

# ES1A~ES1J

## 1.0Amp Super Fast Recovery Surface Mounted Rectifiers

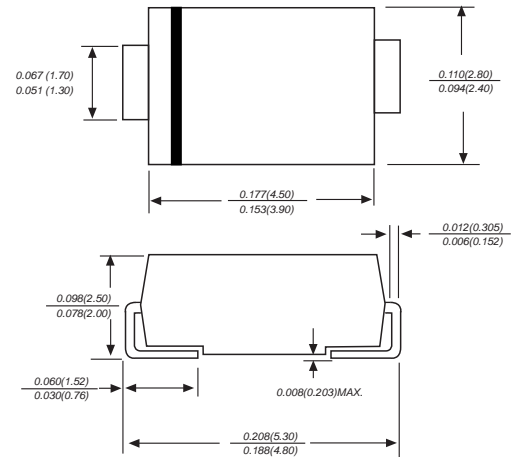
### Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Idea for printed circuit board
- ◆ Glass passivated Junction chip
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed 250°C/10 seconds at terminals

### Mechanical Data

Case : Molded plastic body  
 Terminals : Solder plated, solderable per MIL-STD-750,Method 2026  
 Polarity : Polarity symbol marking on body  
 Mounting Position : Any  
 Weight : 0.0023 ounce, 0.07 grams

### DO-214AC/SMA



Dimensions in inches and (millimeters)

### 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 current derate by 20%.

Parameter	SYMBOLS	ES1A	ES1B	ES1C	ES1D	ES1F	ES1G	ES1J	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	150	200	300	400	600	V
Maximum RMS voltage	$V_{RMS}$	35	70	105	140	210	280	420	V
Maximum DC blocking voltage	$V_{DC}$	50	100	150	200	300	400	600	V
Maximum average forward rectified current at $T_L=100^\circ\text{C}$	$I_{(AV)}$	1.0							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	30.0							A
Maximum instantaneous forward voltage at 1.0A	$V_F$	0.95				1.25		1.7	V
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=125^\circ\text{C}$	$I_R$					5.0		500	$\mu\text{A}$
Maximum reverse recovery time(Note 1)	$T_{rr}$					35			ns
Typical junction capacitance (Note2)	$C_J$					18.0			pF
Typical thermal resistance	$R_{qJA}$					80.0			$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150							$^\circ\text{C}$

Note: 1.Reverse recovery time test condition:  $I_F=0.5\text{A}$   $I_R=1.0\text{A}$   $I_{rr}=0.25\text{A}$   
 2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

## Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

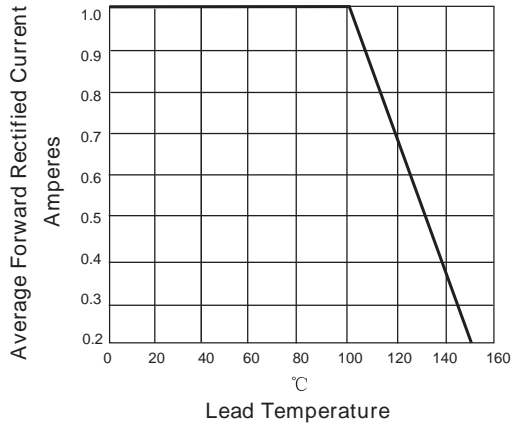


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

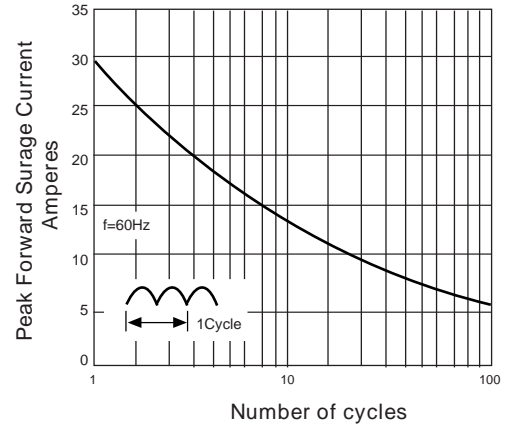


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

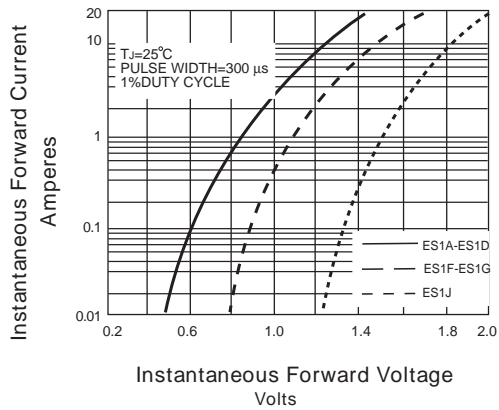


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

