



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
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 ssdi@ssdi-power.com * www.ssdi-power.com

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	V_{RRM}	100	Volts
	SDR951M & Z	V_{RWM}	150	
	SDR952M & Z	V_R	200	
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave, $T_A = 25^\circ\text{C}$) ^{5/}		I_o	50	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, or equivalent DC) ^{4/}		I_{FSM}	350	Amps
Operating & Storage Temperature		$T_{OP} \text{ \& } T_{STG}$	-65 to +200	$^\circ\text{C}$
Maximum Total Thermal Resistance Junction to Case ^{4/}		R_{qJC}	0.85	$^\circ\text{C/W}$

Notes:

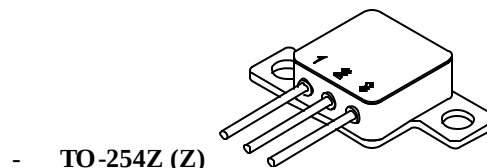
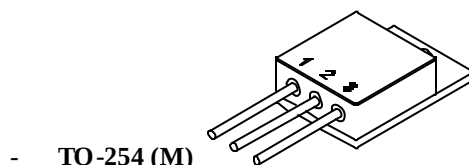
1/ For ordering information, Price, Operating Curves, and Availability- Contact Factory.

2/ Screened to MIL-PRF-19500.

3/ Recovery Conditions: $I_F = 10 \text{ Amp}$, $di/dt = 200\text{A}/\mu\text{s}$

4/ Pins 2 and 3 Tied Together.

5/ $T_C = 150^\circ\text{C}$, Derate to 0A @ 200°C .



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

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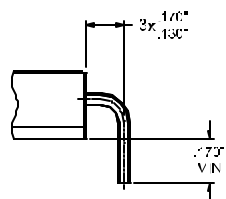
SDR950M & Z

Thru

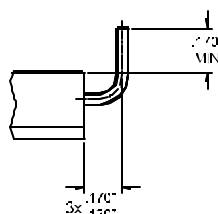
SDR952M & Z

Electrical Characteristics		Symbol	Max	Units
Instantaneous Forward Voltage Drop (I _F = 25A, 300-500μsec Pulse) (I _F = 50A, 300-500μsec Pulse)	T _A = 25 °C	V _{F1}	1.00	V _{DC}
	T _A = 25 °C	V _{F2}	1.25	
Instantaneous Forward Voltage Drop (I _F = 50Adc, 300-500μsec Pulse)	T _A = -55 °C	V _{F3}	1.35	V _{DC}
Reverse Leakage Current (300μsec Pulse Minimum)	T _A = 25 °C, Rated V _R	I _{R1}	100	mA
	T _C = 100 °C, 80% of Rated V _R	I _{R2}	10	mA
Reverse Recovery Time (I _F = 10 Amp, di/dt = 200A/μs)		t _{RR}	50	nsec
Junction Capacitance (V _R = 10V _{DC} , T _A = 25°C, f = 1MHz)		C _J	900	pF

Figure 1- Optional Lead Bends



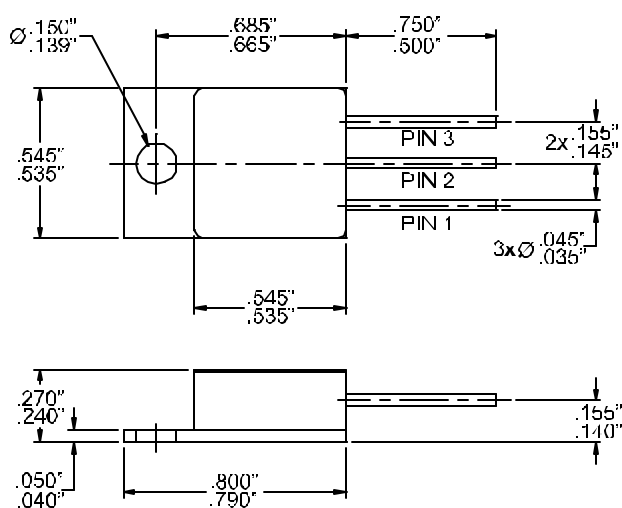
Suffix MD & ZD



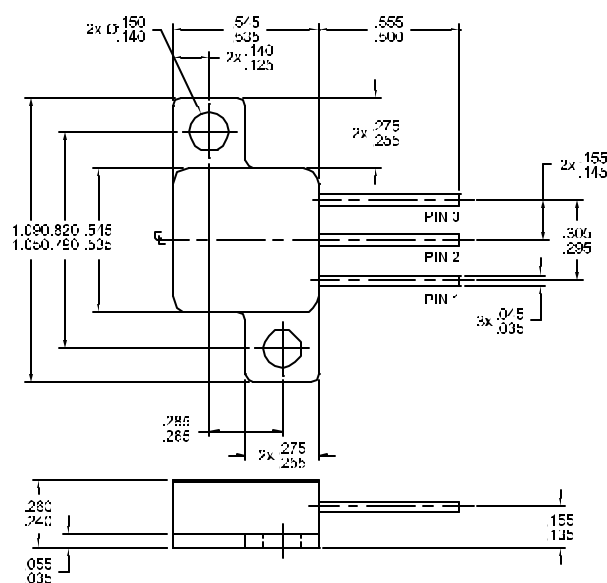
Suffix MU & ZU

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

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