Glass Passivated Bridge Rectifiers

1 General Description

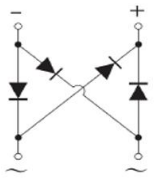
1.1 Features

- Glass Passivated Chip Junction
- Reverse Voltage - 100 to 1000 V
- Average Rectified Output Current- 0.6 A
- High Surge Current Capability
- Designed for Surface Mount Application

REVERSE VOLTAGE
50-1000V
FORWARD CURRENT
0.6Ampere

1.2 Typical Applications

- General-purpose bridge rectifiers, Rectification for SMPS, PD fast chargers, small household appliance control boards, and other bridge rectification applications.



1.3 Mechanical Data

- Case: UMBF
- Terminals: Leads solderable per MIL-STD-750, method 2026
- Polarity: Marked on body
- Mounting position: Any

2 Maximum Ratings(TA=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UMB05F UM05B	UMB1F UM1B	UMB2F UM2B	UMB4F UM4B	UMB6F UM6B	UMB8F UM8B	UMB10F UM10B	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Bridge Input 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 Rectified Output Current at T_C=115℃	I_O	0.6							A
Peak Forward Surge Current 8.3ms Single half Sine-Wave Superimposed On Rated Load (JEDEC Method)	I_{FSM}	20							A
Operating Temperature Range	T_J	-55 to +150							℃
Storage Temperature Range	T_{STG}	-55 to +150							℃
Typical Thermal Resistance per element (Note2)	$R_{\theta JA}$	110							℃/W

Notes:

1. Measured at 1MHz and applied reverse voltage of 4 V D.C.
2. P.C.B. mounted with 4×1.5"×1.5" (3.81×3.81 cm) copper pad areas

3 Electrical Characteristics(TA=25℃ Unless otherwise specified)

PARAMETER		SYMBOL	UMB05F UM05B	UMB1F UM1B	UMB2F UM2B	UMB4F UM4B	UMB6F UM6B	UMB8F UM8B	UMB10F UM10B	UNIT
Maximum instantaneous Forward Voltage drop per leg at 0.6A		V_F	1.1							V
Typical Junction Capacitance (Note1)		C_J	13.0							pF
Maximum DC Reverse Current at Rated DC Blocking Voltage	T_A=25℃	I_R	5							μA
	T_A=125℃		100							

4 Characteristics Curves(TA=25℃ Unless otherwise specified)

Fig.1 Average Rectified Output Current Derating Curve

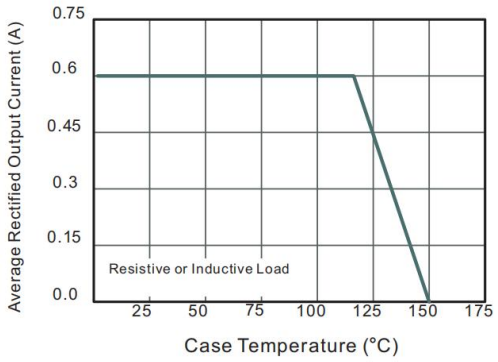


Fig.2 Typical Reverse Characteristics

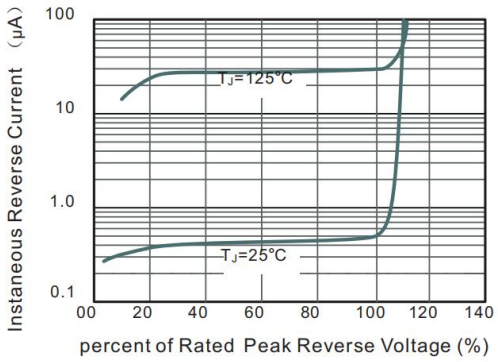


Fig.3 Typical Instaneous Forward Characteristics

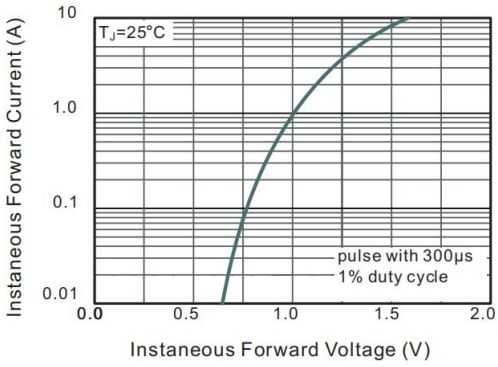


Fig.4 Typical Junction Capacitance

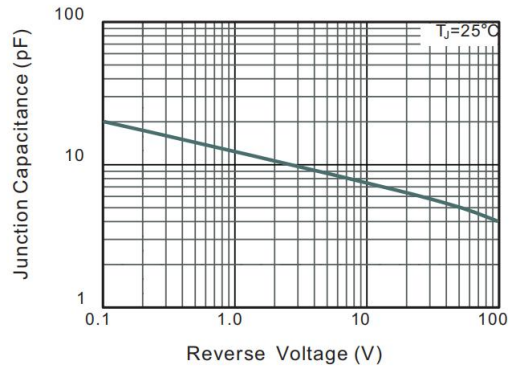
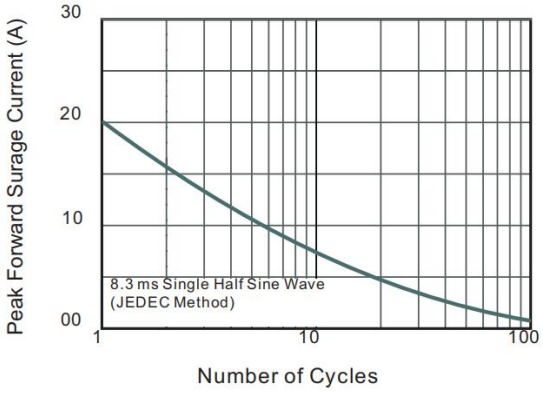
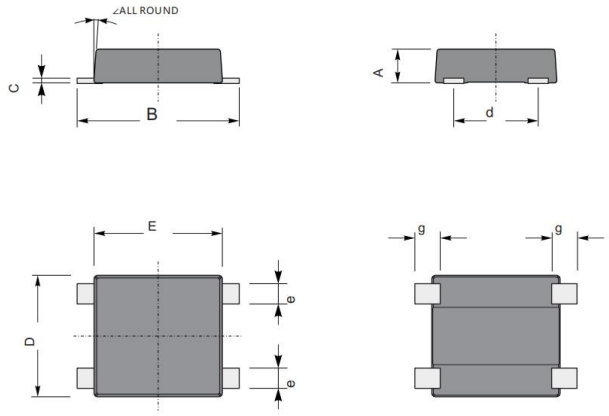


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current



5 Package Outline Dimensions

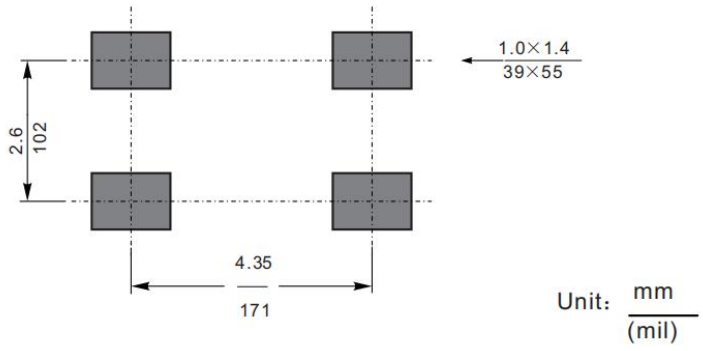


Symbol	UNIT(mm)	
	Min	Max
A	1.0	1.4
B	4.8	5.2
C	0.1	0.3
D	3.65	4.05
E	3.5	3.9
g	0.55	0.95
d	2.4	2.8
e	0.5	0.9
∠	5°	

6 Ordering Information

PACKAGE	UNIT WEIGHT (g)	REEL (pcs)	CARTON (pcs)
UMB	Approximate 0.12	5000	100000

7 Suggested Pad Layout



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