



# 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

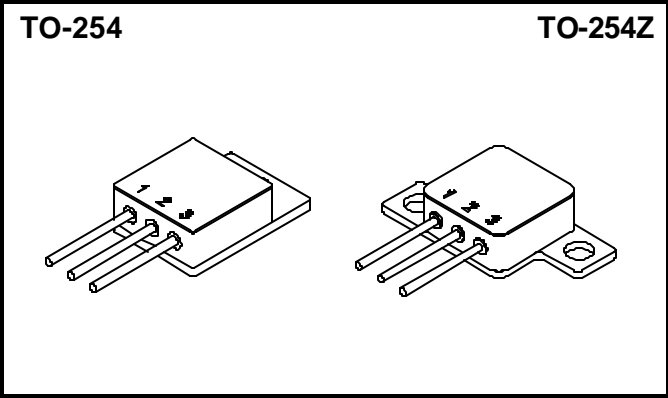
**SSR2008M, SSR2008Z  
SSR2009M, SSR2009Z  
SSR2010M, SSR2010Z**

## Designer's Data Sheet

### FEATURES:

- PIV: 100 Volts
- Low Reverse Leakage Current
- Low Forward Voltage Drop
- Guard Ring for Overvoltage Protection
- Isolated Hermetically Sealed Package
- Available in Glass or Ceramic Seal Packages
- Custom Lead Forming Available
- Eutectic Die Attach
- 175°C Operating Junction Temperature
- TX, TXV, and Space Level Screening Available

**20 AMPS  
100 VOLTS  
SCHOTTKY  
RECTIFIER**



**Available in the Following Configurations:**  
 TO-254: **SSR2008M, SSR2008MUB, SSR2008MDB, SSR2009M, SSR2009MUB, SSR2009MDB, SSR2010M, SSR2010MUB, SSR2010MDB.**  
 TO-254Z: **SSR2008Z, SSR2008ZUB, SSR2008ZDB, SSR2009Z, SSR2009ZUB, SSR2009ZDB, SSR2010Z, SSR2010ZUB, SSR2010ZDB**

MAXIMUM RATINGS <sup>2/</sup>		Symbol	Value	Unit
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SSR2008M & Z	V <sub>RRM</sub>	80	Volts
	SSR2009M & Z	V <sub>RWM</sub>	90	
	SSR2010M & Z	V <sub>R</sub>	100	
Average Rectified Forward Current <sup>1/ 3/</sup> (Resistive Load, 60 Hz, Sine Wave, T <sub>C</sub> = 25°C)		I <sub>O</sub>	20	Amps
Peak Surge Current <sup>3/</sup> (8.3 ms Pulse, Half Sine Wave, T <sub>A</sub> = 25°C)		I <sub>FSM</sub>	300	Amps
Operating and Storage Temperature		T <sub>OP</sub> & T <sub>stg</sub>	-65 to +175	°C
Maximum Thermal Resistance <sup>3/</sup> (Junction to Case)		R <sub>qJC</sub>	1.0	°C/W

- NOTE:**  
<sup>1/</sup> Derate Linearly at 1A/°C for T<sub>C</sub> > 155°C.  
<sup>2/</sup> All Electrical Characteristics @25°C, Unless Otherwise Specified.  
<sup>3/</sup> pins 2 and 3 externally connected together

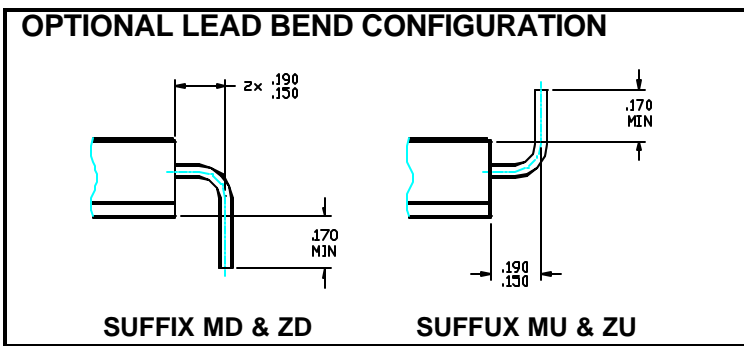
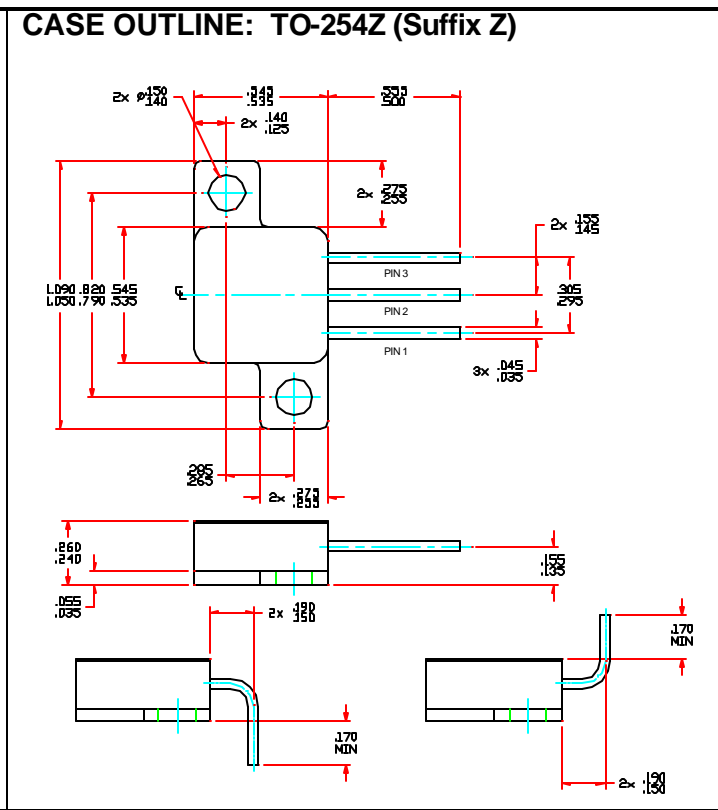
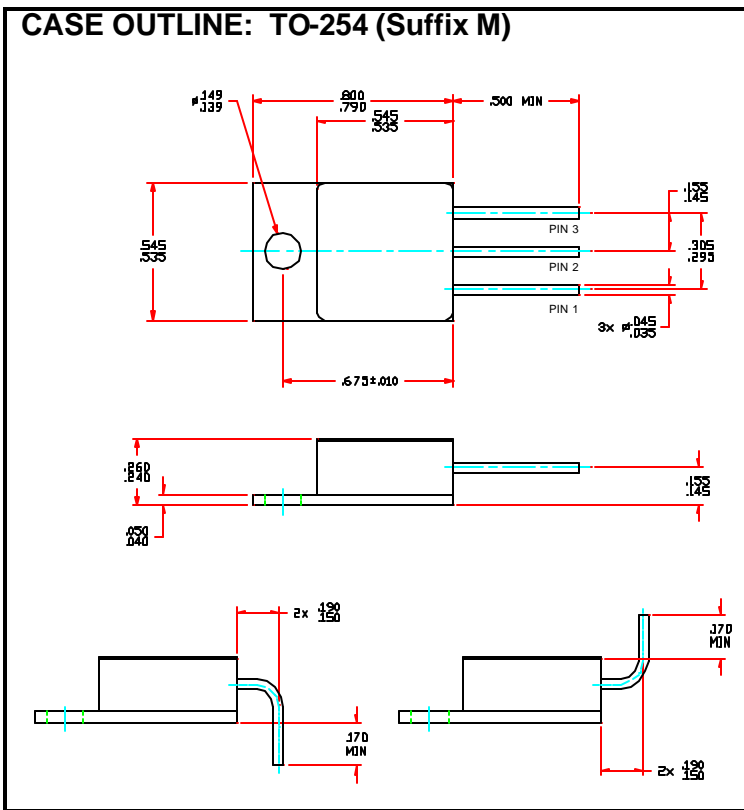


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ELECTRICAL CHARACTERISTICS <sup>2/</sup> (per leg)		Symbol	Max	Unit
Instantaneous Forward Voltage Drop (300 - 500µs Pulse)	$I_F = 10\text{ A}$	$V_{F1}$	0.75	Volts
	$I_F = 15\text{ A}$	$V_{F2}$	0.82	
	$I_F = 20\text{ A}$	$V_{F3}$	0.85	
Instantaneous Forward Voltage Drop ( $T_A = -55^\circ\text{C}$ , 300 - 500µs Pulse)	$I_F = 10\text{ A}$	$V_{F4}$	0.85	Volts
Reverse Leakage Current (Rated $V_R$ , 300µs pulse minimum)	$T_A = 25^\circ\text{C}$	$I_{R1}$	200	mA
	$T_C = 100^\circ\text{C}$	$I_{R2}$	10	mA
Junction Capacitance ( $V_R = 10\text{ V}$ , $f = 1\text{ MHz}$ , $T_A = 25^\circ\text{C}$ )		$C_J$	800	pF



PIN ASSIGNMENT			
FUNCTION	PIN 1	PIN 2	PIN 3
Rectifier <sup>4/</sup>	Cathode	Anode	Anode

**NOTE:**  
<sup>4/</sup> Pins 2 and 3 externally connected for best performance.