

## **COTS Plus Solutions**

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

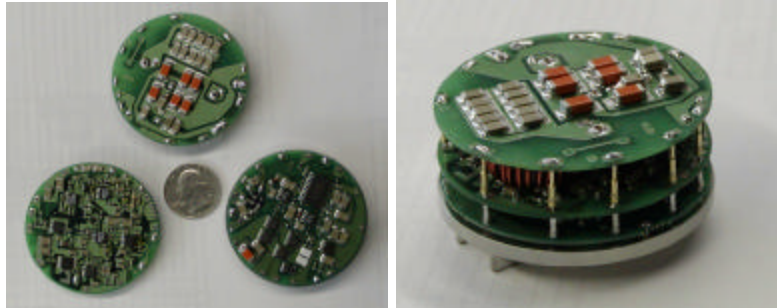


*"Major military contractors are still under continuous pressure to provide increasingly flexible,  
higher performance systems at a lower unit cost and with low support costs.  
COTS hardware and software offer solutions to all of these conflicting requirements."*

# COTS Plus Solutions

## 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: SPMXMXX-XX-1**



## Mosfet Power Module

- ❑ Used on NFA-16A
- ❑ Used to modulate the TWT at >150KHz
- ❑ Turn on and off times are about 15nsec at 1200V.
- ❑ Delay time is <40 nsec



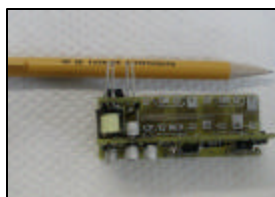
➔ **SENSITRON P/N: SCP-4926**



## 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

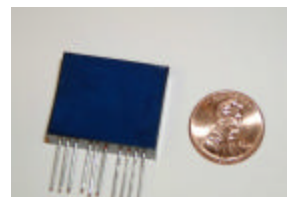
➔ **SENSITRON P/N: SCP-5476**



## 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<sup>2</sup>t Protection from 130% to 1500% of rated current
- ❑ High Overload Capability up to 140A
- ❑ Microcontroller based intelligent controller

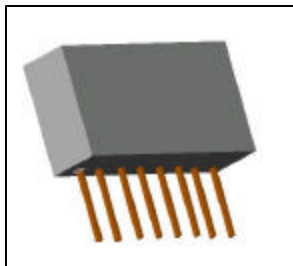
➔ **SENSITRON P/N: SPD-7D28**



## COTS Plus Solutions

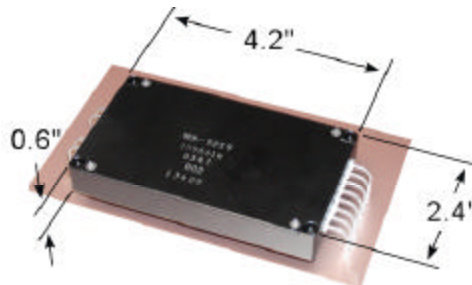
### TVS Array for Lightning Strike Protection

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



### DC/DC Converter

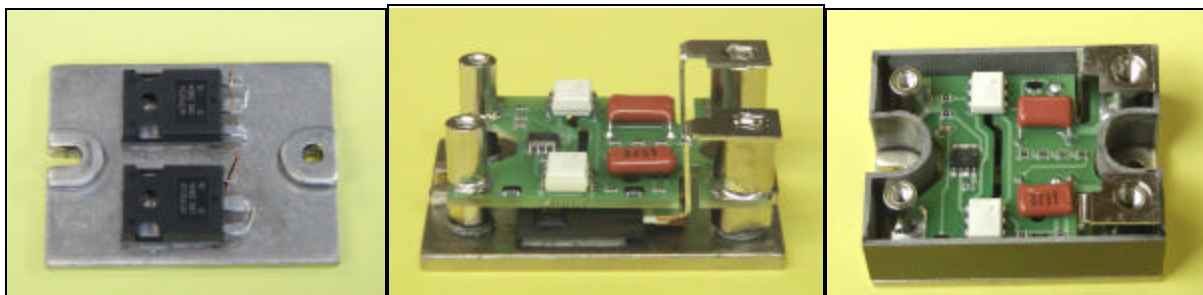
- ❑ Four **independent** outputs - 1.5, 2.5, 3.3, 5V
- ❑ Operation from 15 to 50 Volts, 80V Surge
- ❑ .9 to 2.2 Volt Adj. @ 4.0A (4W max)
- ❑ Operates at -55°C to 125°C
- ❑ No load operation
- ❑ Built-In EMI Filter
- ❑ Individual Current Limit
- ❑ Primary Power Limit



### Solid State Relay

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

➔ **SENSITRON P/N: SCP-5285**



**Sensitron** designs, builds and tests non-hermetic assemblies that

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

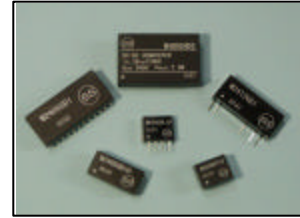
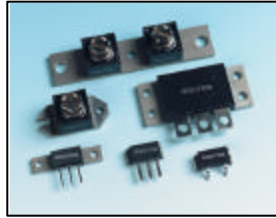
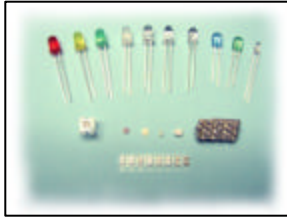
Give us a call or visit our website at

<http://www.sensitron.com/cotsplussolutions.htm>

# Sensitron – Strong Support for Your COTS Needs

## ➤ **Sensitron also has standard plastic discrete product:**

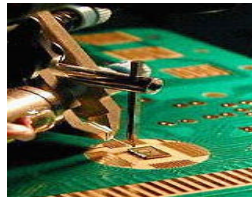
*Schottkys, DC/DC Converters, TVS & TVS Arrays, Bridge Rectifiers, Diodes, Optoelectronics*



## 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

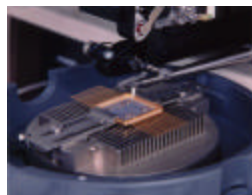


### Electrical Engineering & Testing

- 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