



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-7855 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

**SHF1402 - SHF1406
and
SHF1402SMS - SHF1406SMS**

**4 AMP
200-600 Volts
30 nsec
HYPER FAST RECTIFIER**

DESIGNER'S DATA SHEET

Part Number / Ordering Information ^{1/}

SHF14 _____
|
| L Screening^{2/} = None
| TX = TX Level
| TXV = TXV Level
| S = S Level
| L Package
| _____ = Axial Leaded
| SMS = Surface Mount Square Tab
Voltage
02 = 200 V
03 = 300 V
04 = 400 V
05 = 500 V
06 = 600 V

Features:

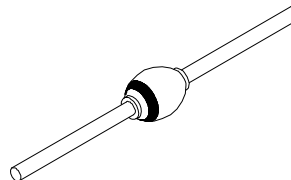
- Guaranteed High Temp. trr: 50 nsec Max (Axial) trr: 60nsec Max (SMS)
- Hyper Fast Recovery: 30 nsec Max.
- PIV to 600 Volts
- Void Free Construction
- Hermetically Sealed
- Low Reverse Leakage Current
- For High Efficiency Applications
- Replacement for 1N6626 Series where faster trr is required
- TX, TXV, and S-Level Screening Available^{2/}

Maximum Ratings		Symbol	Value	Units
Peak Repetitive Reverse and DC Blocking Voltage	SHF1402	V_{RRM}	200	Volts
	SHF1403		300	
	SHF1404	V_{RWM}	400	
	SHF1405		500	
	SHF1406	V_R	600	
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave, $T_A = 55^\circ C$, $L=3/8''$)		I_o	4	Amps
Surge Current (Single 8.3 ms Pulse, Half Sine Superimposed on I_o , $T_A = 55^\circ C$)		I_{FSM}	75	Amps
Repetitive Peak Surge Current (8.3 ms Pulse, Half Sine Wave Superimposed on I_o , Allow Junction to Reach Equilibrium Between Pulses, $T_A = 55^\circ C$)		I_{FRM}	20	Amps
Operating & Storage Temperature		Top & Tstg	-65 to +175	$^\circ C$
Maximum Thermal Resistance	Junction to Lead, $L = 3/8''$	$R_{\theta JL}$	20	$^\circ C/W$
	Junction to End	$R_{\theta JE}$	14	

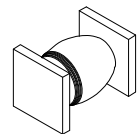
Notes:

^{1/} For Ordering Information, Price, Operating Curves, and Availability – Contact Factory.
^{2/} Screening Based on MIL-PRF-19500. Screening Flows Available on Request.

Axial Leaded



SMS (Square)



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

DATA SHEET #: RH0023B

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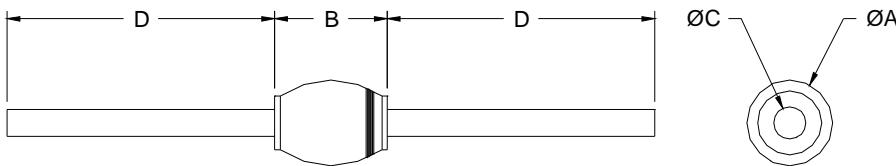
Solid State Devices, Inc.

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**SHF1402 - SHF1406
 and
 SHF1402SMS - SHF1406SMS**

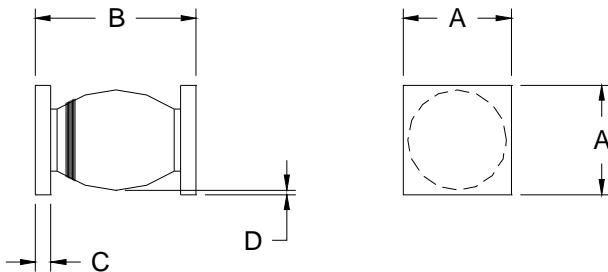
Electrical Characteristics	Symbol	Max	Units
Instantaneous Forward Voltage Drop ($I_F = 3 \text{ Adc}$, $T_A = 25^\circ\text{C}$, 300 μs pulse)	V_F	1.5	Vdc
Instantaneous Forward Voltage Drop ($I_F = 4 \text{ Adc}$, $T_A = 25^\circ\text{C}$, 300 μs pulse)	V_F	1.6	Vdc
Reverse Leakage Current (Rated V_R , $T_A = 25^\circ\text{C}$, 300 μs pulse minimum)	I_R	10	μA
Reverse Leakage Current (Rated V_R , $T_A = 100^\circ\text{C}$, 300 μs pulse minimum)	I_R	1	mA
Junction Capacitance ($V_R = 10 \text{ Vdc}$, $T_A = 25^\circ\text{C}$, $f = 1\text{MHz}$)	C_J	50	pF
Reverse Recovery Time ($I_F = 500 \text{ mA}$, $I_R = 1\text{A}$, $I_{RR} = 0.25\text{A}$, $T_A = 25^\circ\text{C}$) ($I_F = 500 \text{ mA}$, $I_R = 1\text{A}$, $I_{RR} = 0.25\text{A}$, $T_A = 100^\circ\text{C}$)	t_{rr}	30 60	nsec

Case Outline: (Axial)



DIMENSIONS		
DIM	MIN	MAX
A	.140"	.170"
B	.170"	.230"
C	.047"	.053"
D	1.00"	---

Case Outline: (SMS)



DIMENSIONS		
DIM	MIN	MAX
A	.172"	.180"
B	.220"	.270"
C	.022"	.028"
D	.002"	---

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