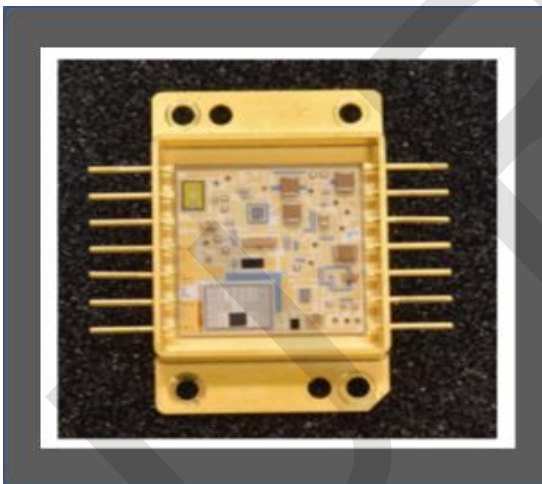


SOLID STATE SWITCH 411SS – HMC (42V)

U R Rao Satellite Centre (URSC) of Indian Space Research Organisation (ISRO) has developed Solid State Switch (SSS) which is an N channel MOSFET based single pole single throw electronic switch HMC, designed to switch the Raw Bus to the load. The use of N channel MOSFET enables to enhance the current handling capability compared to the equivalent P channel MOSFET electronic switches. The high side drive required for N MOSFETs is realized with a boots-strapped capacitive charge pump. By controlling the rate of rise of the gate drive with the charge pump, a soft turn on is achieved. With the SSS soft turn on, the inrush currents at turn ON due to capacitive loads is reduced to about one tenth of that seen with electromechanical relays. The absence of magnetics in the SSS yields sleekness to the device. The SSS may be mounted on the PCB or on the package depending on the current it has to handle.

Salient Features

- ❖ Self-biased
- ❖ Soft turn on with controlled inrush current
- ❖ Smooth +ve output voltage transient
- ❖ Standard Pulse command TC interface
- ❖ ON / OFF TM status
- ❖ Unlimited ON / OFF operations
- ❖ Compact size - 1.93" X 1.25" X 0.25"
- ❖ Light weight - 30 grams
- ❖ 7.5A @ 42.5V



Major Specifications

PARAMETER	SYMBOL	VALUE	UNIT
Input Voltage	VIN	42.5	V
Load current	IL	7.5	A
Output Voltage @7.5A Load	VOUT	42.17	V
Max power dissipation	PMAX	3.5	W
Operating Case Temperature	Tcase	+70	°C
Storage Temperature	TSTG	-55 to +125	
LOAD Capacitor	CL	110	uF

Technology Transfer

URSC-ISRO offers to transfer technology of SOLID-STATE SWITCH 411SS - HMC developed by URSC to industries in India with adequate experience and facilities. Industries interested in obtaining knowhow and further details regarding the SSS 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>