

CONDUCTED EMISSION MEASUREMENT

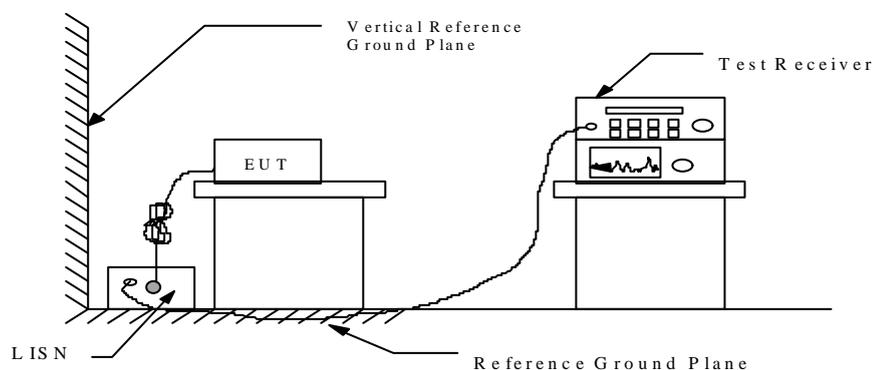
Standard Applicable

For intentional radiator, Line Conducted Emission Limits are in accordance to §15.207(a).

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



Conducted Emission Data

A.

Operation Mode : Charging

Test Date : Jan. 17, 2003

Temperature : 21

Humidity: 60%

Freq. (MHz)	Meter Reading (dB μ V)				Factor (dB)	Limit (dB μ V)		Result (dB μ V)			
	Q.P Value		AVG. Value			Q.P Value	AVG. Value	Q.P Value		AVG. Value	
	N	L1	N	L1				N	L1	N	L1
0.1500	21.3	20.7	----	----	0.2	66.0	56.0	21.5	20.9	----	----
0.2477	20.6	20.4	----	----	0.2	61.8	51.8	20.8	20.6	----	----
0.6680	21.1	20.4	----	----	0.3	56.0	46.0	21.4	20.7	----	----
1.4801	20.2	20.3	----	----	0.4	56.0	46.0	20.6	20.7	----	----
7.5200	21.9	22.1	----	----	0.7	60.0	50.0	22.6	22.8	----	----
8.5273	21.9	21.7	----	----	0.8	60.0	50.0	22.7	22.5	----	----

Note : 1. Please see appendix 1 for Plotted Data

2. The expanded uncertainty of the conducted emission tests is 2.45 dB.

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 μ V is obtained, and LISN Factor is 0.1 dB, then the total of disturbance voltage is 22.6 dB μ V.

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

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

Conducted Measurement Equipment

The following test equipment are used during the conducted test.

Equipment	Manufacturer	Model No.	Next Cal. Date
RF Test Receiver	Rohde and Schwarz	ESH3	01/03/2003
Spectrum Monitor	Rohde and Schwarz	EZM	N.C.R.
Line Impedance Stabilization network	Kyoritsu	KNW-407	12/02/2003
Line Impedance Stabilization network	Rohde & Schwarz	ESH2-Z5	08/05/2003
Plotter	Hewlett-Packard	7440A	N/A
Shielded Room	Riken	N/A	N.C.R.

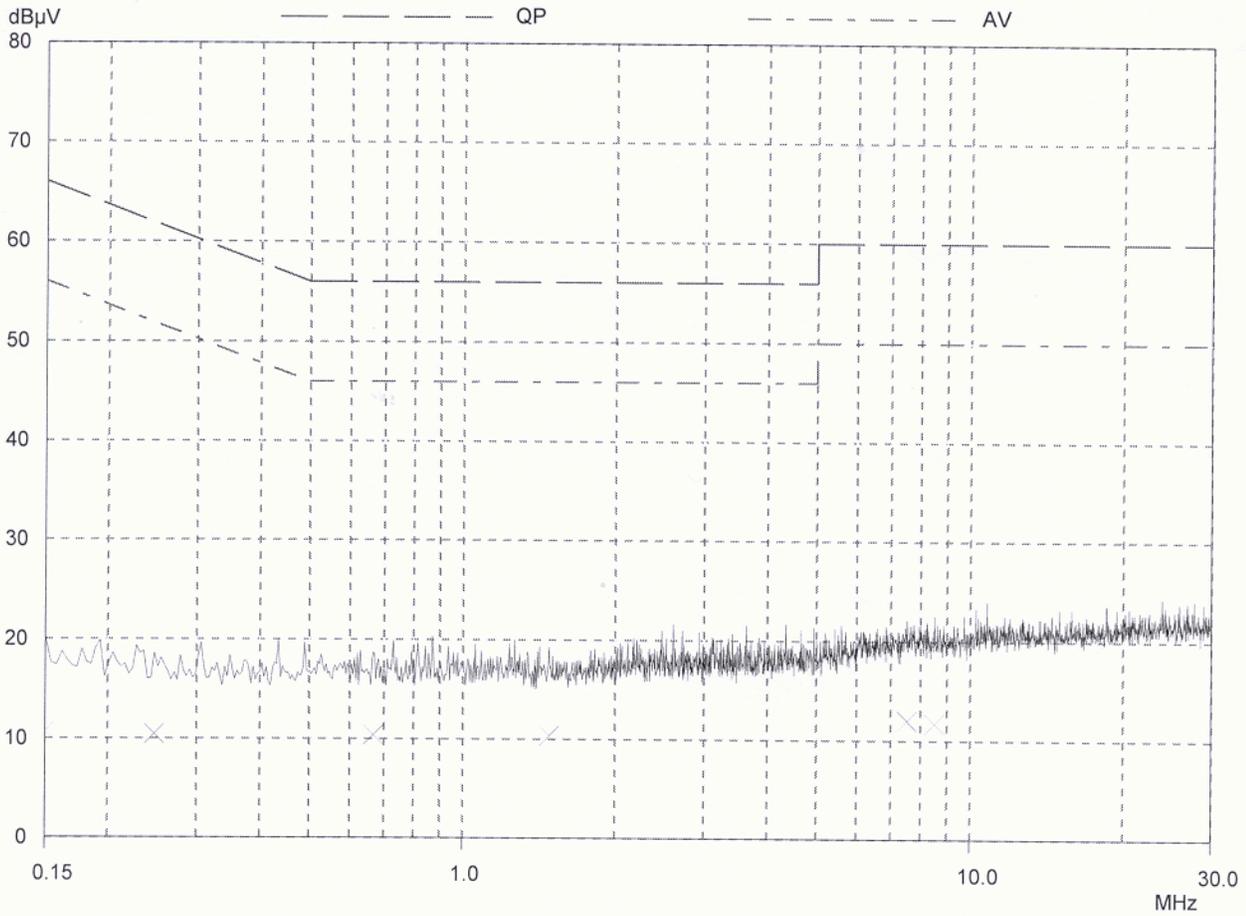
CONDUCTION EMISSION TEST

Peak Value

EUT:
Manuf:
Op Cond:
Operator:
Test Spec:
Comment:

L1

Final Measurement:	Detector:	X QP
	Meas Time:	1sec
	Peaks:	8
	Acc Margin:	25 dB



CONDUCTION EMISSION TEST

Peak Value

EUT:
Manuf:
Op Cond:
Operator:
Test Spec:
Comment:

N

Final Measurement:	Detector:	X QP
	Meas Time:	1sec
	Peaks:	8
	Acc Margin:	25 dB

