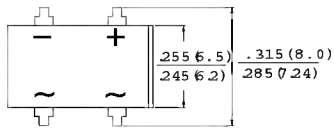
TAIWAN SEMICONDUCTOR

DBL101G - DBL107G

Single Phase 1.0 AMP. Glass Passivated Bridge Rectifiers

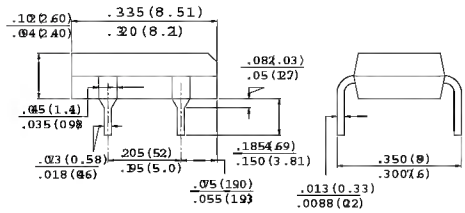
RoHS COMPLIANCE

DBL



Features

- ✧ Glass passivated junction
- ✧ Ideal for printed circuit board
- ✧ Reliable low cost construction utilizing molded plastic technique
- ✧ High temperature soldering guaranteed: 260 °C / 10 seconds / 0.375" (9.5mm) lead length at 5 lbs., (2.3 kg) tension
- ✧ Small size, simple installation
  Pure tin plated terminal, Lead free. Leads solderable per MIL-STD-202, Method 208
- ✧ High surge current capability
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode.



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 °C 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	Units
Maximum Recurrent 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 °C	$I_{(AV)}$	1.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	50							A
Maximum Instantaneous Forward Voltage @ 1.0A	V_F	1.1							V
Maximum DC Reverse Current @ T_A=25 °C at Rated DC Blocking Voltage @ T_A=125 °C	I_R	10 500							uA uA
Typical Junction Capacitance	Cj	25							pF
Typical Thermal resistance (Note 1)	$R_{\theta JA}$ $R_{\theta JL}$	40 15							°C/W
Operating Temperature Range	T_J	-55 to +150							°C
Storage Temperature Range	T_{STG}	-55 to +150							°C

Notes:
1. Thermal Resistance from Junction to Ambient and from Junction to Lead Mounted On P.C.B. with 0.2" x 0.2"" (5 x 5mm) Copper Pads.
2. DBLS for Surface Mount Package.

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RATINGS AND CHARACTERISTIC CURVES (DBL101G THRU DBL107G)

FIG.1- MAXIMUM DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

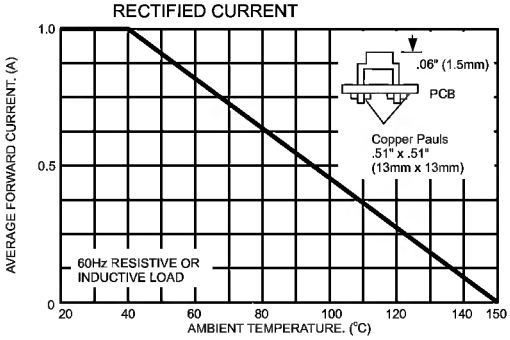

FIG.2- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

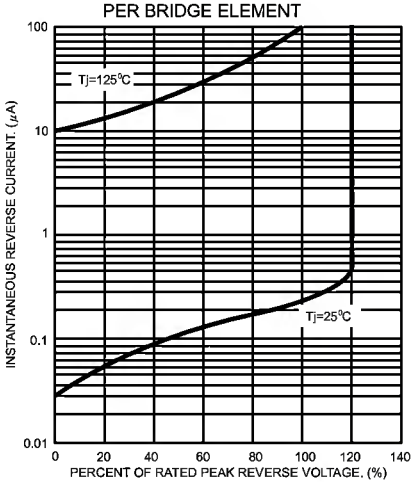

FIG.3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

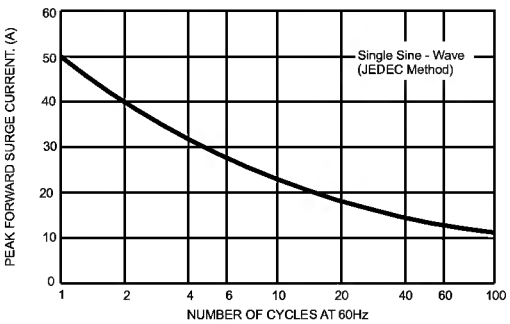

FIG.4- TYPICAL JUNCTION CAPACITANCE PER BRIDGE ELEMENT

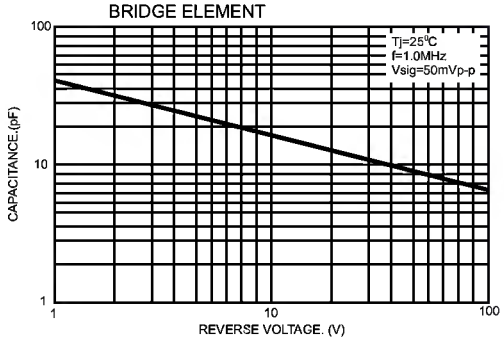

FIG.5- TYPICAL FORWARD CHARACTERISTICS PER BRIDGE ELEMENT