



# Solid State Devices, Inc.

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## SDAD101 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 1

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

**Reverse Recovery Time**  
 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** = 1 Inch Diameter

- FEATURES:**
- Stackable to 600 kV+
  - PIV 2.5 kV to 15 kV
  - 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 Standard, Ultra Fast and Hyper Fast Versions
  - TX, TXV, and S-Level Screening Available <sup>2/</sup>
  - Replacement Upgrade – Microsemi / Unitrode Types UFB2.5 Through UFS10

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

Part Number	Peak Inverse Voltage	Reverse Recovery Time <sup>5/</sup>	Average DC Output Current <sup>4/</sup>		Surge Non-repetitive	Maximum Forward Voltage Drop		Maximum Leakage Current @ PIV	Replacement Part Number
	PIV (kV)	Max (ns)	I <sub>f</sub> (avg)			V <sub>f</sub> (V)	I <sub>f</sub> (A)		
	25 °C	25 °C	75 °C	50 °C		100 °C	25 °C		
SDAD101 B 2.5 F	2.5	500	0.90	2.00	70	6.0	0.90	10	UFB-2.5
SDAD101 B 5.0 F	5.0	500	0.58	1.30	70	12.0	0.60	10	UFB-5
SDAD101 S 5.0 F	5.0	500	0.50	0.90	20	12.0	0.50	5	UFS-5
SDAD101 B 7.5 F	7.5	500	0.45	1.00	70	18.0	0.40	10	UFB-7.5
SDAD101 S 7.5 F	7.5	500	0.38	0.75	20	18.0	0.40	5	UFS-7.5
SDAD101 S 10 F	10	500	0.30	0.58	20	23.0	0.30	5	UFS-10
<b>High Current Versions</b>									
SDAD101 H 2.5 F	2.5	500	1.80	4.00	150	3.6	1.8	10	---
SDAD101 H 5.0 F	5.0	500	1.06	2.60	150	6.1	1.1	10	---
SDAD101 H 7.5 F	7.5	500	0.90	2.00	150	9.0	0.9	10	---
SDAD101 H 10 F	10	500	0.76	1.50	150	11.8	0.8	10	---
SDAD101 H 15 F	15	500	0.60	1.06	30	17.2	0.5	10	---

**SDAD101 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/ T<sub>c</sub> = 50 °C typical operation in oil.  
T<sub>c</sub> = 75 °C is typical ambient T<sub>a</sub> = 25 °C unheatsunk.
- 5/ Recovery Conditions: I<sub>F</sub> = 0.5 Amp, I<sub>R</sub> = 1.0 Amp rec. to .25 Amp.

