



ES1A THRU ES1J

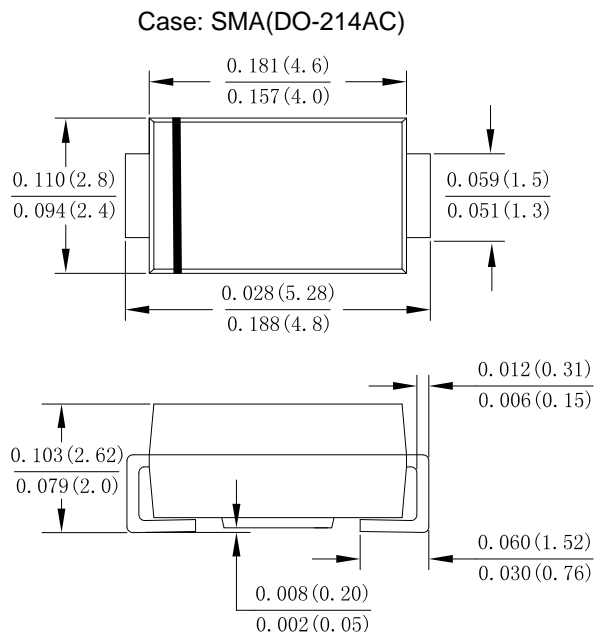
1.0AMP Surface Mount Glass Superfast Recovery Rectifier

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 denotes cathode end
- Mounting Position: Any
- Marking: 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 °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 @IF=1.0A	V _{FM}	0.95			1.3	1.7	V
Peak Reverse Current @T _A =25 °C	I _R	5.0					uA
At Rated DC Blocking Voltage @T _A =125 °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	R _{θ JA}	34					°C/W
Operating Temperature Range	T _J	-55 to+150					°C
Storage Temperature Range	T _{STG}	-55 to +150					°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



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Fig. 1 Forward Current Derating Curve

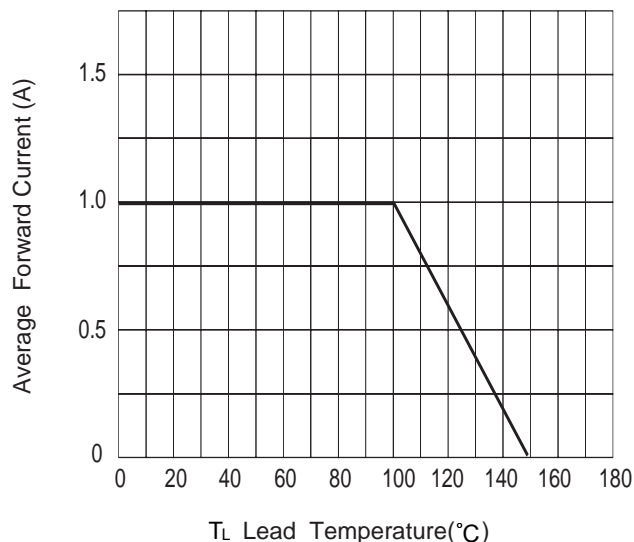


Fig. 2 Typ. Forward Characteristics

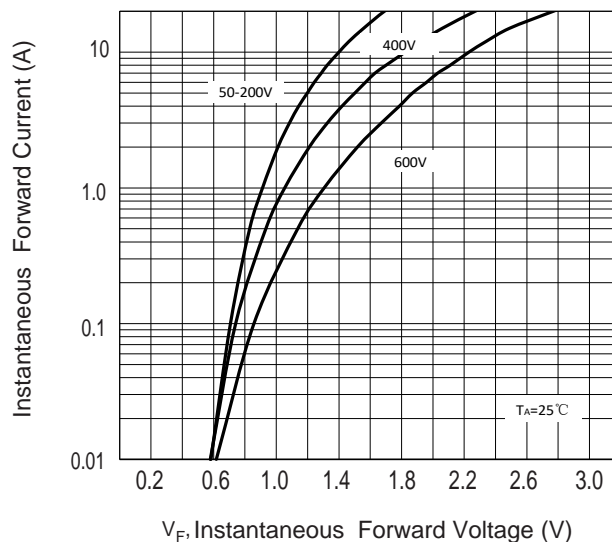


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

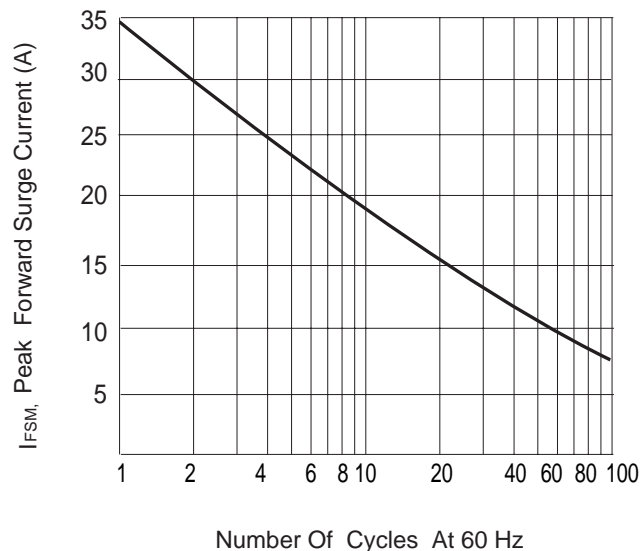


Fig.4 Typical Junction Capacitance

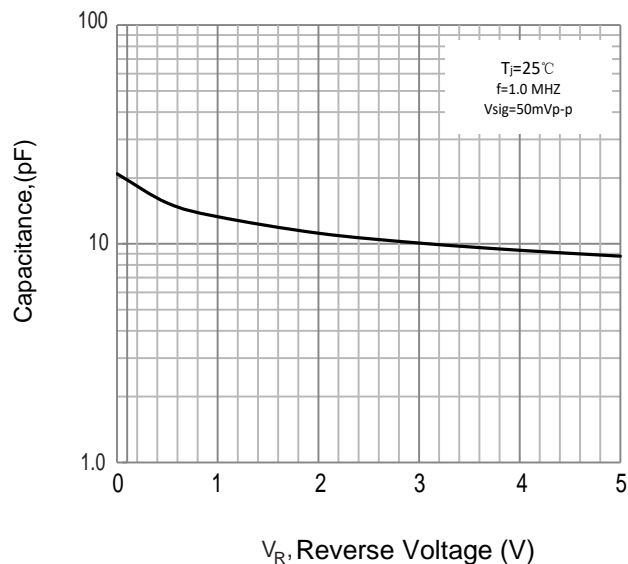


Fig.5 Typical Reverse Characteristics

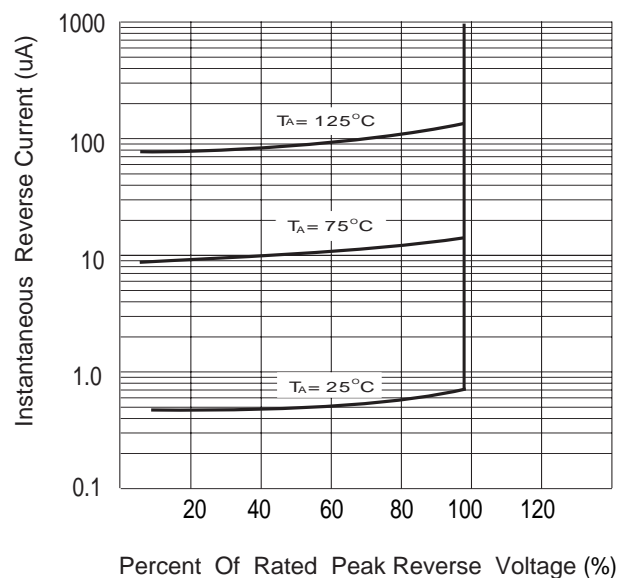
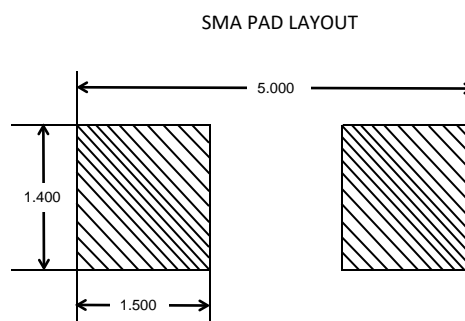


Fig.6 Mounting PAD Layout





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