DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

KBK25A THRU KBK25M

TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER

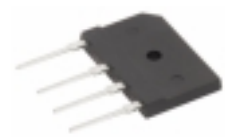
VOLTAGE RANGE - 50 to 1000 Volts *CURRENT - 25 Amperes*

FEATURES

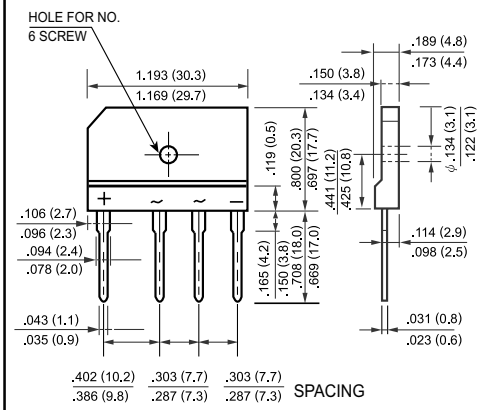
* Low leakage
* Low forward voltage
* Surge overload rating: 300 Amperes peak
* Ideal for printed circuit boards
* High forward surge current capability

MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
* Terminals: MIL-STD-202E, Method 208 guaranteed
* Polarity: Symbols molded or marked on body
* Mounting position: Any
* Weight: 6.6 grams



KBK



Dimensions in inches and (millimeters)

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 current by 20%.

		SYMBOL	KBK25A	KBK25B	KBK25D	KBK25G	KBK25J	KBK25K	KBK25M	UNITS
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Bridge Input Voltage		V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage		V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Output Current at Tc = 100°C		I_O	25							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)		I_{FSM}	300							Amps
Maximum Forward Voltage Drop per element at 12.5 A DC		V_F	1.1							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage per element	@TA = 25°C	I_R	10							uAmps
	@TA = 100°C		500							
I^2t Rating for Fusing (t<8.3ms)		I^2t	510							A^2Sec
Typical Junction Capacitance (Note1)		C_J	85							pF
Typical Thermal Resistance (Note 2)		$R\theta JA$	10							°C/W
Operating Temperature Range		T_J T_{STG}	-55 to + 150							°C

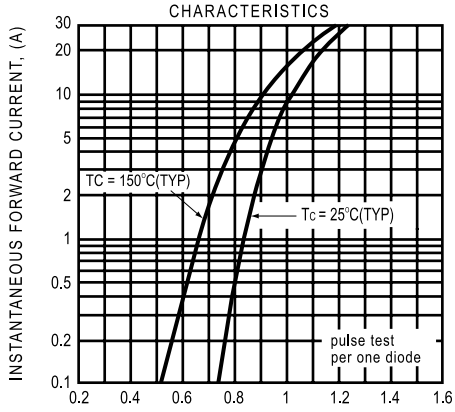
NOTES : 1.Measured at 1 MHz and applied reverse voltage of 4.0 volts

2. Thermal Resistance from Junction to Case per element Unit mounted on 300x300x1.6mm Aluminum plate heat-sink.

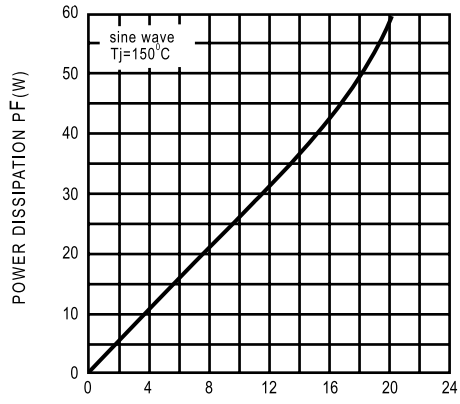
NEXT BACK EXIT

RATING AND CHARACTERISTIC CURVES (KBK25A THRU KBK25M)

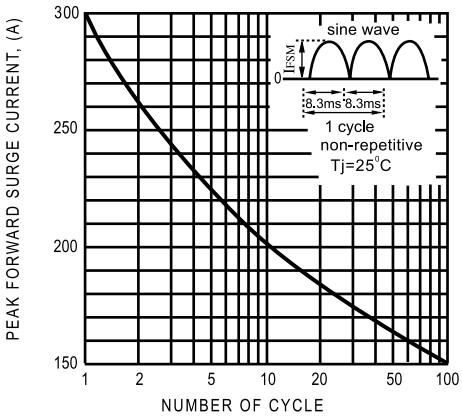
TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



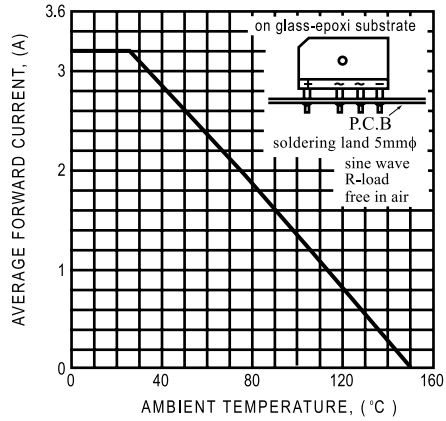
POWER DISSIPATION



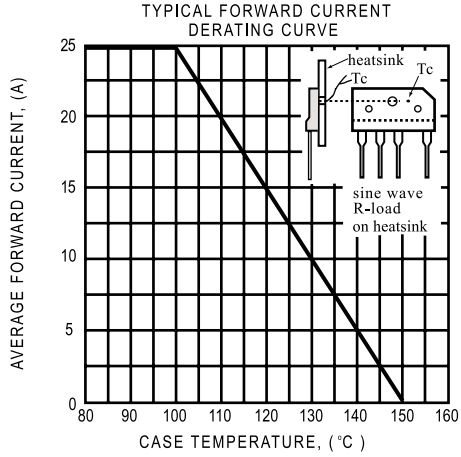
SURGE FORWARD CURRENT CAPABILITY



TYPICAL FORWARD CURRENT DERATING CURVE



TYPICAL FORWARD CURRENT DERATING CURVE



CONTACT THERMAL RESISTANCE ϕcf

