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15A, 600V - 800V Low VF, Low Noise Single-Phase Single In-Line Bridge Rectifiers

FEATURES

- Low forward drop enhance the efficiency
- Oxide planar chip junction
- High surge current capability
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21


GBU
MECHANICAL DATA
Case: GBU

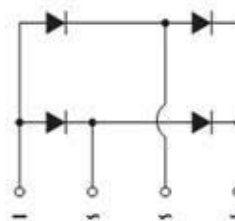
Molding compound, UL flammability classification rating 94V-0

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

Polarity: As marked

Weight: 4 g (approximately)

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

PARAMETER	SYMBOL	GBU15L05		GBU15L06		UNIT
		TYP	MAX	TYP	MAX	
Maximum repetitive peak reverse voltage	V_{RRM}	600		800		V
Maximum RMS voltage	V_{RMS}	420		560		V
Maximum DC blocking voltage	V_{DC}	600		800		V
Maximum average forward rectified current	$I_{F(AV)}$	15				A
Peak forward surge current, 8.3 ms single half sine-wave	I_{FSM}	200				A
Peak forward surge current, 1.0 ms single half sine-wave	I_{FSM}	630				A
Rating of fusing ($t < 8.3\text{ms}$)	I^2t	166				A^2s
Maximum Instantaneous Forward Voltage $I_F = 7.5\text{ A}$ (Note 1)	V_F	TYP	MAX	TYP	MAX	V
		0.87	0.90	0.93	0.96	
		0.75	-	-	-	
Maximum reverse current @ rated V_R	I_R	5				μA
		150				
Typical thermal resistance	$R_{\theta JC}$	3				$^\circ\text{C/W}$
	$R_{\theta JA}$	15				
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

ORDERING INFORMATION					
PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX (*)	PACKAGE	PACKING
GBU15L0x (Note 1)	H	C2	G	GBU	20 / Tube
		D2			20 / Tube
		X0			Forming

Note 1: "x" defines voltage from 600V (GBU15L05) to 800V (GBU15L06)

*: Optional available

EXAMPLE					
PREFERRED P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
GBU15L05HD2G	GBU15L05	H	D2	G	AEC-Q101 qualified Green compound

RATINGS AND CHARACTERISTICS CURVES

(T_A=25°C unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

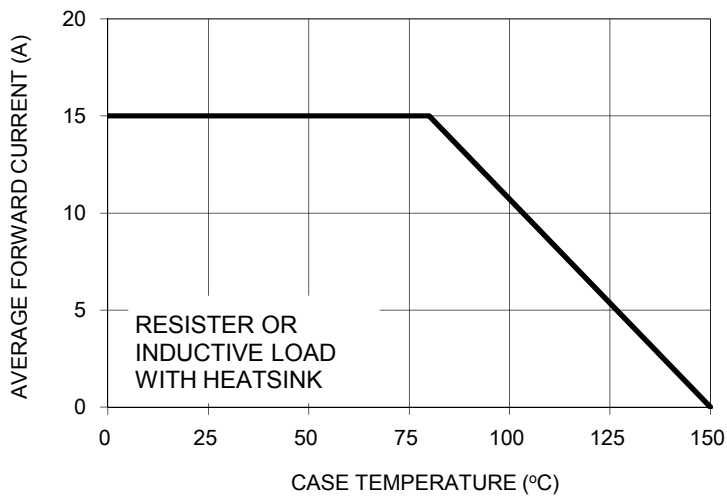


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

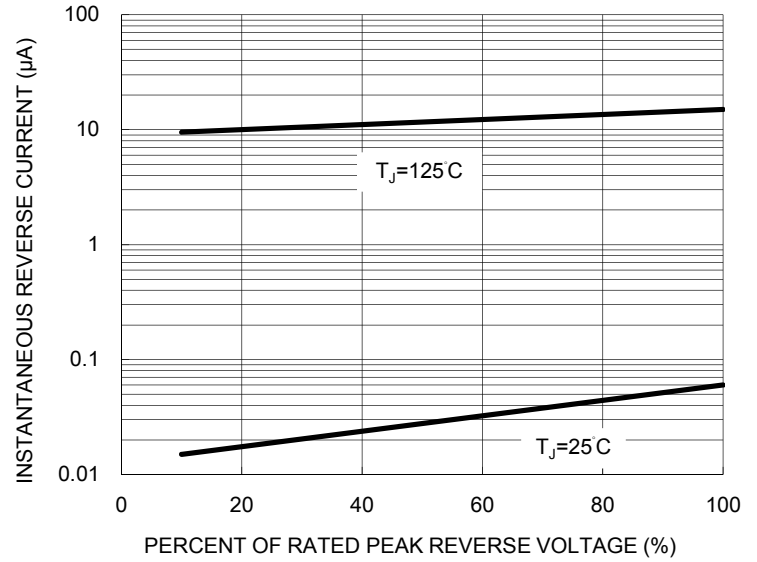


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

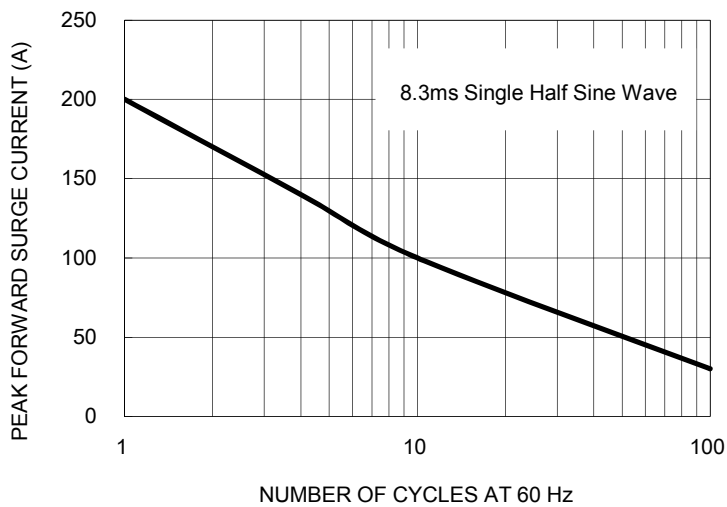


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

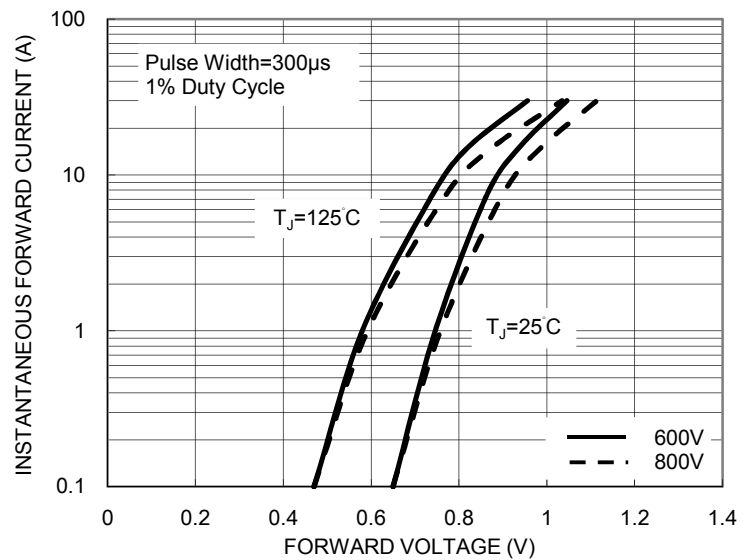
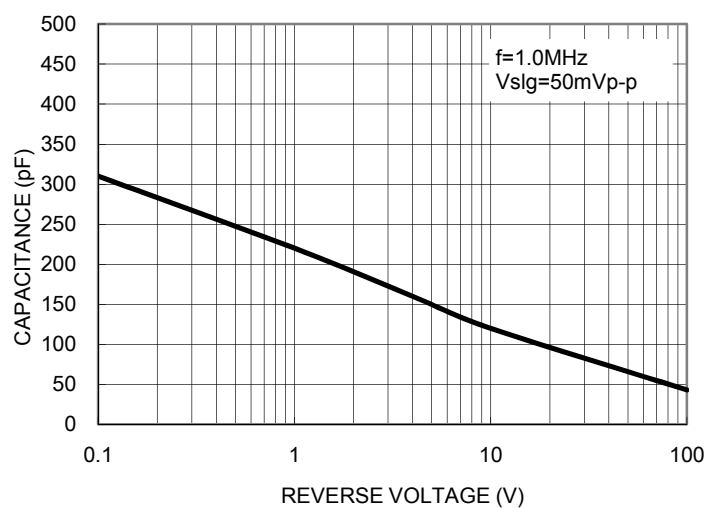
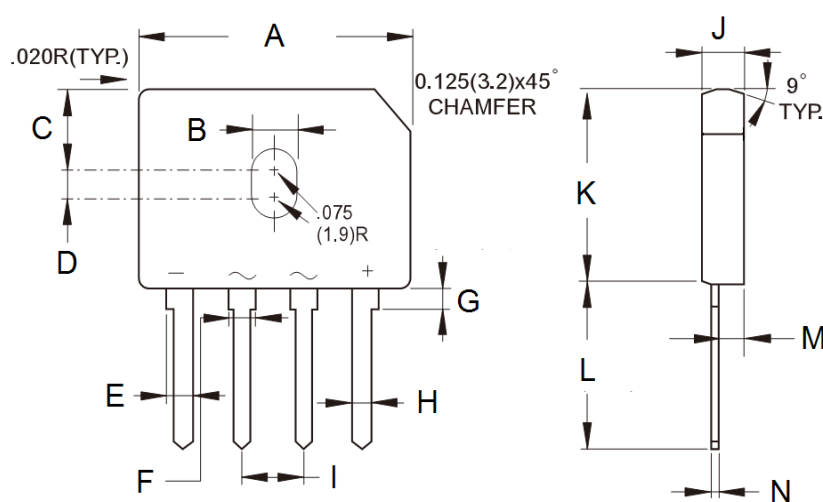


FIG. 5 TYPICAL JUNCTION CAPACITANCE



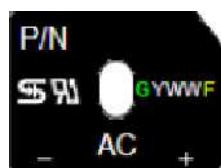
PACKAGE OUTLINE DIMENSIONS

GBU



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	21.80	22.30	0.858	0.878
B	3.50	4.10	0.138	0.161
C	7.40	7.90	0.291	0.311
D	1.65	2.16	0.065	0.085
E	2.16	2.54	0.085	0.100
F	1.65	2.03	0.065	0.080
G	1.52	2.03	0.060	0.080
H	1.02	1.27	0.040	0.050
I	4.83	5.33	0.190	0.210
J	3.30	3.56	0.130	0.140
K	18.30	18.80	0.720	0.740
L	17.50	18.00	0.689	0.709
M	1.90	2.16	0.075	0.085
N	0.46	0.56	0.018	0.022

MARKING DIAGRAM



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

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