

Sensitron High Temperature Application Products

Sensitron has nearly 45 years heritage as a leading manufacturer in the high reliability market and over 10 years supporting the medical market. Positioned as a world leader, Sensitron products are designed, manufactured, tested, and qualified for applications where size, weight, and reliability are critical to mission success. Sensitron Product Certifications include: AS9100 Revision C Registered, ISO 9001:2008 Registered, MIL-PRF-19500 JANS Qualified. Sensitron is a qualified MIL-PRF-38534 Class H & Class D Facility.

Products:

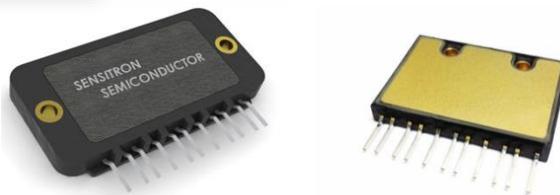
- Sensitron Power Bridges
- Motor Controllers
- Silicon Carbide Schottky Rectifiers & Bridges
- Silicon Carbide Schottky Barrier Diodes*

*In development

Power Bridges (SPM Series)

Features/Benefits:

- ✓ High voltage bridges, up to 1200V
- ✓ Current range from 15A to 150A
- ✓ Designed for harsh environments and wide temperature range (-65°C to 175°C)
- ✓ SPM1001 thru SPM1004 AlSiC baseplate
- ✓ SPM1005 thru SPM1008 Aluminum Nitrate intricate base substrate
- ✓ Lightweight, fully isolated package
- ✓ SPM1007 is designed for down hole and high temperature engine applications



P/N	PIV @ 25 (V)	I _o (A)	R _{θJC} (C/W °C)	Features
SPM1001	600	50	1.0	3-PH IGBT Bridge with SiC Diodes, Brake MOSFET and Integrated Brake Resistor
SPM1002	600	30	1.0	3-PH IGBT Bridge with SiC Diodes, Brake MOSFET and Integrated Brake Resistor
SPM1003	1200	150	0.42	3-Ph IGBT Bridge Brake IGBT + Inrush SCR
SPM1004	1200	150	0.42	3-Ph IGBT Bridge Brake IGBT + High Side Brake IGBT
SPM1005	600	30	3	Low Loss Ultrafast IGBT 3-Ph Bridge Module with SiC Freewheeling Diode
SPM1006	600	60	2	Low Loss Ultrafast IGBT 3-Ph Bridge Module
SPM1007	1200	29	1.7	3-Ph SiC MOSFET Bridge with SiC Diodes
SPM1008	1200	30	1.0	3-Ph SiC MOSFET Bridge

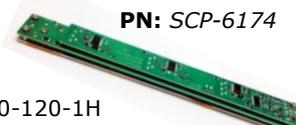
High Temperature Brushless DC Motor Driver

Features/Benefits:

- ✓ Three-phase brushless DC motor controller/driver subsystem housed in a compact power package
- ✓ Up to 7A motor peak current with up to 650VDC bus voltage, at operating case temperature of 175°C.
- ✓ Cycle by cycle current limiting



PN: SMC6G040-120-1H



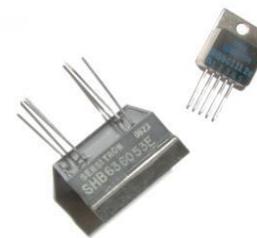
PN: SCP-6174

For more information, visit us at: www.sensitron.com

Sensitron High Temperature Application Products

Silicon Carbide Schottky Rectifiers & Bridges

- ✓ Essentially zero forward and reverse recovery
- ✓ Temperature independent switching behavior
- ✓ Can operate up to 300°C and at frequencies in excess of 1MHz
- ✓ Smaller, lighter, more reliable
- ✓ Available screened to MIL-PRF-19500, TX, TXV or S-level



Silicon Carbide Schottky Rectifiers

Part Number	PIV (V)	Max DC Output Current	Operating Temperature(°C) ¹	Package Type
SHD626051/P/N/D*	600V	10A/ 20A/ 20A/ 10A	-55 to +200	TO-257
SHD620051/P	600V	10A	-55 to +200	LCC-5
SHD625061/D/N/P*	600V	20A /40A/ 40A/ 10A	-55 to +200	TO-254
SHD620031 / P	600V	4A /8A	-55 to +200	LCC-5
SHD626031/P/N/D*	600V	4A /8A /8A /4A	-55 to +200	TO-257
SHD625051/P/N/D*	600V	10A /20A/ 20A /10A	-55 to +200	TO-254
SHD687182	1200V	2A	-55 to +200	SMD 0.2
SHD620052/P	1200V	5A/10A	-55 to +200	LCC-5
SHD619052/P	1200V	5A/10A	-55 to +200	LCC-3P
SHD625052/P*	1200V	5A/10A	-55 to +200	TO-254
SHD620112/P	1200V	10A/20A	-55 to +200	LCC-5
SHD619112/P	1200V	10A/20A	-55 to +200	LCC-3P
SHDC624112/P/N/D*	1200V	10A/20A/ 20A/ 10A	-55 to +200	TO-258
SHDC626112/P/N/D*	1200V	20A/ 40A/ 20A/ 40A	-55 to +200	TO-257
SHDC624122/P/N/D*	1200V	20A/ 40A/ 20A/ 40A	-55 to +200	TO-258
SHDC626052/P/N/D*	1200V	5A/ 10A/ 10A/ 5A	-55 to +200	TO-257
SHDC624172/P/N/D*	1200V	50A/100A/ 100A/ 50A	-55 to +200	TO-258
SHD619112/P	1200V	10A/ 20A	-55 to +200	LCC-3P
SHD625112/D/N/P*	1200V	10A/ 20A/ 20A/ 10A	-55 to +200	TO-254

*TO-254, TO-257, and TO-258 packages, high frequency option and ceramic seal options are available.

High Frequency Option: Non-magnetic Gildcop leads are available for improved performance at high frequency; use part number prefix SHDG to order.

Ceramic Seal Option: For ceramic seals, use part number prefix SHDC to order.

Silicon Carbide Schottky Bridges

Part Number	PIV (V)	Max DC Output Current	Operating Temperature (°C) ¹	Package Type
SHB601031E	600V	8A	-55 to +200	TO-258
SHD601051E	600V	14A	-55 to +200	TO-258
SHB601052FP/N	1200V	5A	-55 to +200	TO-258
SHB601052G	1200V	5A	-55 to +200	TO-258
SHB601052E	1200V	10A	-55 to +200	TO-258
SHB601112E	1200V	10A	-55 to +200	TO-258
SHB681123E	2500V	20A	-55 to +200	SCB-2

Note1: SiC semiconductors will handle at or above this operating and storage temperature. However, extended operational use of the packaged device above 175°C may reduce its future performance. All qualification testing and screening per MIL-PRF-19500 will only be performed to 175°C.

About Sensitron:

Sensitron is a leading manufacturer of high reliability power electronic solutions including MIL-PRF-19500 diodes, transient voltage protection components, motor controllers, smart power management and conversion, voltage protection components and RF products. Sensitron has over 40 years heritage in serving the complete spectrum of high reliability markets including defense, aerospace, space, and medical. <http://www.sensitron.com>