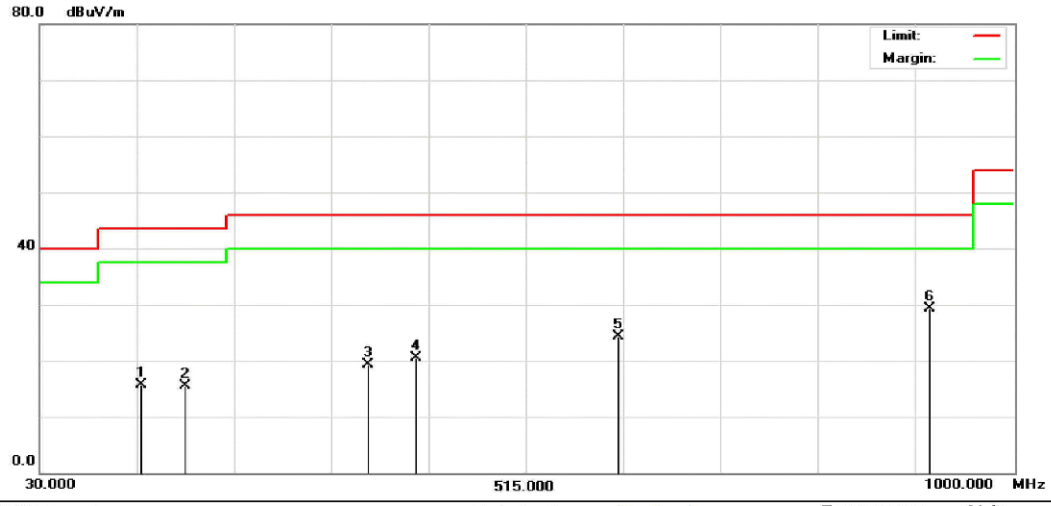
(1) Measuring frequencies from 30 MHz to the 10GHz。

(2) All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurement as necessary.

(3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

Test Mode: Play Mode
Frequency Range: 30MHz-1GHz
Temperature : 24 ℃

Test Date : Apr. 09, 2009
Test By: Sky
Humidity : 61 %



Site :966 Chamber
Limit: FCC Class B 3M Radiation
EUT: biblio
M/N: KD48
Note: PLAYmode

Polarization: *Vertical*
Power: DC3.7V
Distance: 3m

Temperature: 24 ℃
Humidity: 61%
Air Pressure: hpa

No.	Mk.	Freq.	Reading Level	Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		131.8500	28.59	-12.92	15.67	43.50	-27.83	QP	
2		175.5000	28.48	-13.01	15.47	43.50	-28.03	QP	
3		357.3750	29.18	-9.90	19.28	46.00	-26.72	QP	
4		405.8750	28.90	-8.36	20.54	46.00	-25.46	QP	
5		607.1500	28.42	-4.13	24.29	46.00	-21.71	QP	
6	*	917.5500	28.06	1.19	29.25	46.00	-16.75	QP	

Remark：

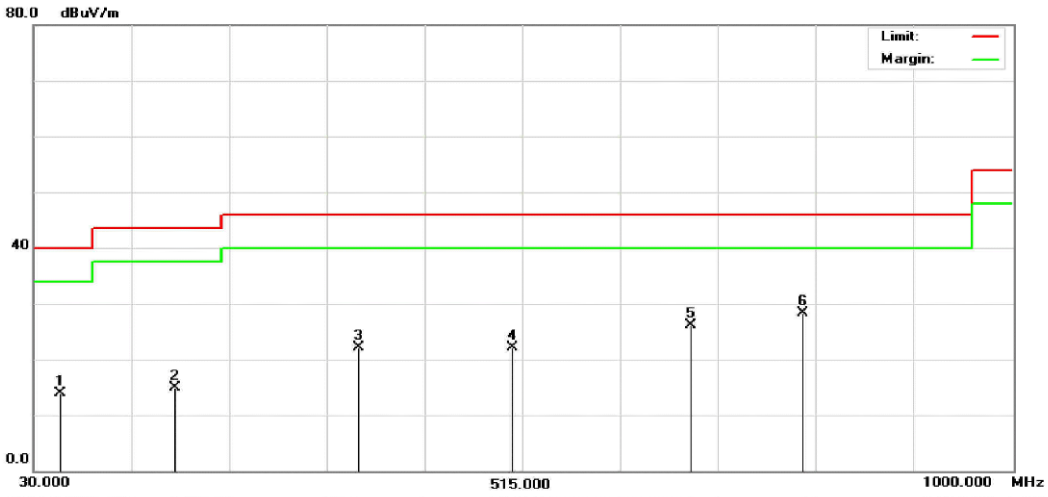
(1) Measuring frequencies from 30 MHz to the 10GHz。

(2) All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurement as necessary.

(3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

Test Mode: Play Mode
Frequency Range: 30MHz-1GHz
Temperature : 24 ℃

Test Date : Apr. 09, 2009
Test By: Sky
Humidity : 61 %



Site :966 Chamber
Limit: FCC Class B 3M Radiation
EUT: biblio
M/N: KD48
Note: PLAYmode

Polarization: *Horizontal*
Power: DC3.7V
Distance: 3m

Temperature: 24 ℃
Humidity: 61%
Air Pressure: hpa

No.	Mk.	Freq.	Reading Level	Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		56.6750	27.92	-14.08	13.84	40.00	-26.16	QP	
2		170.6500	27.56	-12.58	14.98	43.50	-28.52	QP	
3		352.5250	32.14	-10.06	22.08	46.00	-23.92	QP	
4		505.3000	28.95	-6.82	22.13	46.00	-23.87	QP	
5		682.3250	28.35	-2.29	26.06	46.00	-19.94	QP	
6	*	793.8750	28.19	0.17	28.36	46.00	-17.64	QP	

Remark：

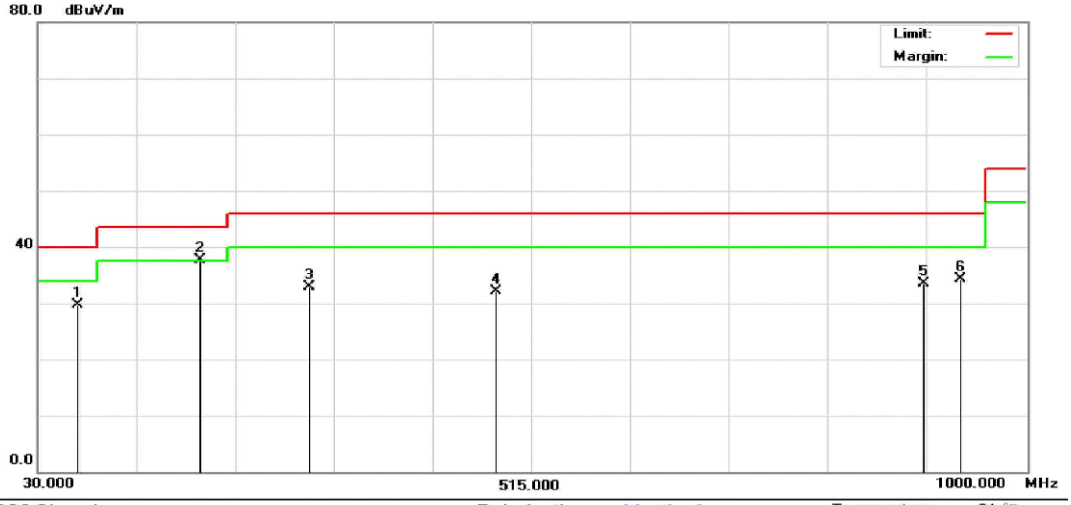
(1) Measuring frequencies from 30 MHz to the 10GHz。

(2) All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurement as necessary.

(3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

Test Mode: Data Link Mode
Frequency Range: 30MHz-1GHz
Temperature : 24 ℃

Test Date : Apr. 14, 2009
Test By: Sky
Humidity : 61 %



Site :966 Chamber
Limit: FCC Class B 3M Radiation
EUT: biblio
M/N: KD48
Note: USBdatalink

Polarization: *Vertical*
Power: DC5V
Distance: 3m

Temperature: 24 ℃
Humidity: 61%
Air Pressure: hpa

No.	Mk.	Freq.	Reading Level	Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		68.8000	45.02	-15.40	29.62	40.00	-10.38	QP	
2	*	190.0500	51.96	-14.21	37.75	43.50	-5.75	QP	
3		296.7500	44.21	-11.25	32.96	46.00	-13.04	QP	
4		481.0500	39.02	-6.97	32.05	46.00	-13.95	QP	
5		900.5750	32.15	1.27	33.42	46.00	-12.58	QP	
6		936.9500	33.14	1.11	34.25	46.00	-11.75	QP	

Remark：

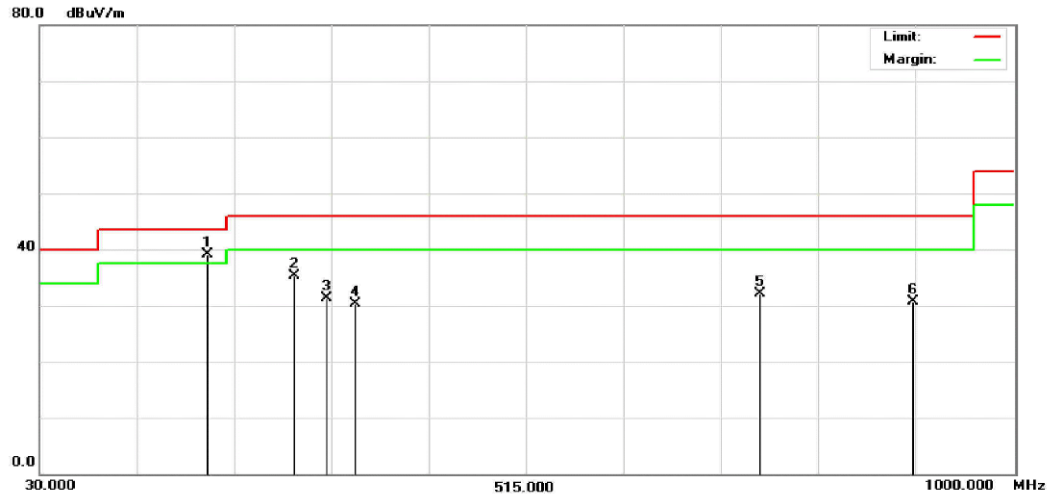
(1) Measuring frequencies from 30 MHz to the 10GHz。

(2) All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurement as necessary.

(3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

Test Mode: Data Link Mode
Frequency Range: 30MHz-1GHz
Temperature : 24 ℃

Test Date : Apr. 14, 2009
Test By: Sky
Humidity : 61 %



Site :966 Chamber
Limit: FCC Class B 3M Radiation
EUT: biblio
M/N: KD48
Note: USBdatalink

Polarization: *Horizontal*
Power: DC5V
Distance: 3m

Temperature: 24 ℃
Humidity: 61%
Air Pressure: hpa

No.	Mk.	Freq.	Reading Level	Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	197.3250	53.75	-14.58	39.17	43.50	-4.33	QP	
2		284.6250	46.74	-11.52	35.22	46.00	-10.78	QP	
3		316.1500	42.10	-10.86	31.24	46.00	-14.76	QP	
4		345.2500	40.55	-10.24	30.31	46.00	-15.69	QP	
5		747.8000	32.71	-0.55	32.16	46.00	-13.84	QP	
6		900.5750	29.36	1.27	30.63	46.00	-15.37	QP	

Remark：

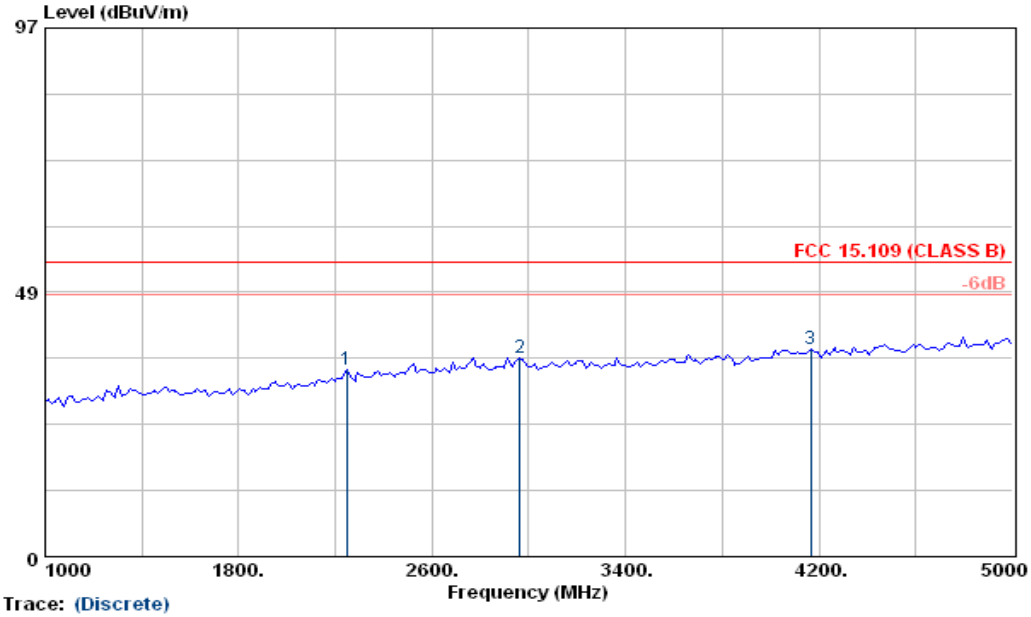
(1) Measuring frequencies from 30 MHz to the 10GHz。

(2) All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurement as necessary.

(3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

Measurement Result (above 1G)

Test Mode: Charge Mode
Test Date : Apr. 09, 2009
Frequency Range: 1GHz – 5GHz
Test By: Sky
Temperature : 25 ℃
Humidity : 65 %



Trace: (Discrete)

Site	: RF SITE
Condition	: FCC 15.109 (CLASS B) 3m BBHA9120D(673)-09 VERTICAL 149cm 360deg
Project No.	: EI/2009/40001
Applicant	: Toshiba
EUT Description	: biblio
EUT Model	: KD48
Test Mode	: CHARGE MODE
Temp./Humid.	: 25/65
Operator	: SKY

	Freq	Pol/Phase	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz		dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	2248.00	VERTICAL	36.24	-1.95	34.29	54.00	-19.71	Peak
2	2963.00	VERTICAL	36.17	0.39	36.56	54.00	-17.44	Peak
3	4165.50	VERTICAL	34.18	4.01	38.19	54.00	-15.81	Peak

Remark：

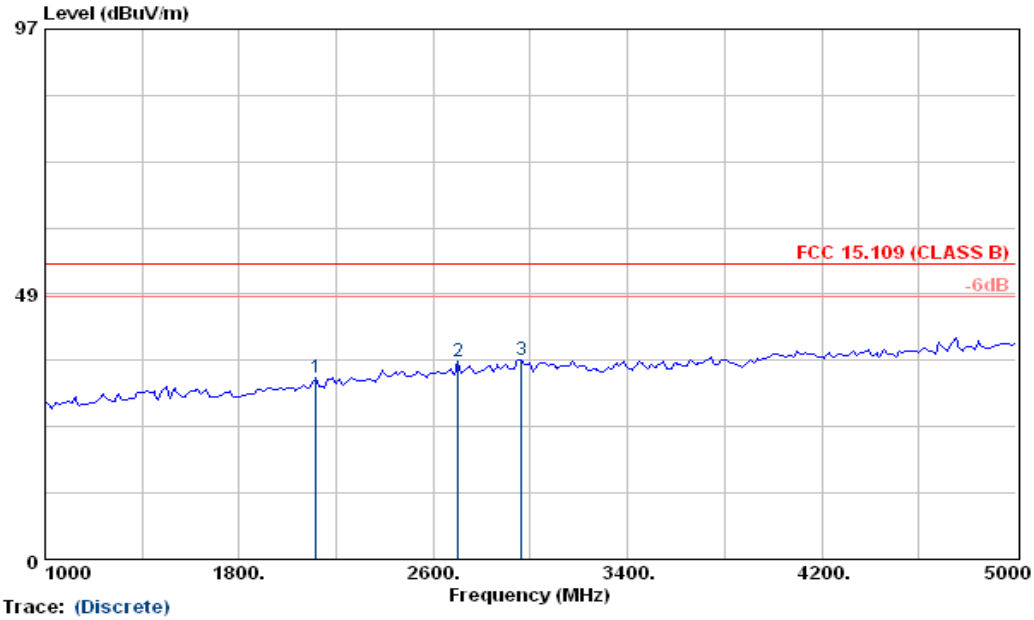
(1) Measuring frequencies from 1GHz to the 13GHz。

(2) All Readings above 1GHz are Peak and Average measurement as necessary.

(3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

Test Mode: Charge Mode
Frequency Range: 1GHz – 5GHz
Temperature : 25 ℃

Test Date : Apr. 09, 2009
Test By: Sky
Humidity : 65 %



Site : RF SITE
Condition : FCC 15.109 (CLASS B) 3m BBHA9120D(673)-09 HORIZONTAL 149cm 0deg
Project No. : EI/2009/40001
Applicant : Toshiba
EUT Description : biblio
EUT Model : KD48
Test Mode : CHARGE MODE
Temp./Humid. : 25/65
Operator : SKY

	Freq	Pol/Phase	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz		dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	2118.00	HORIZONTAL	35.82	-2.57	33.25	54.00	-20.75	Peak
2	2703.00	HORIZONTAL	36.34	-0.21	36.13	54.00	-17.87	Peak
3	2963.00	HORIZONTAL	36.15	0.39	36.54	54.00	-17.46	Peak

Remark：

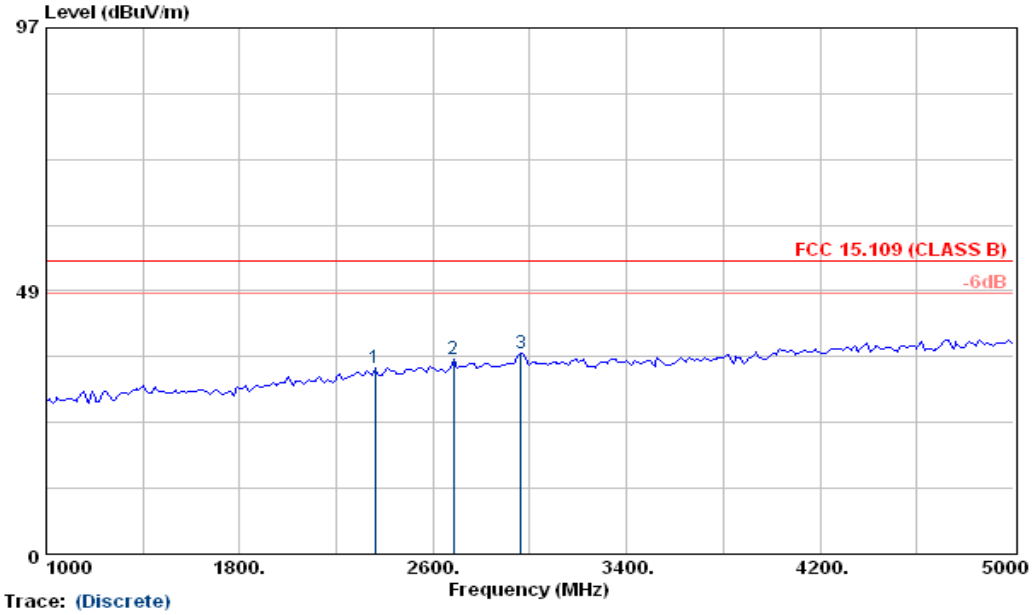
(1) Measuring frequencies from 1GHz to the 13GHz。

(2) All Readings above 1GHz are Peak and Average measurement as necessary.

(3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

Test Mode: Play Mode
Frequency Range: 1GHz – 5GHz
Temperature : 25 ℃

Test Date : Apr. 09, 2009
Test By: Sky
Humidity : 65 %



Site	: RF SITE
Condition	: FCC 15.109 (CLASS B) 3m BBHA9120D(673)-09 VERTICAL 149cm 360deg
Project No.	: EI/2009/40001
Applicant	: Toshiba
EUT Description	: biblio
EUT Model	: KD48
Test Mode	: DATA LINK
Temp./Humid.	: 25/65
Operator	: SKY

	Freq	Pol/Phase	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz		dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	2358.50	VERTICAL	35.71	-1.37	34.34	54.00	-19.66	Peak
2	2683.50	VERTICAL	36.11	-0.26	35.85	54.00	-18.15	Peak
3	2963.00	VERTICAL	36.68	0.39	37.07	54.00	-16.93	Peak

Remark：

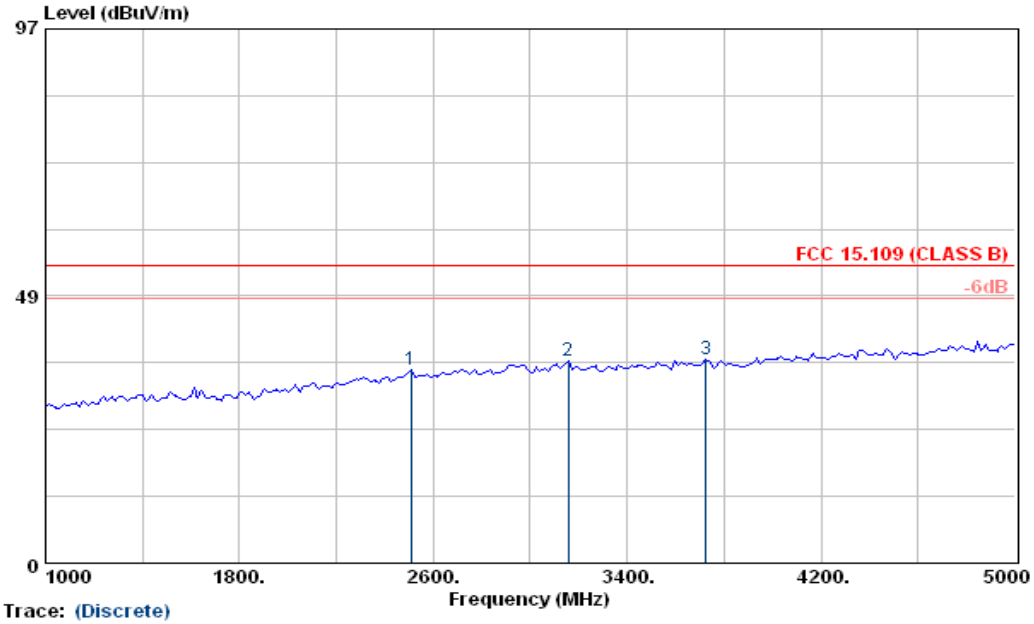
(1) Measuring frequencies from 1GHz to the 13GHz。

(2) All Readings above 1GHz are Peak and Average measurement as necessary.

(3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

Test Mode: Play Mode
Frequency Range: 1GHz – 5GHz
Temperature : 25 ℃

Test Date : Apr. 09, 2009
Test By: Sky
Humidity : 65 %



Trace: (Discrete)

Site : RF SITE
Condition : FCC 15.109 (CLASS B) 3m BBHA9120D(673)-09 HORIZONTAL 149cm 0deg
Project No. : EI/2009/40001
Applicant : Toshiba
EUT Description : biblio
EUT Model : KD48
Test Mode : DATA LINK
Temp./Humid. : 25/65
Operator : SKY

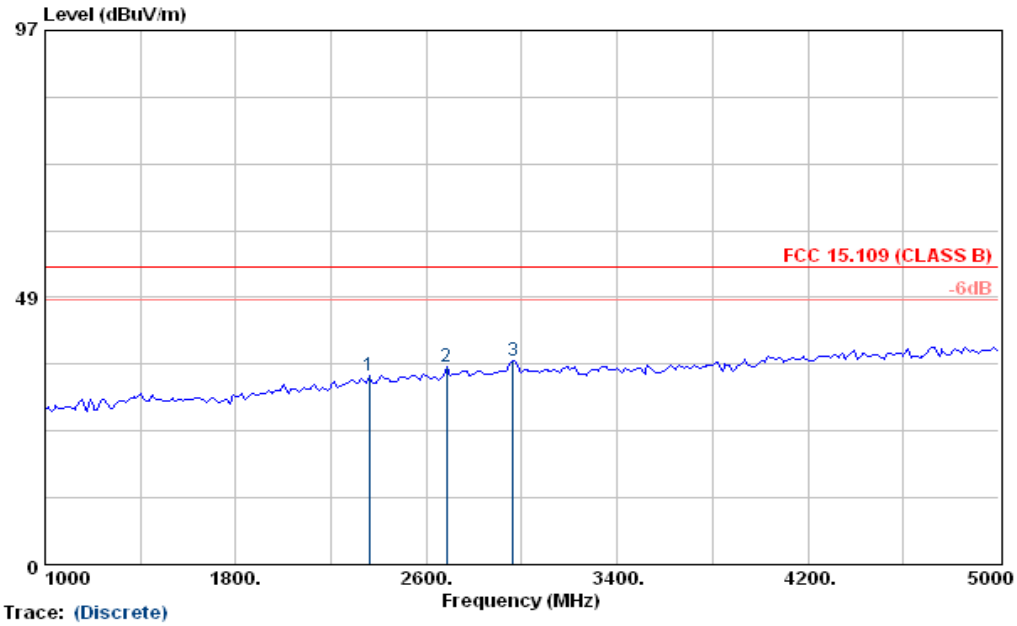
	Freq	Pol/Phase	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz		dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	2508.00	HORIZONTAL	35.87	-0.63	35.24	54.00	-18.76	Peak
2	3158.00	HORIZONTAL	36.12	0.73	36.85	54.00	-17.15	Peak
3	3723.50	HORIZONTAL	34.63	2.34	36.97	54.00	-17.03	Peak

Remark：

(1) Measuring frequencies from 1GHz to the 13GHz。
(2) All Readings above 1GHz are Peak and Average measurement as necessary.
(3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

Test Mode: Data Link Mode
Frequency Range: 1GHz – 5GHz
Temperature : 25 ℃

Test Date : Apr. 14, 2009
Test By: Sky
Humidity : 65 %



Trace: (Discrete)

Site	: RF SITE
Condition	: FCC 15.109 (CLASS B) 3m BBHA9120D(673)-09 VERTICAL 149cm 360deg
Project No.	: EI/2009/40001
Applicant	: Toshiba
EUT Description	: biblio
EUT Model	: KD48
Test Mode	: DATA LINK
Temp./Humid.	: 25/65
Operator	: SKY

	Freq	Pol/Phase	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz		dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	2358.50	VERTICAL	35.71	-1.37	34.34	54.00	-19.66	Peak
2	2683.50	VERTICAL	36.11	-0.26	35.85	54.00	-18.15	Peak
3	2963.00	VERTICAL	36.68	0.39	37.07	54.00	-16.93	Peak

Remark：

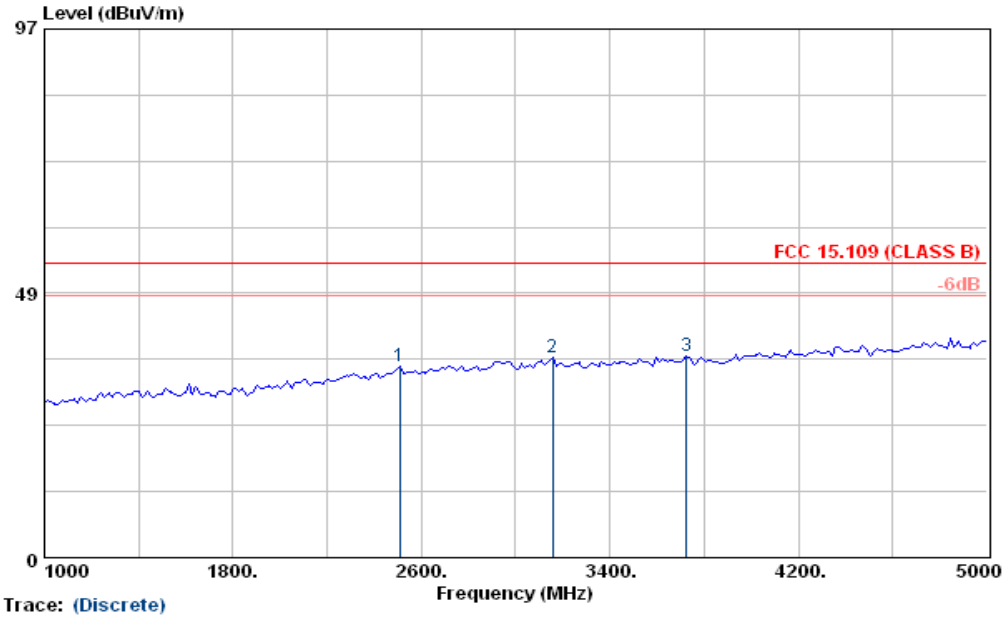
(1) Measuring frequencies from 1GHz to the 13GHz。

(2) All Readings above 1GHz are Peak and Average measurement as necessary.

(3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

Test Mode: Data Link Mode
Frequency Range: 1GHz – 5GHz
Temperature : 25 ℃

Test Date : Apr. 14, 2009
Test By: Sky
Humidity : 65 %



Trace: (Discrete)

Site : RF SITE
Condition : FCC 15.109 (CLASS B) 3m BBHA9120D(673)-09 HORIZONTAL 149cm 0deg
Project No. : EI/2009/40001
Applicant : Toshiba
EUT Description : biblio
EUT Model : KD48
Test Mode : DATA LINK
Temp./Humid. : 25/65
Operator : SKY

	Freq	Pol/Phase	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz		dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	2508.00	HORIZONTAL	35.87	-0.63	35.24	54.00	-18.76	Peak
2	3158.00	HORIZONTAL	36.12	0.73	36.85	54.00	-17.15	Peak
3	3723.50	HORIZONTAL	34.63	2.34	36.97	54.00	-17.03	Peak

Remark：

(1) Measuring frequencies from 1GHz to the 13GHz。

(2) All Readings above 1GHz are Peak and Average measurement as necessary.

(3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz