Intertek Testing Services

Radiated Emissions / Interference

Table: 1

Company: Mitsubishi Wireless
Model: MT279
Job No.: J99017653
Date: 08/07/99
Standard: CFR 47 P24
Class: Group: None
Notes: EIRP Measurements

Tested by: Mark A. Severson
Location: Norcross
Detector: HP 8566
Antenna: AHSYS571
PreAmp: None
Cable(s): CABLE8   CABLE9
Distance: 3

Signature:

Ant. Pol. (V/H)	Frequency MHz	Reading dB(uV)	Antenna Factor dB(1/m)	Cable Loss dB	Pre-amp Factor dB	Distance Factor dB	Net dB(uV/m)	Limit dB(uV/m)	Margin dB
EUT Fixed Antenna									
V	1850.200	97.0	28.6	1.9	0.0	0.0	127.4	n/a	n/a
V	1880.000	97.6	28.8	1.9	0.0	0.0	128.2	n/a	n/a
V	1909.900	97.6	29.0	1.9	0.0	0.0	128.5	n/a	n/a
EUT, retractable antenna(fully Extended)									
V	1850.200	96.5	28.6	1.9	0.0	0.0	126.9	n/a	n/a
V	1880.000	96.1	28.8	1.9	0.0	0.0	126.7	n/a	n/a
V	1909.800	95.8	29.0	1.9	0.0	0.0	126.7	n/a	n/a

Substitution Method

Ant. Pol. (V/H)	Frequency MHz	EUT Measured Reading dB(uV)	Sig Generator Level dBm	Pwr meter Reading dBm	Atten dB	Tx. Ant Gain dBi	Subs Meth Radiated Power dBm	Radiated Power in Watts	Calc. EUT Radiated Power	Delta EUT vs. Subs. dB
EUT Fixed Antenna										
V	1850.200	127.4	-25.1	-8.6	29.8	6.6	27.8	0.603		
V	1880.000	128.2	-22.8	-6.3	29.8	6.6	30.1	1.023		
V	1909.800	128.5	-21.8	-6.7	29.8	6.6	29.7	0.933		
EUT, retractable antenna(fully Extended)										
V	1850.200	126.9	-26.9	-10.2	29.8	6.6	26.2	0.417		
V	1880.000	126.7	-24.3	-7.9	29.8	6.6	28.5	0.708		
V	1909.800	126.7	-24.2	-8.6	29.8	6.6	27.9	0.617		

Comments

1) Sig Generator Level(dBm) refers to raw signal level seen on the signal generator.
   This is recorded for our reference purpose only.

2) Pwr meter reading(dBm) refers to signal level measured on the power meter at the input of transmitting
   antenna and it includes 30 dB nominal attenuator

3) Atten refers to 30 dB nominal attenuator used at the input of the power meter.

4) Tx. Ant Gain(dBi) refers to transmitting antenna gain in dBi

5) The corrected signal generator level that is fed into the antenna can be calculated by combining the signal level
   measured on the power meter and 30 dB nominal attenuator. For example, if the power meter reading was
   -6.3 dBm then the corrected signal generator level = -6.3 + 29.8 = 23.5 dBm

6) Simple radiated power calculation
         Radiated Power(dBm) = Corrected signal generator level(dBm) + Transmitting antenna gain(dBi)

         if the corrected signal generator level(dBm) = 23.5 dBm and
          the transmitting antenna gain = 6.6 dBi, then

         Radiated Power(dBm) = 23.5 dBm + 6.6 dBi = 30.1 dBm or 1 Watt