KBJ4005 THRU KBJ410

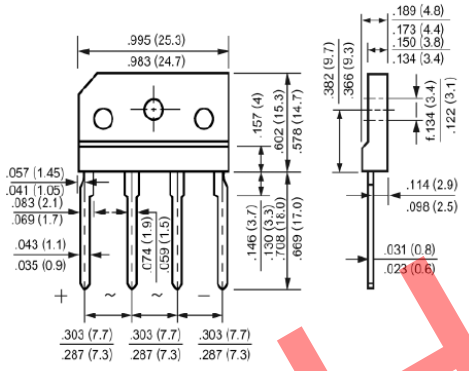
Glass Passivated Single-Phase Bridge Rectifier

Reverse Voltage - 50 to 1000 V
Forward Current - 4 A

KBJ

Features

- Glass passivated chip junction
- Low forward voltage drop
- Low reverse leakage current
- High surge current capability



Dimensions in inches and (millimeters)

Mechanical Data

- Case: Molded plastic, KBJ
- Mounting Position: Any

Maximum Ratings and Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

Parameter	Symbols	KBJ4005	KBJ401	KBJ402	KBJ404	KBJ406	KBJ408	KBJ410	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Average Rectified Rectified Current at T_C = 115 °C	$I_{F(AV)}$	4							A
Non-repetitive Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	120							A
Maximum Forward Voltage at 2 A	V_F	1							V
Maximum Reverse Current T_A = 25 °C at Rated DC Blocking Voltage T_A = 125 °C	I_R	5 500							μA
Typical Junction Capacitance [1]	C_j	40							pF
Typical Thermal Resistance [2]	$R_{\theta JC}$	5.5							°C/W
Operating Junction Temperature Range	T_j	- 55 to + 150							°C
Storage Temperature Range	T_{stg}	- 55 to + 150							°C

[1] Measured at 1 MHz and applied reverse voltage of 4 V DC

[2] Thermal Resistance from Junction to Case with Device Mounted on 75 mm X 75 mm X 1.6 mmCu Plate Heatsink.

FIG.1- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER BRIDGE ELEMENT

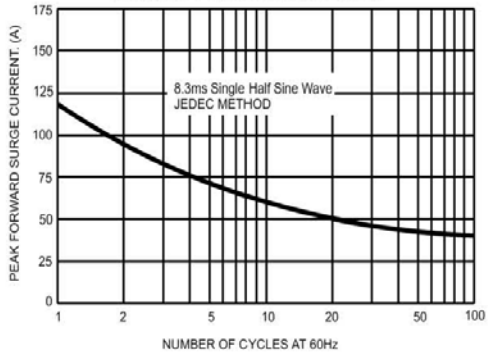


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE PER BRIDGE ELEMENT

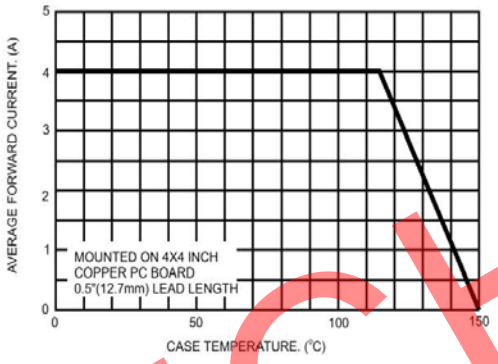


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

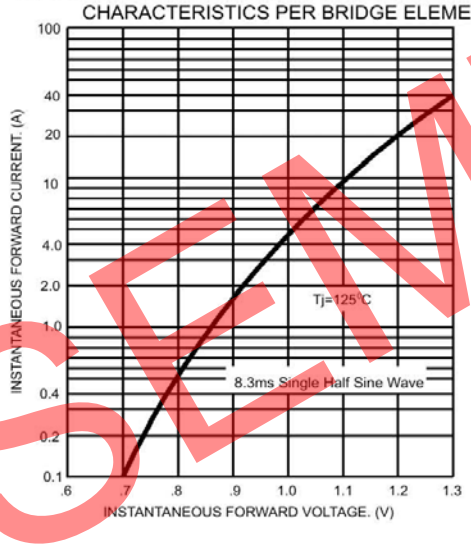


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT