

FCC MPE results for the XP20



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Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = \frac{PG}{4\pi R^2}$$

where: S = power density
P = power input to the antenna
G = power gain of the antenna in the direction of interest relative to an isotropic radiator
R = distance to the center of radiation of the antenna

	IC: 5123A-BGTBT121	Expanse XP20	
	BT Module ¹	Radar ²	
Maximum peak output power at device output terminal:	11.88	15.11	dBm
Cable and Jumper loss:	0	0	dB
Maximum peak output power at antenna input terminal:	11.88	15.11	dBm
	15.41700453	32.43396173	mW
Single Antenna gain (typical):	1	0	dBi
Number of Antennae:	1	1	
Total Antenna gain (typical):	1	0	dBi
	1.258925412	1	(numeric)
Prediction distance:	20	20	cm
Prediction frequency:	2480	24125	MHz
≡ limit for uncontrolled exposure at prediction frequency:	1	1	mW/cm ²
Power density at prediction frequency:	0.00386127	0.006452532	mW/cm ²
	0.038612698	0.064525317	W/m ²
Tx On time:	1	1	ms
Tx period time:	1	1	ms
Average Factor:	100	100	%
Average Power density at prediction frequency:	0.038612698	0.064525317	W/m ²

NOTE 1: The BT module can operated as DSSS and FHSS worst case (DSSS) is reported here

NOTE 2: The XP20 was measured in the 3m chamber as a radiated emissssion - Antenna is integral

$$0.004 + 0.006 + = 0.010314 < 1$$