



# Solid State Devices, Inc.

14701 Firestone Blvd \* La Mirada, CA 90638  
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# SSR6010M SSR6010Z

## 60 AMP SCHOTTKY RECTIFIER 100 VOLTS

### Designer's Data Sheet

**Part Number / Ordering Information<sup>1/</sup>**

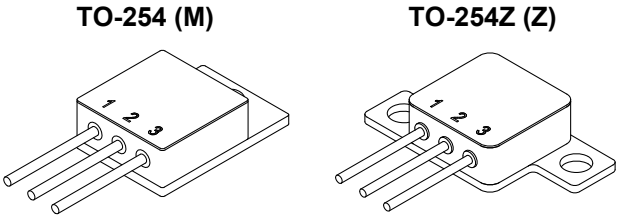
SSR

- Screening<sup>2/</sup>
  - = Not Screened
  - TX = TX Level
  - TXV = TXV Level
  - S = S Level
- Package
  - M = TO-254
  - Z = TO-254Z
- Voltage
  - 10 = 100 V
- Current
  - 60 = 60 A

- 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 <sup>3/</sup>		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, $T_A = 25^\circ\text{C}$ ) <sup>4/</sup>		$I_O$	60	Amps
Peak Surge Current (8.3 ms pulse, half sine wave superimposed on $I_O$ , allow junction to reach equilibrium between pulses, $T_A = 25^\circ\text{C}$ )		$I_{FSM}$	500	Amps
Operating & Storage Temperature		$T_{OP}$ & $T_{stg}$	-55 to +150	°C
Maximum Thermal Resistance (Junction to Case) <sup>4/</sup>		$R_{\theta JC}$	0.80	°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.





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ELECTRICAL CHARACTERISTICS (per leg) <sup>3/</sup>	Symbol	Min	Typ	Max	Units	
<b>Instantaneous Forward Voltage Drop</b> (T <sub>A</sub> =25°C, 300μsec pulse)	I <sub>F</sub> = 30 A	V <sub>F1</sub>	-	0.67	0.8	V <sub>DC</sub>
	I <sub>F</sub> = 60 A	V <sub>F2</sub>	-	0.90	1.1	
<b>Instantaneous Forward Voltage Drop</b> (T <sub>A</sub> = 125°C, 300μsec pulse)	I <sub>F</sub> = 30 A	V <sub>F3</sub>	-	0.63	0.75	V <sub>DC</sub>
	I <sub>F</sub> = 60 A	V <sub>F4</sub>	-	0.83	1.00	
<b>Instantaneous Forward Voltage Drop</b> (T <sub>A</sub> = -55°C, 300μsec pulse)	I <sub>F</sub> = 30 A	V <sub>F5</sub>	-	0.70	0.90	V <sub>DC</sub>
	I <sub>F</sub> = 60 A	V <sub>F6</sub>	-	0.87	-	
<b>Reverse Leakage Current</b> (Rated V <sub>R</sub> , T <sub>A</sub> = 25°C, 300μsec pulse minimum)		I <sub>R1</sub>	-	20	100	uA
<b>Reverse Leakage Current</b> (Rated V <sub>R</sub> , T <sub>A</sub> = 100°C, 300μsec pulse minimum)		I <sub>R2</sub>	-	7.5	-	mA
<b>Reverse Leakage Current</b> (Rated V <sub>R</sub> , T <sub>A</sub> = 125°C, 300μsec pulse minimum)		I <sub>R3</sub>	-	30	70	mA
<b>Junction Capacitance</b> (V <sub>R</sub> = 5V, f = 1MHz, T <sub>A</sub> = 25°C)		C <sub>J</sub>		2400	3500	pF

