



SOLID STATE DEVICES, INC.

14830 Valley View Avenue * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773

Designer's Data Sheet

**SDR950M & Z
thru
SDR952M & Z**

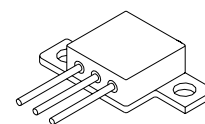
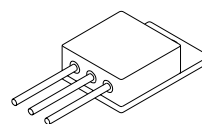
**50AMPS
100 - 200 VOLTS
40 nsec
HYPER FAST
RECTIFIER**

FEATURES:

- Hyper Fast Recovery: 40 nsec Maximum
- High Surge Rating
- Low Reverse Leakage Current
- Low Junction Capacitance
- Hermetically Sealed Package
- Gold Eutectic Die Attach Available
- Ultrasonic Aluminum Wire Bonds
- Ceramic Seal for Improved Hermeticity Available
- Higher Voltages and Faster Recovery Time Available, Consult Factory
- TX, TXV and Space Level Screening Available

TO-254 (M)

TO-254Z (Z)



Maximum Ratings		SYMBOL	VALUE	UNITS
Peak Repetitive Reverse and DC Blocking Voltage	SDR950M & Z	V_{RRM}	100	Volts
	SDR951M & Z	V_{RWM}	150	
	SDR952M & Z	V_R	200	
Average Rectified Forward Current. (Resistive load, 60Hz, Sine Wave, $T_C \leq 150^\circ\text{C}$, Derate to 0A @ 200°C)		I_o	50	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, $T_C = 55^\circ\text{C}$, $I_o = 50\text{A}$) <u>1/</u>		I_{FSM}	300	Amps
Operating and Storage Temperature		$T_{OP} \& T_{stg}$	-65 TO +200	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case, <u>1/</u>		$R_{\theta JC}$	0.85	$^\circ\text{C/W}$

NOTE:

1/ Connect Pins 2 and 3 Together.

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

DATA SHEET #: RH0039G

SDR950M & Z thru SDR952M & Z

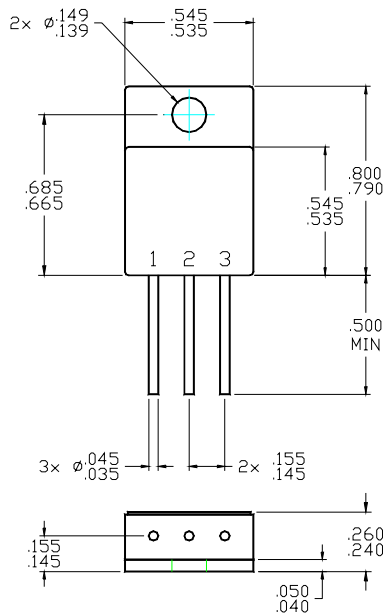


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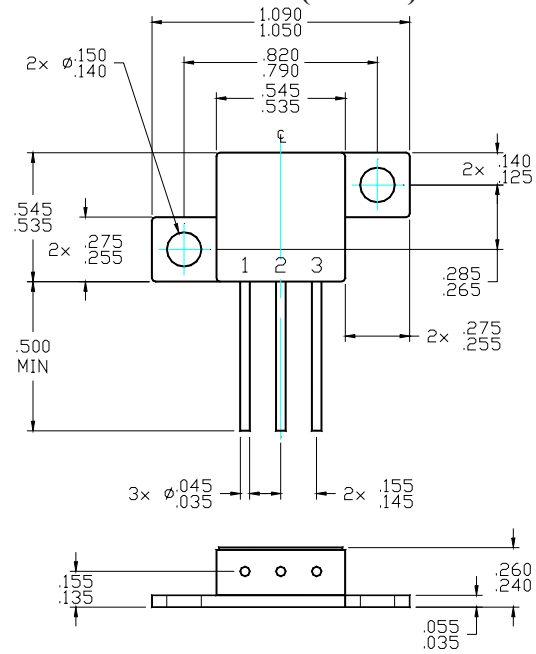
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Electrical Characteristics	SYMBOL	MINIMUM	MAXIMUM	UNITS
Instantaneous Forward Voltage Drop ($T_A = 25^\circ\text{C}$, 300 - 500 μsec Pulse)	$I_F = 25\text{A}$ V_{F1}	—	1.00	V_{DC}
	$I_F = 50\text{A}$ V_{F2}	—	1.25	
Instantaneous Forward Voltage Drop ($I_F = 50\text{A}$, $T_C = -65^\circ\text{C}$, 300 - 500 μsec pulse)	V_{F3}	—	1.35	V_{DC}
Breakdown Voltage ($I_R = 250\mu\text{A}$, $T_A = 25^\circ\text{C}$)	SDR950M & Z	100	—	V
	SDR951M & Z	150	—	
	SDR952M & Z	200	—	
Reverse Leakage Current (80% of Rated V_R , 300 μs pulse min.)	$T_A = 25^\circ\text{C}$ I_{R1}	—	100	μA
	$T_C = 100^\circ\text{C}$ I_{R2}	—	10	mA
Junction Capacitance ($V_R = 10V_{DC}$, $T_A = 25^\circ\text{C}$, $f = 1\text{MHz}$)	C_J	—	900	pF
Reverse Recovery Time ($I_R = 1.0\text{A}$, $I_{RR} = 250\text{mA}$, $T_A = 25^\circ\text{C}$)	t_{RR}	—	40	nsec

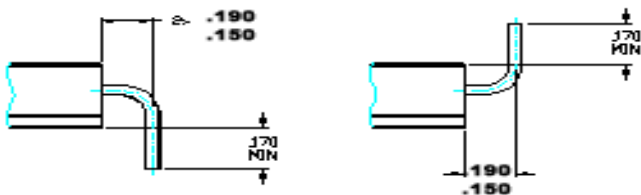
CASE OUTLINE: TO-254 (Suffix M)



CASE OUTLINE: TO-254Z (Suffix Z)



OPTIONAL LEAD BEND CONFIGURATION



SUFFIX MD & ZD

SUFFIX MU & ZU

PIN ASSIGNMENT

CODE	FUNCTION	PIN 1	PIN 2	PIN 3
CT	Common Cathode	Anode	Cathode	Anode
CA	Common Anode	Cathode	Anode	Cathode