



PRELIMINARY

SOLID STATE DEVICES, INC

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

Designer's Data Sheet

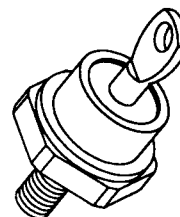
FEATURES:

- 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

**SDR305
thru
SDR315**

**30 AMP
50-150 VOLTS
50 nsec
ULTRA FAST
RECTIFIER**

DO-5



MAXIMUM RATINGS

RATING	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse and DC Blocking Voltage SDR305 SDR307 SDR310 SDR312 SDR315	VRRM VRWM VR	50 70 100 125 150	Volts
Average Rectified Forward Current (Resistive Load, 60Hz, Sine Wave, TA=25°C)	Io	30	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, TA=25°C)	IFSM	275	Amps
Operating and storage temperature	Top & Tstg	-65 to +175	°C
Maximum Thermal Resistance Junction to Case	RθJC	1.5	°C/W

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

DATA SHEET #: RU0023 A

RMD

SDR305 thru SDR315

PRELIMINARY



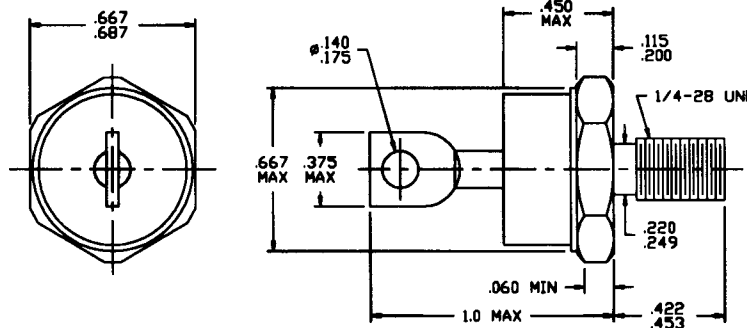
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ELECTRICAL CHARACTERISTICS

CHARACTERISTICS	SYMBOL	MAXIMUM	UNIT
Instantaneous Forward Voltage Drop ($I_F = 30 \text{ A dc}$, $T_A = 25^\circ\text{C}$, 300 μs Pulse)	V_F	0.9	Vdc
Instantaneous Forward Voltage Drop ($I_F = 30 \text{ A dc}$, $T_A = -55^\circ\text{C}$, 300 μs Pulse)	V_F	0.975	Vdc
Reverse Leakage Current (Rated V_R , $T_A = 25^\circ\text{C}$, 300 μs pulse minimum)	I_R	250	μA
Reverse Leakage Current (Rated V_R , $T_A = 100^\circ\text{C}$, 300 μs pulse minimum)	I_R	10	mA
Junction Capacitance ($V_R = 10 \text{ Vdc}$, $T_A = 25^\circ\text{C}$, $f = 1 \text{ MHz}$)	C_J	700	pf
Reverse Recovery Time ($I_F = 500\text{mA}$, $I_R = 1\text{A}$, $I_{RR} = 250\text{mA}$, $T_A = 25^\circ\text{C}$)	t_{rr}	50	nsec

CASE OUTLINE: DO-5



Dimensions prior to solder dipping.

TYPICAL OPERATING CURVES

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

