



# H.B. Compliance Solutions

## Maximum Permissible Exposure Statement

For the

**Microchip Technology Inc.**

**Low-Power Long Range LoRa Technology Transceiver Module Model RN2903**

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**Prepared for:**

Microchip Technology Inc.

2355 W. Chandler Blvd.

Chandler, AZ 85224-6199

**Prepared By:**

H.B. Compliance Solutions

5005 S. Ash Avenue, Suite # A-10

Tempe, Arizona 85282

**Reviewed By:**

A handwritten signature in black ink, appearing to read 'Hoosamuddin Bandukwala'.

Hoosamuddin Bandukwala



Cert # ATL-0062-E

## Prediction of MPE limit at a given distance

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

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

Where,

S = power density (mW/cm<sup>2</sup>)

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) = 6.0(dBi)

Maximum antenna gain = 3.98(numeric)

Prediction distance = 20 (cm)

Prediction frequency = 927 (MHz)

MPE limit for uncontrolled exposure at prediction frequency = 0.618 (mW/cm<sup>2</sup>)

*Power density at prediction frequency = 0.0640581 (mW/cm<sup>2</sup>)*

To solve for the minimum mounting distance required;

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

$$R = \sqrt{80.9 \times 3.98 / 4\pi \times 0.0640581} = \underline{20 \text{ cm}} \text{ (Based on continuous transmission)}$$

**END OF TEST REPORT**