PRELIMINARY

SDR305 thru SDR315

SOLID STATE DEVICES, INC

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

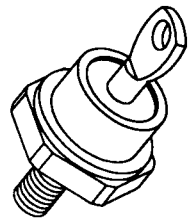
30 AMP 50-150 VOLTS 50 nsec ULTRA FAST RECTIFIER

Designer's Data Sheet

FEATURES:

- Ultra Fast Recovery: 50 nsec Maximum
- Radiation Tolerant
- Very Low Forward Voltage Drop
- Hermetically Sealed
- Single Chip Construction
- 175°C Operating Temperature
- For High Efficiency applications
- TX, TXV and Space Level Screening Available

DO-5



MAXIMUM RATINGS

RATING	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse and DC Blocking Voltage **SDR305** **SDR307** **SDR310** **SDR312** **SDR315**	V_{RRM} V_{RWM} V_R	50 70 100 125 150	**Volts**
Average Rectified Forward Current (Resistive Load, 60Hz, Sine Wave, TA=25°C)	I_O	30	**Amps**
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, TA=25°C)	I_{FSM}	275	**Amps**
Operating and storage temperature	**Top & Tstg**	-65 to +175	**°C**
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	1.5	**°C/W**

SDR305 thru SDR315

PRELIMINARY

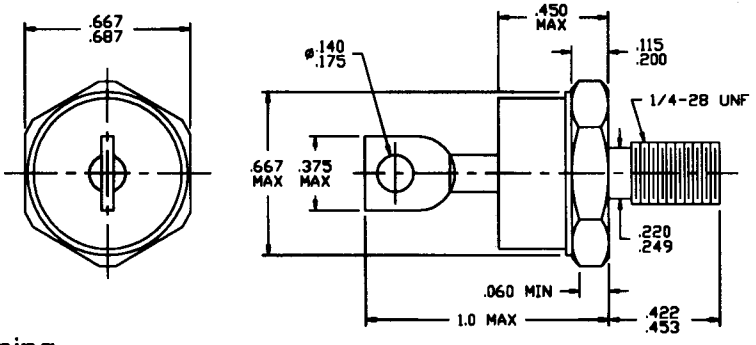
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ELECTRICAL CHARACTERISTICS

CHARACTERISTICS	SYMBOL	MAXIMUM	UNIT
Instantaneous Forward Voltage Drop (I_F = 30 Adc, T_A=25°C, 300µs Pulse)	VF	0.9	Vdc
Instantaneous Forward Voltage Drop (I_F = 30 Adc, T_A=-55°C, 300µs Pulse)	VF	0.975	Vdc
Reverse Leakage Current (Rated VR, T_A=25°C, 300µs pulse minimum)	IR	250	µA
Reverse Leakage Current (Rated V_R, T_A=100°C, 300µs pulse minimum)	IR	10	mA
Junction Capacitance (V_R = 10 Vdc, T_A=25°C, f= 1 MHz)	CJ	700	pf
Reverse Recovery Time (I_F =500mA, I_R = 1A, I_{RR}=250mA, T_A=25°C)	trr	50	nsec

CASE OUTLINE: DO-5



Dimensions prior to solder dipping.

TYPICAL OPERATING CURVES

TA=25°C Unless otherwise specified

