

## 1A, 200V - 600V Miniature Ultrafast Glass Passivated Bridge Rectifiers

### FEATURES

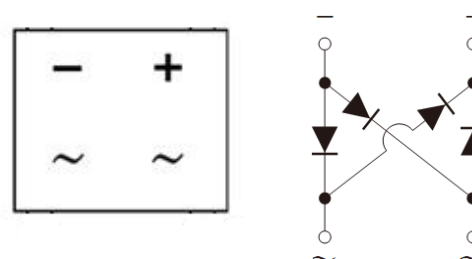
- Ideal for automated placement, for compact PCB design
- High surge current capability
- Ultrafast reverse recovery time for high frequency
- Negligible leakage current
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21



ABS

### TYPICAL APPLICATIONS

General purpose rectification for AC/DC bridge full wave rectification for SMPS. PFC function for LED lighting ballast. Also suitable for secondary stage of high frequency inverters.



### MECHANICAL DATA

- Case:** Molded plastic body
- Molding compound, UL flammability classification rating 94V-0
- Moisture sensitivity level: level 1, per J-STD-020
- Part no. with suffix "H" means AEC-Q101 qualified
- Packing code with suffix "G" means green compound (halogen-free)
- Terminal:** Matte tin plated leads, solderable per JESD22-B102
- Meet JESD 201 class 2 whisker test
- Polarity:** Polarity as marked on the body
- Weight:** 0.09 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)					
PARAMETER	SYMBOL	EABS1D	EABS1G	EABS1J	UNIT
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	200	400	600	V
Maximum RMS voltage	V <sub>RMS</sub>	140	280	420	V
Maximum DC blocking voltage	V <sub>DC</sub>	200	400	600	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	1			A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	40			A
Rating for fusing (t<8.3ms)	I <sup>2</sup> t	6.64			A <sup>2</sup> s
Maximum instantaneous forward voltage (Note 1) I <sub>F</sub> = 1 A	V <sub>F</sub>	0.95	1.20	1.70	V
Maximum reverse current @ rated V <sub>R</sub> T <sub>J</sub> =25°C T <sub>J</sub> =125°C	I <sub>R</sub>	1 200			μA
Maximum reverse recovery time (Note 2)	t <sub>rr</sub>	35			ns
Typical thermal resistance	R <sub>θJL</sub> R <sub>θJA</sub>	25 80			°C/W
Operating junction temperature range	T <sub>J</sub>	- 55 to +150			°C
Storage temperature range	T <sub>STG</sub>	- 55 to +150			°C

Note 1: Pulse test with PW=300μs, 1% duty cycle

Note 2: Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>rr</sub>=0.25A

**ORDERING INFORMATION**

PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
EABS1x (Note 1)	H	RE	G	ABS	1,000 / 7" Plastic reel
		RG		ABS	5,000 / 13" Paper reel

Note 1: "x" defines voltage from 200V (EABS1D) to 600V (EABS1J)

Note 2: Whole series with green compound

**EXAMPLE**

PREFERRED P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
EABS1DHREG	EABS1D	H	RE	G	AEC-Q101 qualified Green compound

**RATINGS AND CHARACTERISTICS CURVES**

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

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

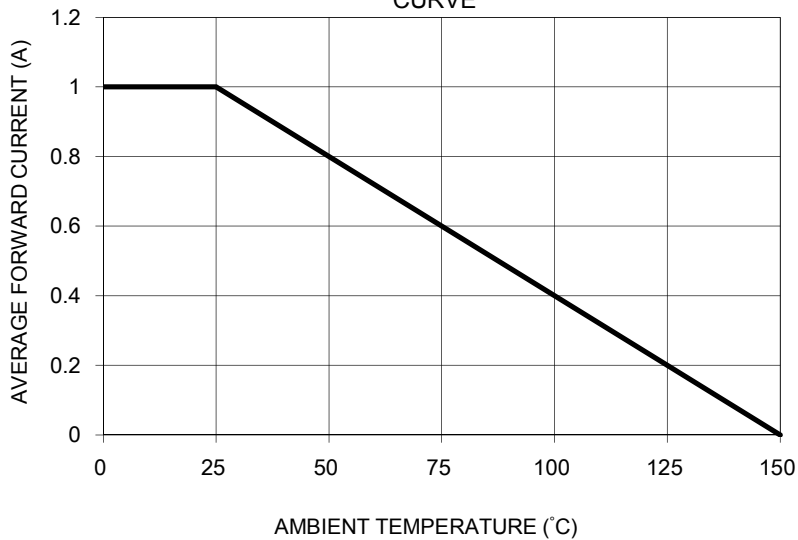


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

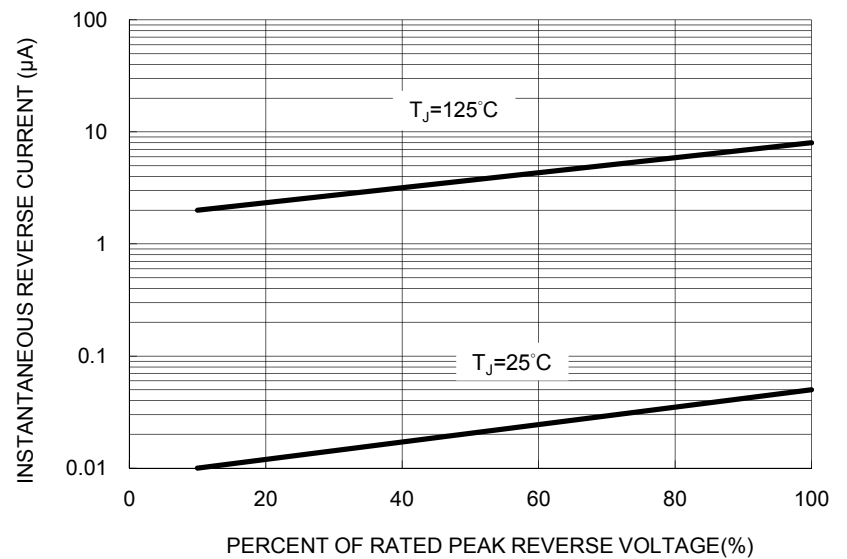


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

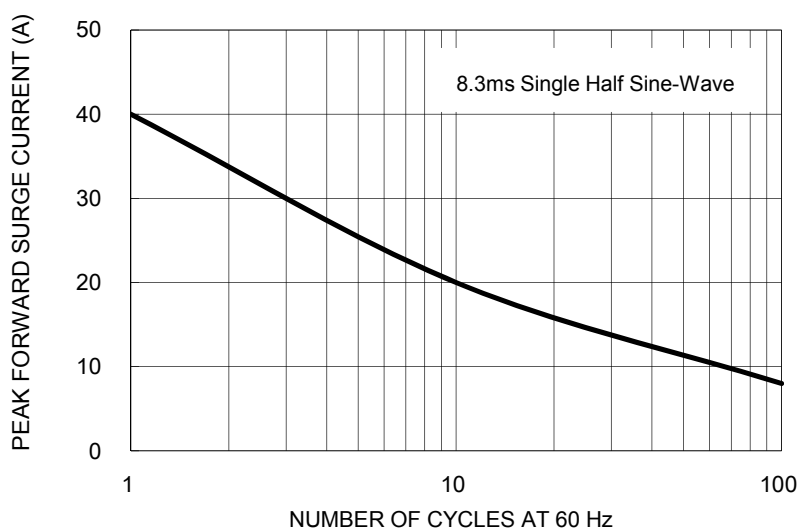


FIG. 4 TYPICAL JUNCTION CAPACITANCE

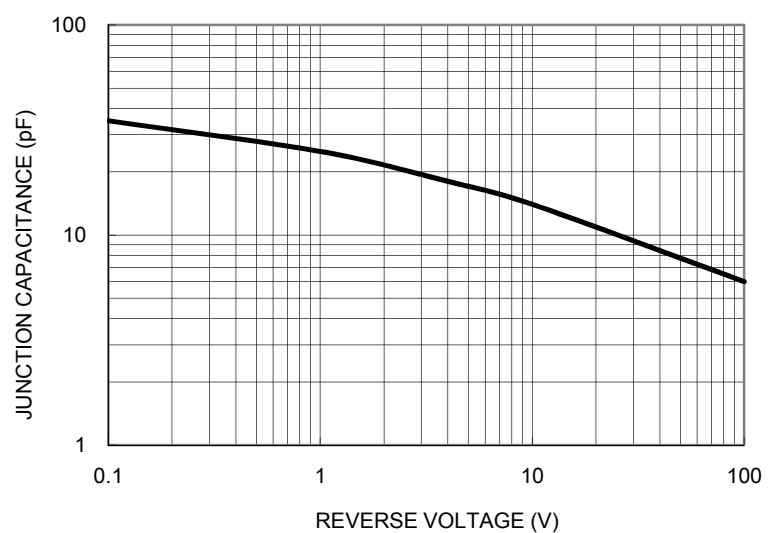
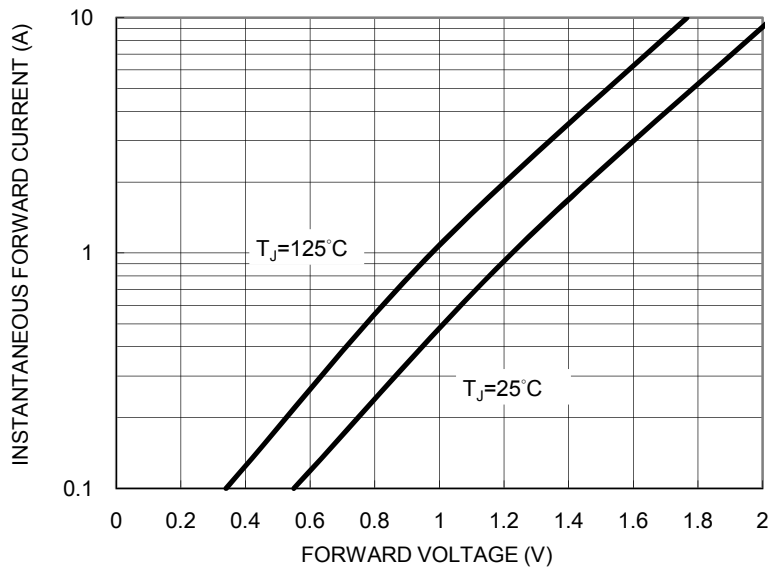
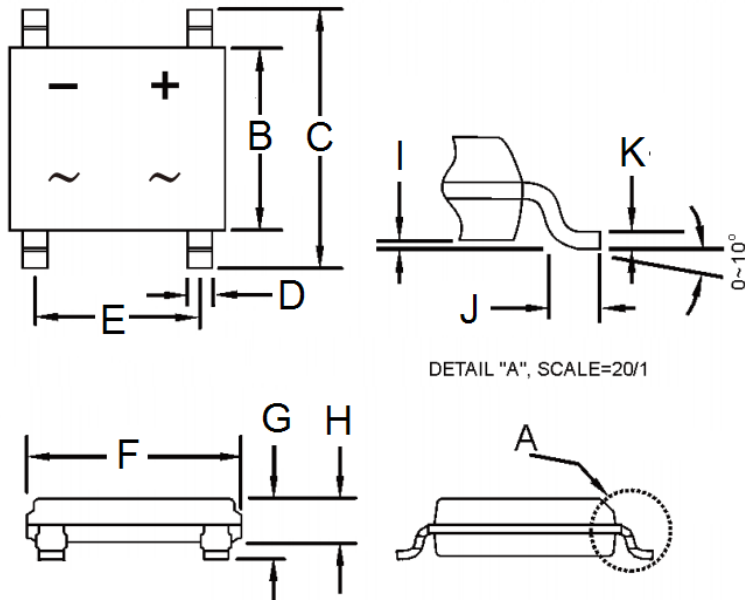


FIG. 5 TYPICAL FORWARD CHARACTERISTICS



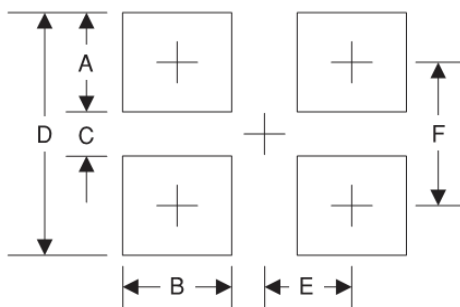
PACKAGE OUTLINE DIMENSIONS

**ABS**



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
B	4.30	4.50	0.169	0.177
C	6.25	6.65	0.246	0.262
D	0.60	0.70	0.024	0.028
E	3.90	4.10	0.154	0.161
F	4.90	5.10	0.193	0.200
G	1.40	1.60	0.055	0.063
H	1.35	1.45	0.053	0.057
I	0.05	0.15	0.002	0.006
J	0.30	0.70	0.012	0.028
K	0.15	0.25	0.006	0.010

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	1.5	0.059
B	0.9	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 = Specific Device Code
- YW = Date Code
- F = Factory Code

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