1.5A, 1000V Fast Recovery Bridge Rectifier

FEATURES

- AEC-Q101 qualified available
- Ideal for automated placement
- High surge current capability
- Fast reverse recovery time for high frequency
- Negligible leakage current
- Moisture sensitivity level: level 1, per J-STD-020
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
I_F	1.5	A
V_{RRM}	1000	V
I_{FSM}	50	A
$T_{J\ MAX}$	150	°C
Package	ABS-L	
Configuration	Quad	

APPLICATIONS

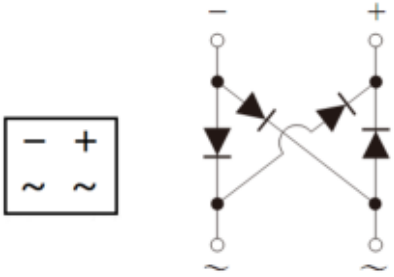
- Switching mode power supply (SMPS)
- Adapters
- Lighting application

MECHANICAL DATA

- Case: ABS-L
- 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: 0.090g (approximately)



ABS-L



ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)			
PARAMETER	**SYMBOL**	**RABS15M**	**UNIT**
Marking code on the device		RABS15M	
Repetitive peak reverse voltage	V_{RRM}	1000	V
Reverse voltage, total rms value	$V_{R(RMS)}$	700	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	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	$R_{\Theta JL}$	26	°C/W
Junction-to-ambient thermal resistance	$R_{\Theta JA}$	70	°C/W

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

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage per diode[1]	I_F = 1.5A, T_J = 25°C	V_F	-	1.30	V
Reverse current @ rated V_R per diode[2]	T_J = 25°C	I_R	-	1	μA
	T_J = 125°C		-	200	μA
Maximum reverse recovery time	I_F = 0.5A , I_R = 1.0A I_{rr} = 0.25A	t_{rr}	-	500	ns

Notes:

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

ORDERING INFORMATION

ORDERING CODE[1]	PACKAGE	PACKING
RABS15M	ABS-L	5,000 / Tape & Reel
RABS15MH	ABS-L	5,000 / Tape & Reel

Notes:

1. “H” means AEC-Q101 qualified

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

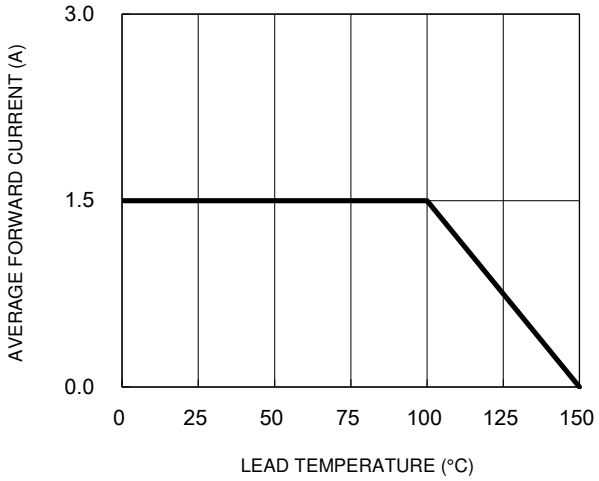


Fig.2 Typical Junction Capacitance

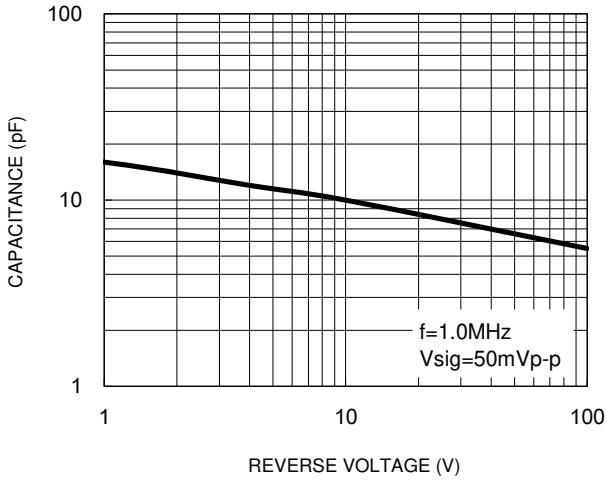


Fig.3 Typical Reverse Characteristics

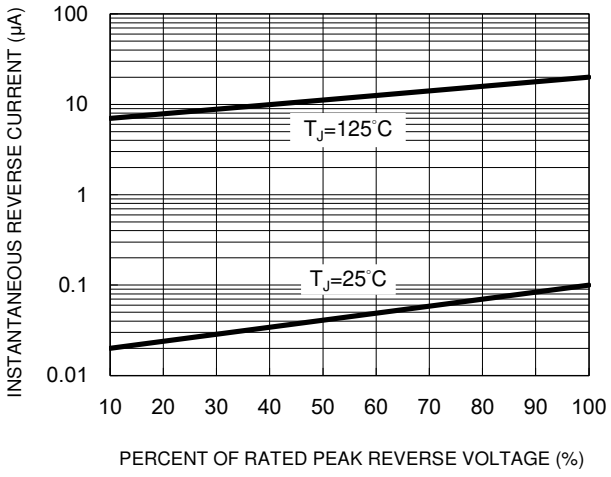


Fig.4 Typical Forward Characteristics

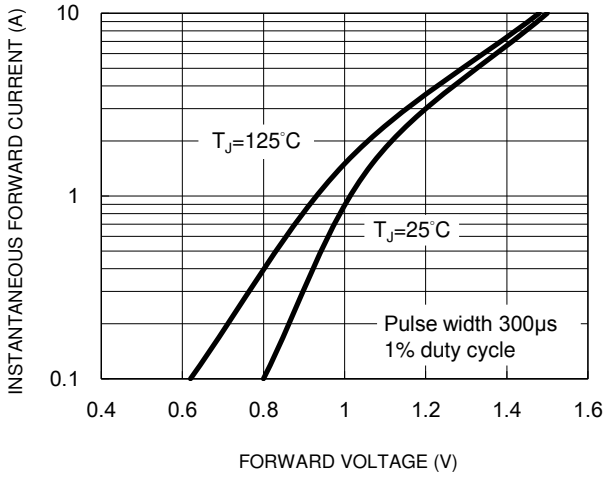
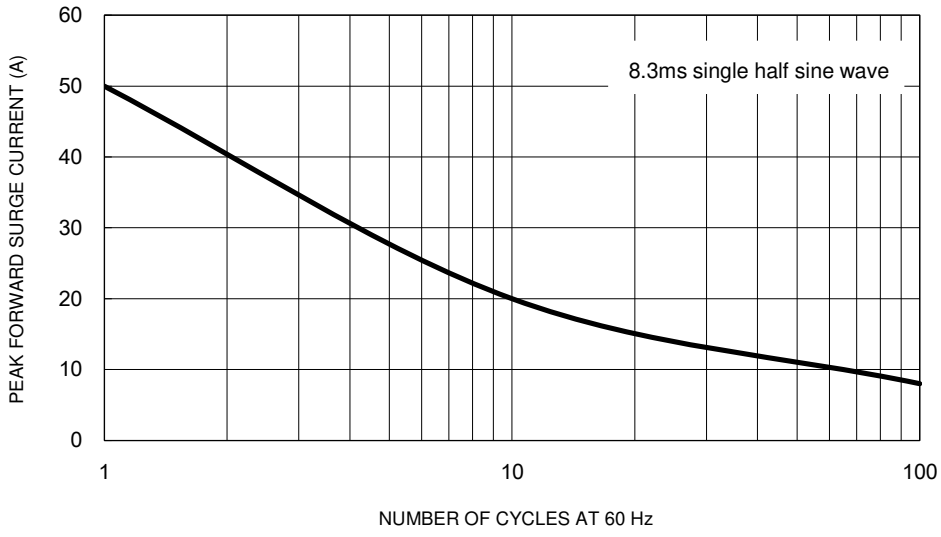
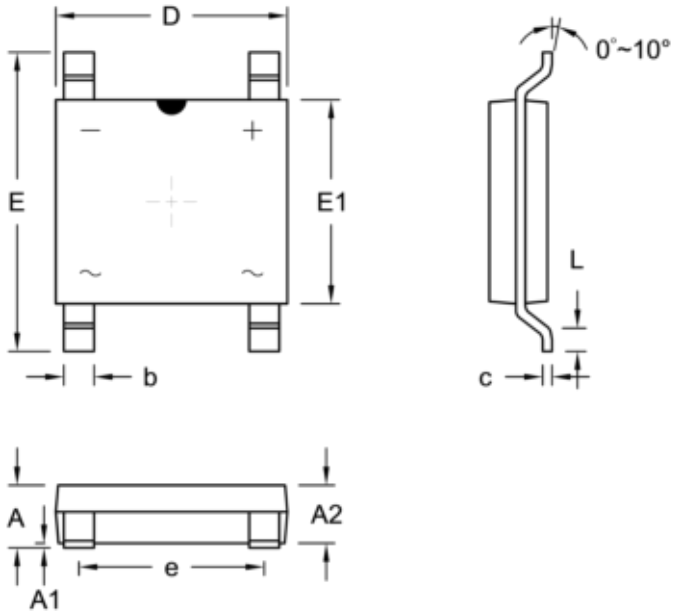


Fig.5 Maximum Non-Repetitive Forward Surge Current



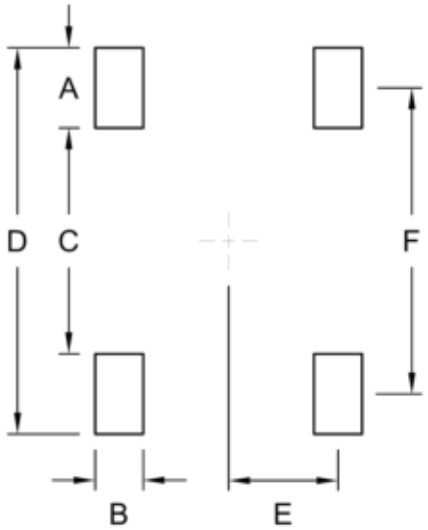
PACKAGE OUTLINE DIMENSIONS

ABS-L



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	1.25	1.35	0.049	0.063
A1	0.05	0.15	0.002	0.006
A2	1.20	1.30	0.047	0.051
b	0.60	0.70	0.024	0.028
c	0.15	0.25	0.006	0.010
D	4.90	5.10	0.193	0.201
E	6.25	6.65	0.246	0.262
E1	4.30	4.50	0.169	0.177
e	3.90	4.10	0.154	0.161
L	0.30	0.70	0.012	0.028

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	1.50	0.059
B	0.90	0.035
C	4.22	0.166
D	7.22	0.284
E	2.05	0.081
F	5.72	0.225

MARKING DIAGRAM



P/N = Marking Code
YW = Date Code
F = Factory Code

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