

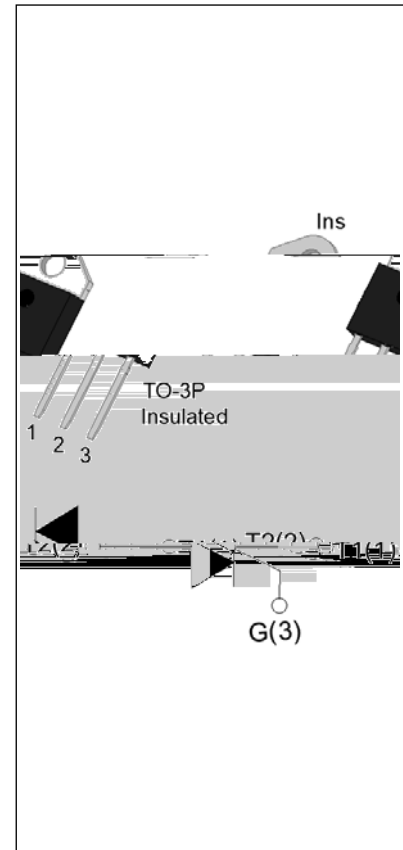


JST41Z-800GW 40A TRIAC

Rev.A.1.1

DESCRIPTION:

The JST41Z-800GW triac is suitable for general purpose AC switching. It can be used as an ON/OFF function in applications such as heating regulation, induction motor starting circuits, for phase control operation in light dimmers, motor speed controllers. JST41Z-800GW snubberless triac is especially recommended for use on inductive loads. By using an internal ceramic pad, JST41Z-800GW provides a rated insulation voltage of 2500 VRMS, complying with UL standards (File ref: E252906). Package TO-3P is RoHS compliant.



MAIN FEATURES

| Symbol | Value | Unit |
|-------------------|----------|------|
| $I_{T(RMS)}$ | 40 | A |
| V_{DRM}/V_{RRM} | 800 | V |
| $I_{GT} / /$ | 70/70/70 | mA |

ABSOLUTE MAXIMUM RATINGS

| Parameter | Symbol | Value | Unit |
|--|--------------|---------|------------------------|
| Storage junction temperature range | T_{stg} | -40-150 | |
| Operating junction temperature range | T_j | -40-125 | |
| Repetitive peak off-state voltage ($T_j=25^\circ\text{C}$) | V_{DRM} | 800 | V |
| Repetitive peak reverse voltage ($T_j=25^\circ\text{C}$) | V_{RRM} | 800 | V |
| RMS on-state current ($T_c = 81^\circ\text{C}$) | $I_{T(RMS)}$ | 40 | A |
| Non repetitive surge peak on-state current (full cycle, $t_p=20\text{ms}$, $T_j=25^\circ\text{C}$) | I_{TSM} | 420 | A |
| Non repetitive surge peak on-state current (full cycle, $t_p=16.6\text{ms}$, $T_j=25^\circ\text{C}$) | | 462 | |
| I^2t value for fusing ($t_p=10\text{ms}$, $T_j=25^\circ\text{C}$) | I^2t | 1000 | A^2s |
| Critical rate of rise of on-state current ($I_G=2 \times I_{GT}$, $f=100\text{Hz}$, $T_j=125^\circ\text{C}$) | di/dt | 100 | $\text{A}/\mu\text{s}$ |
| Peak gate current ($t_p=20\mu\text{s}$, $T_j=125^\circ\text{C}$) | I_{GM} | 8 | A |

Average gate power dissipation ($T_j=1$)

JST41Z-800GW

FIG.1: Maximum power dissipation versus RMS on-state current

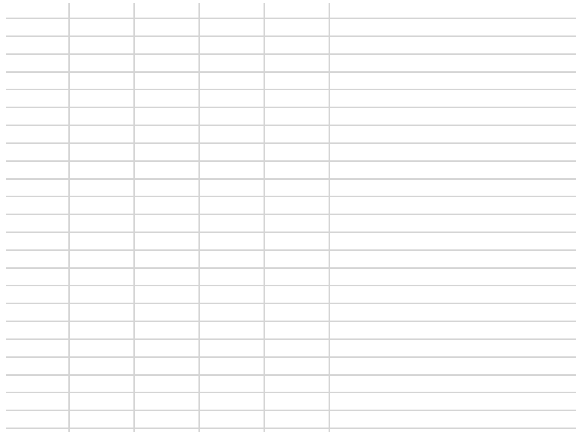
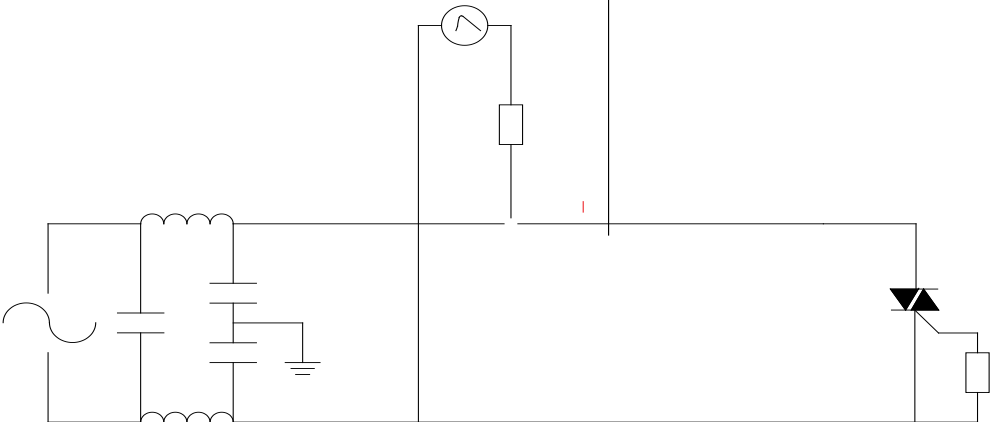


FIG.2: RMS on-state current versus case temperature

FIG.7 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards



ORDERING INFORMATION

| Order code | Voltage $V_{DRM}/V_{RRM}(V)$ | IGT(mA) | Package | Base qty. (pcs) | Delivery mode |
|---------------------|---------------------------------|-----------|-------------------|--------------------|------------------|
| | | - - | | | |
| JST41Z-800GW | 800 | 70 | TO-3P(Ins) | 30 | Tube |

Document Revision History

| Date | Revision | Changes |
|--------------|----------|--------------------------------|
| Apr.11, 2023 | A.1.0 | Last updated |
| Oct.16, 2025 | A.1.1 | Revise PACKAGE MECHANICAL DATA |

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