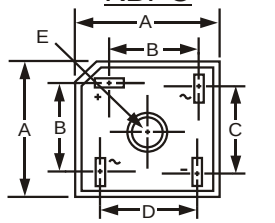
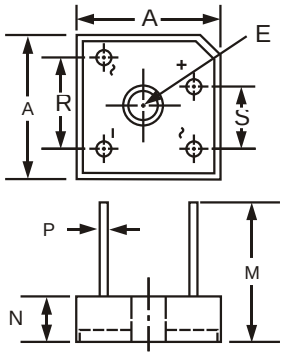
KBPC25005/W THRU KBPC2510/W

SINGLE - PHASE BRIDGE RECTIFIER
VOLTAGE - 50 TO 1000 VOLTS CURRENT - 25.0 AMPERES

KBPC



KBPC-W



KBPC/W		
Dim	Min	Max
A	28.30	28.80
B	16.10	17.10
C	13.80	14.80
D	17.60	18.60
E	4.90 ϕ	
G	22.86	25.40
H	10.97	11.23
J	6.35	—
K	0.71	0.84
L	2.40 ϕ	
M	30.5 min	
N	10.97	11.23
P	0.97ϕ	1.07ϕ
R	17.60	18.60
S	10.90	11.90
All Dimnsions in mm		

FEATURES

- Surge overload rating to 300 amperes peak
- Integrally molded heatsink provides very low thermal resistance for maximum heat dissipation
- Universal 3 way terminals: snap-on, wire wrap-around, or P.C.B. mounting
- Case to terminal isolation voltage 2500V
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High temperature soldering guaranteed: 260°C/10 seconds at 5lbs. (2.3kg) tension

MECHANICAL DATA

Case: Molded plastic with aluminum heatsink
Terminals: Either plated 0.25" (6.35mm), Faston lugs or plated copper leads 0.04" (1.02mm) diameter. Suffix letter "W" added to indicate leads. (e.g. KBPC2510W)
Weight: KBPC 0.71 ounce, 20 grams
KBPC-W 0.65 ounce, 18 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	SYMBOL	KBPC 25005/W	KBPC 2501/W	KBPC 2502/W	KBPC 2504/W	KBPC 2506/W	KBPC 2508/W	KBPC 2510/W	UNITS
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS 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 Current T_C = 55°C	$I_{(AV)}$	25.0							Amps
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	300							Amps
Maximum Instantaneous Forward Voltage Drop Per Bridge Element at 12.5A	V_F	1.2							Volts
Maximum DC Reverse Current T_A = 25°C	I_R	10							μA
at Rated DC Blocking Voltage T_A = 125 °C		500							
Rating for Fusing (t < 8.3ms) (NOTE 1)	I^2t	660							A^2s
Typical Junction Capacitance (NOTE 2)	C_J	300							pF
Typical Thermal Resistance (NOTE 3)	$R_{\theta JC}$	3.8							°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to + 150							°C

NOTES:
1. Measured at non-repetitive, for t > 1ms and t < 8.3ms
2. Measured at 1.0MHz and applied reverse voltage of 4.0 volts
3. Thermal resistance from junction to case per bridge element

RS

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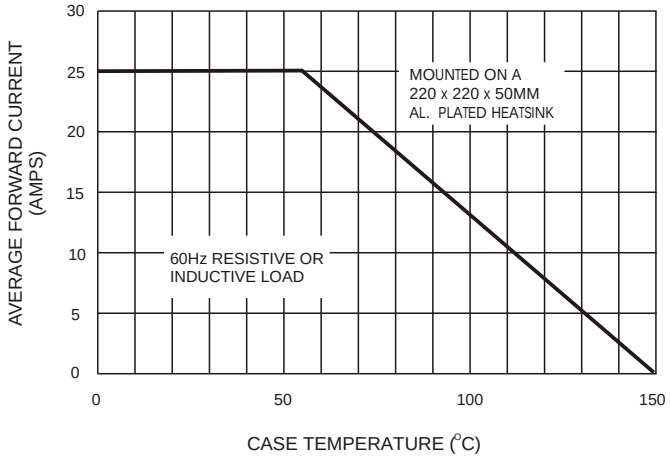

Figure 1. Forward Current Derating Curve

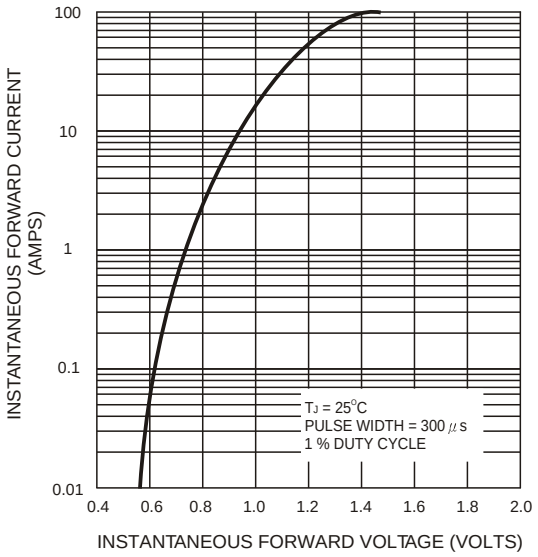

Figure 2. Typical Instantaneous Forward Characteristics Per Bridge Element

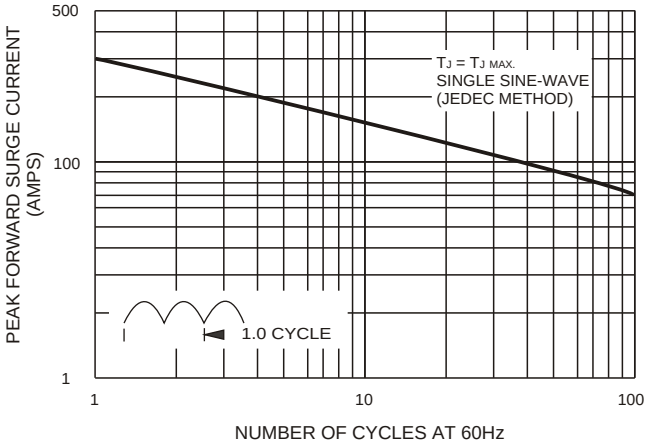

Figure 3. Maximum Non-repetitive Peak Forward Surge Current Per Bridge Element

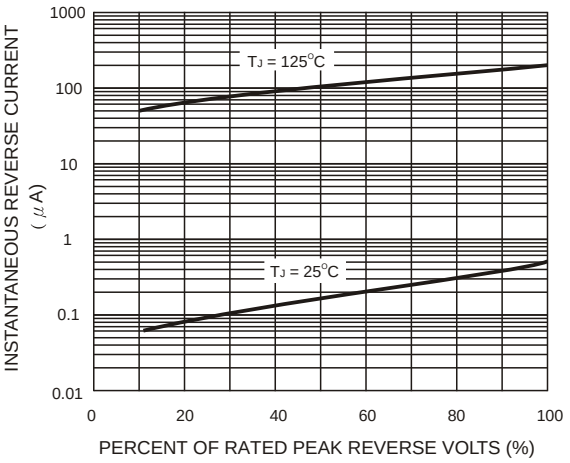

Figure 4. Typical Reverse Leakage Characteristics Per Bridge Element

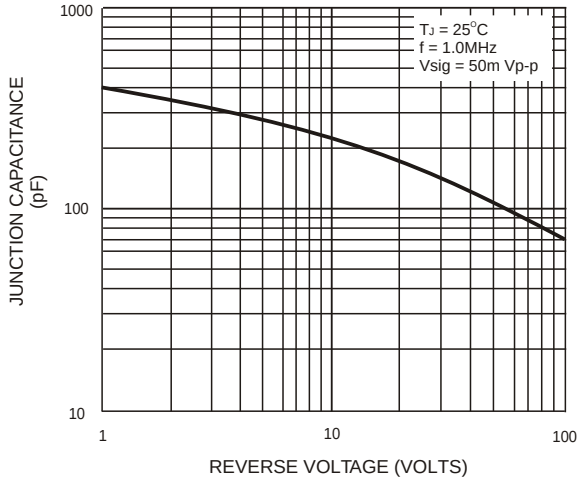

Figure 5. Typical Junction Capacitance Per Bridge Element

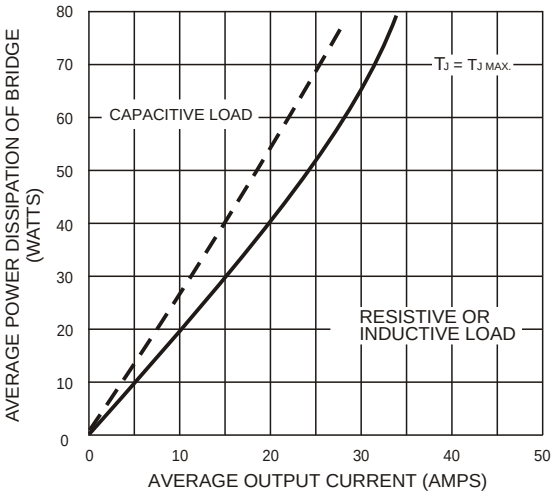

Figure 6. Maximum Power Dissipation