

**SR10300L**

LOW VF SCHOTTKY RECTIFIERS



<b>VOLTAGE</b>	300 Volts	<b>CURRENT</b>	10.0 Amperes	<b>DO-27(DO-201AD)</b>	<b>Marking and Polarity</b>
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**FEATURES**

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- For use in low voltage ,high frequency inverters, free wheeling ,and polarity protection applications
- High temperature soldering guaranteed:260 C/10 seconds at terminals
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

**MECHANICAL DATA**

- Case: JEDEC DO-201AD molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750,method 2026
- Mounting Position: Any
- Weight:App. 1.05 grams ( 0.0353 ou)

**TYPICAL APPLICATIONS**

- For use in low voltage ,high frequency inverters ,DC/DC converters, free wheeling ,and polarity protection applications

SR10300L  
NH FFDDK

Remark:  
 ①. SR10300L=Model No.  
 ②. NH=niuhang trademark  
 ③. FFDDK=Internal control code,According to actual changes  
 ④. White band denotes cathode

**Maximum Ratings (Ratings at 25°C ambient temperature unless otherwise specified.)**

Parameter	Symbol	SR10300L	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	300	V
Maximum RMS voltage	$V_{RMS}$	210	V
Maximum DC blocking voltage	$V_{DC}$	300	V
Maximum average forward rectified current(see fig.2)	$I_{F(AV)}$	10	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	$I_{FSM}$	120	A

**Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)**

Parameter	Symbol	SR10300L				Unit	
		Test Conditions		Min.	Typ.		Max.
Maximum instantaneous forward voltage (Note 1)	$V_F$	TA=25°C	IF=10A	--	0.88	0.92	V
Maximum instantaneous reversecurrent at rated DC blockingvoltage (Note 1)	$I_{RRM}$	VR=150	TA=25°C	--	--	5	uA
			TA=125°C	--	--	15	mA
Typical junction capacitance	$C_J$	4V,1MHz		300		pF	

**Thermal Characteristics (Ratings at 25°C ambient temperature unless otherwise specified )**

Parameter	Symbol	SR10300L	Unit
Operating junction	$T_J$	-55 to +150	°C
Storage temperature range	$T_{STG}$	-55 to +150	
Typical thermal resistance (Note 2)	$R_{\theta JA}$	25	°C/W
	$R_{\theta JL}$	8	

Note: 1. Pulse width < 300 uS, Duty cycle < 2%  
 2. Thermal resistance from junction to lead vertical P.C.B. mounted , 0.375"(9.5mm)lead length,Polymide PCB, 2 oz Copper.  
 Cathode pad dimensions 18.8x14.4mm , Anode pad dimensions- (5.6x14.4mm)

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RATING AND CHARACTERISTIC CURVES

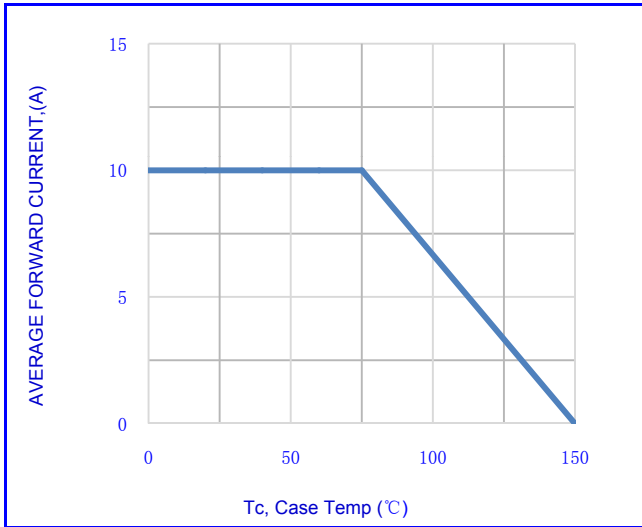


Fig.1- FORWARD CURRENT DERATING CURVE

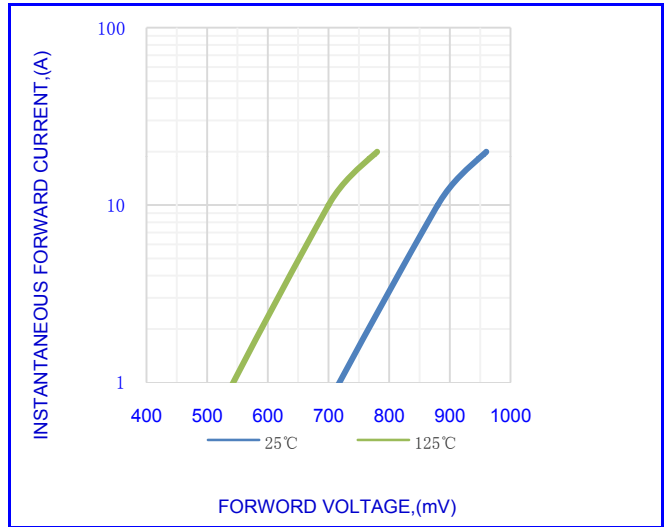


Fig.2-TYPICAL INSTANTANEOUS FORWARD

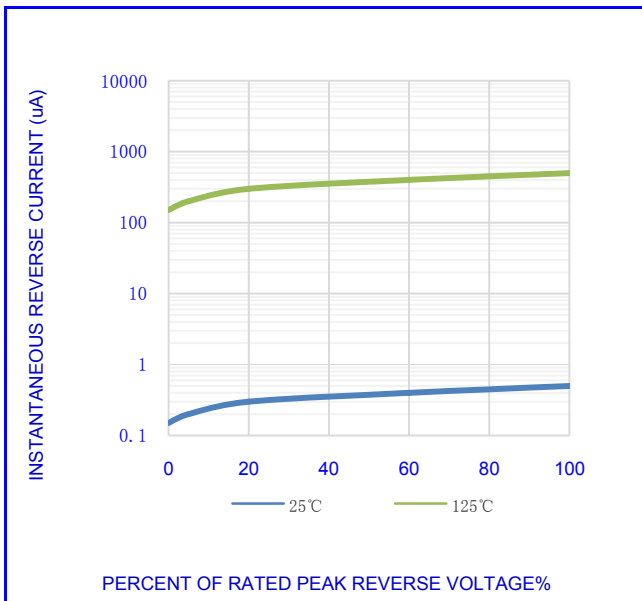


Fig.3-TYPICAL REVERSE CHARACTERISTICS

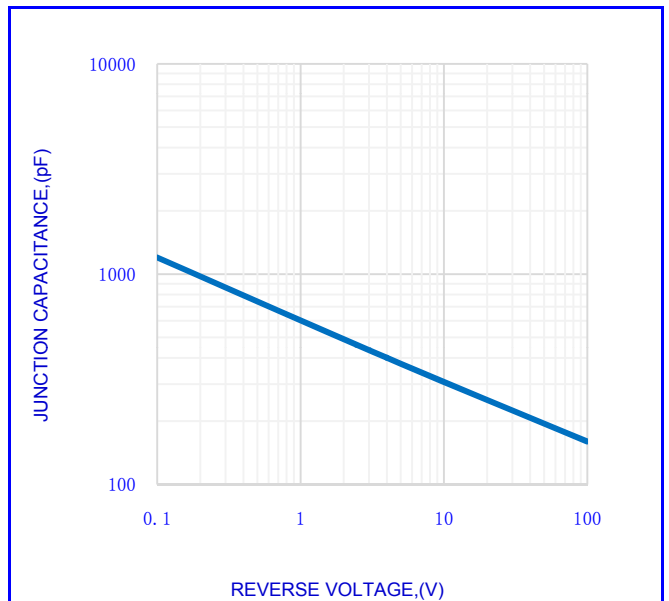


Fig.4- TYPICAL JUNCTION CAPACITANCE

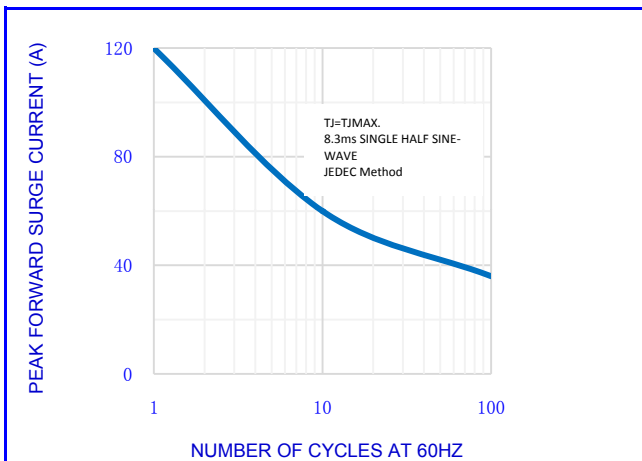


Fig.5-MAX. NON-REPETITIVE SURGE CURRENT

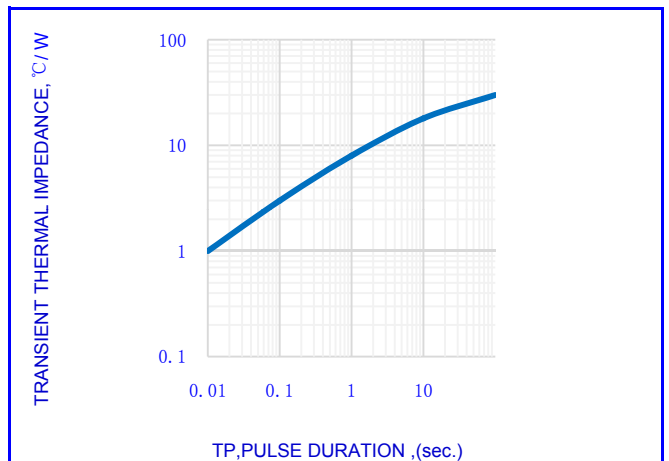


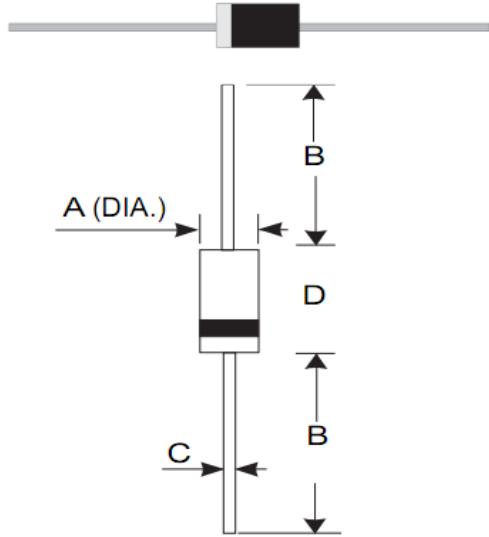
Fig.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

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**OUTLINE DRAWINGS**



**OUTLINE DIMENSIONS**

DIM	MILLIMETERS			INCHES		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.9	-	5.6	0.193	-	0.220
B	24.5	-	26.4	0.965	-	1.039
C	0.9	-	1.3	0.035	-	0.051
D	7.2	-	9.5	0.285	-	0.374

**DO-27(DO-201AD)**

**Packing Information**

Package	Pack	Box Size L×W×H(mm)	Quantity (pcs/box)	Carton Size L×W×H(mm)	Quantity (box/carton)
DO-27(DO-201AD)	B/G	250*75*140	1250	420*280*310	10

SR10300L

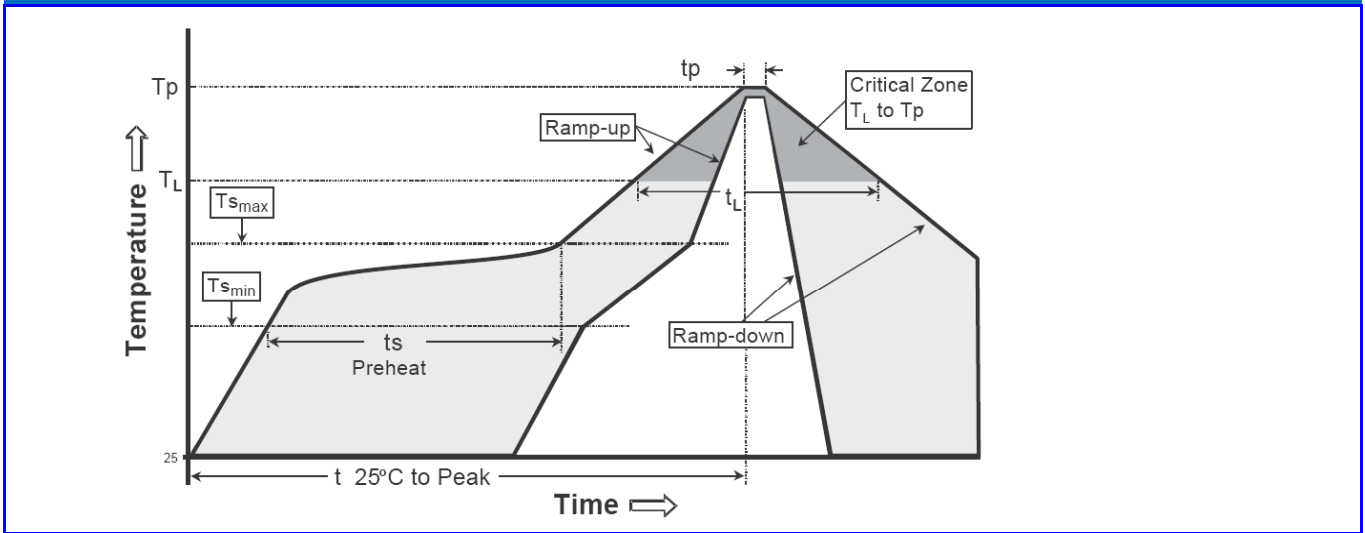
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Recommended wave soldering condition

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 (T <sub>Smax</sub> to T <sub>p</sub> )	3°C/second max.	3°C/second max.
Preheat -Temperature Min(T <sub>Smin</sub> ) -Temperature Max(T <sub>Smax</sub> ) -Time(ts min to ts max)	100°C 150°C 60-120 seconds	150°C 200°C 60-180 seconds
Time maintained above: -Temperature (T <sub>L</sub> ) - Time (t <sub>L</sub> )	183°C 60-150 seconds	217°C 60-150 seconds
Peak Temperature(T <sub>p</sub> )	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.

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