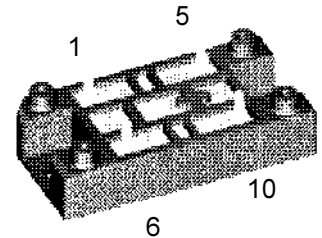
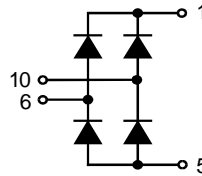


Single Phase Rectifier Bridge

with Fast Recovery Epitaxial Diodes (FRED)

$I_{dAV} = 20 \text{ A}$
 $V_{RRM} = 2000 \text{ V}$
 $t_{rr} = 70 \text{ ns}$

| V_{RSM} V | V_{RRM} V | Type |
|----------------|----------------|--------------|
| 2000 | 2000 | VBE 20-20NO1 |



| Symbol | Conditions | Maximum Ratings | |
|------------|--|-----------------|------------------|
| I_{dAV} | $T_C = 65^\circ\text{C}$, module | 20 | A |
| I_{FSM} | $T_{VJ} = 45^\circ\text{C}$; $t = 10 \text{ ms}$ (50 Hz), sine $V_R = 0$ | 75 | A |
| | $T_{VJ} = T_{VJM}$; $t = 10 \text{ ms}$ (50 Hz), sine $V_R = 0$ | 65 | A |
| I^2dt | $T_{VJ} = 45^\circ\text{C}$; $t = 10 \text{ ms}$ (50 Hz), sine $V_R = 0$ | 28 | A ² s |
| | $T_{VJ} = T_{VJM}$; $t = 10 \text{ ms}$ (50 Hz), sine $V_R = 0$ | 21 | A ² s |
| T_{VJ} | | -40...+150 | °C |
| T_{VJM} | | 150 | °C |
| T_{stg} | | -40...+125 | °C |
| V_{ISOL} | 50/60 Hz, RMS $t = 1 \text{ min}$ | 3000 | V~ |
| | $I_{ISOL} \leq 1 \text{ mA}$ $t = 1 \text{ s}$ | 3600 | V~ |
| M_d | Mounting torque (M5) (10-32UNF) | 2 - 2.5 | Nm |
| | | 18 - 22 | lb.in. |
| Weight | typ. | 35 | g |

Features

- Package with DCB ceramic base plate
- Isolation voltage 3600 V~
- Planar passivated chips
- Leads suitable for PC board soldering
- Creeping and creepage-distance fulfil UL 508/CSA 22.2NO14 and VDE 0160 requirements
- Epoxy meets UL94V-O
- UL listing applied for

Applications

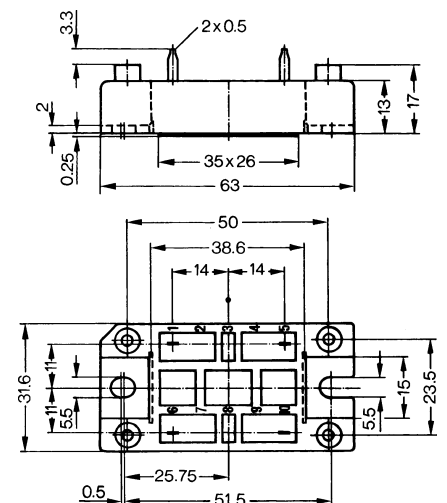
- Supplies for DC power equipment
- Input rectifiers for PWM inverter
- Output filter for PWM inverter

Advantages

- Reduced EMI/RFI
- Easy to mount with two screws
- Space and weight savings
- Improved temperature and power cycling

| Symbol | Conditions | Characteristic Values | |
|--------------------------|---|------------------------------|---------------------|
| | | typ. | max |
| I_R | $V_R = V_{RRM}$ $V_R = 0.8 V_{RRM}$ | $T_{VJ} = 25^\circ\text{C}$ | 0.75 mA |
| | | $T_{VJ} = 125^\circ\text{C}$ | 7 mA |
| V_F | $I_F = 12 \text{ A}$ | $T_{VJ} = 25^\circ\text{C}$ | 5.41 V |
| V_{T0} | For power-loss calculations only | | 3.3 V |
| r_T | | | 93 mΩ |
| R_{thJC} R_{thCH} | per diode, DC | | 1.7 K/W |
| | | 0.3 | K/W |
| I_{RM} | $I_F = 12 \text{ A}$, $-di_F/dt = 100 \text{ A/ms}$ $V_R = 540 \text{ V}$, $L \leq 0.05 \text{ mH}$, $T_{VJ} = 100^\circ\text{C}$ | 9 | 12 A |
| t_{rr} | $I_F = 1 \text{ A}$; $-di/dt = 100 \text{ A/ms}$; $V_R = 30 \text{ V}$, $T_{VJ} = 25^\circ\text{C}$ | 70 | 90 ns |
| d_s | Creeping distance on surface | | 12.7 mm |
| d_A | Creepage distance in air | | 9.4 mm |
| a | Max. allowable acceleration | | 50 m/s ² |

Dimensions in mm (1 mm = 0.0394")



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