



# Solid State Devices, Inc.

14701 Firestone Blvd \* La Mirada, CA 90638  
Phone: (562) 404-4474 \* Fax: (562) 404-1773  
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## SRM6 thru SRM12 Series

**60 AMPS**  
**STANDARD RECOVERY RECTIFIER**  
**600 - 1200 VOLTS**  
**5 μsec**

### Designer's Data Sheet

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

**Screening<sup>2/</sup>**  
 \_\_\_ = Not Screened  
 TX = TX Level  
 TXV = TXV Level  
 S = S Level

**Package Type**  
 \_\_\_ = Axial  
 SMS = Surface Mount Square Tab  
 BTR = Button

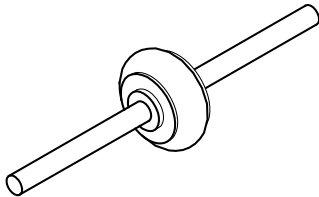
**Voltage**  
 6 = 600V  
 8 = 800V  
 10 = 1000V  
 12 = 1200V

- FEATURES:**
- Replacement for DO-4 or DO-5
  - Standard recovery: 5 μsec maximum
  - PIV to 1200 volts
  - Low reverse leakage current
  - Hermetically sealed void-free construction
  - Monolithic single chip construction
  - High surge rating
  - Low thermal resistance
  - Equivalent to 5961-94022
  - TX, TXV, and Space Level Screening Available

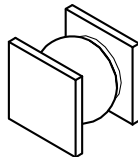
MAXIMUM RATINGS		Symbol	Value	Units
<b>Peak Repetitive Reverse Voltage and DC Blocking Voltage</b>	SRM6	$V_{RRM}$ $V_{RWM}$ $V_R$	600	Volts
	SRM8		800	
	SRM10		1000	
	SRM12		1200	
<b>Average Rectified Forward Current</b> (Resistive Load, 60 Hz Sine Wave; Axial, $T_L = 100^\circ\text{C}$ ; SMS, $T_E = 100^\circ\text{C}$ ; Button, $T_C = 100^\circ\text{C}$ )		$I_O$	60	Amps
<b>Peak Surge Current</b> (8.3 ms Pulse, Half Sine Wave, Superimposed on $I_O$ , Allow Junction to Reach Equilibrium Between Pulses, $T_L$ or $T_C = 55^\circ\text{C}$ )		$I_{FSM}$	800	Amps
<b>Operating and Storage Temperature</b>		$T_{OP} \ \& \ T_{stg}$	-65 to +175	$^\circ\text{C}$
<b>Maximum Thermal Resistance</b> Junction to Lead, $L = 3/8''$ Junction to End Tab Junction to End	Axial (___)	$R_{\theta JL}$	3	$^\circ\text{C/W}$
	SMS	$R_{\theta JE}$	2.5	
	Button (BTR)	$R_{\theta JC}$	1	

**Notes:** 1/ For ordering information, price, operating curves, and availability- Contact factory.  
2/ Screening based on MIL-PRF-19500. Screening flows available on request.  
3/ Unless otherwise specified, all maximum ratings/electrical characteristics @25°C.

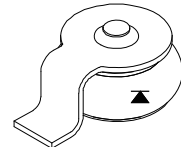
**Axial (\_\_\_)**



**Surface Mount Square Tab (SMS)**



**Button (BTR)**





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ELECTRICAL CHARACTERISTICS		Symbol	Min	Max	Unit
<b>Instantaneous Forward Voltage Drop</b> ( $I_F = 20 A_{DC}$ , 300 $\mu$ sec min pulse)	$T_A = 25^\circ C$	$V_{F1}$	—	1.05	$V_{DC}$
	$T_A = -55^\circ C$	$V_{F2}$	—	1.15	$V_{DC}$
( $I_F = 60 A_{DC}$ , 300 $\mu$ sec min pulse)	$T_A = 25^\circ C$	$V_{F3}$	—	1.20	$V_{DC}$
<b>Reverse Leakage Current</b> (Rated $V_R$ , 300 $\mu$ sec min pulse)	$T_A = 25^\circ C$	$I_{R1}$	—	2.0	$\mu A$
	$T_A = 100^\circ C$	$I_{R2}$	—	500	$\mu A$
<b>Junction Capacitance</b> ( $V_R = 10 V_{DC}$ , $T_A = 25^\circ C$ , $f = 1$ MHz)		$C_J$	—	250	pF
<b>Reverse Recovery Time</b> ( $I_F = 500$ mA, $I_R = 1$ A, $I_{RR} = 250$ mA, $T_A = 25^\circ C$ )		$t_{rr}$	—	5	$\mu$ sec

