



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

Designer's Data Sheet

Part Number/Ordering Information

SPD



Screening

— = Not Screened
TX = TX Level
TXV = TXV
S = S Level

Voltage

3889 = 50V
3890 = 100V
3891 = 200V
3892 = 300V
3893 = 400V

SPD3889

Thru

SPD3893

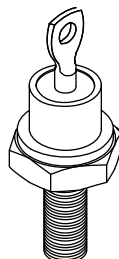
**12 A, 120 nsec, 50-400 V
Fast Recovery Rectifier**

Features:

- Fast Recovery: 120nsec Maximum
- Higher Voltage Devices Available
- Low Reverse Leakage Current
- Single Chip Construction
- PIV to 400 Volts
- Hermetically Sealed
- High Surge Rating
- Low Thermal Resistance
- For Reverse Polarity add suffix "R"
- TX, TXV, and Space Level Screening Available

Maximum Ratings	Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage @ 100μA	SPD3889 SPD3890 SPD3891 SPD3892 SPD3893	V_{RRM} V_{RWM} V_R 50 100 200 300 400	Volts
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, $T_A = 25^\circ\text{C}$)	I_o	12	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, $T_A = 25^\circ\text{C}$)	I_{FSM}	200	Amps
Operating & Storage Temperature	$T_{OP} \text{ \& } T_{STG}$	-65 to +150	$^\circ\text{C}$
Maximum Thermal Resistance (Junction to Case)	$R_{\theta JC}$	2.5	$^\circ\text{C/W}$

DO-4



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

DATA SHEET #: RF0007B

DOC



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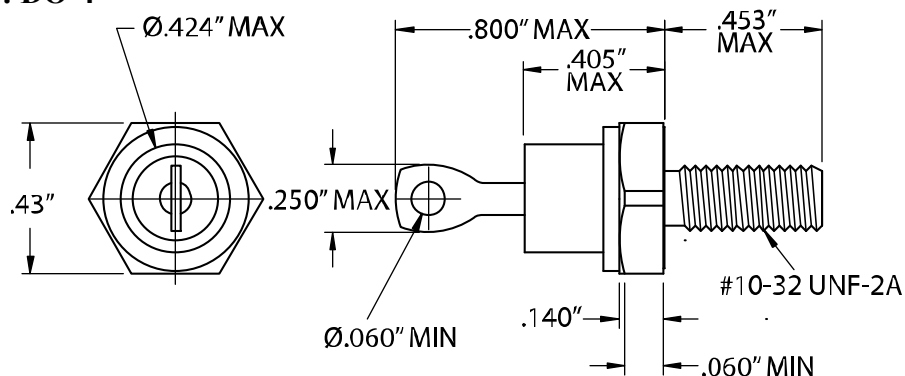
SPD3889

Thru

SPD3893

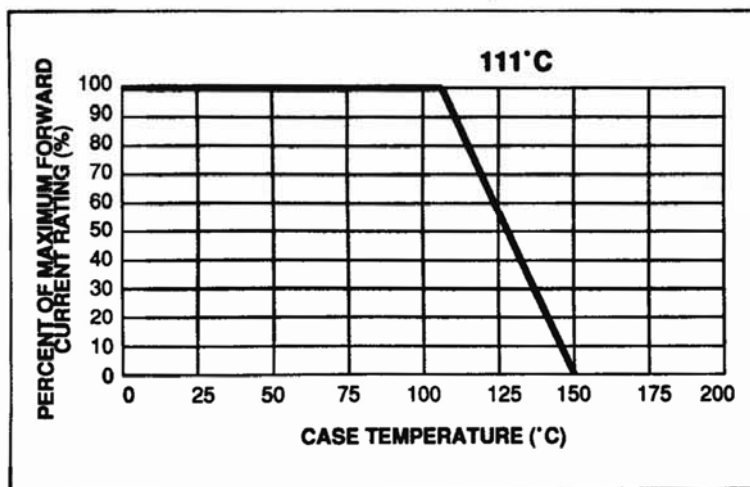
Electrical Characteristics	Symbol	Value	Units
Instantaneous Forward Voltage Drop ($I_F = 12\text{A}$, $T_A = 25^\circ\text{C}$, 300 μs Pulse)	V_F	1.3	V_{DC}
Instantaneous Forward Voltage Drop ($I_F = 12\text{A}$, $T_A = -55^\circ\text{C}$, 300 μs Pulse)	V_F	1.45	V_{DC}
Reverse Leakage Current (Rated V_R , $T_A = 25^\circ\text{C}$, 300 μs minimum pulse)	I_R	20	μA
Reverse Leakage Current (Rated V_R , $T_A = 100^\circ\text{C}$, 300 μs minimum pulse)	I_R	2	mA
Reverse Recovery Time ($I_F = 500\text{ mA}$, $I_R = 1\text{ Amp}$, $I_{RR} = 250\text{ mA}$, $T_A = 25^\circ\text{C}$)	t_{RR}	120	nsec
Junction Capacitance ($V_R = 10V_{DC}$, $T_A = 25^\circ\text{C}$, $f = 1\text{MHz}$)	C_J	300	pF

CASE OUTLINE: DO-4



TYPICAL OPERATING CURVES

$T_A = 25^\circ\text{C}$ Unless otherwise specified



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