H.B. Compliance Solutions

Maximum Permissible Exposure Statement

For the

Microchip Technology Inc.

Low-Power Long Range LoRa Technology Transceiver Module Model RN2903

May 18, 2016

Prepared for:

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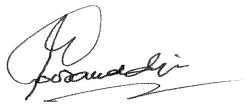

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Cert # ATL-0062-E

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$S = PG/4\pi R2$

Where,

S = power density (mW/cm2)
P = output power at the antenna terminal (mW)
G = gain of transmit antenna (numeric)
R = distance from transmitting antenna (cm)

Maximum peak output power at antenna input terminal = 19.08 (dBm)
Maximum peak output power at antenna input terminal = 80.9 (mW)
Antenna gain (typical) = 1.3(dBi)
Maximum antenna gain = 1.32(numeric)
Prediction distance = 20 (cm)
Prediction frequency = 927 (MHz)
MPE limit for uncontrolled exposure at prediction frequency = 0.618 (mW/cm^2)
Power density at prediction frequency = 0.0212454 (mW/cm^2)

To solve for the minimum mounting distance required;

$R = \sqrt{(PG/4\pi S)}$

$R = \sqrt{(80.9 \times 1.32 / 4\pi \times 0.0212454)}$ = 20 cm (Based on continuous transmission)

END OF TEST REPORT