

RF Exposure Calculations

SAF Tehnika	Model: TDSPT0U1		Test Number:	171106A		
MPE Calculator	MPE uses EIRP for calculation. EIRP is based on TX power added to the antenna gain in dBi.					
	dBi = dB gain compared to an isotropic radiator.					
	S = power density in mW/cm^2					
					Antenna Gain (dBi)	0
		Output Power		dBd + 2.17 = dBi	dBi to dBd	2.2
Tx Frequency (MHz)	917.3	Maximum (Watts)	0.029		Antenna Gain (dBd)	-2.17
Cable Loss (dB)	0.0	(dBm)	14.7		Antenna minus cable (dBi)	0.00
	Calculated ERP (mw)	17.783		EIRP = Po(dBm) + Gain (dB)		
	Calculated EIRP (mw)	29.309			Radiated (EIRP) dBm	14.670
	<div>Power density (S) EIRP ----- = mW/cm^2 4 p r^2</div>			ERP = EIRP - 2.17 dB	Radiated (ERP) dBm	12.500
	Occupational Limit	FCC radio frequency radiation exposure limits per 1.1310				
3.06	mW/cm²	Frequency (MHz)	Occupational Limit (mW/cm²)	Public Limit (mW/cm²)		
30.58	W/m²	300-1,500	ƒ300	ƒ1500		
	General Public Limit	1,500-10,000	5	1		
0.61	mW/cm²					
6.12	W/m²					
	Occupational Limit	IC radio frequency radiation exposure limits per RSS-102				
0.6455ƒ ^{0.5}	W/m²	Frequency (MHz)	Occupational Limit (W/m²)	Public Limit (W/m²)		
19.55023	W/m²	100-6,000	0.6455ƒ ^{0.5}			
	General Public Limit	6,000-15,000	50			
0.02619ƒ ^{0.6834}	W/m²	48-300		1.291		
2.77151	W/m²	300-6,000		0.02619ƒ ^{0.6834}		
		6,000-15,000	50	10		
EIRP	S	S	Distance	Distance	Distance	Distance
milliwatts	mW/cm²	W/m²	cm	meter	inches	Feet
29.309	0.00023	0.00233	100.00	1.00	39.37	3.28
29.309	0.00029	0.00288	90.00	0.90	35.43	2.95
29.309	0.00036	0.00364	80.00	0.80	31.50	2.62
29.309	0.00048	0.00476	70.00	0.70	27.56	2.30
29.309	0.00065	0.00648	60.00	0.60	23.62	1.97
29.309	0.00093	0.00933	50.00	0.50	19.69	1.64
29.309	0.00115	0.01152	45.00	0.45	17.72	1.48
29.309	0.00146	0.01458	40.00	0.40	15.75	1.31
29.309	0.00190	0.01904	35.00	0.35	13.78	1.15
29.309	0.00259	0.02591	30.00	0.30	11.81	0.98
29.309	0.00373	0.03732	25.00	0.250	9.84	0.82
29.309	0.00583	0.05831	20.00	0.200	7.87	0.66
29.309	0.01037	0.10366	15.00	0.150	5.91	0.49
29.309	0.02332	0.23323	10.00	0.100	3.94	0.33
29.309	0.02879	0.28794	9.00	0.090	3.54	0.30
29.309	0.03644	0.36443	8.00	0.080	3.15	0.26
29.309	0.04760	0.47599	7.00	0.070	2.76	0.23
		Frequency (MHz)	Occupational Limit minimum Distance (meters)	Public Limit minimum distance (meters)		
		47CFR 1.1310	0.20	0.20		
		RSS-102	0.20	0.20		

Rogers Labs, Inc.

4405 W. 259th Terrace Model: TDSPT0U1, Aranet T/RH Sensor

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Revision 1

SAF Tehnika AS

Test #: 171106A

Test to: CFR47 15C, RSS-Gen RSS-247

File: ARANETTRH RFExp

S/N's: 00001, 2, 3, 4 and 5

FCC ID: W9Z-ARANETTRH

IC: 8855A- ARANETTRH

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