SOLID STATE DEVICES, INC

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

PRELIMINARY

SDR936DM&Z thru SDR939DM&Z

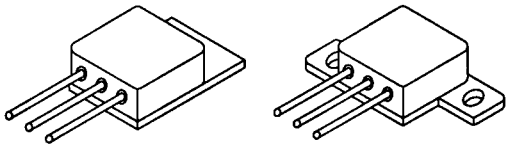
Designer's Data Sheet

30 AMP 600-900 VOLTS 80 nsec ULTRA FAST DOUBLER

FEATURES:

- Soft Recovery Diode
- Ultrafast Recovery: 80 nsec Maximum
- Available in faster recovery versions
- High Surge Rating
- Low Reverse Leakage Current
- Low Junction Capacitance
- Hermetically Sealed Package
- Gold Eutectic Die Attach available
- Ultrasonic Aluminum Wire Bonds
- Ceramic Seals for improved hermeticity available
- TX, TXV and Space Level Screening Available

TO-254 **TO-254Z**



MAXIMUM RATINGS

RATING	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse and DC Blocking Voltage			
SDR936DM&Z	V_{RRM}	600	**Volts**
SDR937DM&Z	V_{RWM}	700	
SDR938DM&Z		800	
SDR939DM&Z	V_R	900	
Average Rectified Forward Current (Resistive Load, 60Hz, Sine Wave, TA=25°C)	**Io**	30/LEG	**Amps**
Peak Surge Current (per leg) (8.3 ms Pulse, Half Sine Wave, TA=25°C)	**I_{FSM}**	250/LEG	**Amps**
Operating and storage temperature	**Top & Tstg**	-65 to +200	**°C**
Maximum Thermal Resistance Junction to Case, each individual diode	**$R_{\theta JC}$**	2.0	**°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#: RU0163 C

SDR936DM&Z thru SDR939DM&Z

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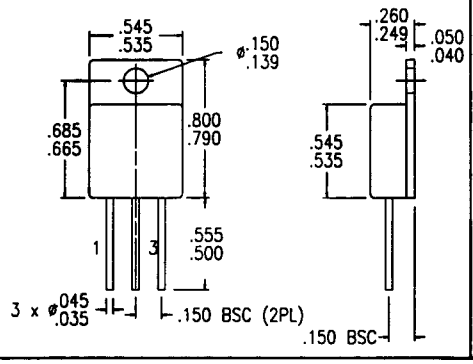
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ELECTRICAL CHARACTERISTICS (Per Leg)

CHARACTERISTICS	SYMBOL	MAXIMUM	UNIT
Instantaneous Forward Voltage Drop (IF = 15 Adc, TA=25°C, 300ms Pulse)	VF	1.40	Vdc
Instantaneous Forward Voltage Drop (IF = 15 Adc, TA=100°C, 300ms Pulse) (IF = 15 Adc, TA= - 55°C, 300ms Pulse)	VF	1.30 1.35	Vdc
Reverse Leakage Current (Rated VR, TA=25°C, 300ms pulse minimum)	IR	100	µA
Reverse Leakage Current (Rated VR, TA=100°C, 300ms pulse minimum)	IR	10	mA
Junction Capacitance (VR = 10 Vdc, TA=25°C, f= 1 MHz)	CJ	100	pf
Reverse Recovery Time (IF=500mA, IR=1 A, IRR=250mA, TA=25°C)	trr	80	nsec

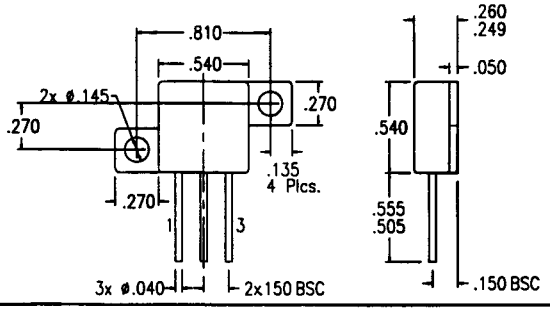
CASE OUTLINE: TO-254

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



CASE OUTLINE: TO-254Z

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



TYPICAL OPERATING CURVES

TA=25°C Unless otherwise specified

