

## 1A, 400V - 1000V Glass Passivated Bridge Rectifier

### FEATURES

- Glass passivated junction
- Ideal for automated placement
- Reliable low cost construction utilizing molded plastic technique
- High surge current capability
- UL Recognized File # E-326854
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

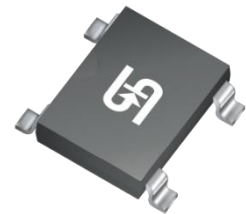
### APPLICATIONS

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

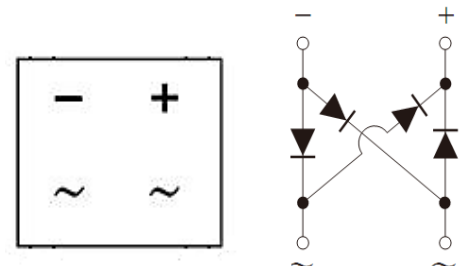
### MECHANICAL DATA

- Case: ABS
- Molding compound :meets UL 94V-0 flammability rating
- Packing code with suffix "G" means green compound (halogen-free)
- Moisture sensitivity level: level 1, per J-STD-020
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1A whisker test
- Polarity: As marked
- Weight: 0.12 g (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
$I_{F(AV)}$	1	A
$V_{RRM}$	400 - 1000	V
$I_{FSM}$	30	A
$T_{J\ MAX}$	150	°C
Package	ABS	
Configuration	Quad	



ABS



ABSOLUTE MAXIMUM RATINGS (T <sub>A</sub> = 25°C unless otherwise noted)						
PARAMETER	SYMBOL	ABS4-K	ABS6-K	ABS8-K	ABS10-K	UNIT
Marking code on the device		ABS4	ABS6	ABS8	ABS10	
Repetitive peak reverse voltage	V <sub>RRM</sub>	400	600	800	1000	V
Reverse voltage, total rms value	V <sub>R(RMS)</sub>	280	420	560	700	V
Maximum DC blocking voltage	V <sub>DC</sub>	400	600	800	1000	V
Forward current On glass-epoxy	I <sub>F(AV)</sub>	0.8				A
Forward current On aluminum substrate		1.0				
Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	30				A
I <sup>2</sup> t value (of a surge on-state current)	I <sup>2</sup> t	3.74				A <sup>2</sup> s
Junction temperature	T <sub>J</sub>	-55 to +150				°C
Storage temperature	T <sub>STG</sub>	-55 to +150				°C

**THERMAL PERFORMANCE**

PARAMETER	SYMBOL	LIMIT	UNIT
Junction-to-lead thermal resistance	$R_{\theta JL}$	25	°C/W
Junction-to-ambient thermal resistance	$R_{\theta JA}$	80	°C/W

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

PARAMETER	CONDITIONS	SYMBOL	TYP.	MAX.	UNIT
Forward voltage <sup>(1)</sup>	$I_F = 0.4\text{A}$ , $T_J = 25^\circ\text{C}$	$V_F$	-	0.95	V
Reverse current @ rated $V_R$ <sup>(2)</sup>	$T_J = 25^\circ\text{C}$	$I_R$	-	10	$\mu\text{A}$
	$T_J = 125^\circ\text{C}$		-	150	$\mu\text{A}$

**Notes:**

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

**ORDERING INFORMATION**

PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
ABSxx-K (Note 1, 2)	RE	G	ABS	1,000 / 7" Plastic reel
	RG		ABS	5,000 / 13" Paper reel

**Notes:**

1. "xx" defines voltage from 400V (ABS4-K) to 1000V (ABS10-K)
2. Whole series with green compound (halogen-free)

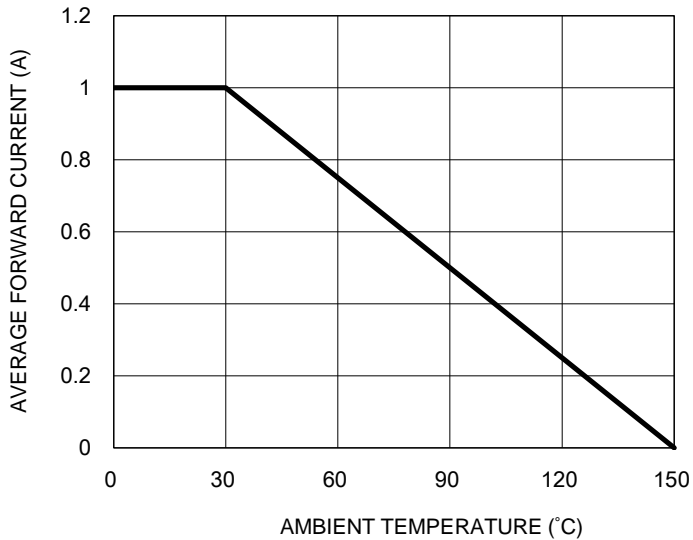
**EXAMPLE P/N**

EXAMPLE P/N	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
ABS8-K REG	ABS8-K	RE	G	Green compound

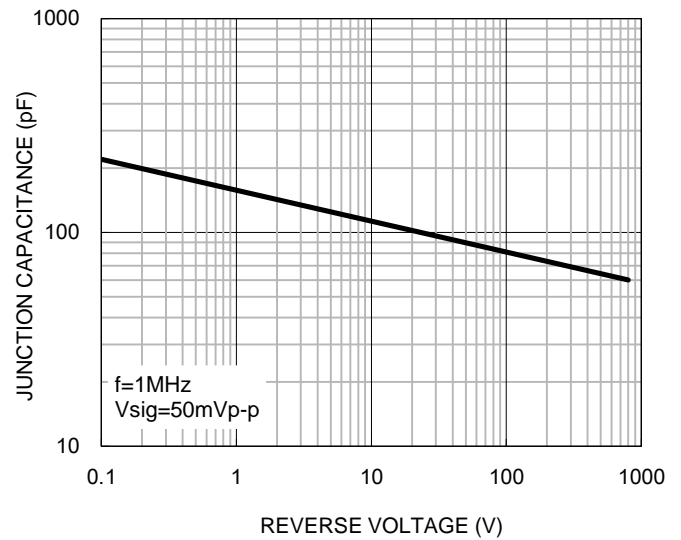
## CHARACTERISTICS CURVES

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

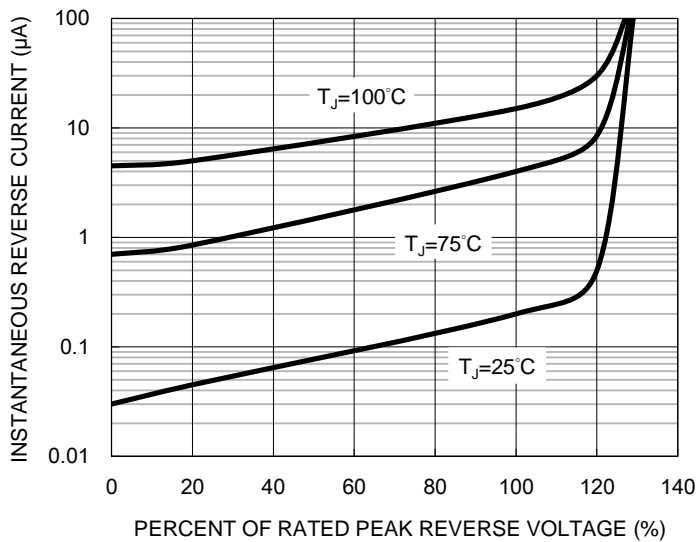
**Fig.1 Forward Current Derating Curve**



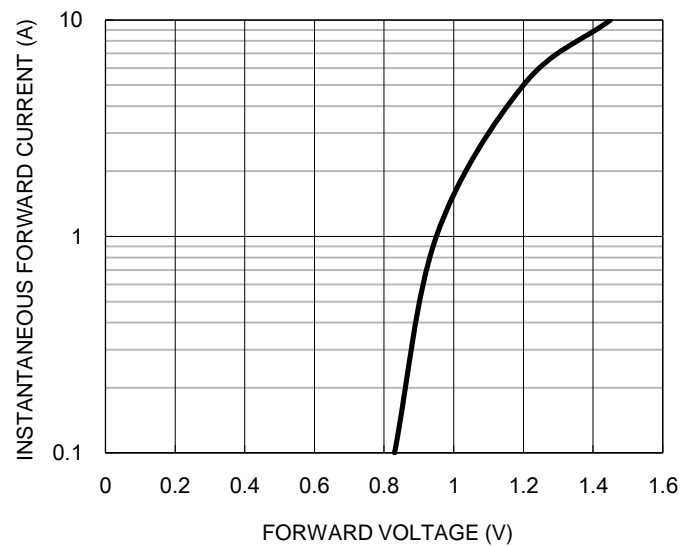
**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



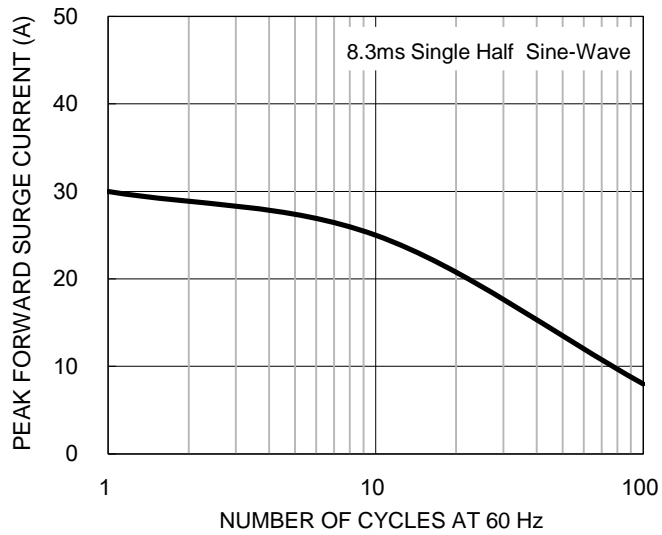
**Fig.4 Typical Forward Characteristics**



## CHARACTERISTICS CURVES

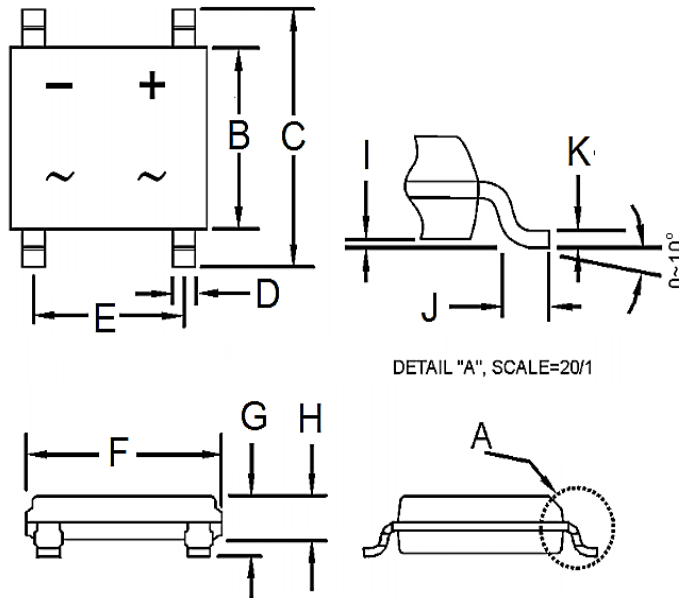
( $T_A = 25^\circ\text{C}$  unless otherwise noted)

**Fig.5 Maximum Non-repetitive Forward Surge Current**



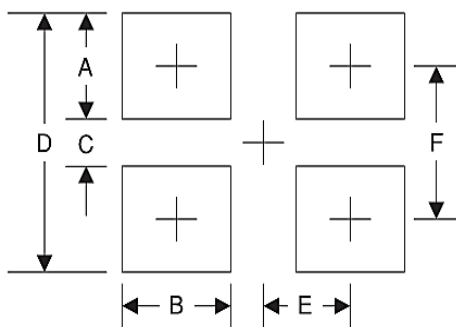
## PACKAGE OUTLINE DIMENSIONS

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 = Marking Code  
YW = Date Code  
F = Factory Code

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