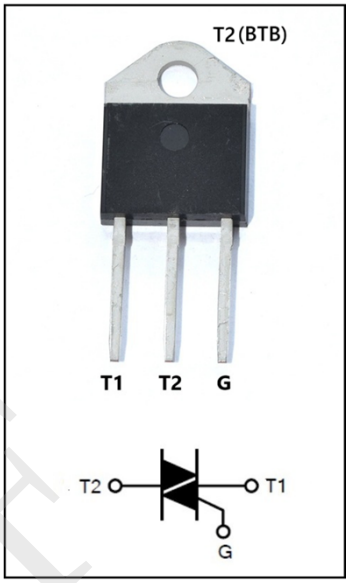
鼎德丰
DING DE FENG

# TRIAC BTA41/BTB41

## FEATURES

- Glass Passivated Junctions
- High voltage and surge capability
- Low Thermal Resistance and Durability
- Low thermal resistance insulation ceramic for insulated BTA
- BTA :Insulating Voltage2500V(RMS)




## APPLICATIONS

- Mains power AC switching
- Static relays
- Light dimmers
- Heater Control
- Motor Speed Controller

## ABSOLUTE MAXIMUM RATINGS

| PARAMETER | SYMBOL | | VALUE | | UNIT |
|---|---|---|---|---|---|
| Repetitive Peak Off-State Voltages | $V_{DRM,}$ $V_{RRM}$ | 4Q | BTA41/BTB41-600B | 600 | V |
| | | | BTA41/BTB41-800B | 800 | |
| | | | BTA41/BTB41-1000 | 1000 | |
| | | 3Q | BTA41/BTB41-600(CW/BW) | 600 | |
| | | | BTA41/BTB41-800(CW/BW) | 800 | |
| | | | BTA41/BTB41-1000(CW/BW) | 1000 | |
| RMS on-State Current | $I_{T(RMS)}$ | | 40 | | A |
| Non-Repetitive Peak On-State Current | $I_{TSM}$ | | 400 | | A |
| $I^2t$ for fusing | $I^2t$ | | 880 | | $A^2s$ |
| Repetitive rate of rise of on-state current after triggering | di/dt | | 50 | | A/uS |
| Peak gate current | $I_{GM}$ | | 8 | | A |
| Average Gate Power | $P_{G(AV)}$ | | 1 | | W |
| Operating junction temperature | $T_J$ | | -40~+125 | | ℃ |
| Storage Temperature | $T_{STG}$ | | -40 ~ +150 | | ℃ |

## ELECTRICAL CHARACTERISTICS (TJ=25°C) 4 Quadrants

| PARAMETER | SYMBOL | TEST CONDITIONS | | MIN | MAX B | UNITS |
|---|---|---|---|---|---|---|
| Peak Repetitive Forward or Reverse Blocking Current | $I_{DRM}$ $I_{RRM}$ | $V_{AK}$ = Rated $V_{DRM}$ or $V_{RRM}$; | | | 5 | uA |
| Gate Trigger Current | $I_{GT}$ | $V_D$=12V, $R_L$=33Ω | I-II-III | | 50 | mA |
| | | | IV | | 100 | |
| Gate Trigger Voltage | $V_{GT}$ | $V_D$=12V, $R_L$=33Ω | | | 1.3 | V |
| Non-triggering gate voltage | $V_{GD}$ | VD = VDRM ,Tj = 125°C | | 0.2 | | V |
| Peak Forward On-State Voltage | $V_{TM}$ | IT=60A, | | | 1.55 | V |
| Latch Current | $I_L$ | IG=1.2IGT | I-III-IV | | 80 | mA |
| | | | II | | 100 | |
| Holding Current | $I_H$ | $I_T$=0.5A | | | 70 | mA |
| Critical Rate of Rise of Off-State Voltage | dV/dt | $V_D$=67%$V_{DRM}$, Gate open | | 500 | | V/μs |

## ELECTRICAL CHARACTERISTICS (TJ=25°C)

## (3Q) Triggering in three quadran

| Parameter | Symbol | Test Conditions | | | CW | BW | Units |
|---|---|---|---|---|---|---|---|
| Peak Repetitive Forward or Reverse Blocking Current | $I_{DRM}$ $I_{RRM}$ | $V_{AK}$ = Rated $V_{DRM}$ or $V_{RRM}$; | | MAX | 5 | | uA |
| Gate Trigger Current | $I_{GT}$ | $V_D$=12V, $R_L$=33Ω | I-II-III | MAX | 35 | 50 | mA |
| Gate Trigger Voltage | $V_{GT}$ | | | MAX | 1.3 | | V |
| Non-triggering gate voltage | $V_{GD}$ | VD = VDRM ,Tj = 125°C | | MIN | 0.2 | | V |
| Peak Forward On-State Voltage | $V_{TM}$ | IT=60A, | | MAX | 1.55 | | V |
| Latch Current | $I_L$ | IG=1.2IGT | I-III | MAX | 70 | 80 | mA |
| | | | II | MAX | 80 | 100 | |
| Holding Current | $I_H$ | IT=0.5A | | MAX | 60 | 70 | mA |
| Critical Rate of Rise of Off-State Voltage | dV/dt | $V_D$=67%$V_{DRM}$, $T_J$=25°C, Gate open | | MIN | 500 | 1000 | V/μs |