

Single Phase Rectifier Bridge

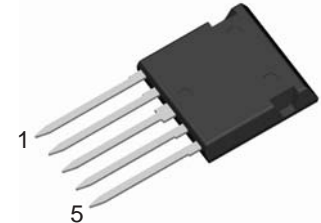
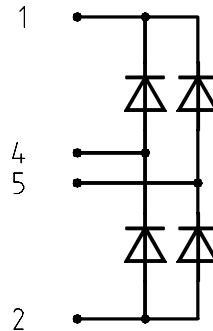
in ISOPLUS i4-PAC™

FBO40-12N

$$V_{RRM} = 1200 \text{ V}$$

$$I_{D(AV)M} = 40 \text{ A}$$

$$I_{FSM} = 250 \text{ A}$$



Rectifier Bridge

| Symbol | Conditions | Maximum Ratings | |
|--------------|--|-----------------|---|
| V_{RRM} | | 1200 | V |
| I_{FAV} | $T_C = 90^\circ\text{C}$; sine 180° (per diode) | 20 | A |
| $I_{D(AV)M}$ | $T_C = 90^\circ\text{C}$ | 40 | A |
| I_{FSM} | $T_{VJ} = 25^\circ\text{C}$; $t = 10 \text{ ms}$; sine 50 Hz | 250 | A |
| P_{tot} | $T_C = 25^\circ\text{C}$ (per diode) | 55 | W |

Features

- rectifier diodes for line frequency
- ISOPLUS i4-PAC™ package
 - isolated back surface
 - low coupling capacity between pins and heatsink
 - enlarged creepage towards heatsink
 - application friendly pinout
 - high reliability
 - industry standard outline

| Symbol | Conditions | Characteristic Values | | |
|--------------------------|--|--|------|---------------------|
| | | $(T_{VJ} = 25^\circ\text{C}$, unless otherwise specified) | | |
| | | min. | typ. | max. |
| V_F | $I_F = 25 \text{ A}$; $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = 125^\circ\text{C}$ | 1.1 | 1.2 | V |
| | | 1.1 | | V |
| I_R | $V_R = V_{RRM}$; $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = 125^\circ\text{C}$ | 0.4 | 20 | μA mA |
| R_{thJC} R_{thJS} | (per diode) | 2.9 | 2.3 | K/W K/W |

Applications

- single phase mains rectifiers
- power factor correction in conjunction with boost chopper (FID.../FMD... type)

Data according to IEC 60747 refer to a single diode unless otherwise stated

IXYS reserves the right to change limits, test conditions and dimensions.

Component

| Symbol | Conditions | Maximum Ratings | |
|------------|--|-----------------|----|
| T_{VJ} | | -55...+150 | °C |
| T_{stg} | | -55...+125 | °C |
| V_{ISOL} | $I_{ISOL} \leq 1 \text{ mA}; 50/60 \text{ Hz}$ | 2500 | V~ |
| F_c | mounting force with clip | 20...120 | N |

| Symbol | Conditions | Characteristic Values | | |
|---------------|---|-----------------------|------|------|
| | | min. | typ. | max. |
| C_p | coupling capacity between shorted pins and mounting tab in the case | | 40 | pF |
| d_s, d_A | pin - pin | 1.7 | | mm |
| d_s, d_A | pin - backside metal | 5.5 | | mm |
| Weight | | | 9 | g |

Dimensions in mm (1 mm = 0.0394")
