EMC Test Data

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

Maximum Permissible Exposure / SAR Exclusion

Test Specific Details

ITS

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/m²), 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.

	Topcon Positioning Systems						Job Number:	J96648
Model	R2Lite UHF						T-Log Number:	T97391
Model							Project Manager:	Deepa Shetty
	Ferdinand F			Project Coordinator:				
Standard	FCC Part 90), RSS-119 I	ssue 12, EN 3	Class: N/A				
	Calculation							
Use:	General							
Antenna:	2.5 dBi							
		UT	e transmitter Cable Loss	Ant	Power		Power Density (S)	MPE Limit
Freq.		wer	Loss	Gain	at Ant	EIRP	at 20 cm	at 20 cm
MHz	dBm	mW*	dB	dBi	dBm	mW	mW/cm^2	mW/cm^2
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
106 1125	0.397 0.397					10		
406.1125 469.9875			0.2			4.2 2.5		
469.9875	0.3 anada MPE (397						
469.9875 Industry Ca Use:	0.3	397						
469.9875 Industry Ca Use: Antenna:	0.3 anada MPE (General 2.5 dBi	397 Calculation	0.3	13	2			
469.9875 Industry Ca Use: Antenna:	0.3 anada MPE (General 2.5 dBi FOR 300-600	397 Calculation		13	2		Power Density (S)	MPE Limit
469.9875 Industry Ca Use: Antenna: USE THIS I Freq.	0.3 anada MPE (General 2.5 dBi FOR 300-600 El Po	397 Calculation 10 MHz sing UT Wer	0.3 le transmitter Cable Loss Loss	<u>13</u> r <u>s (General</u> Ant Gain	use) Power at Ant	2.5 EIRP	at 20 cm	at 20 cm
469.9875 Industry Ca Jse: Antenna: JSE THIS I Freq. MHz	0.3 anada MPE (General 2.5 dBi FOR 300-600 El Po dBm	397 Calculation 0 MHz sing UT wer W*	0.3 le transmitter Cable Loss Loss dB	<u>13</u> rs (General Ant Gain dBi	use) Power at Ant dBm	EIRP mW	at 20 cm mW/cm^2	at 20 cm mW/cm^2
469.9875 Industry Ca Use: Antenna: USE THIS I Freq. MHz 406.1125	anada MPE (General 2.5 dBi FOR 300-600 El Po dBm 30.5	397 Calculation 0 MHz sing UT wer mW* 1122.0	0.3 e transmitter Cable Loss Loss dB 0	<u>13</u> rs (General Ant Gain dBi 2.5	use) Power at Ant dBm 30.5	EIRP mW 1995.26	at 20 cm mW/cm^2 0.397	at 20 cm mW/cm^2 0.159
469.9875 Industry Ca Use: Antenna: USE THIS I Freq. MHz	0.3 anada MPE (General 2.5 dBi FOR 300-600 El Po dBm	397 Calculation 0 MHz sing UT wer W*	0.3 le transmitter Cable Loss Loss dB	<u>13</u> rs (General Ant Gain dBi	use) Power at Ant dBm	EIRP mW	at 20 cm mW/cm^2	at 20 cm mW/cm^2
469.9875 Industry Ca Use: Antenna: <u>USE THIS I</u> Freq. <u>MHz</u> 406.1125 469.9875	anada MPE (General 2.5 dBi FOR 300-600 El Po dBm 30.5	Calculation	0.3 le transmitter Cable Loss Loss dB 0 0	<u>13</u> rs (General Ant Gain dBi 2.5	use) Power at Ant dBm 30.5	EIRP mW 1995.26	at 20 cm mW/cm^2 0.397	at 20 cm mW/cm^2 0.159
469.9875 Industry Ca Use: Antenna: <u>USE THIS I</u> Freq. <u>MHz</u> 406.1125 469.9875	anada MPE (General 2.5 dBi FOR 300-600 El Po dBm 30.5 30.5 es where S >	Calculation	0.3 le transmitter Cable Loss Loss dB 0 0 nit	13 rs (General Ant Gain dBi 2.5 2.5 Limit	2 Use) Power at Ant dBm 30.5 30.5	EIRP mW 1995.26	at 20 cm mW/cm^2 0.397	at 20 cm mW/cm^2 0.159
469.9875 Industry Ca Jse: Antenna: JSE THIS I Freq. MHz 406.1125 469.9875 For the cas Freq.	anada MPE (General 2.5 dBi FOR 300-600 Bm 30.5 30.5 es where S > Power D at 2	Calculation Calculation 0 MHz sing UT wer 1122.0 1122.0 the MPE Lin ensity (S) 0 cm	0.3 le transmitter Cable Loss Loss dB 0 0 nit MPE at 20	13 rs (General Ant Gain dBi 2.5 2.5 Limit	use) Power at Ant dBm 30.5 30.5 Distanc	EIRP mW 1995.26 1995.26	at 20 cm mW/cm^2 0.397	at 20 cm mW/cm^2 0.159
469.9875 Industry Ca Use: Antenna: <u>USE THIS I</u> Freq. <u>MHz</u> 406.1125 469.9875 For the cas Freq. <u>MHz</u>	0.3 anada MPE (General 2.5 dBi FOR 300-600 El Po dBm 30.5 30.5 es where S > Power D at 2 mW/	Calculation Calculation 0 MHz sing UT wer 1122.0 1122.0 the MPE Lin ensity (S) 0 cm cm ²	0.3 le transmitter Cable Loss Loss dB 0 0 nit MPE at 20 mW/c	13 rs (General Ant Gain dBi 2.5 2.5 Limit cm cm 2.5	use) Power at Ant dBm 30.5 30.5 Distanc S <= M	EIRP mW 1995.26 1995.26 2e where PE Limit	at 20 cm mW/cm^2 0.397	at 20 cm mW/cm^2 0.159
469.9875 Industry Ca Jse: Antenna: JSE THIS I Freq. MHz 406.1125 469.9875 For the cas Freq.	anada MPE (General 2.5 dBi FOR 300-600 El Po dBm 30.5 30.5 es where S > Power D at 2 mW/ 0.3	Calculation Calculation 0 MHz sing UT wer 1122.0 1122.0 the MPE Lin ensity (S) 0 cm	0.3 le transmitter Cable Loss Loss dB 0 0 nit MPE at 20	13 rs (General Ant Gain dBi 2.5 2.5 Limit cm cm 29	use) Power at Ant dBm 30.5 30.5 Distanc S <= M	EIRP mW 1995.26 1995.26 xe where PE Limit	at 20 cm mW/cm^2 0.397	at 20 cm mW/cm^2 0.159