
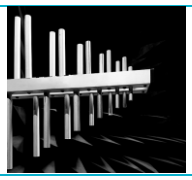
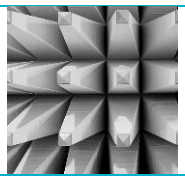

CTC advanced
member of RWTÜV group

Bundesnetzagentur

BNetzA-CAB-02/21-102

DAkkS Deutsche Akkreditierungsstelle D-PL-12076-01-03

Maximum Permissible Exposure (MPE) & Exposure evaluation

Report identification number: 1-0079/20-03-03 MPE (FCC_ISED)

Certification numbers and labeling requirements	
FCC ID	YQ7-LRS-510-10
Art	LRS-510-10-**-*UPN8-H11*1
Typ	Radar Level Sensor

This test report is electronically signed and valid without handwritten signature. For verification of the electronic signatures, the public keys can be requested at the testing laboratory.

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EUT technologies:

Technologies:	Max. EIRP [dBm]
122-123 GHz FMCW Radar	7.7

Duty cycle: 0.98
Measurement result EIRP taken from test report no.: 1-0079/20-03-02 page 25

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:	123 GHz	
	Frequency (MHz)	123000	
PG	Declared max power (EIRP)	7.7	dBm
R	Distance	20	cm
S	MPE limit for uncontrolled exposure	1	mW/cm^2
	Calculated Power density:	0.0012	mW/cm^2
	Calculated percentage of Limit:	0.12%	

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.