



**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

**SHF1204 & SHF1204SMS  
 thru  
 SHF1209 & SHF1209SMS**

**2 AMP  
 400 - 900 V  
 Hyper Fast Rectifier**

**DESIGNER'S DATA SHEET**

SHF12

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

**Package Type**  
 — = Axial Leaded  
 SMS = Surface Mount Square Tab

**Family/Voltage**  
 04 = 400 V  
 06 = 600 V  
 08 = 800 V  
 09 = 900 V

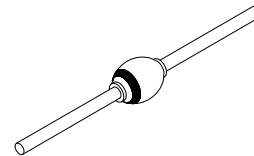
- Features:**
- Hyper Fast Recovery: 40 nsec maximum
  - PIV to 900 Volts, Consult Factory
  - Hermetically Sealed
  - Void Free Construction
  - For High Efficiency Applications
  - Replaces UES1204, UES1206
  - TX, TXV, S Level screening Available<sup>2/</sup>

Maximum Ratings		Symbol	Value	Units
<b>Peak Repetitive Reverse and DC Blocking Voltage</b>	SHF1204	$V_{RRM}$	400	Volts
	SHF1206	$V_{RSM}$	600	
	SHF1208	$V_R$	800	
	SHF1209		900	
<b>Average Rectified Forward Current</b> (Resistive Load, 60 hz Sine Wave, $T_A = 25^\circ C$ )		$I_O$	2.0	Amps
<b>Peak Surge Current</b> (8.3 ms Pulse, Half Sine Wave, $T_A = 25^\circ C$ )		$I_{FSM}$	20	Amps
<b>Operating &amp; Storage Temperature</b>		$T_{OP}$ & $T_{STG}$	-65 to +175	$^\circ C$
<b>Maximum Thermal Resistance</b>	Junction to Leads, $L = 3/8$ "	$R_{\theta JL}$	35	$^\circ C/W$
	Junction to Tabs	$R_{\theta JE}$	28	

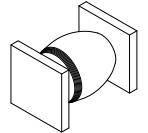
**NOTES:**

- 1/ For Ordering Information, Price, and Availability- Contact Factory.  
 2/ Screening Based on MIL-PRF-19500. Screening Flows Available on Request.

**Axial Lead Diode**



**SMS**





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**SHF1204 & SHF1204SMS  
 thru  
 SHF1209 & SHF1209SMS**

Electrical Characteristic	Symbol	Max	Units
<b>Instantaneous Forward Voltage Drop</b> ( $I_F = 1.2A_{DC}$ , $T_A = 25^\circ C$ ; pulsed)	$V_F$	1.7	$V_{DC}$
<b>Instantaneous Forward Voltage Drop</b> ( $I_F = 2A_{DC}$ , $T_A = 25^\circ C$ ; pulsed)	$V_F$	1.9	$V_{DC}$
<b>Reverse Leakage Current</b> (Rated $V_R$ , $T_A = 25^\circ C$ ; pulsed)	$I_R$	10	$\mu A$
<b>Reverse Leakage Current</b> (Rated $V_R$ , $T_A = 100^\circ C$ ; pulsed)	$I_R$	1	mA
<b>Junction Capacitance</b> ( $V_R = 10V_{DC}$ , $T_A = 25^\circ C$ , $f = 1MHz$ )	$C_J$	22	pF
<b>Reverse Recovery Time</b> ( $I_F = 500mA$ , $I_R = 1A$ , $I_{RR} = 250mA$ , $T_A = 25^\circ C$ ) ( $I_F = 500mA$ , $I_R = 1A$ , $I_{RR} = 250mA$ , $T_A = 100^\circ C$ )	$t_{RR}$	40 80	nsec

**Case Outline: (Axial)**

DIM	MIN	MAX
A	0.100"	0.130"
B	0.130"	0.180"
C	0.027"	0.033"
D	1.00"	--

**Case Outline: (SMS)**

DIM	MIN	MAX
A	0.127"	0.140"
B	0.180"	0.230"
C	0.020"	0.030"
D	0.002"	--