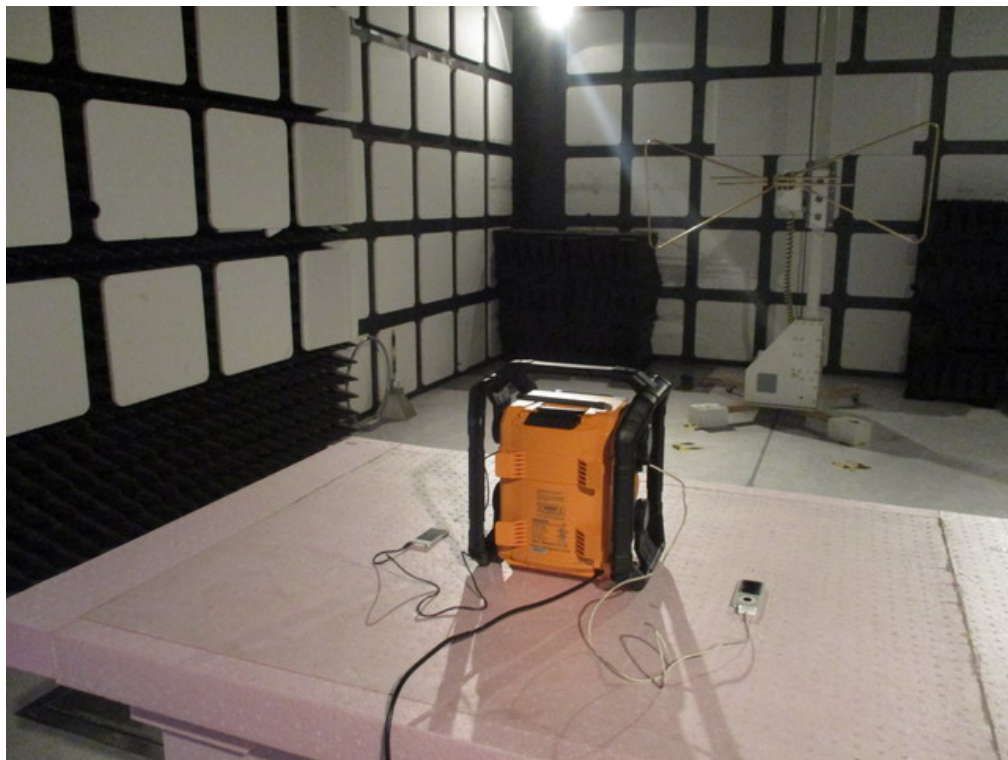
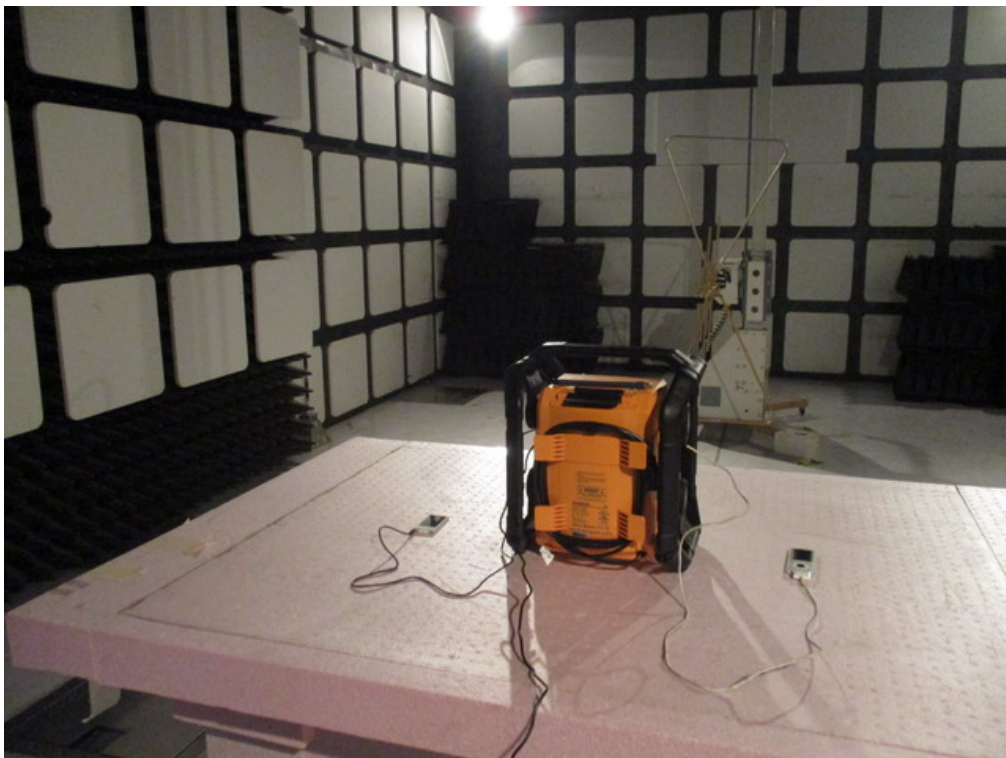


## 4.6 Photos of Radiation Measuring Setup

(Below 1GHz)  
Adapter Mode



**Battery Mode**

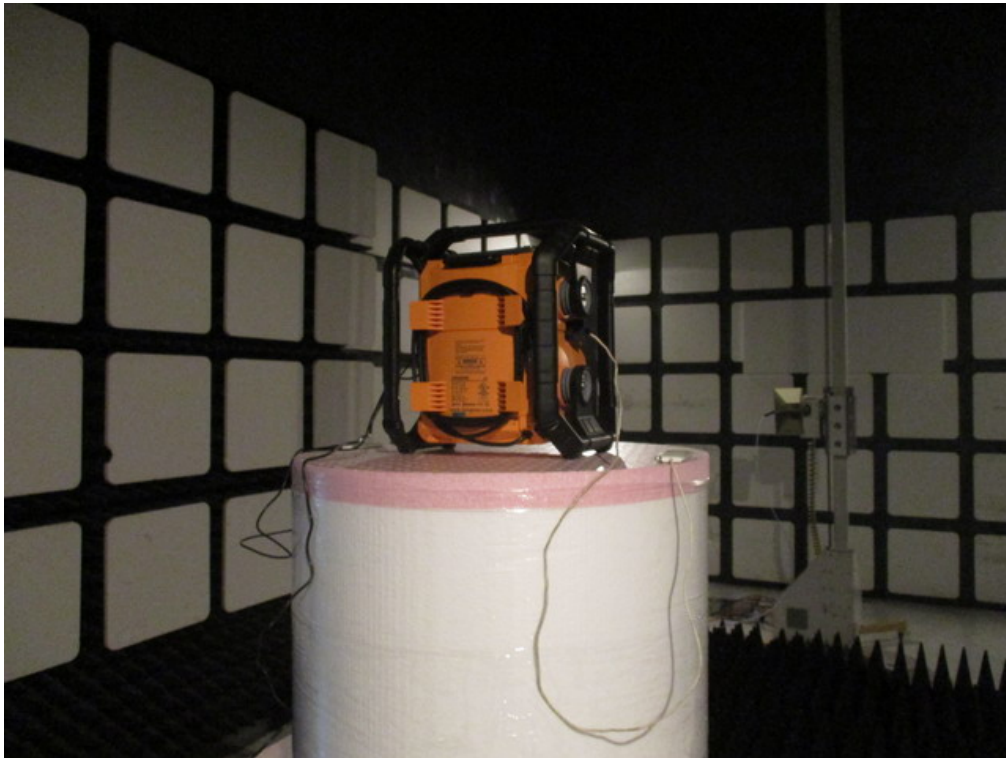


**(Above 1GHz)**

**Adapter Mode**



### Battery Mode



## 5 CONDUCTED EMISSION MEASUREMENT

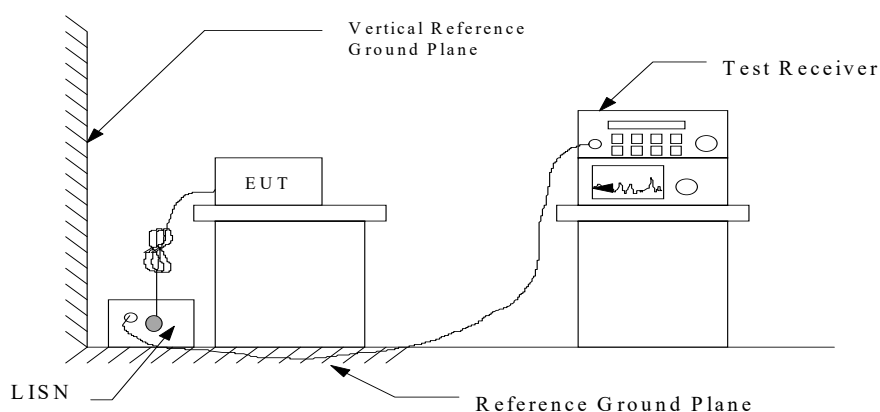
### 5.1 Standard Applicable

For unintentional and intentional device, Line Conducted Emission Limits are in accordance to § 15.107(a) and § 15.207(a) respectively. Both Limits are identical specification.

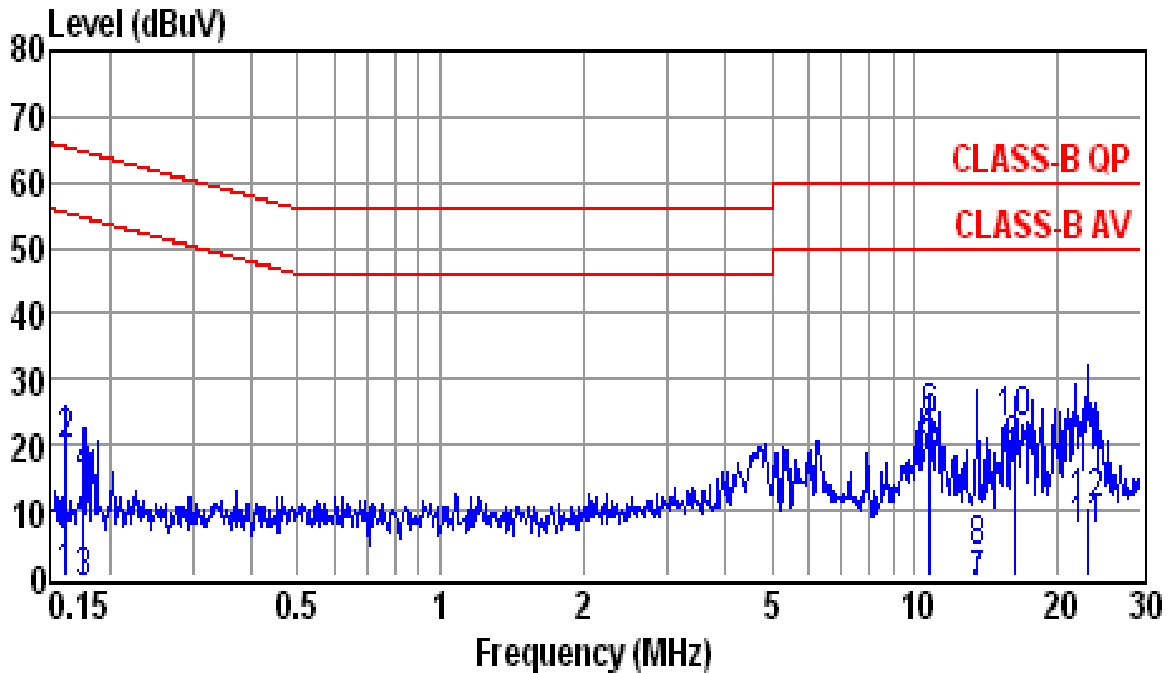
### 5.2 Measurement Procedure

1. Setup the configuration per figure 3.
2. A preliminary scan with a spectrum monitor is performed to identify the frequency of emission that has the highest amplitude relative to the limit by operating the EUT in selected modes of operation, typical cable positions, and with a typical system configuration.
3. Record the 6 or 8 highest emissions relative to the limit.
4. Measure each frequency obtained from step 3 by a test receiver set on quasi peak detector function, and then record the accuracy frequency and emission level. If all emissions measured in the specified band are attenuated more than 20 dB from the limit, this step would be ignored, and the peak detector function would be used.
5. Confirm the highest three emissions with variation of the EUT cable configuration and record the final data.
6. Repeat all above procedures on measuring each operation mode of EUT.

Figure 3 : Conducted emissions measurement configuration



### 5.3 Conducted Emission Data

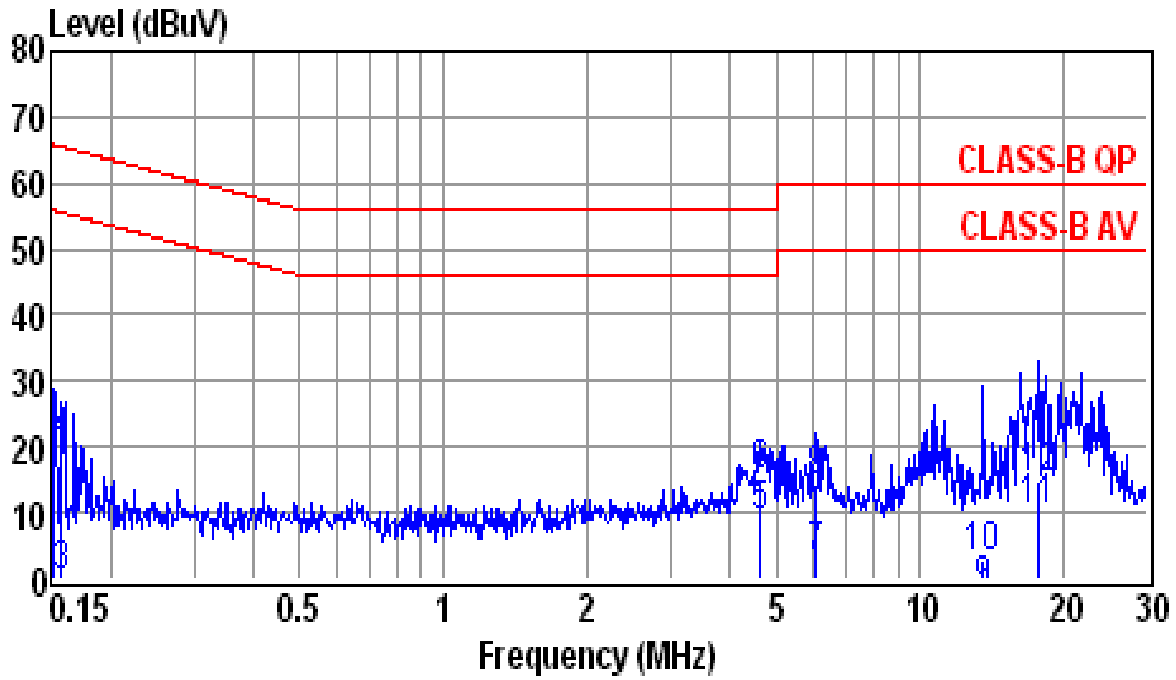


Site : conducted #1 Date : 03-03-2017  
 Condition : CLASS-B QP LISN : NEUTRAL  
 Tem / Hum : 18 °C / 59% Test Mode : BT Mode  
 EUT : FM RDS/AM/WX/BLUETOOTH JOBSITE RADIO Power Rating : AC120V 60Hz  
 Memo : Memo :

Freq (MHz)	Reading (dBµV)	Factor (dB)	Emission Level (dBµV)	Limit Line (dBµV)	Over Limit (dB)	Remark
0.1616	-10.76	10.17	-0.59	55.38	-55.97	Average
0.1616	9.42	10.17	19.59	65.38	-45.79	QP
0.1768	-11.77	10.16	-1.61	54.64	-56.25	Average
0.1768	4.63	10.16	14.79	64.64	-49.85	QP
10.7900	8.74	10.67	19.41	50.00	-30.59	Average
10.7900	12.90	10.67	23.57	60.00	-36.43	QP
13.6230	-12.95	10.86	-2.09	50.00	-52.09	Average
13.6230	-7.69	10.86	3.17	60.00	-56.83	QP
16.2260	7.88	10.99	18.87	50.00	-31.13	Average
16.2260	12.21	10.99	23.20	60.00	-36.80	QP
23.1400	-4.61	11.14	6.53	50.00	-43.47	Average
23.1400	-0.59	11.14	10.55	60.00	-49.45	QP

Note :

1. Result = Reading + Factor
2. Factor = LISN Factor + Cable Loss



Site : conducted #1 Date : 03-03-2017  
 Condition : CLASS-B QP LISN : LINE  
 Tem / Hum : 18 °C / 59% Test Mode : BT Mode  
 EUT : FM RDS/AM/WX/BLUETOOTH JOBSITE RADIO Power Rating : AC120V 60Hz  
 Memo : Memo :

Freq (MHz)	Reading (dBμV)	Factor (dB)	Emission Level (dBμV)	Limit Line (dBμV)	Over Limit (dB)	Remark
0.1516	-9.66	10.17	0.51	55.91	-55.40	Average
0.1516	11.36	10.17	21.53	65.91	-44.38	QP
0.1582	-10.13	10.17	0.04	55.56	-55.52	Average
0.1582	9.83	10.17	20.00	65.56	-45.56	QP
4.6220	-1.37	10.41	9.04	46.00	-36.96	Average
4.6220	4.88	10.41	15.29	56.00	-40.71	QP
6.0560	-7.48	10.49	3.01	50.00	-46.99	Average
6.0560	3.85	10.49	14.34	60.00	-45.66	QP
13.6230	-13.22	10.94	-2.28	50.00	-52.28	Average
13.6230	-8.15	10.94	2.79	60.00	-57.21	QP
17.7550	-1.04	11.17	10.13	50.00	-39.87	Average
17.7550	3.71	11.17	14.88	60.00	-45.12	QP

Note :

1. Result = Reading + Factor
2. Factor = LISN Factor + Cable Loss

## 5.4 Result Data Calculation

The result data is calculated by adding the LISN Factor to the measured reading. The basic equation with a sample calculation is as follows:

$$\mathbf{RESULT = READING + LISN FACTOR}$$

Assume a receiver reading of 22.5 dB  $\mu$  V is obtained, and LISN Factor is 0.1 dB, then the total of disturbance voltage is 22.6 dB  $\mu$  V.

$$\text{RESULT} = 22.5 + 0.1 = 22.6 \text{ dB } \mu \text{ V}$$

$$\begin{aligned} \text{Level in } \mu \text{ V} &= \text{Common Antilogarithm}[(22.6 \text{ dB } \mu \text{ V})/20] \\ &= 13.48 \mu \text{ V} \end{aligned}$$

## 5.5 Conducted Measurement Equipment

The following test equipment are used during the conducted test .

Equipment	Manufacturer	Model No.	Calibration Date	Next Cal. Date
EMI Test Receiver	Rohde & Schwarz	ESCI	2016/12/05	2017/12/05
LISN	Shibasoku	563	2016/05/16	2017/05/15
LISN	Rohde & Schwarz	ESH2-Z5	2016/05/05	2017/05/04



## 5.6 Photos of Conduction Measuring Setup

