PRELIMINARY

SOLID STATE DEVICES, INC

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

SDR9103CTNA&PA thru SDR9105CTNA&PA

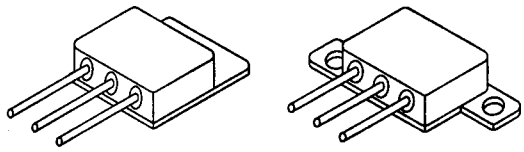
Designer's Data Sheet

100 AMP
300-500 VOLTS
35 nsec
HYPER FAST
CENTERTAP RECTIFIER
40 MIL PINS

FEATURES:

- Hyper Fast Recovery: 35 nsec Maximum
- High Surge Rating
- Low Reverse Leakage Current
- Low Junction Capacitance
- Hermetically Sealed Low Profile Package
- Gold Eutectic Die Attach available
- Ultrasonic Aluminum Wire Bonds
- Ceramic Seals for improved hermeticity
- TX, TXV and Space Level Screening Available
- Common Anode and Doubler versions available

TO-258 TO-259



MAXIMUM RATINGS

RATING	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse and DC Blocking Voltage SDR9103CTNA&PA / SDR9104CTNA&PA / SDR9105CTNA&PA	V_{RRM} / V_{RWM} / V_R	300 / 400 / 500	**Volts**
Average Rectified Forward Current (Resistive Load, 60Hz, Sine Wave, TA=25°C) note 1	**Io**	100	**Amps**
Peak Surge Current (8.3 ms Pulse, Half Sine Wave per leg, TA=25°C) note 2	**I_{FSM}**	500	**Amps**
Operating and storage temperature	**T_{op} & T_{stg}**	-65 to +200	**°C**
Maximum Thermal Resistance Junction to Case, each individual diode / Junction to Case, note 1	**$R_{\theta JC}$**	0.73 / 0.4	**°C/W**

note 1 Both legs tied together
note 2 Available with higher surge ratings

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

DATA SHEET#: RH0243 A

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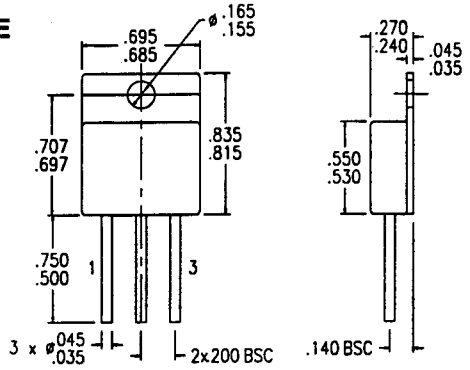
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ELECTRICAL CHARACTERISTICS (Per leg)

CHARACTERISTICS	SYMBOL	MAXIMUM	UNIT
Instantaneous Forward Voltage Drop (IF = 25 Adc, TA=25°C, 300µs Pulse) (IF = 50 Adc, TA=25°C, 300µs Pulse)	VF	1.35 1.65	Vdc
Instantaneous Forward Voltage Drop (IF = 25 Adc, TA=100°C, 300µs Pulse) (IF = 25 Adc, TA= - 55°C, 300µs Pulse)	VF	1.25 1.55	Vdc
Reverse Leakage Current (Rated VR, TA=25°C, 300µs pulse minimum)	IR	100	µA
Reverse Leakage Current (Rated VR, TA=100°C, 300µs pulse minimum)	IR	10	mA
Junction Capacitance (VR = 10 Vdc, TA=25°C, f= 1 MHz)	CJ	250	pf
Reverse Recovery Time (IF=500mA, IR=1 A, IRR=250mA, TA=25°C)	trr	35	nsec

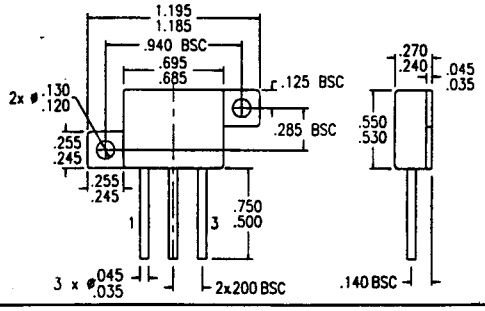
CASE OUTLINE: TO-258 (SUFFIX 'NA')

PIN 1: ANODE 1
PIN 2: CATHODE
PIN 3: ANODE 2



CASE OUTLINE: TO-259 (SUFFIX 'PA')

PIN 1: ANODE 1
PIN 2: CATHODE
PIN 3: ANODE 2



TYPICAL OPERATING CURVES

TA=25°C Unless otherwise specified

