



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
 Phone: (562) 404-4474 * Fax: (562) 404-1773
 ssdi@ssdi-power.com * www.ssdi-power.com

SDA160A thru SDA160F

40 AMPS 50 – 300 VOLTS HYPER FAST RECOVERY THREE PHASE BRIDGE RECTIFIER

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SDA160

Screening ^{2/}

— = Not Screened

TX = TX Level

TXV = TXV

S = S Level

Terminals

— = Spade Terminals

T = Turret Terminals

Peak Inverse Voltage (per leg)

A = 50V, B = 100V, C = 150V,

D = 200V, E = 250V, F = 300V,

FEATURES:

- Hyper Fast Reverse Recovery Time 40 ns Max ^{4/}
- Average Output Current 40 Amps @ 55°C
- PIV 50 to 300 Volts Per Leg
- Available with Turret or Spade Terminals
- High Surge Rating- 250A
- Thermally Superior Encapsulant
- Hermetically Sealed Diode Cells
- Replacement for Unitrode 800 Series
- Aluminum Case, Electrically Insulated
- Available in Higher Voltages
- Available in Hyper Fast Recovery Times

MAXIMUM RATINGS ^{3/}

RATING	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage ^{5/} (per leg) And DC Blocking Voltage (per leg)	SDA160A SDA160B SDA160C SDA160D SDA160E SDA160F $V_{RM(Rep)}$ V_R	50 100 150 200 250 300	Volts
Half Wave Rectified Forward Current, Averaged Over Full Cycle (Resistive Load, 60 Hz, Sine Wave, T _C = 55°C)	I_O	40	Amps
Peak Repetitive Forward Current (per leg) (T _C = 55°C, 8.3 msec Pulse, Allow Junction to Reach Equilibrium Between Pulses)	$I_{FM(Rep)}$	150	Amps
Peak Surge Current (per assembly) (T _C = 55°C, Superimposed on Rated Current at Rated Voltage, 8.3 msec Pulse)	$I_{FM(SURGE)}$	250	Amps
Operating & Storage Temperature	T _{OP} and T _{STG}	-65 to +150	°C
Thermal Resistance, Junction to Case	R _{θJC}	1.5	°C/W

SDA160 Packages:

NOTES:

^{1/} For Ordering Information, Price, and Availability-Contact Factory.

^{2/} Screened to MIL-PRF-19500.

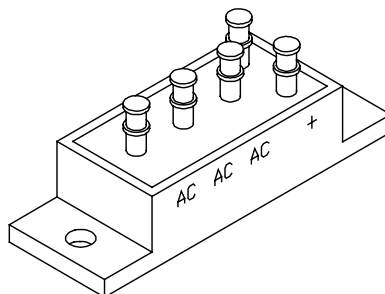
^{3/} Unless Otherwise Specified,
All Electrical Characteristics @25°C.

^{4/} Recovery Conditions:

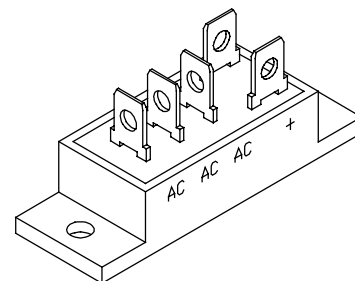
I_F = 0.5 Amp, I_R = 1.0 Amp rec. to .25 Amp.

^{5/} For RMS Reverse Voltage, multiply V_R values by .707

Turret Terminals:



Spade Terminals:



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

DATA SHEET #: RA0089A

DOC



Solid State Devices, Inc.

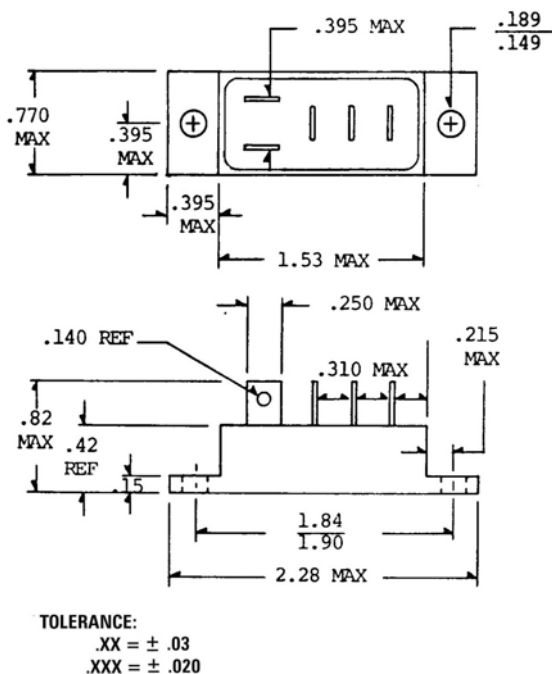
14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

SDA160A thru SD160F

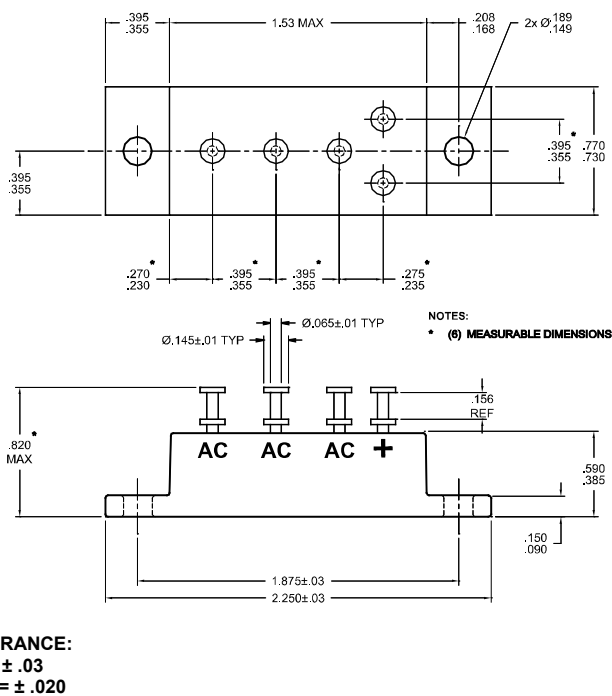
ELECTRICAL CHARACTERISTICS (per leg) ^{3/} _{6/}

CHARACTERISTICS	SYMBOL	VALUE	UNIT
Maximum Instantaneous Forward Voltage Drop ($I_F = 10A$, 60Hz, 300 μs Pulse, $T_C = 25^\circ C$)	V_F	1.2	Volts
Maximum Reverse Leakage Current (Rated V_R , $T_C = 25^\circ C$)	I_{R1}	20	μA
Maximum Reverse Leakage Current (Rated V_R , $T_C = 100^\circ C$)	I_{R2}	2	mA
Maximum Reverse Recovery Time ($I_F = 500mA$, $I_R = 1A$, $I_{RR} = 250mA$)	t_{rr}	40	ns

Spade Terminal Package Outline:



Turret Terminal Package Outline:



NOTES:

- 1/ For Ordering Information, Price, and Availability- Contact Factory.
- 2/ Screened to MIL-PRF-19500.
- 3/ Unless Otherwise Specified, All Electrical Characteristics @25°C.

- 4/ Recovery Conditions: $I_F = 0.5$ Amp, $I_R = 1.0$ Amp rec. to .25 Amp.
- 5/ For RMS Reverse Voltage, multiply V_R values by .707
- 6/ For information on operating curves, contact Factory.

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

DATA SHEET #: RA0089A

DOC