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1A, 50V - 1000V Glass Passivated High Efficient Bridge Rectifiers

FEATURES

- 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



DBLS

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

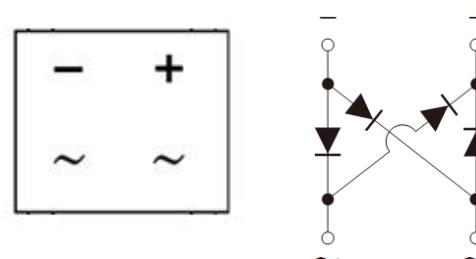
Packing code with suffix "G" means green compound (halogen-free)

Terminal: Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 2 whisker test

Polarity: Polarity as marked on the body

Weight: 0.36 g (approximately)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	HDBLS 101G	HDBLS 102G	HDBLS 103G	HDBLS 104G	HDBLS 105G	HDBLS 106G	HDBLS 107G	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current	$I_{F(AV)}$				1				A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}				50				A
Rating for fusing ($t < 8.3\text{ms}$)	I^2t				10.3				A^2s
Maximum instantaneous forward voltage (Note 1) $I_F = 1\text{ A}$	V_F		1.0		1.3		1.7		V
Maximum reverse current @ rated V_R $T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	I_R				5 500				μA
Maximum reverse recovery time (Note 2)	t_{rr}		50			75			ns
Typical thermal resistance	$R_{\theta JL}$ $R_{\theta JA}$				15 40				$^\circ\text{C/W}$
Operating junction temperature range	T_J				- 55 to +150				$^\circ\text{C}$
Storage temperature range	T_{STG}				- 55 to +150				$^\circ\text{C}$

Note 1: Pulse Test with $PW=300\mu\text{s}$, 1% Duty Cycle

Note 2: Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

ORDERING INFORMATION

PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX (*)	PACKAGE	PACKING
HDBLS10xG (Note 1)	H	C1	G	DBLS	50 / TUBE
		RD			1,500 / 13" Paper reel

Note 1: "x" defines voltage from 50V (HDBLS101G) to 1000V (HDBLS107G)

*: Optional available

EXAMPLE

PREFERRED P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
HDBLS107GHRDG	HDBLS107G	H	RD	G	AEC-Q101 qualified Green compound

RATINGS AND CHARACTERISTICS CURVES

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

FIG.1 FORWARD CURRENT DERATING CURVE

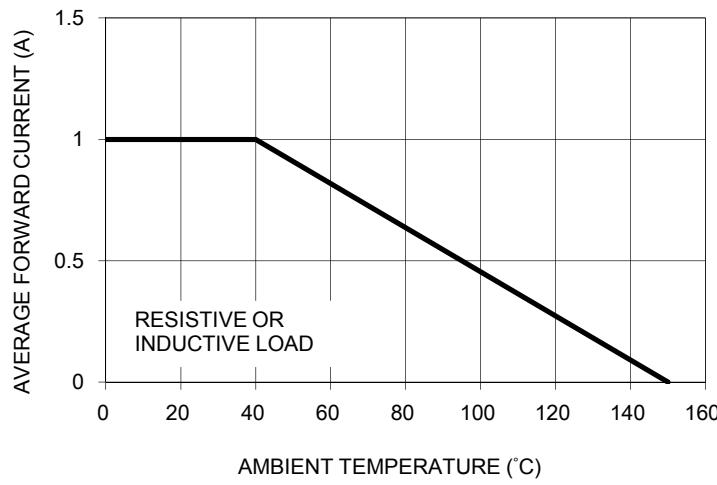


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

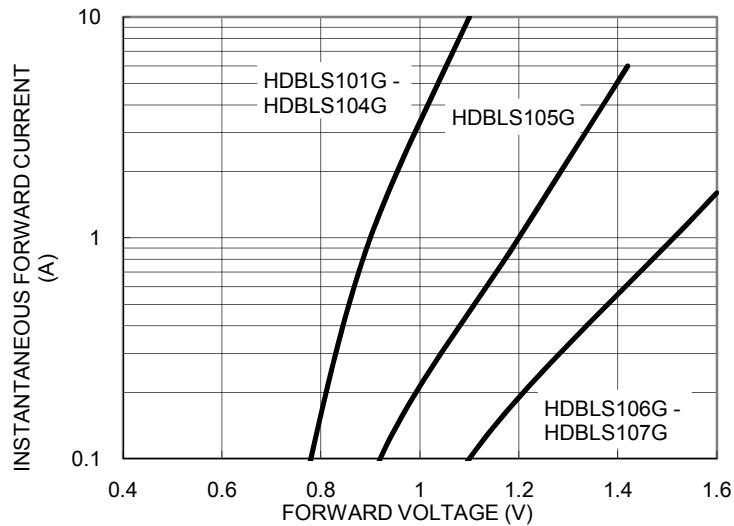


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

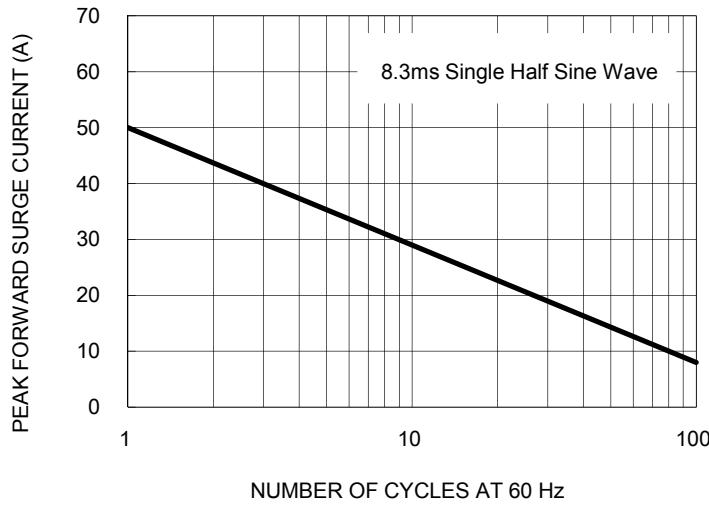


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

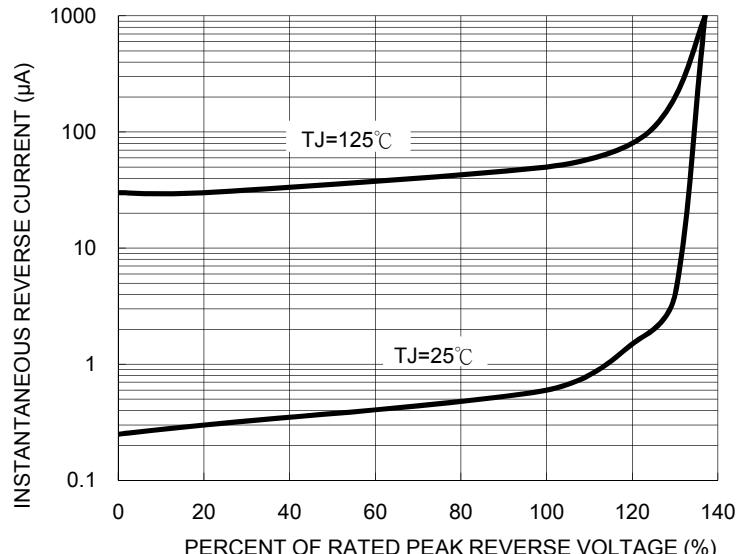
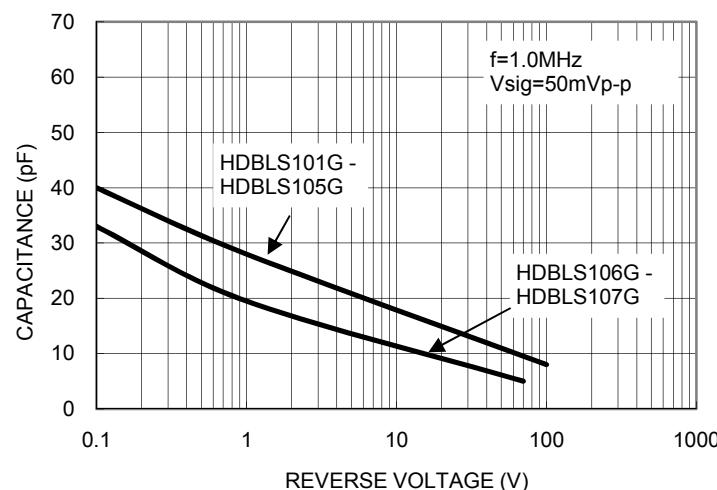
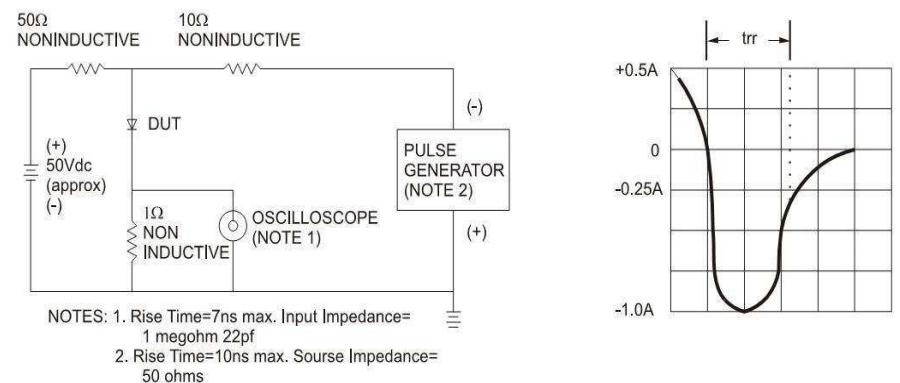
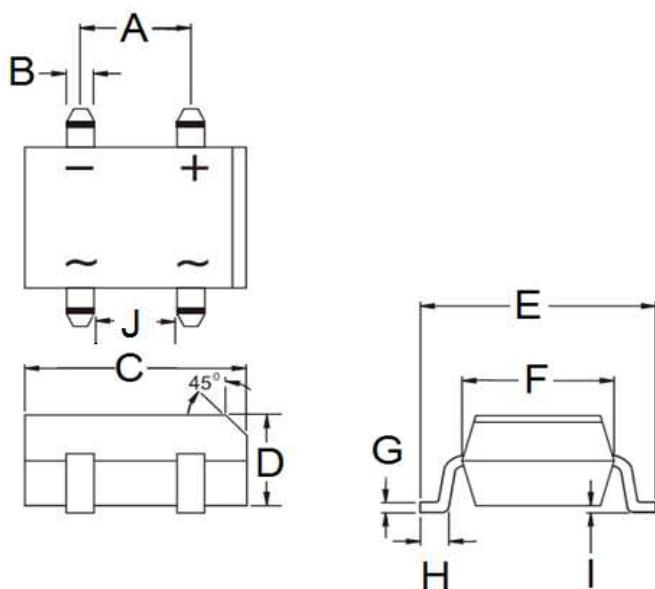
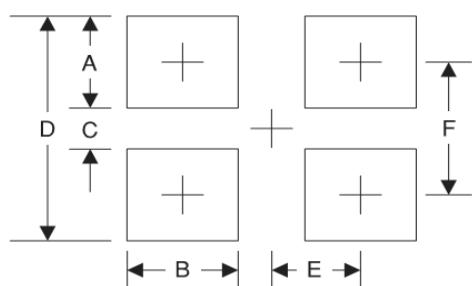


FIG. 5 TYPICAL JUNCTION CAPACITANCE

FIG.6 REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

PACKAGE OUTLINE DIMENSIONS
DBLS


DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	5.00	5.20	0.197	0.205
B	1.02	1.20	0.040	0.047
C	8.13	8.51	0.320	0.335
D	2.40	2.60	0.094	0.102
E	9.80	10.30	0.386	0.406
F	6.20	6.50	0.244	0.256
G	0.22	0.33	0.009	0.013
H	1.02	1.53	0.040	0.060
I	0.076	0.33	0.003	0.013
J	3.90	4.10	0.154	0.161

SUGGESTED PAD LAYOUT


Symbol	Unit (mm)	Unit (inch)
A	2.3	0.091
B	1.3	0.051
C	6.9	0.272
D	11.5	0.453
E	2.6	0.102
F	9.2	0.362

MARKING DIAGRAM


P/N	= Specific Device Code
G	= Green Compound
YW	= Date Code
F	= Factory Code

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