Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
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SDR950M & Z Thru SDR952M & Z

Designer's Data Sheet

Part Number/Ordering Information [1/]

SDR950 ___ ___ ___

+ **Screening** [2/] __ = Not Screened
TX = TX Level
TXV = TXV Level
S = S Level

+ **Leg Bend Option**
(See Figure 1)

+ **Package** M = TO-254, Z = TO-254Z

50A, 35nsec typ., 100-200 V Hyper Fast Rectifier

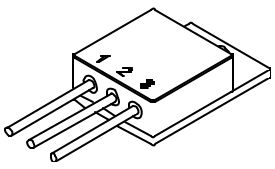
Features:

- **Hyper Fast Recovery: 50nsec Maximum** [3/]
- **High Surge Rating**
- **Low Reverse Leakage Current**
- **Low Junction Capacitance**
- **Hermetically Sealed Package**
- **Gold Eutectic Die Attach**
- **Ultrasonic Aluminum Wire Bonds**
- **Higher Voltages and Faster Recovery Times Available, Contact Factory**
- **Ceramic Seal for Improved Hermeticity Available**
- **TX, TXV, and S-Level Screening Available** [2/]

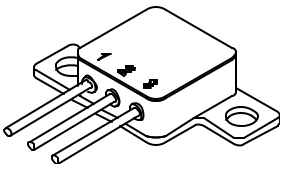
Maximum Ratings	Symbol	Value	Units
Peak Repetitive Reverse Voltage **SDR950M & Z** **SDR951M & Z** **SDR952M & Z**	V_{RRM} V_{RWM} V_R	100 150 200	**Volts**
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave, T_A = 25 °C) [5/]	**Io**	50	**Amps**
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, or equivalent DC) [4/]	I_{FSM}	350	**Amps**
Operating & Storage Temperature	T_{OP} & T_{STG}	-65 to +200	**°C**
Maximum Total Thermal Resistance Junction to Case [4/]	$R_{\theta JC}$	0.85	**°C/W**

- **Notes:**
  1/ For ordering information, Price, Operating Curves, and Availability- Contact Factory.
  2/ Screened to MIL-PRF-19500.
  3/ Recovery Conditions: I_F =10 Amp, di/dt = 200A/µs
  4/ Pins 2 and 3 Tied Together.
  5/ T_C = 150°C, Derate to 0A @ 200°C.

- **TO-254 (M)**



- **TO-254Z (Z)**

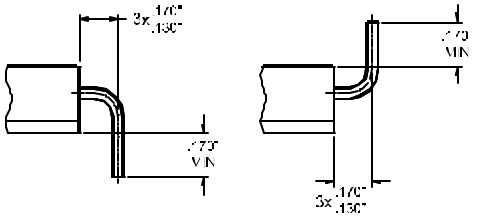


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SDR950M & Z Thru SDR952M & Z

Electrical Characteristics		Symbol	Max	Units
Instantaneous Forward Voltage Drop (I_F = 25A, 300-500µsec Pulse) (I_F = 50A, 300-500µsec Pulse)	T_A = 25 ºC T_A = 25 ºC	V_{F1} V_{F2}	1.00 1.25	V_{DC}
Instantaneous Forward Voltage Drop (I_F = 50Adc, 300-500µsec Pulse)	T_A = -55 ºC	V_{F3}	1.35	V_{DC}
Reverse Leakage Current (300µsec Pulse Minimum)	T_A = 25 ºC, Rated V_R T_C = 100 ºC, 80% of Rated V_R	I_{R1} I_{R2}	100 10	mA mA
Reverse Recovery Time (I_F =10 Amp, di/dt = 200A/µs)		t_{RR}	50	nsec
Junction Capacitance (V_R = 10V_{DC}, T_A = 25ºC, f = 1MHz)		C_J	900	pF

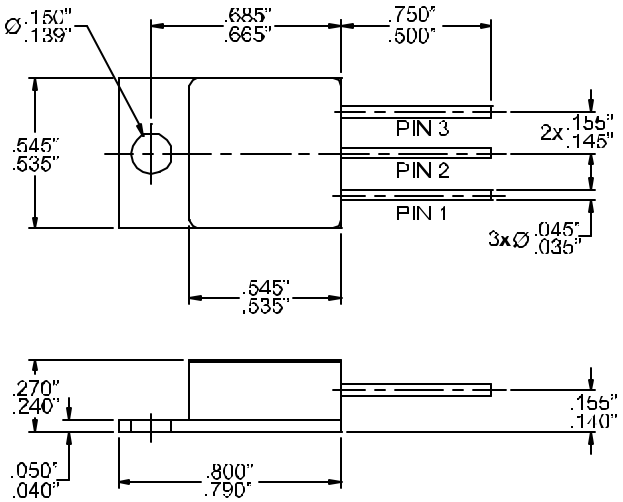
Figure 1- Optional Lead Bends



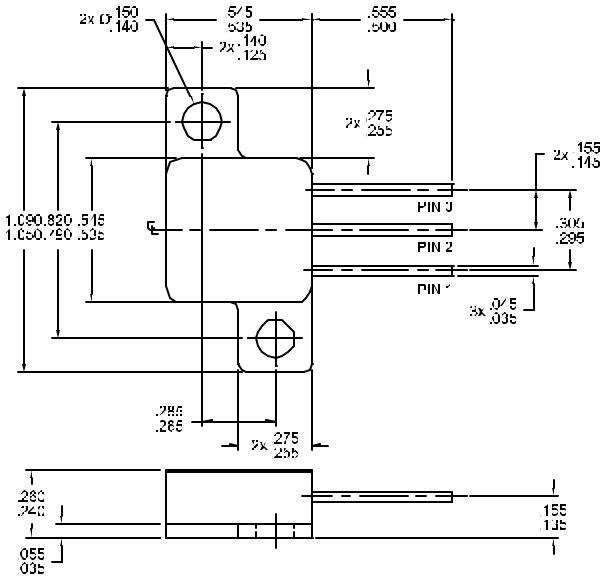
Suffix MD & ZD **Suffix MU & ZU**

PIN ASSIGNMENT				
Code	**FUNCTION**	**Pin 1**	**Pin 2**	**Pin 3**
		Cathode	Anode	Anode

TO-254 (Suffix M) Outline:



TO-254Z (Suffix Z) Outline:



Measured in Inches