KUMB12F-KUMB110F

Schottky Surface Mount Flat Bridge Rectifier

Features

- Low profile package
- Ideal for automated placement
- Low power losses, high efficiency
- Low forward voltage drop
- High surge capability
- High temperature soldering：
  260℃/10 seconds at terminals
- Component in accordance to
  RoHS 2002/95/1 and WEEE 2002/96/EC

SOF2-4

Mechanical Date

- **Case:** SOF2-4 Molded plastic body over Schottky barrier chips
- **Terminals:** Solder plated, solderable per JESD22-B102
- **Polarity:** Polarity symbols marked on body

Major Ratings and Characteristics

$I_{F(AV)}$	**1.0 A**
V_{RRM}	**20V to 100V**
I_{FSM}	**30**
V_F	**0.50V, 0.55V, 0.70V, 0.85V**
T_j **max.**	

Maximum Ratings & Thermal Characteristics

(T_A = 25 °C unless otherwise noted)

Items	Symbol	KUMB12F	KUMB14F	KUMB16F	KUMB18F	KUMB110F	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	20	40	60	80	100	V
Maximum RMS voltage	V_{RMS}	14	28	42	56	70	V
Maximum DC blocking voltage	V_{DC}	20	40	60	80	100	V
Maximum average forward output rectified current at T_A=30℃	$I_{F(AV)}$	1.0					A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30					A
Thermal resistance from junction to ambient per leg(1)	$R_{\theta JA}$	85					℃/W
Thermal resistance from junction to lead per leg(1)	$R_{\theta JL}$	20					℃/W
Operating junction temperature range	T_J	–55 to +125					℃
Storage temperature range	T_{STG}	–55 to +125					℃

Note 1: Units mounted on P.C.B. with 0.5×0.5″ (13×13mm) pads

Electrical Characteristics

(T_A = 25 °C unless otherwise noted)

Items	Test conditions		Symbol	KUMB12F	KUMB14F	KUMB16F	KUMB18F~ KUMB110F	UNIT
Instantaneous forward voltage per leg	I_F=1.0A (2)		V_F	0.50	0.55	0.70	0.85	V
Reverse current per leg	V_R=V_{DC}	T_j=25℃ T_j=100℃	I_R	0.5 20				mA

Note 2: Pulse test:300μs pulse width,1% duty cycle.

Characteristic Curves (T_A=25 ℃ unless otherwise noted)

Fig.1 Forward Current Derating Curve

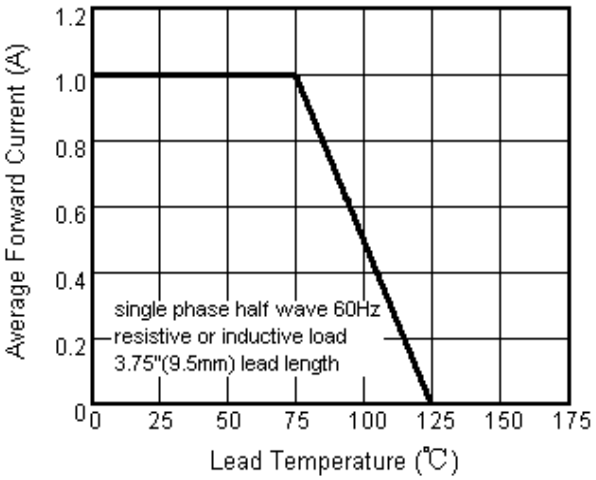


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

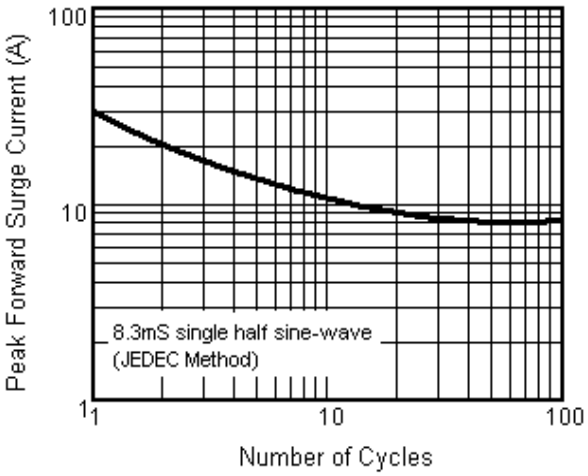


Fig.3 Typical Instantaneours Forward Characteristics

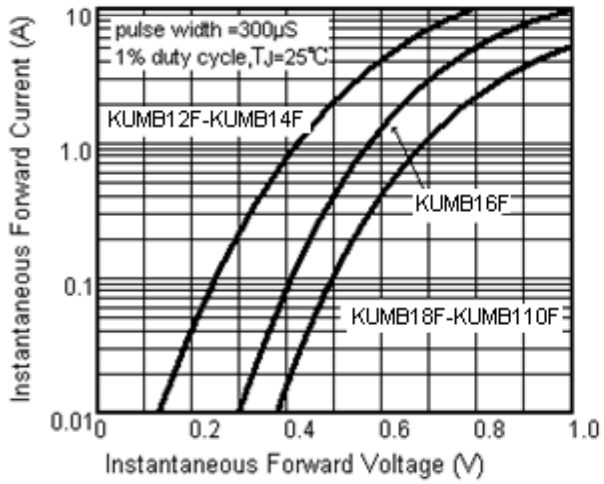
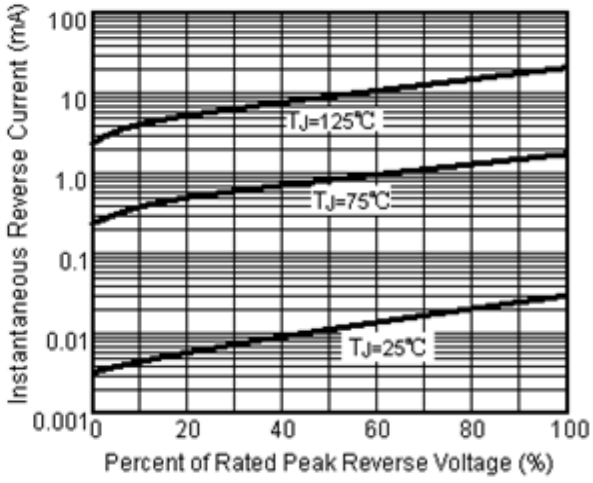
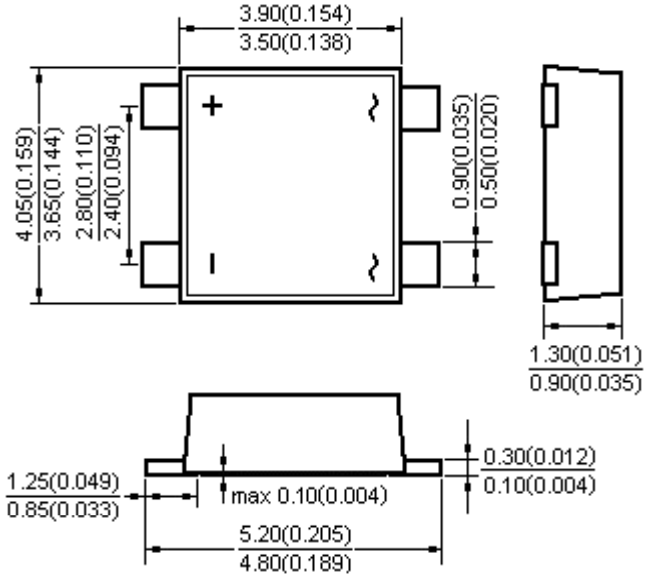


Fig.4 Typical Reverse Characteristics



Package Outline

SOF2-4



Dimensions in millimeters and (inches)

- Product is intended for use in general electronics applications.
- Product should be worked less than the ratings; if exceeded, may cause permanent damage.or introduce latent failure mechanisms.
- The absolute maximum ratings are rated values and must not be exceeded during operation. The following are the general derating methods you design a circuit with a device.

  $I_{F(AV)}$: We recommend that the worst case current be no greater than 80% .

  T_J : Derate this rating when using a device in order to ensure high reliability. We recommend that the device be used at a T_J of below 100°C.