TAIWAN SEMICONDUCTOR

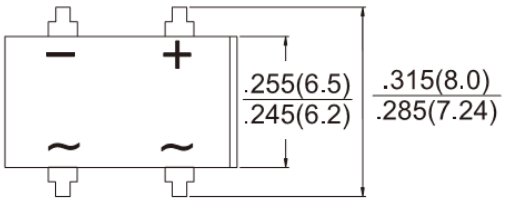
DBL101G - DBL107G

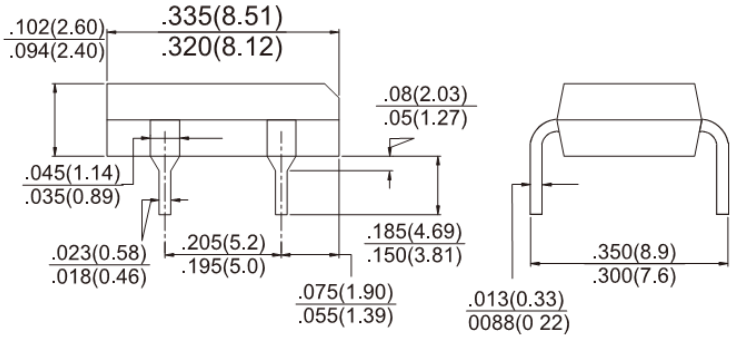
Single Phase 1.0AMP. Glass Passivated Bridge Rectifiers

RoHS COMPLIANCE



DBL





Features

- ✧ UL Recognized File # E-326854
- ✧ Glass passivated junction
- ✧ Ideal for printed circuit board
- ✧ Reliable low cost construction utilizing molded plastic technique
- ✧ High temperature soldering guaranteed: 260℃/ 10 seconds at 5lbs., (2.3kg) tension
- ✧ High surge current capability
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode

Mechanical Data

- ✧ Case: Molded plastic body
- ✧ Terminals: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208
- ✧ Weight: 0.37 grams

Dimensions in inches and (millimeters)

Marking Diagram



DBL10XG	= Specific Device Code
G	= Green Compound
Y	= Year
WW	= Work Week

Maximum Ratings and Electrical Characteristics

Rating at 25 ℃ ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%

Type Number	Symbol	DBL 101G	DBL 102G	DBL 103G	DBL 104G	DBL 105G	DBL 106G	DBL 107G	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 @T_A=40℃	$I_{F(AV)}$	1							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	40					30		A
Maximum Instantaneous Forward Voltage (Note 1) @1.0A	V_F	1.1							V
Maximum DC Reverse Current @T_A=25℃ at Rated DC Block Voltage @ T_A=125 ℃	I_R	10 500							uA
Typical Junction Capabitance	Cj	25							pF
Typical Thermal Resistance (Note 2)	$R_{\theta jA}$ $R_{\theta jL}$	40 15							^{O}C/W
Operating Temperature Range	T_J	- 55 to + 150							^{O}C
Storage Temperature Range	T_{STG}	- 55 to + 150							^{O}C

Notes 1: Pulse Test with PW=300 usec, 1% Duty Cycle

Notes 2: Thermal Resistance from Junction to Ambient and from Junction to Lead Mounted On P.C.B. With 0.2" x 0.2"(5mm x 5mm) Copper Pads.

RATINGS AND CHARACTERISTIC CURVES (DBL101G THRU DBL107G)

FIG.1 FORWARD CURRENT DERATING CURVE

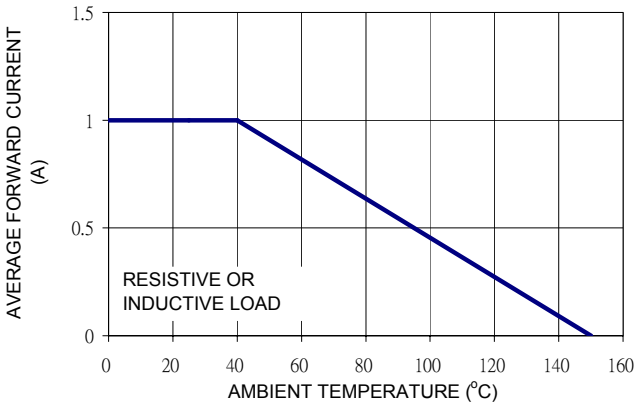


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

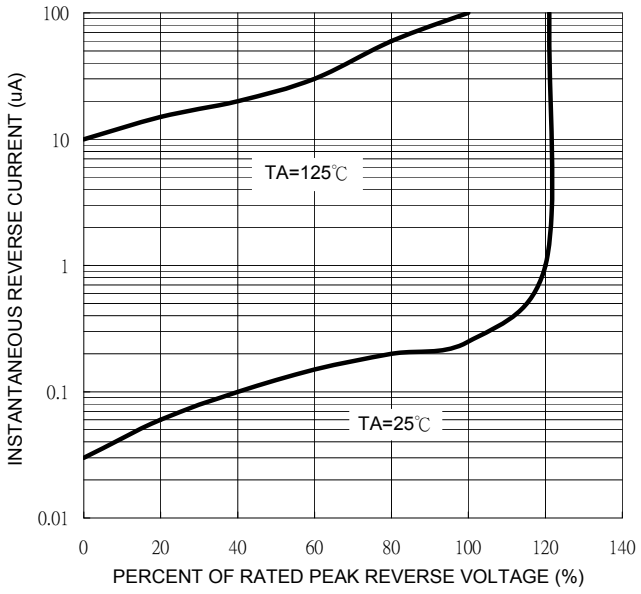


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

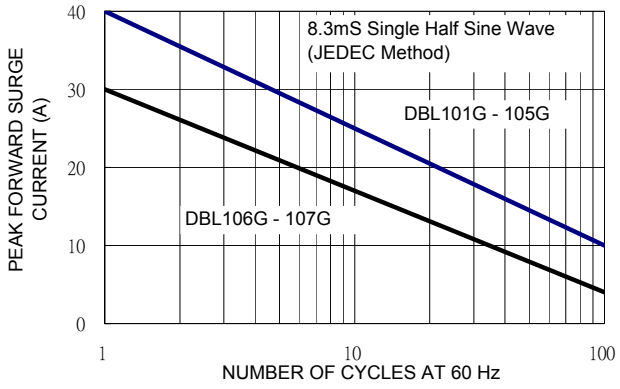


FIG. 4 TYPICAL JUNCTION CAPACITANCE

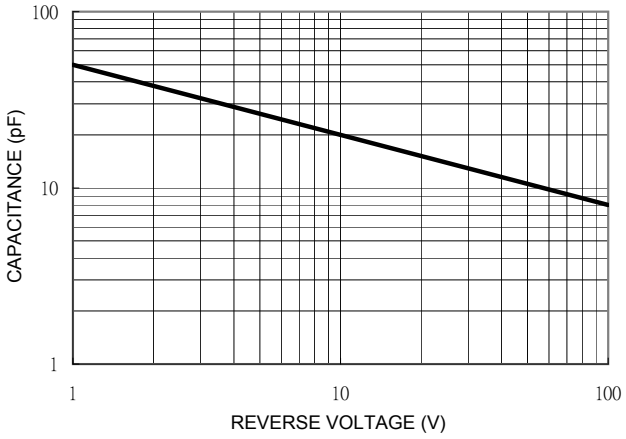


FIG. 5 TYPICAL FORWARD CHARACTERISRICS

