



Solid State Devices, Inc.

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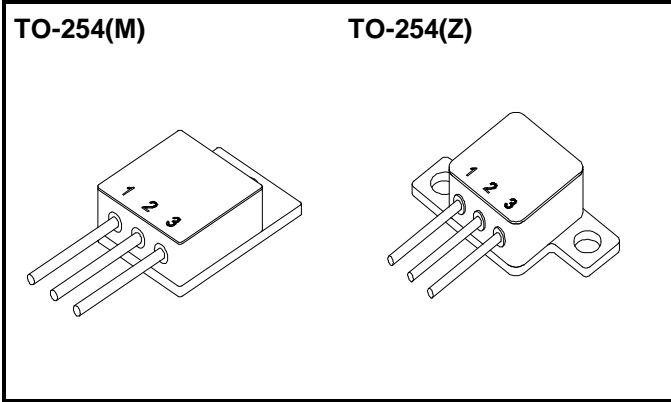
**SDR936M&Z
thru
SDR939M&Z**

**30 AMPS
600 - 900 VOLTS
80 nsec
ULTRA FAST
RECTIFIER**

Designer's Data Sheet

FEATURES:

- Soft Recovery Diode
- Ultra Fast Recovery: 80 nsec maximum
- Available in faster recovery versions
- High Surge Rating
- Low Reverse Leakage Current
- Low Junction Capacitance
- Hermetically Sealed Package
- Gold Eutectic Die Attach available
- Ultrasonic Aluminum Wire Bonds
- Ceramic Seals for improved hermeticity available
- TX, TXV, and Space Level Screening Available



MAXIMUM RATINGS		Symbol	Value	Units
Peak Repetitive Reverse and DC Blocking Voltage	SDR936M&Z	V_{RRM} V_{RWM} V_R	600	Volts
	SDR937M&Z		700	
	SDR938M&Z		800	
	SDR939M&Z		900	
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, $T_A=25^\circ\text{C}$)		I_o	30	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, $T_A=25^\circ\text{C}$)		I_{FSM}	500*	Amps
Operating and Storage Temperature Range		T_{OP} T_{stg}	-65 to 200	$^\circ\text{C}$
Maximum Thermal Resistance		R_{qJL} R_{qJE}	6 4	$^\circ\text{C/W}$

Note: 1/ * Pin 2&3 connected together; available with higher surge capacity.
2/ For best results, Pin 2&3 must be connected together in the application.



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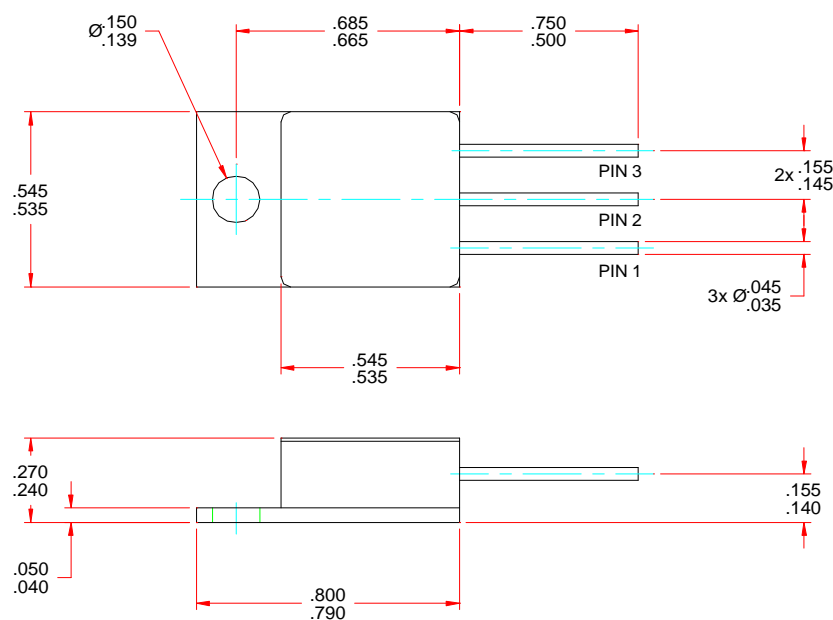
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**SDR936M&Z
 thru
 SDR939M&Z**

ELECTRICAL CHARACTERISTICS	Symbol	Min	Max	Unit
Instantaneous Forward Voltage Drop (IF=15 Adc, TA = 25°C, 300ms Pulse) (IF=30 Adc, TA = 25°C, 300ms Pulse)	V_F	—	1.25	Volts
		—	1.40	Volts
Instantaneous Forward Voltage Drop (IF=15 Adc, TA = -55°C, 300ms Pulse) (IF=15 Adc, TA = 100°C, 300ms Pulse)	V_F	—	1.15	Volts
		—	1.35	Volts
Reverse Leakage Current (Rated V _R , T _A 300ms Pulse minimum)	I_{R1}	—	100	mA
	I_{R2}	—	100	mA
Junction Capacitance (V _R = 10 V _{DC} , T _A = 25°C, f = 1 MHz)	C_J	—	150	pF
Reverse Recovery Time (I _F =500 mA, I _R =1 A, I _{RR} =250 mA, T _A = 25°C)	t_{rr}	—	80	ns

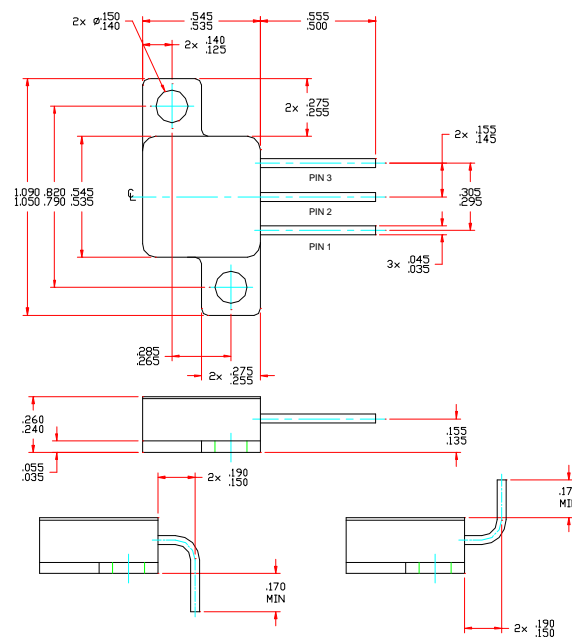
Case Outline: TO-254(M)

- Pin1: Cathode**
- Pin 2: Anode**
- Pin 3: Anode**



Case Outline: TO-254(Z)

- Pin 1: Cathode**
- Pin 2: Anode**
- Pin 3: Anode**



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

DATA SHEET #: RU0073B

DOC