



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

**SHF1100SM
 thru
 SHF1103SM**

**1 AMP
 50–300 Volts
 35 nsec
 HYPER FAST RECTIFIER**

DESIGNER'S DATA SHEET

Part Number / Ordering Information^{1/}

SHF11 _ SM _

└─ Screening^{2/} = None
 TX = TX Level
 TXV = TXV Level
 -S = S Level

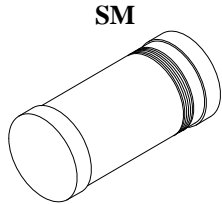
└─ Package
 SM = Surface Mount Round Tab

└─ Voltage
 00 = 50 V
 01 = 100 V
 02 = 200 V
 03 = 300 V

- Features:**
- Hyper Fast Recovery: 35 nsec Max.
 - PIV to 300 Volts
 - Hermetically Sealed Surface Mount Package
 - Void Free Construction
 - For High Efficiency Applications
 - Single Chip Construction
 - Replaces for UES1104 Types
 - TX, TXV, and S-Level Screening Available^{2/}

Maximum Ratings		Symbol	Value	Units
Peak Repetitive Reverse and DC Blocking Voltage	SHF1100SM	V_{RRM}	50	Volts
	SHF1101SM	V_{RWM}	100	
	SHF1102SM	V_R	200	
	SHF1103SM	V_R	300	
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, $T_A = 25^\circ\text{C}$)		I_o	1	Amps
Surge Current (8.3 ms Pulse, Half Sine Wave Superimposed on I_o , Allow Junction to Reach Equilibrium between Pulses, $T_A = 25^\circ\text{C}$)		I_{FSM}	20	Amps
Operating & Storage Temperature		Top & Tstg	-65 to +175	°C
Maximum Thermal Resistance Junction to End Tab		$R_{\theta JE}$	28	°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.





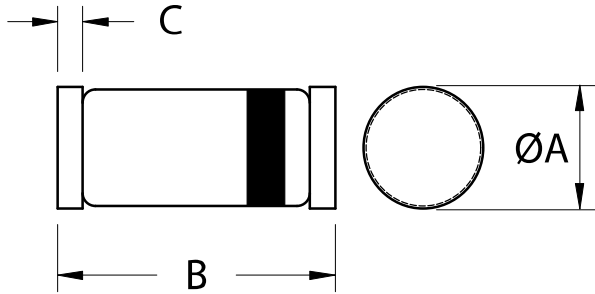
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Electrical Characteristics	Symbol	Max	Units
Instantaneous Forward Voltage Drop ($I_F = 1 \text{ Adc}$, $T_A = 25^\circ\text{C}$, 300 μs pulse)	V_F	1.35	Vdc
Instantaneous Forward Voltage Drop ($I_F = 5 \text{ Adc}$, $T_A = -55^\circ\text{C}$, 300 μs pulse)	V_F	1.5	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	20	pF
Reverse Recovery Time ($I_F = 500 \text{ mA}$, $I_R = 1 \text{ A}$, $I_{RR} = 0.25 \text{ A}$, $T_A = 25^\circ\text{C}$)	t_{rr}	35	nsec

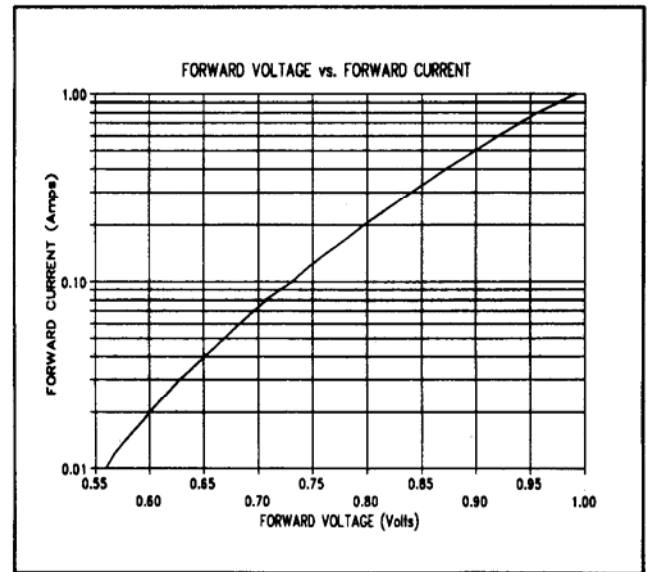
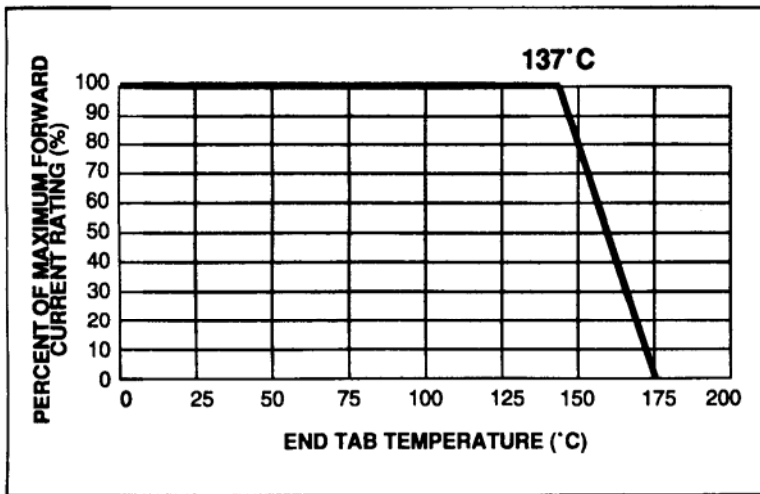
Case Outline: Surface Mount Round Tab



DIMENSIONS		
DIM	MIN	MAX
A	.095"	.105"
B	.190"	.210"
C	.005"	.025"

TYPICAL OPERATING CURVES

$T_A = 25^\circ\text{C}$ Unless otherwise specified



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

DATA SHEET #: RH0115C

DOC