

Test Report

Prepared for: Telonics Inc

Model: GPSI-31

Description: Globalstar Simplex Transmitter Module

Project No: p2590008

Serial Number: 760627A

FCC ID: JYL-GPSI31

To

FCC Part 1.1310
FCC Part 2.1091

Date of Issue: September 30, 2025

On behalf of the applicant:

Telonics Inc
932 E Impala Ave
Mesa AZ 85204

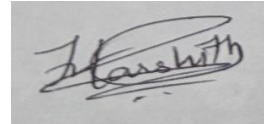
Attention of:

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Prepared By:

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Reviewed / Authorized By:



Harshith Devaraja
EMC Engineer

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Test Report Revision History

Revision	Date	Revised By	Reason for Revision
1.0	September 30, 2025	Harshith Devaraja	Original Document

Current revision of the test report replaces any prior versions. Only the current version of the test report is valid.

EUT Description

Model:	GPSI-31
Serial:	760627A
Firmware:	uGPSI-31 devel uGPSI-31 2025.09.16 19:18:01
Description:	Globalstar Simplex Transmitter Module
Additional Information:	Radio Frequency Range and Operational Info: 1611.25 – 1618.75 MHz Modulation Type: BPSK FCC Emission designator: 2M50G1D Antenna Gain = 2 dBi Usage: Mobile
Receipt of Sample(s):	September 22,2025
EUT Condition:	Visual Damage No State of Development Production/Production Equivalent

Average Power calculations

Average Power = Peak Power * duty-cycle%

Tuned Frequency (MHz)	Conducted Peak Output Power (dBm)	Duty Cycle (%)	Average Power (mW)
1611.25	18.93	100	78.1
1613.75	20.36	100	108.6
1616.25	20.21	100	104.9
1618.75	20.16	100	103.8

MPE Evaluation

This is a fixed device used in Uncontrolled Exposure environment.

Limits Controlled Exposure 47 CFR 1.1310 Table 1, (A)

0.3-3.0 MHz:	Limit [mW/cm ²] = 100
3.0-30 MHz:	Limit [mW/cm ²] = (900/f ²)
30-300 MHz:	Limit [mW/cm ²] = 1.0
300-1500 MHz:	Limit [mW/cm ²] = f/300
1500-100,000 MHz	Limit [mW/cm ²] = 5

Limits Uncontrolled Exposure 47 CFR 1.1310 Table 1, (B)

0.3-1.234 MHz:	Limit [mW/cm ²] = 100
1.34-30 MHz:	Limit [mW/cm ²] = (180/f ²)
30-300 MHz:	Limit [mW/cm ²] = 0.2
300-1500 MHz:	Limit [mW/cm ²] = f/1500
1500-100,000 MHz	Limit [mW/cm ²] = 1.0

Test Data

Test Frequency, MHz	1613.75
Power, Radiated, mW (P)	108.6
Antenna Gain Isotropic	2 dBi
Antenna Gain Numeric (G)	1.58
Distance (R)	20 cm

$S = \frac{P * G}{4\pi r^2}$
Power Density (S) mw/cm ²

Power Density (S) = 0.03413 mw/cm ²
Limit = (from above table) = 1.0 mw/cm ²

**Determination of Exemption
47 CFR 2.1091 (c)(1)**

$$ERP_{20\text{ cm}} (\text{mW}) = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases}$$

ERP_{20cm} = 3060 mW

Separation distance (d) = 20 cm

P_{th} = 3060 mW

Average power of the EUT = 108.6 mW

The fixed EUT is exempt from the obligation to perform a routine environmental evaluation to demonstrate compliance with the RF exposure limits in § 1.1310 shown above.

END OF TEST REPORT