

Client: Topcon Positioning Systems	Job Number: JD99757
Model: R2Lite-FH915	T-Log Number: T99815
Contact: Ferdinand Riodique	Project Manager: Deepa Shetty
Standard: FCC Part 15.247, RSS-247 and AS/NZS 4268	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: 3/21/2015

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

FCC: Device complies with Power Density requirements at 20 cm separation:	Yes
Industry Canada: Device complies with Power Density requirements at 20 cm separation:	No
If not, required separation distance - Industry Canada (in cm) :	27

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.

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FCC MPE Calculation

Use: General

Antenna: 4 dBi

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
902.2	dBm	mW*						
902.2	30.0	1000.0	0.0	4.0	30.0	2511.89	0.500	0.601
915.0	30.0	1000.0	0.0	4.0	30.0	2511.89	0.500	0.610
927.8	30.0	1000.0	0.0	4.0	30.0	2511.89	0.500	0.619

Note 1: RF power adjusted for tune-up tolerance.

Industry Canada MPE Calculation

Use: General

Antenna: 4 dBi

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
902.2	dBm	mW*						
902.2	30.0	1000.0	0.0	4.0	30.0	2511.89	0.500	0.274
915.0	30.0	1000.0	0.0	4.0	30.0	2511.89	0.500	0.277
927.8	30.0	1000.0	0.0	4.0	30.0	2511.89	0.500	0.279

Note 1: RF power adjusted for tune-up tolerance.

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
902.2	0.500	0.274	27.0
915.0	0.500	0.277	26.9
927.8	0.500	0.279	26.8

RSS-102 Issue 5 Exemption Limits for Routine Evaluation - RF Exposure Evaluation - For 300-6000 MHz single transmitters:

$1.31 \times 10^{-2} f^{0.6834} \text{ W}$

Freq. MHz	Exemption limit eirp W
902.2	1.37
915.0	1.38
927.8	1.40