

**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 Level
 TXV = TXV Level
 S = S Level

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

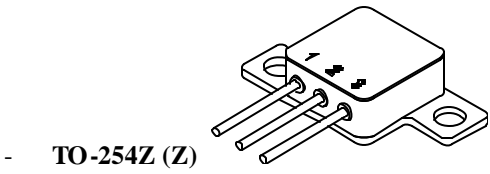
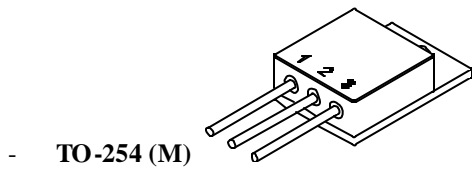
+ **Package** M = TO-254, Z = TO-254Z

+ **Voltage** 3 = 300V, 4 = 400V,
 5 = 500V, 6 = 600V.

- 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 Improved 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	V_{RRM} V_{RWM} V_R	300 400 500 600 Volts
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave, $T_A = 25^\circ C$)	I_o	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_{qJC}	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, $I_R = 1A$, $I_{RR} = .25A$.
 - 4/ Pins 2 and 3 Tied Together.
 - 5/ Available with higher surge ratings.



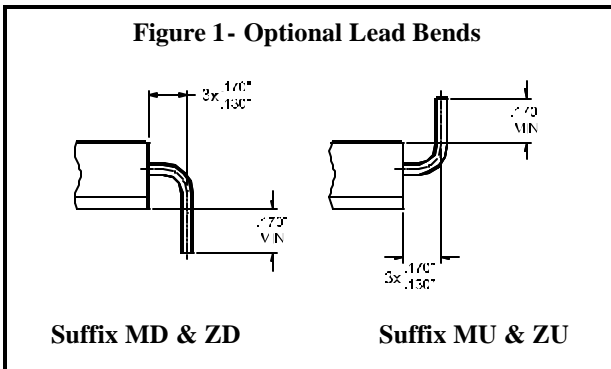


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Thru
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Electrical Characteristics		Symbol	Max	Units
Instantaneous Forward Voltage Drop ^{4/} (I _F = 25A, Pulse) (I _F = 50A, Pulse)	T _A = 25 °C	V _{F1}	1.30	V _{DC}
	T _A = 25 °C	V _{F2}	1.65	
Instantaneous Forward Voltage Drop ^{4/} (I _F = 25Adc, Pulse)	T _A = -55 °C	V _{F3}	1.4	V _{DC}
	T _A = 100 °C	V _{F4}	1.2	
Reverse Leakage Current	T _A = 25 °C, Rated V _R , Pulse	I _{R1}	100	mA
	T _A = 100 °C, Rated V _R , Pulse	I _{R2}	10	mA
Reverse Recovery Time (I _F = .5 Amp, I _R = 1A, I _{RR} = .25A)	T _A = 25 °C	t _{RR}	35	nsec
Junction Capacitance (V _R = 10V _{DC} , T _A = 25°C, f = 1MHz)		C _J	250	pF



PIN ASSIGNMENT (TO-254 and TO-254Z Packages)				
Code	FUNCTION	Pin 1	Pin 2	Pin 3
		Cathode	Anode	Anode

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- 4/ Pins 2 and 3 Tied Together.
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