

Surface Mount Schottky Barrier Rectifier 200V Current 3A

FEATURES AND BENEFITS

- Low power loss, high efficiency operation
- Low forward voltage drop
- Fast switching capability
- High forward surge capability
- Excellent High Temperature Stability

MECHANICAL DATA

- Epoxy: UL94 V-0 rated flame retardant
- Case: SMAF Package
- Terminals: Matte Tin annealed over copper
- Weight:



SMAF

Primary Characteristic	
I_o	3A
V_{RRM}	200V
I_{FSM}	70A
V_F Typical=3A $T_J=125^\circ\text{C}$	0.75V
T_{Jmax}	150°C

Maximum Ratings ($T_a=25^\circ\text{C}$ unless otherwise specified)						
Characteristics		Symbol	Value	Unit		
Peak Repetitive Reverse Voltage		V_{RRM}	200	V		
Working Peak Reverse Voltage		V_{RWM}	200	V		
DC Blocking Voltage		V_{DC}	200	V		
RMS Reverse Voltage		V_{RMS}	140	V		
Average Forward Rectified Current (per diode)		I_o	3	Amps		
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)		I_{FSM}	70	Amps		
Electrical Characteristics ($T_a=25^\circ\text{C}$ unless otherwise specified)						
Characteristics			Symbol	Typ.	Max.	Unit
Forward Voltage Drop ⁽¹⁾	$I_F=1\text{A}$	$T_a=25^\circ\text{C}$	V_F	0.78		V
	$I_F=3\text{A}$	$T_a=25^\circ\text{C}$	V_F	0.82	0.95	V
	$I_F=1\text{A}$	$T_a=125^\circ\text{C}$	V_F	0.69		V
	$I_F=3\text{A}$	$T_a=125^\circ\text{C}$	V_F	0.75		V
Reverse Current ⁽²⁾	$V_R=200\text{V}$	$T_a=25^\circ\text{C}$	I_R		10	μA
	$V_R=200\text{V}$	$T_a=125^\circ\text{C}$	I_R	1	5	mA

Notes (1): Pulse test: 300 μs pulse width, 1% duty cycle,

Notes (2): Pulse width $\leq 40\text{ms}$

THERMAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)				
Characteristics		Symbol	Value	Unit
Typical Thermal Resistance, junction to Lead		$R_{\theta JC}$	30	$^\circ\text{C/W}$
Operating Temperature Range (in DC Mode)		T_J	-65 to +150	$^\circ\text{C}$
Storage Temperature Range		T_{STG}	-65 to +150	$^\circ\text{C}$

Notes (3): FR-4 PCB, 2oz copper. Minimum recommended pad layout

RATINGS AND CHARACTERISTICS CURVES

Fig 1. Typical Forward Characteristics

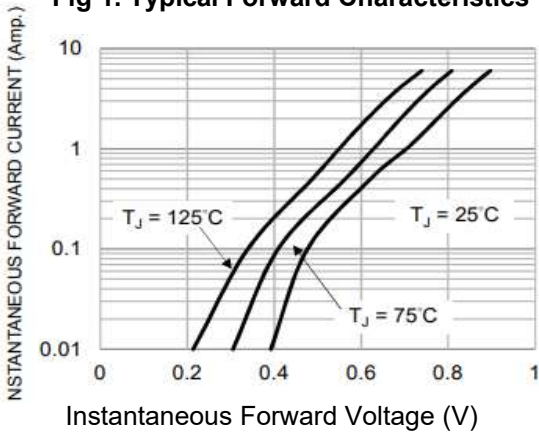


Fig 2. Typical Reverse Characteristics

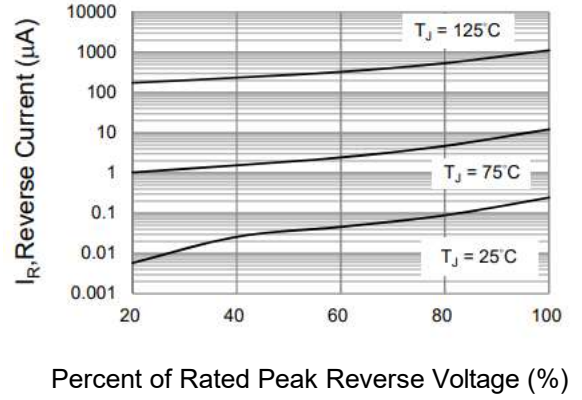


Fig 3. Forward Current Derating Curve

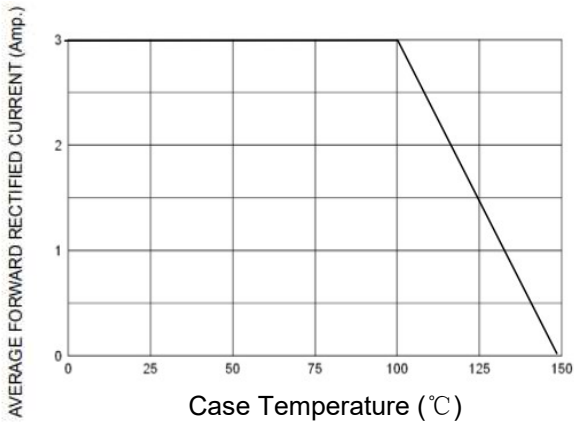
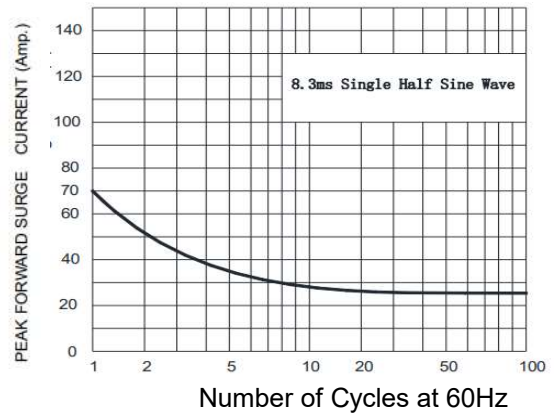
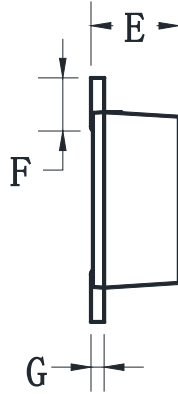
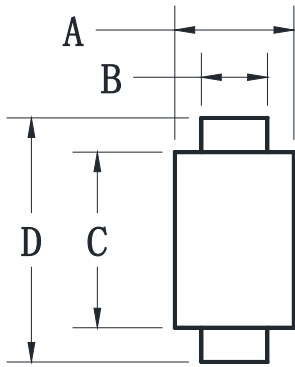


Fig 4. Non-repetitive Forward Surge Current



Package Outline Dimensions (in millimeters)



SMAF		
Dim	Min	Max
A	2.40	2.75
B	1.30	1.50
C	3.25	3.70
D	4.35	4.85
E	0.95	1.50
F	0.60	1.20
G	0.10	0.30

Marking Information

