General technical requirements

Digital modulation techniques: FCC 15.319(b), IC RSS-213 6.1

The DECT standard GFSK modulation is used.

Peak transmit power: FCC 15.319(c), IC RSS-213 6.5

Test summary

The requirements are: ■ - MET ☐ - NOT MET

The peak transmit power does not exceed 100 microwatts multiplied by the square root of the emission bandwidth in Hertz.

Test location

■ - Wild River Lab Large Test Site (Open Area Test Site) – radiated measurement for microphone

☐- Wild River Lab Small Test Site (Open Area Test Site)

☐ - Wild River Lab Shield Room – conducted measurement for base station

Test equipment

TUV ID	Model Number	Manufacturer	Description	Serial Number	Cal Due
3371	E4440A	Agilent	Spectrum Analyzer	MY43362222	03-Nov-06
2075	3115	Electro-Mechanics (EMCO)	Ridge Guide Antenna	9001-3275	08-Dec-06
3229	3115	Electro-Mechanics (EMCO)	Ridge Guide Antenna	2483	17-May-07
3333	SME03	Rohde-Schwarz	Signal generator	100003	07-Jun-07

Cal Code B = Calibration verification performed internally. Cal Code Y = Calibration not required when used with other calibrated equipment.

Test limits

120 milliwatts, based on 100 microwatts x $(1460000\ Hz)^{1/2}$

The formula used to calculate the ERP was E(dBuV/m) = 106.92 + ERP (dBk) - 20 log D (km).

109 dBuV/m = 106.92 + ERP (dBk) - 20 log .003 m

ERP = 14.5 mW, or 11.6 dBm

EIRP = 11.6 + 2.15, or 13.75 dBm

These values were verified by substitution method of the peak field strength.

4.0 dBm (signal generator output) + 1.7 dB (cable loss) + 8 dBi (antenna gain) = 13.7 dBm.

Radiated measurements made in lieu of conducted measurements since antenna was not detachable.

The solo microphone units each have a single smt ceramic 1.5 dBi gain antenna.