EN: This Datasheet/Document is presented by the manufacturer.

Please visit our website for pricing and availability at www.hestore.hu.

SR10100L

Schottky Barrier Rectifiers

Pb-Free RoHS COMPLIANT

Voltage:	100 Volts	Current:	10 A	Package:	DO-27

Features

- NH'S Plane Schottky Barrier Chip Technology
- Low Forward Voltage Drop For High Efficiency
- Low Power Loss For High Reliability
- High Frequency Switching Speed

Mechanical Data

- **Case:** Molded With UL-94 ClassV-0 Recognized, RoHS-Compliant
- **Polarity:** Look At The Diagram And Polarity On The Right
- **Terminals:** Tin Plated Leads,Solderable Per J-STD-002 And JESD22-B102

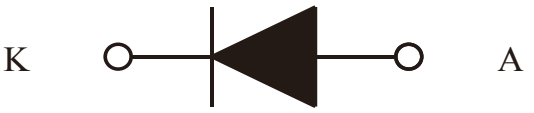
Typical Applications

- Switch Mode Power Supplies (SMPS)
- Fast Chargers
- LED Driver And Monitor Lighting
- Automotive Electronics And Charging Posts

Diagram:



Polarity:



Single Phase,Half Wave,60Hz,Resistive Or Inductive Load.For Capacitive Load,Derate Current By 20%

Maximum Ratings (Ta=25℃ Unless Otherwise Specified)

Parameter	Test Conditions	Symbol	Ratings	Unit
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	100	V
Maximum RMS Voltag		V_{RMS}	70	V
Maximum DC Blocking Voltage		V_{DC}	100	V
Maximum Average Forward Rectified Current		$I_{F(AV)}$	10	A
Peak Forward Surge Current	8.3ms Single Half Sine-wave Superimposed On Rate Load	I_{FSM}	200	A
Current Squared Time	t< 8.3ms	I^2t	166.0	A^2sec

Electrical Characteristcs (Ta=25℃ Unless Otherwise Specified)

Parameter	Test Conditions	Symbol	Ratings			Unit
			Min.	Typ.	Max.	
Instaneous Forward Voltage Per Diode	Ta=25℃ I_F= 10.0 A	V_F	--	0.78	0.85	V
	Ta=110℃		--	0.74	0.8	
Maximum DC Reverse Current at Rated DC Blocking Voltage	Ta=25℃ ,V_R=VRRM	I_{RRM}	--	1	5	uA
	Ta=110℃ ,V_R=VRRM*80%		--	25	200	uA
Typical Junction Capacitance	4 V,1MHz	C_J	--	250	--	pF

Thermal Characteristcs (Ta=25℃ Unless Otherwise Specified)

Parameter	Test Conditions	Symbol	Ratings	Unit
Operating Junction Temperature Range		T_J	-55 to 175	℃
Storage Temperature Range		T_{STD}	-55 to 175	
Thermal Resistance Junction To Ambient With Steady-State	Still Air Environment With Ta=25℃	$R_{\theta JA}$	45.0	℃/W
Thermal Resistance Junction-Case With Steady-State	At 0.375"(9.5mm) lead length Mounted On vertical P.C. Board	$R_{\theta JC}$	12.0	

Notes: 1.Pulse Test: 300 Us Pulse Width,1% Duty Cycle

Typical Characteristics Curves

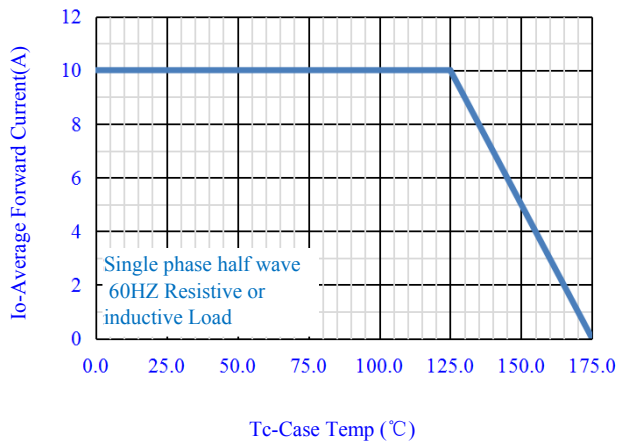


Fig.1-Forward Current Derating Curve

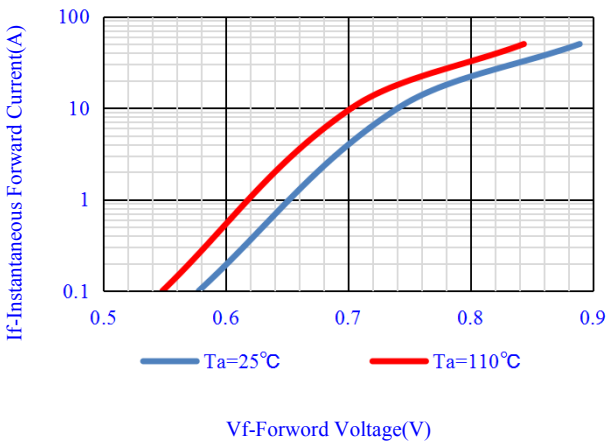


Fig.2-Typical Instantaneous Forward

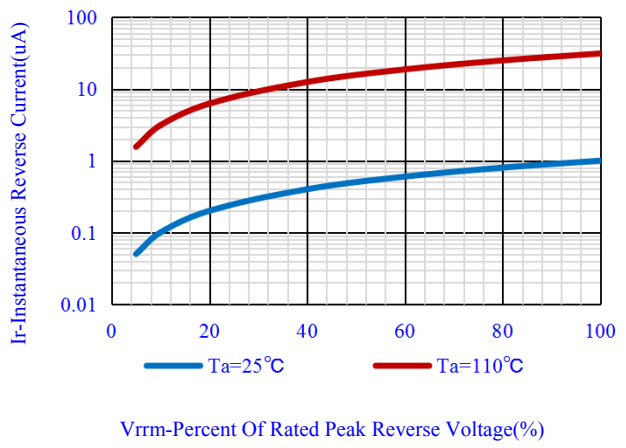


Fig.3-Typical Reverse Characteristics

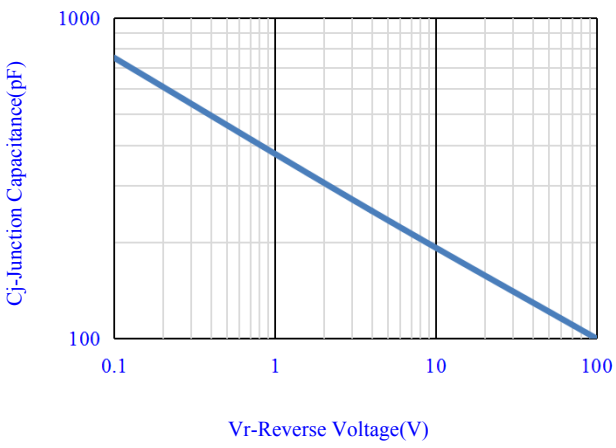


Fig.4-Typical Junction Capacitance

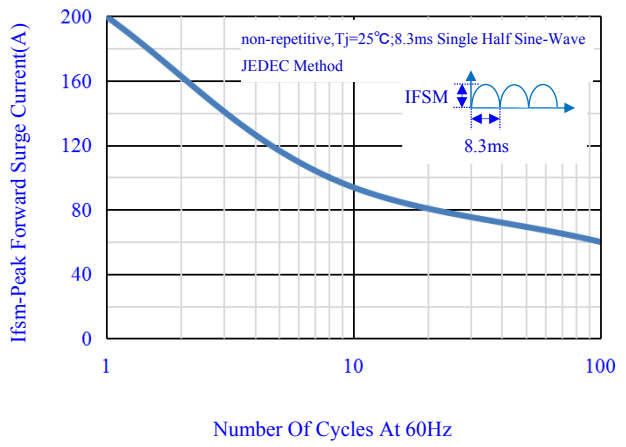
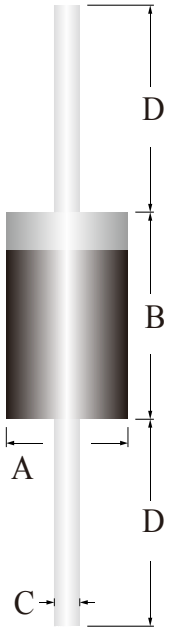


Fig.5-Max. Non-Repetitive Surge Current

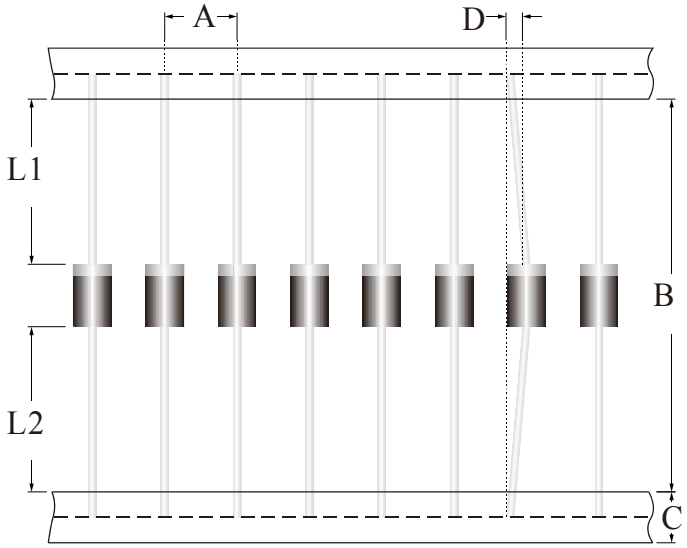
OUTLINE DRAWINGS



DO-27

OUTLINE DIMENSIONS						
Dim.	Milimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.90	-	5.60	0.1929	-	0.2205
B	8.00	-	10.00	0.3150	-	0.3937
C	1.00	-	1.40	0.0394	-	0.0551
D	24.50	-	26.50	0.9646	-	1.0433

COMPONENT PITCH DIMENSION DIAGRAM



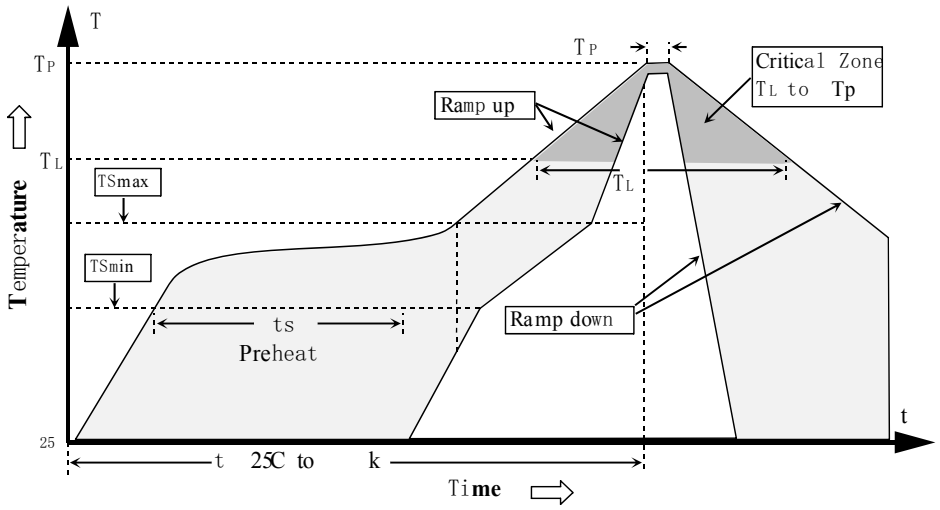
DO-27

OUTLINE DIMENSIONS						
Dim.	Milimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	9.50	-	10.50	0.3740	-	0.4134
B	51.00	-	53.00	2.0079	-	2.0866
C	5.50	-	6.50	0.2165	-	0.2559
D	-	-	1.20	-	-	0.0472
|L2-L1|	-	-	1.00	-	-	0.0394

Recommended wave soldering condition

Product	Peak Temperature	Soldering Time
Pb-free devices	260 +0/-5 °C	5 +1/-1 seconds

Recommended temperature profile for IR reflow



Profile feature	Sn-Pb eutectic Assembly	Pb-free Assembly
Average ramp-up rate (Tsmax to Tp)	3°C/second max.	3°C/second max.
Preheat −Temperature Min(TS min) −Temperature Max(TS max) −Time(ts min to ts max)	100°C 150°C 60-120 seconds	150°C 200°C 60-180 seconds
Time maintained above: −Temperature (TL) − Time (tL)	183°C 60-150 seconds	217°C 60-150 seconds
Peak Temperature(TP)	240 +0/-5 °C	260 +0/-5 °C
Time within 5°C of actual peak temperature(tp)	10-30 seconds	20-40 seconds
Ramp down rate	6°C/second max.	6°C/second max.
Time 25 °C to peak temperature	6 minutes max.	8 minutes max.

Note : All temperatures refer to topside of the package, measured on the package body surface.