

800V With High T_J Ultra Low V_F Bridge Rectifier

Voltage

800 V

Current

25A

Features



- Oxide planar chip junction
- Low forward voltage drop ($V_F@0.72V$)
- Low leakage current ($I_R@20\mu A$)
- Lead free in compliance with EU RoHS 2.0
- Halogen-free according to IEC 61249 standard

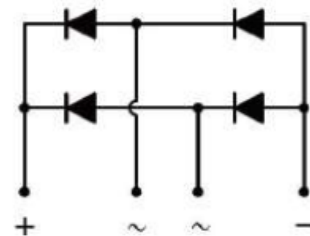
Mechanical Data

- Case : KBJ-2 Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 4.1442 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

KBJ-2



Key Parameters	
Parameter	Value
V_{RRM}	800V
$I_F(AV)$	25A
I_{FSM}	350A
$V_F@175^\circ C$	0.72V
I_R	1uA
T_J max.	175°C
Package	KBJ-2

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

PARAMETER		SYMBOL	LIMIT	UNIT
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	800	V
Maximum RMS Voltage		V_{RMS}	560	V
Maximum DC Blocking Voltage		V_{DC}	800	V
Maximum Average Forward Current	With heatsink	$I_{F(AV)}$	25	A
	Without heatsink		4.9	
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load	@ $T_A = 25^\circ\text{C}$	I_{FSM}	350	A
	@ $T_A = 125^\circ\text{C}$		280	
Peak Forward Surge Current : 1.0 ms Single Half Square -Wave Superimposed On Rated Load	@ $T_A = 25^\circ\text{C}$	I_{FSM}	600	A
	@ $T_A = 125^\circ\text{C}$		500	
$I^2 t$ rating for fusing ($t = 8.3\text{ms}$)		$I^2 t$	508	A^2S
Typical Junction Capacitance Measured at 1 MHZ And Applied $V_R = 4\text{ V}$		C_J	170	pF
Typical Thermal Resistance (Note 1) (with heatsink)		$R_{\theta JA}$	6	$^\circ\text{C/W}$
		$R_{\theta JL}$	4	
		$R_{\theta JC}$	1	
Operating junction and storage temperature range		T_J, T_{STG}	-55~175	$^\circ\text{C}$
Mounting torque @ Recommend torque:5Kg.cm		Tor	8	Kg.cm

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

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage	V_F	$I_F = 12.5\text{ A}, T_J = 25^\circ\text{C}$	-	0.88	0.92	V
		$I_F = 12.5\text{ A}, T_J = 125^\circ\text{C}$	-	0.75	-	
Reverse Current	I_R	$V_R = 800\text{ V}, T_J = 25^\circ\text{C}$	-	0.2	1	μA
		$V_R = 800\text{ V}, T_J = 125^\circ\text{C}$	-	20	-	

NOTES :

1. Device mounted on 10 cm * 9.4 cm * 2.6 cm Fin type heat sink.

TYPICAL CHARACTERISTIC CURVES

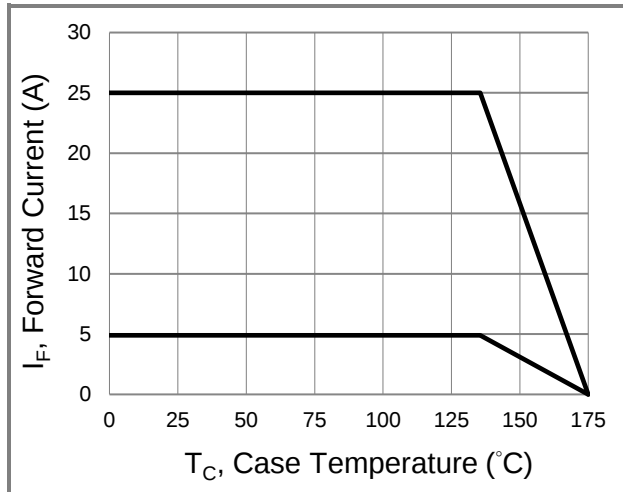


Fig.1 Forward Current Derating Curve

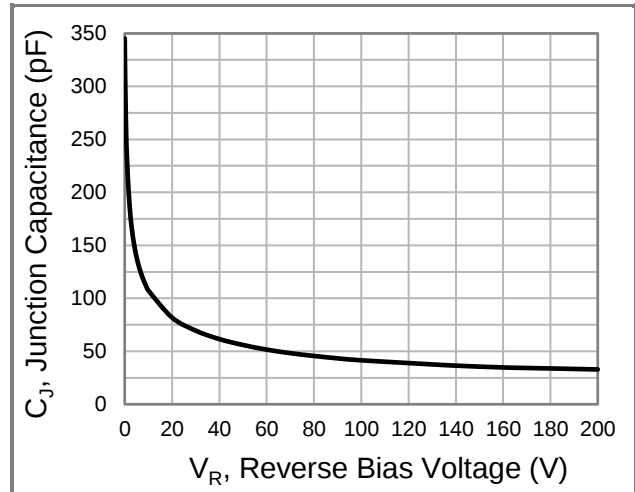


Fig.2 Typical Junction Capacitance

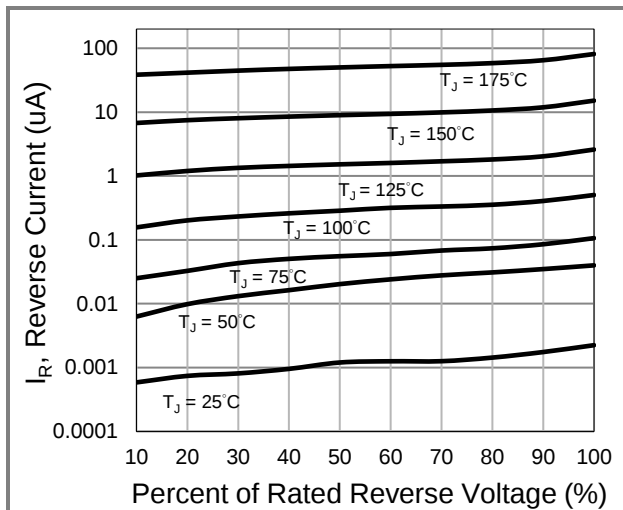


Fig.3 Typical Reverse Characteristics

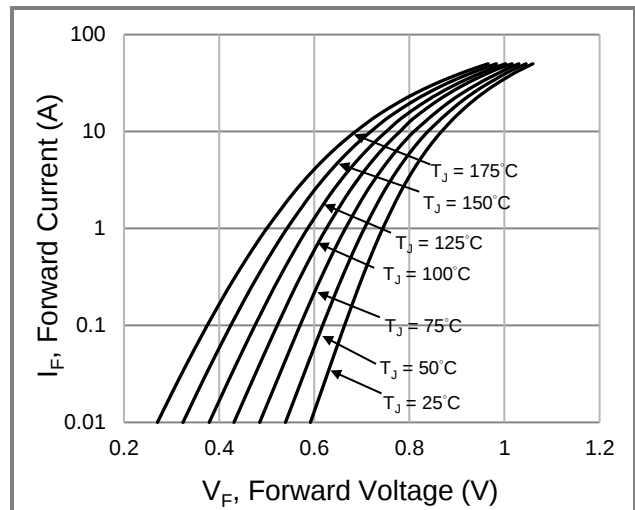
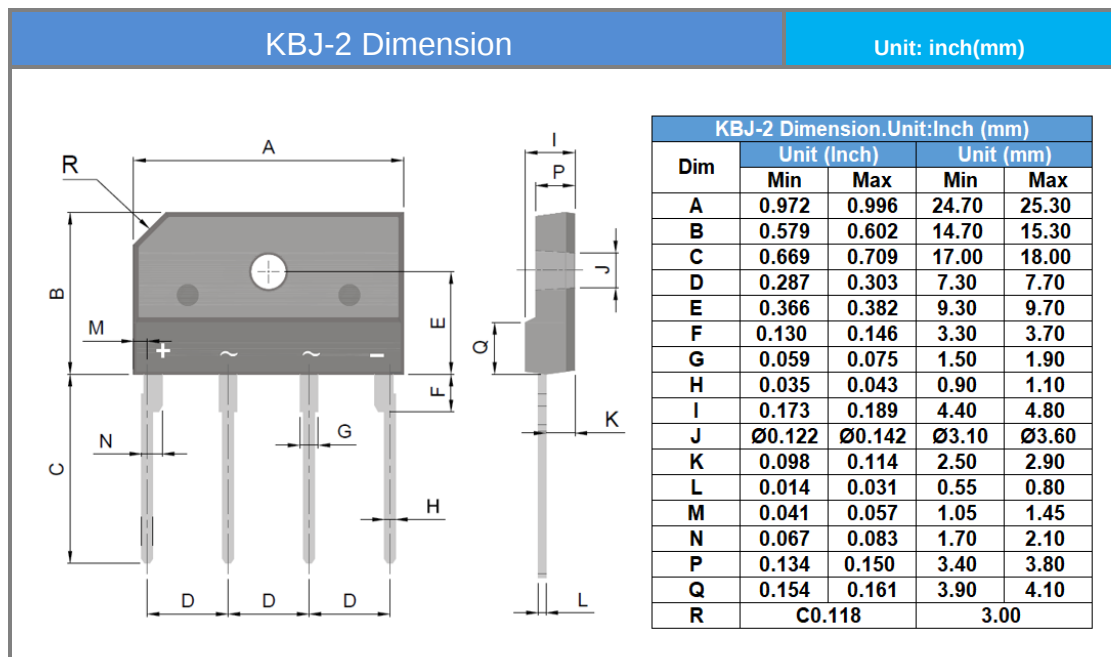


Fig.4 Typical Forward Characteristics

Product and Packing Information

Part No.	Package Type	Packing Type	Marking
KBJ2508HULV	KBJ-2	20 pcs / tube	KBJ2508HULV

Packaging Information



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