

Dual HCI



Specifications

- FOV: 1.5° each head
- Accuracy from GEO (3σ): 2-60RPM
Chord Length 0.03°,
Chord Center 0.02°
- Supply Voltage: +/- 12 VDC
- Supply Power: < 2W
- Output: Analog
- Detector: Proprietary LTO
- Optical Pass Band: 14.6-15.8μ

Environmental

- Random Vibration: 8.4 Grms
- Shock: 1000Gs @ 5 KHz
- Temperature: -40 to + 60°C
- EMC: Mil-Std 1541A

Physical

- Mass: 0.8 KG
- Dimensions: 7.9 x 4.9 x 2.7 in.
- Mounting Surface: Flat

Electronics

- Hybridized detector assembly
- Proprietary pulse shaping network

Flight Heritage

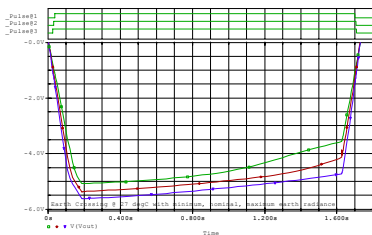
- Orbital BSAT-2
- Single POBA'S BSS - MCP

STATUS

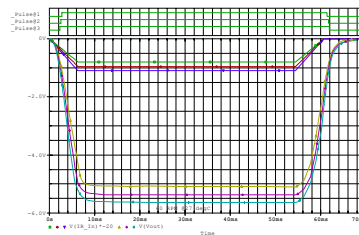
Qualified Unit
COTS Availability

Description:

The Dual Horizon Crossing Indicator (HCI) is a single assembly that contains two Pyroelectric Optical Barrel Assemblies and pulse conditioning circuitry. It is designed to operate at GEO orbit and used during transfer orbit for satellite spin rates of from 2 RPM to 60 RPM. Each HCI has a 1.5 degree beam width and the separation between the two HCI's is 10 degrees. The output from each of the HCI's is an analog pulse whose pulse width is equivalent to the Earth chord length and provides a single leading edge and trailing edge threshold crossing corresponding to the Space/Earth crossing and the Earth/Space crossing. The common chassis mounting of the two heads and the sharing of some common electronics provides for a compact lightweight assembly. A common alignment mirror is provided.



Earth Crossing pulse at 2 RPM



Earth Crossing Pulse at 60 RPM

Contact Information

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