



# SR36 THRU SR39

## SURFACE MOUNT FAST SWITCHING RECTIFIER

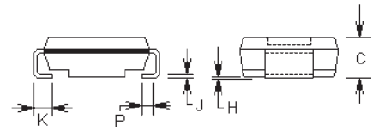
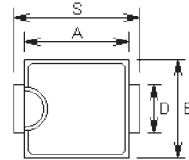
Reverse Voltage - 100 to 800 Volts

Forward Current - 3.0 Amperes

### Features

- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High temperature soldering: 260°C/10 seconds at terminals
- Fast recovery times for high efficiency

SMC



### Mechanical Data

- **Case:** SMC molded plastic
- **Terminals:** Solder plated solderable per MIL-STD-750, method 2026
- **Polarity:** Indicated by cathode band
- **Weight:** 0.007 ounce, 0.25 gram

DIM	DIMENSIONS				Note
	inches		mm		
	Min.	Max.	Min.	Max.	
A	0.260	0.280	6.60	7.11	
B	0.220	0.240	5.59	6.10	
C	0.075	0.095	1.90	2.41	
D	0.115	0.121	2.92	3.07	
H	0.0020	0.0080	0.051	0.152	
J	0.006	0.012	0.15	0.30	
K	0.030	0.050	0.76	1.27	
P	0.020 REF		0.51 REF		
S	0.305	0.320	7.75	8.13	

### Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%.

	Symbols	SR36	SR37	SR38	SR39	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	100	200	400	800	Volts
Maximum RMS voltage	$V_{RMS}$	70	140	280	560	Volts
Maximum DC blocking voltage	$V_{DC}$	100	200	400	800	Volts
Maximum average forward rectified current at $T_c=75^\circ\text{C}$	$I_{(AV)}$	3.0				Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (MIL-STD-750D 4066 method)	$I_{FSM}$	100.0				Amps
Maximum instantaneous forward voltage at 3.0A	$V_F$	1.30				Volts
Maximum DC reverse current at rated DC blocking voltage	$I_R$	10.0 350.0				$\mu\text{A}$
Maximum reverse recovery time (Note 1)	$T_{rr}$	500				nS
Typical junction capacitance (Note 2)	$C_J$	60.0				pF
Maximum thermal resistance (Note 3)	$R_{\theta JA}$ $R_{\theta JL}$	15.0 50.0				$^\circ\text{C/W}$
Operating and storage temperature range	$T_J, T_{STG}$	-50 to +150				$^\circ\text{C}$

Notes:

- (1) Reverse recovery test conditions:  $I_f=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_t=0.25\text{A}$
- (2) Measured at 1.0MHz and applied reverse voltage of 4.0 volts
- (3) 8.0mm<sup>2</sup> (0.013mm thick) land areas

# RATINGS AND CHARACTERISTIC CURVES

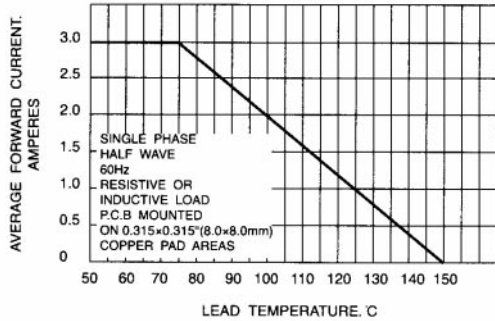


FIG. 1 - FORWARD CURRENT DERATING CURVE

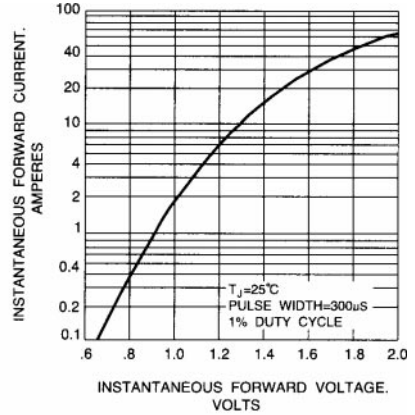


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

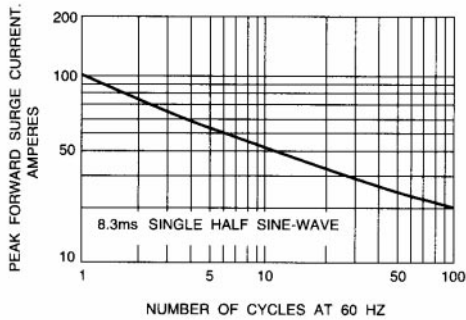


FIG. 3 - MAXIMUM NON-REPETITIVE SURGE CURRENT

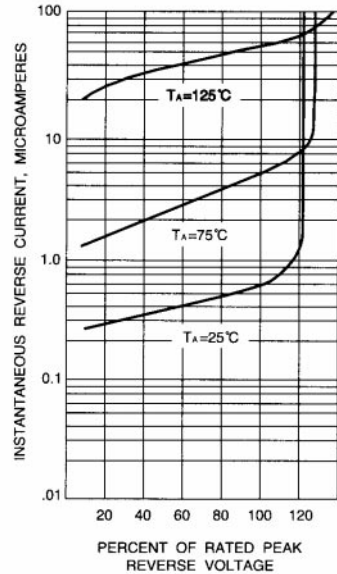


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

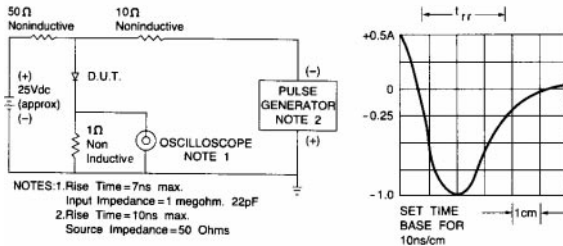


FIG. 5 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST DIAGRAM