

## Maximum Permissible Exposure (MPE) & Exposure evaluation

**Report identification number: 1-1739/21-01-06 MPE (FCC\_ISED)**

Certification numbers and labeling requirements	
FCC ID	2ASDVEDGE1
ISED number	24744EDGE1
HVIN (Hardware Version Identification Number)	Edge Station v1
PMN (Product Marketing Name)	Easypulse Edge Station
FVIN (Firmware Version Identification Number)	-/-
HMN (Host Marketing Name)	-/-

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.

### Document authorised:

Alexander Hnatovskiy  
Lab Manager  
Radio Communications & EMC

Marco Scigliano  
Testing Manager  
Radio Communications & EMC

**EUT technologies:**

Technologies:	Max. meas. EIRP
Proprietary 1626.5 – 1660.5 MHz	37.1 dBm

**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 <sup>2</sup> )	Averaging Time (minutes)
300 -1500	f/1500	30
1500 - 100000	1.0	30

where f = Frequency (MHz)

Prediction: worst case

Technologies:	Proprietary	
Frequency (MHz)	1626.5 to 1660.5	
PG Declared max power (EIRP)	37.1	dBm
R Distance	21	cm
S MPE limit for uncontrolled exposure	1	mW/cm <sup>2</sup>
<b>Calculated Power density:</b>	0.9259	mW/cm <sup>2</sup>
<b>Calculated percentage of Limit:</b>	92.59%	

**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.

### Prediction of MPE limit at given distance - ISED

RSS-102, general limitations for E- and H- Field

Reference levels for general public (uncontrolled environment) exposure to time-varying electric and magnetic fields

According to: RSS 102-ISSUE 05		
Frequency Range (MHz)	Power density (W/m <sup>2</sup> )	Reference Period (minutes)
0.003-10	--	<b>Instantaneous*</b>
0.1-10	--	6**
1.1-10	--	6**
10-20	2	6
20-48	$8.944 / f^{0.5}$	6
48-300	1.291	6
<b>300-6000</b>	<b><math>0.02619 \times f^{0.6834}</math></b>	<b>6</b>
6000-15000	10	6
15000-150000	10	$616000 / f^{1.2}$
150000-300000	$6.67 \times 10^{-5} \times f$	$616000 / f^{1.2}$
<p><b>Note:</b> f is frequency in MHz.            * Based on nerve stimulation (NS).            ** Based on specific absorption rate (SAR).</p>		

NOTE:

The resulting Limit for 1660MHz is 4.16W/m<sup>2</sup>

Prediction: worst case

		Proprietary	
	Frequency	1626.5 to 1660.5	MHz
R	Distance	32	cm
PG	Maximum EIRP	37.1	dBm
PG	<b>Maximum EIRP</b>	5.13	W
S	<b>Power density</b>	3.99	W/m <sup>2</sup>
	<b>Exclusion Limit from above:</b>	4.16	W/m <sup>2</sup>
	<b>Calculated percentage of Limit:</b>	95.81%	

**Conclusion:** RF exposure evaluation is not required.