



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**

**20 AMPS
 100 VOLTS
 SCHOTTKY
 RECTIFIER**

Designer's Data Sheet

Part Number/Ordering Information ^{1/}
SSR20

Screening ^{2/}
 — = Not Screened
 TX = TX Level
 TXV = TXV Level
 S = S Level

Lead Options
 — = Straight Leads,
 DB = Bent Down
 UB = Bent Up

Package
 M = TO-254
 Z = TO-254Z

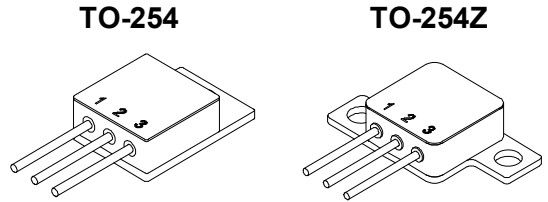
Voltage / Family
 08 = 80V
 09 = 90V
 10 = 100V

- 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

MAXIMUM RATINGS ^{3/}	Symbol	Value	Unit	
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SSR2008M & Z SSR2009M & Z SSR2010M & Z	V_{RRM} V_{RWM} V_R	80 90 100	Volts
Average Rectified Forward Current ^{1/4/} (Resistive Load, 60 Hz, Sine Wave, $T_C = 25^\circ C$)		I_o	20	Amps
Peak Surge Current ^{4/} (8.3 ms Pulse, Half Sine Wave, $T_A = 25^\circ C$)		I_{FSM}	300	Amps
Operating and Storage Temperature		$T_{OP} \& T_{stg}$	-65 to +175	°C
Maximum Thermal Resistance^{4/} (Junction to Case)		$R_{\theta JC}$	1.2	°C/W

NOTE:

- ^{1/} Derate linearly at 1A/°C for $T_C > 155^\circ C$
- ^{2/} Screening based on MIL-PRF-19500. Screening flows available on request.
- ^{3/} All electrical characteristics @25°C, unless otherwise specified
- ^{4/} Pins 2 and 3 externally connected together



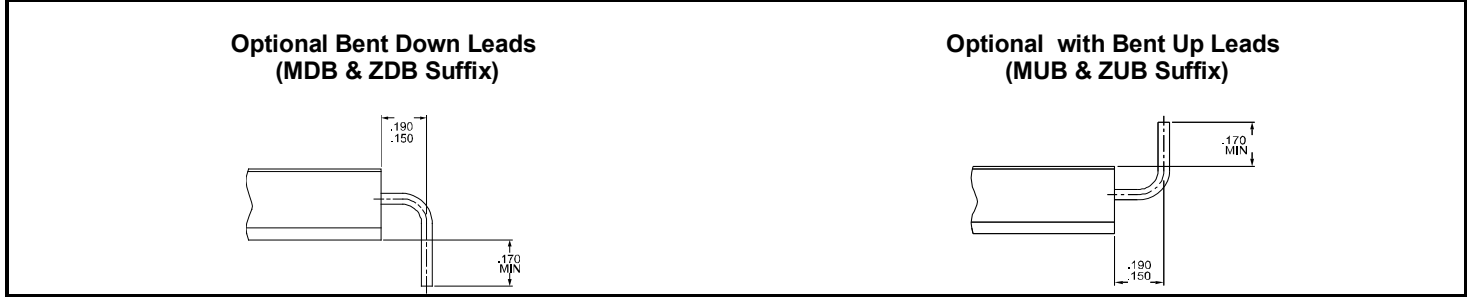
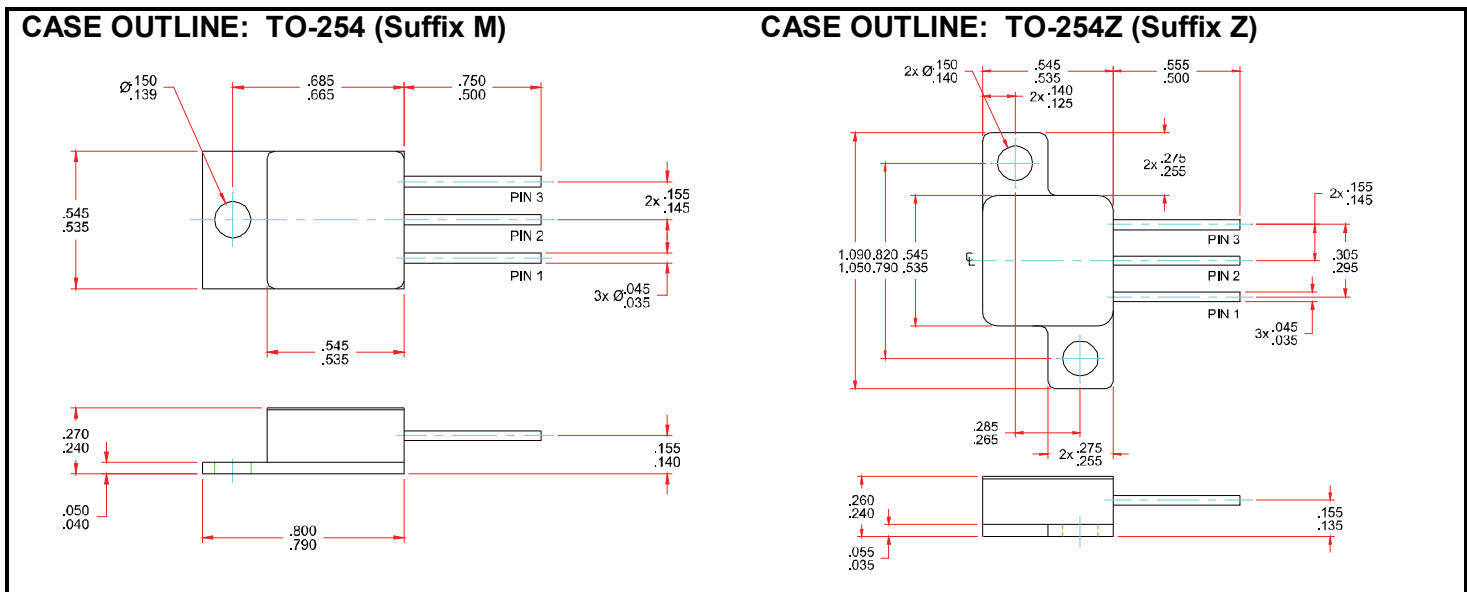


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ELECTRICAL CHARACTERISTICS ^{5/} (per leg)		Symbol	Max	Unit
Instantaneous Forward Voltage Drop (300 - 500µs Pulse)	$I_F = 10\text{ A}$	V_{F1}	0.75	Volts
	$I_F = 15\text{ A}$	V_{F2}	0.82	
	$I_F = 20\text{ A}$	V_{F3}	0.85	
Instantaneous Forward Voltage 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	µA
	$T_C = 100^\circ\text{C}$	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



<p>Available in the following configurations:</p> <p>TO-254: SSR2008M, SSR2008MUB, SSR2008MDB, SSR2009M, SSR2009MUB, SSR2009MDB, SSR2010M, SSR2010MUB, SSR2010MDB</p> <p>TO-254Z: SSR2008Z, SSR2008ZUB, SSR2008ZDB, SSR2009Z, SSR2009ZUB, SSR2009ZDB, SSR2010Z, SSR2010ZUB, SSR2010ZDB</p>	<table border="1" style="margin: 0 auto;"> <thead> <tr> <th colspan="4">PIN ASSIGNMENT</th> </tr> <tr> <th>FUNCTION</th> <th>PIN 1</th> <th>PIN 2</th> <th>PIN 3</th> </tr> </thead> <tbody> <tr> <td>Rectifier ^{5/}</td> <td>Cathode</td> <td>Anode</td> <td>Anode</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table> <p>NOTE: ^{5/} Pins 2 and 3 externally connected for best performance.</p>	PIN ASSIGNMENT				FUNCTION	PIN 1	PIN 2	PIN 3	Rectifier ^{5/}	Cathode	Anode	Anode								
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