

Transcore - Ametech	Model: E4FHSS	Test Number:	180521			
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					
		Output Power	dBd + 2.17 = dBi	Antenna Gain (dBi)	10.3	
Tx Frequency (MHz)	915	Maximum (Watts)	0.250	dBi to dBd	2.2	
				Antenna Gain (dBd)	8.13	
Cable Loss (dB)	0.0	(dBm)	24.0	Antenna minus cable (dBi)	10.30	
	Calculated ERP (mw)	1625.324		EIRP = Po(dBm) + Gain (dB)		
	Calculated EIRP (mw)	2678.798			Radiated (EIRP) dBm	34.279
		Power density (S)		ERP = EIRP - 2.17 dB		
		EIRP ----- = mW/cm ² 4 π r ²			Radiated (ERP) dBm	32.109
		EIRP (mW), r (cm)				
	Occupational Limit	FCC radio frequency radiation exposure limits per 1.1310				
3.05	mW/cm ²	Frequency (MHz)	Occupational Limit (mW/cm ²)	Public Limit (mW/cm ²)		
30.50	W/m ²	300-1,500	ƒ/300	ƒ/1500		
	General Public Limit	1,500-10,000	5	1		
0.61	mW/cm ²					
6.10	W/m ²					
	Occupational Limit	IC radio frequency radiation exposure limits per RSS-102				
0.6455ƒ ^{0.5}	W/m ²	Frequency (MHz)	Occupational Limit (W/m ²)	Public Limit (W/m ²)		
19.52571	W/m ²	100-6,000	0.6455ƒ ^{0.5}			
	General Public Limit	6,000-15,000	50			
0.02619ƒ ^{0.6834}	W/m ²	48-300		1.291		
2.76675	W/m ²	300-6,000		0.02619ƒ ^{0.6834}		
		6,000-15,000	50	10		
EIRP	S	S	Distance	Distance	Distance	Distance
milliwatts	mW/cm ²	W/m ²	cm	meter	inches	Feet
2678.798	0.01480	0.14804	120.00	1.20	47.24	3.94
2678.798	0.02632	0.26318	90.00	0.90	35.43	2.95
2678.798	0.03331	0.33308	80.00	0.80	31.50	2.62
2678.798	0.04350	0.43504	70.00	0.70	27.56	2.30
2678.798	0.05921	0.59214	60.00	0.60	23.62	1.97
2678.798	0.08527	0.85269	50.00	0.50	19.69	1.64
2678.798	0.13323	1.33232	40.00	0.40	15.75	1.31
2678.798	0.23686	2.36858	30.00	0.30	11.81	0.98
2678.798	0.27190	2.71903	28.00	0.28	11.02	0.92
2678.798	0.53293	5.32930	20.00	0.20	7.87	0.66
2678.798	0.94743	9.47431	15.00	0.150	5.91	0.49
2678.798	1.76175	17.61752	11.00	0.110	4.33	0.36
2678.798	2.13172	21.31720	10.00	0.100	3.94	0.33
2678.798	2.63175	26.31753	9.00	0.090	3.54	0.30
2678.798	3.33081	33.30812	8.00	0.080	3.15	0.26
2678.798	4.35045	43.50449	7.00	0.070	2.76	0.23
2678.798	5.92144	59.21444	6.00	0.060	2.36	0.20

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Revision 1

Transcore Amtech Technology Center
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Test #: 180521
Test to: 47CFR, 15.247, RSS-247
File: E4FHSS RFExp

S/N's: ENG1, ENG2
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