



PRELIMINARY

SOLID STATE DEVICES, INC

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

**SDR612.  
thru  
SDR618**

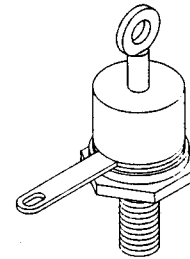
**15 AMP  
200-800 VOLTS  
45-60 nsec  
ULTRA FAST  
RECTIFIER**

## Designer's Data Sheet

### FEATURES:

- Ultrafast Recovery: 45-60 nsec Maximum
- Low Reverse Leakage
- Hermetically Sealed
- Single Chip Construction
- Low Forward Voltage Drop
- High Surge Current
- Isolated Stud Eliminates the need for mounting hardware
- TX and TXV Screening Available

DO-10



## MAXIMUM RATINGS

RATING	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse and DC Blocking Voltage	SDR612 SDR613 SDR614 SDR615 SDR616 SDR617 SDR618	200 300 400 500 600 700 800	Volts
Average Rectified Forward Current (Resistive Load, 60Hz, Sine Wave, TA=25°C)	IO	15	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, TA=25°C)	IFSM	250	Amps
Operating and storage temperature	Top & Tstg	-65 to +175	°C
Maximum Thermal Resistance Junction to Case	RθJC	3	°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 #: RU0021 B

RMD

# SDR612 thru SDR618

PRELIMINARY



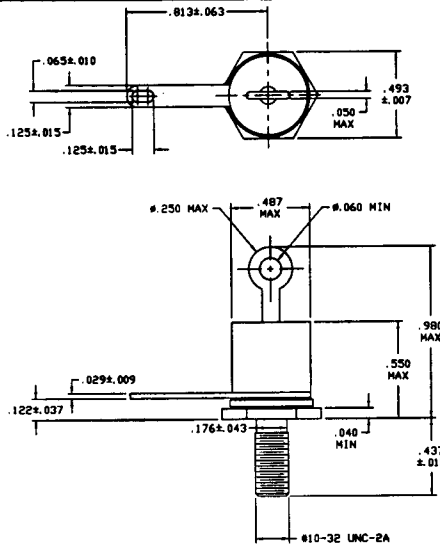
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## ELECTRICAL CHARACTERISTICS

CHARACTERISTICS		SYMBOL	MAXIMUM	UNIT
Instantaneous Forward Voltage Drop ( $I_F = 15 \text{ Adc}$ , $T_A = 25^\circ\text{C}$ , 300 $\mu\text{s}$ Pulse)	SDR612-615	VF	1.3	Vdc
	SDR616-618		1.8	
Instantaneous Forward Voltage Drop ( $I_F = 15 \text{ Adc}$ , $T_A = -55^\circ\text{C}$ , 300 $\mu\text{s}$ Pulse)	SDR612-615	VF	1.45	Vdc
	SDR616-618		1.95	
Reverse Leakage Current (Rated $V_R$ , $T_A = 25^\circ\text{C}$ , 300 $\mu\text{s}$ pulse minimum)		IR	50	$\mu\text{A}$
Reverse Leakage Current (Rated $V_R$ , $T_A = 100^\circ\text{C}$ , 300 $\mu\text{s}$ pulse minimum)		IR	10	mA
Junction Capacitance ( $V_R = 10 \text{ Vdc}$ , $T_A = 25^\circ\text{C}$ , $f = 1 \text{ MHz}$ )		CJ	150	pf
Reverse Recovery Time ( $I_F = 500\text{mA}$ , $I_R = 1\text{A}$ , $I_{RR} = 250\text{mA}$ , $T_A = 25^\circ\text{C}$ )	SDR612-615	trr	45	nsec
	SDR616		50	
	SDR617-618		60	

## CASE OUTLINE: DO-10



## TYPICAL OPERATING CURVES

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

