

SR840



Low Vf Schottky Barrier Rectifiers

Voltage:	40	Volts	Current:	8	A	Package:	DO-27
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Features

- NH'S Low Vf Schottky Barrier Chip Technology
- Super 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°C Unless Otherwise Specified)

Parameter	Test Conditions	Symbol	Ratings	Unit
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	40	V
Maximum RMS Voltag		V_{RMS}	28	V
Maximum DC Blocking Voltage		V_{DC}	40	V
Maximum Average Forward Rectified Current		$I_{F(AV)}$	8	A
Peak Forward Surge Current	8.3ms Single Half Sine-wave Superimposed On Rate Load	I_{FSM}	190	A
Current Squared Time	$t < 8.3ms$	I^2t	149.8	A ² sec

Electrical Characteristics (Ta=25°C Unless Otherwise Specified)

Parameter	Test Conditions	Symbol	Ratings			Unit
			Min.	Typ.	Max.	
Maximum Instaneous Forward Voltage	Ta=25°C Ta=100°C If= 8.0 A	V_F	-- --	0.79 0.75	0.85 0.8	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	Ta=25°C ,VR=VRRM Ta=90°C ,VR=VRRM*80%	I_{RRM}	-- --	20 2	50 6	uA mA
Typical Junction Capacitance	4 V,1MHz	C_J	--	160	--	pF

Thermal Characteristics (Ta=25°C Unless Otherwise Specified)

Parameter	Test Conditions	Symbol	Ratings	Unit
Operating Junction Temperature Range		T_J	-55 to 150	°C
Storage Temperature Range		T_{STD}	-55 to 150	
Thermal Resistance Junction To Ambient With Steady-State	Still Air Environment With Ta=25°C	$R_{\theta JA}$	45.0	°C/W
Thermal Resistance Junction-Case With Steady-State	At 0.375"(9.5mm) lead length Mounted On vertical P.C. Board	$R_{\theta JC}$	15.0	

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

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Typical Characteristics Curves

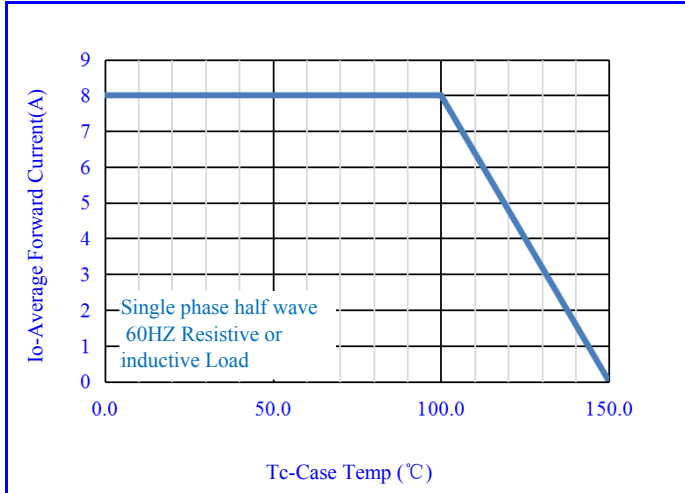


Fig.1-Forward Current Derating Curve

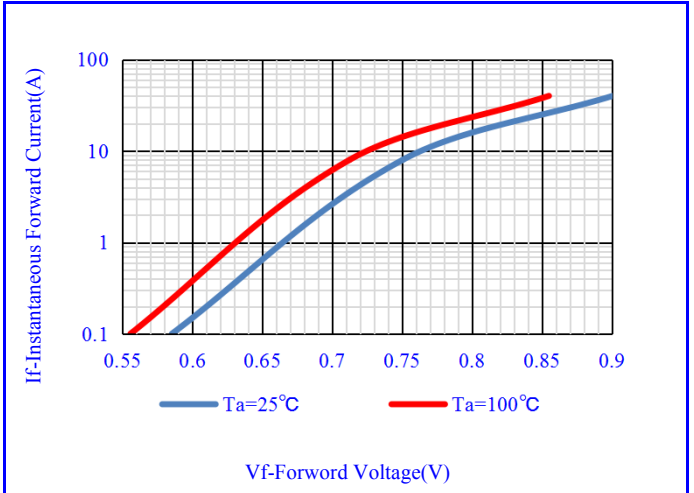


Fig.2-Typical Instantaneous Forward

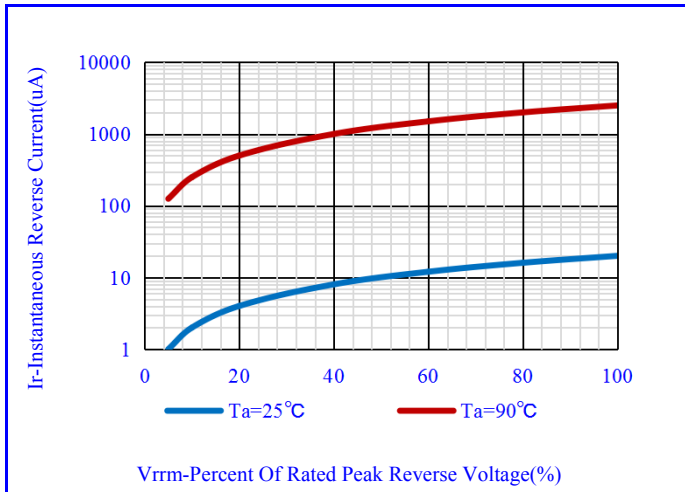


Fig.3-Typical Reverse Characteristics

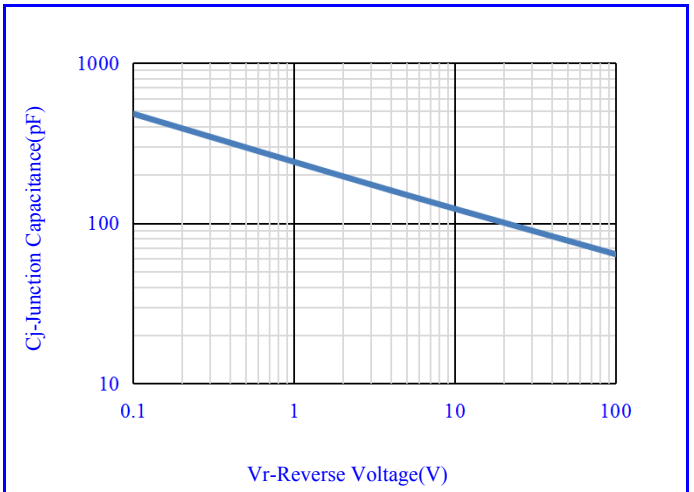


Fig.4-Typical Junction Capacitance

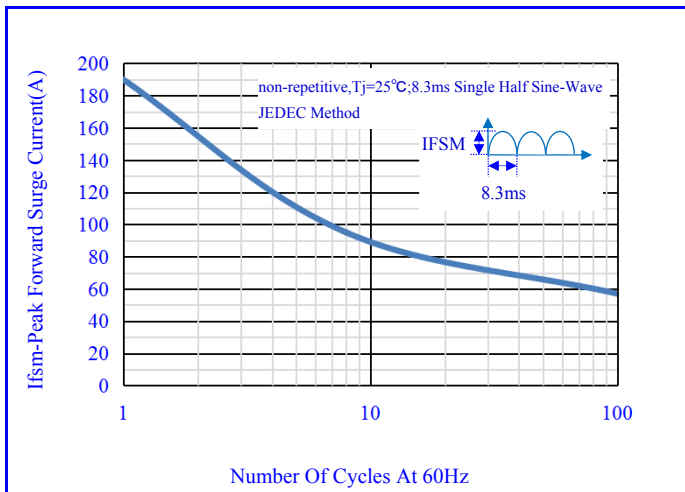


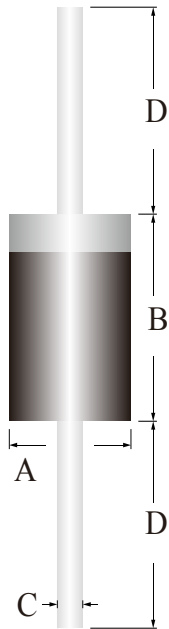
Fig.5-Max. Non-Repetitive Surge Current

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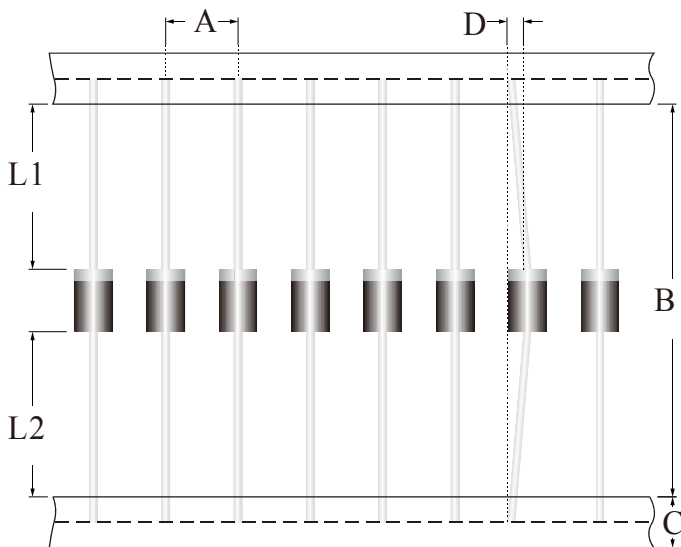
OUTLINE DRAWINGS



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

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