



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

SDR950M & Z Thru SDR952M & Z

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

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

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} & T_{STG}	-65 to +200	$^\circ\text{C}$
Maximum Total Thermal Resistance Junction to Case ^{4/}		$R_{\theta JC}$	0.85	$^\circ\text{C/W}$

Notes:

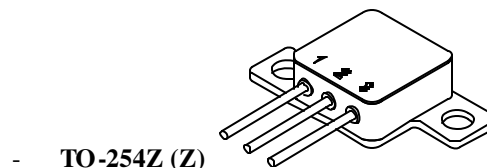
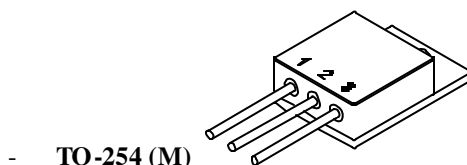
1/ For ordering information, Price, Operating Curves, and Availability- Contact Factory.

2/ Screened to MIL-PRF-19500.

3/ Recovery Conditions: $I_F = 10$ 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.

DATA SHEET #: RH0039K

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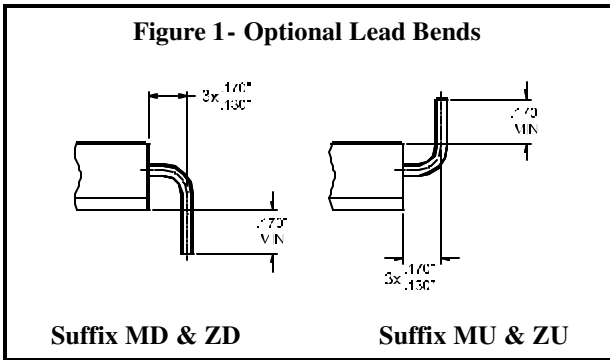


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SDR950M & Z
Thru
SDR952M & Z

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



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

