COTS Plus Assemblies

"DoD will be able to use COTS hardware and software in avionics systems in advanced military aircraft."

"Major military contractors are still under continuous pressure to provide increasingly flexible, higher performance systems at a lower unit cost and with low support costs. COTS hardware and software offer solutions to all of these conflicting requirements."

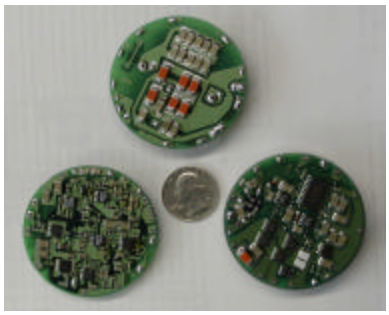
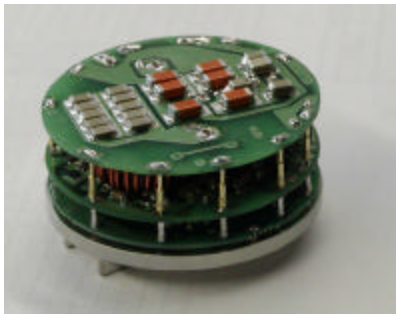
...Specialists in Power Electronics Design and Packaging!

SENSITRON SEMICONDUCTOR 221 West Industry Court • Deer Park, NY 11729-4681
(631) 586-7600 • Fax: (631) 242-9798 • Web Site: http://www.sensitron.com • E-mail: sales@sensitron.com

COTS Plus Assemblies

Motor Controller

- Used on Cryogenic Coolers
- Fully integrated linear DC Motor Control Subsystem
- Including power stage, non-isolated driver stage and controller stage
- 40A Average Phase Current with up to 300V Maximum Bus Voltage

Motor Controller

- Used as a two quadrant speed controller for controlling/driving fans, pumps, and motors.
- Many integral control features provide the user flexibility in adapting to specific system requirements.
- Up to 600V and 100 Amp.
- The small size of the complete subsystem is ideal for aerospace, military, and high-end industrial applications.

➡ **SENSITRON P/N: SPMXMXXX-XX-1**

Mosfet Power Module

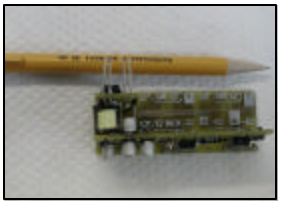
- Used on NFA-18A HORNET
- Used to modulate the TWT at >150KHz
- Turn on and off times are about 15nsec at 1200V.
- Delay time is <40 nsec

➡ **SENSITRON P/N: SCP-4926**

Solid State Circuit Breaker

- Microcontroller based for use in Aircraft/ Naval 115VAC/150VDC applications
- Integrated current sensing and over current/over temp protection.
- Drop-in equivalent to a DPST relay with a common single side isolated control
- AC and DC operation Two Channel with simultaneous control of both channels

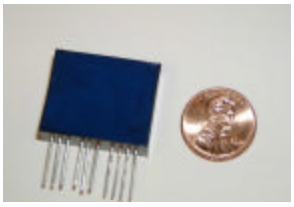
➡ **SENSITRON P/N: SCP-5476**



Solid State Power Controller

- Microcontroller based Solid State Relay for use in Aircraft and other 28VDC applications
- 28VDC Input-Capacity ranging from 1-7 Amp
- True I^2t Protection from 130% to 1500% of rated current
- High Overload Capability up to 140A
- Microcontroller based intelligent controller

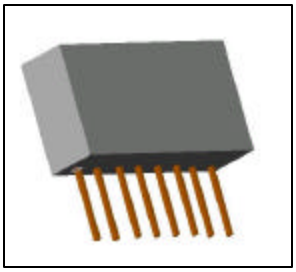
➡ **SENSITRON P/N: SPD-7D28**



COTS Plus Assemblies

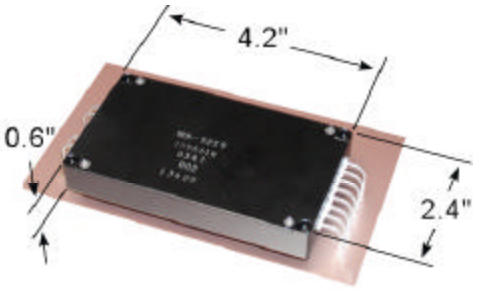
TVS Array for Lightning Strike Protection

- q Used in various aerospace systems such as FADEC or Flight Control Computers
- q Uni-directional and bi-directional
- q Standard parts from 11-46 volts and capacitance as low as 500 pf
- q Custom parts are available including different dimensions, special lightning curves, and/or other package designs!
- q Protection level ABD 0007 Compliant



DC/DC Converter

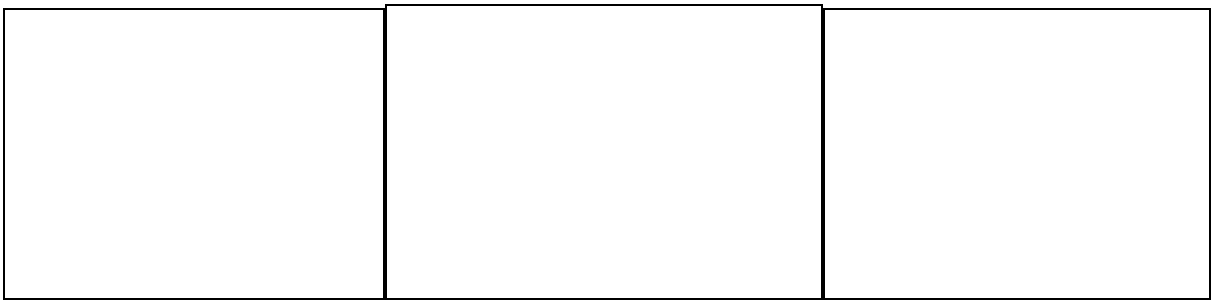
- q Four **independent** outputs - 1.5, 2.5, 3.3, 5V
- q Operation from 15 to 50 Volts, 80V Surge
- q .9 to 2.2 Volt Adj. @ 4.0A (4W max)
- q Operates at –55°C to 125°C
- q No load operation
- q Built-In EMI Filter
- q Individual Current Limit
- q Primary Power Limit



Solid State Relay

- q Solid State Relay w/Back-to-back SCR output
- q 1600V Surge Voltage Withstand Capability
- q Zero voltage Turn-ON Switching reduces EMC
- q 75A Rating up to 85°C baseplate temperature
- q Used on MK41 Vertical Launch System

è **SENSITRON P/N: SCP-5285**



Sensitron designs, builds and tests non-hermetic assemblies that

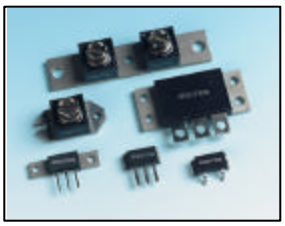
- Ø use plastic commercial devices in plastic packages
- Ø perform well in aerospace & military requirements to temperatures of - 40°C to +85°C (expanded temperature ranges available on request)
- Ø are smaller, denser, cheaper and lighter than traditional hermetic modules
- Ø are turnkey -Sensitron will design, kit, build & test custom parts to your requirements
- Ø use hybrid, chip-on-board, surface mount or through-hole technologies

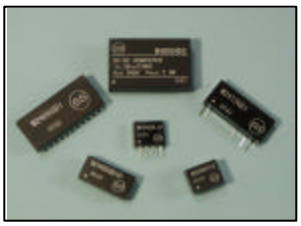
Give us a call or visit our website at
http://www.sensitron.com/costplusassemblies.com

Sensitron – Strong Support for Your COTS Needs

- **Sensitron also has standard plastic discrete product:**

Schottkys, DC/DC Converters, TVS & TVS Arrays, Bridge Rectifiers, Diodes, Optoelectronics





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Sensitron capabilities include:

Company Strengths

- Proven expertise in Power product design, development, and manufacturing
- Natural synergy between Semiconductor Fab, high voltage expertise, power module expertise and hybrid / multi chip module development
- Discrete power module or hybrid solutions
- Strong technical expertise

Assembly

- Class 10,000 clean room, with class 100 laminar flow stations.
- Operations performed to appropriate standards per instructions in device specific lot travelers
- In process monitors including wire pull and Sonoscan screening to ensure high quality

Mechanical & Environmental Screening

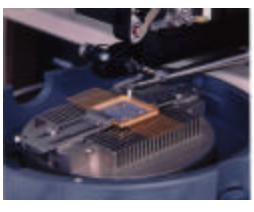
- A complete screening lab with all the necessary equipment for appropriate mil standards testing and source control drawing requirements testing
- Services offered compliant to MIL-STD-883, MIL-PRF-19500 or JEDEC standards, as applicable

Electrical Engineering & Testing

- Engineering staff versatile in supporting range of device types, technologies, and complexities
- Automated and Semi-automated test hardware systems capable of electrically testing devices to military and custom specifications
- Temperature forcing systems to replicate operating temperatures during testing

Quality Systems

- DSCC certified to
  - ISO 9001, 2000 Edition
  - MIL-PRF-19500
  - MIL-PRF-38534
- Fully integrated quality system including recall and calibration procedures per ASNI / NCSL Z540-1
- Ongoing employee training program and strict adherence to ESD procedures



Additional test capabilities

- Corona (AC)
- Dielectric Strength (Hi-Pot)
- Multi-temperature Testing
- Thermal Impedance Evaluation
- Impedance Testing / S-parameter
- In-house HAST Testing