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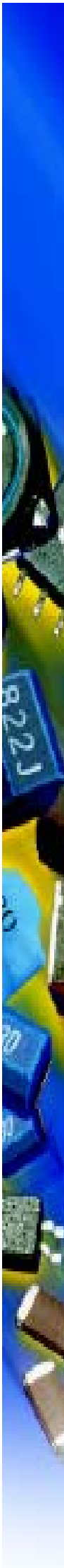
QRF4001 802.11b/g Wlan Module
QRF4001-SDIO Demonstrator Card
FCC ID W3RQRF4001SDIO
MPE Calculation

1.0 Revision History

REV. No.	Revision Changes	DATE
1.0	Document of origin	**08-April-09**



MPE Calculation for QRF4001-SDIO Module

The FCC requires that the calculated MPE be equal to or less than a given limit dependent on frequency at a distance of 20 cm from a device to the body of a user.

The SDIO Module transmitter operates over the 2412 – 2462MHz frequency band.

The unit has an integral antenna and has a measured maximum transmitter power of 18.3dBm EIRP.

The equation for the MPE calculation is given in OET Bulletin 65, page 19 as:

$$S = EIRP/4 \pi R^2$$

Where S = Power density

EIRP = Effective Isotropically Radiated Power (EIRP = P x G)

R = distance to the centre of radiation of the antenna

Values for the WITS

Output power : +18.3dBm max from test report

ie: EIRP = 67.6 mW

R = 20cm

Calculation

$S = EIRP/4 \pi R^2$

$S = 67.6 /(12.56 \times 20^2)$

$S = 0.0134$ mW/cm^2

Requirement

From table 1 (b) - Limits for General Population/ Uncontrolled Exposure of FCC Rule Part 1.1310 for the 2412 – 2462MHz frequency range.

$S = 1.0$ mW/cm^2

Conclusion

The MPE value of the QRF4001-SDIO Module at 20 cm meets the RF exposure limits.