PRELIMINARY

SOLID STATE DEVICES, INC

14849 Firestone Boulevard · La Mirada,CA 90638
Phone: (714) 670-SSDI (7734) · Fax: (714) 522-7424

SPD502 thru SPD506

Designer's Data Sheet

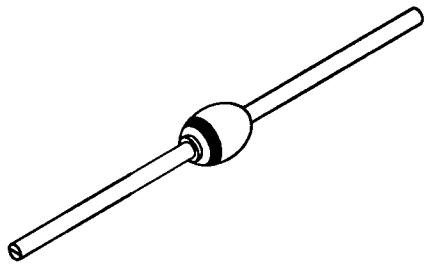
5 AMP 200-600 VOLTS 40 nsec HYPER FAST RECTIFIER

FEATURES:

- Hyper Fast Recovery: 40 nsec Maximum
- PIV to 600 Volts
- Low Forward Voltage Drop
- Hermetically Sealed
- Void Free Construction
- For High Efficiency Applications
- Single Chip Construction

- TX, TXV and Space Level Screening available

AXIAL



MAXIMUM RATINGS

RATING	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse and DC Blocking Voltage SPD502 SPD503 SPD504 SPD505 SPD506	V_{RRM} V_{RWM} V_R	200 300 400 500 600	Volts
Average Rectified Forward Current (Resistive Load, 60Hz, Sine Wave, TA=25°C)	I_O	5	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave Superimposed on Io, allow junction to reach equilibrium between pulses, TA=25°C)	I_{FSM}	100	Amps
Operating and storage temperature	Top & Tstg	-65 to +175	°C
Maximum Thermal Resistance Junction to Leads, L=3/8"	$R_{\theta JL}$	15	°C/W

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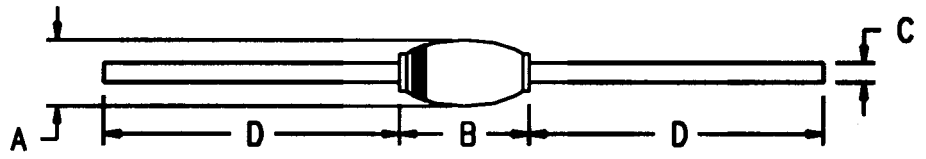
ELECTRICAL CHARACTERISTICS

CHARACTERISTICS	SYMBOL	MAXIMUM	UNIT
Instantaneous Forward Voltage Drop (IF = 5 Adc, TA=25°C, 300µs Pulse)	VF	1.6	Vdc
Instantaneous Forward Voltage Drop (IF = 5 Adc, TA= - 55°C, 300µs Pulse)	VF	1.75	Vdc
Reverse Leakage Current (Rated VR, TA=25°C, 300µs pulse minimum)	IR	10	µA
Reverse Leakage Current (Rated VR, TA=100°C, 300µs pulse minimum)	IR	1	mA
Junction Capacitance (VR = 10 Vdc, TA=25°C, f= 1 MHz)	CJ	50	pf
Reverse Recovery Time (IF=500mA, IR=1 A, IRR=250mA, TA=25°C)	trr	40	nsec

CASE OUTLINE:



DIMENSIONS		
DIM	MIN.	MAX.
A	.140"	.170"
B	.170"	.230"
C	.047"	.053"
D	1.00"	—

TYPICAL OPERATING CURVES

TA=25°C Unless otherwise specified