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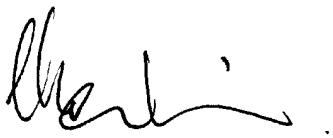
Attention: Reviewing Engineer

The HZB-S58-B60C radio is designed for fixed-mount point-to-multipoint applications. The following table lists the RF exposure Power Density for all types and sizes of antennas intended to be used with the device. The power density calculation shows compliance to the limit for General Population/ Uncontrolled environment as specified in rule 1.1310.

Please contact the undersigned for any questions.



Caroline Yu

Regulatory Compliance Manager
Proxim Corporation

Power Density Calculation

	G (dBi)	h (m)	Width (m)	A (m^2)	OD (m)	θ (3dB BW Az$^{o)}$	P (W)	$S_{surface}$ (w/m2)	$R_{nf\ (m)}$	S_{nf} (w/m^2)	S_{nfmax} (w/m^2)	$R_{ff\ (m)}$	S_{ff}(w/m^2)
Omni 7.5	7.5	0.276			0.0254		0.066	2.9983	0.7760	2.9983	2.9983	0.7760	0.0491
Omni 9	9.0	0.5			0.0400		0.066	1.0510	1.9858	1.0510	1.0510	1.9858	0.0106
Omni 12	12.0	0.83			0.0560		0.066	0.4522	6.5773	0.4522	0.4522	6.5773	0.0019
SEC-5V/H-90-17	17.0	0.65	0.216	0.1404		90	0.066	1.8803	4.0721	0.0040	0.0108	4.0721	0.0159
SEC-5V/H-60-18	18.0	0.65	0.216	0.1404		60	0.066	1.8803	3.4177	0.0047	0.0108	3.4177	0.0284

Where:

G: antenna gain

h: the height of the antenna

A: physical area of the aperture antenna

P: radio output power, P_{max} = 0.066 W

$S_{surface}$: maximum power density at the antenna surface, $S_{surface}$ = 4P/A, with omni antenna, $S_{surface}$=P/(2x3.14xODxh)

R_{nf}: extent of near field, $R_{nf} = D^2/4\lambda$, where λ is wavelength, at 5.8GHz, λ=0.052m;

With omni antenna, Rnf is where $S_{nf}=S_{ff}$; Rnf=Gh/2, where G is the antenna gain

With sector antenna, R_{nf} is where $S_{nf}=S_{ff,}$ $R_nf=\theta hG/720$

$S_{nf\ max}$: maximum near field power density,

For panel and parabolic antennas, Snf = 16ηP/πD2 (D is the antenna diameter); for worst case situation, η is assmumed to be 1

For omni and sector antenna, $S_{nf}=180P/(\theta\pi h\ R_{nf})$

R_{ff}: distance to beginning of far field; with omni and sector antenna, R_{ff} starts at the point where $S_{nf}=S_{ff}$

S_{ff}: far field power density (on axis); $S_{ff} = PG/4\pi R^2$

Note: Power density beyond 1.5m from the center of antenna must be within $10W/m^2$ or $1mW/cm^2$

Created by: Caroline Yu
3/13/2003