

# MPE TEST REPORT

FROM



Evaluation of: Radwin Ltd. Outdoor Subscriber Radio Unit  
to

To: FCC CFR 47 Part 1.1310

Test Report Serial No.: RDWN45-MPE Rev A Report

This report supersedes: NONE

Applicant: Radwin Ltd.  
27 Habarzel Street  
Tel Aviv, 69710  
Israel

Product Function: Outdoor Subscriber Radio Unit

Issue Date: 12th April 2017

## **This Test Report is Issued Under the Authority of:**

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# 1. MAXIMUM PERMISSABLE EXPOSURE

## Calculations for Maximum Permissible Exposure Levels

$$\text{Power Density} = P_d (\text{mW/cm}^2) = \text{EIRP} / (4 \cdot \pi \cdot d^2)$$

$$\text{EIRP} = P \cdot G$$

P = Peak output power (mW)

G = Antenna numeric gain (numeric)

d = Separation distance (cm)

$$\text{Numeric Gain} = 10^{(G (\text{dBi})/10)}$$

Because the EUT belongs to the General Population/Uncontrolled Exposure the limit of power density is  $1.0 \text{ mW/cm}^2$

The calculations in the table below use the highest conducted power values together with the lowest antenna gain specified for the EUT. These calculations represent worst case in terms of the exposure levels.

Freq. Band (MHz)	Ant Gain (dBi)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Power Density ( $\text{mW/cm}^2$ ) @ 20cm	Min Calculated Safe Distance for $1\text{mW/cm}^2$ (cm)
5725.0 – 5850.0	23.0	199.53	28.76	751.62	29.84	109.24
5150.0 - 5250.0	23.0	199.53	28.54	714.50	28.36	106.51
5250.0 - 5350.0	23.0	199.53	7.0	5.01	0.20	20.0
5470.0 - 5725.0	23.0	199.53	7.0	5.01	0.20	20.0
4945.0 – 4985.0	23.0	199.53	20.65	116.14	4.61	42.94
2400.0 - 2483.5	3.0	2.00	26.12	409.26	0.16	20.0

Assessment for simultaneous operation:

Freq. Band (MHz)	Ant Gain (dBi)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Power Density ( $\text{mW/cm}^2$ ) @ 20cm	Minimum Separation Distance (cm)
5725.0 - 5850.0	23.0	199.53	28.76	751.62	29.84	110.0
2400.0 - 2483.5	3.0	2.00	26.12	409.26	0.16	110.0
<b>EIRP TOTAL (mW/EIRP) : 150785.1</b>					<b>30.0</b>	<b>110.00</b>

**Note:** for mobile or fixed location transmitters the minimum separation distance is **110cm**, even if calculations indicate the MPE distance to be less.

## Specification

### Maximum Permissible Exposure Limits

**FCC §1.1310** Limit =  $1.00\text{mW} / \text{cm}^2$  from 1.310 Table 1



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