THE DATASHEET OF

DBL154G

1.5A, 50V - 1400V 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

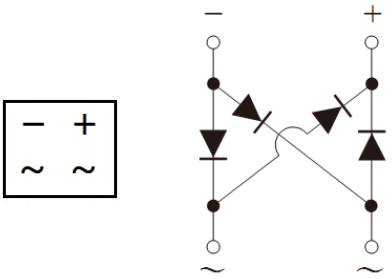
MECHANICAL DATA

- 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	1.5	A
V_{RRM}	50 - 1400	V
I_{FSM}	50	A
$T_{J\ MAX}$	150	°C
Package	DBL	
Configuration	Quad	

Pb-Free RoHS COMPLIANT HALOGEN FREE

DBL



ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

PARAMETER	SYMBOL	DBL 151G	DBL 152G	DBL 153G	DBL 154G	DBL 155G	DBL 156G	DBL 157G	DBL 158G	DBL 159G	UNIT
Marking code on the device		DBL 151G	DBL 152G	DBL 153G	DBL 154G	DBL 155G	DBL 156G	DBL 157G	DBL 158G	DBL 159G	
Repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	1200	1400	V
Reverse voltage, total rms value	$V_{R(RMS)}$	35	70	140	280	420	560	700	840	980	V
Forward current	I_F	1.5									A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	50									A
Rating for fusing (t<8.3ms)	I^2t	10.3									A^2s
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°C unless otherwise noted)

PARAMETER		CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage per diode[1]	DBL151G DBL152G DBL153G DBL154G DBL155G DBL156G DBL157G	I_F = 1.5A, T_J = 25°C	V_F	-	1.10	V
	DBL158G DBL159G			-	1.25	V
Reverse current @ rated V_R per diode[2]		T_J = 25°C	I_R	-	2	μA
		T_J = 125°C		-	500	μA
Junction capacitance per diode		1MHz, V_R = 4.0V	C_J	25	-	pF

Notes:

1. Pulse test with PW = 0.3ms
2. Pulse test with PW = 30ms

ORDERING INFORMATION

ORDERING CODE[1][2]	PACKAGE	PACKING
DBL15xG	DBL	50 / Tube
DBL15xGH	DBL	50 / Tube

Notes:

1. “x” defines voltage from 50V(DBL151G) to 1400V(DBL159G)
2. “H” means AEC-Q101 qualified

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

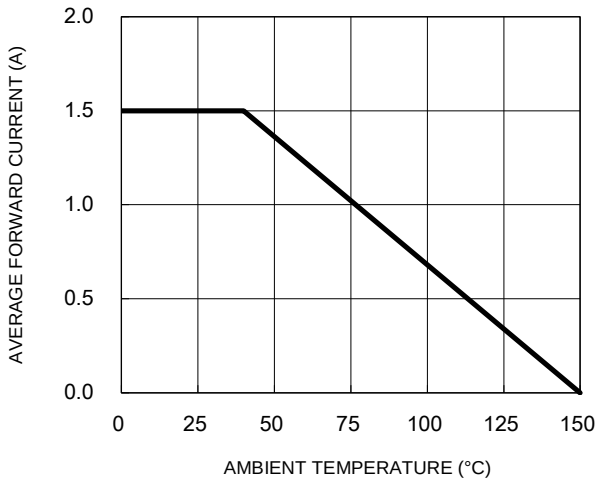


Fig.2 Typical Junction Capacitance

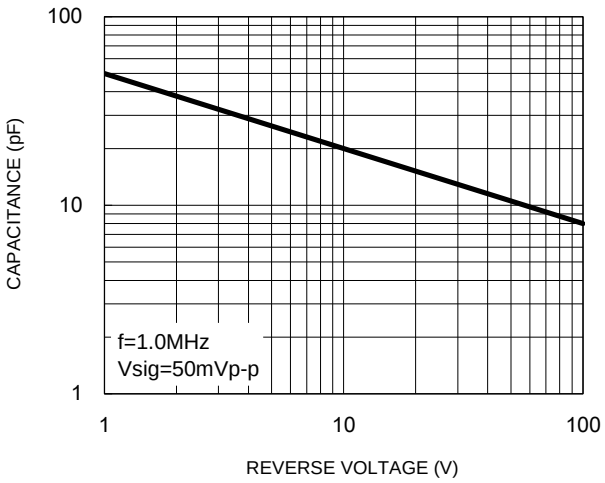


Fig.3 Typical Reverse Characteristics

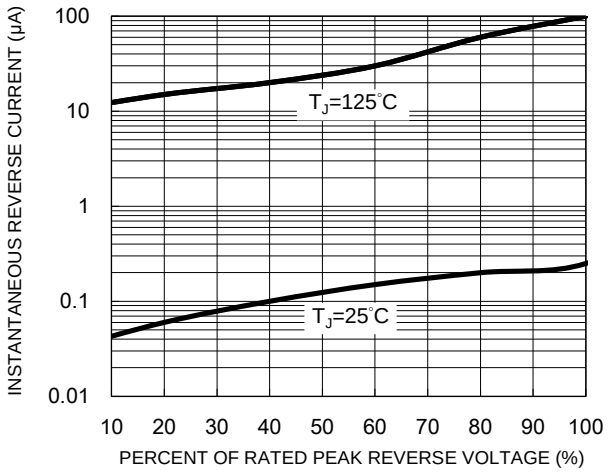


Fig.4 Typical Forward Characteristics

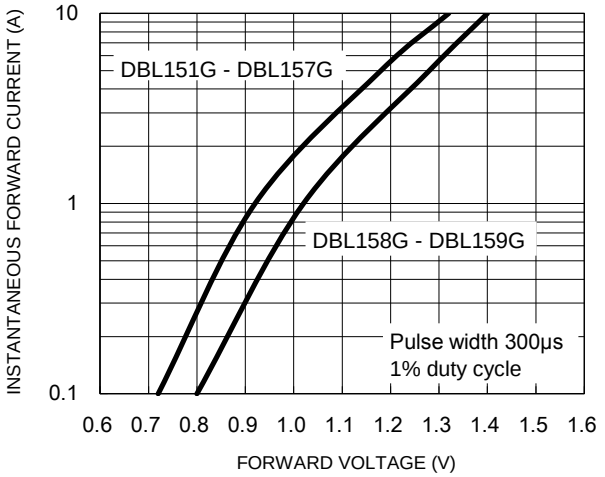
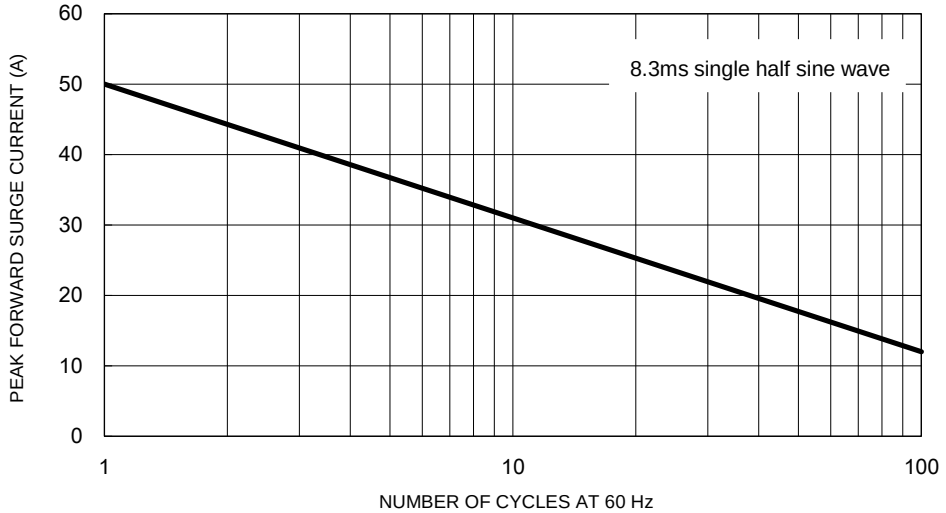
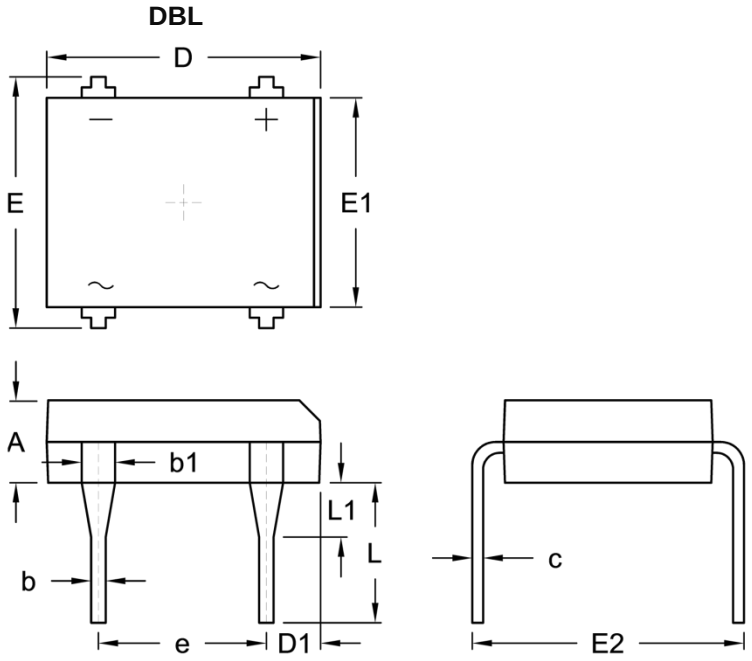


Fig.5 Maximum Non-Repetitive Forward Surge Current



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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