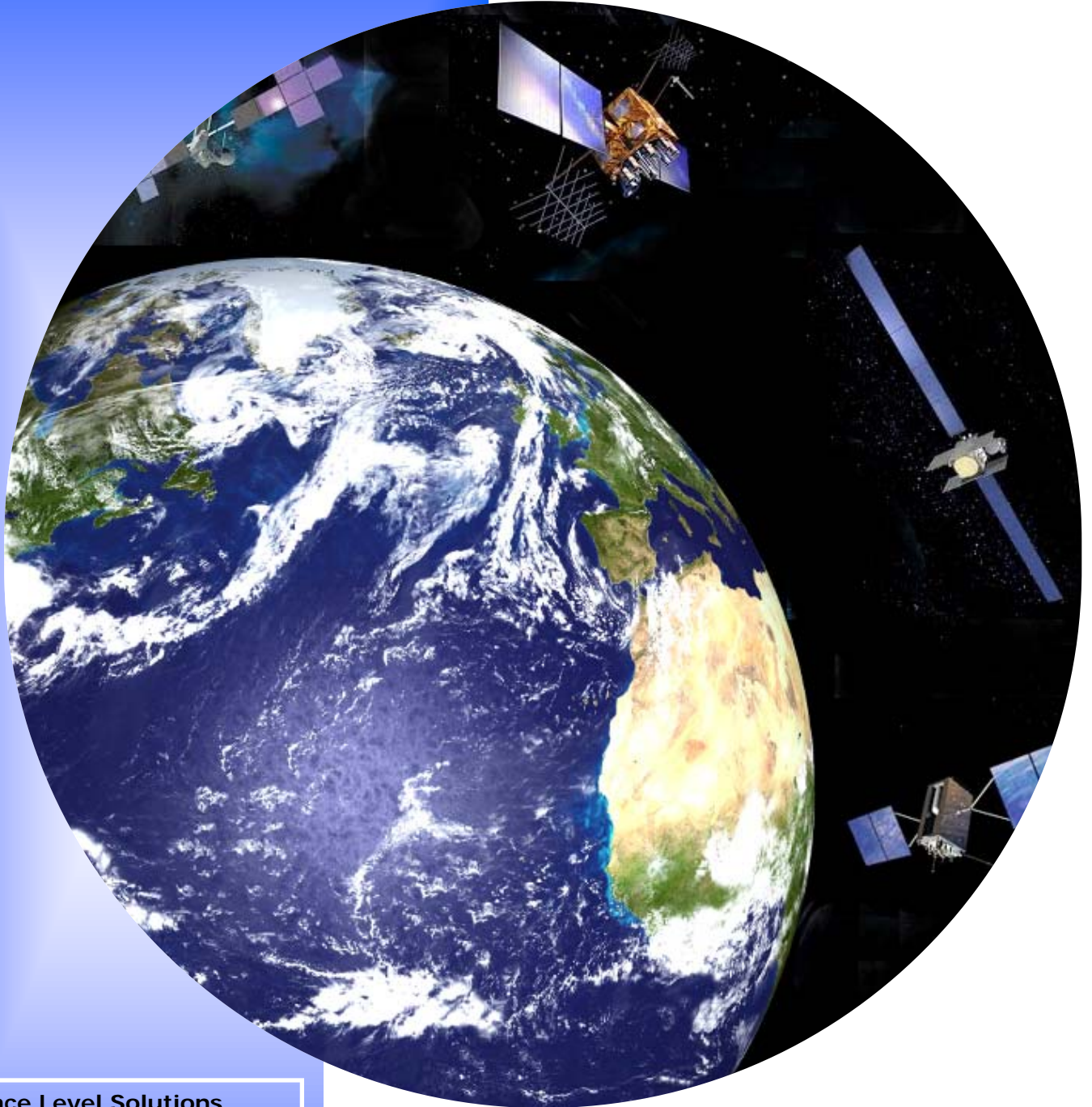


SENSITRON **SEMICONDUCTOR**

Powered by Sensitron

*AS9100 Registered
ISO 9001:2000 Registered
MIL-PRF-19500 JANS Qualified
MIL-PRF-38534 Class H Qualified*



Space Level Solutions

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Space Level Solutions

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145-0314

Space Diodes: JAN QPL & Equivalent Diodes

The Sensitron Advantage:

- ✓ Has supplied Axial & MELF (JANS equivalent) for 10+ years and JANS qualified diodes since 2011.
- ✓ Among the **largest suppliers** of Space Level Diodes, and among the **largest portfolios** of Space Level Rectifier Diodes, Zener Diodes, Transient Voltage Suppressors Diodes, and Switching Diodes in the world, having shipped over 2.3 million JANS and JANS-equivalent diodes to space applications.
- ✓ Qualified per JANTXV/JANS on 19 individual MIL-PRF-19500 slash sheets, encompassing over 250 JANS part numbers, with more coming every quarter!
- ✓ Sensitron offers at "No Charge " our JANS PLUS Program to all of our JANS product lines:
 - Additional cost savings for our customer comes from our standard process flow:
 - All parts are Hot Solder Dipped, therefore there is no need to send Sensitron diodes to third party plating house or pay a manufacturer for "special plating services".
 - No tags are used to serialize our JANS components, eliminating cost of tag removal & cleaning.
 - **These savings translate into a \$3 - \$7.00 price savings per device!**



BASE PART NUMBERS AVAILABLE TO JANTXV/JANS SCREENING (as indicated):

PART NUMBER						MELF	Slash	JANTXV	JANS	DESCRIPTION
3595-1						US	241	QPL	QPL	Vf Controlled Diode
3611	3612	3613	3614	3957		None	228	QPL	N/A	1A Std Recovery
4099-1	to	4120-1				UR-1	435	QPL	QPL	500mW Zener 7.5v - 30v
4245	4246	4247	4248	4249		None	286	QPL	N/A	1A Std Recovery
4460	4461	4467	to	4496		US	406	QPL	QPL	1.5W Zener 6.8v, 12v - 200v
4942	4944	4946	4947	4948		None	359	QPL	N/A	1 A Fast Recovery
4958	to	4989				US	356	QPL	QPL	5W Zener 10v - 390v
5186	5187	5188	5190			None	424	QPL	N/A	3A Fast Recovery
5415	5416	5417	5418	5419	5420	US	411	QPL	QPL	3A Fast Recovery
5550	5551	5552				US	420	QPL	QPL	3A Std Recovery
5553	5554					US	420	2014	2014	3A Std Recovery
5555	5558					None	500	2015	N/A	1A Std Recovery
5614	5616	5618	5620	5622		US	427	QPL	QPL	1A Std Recovery
5615	5617	5619	5621	5623		US	429	QPL	QPL	1A Fast Recovery
5629	5665					None	500	2015	N/A	1500W Unipolar TVS DO13
5802	5804	5806				US	477	QPL	QPL	1A Ultra Fast Rectifier
5807	5809	5811				US	477	QPL	QPL	3A Ultra Fast Rectifier
5819-1	5822					UR-1/US	586/620	2015	2015	1A, 3A/40V Schottky Rectifier
6102A	to	6107A				US	516	2014	2014	500W Bi-directional TVS
6108A	to	6136A				US	516	QPL	QPL	500W Bi-directional TVS
6144A	to	6170A				US	516	2014	2014	1500W Bi-directional TVS
6324	to	6351				US	533	QPL	QPL	500mW Zener (6.2v, 6.8v 2013) 10v -130v MELF
6620	6621	6622	6623	6624	6625	U or US	585	QPL	QPL	1A Ultra Fast Rectifier HV
6626	6627	6628	6629	6630	6631	U or US	590	QPL	QPL	2A Ultra Fast Rectifier HV
6638	6642	6643				U & US	578	QPL	QPL	Small Signal Switching
6639	6640	6641				US	609	QPL	QPL	Small Signal Switching
80XX	to	81XX				US	772	2014	2014	150W, 500W, 1500W Unipolar TVS

Slash Sheet Extension Diodes

Sensitron offers rectifier diodes as an extension to industry standard slash sheet diodes.
**This list is a selection only. For more information, contact us at sales@sensitron.com

Package	1A	1A	3A	3A
	Axial 106	MELF-A	Axial 306	MELF-B
150V trr	1N5806 25ns	1N5806US 25ns	1N5811 30ns	1N5811US 30ns
200V trr	SRS120HE 40ns	SRS120HEU 40ns	SRS320HE 30ns	SRS320HEU 30ns
250V trr	SRS125HE 40ns	SRS125HEU 40ns	SRS325HE 30ns	SRS325HEU 30ns
200V trr	1N6620 30ns	1N6620US 30ns	1N6626 30ns	1N6626US 30ns
600V trr	1N6622 30ns	1N6622US 30ns	1N6628 30ns	1N6628US 30ns
1000V trr	1N6625 60ns	1N6625US 60ns	1N6631 60ns	1N6631US 60ns
1200V trr	SRS1120HE 60ns	SRS1120HEU 60ns	SRS3120HE 60ns	SRS3120HEU 60ns
1300V trr	SRS1130HE 80ns	SRS1130HEU 80ns	SRS3130HE 100ns	SRS3130HEU 100ns
1400V trr	SRS1140HE 80ns	SRS1140HEU 80ns	SRS3140HE 100ns	SRS3140HEU 100ns
1500V trr	SRS1150HE 80ns	SRS1150HEU 80ns	SRS3150HE 100ns	SRS3150HEU 100ns

SRS120/125/320/235
(extension of /477)
Higher Breakdown Voltage:
PIV @ 200V to 250V

SRS1120/30/40/50
(extension of /585, /590)
High Voltage Diodes
PIV @ 1200 to 1500V

Sensitron has product in key Space Programs, including the following (10-year pedigree):



Echostar & DirecTV Satellites, Dawn Satellite, Globalstar, Titan, Globalstar, Atlas V URCU & BRCU, Intelesat, Advanced EHF, Space Based Radar, TerraSar, Dawn Satellite Camera, GPS 3, ASTRO15, Mars Orbiter & Lander, Space Tech 5, Spacebus 3000/4000, Galaxy 12/14/15, Galileo, Iridium, Nat Polar-Orbiting Satellite Systems, Eurostar 3000, NextView, Atlas, ISIS, GPS3, Sirius, International Space Station

Space Level Die Products

Standard, FR, & UFR Rectifier Die

- Many standard part numbers, 1C5806, 1C5811, 1C6631
- FR (150ns to 500ns): 1C5621
- General Purpose, 1C5554, 1C5552
- All die for QPL rectifiers
- UFR Voltage Range: 50V to 600V. Up to 1000V available
- UFR Chip size: 34, 40, 65, 85, 120, 215, up to 300 mil²
- UFR Trr range from 25 ns to 60 ns
- Back metal: Ag (Solderable)
- Front metal: Al (wire bonding), or Ag (soldering)
 - Au metal for front or back are available as non standard process with lot charge.
 - Moly tab assembly available
- (R) reverse polarity die available, such as 1C5554-R

TVS Die

- QPL TVS: 1N6102 - 37, 1N6102A - 37A (90 mil hex)
 - Standard has 10% tolerance, "A" version has 5% tolerance
- Working Voltage: 10 to 152 V
- Power: 500 W (1500W also available, 125 mil hex)
- Unipolar
- Front Metal: Al, Ag or Au
- Back Metal: Ag or Au

Zener Die

- QPL Zener
 - 1N4958 – 89 (90 MIL HEX, 5W)
 - 1N4478 – 94 (36 MIL SQUARE, 1.5W)
 - 1N6300 series (25 MIL SQUARE, .5W)
- Working Voltage: 6.8 to 300V
- Power: 5W, 1.5W AND .5W
- Front Metal: Al, Ag or Au
- Back Metal: Ag or Au
- Polarity: Cathode top or bottom

Schottky Die

- Voltage Range: 15V to 200V
- Current: 1A to 120A
- Chip size: 40, 60, 72, 90, 125, 175, 200, 275 mil²
- Custom sizes available for high volume applications
- Back metal: Ag (Solderable)
- Front metal: Al (for wirebonding) or Ag (for soldering)
- Au metal available as non standard process
- Moly tab assembly

Small Signal Switching Die

- Popular 1C4148, 1C6640, and 1C5711
- Schottky, Planar UFR
- Front Metal: Al, Ag or Au
- Back Metal: Ag or Au

Sensitron can perform Lot Acceptance Testing to the process flow following these quality levels:

- ✓ MIL-PRF-38534, Class H and Class K
- ✓ MIL-PRF-19500, Class H and Class K

Part Number						Slash	Description	Die
1N3595-1						241	Vf Controlled	✓
1N3611	1N3612	1N3613	1N3614	1N3957		228	1A Std Recovery	✓
1N4099-1	to	1N4135-1				435	500mW Zener	✓
1N4148-1						116	Small Signal Switching	✓
1N4245	1N4246	1N4247	1N4248	1N4249		286	1A Std Recovery	✓
1N4460	to	1N4496				406	1.5W Zener	✓
1N4942	1N4944	1N4946	1N4947	1N4948		359	1A Fast Recovery	✓
1N4954	to	1N4996				356	5W Zener	✓
1N5186	1N5187	1N5188	1N5190			424	3A Fast Recovery	✓
1N5415	1N5416	1N5417	1N5418	1N5419	1N5420	411	3A Fast Recovery	✓
1N5550	1N5551	1N5552	1N5553	1N5554		420	3A Std Recovery	✓
1N5614	1N5616	1N5618	1N5620	1N5622		427	1A Std Recovery	✓
1N5615	1N5617	1N5619	1N5621	1N5623		429	1A Fast Recovery	✓
1N5711-1						444	Schottky	✓
1N5802	1N5804	1N5806	1N5807	1N5809	1N5811	477	3A Ultra Fast	✓
1N5819-1						586	1A/45V Schottky	✓
1N6102	to	1N6173A				516	500W/1500W Bi-directional TVS	✓
1N6309	to	1N6355				533	500mW Zener	✓
1N6620	1N6621	1N6622	1N6623	1N6624	1N6625	585	1A Ultra Fast Rectifier HV	✓
1N6626	1N6627	1N6628	1N6629	1N6630	1N6631	590	2A Ultra Fast Rectifier HV	✓
1N6638	1N6642					578	Small Signal Switching	✓
1N6639	1N6640	1N6641				609	Small Signal Switching	✓

** This list is for reference only. For a comprehensive list, view our catalog for download at: www.sensitron.com/dieproducts.htm

Rad MOSFETs, Rad POL Regulators & Arrays

Radiation Hard N-Channel Power MOSFETs

- Part Number: **SRADM Series**
- Single MOSFET, 3 Phase Bridge, Quad Array available
- Total Ionization Dose (TID) hardened up to 100krad (300krad on request)
- SEE up to LET 55@90 μm (Xe) and LET38@279 μm (Xe)
- NASA tested up to LET85@118 μm (Au)

Target Applications, drop in for:

- Buck-Boost converters
- DC/DC or switch mode converters
- Motor control (H-Bridge)

Sensitron Part Number	Industry Equivalent	Max $R_{DS(on)}$	I_{DC}	Min BV_{DSS}	Package	Description
SRADM1001SS	N/A	0.16	12.4	250	22-Lead Flatpack	3-Phase Bridge
SRADM1002SS	IRHQ57214SE	0.45	4.4	250	LCC-28T	Quad Array
SRADM1003SS	IRHMS67260	0.03	45	250	TO-254	Single MOSFET
SRADM1004SS	RHNA67260	0.03	45	250	SMD-2	Single MOSFET
SRADM1005SS	IRHNJ67234	0.13	12.4	250	SMD-0.5	Single MOSFET
SRADM1006SS	IRHY7130CM	0.13	12.4	100	TO-257	Single MOSFET
SRADM1007SS	IRHNJ7130	0.13	12.4	100	SMD-0.5	Single MOSFET
SRADM1008SS	IRHYS67234CM	0.13	12.4	250	TO-257	Single MOSFET
SRADM1009SS	IRHNM57214SE	0.40	4.4	250	LCC-5	Single MOSFET

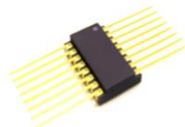
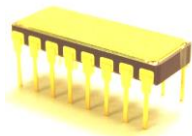


Radiation Hard Point-of-Load Regulators

- Part Number: **SRADP Series**
- 3A Rad hard positive ultra-LDO adjustable voltage regulator
- 100krad(Si)
- 86MeV-cm²/mg SET/SEL/SEB
- 65mV typical at 1.0A
- 225mV typical at 3.0A
- Adjustable overcurrent
- Stable with 47 μF tantalum capacitor



Space Level TVS & Diode Arrays



- | | | | |
|--|---|---|---|
| <p>Part Number: STB Series</p> <ul style="list-style-type: none"> • Uni-directional or Bi-Directional TVS Array • 500W capability for 8/20 μs repetitive pulses • 100% electrically tested for clamp performance • Multichannel hybrid saves board space • Hermetic through hole pkg • Ideal for high speed data lines • Add SS for JANS level screening | <p>Part Number: SDA Series</p> <ul style="list-style-type: none"> • Up to 300V, 1A space level diode array • Devices are serialized • Built and screen to space level quality • Space quality level conformance testing is performed on each lot | <p>Part Number: SCP-6291</p> <ul style="list-style-type: none"> • 400V, 1A diode array • High density, smallest pkg in the industry • Devices are serialized • Built and screened to space level quality. Space quality level conformance testing performed on each lot • Two diodes in series per leg for redundancy | <p>Part Number: SCP-4644</p> <ul style="list-style-type: none"> • 200V space level diode array • High density • Built and screened to space level quality • Devices are serialized |
|--|---|---|---|

Space Level Schottky Rectifier Discretes

Features/Benefits

- ✓ Available voltages: 15V to 200V
- ✓ Ultra low leakage current for 100V and 150V
- ✓ 200 °C process
- ✓ Low forward voltage drop
- ✓ Ceramic feedthroughs standard
- ✓ Wafer fab in-house
- ✓ Fast delivery time



Sensitron provides a variety of packages as drop in replacements for industry standard packages, a selection which can be seen below:

Thru-hole			
Part Number	Volts	Amps	Package
SHD126268	15	15	TO-257
16SYQ030C	30	16	TO-257
35SGQ030	30	35	TO-254
SHD124611	30	45	TO-258
SHD125222	45	15	TO-254
10YQ045	45	15	TO-257
10YQ045C	45	15	TO-257
16YQ045C	45	16	TO-257
25GQ045	45	35	TO-254
35SGQ060	60	35	TO-254
SHD124623	60	45	TO-258
SHD125434	100	30	TO-254
22GQ100	100	45	TO-258
SHD124535	150	45	TO-258
SHD125246	200	15	TO-254
SHD124446	200	30	TO-258
SHD125536	200	35	TO-254

Surface Mount			
Part Number	Volts	Amps	Package
SHD119568	15	45	SMD-1
SHD114668	15	120	SHD-3
SHD120211	30	15	SMD-0.5
SHD114611	30	120	SHD-3
75SLQ030	30	120	SHD-5
SHD176222	45	15	SHD-1High Profile
8EQ045	45	15	SMD-1
30SLJQ045	45	30	SMD-0.5
SHD119512	45	45	SMD-1
120LQ045	45	120	SHD-3
SHD114622	45	120	SHD-3 High Profile
75SLQ045	45	120	SHD-5
75SLQ060	60	75	SMD-1
SHD119513	60	75	SMD-1
SHD118513	60	120	SHD-5
SHD120244	100	15	SMD-0.5
5EQ100	100	15	SMD-1
SHD114544	100	60	SHD-3
120LQ100	100	120	SMD-1
SHD120245	150	15	SMD-0.5
30LJQ150	150	35	SMD-1
SHD119545	150	60	SMD-1

For a complete list of our standard devices, see the parametric search and cross reference guides online at www.sensitron.com

Sensitron offers full space level traceability and serialization!

SiC Power MOSFETs, Discretes & Bridges

Silicon Carbide Power MOSFETs

Part Number	PIV (V)	Max DC Output Current	Operating Temperature(° C) ¹	Package Type
SHD619532	1200V	23A	-55 to +150	LCC-3P
SHD626532	1200V	20A	-55 to +150	TO-257
SHDC626822	1200V	22A	-55 to +150	TO-257
SHDC625822	1200V	31A	-55 to +150	TO-254
SHDC625812	1200V	31A	-55 to +150	TO-257

Silicon Carbide Schottky Rectifier Discretes

Part Number	PIV (V)	Max DC Output Current	Operating Temperature(° C) ¹	Package Type
SHD626160/P/N/D*	300V	20A/ 40A/ 40A/ 20A	-55 to +175	TO-257
SHD625160/P/N/D*	300V	20A/ 40A/ 40A/ 20A	-55 to +175	TO-254
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
SHDC626182/P/N/D*	1200V	2A/ 4A/ 4A/ 2A	-55 to +175	TO-257
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 Rectifier 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 175C.

QUALITY

- ✓ Registered to AS 9100, Revision C
- ✓ Registered to ISO9001:2008
- ✓ MIL-PRF-38534, Class H Qualified
- ✓ MIL-PRF-19500 Certified for JAN, JANTX, & JANTXV Products
- ✓ Mil-PRF-19500 Certified for JANS Products

SENSITRON SEMICONDUCTOR

Part Number:

Product Type:

Products

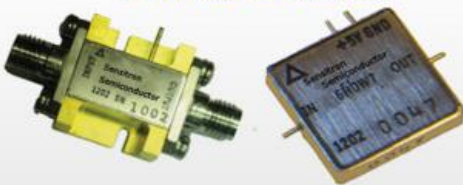
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PRODUCT HIGHLIGHT: RF AMPLIFIERS, LIMITERS & POWER DIVIDERS



Sensitron has added RF devices to our high reliability product portfolio. The RF Broadband Low Noise Amplifiers and Ultra Flat Gain High Linearity Amplifiers form a core product [more...](#)

THE POWER BEHIND YOUR SYSTEM

Sensitron is a leading manufacturer of high reliability power electronic solutions. Markets served include the complete spectrum of high reliability markets including space, aerospace, and defense.

Discrete Diodes and Die Products

JANS, JANTX/V, JAN, Diodes, Zener Diodes, TVS Diodes, Power Rectifier Diodes, Schottky Diodes, Small Signal Switching Diodes, Space Level Diodes, Zener Die, TVS Die, Schottky Rectifier Die, [more...](#)



[learn more](#)

Motor Controllers and Drivers

Fully Integrated Motor Controllers with Ethernet, CAN, Discrete or Analog Controls, MOSFET and IGBT Drivers, Three-Phase Brushless DC Motor Control, Field Oriented Controller, [more...](#)



[learn more](#)

In The News:

November 2013-Sensitron now offers a high pulse power SAE J1113-11 compliant Transzorb for 12Vdc systems. The SAE-5282-12 features [more...](#)

March 2013-Sensitron introduces a lightweight (20oz) all-in-one digital motor controller, EMI filter and heatsink, available in [more...](#)

Power Rectification

Schottky Rectifiers, Discrete Power Rectifier Diodes, SiC Schottky Rectifiers and Bridges, Three Phase Bridge Rectifier Assemblies, Primary Power Generation [more...](#)



[learn more](#)

Solid State Power Management

Multi-Channel Solid State Power Controller boards, Remote Power Controllers, High Current / High Voltage Modules, Solid State Power Controller Modules, Solid State Relays [more...](#)



[learn more](#)

New Product:

SENSITRON SEMICONDUCTOR IS A CERTIFIED JANS FACILITY

Sensitron has received qualification for various JANS, JANTX/V, JAN QPL Diodes, per MIL-PRF-19500 slash sheets including /228, /286, /359, [more...](#)

Products

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