

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

SSR5010M
SSR5010Z

**50 AMP
SCHOTTKY RECTIFIER
100 VOLTS**

Designer's Data Sheet

Part Number / Ordering Information^{1/}

SSR 50 10

Screening^{2/}

Package

Voltage

Current

10 = 100 V

50 = 50 A

— = Not Screened
TX = TX Level
TXV = TXV Level
S = S Level

M = TO-254
Z = TO-254Z

FEATURES:

- Extremely low forward voltage drop
- Low reverse leakage
- Hermetically sealed custom surface mount package
- Guard ring for overvoltage protection
- Eutectic die attach
- 175°C operating junction temperature
- Available with glass or ceramic seals – consult factory for details
- TX, TXV, and S level screening available - consult factory

MAXIMUM RATINGS ^{3/}		Symbol	Value	Units
Peak Repetitive Reverse and DC Blocking Voltage		V_{RRM} V_{RWM} V_R	100	Volts
Average Rectified Forward Current (Resistive load, 60 Hz, sine wave, $T_A = 25^\circ\text{C}$) ^{4/}		I_O	50	Amps
Peak Surge Current (8.3 ms pulse, half sine wave, $T_A = 25^\circ\text{C}$)		I_{FSM}	500	Amps
Operating & Storage Temperature		T_{OP} & T_{stg}	-55 to +150	$^\circ\text{C}$
Maximum Thermal Resistance (Junction to Case) ^{4/}		$R_{\theta JC}$	1.0	$^\circ\text{C/W}$

NOTES:

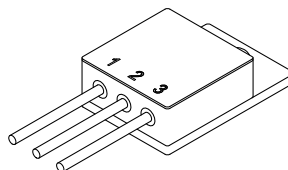
1/ For ordering information, price, and availability - contact factory.

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

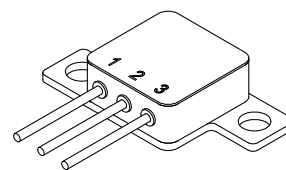
3/ Unless otherwise specified, all electrical characteristics @25°C.

4/ Both anode legs together.

TO-254 (M)



TO-254Z (Z)



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

DATA SHEET #: SH0062A

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SSR5010M SSR5010Z

ELECTRICAL CHARACTERISTICS (per leg)^{3/}

		Symbol	Min	Typ	Max	Units
Instantaneous Forward Voltage Drop (T _A =25°C, 300μsec pulse)	I _F = 20 A	V _{F1}	-	0.72	1.1	V _{DC}
	I _F = 35 A	V _{F2}	-	0.84	1.6	
	I _F = 50 A	V _{F3}	-	0.95	-	
Instantaneous Forward Voltage Drop (T _A = 125°C, 300μsec pulse)	I _F = 20 A	V _{F4}	-	0.60	0.9	V _{DC}
	I _F = 35 A	V _{F5}	-	0.70	1.3	
	I _F = 50 A	V _{F6}	-	0.80	-	
Instantaneous Forward Voltage Drop (T _A = -55°C, 300μsec pulse)	I _F = 20 A	V _{F7}	-	0.75	-	V _{DC}
	I _F = 35 A	V _{F8}	-	0.88	-	
	I _F = 50 A	V _{F9}	-	1.03	-	
Reverse Leakage Current (Rated V _R , T _A = 25°C, 300μsec pulse minimum)		I _{R1}	-	6	500	uA
Reverse Leakage Current (Rated V _R , T _A = 100°C, 300μsec pulse minimum)		I _{R2}	-	2	-	mA
Reverse Leakage Current (Rated V _R , T _A = 125°C, 300μsec pulse minimum)		I _{R3}	-	10	45	mA
Junction Capacitance (V _R = 5V, f = 1MHz, T _A = 25°C)		C _J		1280	1400	pF

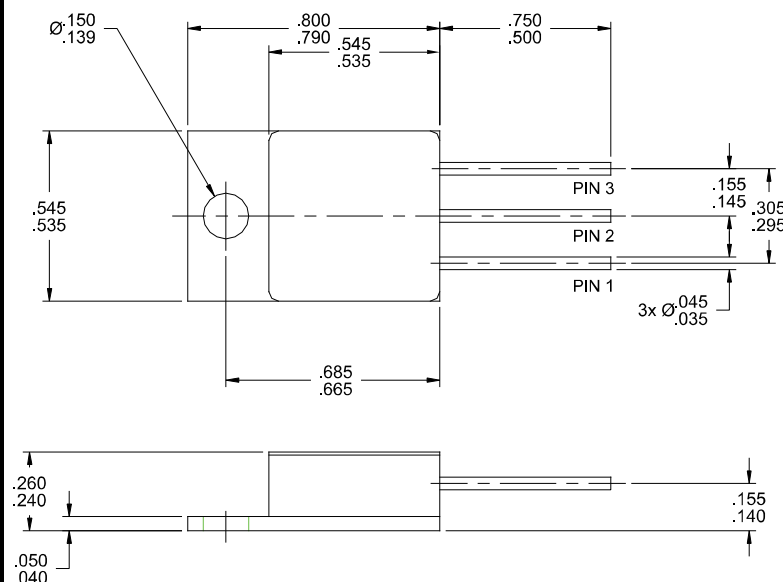
Package Outline: TO-254

PIN OUT:

PIN 1: CATHODE

PIN 2: ANODE

PIN 3: ANODE



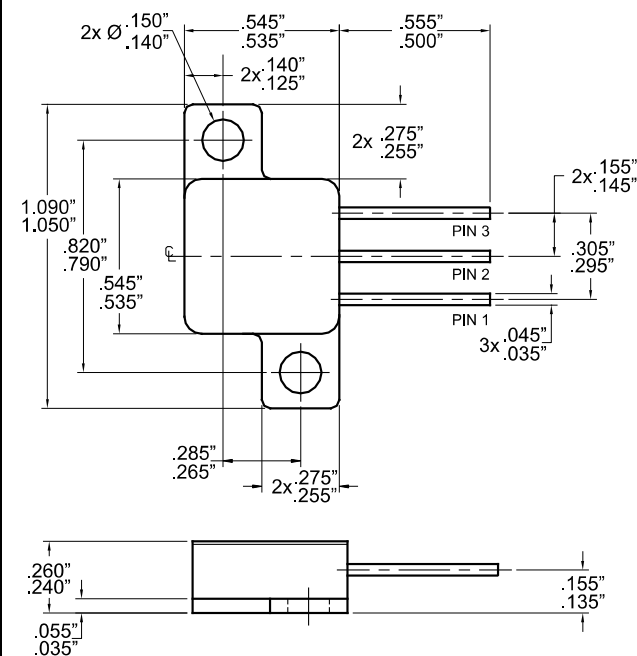
Package Outline: TO-254Z

PIN OUT:

PIN 1: CATHODE

PIN 2: ANODE

PIN 3: ANODE



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