



**Solid State Devices, Inc.**

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**SDAD103 F Series**

**2,500 to 15,000 VOLTS  
 FAST 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  
 S = S Level

**+ Reverse Recovery Time <sup>4/ 5/</sup>**  
 F = Fast Recovery Time

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

**+ Power Rating** (See Below)

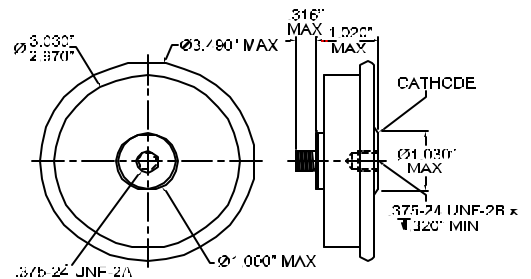
**+ Package Size** = 3 Inches Diameter

- FEATURES:**
- Stackable to 160kV
  - PIV 2.5kV to 15kV
  - High Current Ratings
  - Fast Reverse Recovery Time
  - Only Hermetically Sealed Rectifiers Used
  - Controlled Avalanche Rated
  - Modular Design for Easy Stacking
  - Storage and Operating Temps -65 °C to +150 °C
  - Available in Ultra Fast and Hyper Fast Versions
  - Replacement Upgrade - Unitorde types UGF-2.5 through UGC-15
  - TX, TXV, and S-Level Screening Available <sup>2/</sup>

**ELECTRICAL CHARACTERISTICS <sup>3/</sup>**

Part Number	Peak Inverse Voltage	Reverse Recovery Time <sup>5/</sup>	Average DC Output Current <sup>4/</sup> Tc = Case Temperature			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	
SDAD103 F 2.5 F	2.5	500	5.00	8.00	6.25	150	6.0	2.5	10	UGF-2.5
SDAD103 F 5.0 F	5.0	500	3.75	6.00	4.70	150	11	1.8	10	UGF-5
SDAD103 D 5.0 F	5.0	500	3.30	4.80	4.10	80	11	1.6	5	UGD-5
SDAD103 F 7.5 F	7.5	500	2.50	4.00	3.10	150	17	1.2	10	UGF-7.5
SDAD103 D 7.5 F	7.5	500	2.25	3.50	2.80	80	17	1.1	5	UGD-7.5
SDAD103 D 10 F	10	500	1.75	2.50	2.20	80	22	0.85	5	UGD-10
SDAD103 C 15 F	15	500	1.18	1.67	1.47	30	27	0.65	5	UGC-15
High Current Versions										
SDAD103 H 2.5 F	2.5	500	10.0	16.0	12.5	200	3.30	8.0	30	---
SDAD103 H 5.0 F	5.0	500	7.50	12.0	9.40	200	6.80	6.2	30	---
SDAD103 H 7.5 F	7.5	500	5.00	8.00	6.20	200	8.65	4.0	20	---
SDAD103 H 10 F	10	500	3.50	5.00	4.40	125	12.0	2.5	10	---
SDAD103 H 15 F	15	500	2.36	3.33	2.94	125	17.2	1.6	10	---

**SDAD103 Package:**



**NOTES:**

- <sup>1/</sup> For Ordering Information, Price, Curves, and Availability- Contact Factory.
- <sup>2/</sup> Screened to MIL-PRF-19500.
- <sup>3/</sup> Unless Otherwise Specified, All Electrical Characteristics @25°C.
- <sup>4/</sup> 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.
- <sup>5/</sup> Recovery Conditions: I<sub>F</sub> = 0.5 Amp, I<sub>R</sub> = 1.0 Amp rec. to .25 Amp.

**NOTE:** All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.

**DATA SHEET #: RA0065B**

**DOC**