



# S34L THRU S320L

## 3.0 AMP SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

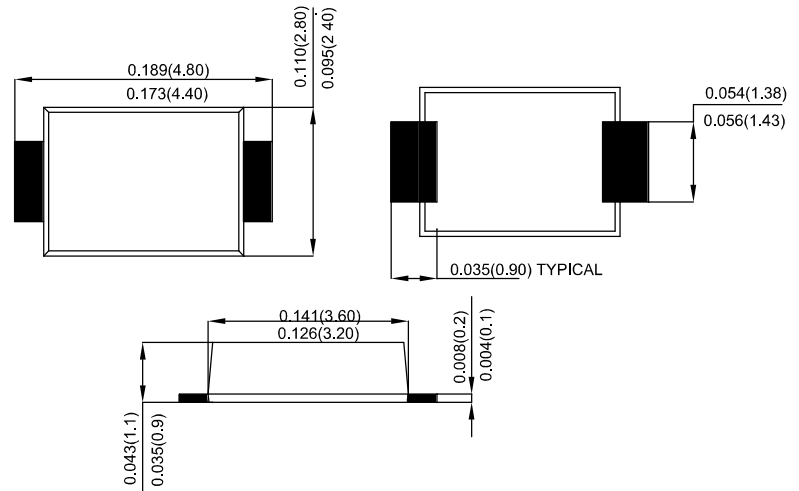
### Features

- Schottky Barrier Chip
- Low Power Loss, High Efficiency
- Ideally Suited for Automatic Assembly
- Surge Overload Rating to 80A Peak
- Plastic Case Material has UL Flammability Classification Rating 94V-0

### Mechanical Data

- Case: Molded plastic SMAF
- Terminals: Plated leads solderable per MIL-STD-750, Method 2026 guaranteed
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Making: Type Number

### SMAF



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load

For capacitive load derate current by 20%

Type Number	SYMBOL	S34L	S345L	S35L	S36L	S38L	S310L	S315L	S320L	Unit
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	40	45	50	60	80	100	150	200	V
Maximum RMS Voltage	$V_{RMS}$	28	31	35	42	56	70	105	140	V
Maximum DC Blocking Voltage	$V_{DC}$	40	45	50	60	80	100	150	200	V
Average Rectified Output Current @ $T_L=90^\circ\text{C}$	$I_{F(AV)}$	3.0								A
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	80								A
$I^2t$ Rating for Fusing ( $t < 8.3\text{ms}$ )	$I^2t$	26.560								$\text{A}^2\text{s}$
Forward Voltage @ $I_F=3.0\text{A}$	$V_{FM}$	0.45		0.5	0.6		0.85		V	
Peak Reverse Current @ $T_A=25^\circ\text{C}$	$I_R$	0.1				0.05				mA
At Rated DC Blocking Voltage @ $T_A=100^\circ\text{C}$		10				5				
Typical Junction Capacitance (Note1)	$C_J$	400				300				pF
Power Dissipation	$P_D$	1.35		1.5	1.8		2.55		W	
Typical Thermal Resistance (Note 2)	$R_{\theta JL}$	20								$^\circ\text{C}/\text{W}$
	$R_{\theta JC}$	24								
	$R_{\theta JA}$	107								
Operating Temperature Range	$T_J$	-55 to +150								$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150								$^\circ\text{C}$

Note: 1. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C

2. Device mounted on FR-4 substrate, 1"\*1", 2oz, single-sided, PC boards with 0.06"\*0.09" copper pad.



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Fig. 1 Forward Current Derating Curve

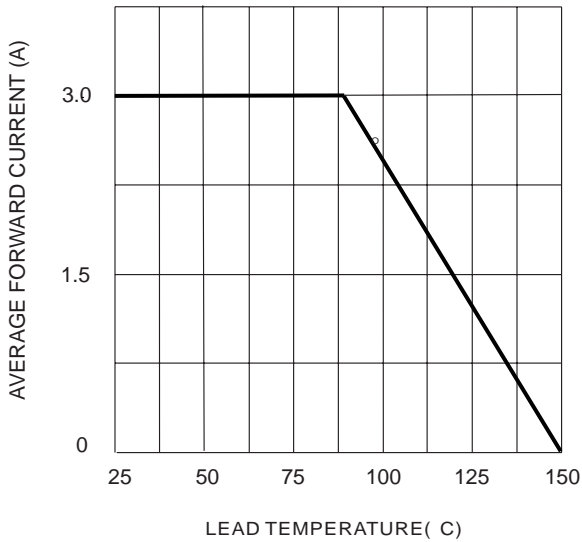


Fig. 2 Typ. Forward Characteristics

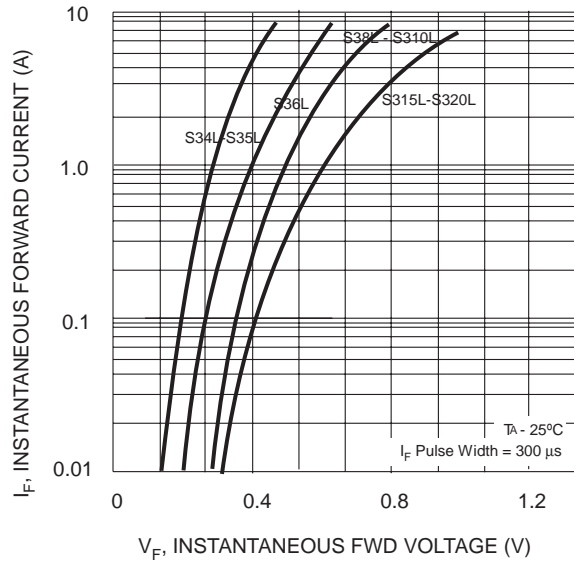


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

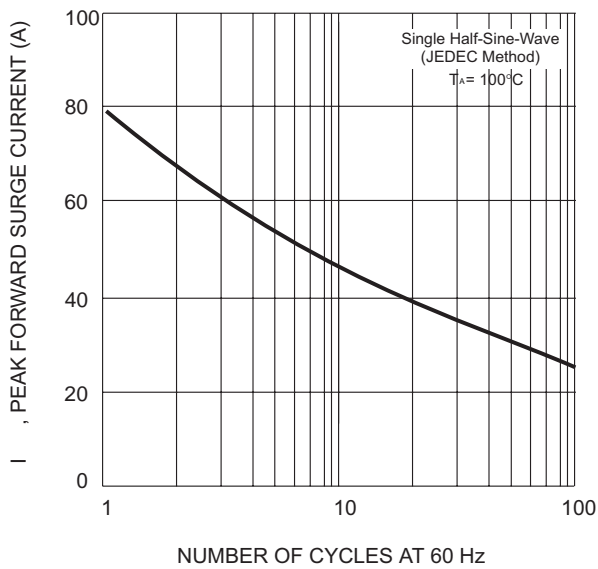


Fig. 4 Typical Reverse Characteristics (per element)

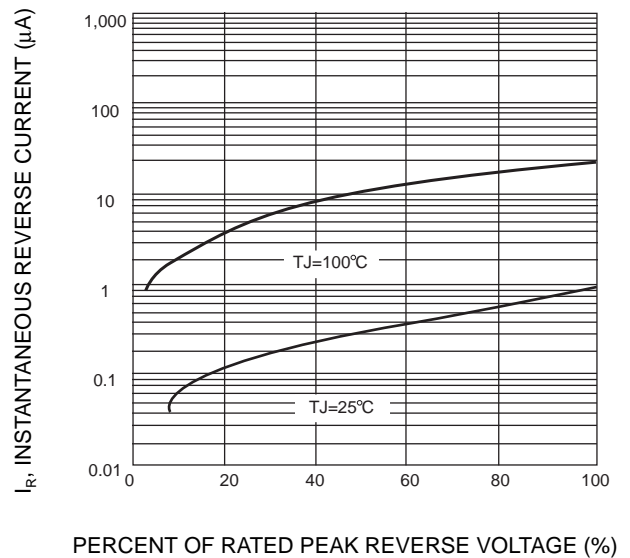
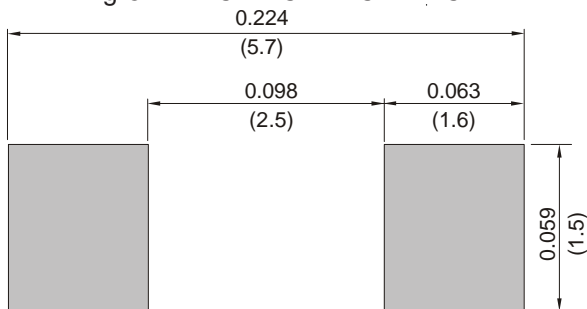


Fig.5 TYPICAL CAPACITANCE





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