



# 4A, 400V - 1000V Glass Passivated Single-Phase Bridge Rectifiers

## **FEATURES**

- Ideal for printed circuit board
- High case dielectric strength of 1500 VRMS
- 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







## **MECHANICAL DATA**

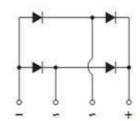
Case: GBU

Molding compound: UL flammability classification rating 94V-0 **Terminals:** Matte tin plated leads, solderable per J-STD-002 Packing code with suffix "G" means green compound (halogen-free)

Polarity: As marked

Mounting torque: 0.56 Nm (5 in-lbs.) max.

Weight: 4 g (approximately)



**GBU** 

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)							
PARAMETER		SYMBOL	GBU404-K	GBU405-K	GBU406-K	GBU407-K	UNIT
Marking code			GBU404	GBU405	GBU406	GBU407	
Maximum repetitive peak reverse voltage		$V_{RRM}$	400	600	800	1000	V
Maximum RMS voltage		$V_{RMS}$	280	420	560	700	V
Maximum DC blocking voltage		$V_{DC}$	400	600	800	1000	V
Maximum average forward rectified current		I <sub>F(AV)</sub>	4				Α
Peak forward surge current, 8.3 ms single half sine-wave		I <sub>FSM</sub>	150			Α	
Rating of fusing ( t<8.3ms)		l <sup>2</sup> t	93			A <sup>2</sup> s	
Maximum Instantaneous Forward Voltage (Note 1) $I_F=2~A$ $I_F=4~A$		V <sub>F</sub>	1.0 1.1			٧	
Maximum reverse current @ rated V <sub>P</sub>	=25°C =125°C	I <sub>R</sub>	5 500		μA		
Typical junction capacitance per leg (Note 2)		CJ	100 45			pF	
Typical thermal resistance		$R_{ hetaJC} \ R_{ hetaJA}$	4 20			°C/W	
Operating junction temperature range		TJ	- 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: Measured at 1MHz and applied reverse bias of 4.0V DC



ORDERING INFORMATION					
PART NO.	PACKING CODE	PACKING CODE SUFFIX (*)		PACKING	
GBU40X-K (Note 1)	D2	G	GBU	20 / Tube	

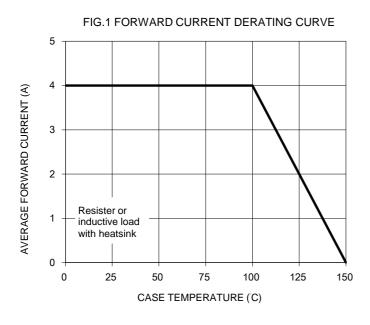
Note 1: "x" defines voltage from 400V (GBU404-K) to 1000V (GBU407-K)

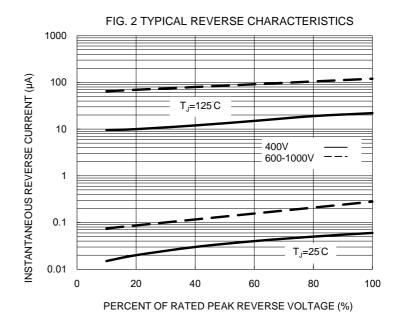
Note 2: " \* " defines optional available

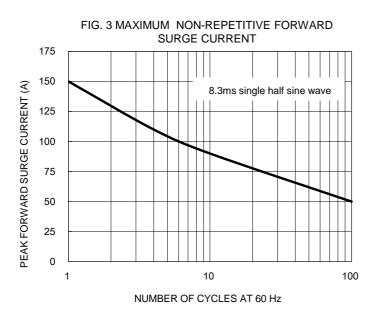
EXAMPLE					
EXAMPLE PART NO.	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION	
GBU406-K D2	GBU406-K	D2		Non-Green compound	
GBU406-K D2G			G	Green compound	

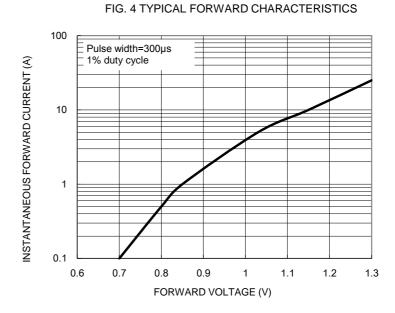
#### **RATINGS AND CHARACTERISTICS CURVES**

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





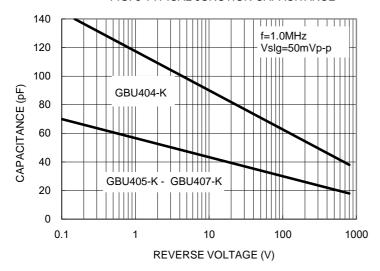




Version: C1606

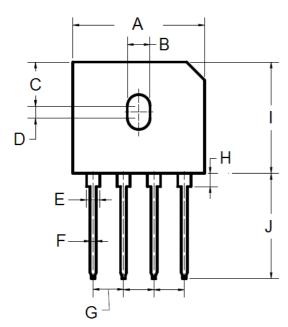


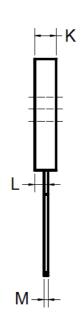
FIG. 5 TYPICAL JUNCTION CAPACITANCE



## **PACKAGE OUTLINE DIMENSIONS**

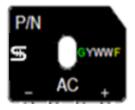
**GBU** 





DIM.	Unit	(mm)	Unit (inch)		
DIIVI.	Min	Max	Min	Max	
Α	21.80	22.30	0.858	0.878	
В	3.50	4.10	0.138	0.161	
С	7.40	7.90	0.291	0.311	
D	1.65	2.16	0.065	0.085	
Е	2.06	2.54	0.081	0.100	
F	1.02	1.27	0.040	0.050	
G	4.83	5.33	0.190	0.210	
Н	1.91	2.54	0.075	0.100	
1	18.30	18.80	0.720	0.740	
J	17.50	18.00	0.689	0.709	
K	3.30	3.56	0.130	0.140	
L	2.40	2.66	0.094	0.105	
М	0.46	0.56	0.018	0.022	

# **MARKING DIAGRAM**



P/N = Marking code
YW = Date Code
F = Factory Code
G = Green Compound

Version: C1606



## **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.

Version: C1606