
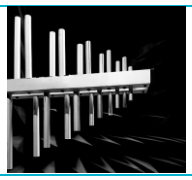
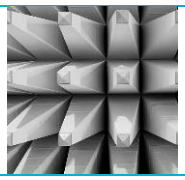

CTC advanced
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BNetzA-CAB-02/21-102

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

Maximum Permissible Exposure (MPE) & Exposure evaluation

Report identification number: 1-7810/19-11-04 MPE (FCC)

Certification numbers and labeling requirements	
FCC ID	2AC8P-456TR1

This report is electronically signed and valid without handwriting 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. rated power: (AVG)	Max. gain:	Min. pathloss:
SRD 457.5 to 458.5 MHz	Declared: max 12.0 dBm	2.14 dBi	0 dB (if applicable)

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 1B of 47 CFR 1.1310 titled “Limits for Maximum Permissible Exposure (MPE), Limits for General Population/Uncontrolled Exposure”

Frequency Range (MHz)	Power Density (mW/cm^2)	Averaging Time (minutes)
300 -1500	f/1500	30
1500 - 100000	1.0	30

where f = Frequency (MHz)

Prediction: worst case

	Technologies:	SRD	
	Frequency (MHz)	458	
PG	Declared max power (EIRP)	14.14	dBm
R	Distance	20	cm
S	MPE limit for uncontrolled exposure	0.305333333	mW/cm^2
	Calculated Power density:	0.0052	mW/cm^2
	Calculated percentage of Limit:	1.69%	

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