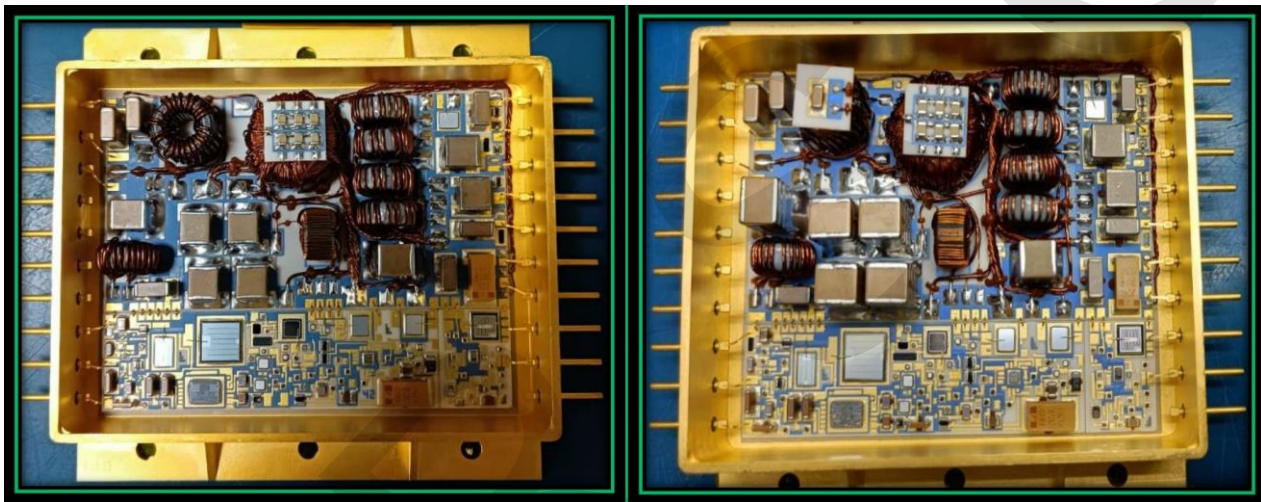


15W Triple output DC-DC Converter HMC for 42V & 70V Power Bus

U R Rao Satellite Centre (URSC) of Indian Space Research Organisation (ISRO) has developed 15W HMC DC-DC Converters to meet Electrical performance with High Reliability requirements for Space Application with minimum size and weight. HMC DC-DC Converters developed for Space Application adopting Innovative Thick Film Process technology developed and qualified for Space application.



15W DC-DC Converter HMCs (42V and 70V Power Bus)

Salient Features

- ❖ Meets Electrical performance with High Reliability requirements for Space Application.
- ❖ Minimum size and weight.
- ❖ Converter design meets high reliability requirements and provides triple output voltages of +5V, +15V and -15V.
- ❖ Integrated Circuits (in unencapsulated die form) used are compliant to QML-V of MIL-PRF-38535 and Discrete components (in die form) are compliant to Class-K of MIL-PRF-19500.

- ❖ Hybrid design and fabrication processes comply to ISRO-PAS-206 guidelines.
- ❖ Innovative thick film process technology with special subassemblies adopted for realisation of the HMC which is housed in custom designed Kovar flat package.
- ❖ The Converter performance suits typical space electronic systems up to 15W, covering requirements of EMI, regulation, thermal dissipation and standard protection features.

Major Specifications

- ❖ Input voltage range : 26-42V / 42V-72V
- ❖ Triple outputs ($\pm 15\text{V}$: 0.25A and +5V: 1.5A) delivering up to 15W.
- ❖ In-built regulator for 5V output line.
- ❖ Built-in EMI filter capable of meeting ISRO Standards (based on MIL-461C)
- ❖ Converter shutdown feature.
- ❖ Efficiency : 70%
- ❖ Switching frequency : 140 KHz
- ❖ Short circuit, over load and over voltage protections for all outputs.
- ❖ Telemetry monitoring feature.
- ❖ Size : 2.88"x2.88"x0.60"
- ❖ Weight : <160 gm

Technology Transfer

URSC-ISRO offers to transfer technology of 15W HMC DC-DC Converters developed by URSC to industries in India with adequate experience and facilities. Industries interested in obtaining knowhow may write giving details of their present activities, infrastructure and facilities.

Technology Transfer & Industry Coordination Division (TTID),
Programme Planning and Evaluation Group (PPEG),

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🌐 <https://www.ursc.gov.in/industry/index.jsp>