



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

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

SHF1402 - SHF1406

and

SHF1402SMS - SHF1406SMS

4 AMP

200-600 Volts

30 nsec

HYPER FAST RECTIFIER

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

Peak Repetitive Reverse and
DC Blocking Voltage

SHF1402
SHF1403
SHF1404
SHF1405
SHF1406

V_{RRM}
 V_{RWM}
 V_R

200
300
400
500
600

Volts

Average Rectified Forward Current

(Resistive Load, 60 Hz Sine Wave, $T_A = 55^\circ\text{C}$, $L=3/8''$)

I_o

4

Amps

Surge Current

(Single 8.3 ms Pulse, Half Sine Superimposed on I_o , $T_A = 55^\circ\text{C}$)

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, $T_A = 55^\circ\text{C}$)

I_{FRM}

20

Amps

Operating & Storage Temperature

Top & Tstg

-65 to +175

$^\circ\text{C}$

Maximum Thermal Resistance

Junction to Lead, $L = 3/8''$
Junction to End

$R_{\theta JL}$
 $R_{\theta JE}$

20
14

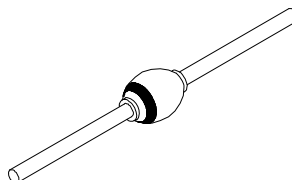
$^\circ\text{C/W}$

Notes:

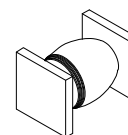
^{1/} For Ordering Information, Price, Operating Curves, and Availability – Contact Factory.

^{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

DOC



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638

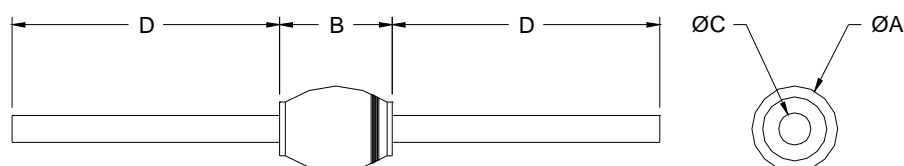
Phone: (562) 404-4474 * Fax: (562) 404-1773

ssdi@ssdi-power.com * www.ssdi-power.com

SHF1402 - SHF1406 and SHF1402SMS - SHF1406SMS

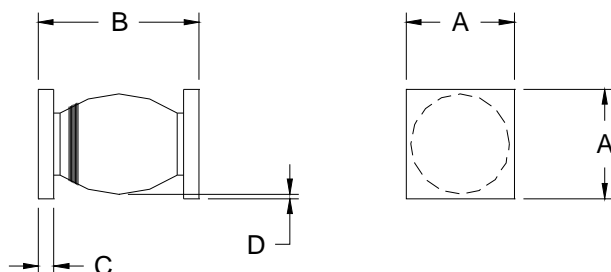
Electrical Characteristics	Symbol	Max	Units
Instantaneous Forward Voltage Drop ($I_F = 3 \text{ Adc}$, $T_A = 25^\circ\text{C}$, 300 μs pulse)	V_F	1.5	Vdc
Instantaneous Forward Voltage Drop ($I_F = 4 \text{ Adc}$, $T_A = 25^\circ\text{C}$, 300 μs pulse)	V_F	1.6	Vdc
Reverse Leakage Current (Rated V_R , $T_A = 25^\circ\text{C}$, 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"	---

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

DOC