



S3AF THRU S3MF

3.0 AMP Surface Mount Passivated Rectifiers

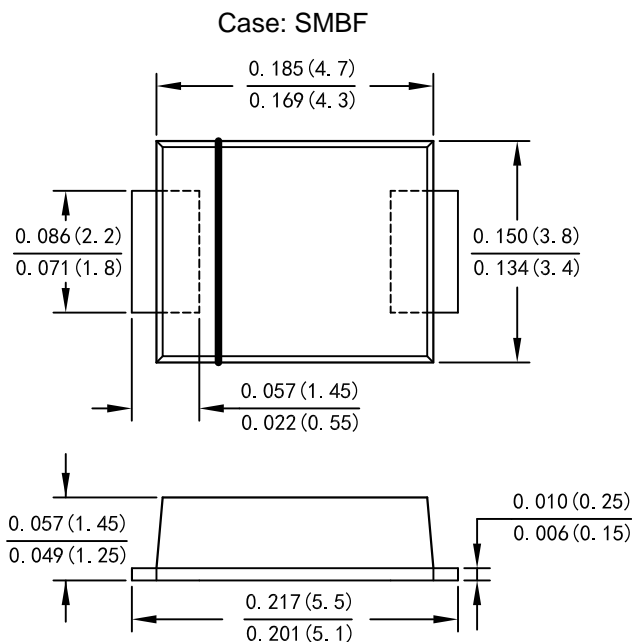
Features

- Glass Passivated Die Construction
- Low forward voltage drop
- High current capability
- High reliability
- Metal silicon junction, majority carrier conduction
- Plastic Case Material has UL Flammability

Classification Rating 94V-0

Mechanical Data

- Case: Molded plastic SMBF
- Terminals: Plated leads solderable per MIL-STD-750, Method 2026 guaranteed
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Marking: Type Number



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	S3AF	S3BF	S3DF	S3GF	S3JF	S3KF	S3MF	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 =100℃	I _{F(AV)}	3.0							A
Non-Repetitive Peak Forward Surge @T _j =25 ℃ Current 8.3ms Single half sine-wave@T _j =125 ℃ Superimposed On Rated Load (JEDEC Method)	I _{FSM}	120 96							A
Non-Repetitive Peak Forward Surge @T _j =25 ℃ Current 1.0ms Single half sine-wave @T _j =125℃ Superimposed On Rated Load (JEDEC Method)	I _{FSM}	240 192							A
10000 times of the wave surge current (time width 1ms, time interval 3s)	I _{FSM}	90							A
I ² t Rating for Fusing (t < 8.3ms)	I ² t	59.76							A ² s
Forward Voltage @IF=3.0A	V _{FM}	1.0							V
Peak Reverse Current @T _A =25℃	I _R	5.0							uA
At Rated DC Blocking Voltage @T _A =125℃		100							
Typical Junction Capacitance (Note 1)	C _J	22							pF
Typical Thermal Resistance Junction to Ambient	R _{θJA}	100							℃/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to+150							℃

Note:

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



Fig. 1 Forward Current Derating Curve

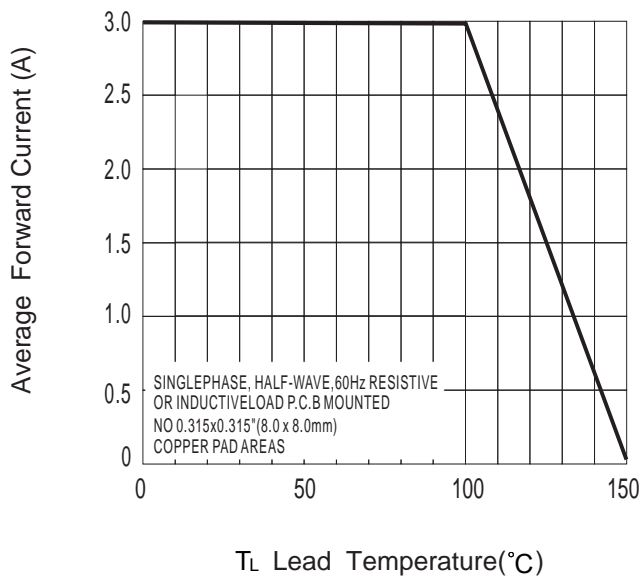


Fig. 2 Typ. Forward Characteristics

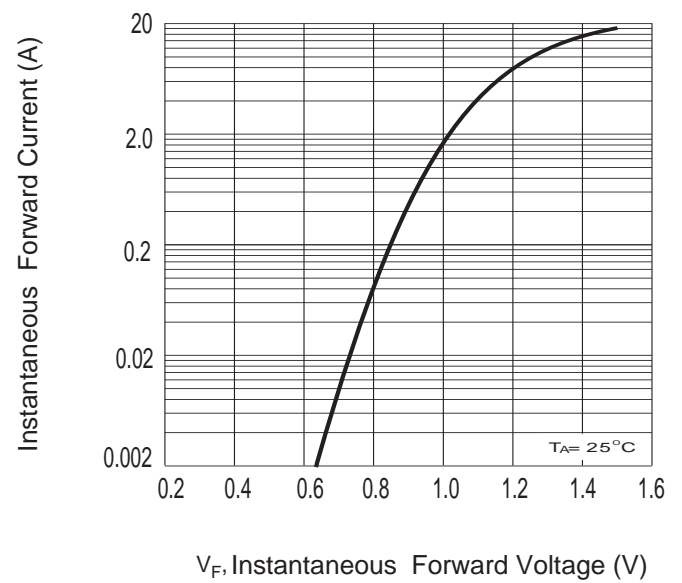


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

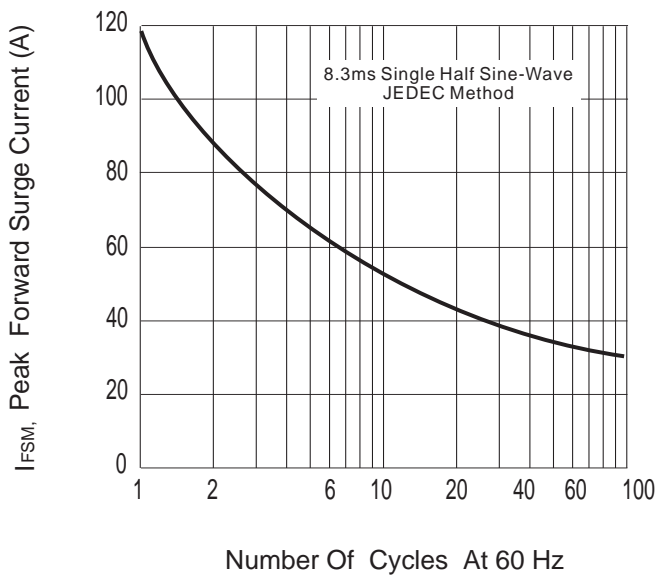


Fig.4 Typical Reverse Characteristics

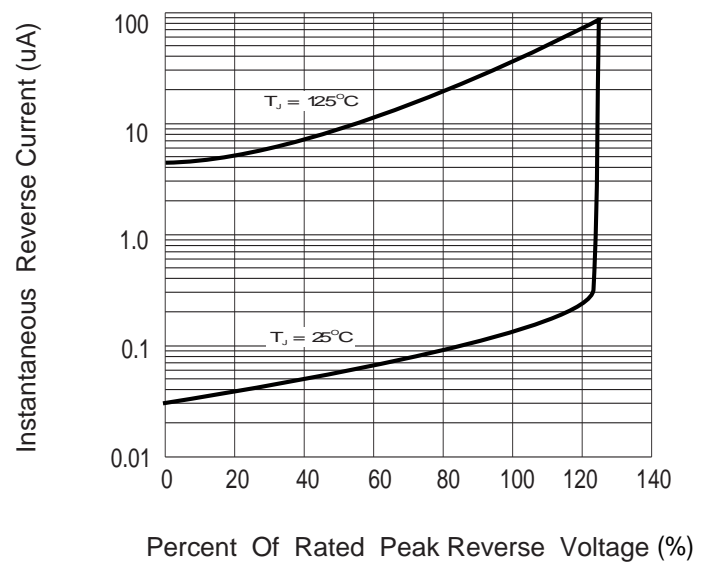
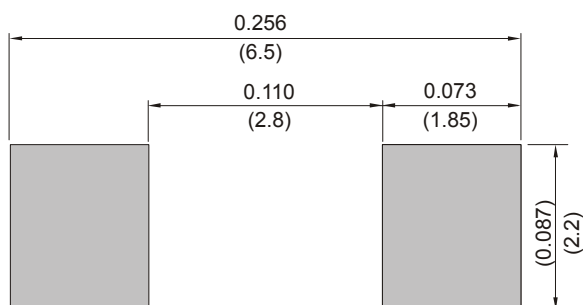


Fig.5 Mounting PAD Layout





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