



ES1A THRU ES1J

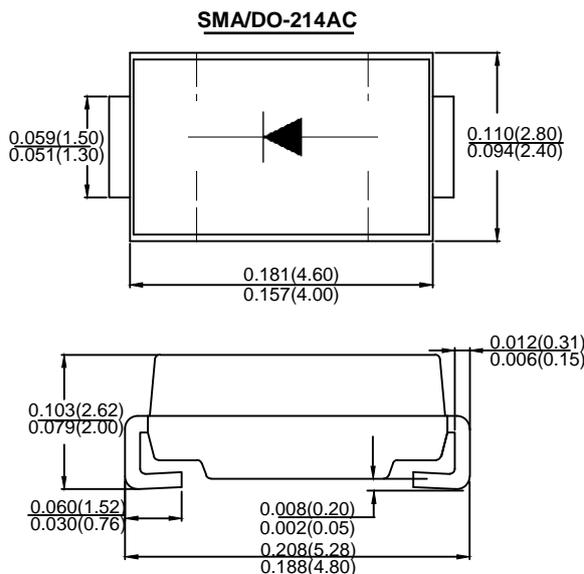
1.0AMP SURFACE MOUNT GLASS SUPERFAST RECOVERY RECTIFIER

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: Molded 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 @ $T_L = 100^\circ C$	$I_F(AV)$	1.0					A
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	35					A
Rating for fusing (t<8.3ms)	$I^2 t$	5.08					$A^2 s$
Forward Voltage @ $I_F=1.0A$	V_{FM}	0.95			1.3	1.7	V
Peak Reverse Current @ $T_A=25^\circ C$	I_R	5.0					uA
At Rated DC Blocking Voltage @ $T_A=125^\circ C$		200					
Maximum Reverse Recovery Time (Note1)	T_{rr}	35					ns
Typical Junction Capacitance (Note 2)	C_J	20			7		pF
Typical Thermal Resistance Junction to Ambient(Note 3)	$R_{\theta JA}$	34					$^\circ C/W$
Operating Temperature Range	T_J	-55 to +150					$^\circ C$
Storage Temperature Range	T_{STG}	-55 to +150					$^\circ C$

Note: 1.Reverse Recovery Test Conditions: $I_F=0.5A, I_R=1.0A, I_{RR}=0.25A$.

2. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C

3. Device mounted on FR-4 substrate, 1"×1", 2oz, single-sided, PC boards with 0.1"×0.15" copper pad.



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FIG.1 MAXIMUM AVERAGE FORWARD CURRENT DERATING

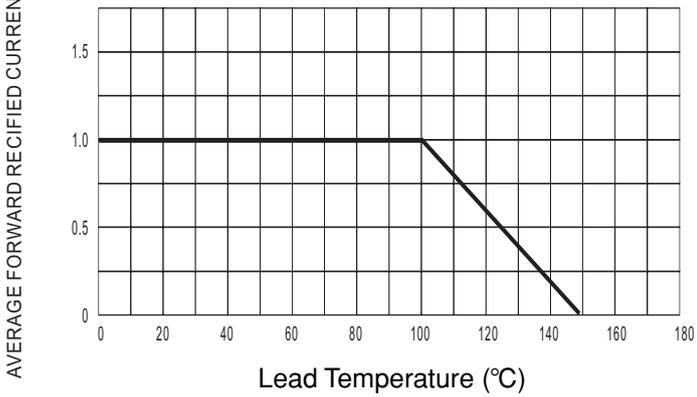


FIG.2 TYPICAL FORWARD CHARACTERISTICS

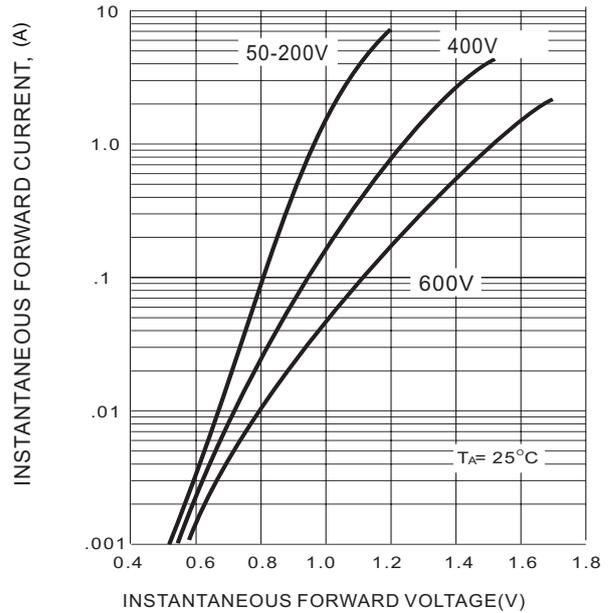


FIG.3 MAXIMUM NON-REPEITIVE SURGE CURRENT



FIG.4 TYPICAL JUNCTION CAPACITANCE

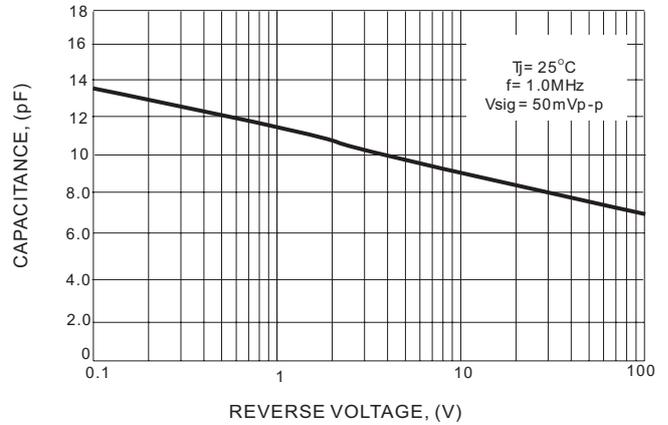
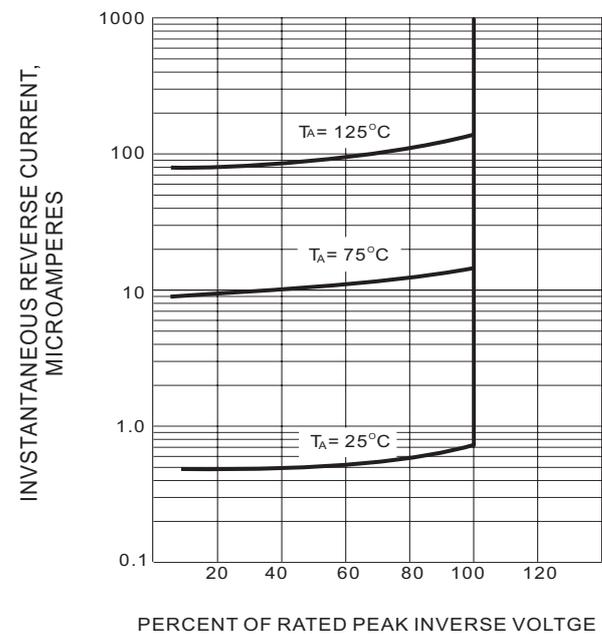
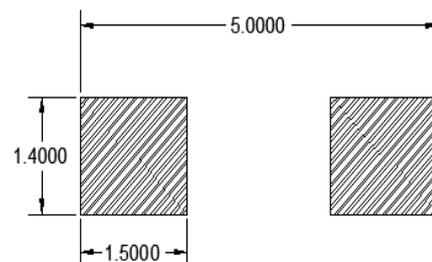


FIG.5 TYPICAL REVERSE CHARACTERISTICS



SMA PAD LAYOUT





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