



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, CA 90638
 Phone: (562) 404-4474 * Fax: (562) 404-1773
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**SHF1160 & SHF1160SMS
 thru
 SHF1190 & SHF1190SMS**

DESIGNER'S DATA SHEET

Part Number/Ordering Information ^{1/}
 SHF11

Screening ^{2/}
 — = Not Screened
 TX = TX Level
 TXV = TXV Level
 S = S Level

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

Family/Voltage
 60 = 600 V
 70 = 700 V
 80 = 800 V
 90 = 900 V

**30 nsec
 1 Amp
 Hyper Fast Rectifier
 600 - 900 V**

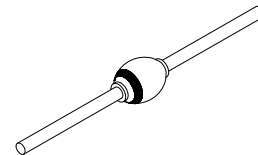
- Features:**
- Hyper fast recovery: 30 nsec maximum
 - PIV to 900 Volts, consult factory for higher voltages
 - Low reverse leakage current
 - Hermetically sealed
 - Void free construction
 - For high efficiency applications
 - Higher voltages available – consult factory
 - TX, TXV, and S level screening available ^{2/}

Maximum Ratings		Symbol	Value	Units
Peak Repetitive Reverse and DC Blocking Voltage	SHF1160	V_{RRM} V_{RSM} V_R	600	Volts
	SHF1170		700	
	SHF1180		800	
	SHF1190		900	
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave, $T_A = 25^\circ\text{C}$)		I_O	1.0	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, $T_A = 25^\circ\text{C}$)		I_{FSM}	25	Amps
Operating & Storage Temperature		T_{OP} & T_{STG}	-65 to +175	$^\circ\text{C}$
Maximum Thermal Resistance	Junction to Leads, L = 3/8	$R_{\theta JE}$	50	$^\circ\text{C/W}$
	Junction to Tabs		28	

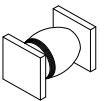
NOTES:

- ^{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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Electrical Characteristic	Symbol	Max	Units
Instantaneous Forward Voltage Drop ($I_F = 1A_{DC}$, $T_A = 25^\circ C$ pulsed)	V_F	1.9	V_{DC}
Instantaneous Forward Voltage Drop ($I_F = 1A_{DC}$, $T_A = -55^\circ C$ pulsed)	V_F	2.4	V_{DC}
Reverse Leakage Current (Rated V_R , $T_A = 25^\circ C$ pulsed)	I_R	10	μA
Reverse Leakage Current (Rated V_R , $T_A = 100^\circ C$ pulsed)	I_R	200	μA
Reverse Recovery Time ($I_F = 500mA$, $I_R = 1A$, $I_{RR} = 250mA$, $T_A = 25^\circ C$)	t_{RR}	30	nsec
Junction Capacitance ($V_R = 10V_{DC}$, $T_A = 25^\circ C$, $f = 1MHz$)	C_J	18	pF

Case Outline: (Axial)

DIM	MIN	MAX
A	0.100"	0.135"
B	0.130"	0.185"
C	0.027"	0.033"
D	1.00"	--

Case Outline: (SMS)

DIM	MIN	MAX
A	0.140"	0.155"
B	0.180"	0.230"
C	0.020"	0.030"
D	0.002"	--