



# SE1A-S thru SE1M-S

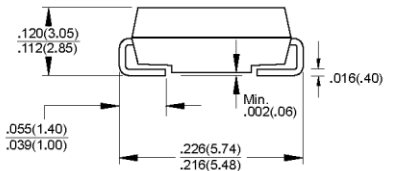
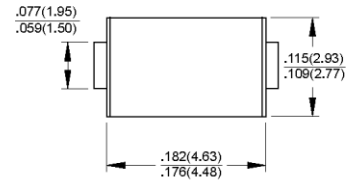
1.0 Amp. High Efficient Surface Mount Rectifiers  
Voltage Range 50 to 1000 Volts Forward Current 1.0 Ampere

## Features

- ◆ For surface mounted application
- ◆ Low forward voltage drop
- ◆ Low profile package
- ◆ Built-in stain relief, ideal for automatic placement
- ◆ Fast switching for high efficiency
- ◆ High temperature soldering:  
260°C/10 seconds at terminals
- ◆ Plastic material used carries Underwriters Laboratory  
Classification 94V-O



DO-214AC (SMAJ)



Dimensions in inches and (millimeters)

## Mechanical Data

- ◆ Cases: New SMA molded plastic
- ◆ Terminals: Solder plated solderable per MIL-STD-750,  
Method 2026
- ◆ Polarity: Indicated by cathode band
- ◆ Weight: 0.004 ounce, 0.11 gram

## Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

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

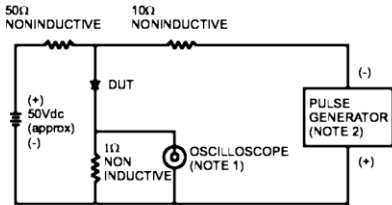
For capacitive load, derate current by 20%

Parameter	Symbols	SE1AS	SE1BS	SE1DS	SE1FS	SE1GS	SE1JS	SE1KS	SE1MS	Units	
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	300	400	600	800	1000	Volts	
Maximum RMS voltage	$V_{RMS}$	35	70	140	210	280	420	560	700	Volts	
Maximum DC blocking voltage	$V_{DC}$	50	100	200	300	400	600	800	1000	Volts	
Maximum average forward rectified current See Fig.2	$I_{(AV)}$	1.0								Amp	
Peak surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30.0								Amps	
Maximum instantaneous forward voltage @ 1.0A	$V_F$	1.00			1.30		1.50	1.70		Volts	
Maximum DC reverse current at rated DC blocking voltage @ $T_A=25^\circ\text{C}$ @ $T_A=100^\circ\text{C}$	$I_R$	10.0				500					$\mu\text{A}$
Maximum reverse recovery time (Note 1)	$t_{rr}$	50				100				nS	
Typical junction capacitance (Note 2)	$C_J$	20				15				pF	
Operating temperature range	$T_J$	-55 to +125								$^\circ\text{C}$	
Storage temperature range	$T_{STG}$	-55 to +150								$^\circ\text{C}$	

**Notes:** 1. Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$   
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

# RATINGS AND CHARACTERISTIC CURVES

FIG.1- 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

FIG.2- MAXIMUM AVERAGE FORWARD CURRENT DERATING

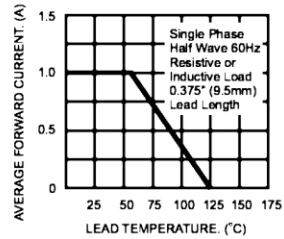
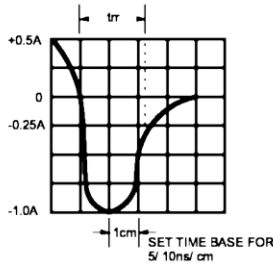


FIG.3- TYPICAL REVERSE CHARACTERISTICS

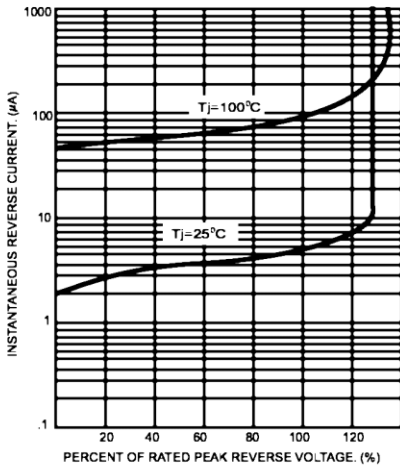


FIG.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

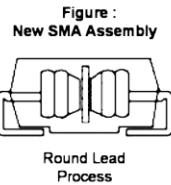
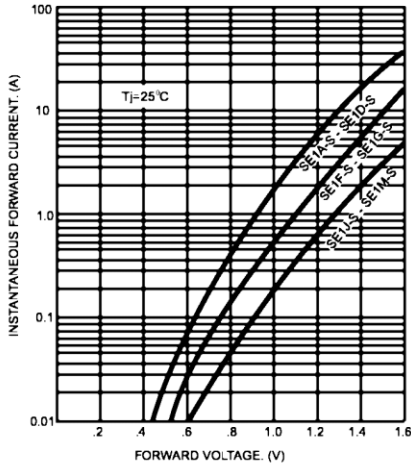


FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

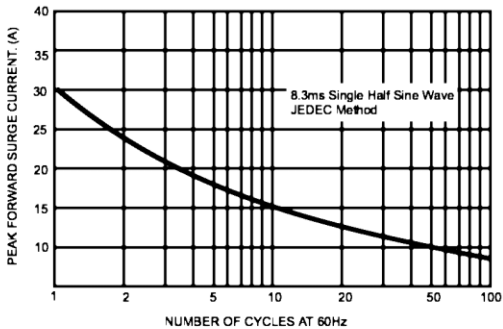


FIG.6- TYPICAL JUNCTION CAPACITANCE

