
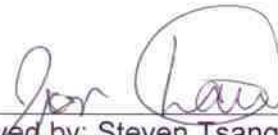




TEST REPORT No: (5210)244-0584

TEST REPORT

To:	ADVANCED CONTROL TECHNOLOGIES, INC.	To:	-
Attn:	Kevin Shelow	Attn:	-
Address:	6805 Hillsdale Ct. Indianapolis, IN. 46250, USA	Address:	-
Fax:	--	Fax:	-
E-mail:	kshelow@act-solutions.com	E-mail:	-
Folder No.:	MEW-10SE005ATHS-B-B		
Factory name:	MEGA WORLD HOLDINGS LTD.		
Location:	Unit J, 13/F., World Tech Centre, 95 How Ming Street, Kwun Tong, Hong Kong		
Product:	FIXTURE MODULE RECEIVER Model No.: ZRF113 Series 300		
(Please see Exhibit: External Photo)	Sample No:	HK100825/002	
	Test date:	September 3, 2010 To September 8, 2010	
	Test Requested:	FCC Part 15 - 2008	
	Test Method:	ANSI C63.4 - 2003	
	FCC ID:	QIE0791-01	
The results given in this report are related to the tested specimen of the described electrical apparatus.			
CONCLUSION: The submitted sample was found to <u>COMPLY</u> with requirement of FCC Part 15 Subpart C.			
Authorized Signature:			
			
Reviewed by: Keith Yeung		Approved by: Steven Tsang	
Date: October 12, 2010		Date: October 12, 2010	

BUREAU VERITAS HONG KONG LIMITED –
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This report is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. Our report is limited to the test samples identified herein. The results set forth in this report are not necessarily indicative or representative of the statistical quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof. You shall have thirty days from receipt of this report to request additional testing of the samples or to notify us of any errors or omissions relating to our report, provided, however, such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.



TEST REPORT No: (5210)244-0584

Location of the test laboratory

Radiated and Conducted emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2003. An Open Area Test Site and Full Anechoic Chamber (FCC Listed Site, Registration No. 642151) are set up for investigation and located at :

BUREAU VERITAS HONG KONG LIMITED, EMC CENTRE

No. 2106-2107, 21/F., Westin Centre,
26 Hung To Road,
Kwun Tong, Kowloon,
Hong Kong

List of measuring equipment

Radiated Emission

EQUIPMENT	MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATION DUE
EMI TEST RECEIVER	R&S	ESCS 30	830986/030	26-SEP-2010
BILOG ANTENNA	SCHAFFNER	CBL6112D	25229	02-AUG-2011
OPEN AREA TEST SITE	BVCPS	N/A	N/A	05-JULY-2011
ANECHOIC CHAMBER	ALBATROSS	M-CDC	80374004499B	06-JULY-2011
HORN ANTENNA	SCHWARZBECK	BBHA9120D	9120D-692	20-JULY-2011
PREAMPLIFIER	SCHWARZBECK	BBV9718	9718-152	26-JULY-2011
COAXIAL CABLE	SUHNER	N/A	N/A	07-DEC-2010

Conducted Emission

EQUIPMENT	MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATION DUE
EMI TEST RECEIVER	R&S	ESCS 30	830986/030	26-SEP-2010
LISN	R&S	ENV216	100024	09-MAR-2011

Remarks:-

N/A : Not Applicable or Not Available

The measurement instrumentation uncertainty would be taking into consideration on each of the test result contents.



TEST REPORT No: (5210)244-0584

Equipment Under Test [EUT]

Description of Sample:

Model Name: FIXTURE MODULE RECEIVER
Model Number: ZRF113 Series 300
Additional Model Number: LRF-20
Additional Model information: Declare the Circuit, PCB layout, Electrical parts and outlook of the products are identical to the basic model, except the model number.
Rating: 120Va.c, 60Hz

Description of EUT Operation:

The Equipment Under Test (EUT) is an ADVANCED CONTROL TECHNOLOGIES, INC. of RF Fixture Module. The transceiver is 1 button on/off function and operating at 908.40MHz. The transmission occurs briefly in response to one of two events: 1) A manually issued command initiated by the User via a remote control, or 2) An automated command that is initiated when the internal time of day clock matches a previously User-programmed time. Modulation by IC, and type is FSK modulation.

The transmitter has different control:

1. On/Off button – on/off control

Antenna Requirement (Section 15.203)

The EUT is use of a permanently antenna. The antenna consists of 8cm long wire. It is soldered on the PCB. The antenna is not replaceable or user serviceable. The requirements of S15.203 are met. There are no deviations or exceptions to the specifications.

TEST REPORT No: (5210)244-0584

Test Results

Emission

Conducted Emissions (150kHz to 30MHz)

Test Requirement:	FCC Part 15 Section 15.207
Test Method:	ANSI C63.4
Test Limits:	Class B
Test Date(s):	2010-09-03
Temperature:	26.0 °C
Humidity:	65.0 %
Atmospheric Pressure:	100.0 kPa
Mode of Operation:	Transmission mode (with load), Receiver mode (with load) & On mode (with load)
Tested Voltage:	117Va.c., 60Hz

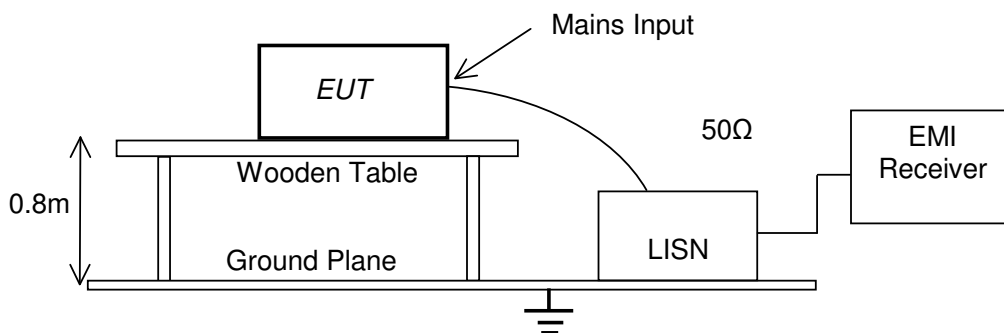
Test Procedure:

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.4 – 2003. The EUT was setup as described in the procedures, and both lines were measured.

Initial measurements were performed in peak and average detection modes on the live and neutral line, any emissions recorded within 30dB of the relevant limit lines were re-measured using quasi-peak and average detection on the live and neutral lines with the worst case recorded in the table of results.

Location: Shielding Room, No. 603, 6/F., Westin Centre, 26 Hung To Road, Kwun Tong, Kowloon, Hong Kong

Test Setup:



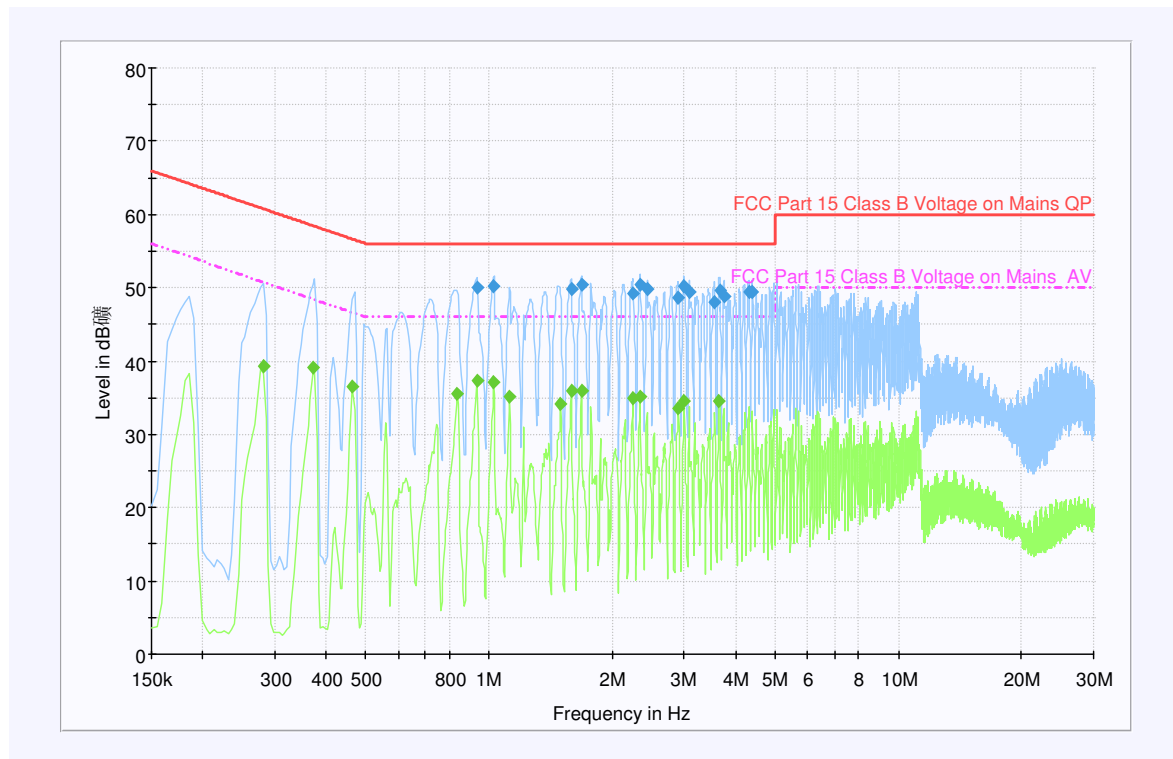
TEST REPORT No: (5210)244-0584

Measurement Data: Live

Test Result of (Transmission mode, with load): PASS

Results and limit lines for Conducted Emission:

Limits for Conducted Emission Test, please refer to limit lines (Quasi-Peak and Average) in the following diagram.



TEST REPORT No: (5210)244-0584

Results and limit lines for Conducted Emission:

Limits for Conducted Emission Test, please refer to limit lines (Quasi-Peak and Average) in the following tables.

Frequency (MHz)	QuasiPeak (dBμV)	Bandwidth (kHz)	Line	Margin (dB)	Limit (dBμV)
0.933000	50.0	9.000	L1	6.0	56.0
1.027500	50.3	9.000	L1	5.8	56.0
1.590000	49.9	9.000	L1	6.1	56.0
1.684500	50.4	9.000	L1	5.6	56.0
2.242500	49.3	9.000	L1	6.7	56.0
2.341500	50.5	9.000	L1	5.5	56.0
2.436000	49.8	9.000	L1	6.2	56.0
2.895000	48.6	9.000	L1	7.4	56.0
2.998500	50.2	9.000	L1	5.8	56.0
3.093000	49.4	9.000	L1	6.6	56.0
3.547500	48.0	9.000	L1	8.0	56.0
3.655500	49.6	9.000	L1	6.4	56.0
3.750000	48.8	9.000	L1	7.2	56.0
4.308000	49.5	9.000	L1	6.5	56.0
4.402500	49.4	9.000	L1	6.6	56.0

Frequency (MHz)	Average (dBμV)	Bandwidth (kHz)	Line	Margin (dB)	Limit (dBμV)
0.280500	39.2	9.000	L1	11.6	50.8
0.370500	39.0	9.000	L1	9.5	48.5
0.465000	36.5	9.000	L1	10.1	46.6
0.838500	35.5	9.000	L1	10.5	46.0
0.933000	37.3	9.000	L1	8.7	46.0
1.027500	37.1	9.000	L1	8.9	46.0
1.122000	35.1	9.000	L1	10.9	46.0
1.495500	34.1	9.000	L1	11.9	46.0
1.590000	36.0	9.000	L1	10.0	46.0
1.684500	36.0	9.000	L1	10.0	46.0
2.247000	34.9	9.000	L1	11.1	46.0
2.341500	35.2	9.000	L1	10.8	46.0
2.899500	33.6	9.000	L1	12.4	46.0
2.994000	34.6	9.000	L1	11.4	46.0
3.651000	34.5	9.000	L1	11.5	46.0

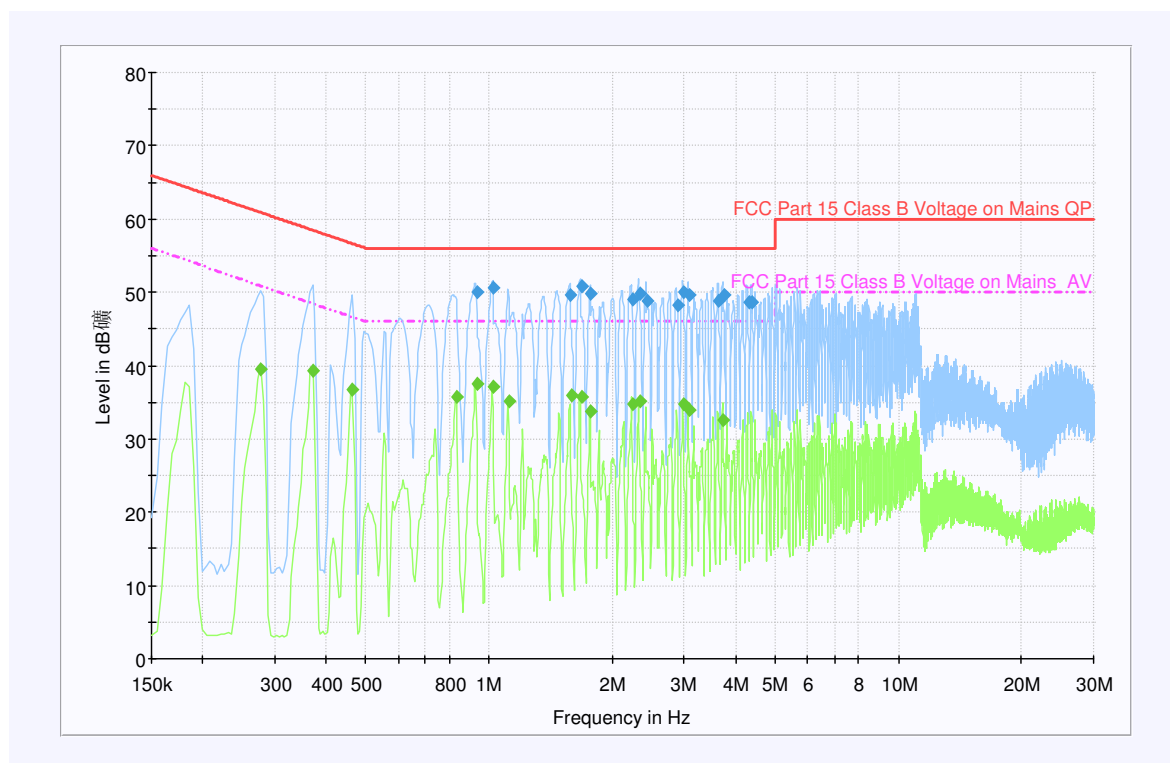
TEST REPORT No: (5210)244-0584

Measurement Data: Neutral

Test Result of (Transmission mode, with load): PASS

Results and limit lines for Conducted Emission:

Limits for Conducted Emission Test, please refer to limit lines (Quasi-Peak and Average) in the following diagram.



TEST REPORT No: (5210)244-0584

Results and limit lines for Conducted Emission:

Limits for Conducted Emission Test, please refer to limit lines (Quasi-Peak and Average) in the following tables.

Frequency (MHz)	QuasiPeak (dBμV)	Bandwidth (kHz)	Line	Margin (dB)	Limit (dBμV)
0.933000	50.1	9.000	N	5.9	56.0
1.027500	50.5	9.000	N	5.5	56.0
1.585500	49.5	9.000	N	6.5	56.0
1.684500	50.8	9.000	N	5.2	56.0
1.779000	49.7	9.000	N	6.3	56.0
2.238000	49.1	9.000	N	6.9	56.0
2.337000	49.8	9.000	N	6.2	56.0
2.431500	48.9	9.000	N	7.1	56.0
2.890500	48.3	9.000	N	7.7	56.0
2.994000	50.0	9.000	N	6.0	56.0
3.088500	49.6	9.000	N	6.4	56.0
3.646500	48.9	9.000	N	7.1	56.0
3.745500	49.6	9.000	N	6.4	56.0
4.303500	48.7	9.000	N	7.3	56.0
4.398000	48.6	9.000	N	7.4	56.0

Frequency (MHz)	Average (dBμV)	Bandwidth (kHz)	Line	Margin (dB)	Limit (dBμV)
0.276000	39.6	9.000	N	11.3	50.9
0.370500	39.3	9.000	N	9.2	48.5
0.465000	36.8	9.000	N	9.8	46.6
0.838500	35.8	9.000	N	10.2	46.0
0.933000	37.5	9.000	N	8.6	46.0
1.027500	37.2	9.000	N	8.8	46.0
1.122000	35.1	9.000	N	10.9	46.0
1.590000	36.0	9.000	N	10.0	46.0
1.684500	35.8	9.000	N	10.2	46.0
1.774500	33.8	9.000	N	12.2	46.0
2.242500	34.8	9.000	N	11.2	46.0
2.337000	35.2	9.000	N	10.8	46.0
2.994000	34.8	9.000	N	11.2	46.0
3.088500	33.9	9.000	N	12.1	46.0
3.741000	32.6	9.000	N	13.4	46.0

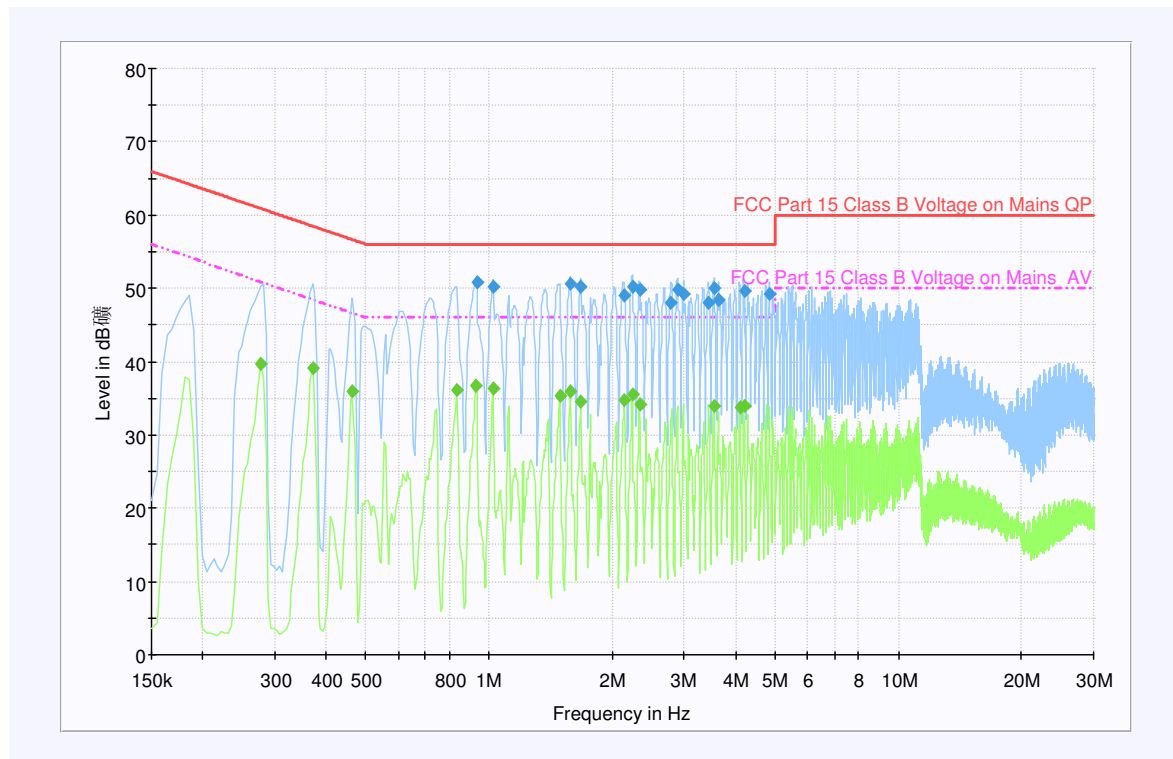
TEST REPORT No: (5210)244-0584

Measurement Data: Live

Test Result of (Receiver mode, with load): PASS

Results and limit lines for Conducted Emission:

Limits for Conducted Emission Test, please refer to limit lines (Quasi-Peak and Average) in the following diagram.



TEST REPORT No: (5210)244-0584

Results and limit lines for Conducted Emission:

Limits for Conducted Emission Test, please refer to limit lines (Quasi-Peak and Average) in the following tables.

Frequency (MHz)	QuasiPeak (dBμV)	Bandwidth (kHz)	Line	Margin (dB)	Limit (dBμV)
0.933000	50.7	9.000	L1	5.3	56.0
1.027500	50.3	9.000	L1	5.7	56.0
1.585500	50.6	9.000	L1	5.4	56.0
1.680000	50.3	9.000	L1	5.7	56.0
2.139000	49.0	9.000	L1	7.0	56.0
2.238000	50.3	9.000	L1	5.7	56.0
2.332500	49.9	9.000	L1	6.1	56.0
2.787000	48.1	9.000	L1	7.9	56.0
2.890500	49.8	9.000	L1	6.2	56.0
2.985000	49.2	9.000	L1	6.8	56.0
3.439500	48.0	9.000	L1	8.0	56.0
3.547500	50.0	9.000	L1	6.0	56.0
3.637500	48.5	9.000	L1	7.5	56.0
4.200000	49.7	9.000	L1	6.3	56.0
4.852500	49.2	9.000	L1	6.8	56.0

Frequency (MHz)	Average (dBμV)	Bandwidth (kHz)	Line	Margin (dB)	Limit (dBμV)
0.276000	39.7	9.000	L1	11.2	50.9
0.370500	39.2	9.000	L1	9.3	48.5
0.465000	35.9	9.000	L1	10.7	46.6
0.838500	36.1	9.000	L1	9.9	46.0
0.928500	36.8	9.000	L1	9.2	46.0
1.023000	36.3	9.000	L1	9.7	46.0
1.491000	35.3	9.000	L1	10.7	46.0
1.585500	35.9	9.000	L1	10.1	46.0
1.675500	34.5	9.000	L1	11.5	46.0
2.143500	34.8	9.000	L1	11.2	46.0
2.238000	35.5	9.000	L1	10.5	46.0
2.332500	34.2	9.000	L1	11.8	46.0
3.543000	34.0	9.000	L1	12.0	46.0
4.105500	33.8	9.000	L1	12.2	46.0
4.200000	33.9	9.000	L1	12.1	46.0

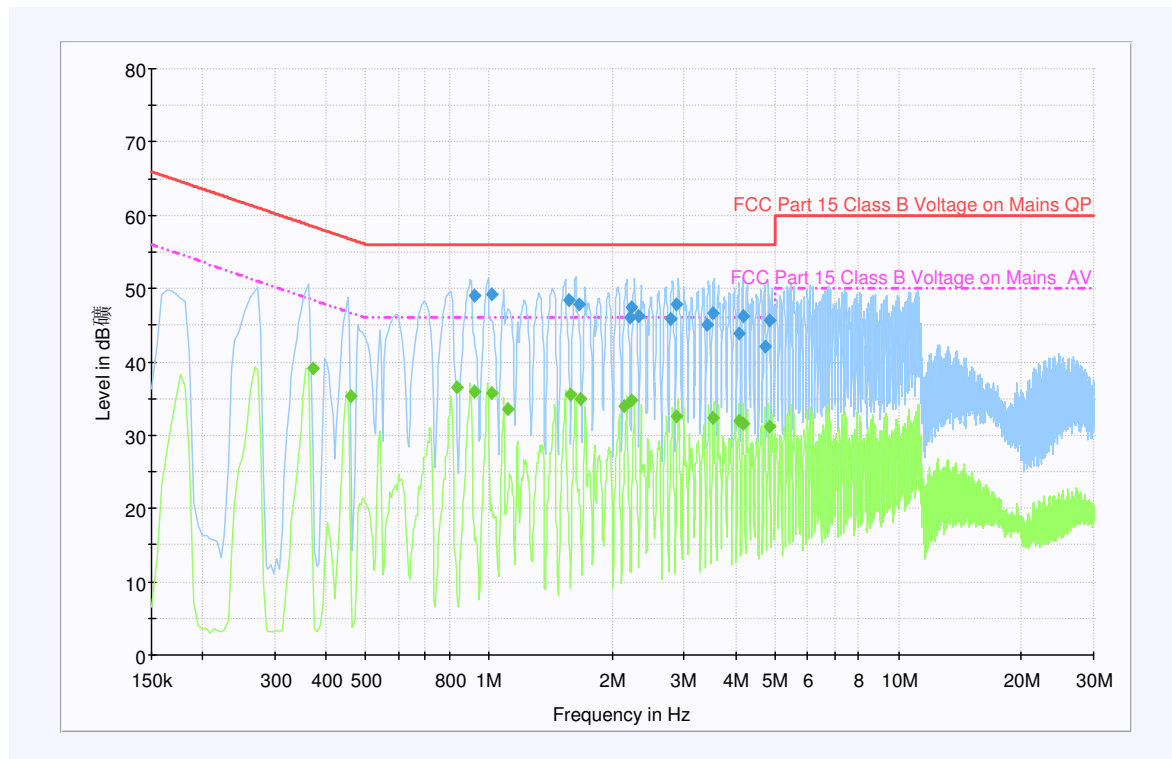
TEST REPORT No: (5210)244-0584

Measurement Data: Neutral

Test Result of (Receiver mode, with load): PASS

Results and limit lines for Conducted Emission:

Limits for Conducted Emission Test, please refer to limit lines (Quasi-Peak and Average) in the following diagram.



TEST REPORT No: (5210)244-0584

Results and limit lines for Conducted Emission:

Limits for Conducted Emission Test, please refer to limit lines (Quasi-Peak and Average) in the following tables.

Frequency (MHz)	QuasiPeak (dBμV)	Bandwidth (kHz)	Line	Margin (dB)	Limit (dBμV)
0.924000	49.1	9.000	N	6.9	56.0
1.018500	49.3	9.000	N	6.7	56.0
1.572000	48.5	9.000	N	7.5	56.0
1.666500	47.9	9.000	N	8.1	56.0
2.215500	46.0	9.000	N	10.0	56.0
2.220000	47.5	9.000	N	8.5	56.0
2.314500	46.2	9.000	N	9.8	56.0
2.769000	45.9	9.000	N	10.1	56.0
2.872500	47.9	9.000	N	8.1	56.0
3.417000	45.1	9.000	N	10.9	56.0
3.520500	46.7	9.000	N	9.3	56.0
4.065000	43.9	9.000	N	12.1	56.0
4.173000	46.2	9.000	N	9.8	56.0
4.713000	42.1	9.000	N	13.9	56.0
4.825500	45.6	9.000	N	10.4	56.0

Frequency (MHz)	Average (dBμV)	Bandwidth (kHz)	Line	Margin (dB)	Limit (dBμV)
0.370500	39.2	9.000	N	9.3	48.5
0.460500	35.3	9.000	N	11.4	46.7
0.834000	36.5	9.000	N	9.5	46.0
0.924000	36.0	9.000	N	10.0	46.0
1.018500	35.8	9.000	N	10.2	46.0
1.113000	33.5	9.000	N	12.5	46.0
1.576500	35.5	9.000	N	10.5	46.0
1.671000	34.9	9.000	N	11.1	46.0
2.134500	33.9	9.000	N	12.1	46.0
2.229000	34.8	9.000	N	11.2	46.0
2.877000	32.5	9.000	N	13.5	46.0
3.529500	32.4	9.000	N	13.6	46.0
4.087500	31.9	9.000	N	14.1	46.0
4.182000	31.6	9.000	N	14.4	46.0
4.834500	31.2	9.000	N	14.8	46.0

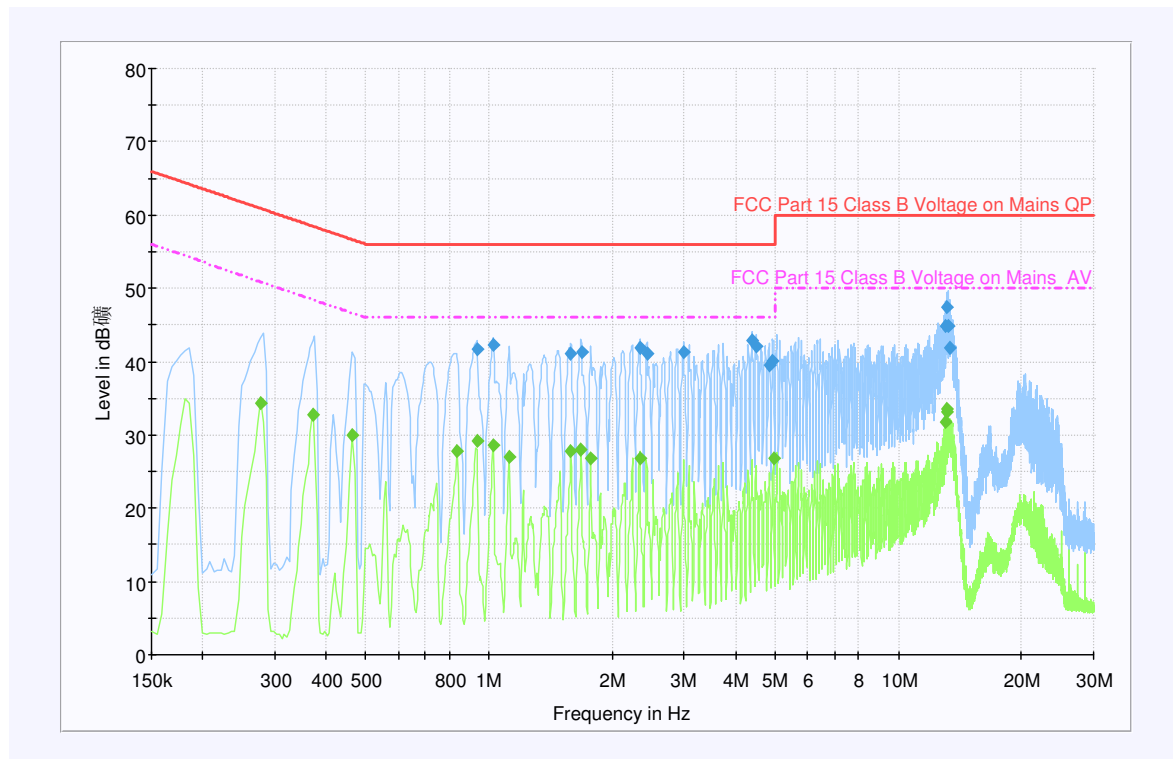
TEST REPORT No: (5210)244-0584

Measurement Data: Live

Test Result of (On mode, with load): PASS

Results and limit lines for Conducted Emission:

Limits for Conducted Emission Test, please refer to limit lines (Quasi-Peak and Average) in the following diagram.



TEST REPORT No: (5210)244-0584

Results and limit lines for Conducted Emission:

Limits for Conducted Emission Test, please refer to limit lines (Quasi-Peak and Average) in the following tables.

Frequency (MHz)	QuasiPeak (dBμV)	Bandwidth (kHz)	Line	Margin (dB)	Limit (dBμV)
0.933000	41.8	9.000	L1	14.2	56.0
1.027500	42.3	9.000	L1	13.7	56.0
1.585500	41.1	9.000	L1	14.9	56.0
1.684500	41.3	9.000	L1	14.7	56.0
2.337000	41.9	9.000	L1	14.1	56.0
2.431500	41.1	9.000	L1	14.9	56.0
2.989500	41.2	9.000	L1	14.8	56.0
4.393500	43.0	9.000	L1	13.0	56.0
4.488000	42.1	9.000	L1	13.9	56.0
4.839000	39.5	9.000	L1	16.5	56.0
4.938000	40.2	9.000	L1	15.8	56.0
13.078500	44.8	9.000	L1	15.2	60.0
13.182000	47.5	9.000	L1	12.5	60.0
13.281000	44.9	9.000	L1	15.1	60.0
13.375500	42.0	9.000	L1	18.0	60.0

Frequency (MHz)	Average (dBμV)	Bandwidth (kHz)	Line	Margin (dB)	Limit (dBμV)
0.276000	34.3	9.000	L1	16.6	50.9
0.370500	32.7	9.000	L1	15.8	48.5
0.465000	29.9	9.000	L1	16.7	46.6
0.838500	27.9	9.000	L1	18.1	46.0
0.933000	29.2	9.000	L1	16.8	46.0
1.027500	28.7	9.000	L1	17.3	46.0
1.117500	27.0	9.000	L1	19.0	46.0
1.585500	27.7	9.000	L1	18.3	46.0
1.680000	28.1	9.000	L1	17.9	46.0
1.774500	26.7	9.000	L1	19.3	46.0
2.332500	26.8	9.000	L1	19.2	46.0
4.951500	26.8	9.000	L1	19.2	46.0
12.984000	31.7	9.000	L1	18.3	50.0
13.083000	33.1	9.000	L1	16.9	50.0
13.182000	33.6	9.000	L1	16.4	50.0

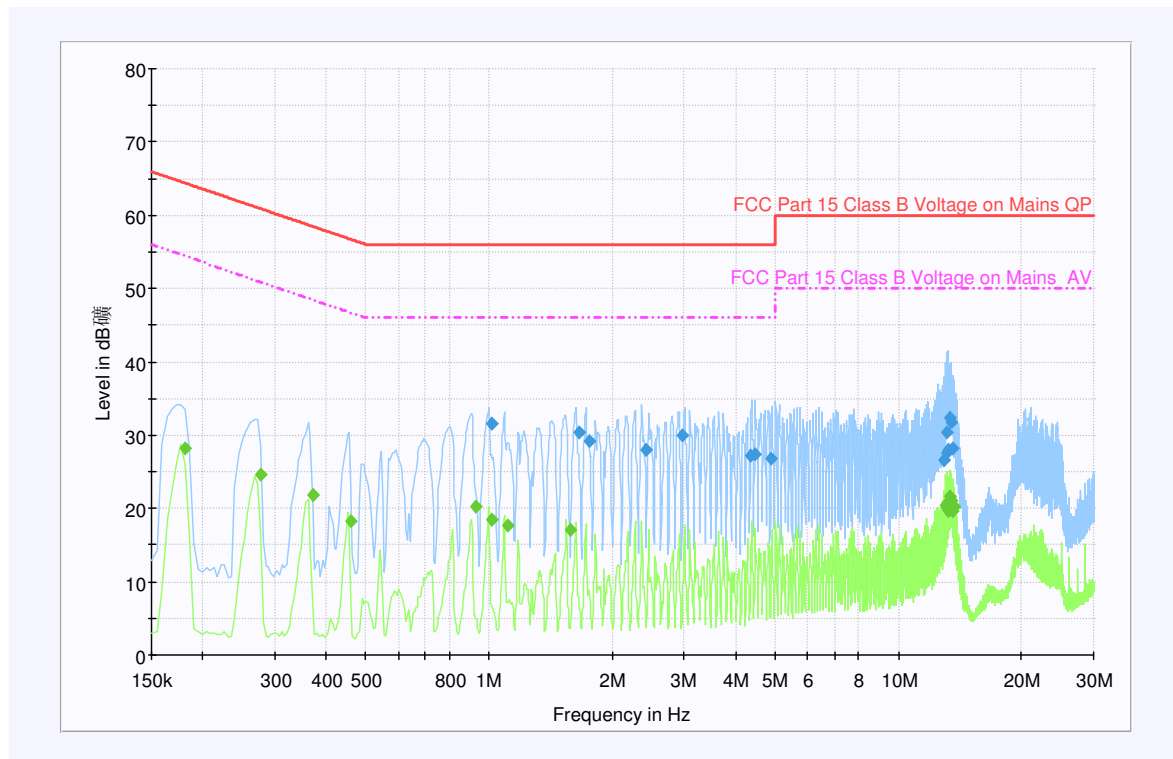
TEST REPORT No: (5210)244-0584

Measurement Data: Neutral

Test Result of (On mode, with load): PASS

Results and limit lines for Conducted Emission:

Limits for Conducted Emission Test, please refer to limit lines (Quasi-Peak and Average) in the following diagram.



TEST REPORT No: (5210)244-0584

Results and limit lines for Conducted Emission:

Limits for Conducted Emission Test, please refer to limit lines (Quasi-Peak and Average) in the following tables.

Frequency (MHz)	QuasiPeak (dBμV)	Bandwidth (kHz)	Line	Margin (dB)	Limit (dBμV)
1.018500	31.5	9.000	N	24.5	56.0
1.666500	30.4	9.000	N	25.6	56.0
1.761000	29.2	9.000	N	26.8	56.0
2.409000	28.0	9.000	N	28.0	56.0
2.967000	30.0	9.000	N	26.0	56.0
4.357500	27.2	9.000	N	28.8	56.0
4.456500	27.3	9.000	N	28.7	56.0
4.902000	26.7	9.000	N	29.3	56.0
12.970500	26.5	9.000	N	33.5	60.0
13.083000	27.5	9.000	N	32.5	60.0
13.182000	30.3	9.000	N	29.7	60.0
13.195500	28.0	9.000	N	32.0	60.0
13.384500	32.3	9.000	N	27.7	60.0
13.425000	31.8	9.000	N	28.2	60.0
13.614000	28.2	9.000	N	31.8	60.0

Frequency (MHz)	Average (dBμV)	Bandwidth (kHz)	Line	Margin (dB)	Limit (dBμV)
0.181500	28.2	9.000	N	26.2	54.4
0.276000	24.6	9.000	N	26.3	50.9
0.370500	21.9	9.000	N	26.6	48.5
0.460500	18.2	9.000	N	28.5	46.7
0.928500	20.2	9.000	N	25.8	46.0
1.018500	18.5	9.000	N	27.5	46.0
1.113000	17.6	9.000	N	28.4	46.0
1.576500	17.1	9.000	N	28.9	46.0
13.024500	20.4	9.000	N	29.6	50.0
13.123500	20.0	9.000	N	30.0	50.0
13.222500	19.7	9.000	N	30.3	50.0
13.348500	21.7	9.000	N	28.3	50.0
13.456500	21.1	9.000	N	28.9	50.0
13.560000	19.7	9.000	N	30.3	50.0
13.681500	20.2	9.000	N	29.8	50.0

TEST REPORT No: (5210)244-0584

Radiated Emissions (Fundamental)

Test Requirement: FCC Part 15 Section 15.249
Test Method: ANSI C63.4
Test Date(s): 2010-09-08
Temperature: 30.0 °C
Humidity: 72.0 %
Atmospheric Pressure: 100.2 kPa
Mode of Operation: Transmission mode (with load)
Tested Voltage: 117Va.c., 60Hz

Test Procedure:

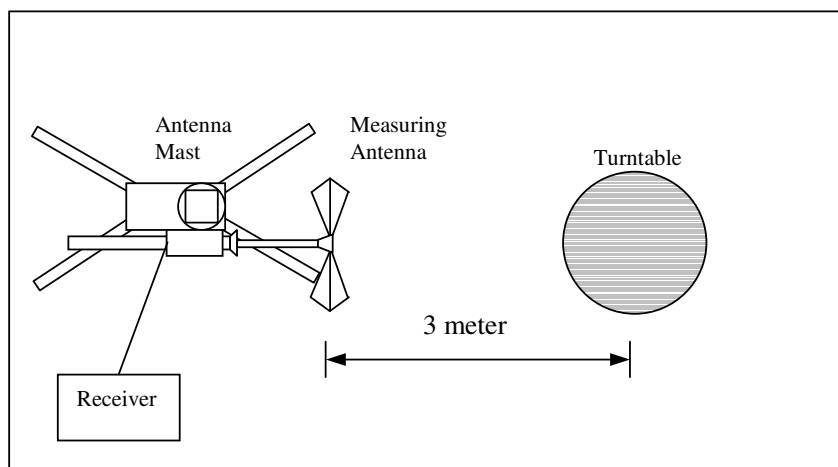
Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2003.

The equipment under test (EUT) was placed on a non-conductive turntable with dimensions of 1.5m x 1m and 0.8m high above the ground. 3m from the EUT, a broadband antenna mounting on the mast received the signal strength. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, For battery operated equipment, the equipment tests shall be perform using new battery. The turntable was rotated to maximize the emission level. The antenna was then moving along the mast from 1m up to 4m until no more higher value was found. Both horizontal and vertical polarization of the antenna were placed and investigated.

For below 30MHz, a loop antenna with its vertical plane is place 3m from the EUT and rotated about its vertical axis for maximum response at each azimuth about the EUT. And the centre of the loop shall be 1m above the ground.

Location: The Roof, Westin Centre, 26 Hung To Road, Kwun Tong, Kowloon, Hong Kong

Test Setup: Open Area Test Site





TEST REPORT No: (5210)244-0584

Limits for Field Strength of Fundamental Emissions [FCC 47CFR 15.249]:

Frequency Range of Fundamental [MHz]	Field Strength of Fundamental Emission (Quasi-Peak) [mV/m]	Field Strength of Harmonics Emission (Average) [μV/m]
902-928	50	500

Measurement Data

Test Result of (Transmission mode, with load): PASS

Detection mode: Quasi-Peak

Frequency (MHz)	Polarity (H/V) and degree	EUT Orientation	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
908.39	V	Front side	25.2	78.9	94.0	-15.1

Note: Field Strength includes Antenna Factor and Cable Loss.

Receiver setting: RBW = 100KHz
VBW = 300KHz



TEST REPORT No: (5210)244-0584

Radiated Emissions (Spurious Emission)

Test Requirement: FCC Part 15 Section 15.249
Test Method: ANSI C63.4
Test Date(s): 2010-09-08
Temperature: 30.0 °C
Humidity: 72.0 %
Atmospheric Pressure: 100.2 kPa
Mode of Operation: Transmission mode (with load)
Tested Voltage: 117Va.c., 60Hz

Measurement Data

Test Result of (Transmission mode, with load): **PASS**

Detection mode: **Peak**

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
1816.78	H	-5.8	34.6	74.0	-39.4
2725.17	H	-3.1	41.0	74.0	-33.0
3633.56	H	-1.1	42.8	74.0	-31.2
4541.95	H	1.7	43.2	74.0	-30.8
5450.34	V	4.1	45.5	74.0	-28.5
6358.73	V	6.8	45.4	74.0	-28.6
7267.12	H	10.0	47.5	74.0	-26.5
8175.51	H	11.2	48.9	74.0	-25.1
9083.90	H	12.4	48.9	74.0	-25.1
9992.29	H	11.9	50.6	74.0	-23.4

Note: Field Strength includes Antenna Factor and Cable Loss.

Receiver setting: RBW = 1MHz
VBW = 1MHz



TEST REPORT No: (5210)244-0584

Measurement Data

Test Result of (Transmission mode, with load): PASS

Detection mode: Average

Frequency (MHz)	Polarity (H/V)	Antenna Factor and Cable Loss (dB/m)	Field Strength at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
1816.78	H	-5.8	24.5	54.0	-29.5
2725.17	H	-3.1	30.1	54.0	-23.9
3633.56	H	-1.1	32.2	54.0	-21.8
4541.95	H	1.7	32.9	54.0	-21.1
5450.34	H	4.1	34.4	54.0	-19.6
6358.73	H	6.8	35.2	54.0	-18.8
7267.12	H	10.0	38.0	54.0	-16.0
8175.51	H	11.2	39.0	54.0	-15.0
9083.90	H	12.4	39.5	54.0	-14.5
9992.29	H	11.9	39.6	54.0	-14.4

Note: Field Strength includes Antenna Factor and Cable Loss.

Receiver setting: RBW = 1MHz
VBW = 10Hz



TEST REPORT No: (5210)244-0584

Radiated Emissions (30MHz – 5GHz)

Test Requirement: FCC Part 15 Section 15.209
Test Method: ANSI C63.4
Test Date(s): 2010-09-08
Temperature: 30.0 °C
Humidity: 72.0 %
Atmospheric Pressure: 100.2 kPa
Mode of Operation: Transmission mode (with load), Receiver mode (with load) and On mode (with load)
Tested Voltage: 117Va.c., 60Hz

Limits for Radiated Emissions [FCC 47 CFR 15.209]:

Frequency Range [MHz]	Quasi-Peak Limits [μV/m]
1.705-30	300
30-88	100
88-216	150
216-960	200
Above960	500



TEST REPORT No: (5210)244-0584

Measurement Data

Test Result of (Receiver mode, with load): PASS

Detection mode: Quasi-Peak

Frequency (MHz)	Polarity (H/V)	Field Strength at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
908.39	V	36.5	46.0	-9.5

Detection mode: Peak

Frequency (MHz)	Polarity (H/V)	Field Strength at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
1816.78	H	35.3	74.0	-38.7
2725.17	H	40.9	74.0	-33.1
3633.56	H	42.9	74.0	-31.1
4541.95	H	43.5	74.0	-30.5

Note: Field Strength includes Antenna Factor and Cable Loss.

During the test shall be used to radiate an unmodulated CW signal to a superregenerative receiver at its operating frequency in order to "cohere" or to resolve the individual components of the characteristic broadband emissions from such a receiver. The level of the signal may need to be increased for this to occur.

Receiver setting (30-1000MHz) :RBW = 100KHz
:VBW = 300KHz

Receiver setting (1-18GHz) :RBW = 1MHz
:VBW = 1MHz



TEST REPORT No: (5210)244-0584

Measurement Data

Test Result of (Receiver mode, with load): **PASS**

Detection mode: Average

Frequency (MHz)	Polarity (H/V)	Field Strength at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
1816.78	V	24.7	54.0	-29.3
2725.17	H	29.9	54.0	-24.1
3633.56	H	32.2	54.0	-21.8
4541.95	H	32.8	54.0	-21.2

Note: Field Strength includes Antenna Factor and Cable Loss.

During the test shall be used to radiate an unmodulated CW signal to a superregenerative receiver at its operating frequency in order to "cohere" or to resolve the individual components of the characteristic broadband emissions from such a receiver. The level of the signal may need to be increased for this to occur.

Receiver setting :RBW = 1MHz
:VBW = 10Hz

Test Result of (On mode, with load): **PASS**

Detection mode: Quasi-Peak

Frequency (MHz)	Polarity (H/V)	Field Strength at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
35.25	H	28.4	40.0	-11.6
132.50	H	23.5	43.5	-20.0
235.50	V	26.8	46.0	-19.2
331.68	V	30.4	46.0	-15.6
413.87	V	32.0	46.0	-14.0
613.75	H	34.6	46.0	-11.4

Note: Field Strength includes Antenna Factor and Cable Loss.

Receiver setting (30-1000MHz) :RBW = 100KHz
:VBW = 300KHz

Receiver setting (1-18GHz) :RBW = 1MHz
:VBW = 1MHz



TEST REPORT No: (5210)244-0584

Frequency range of Fundamental Emission

Test Requirement: FCC 47 CFR 15.249
Test Method: ANSI C63.4:2003 (Section 13.1.7)
Test Date(s): 2010-09-07
Temperature: 22.0 °C
Humidity: 72.0 %
Atmospheric Pressure: 102.1 kPa
Mode of Operation: Transmission mode (with load)
Tested Voltage: 117Va.c., 60Hz

Test Method:

The bandwidth is measured at an amplitude level reduced from the reference level by a specified ratio. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst-case (i.e. the widest) bandwidth.

Limits for Frequency range of Fundamental Emission:

Frequency [MHz]	FCC Limits [MHz]
908.390	902-928

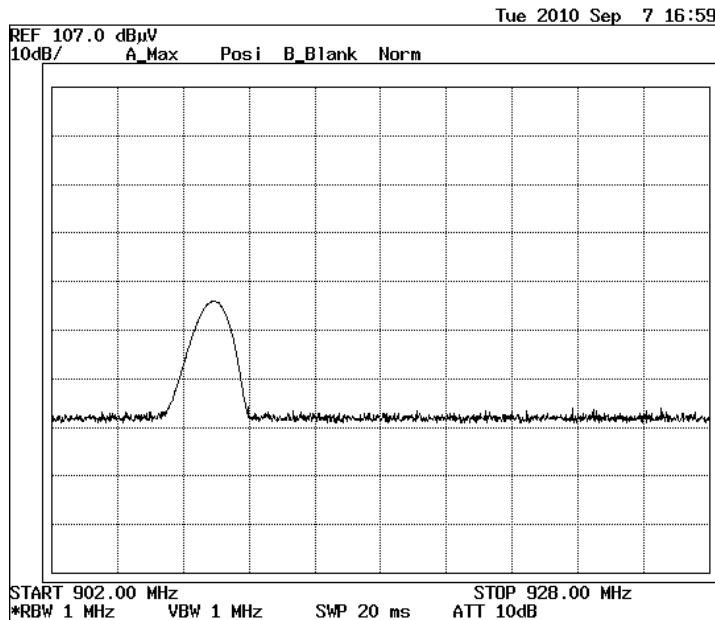


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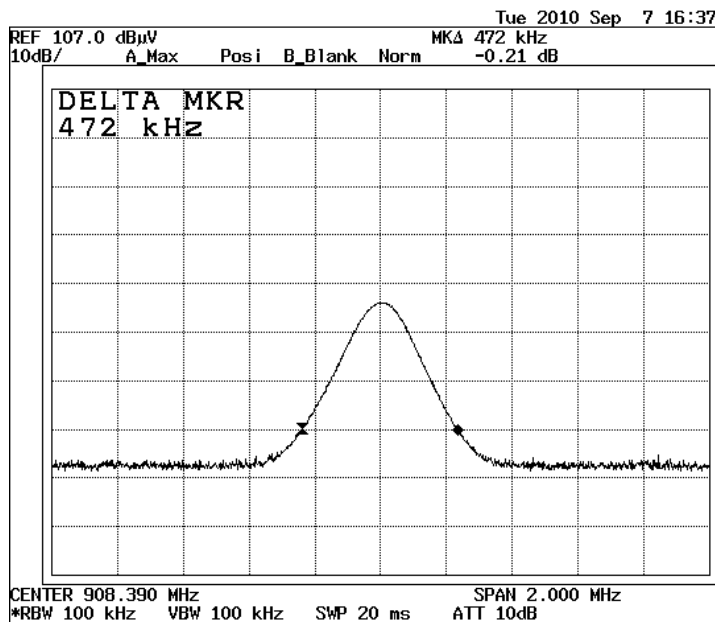
TEST REPORT No: (5210)244-0584

Measurement Data :

Test Result of Frequency Range of Fundamental Emission: PASS



Test Result of 26dB bandwidth of Fundamental Emission: PASS



***** End of Report *****

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