



STC Test Report

Date : 2012-10-26

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No. : DM108561

Applicant (SHM004):

SHENZHEN MANIWAY ELECTRONICS LIMITED
BLDG.8, SANLIAN HEBEI INDUSTRIAL ESTATE,
LONGHUA STREET, BAO'AN DIST., SHENZHEN,
CHINA

Manufacturer:

SHENZHEN MANIWAY ELECTRONICS LIMITED
BLDG.8, SANLIAN HEBEI INDUSTRIAL ESTATE,
LONGHUA STREET, BAO'AN DIST., SHENZHEN,
CHINA

Description of Sample(s):

Product: 2.1CH BLUETOOTH SPEAKER
Brand Name: MANIWAY
Model Number: MW-1265
FCC ID: OG5MW1265

Date Sample(s) Received: 2012-07-19

Date Tested: 2012-07-21 to 2012-08-11

Investigation Requested:

Perform ElectroMagnetic Interference measurement in accordance with FCC 47CFR [Codes of Federal Regulations] Part 15: 2011 and ANSI C63.4:2009 for FCC Certification.

Conclusion(s):

The submitted product COMPLIED with the requirements of Federal Communications Commission [FCC] Rules and Regulations Part 15. The tests were performed in accordance with the standards described above and on Section 2.2 in this Test Report.

Remark(s):

For additional models details, see page 3.



Dr. LEE Kam Chuen

Authorized Signatory

ElectroMagnetic Compatibility Department

For and on behalf of

The Hong Kong Standards and Testing Centre Ltd.

The Hong Kong Standards and Testing Centre Ltd.

10 Dai Wang Street, Taipo Industrial Estate, N.T., Hong Kong

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1.0 General Details

1.1 Test Laboratory

STC (Dongguan) Company Limited
EMC Laboratory
68 Fumin Nan Road, Dalang, Dongguan, China

Telephone: (86 769) 81119888
Fax: (86 769) 81116222

1.2 Equipment Under Test [EUT]

Description of Sample(s)

Product:	2.1CH BLUETOOTH SPEAKER
Manufacturer:	SHENZHEN MANIWAY ELECTRONICS LIMITED
Brand Name:	MANIWAY
Model Number:	MW-1265
Additional Brand Name(s):	AEG, Silva Schneider, Henson Audio, DENVER
Additional Model Number(s):	MW-1266, BSS4804, BT-S 300 iP, HDB-500, BTS-400
Input Voltage:	100-240Va.c. 50/60Hz

1.2.1 Description of EUT Operation

The Equipment Under Test (EUT) is a SHENZHEN MANIWAY ELECTRONICS LIMITED, 2.1CH BLUETOOTH SPEAKER, it is Audio System, modulation by IC; and type is frequency hopping speed spectrum Modulation.

1.3 Date of Order

2012-07-19

1.4 Submitted Sample(s):

1 Sample

1.5 Test Duration

2012-07-21 to 2012-08-11

1.6 Country of Origin

China

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1.7 RF Module Details

Module Model Number:	F-3088
Module FCC ID:	
Module Transmission Type:	Bluetooth V2.1+EDR
Modulation:	FHSS (GFSK / $\pi/4$ -DQPSK / 8DPSK)
Data Rates:	1MBps: GFSK 2 MBps: $\pi/4$ -DQPSK 3 MBps: 8DPSK
Frequency Range:	2400-2483.5MHz
Carrier Frequencies:	2402MHz – 2480MHz

Module Specification (specification provided by manufacturer)

1.8 Antenna Details

Antenna Type:	PCB Layout Inverted F
Antenna Length:	3.0x14mm
Antenna Gain:	0dBi

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2.0 Technical Details

2.1 Investigations Requested

Perform Electromagnetic Interference measurements in accordance with FCC 47CFR [Codes of Federal Regulations] Part 15: 2011 Regulations and ANSI C63.4:2009 for FCC Certification.

2.2 Test Standards and Results Summary Tables

EMISSION Results Summary					
Test Condition	Test Requirement	Test Method	Class / Severity		
			Pass	Fail	N/A
Output Power of Fundamental Emissions	FCC 47CFR 15.247(b)(1)	ANSI C63.4:2009	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>
RF Conducted Spurious Emission	FCC 47CFR 15.247(c)	N/A	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Radiated Spurious Emissions	FCC 47CFR 15.209	ANSI C63.4:2009	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>
AC Mains Conducted Emissions	FCC 47CFR 15.207	ANSI C63.4:2009	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Number of Operating Channel	FCC 47CFR 15.247(a)(2)(b)(1)	N/A	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Band-edge compliance of Conducted Emission	FCC 47CFR 15.247(c)	N/A	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Pseudorandom Hopping Algorithm	FCC 47CFR 15.247(a)(1)	N/A	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Time of Occupancy	FCC 47CFR 15.247(a)(1)(iii)	N/A	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>
20dB Bandwidth	FCC 47CFR 15.247(a)(2)	N/A	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Hopping Channel Separation	FCC 47CFR 15.247(a)(1)	N/A	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Antenna requirement	FCC 47CFR 15.203	N/A	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Note: N/A – Not Applicable

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2.3 Table for Test Modes

Preliminary tests were performed in different data rate to find the worst radiated emission. The data rate in the table below is the worst case rate with respect to the specific test item.

Investigation has been done on all the possible configurations for searching the worst cases.

The following table is a list of the test modes shown in this test report.

Test Items	Mode	Data Rate
Max. Conducted Output Power	GFSK / $\pi/4$ -DQPSK / 8DPSK	1MBps / 2MBps / 3MBps
Hopping Channel Separation	8DPSK	3MBps
Number of Hopping Frequency	8DPSK	3MBps
Dwell Time	8DPSK (DH1 / DH3 / DH5)	3MBps
Radiated Emissions Below 1GHz	GFSK	1MBps
Radiated Emission Above 1GHz	GFSK	1MBps
Band Edge Emissions	GFSK / $\pi/4$ -DQPSK / 8DPSK	1MBps / 2MBps / 3MBps

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3.0 Test Results

3.1 Emission

3.1.1 Maximum Peak Output Power

Test Requirement: FCC 47CFR 15.247(b)(1)

Test Method: N/A

Test Date: 2012-08-07

Mode of Operation: Bluetooth Communication mode

Test Method:

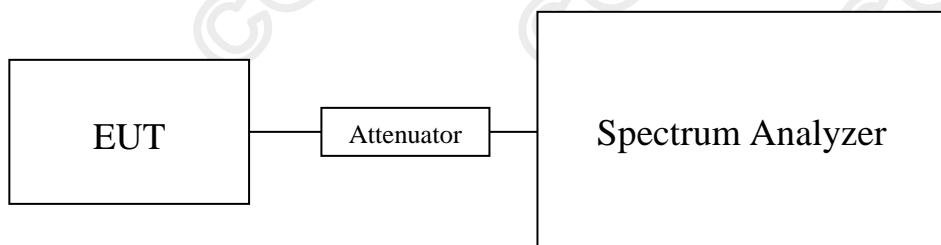
The RF output of the EUT was connected to the spectrum analyzer. All the attenuation or cable loss will be added to the measured maximum output power. The results are recorded in dBm.

Spectrum Analyzer Setting:

RBW = 3 MHz, VBW= 3MHz, Sweep = Auto, Span = 10MHz

Detector = Peak, Trace = Max. hold

Test Setup:



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Limits for Peak Output Power of Fundamental & Harmonics Emissions [FCC 47CFR 15.247]:

The maximum peak output power shall not exceed the following limits:

For frequency hopping systems employing at least 75 hopping channels: 1 Watt

For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 Watts

For Digital Transmission systems in 2400-2483.5 MHz Band: 1 Watt

Results of Bluetooth Communication mode (GFSK) (Fundamental Power): Pass **Maximum conducted output power**

Transmitter Frequency (MHz)	Maximum conducted output power (Watt)
2402	0.00073

Transmitter Frequency (MHz)	Maximum conducted output power (Watt)
2441	0.00072

Transmitter Frequency (MHz)	Maximum conducted output power (Watt)
2480	0.00071

Results of Bluetooth Communication mode ($\pi/4$ -DQPSK) (Fundamental Power): Pass **Maximum conducted output power**

Transmitter Frequency (MHz)	Maximum conducted output power (Watt)
2402	0.00062

Transmitter Frequency (MHz)	Maximum conducted output power (Watt)
2442	0.00058

Transmitter Frequency (MHz)	Maximum conducted output power (Watt)
2480	0.00054

Results of Bluetooth Communication mode (8 DPSK) (Fundamental Power): Pass **Maximum conducted output power**

Transmitter Frequency (MHz)	Maximum conducted output power (Watt)
2402	0.00063

Transmitter Frequency (MHz)	Maximum conducted output power (Watt)
2442	0.00059

Transmitter Frequency (MHz)	Maximum conducted output power (Watt)
2480	0.00060

Limit: 0.125W (125mW)

Calculated measurement uncertainty : 30MHz to 1GHz 1.7dB
1GHz to 18GHz 1.7dB

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3.1.2 Radiated Spurious Emissions

Test Requirement:	FCC 47CFR 15.209
Test Method:	ANSI C63.4:2009
Test Date:	2012-08-11
Mode of Operation:	Tx mode / Bluetooth Communication mode / Aux in (Connected to iPod) / iPod mode (Connected to iPod) / USB Audio Play mode (Connected to USB flash drive)

Test Method:

The sample was placed 0.8m above the ground plane of semi-anechoic Chamber*. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.

* Semi-anechoic chamber located on the G/F of “STC (Dongguan) Company Limited” with a metal ground plane filed with the FCC pursuant to section 2.948 of the FCC rules, with Registration Number: 629686.

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Spectrum Analyzer Setting:

9KHz – 30MHz (Pk & Av)

RBW: 10kHz
VBW: 30kHz
Sweep: Auto
Span: Fully capture the emissions being measured
Trace: Max. hold

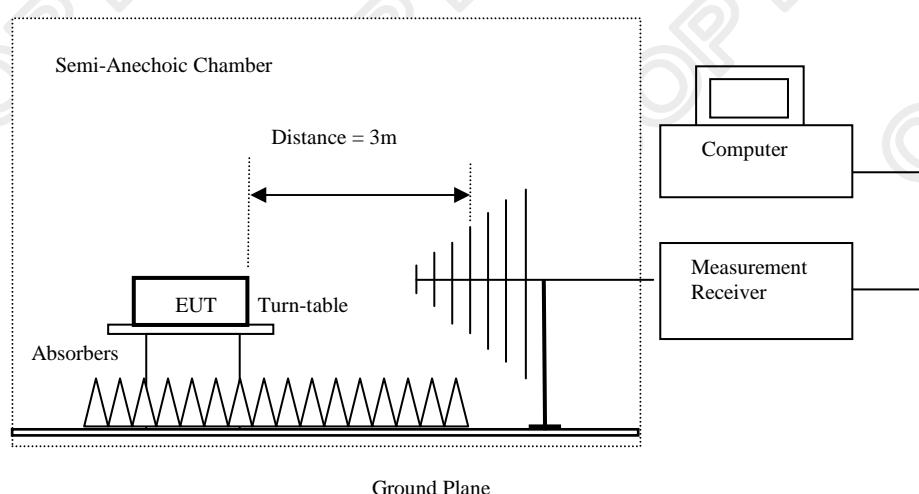
30MHz – 1GHz (QP)

RBW: 120kHz
VBW: 120kHz
Sweep: Auto
Span: Fully capture the emissions being measured
Trace: Max. hold

Above 1GHz (Pk & Av)

RBW: 3MHz
VBW: 3MHz
Sweep: Auto
Span: Fully capture the emissions being measured
Trace: Max. hold

Test Setup:



Absorbers placed on top of the ground plane are for measurements above 1000MHz only.

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Limits for Radiated Emissions [FCC 47 CFR 15.209 Class B]:

Frequency Range [MHz]	Quasi-Peak Limits [μ V/m]
0.009-0.490	2400/F (kHz)
0.490-1.705	24000/F (kHz)
1.705-30	30
30-88	100
88-216	150
216-960	200
Above960	500

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

Result of Tx mode (2402.0 MHz) (GFSK mode) (9kHz – 30MHz): Pass

Field Strength of Spurious Emissions Average Value						
Frequency MHz	Measured Level dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit μ V/m	E-Field Polarity
Emissions detected are more than 20 dB below the FCC Limits						

Result of Tx mode (2402.0 MHz) (GFSK mode) (30MHz – 1GHz): Pass

Field Strength of Spurious Emissions Average Value						
Frequency MHz	Measured Level dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit μ V/m	E-Field Polarity
Emissions detected are more than 20 dB below the FCC Limits						

Result of Tx mode (2402.0 MHz) (GFSK mode) (Above 1GHz): Pass

Field Strength of Spurious Emissions Peak Value						
Frequency MHz	Measured Level @3m dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Limit @3m dB μ V/m	Margin dB μ V/m	E-Field Polarity
4804.0	9.1	41.5	50.6	74.0	23.4	Horizontal
4804.0	12.2	41.5	53.7	74.0	20.3	Vertical
7206.0	6.6	48.8	55.4	74.0	18.6	Horizontal
7206.0	4.1	48.8	52.9	74.0	21.1	Vertical

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Result of Tx mode (2402.0 MHz) (GFSK mode) (Above 1GHz): Pass

Field Strength of Spurious Emissions						
Average Value						
Frequency MHz	Measured Level @3m dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Limit @3m dB μ V/m	Margin dB μ V/m	E-Field Polarity
4804.0	-1.2	41.5	40.3	54.0	13.7	Horizontal
4804.0	2.2	41.5	43.7	54.0	10.3	Vertical
7206.0	-5.1	48.8	43.7	54.0	10.3	Horizontal
7206.0	-6.1	48.8	42.7	54.0	11.3	Vertical

Result of Tx mode (2441.0 MHz) (GFSK mode) (9kHz – 30MHz): Pass

Field Strength of Spurious Emissions						
Average Value						
Frequency MHz	Measured Level dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit μ V/m	E-Field Polarity
Emissions detected are more than 20 dB below the FCC Limits						

Results of Tx mode (2441.0 MHz) (GFSK mode) (30MHz – 1000MHz): PASS

Field Strength of Spurious Emissions						
Average Value						
Frequency MHz	Measured Level dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit μ V/m	E-Field Polarity
Emissions detected are more than 20 dB below the FCC Limits						

Result of Tx mode (2441.0 MHz) (GFSK mode) (Above 1GHz): Pass

Field Strength of Spurious Emissions						
Peak Value						
Frequency MHz	Measured Level @3m dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Limit @3m dB μ V/m	Margin dB μ V/m	E-Field Polarity
4882.0	13.4	41.4	54.8	74.0	19.2	Horizontal
4882.0	12.0	41.4	53.4	74.0	20.6	Vertical
7323.0	4.9	48.7	53.6	74.0	20.4	Horizontal
7323.0	3.9	48.7	52.6	74.0	21.4	Vertical

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Result of Tx mode (2441.0 MHz) (GFSK mode) (Above 1GHz): Pass

Field Strength of Spurious Emissions						
Average Value						
Frequency MHz	Measured Level @3m dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Limit @3m dB μ V/m	Margin dB μ V/m	E-Field Polarity
4882.0	-6.9	41.4	34.5	54.0	19.5	Horizontal
4882.0	-8.3	41.4	33.1	54.0	20.9	Vertical
7323.0	-16.7	48.7	32.0	54.0	22.0	Horizontal
7323.0	-16	48.7	32.7	54.0	21.3	Vertical

Result of Tx mode (2480.0 MHz) (GFSK mode) (9kHz – 30MHz): Pass

Field Strength of Spurious Emissions						
Average Value						
Frequency MHz	Measured Level dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit μ V/m	E-Field Polarity
Emissions detected are more than 20 dB below the FCC Limits						

Results of Tx mode (2480.0 MHz) (GFSK mode) (30MHz – 1000MHz): PASS

Field Strength of Spurious Emissions						
Average Value						
Frequency MHz	Measured Level dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit μ V/m	E-Field Polarity
Emissions detected are more than 20 dB below the FCC Limits						

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Result of Tx mode (2480.0 MHz) (GFSK mode) (Above 1GHz): Pass

Field Strength of Spurious Emissions						
Peak Value						
Frequency MHz	Measured Level @3m dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Limit @3m dB μ V/m	Margin dB μ V/m	E-Field Polarity
4960.0	13.7	41.4	55.1	74.0	18.9	Horizontal
4960.0	12.9	41.4	54.3	74.0	19.7	Vertical
7440.0	3.3	48.6	51.9	74.0	22.1	Horizontal
7440.0	3.5	48.6	52.1	74.0	21.9	Vertical

Result of Tx mode (2480.0 MHz) (GFSK mode) (Above 1GHz): Pass

Field Strength of Spurious Emissions						
Average Value						
Frequency MHz	Measured Level @3m dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Limit @3m dB μ V/m	Margin dB μ V/m	E-Field Polarity
4960.0	-5.0	41.4	36.4	54.0	17.6	Horizontal
4960.0	-7.7	41.4	33.7	54.0	20.3	Vertical
7440.0	-15.0	48.6	33.6	54.0	20.4	Horizontal
7440.0	-15.9	48.6	32.7	54.0	21.3	Vertical

Remarks:

* Denotes restricted band of operation.

Measurements were made using a peak detector. Any emission less than 1000MHz and falling within the restricted bands of FCC Rules Part 15 Section 15.205 and the limits of FCC Rules Part 15 Section 15.209 were applied.

Correction Factor included Antenna Factor and Cable Attenuation.

Calculated measurement uncertainty : 30MHz to 1GHz 5.1dB
1GHz to 18GHz 5.1dB

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Result of Tx mode (2402.0 MHz) ($\pi/4$ -DQPSK mode) (9kHz – 30MHz): Pass

Field Strength of Spurious Emissions						
Average Value						
Frequency MHz	Measured Level dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit μ V/m	E-Field Polarity
Emissions detected are more than 20 dB below the FCC Limits						

Result of Tx mode (2402.0 MHz) ($\pi/4$ -DQPSK mode) (30MHz – 1GHz): Pass

Field Strength of Spurious Emissions						
Average Value						
Frequency MHz	Measured Level dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit μ V/m	E-Field Polarity
Emissions detected are more than 20 dB below the FCC Limits						

Result of Tx mode (2402.0 MHz) ($\pi/4$ -DQPSK mode) (Above 1GHz): Pass

Field Strength of Spurious Emissions						
Peak Value						
Frequency MHz	Measured Level @3m dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Limit @3m dB μ V/m	Margin dB μ V/m	E-Field Polarity
4804.0	7.8	41.5	49.3	74.0	24.7	Horizontal
4804.0	11.6	41.5	53.1	74.0	20.9	Vertical
7206.0	5.8	48.8	54.6	74.0	19.4	Horizontal
7206.0	4.5	48.8	53.3	74.0	20.7	Vertical

Result of Tx mode (2402.0 MHz) ($\pi/4$ -DQPSK mode) (Above 1GHz): Pass

Field Strength of Spurious Emissions						
Average Value						
Frequency MHz	Measured Level @3m dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Limit @3m dB μ V/m	Margin dB μ V/m	E-Field Polarity
4804.0	-2.5	41.5	39.0	54.0	15.0	Horizontal
4804.0	1.2	41.5	42.7	54.0	11.3	Vertical
7206.0	-6.2	48.8	42.6	54.0	11.4	Horizontal
7206.0	-7.5	48.8	41.3	54.0	12.7	Vertical

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Result of Tx mode (2441.0 MHz) ($\pi/4$ -DQPSK mode) (9kHz – 30MHz): Pass

Field Strength of Spurious Emissions						
Average Value						
Frequency MHz	Measured Level dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit μ V/m	E-Field Polarity
Emissions detected are more than 20 dB below the FCC Limits						

Results of Tx mode (2441.0 MHz) ($\pi/4$ -DQPSK mode) (30MHz – 1000MHz): PASS

Field Strength of Spurious Emissions						
Average Value						
Frequency MHz	Measured Level dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit μ V/m	E-Field Polarity
Emissions detected are more than 20 dB below the FCC Limits						

Result of Tx mode (2441.0 MHz) ($\pi/4$ -DQPSK mode) (Above 1GHz): Pass

Field Strength of Spurious Emissions						
Peak Value						
Frequency MHz	Measured Level @3m dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Limit @3m dB μ V/m	Margin dB μ V/m	E-Field Polarity
4882.0	12.3	41.4	53.7	74.0	20.3	Horizontal
4882.0	11.5	41.4	52.9	74.0	21.1	Vertical
7323.0	3.7	48.7	52.4	74.0	21.6	Horizontal
7323.0	2.9	48.7	51.6	74.0	22.4	Vertical

Result of Tx mode (2441.0 MHz) ($\pi/4$ -DQPSK mode) (Above 1GHz): Pass

Field Strength of Spurious Emissions						
Average Value						
Frequency MHz	Measured Level @3m dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Limit @3m dB μ V/m	Margin dB μ V/m	E-Field Polarity
4882.0	-7.7	41.4	33.7	54.0	20.3	Horizontal
4882.0	-8.5	41.4	32.9	54.0	21.1	Vertical
7323.0	-16.3	48.7	32.4	54.0	21.6	Horizontal
7323.0	-17.1	48.7	31.6	54.0	22.4	Vertical

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Result of Tx mode (2480.0 MHz) ($\pi/4$ -DQPSK mode) (9kHz – 30MHz): Pass

Field Strength of Spurious Emissions						
Average Value						
Frequency MHz	Measured Level dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit μ V/m	E-Field Polarity
Emissions detected are more than 20 dB below the FCC Limits						

Results of Tx mode (2480.0 MHz) ($\pi/4$ -DQPSK mode) (30MHz – 1000MHz): PASS

Field Strength of Spurious Emissions						
Average Value						
Frequency MHz	Measured Level dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit μ V/m	E-Field Polarity
Emissions detected are more than 20 dB below the FCC Limits						

Result of Tx mode (2480.0 MHz) ($\pi/4$ -DQPSK mode) (Above 1GHz): Pass

Field Strength of Spurious Emissions						
Peak Value						
Frequency MHz	Measured Level @3m dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Limit @3m dB μ V/m	Margin dB μ V/m	E-Field Polarity
4960.0	14.1	41.4	55.5	74.0	18.5	Horizontal
4960.0	12.4	41.4	53.8	74.0	20.2	Vertical
7440.0	4.1	48.6	52.7	74.0	21.3	Horizontal
7440.0	3.7	48.6	52.3	74.0	21.7	Vertical

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Result of Tx mode (2480.0 MHz) ($\pi/4$ -DQPSK mode) (Above 1GHz): Pass

Field Strength of Spurious Emissions						
Average Value						
Frequency MHz	Measured Level @3m dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Limit @3m dB μ V/m	Margin dB μ V/m	E-Field Polarity
4960.0	-5.9	41.4	35.5	54.0	18.5	Horizontal
4960.0	-9.3	41.4	32.1	54.0	21.9	Vertical
7440.0	-15.1	48.6	33.5	54.0	20.5	Horizontal
7440.0	-16.1	48.6	32.5	54.0	21.5	Vertical

Remarks:

* Denotes restricted band of operation.

Measurements were made using a peak detector. Any emission less than 1000MHz and falling within the restricted bands of FCC Rules Part 15 Section 15.205 and the limits of FCC Rules Part 15 Section 15.209 were applied.

Correction Factor included Antenna Factor and Cable Attenuation.

Calculated measurement uncertainty : 30MHz to 1GHz 5.1dB
1GHz to 18GHz 5.1dB

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Result of Tx mode (2402.0 MHz) (8DPSK) (9kHz – 30MHz): Pass

Field Strength of Spurious Emissions						
Average Value						
Frequency MHz	Measured Level dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit μ V/m	E-Field Polarity
Emissions detected are more than 20 dB below the FCC Limits						

Result of Tx mode (2402.0 MHz) (8DPSK) (30MHz – 1GHz): Pass

Field Strength of Spurious Emissions						
Average Value						
Frequency MHz	Measured Level dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit μ V/m	E-Field Polarity
Emissions detected are more than 20 dB below the FCC Limits						

Result of Tx mode (2402.0 MHz) (8DPSK) (Above 1GHz): Pass

Field Strength of Spurious Emissions						
Peak Value						
Frequency MHz	Measured Level @3m dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Limit @3m dB μ V/m	Margin dB μ V/m	E-Field Polarity
4804.0	8.8	41.5	50.3	74.0	23.7	Horizontal
4804.0	12.6	41.5	54.1	74.0	19.9	Vertical
7206.0	7.5	48.8	56.3	74.0	17.7	Horizontal
7206.0	4.1	48.8	52.9	74.0	21.1	Vertical

Result of Tx mode (2402.0 MHz) (8DPSK) (Above 1GHz): Pass

Field Strength of Spurious Emissions						
Average Value						
Frequency MHz	Measured Level @3m dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Limit @3m dB μ V/m	Margin dB μ V/m	E-Field Polarity
4804.0	-1.8	41.5	39.7	54.0	14.3	Horizontal
4804.0	1.0	41.5	42.5	54.0	11.5	Vertical
7206.0	-6.2	48.8	42.6	54.0	11.4	Horizontal
7206.0	-4.4	48.8	44.4	54.0	9.6	Vertical

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Result of Tx mode (2441.0 MHz) (8DPSK) (9kHz – 30MHz): Pass

Field Strength of Spurious Emissions						
Average Value						
Frequency MHz	Measured Level dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit μ V/m	E-Field Polarity
Emissions detected are more than 20 dB below the FCC Limits						

Results of Tx mode (2441.0 MHz) (8DPSK) (30MHz – 1000MHz): PASS

Field Strength of Spurious Emissions						
Average Value						
Frequency MHz	Measured Level dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit μ V/m	E-Field Polarity
Emissions detected are more than 20 dB below the FCC Limits						

Result of Tx mode (2441.0 MHz) (8DPSK) (Above 1GHz): Pass

Field Strength of Spurious Emissions						
Peak Value						
Frequency MHz	Measured Level @3m dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Limit @3m dB μ V/m	Margin dB μ V/m	E-Field Polarity
4882.0	13.3	41.4	54.7	74.0	19.3	Horizontal
4882.0	11.1	41.4	52.5	74.0	21.5	Vertical
7323.0	4.8	48.7	53.5	54.0	0.5	Horizontal
7323.0	2.9	48.7	51.6	54.0	2.4	Vertical

Result of Tx mode (2441.0 MHz) (8DPSK) (Above 1GHz): Pass

Field Strength of Spurious Emissions						
Average Value						
Frequency MHz	Measured Level @3m dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Limit @3m dB μ V/m	Margin dB μ V/m	E-Field Polarity
4882.0	-6.7	41.4	34.7	54.0	19.3	Horizontal
4882.0	-6.5	41.4	34.9	54.0	19.1	Vertical
7323.0	-16.3	48.7	32.4	54.0	21.6	Horizontal
7323.0	-15.1	48.7	33.6	54.0	20.4	Vertical

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Result of Tx mode (2480.0 MHz) (8DPSK) (9kHz – 30MHz): Pass

Field Strength of Spurious Emissions						
Average Value						
Frequency MHz	Measured Level dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit μ V/m	E-Field Polarity
Emissions detected are more than 20 dB below the FCC Limits						

Results of Tx mode (2480.0 MHz) (8DPSK) (30MHz – 1000MHz): PASS

Field Strength of Spurious Emissions						
Average Value						
Frequency MHz	Measured Level dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit μ V/m	E-Field Polarity
Emissions detected are more than 20 dB below the FCC Limits						

Result of Tx mode (2480.0 MHz) (8DPSK) (Above 1GHz): Pass

Field Strength of Spurious Emissions						
Peak Value						
Frequency MHz	Measured Level @3m dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Limit @3m dB μ V/m	Margin dB μ V/m	E-Field Polarity
4960.0	13.5	41.4	54.9	74.0	19.1	Horizontal
4960.0	13.1	41.4	54.5	74.0	19.5	Vertical
7440.0	5.8	48.6	54.4	74.0	19.6	Horizontal
7440.0	3	48.6	51.6	74.0	22.4	Vertical

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Result of Tx mode (2480.0 MHz) (8DPSK) (Above 1GHz): Pass

Field Strength of Spurious Emissions						
Average Value						
Frequency MHz	Measured Level @3m dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Limit @3m dB μ V/m	Margin dB μ V/m	E-Field Polarity
4960.0	-4.9	41.4	36.5	54.0	17.5	Horizontal
4960.0	-8.3	41.4	33.1	54.0	20.9	Vertical
7440.0	-14.1	48.6	34.5	54.0	19.5	Horizontal
7440.0	-7.1	48.6	41.5	54.0	12.5	Vertical

Remarks:

* Denotes restricted band of operation.

Measurements were made using a peak detector. Any emission less than 1000MHz and falling within the restricted bands of FCC Rules Part 15 Section 15.205 and the limits of FCC Rules Part 15 Section 15.209 were applied.

Correction Factor included Antenna Factor and Cable Attenuation.

Calculated measurement uncertainty : 30MHz to 1GHz 5.1dB
1GHz to 18GHz 5.1dB

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Limits for Radiated Emissions [FCC 47 CFR 15.209 Class B]:

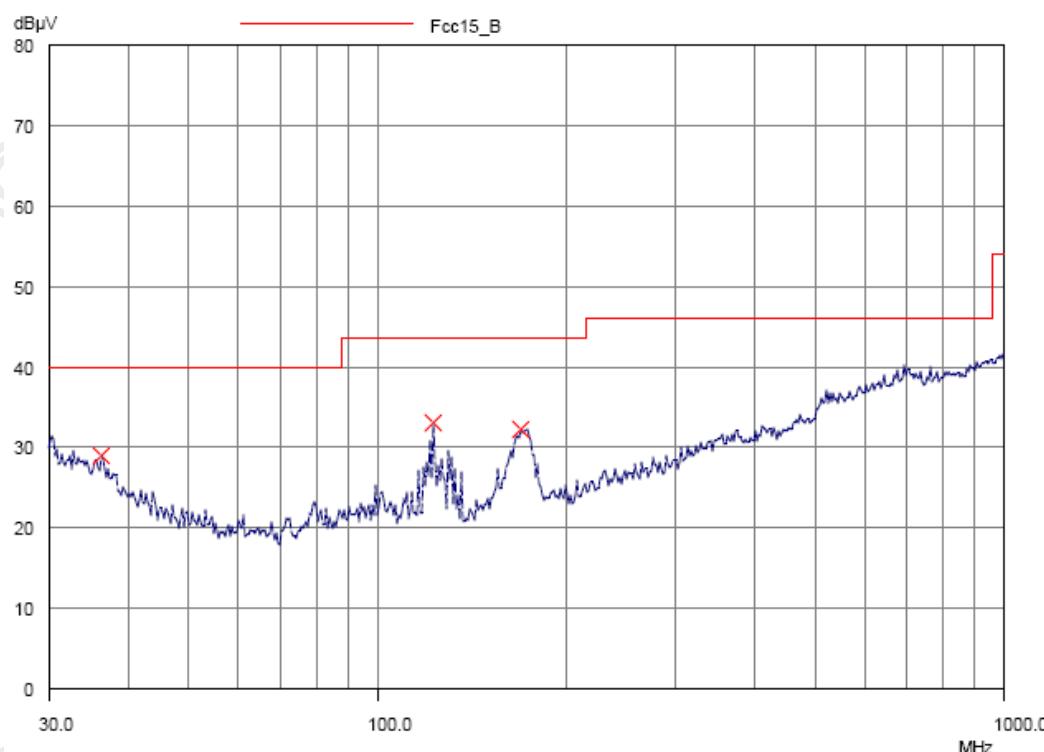
Frequency Range [MHz]	Quasi-Peak Limits [μ V/m]
0.009-0.490	2400/F (kHz)
0.490-1.705	24000/F (kHz)
1.705-30	30
30-88	100
88-216	150
216-960	200
Above 960	500

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

Result of Aux in mode (Connected to iPod) (30MHz – 1GHz): Pass

Please refer to the following table for result details

Horizontal



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Result of Aux in mode (Connected to iPod) (30MHz – 1GHz): Pass

Radiated Emissions Quasi-Peak					
Emission Frequency MHz	E-Field Polarity	Level @3m dB μ V/m	Limit @3m dB μ V/m	Level @3m μ V/m	Limit @3m μ V/m
36.3	Horizontal	29.1	40.0	28.5	100
123.6	Horizontal	33.2	43.5	45.7	150
170.3	Horizontal	32.4	43.5	41.7	150

Remarks:

Correction Factor included Antenna Factor and Cable Attenuation.

Calculated measurement uncertainty : 30MHz to 1GHz 5.2dB
1GHz to 18GHz 5.1dB

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Limits for Radiated Emissions [FCC 47 CFR 15.209 Class B]:

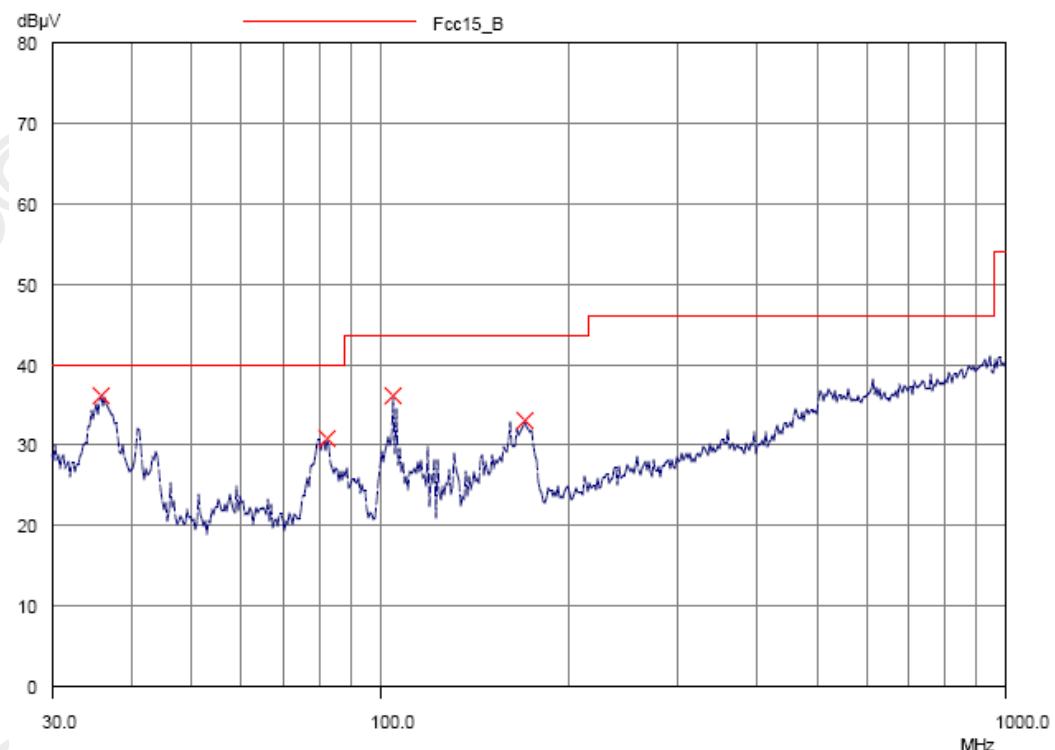
Frequency Range [MHz]	Quasi-Peak Limits [μ V/m]
0.009-0.490	2400/F (kHz)
0.490-1.705	24000/F (kHz)
1.705-30	30
30-88	100
88-216	150
216-960	200
Above960	500

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

Result of Aux in mode (Connected to iPod) (30MHz – 1GHz): Pass

Please refer to the following table for result details

Vertical



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Result of Aux in mode (Connected to iPod) (30MHz – 1GHz): Pass

Radiated Emissions Quasi-Peak					
Emission Frequency MHz	E-Field Polarity	Level @3m dB μ V/m	Limit @3m dB μ V/m	Level @3m μ V/m	Limit @3m μ V/m
35.9	Vertical	36.3	40.0	65.3	100
82.3	Vertical	30.9	40.0	35.1	100
105.1	Vertical	36.2	43.5	64.6	150
171.4	Vertical	33.1	43.5	45.2	150

Remarks:

Correction Factor included Antenna Factor and Cable Attenuation.

Calculated measurement uncertainty : 30MHz to 1GHz 5.2dB
1GHz to 18GHz 5.1dB

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Limits for Radiated Emissions [FCC 47 CFR 15.209 Class B]:

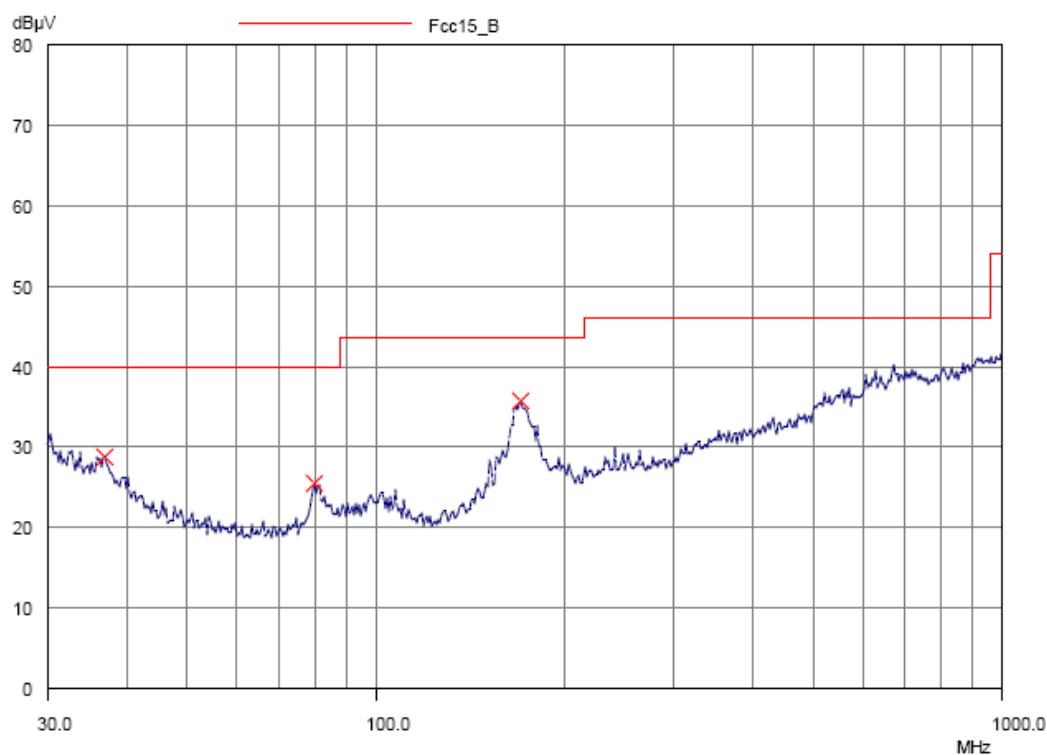
Frequency Range [MHz]	Quasi-Peak Limits [μ V/m]
0.009-0.490	2400/F (kHz)
0.490-1.705	24000/F (kHz)
1.705-30	30
30-88	100
88-216	150
216-960	200
Above960	500

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

Result of iPod mode (Connected to iPod) (30MHz – 1GHz): Pass

Please refer to the following table for result details

Horizontal



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Result of iPod mode (Connected to iPod) (30MHz – 1GHz): Pass

Radiated Emissions Quasi-Peak					
Emission Frequency MHz	E-Field Polarity	Level @3m dB μ V/m	Limit @3m dB μ V/m	Level @3m μ V/m	Limit @3m μ V/m
36.9	Horizontal	28.7	40.0	27.2	100
79.9	Horizontal	25.5	40.0	18.8	100
171.3	Horizontal	35.8	43.5	61.7	150

Remarks:

Correction Factor included Antenna Factor and Cable Attenuation.

Calculated measurement uncertainty : 30MHz to 1GHz 5.2dB
1GHz to 18GHz 5.1dB

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Limits for Radiated Emissions [FCC 47 CFR 15.209 Class B]:

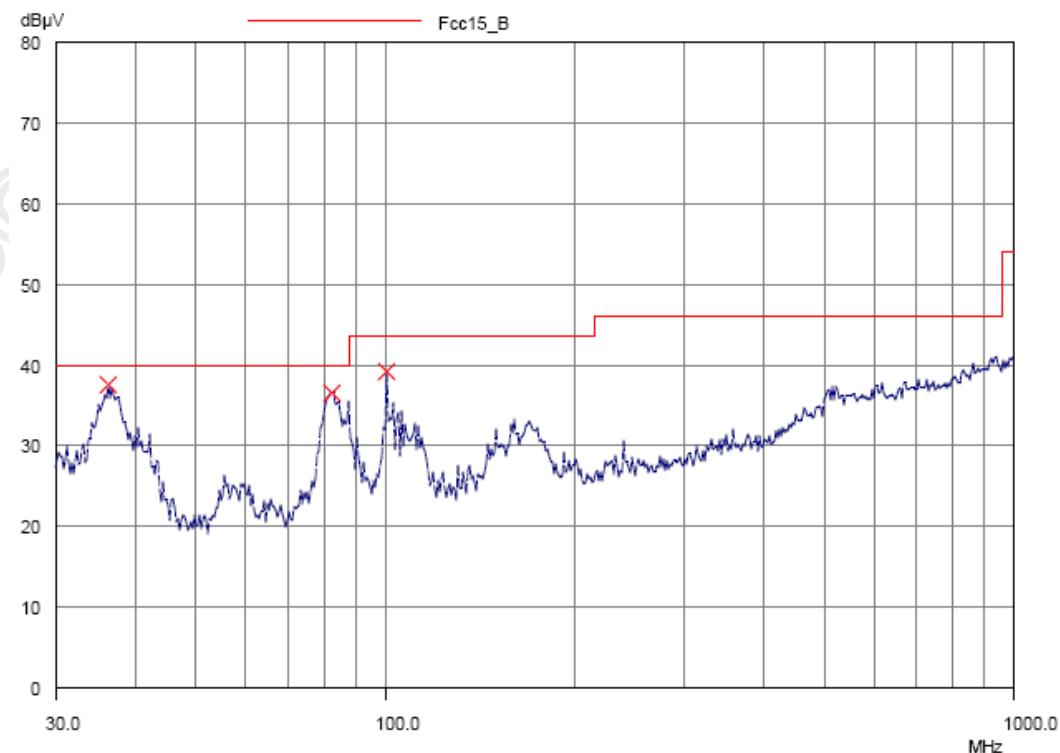
Frequency Range [MHz]	Quasi-Peak Limits [μ V/m]
0.009-0.490	2400/F (kHz)
0.490-1.705	24000/F (kHz)
1.705-30	30
30-88	100
88-216	150
216-960	200
Above960	500

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

Result of iPod mode (Connected to iPod) (30MHz – 1GHz): Pass

Please refer to the following table for result details

Vertical



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Result of iPod mode (Connected to iPod) (30MHz – 1GHz): Pass

Radiated Emissions Quasi-Peak					
Emission Frequency MHz	E-Field Polarity	Level @3m dB μ V/m	Limit @3m dB μ V/m	Level @3m μ V/m	Limit @3m μ V/m
36.4	Vertical	36.6	40.0	67.6	100
82.7	Vertical	35.7	40.0	61.0	100
101.0	Vertical	38.3	43.5	82.2	150

Remarks:

Correction Factor included Antenna Factor and Cable Attenuation.

Calculated measurement uncertainty : 30MHz to 1GHz 5.2dB
1GHz to 18GHz 5.1dB

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Limits for Radiated Emissions [FCC 47 CFR 15.209 Class B]:

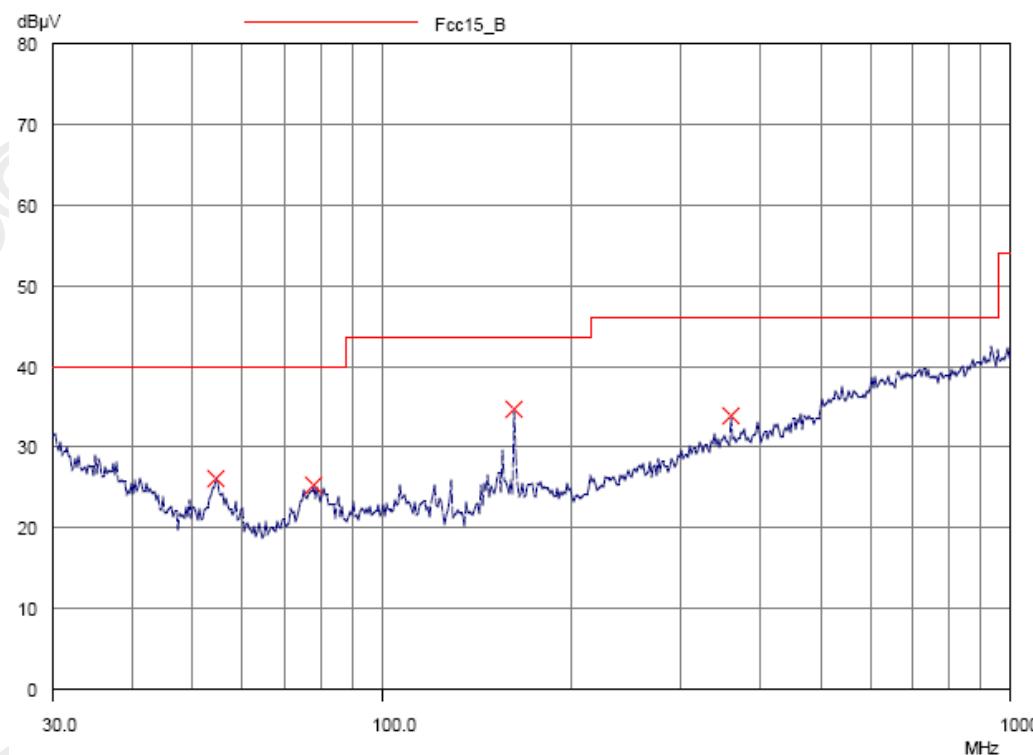
Frequency Range [MHz]	Quasi-Peak Limits [μ V/m]
0.009-0.490	2400/F (kHz)
0.490-1.705	24000/F (kHz)
1.705-30	30
30-88	100
88-216	150
216-960	200
Above960	500

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

Result of USB Audio Play mode (Connected to USB flash drive) (30MHz – 1GHz): Pass

Please refer to the following table for result details

Horizontal



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Result of USB Audio Play mode (Connected to USB flash drive) (30MHz – 1GHz): Pass

Radiated Emissions Quasi-Peak					
Emission Frequency MHz	E-Field Polarity	Level @3m dB μ V/m	Limit @3m dB μ V/m	Level @3m μ V/m	Limit @3m μ V/m
54.5	Horizontal	26.2	40.0	20.4	100
78.3	Horizontal	25.4	40.0	18.6	100
163.4	Horizontal	34.8	43.5	55.0	150
360.0	Horizontal	34.0	46.0	50.1	200

Remarks:

Correction Factor included Antenna Factor and Cable Attenuation.

Calculated measurement uncertainty : 30MHz to 1GHz 5.2dB
1GHz to 18GHz 5.1dB

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Limits for Radiated Emissions [FCC 47 CFR 15.209 Class B]:

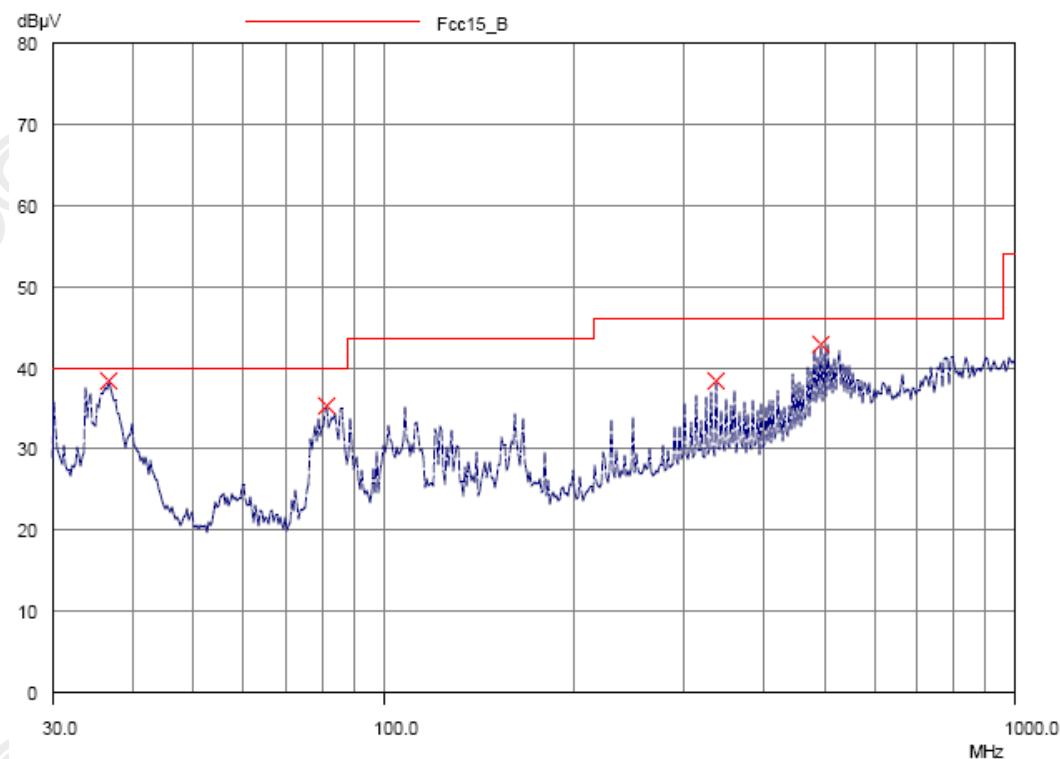
Frequency Range [MHz]	Quasi-Peak Limits [μ V/m]
0.009-0.490	2400/F (kHz)
0.490-1.705	24000/F (kHz)
1.705-30	30
30-88	100
88-216	150
216-960	200
Above960	500

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

Result of USB Audio Play mode (Connected to USB flash drive) (30MHz – 1GHz): Pass

Please refer to the following table for result details

Vertical



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Result of USB Audio Play mode (Connected to USB flash drive) (30MHz – 1GHz): Pass

Radiated Emissions Quasi-Peak					
Emission Frequency MHz	E-Field Polarity	Level @3m dB μ V/m	Limit @3m dB μ V/m	Level @3m μ V/m	Limit @3m μ V/m
36.9	Vertical	36.4	40.0	66.1	100
81.6	Vertical	35.4	40.0	58.9	100
336.0	Vertical	38.5	46.0	84.1	200
492.0	Vertical	43.0	46.0	141.3	200

Remarks:

Correction Factor included Antenna Factor and Cable Attenuation.

Calculated measurement uncertainty : 30MHz to 1GHz 5.2dB
1GHz to 18GHz 5.1dB

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Limits for Radiated Emissions [FCC 47 CFR 15.209 Class B]:

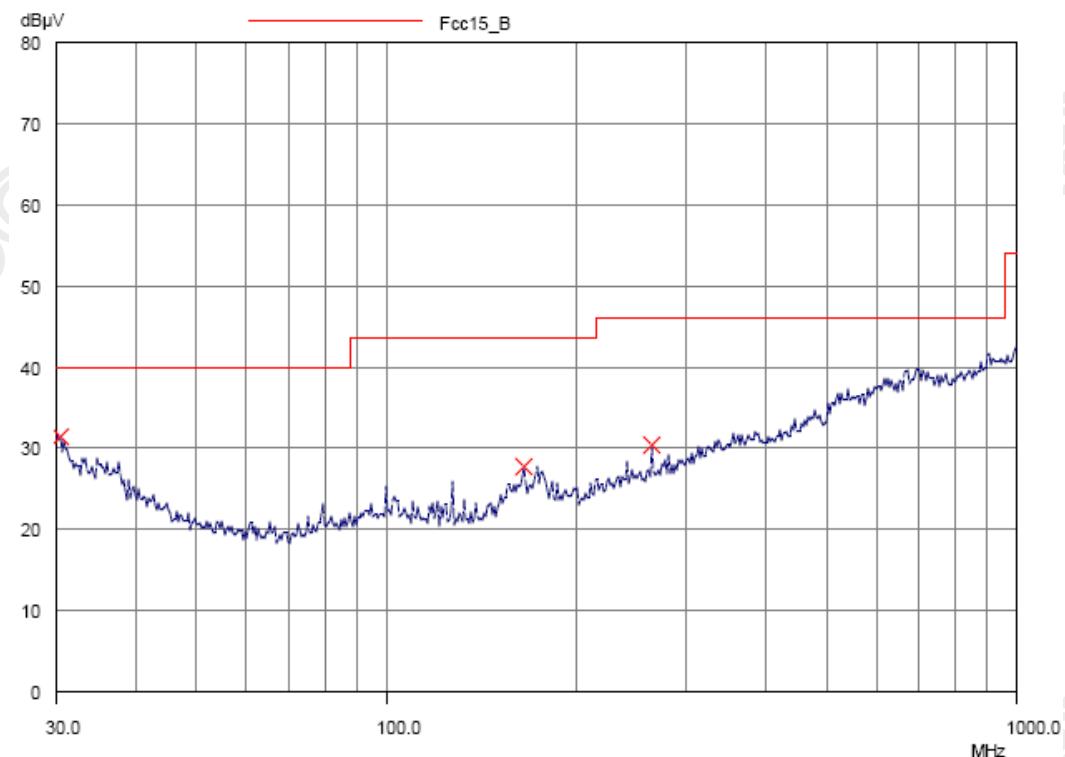
Frequency Range [MHz]	Quasi-Peak Limits [μ V/m]
0.009-0.490	2400/F (kHz)
0.490-1.705	24000/F (kHz)
1.705-30	30
30-88	100
88-216	150
216-960	200
Above960	500

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

Result of Bluetooth Communication mode (30MHz – 1GHz): Pass

Please refer to the following table for result details

Horizontal



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Result of Bluetooth Communication mode (30MHz – 1GHz): Pass

Radiated Emissions Quasi-Peak					
Emission Frequency MHz	E-Field Polarity	Level @3m dB μ V/m	Limit @3m dB μ V/m	Level @3m μ V/m	Limit @3m μ V/m
30.4	Horizontal	31.5	40.0	37.6	100
166.4	Horizontal	27.9	43.5	24.8	150
264.0	Horizontal	30.4	46.0	33.1	200

Remarks:

Correction Factor included Antenna Factor and Cable Attenuation.

Calculated measurement uncertainty : 30MHz to 1GHz 5.2dB
1GHz to 18GHz 5.1dB

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Limits for Radiated Emissions [FCC 47 CFR 15.209 Class B]:

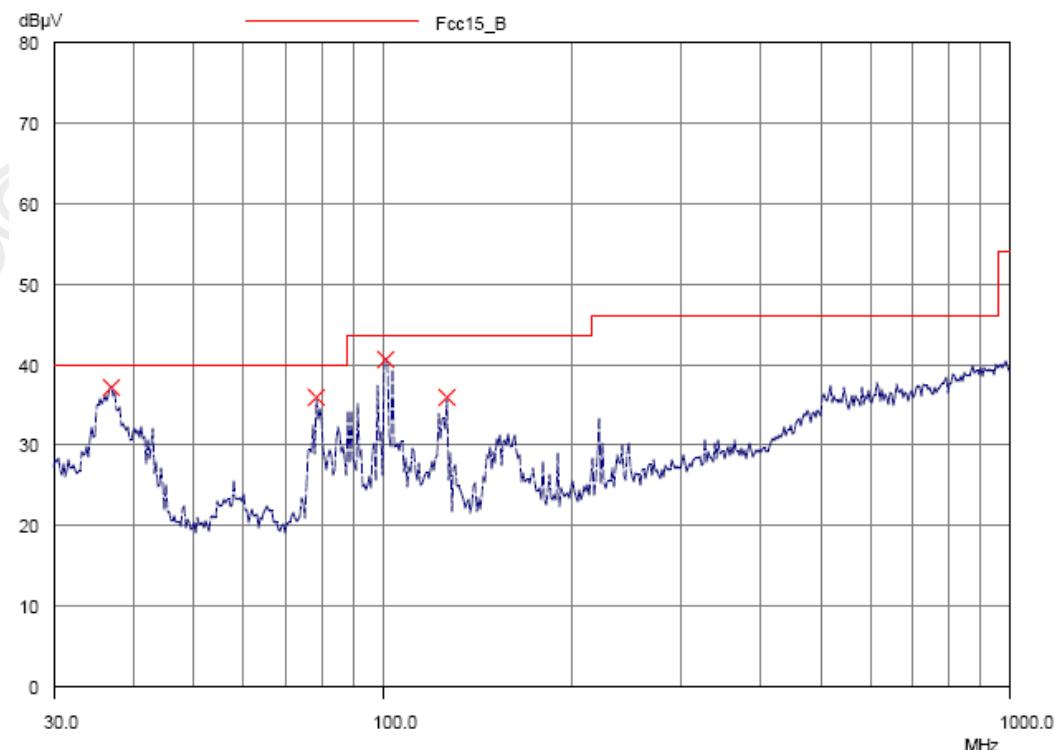
Frequency Range [MHz]	Quasi-Peak Limits [μ V/m]
0.009-0.490	2400/F (kHz)
0.490-1.705	24000/F (kHz)
1.705-30	30
30-88	100
88-216	150
216-960	200
Above960	500

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

Result of Bluetooth Communication mode (30MHz – 1GHz): Pass

Please refer to the following table for result details

Vertical



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Result of Bluetooth Communication mode (30MHz – 1GHz): Pass

Radiated Emissions Quasi-Peak					
Emission Frequency MHz	E-Field Polarity	Level @3m dB μ V/m	Limit @3m dB μ V/m	Level @3m μ V/m	Limit @3m μ V/m
37.0	Vertical	36.2	40.0	64.6	100
78.8	Vertical	36.1	40.0	63.8	100
101.7	Vertical	38.7	43.5	86.1	150
127.1	Vertical	36.0	43.5	63.1	150

Remarks:

Correction Factor included Antenna Factor and Cable Attenuation.

Calculated measurement uncertainty : 30MHz to 1GHz 5.2dB
1GHz to 18GHz 5.1dB

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Limits for Radiated Emissions [FCC 47 CFR 15.209 Class B]:

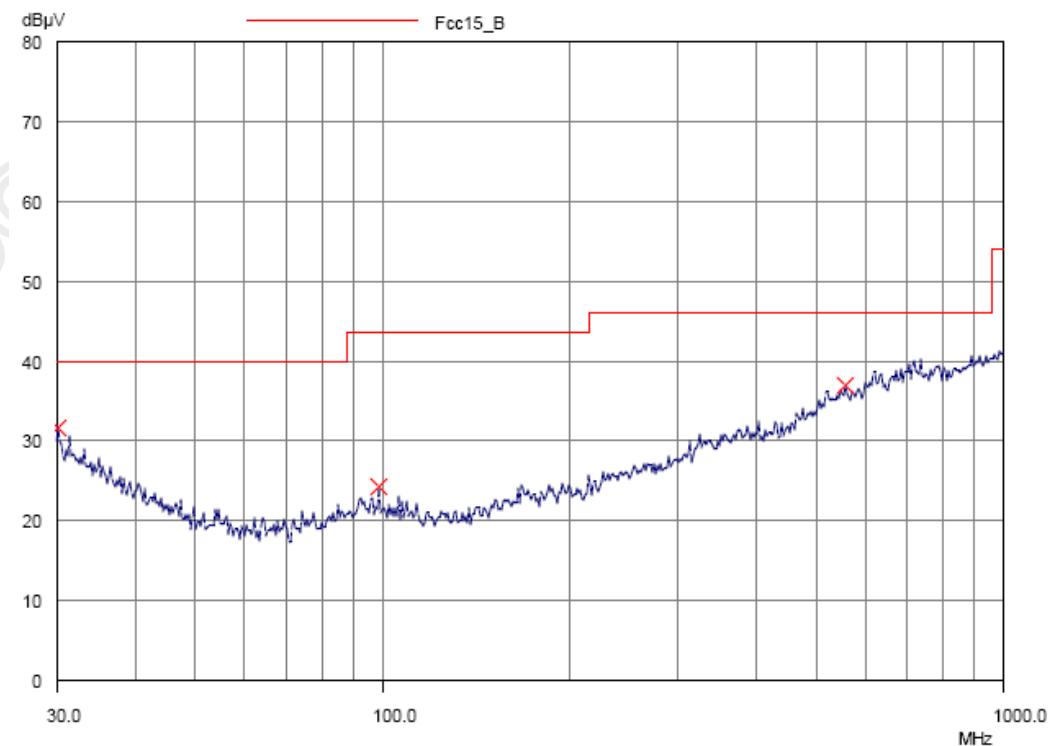
Frequency Range [MHz]	Quasi-Peak Limits [μ V/m]
0.009-0.490	2400/F (kHz)
0.490-1.705	24000/F (kHz)
1.705-30	30
30-88	100
88-216	150
216-960	200
Above960	500

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

Result of Infrared remote control on mode (30MHz – 1GHz): Pass

Please refer to the following table for result details

Horizontal



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Result of Infrared remote control on mode (30MHz – 1GHz): Pass

Radiated Emissions Quasi-Peak					
Emission Frequency MHz	E-Field Polarity	Level @3m dB μ V/m	Limit @3m dB μ V/m	Level @3m μ V/m	Limit @3m μ V/m
30.1	Horizontal	31.7	40.0	38.5	100
99.9	Horizontal	24.2	43.5	16.2	150
557.0	Horizontal	37.0	46.0	70.8	200

Remarks:

Correction Factor included Antenna Factor and Cable Attenuation.

Calculated measurement uncertainty : 30MHz to 1GHz 5.2dB
1GHz to 18GHz 5.1dB

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Limits for Radiated Emissions [FCC 47 CFR 15.209 Class B]:

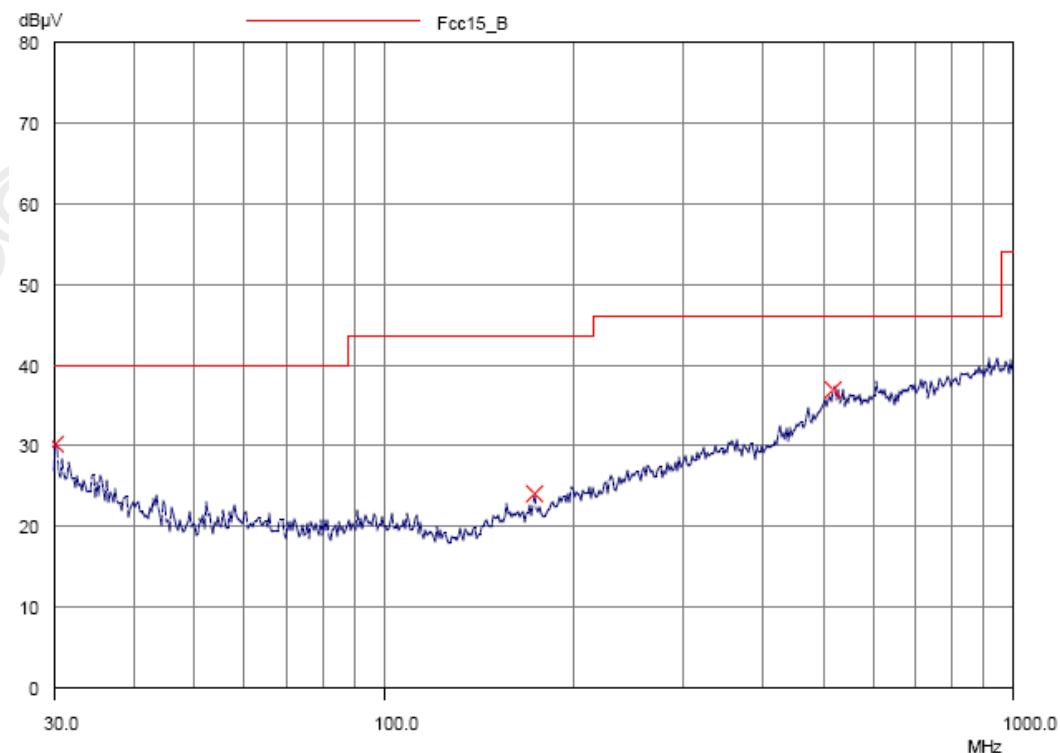
Frequency Range [MHz]	Quasi-Peak Limits [μ V/m]
0.009-0.490	2400/F (kHz)
0.490-1.705	24000/F (kHz)
1.705-30	30
30-88	100
88-216	150
216-960	200
Above960	500

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

Result of Infrared remote control on mode (30MHz – 1GHz): Pass

Please refer to the following table for result details

Vertical



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Result of Infrared remote control on mode (30MHz – 1GHz): Pass

Radiated Emissions Quasi-Peak					
Emission Frequency MHz	E-Field Polarity	Level @3m dB μ V/m	Limit @3m dB μ V/m	Level @3m μ V/m	Limit @3m μ V/m
30.1	Vertical	30.3	40.0	32.7	100
172.7	Vertical	24.1	43.5	16.0	150
518.1	Vertical	37.1	46.0	71.6	200

Remarks:

Correction Factor included Antenna Factor and Cable Attenuation.

Calculated measurement uncertainty : 30MHz to 1GHz 5.2dB
1GHz to 18GHz 5.1dB

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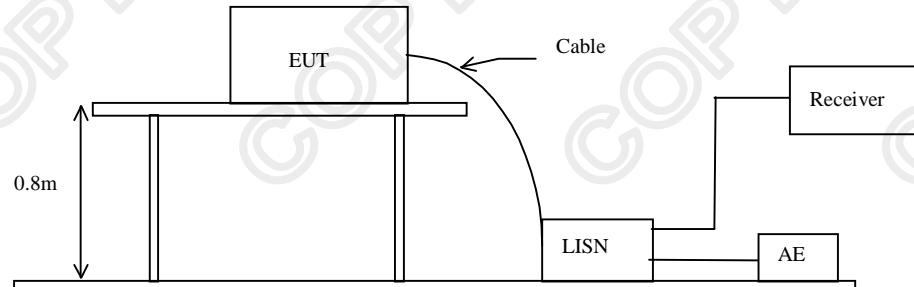
3.1.3 Conducted Emissions (0.15MHz to 30MHz)

Test Requirement:	FCC 47CFR 15.207
Test Method:	ANSI C63.4:2009
Test Date:	2012-07-21
Mode of Operation:	Aux in mode (Connected to iPod) / iPod mode(Connected to iPod) / USB Audio play mode (Connected to USB flash drive) / Bluetooth Communication mode
Test Voltage:	117V a.c., 60Hz

Test Method:

The test was performed in accordance with ANSI C63.4: 2009, with the following: an initial measurement was performed in peak and average detection mode on the live line, any emissions recorded within 30dB of the relevant limit line 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.

Test Setup:



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Limit for Conducted Emissions (FCC 47 CFR 15.207):

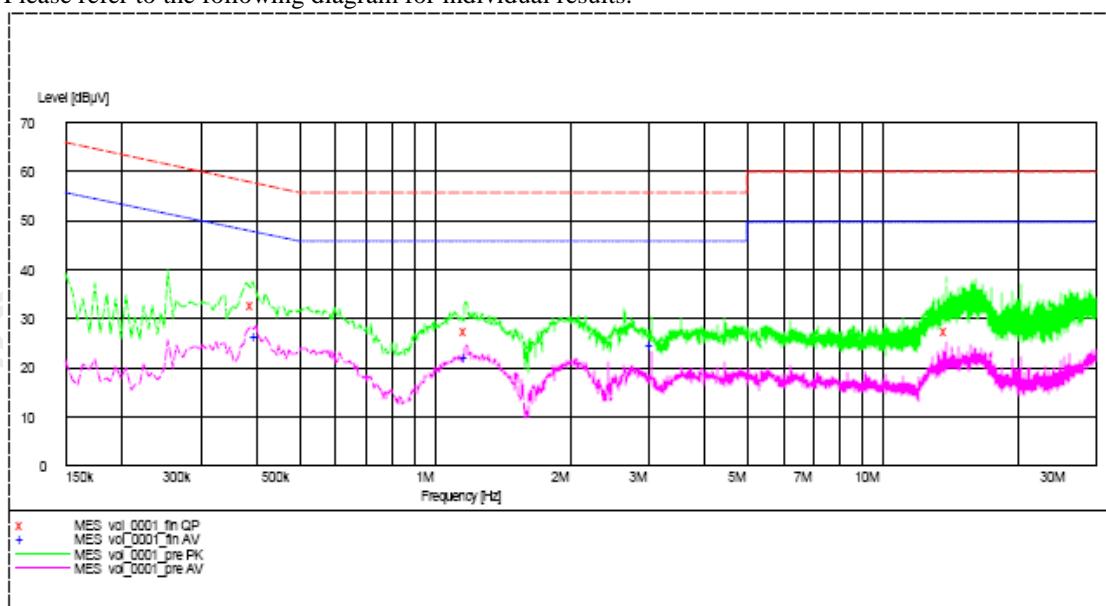
Frequency Range [MHz]	Quasi-Peak Limits [dB μ V]	Average [dB μ V]
0.15-0.5	66 to 56*	56 to 46*
0.5-5.0	56	46
5.0-30.0	60	50

* Decreases with the logarithm of the frequency.

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

Results of Aux in mode (Connected to iPod) (L): Pass

Please refer to the following diagram for individual results.



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Results of Aux in mode (Connected to iPod) (L): Pass

Conductor Live or Neutral	Frequency MHz	Quasi-peak		Average	
		Level dB μ V	Limit dB μ V	Level dB μ V	Limit dB μ V
Live	0.395	32.7	58.0	-*-	-*-
Live	1.180	27.7	56.0	22.3	46.0
Live	13.950	27.4	60.0	-*-	-*-
Live	0.400	-*-	-*-	26.6	48.0
Live	3.065	-*-	-*-	24.6	46.0

Remarks:

Calculated measurement uncertainty : 3.97dB

-*- Emission(s) that is far below the corresponding limit line.

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Limit for Conducted Emissions (FCC 47 CFR 15.207):

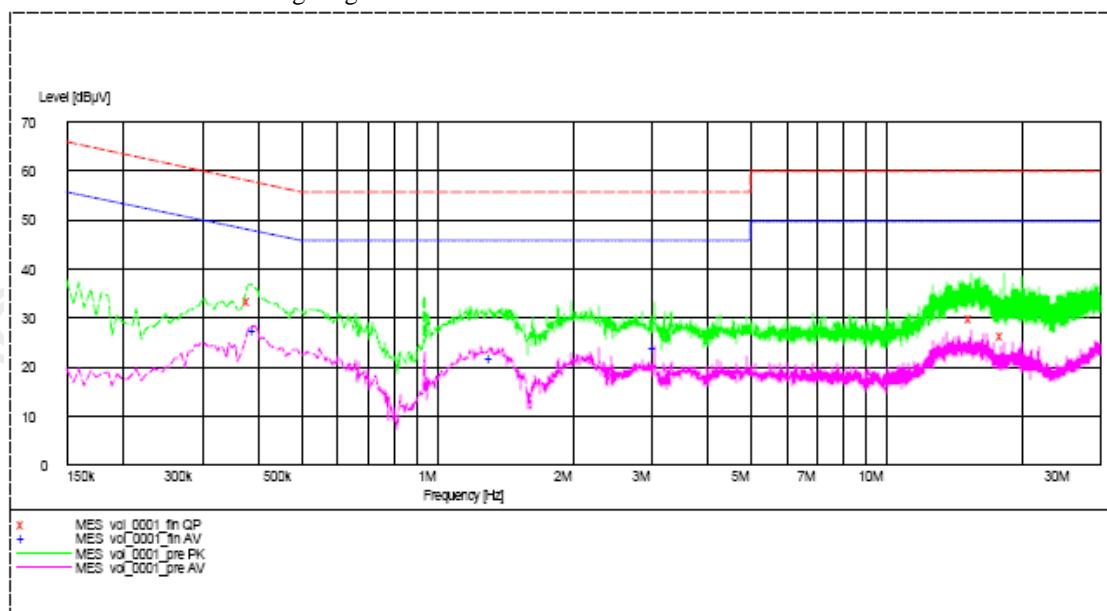
Frequency Range [MHz]	Quasi-Peak Limits [dB μ V]	Average [dB μ V]
0.15-0.5	66 to 56*	56 to 46*
0.5-5.0	56	46
5.0-30.0	60	50

* Decreases with the logarithm of the frequency.

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

Results of Aux in mode (Connected to iPod) (N): Pass

Please refer to the following diagram for individual results.



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Results of Aux in mode (Connected to iPod) (N): Pass

Conductor Live or Neutral	Frequency MHz	Quasi-peak		Average	
		Level dB μ V	Limit dB μ V	Level dB μ V	Limit dB μ V
Neutral	0.385	33.7	58.0	-*-	-*-
Neutral	15.525	29.9	60.0	-*-	-*-
Neutral	18.295	26.6	60.0	-*-	-*-
Neutral	0.395	-*-	-*-	27.6	48.0
Neutral	1.325	-*-	-*-	21.9	46.0
Neutral	3.065	-*-	-*-	24.2	46.0

Remarks:

Calculated measurement uncertainty : 3.97dB

-*- Emission(s) that is far below the corresponding limit line.

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Limit for Conducted Emissions (FCC 47 CFR 15.207):

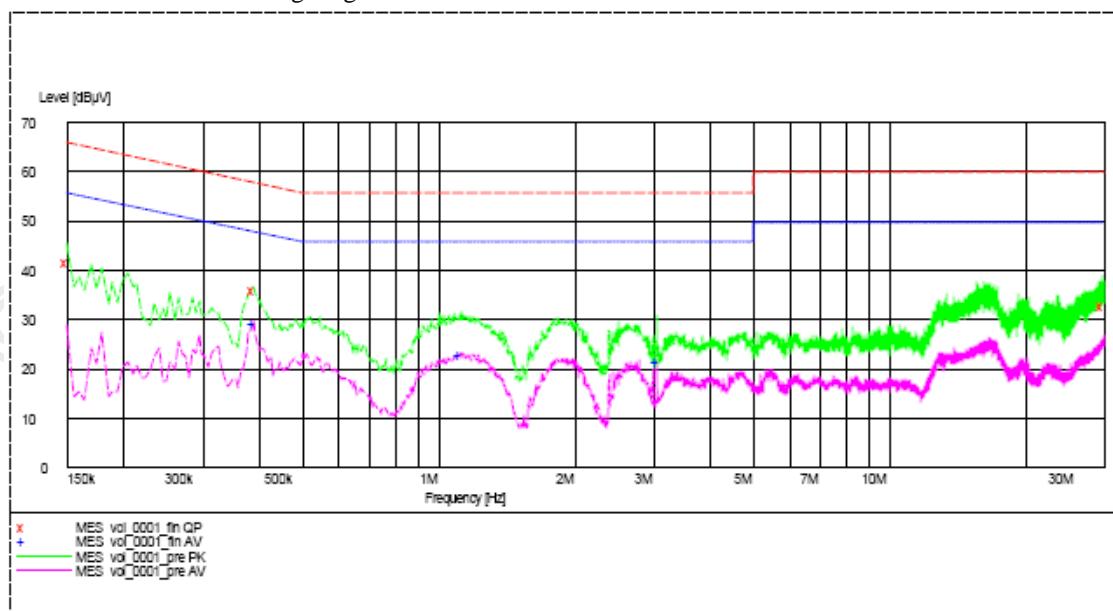
Frequency Range [MHz]	Quasi-Peak Limits [dB μ V]	Average [dB μ V]
0.15-0.5	66 to 56*	56 to 46*
0.5-5.0	56	46
5.0-30.0	60	50

* Decreases with the logarithm of the frequency.

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

Results of iPod mode (Connected to iPod) (L): Pass

Please refer to the following diagram for individual results.



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Results of iPod mode (Connected to iPod) (L): Pass

Conductor Live or Neutral	Frequency MHz	Quasi-peak		Average	
		Level dB μ V	Limit dB μ V	Level dB μ V	Limit dB μ V
Live	0.150	41.6	66.0	-*-	-*-
Live	0.390	36.0	58.0	-*-	-*-
Live	29.710	32.7	60.0	-*-	-*-
Live	0.390	-*-	-*-	29.3	48.0
Live	1.120	-*-	-*-	22.9	46.0
Live	3.065	-*-	-*-	21.4	46.0

Remarks:

Calculated measurement uncertainty : 3.97dB

-*- Emission(s) that is far below the corresponding limit line.

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Limit for Conducted Emissions (FCC 47 CFR 15.207):

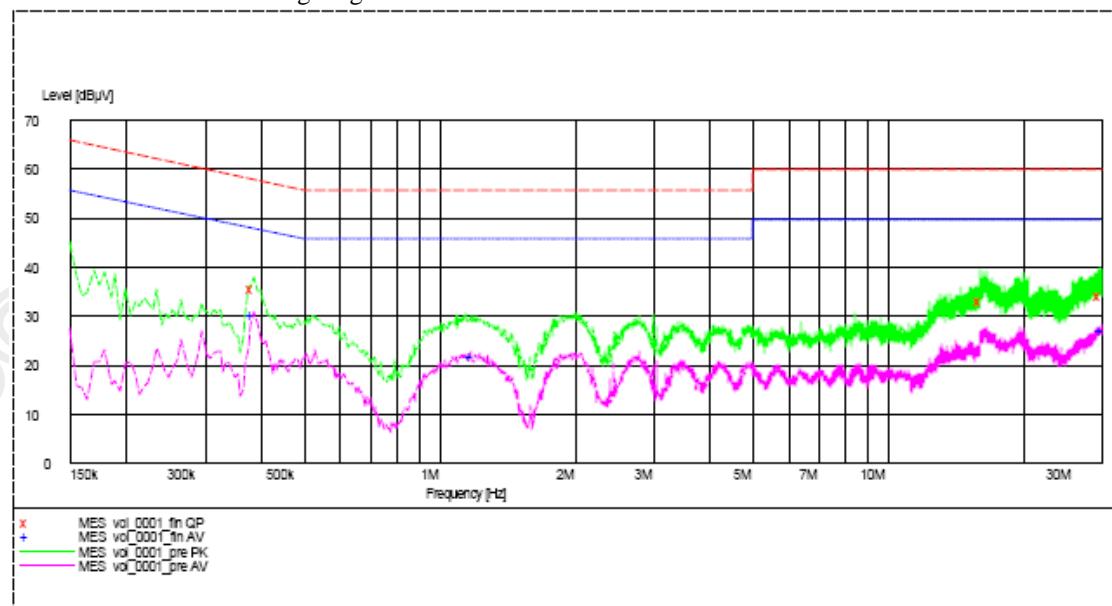
Frequency Range [MHz]	Quasi-Peak Limits [dB μ V]	Average [dB μ V]
0.15-0.5	66 to 56*	56 to 46*
0.5-5.0	56	46
5.0-30.0	60	50

* Decreases with the logarithm of the frequency.

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

Results of iPod mode (Connected to iPod) (N): Pass

Please refer to the following diagram for individual results.



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Results of iPod mode (Connected to iPod) (N): Pass

Conductor Live or Neutral	Frequency MHz	Quasi-peak		Average	
		Level dB μ V	Limit dB μ V	Level dB μ V	Limit dB μ V
Neutral	0.385	35.8	58.0	-*-	-*-
Neutral	16.085	33.1	60.0	-*-	-*-
Neutral	29.780	34.3	60.0	-*-	-*-
Neutral	0.385	-*-	-*-	30.2	48.0
Neutral	1.175	-*-	-*-	21.9	46.0
Neutral	29.930	-*-	-*-	27.3	50.0

Remarks:

Calculated measurement uncertainty : 3.97dB

-*- Emission(s) that is far below the corresponding limit line.

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Limit for Conducted Emissions (FCC 47 CFR 15.207):

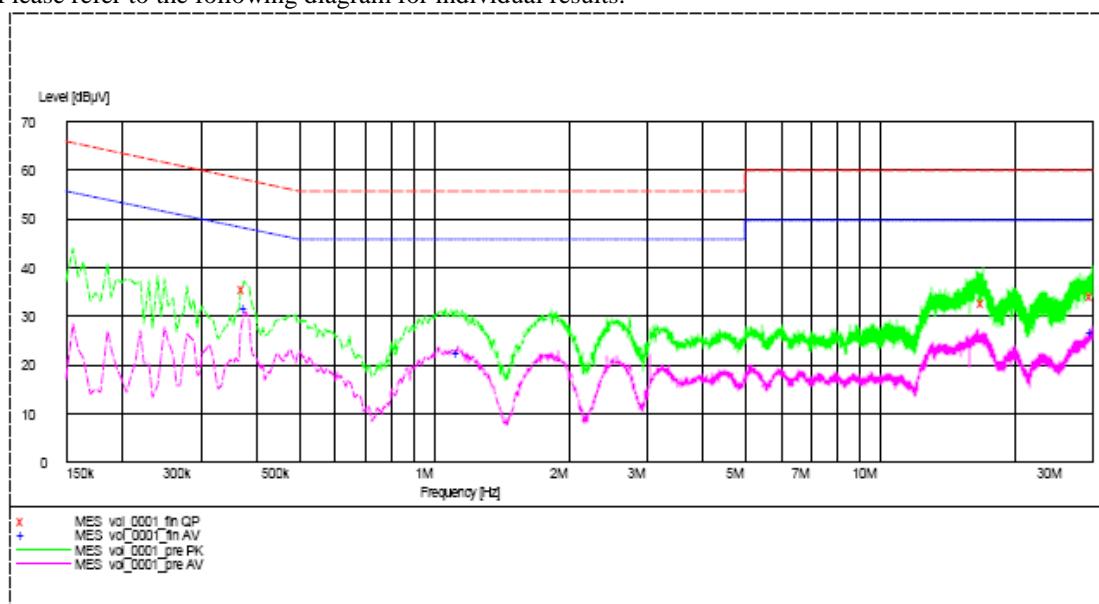
Frequency Range [MHz]	Quasi-Peak Limits [dB μ V]	Average [dB μ V]
0.15-0.5	66 to 56*	56 to 46*
0.5-5.0	56	46
5.0-30.0	60	50

* Decreases with the logarithm of the frequency.

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

Results of USB Audio play mode (Connected to USB flash drive) (L): Pass

Please refer to the following diagram for individual results.



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