

Features

- Metal silicon junction, majority carrier conduction.
- For surface mounted applications.
- Low power loss, high efficiency.
- High forward surge current capability.
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications.

Mechanical data

- Case: SMAF
- Terminals: Solderable per MIL-STD-750, method 2026.

Circuit Diagram



Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

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

Parameter	Symbols	SS120F	Units
Maximum repetitive peak reverse voltage	V_{RRM}	200	V
Maximum RMS voltage	V_{RMS}	140	V
Maximum DC blocking voltage	V_{DC}	200	V
Maximum average forward rectified current	$I_{F(AV)}$	1	A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	25	A
Max instantaneous forward voltage at 1A	V_F	0.90	V
Maximum DC reverse current $T_J = 25^{\circ}C$ at rated DC reverse voltage $T_J = 100^{\circ}C$	I_R	0.1 2	mA
Typical junction capacitance (Note 1)	C_j	80	pF
Typical thermal resistance (Note 2)	$R_{\theta JA}$	95	$^{\circ}C/W$
Operating junction temperature range	T_J	-55 ~ +125	$^{\circ}C$
Storage temperature range	T_{stg}	-55 ~ +150	$^{\circ}C$

Notes: 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.

Rating and Characteristic Curves (SS14F-HF Thru. SS120F-HF)

Fig.1 - Forward Current Derating Curve

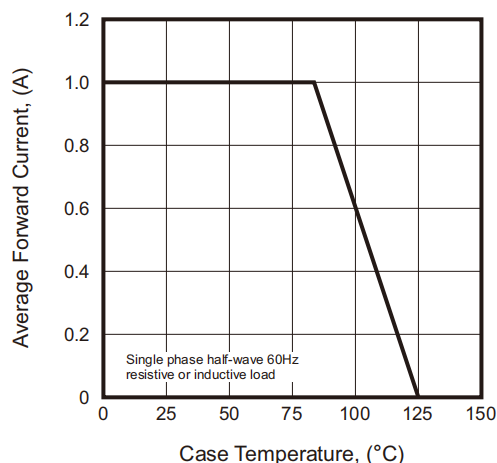


Fig.2 - Typical Reverse Characteristics

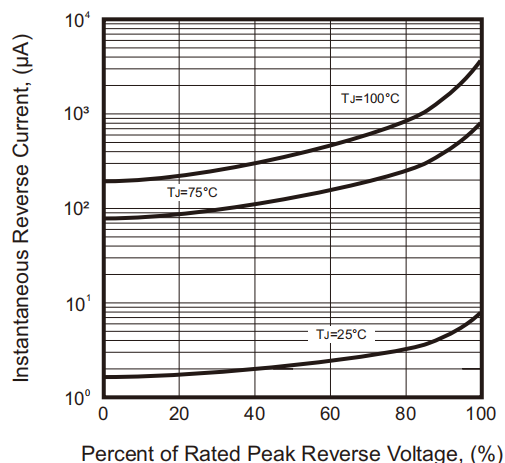


Fig.3 - Typical Forward Characteristic

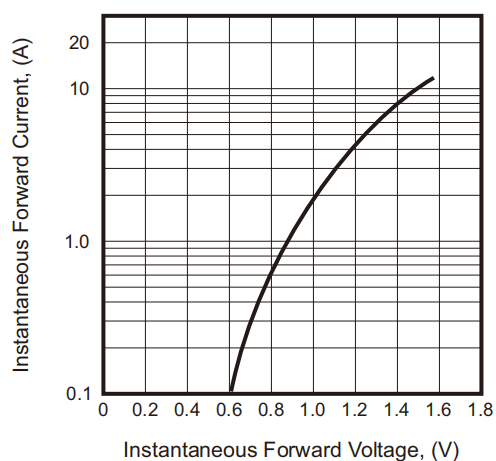


Fig.4 - Typical Junction Capacitance

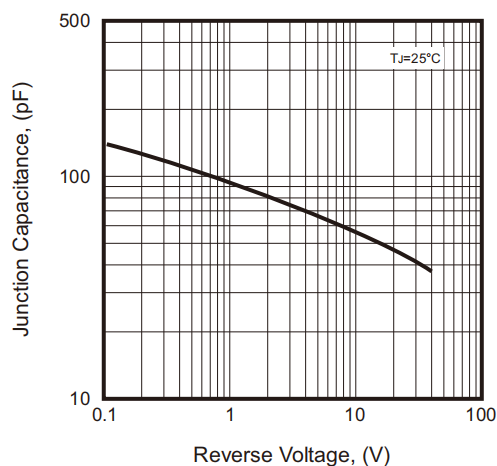


Fig.5 - Maximum Non-Repetitive Peak Forward Surge Current

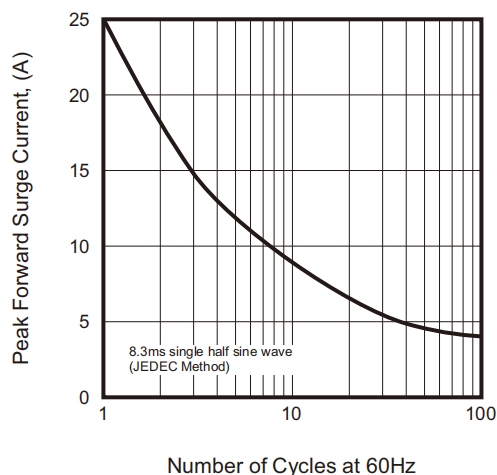
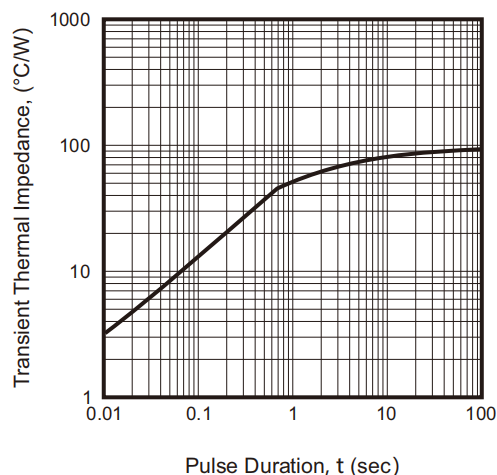
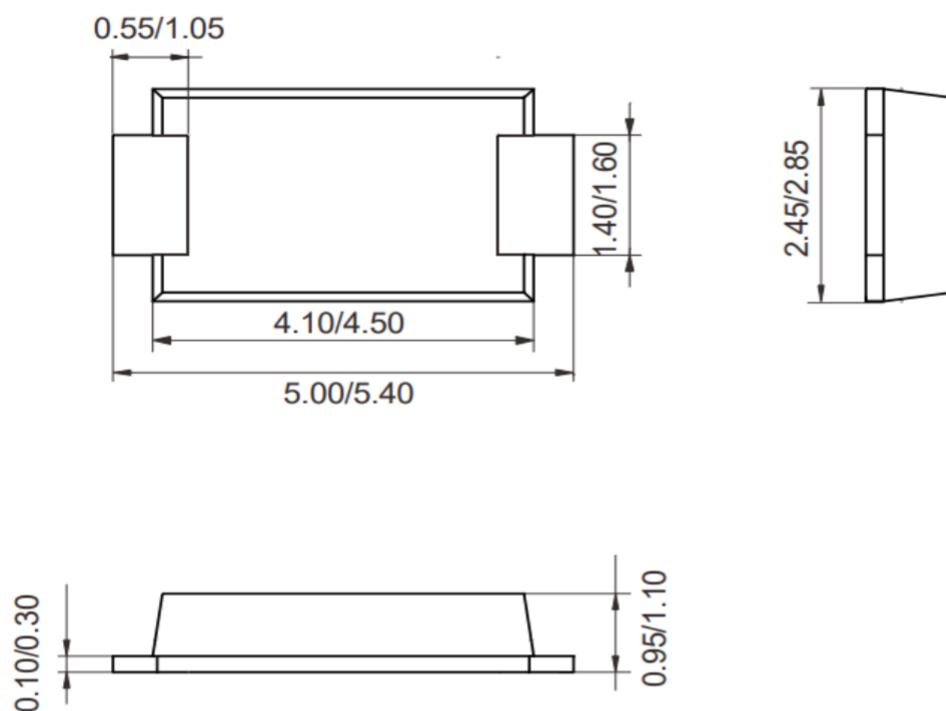


Fig.6 - Typical Transient Thermal Impedance



Package Outline Dimensions (unit: mm)

SMAF



Mounting Pad Layout (unit: mm)

