



DB301S~DB307S

Single Phase 3.0Amp Glass passivated Bridge Rectifiers

DBS

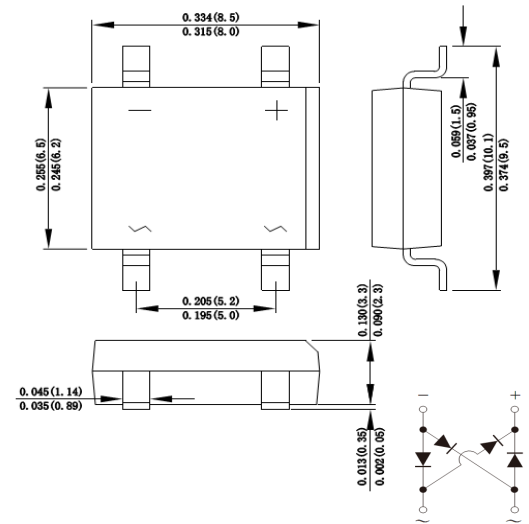


Features

- ◆ 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 250°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 : 0.0078 ounce, 0.22 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	DB301S	DB302S	DB303S	DB304S	DB305S	DB306S	DB307S	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 $T_L=100^\circ\text{C}$	$I_{(AV)}$	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 ($t=8.3\text{ms}$, $T_A=25^\circ\text{C}$)	I_t^2	26.5							A_s^2
Maximum instantaneous forward voltage at 3.0A	V_F	1.10							V
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=125^\circ\text{C}$	I_R	5.0 500							μA
Typical junction capacitance (Note 1)	C_J	32.0							pF
Typical thermal resistance	$R_{\theta JA}$	70.0							$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							$^\circ\text{C}$

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

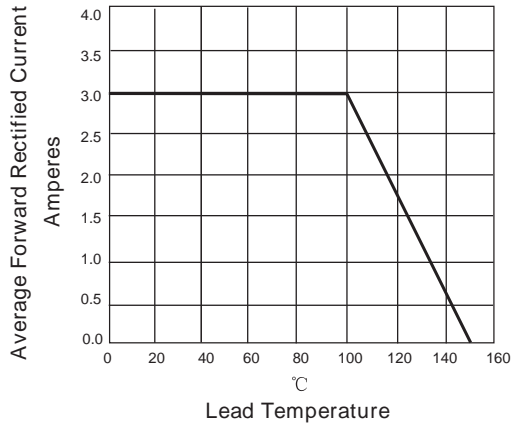


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

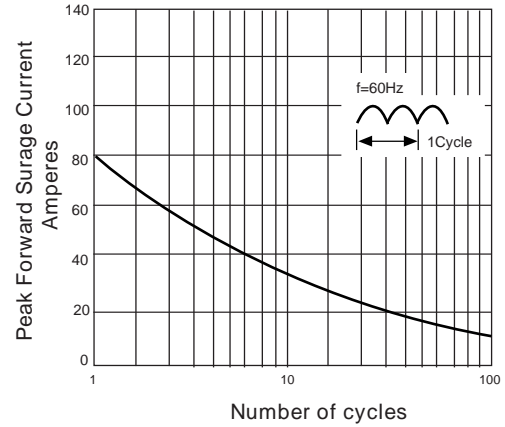


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

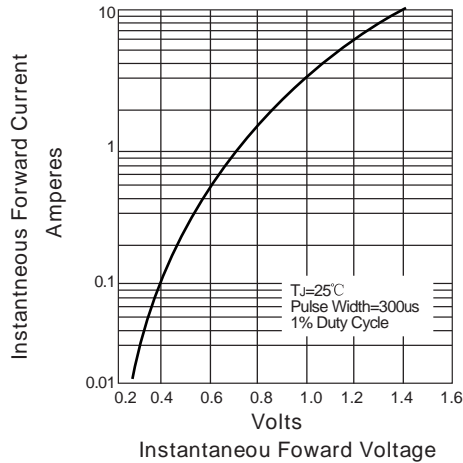
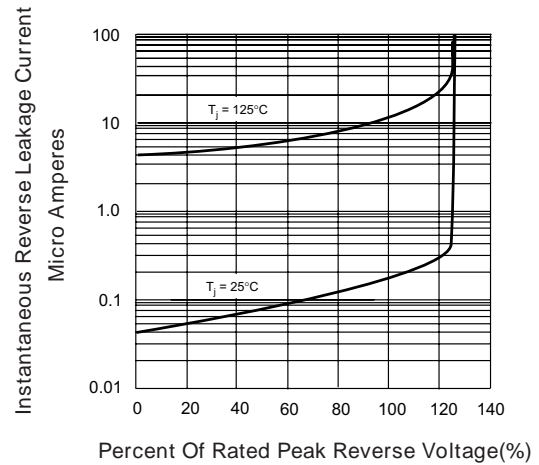
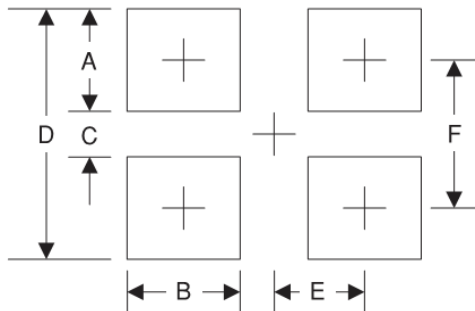


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



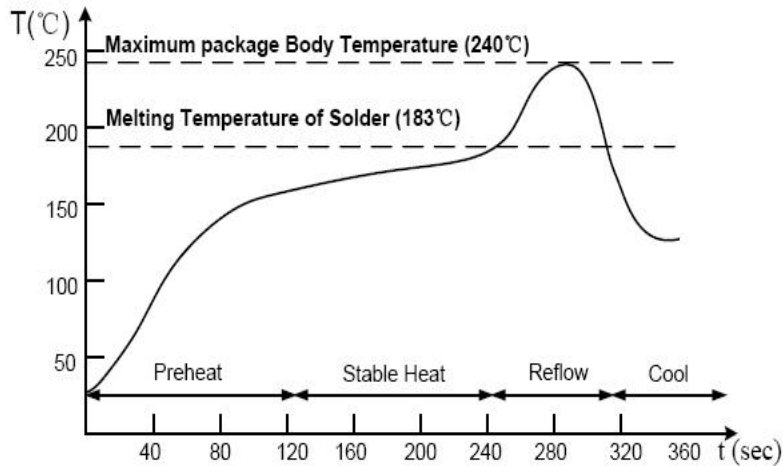
Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	2.3	0.091
B	1.3	0.051
C	6.90	0.272
D	11.5	0.453
E	2.6	0.102
F	9.20	0.362



Suggested Soldering Temperature Profile

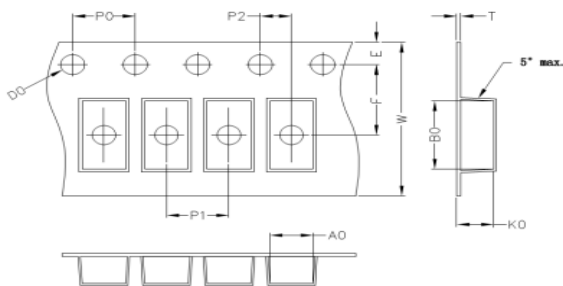


Note

- 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
8.64	10.4	3.3	1.55	1.75	7.50
P0	P1	P2	T	W	Tolerance
4.0	12.0	2.0	0.30	16	0.1

Package Specifications

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	Q'TY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
DBS	13'	330	1.5	338	3	365*365*360	20

Package	Tube (mm)	Q'TY/Tube (Kpcs)	Box Size (mm)	Q'TY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
DBS	425	0.05	440*141*54	4	460*250*165	20