

Product Summary

V _{RRM} (V)	I _F (A)	V _F Max (V) @ I _F = 20A	I _R Max (μA)
1000	40	1.1	5

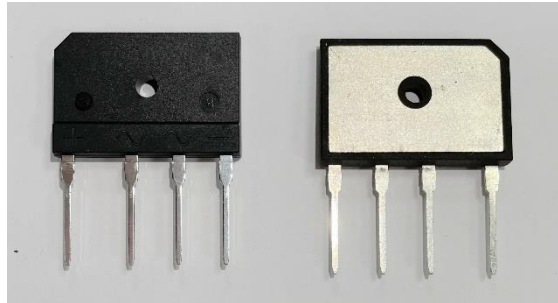
Mechanical Data

- Package: GBJ5
- Package Material: Plastic Material, UL Flammability Classification 94V-0
- Terminals: Finish – Matte Tin Plated Leads, Solderable Per MIL-STD-202, Method 208
- Polarity Indicator: Symbol Molded On Body
- Weight: 7.2 grams (Approximate)

Features

- Glass Passivated Die Construction
- Ideal for Printed Circuit Board
- High Surge Current Capability
- Ceramic Heat Sink On The Back Superior Thermal Conductivity
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. “Green” Device (Note 3)**
- **For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](#) or your local Diodes representative.**

<https://www.diodes.com/quality/product-definitions/>

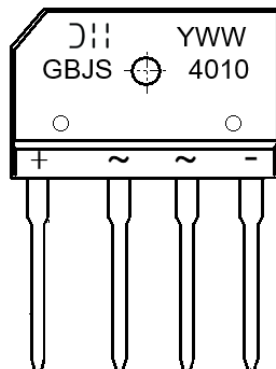


Ordering Information (Note 4)

Part Number	Qualification	Package	Packing	
			Qty.	Carrier
GBJS4010	Commercial	GBJS	15pcs	Tube

- Notes:
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
 2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
 3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
 4. For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.

Marking Information



GBJS4010 = Product Type Marking Code
 ⌋⌋⌋ = Manufacturer's Code Marking
 YWW = Date Code Marking
 Y = Last Digit of Year (ex: 1 = 2021)
 WW = Week Code (01 to 53)

Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	1000	V
Maximum DC Blocking Voltage	V _{DC}	1000	V
Average Rectified Output Current @ T _C = +120°C	I _{F(AV)}	40 4.0	A
Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed On Rated Load (Note 5)	I _{FSM}	360	A
Peak Forward Surge Current 1.0ms Single Half Sine Wave Superimposed On Rated Load (Note 5)	I _{FSM}	720	A
I ² t Rating for Fusing (t = 8.3ms)	I ² t	537	A ² s
Mounting Torque (Recommended Torque: 0.5 N.m.)	TOR	0.8	N.m.
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

Electrical Characteristics

Characteristic	Test Conditions	Symbol	Value	Unit
Forward Voltage	I _F = 20A T _J = +25°C	V _F	1.1	V
Leakage Current	V _R = 1000V T _J = +25°C T _J = +125°C	I _R	5 500	μA
Typical Junction Capacitance (Note 5)		C _J	130	pF

Thermal Characteristics

Characteristic	Symbol	Typ	Unit
Typical Thermal Resistance (Note 6)	R _{θJC}	0.45	°C/W
	R _{θJL}	0.5	
	R _{θJA}	1.7	

Notes: 5. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

6. Thermal resistance junction to case, lead and ambient in accordance with JESD-51. Unit mount on 250mm*250mm*10mm Cu plate.

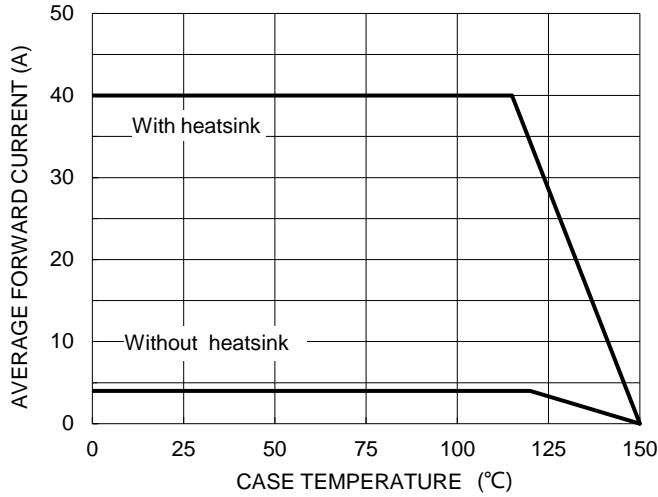


Figure 1. Forward Current Derating Curve

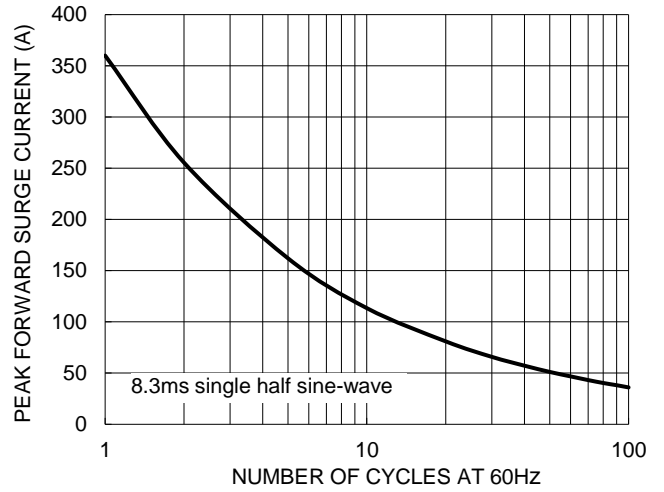


Figure 2. Maximum Non-Repetitive Surge Current

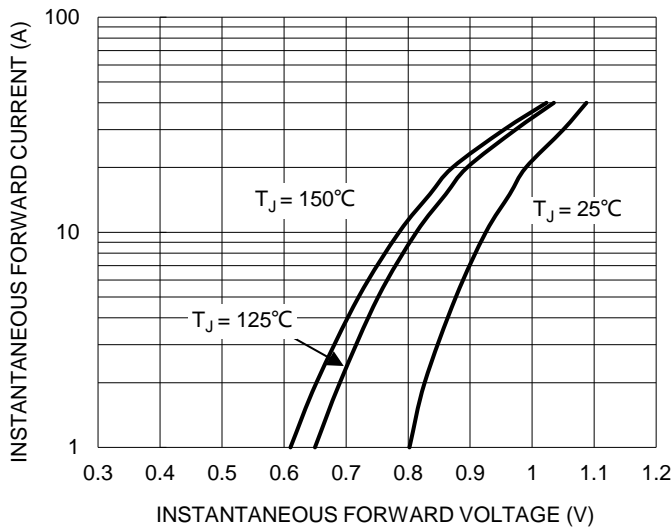


Figure 3. Typical Forward Characteristics

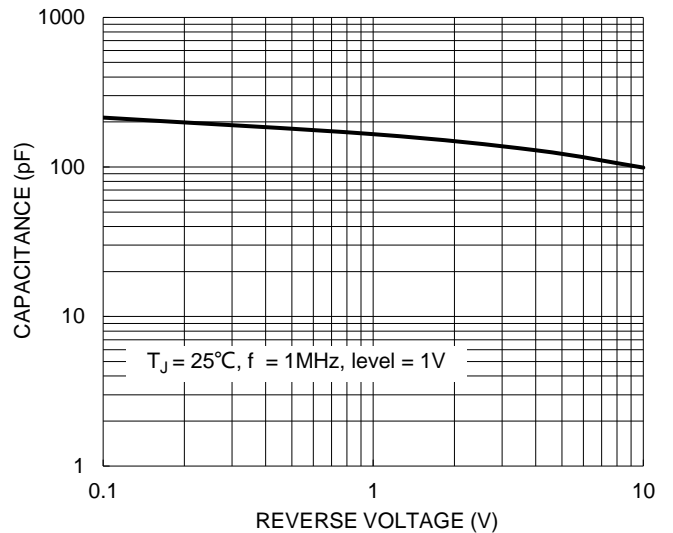


Figure 4. Typical Junction Capacitance

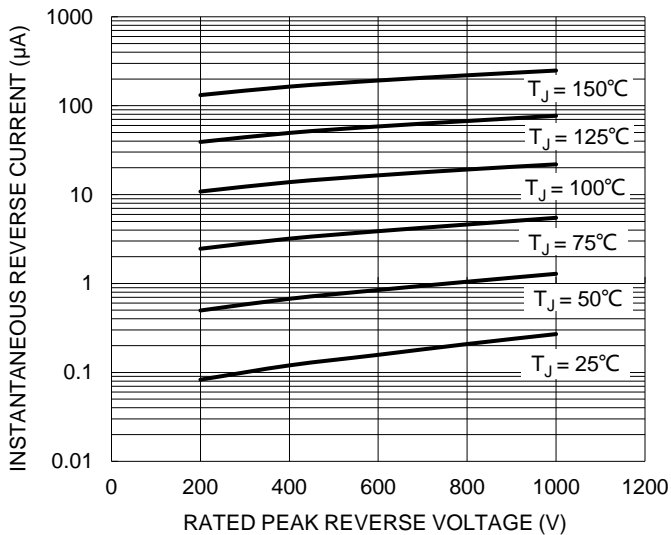
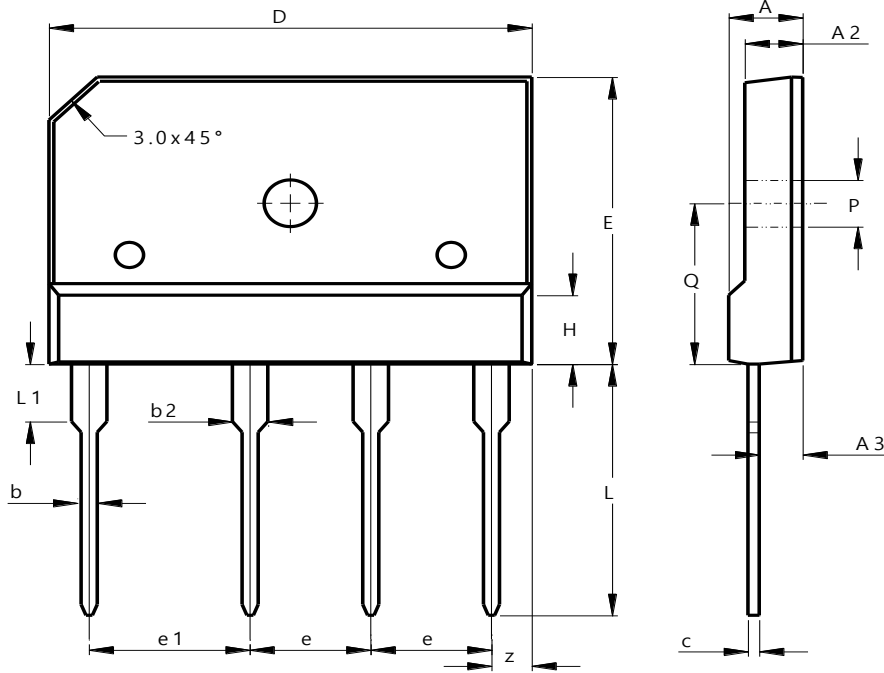


Figure 5. Typical Reverse Characteristics

Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

GBJS



GBJS			
Dim	Min	Max	Typ.
A	4.40	4.80	--
A2	3.40	3.80	--
A3	2.50	2.90	--
b	0.90	1.10	--
b2	2.00	2.40	--
c	0.60	0.80	--
D	29.70	30.30	--
E	19.70	20.30	--
e	7.20	7.70	--
e1	9.80	10.20	--
H	4.70	4.90	--
L	17.00	18.00	--
L1	3.80	4.20	--
P	3.10Ø	3.40Ø	--
Q	10.80	11.20	--
z	2.30	2.70	--
All Dimensions in mm			

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