PRELIMINARY

SOLID STATE DEVICES, INC

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

SDR8400S4 thru SDR8400S12

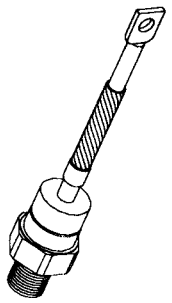
Designer's Data Sheet

400 AMPS 400-1200 VOLTS 15µsec STANDARD RECOVERY HIGH CURRENT RECTIFIER

FEATURES:

- Forward current to 400 Amps
- PIV to 1200 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 ad suffix "R"
- Fast Recovery version available (0.7 usec typical)
- Higher Voltage versions up to 5000 volts available
- TX, TXV, and Space Level Screening available

DO-8



MAXIMUM RATINGS

RATING (Note 1)	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse and DC Blocking Voltage **SDR8400S4** **SDR8400S6** **SDR8400S8** **SDR8400S10** **SDR8400S12**	V_{RRM} V_{RWM} V_R	400 600 800 1000 1200	**Volts**
Average Rectified Forward Current (Resistive Load, 60Hz, Sine Wave, TA=25°C)	I_O	400	**Amps**
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, TA=25°C)	I_{FSM}	2200	**Amps**
Operating and storage temperature	T_{op} & T_{stg}	-55 to +175	°C
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	0.25	°C/W

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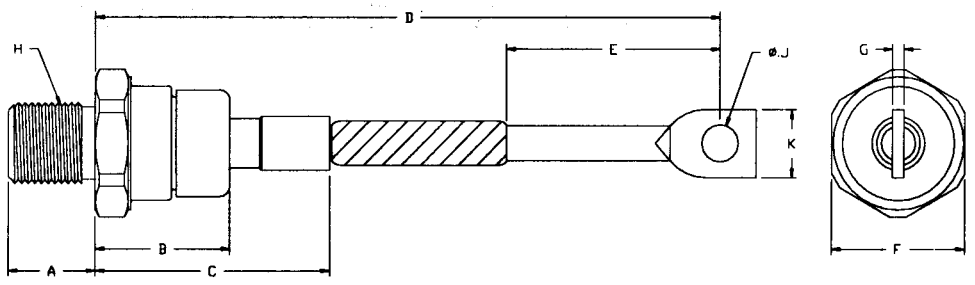
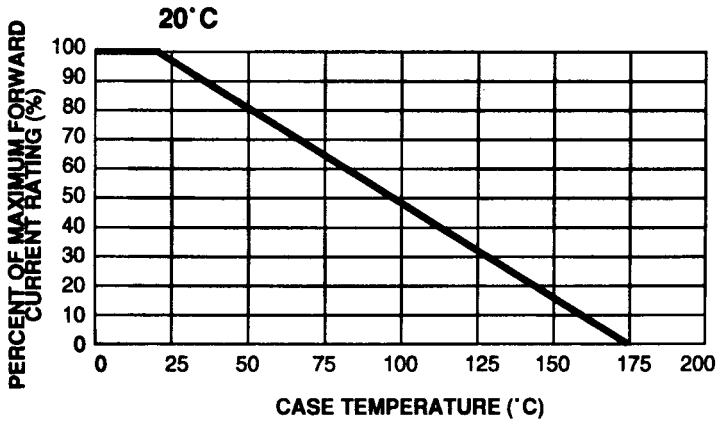
ELECTRICAL CHARACTERISTICS

CHARACTERISTICS	SYMBOL	MAXIMUM	UNIT
Instantaneous Forward Voltage Drop (IF = 400 Adc pulse, TJ=25°C)	VF	1.55	Vdc
Instantaneous Forward Voltage Drop (IF = 400 Adc pulse, TJ= +175°C)	VF	1.50	Vdc
Reverse Leakage Current (Rated VR pulse, TJ=25°C)	IR	1.5	mA
Reverse Leakage Current (Rated VR pulse, TJ=175°C)	IR	40	mA
Reverse Recovery Time (IFM= 400 A, VR=400V, di/dt= -25µs, Rs=10Ω, Cs=0.5µF, TA=25°C)	trr	15	µsec

CASE OUTLINE: DO-8



DIM	MIN	MAX
A	0.60"	0.65"
B	---	1.6"
C	---	1.675"
D	3.8"	6.0"
E	0.8"	2.2"typ
F	1.031"	1.063"
G	0.050"	0.100"
H	.375-24UNF	
J	0.250"	0.310"
K	0.437"	0.650"

TYPICAL OPERATING CURVES

TA=25°C Unless otherwise specified