



Solid State Devices, Inc.

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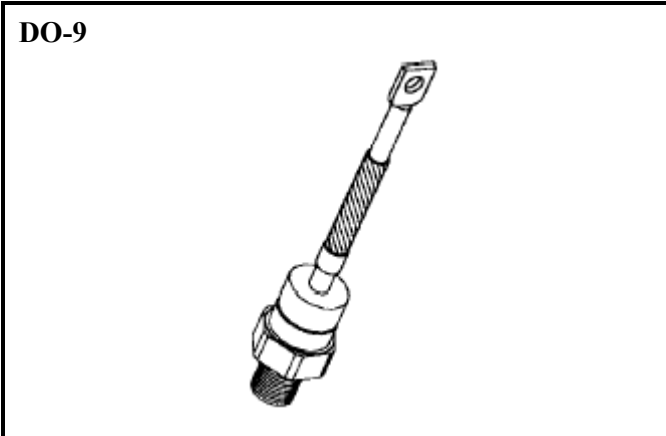
**SDR9400S10
 thru
 SDR9400S20**

**400 AMPS
 1000 – 2000 VOLTS
 25 µsec
 STANDARD RECOVERY
 HIGH CURRENT RECTIFIER**

Designer's Data Sheet

FEATURES:

- Forward Current to 400 Amps
- PIV 1000 to 2000 Volts
- Transient Voltage Rating of 200 Volts Above PIV
- Pressure Contact Device
- Single Chip Construction
- Low Forward Voltage Drop
- Hermetically Sealed
- For High Power Applications
- For Reverse Polarity Version Add Suffix "R"
- Fast Recovery Version Available (0.7 µsec typical)
- Higher Voltage Versions up to 5000 Volts Available
- TX, TXV, and Space Level Screening Available



MAXIMUM RATINGS ^{1/}		Symbol	Value	Unit
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SDR9400S10	V_{RRM}	1000	Volts
	SDR9400S15	V_{RWM}	1500	
	SDR9400S20	V_R	2000	
Average Rectified Forward Current Over Full Cycle (Resistive Load, 60 Hz, Sine Wave, $T_A=25^\circ\text{C}$)		I_O	400	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, $T_A=25^\circ\text{C}$)		I_{FSM}	3500	Amps
Operating and Storage Temperature		$T_{OP} \& T_{stg}$	-55 to +175	°C
Maximum Thermal Resistance (Junction to Case)		$R_{\theta JC}$	0.14	°C/W

NOTES:

^{1/} Mounting force = 238.95 in.-lbs. ± 10% for non-lubricated threads
 Typical weight = 220 grams



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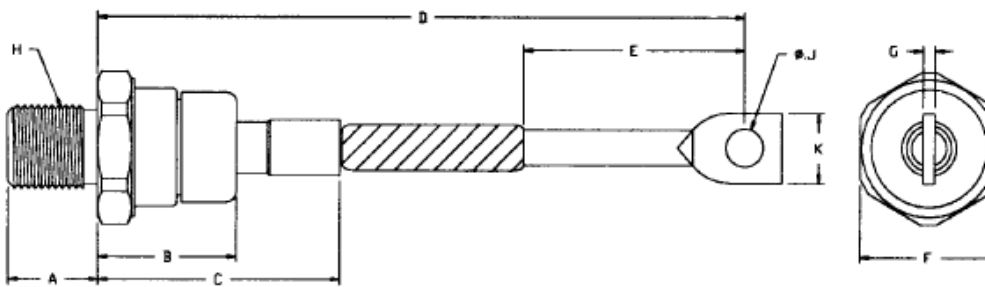
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**SDR9400S10
thru
SDR9400S20**

ELECTRICAL CHARACTERISTICS	Symbol	Value	Unit
Instantaneous Forward Voltage Drop ($I_F = 400$ Amp Pulse, $T_J = 25^\circ\text{C}$)	V_F	1.15	Volts
Instantaneous Forward Voltage Drop ($I_F = 400$ Amp Pulse, $T_J = 175^\circ\text{C}$)	V_F	1.10	Volts
Reverse Leakage Current (Rated V_R pulse, $T_J = 25^\circ\text{C}$)	I_R	2	mA
Reverse Leakage Current, Per Leg (Rated V_R pulse, $T_J = 175^\circ\text{C}$)	I_R	40	mA
Reverse Recovery Time ($I_{FM} = 400$ A, $V_R = 400$ V, $di/dt = -25 \mu\text{s}$, $R_S = 10\Omega$, $C_S = 0.5 \mu\text{F}$, $T_A = 25^\circ\text{C}$)	t_{rr}	25	μsec

CASE OUTLINE: DO-9



DIM	MIN	MAX
A	0.79"	0.83"
B	---	1.6"
C	---	2.25"
D	5.00"	6.00"
E	0.8"	2.2"typ
F	1.212"	1.250"
G	0.063"	0.172"
H	0.75-16UNF	
J	0.265"	0.350"
K	0.530"	0.755"

*For information on curves, contact the Factory Representative for Engineering Assistance.