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

SPD5802 thru SPD5806
and
SPD5802SMS thru SPD5806SMS

LOW LEAKAGE
2.0 AMPS
50 – 150 VOLTS
25 ns HYPERFAST RECOVERY
RECTIFIER

Designer's Data Sheet

Part Number/Ordering Information [1/]

SPD ___ ___ ___

Screening [2/]
- __ = Not Screened
- TX = TX Level
- TXV = TXV
- S = S Level

Package Type
- __ = Axial Leaded
- SMS = Surface Mount Square Tab

Voltage/Family
- 5802 = 50V
- 5804 = 100V
- 5806 = 150V

FEATURES:
- **Hyper Fast Reverse Recovery: 25ns Maximum** [4/]
- **PIV to 150 Volts (Voltages Up To 300V Available)**
- **Hermetically Sealed**
- **Low Forward Voltage Drop**
- **Void Free Chip Construction**
- **For High Efficiency Applications**
- **Available in Axial & Square Tab Versions**
- **TX, TXV, and S-Level Screening Available** [2/]
- **Low Leakage Replacement for: 1N 5802, US thru 1N5806, US**

MAXIMUM RATINGS [3/]

RATING		SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage And DC Blocking Voltage	SPD5802 SPD5804 SPD5806	V_{RRM} V_{RWM} V_R	50 100 150	Volts
Average Rectified Forward Current (Resistive Load, 60Hz, Sine Wave, T_A = 25°C)		I_O	2.0	Amps
Peak Surge Current (8.3ms pulse, half sine wave superimposed on Io, allow junction to reach equilibrium between pulses, T_A = 25°C)		I_{FSM}	50	Amps
Operating & Storage Temperature		T_J and T_{STG}	-65 to +175	°C
Thermal Resistance	Junction to Lead for Axial, L =.375" Junction to End Tab for Surface Mount	$R_{\theta JL}$ $R_{\theta JE}$	38 25	°C/W

NOTES:

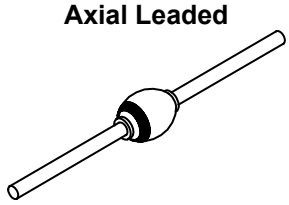
1/ For Ordering Information, Price, Operating Curves, and Availability- Contact Factory.

2/ Screening Based on MIL-PRF-19500. Screening Flows Available on Request.

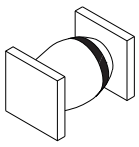
3/ Unless Otherwise Specified, All Electrical Characteristics @25ºC.

4/ I_F = 500mA, I_R = 1A, I_{RR} = 250mA, T_A = 25°C

Axial Leaded



SMS



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ELECTRICAL CHARACTERISTICS [3/]

CHARACTERISTICS		SYMBOL	VALUE	UNIT
			MAX	
Instantaneous Forward Voltage Drop	I_F = 2.0 Adc , T_A = +25°C, 300 - 500µs pulse I_F = 2.0 Adc , T_A = -55°C, 300 - 500µs pulse	V_{F1} V_{F2}	.975 1.1	Vdc
Reverse Leakage Current	(Rated V_R, T_A = +25°C) (Rated V_R, T_A =+100°C)	I_{R1} I_{R2}	1 100	µA
Junction Capacitance V_R = 10 Vdc, f = 1MHz, T_A = 25°C		C_J	45	pF
Maximum Reverse Recovery Time I_F = 500mA, I_R = 1A, I_{RR} = 250mA, T_A = 25°C		t_{rr}	25	ns

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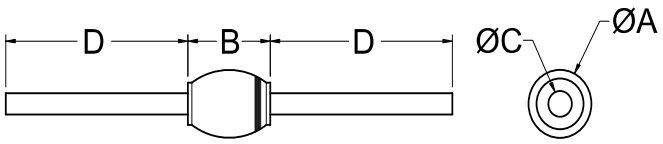
4/ I_F = 500mA, I_R = 1A, I_{RR} = 250mA, T_A = 25°C

Package Outlines:

DIMENSIONS (inches)			DIMENSIONS (inches)		
DIM.	Minimum	Maximum	DIM.	Minimum	Maximum
A	---	.140	A	.134	.155
B	.190	.230	B	.230	.280
C	.027	.033	C	.022	.028
D	1.00	---	D	.002	---

AXIAL



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