EMC
TEST REPORT

Report No. : TS13010056-EME
Model No. : TTD-91R
Issued Date : Jan. 16, 2013

Applicant: **Tranwo Technology Corp.**
No. 236, Sec. 3, Huanbei Rd., Jubei City, Hsinchu County 30265, Taiwan

Test Method/ Standard: **FCC Part 15 Subpart C Section §15.205、§15.207、§15.209、§15.247, DA 00-705 and ANSI C63.4/2003.**

Test By: **Intertek Testing Services Taiwan Ltd.**
No. 11, Lane 275, Ko-Nan 1 Street, Chia-Tung Li, Shiang-Shan District, Hsinchu City, Taiwan

The test report was prepared by: Sign on File
Candy Liu/ Assistant

These measurements were taken by: Sign on File
William Shia/ Sr. Engineer

The test report was reviewed by: Jimmy Yang

Name Jimmy Yang
Title Engineer

Table of Contents

Summary of Tests

Test	Reference	Results
20dB Bandwidth test	15.247(a)(1)	Pass
Carrier Frequency Separation test	15.247(a)(1)	Pass
Number of hopping frequencies test	15.247(a)(1)	Pass
Time of Occupancy (dwell time) test	15.247(a)(1)	Pass
Maximum Output Power test	15.247(b)	Pass
RF Antenna Conducted Spurious test	15.247(d)	Pass
Radiated Spurious Emission test	15.205, 15.209	Pass
Emission on the Band Edge test	15.247(d)	Pass
AC Power Line Conducted Emission test	15.207	Pass

1. General information

1.1 Identification of the EUT

Product:	Digital Wireless Color Baby Monitor
Model No.:	TTD-91R
FCC ID:	O6LTTD-91R
Rated Power:	1.DC 6 V from adapter 2.DC 3.7 V from Li-ion Rechargeable battery
Operating Frequency:	2408.63MHz ~ 2467.13 MHz
Frequency of Each Channel:	See section 1.2
Channel Number:	22 channels
Type of Modulation:	GFSK, FHSS
Power Cord:	N/A
Data Cable:	N/A
Sample receiving date:	Jan.09, 2013
Testing date:	Jan.09, 2013 ~ Jan.15, 2013
Note 1:	This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.
Note 2:	When determining the test conclusion, the Measurement Uncertainty of test has been considered.

A FCC DoC report has been generated for the client.

1.2 Additional information about the EUT

The EUT is a Digital Wireless Color Baby Monitor, and was defined as information technology equipment.

Each frequency of channel is listed as below,

Channel	TX Freq	Channel	TX Freq
1	2408.63 MHz	12	2439.00 MHz
2	2412.00 MHz	13	2442.38 MHz
3	2414.25 MHz	14	2444.63 MHz
4	2417.63 MHz	15	2448.00 MHz
5	2422.13 MHz	16	2450.25 MHz
6	2425.50 MHz	17	2453.63 MHz
7	2427.75 MHz	18	2457.00 MHz
8	2430.00 MHz	19	2459.25 MHz
9	2432.25MHz	20	2461.50 MHz
10	2434.50MHz	21	2464.88MHz
11	2436.75MHz	22	2467.13MHz

For more detail features, please refer to User's manual as file name “Installation guide.pdf”

1.3 Antenna description

The EUT uses a permanently connected antenna.

Antenna Gain : 1.5 dBi max
Antenna Type : Monopole antenna
Connector Type : Fixed

1.4 Adapter information

The EUT will be supplied with a power supply from below list:

No.	Brand	Model no.	Specification
Adapter	N/A	SSW-2256US	I/P: 100-240 Vac, 50-60 Hz, 0.25A O/P: 6.0V, 800 mA

2. Test specifications

2.1 Test standard

The EUT was performed according to the procedures in FCC Part 15 Subpart C Section § 15.205、§15.207、§15.209、§15.247, DA 00-705 and ANSI C63.4/2003.

The test of radiated measurements according to FCC Part15 Section 15.33(a) had been conducted and the field strength of this frequency band were all meet limit requirement, thus we evaluate the EUT pass the specified test.

2.2 Operation mode

The EUT was supplied DC 6 V from adapter and 3.7V Li-ion battery (Test voltage: 120 Vac, 60 Hz) and it was run in TX mode that was controlled by Eng mode.

2.3 Test equipment

Equipment	Brand	Model No.	Serial No.	Calibration Date	Next Calibration Date
EMI Test Receiver	Rohde & Schwarz	ESCI	100018	2012/11/30	2013/11/29
Spectrum Analyzer	Rohde&schwarz	FSP30	100137	2012/06/25	2013/06/25
Spectrum Analyzer	Rohde&schwarz	FSEK30	100186	2012/02/06	2013/02/05
Horn Antenna (1-18G)	Schwarzbeck	BBHA 9120 D	9120D-456	2012/09/03	2014/09/03
Horn Antenna (14-42G)	SHWARZBECK	BBHA 9170	BBHA9170159	2012/09/05	2014/09/05
Broadband Antenna	SCHWARZBECK	VULB 9168	9168-172	2011/07/26	2013/07/25
Pre-Amplifier	MITEQ	AFS44-00102650--42-10P-44	1495287	2011/10/27	2013/10/26
Pre-Amplifier	MITEQ	JS4-26004000--27-8A	828825	2012/09/08	2014/09/07
Power Meter	Anritsu	ML2495A	0844001	2012/10/09	2013/10/09
Power Senor	Anritsu	MA2411B	0738452	2012/10/09	2013/10/09
WiMAX PSA Spectrum Analyzer	Agilent	E4440A	MY46186191	2012/06/01	2013/06/01

Note: The above equipments are within the valid calibration period.

3. 20dB Bandwidth test

3.1 Operating environment

Temperature:	22	℃
Relative Humidity:	55	%
Atmospheric Pressure:	1008	hPa
Test Date:	Jan. 10, 2013	

3.2 Test setup & procedure

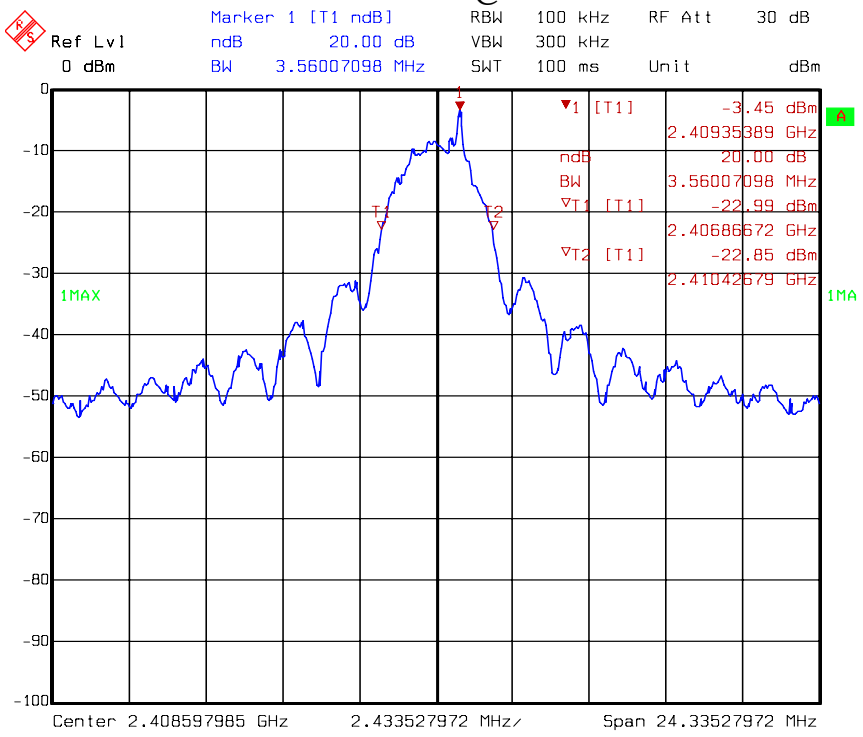
The test procedure was according to FCC measurement guidelines DA 00-705.
The 20dB bandwidth per FCC §15.247(a)(1) was measured using a 50 ohm spectrum analyzer with the resolutions bandwidth set at 100 kHz, the video bandwidth≧RBW, and the SPAN may equal to approximately 2 to 3 times the 20dB bandwidth. The test was performed at 3 channels (lowest, middle and highest channel). The maximum 20dB modulation bandwidth is in the following Table.

3.3 Measured data of modulated bandwidth test results

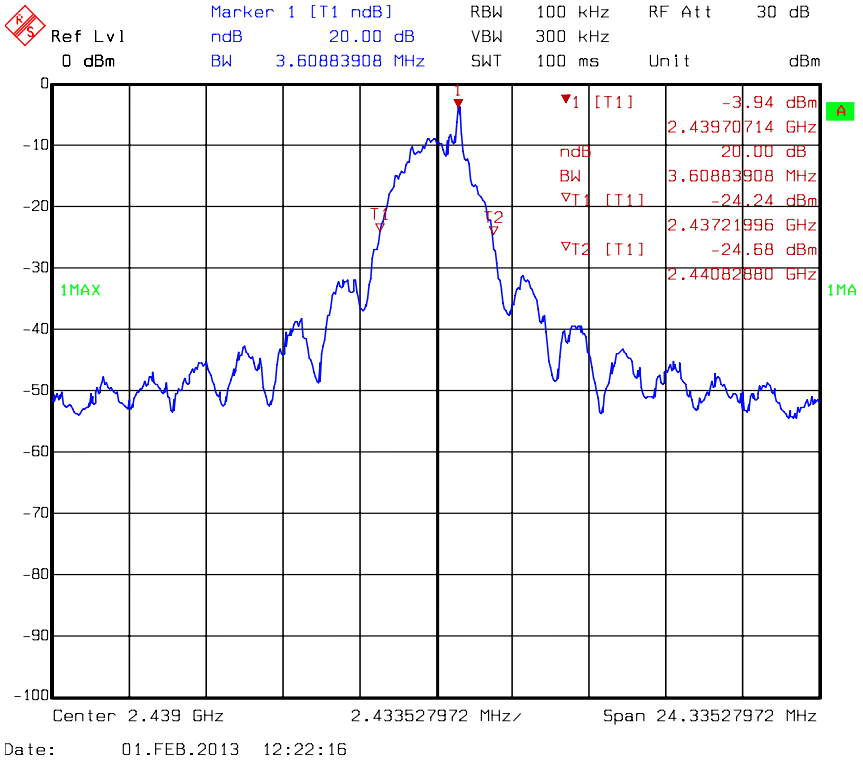
Channel	Frequency (MHz)	20dB Bandwidth (MHz)
1	2408.63	3.56007
12	2439.00	3.60884
22	2467.13	3.60884

Please see the plot below.

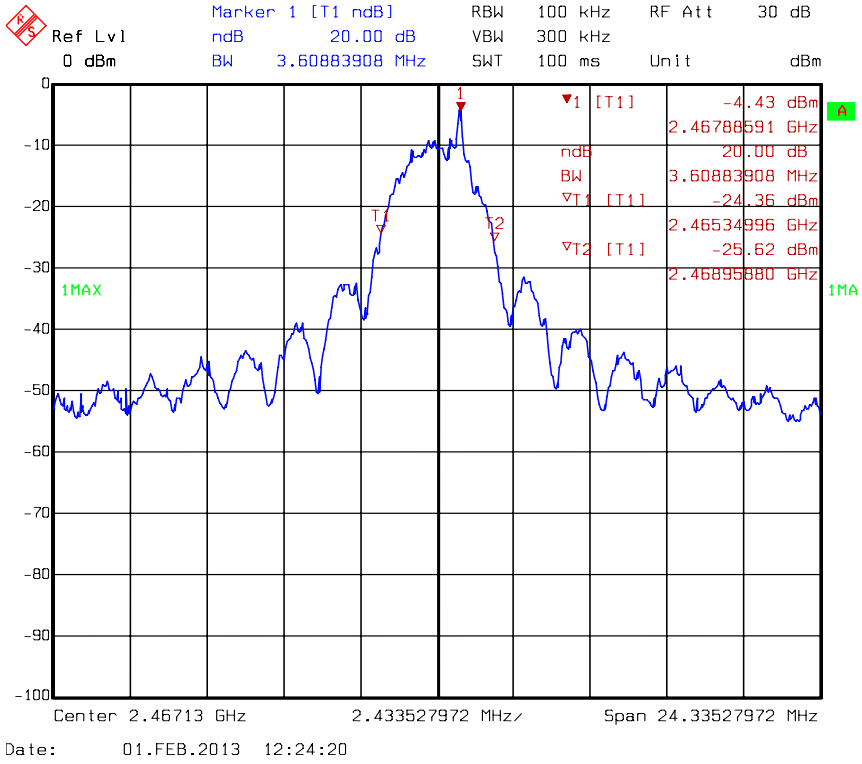
20 dB Bandwidth @ channel 1



20 dB Bandwidth @ channel 12



20 dB Bandwidth @ channel 22



4. Carrier Frequency Separation test

4.1 Operating environment

Temperature: 22 ℃
Relative Humidity: 52 %
Atmospheric Pressure: 1008 hPa
Test Date: Jan. 10, 2013

4.2 Test setup & procedure

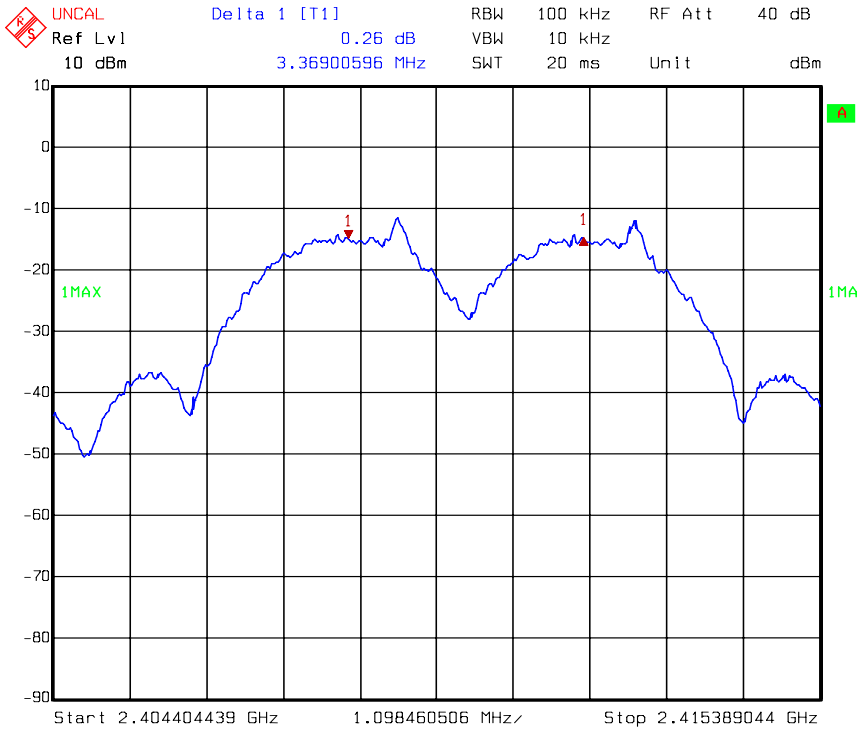
The test procedure was according to FCC measurement guidelines DA 00-705.
The carrier frequency separation per FCC §15.247(a)(1) was measured using a 50 ohm spectrum analyzer with the resolutions bandwidth set at ≧1% of the span, the video bandwidth≧RBW, and the SPAN was wide enough to capture the peaks of two adjacent channels. The carrier frequency separation result is in the following Table.

4.3 Measured data of Carrier Frequency Separation test result

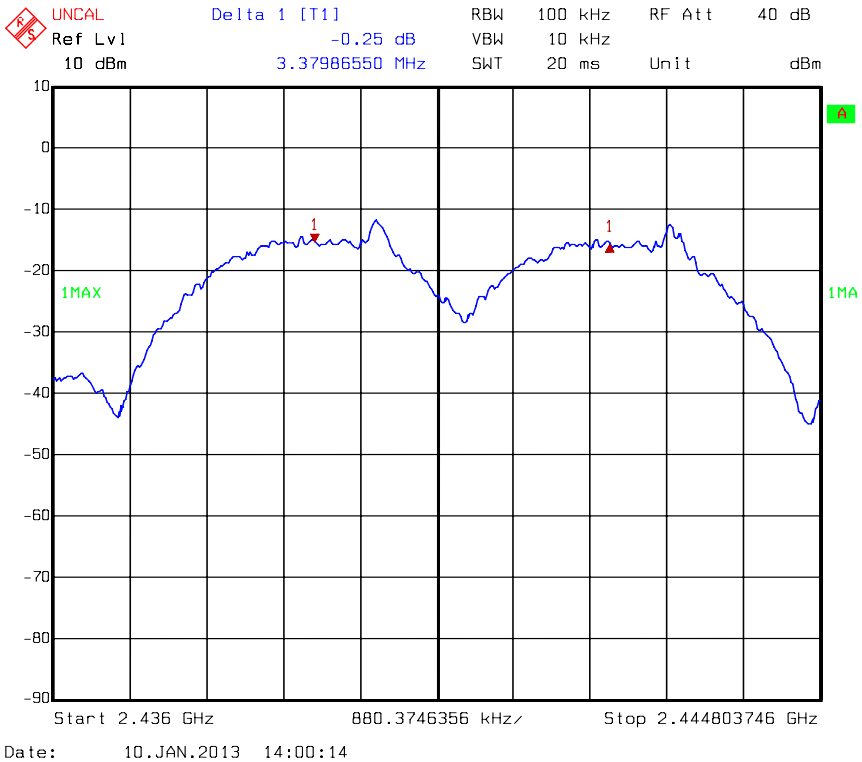
Channel	Frequency (MHz)	Measurement Frequency separation (kHz)	Limit 20dB BW*2/3(kHz)
Channel 1-2	2408.63	3369.006	2373.38
	2412.00		
Channel 12-13	2439.00	3379.866	2405.89
	2442.38		
Channel 21-22	2464.88	2464.880	2405.89
	2467.13		

Please see the plot below.

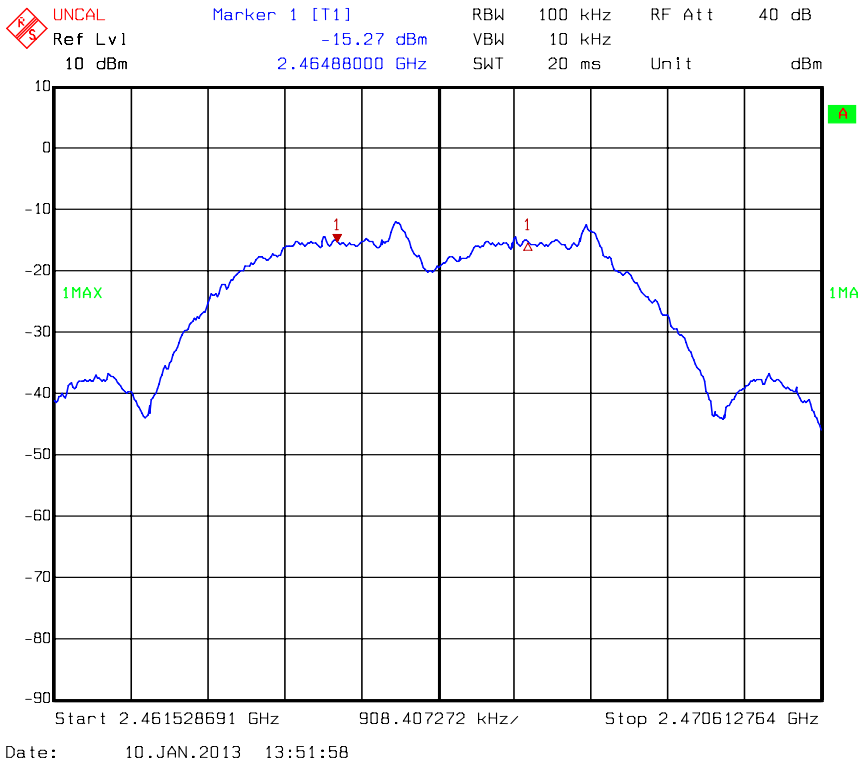
Carrier Frequency Separation @ channel 1~ 2



Carrier Frequency Separation @ Channel 12~ 13



Carrier Frequency Separation @ Channel 21~ 22



5. Number of hopping frequencies test

5.1 Operating environment

Temperature:	25	℃
Relative Humidity:	55	%
Atmospheric Pressure:	1008	hPa

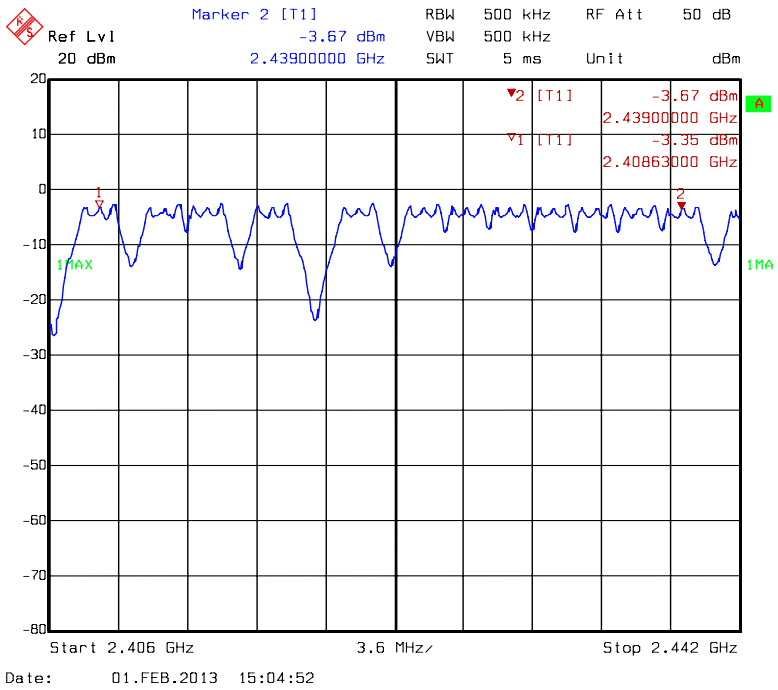
5.2 Test setup & procedure

The test procedure was according to FCC measurement guidelines DA 00-705.
The number of hopping frequencies per FCC §15.247(a)(1) was measured using a 50 ohm spectrum analyzer with the resolutions bandwidth set at ≧1% of the span, the video bandwidth≧RBW, and the SPAN was the frequency band of operation. The carrier frequency separation result is in the following Table.

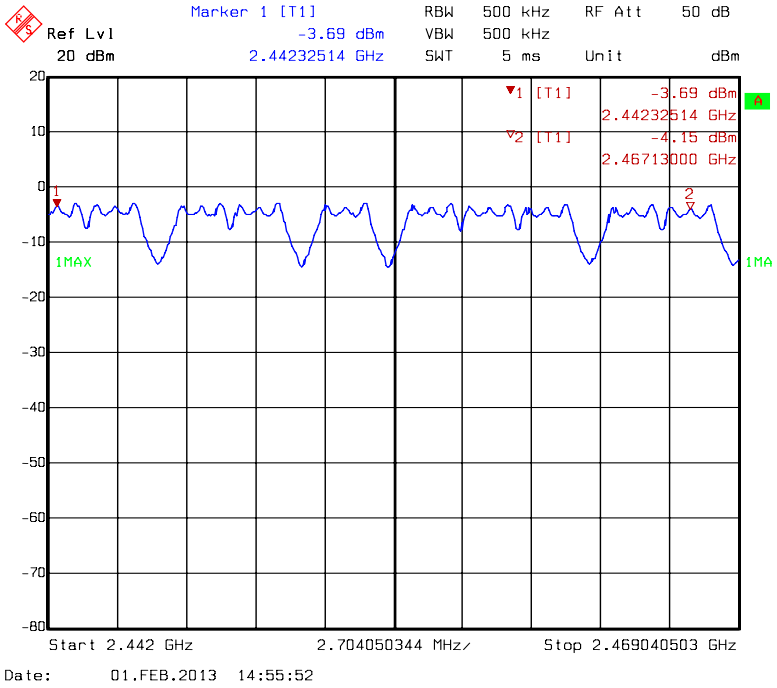
5.3 Measured data of number of hopping frequencies test result

Frequency Range (MHz)	Total hopping channels
2400 ~ 2483.5	22

Number of hopping frequencies Channel 1~12



Number of hopping frequencies Channel 13~22



6. Time of Occupancy (dwell time) test

6.1 Operating environment

Temperature:	25	℃
Relative Humidity:	55	%
Atmospheric Pressure:	1008	hPa
Test Date:	Jan. 11, 2013	

6.2 Test setup & procedure

The test procedure was according to FCC measurement guidelines DA 00-705.
The time of occupancy (dwell time) per FCC §15.247(a)(1) was measured using a 50 ohm spectrum analyzer with the resolutions bandwidth set at 1MHz, the video bandwidth≧RBW, and the zero span function of spectrum analyzer was enable. The EUT has its hopping function enable.

The total sweep time is 400mS x 22Ch =8800mS

Time of occupancy (dwell time):

(1) Ch1 Number of Hops in 8800mS =133, Single Pulse Width = 0.22034mS
Dwell time = (Pulse Width x Total Number of Hops) 0.22034mS x 133 = 29.31mS<400mS.

(2) Ch12 Number of Hops in 8800mS =131.5, Single Pulse Width = 0.21914mS
Dwell time = (Pulse Width x Total Number of Hops) 0.21914mS x 131.5 = 28.82mS<400mS.

(3) Ch22 Number of Hops in 8800mS =132, Single Pulse Width = 0.21993mS
Dwell time = (Pulse Width x Total Number of Hops) 0.21993mS x 132 = 29mS<400mS.

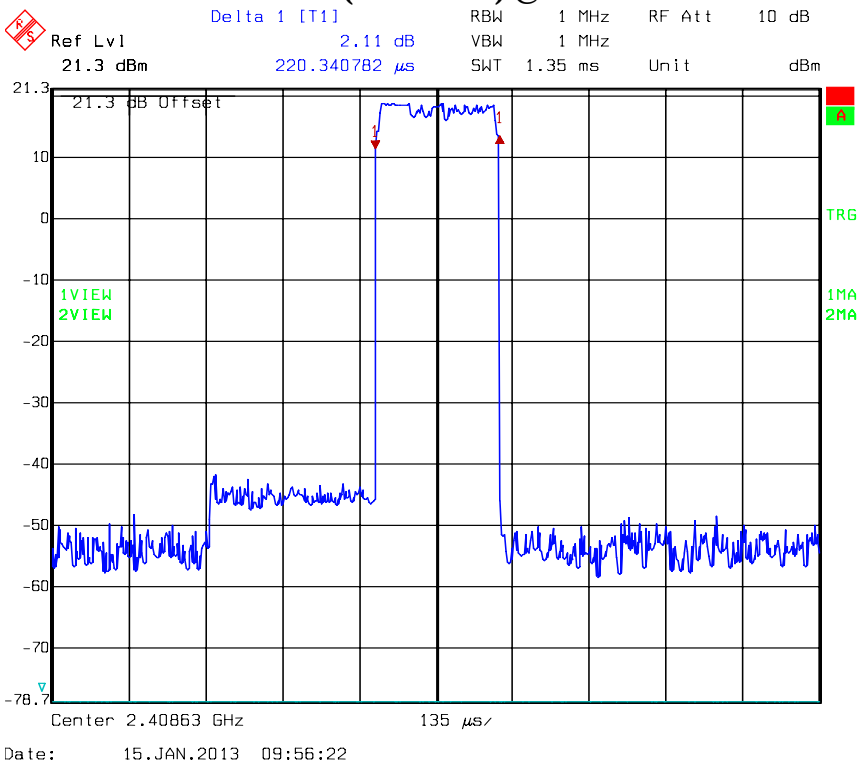
Duty cycle correction factor:

Channel	Pulse time (ms)	Number of pulse during time period	Time period (ms)	Duty cycle %	Duty cycle correction factor
1	0.22034	1	66.39	0.33%	-49.58
12	0.21914	1	66.93	0.33%	-49.70
22	0.21993	1	66.73	0.33%	-49.64

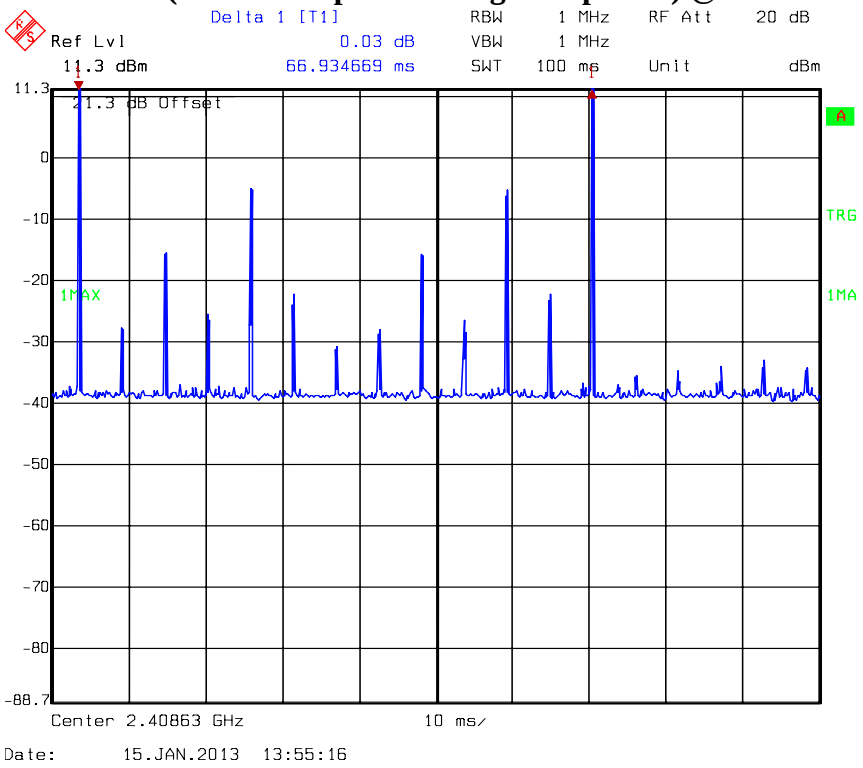
Remark:
1. The time period over which the duty cycle is measured in 100 ms or the repetition cycle, whichever is a shorter time frame.
2. Duty Cycle = (Pulse time) / (Time period)*100%
3. Duty Cycle Correction Factor = 20 log (Duty cycle)

Please see the plot below.

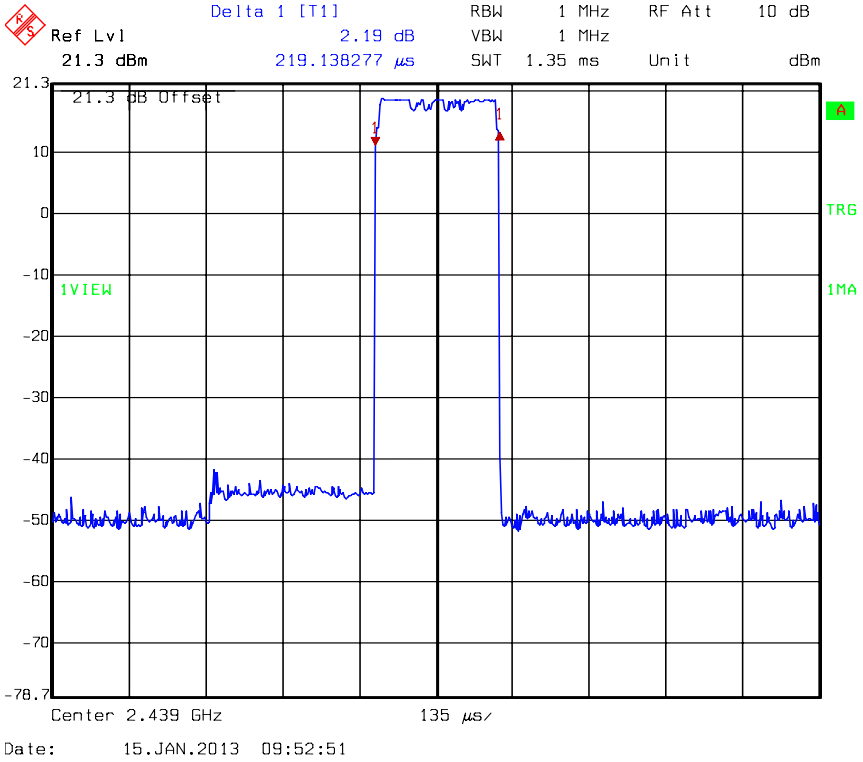
Dwell time (Pulse time) @ channel 1



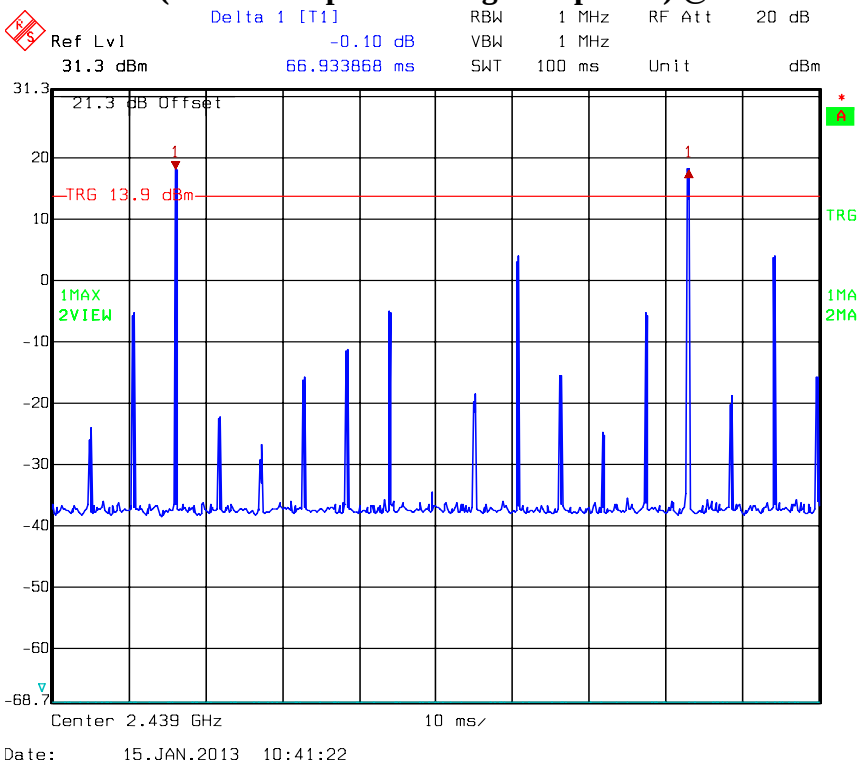
Dwell time (Number of pulse during time period) @ channel 1



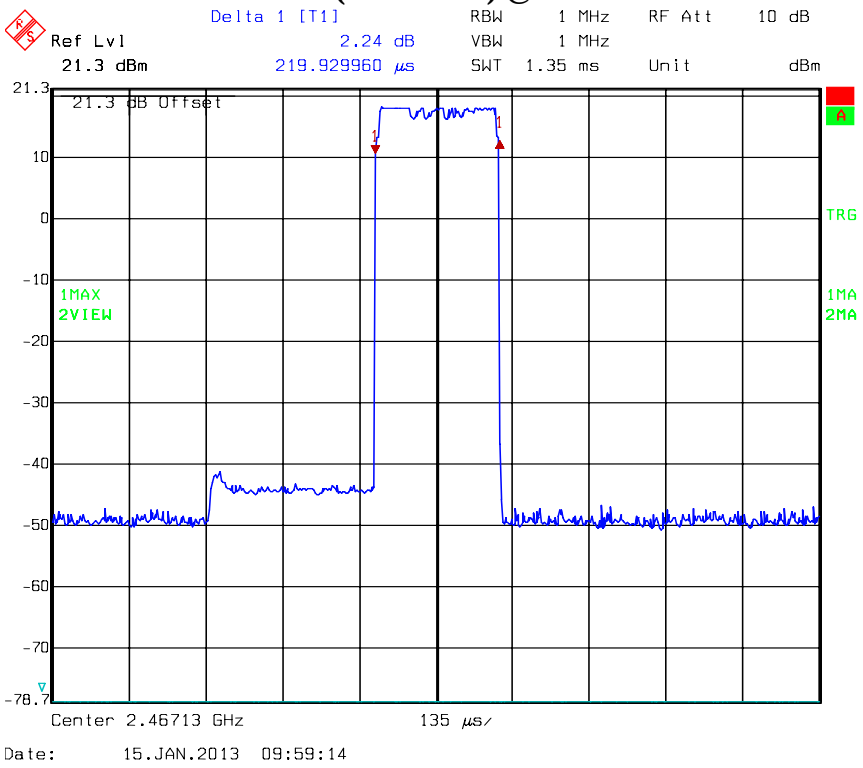
Dwell time (Pulse time) @ channel 12



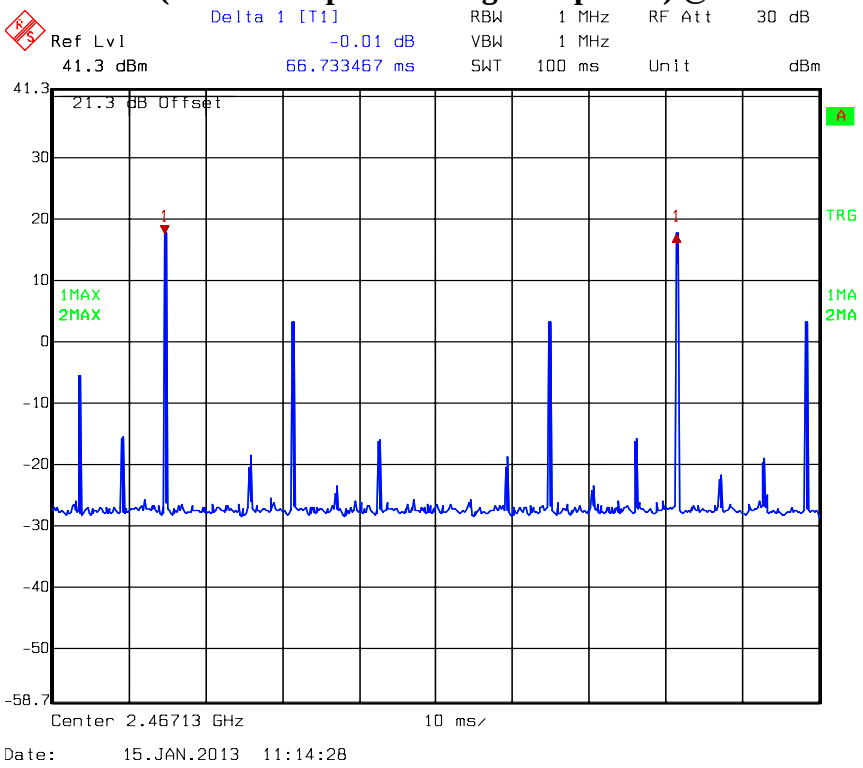
Dwell time (Number of pulse during time period) @ channel 12



Dwell time (Pulse time) @ channel 22



Dwell time (Number of pulse during time period) @ channel 22



7. Maximum Output Power test

7.1 Operating environment

Temperature: 22 ℃
Relative Humidity: 52 %
Atmospheric Pressure: 1008 hPa
Test Date: Jan. 10, 2013

7.2 Test setup & procedure

The test procedure was according to FCC measurement guidelines DA 00-705.
The power output per FCC §15.247(b) was measured on the EUT using a 50 ohm SMA cable connected to peak power meter via power sensor. Power was read directly and cable loss correction (1.0 dB) was added to the reading to obtain power at the EUT antenna terminals. The test was performed at 3 channels (lowest, middle and highest channel).

7.3 Measured data of Maximum Output Power test results

Channel	Frequency (MHz)	Output Power (dBm) (PK)	Total Power (mW) (PK)	Limit (dBm)	Margin (dB)
1	2408.63	18.64	73.11	20.97	-2.33
12	2439	18.48	70.47	20.97	-2.49
22	2467.13	17.95	62.37	20.97	-3.02

8. RF Antenna Conducted Spurious test

8.1 Operating environment

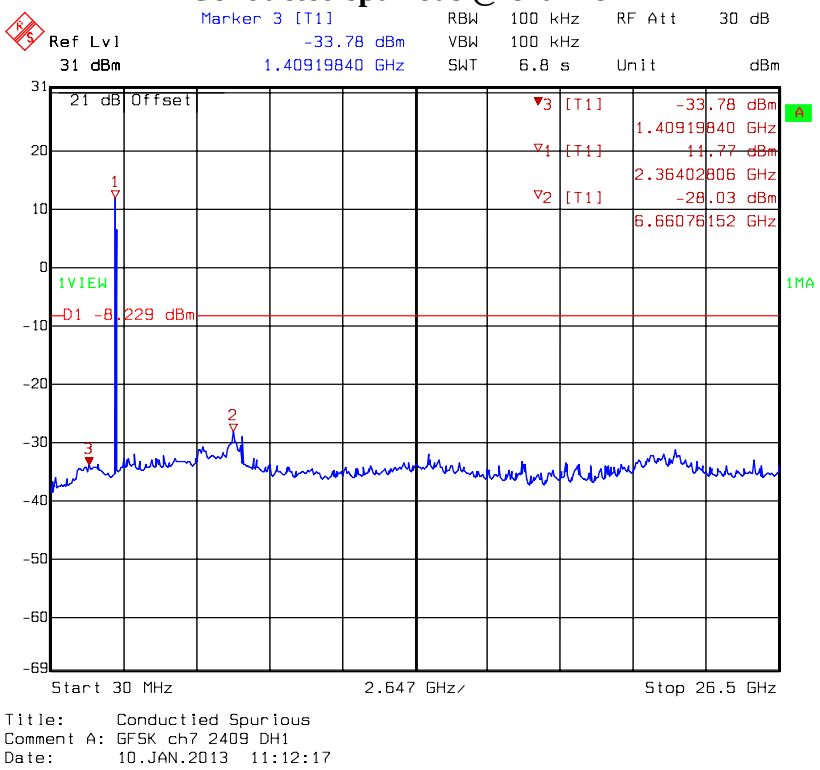
Temperature:	22	℃
Relative Humidity:	52	%
Atmospheric Pressure:	1008	hPa
Test Date:	Jan. 10, 2013	

8.2 Test setup & procedure

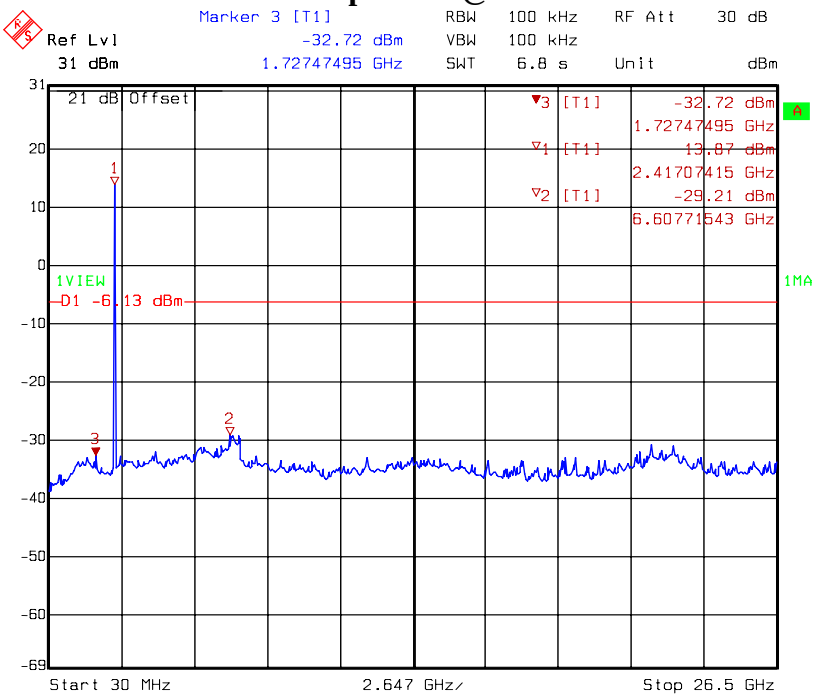
The test procedure was according to FCC measurement guidelines DA 00-705.
The measurements were performed from 30MHz to 25GHz RF antenna conducted per FCC 15.247 (c) was measured from the EUT antenna port using a 50ohm spectrum analyzer with the resolution bandwidth set at 100 kHz, and the video bandwidth set at 100 kHz.
Harmonics and spurious noise must be at least 20dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW. The table below is the results from the highest emission for each channel within the authorized band. This table was used to determine the spurious limits for each channel.

8.3 Measured data of the highest RF Antenna Conducted Spurious test result

Conducted spurious @ channel 1

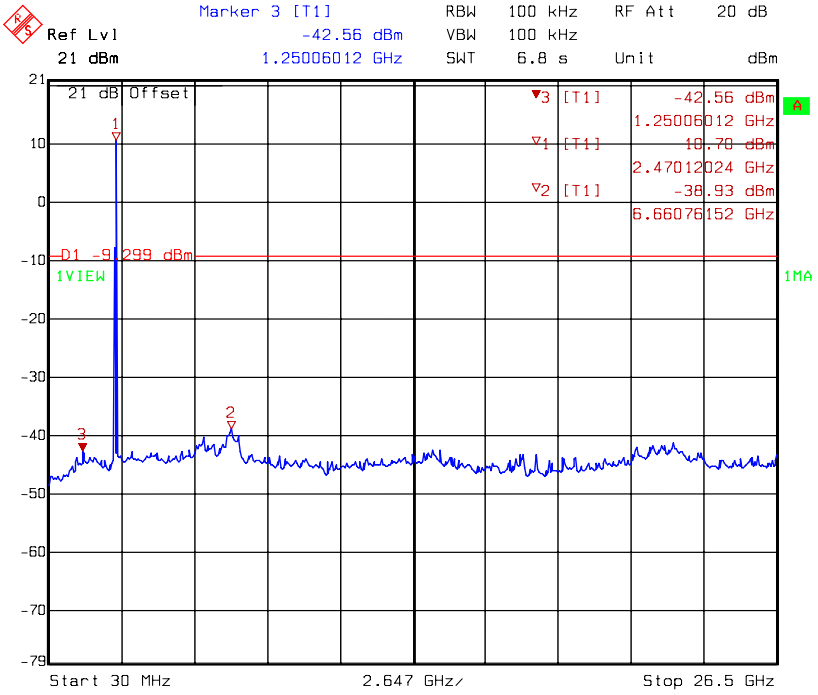


Conducted spurious @ channel 12



Title: Conductied Spurious
Comment A: GFSK ch37 2439 DH1
Date: 10.JAN.2013 11:16:19

Conducted spurious @ channel 22



Title: Conductied Spurious
Comment A: GFSK ch65 2467 DH1
Date: 10.JAN.2013 11:19:19

9. Radiated Emission test

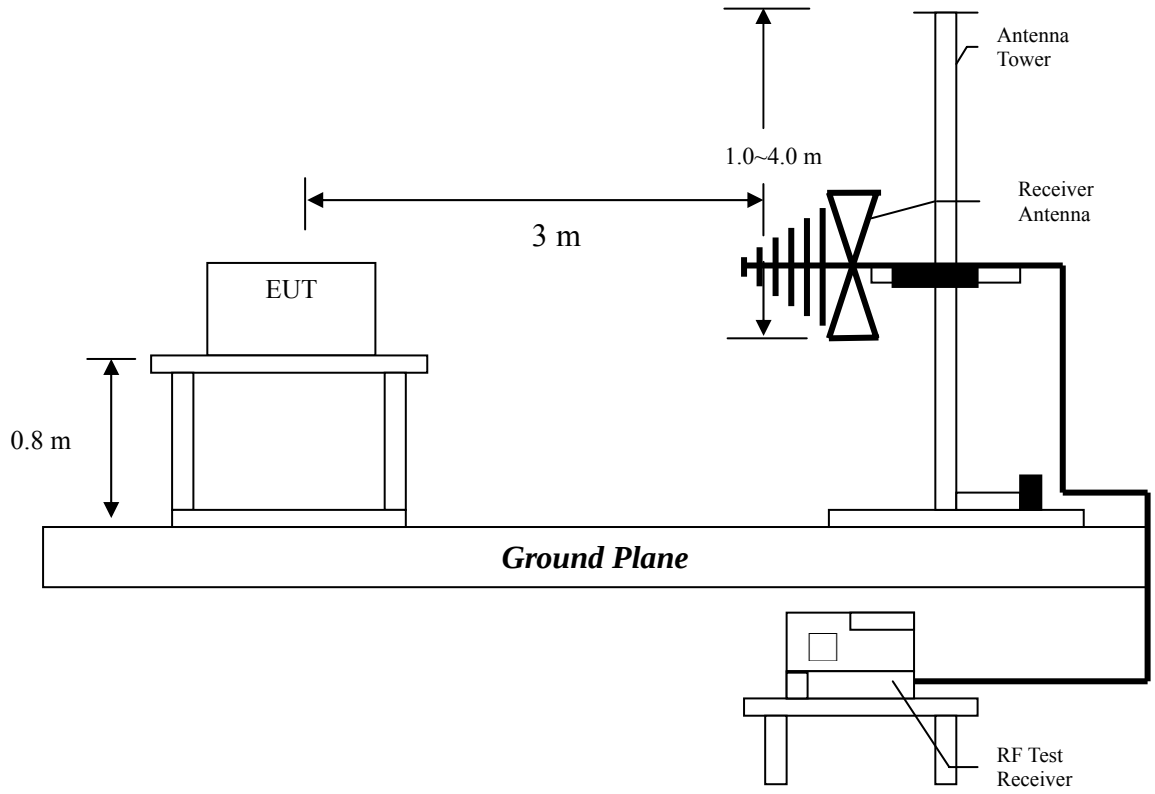
9.1 Operating environment

Temperature:	22	℃
Relative Humidity:	52	%
Atmospheric Pressure:	1008	hPa
Test Date:	Jan. 09, 2013	

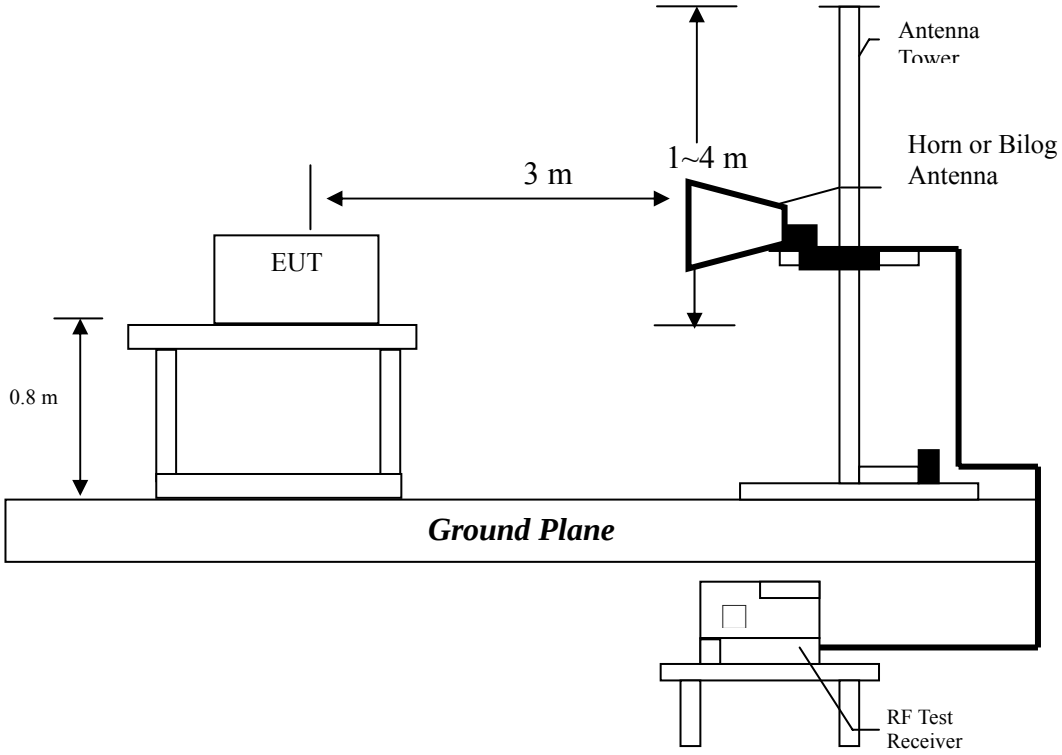
9.2 Test setup & procedure

The test procedure was according to FCC measurement guidelines DA 00-705 and ANSI C63.4/2003**.**
The Diagram below shows the test setup, which is utilized to make these measurements.

The frequency spectrum from 30MHz to 1000MHz was investigated.



The frequency spectrum from over 1GHz was investigated.



Radiated emission measurements were performed from 30MHz to 25GHz. Spectrum Analyzer Resolution Bandwidth is 100kHz or greater for frequencies 30MHz to 1GHz, 1MHz – for frequencies above 1GHz.
The EUT for testing is arranged on a wooden turntable. If some peripherals apply to the EUT, the peripherals will be connected to EUT and the whole system. During the test, all cables were arranged to produce worst-case emissions. The signal is maximized through rotation. The height of antenna and polarization is changing constantly for exploring for maximum signal level. The height of antenna can be up to 4 meters and down to 1 meter.

The measurement for radiated emission will be done at the distance of three meters unless the signal level is too low to measure at that distance. In the case of the reading under noise floor, a pre-amplifier is used and/or the test is conducted at a closer distance. And then all readings are extrapolated back to the equivalent 3 meter reading using inverse scaling with distance.

The EUT configuration please refer to the “Spurious set-up photo.pdf”.

9.3 Emission limits

The spurious Emission shall test through the 10th harmonic. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a).

Frequency (MHz)	Limits (dBμV/m@3m)
30-88	40
88-216	43.5
216-960	46
Above 960	54

Remark:
1. In the above table, the tighter limit applies at the band edges.
2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system

Measurement uncertainty was calculated in accordance with TR 100 028-1.

Parameter	Uncertainty
Radiated Emission	±5.056 dB

9.4 Radiated spurious emission test data

9.4.1 Measurement results: frequencies equal to or less than 1 GHz

The test was performed on EUT under Channel 1, Channel 12 and Channel 22. The worst case occurred at Channel 12.

EUT : TTD-91R
Worst Case : TX channel 12

Antenna Polariz. (V/H)	Freq. (MHz)	Receiver Detector	Corr. Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
V	43.58	QP	12.38	24.83	37.20	40.00	-2.80
V	163.86	QP	15.70	13.55	29.25	43.50	-14.25
V	383.08	QP	16.40	11.57	27.97	46.00	-18.03
V	577.08	QP	20.71	10.12	30.83	46.00	-15.17
H	45.52	QP	14.33	13.22	27.54	40.00	-12.46
H	101.78	QP	9.03	20.00	29.02	43.50	-14.48
H	383.08	QP	16.74	12.02	28.76	46.00	-17.24
H	497.54	QP	18.64	10.19	28.83	46.00	-17.17
H	769.14	QP	23.02	9.56	32.58	46.00	-13.42
H	901.06	QP	24.59	11.24	35.82	46.00	-10.18

Remark:

1. Corr. Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Corr. Factor

9.4.2 Measurement results: frequency above 1GHz

EUT : TTD-91R
Test Condition : Tx PRBS mode
Tx at channel 1

Frequency (MHz)	Spectrum Analyzer Detector	Ant. Pol. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Average Factor (dB)	Corrected Reading (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3210.00	PK	V	33.8	36.24	46.1	-	48.54	54	-5.46
3990.00	PK	V	33.9	36.16	41.26	-	43.52	54	-10.48
4817.26	PK	V	35.1	38.54	63.91	-	67.35	74	-6.65
4817.26	AV	V	35.1	38.54	14.33	-49.58	17.77	54	-36.23
7225.89	PK	V	33	44.6	60.59	-	72.19	74	-1.81
7225.89	AV	V	33	44.6	11.01	-49.58	22.61	54	-31.39
12043.15	PK	V	31.6	50.87	46.16	-	65.43	74	-8.57
12043.15	AV	V	31.6	50.87	-3.42	-49.58	15.85	54	-38.15
3210.00	PK	H	33.8	36.24	44.85	-	47.29	54	-6.71
3990.00	PK	H	33.9	36.16	42.21	-	44.47	54	-9.53
4817.26	PK	H	35.1	38.54	64.62	-	68.06	74	-5.94
4817.26	AV	H	35.1	38.54	15.04	-49.58	18.48	54	-35.52
7225.89	PK	H	33	44.6	60.95	-	72.55	74	-1.45
7225.89	AV	H	33	44.6	11.37	-49.58	22.97	54	-31.03
12043.15	PK	H	31.6	50.87	46.16	-	65.43	74	-8.57
12043.15	AV	H	31.6	50.87	-3.42	-49.58	15.85	54	-38.15

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1GHz to 25GHz.The data value listed above which is higher than the noise floor, the others please refer to noise floor level.
4. Duty cycle correction factor = 20log (Total Pulse time/Time period)
   = 20log (0.22034ms/66.39ms) = -49.58
   Please see dwell time test in page 16 of this report.

EUT : TTD-91R

Test Condition : Tx PRBS mode
Tx at channel 12, 2439 MHz

Frequency (MHz)	Spectrum Analyzer Detector	Ant. Pol. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Average Factor (dB)	Corrected Reading (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3240.00	PK	V	33.8	36.24	46.29	-	48.73	54	-5.27
4050.00	PK	V	34.5	37.48	41.85	-	44.83	54	-9.17
4878.00	PK	V	35.1	38.54	64.78	-	68.22	74	-5.78
4878.00	AV	V	35.1	38.54	15.08	-49.70	18.52	54	-35.48
7317.00	PK	V	33	44.6	61.31	-	72.91	74	-1.09
7317.00	AV	V	33	44.6	11.61	-49.70	23.21	54	-30.79
12185.00	PK	V	31.6	50.87	46.38	-	65.65	74	-8.35
12185.00	AV	V	31.6	50.87	-3.32	-49.70	15.95	54	-38.05
3240.00	PK	H	33.8	36.24	43.9	-	46.34	54	-7.66
4050.00	PK	H	34.5	37.48	43.64	-	46.62	54	-7.38
4878.00	PK	H	35.1	38.54	64.07	-	67.51	74	-6.49
4878.00	AV	H	35.1	38.54	14.37	-49.70	17.81	54	-36.19
7317.00	PK	H	33	44.6	59.92	-	71.52	74	-2.48
7317.00	AV	H	33	44.6	10.22	--49.70	21.82	54	-32.18
12185.00	PK	H	31.6	50.87	42.05	-	61.32	74	-12.68
12185.00	AV	H	31.6	50.87	-7.65	-49.70	11.62	54	-42.38

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1GHz to 25GHz.The data value listed above which is higher than the noise floor, the others please refer to noise floor level.
4. Duty cycle correction factor = 20log (Total Pulse time/Time period)
   = 20log (0.21914ms/66.93ms) = -49.70
   Please see dwell time test in page 16 of this report.

EUT : TTD-91R
Test Condition : Tx at channel 22, 2467.13 MHz

Frequency (MHz)	Spectrum Analyzer Detector	Ant. Pol. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Average Factor (dB)	Corrected Reading (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3270.00	PK	V	33.8	36.24	47.48	-	49.92	54	-4.08
4934.26	PK	V	35.1	38.54	65.28	-	68.72	74	-5.28
4934.26	AV	V	35.1	38.54	15.64	-49.64	19.08	54	-34.92
7401.39	PK	V	33	44.6	60.71	-	72.31	74	-1.69
7401.39	AV	V	33	44.6	11.07	-49.64	22.67	54	-31.33
12335.65	PK	V	31.6	50.87	44.24	-	63.51	74	-10.49
12335.65	AV	V	31.6	50.87	-5.4	-49.64	13.87	54	-40.13
3270.00	PK	H	33.8	36.24	45.02	-	47.46	54	-6.54
4110.00	PK	H	34.5	37.48	45.91	-	48.89	54	-5.11
4934.26	PK	H	35.1	38.54	63.91	-	67.35	74	-6.65
4934.26	AV	H	35.1	38.54	14.27	-49.64	17.71	54	-36.29
7401.39	PK	H	33	44.6	56.86	-	68.46	74	-5.54
7401.39	AV	H	33	44.6	7.22	-49.64	18.82	54	-35.18
12335.65	PK	H	31.6	50.87	40.73	-	60.00	74	-14.00
12335.65	AV	H	31.6	50.87	-8.91	-49.64	10.36	54	-43.64

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1GHz to 25GHz.The data value listed above which is higher than the noise floor, the others please refer to noise floor level.
4. Duty cycle correction factor = 20log (Total Pulse time/Time period)
   = 20log (0.21993ms/66.73ms) = -49.64
   Please see dwell time test in page 16 of this report.

10. Emission on the band edge §FCC 15.247(d)

In any 100kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 KHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

10.1 Test setup & procedure

Please refer to the clause 9.2 of this report.

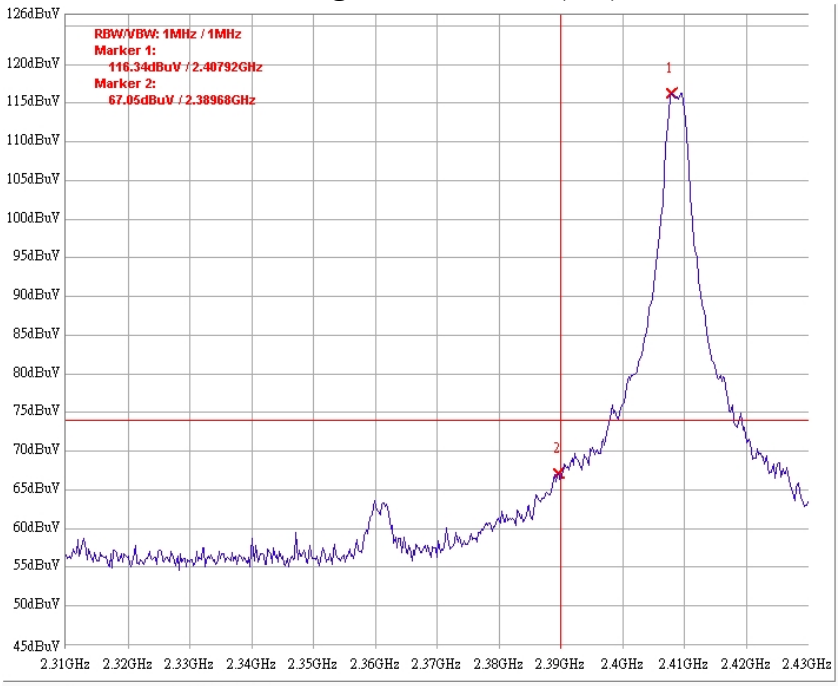
10.2 Test Result

Channel	Measurement Freq.Band (MHz)	Detector	Average Factor (dB)	The Max. Field Strength in Restrict Band (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
1 (lowest)	2310-2390	PK		67.05	74	-6.95
		AV	-49.58	17.47	54	-36.53
22 (highest)	2483.5-2500	PK		70.54	74	-3.46
		AV	-49.64	20.9	54	-33.1

Remark: 1. Duty cycle correction factor Channel 1= -49.58 dB, Channel 22=-49.64 dB
2. Please refer Time of Occupancy (dwell time) test in clause 6 of this report.

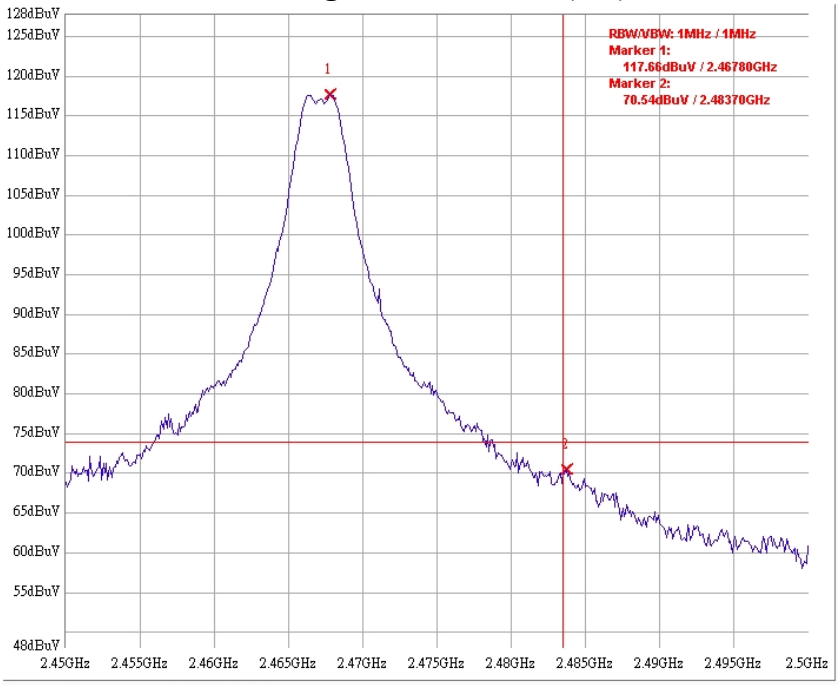
Please see the plot below.

Band edge @ Channel 1 (PK)



Brand / Model : 傳世 / TTD-61RT(Monitor)
Remark : CH1 SWT:5ms PK Horizontal
Tested by : William

Band edge @ Channel 22 (PK)



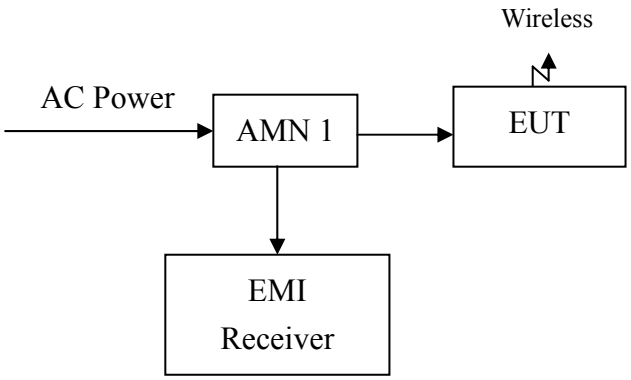
Brand / Model : 傳世 / TTD-61RT(Monitor)
Remark : CH22 SWT:2.5ms PK Horizontal
Tested by : William

11. Power Line Conducted Emission test §FCC 15.207

11.1 Operating environment

Temperature:	22	℃
Relative Humidity:	52	%
Atmospheric Pressure	1008	hPa
Test Date:	Jan. 02, 2013	

11.2 Test setup & procedure



The test procedure was according to ANSI C63.4/2003**.**

The EUT are connected to the main power through a line impedance stabilization network (LISN). This provides a 50 ohm/50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination.
Both sides (Line and Neutral) of AC line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4/2003 on conducted measurement.
The bandwidth of the field strength meter (R & S Test Receiver ESCS 30) is set at 9kHz.

The EUT configuration please refer to the “Conducted set-up photo.pdf”.

11.3 Emission limit

Freq. (MHz)	Conducted Limit (dBuV)	
	Q.P.	Ave.
0.15~0.50	66 – 56*	56 – 46*
0.50~5.00	56	46
5.00~30.0	60	50

*Decreases with the logarithm of the frequency.

11.4 Uncertainty of Conducted Emission

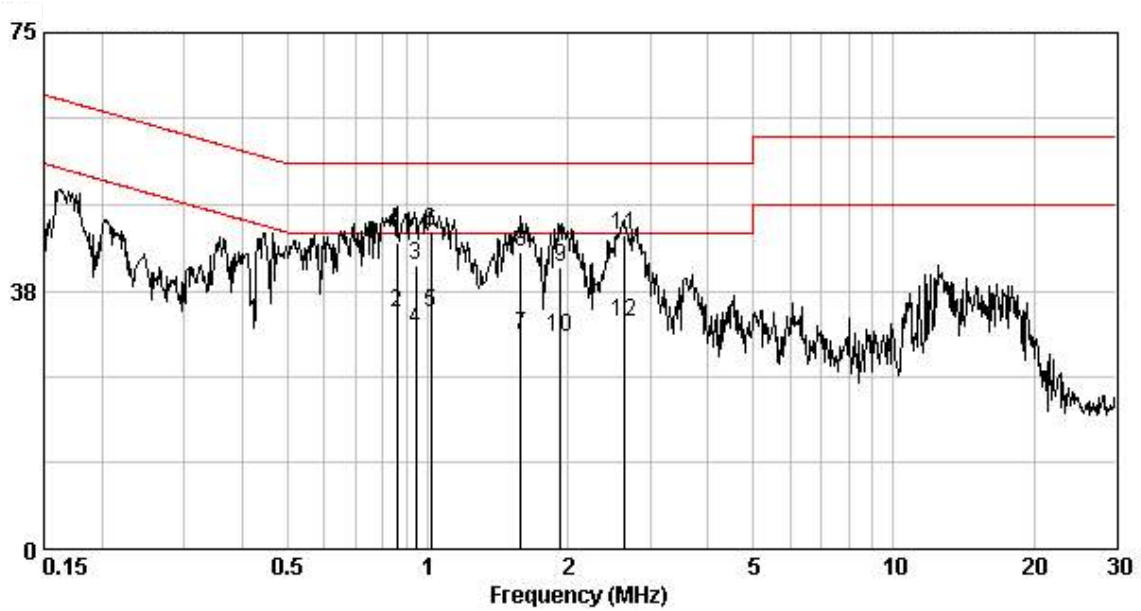
Expanded uncertainty (k=2) of conducted emission measurement is ±2.786 dB.

11.5 Power Line Conducted Emission test data

Phase : Line
EUT : TTD-91R
Test Condition : Normal operating mode

Frequency (MHz)	Corr. Factor (dB)	Level Qp (dBuA)	Limit Qp (dBuA)	Level Av (dBuA)	Limit Av (dBuA)	Margin (dB) Qp	Margin (dB) Av
0.857	0.10	44.45	56.00	34.43	46.00	-11.55	-11.57
0.943	0.10	41.13	56.00	31.99	46.00	-14.87	-14.01
1.016	0.10	46.03	56.00	34.44	46.00	-9.97	-11.56
1.585	0.12	43.17	56.00	31.03	46.00	-12.83	-14.97
1.928	0.13	40.86	56.00	30.85	46.00	-15.14	-15.15
2.636	0.16	45.47	56.00	33.00	46.00	-10.53	-13.00

Remark:
1. Correction Factor (dB)= LISN Factor (dB) + Cable Loss (dB)
2. Margin (dB) = Level (dBuV) – Limit (dBuV)



Phase : Neutral
EUT : TTD-91R
Test Condition : Normal operating mode

Frequency (MHz)	Corr. Factor (dB)	Level Qp (dBuA)	Limit Qp (dBuA)	Level Av (dBuA)	Limit Av (dBuA)	Margin (dB) Qp	Margin (dB) Av
0.739	0.20	41.93	56.00	30.43	46.00	-14.07	-15.57
0.862	0.20	43.30	56.00	31.62	46.00	-12.70	-14.38
0.899	0.20	44.01	56.00	34.26	46.00	-11.99	-11.74
0.943	0.20	44.33	56.00	33.44	46.00	-11.67	-12.56
1.928	0.23	42.39	56.00	31.10	46.00	-13.61	-14.90
2.581	0.26	41.12	56.00	31.23	46.00	-14.88	-14.77

Remark:
1. Correction Factor (dB)= LISN Factor (dB) + Cable Loss (dB)
2. Margin (dB) = Level (dBuV) – Limit (dBuV)