

RF EXPOSURE EVALUATION REPORT

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Test Report Number: SKT-RET-230002

Date of issue: February 8, 2023

Applicant:

Intellian Technologies, Inc.

18-7, Jinwisandan-ro, Jinwi-myeon (Chungho-ri)

Pyeongtaek-si, Gyeonggi-do, 17709 Korea

Manufacturer:

Intellian Technologies, Inc.

18-7, Jinwisandan-ro, Jinwi-myeon (Chungho-ri)

Pyeongtaek-si, Gyeonggi-do, 17709 Korea

Product:

OW50SL

Model:

PS-OW50SP

FCC ID:

XXZ-INTOW50SL

Project number:

SKTEU22-1252

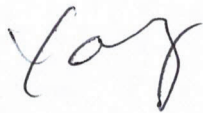
EUT received:

September 21, 2022

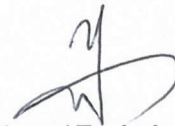
Type of Evaluation:

RF Exposure Evaluation

The above equipment has been tested by SK Tech Co., Ltd., and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product or system, which was tested.



Changwon Yang / Testing Engineer



Jongsoo Yoon / Technical Manager

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Revision History of Test Report

Rev.	Revisions	Effect page	Approved by	Date
-	Initial issue	All	Jongsoo Yoon	Feb. 8, 2023



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1 Description of equipment under test (EUT)

Product:	OW50SL
Model:	PS-OW50SP
Serial number:	None (prototype)
Hardware version:	prototype
Software version:	prototype

Model differences:

Model name	Difference	Tested (checked)
PS-OW50SP	fully tested model that was provided by the applicant. Stand-alone, support all functions	☒

Technical data:

Technologies	Bandwidth	Max. power conducted	Max. antenna gain	Max. EIRP
Satellite 14000 MHz to 14500 MHz	19.8 MHz	28.1 dBm	35.5 dBi	63.6 dBm

2 FCC Exposure Limits

2.1. FCC, CFR 47 Section

The table below is excerpted from Table 1 of 47 CFR 1.1310 titled "Limits for Maximum Permissible Exposure (MPE), (ii) Limits for General Population/Uncontrolled Exposure"

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

where f = frequency in MHz

NOTE: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.



3 Prediction of MPE limit at given distance

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

$$\text{Linear form } S = PG / 4\pi R^2$$

Where: S is the power density (W/m^2)

P is the power delivered to the antenna (W)

G is the antenna gain observed in the far-field region (linear)

R is the distance from antenna to point of interest (m)

Prediction: worst case [under FCC, CFR 47 Section]

Technologies:		Satellite	
	Frequency	14 263	MHz
PG	Declared max power (EIRP)	63.6	dBm
R	Distance	450	cm
S	MPE limit for uncontrolled exposure	1	mW/cm^2
	Calculated Power density:	0.900 7	mW/cm^2

This prediction demonstrates the following:

The power density levels for FCC at a distance of **4.5 m** are below the maximum levels allowed by regulations.