



# Solid State Devices, Inc.

14701 Firestone Blvd \* La Mirada, Ca 90638  
 Phone: (562) 404-4474 \* Fax: (562) 404-1773  
 ssdi@ssdi-power.com \* www.ssdi-power.com

## SDAD103 Series

### 2,500 to 15,000 VOLTS STANDARD RECOVERY STACKABLE HIGH VOLTAGE RECTIFIER

### Designer's Data Sheet

**Part Number/Ordering Information <sup>1/</sup>**  
**SDAD10 3**

**Screening <sup>2/</sup>**  
 \_\_\_ = Not Screened  
 TX = TX Level  
 TXV = TXV Level  
 S = S Level

**Reverse Recovery Time**  
 \_\_\_ = Standard Recovery Time

**Voltage** 2.5 = 2.5kV, 5 = 5kV,  
 7.5 = 7.5kV, 10 = 10kV, and  
 15 = 15kV

**Power Rating** (See Below)

**Package Size** = 3 Inches Diameter

- FEATURES:**
- Stackable to 600 kV+
  - PIV 2.5kV to 15kV
  - High Current Ratings
  - Standard Reverse Recovery Time
  - Void-free, Hermetically Sealed Diode Cells
  - Controlled Avalanche
  - Modular Design for Easy Stacking
  - Storage and Operating Temps -65°C to +150°C
  - Available in Fast, Ultra Fast and Hyper Fast Versions
  - TX, TXV, and S-Level Screening Available <sup>2/</sup>
  - Direct Replacement Upgrade – Microsemi / Unitorde type UGE-2.5 through type UGB-10 and 1N5603

### ELECTRICAL CHARACTERISTICS <sup>3/</sup>

Part Number	Peak Inverse Voltage	Reverse Recovery Time <sup>5/</sup>	Average DC Output Current Tc = Case Temperature <sup>4/</sup>			Surge Non-repetitive	Maximum Forward Voltage Drop		Maximum Leakage Current @PIV	Replacement Part Number
	PIV (KV)	Max (ns)	If (avg)			Ifsm	Vf (V)	If (A)	Ir (uA)	
	25 °C	25 °C	75 °C	50 °C	60 °C	100 °C	25 °C		25 °C	
SDAD103E2.5	2.5	5000	6.60	10.0	8.25	200	5.0	3.30	10	UGE-2.5
SDAD103E5.0	5.0	5000	5.00	7.50	6.25	200	10	2.5	15	UGE-5 1N5603
SDAD103 B 5.0	5.0	5000	4.40	6.60	5.50	100	9.0	2.2	5	UGB-5
SDAD103 E 7.5	7.5	5000	3.30	5.00	4.10	200	13	1.6	10	UGE-7.5
SDAD103 B 7.5	7.5	5000	3.00	4.80	3.75	100	13	1.5	5	UGB-7.5
SDAD103 B 10	10	5000	2.30	3.50	2.85	100	17	1.1	5	UGB-10
SDAD103 A 15	15	5000	1.54	2.07	1.84	30	25	0.72	2	---
High Current Versions										
SDAD103 H 2.5	2.5	5000	12.2	20.0	16.5	300	3.10	10	30	---
SDAD103 H 5.0	5.0	5000	10.0	15.0	12.5	300	6.20	8.0	30	---
SDAD103 H 7.5	7.5	5000	6.60	10.0	8.20	250	8.45	5.0	20	---
SDAD103 H 10	10	5000	4.60	7.0	5.70	150	12.1	3.5	10	---
SDAD103 H 15	15	5000	3.08	4.14	3.68	125	16.8	2.8	10	---

#### SDAD103 Package:

**NOTES:**

- 1/ For Ordering Information, Price, Curves, and Availability- Contact Factory.
- 2/ Screening based on MIL-PRF-19500. Screening flows available on request.
- 3/ Unless Otherwise Specified, All Electrical Characteristics @25°C.
- 4/ Tc = 50 °C typical operation in oil.  
 Tc = 75 °C is typical ambient Ta = 25 °C unheatsunk.  
 Tc = 60 °C typical operation with extender plates in air.
- 5/ Recovery Conditions: If = 0.5 Amp, Ir = 1.0 Amp rec. to .25 Amp.

