2A, 50V - 800V Standard Bridge Rectifier

FEATURES

- AEC-Q101 qualified available
- Ideal for printed circuit board
- High case dielectric strength
- High surge current capability
- UL Recognized File # E-326243
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

APPLICATIONS

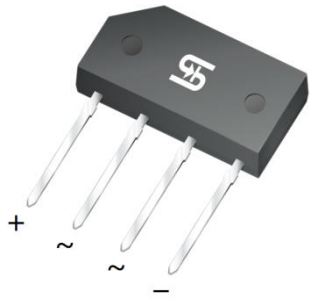
- Switching mode power supply (SMPS)
- Adapters
- Lighting application

MECHANICAL DATA

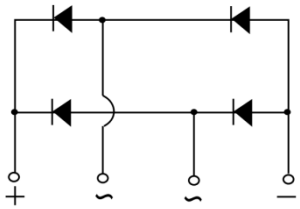
- Case: GBL
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 2 whisker test
- Polarity: As marked
- Weight: 2.00g (approximately)

KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
I_F	2	A
V_{RRM}	50 - 800	V
I_{FSM}	80	A
$T_{J\ MAX}$	150	°C
Package	GBL	
Configuration	Quad	

Pb-Free RoHS COMPLIANT HALOGEN FREE



GBL



ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)								
PARAMETER	**SYMBOL**	**D2SB 05**	**D2SB 10**	**D2SB 20**	**D2SB 40**	**D2SB 60**	**D2SB 80**	**UNIT**
Marking code on the device		D2SB05	D2SB10	D2SB20	D2SB40	D2SB60	D2SB80	
Repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	V
Reverse voltage, total rms value	$V_{R(RMS)}$	35	70	140	280	420	560	V
Forward current	I_F	2						A
Surge peak forward current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	80						A
Rating for fusing (t<8.3ms)	I^2t	26						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	$R_{\Theta JL}$	10	°C/W
Junction-to-ambient thermal resistance	$R_{\Theta JA}$	47	°C/W

ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage per diode[1]	I_F = 2A, T_J = 25°C	V_F	-	1.1	V
Reverse current @ rated V_R per diode[2]	T_J = 25°C	I_R	-	10	μA
	T_J = 125°C		-	500	μA

Notes:

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

ORDERING INFORMATION

ORDERING CODE[1][2]	PACKAGE	PACKING
D2SBx	GBL	25 / Tube
D2SBxH	GBL	25 / Tube

Notes:

1. “x” defines voltage from 50V(D2SB05) to 800V(D2SB80)
2. “H” means AEC-Q101 qualified

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

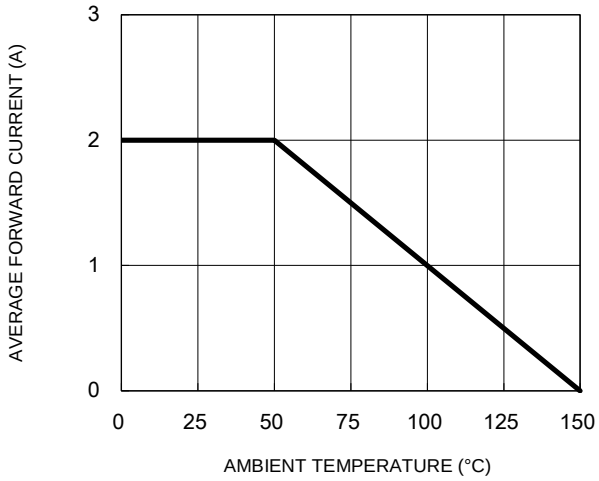


Fig.2 Typical Junction Capacitance

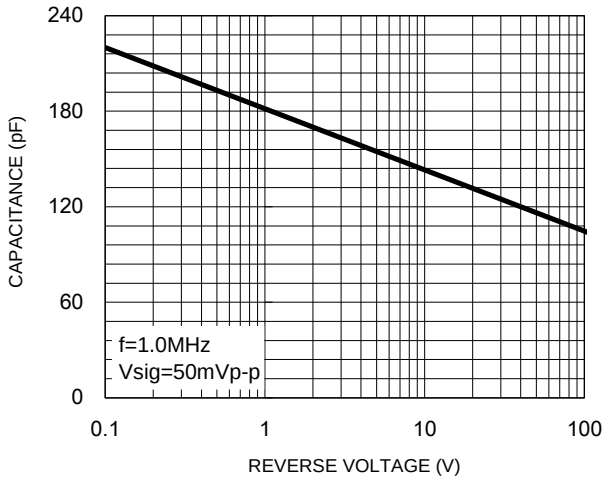


Fig.3 Typical Reverse Characteristics

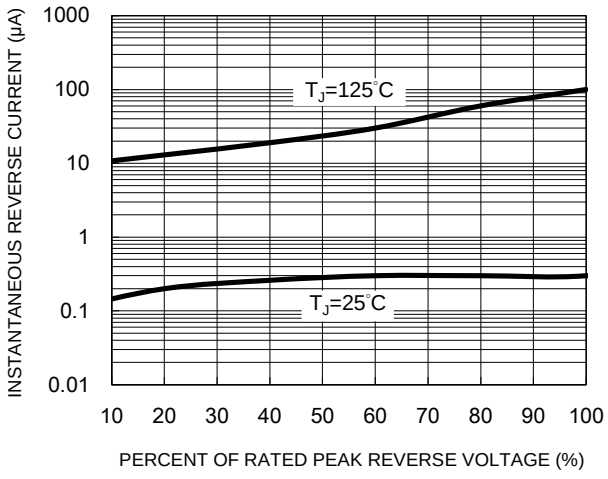


Fig.4 Typical Forward Characteristics

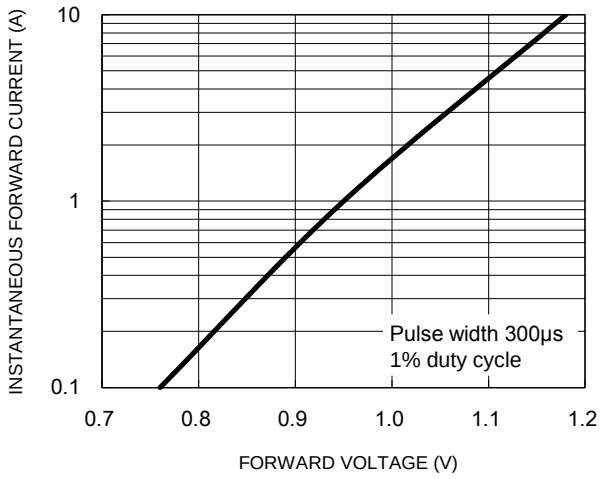
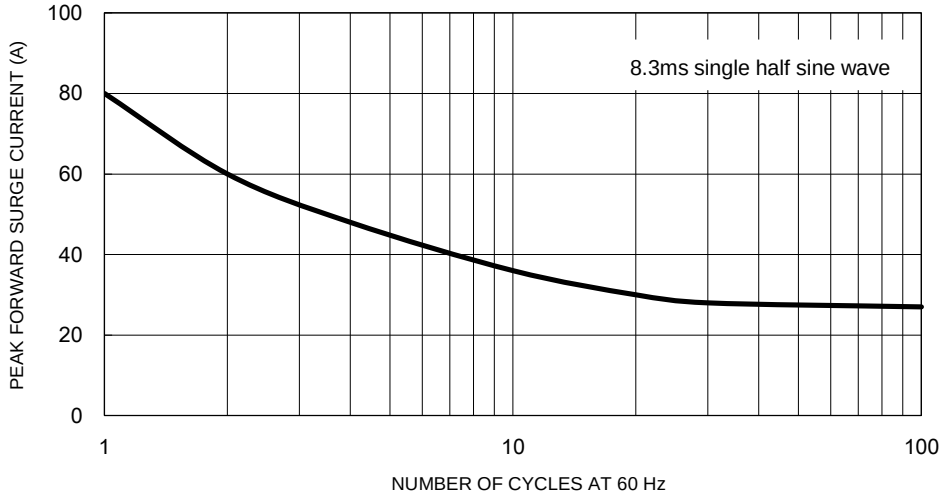
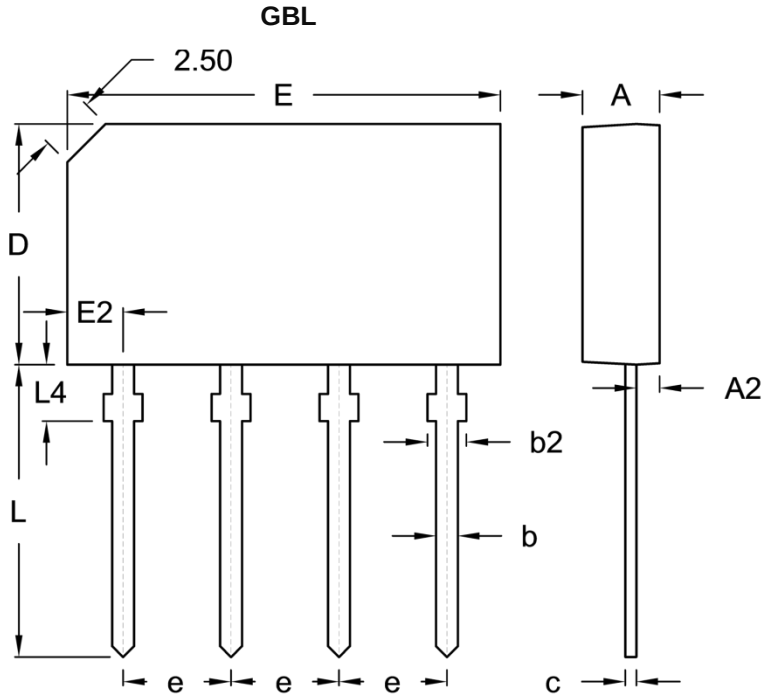


Fig.5 Maximum Non-Repetitive Forward Surge Current



PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	3.30	3.70	0.130	0.146
A2	0.80	1.20	0.031	0.047
b	0.90	1.10	0.035	0.043
b2	1.30	2.00	0.051	0.079
c	0.40	0.60	0.016	0.024
D	10.70	11.30	0.421	0.445
E	19.70	20.30	0.776	0.799
E2	2.30	2.70	0.091	0.106
e	4.80	5.20	0.189	0.205
L	13.00	14.00	0.512	0.551
L4	2.30	2.70	0.091	0.106

MARKING DIAGRAM

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

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