Solid State Devices, Inc.
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SDA480AD thru SDA480FP

HIGH RELIABILITY

20 AMP, 50 – 300 VOLTS
ULTRA FAST RECOVERY
DOUBLER/CENTER TAP RECTIFIER ASSEMBLY

Designer's Data Sheet

Part Number/Ordering Information [1/]

SDA480 ___ ___ ___

Screening [2/]
__ = Not Screened
TX = TX Level
TXV = TXV
S = S Level

Configuration
N = Common Anode
P = Common Cathode
D = Doubler

Peak Inverse Voltage (per leg)
A = 50V, B = 100V, C = 150V, D = 200V,
E = 250V, and F = 300V.

FEATURES:

- **Average Output Current 25 Amps @ 55°C**
- **PIV 50 to 300 Volts Per Leg**
- **High Surge 150 Amps**
- **Ultra Fast Reverse Recovery Time 40 ns Max**
- **Hermetically Sealed Discretes**
- **Thermally Superior Encapsulation**
- **Aluminum Case, Electrically Isolated**
- **Choice of Spade, Hook, or Turret Terminals**
- **Available in Higher Voltages**
- **Available in Standard, Fast, and Hyper Fast Recovery Times**
- **TX, TXV, or S-Level Screening Available**

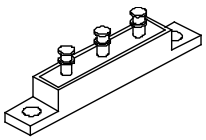
MAXIMUM RATINGS

Part Number	Peak Repetitive Reverse Voltage (per leg) And DC Blocking Voltage (per leg)	RMS Reverse Voltage (per leg)	Reverse[3/] Recovery Time	Half Wave Rectified Forward Current, Averaged Over Full Cycle[4/]	Peak Repetitive Forward Current[5/]	Peak Surge Current[6/]	Operating and Storage Temperature	Thermal Resistance Junction to Case
Symbol	$V_{RM\ (rep)}$ V_R	V_r	T_{rr}	I_O	$I_{FM\ (rep)}$	$I_{FM\ (surge)}$	T_J T_{stg}	$R_{\theta JC}$
Units	**Volts**	**Volts**	**ns**	**Amps**	**Amps**	**Amps**	**°C**	**°C/W**
SDA480A(*)	50	35	40	20	75	150	- 65 to +150	6.0
SDA480B(*)	100	70	40	20	75	150	- 65 to +150	6.0
SDA480C(*)	150	105	40	20	75	150	- 65 to +150	6.0
SDA480D(*)	200	140	40	20	75	150	- 65 to +150	6.0
SDA480E(*)	250	175	40	20	75	150	- 65 to +150	6.0
SDA480F(*)	300	210	40	20	75	150	- 65 to +150	6.0

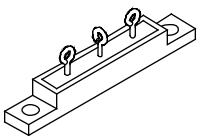
* N, P, or D- Terminal Configurations: See Figure 1.

NOTES: 1. For Ordering Information, Price, and Availability- Contact Factory.
2. Screening per MIL-PRF-19500.
3. Recovery Conditions: I_F = 0.5 Amp, I_R = 1.0 Amp rec. to .25 Amp.
4. Resistive Load, 60Hz, Sine Wave, T_C=55°C.
5. T_C = 55°C, 8.3 ms Pulse, Allow Junction to Reach Equilibrium Between Pulses.
6. T_C = 55°C, Superimposed on Rated Current at Rated Voltage, 8.3 ms Pulse.

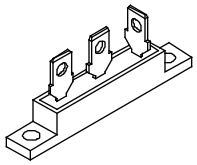
SDA 480 with Turret Terminals:



SDA 480 with Hook Terminals:



SDA 480 with Spade Terminals:



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ELECTRICAL CHARACTERISTICS (Per Leg)

Part Number	Max Full Cycle Forward Voltage Drop, Averaged Over Full Cycle	Max Instantaneous Forward Voltage Drop	Max Full Cycle Reverse Leakage Current, Averaged Over Full Cycle	Max Reverse Leakage Current	Max Junction Capacitance
Symbol	$V_{F\ (AV)}$	V_F	$I_{R\ (AV)}$	I_R	C_J
Units	**Vdc**	**Vdc**	**µAdc**	**µAdc**	**pf**
Conditions	I_O (Max), 60hz Square Wave, T_C = 55°C	I_f = 6 Amps, T_C = 25°C , 300us Pulse	Rated V_R, 60Hz, Square Wave, T_C = 25°C	Rated V_R , T_C = 100°C	V_R = 10V, T_C = 25°C
SDA480A(*)	0.5	0.95	5	200	100
SDA480B(*)	0.5	0.95	5	200	100
SDA480C(*)	0.5	0.95	5	200	100
SDA480D(*)	0.5	0.95	5	200	100
SDA480E(*)	0.5	0.95	5	200	100
SDA480F(*)	0.5	0.95	5	200	100

* N, P, or D- Terminal Configurations: See Figure 1.

SDA480AD through SDA480FP*:

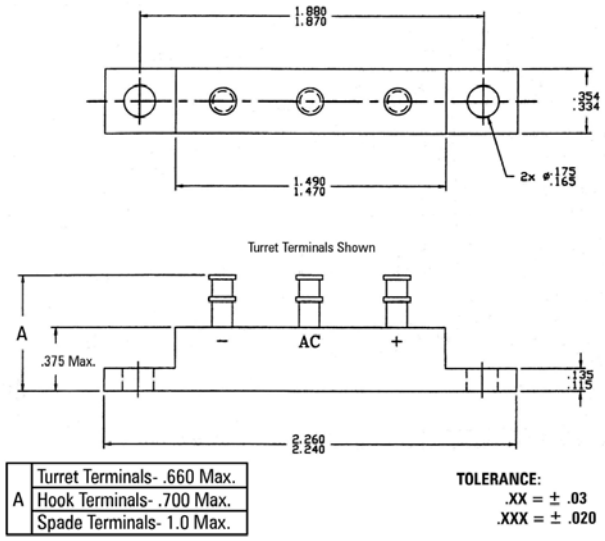
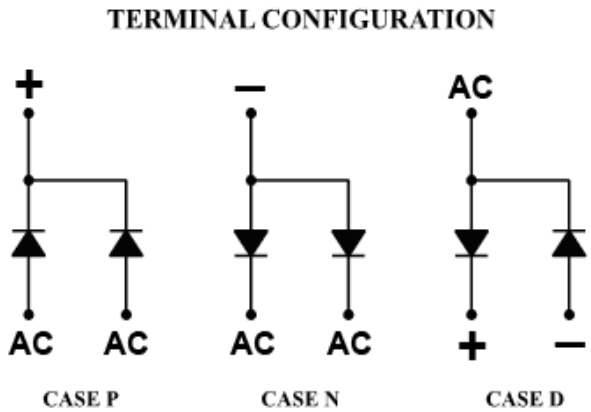


FIGURE 1:



*For information on curves, contact the Factory Representative for Engineering Assistance.