DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

KBPC 50005 / MB 5005
THRU
KBPC 5010 / MB 5010

TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER

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

FEATURES

* Metal case for Maximum Heat Dissipation
* Surge overload ratings-400 Amperes
* Low forward voltage drop

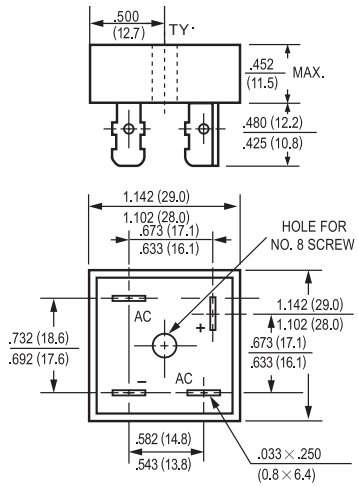
MECHANICAL DATA

* Case: Metal, electrically isolated
* Epoxy: UL 94V-0 rate flame retardant
* Terminals: Plated .25"(6.35mm) Faston lugs, solderable per MIL-STD-202E, Method 208 guaranteed
* Polarity: As marked
* Mounting position: Any
* Weight: 30 grams

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%.

MB-25



Dimensions in inches and (millimeters)

		KBPC 50005	KBPC 5001	KBPC 5002	KBPC 5004	KBPC 5006	KBPC 5008	KBPC 5010	
	SYMBOL	MB5005	MB501	MB502	MB504	MB506	MB508	MB5010	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 Rectified Output Current at Tc = 55°C	I_O	50							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	400							Amps
Maximum Forward Voltage Drop per element at 25A DC	V_F	1.1							Volts
Maximum DC Reverse Current at Rated @T_A = 25°C	I_R	10							uAmps
DC Blocking Voltage per element @T_A = 100°C		500							
I^2t Rating for Fusing (t<8.3ms)	I^2t	664							A^2Sec
Typical Junction Capacitance (Note1)	C_J	300							pF
Typical Thermal Resistance (Note 2)	$R\theta JC$	2.0							°C/W
Operating and Storage 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 leg.

NEXT BACK EXIT

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

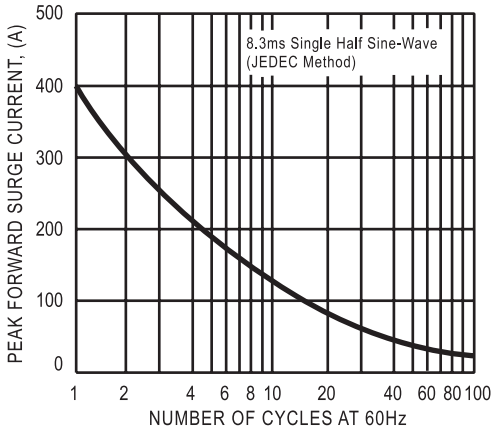


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

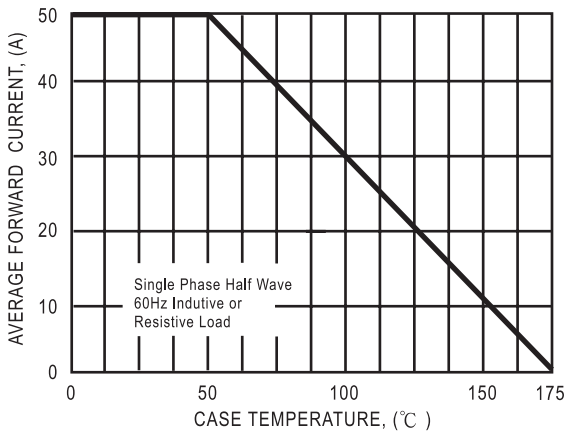


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

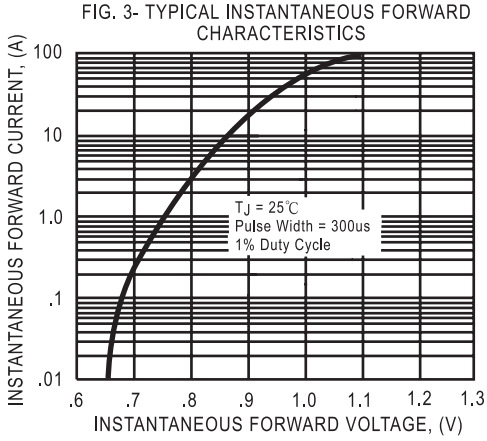


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS