

Client: Topcon Positioning Systems	Job Number: J96648
Model: R2Lite UHF	T-Log Number: T97391
Contact: Ferdinand Riodique	Project Manager: Deepa Shetty
Standard: FCC Part 90, RSS-119 Issue 12, EN 300 113-2, AS/NZS 4768.1	Project Coordinator: -
	Class: N/A

Maximum Permissible Exposure / SAR Exclusion

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 11/5/2015

Test Engineer: Deniz Demirci

General Test Configuration

Calculation uses the free space transmission formula:

$$S = (PG)/(4 \pi d^2)$$

Where: S is power density (W/m^2), P is output power (W), G is antenna gain relative to isotropic, d is separation distance from the transmitting antenna (m).

Summary of Results

Device complies with Power Density requirements at 20 cm separation:	No
If not, required separation distance (in cm):	31.6

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

EMC Test Data

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FCC MPE Calculation

Use: General

Antenna: 2.5 dBi

USE THIS FOR 300-1500 MHz single transmitters (General use)

Freq. MHz	EUT Power		Cable Loss Loss dB	Ant Gain dBi	Power at Ant dBm	EIRP mW	Power Density (S) at 20 cm mW/cm ²	MPE Limit at 20 cm mW/cm ²
	dBm	mW*						
406.1125	30.5	1122.0	0	2.5	30.5	1995.26	0.397	0.271
469.9875	30.5	1122.0	0	2.5	30.5	1995.26	0.397	0.313

For the cases where S > the MPE Limit

Freq. MHz	Power Density (S) at 20 cm mW/cm ²	MPE Limit at 20 cm mW/cm ²	Distance where S ≤ MPE Limit cm
406.1125	0.397	0.271	24.2
469.9875	0.397	0.313	22.5

Industry Canada MPE Calculation

Use: General

Antenna: 2.5 dBi

USE THIS FOR 300-6000 MHz single transmitters (General use)

Freq. MHz	EUT Power		Cable Loss Loss dB	Ant Gain dBi	Power at Ant dBm	EIRP mW	Power Density (S) at 20 cm mW/cm ²	MPE Limit at 20 cm mW/cm ²
	dBm	mW*						
406.1125	30.5	1122.0	0	2.5	30.5	1995.26	0.397	0.159
469.9875	30.5	1122.0	0	2.5	30.5	1995.26	0.397	0.175

For the cases where S > the MPE Limit

Freq. MHz	Power Density (S) at 20 cm mW/cm ²	MPE Limit at 20 cm mW/cm ²	Distance where S ≤ MPE Limit cm
406.1125	0.397	0.159	31.6
469.9875	0.397	0.175	30.1