TEST REPORT

FCC Part 15 Subpart C

	New Application;	Class I PC;	Class II PC
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Product: ECO600 Long-lasting Wireless Laser Mouse

Brand: GIGABYTE

Model: 28713ECO600

Model Difference: N/A

FCC ID: JCK28713ECO600

FCC Rule Part: §15.249

Applicant: GIGA-BYTE Technology Co., Ltd.

Address: No. 6, Bau Chiang Road, Hsin-Tien, Taipei,

Taiwan

Test Performed by:

International Standards Laboratory

<Lung-Tan LAB>

*Site Registration No.

BSMI: SL2-IN-E-0013; MRA TW1036; TAF: 0997; IC: IC4067B-3;

No. 120, Lane 180, San Ho Tsuen, Hsin Ho Rd. Lung-Tan Hsiang, Tao Yuan County 325, Taiwan *Tel: 886-3-407-1718; Fax: 886-3-407-1738

Report No.: ISL-11LR023FC

Issue Date: 2011/05/09

Test results given in this report apply only to the specific sample(s) tested and are traceable to national or international standard through calibration of the equipment and evaluating measurement uncertainty herein.

This report MUST not be used to claim product endorsement by TAF, NVLAP or any agency of the Government.

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VERIFICATION OF COMPLIANCE

Applicant: GIGA-BYTE Technology Co., Ltd.

Product Description: ECO600 Long-lasting Wireless Laser Mouse

Brand Name: GIGABYTE

FCC ID: JCK28713ECO600

FCC Rule Part: §15.249

Model No.: 28713ECO600

Model Difference: N/A

Date of test: $2011/04/28 \sim 2011/05/06$

Date of EUT Received: 2011/04/28

We hereby certify that:

All the tests in this report have been performed and recorded in accordance with the standards described above and performed by an independent electromagnetic compatibility consultant, International Standards Laboratory.

The test results contained in this report accurately represent the measurements of the characteristics and the energy generated by sample equipment under test at the time of the test. The sample equipment tested as described in this report is in compliance with the limits of above standards.

Test By:

Dion Chang / Engineer

Prepared By:

Date: 2011/05/09

Eva Kao / Asst. Supervisor

Approved By:

Date: 2011/05/09

Jim Chu / Director

International Standards Laboratory



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Version

Version No.	Date	Description
00	2011/05/09	Initial creation of document



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FCC ID: JCK28713ECO600

Report Number: ISL-11LR023FC

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1 GENERAL INFORMATION

1.1 Product Description

Product Name:	ECO600 Long-lasting Wireless Laser Mouse
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Brand Name:	GIGABYTE
Model Name:	28713ECO600
Model Difference:	N/A
Operation Frequency:	2402~2479MHz
Channel number:	16 channels
Rated Power:	Less than 10mW
Modulation Type:	GFSK
Power Supply:	3V dc form 2*AA battery
Antenna Designation:	Printed Antenna

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1.2 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for FCC ID: <u>JCK28713ECO600</u> filing to comply with Section 15.249 of the FCC Part 15, Subpart C Rules.

1.3 Test Methodology

Both conducted and radiated testing were 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 **International Standards Laboratory** <Lung-Tan LAB> No. 120, Lane 180, San Ho Tsuen, Hsin Ho Rd., Lung-Tan Hsiang, Tao Yuan County 325, Taiwan which are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4: 2003. FCC Registration Number is: TW1036, Canada Registration Number: 4067B-3.

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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 Transmitter was operated in the engineering operating mode. the Tx frequency was fixed which was for the purpose of the measurements.

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 and 13 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 a placed on as 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 and 13 of ANSI C63.4-2003.

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2.4 Measurement Equipment Used:

Conducted Emission Test Site						
EQUIPMENT	MFR	MODEL	SERIAL	LAST	CAL DUE.	
TYPE		NUMBER	NUMBER	CAL.		
Conduction 03 -1 Cable	WOKEN	CFD 300-NL	Conduction 03 -1	06/21/2010	06/21/2011	
EMI Receiver 12	ROHDE & SCHWARZ	ESCI	100804	06/25/2010	06/25/2011	
LISN 07	FCC Inc.	FCC-LISN-50-100-4 -02	07040	06/02/2010	06/02/2011	
LISN 08	FCC	FCC-LISN50-25-2-0 1	07039	06/25/2010	06/25/2011	

Chh 14/0(C)					
Chamber 14(966)					
EQUIPMENT	MFR	MODEL	SERIAL	LAST	CAL DUE.
TYPE		NUMBER	NUMBER	CAL.	
Spectrum Analyzer 21	Agilent	N9010A	MY49060537	07/13/2010	07/13/2011
Spectrum Analyzer 19	R&S	FSP40	100116	10/18/2010	10/18/2011
Spectrum Analyzer 20	Agilent	E4443A	MY48250315	05/11/2010	05/11/2011
Loop Antenna	A.H.SYSTEM	SAS-564	294	02/28/2011	02/27/2012
Bilog Antenna	Schaffner	CBL 6111D	22612	03/30/2011	03/29/2012
Horn antenna(06)	EMCO	3117	0006665	09/27/2010	09/26/2012
Horn antenna(05)	Com-power	AH-640	100A	01/11/2011	01/10/2013
Horn antenna(04)	Com-power	AH-826	081001	03/30/2011	03/29/2012
Preamplifier	HP	8447F	N/A	01/03/2011	02/28/2012
Preamplifier 15	Agilent	8449B	3008A2471	01/06/2011	01/06/2012
Preamplifier 13	MITEQ	JS4-2600400	1329256	06/10/2010	06/10/2011
Cable	Huber Suhner	Sucoflex 106	N/A	02/09/2011	02/08/2012
Cable	Pacific	8D-FB	N/A	10/18/2010	10/17/2011



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Conducted Emission Test Site					
EQUIPMENT	MFR	MODEL	SERIAL	LAST	CAL DUE.
ТҮРЕ		NUMBER	NUMBER	CAL.	
Power Meter 03	Agilent	E4418B	GB41299009	06/05/2010	06/04/2011
Power Sensor RF 01	Agilent	8481H	MY41091048	06/05/2010	06/04/2011
Spectrum Analyzer 19	R&S	FSP40	100116	10/18/2010	10/18/2011
Spectrum Analyzer 20	Agilent	E4443A	MY48250315	05/11/2010	05/10/2011
Temperature Chamber	KSON	THS-B4H100	2287	03/03/2011	03/03/2012
DC Power supply	ABM	51850	N/A	N/A	N/A

Note: Calibration is traceable to NIST or national or international standards.



2.5 Limitation

(1) Conducted Emission

According to section 15.207(a) Conducted Emission Limits is as following.

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Frequency	Conducted Limit (dBuV)		
(MHz)	Quasi-Peak	Average	
0.15 - 0.5	66 - 56	56 - 46	
0.5 - 5	56	46	
5 - 30	60	50	

(2) Radiated Emission 15.249(a)

The field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following.

Frequency	Field strength of	Field strength of	Distance (m)
(MHz)	Fundamental	Harmonics	
902 - 928	50 mV/m	500 uV/m	3
	(94dBuV/m)	(54dBuV/m)	
2400 – 2483.5	50 mV/m	500 uV/m	3
	(94dBuV/m)	(54dBuV/m)	
5725 – 5875	50 mV/m	500 uV/m	3
	(94dBuV/m)	(54dBuV/m)	
24.0 – 24.25 GHz	250 mV/m	2500 uV/m	3
	(107.95dBuV/m)	(67.95dBuV/m)	



(3) Radiated Emission15.249 (d)

Emission Radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50dB below the level of the fundamental or to the general radiated emission limits in Section 15.209 as below, whichever is the lesser attenuation.

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Frequency	Field strength	Distance (m)	Field strength at	
(MHz)	μV/m		3m dBµV/m	
1.705-30	30	30	69.54	
30-88	100	3	40	
88-216	150	3	43.5	
216-960	200	3	46	
Above 960	500	3	54	

(4) Radiated Emission 15.249(e)

For frequencies above 1000MHz, the above field strength limits are based on average limits. The peak filed strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20dB under any condition of modulation.

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 meters.
- 3. Only spurious frequency is permitted to locate within the Restricted Bands specified in provision of ξ 15.205
- 4. Emission spurious frequency which appearing within the Restricted Bands specified in provision of ξ 15.205, then the general radiated emission limits in ξ 15.209 apply.



2.6 Configuration of Tested System

Fig. 2-1 Configuration of Radiated Emission Test

EUT (TX)

Table 2-1 Equipment Used in Tested System

No	Unit	Brand	Model	Serial No.	Power Cord	FCC ID
1	N/A					

Note: All the above equipment/cables were placed in worse case positions to maximize emission signals during emission test.

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



3 Summary of Test Results

FCC Rules	Description Of Test	Result
§15.207	Conducted Emission	Compliant
§15.249(a)(d)(e)	Radiated Emission	Compliant
§15.215 (c)	20dB band width Measurement	Compliant

4 Description of test modes

The EUT has been tested under operating condition. The EUT is staying in continuous transmitting mode

Channel low $(2402 MHz) \cdot mid (2439 MHz)$ and high (2479 MHz) with highest data rate are chosen for full testing.



5 Conducted Emissions Test

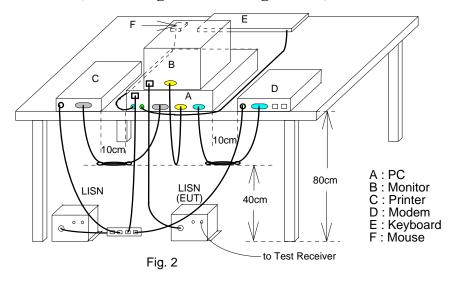
5.1 Measurement Procedure:

1. The EUT was placed on a table which is 0.8m above ground plane.

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- 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)



5.3 Measurement Equipment Used:

Refer to section 2.4 in this report

5.4 Measurement Result:

N/A, The device is powered from battery.



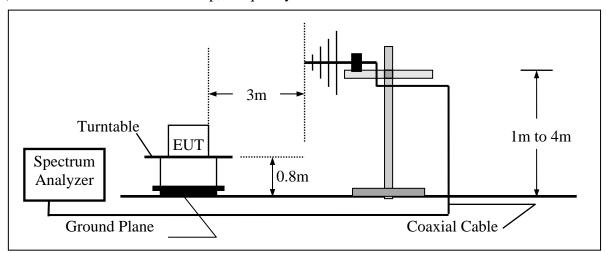
6 Radiated Emission Test

6.1 Measurement Procedure

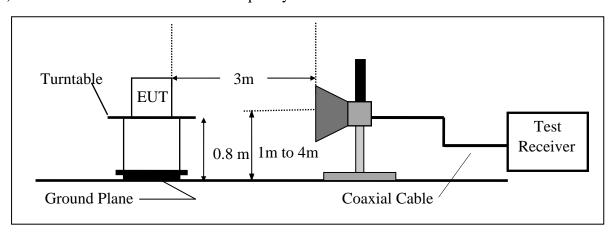
- 1. The EUT was placed on a turntable that is 0.8m above ground plane.
- 2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
- 4. Repeat 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:

Refer to section 2.4 in this report



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	



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6.5 Measurement Result

Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode : TX CH Low Test Date : May 06, 2011

Fundamental Frequency : 2402 MHz Test By : Dino Temp : 25 $^{\circ}$ C Hum. : 60%

N.o	Freq	Reading	Factor	Level	Limit	Over	Remark	Pol
						Limit		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	239.52	45.66	-16.29	29.37	46.00	-16.63	Peak	VERTICAL
2	298.69	41.30	-14.92	26.38	46.00	-19.62	Peak	VERTICAL
3	529.55	35.36	-12.51	22.85	46.00	-23.15	Peak	VERTICAL
4	661.47	31.62	-11.85	19.77	46.00	-26.23	Peak	VERTICAL
5	797.27	34.91	-11.05	23.86	46.00	-22.14	Peak	VERTICAL
6	931.13	33.55	-9.82	23.73	46.00	-22.27	Peak	VERTICAL
1	239.52	40.06	-16.29	23.77	46.00	-22.23	Peak	HORIZONTAL
2	298.69	35.47	-14.92	20.55	46.00	-25.45	Peak	HORIZONTAL
3	399.57	32.65	-13.14	19.51	46.00	-26.49	Peak	HORIZONTAL
4	530.52	35.09	-12.49	22.60	46.00	-23.40	Peak	HORIZONTAL
5	629.46	29.80	-11.96	17.84	46.00	-28.16	Peak	HORIZONTAL
6	799.21	30.96	-11.03	19.93	46.00	-26.07	Peak	HORIZONTAL

Remark:

- 1 No further spurious emissions detected from the lowest internal frequency and 30MHz.
- 2 Measuring frequencies from the lowest internal frequency to the 1GHz.
- 3 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak / QP detector mode.
- 4 Measurement result within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz, VBW=300KHz.



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Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode : TX CH Mid Test Date : May 06, 2011

N.o	Freq	Reading	Factor	Level	Limit	Over	Remark	Pol
						Limit		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	239.52	45.87	-16.29	29.58	46.00	-16.42	Peak	VERTICAL
2	298.69	40.83	-14.92	25.91	46.00	-20.09	Peak	VERTICAL
3	359.80	32.56	-13.65	18.91	46.00	-27.09	Peak	VERTICAL
4	529.55	38.18	-12.51	25.67	46.00	-20.33	Peak	VERTICAL
5	796.30	34.90	-11.06	23.84	46.00	-22.16	Peak	VERTICAL
6	931.13	32.66	-9.82	22.84	46.00	-23.16	Peak	VERTICAL
1	239.52	39.43	-16.29	23.14	46.00	-22.86	Peak	HORIZONTAL
2	298.69	35.13	-14.92	20.21	46.00	-25.79	Peak	HORIZONTAL
3	397.63	36.11	-13.17	22.94	46.00	-23.06	Peak	HORIZONTAL
4	527.61	30.17	-12.54	17.63	46.00	-28.37	Peak	HORIZONTAL
5	599.39	30.87	-12.14	18.73	46.00	-27.27	Peak	HORIZONTAL
6	799.21	28.99	-11.03	17.96	46.00	-28.04	Peak	HORIZONTAL

Remark:

- 1 No further spurious emissions detected from the lowest internal frequency and 30MHz.
- 2 Measuring frequencies from the lowest internal frequency to the 1GHz.
- 3 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak / QP detector mode.
- 4 Measurement result within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz, VBW=300KHz.



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Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode : TX CH High Test Date : May 06, 2011

Fundamental Frequency :2479 MHz Test By : Dino Temp : 25 $^{\circ}$ C Hum. : 60%

N.o	Freq	Reading	Factor	Level	Limit	Over	Remark	Pol
						Limit		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	239.52	45.54	-14.47	31.07	46.00	-14.93	Peak	VERTICAL
2	298.69	41.25	-12.92	28.33	46.00	-17.67	Peak	VERTICAL
3	529.55	35.36	-9.94	25.42	46.00	-20.58	Peak	VERTICAL
4	666.32	30.65	-8.92	21.73	46.00	-24.27	Peak	VERTICAL
5	795.33	33.95	-7.95	26.00	46.00	-20.00	Peak	VERTICAL
6	929.19	32.54	-6.18	26.36	46.00	-19.64	Peak	VERTICAL
1	239.52	39.40	-16.29	23.11	46.00	-22.89	Peak	HORIZONTAL
2	298.69	36.37	-14.92	21.45	46.00	-24.55	Peak	HORIZONTAL
3	398.60	36.34	-13.15	23.19	46.00	-22.81	Peak	HORIZONTAL
4	601.33	31.55	-12.13	19.42	46.00	-26.58	Peak	HORIZONTAL
5	799.21	31.69	-11.03	20.66	46.00	-25.34	Peak	HORIZONTAL
6	958.29	28.08	-9.54	18.54	46.00	-27.46	Peak	HORIZONTAL

Remark:

- 1 No further spurious emissions detected from the lowest internal frequency and 30MHz.
- 2 Measuring frequencies from the lowest internal frequency to the 1GHz.
- 3 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak / QP detector mode.
- 4 Measurement result within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz, VBW=300KHz.



Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode : TX CH Low Test Date : May 06, 2011

N.o	Freq	Reading	Factor	Level	Limit	Over	Remark	Pol
						Limit		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	2402.00	78.90	2.45	81.35	114.00	-32.65	Peak	VERTICAL
1	2402.00	80.20	2.45	82.65	94.00	-11.35	Average	HORIZONTAL
2	2402.00	95.68	2.45	98.13	114.00	-15.87	Peak	HORIZONTAL

N.o	Freq	Reading	Factor	Level	Limit	Over	Remark	Pol
						Limit		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	4804.00	35.50	9.38	44.88	74.00	-29.12	Peak	VERTICAL
2	7206.00							VERTICAL
3	9608.00							VERTICAL
4	12010.00							VERTICAL
1	4804.00							HORIZONTAL
2	7206.00							HORIZONTAL
3	9608.00							HORIZONTAL
4	12010.00							HORIZONTAL

Remark:

- 1 Measuring frequencies from the lowest internal frequency to the 10th of fundamental frequency
- 2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- 3 "F" denotes fundamental frequency; "H" denotes harmonics frequency. "S" denotes spurious frequency.
- 4 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5 Spectrum Peak mode IF bandwidth Setting: 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- 6 Spectrum AV mode if bandwidth Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.



Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode : TX CH Mid Test Date : May 06, 2011

N.o	Freq	Reading	Factor	Level	Limit	Over	Remark	Pol
						Limit		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	2439.00	75.37	2.54	77.91	114.00	-36.09	Peak	VERTICAL
1	2439.00	79.47	2.54	82.01	94.00	-11.99	Average	HORIZONTAL
2	2439.00	94.59	2.54	97.13	114.00	-16.87	Peak	HORIZONTAL

N.o	Freq	Reading	Factor	Level	Limit	Over	Remark	Pol
						Limit		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	4580.00	34.53	8.53	43.06	74.00	-30.94	Peak	VERTICAL
2	7317.00							VERTICAL
3	9756.00							VERTICAL
4	12195.00							VERTICAL
1	4875.00	39.01	9.66	48.67	74.00	-25.33	Peak	HORIZONTAL
2	7317.00							HORIZONTAL
3	9756.00					·		HORIZONTAL
4	12195.00							HORIZONTAL

Remark:

- 1 Measuring frequencies from the lowest internal frequency to the 10th of fundamental frequency
- 2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- 3 "F" denotes fundamental frequency; "H" denotes harmonics frequency. "S" denotes spurious frequency.
- 4 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5 Spectrum Peak mode IF bandwidth Setting: 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- 6 Spectrum AV mode if bandwidth Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.



Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode : TX CH High Test Date : May 06, 2011

Fundamental Frequency : 2479 MHz Test By : Dino

Temp./Hum. : 25 $^{\circ}$ C/: 60%

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N.o	Freq	Reading	Factor	Level	Limit	Over	Remark	Pol
						Limit		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	2479.00	77.77	2.60	80.37	114.00	-33.63	Peak	VERTICAL
1	2479.00	80.36	2.60	82.96	94.00	-11.04	Average	HORIZONTAL
2	2479.00	91.63	2.60	94.23	114.00	-19.77	Peak	HORIZONTAL

N.o	Freq	Reading	Factor	Level	Limit	Over	Remark	Pol
	_					Limit		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	4958.00							VERTICAL
2	7437.00							VERTICAL
3	9916.00							VERTICAL
4	12395.00							VERTICAL
1	4958.00	39.31	9.96	49.27	74.00	-24.73	Peak	HORIZONTAL
2	7437.00							HORIZONTAL
3	9916.00							HORIZONTAL
4	12395.00					_		HORIZONTAL

Remark:

- 1 Measuring frequencies from the lowest internal frequency to the 10th of fundamental frequency
- 2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- 3 "F" denotes fundamental frequency; "H" denotes harmonics frequency. "S" denotes spurious frequency.
- 4 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5 Spectrum Peak mode IF bandwidth Setting: 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- 6 Spectrum AV mode if bandwidth Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.



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Radiated Spurious Emission Measurement Result (Band Edge)

Operation Mode : Band Edge Test Date : May 06, 2011

Temp./Hum. : $25 \, ^{\circ}\text{C}/:60\%$ Test By : Dino

CH Low

Freq	Reading	Factor	Level	Limit	Over	Remark	Pol
					Limit		
MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
2390.00	43.74	2.43	46.17	74.00	-27.83	Peak	VERTICAL
2390.00	43.43	2.43	45.86	54.00	-8.14	Average	HORIZONTAL
2390.00	57.43	2.43	59.86	74.00	-14.14	Peak	HORIZONTAL

CH High

Freq	Reading	Factor	Level	Limit	Over	Remark	Pol
					Limit		
MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
2483.50	48.41	2.62	51.03	74.00	-22.97	Peak	VERTICAL
2483.50	45.36	2.62	47.98	54.00	-6.02	Average	HORIZONTAL
2483.50	61.34	2.62	63.96	74.00	-10.04	Peak	HORIZONTAL

Remark:

- 1 Measuring frequencies from the lowest internal frequency to the 10th of fundamental frequency
- 2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- 3 "F" denotes fundamental frequency; "H" denotes harmonics frequency. "S" denotes spurious frequency.
- 4 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5 Spectrum Peak mode IF bandwidth Setting: 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- 6 Spectrum AV mode if bandwidth Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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7 20 dB Band Width Measurement

7.1 Measurement Procedure

- 1. The EUT was placed on a turn table which is 0.8m above ground plane.
- 2. Set EUT normal operating mode.
- 3. Set SPA Center Frequency = fundamental frequency, RBW = 100kHz, VBW = 300kHz, Span = 10MHz.
- 4. Set SPA Max hold. Mark peak, -20dB.

7.2 Test SET-UP (Block Diagram of Configuration)

Same as 4.2 Radiated Emission Measurement.

7.3 Measurement Equipment Used:

Same as 4.2 Radiated Emission Measurement.

7.4 Measurement Results:

2402 Channel = 1.12MHz

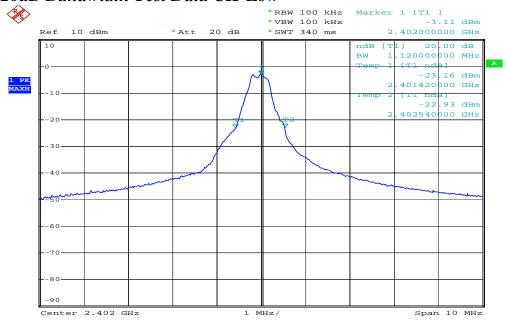
2439 Channel = 1.42MHz

2479 Channel = 1.94MHz

Refer to attached data chart.

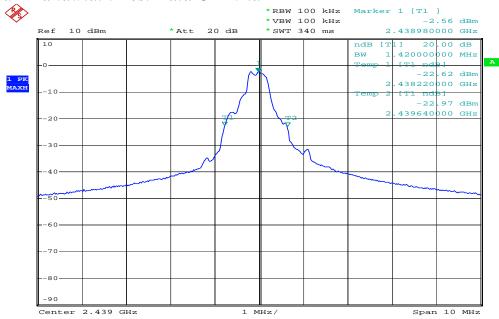


20dB Bandwidth Test Data CH-Low



Date: 5.MAY.2011 17:46:32

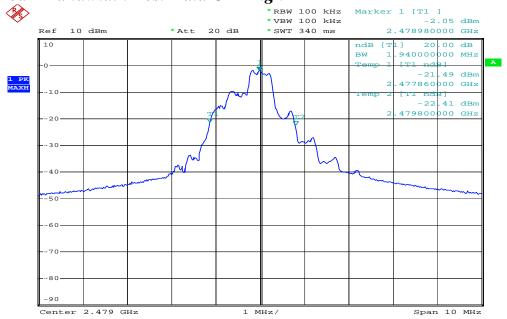
20dB Bandwidth Test Data CH-Mid



Date: 5.MAY.2011 17:45:02



20dB Bandwidth Test Data CH-High



Date: 5.MAY.2011 17:45:41