Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
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SDA345

ULTRA FAST RECOVERY HIGH VOLTAGE ASSEMBLY

Up To 18KV @ 250mA

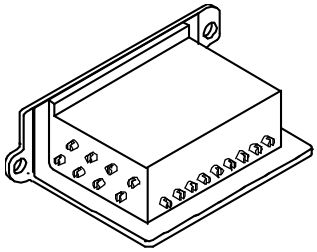
125KHz Operating Frequency

Designer's Data Sheet

Part Number/Ordering Information 1/

SDA345 __

└ Screening 2/
__ = Not Screened
TX = TX Level
TXV = TXV
S = S Level



FEATURES:

- **Designed For Use With High Voltage Switching Power Supplies**
- **Discretes and Assemblies Screened to TX, TXV, or S Level**
- **High Reverse Transient Energy Capabilities**
- **Void Free, Hermetically Sealed, Metallurgically Bonded Discretes**
- **Single Junction Discretes Provide Superior Thermal Properties Than Designs Using Multi-junction Discretes**
- **Isolated Aluminum Heat Sink with Special Epoxy Encapsulation Provides Superior Power Dissipation**
- **All Internal Devices are Matched & Selected**
- **Unique Construction Techniques Guarantee 100% Corona Free Operation**
- **Consult Factory for Higher Voltages and Currents and Alternate Bridge Configurations**

MAXIMUM RATINGS PER LEG

Rating 1/	Symbol	Value	Unit
Peak Repetitive Reverse Voltage and DC Blocking Voltage	VRM(rep) Vr	3,000	Volts
RMS Reverse Voltage	Vr	2,100	Volts
Half Wave Rectified Forward Current Averaged Over Full Cycle 2/	I_O	1	Amps
Peak Repetitive Forward Current 3/	IFM(rep)	6	Amps
Peak Surge Current 4/	IFM(surge)	25	Amps
Operating & Storage Temperature	TJ, Tstg	-55 to +125	^{O}C
Reverse Recovery Time 5/	trr	60	ns

ELECTRICAL CHARACTERISTICS PER LEG

Characteristic 1/	Symbol	Value	Unit
Max. Full Cycle Forward Voltage Drop, Averaged Over Full Cycle 6/	VF (AV)	2.85	Vdc
Max. Instantaneous Forward Voltage Drop 7/	VF	5.7	Vdc
Max. Full Cycle Leakage Current Averaged Over Full Cycle 8/	I_R (AV)	100	µAdc
Max. Reverse Leakage Current 9/	I_R	5	µAdc
Max. Junction Capacitance 10/	CJ	4	pf

NOTES:

1/ Unless Otherwise Specified, All Electrical Characteristics @25ºC.
2/ Resistive Load, 50Hz, Sine Wave, TC=25^{O}C.
3/ TC=55^{O}C, 8.3ms Pulse, Allow Junction to Reach Equilibrium Between Pulses.
4/ TC=55^{O}C, 8.3ms Pulse, Superimposed on Rated Current at Rated Voltage.
5/ Recovery Conditions: I_F = 0.5 Amp, I_R = 1.0 Amp rec. to .25 Amp, tested on each individual diode before assembly.
6/ IO (MAX), 60Hz, Square Wave, TC = 55^{O}C.
7/ IF = 1 Adc, TC = 25^{O}C, 300 µs Pulse.
8/ Rated VR, 60Hz, Square Wave, TC = 100^{O}C.
9/ Rated VR, TC = 25^{O}C.
10/ VR = 100V, TC = 25^{O}C.

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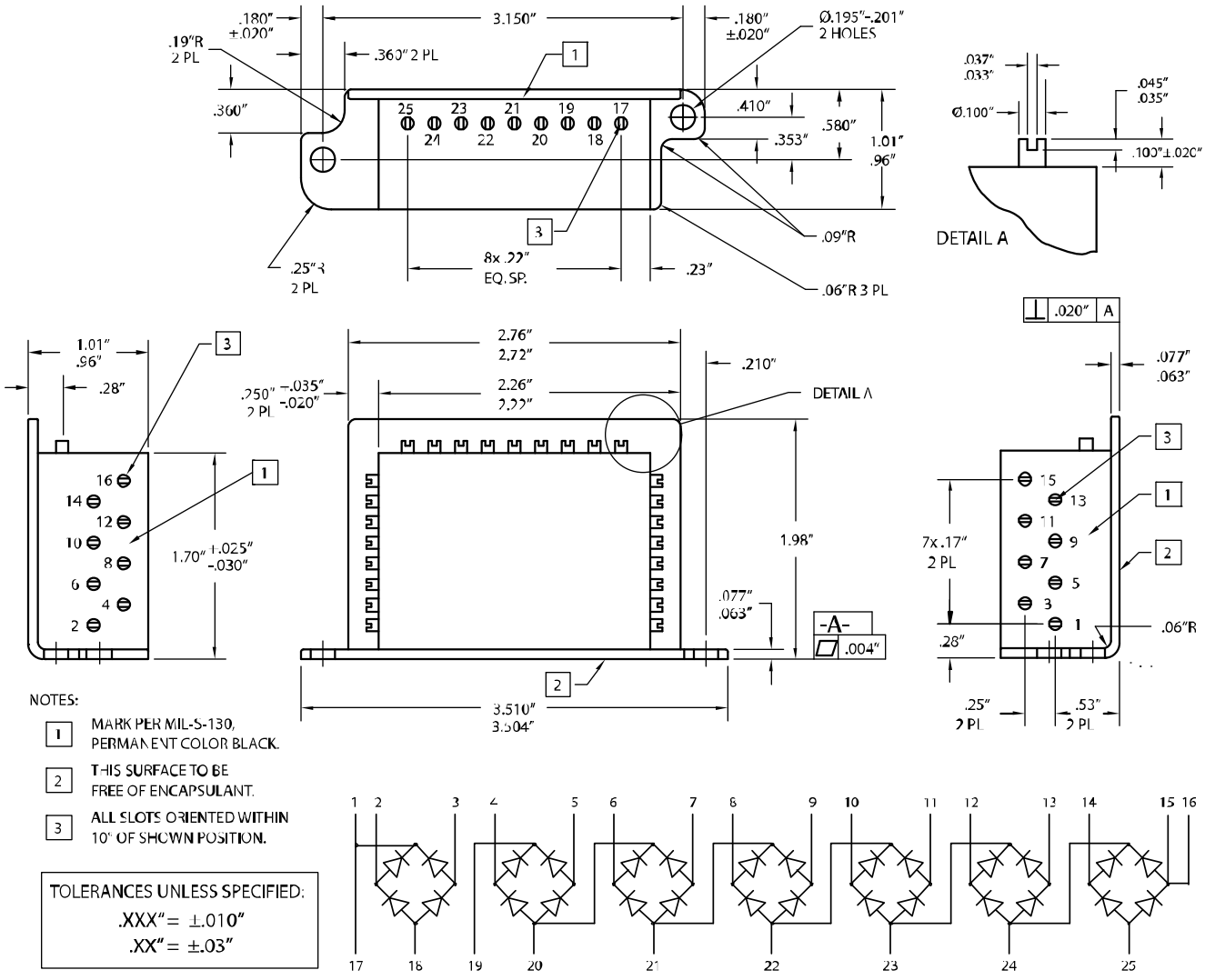
SDA345 OUTLINE and SCHEMATIC DRAWING:



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