



Excellence in Compliance Testing

FCC Part 15.247 Transceiver Certification

Digital Transmission System with Frequency Hopping Spread Spectrum

Test Report

FCC ID: HSW-2492

FCC Rule Part: 15.247

ACS Report Number: 07-0052-15C

Manufacturer: Cirronet
Model: WIT2492

RF Exposure

General Information:

Applicant: Cirronet
 ACS Project: 07-0052
 FCC ID: HSW-2492
 Device Category: Fixed/Mobile
 Exposure Conditions: Uncontrolled/General Population

Technical Information:

Antenna Type: Multiple Types
 Antenna Gain Maximum: 15dBi
 Max Transmitter Output Power: 17.75dBm
 Max System EIRP: 32.75dBm / 1.9W
 Operating Configuration: Fixed/Mobile

NOTE: Multiple antennas are available. Listed above are antennas with the highest gain.

MPE Calculation

The Power Density (mW/cm²) is calculated as follows:

$$S = \frac{PG}{4\pi R^2}$$

Where:

- S = power density (in appropriate units, e.g. mW/cm2)
- P = power input to the antenna (in appropriate units, e.g., mW)
- G = power gain of the antenna in the direction of interest relative to an isotropic radiator
- R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

Calculations were performed at the frequencies with the highest output power as determined during testing.

Maximum Permissible Exposure (MPE) General Population/Uncontrolled Exposure								
Transmit Frequency (MHz)	Radio Power (dBm)	Power Density Limit (mW/Cm2)	Radio Power (mW)	Antenna Gain (dBi)	Antenna Gain (mW eq.)	Distance (cm)	Power Density (mW/cm^2)	Antenna
2402.6	17.75	1.00	59.57	15	31.623	20	0.375	15dBi Yagi
2402.6	17.75	1.00	59.57	14	25.119	20	0.298	14dBi Corner Reflector
2402.6	17.75	1.00	59.57	9	7.943	20	0.094	9dBi Omni-Directional
2402.6	17.75	1.00	59.57	12	15.849	20	0.188	12dBi Patch
2402.6	17.75	1.00	59.57	5	3.162	20	0.037	5dBi Mobile Mount

Installation Guidelines

End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.