



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
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**SPD3889
Thru
SPD3893**

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

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

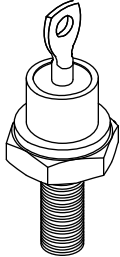
 | | 3892 = 300V

 | | 3893 = 400V

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

DO-4





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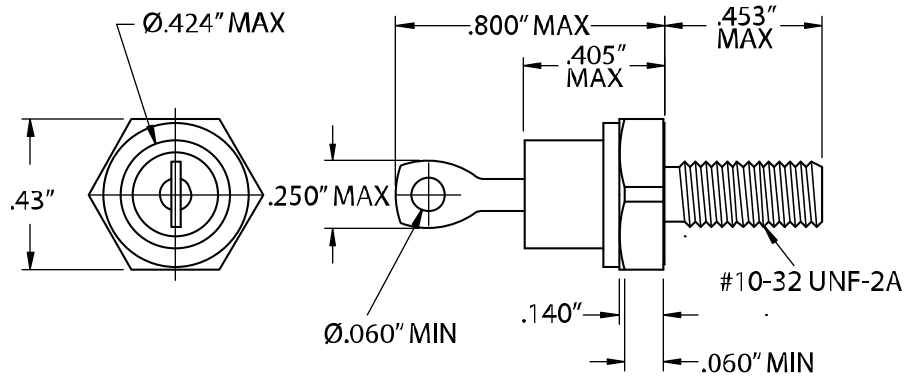
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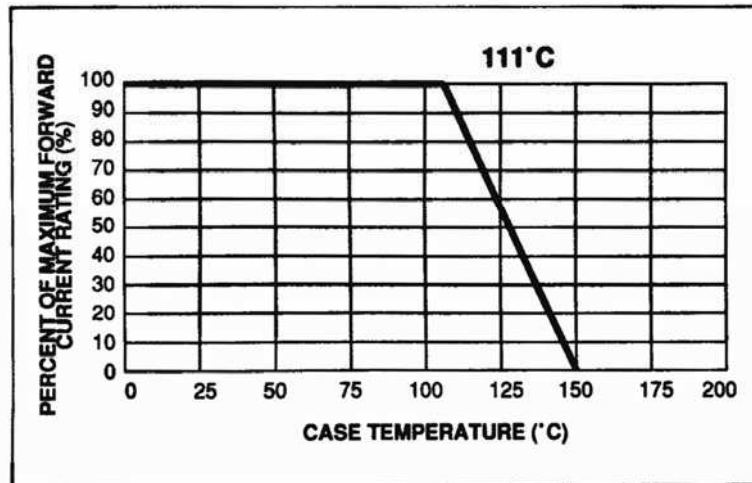
Electrical Characteristics	Symbol	Value	Units
Instantaneous Forward Voltage Drop ($I_F = 12A_{dc}$, $T_A = 25^\circ C$, 300 μs Pulse)	V_F	1.3	V_{DC}
Instantaneous Forward Voltage Drop ($I_F = 12A_{dc}$, $T_A = -55^\circ C$, 300 μs Pulse)	V_F	1.45	V_{DC}
Reverse Leakage Current (Rated V_R , $T_A = 25^\circ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

CASE OUTLINE: DO-4



TYPICAL OPERATING CURVES

$T_A = 25^\circ C$ Unless otherwise specified



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