

Data Sheet 1323, Rev. A

Features

- Diffused Junction
- Low Reverse Leakage Current
- Fast Switching, High Efficiency
- Electrically Isolated Epoxy Case for Maximum Heat Dissipation
- Case to Terminal Isolation Voltage 2500V
- UL Recognized File # E223064

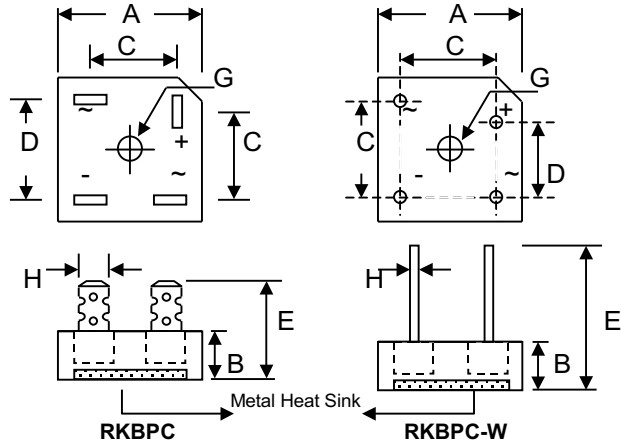
Mechanical Data

- Case: Epoxy Case with Heat Sink Internally Mounted in the Bridge Encapsulation
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Symbols Marked on Case
- Mounting: Through Hole for #8 Screw
- Weight: RKBPC 24 grams (approx.)
RKBPC-W 21 grams (approx.)
- Marking: Type Number

"W" Suffix Designates Wire Leads

No Suffix Designates Faston Terminals

*All Models are Available on B(Height)=7.62mm Max. Epoxy Case



| Dim | RKBPC | | | | RKBPC-W | | | |
|-----|---|-------|--------------|-------|---------|-------|---------|--------|
| | Min | Max | Min | Max | Min | Max | Min | Max |
| A | 28.40 | 27.40 | 1.118 | 1.079 | 28.40 | 27.40 | 1.118 | 1.079 |
| B | 10.97 | 11.23 | 0.432 | 0.442 | 10.97 | 11.23 | 0.432 | 0.442 |
| C | 15.70 | 16.70 | 0.618 | 0.657 | 17.10 | 19.10 | 0.673 | 0.752 |
| D | 17.50 | 18.50 | 0.689 | 0.728 | 10.90 | 11.90 | 0.429 | 0.469 |
| E | 22.86 | 25.40 | 0.90 | 1.00 | 30.50 | — | 1.201 | — |
| G | Hole for #8 screw, 4.90mm(0.193inch)Ø Normina | | | | | | | |
| H | 6.35 Typical | | 0.25 Typical | | 0.97Ø | 1.07Ø | 0.038Ø | 0.042Ø |
| | In mm | | In inch | | In mm | | In inch | |

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| Characteristics | Symbol | -00/W | -01/W | -02/W | -04/W | -06/W | -08/W | -10/W | Unit |
|---|---------------------|-------|-------|-------|--------------------------|-------|-------|-------|------|
| Peak Repetitive Reverse Voltage | V _{RRM} | | | | | | | | V |
| Working Peak Reverse Voltage | V _{RWM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | |
| DC Blocking Voltage | V _R | | | | | | | | |
| RMS Reverse Voltage | V _{R(RMS)} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Average Rectifier Output Current @T _C = 55°C | I _O | | | | 10 15 25 35 | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave Superimposed on rated load (JEDEC Method) | I _{FSM} | | | | 200 300 300 400 | | | | A |
| Forward Voltage Drop (per element) | V _{FM} | | | | 1.3 | | | | V |
| Peak Reverse Current At Rated DC Blocking Voltage | I _{RM} | | | | 10 500 | | | | µA |
| Reverse Recovery Time (Note 1) | t _{rr} | | 150 | | | 250 | 500 | | nS |

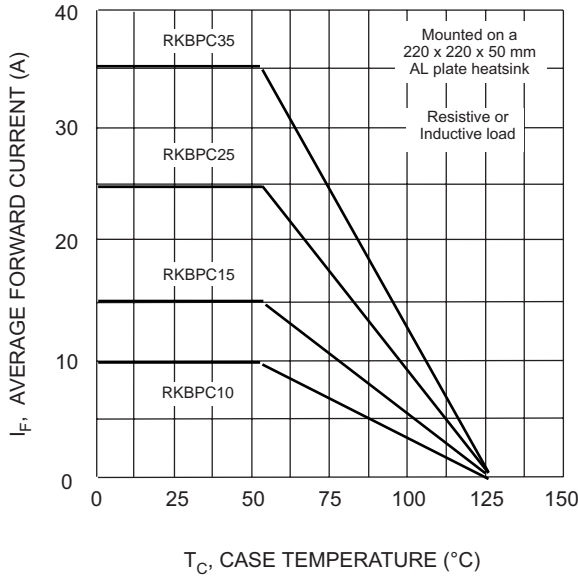
Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

| | | | | |
|---|-----------------------------------|------------------|-------------|-----|
| Typical Junction Capacitance (per element) (Note 2) | RKBPC10/W | C _j | 200 | pF |
| | RKBPC15/W | | 200 | |
| | RKBPC25/W | | 300 | |
| | RKBPC35/W | | 400 | |
| Typical Thermal Resistance Junction to Case (per element) (Note 3) | RKBPC10/W | R _{θJC} | 6.3 | K/W |
| | RKBPC15/W | | 6.3 | |
| | RKBPC25/W | | 3.8 | |
| | RKBPC35/W | | 3.8 | |
| RMS Isolation Voltage from Case to Lead | Viso | | 2500 | V |
| Operating and Storage Temperature Range | T _j , T _{STG} | | -65 to +125 | °C |

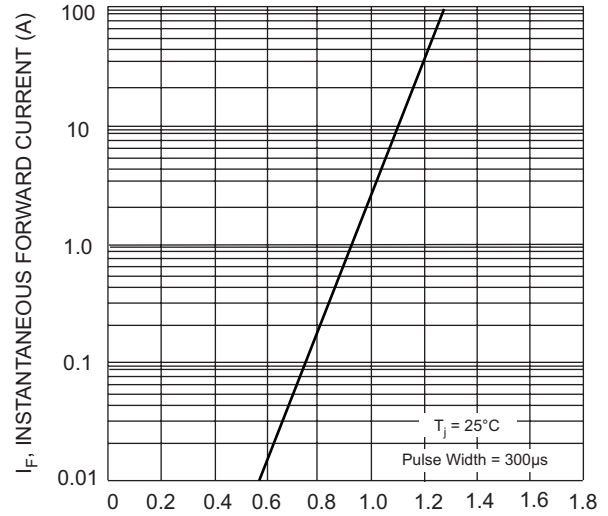
***Glass Passivated forms are available upon request.**

- Note: 1. Measured at $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$.
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.
 3. Thermal resistance junction to case mounted on heatsink.

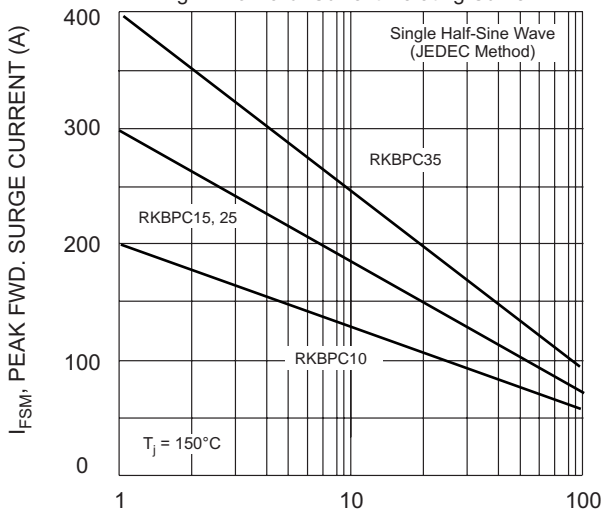
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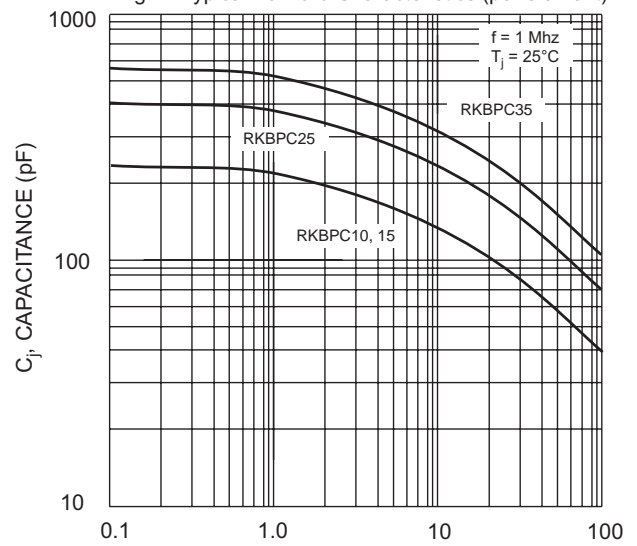
T_C , CASE TEMPERATURE ($^{\circ}C$)
Fig. 1 Forward Current Derating Curve



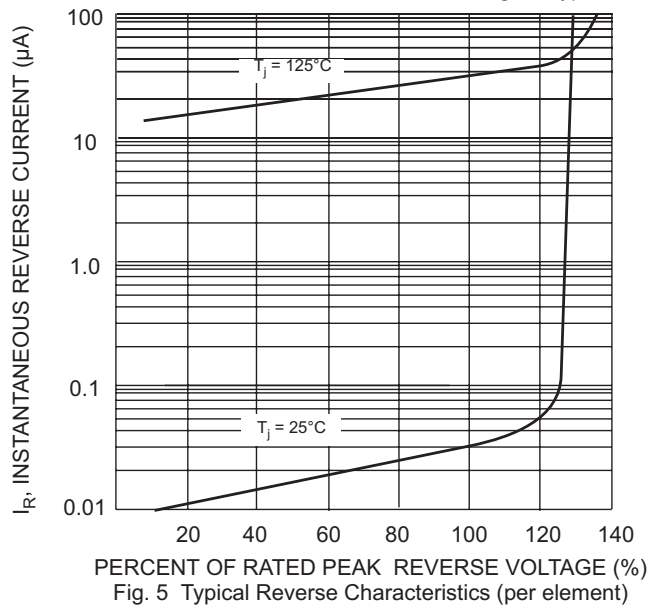
V_F , INSTANTANEOUS FORWARD VOLTAGE (V)
Fig. 2 Typical Forward Characteristics (per element)



NUMBER OF CYCLES AT 60 Hz
Fig. 3 Max Non-Repetitive Surge Current



V_R , REVERSE VOLTAGE (V)
Fig. 4 Typical Junction Capacitance (per element)



PERCENT OF RATED PEAK REVERSE VOLTAGE (%)
Fig. 5 Typical Reverse Characteristics (per element)