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

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

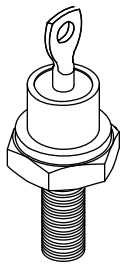
Voltage
3889 = 50V
3890 = 100V
3891 = 200V
3892 = 300V
3893 = 400V

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** **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 °C)		**Io**	**12**	**Amps**
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, T_A = 25 °C)		**I_{FSM}**	**200**	**Amps**
Operating & Storage Temperature		**T_{OP} & T_{STG}**	**-65 to +150**	**ºC**
Maximum Thermal Resistance (Junction to Case)		**$R_{\theta JC}$**	**2.5**	**ºC/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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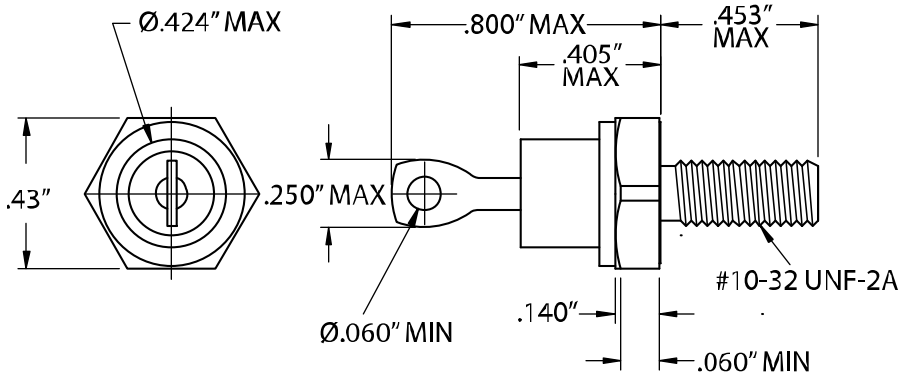
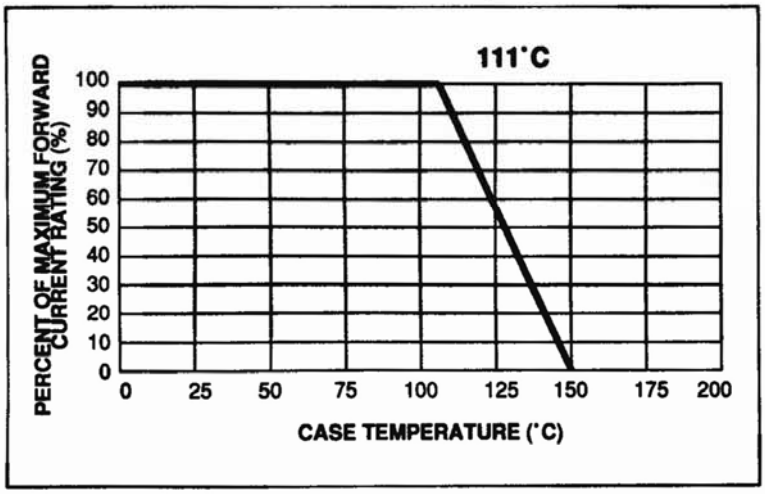
Electrical Characteristics	Symbol	Value	Units
Instantaneous Forward Voltage Drop (I_F =12Adc, T_A = 25 ºC, 300µs Pulse)	V_F	1.3	V_{DC}
Instantaneous Forward Voltage Drop (I_F =12Adc, T_A = -55 ºC, 300µs Pulse)	V_F	1.45	V_{DC}
Reverse Leakage Current (Rated V_R, T_A = 25 º**C** , 300µs minimum pulse)	I_R	20	**µA**
Reverse Leakage Current (Rated V_R, T_A = 100 º**C** , 300µs minimum pulse)	I_R	2	**mA**
Reverse Recovery Time (**I_F** = 500 mA, I_R = 1 Amp, I_{RR} = 250 mA, T_A = 25 º**C**)	t_{RR}	120	**nsec**
Junction Capacitance (V_R = 10V_{DC}, T_A = 25ºC, f = 1MHz)	C_J	300	**pF**

CASE OUTLINE: DO-4



TYPICAL OPERATING CURVES

TA=25˚C Unless otherwise specified



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