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Solid State Devices, Inc. 14701 Firestone Blvd * La Mirada, Ca 90638

SDR953M & Z Thru SDR956M & Z

50A, 35nsec, 300-600 V **Hyper Fast Rectifier**

Designer's Data Sheet Part Number/Ordering Information 1/ SDR95 Screening 2/ = Not Screened TX = TX LevelTXV = TXV LevelS = S Level**Leg Bend Option** (See Figure 1) Package M = TO-254, Z = TO-254Z**Voltage** 3 = 300V, 4 = 400V,5 = 500 V. 6 = 600 V.

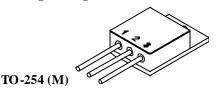
Features:

- Hyper Fast Recovery: 35nsec Maximum ^{3/}
- **High Surge Rating**
- Low Reverse Leakage Current
- **Low Junction Capacitance**
- **Hermetically Sealed Low Profile Package**
- **Gold Eutectic Die Attach Available**
- **Ultrasonic Aluminum Wire Bonds**
- **Higher Voltages and Faster Recovery Times Available, Contact Factory**
- **Ceramic Seal for Improve d Hermeticity Available**
- TX, TXV, and S-Level Screening Available ^{2/}

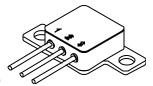
Maximum Ratings		Symbol	Value	Units
Peak Repetitive Reverse Voltage And DC Blocking Voltage	SDR953M & Z SDR954M & Z SDR955M & Z SDR956M & Z	$egin{array}{c} V_{RRM} \ V_{RWM} \ V_{R} \end{array}$	300 400 500 600	Volts
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave, T _A = 25 °C)		Io	50	Amps
Peak Surge Current ⁵ / (8.3 ms Pulse, Half Sine Wave, or equivalent DC) ⁴ /		I_{FSM}	450	Amps
Operating & Storage Temperature		T _{OP} & T _{STG}	-65 to +200	°C
Maximum Total Thermal Resistance Junction to Case		$R_{q, IC}$	0.7	°C/W

Notes:

- 1/ For ordering information, Price, Operating Curves, and Availability- Contact Factory.
- 2/ Screened to MIL-PRF-19500.
- 3/ Recovery Conditions: $I_F = .5$ Amp, $I_R = 1$ A, $I_{RR} = .25$ A.
- 4/ Pins 2 and 3 Tied Together.
- 5/ Available with higher surge ratings.



TO-254Z (Z)

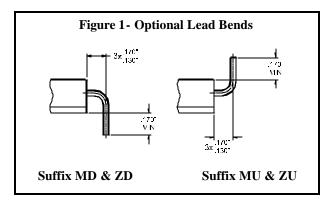




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Electrical Characteristics		Symbol	Max	Units
Instantaneous Forward Voltage Drop $\frac{4}{}$ (I _F = 25A, Pulse) (I _F = 50A, Pulse)	$T_A = 25$ °C $T_A = 25$ °C		1.30 1.65	V_{DC}
Instantaneous Forward Voltage Drop $\frac{4}{}$ (I _F = 25Adc, Pulse)	$T_{A} = -55 ^{\circ}\text{C}$ $T_{A} = 100 ^{\circ}\text{C}$		1.4 1.2	V _{DC}
Reverse Leakage Current	$T_A = 25$ °C, Rated V_R , Pulse $T_A = 100$ °C, Rated V_R , Pulse	$egin{array}{c} I_{R1} \ I_{R2} \end{array}$	100 10	mA mA
Reverse Recovery Time (I _F =.5 Amp, I _R = 1A, I _{RR} = .25A)	T _A = 25 °C	t _{RR}	35	nsec
		C_{J}	250	pF



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

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- 3/ Recovery Conditions: $I_F = .5$ Amp, $I_R = 1$ A, $I_{RR} = .25$ A.
- 4/ Pins 2 and 3 Tied Together.
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