

Ultra Miniature Glass Passivated Single-Phase Surface Mount Flat Bridge Rectifier

Features

- Low profile space
- Ideal for automated placement
- Glass passivated chip junction
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High temperature soldering:
260°C/10 seconds at terminals
- Component in accordance to
RoHS 2002/95/1 and WEEE 2002/96/EC

SOF2-4



Mechanical Data

- **Case:** SOF2-4 Molded plastic over glass passivated chip
- **Terminals:** Solder plated, solderable per J-STD-002B and JESD22-B102D
- **Polarity:** Polarity symbols marked on body

Maximum Ratings & Thermal Characteristics (T_A = 25 °C unless otherwise noted)

Items	Symbol	UMB 05F	UMB 1F	UMB 2F	UMB 4F	UMB 6F	UMB 8F	UMB 10F	UNIT	
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	V	
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	V	
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	V	
Maximum average forward rectified current at T _A =30°C -on glass-epoxy P.C.B. ⁽¹⁾ -on aluminum substrate ⁽²⁾	I _{F(AV)}								0.5 0.8	A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}								20	A
Typical Current Squared Time	I ² t								1.66	A ² S
Thermal resistance from junction to ambient per leg	R _{θJA} ⁽¹⁾ R _{θJA} ⁽²⁾								100 80	°C/W
Thermal resistance from junction to lead per leg ⁽¹⁾	R _{θJL}								30	°C/W
Operating junction and storage temperature range	T _J , T _{STG}								-55 to +150	°C

Note 1: On glass epoxy P.C.B. mounted on 0.06×0.04" (1.5×1.1mm) pads

Note 2: On aluminum substrate P.C.B. with an area of 0.8×0.8" (20×20mm) mounted on 0.06×0.04" (1.5×1.1mm) solder pad

Electrical Characteristics (T_A = 25 °C unless otherwise noted)

Items	Symbol	Min	Type	Max	UNIT
Instantaneous forward voltage per leg I _F =0.4A	V _F	-	0.96	1.10	V
Reverse current per leg V _R =V _{DC}	I _R	-	-	5 100	uA
Reverse Recovery Time (Note 2)	T _{rr}	-	2	-	uSec

Notes: 1. Pulse test :300 us pulse width, 1% duty cycle.

2. Test Conditions: I_F = 0.5A, I_R = -1.0A, I_{RR} = -0.25A.

RATING AND CHARACTERISTICS CURVES (UMB05F THRU UMB10F)

Fig.1 Forward Current Derating Curve

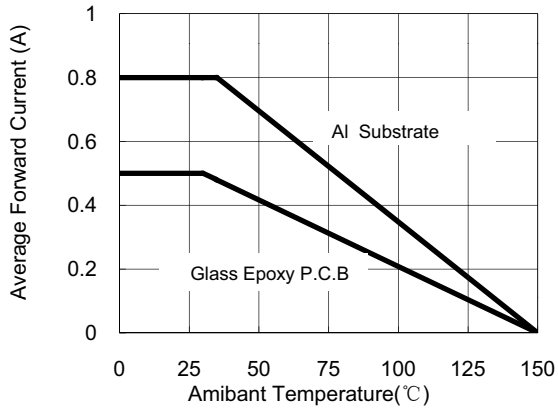


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

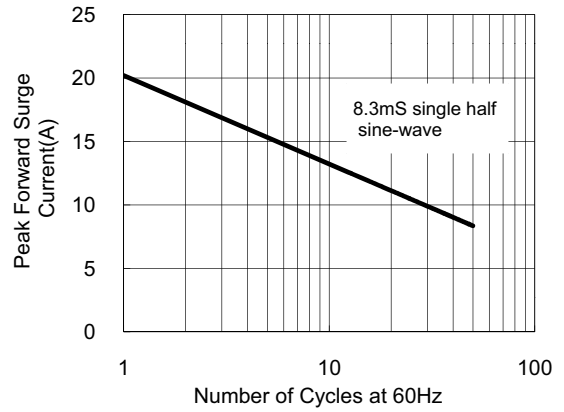


Fig.3 Typical Instantaneous Forward Characteristics

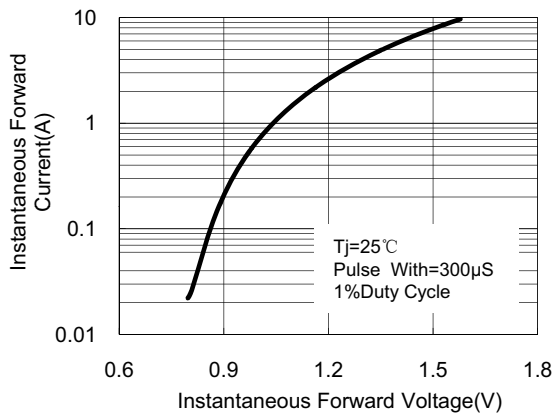
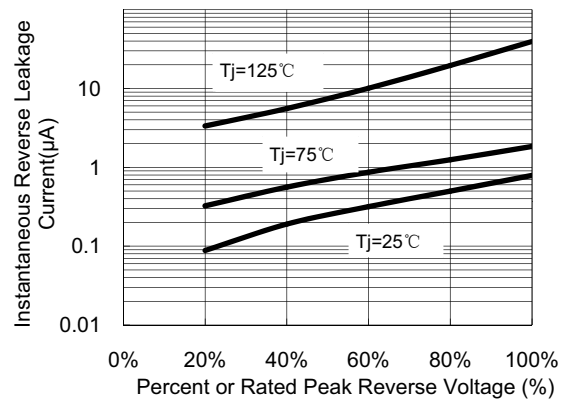


Fig.4 Typical Reverse Leakage Characteristics

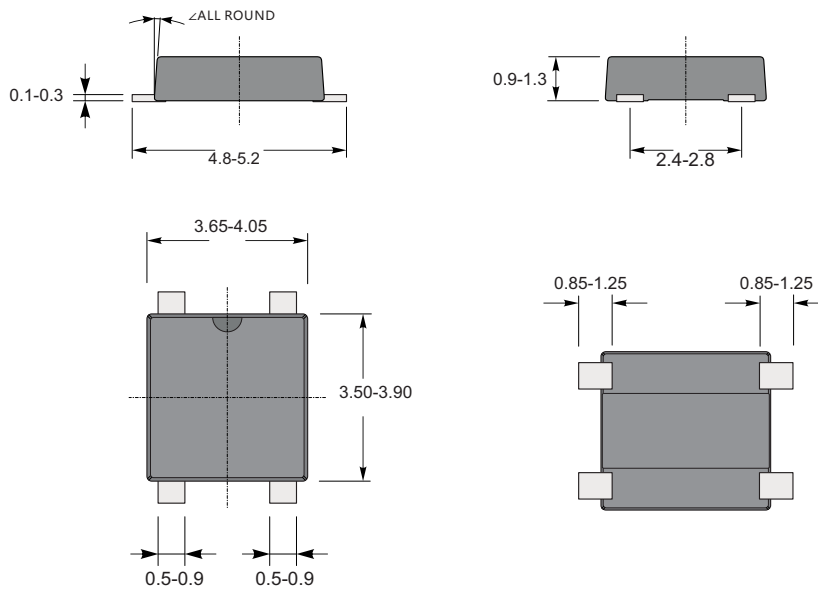


PACKAGE OUTLINE

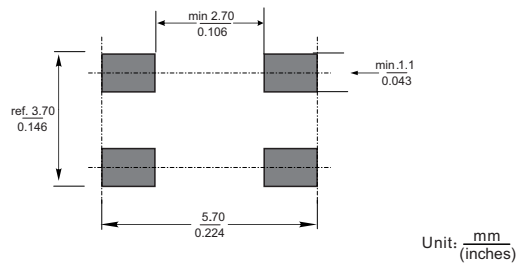
Plastic surface mounted package; 4 leads

SOF2-4

unit: mm



The recommended mounting pad size



Marking



Type number	Marking code
UMB05F	B1
UMB1F	B2
UMB2F	B3
UMB4F	B4
UMB6F	B5
UMB8F	B6
UMB10F	B7

PACKAGING OF DIODE AND BRIDGE RECTIFIERS

REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SOF2-4	-T	4,000	8,000	---	---	---	360*355*360	96,000	15

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