TEST REPORT

Report Number: HK11051691-2

Application
for
Original Grant
of
47 CFR Part 15: 2009 Certification

1.9GHz Digital Modulation Cordless Phone with Caller ID, Speakerphone and Bluetooth - Base Unit Bluetooth Portion

FCC ID: Y5PIRBD10US001

Prepared and Checked by:

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GENERAL INFORMATION

Applicant Name:	Cypress Electronics Ltd.
Applicant Address:	11/F, Block G, East Sun Industrial Centre, 16 Shing Yip Street, Kwun Tong, Kowloon, Hong Kong.
FCC Specification Standard:	FCC Part 15, October 1, 2009 Edition
FCC ID:	Y5PIRBD10US001
FCC Model(s):	50541241, 50541247, 50541248
Type of EUT:	Transceiver
Description of EUT:	1.9GHz Digital Modulation Cordless Phone with Caller ID, Speakerphone and Bluetooth - Base Unit Bluetooth Portion
Serial Number:	N/A
Sample Receipt Date:	May 26, 2011
Date of Test:	June 16-24, 2011
Report Date:	August 15, 2011
Environmental Conditions:	Temperature: +10 to 40°C Humidity: 10 to 90%

Table of Contents

EXHIBIT 1
TEST RESULTS SUMMARY & STATEMENT OF COMPLIANCE

1.0 Test Results Summary & Statement of Compliance

1.1 Summary of Test Results

Test Items	FCC Part 15 Section	Results	Details see section
Antenna Requirement	15.203	Pass	2.1
Radiated Emission Radiated Emission on the Bandedge	15.249(a), 209, & 109 15.249(d)	Pass Pass	4.2 4.4
Radiated Emission in Restricted Bands	15.205	Pass	4.2
Radiated Emission from Receiver	N/A	Pass	4.3
AC Power Line Conducted Emission	15.207 & 15.107	Pass	4.5

Note: Pursuant to FCC Part 15 Section 15.215(c), the 20dB bandwidth of the emission was contained within the frequency band designated (mentioned as above) which the EUT operated. The effects, if any, from frequency sweeping, frequency hopping, other modulation techniques and frequency stability over expected variations in temperature and supply voltage were considered.

1.2 Statement of Compliance

The equipment under test is found to be complying with the following standard:

FCC Part 15, October 1, 2009 Edition

EXHIBIT 2
GENERAL DESCRIPTION

2.0 General Description

2.1 Product Description

The 50541241 is a 1.9GHz Digital Modulation Cordless Phone with Caller ID, Speakerphone and Bluetooth - Base Unit Bluetooth Portion. It operates at frequency range of 2402MHz to 2480MHz with 79 channels. The Base Unit is powered by an adaptor 100-240VAC to 6.5VDC, 1500mA (Model: SW-065150A). With Bluetooth and 1.9GHz wireless communications enabled, the Base Unit allows user to uses a cordless handset to dial out or receive Bluetooth-equipped cellular phone calls via the cellular network. Only one cellular phone can be on a call at a time.

The Bluetooth antennas used in base unit is integral, and the test sample is a prototype.

The Model(s): 50541247 and 50541248 are the same as the Model: 50541241 in electronics/electrical designs including software & firmware, PCB layout and construction design/physical design/enclosure. The only differences between these models are model number and cosmetic details to be sold for marketing purpose.

The circuit description is attached in the Appendix and saved with filename: descri.pdf.

Connection between the device and the telephone network is accomplished through the use of USOC RJ11C in the 2-wire loop calling central office line.

2.2 Test Methodology

Both AC power line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.4 (2003). Preliminary radiated scans and all radiated measurements were performed in Open Area Test Sites. All Radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the "**Justification Section**" of this Application.

2.3 Test Facility

The open area test site and conducted measurement facility used to collect the radiated data and conducted data are at Roof Top and 2nd Floor respectively of Intertek Testing Services Hong Kong Ltd., which is located at Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong. This test facility and site measurement data have been fully placed on file with the FCC.

EXHIBIT 3
SYSTEM TEST CONFIGURATION

3.0 System Test Configuration

3.1 Justification

For radiated emissions testing, the equipment under test (EUT) was setup to transmit continuously / receive continuously / normal mode to simplify the measurement methodology. Care was taken to ensure proper power supply voltages during testing. During testing, all cables (if any) were manipulated to produce worst case emissions.

The Base Unit was powered by an adaptor 100-240VAC to 6.5VDC, 1500mA (Model: SW-065150A).

For the measurements, the EUT was attached to a plastic stand if necessary and placed on the wooden turntable. If the base unit attached to peripherals, they were connected and operational to simulate typical use. The handset was remotely located as far from the antenna and the base as possible to ensure full power transmission from the base. Else, the base was wired to transmit full power.

The signal was maximized through rotation and placement in the three orthogonal axes. The antenna height and polarization were varied during the search for maximum signal level. The antenna height was varied from 1 to 4 meters. Radiated emissions were taken at three meters unless the signal level was too low for measurement at that distance. If necessary, a pre-amplifier was used and/or the test was conducted at a closer distance.

For any intentional radiator powered by AC power line, measurements of the radiated signal level of the fundamental frequency component of the emission was performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage.

For transmitter radiated measurement, the spectrum analyzer resolution bandwidth was 100 kHz for frequencies below 1000 MHz. The resolution bandwidth was 1 MHz for frequencies above 1000 MHz.

For receiver radiated measurement, the spectrum analyzer resolution bandwidth was 1MHz for measurement above 1GHz while 100kHz for measurement from 30MHz to 1GHz.

Radiated emission measurement for transmitter was performed from the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower. Receiver was performed from 30MHz the fifth harmonic of the highest frequency or 40GHz, whichever is lower.

Emission that are directly caused by digital circuits in the transmit path and transmitter portion were measured, and the limit are according to FCC Part 15 Section 15.109.

3.1 Justification - Cont'd

Detector function for radiated emissions is in peak mode. Average readings, when required, are taken by measuring the duty cycle of the equipment under test and subtracting the corresponding amount in dB from the measured peak readings. A detailed description for the calculation of the average factor can be found in section 4.2.3.

Determination of pulse desensitization was made according to *Hewlett Packard Application Note 150-2, Spectrum Analysis... Pulsed RF.* The effective period (Teff) was 625µs. With the resolution bandwidth 1MHz and spectrum analyzer IF bandwidth 3dB, the pulse desensitization factor was 0dB.

For AC line conducted emission test, the EUT along with its peripherals were placed on a 1.0m(W)x1.5m(L) and 0.8m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane. The EUT was connected to power mains through a line impedance stabilization network (LISN), which provided 50ohm coupling impedance for measuring instrument. The LISN housing, measuring instrument case, reference ground plane, and vertical ground plane were bounded together. The excess power cable between the EUT and the LISN was bundled.

All connecting cables of EUT and peripherals were manipulated to find the maximum emission.

All relevant operation modes have been tested, and the worst case data is included in this report.

Bluetooth portion and DECT portion of Base unit were in active during radiated emission testing and conducted emission testing. The simultaneous transmission of both Bluetooth and DECT portions on Base Unit was checked. No new emission was observed during the simultaneous transmission.

3.2 EUT Exercising Software

The EUT exercise program used during radiated and conducted testing was designed to exercise the various system components in a manner similar to a typical use.

3.3 Details of EUT and Description of Accessories

Details of EUT:

An AC adaptor (provided with the unit) was used to power the device. Their description are listed below.

(1) Base Unit: An AC adaptor (100-240VAC to 6.5VDC, 1500mA, Model: SW-065150A) (Supplied by Client)

Description of Peripherals:

(1) Telecommunication cable with RJ11C connectors (1m, unshielded), terminated (Supplied by Intertek)
(2) Telephone Line Simulator, Model: TLS-5D-01, S/N: 151101 (Supplied by Intertek)
(3) Cordless Handset, Model: 50541241, FCC ID: Y5PIRBD10US001 (Supplied by Client)
(4) iPod nano, Model: A1320, Serial No.: YM9374AG72F, DoC Product (Supplied by Client)
(5) Nokia Cell Phone, Model: 5300, FCC ID: PPIRM-146 (Supplied by Intertek)
(6) 3m Telephone Line (Supplied by Intertek)

3.4 Measurement Uncertainty

When determining of the test conclusion, the Measurement Uncertainty of test has been considered.

EXHIBIT 4
TEST RESULTS

4.0 **Test Results**

Data is included of the worst case configuration (the configuration which resulted in the highest emission levels). A sample calculation, configuration photographs and data tables of the emissions are included.

4.1 Field Strength Calculation

The field strength is calculated by adding the reading on the Spectrum Analyzer to the factors associated with preamplifiers (if any), antennas, cables, pulse desensitization and average factors (when specified limit is in average and measurements are made with peak detectors). A sample calculation is included below.

FS = RA + AF + CF - AG + PD + AV

where FS = Field Strength in dBμV/m
RA = Receiver Amplitude (including preamplifier) in dBμV
CF = Cable Attenuation Factor in dB
AF = Antenna Factor in dB
AG = Amplifier Gain in dB
PD = Pulse Desensitization in dB
AV = Average Factor in -dB

In the radiated emission table which follows, the reading shown on the data table may reflects the preamplifier gain. An example of the calculations, where the reading does not reflect the preamplifier gain, follows:

FS = RA + AF + CF - AG + PD +AV

Example
Assume a receiver reading of 62.0 dBμV is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted. The pulse desensitization factor of the spectrum analyzer was 0 dB, and the resultant average factor was -10 dB. The net field strength for comparison to the appropriate emission limit is 32 dBμV/m. This value in dBμV/m was converted to its corresponding level in μV/m.

RA = 62.0 dBμV
AF = 7.4 dB
CF = 1.6 dB
AG = 29 dB
PD = 0 dB
AV = -10 dB
FS = 62 + 7.4 +1.6 -29 +0 + (-10) = 32 dBμV/m

Level in μV/m = Common Antilogarithm [(32 dBμV/m)/20] = 39.8 μV/m

4.2 Radiated Emissions

4.2.1 Radiated Emission Configuration Photograph

Worst Case Radiated Emission
at

Base Unit: 63.542 MHz

The worst case radiated emission configuration photographs are attached in the Appendix and saved with filename: config photos.pdf

4.2.2 Radiated Emission Data

The data in tables 1-4 list the significant emission frequencies, the limit and the margin of compliance.

Judgement -

Base Unit: Passed by 5.4 dB margin

4.2.3 Transmitter Duty Cycle Calculation

Based on the Bluetooth Specification Version 2.0 / 2.1 + EDR, the transmitter ON time for each timeslot of Bluetooth is 625μs. DH5 has the maximum duty cycle, which consists of 5 continuous Tx slots and 1 Rx slot. Therefore one hopset take (5+1) x 625μs = 3.75ms. For one period for a pseudo-random hopping through all 79 RF channels, it take: 79 x 3.75ms = 296.25ms.

The dwell time for DH5 is 5 x 625μs = 3.125ms.

Therefore,

Duty Cycle (DC) = Maximum On time in 100ms/100ms
= 3.125ms/100ms
= 0.03125

Average Factor (AF) of Bluetooth in dB = 20 $\log_{10}$ (0.03125)
= -30.1dB

Mode: TX-Channel 00

Table 1, Base Unit

Radiated Emission Data

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Average Factor (dB)	Calculated at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
V	2402.000	95.0	33	29.4	30.1	61.3	94.0	-32.7
V	***4804.000***	***60.5***	***33***	***34.9***	***30.1***	***32.3***	***54.0***	***-21.7***
H	7206.000	49.7	33	37.9	30.1	24.5	54.0	-29.5
H	9608.000	45.0	33	40.4	30.1	22.3	54.0	-31.7
H	***12010.000***	***43.4***	***33***	***40.5***	***30.1***	***20.8***	***54.0***	***-33.2***
H	14412.000	43.2	33	40.0	30.1	20.1	54.0	-33.9

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
V	2402.000	95.0	33	29.4	91.4	114.0	-22.6
V	***4804.000***	***60.5***	***33***	***34.9***	***62.4***	***74.0***	***-11.6***
H	7206.000	49.7	33	37.9	54.6	74.0	-19.4
H	9608.000	45.0	33	40.4	52.4	74.0	-21.6
H	***12010.000***	***43.4***	***33***	***40.5***	***50.9***	***74.0***	***-23.1***
H	14412.000	43.2	33	40.0	50.2	74.0	-23.8

NOTES: 1. Peak detector is used for the emission measurement.

2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.

3. Negative value in the margin column shows emission below limit.

4. Horn antenna is used for the emission over 1000MHz.

5. Emission (the row indicated by ***bold italic***) within the restricted band meets the requirement of FCC Part 15 Section 15.205.

Mode: TX-Channel 39

Table 2, Base Unit

Radiated Emission Data

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Average Factor (dB)	Calculated at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
V	2441.000	95.2	33	29.4	30.1	61.5	94.0	-32.5
V	***4882.000***	***60.4***	***33***	***34.9***	***30.1***	***32.2***	***54.0***	***-21.8***
H	***7323.000***	***49.9***	***33***	***37.9***	***30.1***	***24.7***	***54.0***	***-29.3***
H	9764.000	45.2	33	40.4	30.1	22.5	54.0	-31.5
H	***12205.000***	***43.3***	***33***	***40.5***	***30.1***	***20.7***	***54.0***	***-33.3***
H	14646.000	44.8	33	38.4	30.1	20.1	54.0	-33.9

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
V	2441.000	95.2	33	29.4	91.6	114.0	-22.4
V	***4882.000***	***60.4***	***33***	***34.9***	***62.3***	***74.0***	***-11.7***
H	***7323.000***	***49.9***	***33***	***37.9***	***54.8***	***74.0***	***-19.2***
H	9764.000	45.2	33	40.4	52.6	74.0	-21.4
H	***12205.000***	***43.3***	***33***	***40.5***	***50.8***	***74.0***	***-23.2***
H	14646.000	44.8	33	38.4	50.2	74.0	-23.8

NOTES:
1. Peak detector is used for the emission measurement.
2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna is used for the emission over 1000MHz.
5. Emission (the row indicated by ***bold italic***) within the restricted band meets the requirement of FCC Part 15 Section 15.205.

Mode: TX-Channel 78

Table 3, Base Unit

Radiated Emission Data

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Average Factor (dB)	Calculated at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
V	2480.000	96.1	33	29.4	30.1	62.4	94.0	-31.6
V	***4960.000***	***60.5***	***33***	***34.9***	***30.1***	***32.3***	***54.0***	***-21.7***
H	***7440.000***	***49.7***	***33***	***37.9***	***30.1***	***24.5***	***54.0***	***-29.5***
H	9920.000	44.9	33	40.4	30.1	22.2	54.0	-31.8
H	***12400.000***	***43.4***	***33***	***40.5***	***30.1***	***20.8***	***54.0***	***-33.2***
H	14880.000	44.7	33	38.4	30.1	20.0	54.0	-34.0

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
V	2480.000	96.1	33	29.4	92.5	114.0	-21.5
V	***4960.000***	***60.5***	***33***	***34.9***	***62.4***	***74.0***	***-11.6***
H	***7440.000***	***49.7***	***33***	***37.9***	***54.6***	***74.0***	***-19.4***
H	9920.000	44.9	33	40.4	52.3	74.0	-21.7
H	***12400.000***	***43.4***	***33***	***40.5***	***50.9***	***74.0***	***-23.1***
H	14880.000	44.7	33	38.4	50.1	74.0	-23.9

NOTES: 1. Peak detector is used for the emission measurement.

2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.

3. Negative value in the margin column shows emission below limit.

4. Horn antenna is used for the emission over 1000MHz.

5. Emission (the row indicated by ***bold italic***) within the restricted band meets the requirement of FCC Part 15 Section 15.205.

Mode: Talk

Table 4, Base unit

Radiated Emission Data

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-amp (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
V	38.476	39.8	16	10.0	33.8	40.0	-6.2
V	54.575	39.5	16	11.0	34.5	40.0	-5.5
H	63.542	41.6	16	9.0	34.6	40.0	-5.4
H	***108.371***	***35.8***	***16***	***14.0***	***33.8***	***43.5***	***-9.7***
H	***132.428***	***34.8***	***16***	***14.0***	***32.8***	***43.5***	***-10.7***
H	***169.374***	***30.2***	***16***	***18.0***	***32.2***	***43.5***	***-11.3***

NOTES: 1. Peak detector is used for the emission measurement.

2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.

3. Negative value in the margin column shows emission below limit.

4. Emission (the row indicated by ***bold italic***) within the restricted band meets the requirement of FCC Part 15 Section 15.205.

4.3 Radiated Emission on the Bandedge

From the following plots, they show that the fundamental emissions are confined in the specified band (902MHz and 928MHz) / (2400MHz and 2483.5MHz) / (5725MHz and 5875MHz). In case of emissions up to two standard bandwidths away from the bandedge, the delta measurement technique is used for determining bandedge compliance. Standard bandwidth is the bandwidth specified by ANSI C63.4 (2003) for frequency being measured.

Emissions radiated outside of the specified frequency bands, except harmonics, are attenuated by 50 dB below the level of the fundamental or to the general radiated emission limits in FCC Part 15 Section 15.209, whichever is the lesser attenuation, which meet the requirement of FCC Part 15 Section 15.249(d).

Radiated Emission on bandedge plots are attached in the Appendix and saved with filename: be.pdf

Bandedge compliance is determined by applying marker-delta method, i.e.

Resultant Field Strength = Fundamental Emissions - Delta from the plot

Resultant field strength for the lowest and/or highest channel(s), with corresponding average values are calculated as follows:

	Channel	Fundamental Emission (dBµV/m)	Delta from the Plot (dB)	Resultant Field Strength (dBµV/m)	Average Limit (dBµV/m)	Margin (dB)
Base	Lowest	61.3	43.49	17.81	54	-36.19
	Highest	62.4	45.71	16.69	54	-37.31

	Channel	Fundamental Emission (dBµV/m)	Delta from the Plot (dB)	Resultant Field Strength (dBµV/m)	Peak Limit (dBµV/m)	Margin (dB)
Base	Lowest	91.4	43.49	47.91	74	-26.09
	Highest	92.5	45.71	46.79	74	-27.21

The resultant field strength meets the general radiated emission limit in FCC Part 15 Section 15.209, which does not exceed 74dBµV/m for peak limit and also 54dBµV/m for average limit.

4.4 AC Power Line Conducted Emission

[ ] Not applicable – EUT is only powered by battery for operation.

[×] EUT connects to AC power line. Emission Data is listed in following pages.

[ ] Base Unit connects to AC power line and has transmission. Handset connects to AC power line but has no transmission. Emission Data of Base Unit is listed in following pages.

4.4.1 AC Power Line Conducted Emission Configuration Photograph

Worst Case Line-Conducted Configuration
at

0.312 MHz

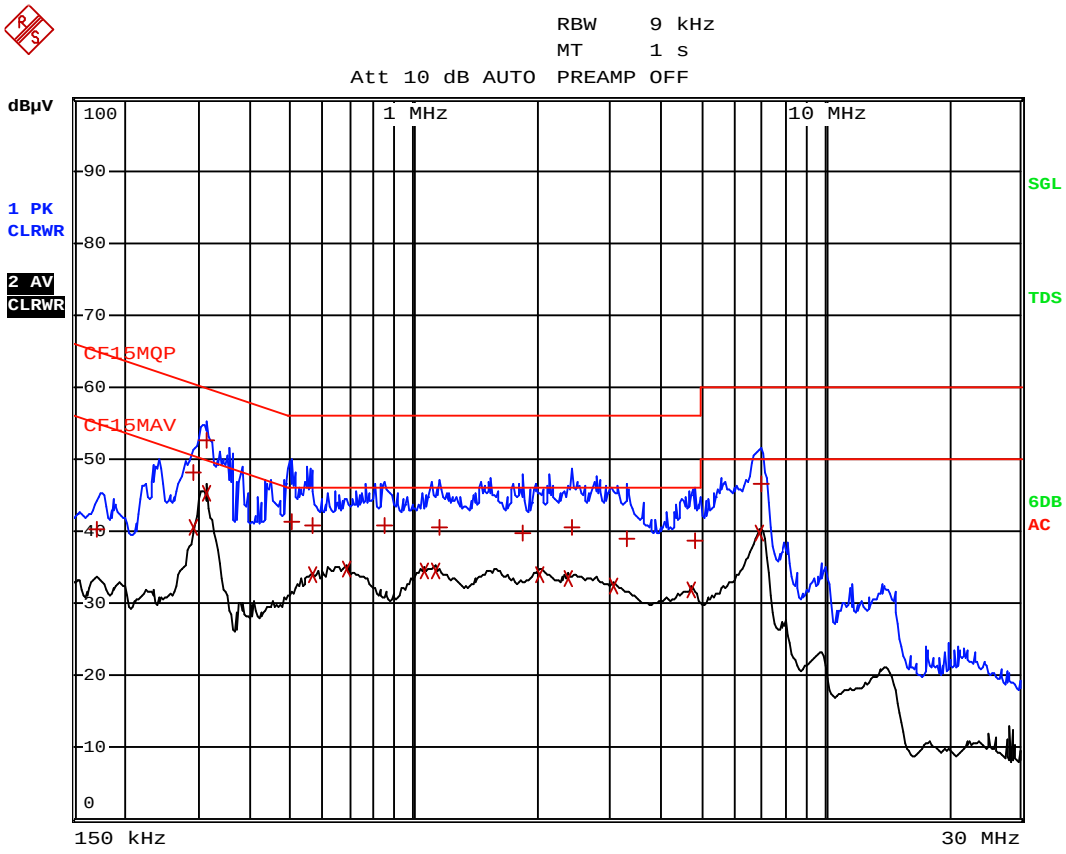
The worst case line conducted configuration photographs are attached in the Appendix and saved with filename: config photos.pdf

4.4.2 AC Power Line Conducted Emission Data

The plot(s) and data in the following pages list the significant emission frequencies, the limit and the margin of compliance

Passed by 4.7 dB margin compare with average limit

Worst Case: Talk and Charging (IPod)



Date: 16.JUN.2011 19:25:14

Worst Case: Talk and Charging (IPod)

EDIT PEAK LIST (Final Measurement Results)

Trace1: CF15MQP
Trace2: CF15MAV
Trace3: ---

	TRACE	FREQUENCY	LEVEL dBµV		DELTA LIMIT dB
1	Quasi Peak	172.5 kHz	40.21	L1	-24.62
2	CISPR Average	289.5 kHz	40.51	L1	-10.02
1	Quasi Peak	289.5 kHz	48.13	L1	-12.40
2	CISPR Average	312 kHz	45.20	L1	-4.70
1	Quasi Peak	312 kHz	52.65	L1	-7.26
1	Quasi Peak	501 kHz	41.30	L1	-14.69
2	CISPR Average	564 kHz	33.99	L1	-12.00
1	Quasi Peak	568.5 kHz	40.71	L1	-15.29
2	CISPR Average	685.5 kHz	34.76	L1	-11.23
1	Quasi Peak	847.5 kHz	40.86	L1	-15.13
2	CISPR Average	1.059 MHz	34.47	L1	-11.52
2	CISPR Average	1.1265 MHz	34.61	L1	-11.38
1	Quasi Peak	1.149 MHz	40.52	L1	-15.47
1	Quasi Peak	1.851 MHz	39.77	L1	-16.22
2	CISPR Average	2.031 MHz	34.06	L1	-11.93
2	CISPR Average	2.3775 MHz	33.44	L1	-12.55
1	Quasi Peak	2.436 MHz	40.47	L1	-15.52
2	CISPR Average	3.066 MHz	32.35	L1	-13.64
1	Quasi Peak	3.309 MHz	38.99	L1	-17.00
2	CISPR Average	4.767 MHz	31.83	L1	-14.16

Date: 16.JUN.2011 19:24:56

Worst Case: Talk and Charging (IPod)

EDIT PEAK LIST (Final Measurement Results)

Trace1: CF15MQP
Trace2: CF15MAV
Trace3: ---

	TRACE	FREQUENCY	LEVEL dBµV		DELTA LIMIT dB
1	Quasi Peak	4.8345 MHz	38.67	L1	-17.32
2	CISPR Average	6.927 MHz	39.66	L1	-10.33
1	Quasi Peak	7.0395 MHz	46.50	L1	-13.49

Date: 16.JUN.2011 19:25:06

EXHIBIT 5
EQUIPMENT LIST

5.0 **Equipment List**

1) Radiated Emissions Test

Equipment	Biconical Antenna	Spectrum Analyzer	EMI Test Receiver
Registration No.	EW-0954	EW-2188	EW-2500
Manufacturer	EMCO	AGILENTTECH	R&S
Model No.	3104C	E4407B	ESCI
Calibration Date	Apr. 14, 2010	Dec. 27, 2010	Jan. 25, 2011
Calibration Due Date	Oct. 14, 2011	Dec. 31, 2011	Jan. 25, 2012

Equipment	Broad-Band Horn Antenna	Double Ridged Guide Antenna	Log Periodic Antenna
Registration No.	EW-1679	EW-1015	EW-0446
Manufacturer	SCHWARZBECK	EMCO	EMCO
Model No.	BBHA9170	3115	3146
Calibration Date	Mar. 03, 2011	Feb. 09, 2010	Apr. 26, 2010
Calibration Due Date	Sep. 03, 2012	Aug. 09, 2011	Oct. 26, 2011

2) Conducted Emissions Test

Equipment	Artificial Mains Network	EMI Test Receiver	Pulse Limiter
Registration No.	EW-2501	EW-2666	EW-0699
Manufacturer	R&S	R&S	R&S
Model No.	ENV-216	ESCI7	ESH3-Z2
Calibration Date	Mar. 30, 2011	Oct. 12, 2010	Dec. 24, 2009
Calibration Due Date	Mar. 30, 2012	Oct. 12, 2011	Jun. 24, 2011

END OF TEST REPORT