

## ES1A THRU ES1J

### Features

- Low Power Loss, High Efficiency
- Ideally Suited for Automatic Assembly
- Guard Ring Die Construction
- Plastic Case Material has UL Flammability Classification Rating 94V-0

### Mechanical Data

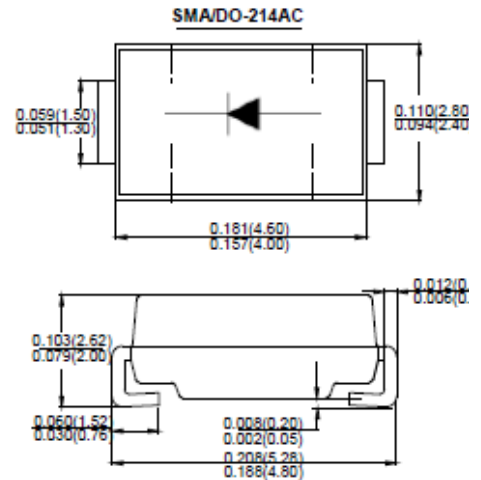
**Case:** molded plastic SMA/DO-214AC

**Terminals:** Solder plated, solderable per MIL-STD-750,  
Method 2026 guaranteed

**Polarity:** Color band denotes cathode end

**Mounting position:** Any

**Making:** Type Number



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	ES1A	ES1B	ES1D	ES1G	ES1J	Unit
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	V
Average Rectified Output Current @ $T_A=75^\circ\text{C}$	$I_{F(AV)}$	1.0					A
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30					A
Forward Voltage @ $I_F=1.0\text{A}$	$V_{FM}$	0.95			1.25	1.7	V
Peak Reverse Current @ $T_A=25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A=100^\circ\text{C}$	$I_R$	5.0					$\mu\text{A}$
		100					
Maximum Reverse Recovery Time (Note 1)	$T_{rr}$	35					ns
Typical Junction Capacitance (Note 3)	$C_j$	15					pF
Typical Thermal Resistance Junction to Ambient (Note 2)	$R_{\theta JA}$	45					$^\circ\text{C}/\text{W}$
Operating Temperature Range	$T_J$	-55 to +150					$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150					$^\circ\text{C}$

Note: 1. Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $IRR=0.25\text{A}$

2. 8.0mm<sup>2</sup> (.013mm thick) land areas

3. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

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### Characteristic Curves

Fig. 1 - Forward Current Derating Curve

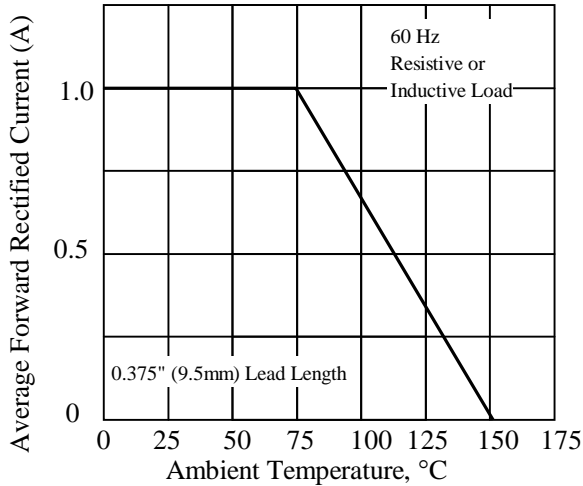


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

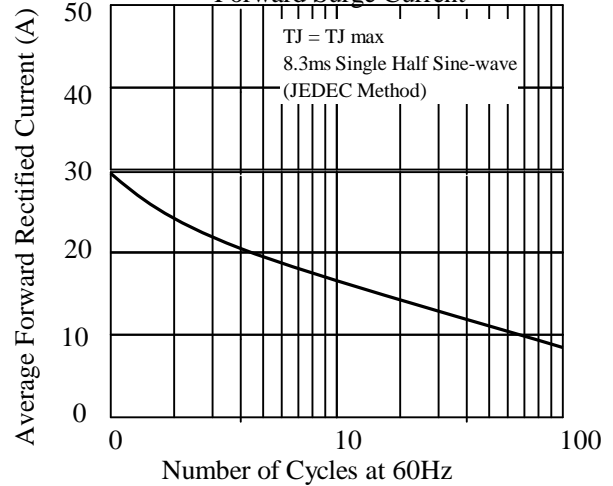


Fig. 3 - Typical Instantaneous Forward Characteristics

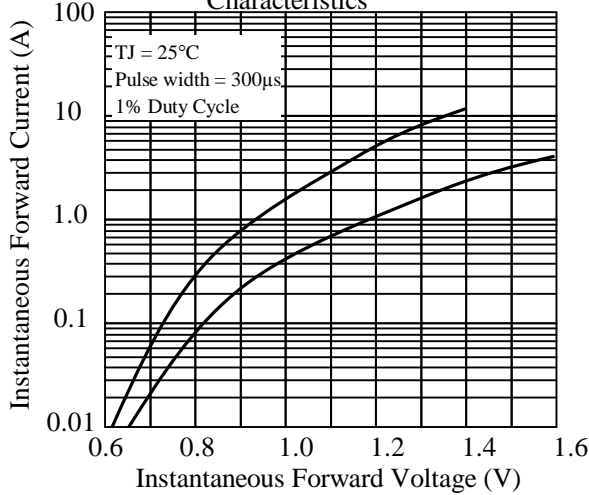


Fig. 4 - Typical Reverse Characteristics

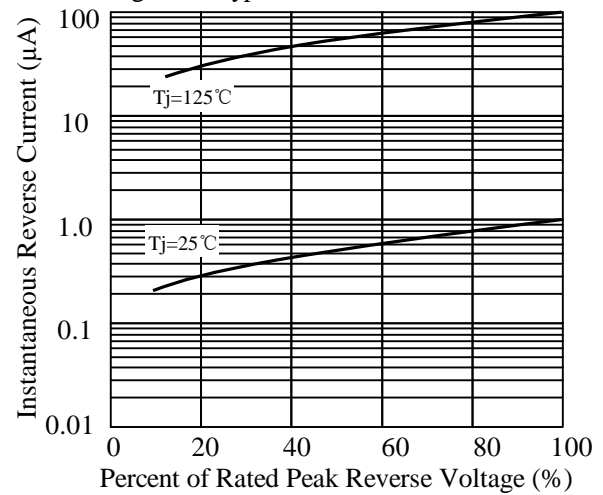


Fig. 5 - typical transient thermal impedance

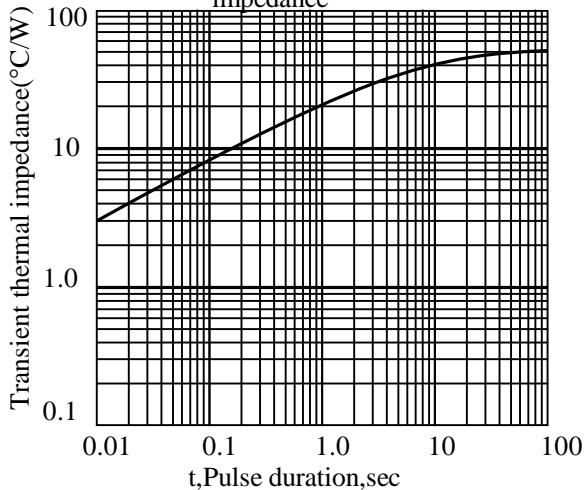


Fig. 6 - Typical Junction Capacitance

