

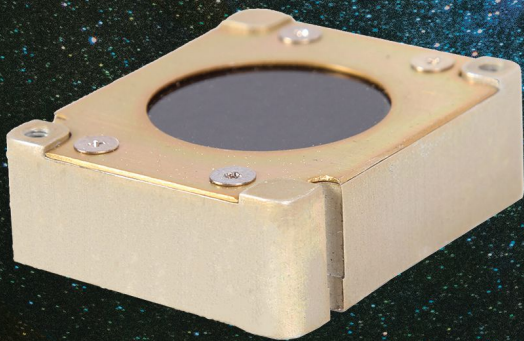


Features

- Digital
- High Accuracy
- Wide Field of View
- Small Size & Low Mass
- Low Power
- Albedo Detection
- Electronic Shutter

HSS-05

DIGITAL SUN SENSOR



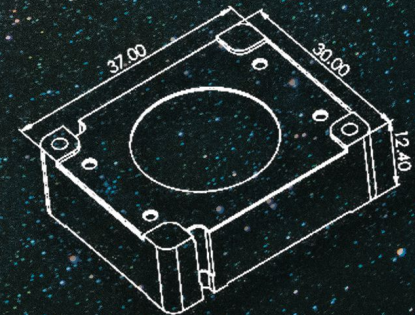
HOJJAT FANA VAR PAJOOH

☎ 021-77141624 0910 788 9261

🌐 www.hojjatco.com

✉ info@hojjatco.com

Mechanical Interface



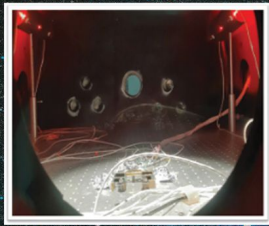
Qualification

The tests have been done on 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



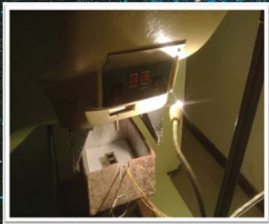
Mechanical



Thermal



EMC/EMI



Radiation

Based on Several Functional & Environmental Tests on HFP Digital Sun Sensor, This Product used in more than 10 missions.

Technical Characteristics

Parameter	Value
Functional Properties	
Accuracy (3σ)	0.5
Filed-Of-View	$\pm 60^\circ$
Update Rate	Up to 5 Hz
Output	Sun Direction Unit Vector
Data Interface	SPI (UART/I2C)
Environmental Properties	
Temperature	-25° to 65°C
Vibration	15g RMS
Electrical	MIL-STD-461F
Radiation	10 kRad (component level)
Electrical Properties	
Power Supply	3.3 Volt \pm 1%
Current Consumption	< 30 mA
Physical Properties	
Dimension	37 * 30 * 12.5 mm ³
Mass	30 gr

Utility

The sun sensor determines the direction of the sun position vector on its own matched coordinate system. The extracted information from sun location by sun sensor can be used for locating the satellite Attitude control process.

Variety of sun sensors from very high to normal accuracies with different power consumption and dimensions, caused them to be considered for a wide range of space applications. In conclusion, they became an inseparable part in satellite ADCS process. Hojjat Fanavar Pajouh company, has designed and manufactured various type of sun sensors that HSS-05 is one of them. This sensor is digital and two axis.

HSS-05 is a fine sun sensor. for this reason, as well as other physical properties, HSS-05 can be one of the best choices for ADCS solution.

