

1A, 50V - 1000V Standard Bridge Rectifier

FEATURES

- AEC-Q101 qualified available
- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique
- High surge current capability
- UL Recognized File # E-326854
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

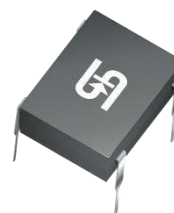
APPLICATIONS

- Switching mode power supply (SMPS)
- Adapters
- Lighting application

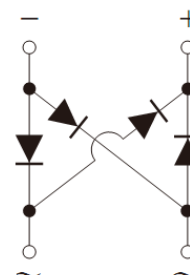
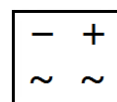
MECHANICAL DATA

- Case: DBL
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 2 whisker test
- Polarity: As marked
- Weight: 0.360g (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
I_F	1	A
V_{RRM}	50 - 1000	V
I_{FSM}	30, 40	A
$T_{J\ MAX}$	150	°C
Package	DBL	
Configuration	Quad	



DBL



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	DBL 101G	DBL 102G	DBL 103G	DBL 104G	DBL 105G	DBL 106G	DBL 107G	UNIT
Marking code on the device		DBL 101G	DBL 102G	DBL 103G	DBL 104G	DBL 105G	DBL 106G	DBL 107G	
Repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Reverse voltage, total rms value	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Forward current	I_F	1							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	40					30		A
Rating for fusing ($t < 8.3\text{ms}$)	I^2t	6.64					3.73		A ² s
Junction temperature	T_J	- 55 to +150							°C
Storage temperature	T_{STG}	- 55 to +150							°C

THERMAL PERFORMANCE

PARAMETER	SYMBOL	TYP	UNIT
Junction-to-lead thermal resistance	$R_{\theta JL}$	15	°C/W
Junction-to-ambient thermal resistance	$R_{\theta JA}$	40	°C/W

ELECTRICAL SPECIFICATIONS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage per diode ⁽¹⁾	$I_F = 1\text{A}, T_J = 25^\circ\text{C}$	V_F	-	1.1	V
Reverse current @ rated V_R per diode ⁽²⁾	$T_J = 25^\circ\text{C}$	I_R	-	2	μA
	$T_J = 125^\circ\text{C}$		-	500	μA
Junction capacitance per diode	1MHz, $V_R = 4.0\text{V}$	C_J	25	-	pF

Notes:

1. Pulse test with $PW = 0.3\text{ms}$
2. Pulse test with $PW = 30\text{ms}$

ORDERING INFORMATION

ORDERING CODE ⁽¹⁾⁽²⁾	PACKAGE	PACKING
DBL10xG	DBL	50 / Tube
DBL10xGH	DBL	50 / Tube

Notes:

1. "x" defines voltage from 50V(DBL101G) to 1000V(DBL107G)
2. "H" means AEC-Q101 qualified

CHARACTERISTICS CURVES

($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig.1 Forward Current Derating Curve

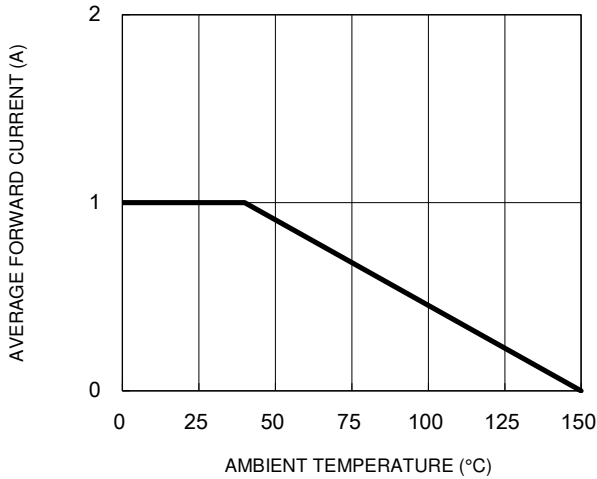


Fig.2 Typical Junction Capacitance

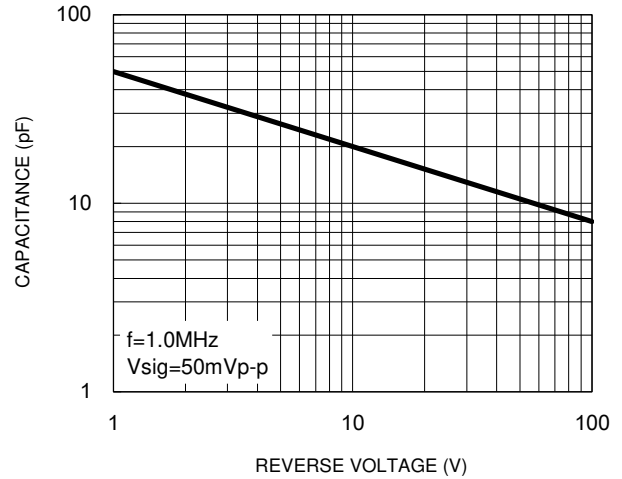


Fig.3 Typical Reverse Characteristics

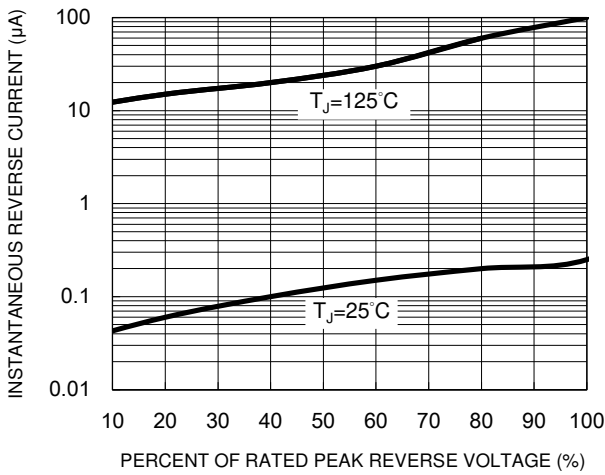


Fig.4 Typical Forward Characteristics

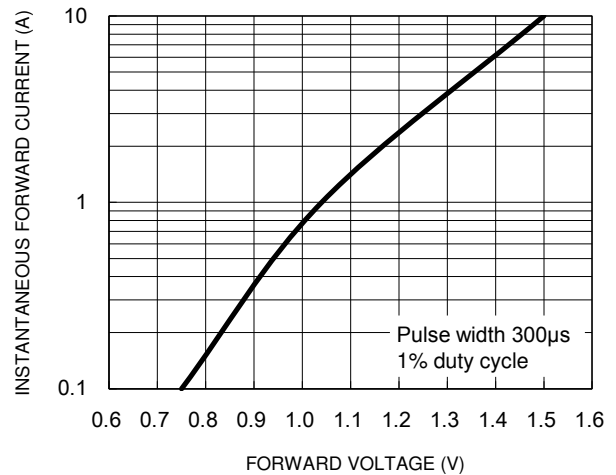
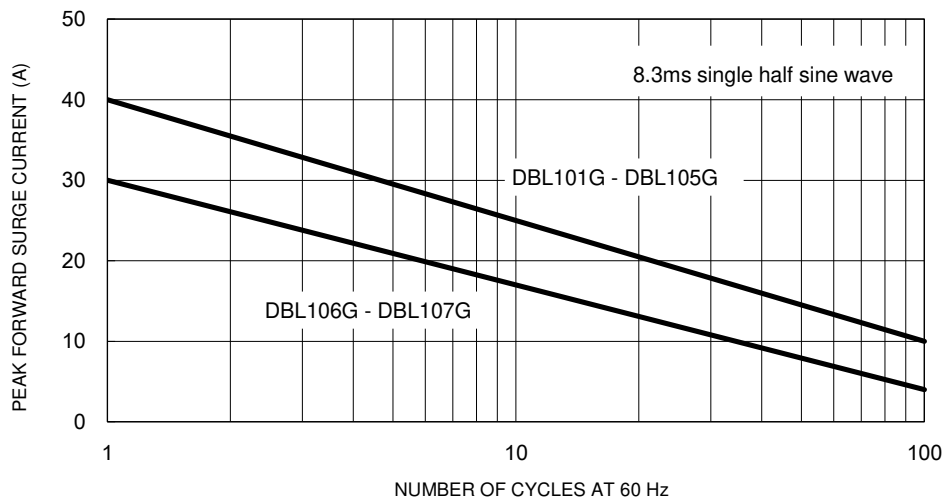
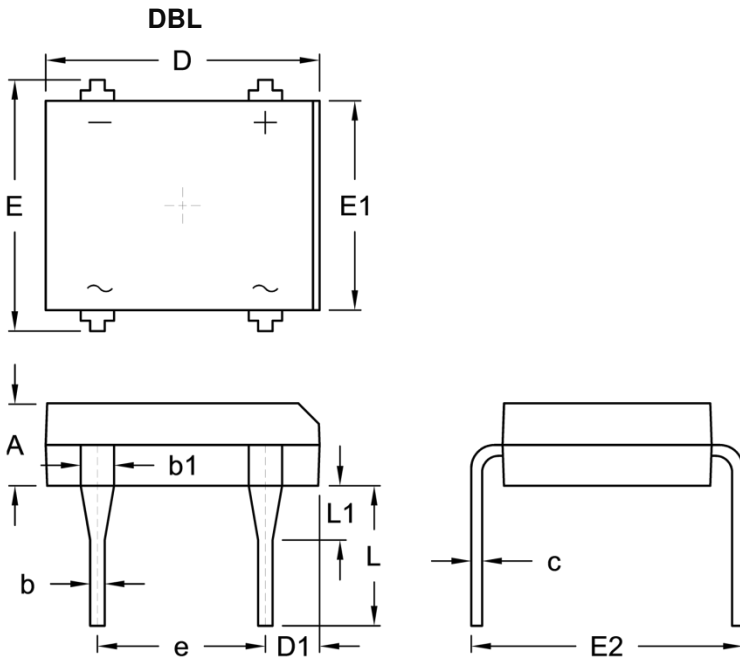


Fig.5 Maximum Non-Repetitive Forward Surge Current



PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	2.40	2.60	0.094	0.102
b	0.46	0.58	0.018	0.023
b1	0.89	1.14	0.035	0.045
c	0.22	0.33	0.009	0.013
D	8.12	8.51	0.320	0.335
D1	1.39	1.90	0.055	0.075
e	5.00	5.20	0.197	0.205
E	7.24	8.00	0.285	0.315
E1	6.20	6.50	0.244	0.256
E2	7.60	8.90	0.299	0.350
L	3.81	4.69	0.150	0.185
L1	1.27	2.03	0.050	0.080

MARKING DIAGRAM



- P/N = Marking Code
- G = Green Compound
- YW = Date Code
- F = Factory Code

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