

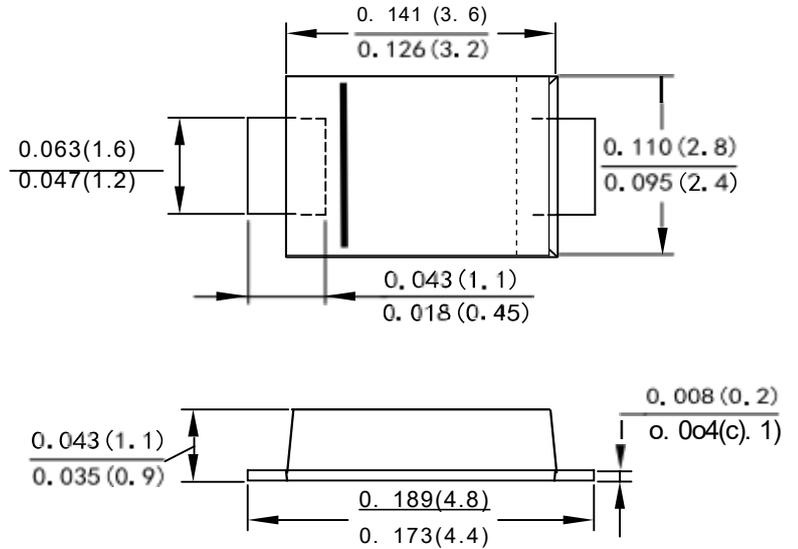
Features

- 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 SMAF
- Terminals: Plated leads solderable per MIL-STD-750, Method 2026 guaranteed
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Making: Type Number

Case: SMAF



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	ES1AF	ES1BF	ES1DF	ES1GF	ES1JF	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 @ $T_L=90^\circ\text{C}$	$I_{F(AV)}$	1.0					A
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	35					A
I^2t Rating for Fusing ($t < 8.3\text{ms}$)	I^2t	5.084					A^2s
Forward Voltage @ $I_F=1.0\text{A}$	V_{FM}	0.95		1.3		1.7	V
Peak Reverse Current @ $T_A=25^\circ\text{C}$	I_R	5.0					uA
At Rated DC Blocking Voltage @ $T_A=125^\circ\text{C}$		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	$R_{\theta JA}$	75					$^\circ\text{C}/\text{W}$
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. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C

Fig. 1 Forward Current Derating Curve

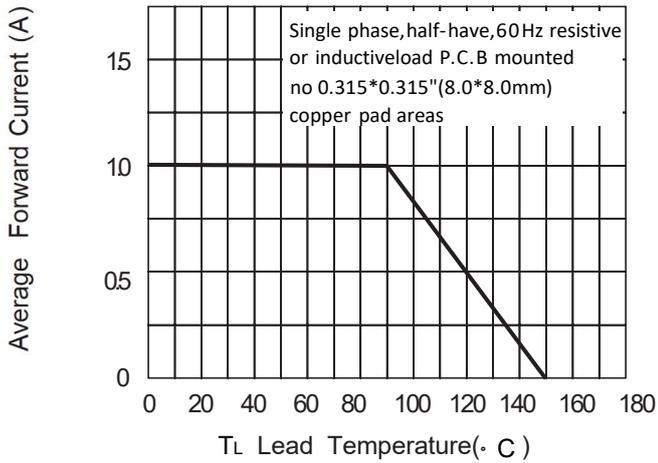


Fig. 2 Typ. Forward Characteristics

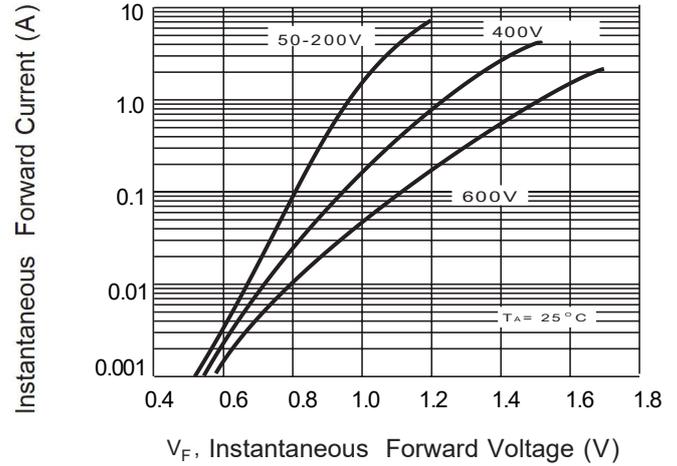


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

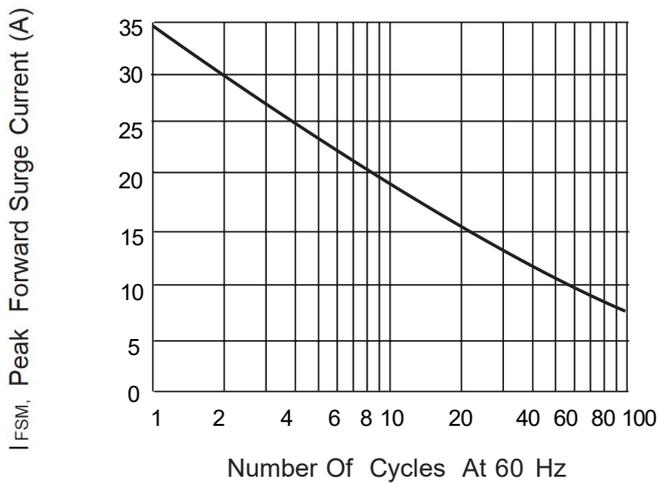


Fig.4 Typical Junction Capacitance

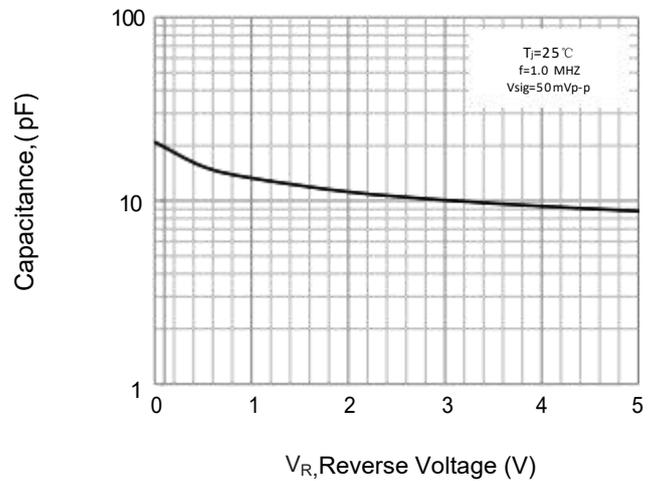


Fig.5 Typical Reverse Characteristics

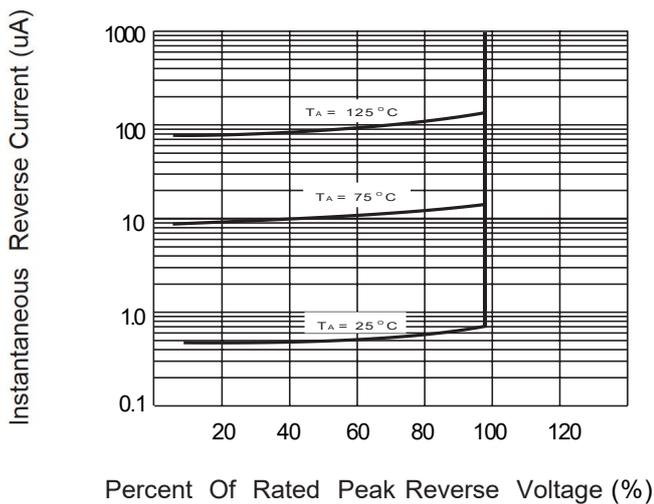


Fig.6 Mounting PAD Layout

