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## TEST REPORT

**Report Number: HK12081307-2**

Application  
for  
Original Grant of 47 CFR Part 15 Certification  
Single New of RSS-210 Issue 8 Equipment Certification

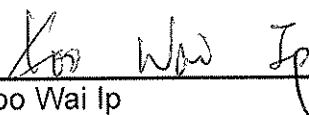
2.4GHz Baby Monitor - Parent Unit


**FCC ID: BOUSCD603H**

**IC: 135M-SCD603H**

Prepared and Checked by:

Approved by:

  
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\_\_\_\_\_  
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Assistant Manager  
November 07, 2012

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## GENERAL INFORMATION

<b>Applicant Name:</b>	Philips Consumer Lifestyle
<b>Applicant Address:</b>	5/F., Philips Electronics Building, 5 Science Park East Avenue, Hong Kong Science Park, Shatin, N.T., Hong Kong.
<b>FCC Specification Standard:</b>	FCC Part 15, October 1, 2011 Edition
<b>FCC ID:</b>	BOUSCD603H
<b>FCC Model(s):</b>	SCD603-H
<b>IC Specification Standard:</b>	RSS-210 Issue 8, December 2010 RSS-Gen Issue 3, December 2010
<b>IC:</b>	135M-SCD603H
<b>IC Model(s):</b>	SCD603-H
<b>Type of EUT:</b>	Spread Spectrum Transmitter
<b>Description of EUT:</b>	2.4GHz Baby Monitor - Parent Unit
<b>Serial Number:</b>	N/A
<b>Sample Receipt Date:</b>	August 14, 2012
<b>Date of Test:</b>	September 07-November 02,2012
<b>Report Date:</b>	November 07, 2012
<b>Environmental Conditions:</b>	Temperature: +10 to 40°C Humidity: 10 to 90%

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**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	RSS-210/ RSS-Gen <sup>#</sup> Section	Results	Details see section
Antenna Requirement	15.203	7.1.2 <sup>#</sup>	Pass	2.1
Security Code Information	15.214(d)	2.4	N/A	4.1
Max. Conducted Output Power	15.247(b)(1) & (4)	A8.4(2)	Pass	4.2
Max. 20dB RF Bandwidth	15.247(a)(1)(iii)	A8.1(d)	Pass	4.3
Min. No. of Hopping Frequencies	15.247(a)(1)(iii)	A8.1(d)	Pass	4.4
Min. Hopping Channel Carrier Frequency Separation	15.247(a)(1)	A8.1(b)	Pass	4.5
Average Time of Occupancy	15.247(a)(1)(iii)	A8.1(d)	Pass	4.6
Out of Band Antenna Conducted Emission	15.247(d)	A8.5	Pass	4.8
Radiated Emission in Restricted Bands and Spurious Emissions	15.247(d) & 15.109	2.2	Pass	4.8
AC Power Line Conducted Emission	15.207 & 15.107	7.2.4 <sup>#</sup>	Pass	4.9
Radio Frequency Radiation Exposure	15.247(i)	---	Pass	4.10

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 standards:

FCC Part 15, October 1, 2011 Edition  
RSS-210 Issue 8, December 2010  
RSS-Gen Issue 3, December 2010

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**EXHIBIT 2**  
**GENERAL DESCRIPTION**

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## 2.0 **General Description**

### 2.1 Product Description

The SCD603-H is a 2.4GHz Baby Monitor - Parent Unit. It operates at frequency range of 2408.625MHz to 2469.375MHz. The Parent Unit is powered by an adaptor 100-240VAC 50-60Hz 300mA to 5.0VDC 1000mA and/or 3.7V, 1100mAh Li-ion rechargeable battery.

The antenna(s) used in the EUT are integral, and the test sample is a prototype.

The circuit description and frequency hopping algorithm are saved with filename: descri.pdf.

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## 2.2 Purpose of Application

This is an application of certification of the transmitter.

## 2.3 Test Methodology

Both AC power line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.4 (2009). 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. Antenna port conducted measurements were performed according to ANSI C63.10 (2009). All other measurements were made in accordance with the procedures in 47 CFR Part 2.

## 2.4 Test Facility

The open area test site, AC Power Line conducted measurement facility, and antenna port conducted measurement facility used to collect the radiated data, AC Power Line conducted data, and conductive data are at Roof Top, 2<sup>nd</sup> Floor, and 5<sup>th</sup> 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 and the Industry Canada.



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**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 / receive continuously 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 EUT was powered by a 100-240VAC 50-60Hz 300mA to 5.0VDC 1000mA adaptor and/or 3.7V, 1100mAh Li-ion rechargeable battery.

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

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.

Radiated emission measurement for transmitter were 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.

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 15.209. Digital circuitry used to control additional functions other than the operation of the transmitter is subject to FCC Part Section 15.109 Limits.

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### 3.1 Justification - Cont'd

Detector function for radiated emissions was in peak mode. Average readings, when required, were 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.

Pulse densensitization is not applicable for this device. Since the transmitter transmits the RF signal continuously.

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.

### 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.

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### 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) Parent Unit: An AC adaptor (100-240VAC to 5.0VDC 1000mA, Model: S006MU0500100) (Supplied by Client)

Description of Accessories:

There are no special accessories necessary for compliance of this product.

### 3.4 Measurement Uncertainty

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

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**EXHIBIT 4**  
**TEST RESULTS**

#### 4.0 Test Results

##### 4.1 Maximum Conducted Output Power at Antenna Terminals

- The antenna power of the EUT was connected to the input of a power meter. Power was read directly and cable loss correction was added to the reading to obtain power at the EUT antenna terminals.
- The antenna port of the EUT was connected to the input of a spectrum analyzer. The analyzer was set for RBW>20dB bandwidth and power was read directly in dBm. External attenuation and cable loss were compensated for using the OFFSET function of the analyser.

(Parent Unit) Antenna Gain = 1.3 dBi		
Frequency (MHz)	Output in dBm	Output in Watt
Low Channel: 2408.625	19.33	0.086
Middle Channel: 2440.125	18.81	0.076
High Channel: 2469.375	18.32	0.068

Cable loss : 0.3 dB External Attenuation : 0 dB

Cable loss, external attenuation:  included in OFFSET function  
 added to SA raw reading

dBm max. output level = 19.33 dBm

Limits:

- 0.125W (21dBm) for antennas with gains of 6dBi or less
- 0.25W (24dBm) for antennas with gains of 6dBi or less
- 1W (30dBm) for antennas with gains of 6dBi or less
- \_\_\_W (\_\_\_dBm) for antennas with gains more than 6dBi

The plots of conducted output power are saved as below.

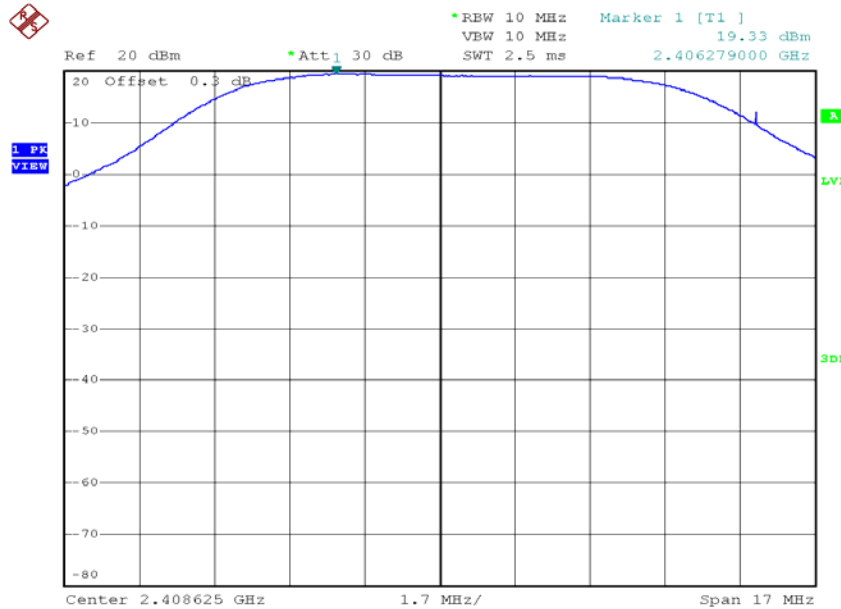
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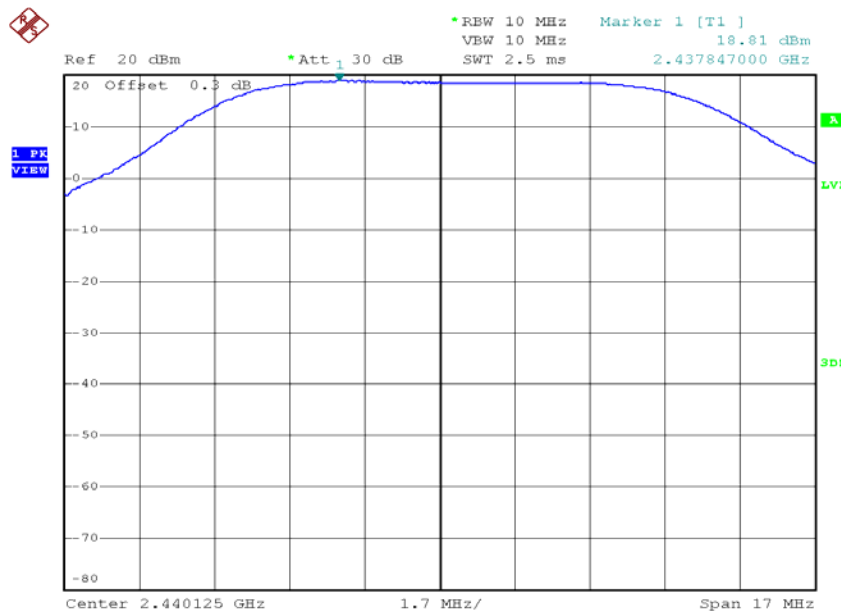


## Plots of conducted output power

### Parent unit, Lowest channel



### Parent unit, Middle channel



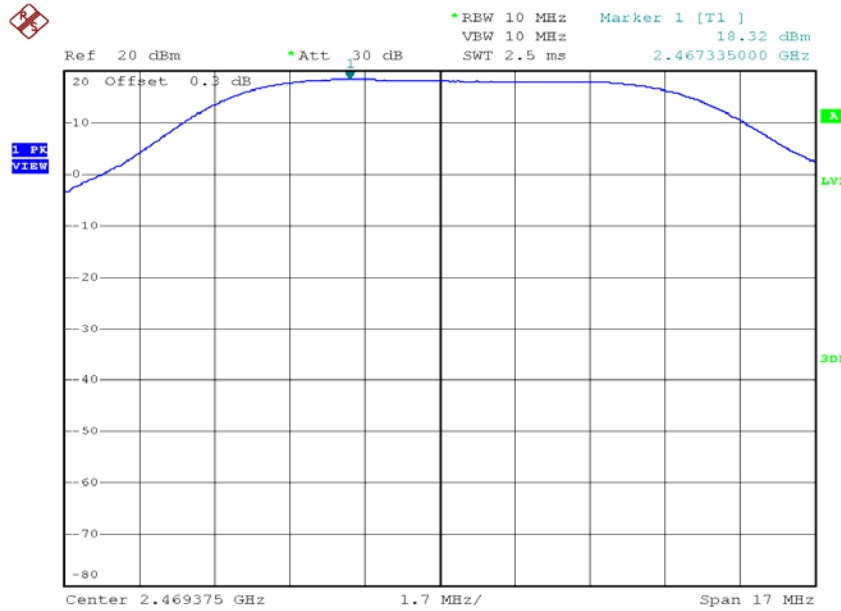
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## Plots of conducted output power

### Parent unit, Highest channel





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#### 4.2 Maximum 20 dB RF Bandwidth

The antenna port of the EUT was connected to the input of a spectrum analyzer. Analyzer RES BW was chosen so that the display was a result of the hopping channel modulation. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. A PEAK output reading was taken, a DISPLAY line was drawn 20 dB lower than PEAK level. The 20 dB bandwidth was determined from where the channel output spectrum intersected the display line.

Parent Unit	
Frequency (MHz)	20 dB Bandwidth (kHz)
Low Channel: 2408.625	3560
Middle Channel: 2440.125	3540
High Channel: 2469.375	3520

#### Limits

- $\leq 500\text{kHz}$  for 902-928MHz
- N/A for 2400-2483.5MHz
- $\leq 1\text{MHz}$  for 5725-5850MHz

The plots of 20dB RF bandwidth and occupied bandwidth are saved as below.

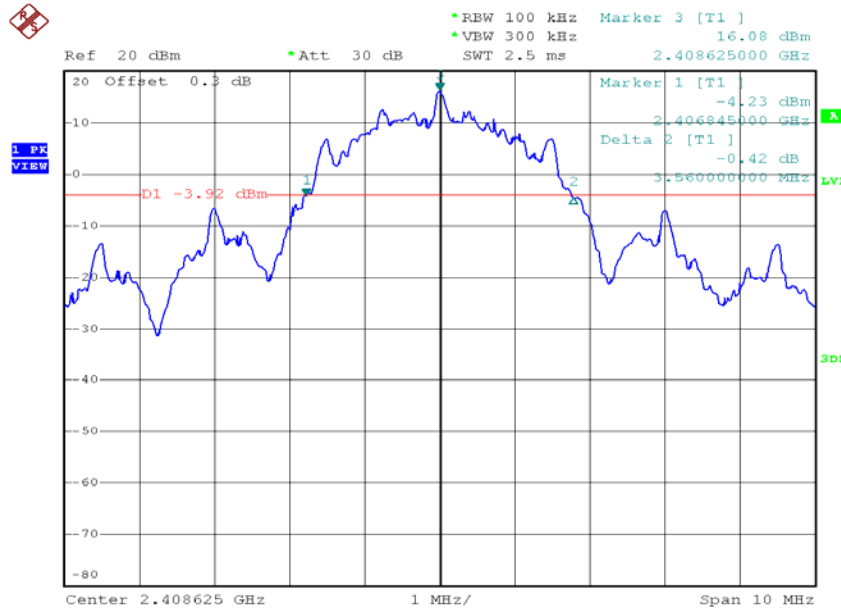
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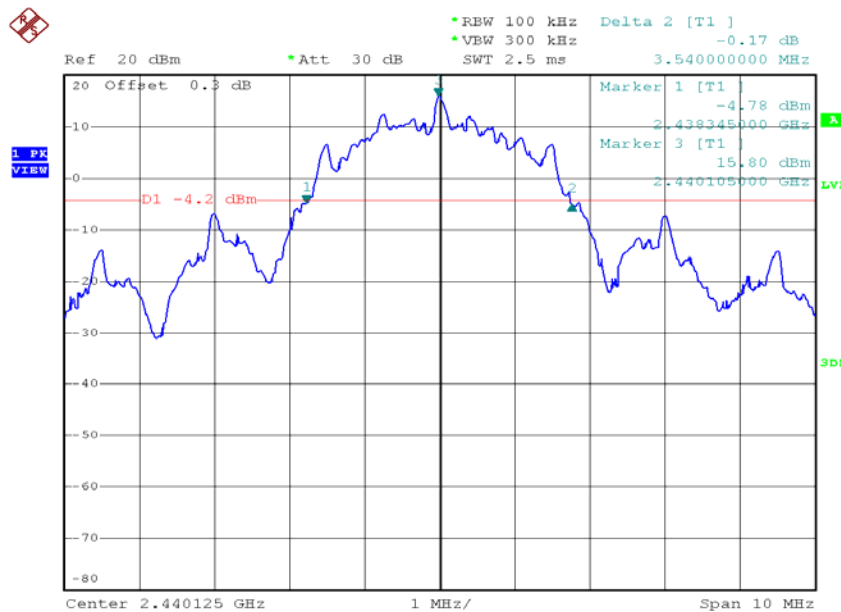


## Plots of 20dB RF bandwidth

### Parent unit, Lowest channel



### Parent unit, Middle channel



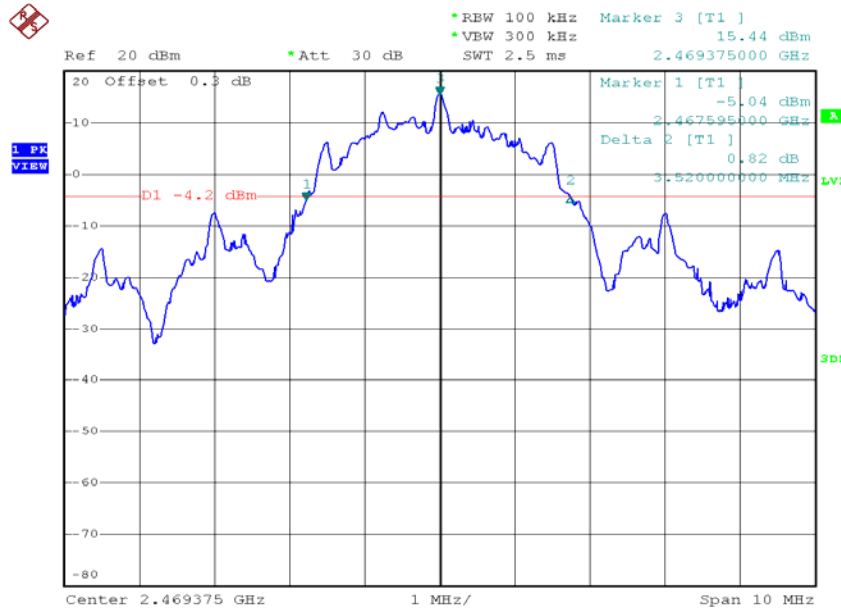
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### Plots of 20dB RF bandwidth

### Parent unit, Highest channel



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#### 4.3 Minimum Number of Hopping Frequencies

With the analyzer set to MAX HOLD readings were taken for 2-3 minutes in each band. The channel peaks so recorded were added together, and the total number compared to the minimum number of channels required in the regulation.

Parent Unit	
No. of hopping channels (Talk)	18

Minimum Requirements:

- at least 50 hopping channels for 902MHz-928MHz (20 dB bandwidth of hopping channel < 250kHz)
- at least 25 hopping channels for 902MHz-928MHz (20 dB bandwidth of hopping channel  $\geq$  250kHz)
- at least 15 hopping channels for 2400MHz-2483.5MHz.
- at least 75 hopping channels for 5725MHz-5850MHz.

The plots of number of hopping frequencies are saved as below.

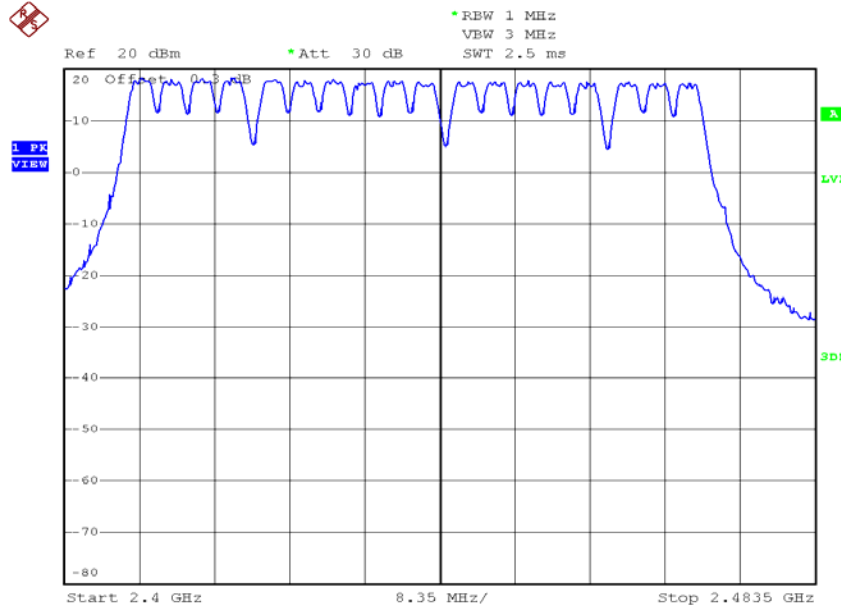
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## Plots of number of hopping frequencies

### Parent unit



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#### 4.4 Minimum Hopping Channel Carrier Frequency Separation

Using the DELTA MARKER function of the analyzer, the frequency separation between two adjacent channels was measured and met the requirement.

Parent Unit	
Channel Separation (Channel <u>09</u> and Channel <u>10</u> )	3376kHz

Limits:

The channel separation must be larger than:

- 25 kHz
- 20 dB bandwidth of hopping channel: \_\_\_ Hz
- 2/3 of 20dB bandwidth of hopping channel: 2373kHz

The plot(s) of hopping channel carrier frequency separation is saved as below.

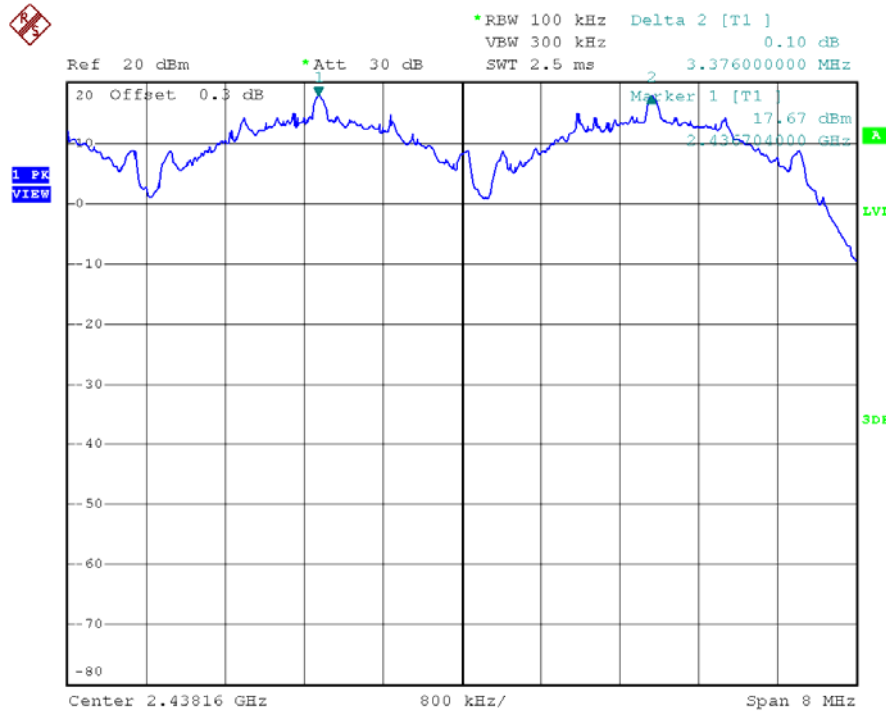
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## Plots of hopping channel carrier frequency separation

### Parent unit, between channel 09 and channel 10



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#### 4.5 Average Channel Occupancy Time

The spectrum analyzer center frequency was set to one of the known hopping channels. The SWEEP was set to 10ms, the SPAN was set to ZERO SPAN, and the TRIGGER was set to VIDEO. The time duration of the transmission so captured was measured with the MARKER DELTA function.

The SWEEP was then set to the time required by the regulation (20 seconds for 902-928 MHz devices, if the 20dB bandwidth is less than 250kHz, 10 seconds for 902-928 MHz if the 20dB bandwidth is or greater than 250kHz, “0.4 seconds x Number of hopping channels employed” seconds for 2400-2483.5 MHz, 30 seconds for 5725-5850 MHz). The analyzer was set to SINGLE SWEEP, the total ON time was added and compared against the limit (0.4 seconds).

Parent Unit	
Average Occupancy Time =	26.4ms

Limits:

Average 0.4 seconds maximum occupancy in:

- 7.2 seconds (0.4 sec. x 18) for 2400MHz-2483.5MHz
- 20 seconds for 902MHz-928MHz  $\geq$  50 hopping channels
- 10 seconds for 902MHz-928MHz  $\geq$  25 hopping channels
- 30 seconds for 5725-5850MHz

The plots of average channel occupancy time are saved as below.



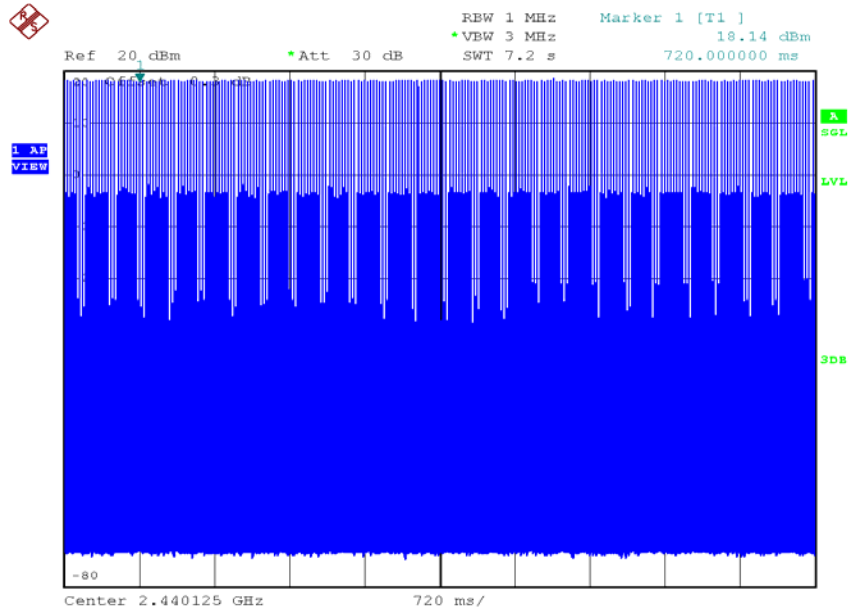
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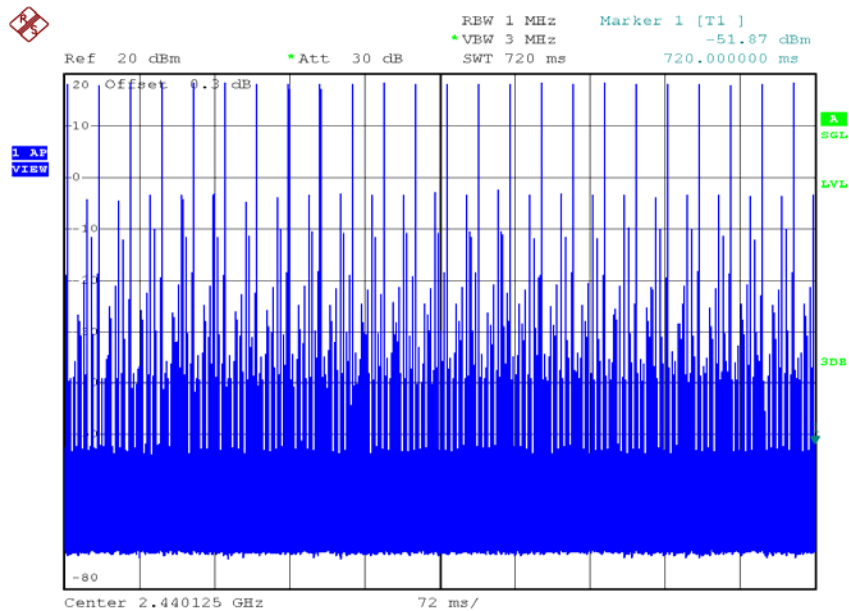


## Plots of average channel occupancy time

### Parent unit



### Parent unit



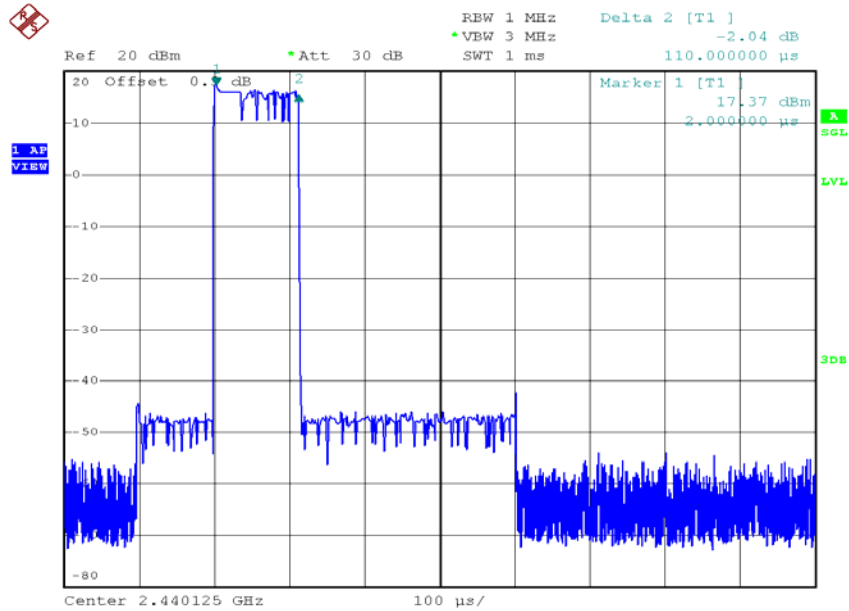
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## Plots of average channel occupancy time

### Parent unit



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#### 4.6 Out of Band Conducted Emissions

In any 100 kHz bandwidth outside the EUT passband, the RF power produced by the modulation products of the spreading sequence, the information sequence, and the carrier frequency shall be at least 20 dB below that of the maximum in-band 100 kHz emission.

The plot(s) of bandedge compliance is shown the worst-case which has been already considered between enable and disable the hopping function of the EUT.

Furthermore, delta measurement technique for measuring bandedge emissions was incorporated in the test of the edge at 2483.5MHz.

**Limits:**

All spurious emission and up to the tenth harmonic was measured and they were found to be at least 20 dB below the highest level of the desired power in the passband.

The plots of out of band conducted emissions and bandedge are saved as below.

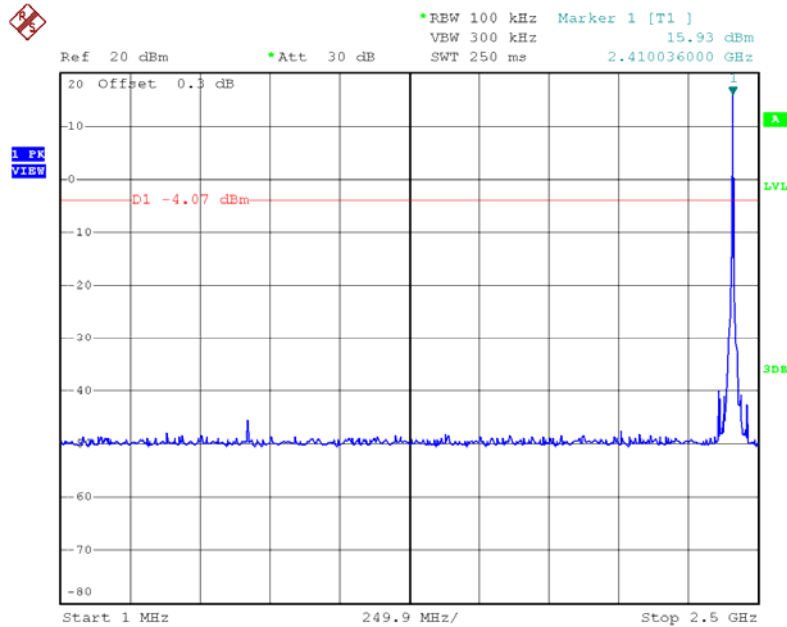
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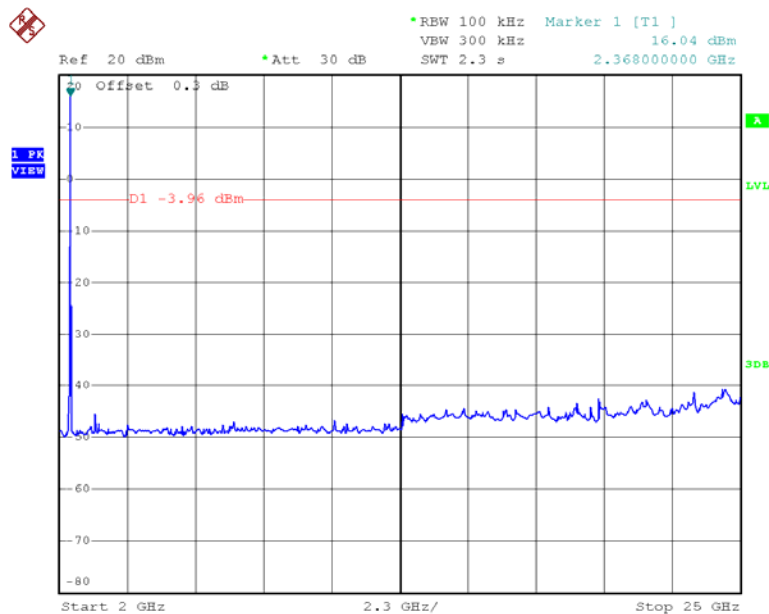


## Plots of out of band conducted emissions

### Parent unit, Lowest channel, Plot 1



### Parent unit, Lowest channel, Plot 2



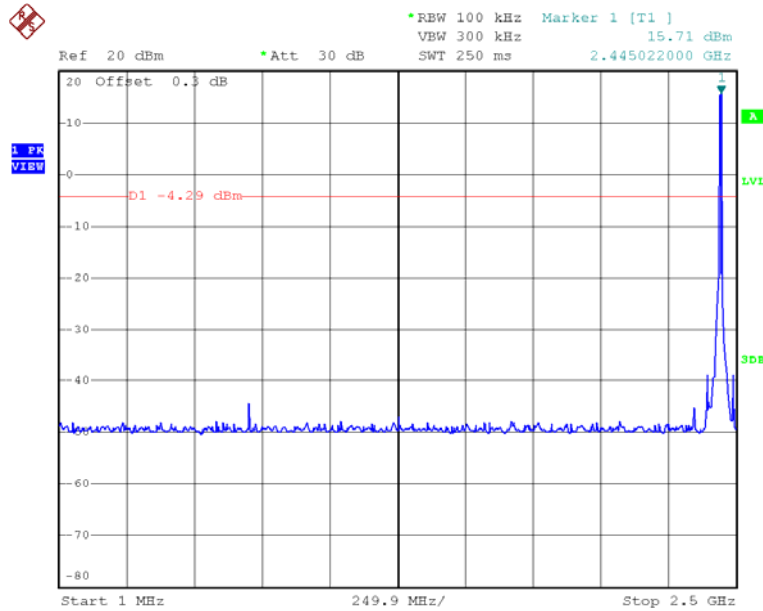
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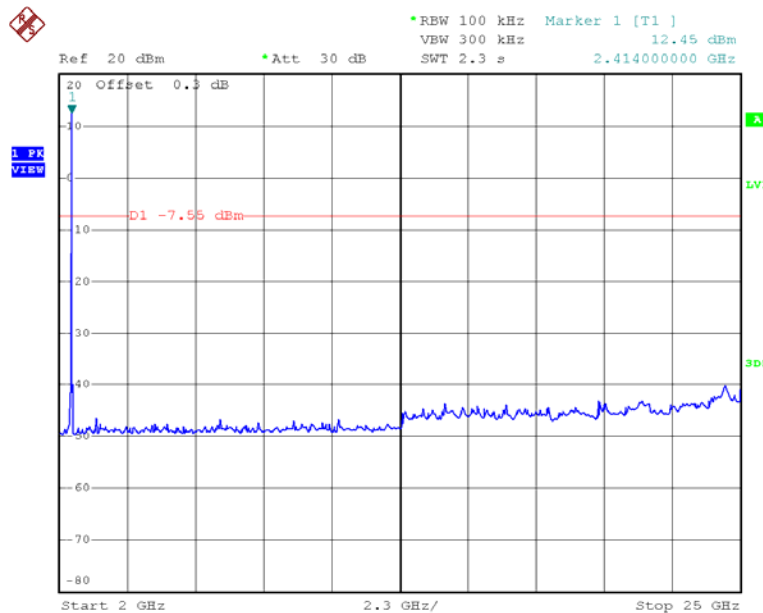


## Plots of out of band conducted emissions

### Parent unit, Middle channel, Plot 1



### Parent unit, Middle channel, Plot 2

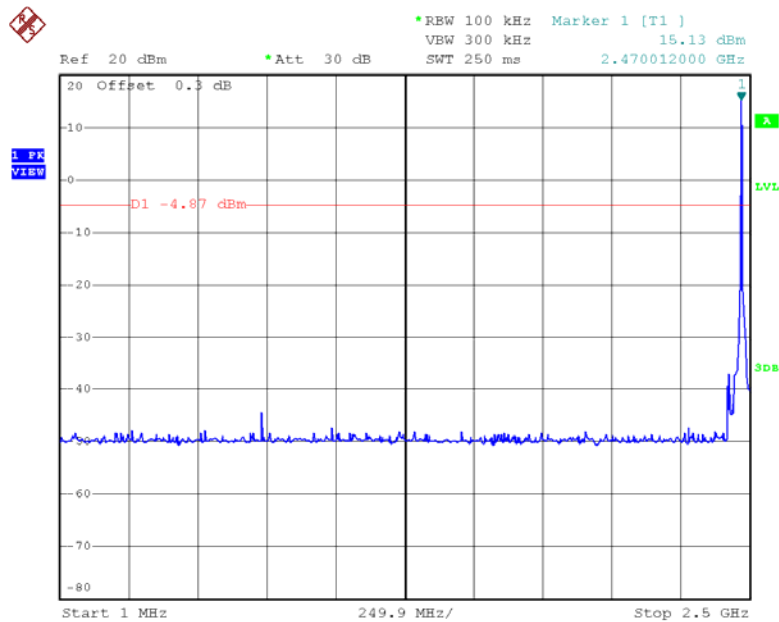


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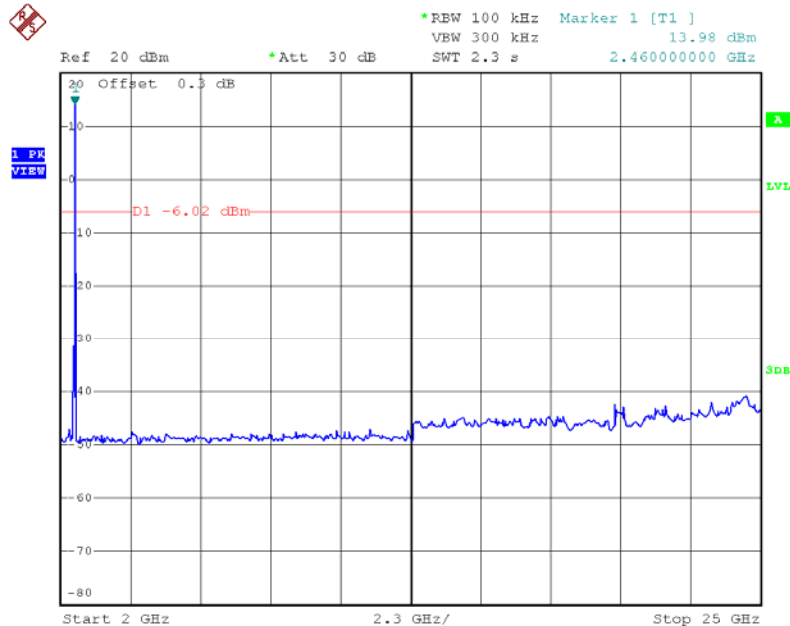
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### Parent unit, Highest channel, Plot 1



### Parent unit, Highest channel, Plot 2



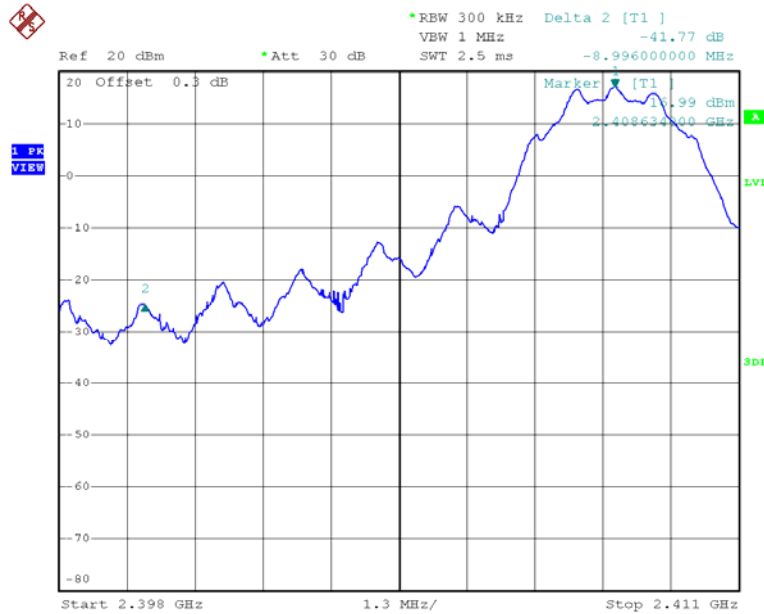
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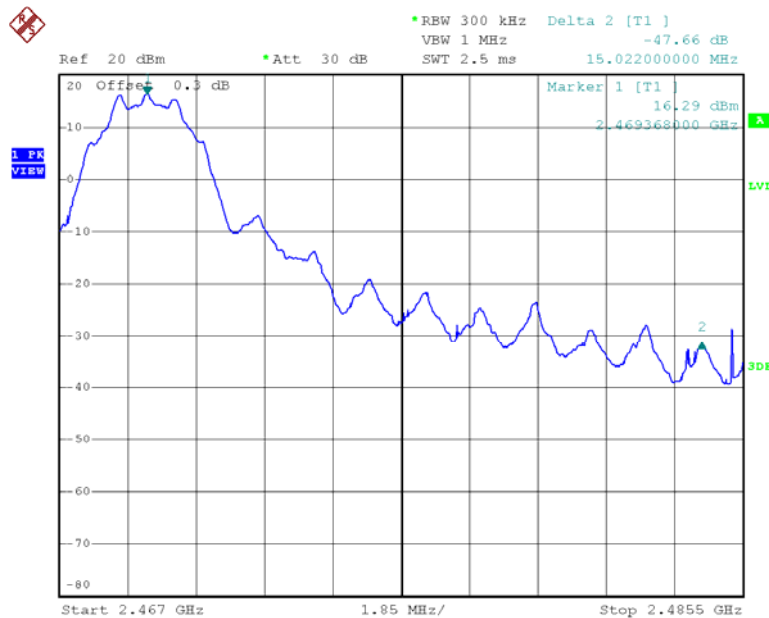


## Plots of bandedge

### Parent unit, Bandedge, Plot 1



### Parent unit, Bandedge, Plot 2



#### 4.7 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 dB $\mu$ V/m
- RA = Receiver Amplitude (including preamplifier) in dB $\mu$ V
- 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 reflect 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 dB $\mu$ V 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 dB $\mu$ V/m. This value in dB $\mu$ V/m was converted to its corresponding level in  $\mu$ V/m.

$$\begin{aligned} RA &= 62.0 \text{ dB}\mu\text{V} \\ AF &= 7.4 \text{ dB} \\ CF &= 1.6 \text{ dB} \\ AG &= 29 \text{ dB} \\ PD &= 0 \text{ dB} \\ AV &= -10 \text{ dB} \\ FS &= 62 + 7.4 + 1.6 - 29 + 0 + (-10) = 32 \text{ dB}\mu\text{V/m} \end{aligned}$$

$$\text{Level in } \mu\text{V/m} = \text{Common Antilogarithm} [(32 \text{ dB}\mu\text{V/m})/20] = 39.8 \mu\text{V/m}$$



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#### 4.8 Transmitter Radiated Emissions in Restricted Bands and Spurious Emissions

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.

The data on the following pages list the significant emission frequencies, the limit and the margin of compliance.

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#### 4.8.1 Radiated Emission Configuration Photograph

Worst Case Restricted Band Radiated Emission  
at

Parent Unit: 72.000 MHz

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

#### 4.8.2 Radiated Emission Data

The data in tables 1-8 list the significant emission frequencies, the limit and the margin of compliance.

Judgement -

Parent Unit: Passed by 8.6 dB margin

Mode: TX-Channel 0

Table 1, Parent Unit

**Radiated Emission Data**

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Average Factor (dB)	Calculated at 3m (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
H	2408.625	120.6	33	29.4	47.1	69.9	--	--
H	4817.250	48.7	33	34.9	47.1	3.5	54.0	-50.5
H	7225.875	46.9	33	37.9	47.1	4.7	54.0	-49.3
H	9634.500	51.7	33	40.4	47.1	12.0	54.0	-42.0
H	12043.125	44.7	33	40.5	47.1	5.1	54.0	-48.9
H	14451.750	44.1	33	40.0	47.1	4.0	54.0	-50.0

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dB $\mu$ V/m)	Peak Limit at 3m (dB $\mu$ V/m)	Margin (dB)
H	2408.625	120.6	33	29.4	117.0	--	--
H	4817.250	48.7	33	34.9	50.6	74.0	-23.4
H	7225.875	46.9	33	37.9	51.8	74.0	-22.2
H	9634.500	51.7	33	40.4	59.1	74.0	-14.9
H	12043.125	44.7	33	40.5	52.2	74.0	-21.8
H	14451.750	44.1	33	40.0	51.1	74.0	-22.9

- 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 / RSS-210 Section 2.2.

Mode: TX-Channel 32

Table 2, Parent Unit

**Radiated Emission Data**

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Average Factor (dB)	Calculated at 3m (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
V	2440.125	120.4	33	29.4	47.1	69.7	--	--
H	4880.250	48.5	33	34.9	47.1	3.3	54.0	-50.7
H	7320.375	46.5	33	37.9	47.1	4.3	54.0	-49.7
H	9760.500	52.5	33	40.4	47.1	12.8	54.0	-41.2
H	12200.625	44.3	33	40.5	47.1	4.7	54.0	-49.3
V	14640.750	46.1	33	38.4	47.1	4.4	54.0	-49.6

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dB $\mu$ V/m)	Peak Limit at 3m (dB $\mu$ V/m)	Margin (dB)
H	2440.125	120.4	33	29.4	116.8	--	--
H	4880.250	48.5	33	34.9	50.4	74.0	-23.6
H	7320.375	46.5	33	37.9	51.4	74.0	-22.6
H	9760.500	52.5	33	40.4	59.9	74.0	-14.1
H	12200.625	44.3	33	40.5	51.8	74.0	-22.2
H	14640.750	46.1	33	38.4	51.5	74.0	-22.5

- 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 / RSS-210 Section 2.2.

Mode: TX-Channel 60

Table 3, Parent Unit

**Radiated Emission Data**

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Average Factor (dB)	Calculated at 3m (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
H	2469.375	119.6	33	29.4	47.1	68.9	--	--
H	4938.750	48.3	33	34.9	47.1	3.1	54.0	-50.9
H	7408.125	46.5	33	37.9	47.1	4.3	54.0	-49.7
H	9877.500	52.6	33	40.4	47.1	12.9	54.0	-41.1
H	12346.875	43.9	33	40.5	47.1	4.3	54.0	-49.7
H	14816.250	45.0	33	38.4	47.1	3.3	54.0	-50.7

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dB $\mu$ V/m)	Peak Limit at 3m (dB $\mu$ V/m)	Margin (dB)
H	2469.375	119.6	33	29.4	116.0	--	--
H	4938.750	48.3	33	34.9	50.2	74.0	-23.8
H	7408.125	46.5	33	37.9	51.4	74.0	-22.6
H	9877.500	52.6	33	40.4	60.0	74.0	-14.0
H	12346.875	43.9	33	40.5	51.4	74.0	-22.6
H	14816.250	45.0	33	38.4	50.4	74.0	-23.6

- 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 / RSS-210 Section 2.2.
- \*\* Fundamental emission was measured for determining band-edge compliance of using delta measurement technique. Peak level and average level at the upper bandedge were 68.34 dB $\mu$ V/m and 21.24 dB $\mu$ V/m respectively.

Mode: Playing

Table 4, Parent Unit

**Radiated Emission Data**

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-amp (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Limit at 3m (dB $\mu$ V/m)	Margin (dB)
V	72.000	40.4	16	7.0	31.4	40.0	-8.6
H	168.000	31.0	16	18.0	33.0	43.5	-10.5
H	216.000	31.0	16	17.0	32.0	43.5	-11.5
H	300.000	25.4	16	22.0	31.4	46.0	-14.6
H	359.999	24.4	16	24.0	32.4	46.0	-13.6
H	503.999	24.0	16	26.0	34.0	46.0	-12.0
H	888.000	17.8	16	32.0	33.8	46.0	-12.2
H	911.999	16.0	16	33.0	33.0	46.0	-13.0

- 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 / RSS-210 Section 2.2.

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#### 4.8.3 Transmitter Duty Cycle Calculation

For double-slots operation,

Duty Cycle (DC) = Maximum On time in 0.15 ms / 34.2 ms

Duty Cycle (DC) = 0.15 ms x 1 / 34.2 ms

Average Factor (AF) = 20 log (DC)  
= 20\* log (4.36\*10<sup>-3</sup>)  
= -47.1 dB

The plots of transmitter On time are saved as below.

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#### 4.9 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.
- Parent Unit connects to AC power line and has transmission. Emission Data of Parent Unit is listed in following pages.

##### 4.9.1 AC Power Line Conducted Emission Configuration Photograph

Worst Case Line-Conducted Configuration  
at

0.217 MHz

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

##### 4.9.2 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 11.42 dB margin



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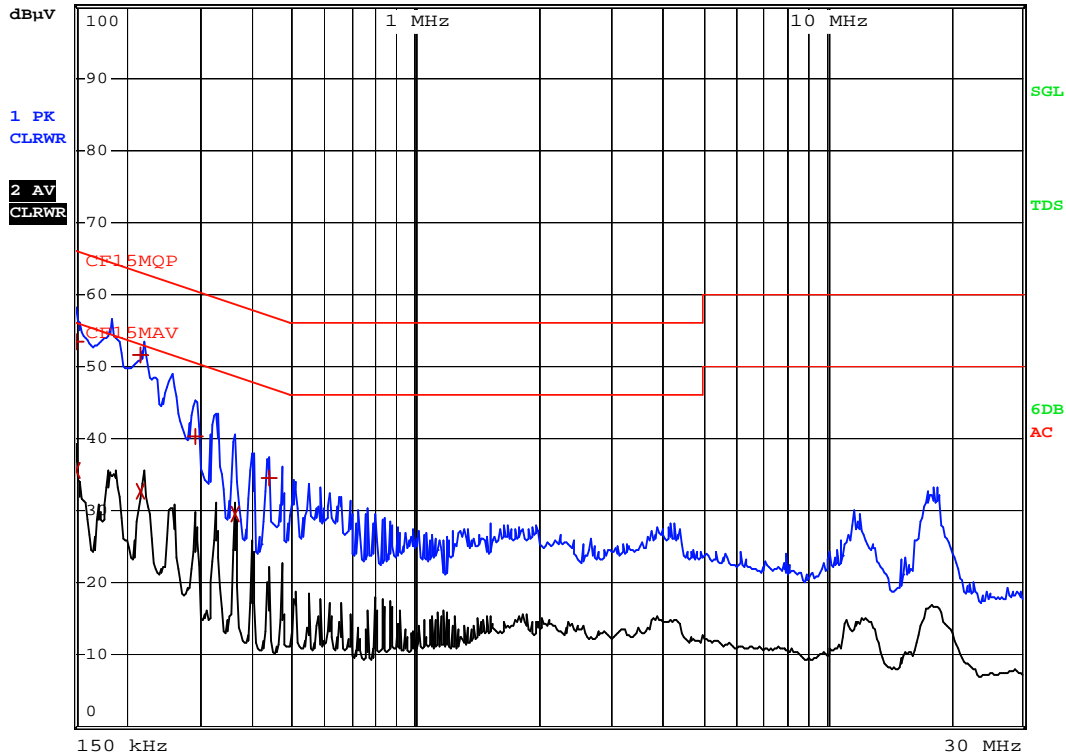


Worst Case: Playing



RBW 9 kHz  
MT 1 s

Att 10 dB AUTO PREAMP OFF



Date: 7.SEP.2012 15:33:47

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Worst Case: Playing

EDIT PEAK LIST (Final Measurement Results)					
Trace1: CF15MQP					
Trace2: CF15MAV					
Trace3: ---					
	TRACE	FREQUENCY	LEVEL dB $\mu$ V		DELTA LIMIT dB
1	Quasi Peak	150 kHz	53.47	L1 gnd	-12.52
2	CISPR Average	150 kHz	35.69	L1 gnd	-20.30
1	Quasi Peak	217.5 kHz	51.49	L1 gnd	-11.42
2	CISPR Average	217.5 kHz	32.63	L1 gnd	-20.28
1	Quasi Peak	294 kHz	40.30	L1 gnd	-20.10
2	CISPR Average	361.5 kHz	29.59	L1 gnd	-19.10
1	Quasi Peak	438 kHz	34.49	N gnd	-22.60

Date: 7.SEP.2012 15:33:31

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#### 4.10 Radio Frequency Radiation Exposure

EUT is subject to the radio frequency exposure requirements specified in FCC Rule §§ 1.1307. It shall be considered to operate in a “general population / uncontrolled” environment.

- Output power is less than the applicable low threshold from SAR evaluation. The evaluation calculation results are saved with filename: RF exposure info.pdf
- EUT was evaluated for Maximum Permissible Exposure (MPE) evaluation compliance according to OET Bulletin 65, Supplement C (Edition 01-01). The evaluation calculation results are saved with filename: RF exposure info.pdf
- EUT was evaluated for Specific Absorption Rate (SAR) evaluation compliance according to OET Bulletin 65, Supplement C (Edition 01-01). It is in compliance with the SAR evaluation requirements. A SAR test report was submitted at same time and saved as SAR Report.pdf

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**EXHIBIT 5**  
**EQUIPMENT LIST**

## 5.0 Equipment List

### 1) Radiated Emissions Test

Equipment	EMI Test Receiver	Biconical Antenna 20MHz to 200MHz	Log Periodic Antenna
Registration No.	EW-2500	EW-2512	EW-0446
Manufacturer	EMCO	EMCO	EMCO
Model No.	ESCI	3104C	3146
Calibration Date	Feb. 24, 2012	Nov. 15, 2011	Oct. 31, 2011
Calibration Due Date	Feb. 24, 2013	May. 15, 2013	Apr. 30, 2013

Equipment	RF Amplifiers (100MHz to 12GHz) 2 Pieces	High Pass Filter 3GHz to 12GHz (2 Pieces)	Spectrum Analyzer
Registration No.	EW-1779	EW-1835	EW-2253
Manufacturer	MITEQ	KLMICROWAVE	R&S
Model No.	AMF-4D-001120-34- 13P	11SH10- 3000/T12000-0/OP	FSP40
Calibration Date	Sep. 22, 2012	Nov. 02, 2011	Jan. 12, 2012
Calibration Due Date	Sep. 22, 2013	Nov. 08, 2012	Jan. 12, 2013

Equipment	Double Ridged Guide Antenna	Broad-Band Horn Antenna
Registration No.	EW-0194	EW-1679
Manufacturer	EMCO	SCHWARZBECK
Model No.	3115	BBHA9170
Calibration Date	Jan. 12, 2012	Mar. 21, 2012
Calibration Due Date	Jul. 12, 2013	Mar. 21, 2013

### 2) Conducted Emissions Test

Equipment	EMI Test Receiver	Artificial Mains Network	Pulse Limiter
Registration No.	EW-2500	EW-0192	EW-0698
Manufacturer	EMCO	ROHDESCHWARZ	ROHDESCHWARZ
Model No.	ESCI	ESH3-Z5	ESH3-Z2
Calibration Date	Feb. 24, 2012	Apr. 11, 2012	Apr. 06, 2012
Calibration Due Date	Feb. 24, 2013	Apr. 11, 2013	Apr. 06, 2013

### 3) Conductive Measurement Test

Equipment	Spectrum Analyzer
Registration No.	EW-2253
Manufacturer	R&S
Model No.	FSP40
Calibration Date	Jan. 12, 2012
Calibration Due Date	Jan. 12, 2013

## END OF TEST REPORT

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