



Solid State Devices, Inc.

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SDAD102 F Series

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

Designer's Data Sheet

Part Number/Ordering Information ^{1/}
 SDAD10 2

Screening ^{2/}
 ___ = 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 = 2 Inches Diameter

- FEATURES:**
- Stackable to 600 kV+
 - PIV 2.5 kV to 15 kV
 - 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 Standard, Ultra Fast and Hyper Fast Versions
 - Replacement Upgrade- Microsemi / Unitrode types UDF-2.5 through UDC-15
 - TX, TXV, and S-Level Screening Available ^{2/}

ELECTRICAL CHARACTERISTICS ^{3/}

Part Number	Peak Inverse Voltage	Maximum Reverse Recovery Time ^{5/}	Average DC Output Current ^{4/} T _C = Case Temperature			Surge Non-repetitive	Maximum Forward Voltage Drop		Maximum Leakage Current @ PIV	Replacement Part Number
	PIV (kV)	t _{RR} (ns)	I _{F(avg)} (A)			I _{FSM} (A)	V _F (V)	I _F (A)	I _R (μA)	
	25°C	25°C	75°C	50°C	60°C	100°C	25°C		25°C	
SDAD102 F 2.5 F	2.5	500	4.50	5.30	5.00	150	6.0	2.2	10	UDF-2.5
SDAD102 D 2.5 F	2.5	500	2.25	3.30	2.80	80	6.0	1.2	5	UDD-2.5
SDAD102 F 5.0 F	5.0	500	3.30	4.40	4.00	150	11	1.6	10	UDF-5
SDAD102 D 5.0 F	5.0	500	1.50	2.00	1.85	80	11	0.75	5	UDD-5
SDAD102 C 5.0 F	5.0	500	1.20	1.70	1.50	25	10	0.70	2	UDC-5
SDAD102 D 7.5 F	7.5	500	1.00	1.50	1.25	80	17	0.50	5	UDD-7.5
SDAD102 C 7.5 F	7.5	500	0.90	1.25	1.10	25	15	0.50	2	UDC-7.5
SDAD102 C 10 F	10	500	0.75	1.00	0.90	25	20	0.37	2	UDC-10
SDAD102 C 15 F	15	500	0.50	0.70	0.60	25	30	0.25	2	UDC-15
High Current Versions										
SDAD102 H 2.5 F	2.5	500	9.00	10.6	10.0	150	4.05	7.0	20	---
SDAD102 H 5.0 F	5.0	500	6.60	8.80	8.00	150	7.20	5.0	20	---
SDAD102 H 7.5 F	7.5	500	2.00	3.00	2.50	80	9.6	1.7	10	---
SDAD102 H 10 F	10	500	1.50	2.00	1.80	50	12.0	1.3	10	---
SDAD102 H 15 F	15	500	1.00	1.40	1.20	50	17.2	0.8	10	---

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_C = 50°C typical operation in oil.
 T_C = 75°C is typical ambient T_A = 25°C unheatsunk.
 T_C = 60°C typical operation with extender plates in air.
- 5/** Recovery Conditions: I_F = 0.5 Amp, I_R = 1.0 Amp rec. to .25 Amp.

SDAD102 Package:

