

Surface Mount General Purpose Silicon Rectifiers

Reverse Voltage - 50 to 1000 V

Forward Current - 3 A

FEATURES

- ◆For surface mounted applications
- ◆Low profile package
- ◆Glass Passivated Chip Junction
- ◆Ideal for automated placement
- ◆Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

- ◆Case: SMAF
- ◆Terminals: Solderable per MIL-STD-750, Method 2026
- ◆Approx. Weight: 27mg /0.00095oz

Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Pinning

1.Cathode	2.Anode
	
SMAF	

Marking Code

S3AF	YFW S3A
S3BF	YFW S3B
S3DF	YFW S3D
S3GF	YFW S3G
S3JF	YFW S3J
S3KF	YFW S3K
S3MF	YFW S3M

Parameter	Symbols	S3AF	S3BF	S3DF	S3GF	S3JF	S3KF	S3MF	Units
Maximum Repetitive 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
Maximum Average Forward Rectified Current at $T_c = 125\text{ }^{\circ}\text{C}$	$I_{F(AV)}$	3							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	90							A
Maximum Instantaneous Forward Voltage at 3 A	V_F	1.1							V
Maximum DC Reverse Current $T_a = 25\text{ }^{\circ}\text{C}$ at Rated DC Blocking Voltage $T_a = 125\text{ }^{\circ}\text{C}$	I_R	5 120							μA
Typical Junction Capacitance ⁽¹⁾	C_j	32							pF
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}/R_{\theta JC}$	50/16							$^{\circ}\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150							$^{\circ}\text{C}$

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Fig.1 Forward Current Derating Curve

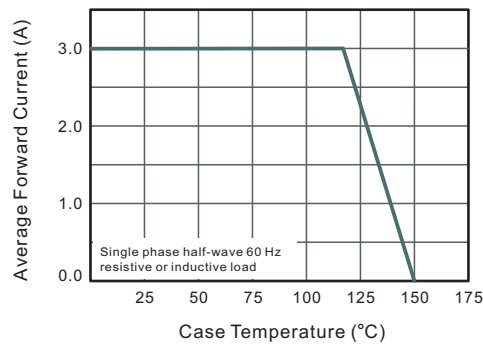


Fig.2 Typical Instantaneous Reverse Characteristics

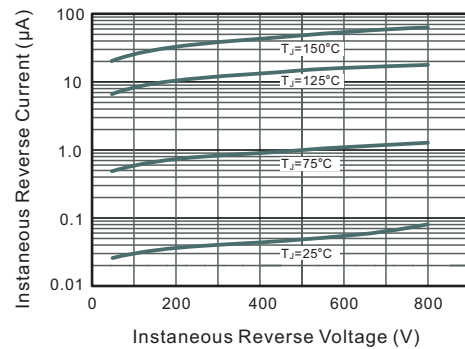


Fig.3 Typical Forward Characteristic

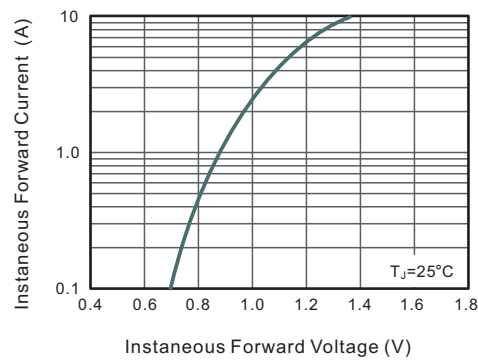


Fig.4 Typical Junction Capacitance

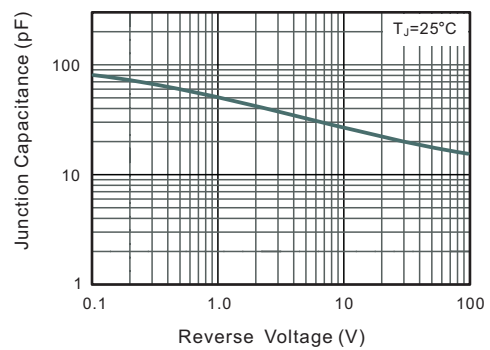
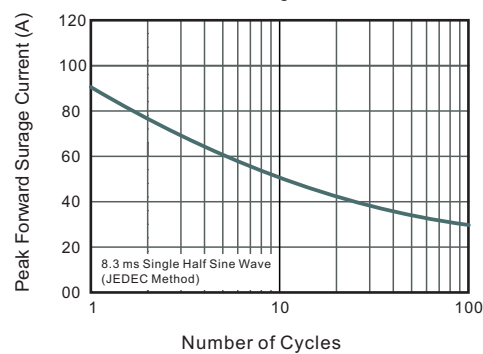


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current



Marking Diagram



Ordering information

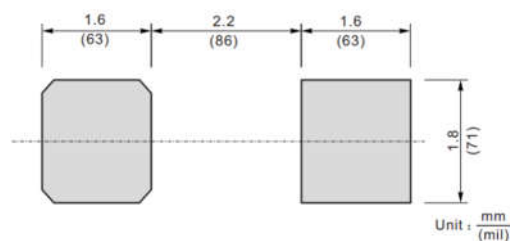
Package	Packing Description	Packing Quantity
SMAF	Tape/Reel, 13" reel	10000PCS/Reel 100000PCS/Carton
	Tape/Reel, 7" reel	3000PCS/Reel 120000PCS/Carton

Package Dimensions

SMAF

Dim.	Millimeter(mm)		mil	
	Min.	Max.	Min.	Max.
A	0.9	1.1	35	43
C	0.12	0.20	4.7	7.9
D	3.3	3.7	130	146
E	2.4	2.7	94	106
e	1.3	1.6	51	63
g	0.8	1.2	31	47
HE	4.4	4.9	173	193
∠	7°			

The recommended mounting pad size



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