



Single Phase 0.3Amp Glass passivated Bridge Rectifiers

UMB

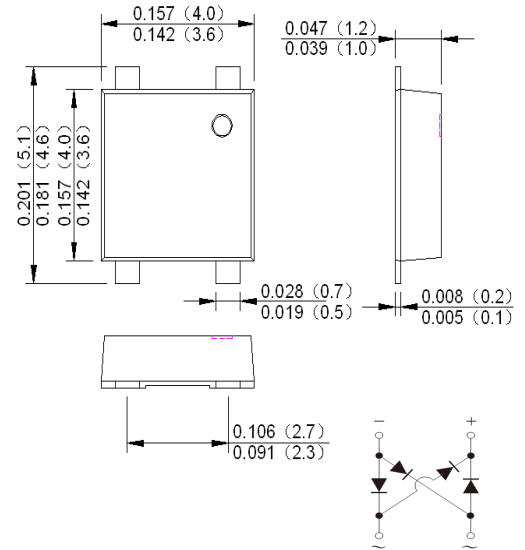


Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Idea for printed circuit board
- Glass passivated junction chip
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed
260°C/10 seconds at terminals

Mechanical Data

- Case : Molded plastic body
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Polarity symbol marking on body
- Mounting Position : Any
- Weight : 0.0017 ounce, 0.05 grams



Dimensions in inches and (millimeters)

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 current derate by 20%.

Parameter	Symbols	UM05B	UM1B	UM2B	UM4B	UM6B	UM8B	UM10B	Units
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 $T_L=100^\circ\text{C}$ On glass-epoxy P.C.B (Note 1)	$I_{(AV)}$	0.3							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	20.0							A
Rating for fusing ($t=8.3\text{ms}$, $T_a=25^\circ\text{C}$)	I_t^2	1.60							A^2s
Maximum instantaneous forward voltage at 0.3A	V_F	1.0							V
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	I_R	2.0 200							μA
Typical junction capacitance (Note 2)	C_J	11.0							pF
Typical thermal resistance	R_{qJA}	81.0							$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							$^\circ\text{C}$

Note: 1. Mounted on glass epoxy PC board with 1.3*1.3mm solder pad
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.



Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

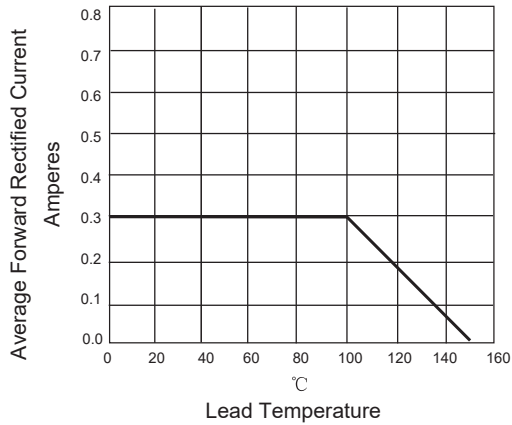


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

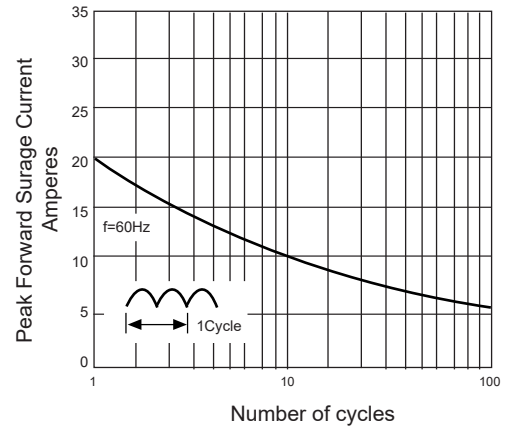


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

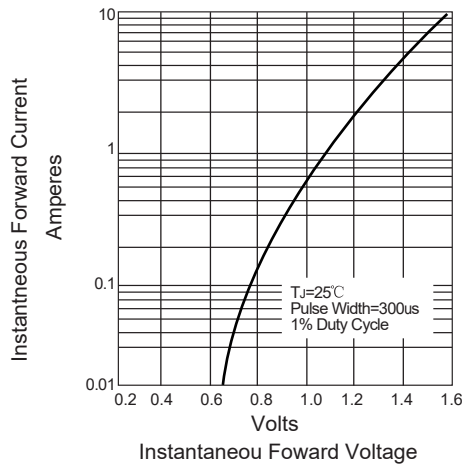
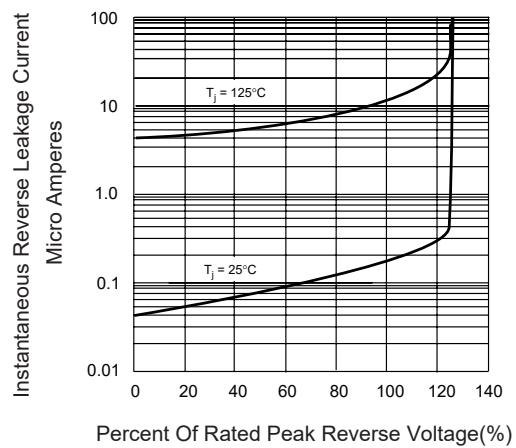
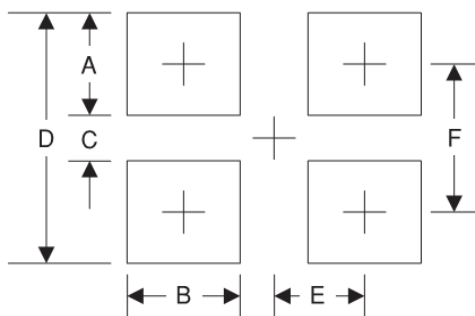


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

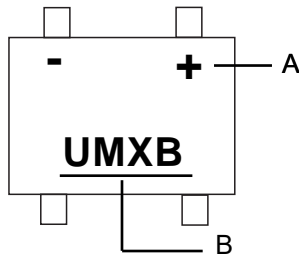


Suggested Pad Layout



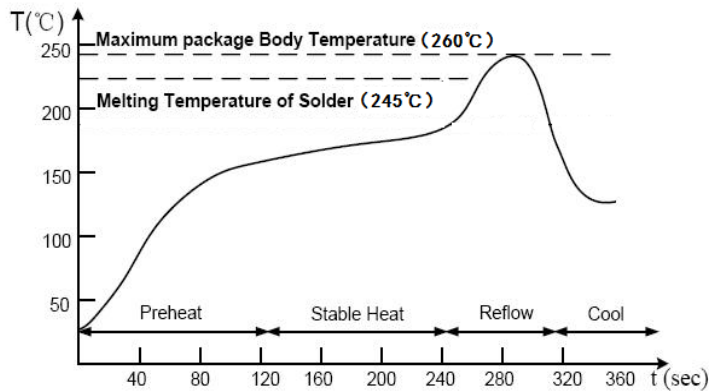
Symbol	Unit (mm)	Unit (inch)
A	1.4	0.055
B	1.0	0.039
C	3.20	0.125
D	6.00	0.236
E	1.25	0.049
F	4.30	0.169

Marking



Symbol	Explanation
A	Polarity Symbol
B	Product Name, X: 05,1.....10

Suggested Soldering Temperature Profile

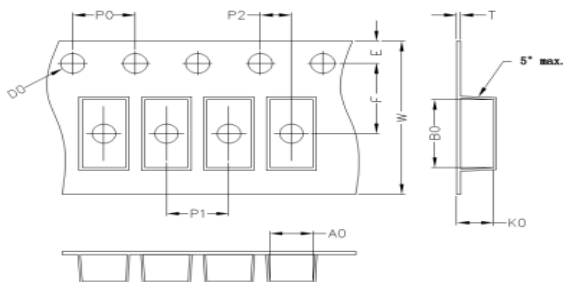


Note

- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 260°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Package Information

Carrier Dimension(mm)



A0	B0	K0	D0	E	F
4.25	5.25	1.35	1.55	1.75	5.50
P0	P1	P2	T	W	Tolerance
4.0	8.0	2.0	0.25	12	0.1

Package Specifications

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
UMB	11'	278	5	280	10	355*310*310	80