

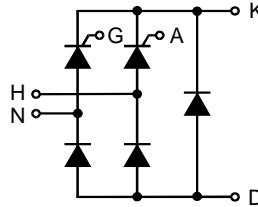
Single Phase Rectifier Bridge

$$I_{dAV} = 32 \text{ A}$$

$$V_{RRM} = 600-1200 \text{ V}$$

Preliminary data

| V_{RSM} V_{DSM} V | V_{RRM} V_{DRM} V | Type |
|-----------------------------|-----------------------------|--------------|
| 700 | 600 | VHF 25-06io7 |
| 900 | 800 | VHF 25-08io7 |
| 1300 | 1200 | VHF 25-12io7 |



| Symbol | Test Conditions | Maximum Ratings | |
|---------------------|---|----------------------------------|----------------------|
| I_{dAV} ① | $T_C = 85^\circ\text{C}$, module | 32 | A |
| I_{TAVM}/I_{FAVM} | $T_C = 85^\circ\text{C}$; (180° sine ; per thyristor) | 16 | A |
| I_{TSM}/I_{FSM} | $T_{VJ} = 45^\circ\text{C}$; $V_R = 0$ | t = 10 ms (50 Hz), sine | 200 A |
| | | t = 8.3 ms (60 Hz), sine | 210 A |
| I^2t | $T_{VJ} = T_{VJM}$ $V_R = 0$ | t = 10 ms (50 Hz), sine | 180 A |
| | | t = 8.3 ms (60 Hz), sine | 190 A |
| $(di/dt)_{cr}$ | $T_{VJ} = T_{VJM}$ f = 50 Hz, $t_p = 200 \mu\text{s}$ $V_D = 2/3 V_{DRM}$ $I_G = 0.15 \text{ A}$ $di_G/dt = 0.15 \text{ A}/\mu\text{s}$ | repetitive, $I_T = 20 \text{ A}$ | 100 A/ μs |
| | | non repetitive, $I_T = I_{TAVM}$ | 500 A/ μs |
| $(dv/dt)_{cr}$ | $T_{VJ} = T_{VJM}$; $R_{GK} = \infty$; method 1 (linear voltage rise) | $V_{DR} = 2/3 V_{DRM}$ | 500 V/ μs |
| V_{RGM} | | 10 | V |
| P_{GM} | $T_{VJ} = T_{VJM}$ $I_T = I_{TAVM}$ | $t_p = 30 \mu\text{s}$ | $\leq 5 \text{ W}$ |
| | | $t_p = 300 \mu\text{s}$ | $\leq 2.5 \text{ W}$ |
| P_{GAVM} | | 0.5 | W |
| T_{VJ} | | -40...+125 | °C |
| T_{VJM} | | 125 | °C |
| T_{stg} | | -40...+125 | °C |
| V_{ISOL} | 50/60 Hz, RMS $I_{ISOL} \leq 1 \text{ mA}$ | t = 1 min | 2500 V~ |
| | | t = 1 s | 3000 V~ |
| M_d | Mounting torque (M4) | 1.5 - 2 | Nm |
| | | 14 - 18 | lb.in. |
| Weight | typ. | 18 | g |

Features

- Package with DCB ceramic base plate
- Isolation voltage 3000 V~
- Planar passivated chips
- Low forward voltage drop
- Leads suitable for PC board soldering

Applications

- Supply for DC power equipment
- DC motor control

Advantages

- Easy to mount with two screws
- Space and weight savings
- Improved temperature and power cycling capability
- Small and light weight

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

① for resistive load at bridge output. IXYS reserves the right to change limits, test conditions and dimensions.

| Symbol | Test Conditions | Characteristic Values | |
|------------|---|-----------------------|---------------------|
| I_D, I_R | $T_{VJ} = T_{VJM}; V_R = V_{RRM}; V_D = V_{DRM}$ | \leq | 5 mA |
| V_T | $I_T = 20 \text{ A}; T_{VJ} = 25^\circ\text{C}$ | \leq | 1.6 V |
| V_{T0} | For power-loss calculations only ($T_{VJ} = 125^\circ\text{C}$) | | 0.85 V |
| r_T | | | 27 m Ω |
| V_{GT} | $V_D = 6 \text{ V}; T_{VJ} = 25^\circ\text{C}$ | \leq | 1.5 V |
| | $T_{VJ} = -40^\circ\text{C}$ | \leq | 2.5 V |
| I_{GT} | $V_D = 6 \text{ V}; T_{VJ} = 25^\circ\text{C}$ | \leq | 25 mA |
| | $T_{VJ} = -40^\circ\text{C}$ | \leq | 50 mA |
| V_{GD} | $T_{VJ} = T_{VJM}; V_D = 2/3 V_{DRM}$ | \leq | 0.2 V |
| I_{GD} | | \leq | 3 mA |
| I_L | $T_{VJ} = 25^\circ\text{C}; t_p = 10 \mu\text{s}$ $I_G = 0.1 \text{ A}; di_G/dt = 0.1 \text{ A}/\mu\text{s}$ | \leq | 75 mA |
| I_H | $T_{VJ} = 25^\circ\text{C}; V_D = 6 \text{ V}; R_{GK} = \infty$ | \leq | 50 mA |
| t_{gd} | $T_{VJ} = 25^\circ\text{C}; V_D = 1/2 V_{DRM}$ $I_G = 0.1 \text{ A}; di_G/dt = 0.1 \text{ A}/\mu\text{s}$ | \leq | 2 μs |
| R_{thJC} | per thyristor; DC | | 1.3 K/W |
| | per module | | 0.22 K/W |
| R_{thJK} | per thyristor; DC | | 1.8 K/W |
| | per module | | 0.3 K/W |
| d_s | Creeping distance on surface | | 11.2 mm |
| d_A | Creepage distance in air | | 9.5 mm |
| a | Max. allowable acceleration | | 50 m/s ² |

Dimensions in mm (1 mm = 0.0394")
