



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
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SSR2008M, SSR2008Z
SSR2009M, SSR2009Z
SSR2010M, SSR2010Z

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

20 AMPS
100 VOLTS
SCHOTTKY
RECTIFIER

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	V_{RRM}	80	Volts
	SSR2009M & Z	V_{RWM}	90	
	SSR2010M & Z	V_R	100	
Average Rectified Forward Current ^{1/4/} (Resistive Load, 60 Hz, Sine Wave, $T_C = 25^\circ\text{C}$)		I_o	20	Amps
Peak Surge Current ^{4/} (8.3 ms Pulse, Half Sine Wave, $T_A = 25^\circ\text{C}$)		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:

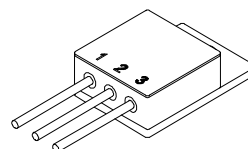
^{1/} Derate linearly at 1A/°C for $T_C > 155^\circ\text{C}$

^{2/} Screening based on MIL-PRF-19500. Screening flows available on request.

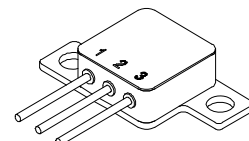
^{3/} All electrical characteristics @25°C, unless otherwise specified

^{4/} Pins 2 and 3 externally connected together

TO-254



TO-254Z



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

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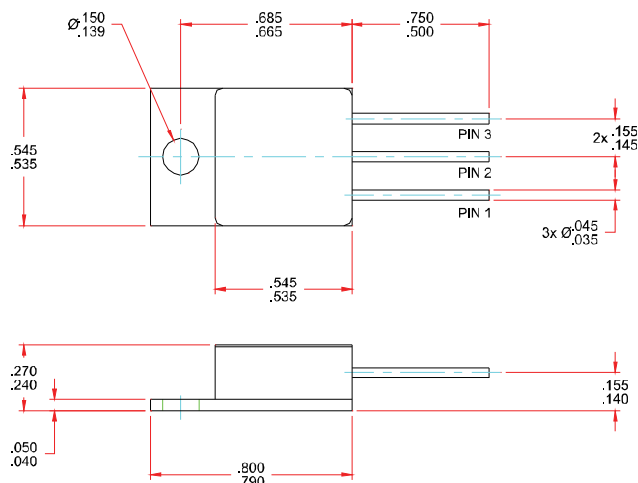
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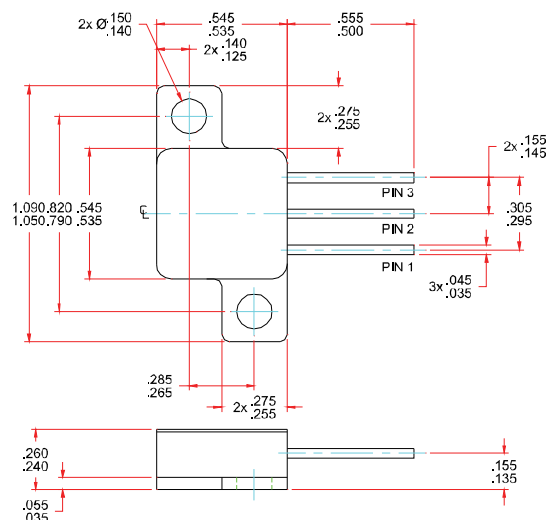
SSR2008M, SSR2008Z
SSR2009M, SSR2009Z
SSR2010M, SSR2010Z

ELECTRICAL CHARACTERISTICS ^{3/} (per leg)		Symbol	Max	Unit
Instantaneous Forward Voltage Drop (300 - 500μs Pulse)	I _F = 10 A	V _{F1}	0.75	Volts
	I _F = 15 A	V _{F2}	0.82	
	I _F = 20 A	V _{F3}	0.85	
Instantaneous Forward Voltage Drop (T _A = -55°C, 300 - 500μs Pulse)	I _F = 10 A	V _{F4}	0.85	Volts
Reverse Leakage Current (Rated V _R , 300μs pulse minimum)	T _A = 25°C	I _{R1}	200	μA
	T _C = 100°C	I _{R2}	10	mA
Junction Capacitance (V _R = 10 V, f = 1MHz, T _A = 25°C)		C _J	800	pF

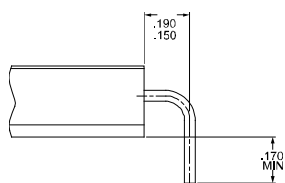
CASE OUTLINE: TO-254 (Suffix M)



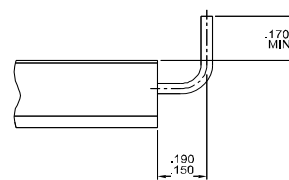
CASE OUTLINE: TO-254Z (Suffix Z)



Optional Bent Down Leads (MDB & ZDB Suffix)



Optional with Bent Up Leads (MUB & ZUB Suffix)



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

PIN ASSIGNMENT

FUNCTION	PIN 1	PIN 2	PIN 3
Rectifier ^{5/}	Cathode	Anode	Anode

NOTE: 5/ Pins 2 and 3 externally connected for best performance.

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