dresden elektronik

dresden elektronik ingenieurtechnik gmbh ▪ Enno-Heidebroek-Str. 12 ▪ D-01237 Dresden

Federal Communications Commission
Equipment Authorization Branch
7435 Oakland Mills Rd
Columbia MD 21046-1609

Dresden, 15 February 2010

RF Exposure Calculation

dresden elektronik ingenieurtechnik gmbh
FCC ID: XVV-MEGA22A02
FCC Part 15 Certification

Dear Sir or Madam,

End-users may not be provided with the module installation instructions. OEM integrators and end users must be provided with transmitter operating conditions for satisfying RF exposure compliance.

For portable applications OEM integrators need no SAR evaluation. The max source-based time-averaged output of 6.2 mW is below the low threshold of 24 mW for distance < 2.5 cm.

Section 15.203: Antenna requirement

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

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The Following calculation is the reference data for distance < 2.5cm.

name		**value**	**log value**	
maximum conducted power		0.81 mW	-0.93 dBm	
maximum antenna gain		2.95	4.70 dBi	
calculated radiated power		6.2 mW	7.92 dBm	
duty cycle factor				
frequency		2400 MHz		
dwell time		100 ms		
time of occupacy / pulse-train time		100 ms		
duty cycle factor		100 %	0.00 dB	
maxium source-based time-averaged power				
conducted power		0.81 mW	-0.93 dB	
calculated radiated power		6.2 mW	7.92 dB	
Specific power				
calculated with max source-based time-averaged power measured condacted power				
$S = \frac{P \cdot G}{4 \cdot \pi \cdot r^2} \left[\frac{mW}{cm^2} \right]$				
r [cm]	20.00	2.50	1.50	0.44
S [mW/cm²]	0.0005	0.0303	0.0843	1.0
limit general population [mW/cm²]	1.0			
limit occupational population [mW/cm²]	5.0			
calculated with max source-based time-averaged power measured radiated power				
$S = \frac{EIRP}{4 \cdot \pi \cdot r^2} \left[\frac{mW}{cm^2} \right]$				
r [cm]	20.00	2.50	1.50	n.a.
S [mW/cm²]	n.a.	n.a.	n.a.	1.0

Sincerely,

Signature

Name Andreas Palm
Title Development Engineer
Company dresden elektronik ingenieurtechnik gmbh