

Maximum Permissible Exposure (MPE) & Exposure evaluation

Report identification number: 1-3243/21-01-06 MPE (FCC)

Certification numbers and labeling requirements	
FCC ID	YQ7-DRXXX-M30E

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EUT technologies:

Technologies:	Max. measured peak EIRP: [dBm]
RADAR 122 to 123 GHz	15.9

NOTE: Worst case result taken from CTC advanced GmbH test report 1-3243/21-01-05

Prediction of MPE limit at given distance - FCC

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

$$S = PG / 4\pi R^2$$

where: S = Power density
 P = Power input to the antenna
 G = Antenna gain
 R = Distance to the center of radiation of the antenna
 PG = Output Power including antenna gain

The table below is excerpted from Table 1 - Limits for Maximum Permissible Exposure (MPE) of FCC-19-126A1 "Limits for General Population/Uncontrolled Exposure"

Frequency Range (MHz)	Power Density (mW/cm ²)	Averaging Time (minutes)
300 -1500	f/1500	30
1500 – 3 000 000	1.0	30

where f = Frequency (MHz)

Prediction: worst case

Technologies:	RADAR		
Frequency (MHz)	122 to 123	GHz	
PG Declared max power (EIRP)	15.9	dBm	
R Distance	20	cm	
S MPE limit for uncontrolled exposure	1	mW/cm ²	
Calculated Power density:	0.0077	mW/cm ²	
Calculated percentage of Limit:	0.77%		

This prediction demonstrates the following:

The power density levels for FCC at a distance of 20 cm are below the maximum levels allowed by regulations.