

SPD2520 THRU SPD2540

.25 AMP

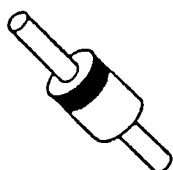
SCHOTTKY RECTIFIER

20 — 40 VOLTS



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

CASE STYLE DO-34



FEATURES

- ULTRA FAST RECOVERY 3ns MAX
- EXTREMELY LOW FORWARD VOLTAGE DROP
- PIV TO 40 VOLTS
- HERMETICALLY SEALED
- HIGH SURGE CAPACITY

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Peak Repetitive Reverse Voltage and DC Blocking Voltage SPD2520 SPD2530 SPD2540	$V_{RM (rep)}$ V_R	20 30 40	Volts
RMS Reverse Voltage SPD2520 SPD2530 SPD2540	V_r	14 21 28	Volts
Half Wave Rectified Forward Current, Averaged Over Full Cycle (Resistive Load, 60Hz, Sine Wave, $T_C = 55^\circ C$)	I_O	.250	Amps
Peak Repetitive Forward Current ($T_C = 55^\circ C$, 8.3 ms Pulse, Allow Junction to Reach Equilibrium Between Pulses)	$I_{FM (rep)}$	5	Amps
Peak Surge Current ($T_C = 55^\circ C$, Superimposed on Rated Current at Rated Voltage, 8.3 ms Pulse)	$I_{FM (surge)}$	25	Amps
Operating and Storage Temperature	T_J, T_{stg}	-55 TO 150	$^\circ C$

THERMAL CHARACTERISTICS

Characteristics	Symbol	Max	Unit
Thermal Resistance, Junction to Leads, $L = 3/8"$	$R_{\theta JL}$	190	$^\circ C/W$

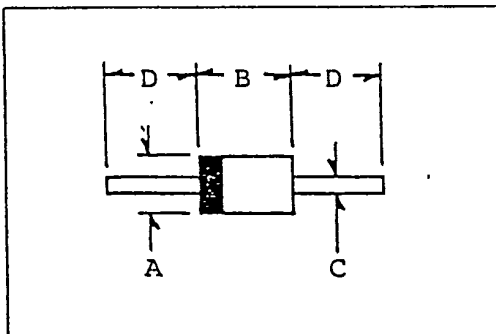
ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Value	Unit
Max Full Cycle Forward Voltage Drop, Averaged Over Full Cycle (I_F (Max), 60 Hz, Square Wave, $T_C = 55^\circ\text{C}$)	$V_{F(AV)}$	0.65	Vdc
Max Instantaneous Forward Voltage Drop ($I_F = 100\text{mA}$, $T_C = 25^\circ\text{C}$, 300us PULSE)	V_F	0.65	Vdc
Max Full Cycle Reverse Leakage Current, Averaged Over Full Cycle (Rated V_R 60Hz, Square Wave, $T_C = 100^\circ\text{C}$)	$I_{R(AV)}$	1000	μA_{dc}
Max Reverse Leakage Current (Rated V_R , $T_C = 25^\circ\text{C}$)	I_R	10	μA_{dc}
Max Junction Capacitance ($V_R = 10\text{V}$, $T_C = 25^\circ\text{C}$)	C_J	5	pf

REVERSE RECOVERY CHARACTERISTICS

Characteristics	Symbol	Min	Typ	Max	Unit
Reverse Recovery Time ($I_F = 125\text{mA}$, $I_R = 250\text{mA}$, $I_{RR} = 62\text{mA}$)	t_{rr}		2	3	ns

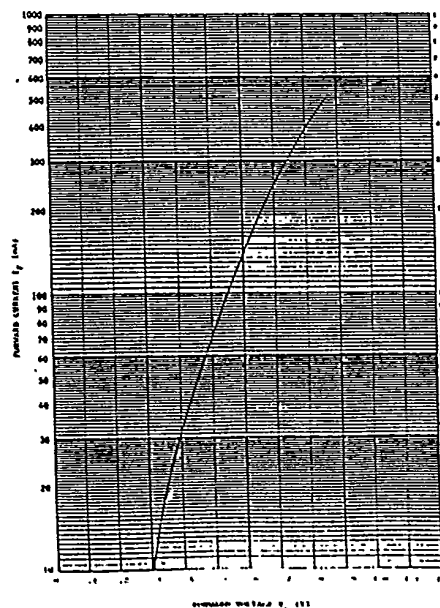
PHYSICAL DIMENSIONS



KEY TO DIMENSIONS:

- (Inches)
- A = .050 - .075
 - B = .085 - .120
 - C = .018 - .022
 - D = 1.00 MIN

TYPICAL OPERATING CURVES



SOLID STATE DEVICES, INC.

5R4/59 THRU 15R4/59

20 AMP

EPION II HIGH SPEED RECTIFIER

50-150 VOLTS

MILITARY GRADE REPLACEMENT FOR COMMERCIAL DO-4



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

CASE STYLE O

2 PIN TO-59



FEATURES

- ISOLATED PACKAGE
- RADIATION TOLERANT
- ULTRA FAST RECOVERY 35 NSEC MAX
- REVERSE VOLTAGE TO 150 VOLTS
- VERY LOW FORWARD VOLTAGE DROP 500 MV AVERAGE
- LOW REVERSE LEAKAGE
- HERMETICALLY SEALED/SINGLE CHIP CONSTRUCTION
- 200°C OPERATING, GOLD EUTECTIC DIE ATTACH, ULTRASONIC ALUMINUM WIRE BONDS

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Peak Repetitive Reverse Voltage and DC Blocking Voltage	$V_{RM} (rep)$ V_R	50 70 100 125 150	Volts
RMS Reverse Voltage	V_r	35 50 70 90 110	Volts
Half Wave Rectified Forward Current, Averaged Over Full Cycle (Resistive Load, 60Hz, Sine Wave, $T_C = 55^\circ C$)	I_O	20	Amps
Peak Repetitive Forward Current ($T_C = 55^\circ C$, 8.3 ms Pulse, Allow Junction to Reach Equilibrium Between Pulses)	$I_{FM} (rep)$	70	Amps
Peak Surge Current ($T_C = 55^\circ C$, Superimposed on Rated Current at Rated Voltage, 8.3 ms Pulse)	$I_{FM} (surge)$	250	Amps
Operating and Storage Temperature	T_J, T_{stg}	-65 to +200	°C

THERMAL CHARACTERISTICS

Characteristics	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	2.0	°C/W

ELECTRICAL CHARACTERISTICS

20E D ■ 8366011 0002215 3 ■ T-03-19

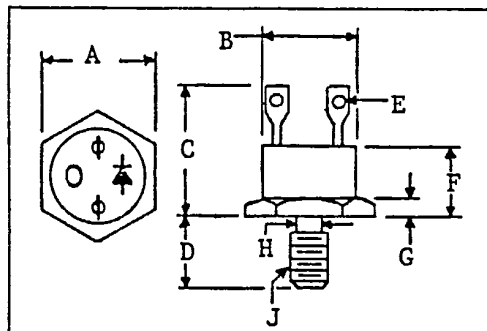
Characteristics	Symbol	Value	Unit
Max Full Cycle Forward Voltage Drop, Averaged Over Full Cycle (I_O (Max), 60 Hz Square Wave, $T_C = 55^\circ\text{C}$)	$V_{F(AV)}$	0.5	Vdc
Max Instantaneous Forward Drop ($I_F = 20$ Adc, $T_C = 25^\circ\text{C}$, 300 μs Pulse)	V_F	1.1	Vdc
Max Full Cycle Reverse Leakage Current, Averaged Over Full Cycle (Rated V_R , 60Hz, Square Wave, $T_C = 100^\circ\text{C}$)	$I_{R(AV)}$	1.0	m Adc
Max Reverse Leakage Current (Rated V_R , $T_C = 25^\circ\text{C}$)	I_R	100	μAdc
Max Junction Capacitance ($V_R = 1.0$ V, $T_C = 25^\circ\text{C}$)	C_J	150	pf

SOLID STATE DEVICES INC

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}	---	---	35	ns

PHYSICAL DIMENSIONS

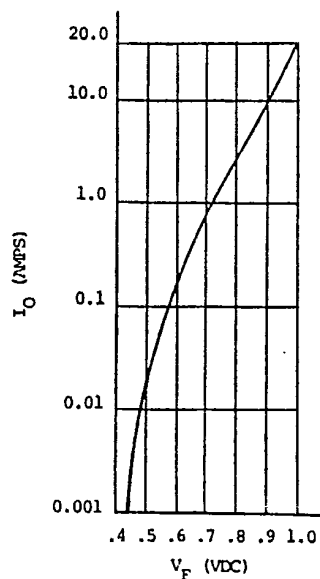
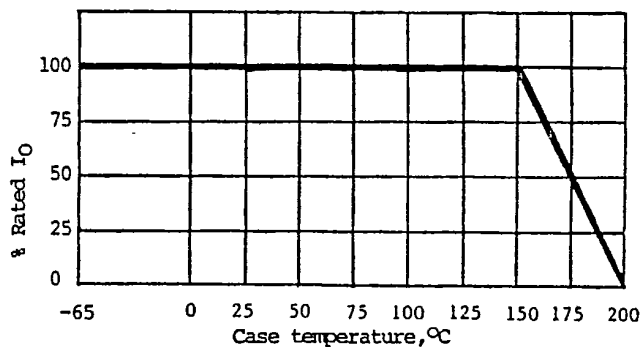


KEY TO DIMENSIONS:

(Inches)

A =	.424 - .437
B =	.318 - .380
C =	.570 - .763
D =	.400 - .455
E =	.040 - .065 (Diameter)
F =	.320 - .468
G =	.090 - .150
H =	.163 - .189 (Diameter)
J =	10-32 UNF-2A

TYPICAL OPERATING CURVES



SOLID STATE DEVICES, INC.

PRELIMINARY DATASHEET

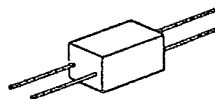
SDA676-12 THROUGH SDA676-50

HIGH VOLTAGE, FAST RECOVERY
SINGLE PHASE BRIDGE
0.125 - 0.4 AMP

SSDI

14849 FIRESTONE BLVD
LA MIRADA, CA 90638
(213) 921-9660

CASE STYLE

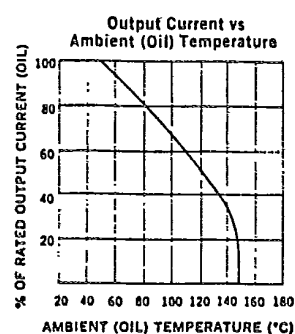
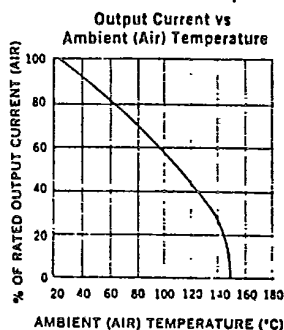
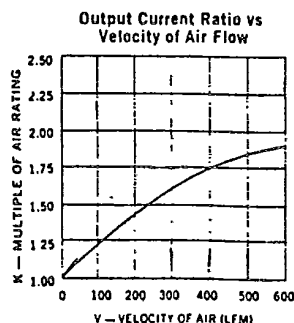
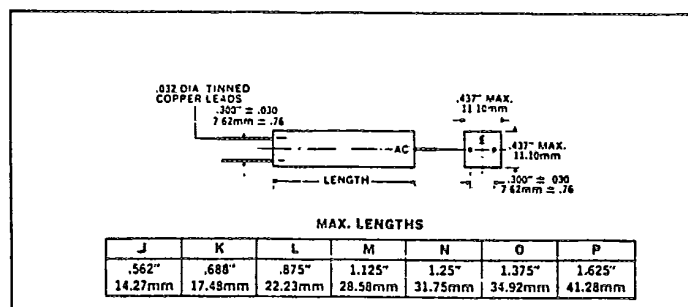


FEATURES

- ▶ MINIATURE HIGH VOLTAGE BRIDGES
- ▶ CONTINUOUS RATINGS TO 0.4A
- ▶ PIV: 1200 TO 5000V
- ▶ RECOVERY TIME 500ns
- ▶ CONTROLLED AVALANCHE CHARACTERISTICS

PART NUMBER *	PIV PER LEG	MAXIMUM FORWARD VOLTAGE DROP PER LEG	LEAKAGE CURRENT PER LEG @ PIV		MAXIMUM REVERSE RECOVERY TIME	BODY SIZE	MAXIMUM AVERAGE DC OUTPUT CURRENT		NON- REPETITIVE SINUSOIDAL SURGE (8.3ms)
			TA=25 °C	TA=100 °C			TA=25 °C AIR	TA=100 °C OIL	
	VOLTS		A	A	ns		AMPS	AMPS	AMPS
SDA676-12	1200	3.3V @ 0.3A	5	150	500	J	0.4	1.0	10
SDA676-18	1800	4.4V @ 0.2A	5	150	500	K	0.35	0.85	10
SDA676-24	2400	5.5V @ 0.2A	5	150	500	L	0.325	0.8	10
SDA676-30	3000	7.7V @ 0.2A	5	150	500	M	0.25	0.625	10
SDA676-36	3600	8.8V @ 0.15A	5	150	500	N	0.175	0.425	10
SDA676-42	4200	9.9V @ 0.15A	5	150	500	O	0.15	0.375	10
SDA676-48	4800	11 V @ 0.15A	5	150	500	P	0.135	0.325	10
SDA676-50	5000	11 V @ 0.15A	5	150	500	P	0.125	0.3	10

*) For JANTX screening add suffix TX to part number.



SOLID STATE DEVICES INC

SDR803 THROUGH SDR814

100 AMP

SSDI T-03-21

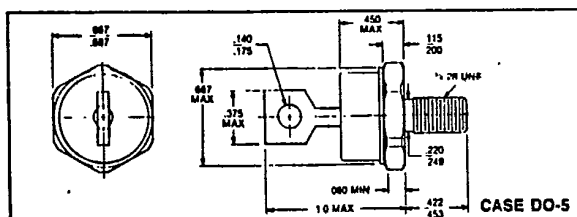
ULTRA FAST RECOVERY

RECTIFIER

50 - 800 VOLTS

14849 FIRESTONE BLVD.
LA MIRADA, CA 90638
(213) 921-9660
FAX (213) 921-2396

CASE STYLE



FEATURES

- ▶ PIV TO 800 VOLTS
- ▶ IO OF 100 AMPS
- ▶ LOW FORWARD VOLTAGE DROP
- ▶ FAST RECOVERY OF 60nsec. MAX.
- ▶ HERMETICALLY SEALED
- ▶ SINGLE CHIP CONSTRUCTION
- ▶ LOW LEAKAGE CURRENT

MAXIMUM RATINGS

RATING	SYMBOL	VALUE	UNIT	RATING	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage and DC Blocking Voltage	VRM(rep) VR		Volts	RMS Reverse Voltage	Vr		Volts
SDR803		50		SDR803		35	
SDR804		100		SDR804		70	
SDR805		150		SDR805		105	
SDR806		200		SDR806		140	
SDR807		250		SDR807		175	
SDR808		300		SDR808		210	
SDR809		350		SDR809		245	
SDR810		400		SDR810		280	
SDR811		500		SDR811		350	
SDR812		600		SDR812		420	
SDR813		700		SDR813		490	
SDR814		800		SDR814		560	

RATING	SYMBOL	VALUE	UNIT
Half Wave Rectified Forward Current Averaged Over Full Cycle (Resistive Load, 60Hz, Sine Wave, TC=55 °C)	IO	100	Amps
Peak Repetitive Forward Current (TC=55 °C, 8.3ms Pulse, Allow Junction to Reach Equilibrium Between Pulses)	IFM(rep)	1000	Amps
Peak Surge Current (TC=55 °C, 8.3ms Pulse, Superimposed on Rated Current at Rated Voltage)	IFM(surge)	1500	Amps
Operating and Storage Temperature	TJ, Tstg	-55 to +175	°C

THERMAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Thermal Resistance, Junction to Case	RθJC	1.0	°C/W