

Features	Case: SMAF
<ul style="list-style-type: none"> <li>• Low Power Loss, High Efficiency</li> <li>• Ideally Suited for Automatic Assembly</li> <li>• Guard Ring Die Construction</li> <li>• Plastic Case Material has UL Flammability Classification Rating 94V - 0</li> </ul>	
Mechanical Data	
<ul style="list-style-type: none"> <li>• Case: Molded plastic SMAF</li> <li>• Terminals: Plated leads solderable per MIL-STD-750, Method 2026 guaranteed</li> <li>• Polarity: Color band denotes cathode end</li> <li>• Mounting Position: Any</li> <li>• Marking: Type Number</li> </ul>	<p>Dimensions in inches and (millimeters)</p>

## Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load

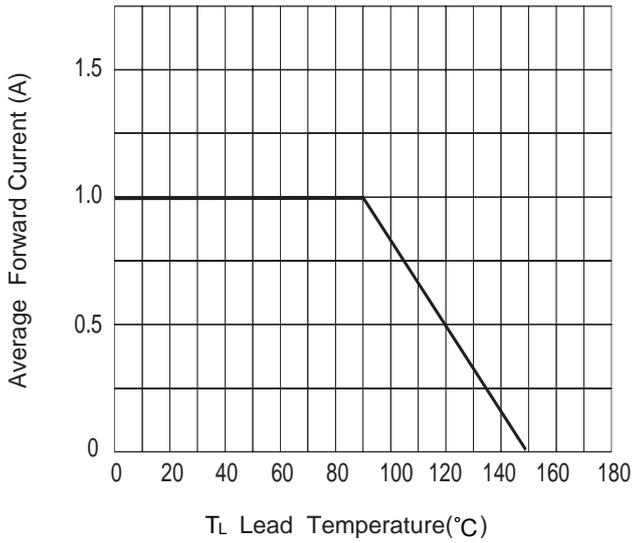
For capacitive load derate current by 20%

Type Number	SYMBOL	US1AF	US1BF	US1DF	US1GF	US1JF	US1KF	US1MF	Unit
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Average Rectified Output Current @ $T_L = 90^\circ C$	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30							A
Rating for fusing ( $t < 8.3ms$ )	$I^2 t$	3.74							$A^2 s$
Forward Voltage @ $I_F = 1.0A$	$V_{FM}$	1.0			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 (Note 1)	$T_{rr}$	50			75				ns
Typical Junction Capacitance (Note 2)	$C_J$	15			10				pF
Typical Thermal Resistance Junction to Ambient (Note 3)	$R_{\theta JA}$	75							$^\circ C/W$
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. PCB mounted on 5.0mmM2 copper pad area

Fig. 1 Forward Current Derating Curve



50-200V

Fig. 2 Typ. Forward Characteristics

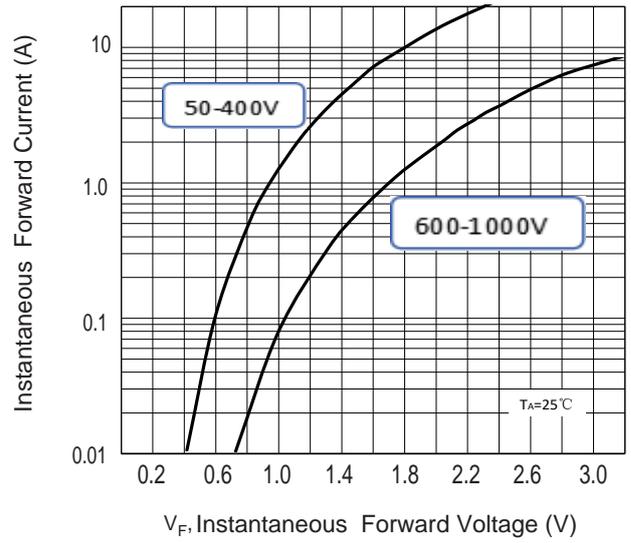


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

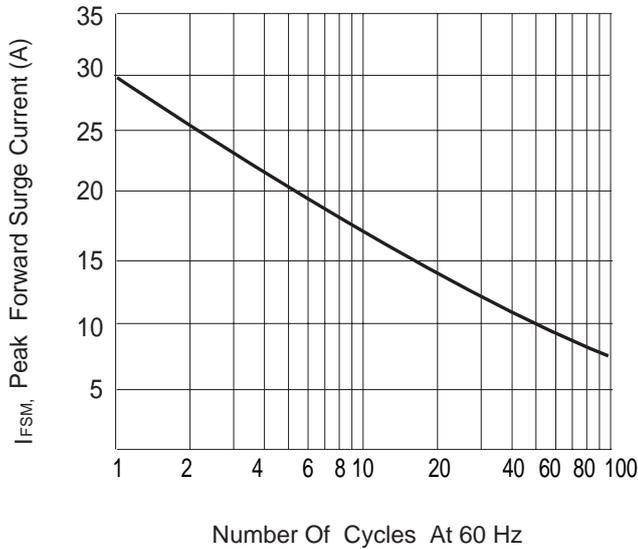


Fig.4 Typical Junction Capacitance

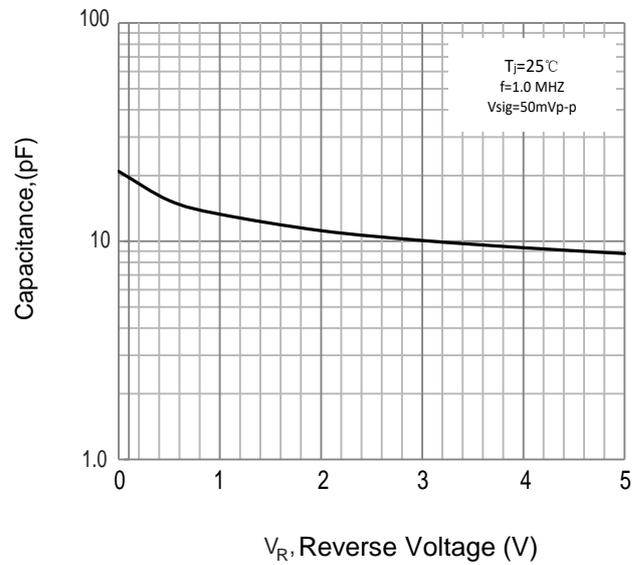


Fig.5 Typical Reverse Characteristics

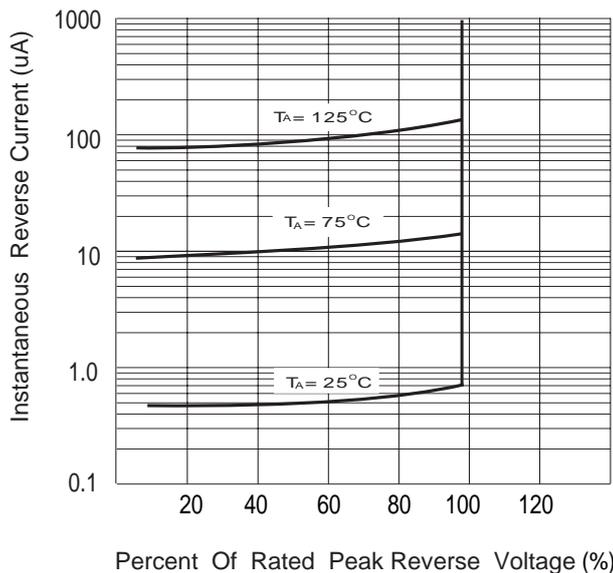


Fig.6 Mounting PAD Layout

