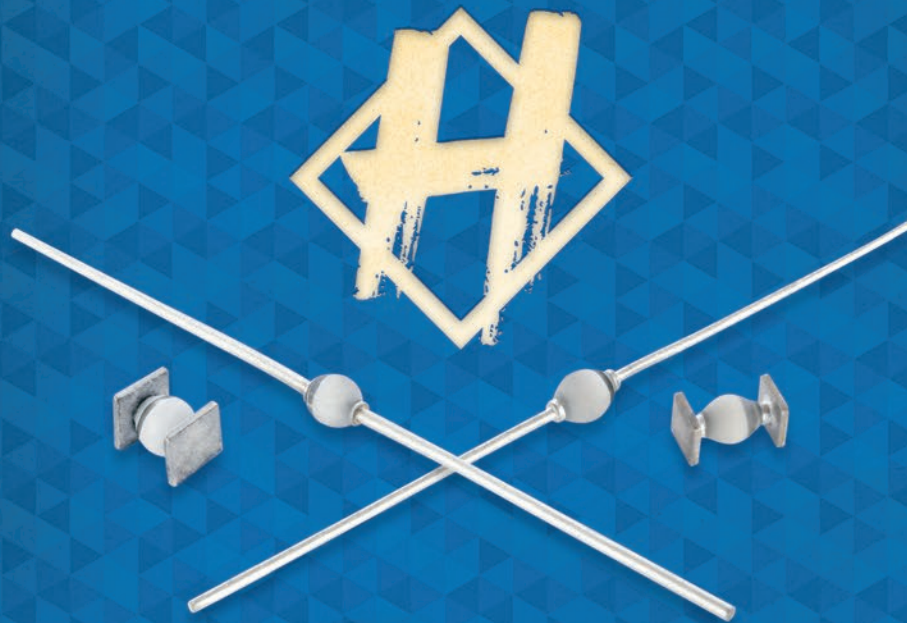


HERMETIC ♦ HIGH CURRENT ♦ HIGH EFFICIENCY
HYPERFAST RECTIFIERS



ENHANCED REPLACEMENTS FOR 1N6620 - 1N6621 (/585)
& 1N6626 - 1N6627 (/590):

SDR8400 SERIES
SDR3350 SERIES
SPD6631 SERIES

SSDI

SOLID STATE DEVICES, INC.

EST. 1967

JANS Certified
ISO 9001 & AS9100 Certified
www.ssdi-power.com

| | |
|---|------------|
| ▪ SDR8400 Series | 3 |
| <i>8 A, 300 - 400 V, 35 ns Hyperfast Rectifier High Current Replacement for 1N6626 - 1N6627</i> | |
| ▪ SDR3350 Series | 4 |
| <i>3 A, 150 - 350 V, 30 ns Hyperfast Rectifier High Current Replacement for 1N6620 - 1N6621</i> | |
| ▪ SPD6631 Series | 5 |
| <i>2.8 - 4 A, 200 - 1200 V, 30 - 60 ns Hyperfast Rectifier High Current Replacement for 1N6626 - 1N6631</i> | |
| ▪ Solid State Devices, Inc. - Company Overview | 6 |
| ▪ High Reliability Screening | 7 |
| <i>*TX, TXV, and S-level screening available for all devices. Screening based on MIL-PRF-19500. Screening flows available on request.</i> | |
| ▪ Sales Representatives / Contact | back cover |



SSDI is JANS certified / ISO 9001 and AS9100 certified

SSDI is a world-renowned leader in the design and manufacture of semiconductors, assemblies, and modules. As a pioneer semiconductor manufacturer for over 50 years, SSDI has earned and maintained a reputation for setting the highest standards of reliability and performance. This reputation has been built upon unsurpassed technology and quality in the areas of high density/high power and high voltage discrete semiconductors and modules.

SSDI currently owns three properties within a 3-mile area in the city of La Mirada, California

For additional information and data sheets:

16961 Knott Ave. La Mirada, CA 90638 | (562) 404-4474 | FAX (562) 404-1773 | ssdi@ssdi-power.com | www.ssdi-power.com



Firestone Facility



Knott Facility



Wafer Fab Facility

The information in this book has been carefully checked and is believed to be accurate; however, no responsibility is assumed for errors or omissions.

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Warnings

Due to technical requirements, components may contain dangerous substances. For information on the types in question, please contact SSDI.

SSDI components may be used in life-support devices or systems only with the express written approval of SSDI. Failure of such components can be reasonably expected to cause the failure of that life-support device or system, or to affect the safety or effectiveness of that device or system. Life support devices or systems are intentionally implanted in a human body, or used to support and/or maintain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.

SDR8400, SDR3350, & SPD6631 Ver 1.00 (09/01/2021) - Entire contents copyright © 2021 Solid State Devices, Inc. All Rights Reserved. No part of this catalog may be reproduced, transmitted, rewritten, scanned, stored mechanically or electronically, translated into other languages, or adapted for any use without the express written permission of Solid State Devices, Inc.

8 A, 300 - 400 V, 35 ns Hyperfast Recovery Rectifier

Features:

- ♦ Hyperfast Reverse Recovery
- ♦ Hermetically Sealed
- ♦ Low Forward Voltage Drop: 0.975 V
- ♦ High Surge Current
- ♦ Void Free Chip Construction
- ♦ For High Efficiency Applications
- ♦ Available in Axial and Square Tab Versions
- ♦ High Current Replacement for 1N6626 - 1N6627
- ♦ TX, TXV, and S-Level Screening Available



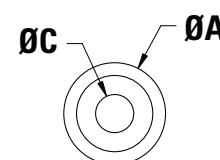
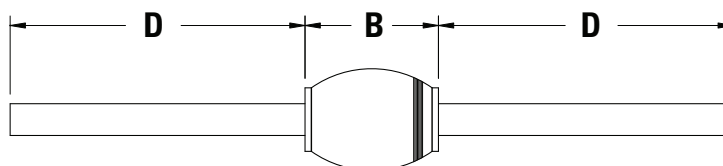
High Current Replacement for 1N6626 - 1N6627

| | SDR8300 - SDR8400 | 1N6626 - 1N6627 (/590) |
|------------------|-------------------|------------------------|
| I_O (A) | 8 | 4 |
| V_R (V) | 300 - 400 | 200 - 400 |
| I_{FSM} (A) | 135 | 75 |
| V_F (V) | 0.975 (@ 8 A) | 1.500 (@ 4 A) |
| I_R (μ A) | 20 | 2 |
| t_{RR} (ns) | 35 | 30 |
| C_J (pF) | 100 | 40 |

Package Outlines

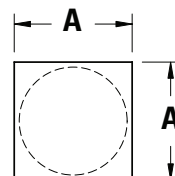
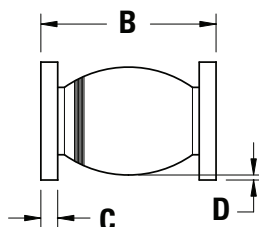
Axial Leaded

| DIM | MIN | MAX |
|-----|--------|--------|
| A | 0.130" | 0.170" |
| B | -- | 0.240" |
| C | 0.038" | 0.042" |
| D | 1.000" | -- |



SMS

| DIM | MIN | MAX |
|-----|--------|--------|
| A | 0.172" | 0.180" |
| B | 0.200" | 0.290" |
| C | 0.020" | 0.035" |
| D | 0.002" | -- |



3 A, 150 - 350 V, 30 ns Hyperfast Recovery Rectifier

Features:

- ♦ Hyperfast Reverse Recovery
- ♦ Hermetically Sealed, Miniature Package
- ♦ Low Capacitance
- ♦ High Surge Current
- ♦ Low Forward Voltage Drop: 0.975 V
- ♦ Low Leakage Current
- ♦ Void Free Chip Construction
- ♦ Available in Axial and Square Tab Versions
- ♦ High Current Replacement for 1N6620 - 1N6621
- ♦ TX, TXV, and S-Level Screening Available



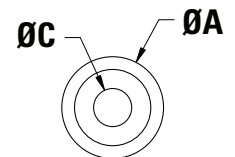
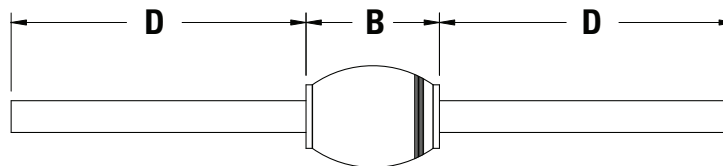
High Current Replacement for 1N6620 - 1N6621

| | SDR3150 - SDR3350 | 1N6620 - 1N6621 (/585) |
|------------------|-------------------|------------------------|
| I_O (A) | 3 | 2 |
| V_R (V) | 150 - 350 | 200 - 400 |
| I_{FSM} (A) | 75 | 20 |
| V_F (V) | 0.975 (@ 3 A) | 1.600 (@ 2 A) |
| I_R (μ A) | 2 | 0.5 |
| t_{RR} (ns) | 30 | 30 |
| C_J (pF) | 45 | 10 |

Package Outlines

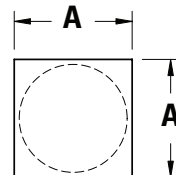
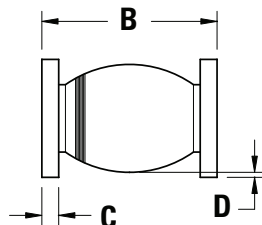
Axial Leaded

| DIM | MIN | MAX |
|-----|--------|--------|
| A | -- | 0.140" |
| B | 0.190" | 0.230" |
| C | 0.027" | 0.033" |
| D | 1.000" | -- |



SMS

| DIM | MIN | MAX |
|-----|--------|--------|
| A | 0.134" | 0.155" |
| B | 0.230" | 0.280" |
| C | 0.022" | 0.028" |
| D | 0.002" | -- |



2.8 - 4 A, 200 - 1200 V, 30 - 60 ns Hyperfast Recovery Rectifier

Features:

- ♦ Hyperfast Reverse Recovery
- ♦ Guaranteed High Temp. trr: 90 - 120 ns max
- ♦ Low Reverse Leakage Current
- ♦ Hermetically Sealed
- ♦ Void Free Construction
- ♦ For High Efficiency Applications
- ♦ Available in Axial Leaded and Square Tab Versions
- ♦ High Current Replacement for 1N6626 - 1N6631
- ♦ TX, TXV, and S-Level Screening Available



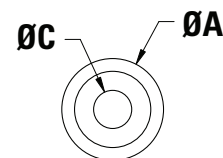
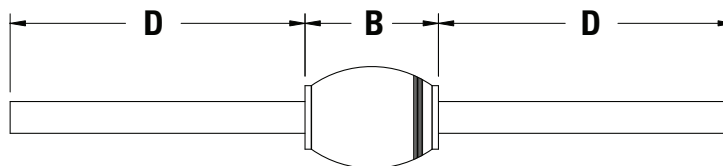
High Current Replacement for 1N6626 - 1N6631

| | SPD6626 - SPD6631B | 1N6626 - 1N6631 (/590) |
|------------------|--|---|
| I_o (A) | 4 (SPD6626 - SPD6628) 2.8 (SPD6629 - SPD6631, A, B) | 2.3 (1N6626 - 1N6628) 1.8 (1N6629 - 1N6631) |
| V_R (V) | 200 - 1200 | 200 - 1000 |
| I_{FSM} (A) | 75 (SPD6626 - SPD6630) 60 (SPD6631, A, B) | 75 (1N6626 - 1N6630) 60 (1N6631) |
| V_F (V) | 1.60 (SPD6626 - SPD6628 @ 4 A) 1.80 (SPD6629 - SPD6630 @ 3 A) 1.95 (SPD6631, A, B @ 2 A) | 1.50 (1N6626 - 1N6628 @ 4 A) 1.70 (1N6629 - 1N6630 @ 3 A) 1.95 (1N6631 @ 2 A) |
| I_R (μ A) | 10 (SPD6626 - SPD6631) 20 (SPD6631A - SPD6631B) | 2 (1N6626 - 1N6630) 4 (1N6631) |
| t_{RR} (ns) | 30 - 60 | 30 - 60 |
| C_J (pF) | 100 (SPD6626) 50 (SPD6627 - SPD6631, A, B) | 40 |

Axial Leaded

| DIM | MIN | MAX |
|---------|--------|--------|
| A | -- | 0.165" |
| B | -- | 0.220" |
| C | 0.047" | 0.053" |
| C (-01) | 0.038" | 0.042" |
| D | 0.950" | -- |

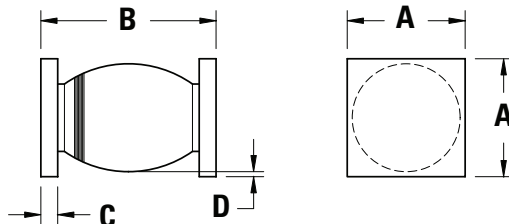
Package Outlines



-01 = Axial with 0.40" lead diameter variant

SMS

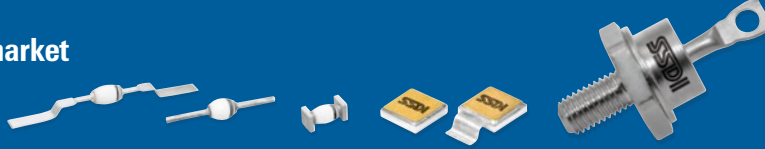
| DIM | MIN | MAX |
|-----|--------|--------|
| A | 0.172" | 0.180" |
| B | 0.180" | 0.280" |
| C | 0.022" | 0.028" |
| D | 0.002" | -- |



SSDI LIFTS PROGRAMS TO NEW HEIGHTS BY FOCUSING ON:

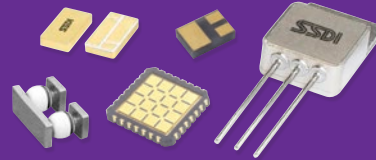
HIGH RELIABILITY

- 50+ years serving the HiRel market
- JANS certified
- ISO 9001 / AS9100 certified



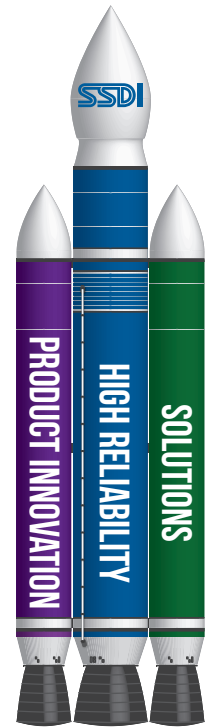
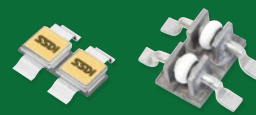
PRODUCT INNOVATION

- **Developing innovative, state of the art products:** *pushing the envelope with performance not matched by other manufacturers' products*
- **Exploring new technology (e.g. GaN, SiC, etc.)**

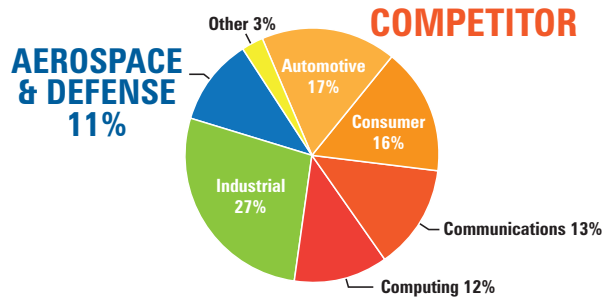
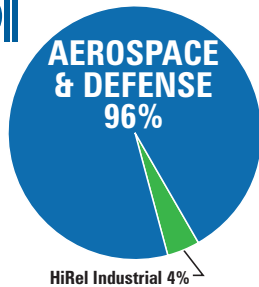


SOLUTIONS

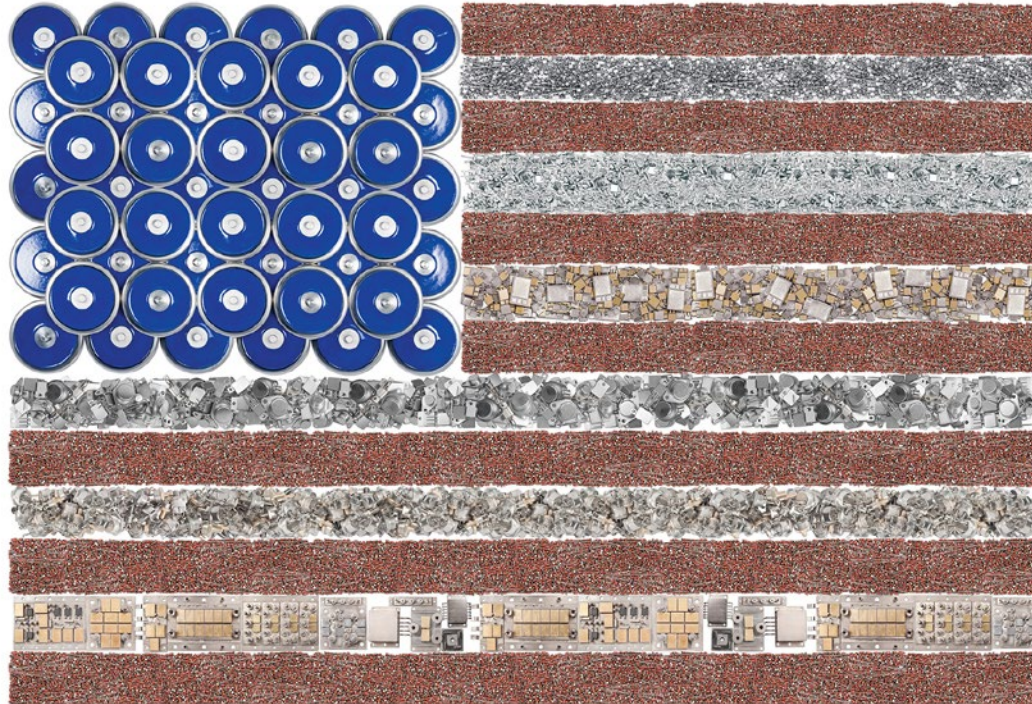
- **Broad Capabilities:** *catalog showcases capability, not limited to current offerings*
- **Design Support / Flexibility:** *make adjustments to satisfy customer requirements*
- **Packaging Flexibility:** *improve density of board design which leads to overall system cost improvements*
- **Sustainment:** *support for the life of the program; work with customer to accommodate small to medium quantities*



2019 SALES BY SECTOR



WIDE RANGE OF HERMETIC PRODUCTS - MADE IN THE USA



SILICON

- Rectifiers
- Schottkys
- Zeners
- TVS
- MOSFETs
- Bipolar Transistors
- JFETs
- PIN Diodes
- Thyristors
- IGBTs

SILICON CARBIDE (SiC)

- Schottkys
- MOSFETs

GALLIUM NITRIDE (GaN)

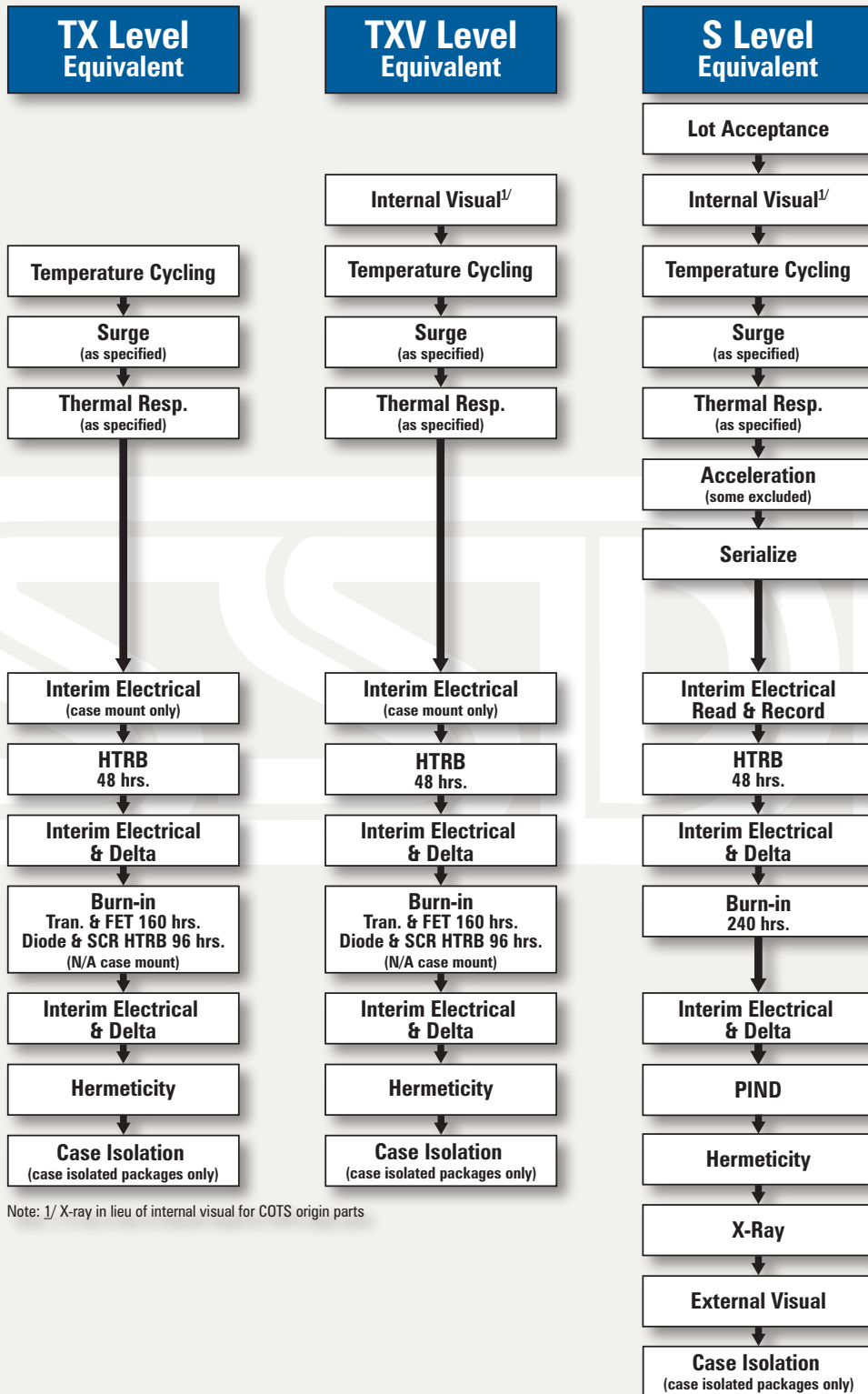
- Power FETs

ASSEMBLY PRODUCTS

- LDO
- DC-DC Converters
- Hybrids
- Assemblies
- Power Modules

*Notes: Minimum order may apply.
Most products available in die form.*

Solid State Devices Screening Per MIL-PRF-19500 Guidelines*

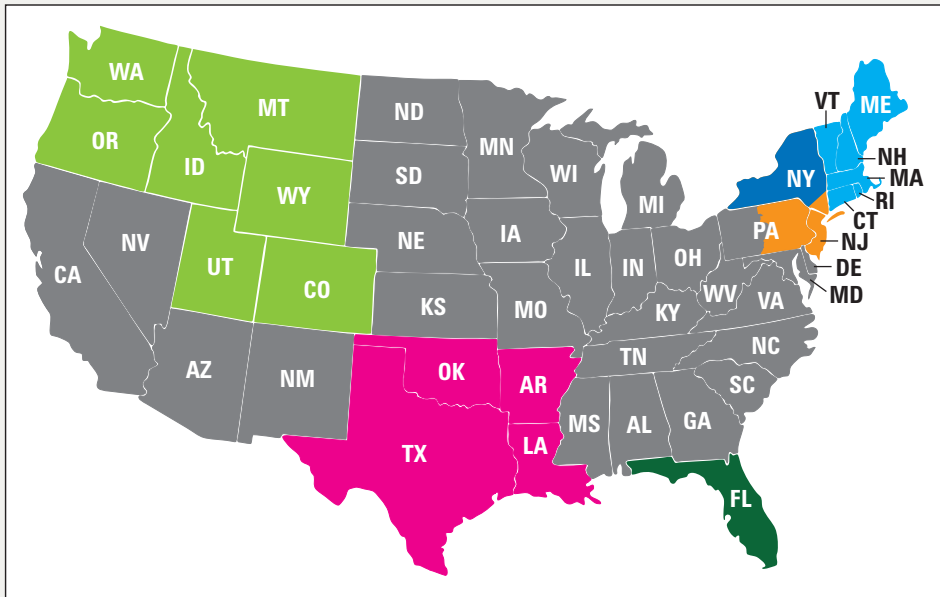


***Specific Product Types May Have Alternate Screening Flows**

Contact your local SSDI Representative or contact the factory directly at (562) 404-4474.

Email: ssdi@ssdi-power.com

Domestic Sales Representatives



Micro Technology Group (CT, ME, MA, NH, RI, VT)

450 Chauncy St., Ste. 3
Mansfield, MA 02048
Phone: 508-337-3388
Website: www.m-t-g.com
sales@mtgelectronics.com

Zimmerman Sales (Upstate NY)

111 Marsh Rd. Office Bldg.
Pittsford, NY 14534
Phone: 585-381-3186
Website: www.zimmermansales.com
sales@zimmermansales.com

Tekmar Sales, Inc. (S. NJ, E. PA)

10 Saddle Brook Court
Dix Hills, NY 11746
Phone: 631-254-9026
Website: www.tekmarsales.com

Straube Associates

(CO, UT, ID, MT, WY, WA, OR)
13401 W. 43rd Dr., Ste. 13,
Golden, CO 80403
Phone: 303-426-0890
Website: straubecompanies.com
main@straubecompanies.com

CentraMark Technical Sales Associates

(TX, OK, AR, LA)
1705 Analog Dr.
Richardson, TX 75081-1944
Phone: 972-414-8188
Website: cmatex.com

FLA. Technology Sales, Inc. (FL)

Phone: 407-421-2366
eFax: 734-939-4411
Email: terry@flatechnology.com

International Sales Representatives

Johnson Group Services (JGS) (United Kingdom, Ireland)

The Ryder Cloisters, 36, Evelyn Rd.
Dunstable, Bedfordshire LU5 4NG
United Kingdom
Phone: +44 (0) 1582 603439
dvjohnson@ssdi-power.co.uk

MES Manz Electronic Systeme OHG (Germany / Austria)

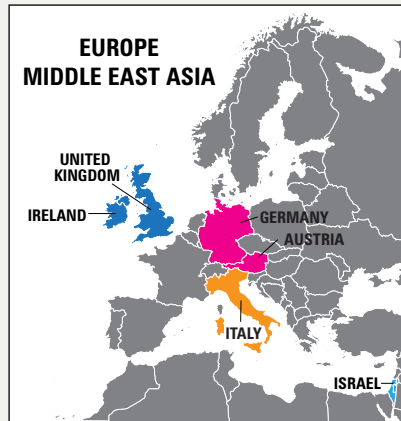
Hauptstrasse 46/1
D-74369 Löchgau, Germany
Phone: +49-7143-4031-0
Website: www.manz-electronic.de
rainer.manz@manz-electronic.de

Milano Brothers (Italy)

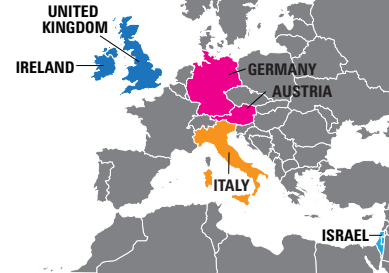
Via Enrico Fermi 79, 00146 Roma, Italy
Phone: +39.338.49.69.298
perugia@milanobro.com
USA Office: 380 SW 12th Ave.
Deerfield Beach, FL 33442
Phone: 954-420-5000

FMS Aerospace Ltd. (Israel)

3 HaBarzel Street
Tel-Aviv 6971005, Israel
Phone: 972-3-6094977
tal@fmsaerospace.com



EUROPE MIDDLE EAST ASIA



Rironic Electronic Tech. Co., Ltd (China)

9th Floor, D Block, He Sheng Jing Guang Ctr.
No. 11, Tang Yan Road, Yan Ta District
XI'AN City, Shaan'Xi Province, China
Phone: +86-029-88377000
Website: www.rironic.com
steven_zhang@rironic.com

Irys Electronics Engineering Services Pvt Ltd. (India)

261/2 Plot 4 & 5, Silver Oak Park
Baner Rd, Pune 411045, Maharashtra, India
Phone: 91 20 2729 1836
irys.india@iryselectronics.com



Sojitz Aerospace (Japan)

Marunouchi Trust Tower Main
4th Floor, 8-3 Marunouchi 1-chome,
Chiyoda-Ku, Tokyo, Japan 100-0005
Phone: +81-(0)3-6870-7221
kodama-koyo@sojitz-aero.com



SOLID STATE DEVICES, INC. | JANS Certified MFR | ISO 9001 & AS9100 Certified
14701 Firestone Blvd., La Mirada, CA 90638 | (562) 404 - 4474 | www.ssdi-power.com