

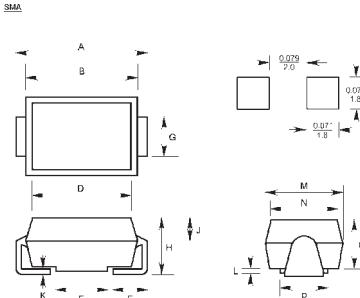


# SRA7 THRU SRA9

**FAST SWITCHING PLASITC RECTIFIER**  
**Reverse Voltage - 400 to 1000 Volts**  
**Forward Current - 1.0 Ampere**

## Features

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



## Mechanical Data

- **Case:** SMA molded plastic
- **Terminals:** Solder plated solderable per MIL-STD-750, method 2026
- **Polarity:** Indicated by cathode band
- **Weight:** 0.004 ounce, 0.113 gram

DIM	Inches		mm		Note
	Min.	Max.	Min.	Max.	
A	0.216	0.226	5.48	5.74	
B	0.176	0.182	4.48	4.63	
C	0.094	0.100	2.40	2.55	
D	0.170	0.176	4.33	4.48	
E	0.039	0.055	1.00	1.40	
F	0.080	0.081	2.03	2.07	
G	0.068	0.083	1.72	2.10	
H	0.112	0.118	2.85	3.00	
J	0.057	-	1.44	-	
K	-	0.018	-	0.45	
L	0.016	-	0.40	-	
M	0.108	0.115	2.77	2.93	
N	0.105	0.107	2.67	2.73	
P	0.078	0.081	2.00	2.05	

## Maximum Ratings and Electrical Characteristics @25°C unless otherwise specified

	Symbols	SRA7	SRA8	SRA9	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	400	600	1000	Volts
Maximum RMS voltage	$V_{RMS}$	280	420	700	Volts
Maximum DC blocking voltage	$V_{DC}$	400	600	1000	Volts
Average forward current at $T_j=90^\circ\text{C}$	$I_{(AV)}$		1.0		Amp
Peak forward surge current 8.3mS single half sine-wave	$I_{FSM}$		30.0		Amps
Maximum instantaneous forward voltage at $T_{FM}=1.0^\circ\text{C}$ ; $T_j=25^\circ\text{C}$ (Note 1)	$V_F$		1.3		Volts
Maximum DC reverse current at rated DC blocking voltage $T=25^\circ\text{C}$ $T_j=125^\circ\text{C}$	$I_R$		5.0 200.0		$\mu\text{A}$
Maximum reverse recovery time (Note 2)	$T_{rr}$	150		250	nS
Typical junction capacitance (Note 3)	$C_J$		50.0		$\text{pF}$
Maximum thermal resistance	$R_{th JL}$		15		$^\circ\text{C/W}$
Operating and Storage temperature range	$T_j, T_{STG}$		-50 to +150		$^\circ\text{C}$

### Notes:

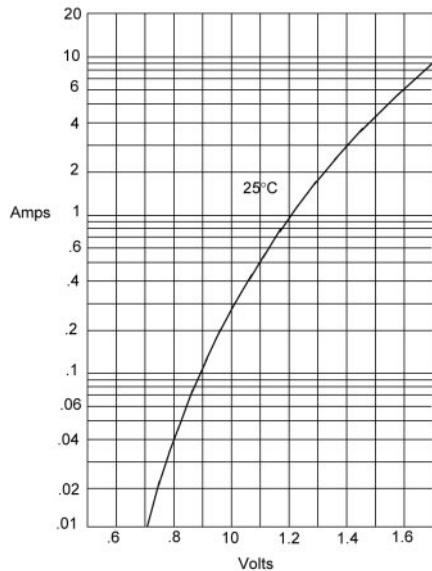
- (1) Pulse test: Pulse width 300uSec, Duty cycle 1%
- (2) Reverse recovery test conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_m=0.25\text{A}$
- (3) Measured at 1.0MHz and applied reverse voltage of 4.0 volts

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## RATINGS AND CHARACTERISTIC CURVES

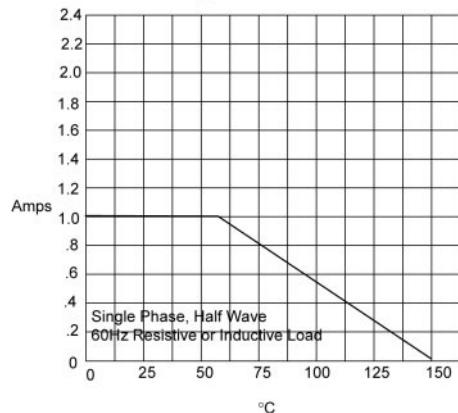
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Figure 1  
Typical Forward Characteristics



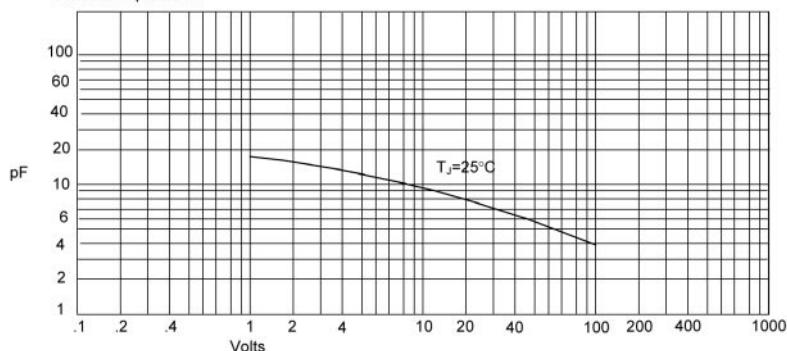
Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

Figure 2  
Forward Derating Curve



Average Forward Rectified Current - Amperes versus  
Ambient Temperature - °C

Figure 3  
Junction Capacitance



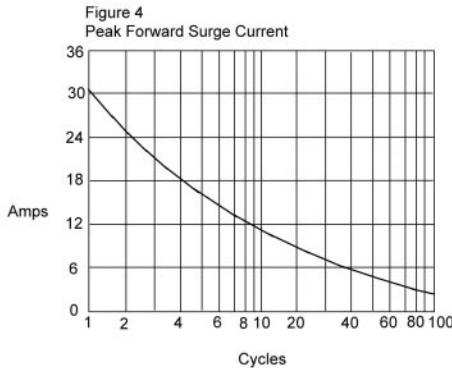
Junction Capacitance - pF versus  
Reverse Voltage - Volts

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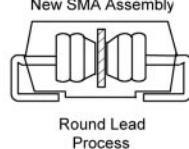
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Figure 4 Peak Forward Surge Current



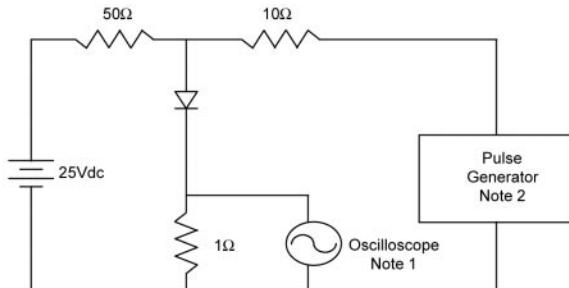
Peak Forward Surge Current - Amperesversus  
Number Of Cycles At 60Hz - Cycles

Figure 5 New SMA Assembly



Round Lead  
Process

Figure 6 Reverse Recovery Time Characteristic And Test Circuit Diagram



Notes:

1. Rise Time = 7ns max.
- Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
- Source impedance = 50 ohms
3. Resistors are non-inductive

