

US Tech Test Report:
FCC ID:
IC:
Test Report Number:
Issue Date:
Customer:
Model:

FCC Part 15 and IC RSS Certification
SM6-MINODE-M
9235A-MINODE
16-0118
July 7, 2016
Mueller Systems, LLC
DCOM4-LP

RF Exposure

The Maximum Exposure level to the Public (MPE) from the RF power of the EUT shall not exceed a power density, S , of 1 mW/cm^2 at a distance, d , of 20 cm from the EUT.

Therefore, for:

Measured maximum output power: 19.62 dBm
Highest Gain Antenna (Dipole antenna) = 2.0 dBi

Peak Power (Watts) = .092 (measured highest output power)
Gain of Transmit Antenna = 2 dBi = 1.58, numeric (from Table 4 of Test Report)

$$\begin{aligned}d &= \text{Distance} = 20 \text{ cm} = 0.2 \text{ m} \\S &= (PG / 4\pi d^2) = \text{EIRP} / 4A = (.092 * 1.58) / 4 * \pi * 0.2 * 0.2 \\&= .1453 / .5027 = .2891 \text{ W/m}^2 \\&= (\text{W/m}^2) (1\text{m}^2/\text{W}) (0.1 \text{ mW/cm}^2) \\&= .02891 \text{ mW/cm}^2 \\&\text{which is } < \text{less than } 1.0 \text{ mW/cm}^2\end{aligned}$$

RSS-102 (2.5.2)

The maximum exposure level to the public from the RF power of the EUT shall not exceed a source-based, time-averaged maximum EIRP based on the calculation below at a distance of 20 cm from the EUT:

Measured maximum output power of EUT: 19.62 dBm
Highest Gain Antenna (Dipole antenna) = 2 dBi

EIRP = 21.62 dBm = 145.21 mW (worst case)

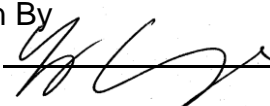
The RF Exposure Limit per RSS-102 (2.5.2) is calculated below:

$$(1.31 * 10^{-2}) \times ((2440 \text{ MHz})^{0.6834}) = 2.7 \text{ W at } > 20 \text{ cm}$$

The measured EIRP is less than the RF Exposure limit.

145.21 mW << 2.7 W

Test Date: July 18, 2016

Calculation By
Signature:  Name: George Yang