

**40A Super Fast Recovery Rectifier Bridge**

**Reverse Voltage - 300 to 600 V**

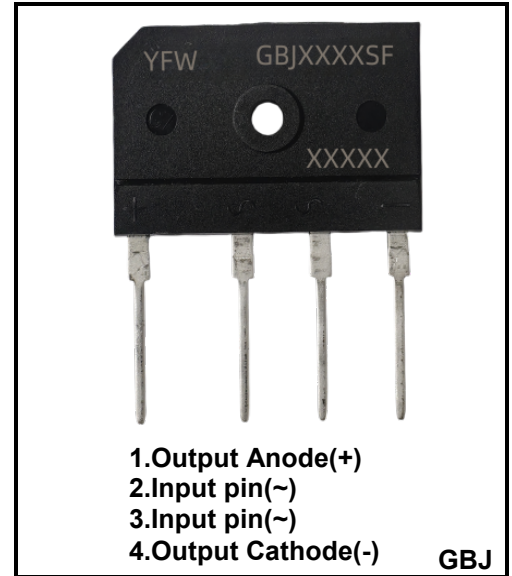
**Forward Current –40A**

**FEATURES**

- ◆Class passivated chip
- ◆Low Reverse Leakage Current
- ◆High surge current capability
- ◆Case to Terminal Isolation Voltage 2500V

**MECHANICAL DATA**

- ◆Case: GBJ
- ◆Terminals: Solderable per MIL-STD-202, Method208
- ◆Approx. Weight: 6.5g



**Maximum Ratings and Electrical characteristics**  
**Ratings at 25 °C ambient temperature unless otherwise specified.**

Parameter	Symbols	GBJ4003SF	GBJ4006SF	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	300	600	V
Maximum RMS voltage	$V_{RMS}$	200	420	V
Maximum DC Blocking Voltage	$V_{DC}$	300	600	V
Maximum Average Forward Rectified Current	$I_{(AV)}$	40		A
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC method) @Ta=85°C	$I_{FSM}$	450		A
Forward Voltage per element @If =40A DC	$V_F$	1.20	1.50	V
Maximum DC Reverse Current at Rated DC Blocking Voltage @Ta=25°C @Ta=125°C	$I_R$	10 500		μA
I2t Rating for Fusing(3ms≤t≤8.3ms)	$I^2t$	664		A <sup>2</sup> S
Typical Junction Capacitance ( Note1 )	$C_j$	130		pF
Maximum Reverse Recovery Time (Note2)	$T_{rr}$	38	45	nS
Typical Thermal Resistance (Note2)	$R_{θJC}$	1.0		°C/W
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +175		°C

Note:  
 (1) Junction to case with heatsink  
 (2) Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with M3 screw

**Ratings and Characteristic Curves**

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

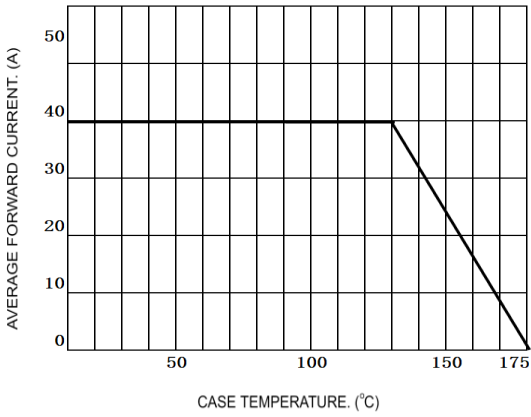


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER BRIDGE ELEMENT

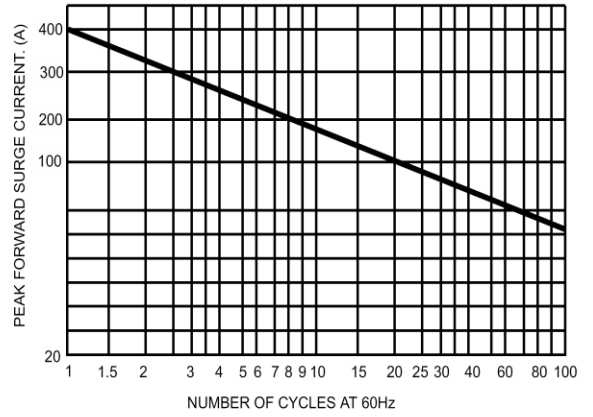


FIG.3- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

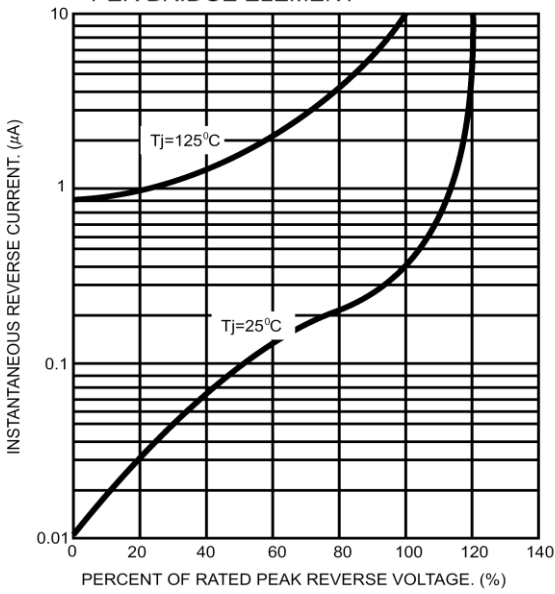
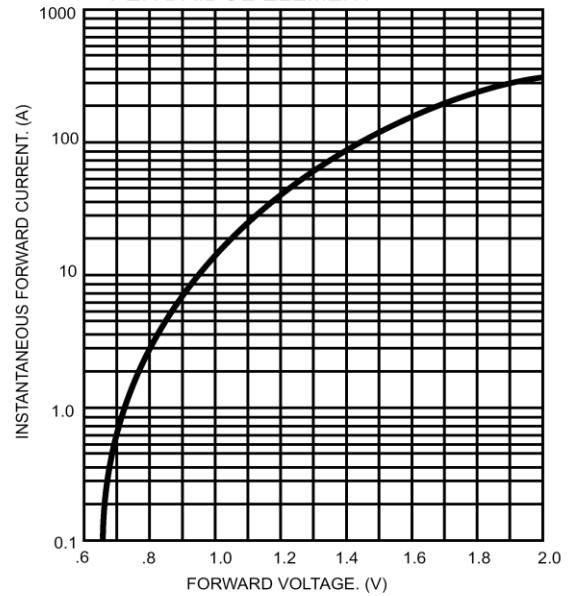
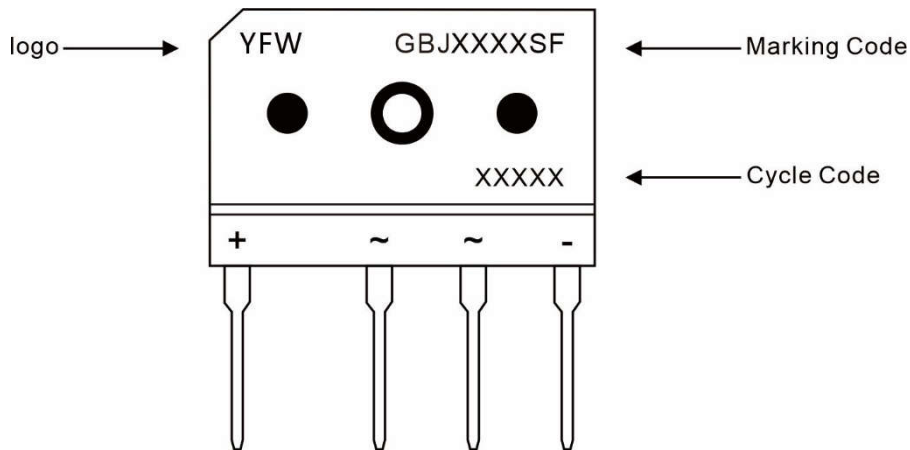


FIG.4- TYPICAL FORWARD CHARACTERISTICS PER BRIDGE ELEMENT



**Marking Diagram**



**Ordering information**

Package	Packing Description	Packing Quantity
GBJ	bulk	250PCS/Box 2000PCS/Carton

**Package Dimensions**

**GBJ**

Dim.	Millimeter(mm)		Dimensions inInch	
	Min.	Max.	Min.	Max.
A	29.70	30.3	1.17	1.19
B	19.70	20.3	0.78	0.80
C	17.00	18.00	0.67	0.71
D	3.80	4.20	0.15	0.17
E	7.30	7.70	0.29	0.30
G	9.80	10.20	0.39	0.40
H	2.00	2.40	0.08	0.09
I	0.90	1.10	0.04	0.04
J	2.30	2.70	0.09	0.11
K	33.0×45°		1.30×45°	
L	4.40	4.80	0.17	0.19
M	3.40	3.80	0.13	0.15
N	3..10	3.40	0.12	0.13
P	2.50	2.90	0.10	0.11
R	0.60	0.80	0.02	0.03
S	10.80	11.20	0.43	0.44

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