

Designer's Data Sheet

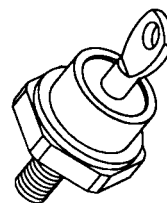
FEATURES:

- 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

**SDR405
thru
SDR415**

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

DO-5



MAXIMUM RATINGS

RATING	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse and DC Blocking Voltage SDR405 SDR407 SDR410 SDR412 SDR415	VRRM VRWM VR	50 70 100 125 150	Volts
Average Rectified Forward Current (Resistive Load, 60Hz, Sine Wave, TA=25°C)	IO	50	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, TA=25°C)	IFSM	450	Amps
Operating and storage temperature	Top & Tstg	-65 to +175	°C
Maximum Thermal Resistance Junction to Case	RθJC	1.0	°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 #: RU0039 A

RMD

SDR405 thru SDR415

PRELIMINARY



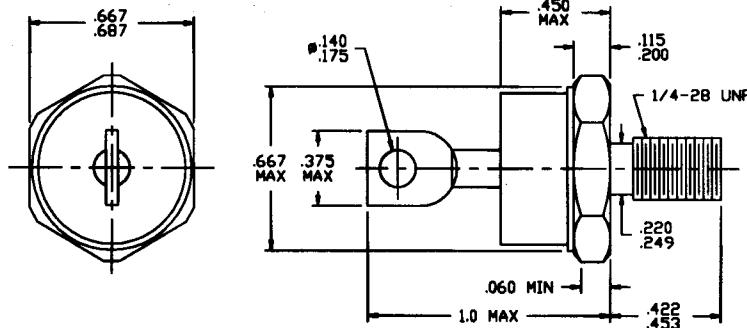
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ELECTRICAL CHARACTERISTICS

CHARACTERISTICS	SYMBOL	MAXIMUM	UNIT
Instantaneous Forward Voltage Drop ($I_F = 50 \text{ A dc}$, $T_A = 25^\circ\text{C}$, 300 μs Pulse)	VF	0.90	Vdc
Instantaneous Forward Voltage Drop ($I_F = 50 \text{ A dc}$, $T_A = -55^\circ\text{C}$, 300 μs Pulse)	VF	1.0	Vdc
Reverse Leakage Current (Rated V_R , $T_A = 25^\circ\text{C}$, 300 μs pulse minimum)	IR	250	μA
Reverse Leakage Current (Rated V_R , $T_A = 100^\circ\text{C}$, 300 μs pulse minimum)	IR	20	mA
Junction Capacitance ($V_R = 10 \text{ Vdc}$, $T_A = 25^\circ\text{C}$, $f = 1 \text{ MHz}$)	CJ	400	pf
Reverse Recovery Time ($I_F = 500 \text{ mA}$, $I_R = 1 \text{ A}$, $I_{RR} = 250 \text{ mA}$, $T_A = 25^\circ\text{C}$)	trr	50	nsec

CASE OUTLINE: DO-5



Dimensions prior to solder dipping.

TYPICAL OPERATING CURVES

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

