

EUT: SOT-WG

FCC ID: Q3IWG

FCC Title 47 CFR Part 15

Date of issue: 2017-03-29

8.9 Radio frequency hazard

8.9.1 Regulation

15.247(i) Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines.

8.9.2 Test result

MPE calculation to the FCC ID:

These equations are generally accurate in the far field of an antenna but will over predict power density in the near field, where they could be used for making a "worst case" prediction.

$$S = PG/4\pi R^2 \quad \text{Or} \quad S = EIRP / (4\pi R^2)$$

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 the isotropic radiator

R = distance to the center of radiation of the antenna (appropriate units e.g. cm)

EIRP = equivalent isotropically radiated power

Calculation:

Radio frequency hazard (Section 15.247)					
Max. EIRP		Distance	Calculated Power Density	Limit	Margin
dBm	mW	cm	mW / cm ²	mW / cm ²	mW / cm ²
4.20	2.63	20	0.00052	1 *	0.99948
*Limit: the reference level for general public exposure according to the OET Bulletin 65, edition 97-01 Table 1.					

Test Cables used	---
Test equipment used	---

The equipment passed the conducted tests	Yes	No	N.t.*
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Test setup photos / test results are attached	Yes	No	Annex no.:
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N.t.* see clause: 9