ES1K

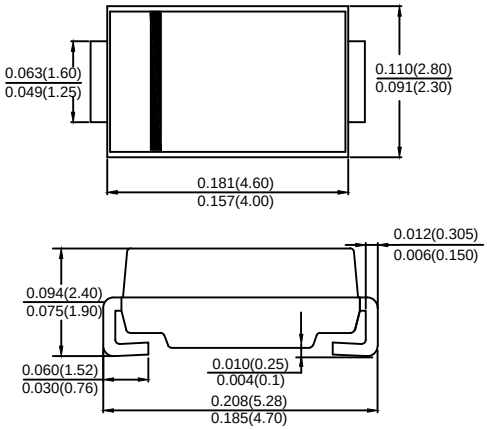
Surface Mount Superfast Rectifiers

FEATURES

RoHS COMPLIANT

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

SMA



Dimensions in inches and (milimeters)

Mechanical Data

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

Absolute Maximum Ratings and Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbols	ES1K	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	800	V
Maximum RMS voltage	V_{RMS}	560	V
Maximum DC Blocking Voltage	V_{DC}	800	V
Maximum Average Forward Rectified Current at T_c = 125 °C	$I_{F(AV)}$	1	A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	30	A
Maximum Forward Voltage at 1 A	V_F	1.7	V
Maximum DC Reverse Current T_a = 25 °C at Rated DC Blocking Voltage T_a =125 °C	I_R	5 100	μA
Typical Junction Capacitance at V_R=4V, f=1MHz	C_j	15	pF
Maximum Reverse Recovery Time (1)	t_{rr}	35	ns
Typical Thermal Resistance (2)	$R_{\theta JA}$	60	°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150	°C

(1) Measured with I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A.

(2) P.C.B. mounted with 1.0 X 1.0" (2.54 X 2.54 cm) copper pad areas.

Characteristic Curves (T_A=25 ℃ unless otherwise noted)

Fig.1 Forward Current Derating Curve

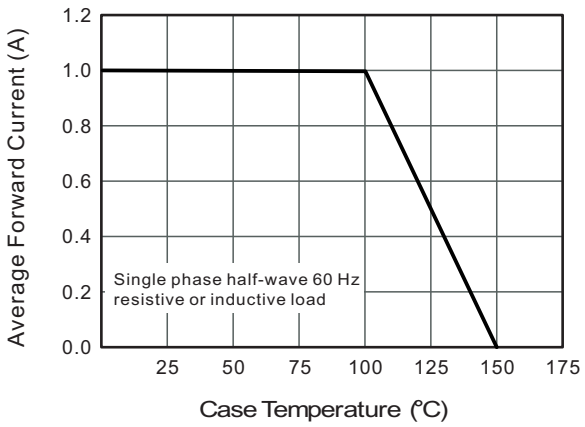


Fig.2 Typical Reverse Characteristics

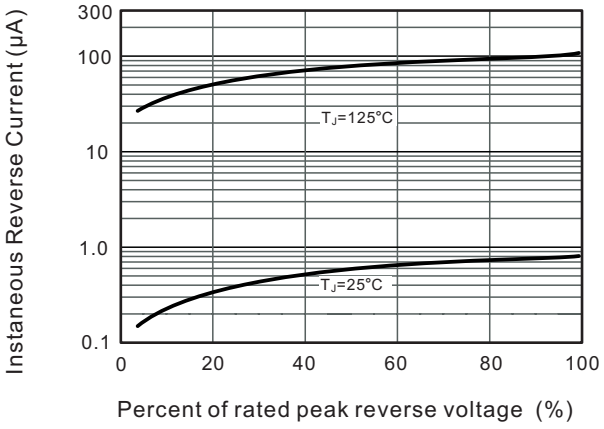


Fig.3 Typical Forward Characteristics

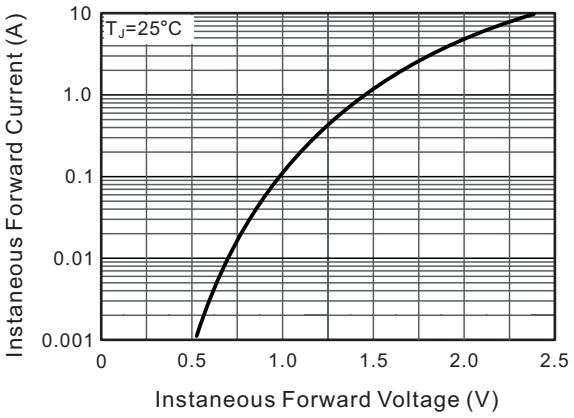
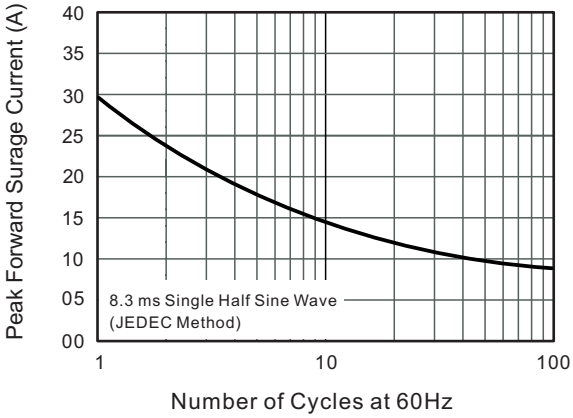


Fig.4 Maximum Non-Repetitive Peak Forward Surage Current



The recommended mounting pad size(SMA)

