



ES1MF

Superfast Recovery Rectifiers

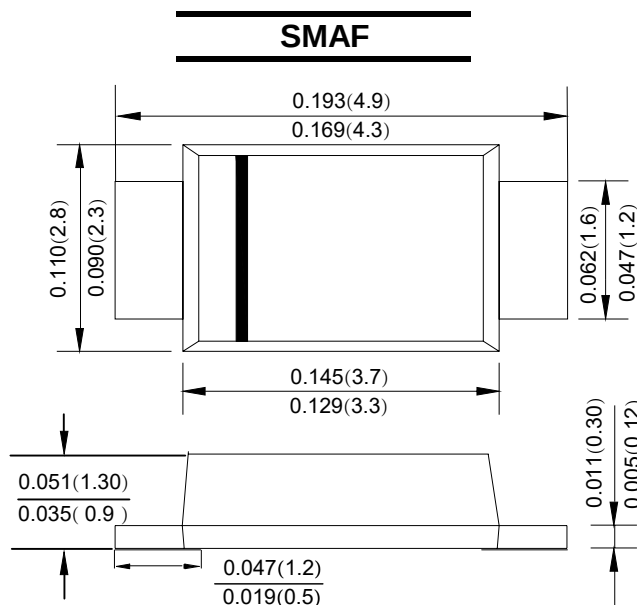
FEATURES

- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- High forward surge capability
- High temperature soldering : 260°C/10 seconds at terminals
- Lead free in comply with EU ROHS 2011/65/EU directives



Mechanical Data

- **Case** : SMAF
- **Terminals** : Solder plated, solderable per MIL-STD-750, Method 2026
- **Polarity** : Cathode line denotes the cathode end
- **Mounting Position** : Any



Dimensions in inches and (millimeters)

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%

CHARACTERISTICS	Symbols	ES1MF	UNIT
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	1000	V
Maximum RMS Bridge Input Voltage	V _{RMS}	700	V
Maximum DC Blocking Voltage	V _{DC}	1000	V
Maximum Average Forward Rectified Current	I <sub(av)< sub=""></sub(av)<>	1	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I _{FSM}	25	A
Maximum Forward Voltage at 1A	V _F	2.5	V
Maximum DC Reverse Current T _A =25°C at Rated DC Blocking Voltage T _A =125°C	I _R	5.0 200	μA
Maximum Reverse Recovery Time (Note1)	T _{RR}	35	ns
Typical Thermal Resistance	R _{θJA}	75	°C/W
Operating Temperature Range	T _J	-55 to +150	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C

NOTES: 1. Measured with I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A



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Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

Fig.1 Forward Current Derating Curve

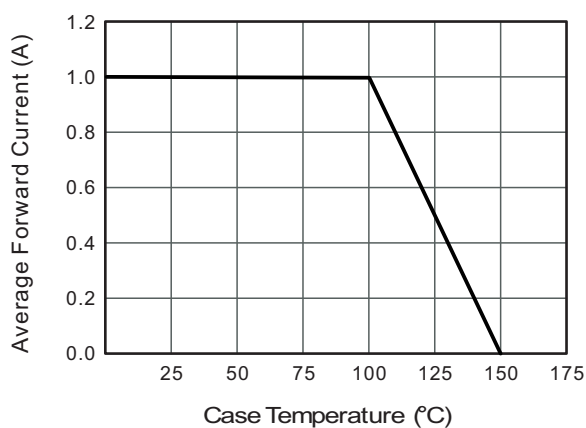


Fig.2 Typical Reverse Characteristics

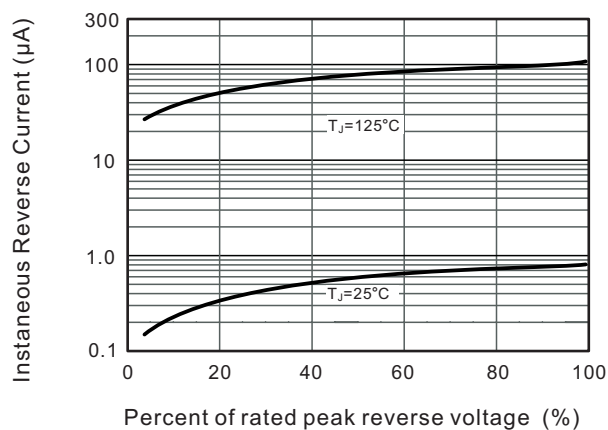


Fig.3 Typical Forward Characteristics

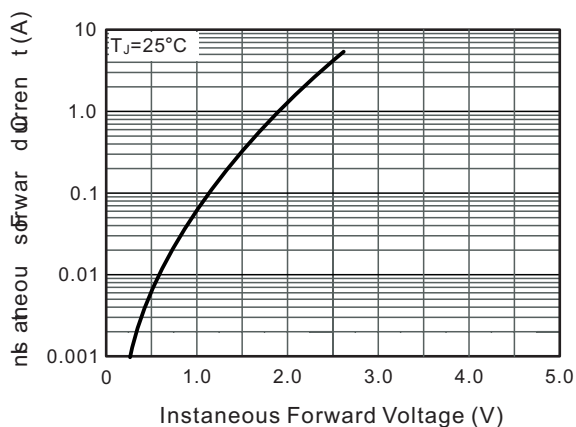
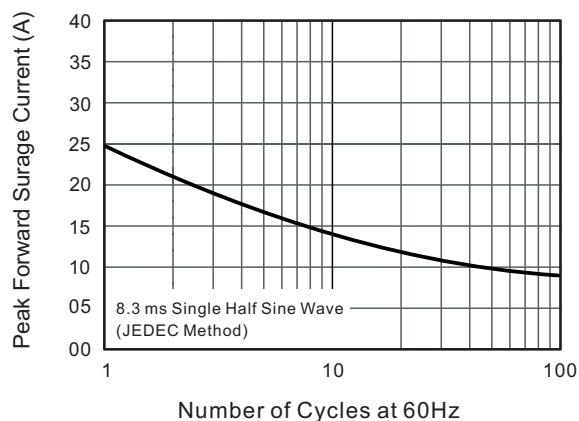
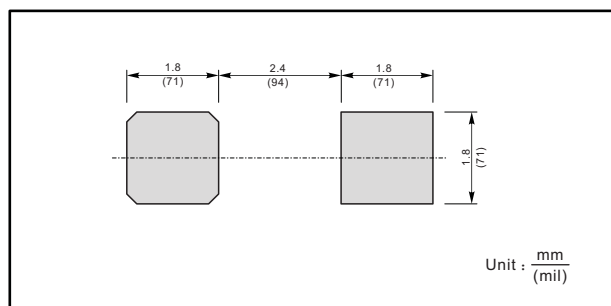


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



The recommended mounting pad size(SMA)



Marking

Type number	Marking code
ES1MF	ES1M