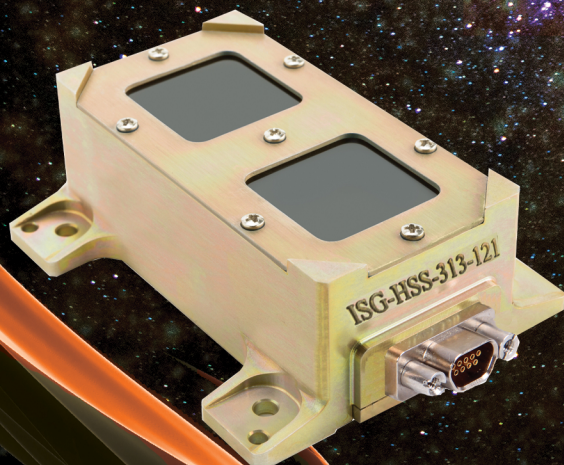


HSS-03

DIGITAL SUN SENSOR



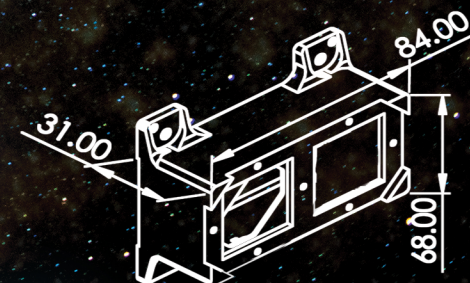
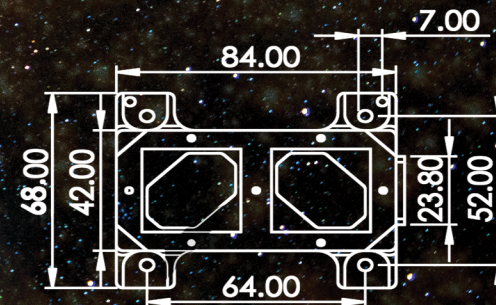
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Features

- Digital
- High Accuracy
- Wide Field of View
- Albedo Detection
- Electronic Shutter

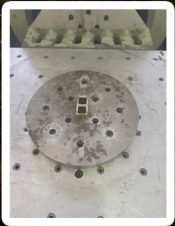
Mechanical Interface



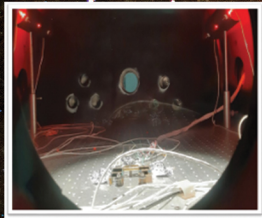
Qualification

The tests conducted on the HSS Sun Sensor are listed below:

Qualification Test	Standard
Mechanical	ECSS-E10-03A ECSS-STD-7000
Thermal	ECSS-E-10-03A
EMC/EMI	MIL-STD-461F
Radiation (TID)	MIL-STD-883G



Mechanical



Thermal



EMC/EMI



Radiation

Based on several Functional & Environmental tests on HFP Digital Sun Sensor, this product is used in more than 10 missions.

Technical Characteristics

Parameter	Value
Functional Properties	
Accuracy (3σ)	$<0.5^\circ$
Filed-Of-View	$\pm 65^\circ$
Update Rate	Up to 5 Hz
Output	Digital Vector
Data Interface	RS485 Full Duplex
Environmental Properties	
Temperature	-25 to +65°C
Vibration	15g RMS
Electrical	MIL-STD 461F
Radiation	15 kRad (component level)
Electrical Properties	
Power Supply	5-25 Volt $\pm 5\%$
Current Consumption	< 80 mA
Physical Properties	
Dimension	84 x 68 x 31mm ³
Mass	150 gr
Connector	9 Way Micro-D

Utility

The sun sensor is a device that determines the direction of the sun position vector within its own reference coordinate system. The information obtained from the sun's position is widely utilized in satellite Attitude Determination and Control Systems (ADCS).

A variety of sun sensors, differing in accuracy, power consumption, and physical dimensions, have been developed to meet the diverse requirements of space missions. Due to their functionality and reliability, sun sensors have become an indispensable component of satellite ADCS.

Hojjat Fanavar Pajouh Company has successfully designed and manufactured several types of sun sensors, among which the HSS-03 is a notable example. The HSS-03 is a digital, two-axis fine sun sensor that provides high-precision measurements. Considering its technical performance and physical characteristics, the HSS-03 represents a highly effective solution for ADCS applications.

