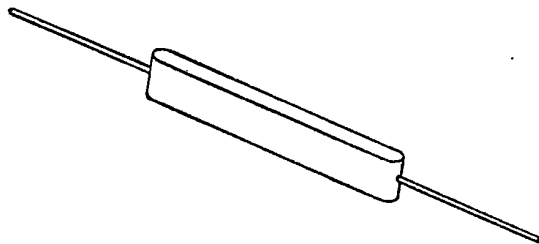


high current – high voltage rectifiers

SDAH 2500–15000

- * AVERAGE OUTPUT CURRENT 2 AMPS
- * PIV 2500 TO 15000 VOLTS
- * LOW REVERSE LEAKAGE
- * LOW FORWARD VOLTAGE DROP
- * CORONA FREE
- * SUPERIOR THERMAL SHOCK RESISTANCE



SSDI introduces a new and complete series of high density, high voltage, high current rectifier assemblies for use in industrial and military applications. Designed to be corona free, these rectifiers are capable of meeting stringent electrical, mechanical, and environmental specifications.

Consult your factory representative for engineering assistance.

SEMTECH EQUIVALENT: SCHS2500-15000

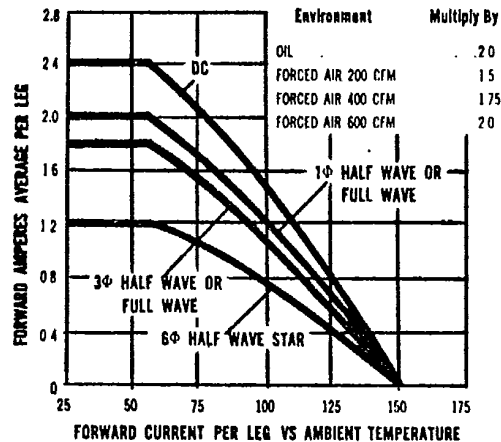
UNITRODE EQUIVALENT: HVH52500-20000 Specifications subject to change without notice.

Type	PIV per leg	Average DC Output Amps TC = (case temp.)		Reverse * Recovery Time T _{rr}	Case Size			Peak Recurrent Forward	VF Max per leg @ ADC 1.0	Reverse Current (IF Max per leg. @ PIV)	
		50°C	100°C	Max	INCHES			25°C		25°C	100°C
	VOLTS	AMPS	AMPS	us	A	B	C	AMPS	VOLTS	UA	UA
SDAH2500	2500	2	1.2	5	1.5	.38	.69	150	3	1	75
SDAH5000	5000	2	1.2	5	2.5	.38	.69	150	6	1	75
SDAH7500	7500	2	1.2	5	3.5	.38	.69	150	8	1	75
SDAH10000	10000	2	1.2	5	4.5	.38	.69	150	11	1	75
SDAH12500	12500	2	1.2	5	5.5	.38	.69	150	13.5	1	75
SDAH15000	15000	2	1.2	5	6.5	.38	.69	150	16	1	75

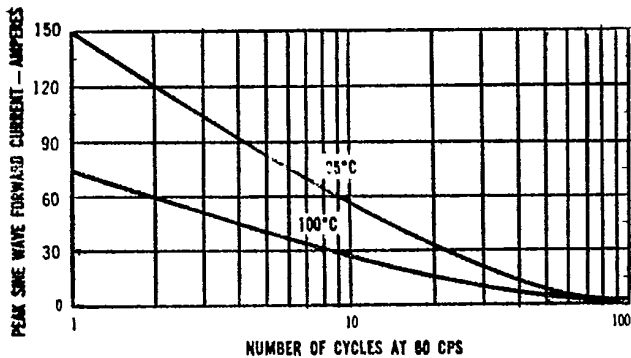
SSDI SOLID STATE DEVICES, INC.

SSD II SOLID STATE DEVICES, INC.

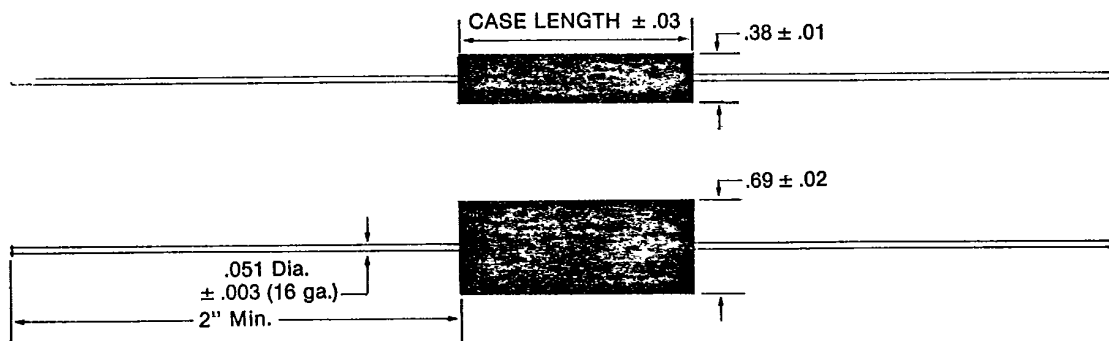
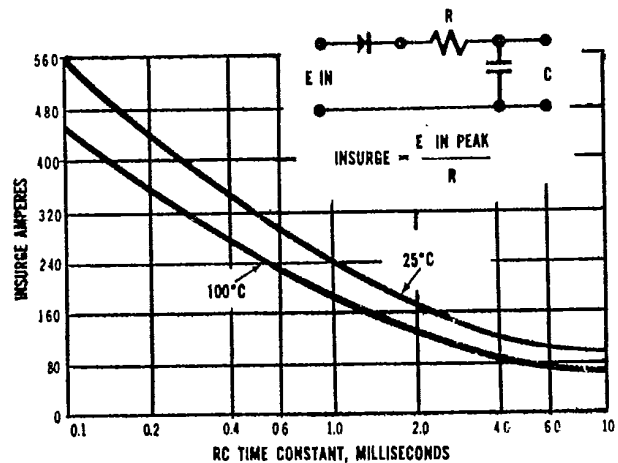
MAXIMUM FORWARD CURRENT VS. AMBIENT TEMPERATURE



FORWARD CURRENT SURGE CURVE



MAXIMUM RATINGS FOR CAPACITY LOADS



SSD II SOLID STATE DEVICES, INC.

SHA 395A thru SHA 395C

12 AMP

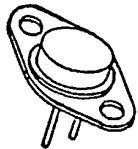
ULTRA FAST CENTERTAP RECTIFIER

100-200 VOLTS



14830 Valley View Avenue
La Mirada, California 90638
(213) 921-9660
TWX 910-583-4807
FAX 213-921-2396

CASE STYLE P
JEDEC TO-66



FEATURES

- COMBINED PERFORMANCE OF TWO AXIAL DISCRETES
- PIV TO 200 VOLTS
- ULTRA FAST RECOVERY, 25NS MAX
- HERMETICALLY SEALED
- VERY LOW FORWARD VOLTAGE DROP
- SUPERIOR THERMAL RESISTANCE
- GOLD EUTECTIC DIE ATTACH, ALUMINUM ULTRASONIC WIRE BOND, NO SOLDER USED

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Per Leg and DC Blocking Voltage Per Leg SHA395A SHA395B SHA395C	$V_{RM} (rep)$ V_R	100 150 200	Volts
RMS Reverse Voltage Per Leg SHA395A SHA395B SHA395C	V_r	70 105 140	Volts
Half Wave Rectified Forward Current, Averaged Over Full Cycle (Resistive Load, 60Hz, Sine Wave, $T_C = 55^\circ C$)	I_O	12	Amps
Peak Repetitive Forward Current ($T_C = 55^\circ C$, 8.3 ms Pulse, Allow Junction to Reach Equilibrium Between Pulses)	$I_{FM} (rep)$	50	Amps
Peak Surge Current ($T_C = 55^\circ C$, Superimposed on Rated Current at Rated Voltage, 8.3 ms Pulse)	$I_{FM} (surge)$	100	Amps
Operating and Storage Temperature	T_J, T_{stg}	-65 to +200	$^\circ C$

THERMAL CHARACTERISTICS

Characteristics	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	3.0	$^\circ C/W$

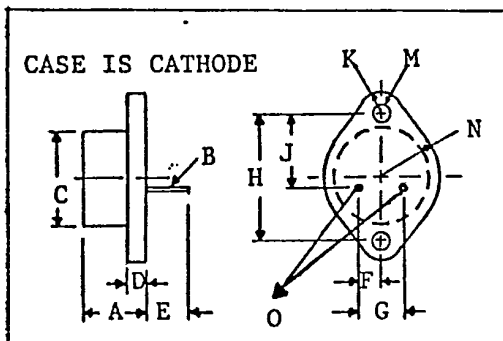
ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Value	Unit
Max Full Cycle Forward Voltage Drop, Averaged Over Full Cycle, Per Leg (I_O (Max), 60 Hz Square Wave, $T_C = 55^\circ\text{C}$)	$V_{F(AV)}$	0.45	Vdc
Max Instantaneous Forward Drop Per Leg ($I_F = 6$ Adc, $T_C = 25^\circ\text{C}$, 300 μs Pulse)	V_F	0.9	Vdc
Max Full Cycle Reverse Leakage Current, Averaged Over Full Cycle, Per Leg (Rated V_R , 60Hz, Square Wave, $T_C = 100^\circ\text{C}$)	$I_{R(AV)}$	50	μAdc
Max Reverse Leakage Current Per Leg (Rated V_R , $T_C = 25^\circ\text{C}$)	I_R	5	μAdc
Max Junction Capacitance Per Leg ($V_R = 10$ V, $T_C = 25^\circ\text{C}$)	C_J	150	pf

REVERSE RECOVERY CHARACTERISTICS

Characteristics	Symbol	Min	Typ	Max	Unit
Reverse Recovery Time ($I_F = 500\text{ma}$, $I_R = 1\text{A}$, $I_{RR} = 250\text{ma}$)	t_{rr}	-	20	25	ns

PHYSICAL DIMENSIONS



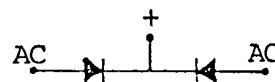
KEY TO DIMENSIONS:

(Inches)

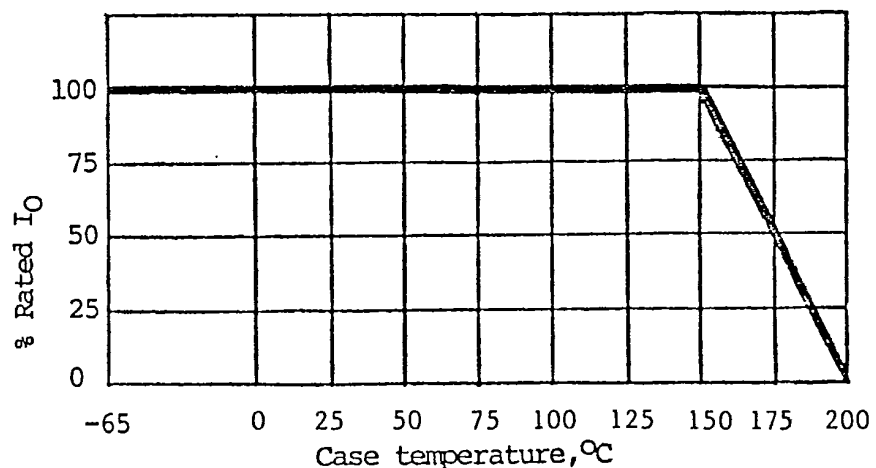
A =	.250 - .340
B =	.028 - .034
C =	.470 - .500
D =	.050 - .075
E =	.360 Min.
F =	.093 - .107
G =	.190 - .210
H =	.958 - .962
J =	.570 - .590
K =	.145 Max.
M =	.142 - .152
N =	.350 Max.
O =	Anode

SCHEMATIC

POSITIVE CENTERTAP



TYPICAL OPERATING CURVES



SOLID STATE DEVICES, INC.

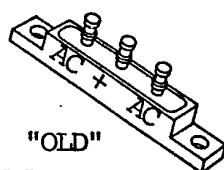
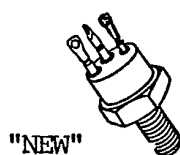
PRELIMINARY DATA SHEET 5-1-85

SHA396A THRU SHA396D 15 AMP ULTRA FAST POSITIVE CENTERTAP 200-500 VOLTS	 14830 Valley View Avenue La Mirada, California 90638 (213) 921-9660 TWX 910-583-4807 FAX 213-921-2396
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CASE STYLE

JEDEC TO-59

ALL TERMINALS ISOLATED FROM CASE

**MAXIMUM RATINGS****FEATURES**

- REPLACES CONVENTIONAL POTTED ASSEMBLIES
- SUPERIOR THERMAL RESISTANCE
- ISOLATED PACKAGE
- ULTRA FAST RECOVERY 30 NSEC. MAX.
- PIV TO 500 VOLTS
- LOW REVERSE LEAKAGE
- HERMETICALLY SEALED
- GOLD EUTECTIC DIE ATTACH, ALUMINUM ULTRASONIC WIRE BOND, NO SOLDER USED

Rating		Symbol	Value	Unit
Peak Repetitive Reverse Voltage Per Leg and DC Blocking Voltage Per Leg	SHA396A SHA396B SHA396C SHA396D	$V_{RM (rep)}$ V_R	200 300 400 500	Volts
RMS Reverse Voltage Per Leg	SHA396A SHA396B SHA396C SHA396D	V_r	140 210 280 350	Volts
Half Wave Rectified Forward Current, Averaged Over Full Cycle (Resistive Load, 60Hz, Sine Wave, $T_C = 55^\circ C$)		I_O	15	Amps
Peak Repetitive Forward Current ($T_C = 55^\circ C$, 8.3 ms Pulse, Allow Junction to Reach Equilibrium Between Pulses)		$I_{FM (rep)}$	50	Amps
Peak Surge Current ($T_C = 55^\circ C$, Superimposed on Rated Current at Rated Voltage, 8.3 ms Pulse)		$I_{FM (surge)}$	150	Amps
Operating and Storage Temperature		T_J, T_{stg}	-65 to +200	$^\circ C$

THERMAL CHARACTERISTICS

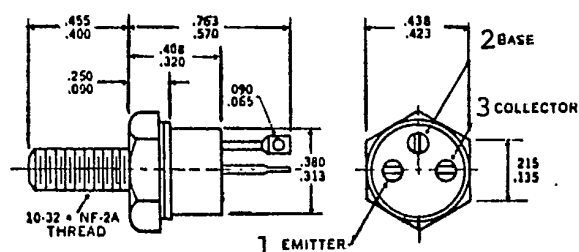
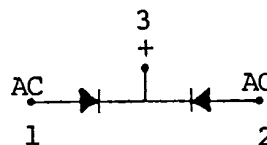
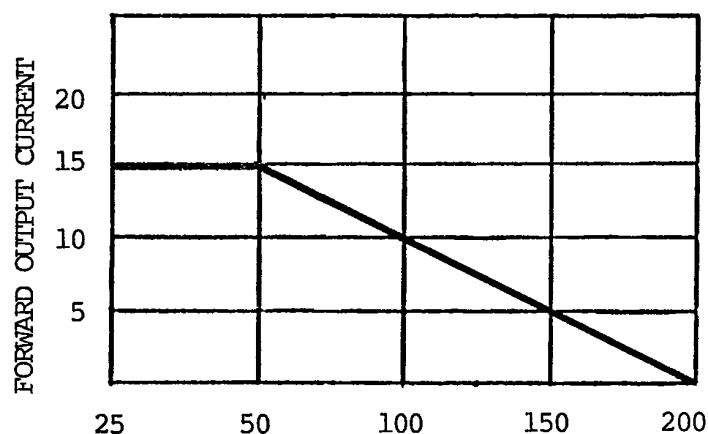
Characteristics	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	4.0	$^\circ C/W$

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Value	Unit
Max Full Cycle Forward Voltage Drop, Averaged Over Full Cycle, Per Leg (I_O (Max), 60 Hz Square Wave, $T_C = 55^\circ\text{C}$)	$V_{F(AV)}$	0.75	Vdc
Max Instantaneous Forward Drop Per Leg ($I_F = 3$ Adc, $T_C = 25^\circ\text{C}$, 300 μs Pulse)	V_F	1.5	Vdc
Max Full Cycle Reverse Leakage Current, Averaged Over Full Cycle, Per Leg (Rated V_R , 60Hz, Square Wave, $T_C = 100^\circ\text{C}$)	$I_{R(AV)}$	50	μAdc
Max Reverse Leakage Current Per Leg (Rated V_R , $T_C = 25^\circ\text{C}$)	I_R	5	μAdc
Max Junction Capacitance Per Leg ($V_R = 10$ V, $T_C = 25^\circ\text{C}$)	C_J	15	pf

REVERSE RECOVERY CHARACTERISTICS

Characteristics	Symbol	Min	Typ	Max	Unit
Reverse Recovery Time ($I_F = 500\text{ma}$, $I_R = 1\text{A}$, $I_{RR} = 250\text{ma}$)	t_{rr}	---	25	30	ns

PHYSICAL DIMENSIONS**SCHEMATIC****POSITIVE CENTERTAP****TYPICAL OPERATING CURVES**

SSD II SOLID STATE DEVICES, INC.