

ES1A THRU ES1J

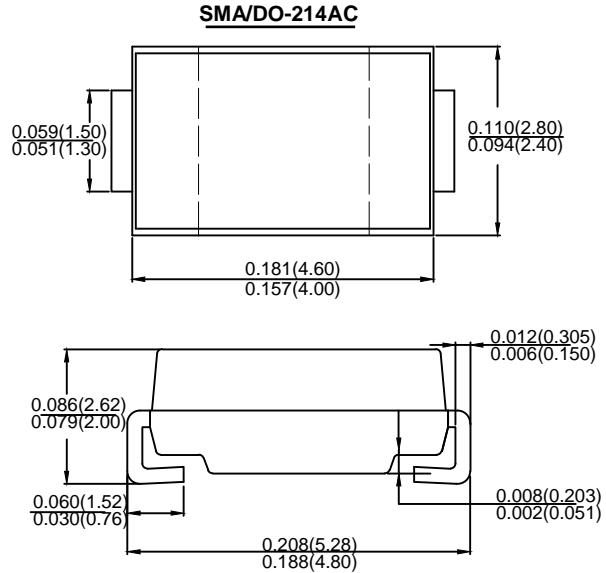
1.0AMP SURFACE MOUNT GLASS SUPERFAST RECOVERY RECTIFIER

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: Moeded plastic SMA
- Terminals: Plated leads solderable per MIL-STD-750, Method 2026 guaranteed
- Polarity: Color band dented 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_o	1.0					A
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	35					A
Forward Voltage @ $I_F=1.0\text{A}$	V_{FM}	0.95		1.25		1.7	V
Peak Reverse Current @ $T_A=25^\circ\text{C}$	I_R	5.0					uA
At Rated DC Blocking Voltage @ $T_A=100^\circ\text{C}$		150					
Maximum Reverse Recovery Time (Note1)	T_{rr}	35					ns
Typical Junction Capacitance (Note 2)	C_J	10					pF
Typical Thermal Resistance Junction to Ambient (Note 3)	$R_{\theta JA}$	34					$^\circ\text{C/W}$
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. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C
 3. 8.0MM² (.013mm Thick) Land Areas.

FIG.1 MAXIMUM AVERAGE FORWARD CURRENT DERATING

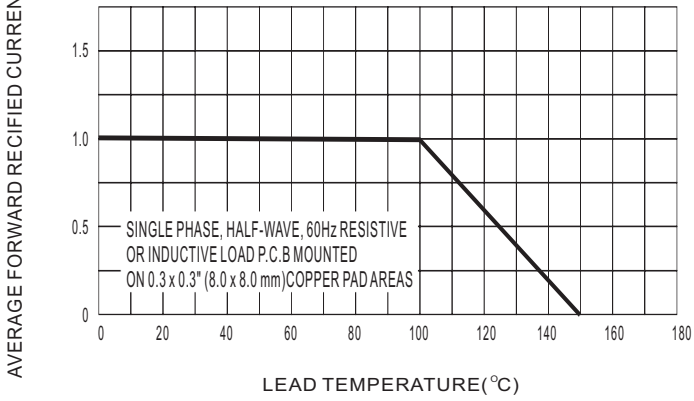


FIG.2 TYPICAL FORWARD CHARACTERISTICS

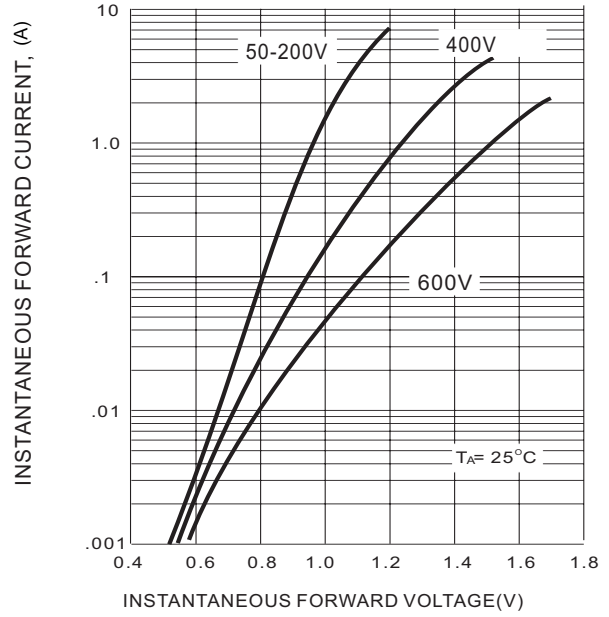


FIG.3 MAXIMUM NON-REPEITIVE SURGE CURRENT

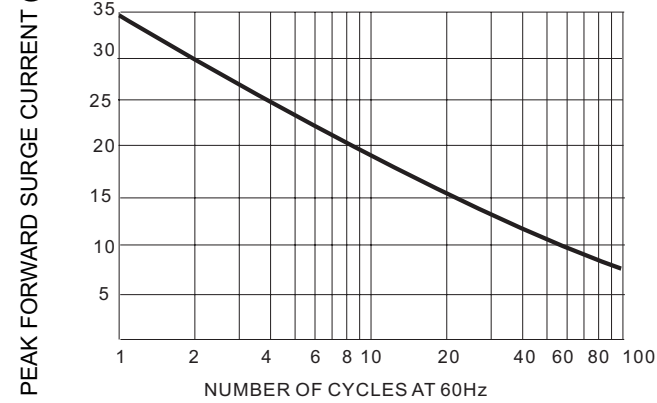


FIG.4 TYPICAL JUNCTION CAPACITANCE

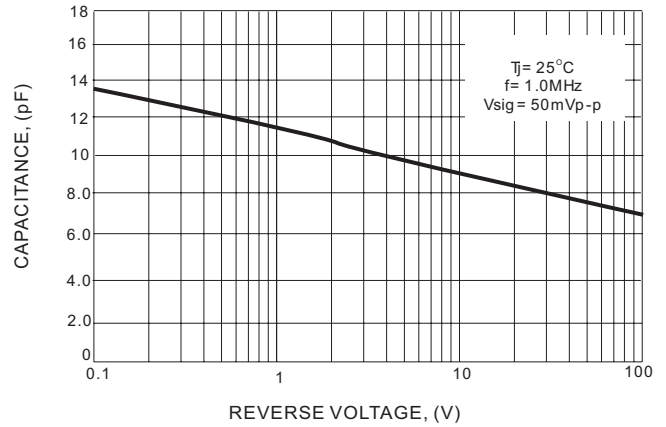


FIG.5 TYPICAL REVERSE CHARACTERISTICS

