

**Ultra Low VF Bridge Rectifier with Super Low Leakage Current**

**Voltage** 600 V **Current** 35A

**GBJ-2**

**Features**



- Oxide planar chip junction
- Low forward voltage drop (VF@0.75V)
- Low leakage current (IR@20uA)
- Lead free in compliance with EU RoHS 2.0
- Halogen-free according to IEC 61249 standard

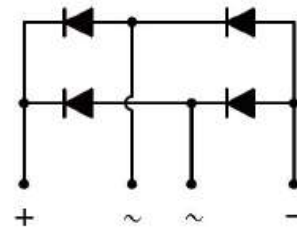


**Mechanical Data**

- Case : GBJ-2 Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 6.6972 grams

**Application**

- Computing Power / Desktop Power
- Game Console Power
- Server Power
- Air Conditioner out door power board
- High Power/High Efficiency Power
- Home Appliances Power Board



Key Parameters	
Parameter	Value
<b><math>V_{RRM}</math></b>	<b>600V</b>
<b><math>I_F(AV)</math></b>	<b>35A</b>
<b><math>I_{FSM}</math></b>	<b>400A</b>
<b><math>V_F@125^{\circ}C</math></b>	<b>0.75V</b>
<b><math>I_R</math></b>	<b>1uA</b>
<b>Package</b>	<b>GBJ-2</b>

**Maximum Ratings and Thermal Characteristics** ( $T_A = 25\text{ }^\circ\text{C}$  unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	600	V
Maximum RMS Voltage	$V_{RMS}$	420	V
Maximum DC Blocking Voltage	$V_{DC}$	600	V
Maximum Average Forward Current	With heatsink	35	A
	Without heatsink	7	
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load	@ $T_A = 25\text{ }^\circ\text{C}$	400	A
	@ $T_A = 125\text{ }^\circ\text{C}$	320	
Peak Forward Surge Current : 1.0 ms Single Half Sine-Wave Superimposed On Rated Load	@ $T_A = 25\text{ }^\circ\text{C}$	800	A
	@ $T_A = 125\text{ }^\circ\text{C}$	640	
$I^2 t$ rating for fusing ( $t = 8.3\text{ms}$ )	$I^2 t$	664	$A^2S$
Typical Junction Capacitance Measured at 1 MHz And Applied $V_R = 4\text{ V}$	$C_J$	280	pF
Typical Thermal Resistance (Note 1) (with heatsink)	$R_{\theta JA}$	6	$^\circ\text{C/W}$
	$R_{\theta JL}$	3	
	$R_{\theta JC}$	1.2	
Operating junction and storage temperature range	$T_J, T_{STG}$	-55~150	$^\circ\text{C}$
Mounting torque @ Recommend torque:5Kg.cm	Tor	8	Kg.cm

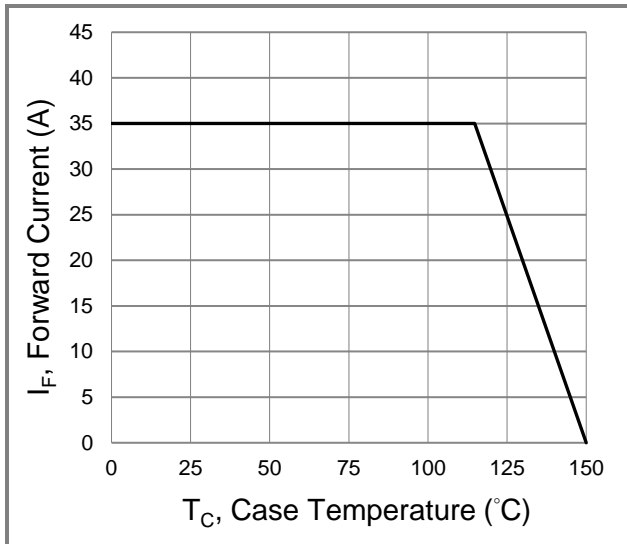
**Electrical Characteristics** ( $T_A = 25\text{ }^\circ\text{C}$  unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	$V_F$	$I_F = 17.5\text{ A}, T_J = 25\text{ }^\circ\text{C}$	-	0.88	0.92	V
		$I_F = 17.5\text{ A}, T_J = 125\text{ }^\circ\text{C}$	-	0.75	-	
Reverse Current	$I_R$	$V_R = 600\text{ V}, T_J = 25\text{ }^\circ\text{C}$	-	0.2	1	uA
		$V_R = 600\text{ V}, T_J = 125\text{ }^\circ\text{C}$	-	20	-	

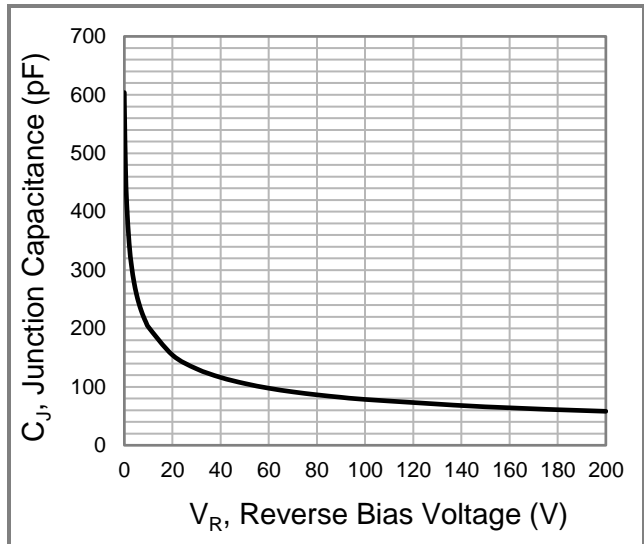
NOTES :

1. Device mounted on 200 mm \* 200 mm \* 20 mm Cu Plate heat sink

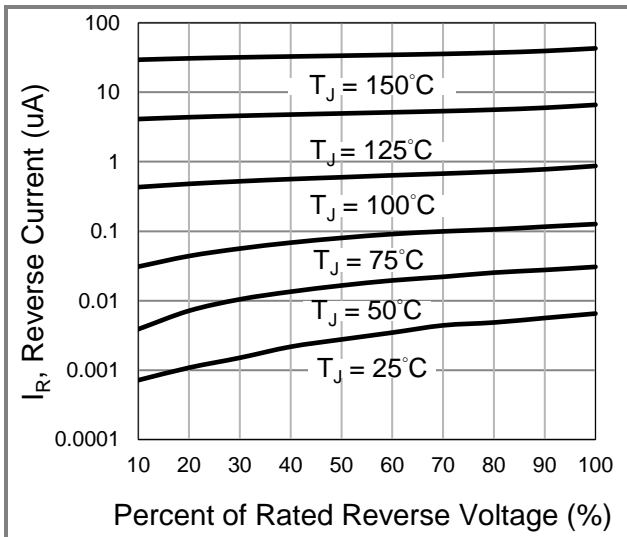
**TYPICAL CHARACTERISTIC CURVES**



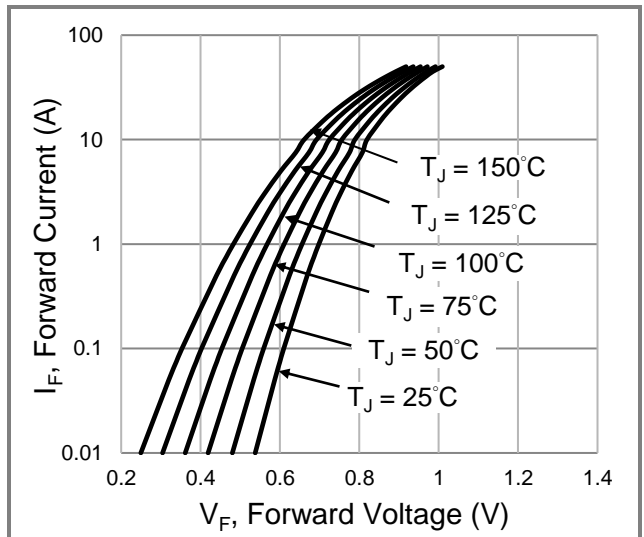
**Fig.1 Forward Current Derating Curve**



**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**

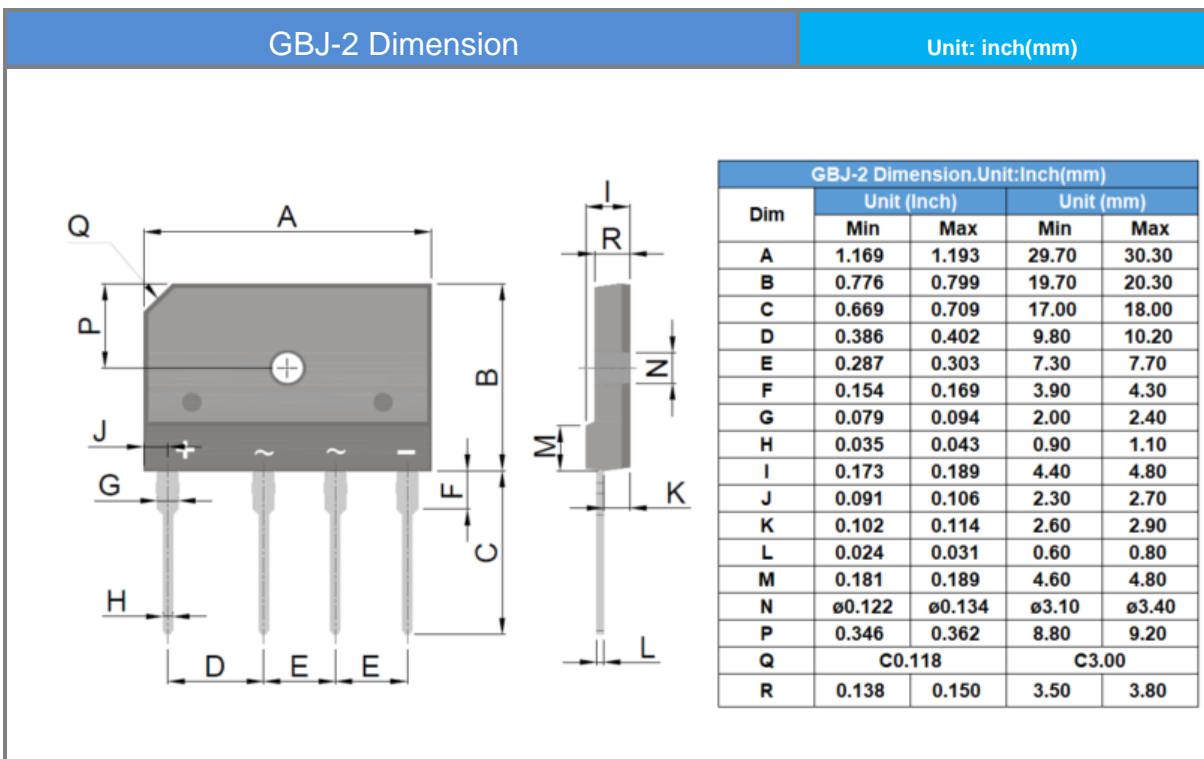


**Fig.4 Typical Forward Characteristics**

**Part No. Marking Code Version**

Approved Part No.	Package Type	Packing Type	Marking
GBJ3506ULV	GBJ-2	15 pcs / tube	GBJ3506ULV

**Packaging Information**



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