

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	SS14F	SS16F	SS110F	SS115F	SS120F	Units
Maximum repetitive peak reverse voltage	V _{RRM}	40	60	100	150	200	V
Maximum RMS voltage	V _{RMS}	28	42	70	105	140	V
Maximum DC blocking voltage	V _{DC}	40	60	100	150	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	0.55	0.70	0.85	0.90		V
Maximum DC reverse current T _J = 25°C at rated DC reverse voltage T _J = 100°C	I _R	0.3 10		0.2 5	0.1 2		mA
Typical junction capacitance (Note 1)	C _j	110	80				pF
Typical thermal resistance (Note 2)	R _{θJA}	95					°C/W
Operating junction temperature range	T _j	-55 ~ +125					°C
Storage temperature range	T _{stg}	-55 ~ +150					°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-SS120F)

Fig.1 - Forward Current Derating Curve

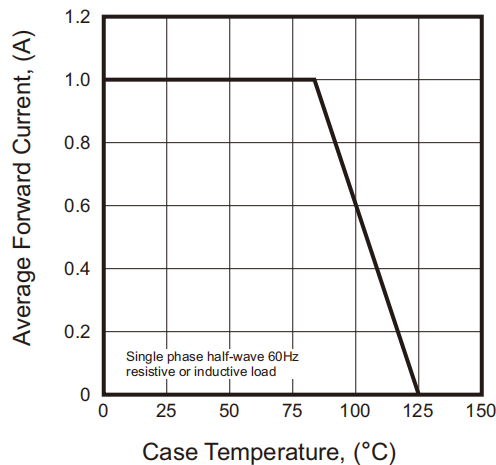


Fig.2 - Typical Reverse Characteristics

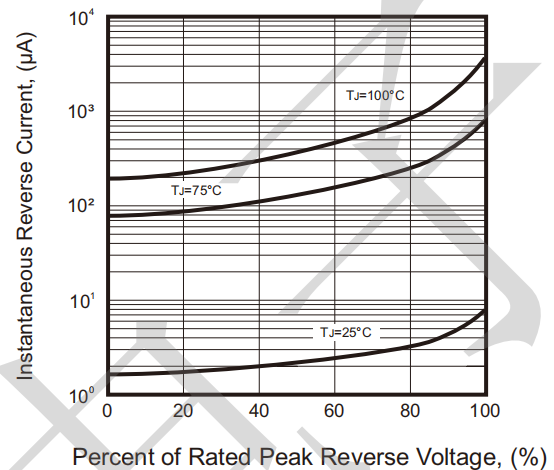


Fig.3 - Typical Forward Characteristic

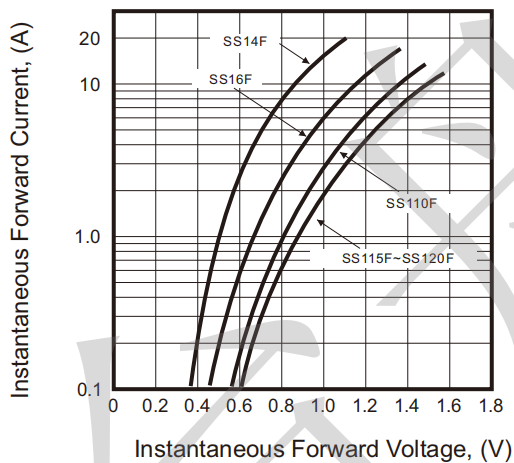


Fig.4 - Typical Junction Capacitance

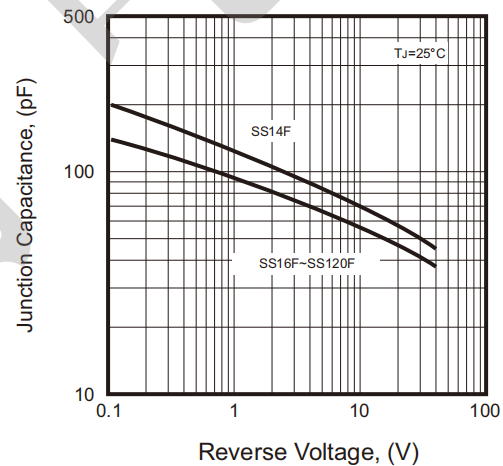


Fig.5 - Maximum Non-Repetitive Peak Forward Surge Current

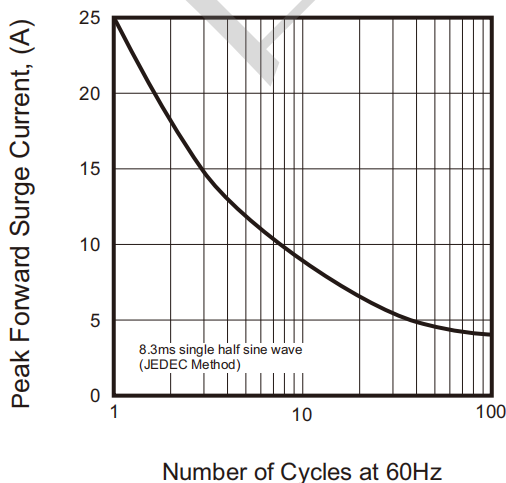
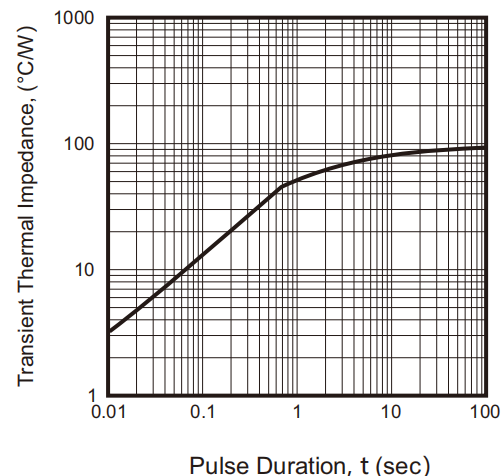
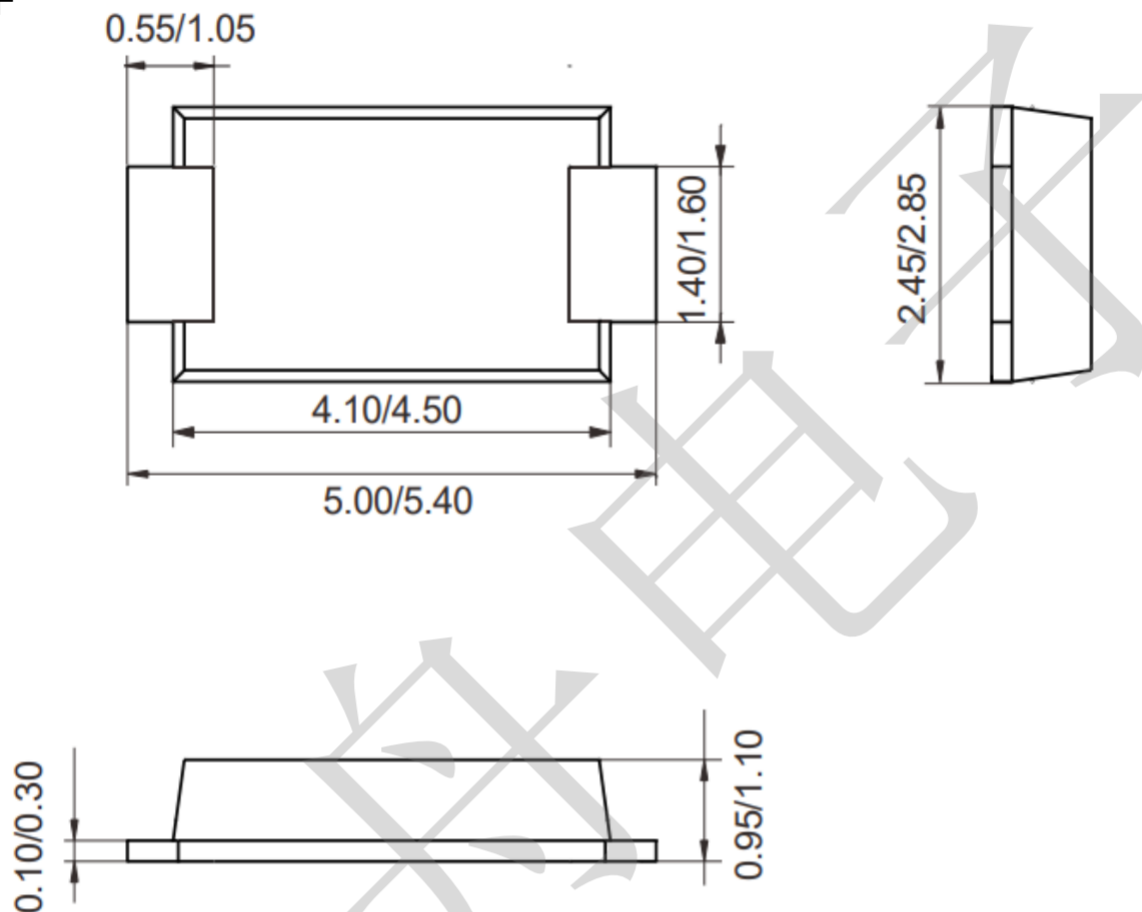


Fig.6 - Typical Transient Thermal Impedance



Package information (Unit: mm)

SMAF



Mounting Pad Layout (Unit: mm)

