



Solid State Devices, Inc.

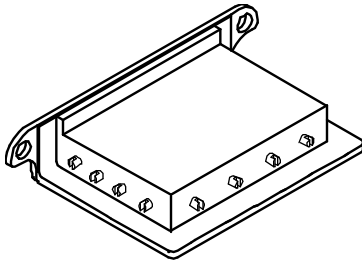
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Designer's Data Sheet

Part Number/Ordering Information 1/

SDA346

— Screening 2/
 L = Not Screened
 TX = TX Level
 TXV = TXV
 S = S Level



SDA346

ULTRA FAST RECOVERY HIGH VOLTAGE ASSEMBLY

Up To 30KV @ 250mA
 125KHz Operating Frequency

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	10,000	Volts
RMS Reverse Voltage	Vr	7,000	Volts
Half Wave Rectified Forward Current Averaged Over Full Cycle ^{2/}	IO	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	°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)	7.0	Vdc
Max. Instantaneous Forward Voltage Drop ^{7/}	VF	14.5	Vdc
Max. Full Cycle Leakage Current Averaged Over Full Cycle ^{8/}	IR (AV)	100	µAdc
Max. Reverse Leakage Current ^{9/}	IR	5	µAdc
Max. Junction Capacitance ^{10/}	CJ	1.5	pf

NOTES:

1. Unless Otherwise Specified, All Electrical Characteristics @25°C.
2. Resistive Load, 60Hz, Sine Wave, TC=25°C.
3. TC=55°C, 8.3ms Pulse, Allow Junction to Reach Equilibrium Between Pulses.
4. TC=55°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°C.
7. IF = 1 Adc, TC = 25°C, 300 µs Pulse.
8. Rated VR, 60Hz, Square Wave, TC = 100°C.
9. Rated VR, TC = 25°C.
10. VR = 100V, TC = 25°C.

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

DATA SHEET #: RA0073A

DOC

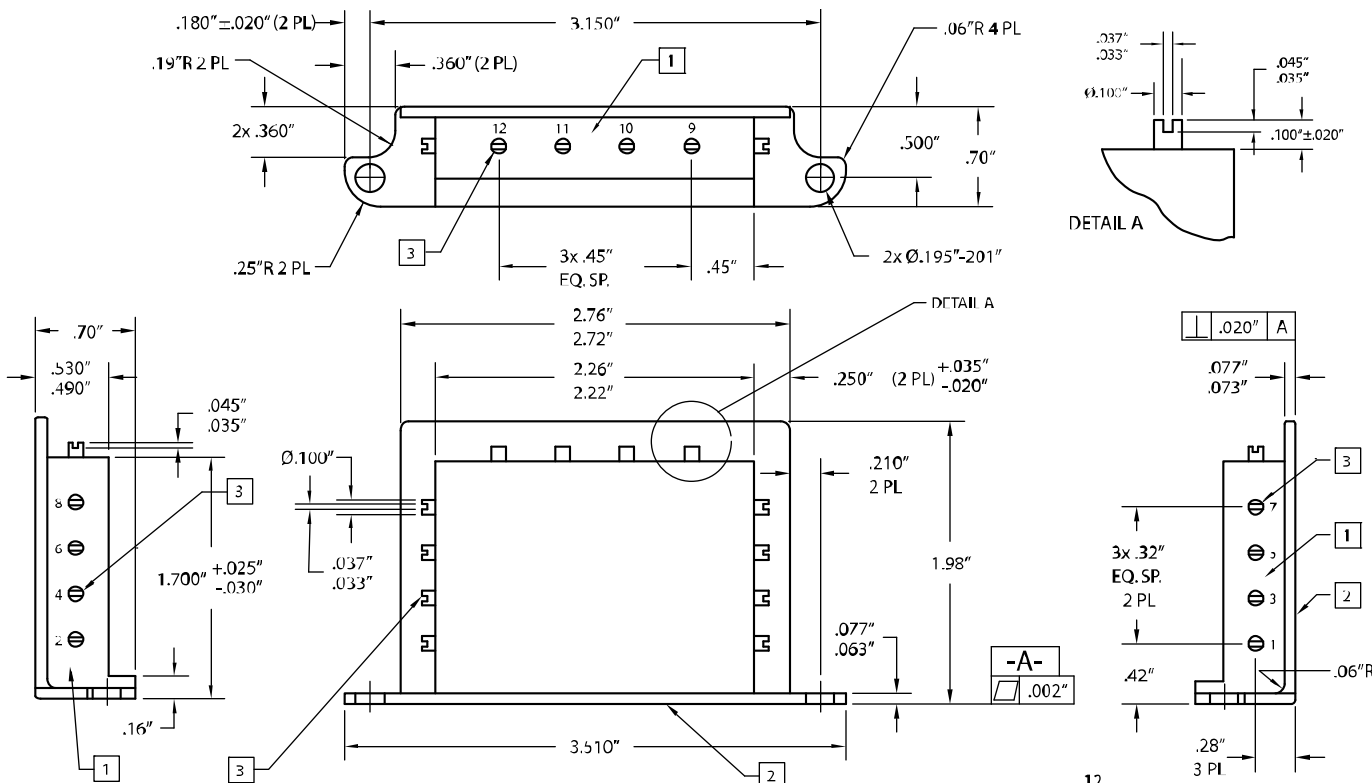


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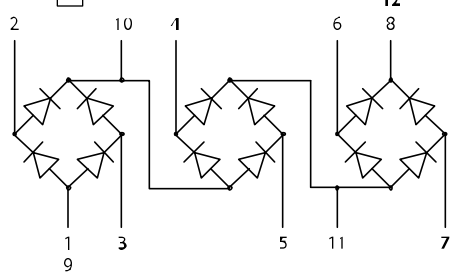
SDA346

SDA346 Outline and Schematic Drawing*:



- NOTES:
- 1 MARK PFR MII-S-130, PERMANENT COLOR BLACK.
 - 2 THIS SURFACE TO BE FREE OF ENCAPSULANT.
 - 3 ALL SLOTS ORIENTED WITHIN 10° OF SHOWN POSITION.

TOLERANCES UNLESS SPECIFIED:
 .XXX" = ±.010"
 .XX" = ±.03"



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