Ultra Low VF Bridge Rectifier with Super Low Leakage Current

Voltage	600 V	Current	25A

GBU-2

Features

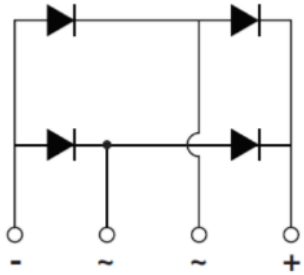
- Oxide planar chip junction
- Low forward voltage drop (VF@0.74V)
- Low leakage current (IR@20uA)
- Lead free in compliance with EU RoHS 2.0
- Halogen-free according to IEC 61249 standard

Mechanical Data

- Case : GBU-2 Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 3.8348 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**
V_{RRM}	600V
$I_F(AV)$	25A
I_{FSM}	380A
V_F@125˚C	0.74V
I_R	1uA
T_J max.	175 ˚C
Package	GBU-2

Maximum Ratings and Thermal Characteristics (T_A = 25 °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	$I_{F(AV)}$	25	A
	Without heatsink		5.2	
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load	@ T_A = 25 °C	I_{FSM}	380	A
	@ T_A = 125 °C		304	
Peak Forward Surge Current : 1.0 ms Single Half Sine-Wave Superimposed On Rated Load	@ T_A = 25 °C	I_{FSM}	760	A
	@ T_A = 125 °C		608	
I^2t rating for fusing (t = 8.3ms)		I^2t	599	A^2S
Typical Junction Capacitance Measured at 1 MHZ And Applied V_R = 4 V		C_J	300	pF
Typical Thermal Resistance (Note 1) (with heatsink)		$R_{\theta JA}$	6	°C/W
		$R_{\theta JL}$	3	
		$R_{\theta JC}$	1	
Operating junction and storage temperature range		T_J, T_{STG}	-55~175	°C
Mounting torque @ Recommend torque:5Kg.cm		Tor	8	Kg.cm

Electrical Characteristics (T_A = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	V_F	I_F = 12.5 A, T_J = 25 °C	-	0.85	0.92	V
		I_F = 12.5 A, T_J = 125 °C	-	0.74	-	
Reverse Current	I_R	V_R = 600 V, T_J = 25 °C	-	0.2	1	uA
		V_R = 600 V, T_J = 125 °C	-	20	-	

NOTES :

1. Device mounted on 100 mm * 94 mm * 26 mm Fin type heat sink .

TYPICAL CHARACTERISTIC CURVES

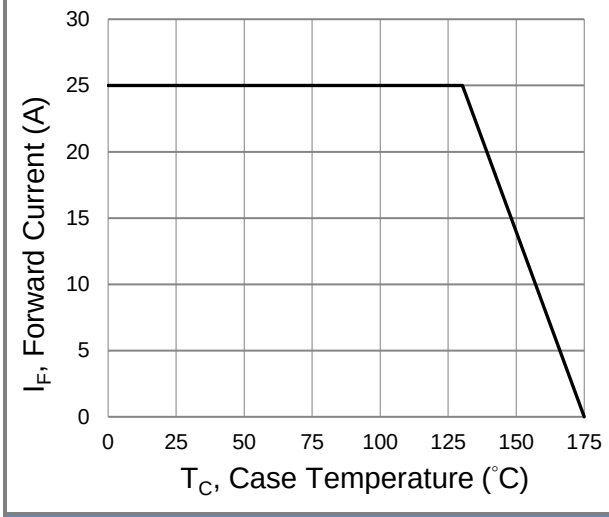


Fig.1 Forward Current Derating Curve

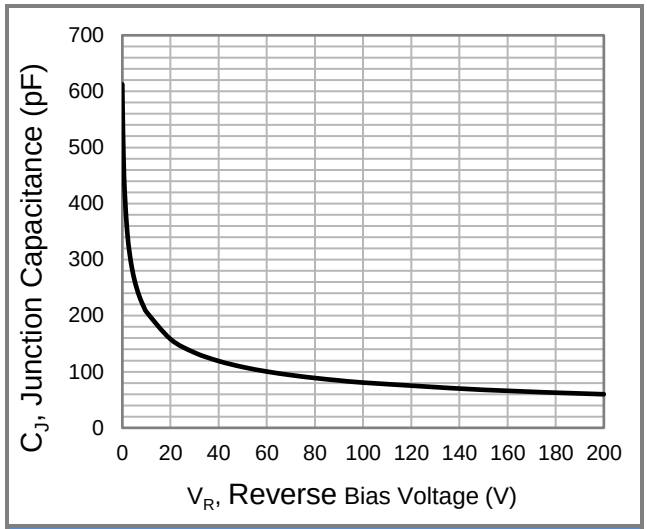


Fig.2 Typical Junction Capacitance

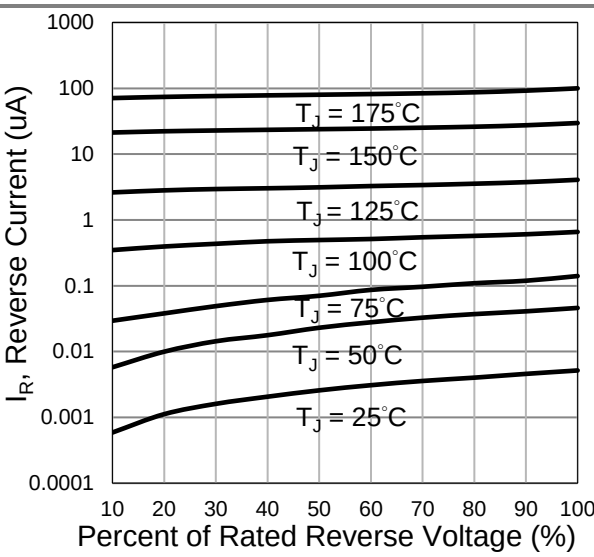


Fig.3 Typical Reverse Characteristics

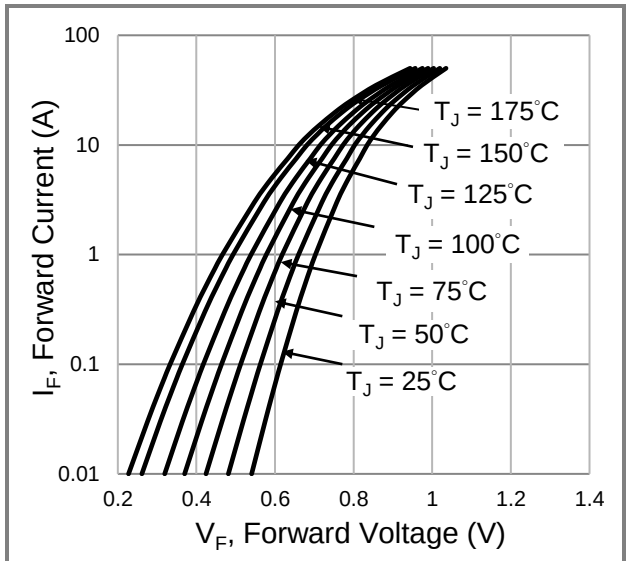


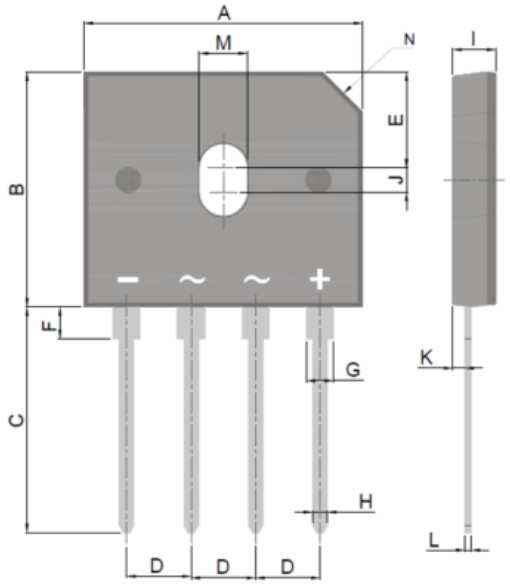
Fig.4 Typical Forward Characteristics

Product and Packing Information

Part No.	Package Type	Packing Type	Marking
GBU2506HULV	GBU-2	20 pcs / tube	GBU2506HULV

Packaging Information

GBU-2 Dimension — Unit: inch(mm)



GBU-2 Dimension.Unit:Inch(mm)				
Dim	Unit (Inch)		Unit (mm)	
	Min	Max	Min	Max
A	0.854	0.878	21.70	22.30
B	0.720	0.740	18.30	18.80
C	0.689	0.709	17.50	18.00
D	0.190	0.210	4.83	5.33
E	0.291	0.311	7.40	7.90
F	0.089	0.108	2.25	2.75
G	0.077	0.093	1.95	2.35
H	0.040	0.050	1.02	1.27
I	0.130	0.138	3.30	3.50
J	0.065	0.085	1.65	2.15
K	0.030	0.039	0.76	1.00
L	0.018	0.022	0.45	0.55
M	0.138	0.161	3.50	4.10
N	0.125*45°		3.17*45°	

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