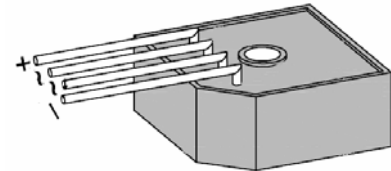


40A Single-Phase in-line Bridge Rectifier

Features

- Low Forward Voltage Drop
- High Current Capability, High Reliability
- High Surge Current Capability
- Designed for Saving Mounting Space
- RoHS Compliant



KBPCS
(Plastic Case with Metal Heat Sink)



Mechanical Data

| | |
|-------------------------|--|
| Case: | KBPCS, molded plastic with heatsink internally mounted in the bridge encapsulation |
| Terminals: | Plated leads solderable per MIL-STD-202, method 208 |
| Polarity: | As marked on body |
| Mounting: | Through hole with #10 screw |
| Mounting Torque: | 23 cm-kg (20 in-lbs) Max. |
| Weight: | 21grams |

Maximum Ratings And Electrical Characteristics (T_{amb}=25°C)

| Symbol | Description | KBPC40-005S | KBPC40-01S | KBPC40-02S | KBPC40-04S | KBPC40-06S | KBPC40-08S | KBPC40-10S | Unit | Conditions |
|------------------------|---|-------------|------------|------------|------------|------------|------------|------------|------|---|
| V_{RRM} | Max. Repetitive Peak Reverse Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| V_{RMS} | Max. RMS Voltage | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V | |
| V_{DC} | Max. DC blocking voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| I_o | Average Rectified Output Current | 40 | | | | | | | A | T _A =60°C |
| I_{FSM} | Non-Repetitive Peak Forward Surge Current | 400 | | | | | | | A | 8.3ms single half sine-wave superimposed on rated load (JEDEC method) |

40A Single-Phase in-line Bridge Rectifier

KBPC40-005S – KBPC40-10S

| Symbol | Description | KBPC40-005S | KBPC40-01S | KBPC40-02S | KBPC40-04S | KBPC40-06S | KBPC40-08S | KBPC40-10S | Unit | Conditions | |
|----------------------------------|--|-------------|------------|------------|------------|-------------|------------|------------|------|------------------|-------------------------------|
| V _{FM} | Forward Voltage per leg | | | | | 1.1 | | | | V | I _o =20A |
| I _{RM} | Max. Reverse DC Current At Rated DC Blocking Voltage per leg | | | | | 10 | | | | μA | T _C = 25°C |
| | | | | | | 500 | | | | μA | T _C = 125°C |
| I ² t | Rating for Fusing (t<8.3ms) | | | | | 664 | | | | A ² s | |
| C _J | Typical junction capacitance per leg | | | | | 400 | | | | pF | f=1MHz V _R = 4V |
| R _{thjc} | Typical Thermal Resistance per leg | | | | | 2.1 | | | | °C / W | Note |
| V _{ISO} | RMS Isolation Voltage from Case to Leads | | | | | 2500 | | | | V | |
| T _J ,T _{STG} | Operating Junction and Storage Temperature Range | | | | | -65 to +150 | | | | °C | |

Note: Thermal Resistance junction to case, mounted on heatsink.

Typical Characteristics Curves

Fig.1- Forward Current Derating Curve

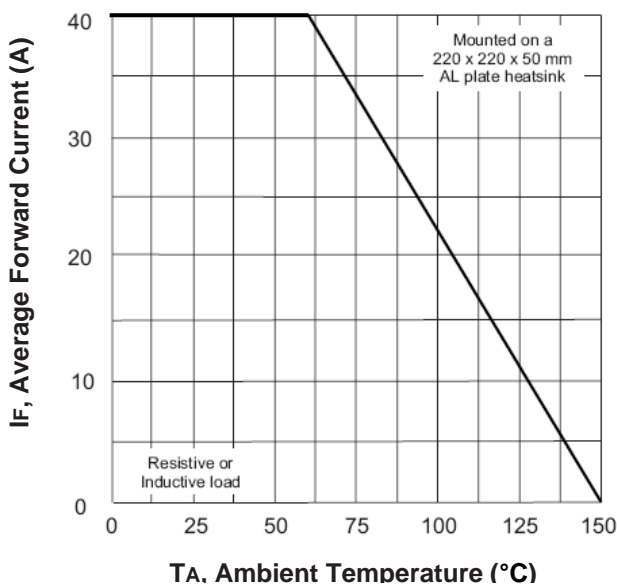
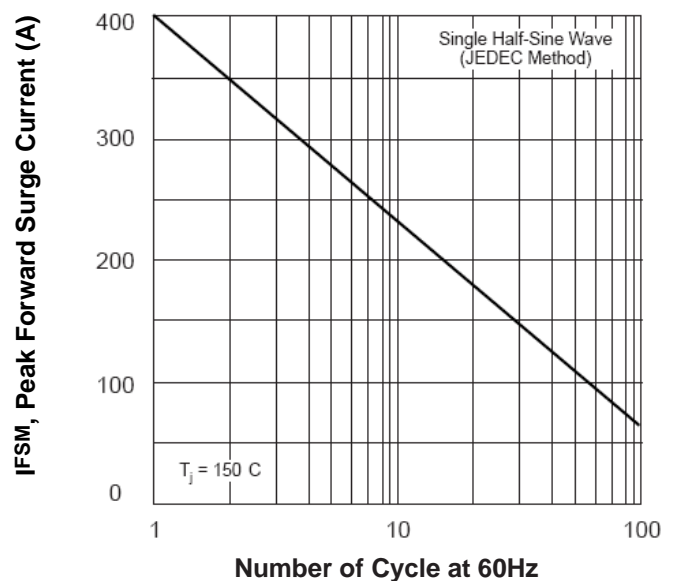


Fig.2-Max. Non-repetitive Peak Forward Surge Current Per Leg



40A Single-Phase in-line Bridge Rectifier

KBPC40-005S – KBPC40-10S

Fig.3-Typical Instantaneous Forward Characteristic Per Leg

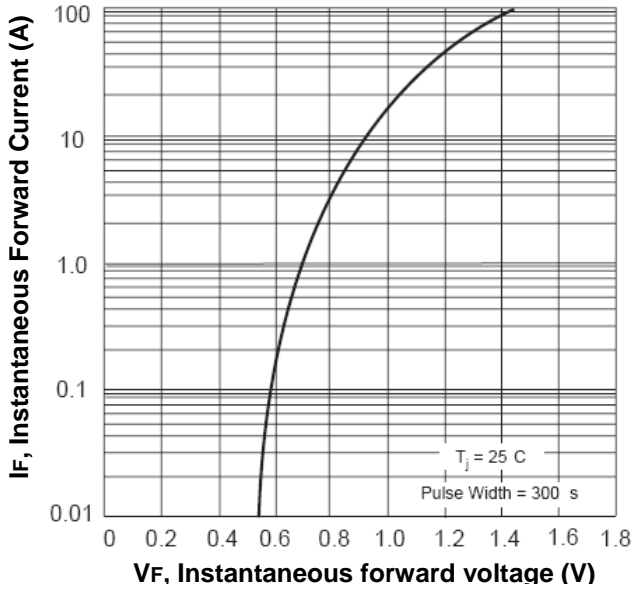


Fig.4-Typical Reverse Characteristics Per Leg

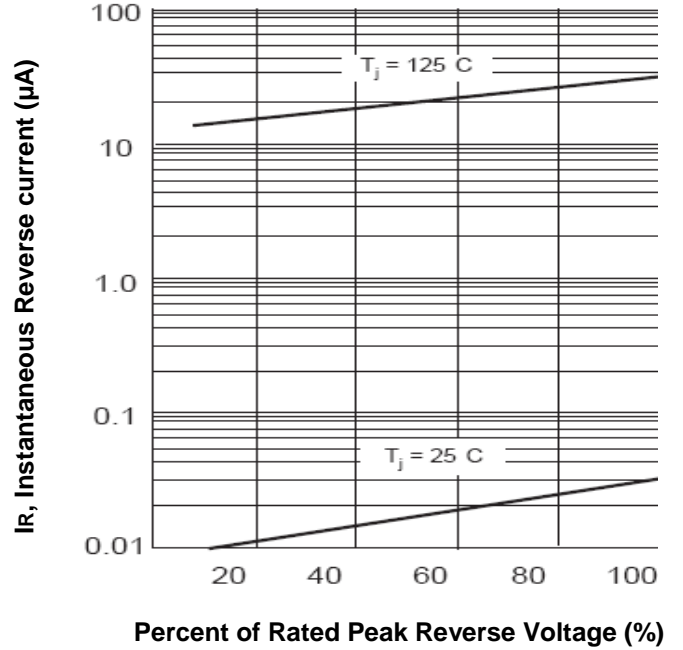
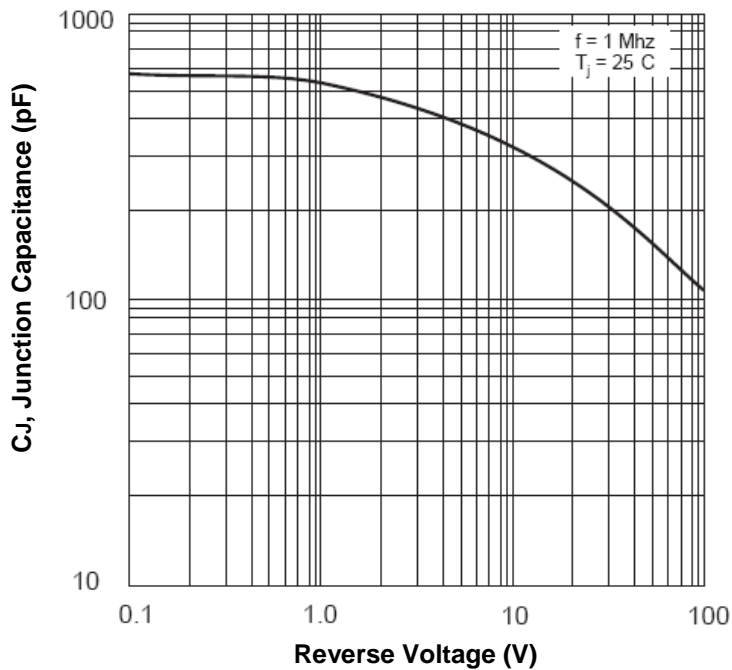


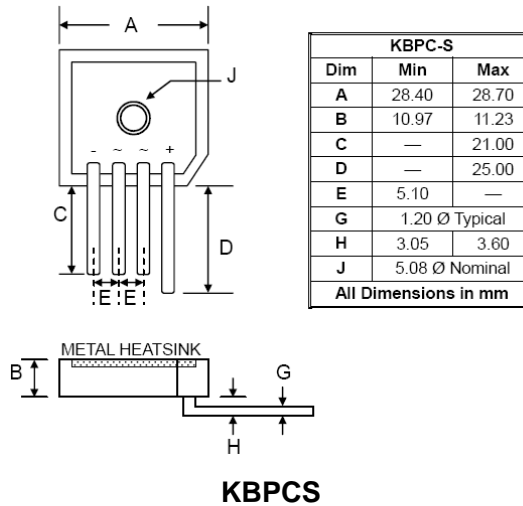
Fig.5-Typical Junction Capacitance Per Leg



40A Single-Phase in-line Bridge Rectifier

KBPC40-005S – KBPC40-10S

Dimensions in inch (mm)



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