

FCC Test Report

FCC ID: TZI-CN897153

Project No. : 1412C205
Equipment : Bluetooth Alarm Clock
Model Name : TimeSmart Alarm Clock, CN011
Applicant : Arts Electronics Co., Ltd.
Address : NO. 1 SHANGXING LU, SHANGJIAO
COMMUNITY, CHANGAN TOWN, DONGGUAN
CITY, GUANGDONG PROVINCE, CHINA

Date of Receipt : Dec. 25, 2014
Date of Test : Dec. 25, 2014 ~ Feb. 05, 2015
Issued Date : Feb. 09, 2015
Tested by : BTL Inc.

Testing Engineer : Pike Lee
(Pike Lee)
Technical Manager : Jeff Yang
(Jeff Yang)
Authorized Signatory : Andy Chiu
(Andy Chiu)

B T L I N C .

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Declaration

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with the standards traceable to National Measurement Laboratory (**NML**) of **CHINA**, or National Institute of Standards and Technology (**NIST**) of **U.S.A.**

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BTL's laboratory quality assurance procedures are in compliance with the **ISO Guide 17025** requirements, and accredited by the conformity assessment authorities listed in this test report.

Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

Table of Contents	Page
1 . CERTIFICATION	5
2 . SUMMARY OF TEST RESULTS	6
2.1 TEST FACILITY	7
2.2 MEASUREMENT UNCERTAINTY	7
3 . GENERAL INFORMATION	8
3.1 GENERAL DESCRIPTION OF EUT	8
3.2 DESCRIPTION OF TEST MODES	9
3.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	10
3.4 DESCRIPTION OF SUPPORT UNITS	11
4 . EMC EMISSION TEST	12
4.1 CONDUCTED EMISSION MEASUREMENT	12
4.1.1 POWER LINE CONDUCTED EMISSION	12
4.1.2 MEASUREMENT INSTRUMENTS LIST	12
4.1.3 TEST PROCEDURE	13
4.1.4 DEVIATION FROM TEST STANDARD	13
4.1.5 TEST SETUP	13
4.1.6 EUT OPERATING CONDITIONS	13
4.1.7 TEST RESULTS	14
4.2 RADIATED EMISSION MEASUREMENT	19
4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT	19
4.2.2 MEASUREMENT INSTRUMENTS LIST	20
4.2.3 TEST PROCEDURE	20
4.2.4 DEVIATION FROM TEST STANDARD	21
4.2.5 TEST SETUP - BELOW 1 GHZ	21
4.2.6 TEST SETUP - ABOVE 1 GHZ	21
4.2.7 EUT OPERATING CONDITIONS	21
4.2.8 TEST RESULTS (30 TO 1000 MHZ)	22
4.2.9 TEST RESULTS (ABOVE 1000 MHZ)	27
5. EUT TEST PHOTO	36

REPORT ISSUED HISTORY

Issued No.	Description	Issued Date
BTL-FCCE-1-1412C205	Original Issue.	Feb. 09, 2015

1. CERTIFICATION

Equipment : Bluetooth Alarm Clock
Brand Name : Brookstone
Model Name : TimeSmart Alarm Clock, CN011
Applicant : Arts Electronics Co., Ltd.
Manufacturer : Arts Electronics Co., Ltd.
Address : NO.1 SHANGXING LU, SHANGJIAO COMMUNITY, CHANGAN TOWN,
DONGGUAN CITY, GUANGDONG PROVINCE, CHINA
Date of Test : Dec. 25, 2014 ~ Feb. 05, 2015
Test Item : ENGINEERING SAMPLE
Standard(s) : FCC Part 15, Subpart B: 2013
ANSI C63.4-2009

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCCE-1-1412C205) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s).

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

EMC Emission				
Standard(s)	Test Item	Limit	Judgment	Remark
FCC Part 15, Subpart B: 2013 ANSI C63.4-2009	Conducted Emission	Class B	PASS	
	Radiated Emission	Class B	PASS	

NOTE:

(1) "N/A" denotes test is not applicable in this test report.

2.1 TEST FACILITY

The test facilities used to collect the test data in this report is **C02/CB08** at the location of 1F., No. 61, Ln. 77, Sing-ai Rd., Neihu Dist., Taipei City 114, Taiwan

2.2 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

The BTL measurement uncertainty is less than the CISPR 16-4-2 U_{CISPR} requirement.

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately **95%**.

A. Conducted Measurement :

Test Site	Method	Measurement Frequency Range	U, (dB)	NOTE
C02	CISPR	150 KHz~30MHz	2.59	

B. Radiated Measurement :

Test Site	Method	Measurement Frequency Range	Ant. H / V	U, (dB)	NOTE
CB08	CISPR	30MHz~200MHz	V	3.22	
		30MHz~200MHz	H	3.55	
		200MHz~ 1,000MHz	V	3.24	
		200MHz~ 1,000MHz	H	3.11	
		1,000MHz~18,000MHz	V	4.05	
		1,000MHz~18,000MHz	H	3.97	
		18,000MHz~40,000MHz	V	4.04	
		18,000MHz~40,000MHz	H	4.01	

Note: Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	Bluetooth Alarm Clock
Brand Name	Brookstone
Model Name	TimeSmart Alarm Clock, CN011
OEM Brand/Model Name	N/A
Model Difference	Model number and color of cabinet.
Power Source	#1 DC voltage supplied from AC/DC adapter. Model: 1) S12B22-050A200-04; 2) OH-1015A0502000U1-UL #2 Supplied from lithium cell. Model: CR2032
Power Rating	#1 1) I/P: AC 100-240V~50/60Hz max 0.5A O/P: DC 5V 2A; 2) I/P: 100-240V~50/60Hz 350mA O/P: DC 5V 2A #2 DC 3V

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
2. The EUT's operating frequency is 2.4GHz

3.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generated from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	BT PLAY+FULL LOAD

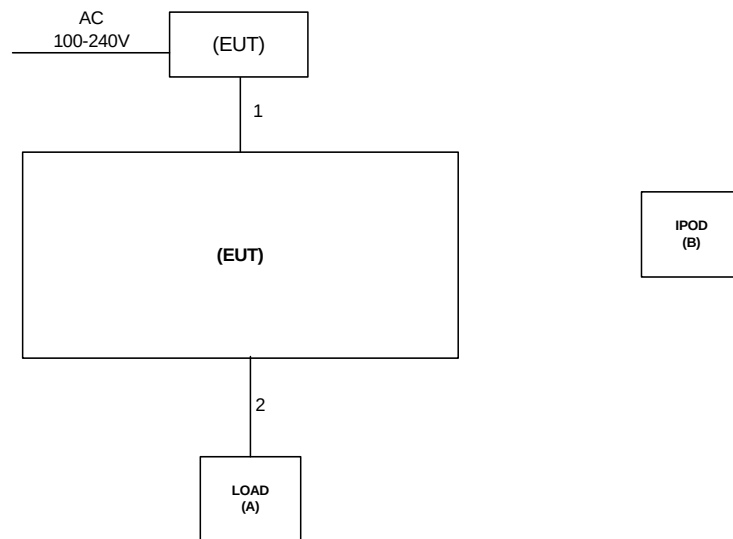
The EUT system operated these modes were found to be the worst case during the pre-scanning test as following:

For Conducted / Radiated Test	
Final Test Mode	Description
Mode 1	BT PLAY+FULL LOAD

3.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Remote System

Ground Plane



3.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.	Note
A	LOAD	N/A	N/A	N/A	N/A	
B	iPod nano(8G)	Apple	A1320	DOC	YM011JNG721	

Item	Shielded Type	Ferrite Core	Length	Note
1	NO	NO	1.6m	DC Cable
2	NO	NO	0.5m	USB Cable

Note:

- (1) The support equipment was authorized by Declaration of Conformity.
- (2) For detachable type I/O cable should be specified the length in m in 『Length』 column.

4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 POWER LINE CONDUCTED EMISSION (FREQUENCY RANGE 150KHZ-30MHZ)

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79.00	66.00	66 - 56 *	56 - 46 *
0.50 - 5.0	73.00	60.00	56.00	46.00
5.0 - 30.0	73.00	60.00	60.00	50.00

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of “ * ” marked band means the limitation decreases linearly with the logarithm of the frequency in the range.
- (3) The test result calculated as following:
 Measurement Value = Reading Level + Correct Factor
 Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor(if use)
 Margin Level = Measurement Value - Limit Value

4.1.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	TWO-LINE V-NETWORK	R&S	ENV216	100087	Dec. 07, 2015
2	Test Cable	TIMES	CFD300-NL	C02	Jun. 15, 2015
3	EMI Test Receiver	Agilent	N9038A	MY51210215	Apr. 21, 2016
4	Measurement Software	EZ	EZ_EMC (Version NB-03A)	N/A	N/A

Remark: " N/A" denotes No Model Name, Serial No. or No Calibration specified.

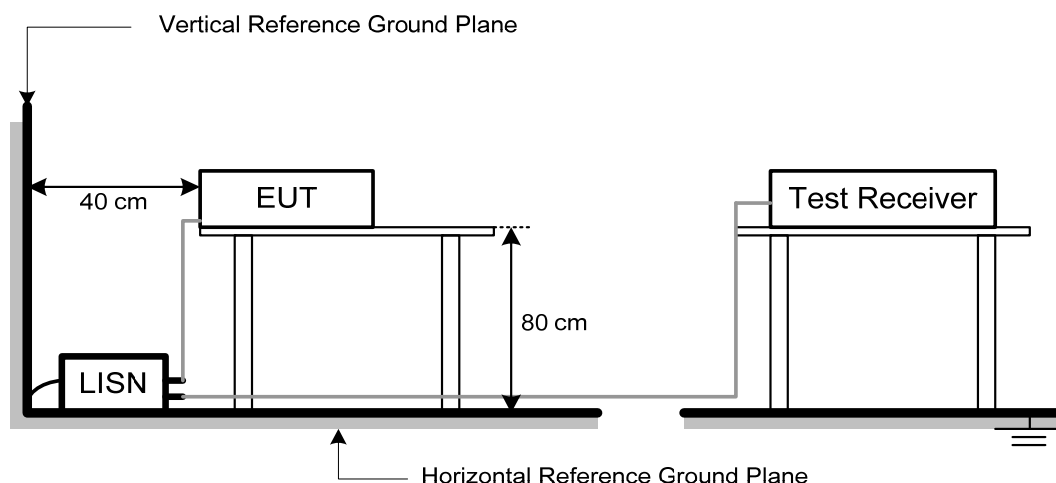
4.1.3 TEST PROCEDURE

- The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- LISN at least 80 cm from nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –Block Diagram of system tested (please refer to 3.3).

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



4.1.6 EUT OPERATING CONDITIONS

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

- EUT connect to Load via USB cable.
- EUT connect to iPod via BT function.

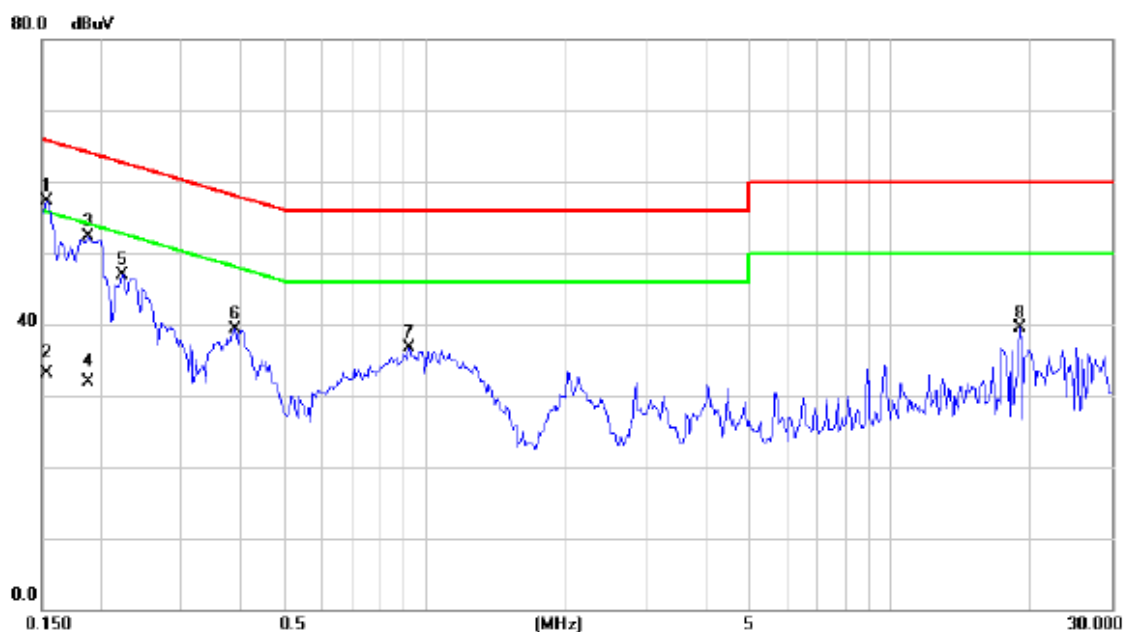
This operating condition was tested and used to collect the included data. This operating condition was tested and used to collect the included data.

4.1.7 TEST RESULTS

Remark:

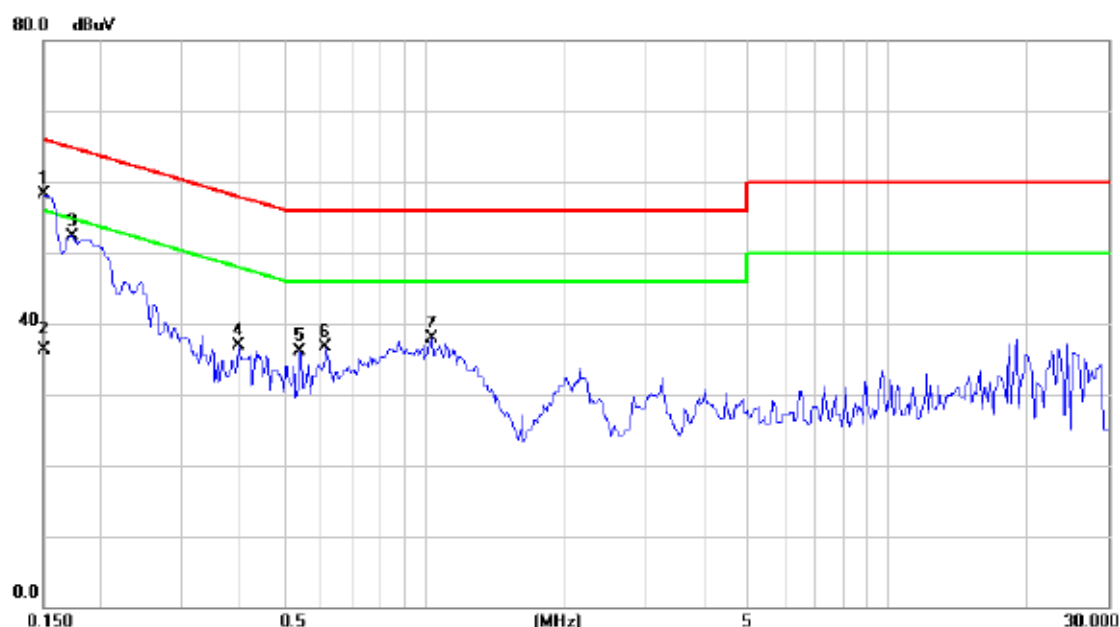
- (1) Reading in which marked as QP means measurements by using are Quasi-Peak Mode with Detector BW=9KHz; SPA setting in RBW=10KHz, VBW =10KHz, Swp. Time = 0.3 sec./MHz. Reading in which marked as AV means measurements by using are Average Mode with instrument setting in RBW=10KHz,VBW=10KHz, Swp. Time =0.3 sec./MHz.
- (2) All readings are QP Mode value unless otherwise stated AVG in column of 『Note』. If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform. In this case, a “ * ” marked in AVG Mode column of Interference Voltage Measured.
- (3) Measuring frequency range from 150KHz to 30MHz.

E.U.T :	Bluetooth Alarm Clock	Model Name :	TimeSmart Alarm Clock
Temperature :	20° C	Relative Humidity :	50 %
Pressure :	1008 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	BT PLAY+FULL LOAD Adapter: S12B22-050A200-04	Phase:	Line



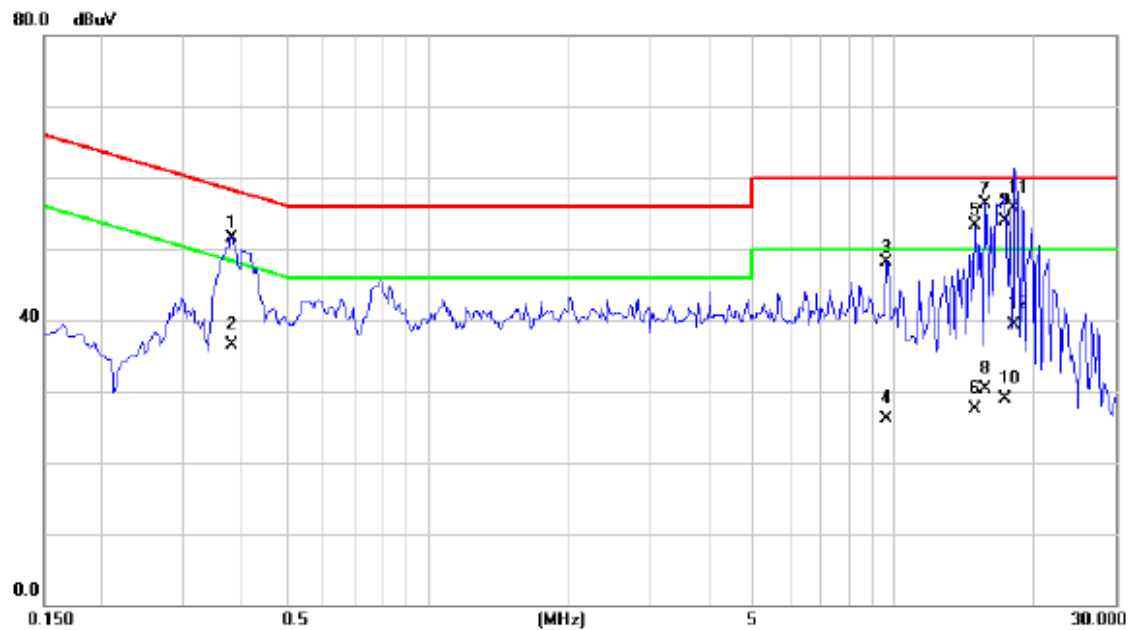
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	*	0.1540	47.92	9.48	57.40	65.78	-8.38	peak	
2		0.1540	23.60	9.48	33.08	55.78	-22.70	AVG	
3		0.1891	42.71	9.50	52.21	64.08	-11.87	peak	
4		0.1891	22.40	9.50	31.90	54.08	-22.18	AVG	
5		0.2242	37.44	9.51	46.95	62.66	-15.71	peak	
6		0.3922	29.66	9.59	39.25	58.02	-18.77	peak	
7		0.9234	27.06	9.61	36.67	56.00	-19.33	peak	
8		19.0898	29.51	10.02	39.53	60.00	-20.47	peak	

E.U.T :	Bluetooth Alarm Clock	Model Name :	TimeSmart Alarm Clock
Temperature :	20° C	Relative Humidity :	50 %
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Test Mode :	BT PLAY+FULL LOAD Adapter: S12B22-050A200-04	Phase:	Neutral



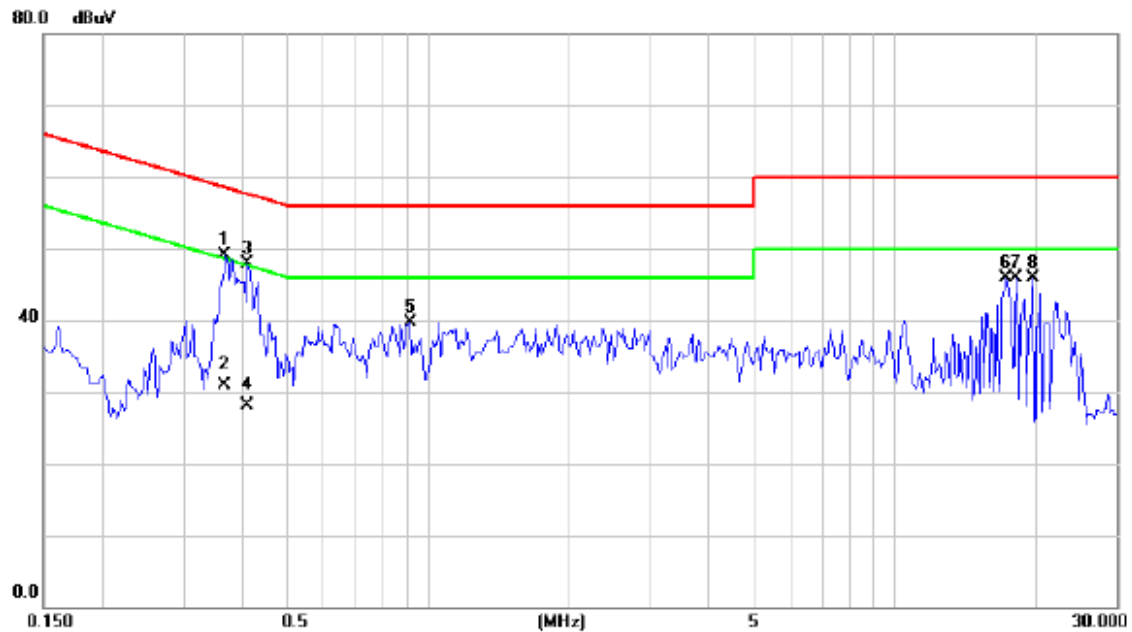
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	*	0.1500	48.64	9.59	58.23	66.00	-7.77	peak	
2		0.1500	26.70	9.59	36.29	56.00	-19.71	AVG	
3		0.1734	42.69	9.58	52.27	64.80	-12.53	peak	
4		0.3961	27.30	9.58	36.88	57.93	-21.05	peak	
5		0.5406	26.44	9.58	36.02	56.00	-19.98	peak	
6		0.6110	27.12	9.58	36.70	56.00	-19.30	peak	
7		1.0367	28.24	9.60	37.84	56.00	-18.16	peak	

E.U.T :	Bluetooth Alarm Clock	Model Name :	TimeSmart Alarm Clock
Temperature :	20° C	Relative Humidity :	50 %
Pressure :	1008 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	BT PLAY+FULL LOAD Adapter: OH-1015A0502000U1-UL	Phase:	Line



No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	0.3805	41.95	9.59	51.54	58.27	-6.73	peak	
2	0.3805	26.90	9.59	36.49	48.27	-11.78	AVG	
3	9.6992	38.41	9.79	48.20	60.00	-11.80	peak	
4	9.6992	16.30	9.79	26.09	50.00	-23.91	AVG	
5	14.9610	43.34	9.88	53.22	60.00	-6.78	peak	
6	14.9610	17.60	9.88	27.48	50.00	-22.52	AVG	
7 *	15.7656	46.34	9.91	56.25	60.00	-3.75	peak	
8	15.7656	20.40	9.91	30.31	50.00	-19.69	AVG	
9	17.3867	43.90	9.96	53.86	60.00	-6.14	QP	
10	17.3867	18.90	9.96	28.86	50.00	-21.14	AVG	
11	18.1914	45.80	9.99	55.79	60.00	-4.21	QP	
12	18.1914	29.30	9.99	39.29	50.00	-10.71	AVG	

E.U.T :	Bluetooth Alarm Clock	Model Name :	TimeSmart Alarm Clock
Temperature :	20° C	Relative Humidity :	50 %
Pressure :	1008 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	BT PLAY+FULL LOAD Adapter: OH-1015A0502000U1-UL	Phase:	Neutral



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	*	0.3688	39.44	9.58	49.02	58.53	-9.51	peak	
2		0.3688	21.30	9.58	30.88	48.53	-17.65	AVG	
3		0.4117	38.25	9.58	47.83	57.61	-9.78	peak	
4		0.4117	18.60	9.58	28.18	47.61	-19.43	AVG	
5		0.9195	30.03	9.60	39.63	56.00	-16.37	peak	
6		17.4336	35.99	9.98	45.97	60.00	-14.03	peak	
7		18.2383	35.96	10.00	45.96	60.00	-14.04	peak	
8		19.8633	35.90	10.02	45.92	60.00	-14.08	peak	

4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Below 1 GHz

Measurement Method and Applied Limits:

ANSI C63.4:

Frequency (MHz)	Class A (at 10m)		Class B (at 3m)	
	(uV/m) Field strength	(dBuV/m) Field strength	(uV/m) Field strength	(dBuV/m) Field strength
30 - 88	90	39	100	40
88 - 216	150	43.5	150	43.5
216 - 960	210	46.4	200	46
Above 960	300	49.5	500	54

CISPR 22 or CAN/CSA CISPR 22-10:

Frequency (MHz)	Class A (at 10m)	Class B (at 10m)
	dBuV/m	dBuV/m
30 - 230	40	30
230 - 1000	47	37

Above 1 GHz

Measurement Method and Applied Limits:

ANSI C63.4:

Frequency (MHz)	Class A				Class B	
	(dBuV/m) (at 3m)		(dBuV/m) (at 10m)		(dBuV/m) (at 3m)	
	Peak	Average	Peak	Average	Peak	Average
Above 1000	80	60	69.5	49.5	74	54

FREQUENCY RANGE OF RADIATED MEASUREMENT (FOR UNINTENTIONAL RADIATORS)

Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz)	Range (MHz)
Below 1.705	30
1.705 - 108	1000
108 - 500	2000
500 - 1000	5000
Above 1000	5 th harmonic of the highest frequency or 40 GHz, whichever is lower

NOTE:

- (1) The limit for radiated test was performed according to as following:
FCC Part 15, Subpart B: 2013;
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m) = 20log Emission level (uV/m).
3m Emission level = 10m Emission level + 20log(10m/3m).
- (4) The test result calculated as following:
Measurement Value = Reading Level + Correct Factor
Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use)
Margin Level = Measurement Value - Limit Value

4.2.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Log-Bicon Antenna	Schwarzbeck	VULB 9168	9168-352	Jul. 09, 2015
2	Pre-Amplifier	Anritsu	MH648A	M92649	Apr. 17, 2015
3	Test Cable	TIMES	LMR-400	12M	May. 13, 2015
4	Test Cable	TIMES	LMR-400	3M	May. 13, 2015
5	EMI Test Receiver	Agilent	N9038A	MY51210215	Apr. 21, 2016
6	Microflex Cable	HARBOUR INDUSTRIES	27478 LL142	1M	May. 12, 2015
7	Horn Antenna (1G)	Schwarzbeck	BBHA 9120 D	9120D-325	Jan. 12, 2015
8	Pre_Amplifier	Agilent	8449B	3008A01714	Apr. 15, 2015
9	Microflex Cable	HARBOUR INDUSTRIES	27478 LL142	1M	May. 12, 2015
10	Microflex Cable	AISI	S104-SMAP-1	10M	May. 14, 2015
11	Microflex Cable	HARBOUR INDUSTRIES	27478 LL142	3M	May. 12, 2015
12	EMI Test Receiver	Agilent	N9038A	MY51210215	Apr. 21, 2016
13	Measurement Software	EZ	EZ EMC (Version NB-03A)	N/A	N/A

Remark: " N/A" denotes No Model Name / Serial No. and No Calibration specified.

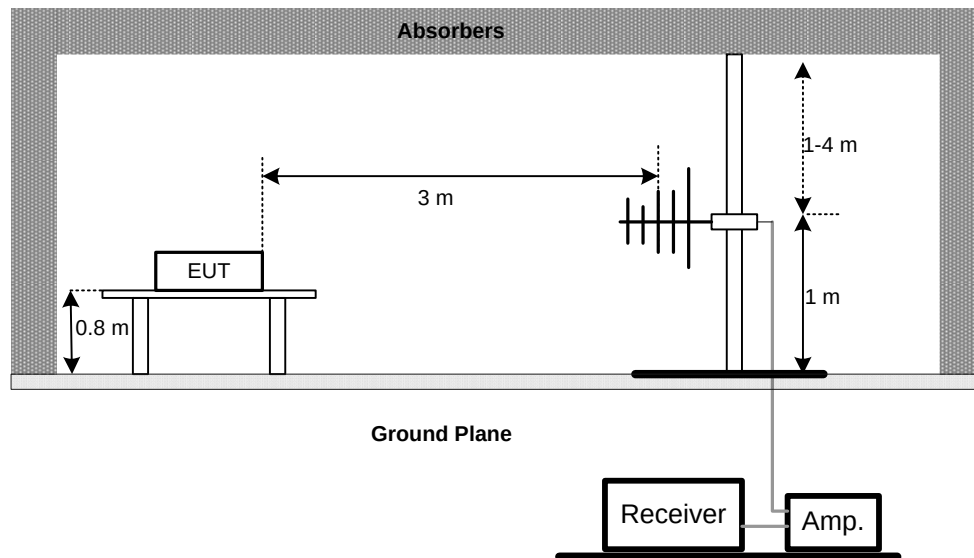
4.2.3 TEST PROCEDURE

- The measuring distance of at 3 m shall be used for measurements at frequency below 1GHz. The measuring distance of at 3 m shall be used for measurements at frequency above 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter semi-anechoic chamber room. The table was rotated 360 degrees to determine the position of the highest radiation. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. (below 1G)
- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter fully-anechoic chamber room. The table was rotated 360 degrees to determine the position of the highest radiation. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. (above 1G)
- The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- The initial step in collecting radiated emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- For the actual test configuration, please refer to the related Item –Block Diagram of system tested (please refer to 3.3).

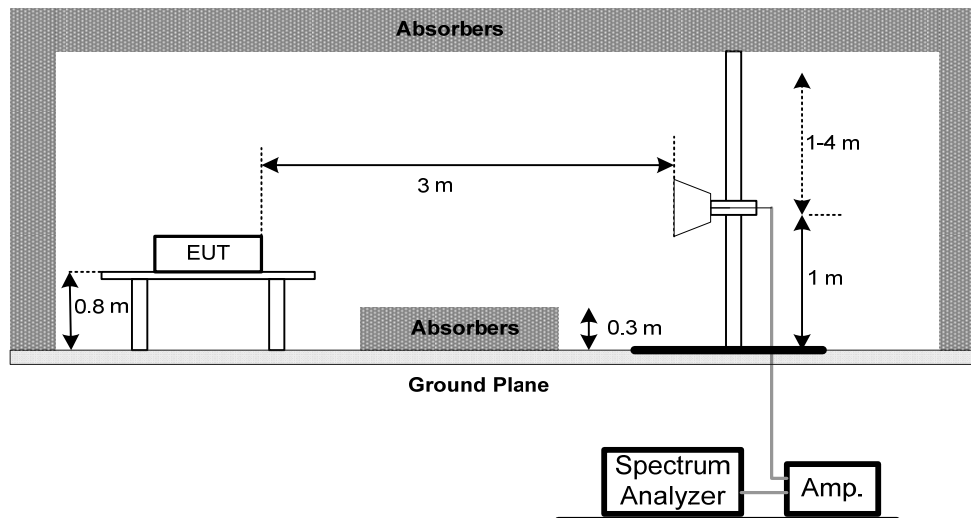
4.2.4 DEVIATION FROM TEST STANDARD

No deviation

4.2.5 TEST SETUP - BELOW 1 GHZ



4.2.6 TEST SETUP - ABOVE 1 GHZ



4.2.7 EUT OPERATING CONDITIONS

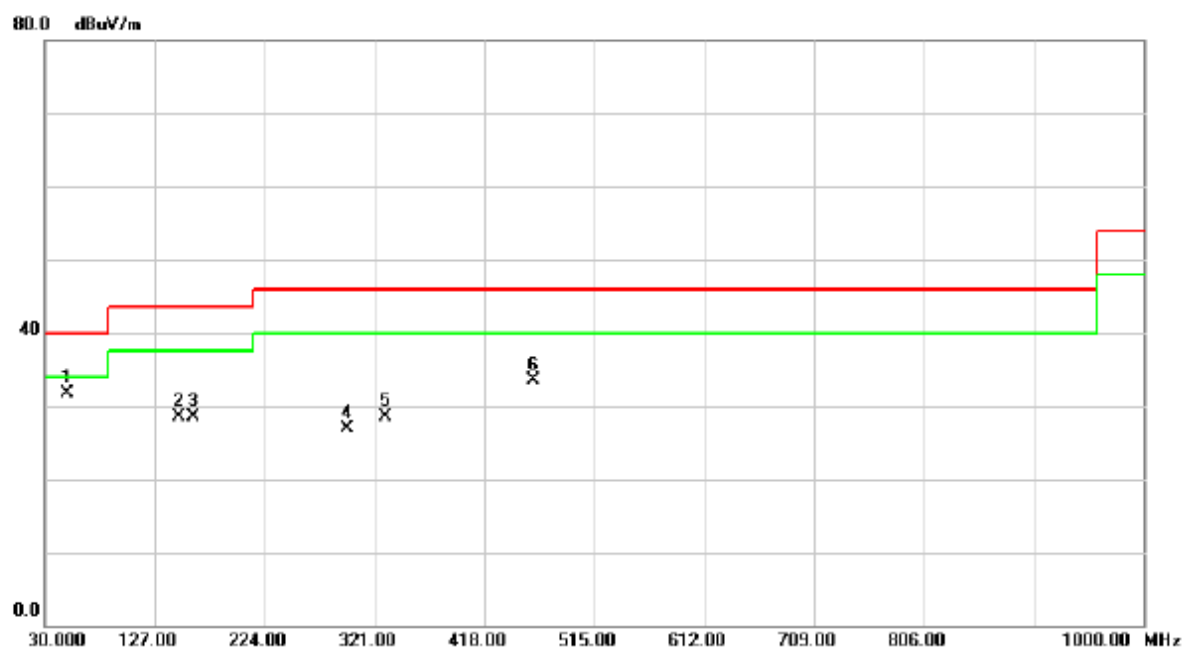
The EUT tested system was configured as the statements of **4.1.6** Unless otherwise a special operating condition is specified in the follows during the testing.

4.2.8 TEST RESULTS (30 TO 1000 MHZ)

Remark:

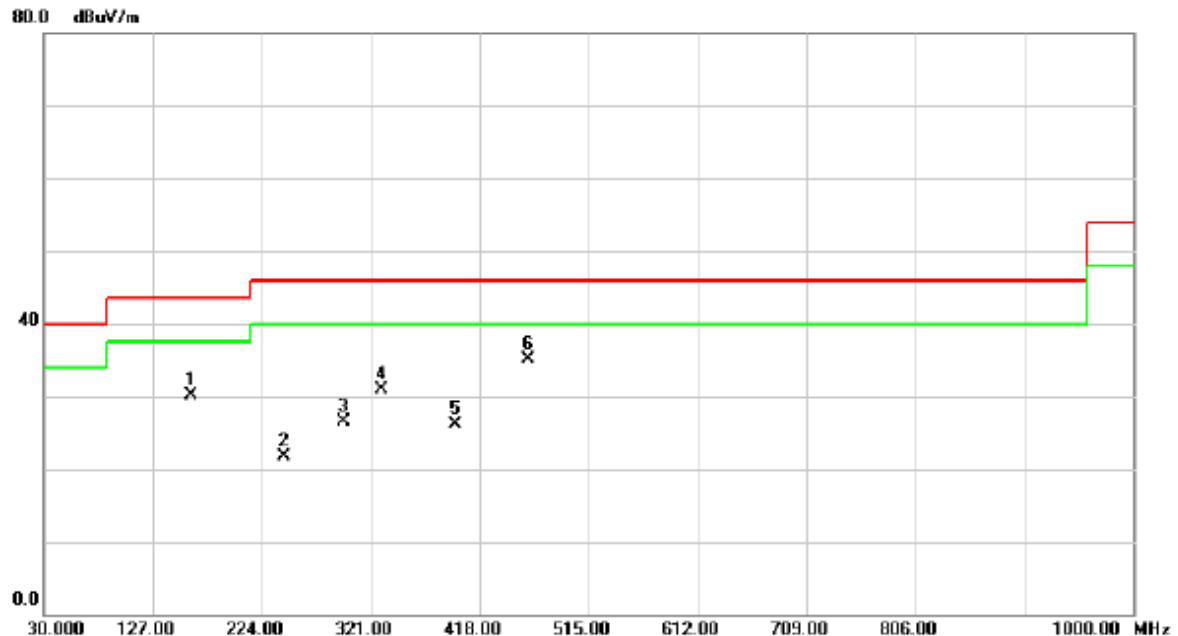
- (1) Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode or Peak Mode with Detector BW=120KHz; SPA setting in RBW=120KHz, VBW=120KHz, Swp. Time = 0.3 sec./MHz.
- (2) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz.
- (4) If the peak scan value lower limit more than 20dB, then this signal data does not show in table.

E.U.T :	Bluetooth Alarm Clock	Model Name :	TimeSmart Alarm Clock
Temperature :	20° C	Relative Humidity :	50 %
Pressure :	1008 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	BT PLAY+FULL LOAD Adapter: S12B22-050A200-04	Polarization:	Vertical



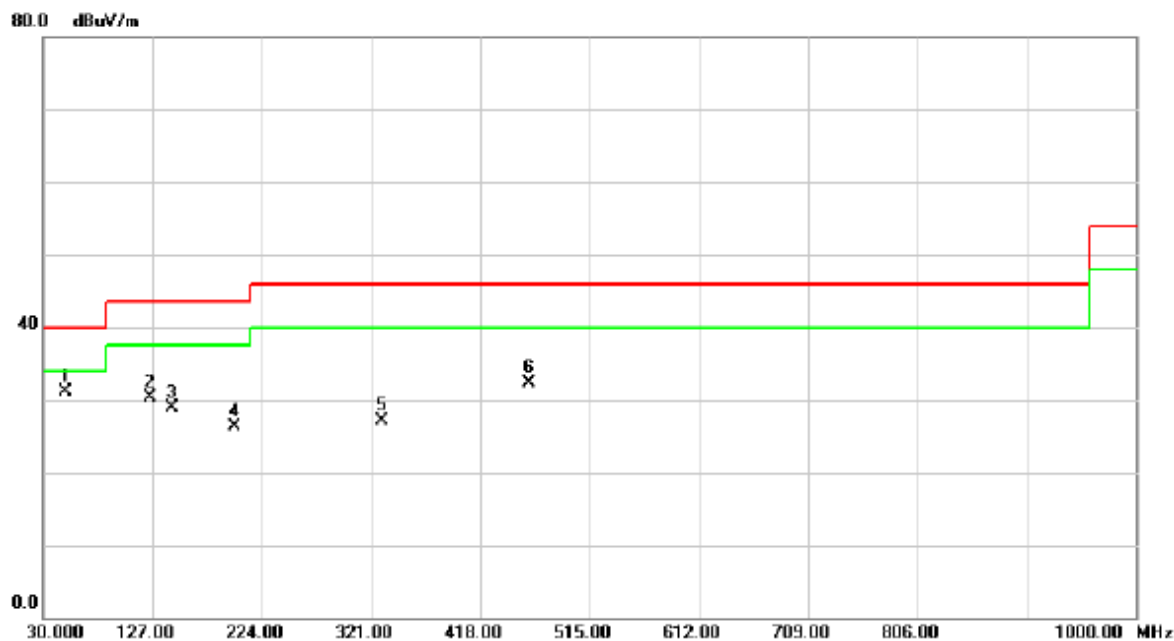
No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin		
		MHz	Level	Factor	ment			Detector	Comment
			dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	49.4000	45.40	-13.69	31.71	40.00	-8.29	peak	
2		148.8250	42.58	-14.09	28.49	43.50	-15.01	peak	
3		160.9500	42.46	-13.97	28.49	43.50	-15.01	peak	
4		296.7500	40.45	-13.57	26.88	46.00	-19.12	peak	
5		330.7000	41.13	-12.68	28.45	46.00	-17.55	peak	
6		461.6500	43.06	-9.58	33.48	46.00	-12.52	peak	

E.U.T :	Bluetooth Alarm Clock	Model Name :	TimeSmart Alarm Clock
Temperature :	20° C	Relative Humidity :	50 %
Pressure :	1008 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	BT PLAY+FULL LOAD Adapter: S12B22-050A200-04	Polarization:	Horizontal



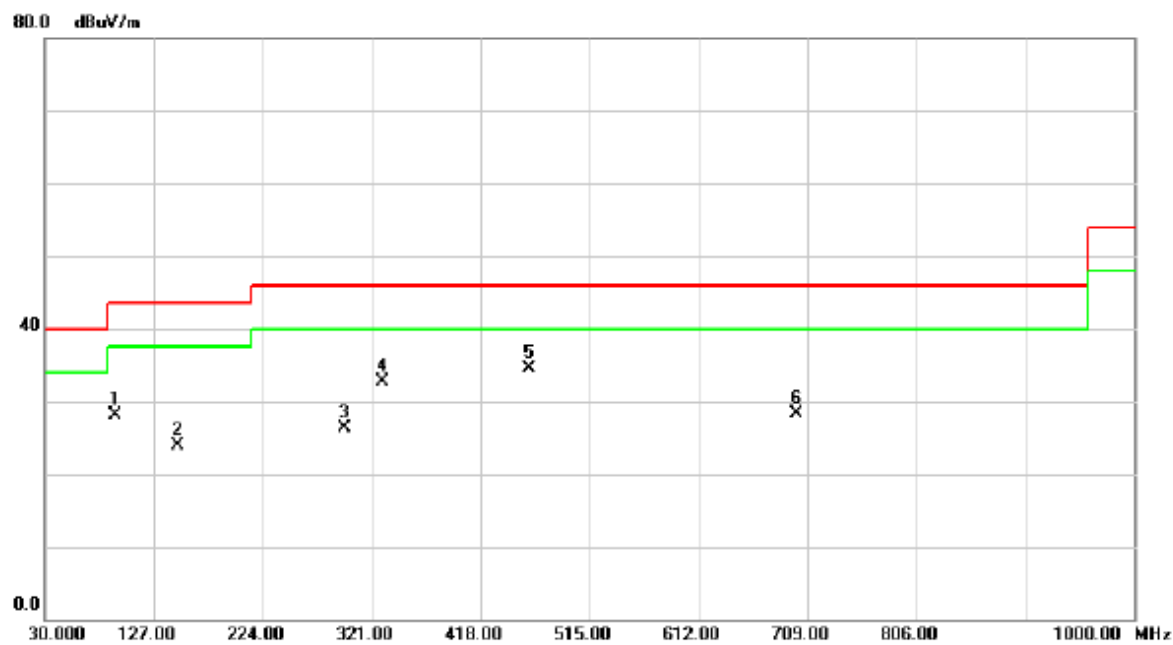
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		160.9500	44.09	-13.97	30.12	43.50	-13.38	peak	
2		243.4000	36.98	-15.22	21.76	46.00	-24.24	peak	
3		296.7500	39.98	-13.57	26.41	46.00	-19.59	peak	
4		330.7000	43.64	-12.68	30.96	46.00	-15.04	peak	
5		396.1750	37.30	-11.18	26.12	46.00	-19.88	peak	
6	*	461.6500	44.63	-9.58	35.05	46.00	-10.95	peak	

E.U.T :	Bluetooth Alarm Clock	Model Name :	TimeSmart Alarm Clock
Temperature :	20° C	Relative Humidity :	50 %
Pressure :	1008 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	BT PLAY+FULL LOAD Adapter: OH-1015A0502000U1-UL	Polarization:	Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	49.4000	44.79	-13.69	31.10	40.00	-8.90	peak	
2		124.5750	46.17	-15.80	30.37	43.50	-13.13	peak	
3		143.9750	43.18	-14.29	28.89	43.50	-14.61	peak	
4		199.7500	43.10	-16.72	26.38	43.50	-17.12	peak	
5		330.7000	39.69	-12.68	27.01	46.00	-18.99	peak	
6		461.6500	41.82	-9.58	32.24	46.00	-13.76	peak	

E.U.T :	Bluetooth Alarm Clock	Model Name :	TimeSmart Alarm Clock
Temperature :	20° C	Relative Humidity :	50 %
Pressure :	1008 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	BT PLAY+FULL LOAD Adapter: OH-1015A0502000U1-UL	Polarization:	Horizontal



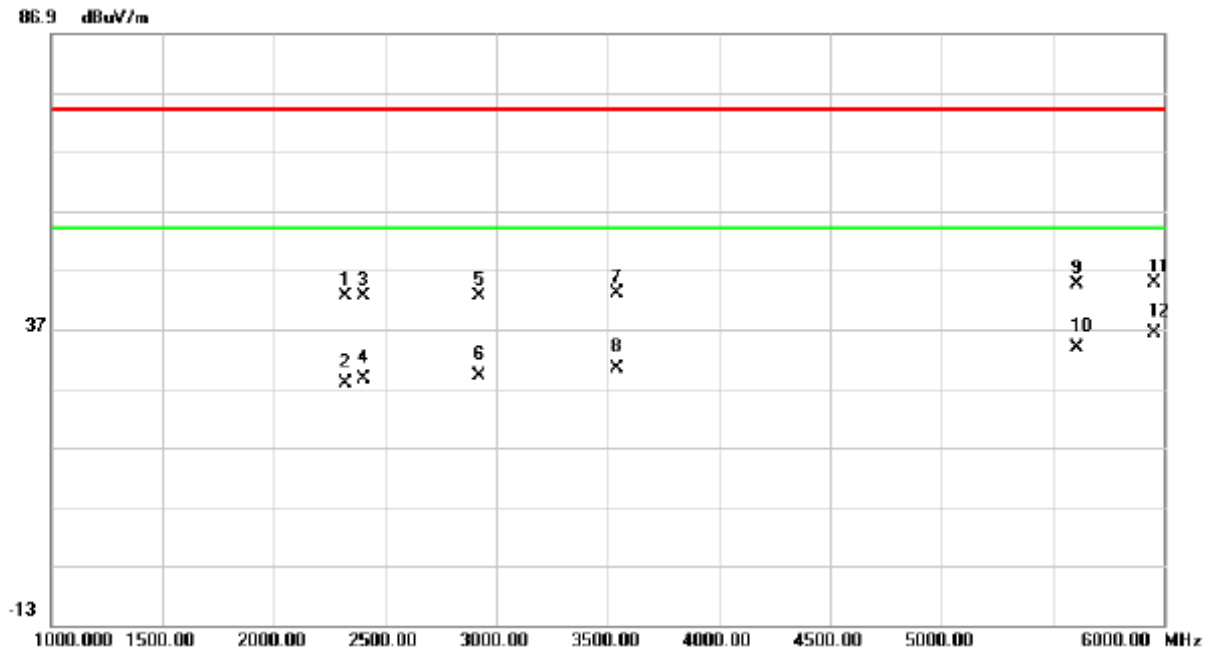
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		93.0500	48.05	-19.86	28.19	43.50	-15.31	peak	
2		148.8250	38.07	-14.09	23.98	43.50	-19.52	peak	
3		296.7500	39.97	-13.57	26.40	46.00	-19.60	peak	
4		330.7000	45.45	-12.68	32.77	46.00	-13.23	peak	
5	*	461.6500	44.09	-9.58	34.51	46.00	-11.49	peak	
6		699.3000	33.76	-5.44	28.32	46.00	-17.68	peak	

4.2.9 TEST RESULTS (ABOVE 1000 MHZ)

Remark:

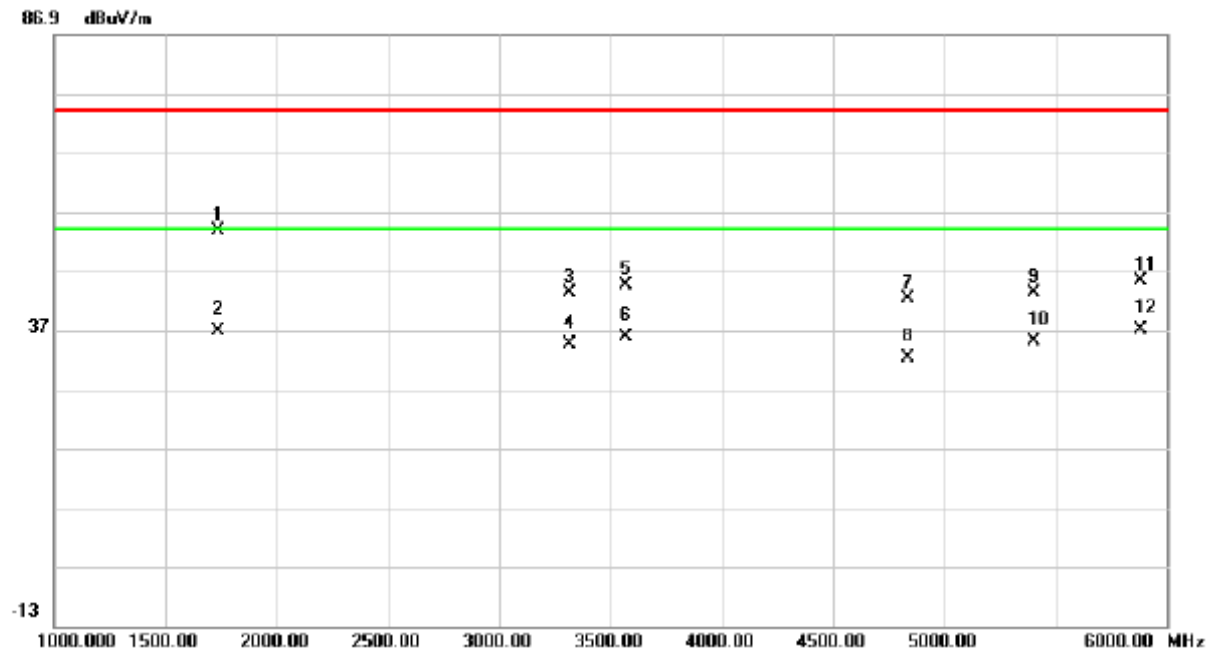
- (1) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission.
- (3) Data of measurement within this frequency range shown “ * ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (4) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

E.U.T :	Bluetooth Alarm Clock	Model Name :	TimeSmart Alarm Clock
Temperature :	20° C	Relative Humidity :	50 %
Pressure :	1008 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	BT PLAY+FULL LOAD Adapter: S12B22-050A200-04	Polarization:	Vertical



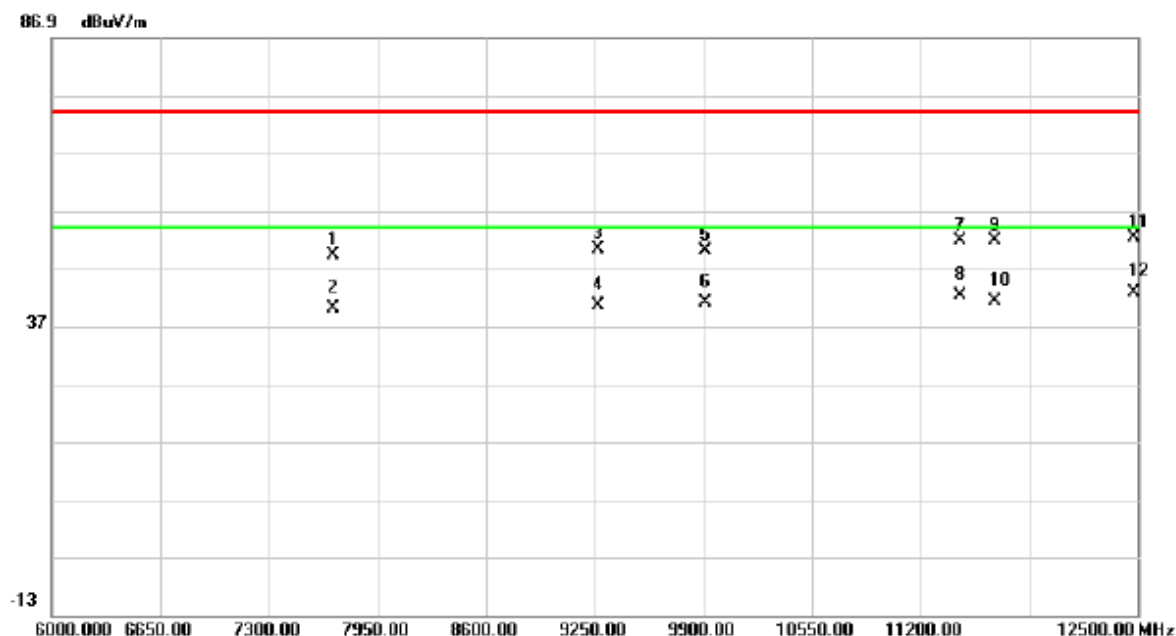
No. Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2320.000	44.99	-2.54	42.45	74.00	-31.55	peak	
2	2320.000	30.26	-2.54	27.72	54.00	-26.28	AVG	
3	2405.000	45.04	-2.45	42.59	74.00	-31.41	peak	
4	2405.000	30.87	-2.45	28.42	54.00	-25.58	AVG	
5	2920.000	43.13	-0.49	42.64	74.00	-31.36	peak	
6	2920.000	29.46	-0.49	28.97	54.00	-25.03	AVG	
7	3540.000	41.62	1.53	43.15	74.00	-30.85	peak	
8	3540.000	28.73	1.53	30.26	54.00	-23.74	AVG	
9	5610.000	38.38	6.03	44.41	74.00	-29.59	peak	
10	5610.000	27.64	6.03	33.67	54.00	-20.33	AVG	
11	5955.000	37.33	7.45	44.78	74.00	-29.22	peak	
12 *	5955.000	28.71	7.45	36.16	54.00	-17.84	AVG	

E.U.T :	Bluetooth Alarm Clock	Model Name :	TimeSmart Alarm Clock
Temperature :	20° C	Relative Humidity :	50 %
Pressure :	1008 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	BT PLAY+FULL LOAD Adapter: S12B22-050A200-04	Polarization:	Horizontal



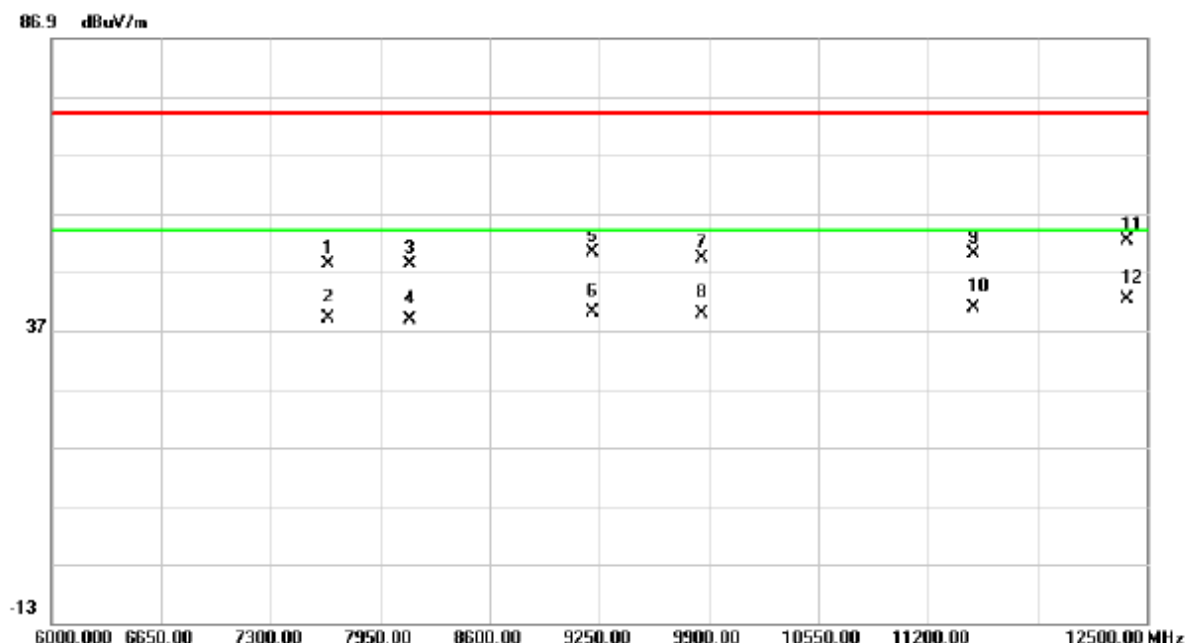
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		1735.000	58.16	-4.43	53.73	74.00	-20.27	peak	
2		1735.000	41.30	-4.43	36.87	54.00	-17.13	AVG	
3		3315.000	42.35	0.84	43.19	74.00	-30.81	peak	
4		3315.000	33.60	0.84	34.44	54.00	-19.56	AVG	
5		3570.000	42.86	1.60	44.46	74.00	-29.54	peak	
6		3570.000	34.20	1.60	35.80	54.00	-18.20	AVG	
7		4835.000	38.70	3.64	42.34	74.00	-31.66	peak	
8		4835.000	28.56	3.64	32.20	54.00	-21.80	AVG	
9		5405.000	38.07	5.28	43.35	74.00	-30.65	peak	
10		5405.000	29.64	5.28	34.92	54.00	-19.08	AVG	
11		5880.000	38.12	7.15	45.27	74.00	-28.73	peak	
12	*	5880.000	29.97	7.15	37.12	54.00	-16.88	AVG	

E.U.T :	Bluetooth Alarm Clock	Model Name :	TimeSmart Alarm Clock
Temperature :	20° C	Relative Humidity :	50 %
Pressure :	1008 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	BT PLAY+FULL LOAD Adapter: S12B22-050A200-04	Polarization:	Vertical



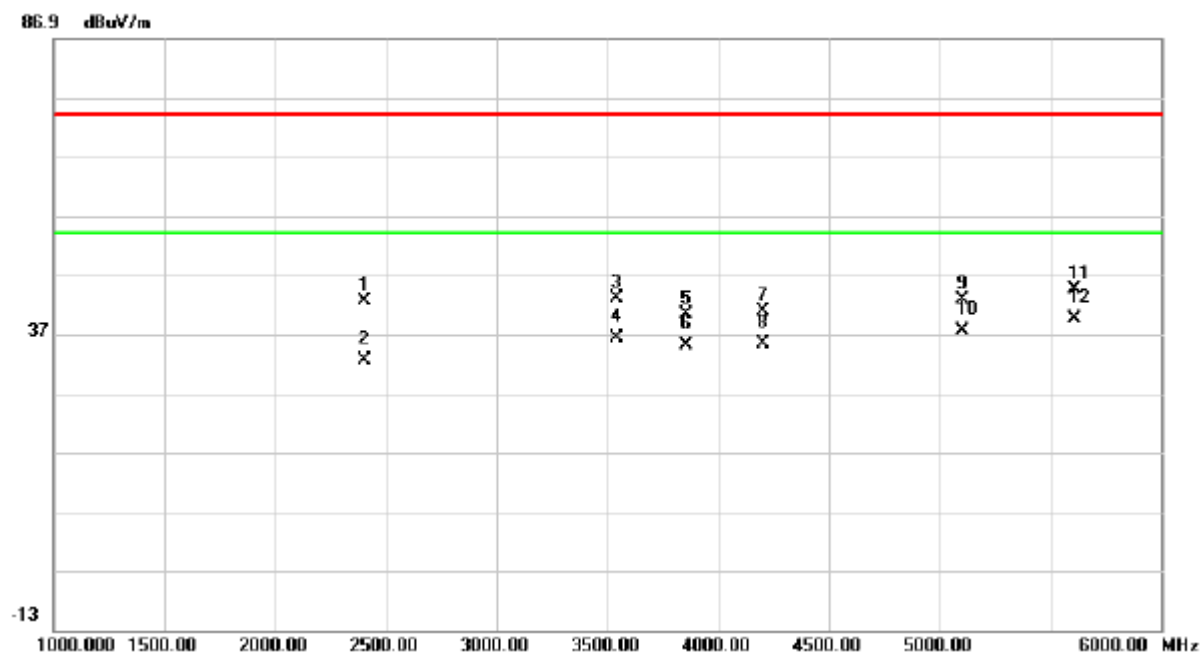
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7683.500	38.78	10.47	49.25	74.00	-24.75	peak	
2		7683.500	29.64	10.47	40.11	54.00	-13.89	AVG	
3		9269.500	39.60	10.79	50.39	74.00	-23.61	peak	
4		9269.500	29.83	10.79	40.62	54.00	-13.38	AVG	
5		9913.000	38.55	11.51	50.06	74.00	-23.94	peak	
6		9913.000	29.41	11.51	40.92	54.00	-13.08	AVG	
7		11440.50	39.04	12.76	51.80	74.00	-22.20	peak	
8		11440.50	29.53	12.76	42.29	54.00	-11.71	AVG	
9		11648.50	39.00	12.84	51.84	74.00	-22.16	peak	
10		11648.50	28.37	12.84	41.21	54.00	-12.79	AVG	
11		12474.00	38.02	14.29	52.31	74.00	-21.69	peak	
12	*	12474.00	28.51	14.29	42.80	54.00	-11.20	AVG	

E.U.T :	Bluetooth Alarm Clock	Model Name :	TimeSmart Alarm Clock
Temperature :	20° C	Relative Humidity :	50 %
Pressure :	1008 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	BT PLAY+FULL LOAD Adapter: S12B22-050A200-04	Polarization:	Horizontal



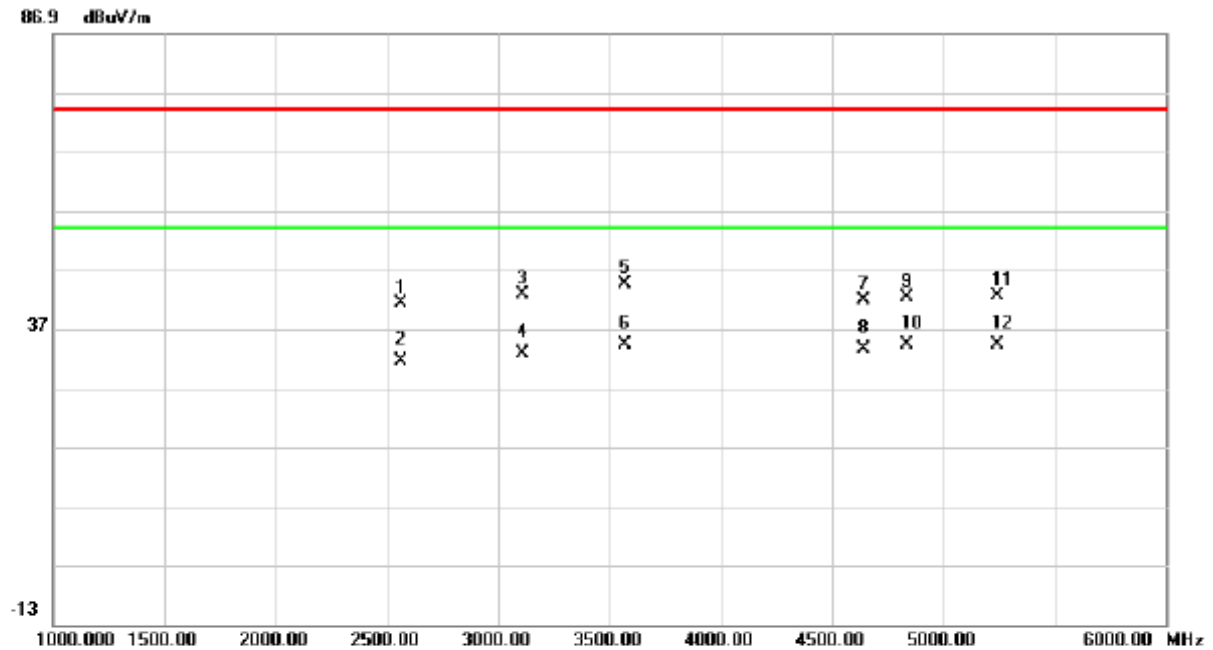
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		7638.000	37.83	10.48	48.31	74.00	-25.69	peak	
2		7638.000	28.59	10.48	39.07	54.00	-14.93	AVG	
3		8125.500	37.94	10.46	48.40	74.00	-25.60	peak	
4		8125.500	28.38	10.46	38.84	54.00	-15.16	AVG	
5		9211.000	39.47	10.71	50.18	74.00	-23.82	peak	
6		9211.000	29.34	10.71	40.05	54.00	-13.95	AVG	
7		9861.000	37.81	11.46	49.27	74.00	-24.73	peak	
8		9861.000	28.34	11.46	39.80	54.00	-14.20	AVG	
9		11473.00	37.27	12.85	50.12	74.00	-23.88	peak	
10		11473.00	27.92	12.85	40.77	54.00	-13.23	AVG	
11		12383.00	38.30	13.96	52.26	74.00	-21.74	peak	
12	*	12383.00	28.34	13.96	42.30	54.00	-11.70	AVG	

E.U.T :	Bluetooth Alarm Clock	Model Name :	TimeSmart Alarm Clock
Temperature :	20° C	Relative Humidity :	50 %
Pressure :	1008 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	BT PLAY+FULL LOAD Adapter: OH-1015A0502000U1-UL	Polarization:	Vertical



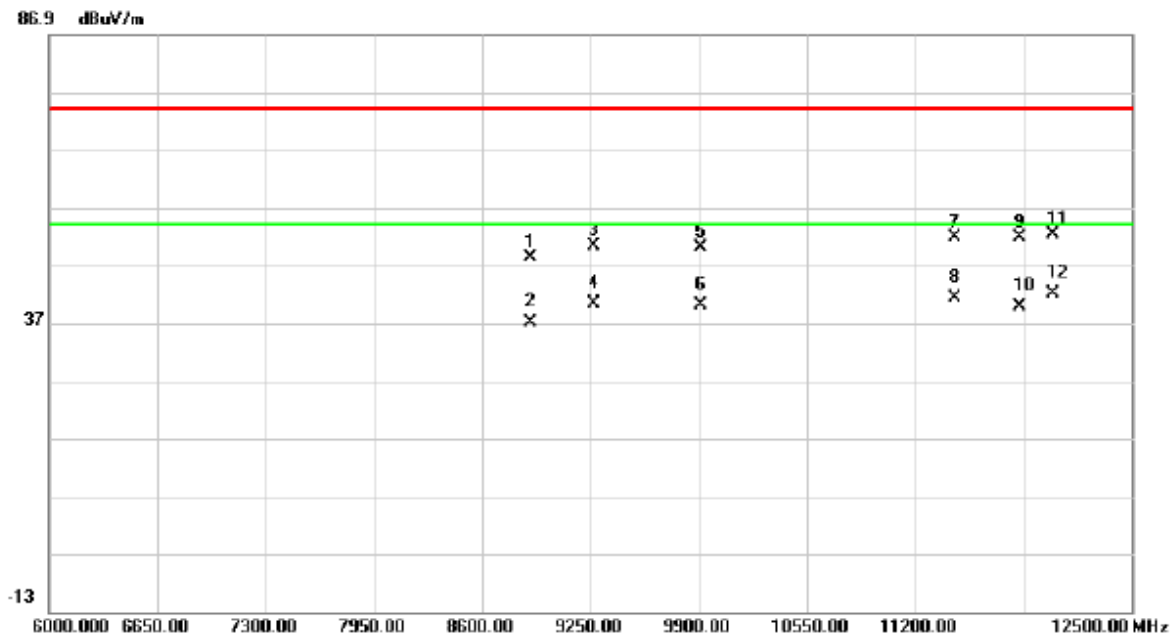
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2405.000	45.04	-2.45	42.59	74.00	-31.41	peak	
2		2405.000	34.93	-2.45	32.48	54.00	-21.52	AVG	
3		3540.000	41.62	1.53	43.15	74.00	-30.85	peak	
4		3540.000	34.73	1.53	36.26	54.00	-17.74	AVG	
5		3855.000	37.90	2.37	40.27	74.00	-33.73	peak	
6		3855.000	32.59	2.37	34.96	54.00	-19.04	AVG	
7		4205.000	37.83	2.87	40.70	74.00	-33.30	peak	
8		4205.000	32.51	2.87	35.38	54.00	-18.62	AVG	
9		5105.000	38.39	4.29	42.68	74.00	-31.32	peak	
10		5105.000	33.26	4.29	37.55	54.00	-16.45	AVG	
11		5610.000	38.38	6.03	44.41	74.00	-29.59	peak	
12	*	5610.000	33.56	6.03	39.59	54.00	-14.41	AVG	

E.U.T :	Bluetooth Alarm Clock	Model Name :	TimeSmart Alarm Clock
Temperature :	20° C	Relative Humidity :	50 %
Pressure :	1008 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	BT PLAY+FULL LOAD Adapter: OH-1015A0502000U1-UL	Polarization:	Horizontal



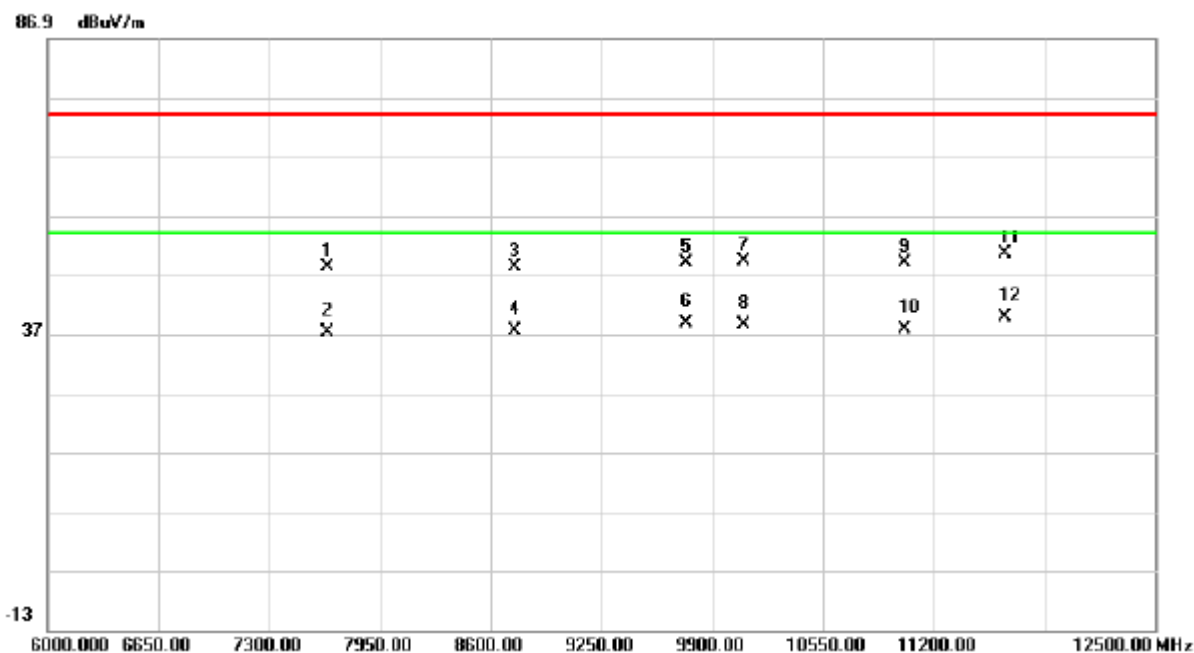
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector Comment
1		2565.000	43.26	-2.04	41.22	74.00	-32.78	peak
2		2565.000	33.69	-2.04	31.65	54.00	-22.35	AVG
3		3110.000	42.64	0.20	42.84	74.00	-31.16	peak
4		3110.000	32.64	0.20	32.84	54.00	-21.16	AVG
5		3570.000	42.86	1.60	44.46	74.00	-29.54	peak
6		3570.000	32.60	1.60	34.20	54.00	-19.80	AVG
7		4640.000	38.41	3.27	41.68	74.00	-32.32	peak
8		4640.000	30.26	3.27	33.53	54.00	-20.47	AVG
9		4835.000	38.70	3.64	42.34	74.00	-31.66	peak
10		4835.000	30.59	3.64	34.23	54.00	-19.77	AVG
11		5240.000	37.74	4.73	42.47	74.00	-31.53	peak
12	*	5240.000	29.64	4.73	34.37	54.00	-19.63	AVG

E.U.T :	Bluetooth Alarm Clock	Model Name :	TimeSmart Alarm Clock
Temperature :	20° C	Relative Humidity :	50 %
Pressure :	1008 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	BT PLAY+FULL LOAD Adapter: OH-1015A0502000U1-UL	Polarization:	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		8892.500	37.75	10.48	48.23	74.00	-25.77	peak	
2		8892.500	26.59	10.48	37.07	54.00	-16.93	AVG	
3		9269.500	39.60	10.79	50.39	74.00	-23.61	peak	
4		9269.500	29.46	10.79	40.25	54.00	-13.75	AVG	
5		9913.000	38.55	11.51	50.06	74.00	-23.94	peak	
6		9913.000	28.46	11.51	39.97	54.00	-14.03	AVG	
7		11440.50	39.04	12.76	51.80	74.00	-22.20	peak	
8		11440.50	28.43	12.76	41.19	54.00	-12.81	AVG	
9		11830.50	39.14	12.73	51.87	74.00	-22.13	peak	
10		11830.50	27.16	12.73	39.89	54.00	-14.11	AVG	
11		12025.50	39.50	12.70	52.20	74.00	-21.80	peak	
12	*	12025.50	29.34	12.70	42.04	54.00	-11.96	AVG	

E.U.T :	Bluetooth Alarm Clock	Model Name :	TimeSmart Alarm Clock
Temperature :	20° C	Relative Humidity :	50 %
Pressure :	1008 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	BT PLAY+FULL LOAD Adapter: OH-1015A0502000U1-UL	Polarization:	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7638.000	37.83	10.48	48.31	74.00	-25.69	peak	
2		7638.000	26.84	10.48	37.32	54.00	-16.68	AVG	
3		8743.000	37.66	10.51	48.17	74.00	-25.83	peak	
4		8743.000	26.93	10.51	37.44	54.00	-16.56	AVG	
5		9750.500	37.59	11.34	48.93	74.00	-25.07	peak	
6		9750.500	27.56	11.34	38.90	54.00	-15.10	AVG	
7		10082.00	37.71	11.50	49.21	74.00	-24.79	peak	
8		10082.00	27.13	11.50	38.63	54.00	-15.37	AVG	
9		11031.00	37.60	11.48	49.08	74.00	-24.92	peak	
10		11031.00	26.38	11.48	37.86	54.00	-16.14	AVG	
11		11622.50	37.71	12.86	50.57	74.00	-23.43	peak	
12	*	11622.50	26.94	12.86	39.80	54.00	-14.20	AVG	

5. EUT TEST PHOTO

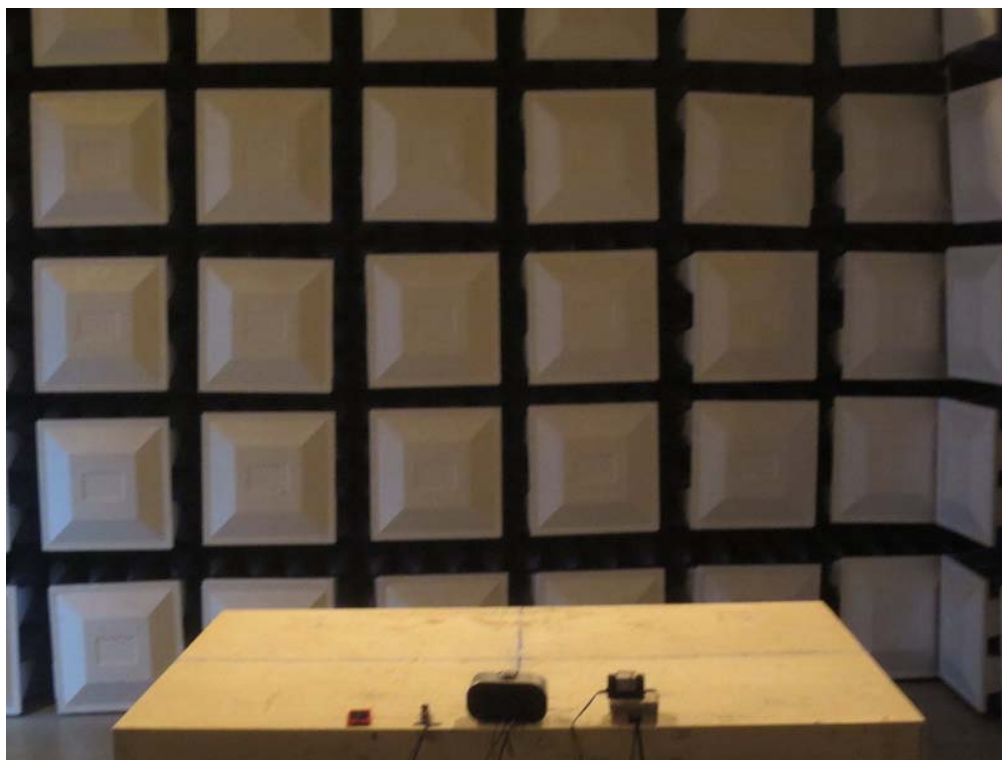
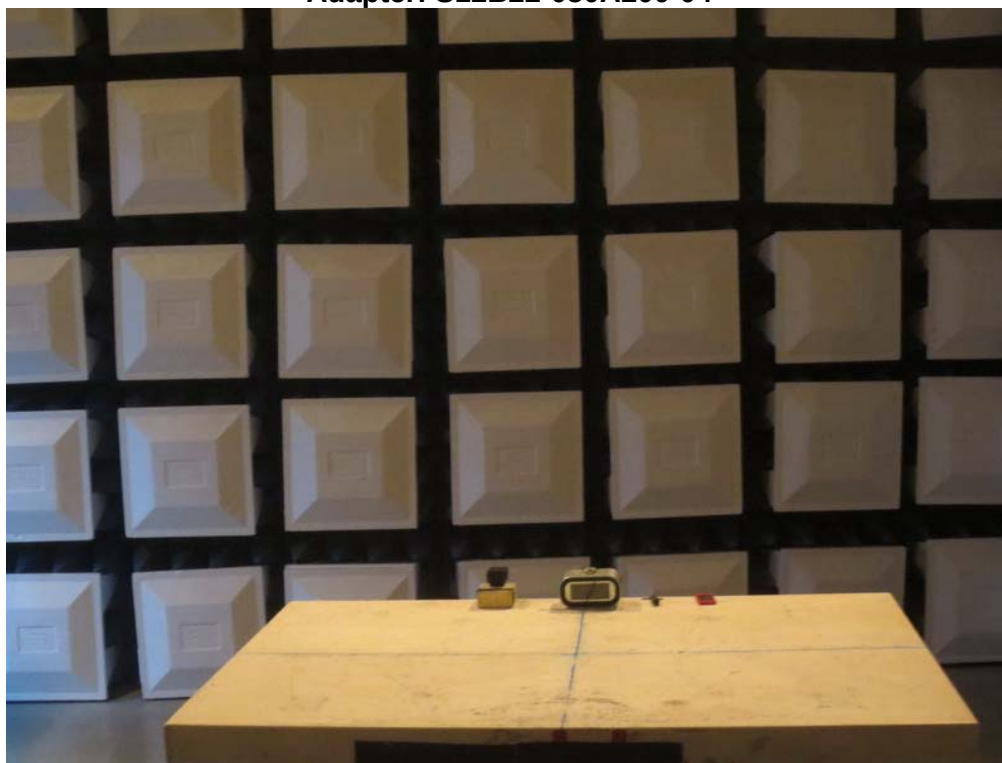
Conducted Measurement Photos
Adapter: S12B22-050A200-04



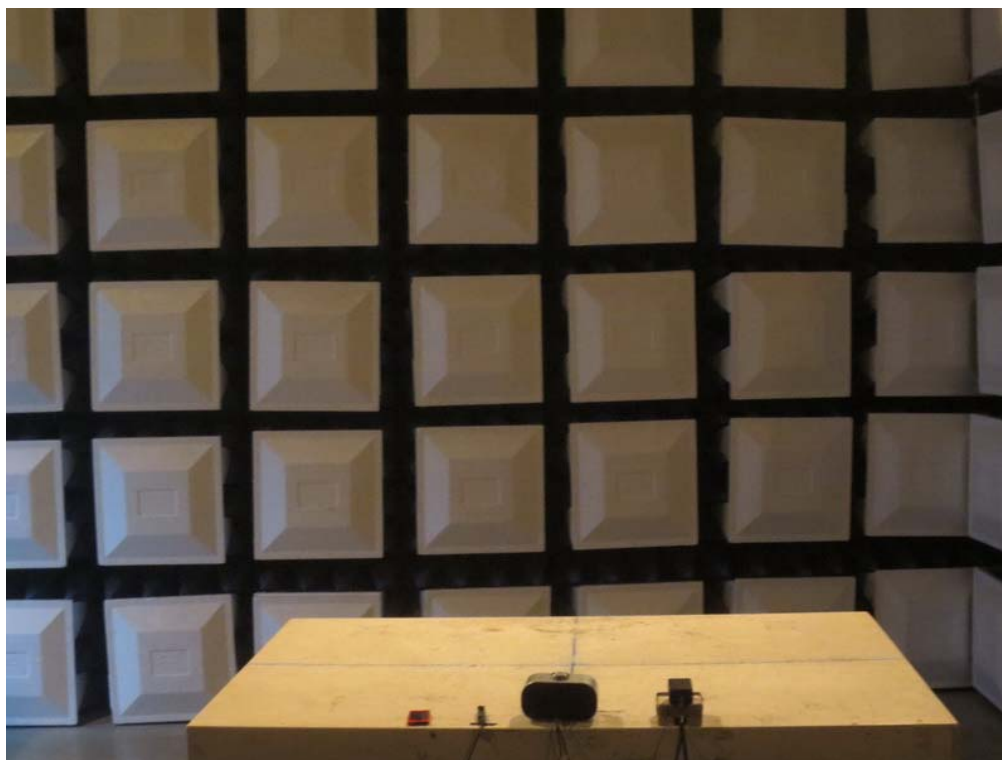
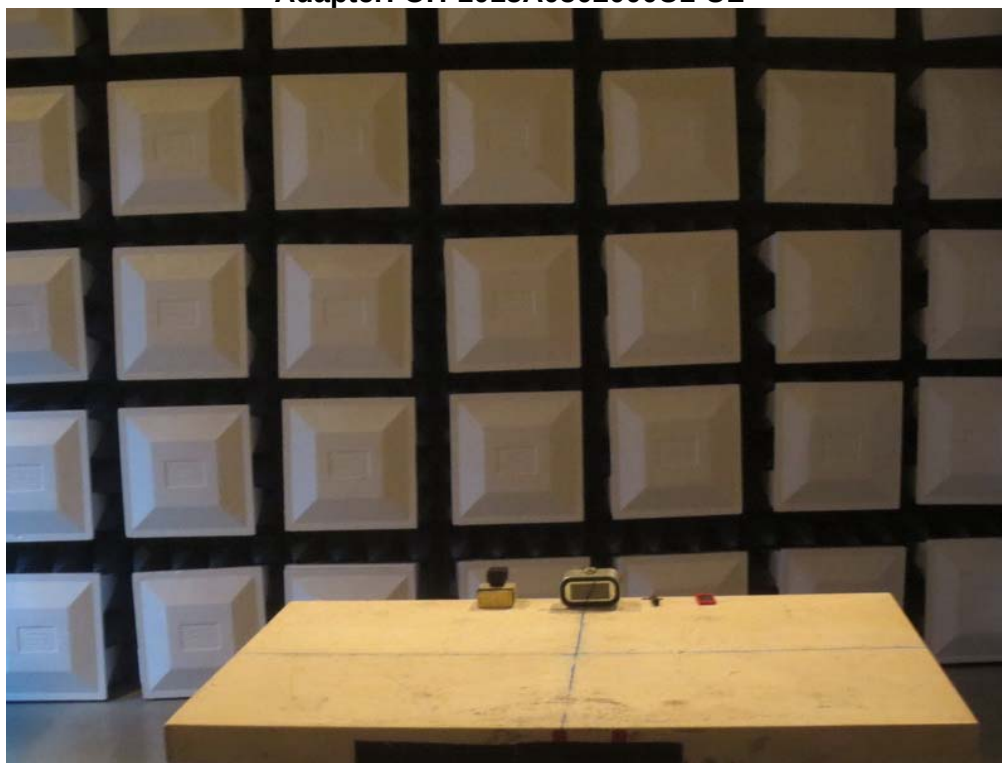
Conducted Measurement Photos
Adapter: OH-1015A0502000U1-UL



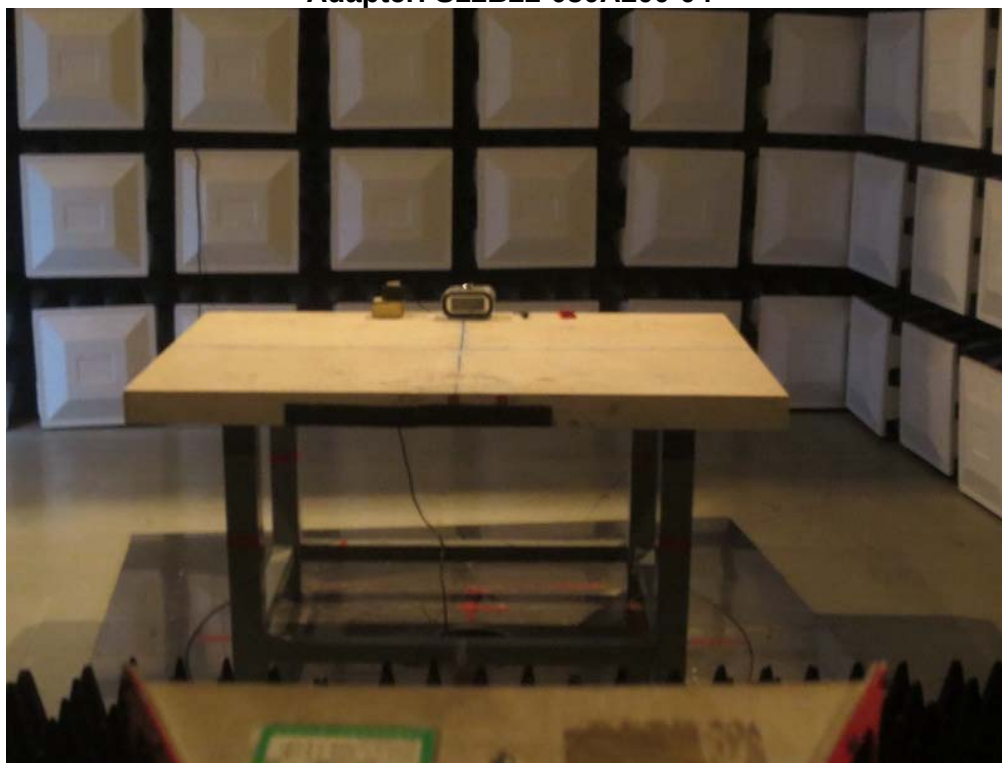
**Radiated Measurement Photos
Below 1G
Adapter: S12B22-050A200-04**



**Radiated Measurement Photos
Below 1G
Adapter: OH-1015A0502000U1-UL**



**Radiated Measurement Photos
Above 1G
Adapter: S12B22-050A200-04**



Radiated Measurement Photos
Above 1G
Adapter: OH-1015A0502000U1-UL

