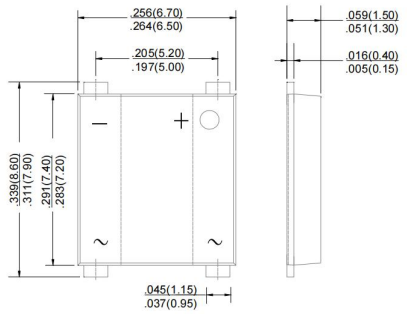
MSB301-MSB307

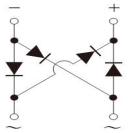
Glass passivated Recovery Bridge Rectifiers

General description

Single Phase 3.0Amp Glass passivated Recovery Bridge Rectifiers

MSBL Package





Dimensions in inches and (millimeters)

FEATURES

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Idea for printed circuit board
- Glass passivated Junction chip
- RoHS Compliant
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed 250 ℃/10 seconds at terminals

MECHANICAL DATA

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

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	MSB 301	MSB 302	MSB 303	MSB 304	MSB 305	MSB 306	MSB 307	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℃	$I_{(AV)}$	3.0							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	80.0							A
Rating for fusing (t=8.3ms, Ta=25℃)	I^2t	26.56							A^2s
Maximum instantaneous forward voltage at 3.0A	V_F	1.1							V
Maximum DC reverse current T_A=25℃ at rated DC blocking voltage T_A=125℃	I_R	5.0 500							uA
Typical junction capacitance (Note 1)	C_J	33.0							pF
Typical thermal resistance	R_{qJA}	55.0							℃/W
Operating junction and storage temperature range	T_J,T_{STG}	-55 to +150							℃

Note: 1.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

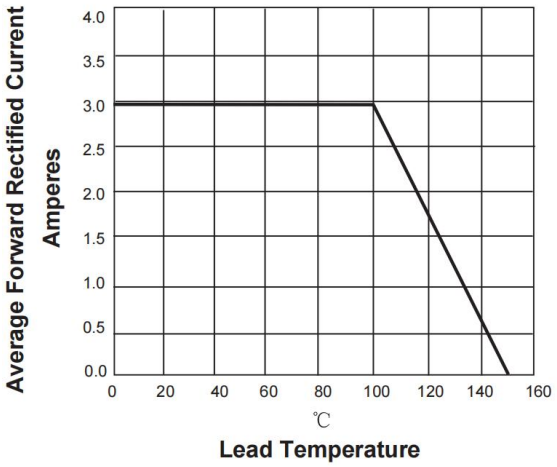


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PERLEG

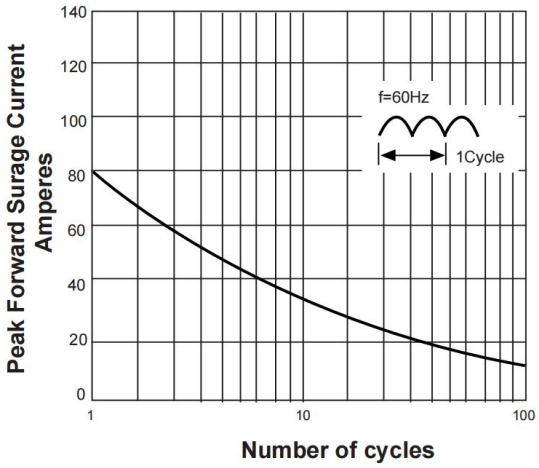


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

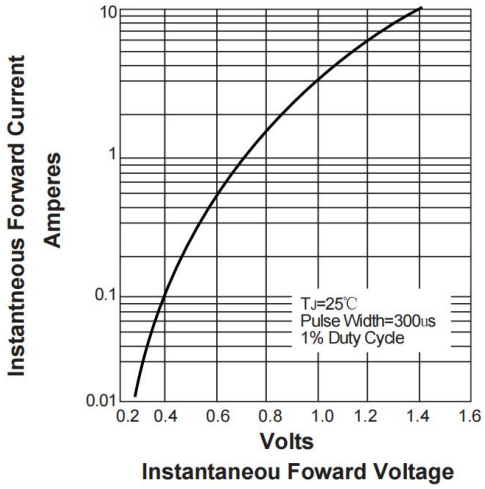
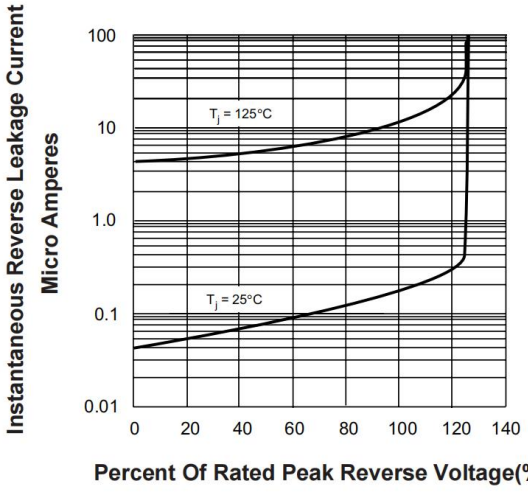
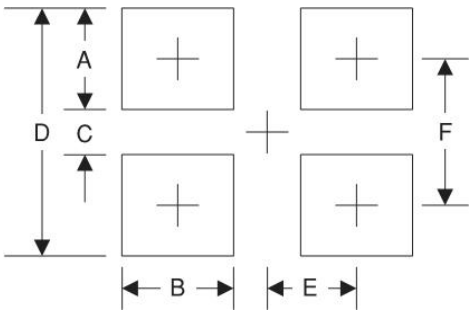


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

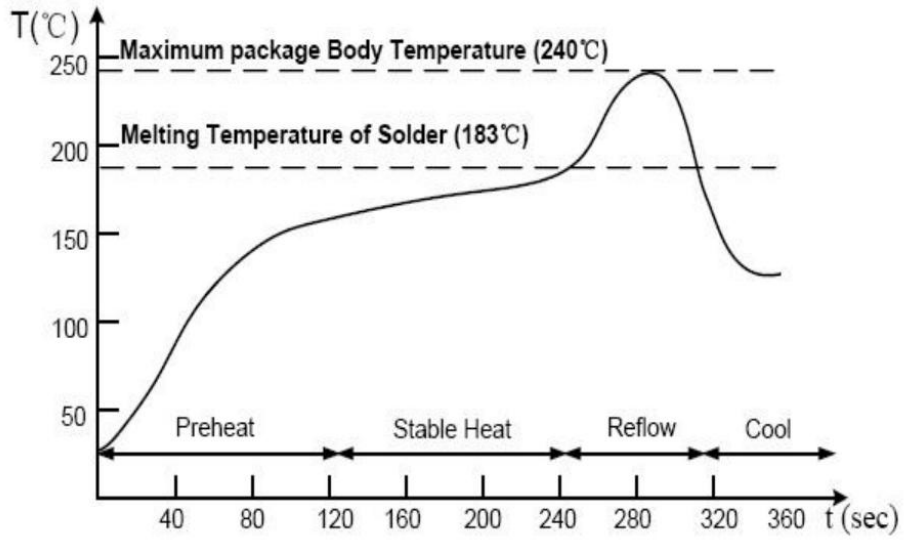


Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.8	0.071
B	2.0	0.078
C	5.50	0.216
D	9.15	0.360
E	2.6	0.102
F	7.35	0.289

Suggested Soldering Temperature Profile

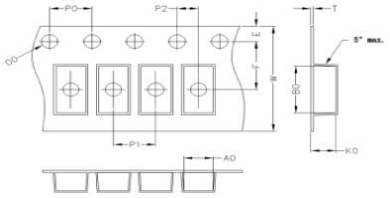


Note

- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 265°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
6.90	8.60	1.65	1.55	1.75	7.50
P0	**P1**	**P2**	**T**	**W**	**Tolerance**
4.0	12.0	2.0	0.30	16	0.1

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
MSBL	13’	330	3	338	6	360*360*360	48

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