

## 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

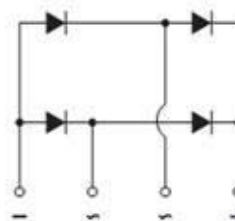
Molding compound, UL flammability classification rating 94V-0

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 <sub>A</sub> =25°C unless otherwise noted)							
PARAMETER	SYMBOL	GBU15L05		GBU15L06		UNIT	
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	600		800		V	
Maximum RMS voltage	V <sub>RMS</sub>	420		560		V	
Maximum DC blocking voltage	V <sub>DC</sub>	600		800		V	
Maximum average forward rectified current	I <sub>F(AV)</sub>	15				A	
Peak forward surge current, 8.3 ms single half sine-wave	I <sub>FSM</sub>	200				A	
Peak forward surge current, 1.0 ms single half sine-wave	I <sub>FSM</sub>	630				A	
Rating of fusing ( t<8.3ms)	I <sup>2</sup> t	166				A <sup>2</sup> s	
Maximum Instantaneous Forward Voltage I <sub>F</sub> = 7.5 A (Note 1)	V <sub>F</sub>	T <sub>J</sub> =25°C	TYP	MAX	TYP	MAX	V
		T <sub>J</sub> =125°C	0.87	0.90	0.93	0.96	
			0.75	-	-	-	
Maximum reverse current @ rated V <sub>R</sub>	I <sub>R</sub>	T <sub>J</sub> =25°C	5				μA
		T <sub>J</sub> =125°C	150				
Typical thermal resistance	R <sub>θJC</sub>	3				°C/W	
	R <sub>θJA</sub>	15					
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

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<sub>A</sub>=25°C unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

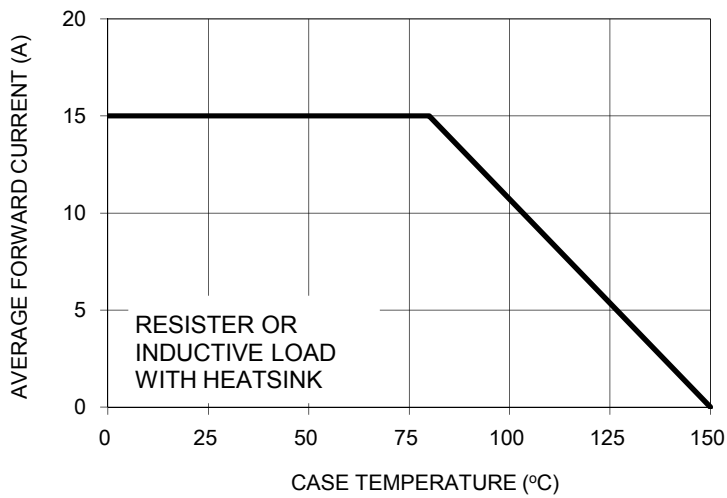


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

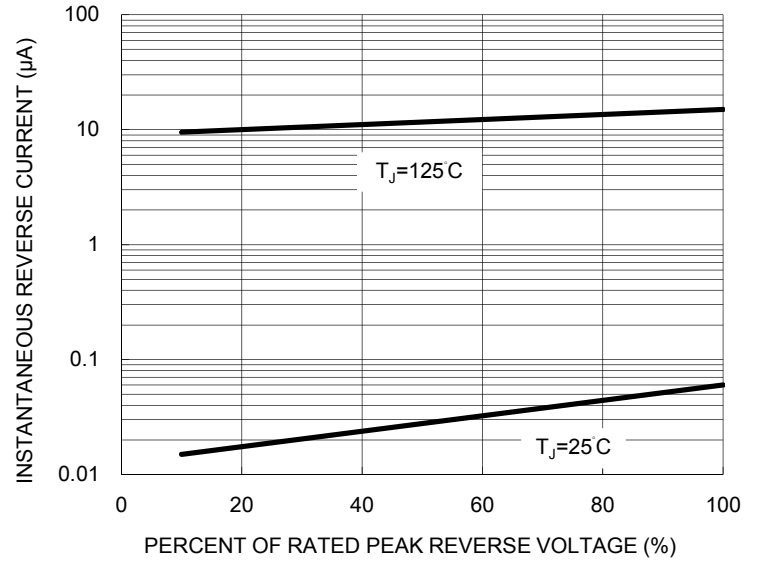


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

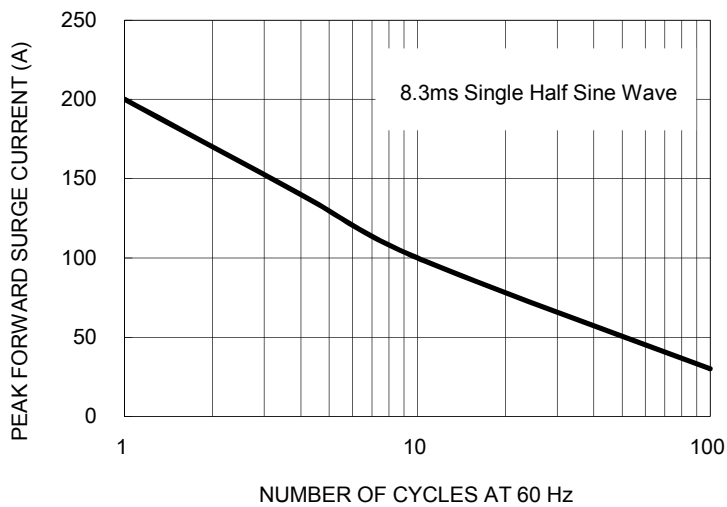


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

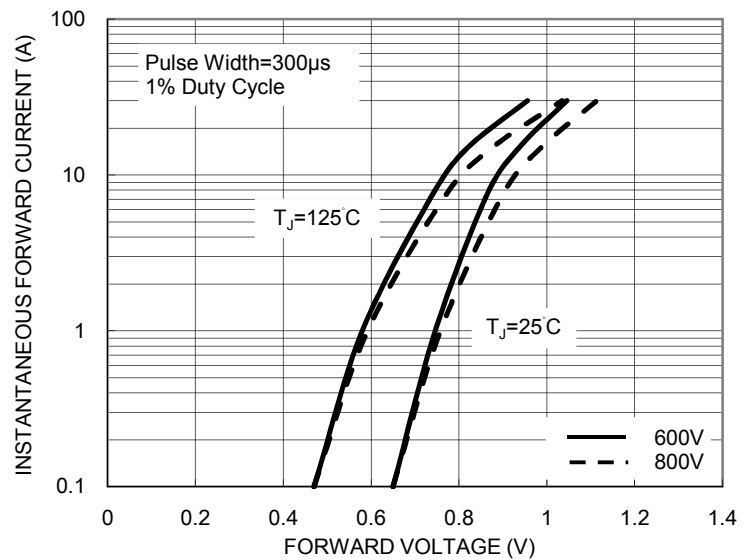
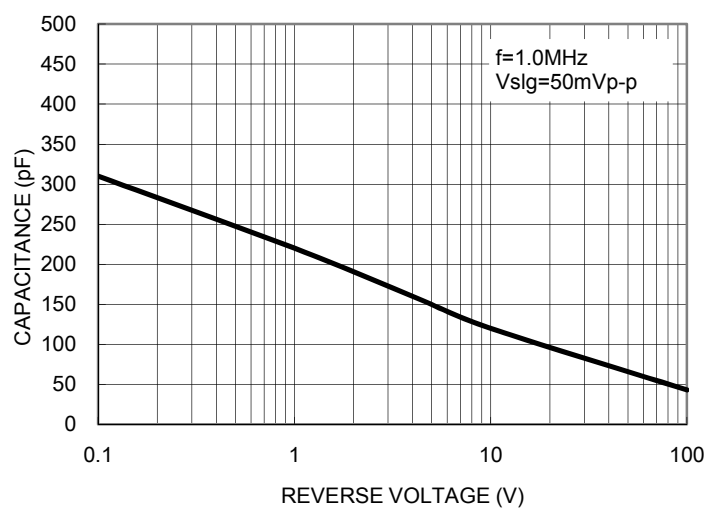
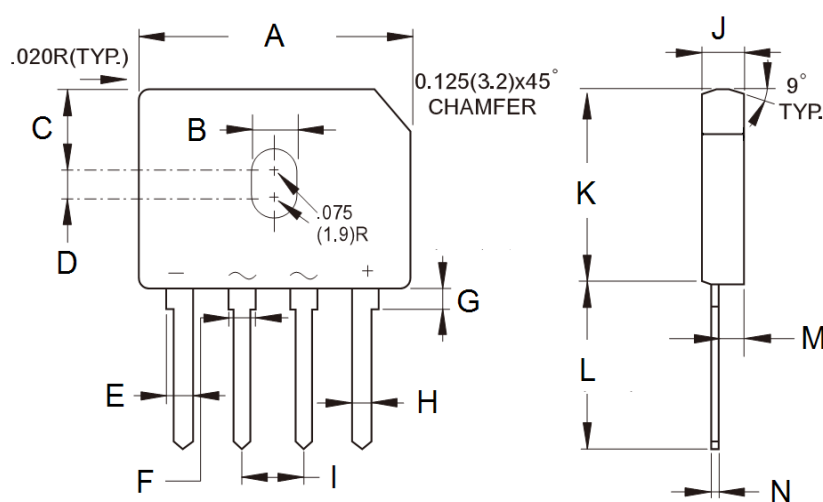


FIG. 5 TYPICAL JUNCTION CAPACITANCE



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

## Notice

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.