

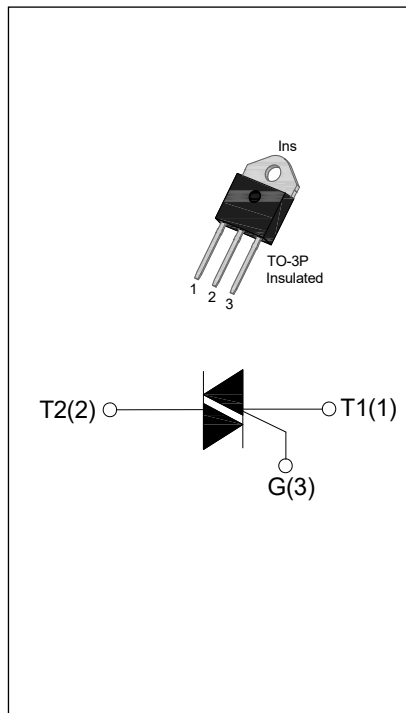


JST26Z-800BW 25A TRIACs

Rev.2

DESCRIPTION:

with high ability to withstand the shock loading of large current, provide high dv/dt rate with strong resistance to electromagnetic interference. With high commutation performances, especially recommended for use on inductive load. From all three terminals to external heatsink, JST26Z-800BW provides a rated insulation voltage of 2500 V_{RMS}, complying with UL standards (File ref: E252906). Package TO-3P is RoHS compliant.(2011/65/EU)



MAIN FEATURES

| Symbol | Value | Unit |
|---------------------|-------|------|
| $I_{T(RMS)}$ | 25 | A |
| V_{DRM} / V_{RRM} | 800 | V |

ABSOLUTE MAXIMUM RATINGS

| Parameter | Symbol | Value | Unit |
|---|---|---------|------------------|
| Storage junction temperature range | T_{stg} | -40-150 | °C |
| Operating junction temperature range | T_j | -40-125 | °C |
| 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 | TO-3P(Ins) ($T_C=100^\circ\text{C}$) $I_{T(RMS)}$ | 25 | A |
| Non repetitive surge peak on-state current (full cycle, F=50Hz) | I_{TSM} | 250 | A |
| I^2t value for fusing ($t_p=10\text{ms}$) | I^2t | 310 | A ² s |
| Critical rate of rise of on-state current ($I_G=2 \times I_{GT}$) | dI/dt | 50 | A/ μs |
| Peak gate current | I_{GM} | 4 | A |
| Average gate power dissipation | $P_{G(AV)}$ | 1 | W |
| Peak gate power | P_{GM} | 10 | W |

| | | | |
|--|----------|---|----|
| Peak pulse voltage ($T_j=25^{\circ}\text{C}$; non-repetitive, off-state; FIG.7) | V_{pp} | 5 | kV |
|--|----------|---|----|

ELECTRICAL CHARACTERISTICS ($T_j=25^{\circ}\text{C}$ unless otherwise specified)

| Symbol | Test Condition | Quadrant | | Value | Unit |
|-----------|--|-------------|-----|-------|------------------|
| I_{GT} | $V_D=12\text{V}$ $R_L=33\Omega$ | I - II -III | MAX | 50 | mA |
| V_{GT} | | I - II -III | MAX | 1.3 | V |
| V_{GD} | $V_D=V_{DRM}$ $T_j=125^{\circ}\text{C}$ $R_L=3.3\text{K}\Omega$ | I - II -III | MIN | 0.2 | V |
| I_L | $I_G=1.2I_{GT}$ | I -III | MAX | 80 | mA |
| | | II | | 100 | |
| I_H | $I_T=100\text{mA}$ | | MAX | 75 | mA |
| dv/dt | $V_D=2/3V_{DRM}$ Gate Open $T_j=125^{\circ}\text{C}$ | | MIN | 1000 | V/ μs |
| t_{on} | $I_G=40\text{mA}$ $I_A=200\text{mA}$ $I_R=20\text{mA}$ $T_j=25^{\circ}\text{C}$ | | TYP | 5 | μs |
| t_{off} | | | TYP | 100 | μs |

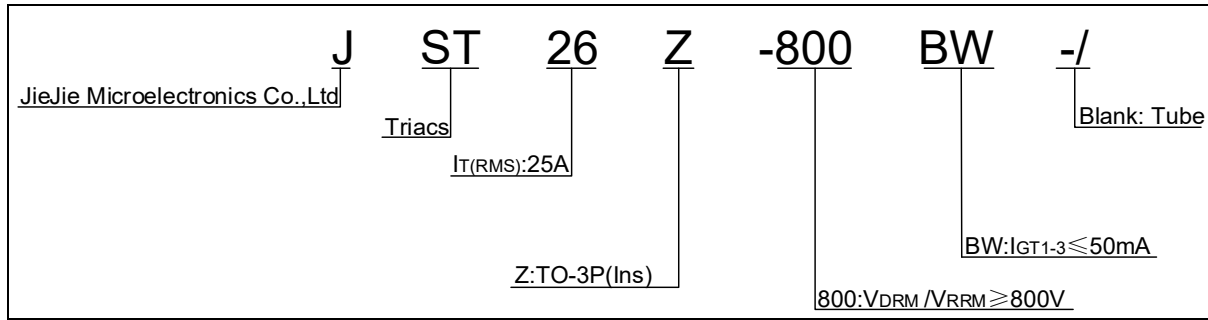
STATIC CHARACTERISTICS

| Symbol | Parameter | | Value(MAX) | Unit |
|-----------|--|---------------------------|------------|------------------|
| V_{TM} | $I_{TM}=35\text{A}$ $t_p=380\mu\text{s}$ | $T_j=25^{\circ}\text{C}$ | 1.5 | V |
| V_{TO} | Threshold voltage | $T_j=150^{\circ}\text{C}$ | 0.89 | V |
| R_d | Dynamic resistance | $T_j=150^{\circ}\text{C}$ | 11 | $\text{m}\Omega$ |
| I_{DRM} | $V_D=V_{DRM}$ $V_R=V_{RRM}$ | $T_j=25^{\circ}\text{C}$ | 5 | μA |
| I_{RRM} | | $T_j=125^{\circ}\text{C}$ | 3 | mA |

THERMAL RESISTANCES

| Symbol | Parameter | | Value | Unit |
|---------------|----------------------|-------|-------|-----------------------------|
| $R_{th(j-c)}$ | junction to case(AC) | TO-3P | 0.78 | $^{\circ}\text{C}/\text{W}$ |

ORDERING INFORMATION



MARKING

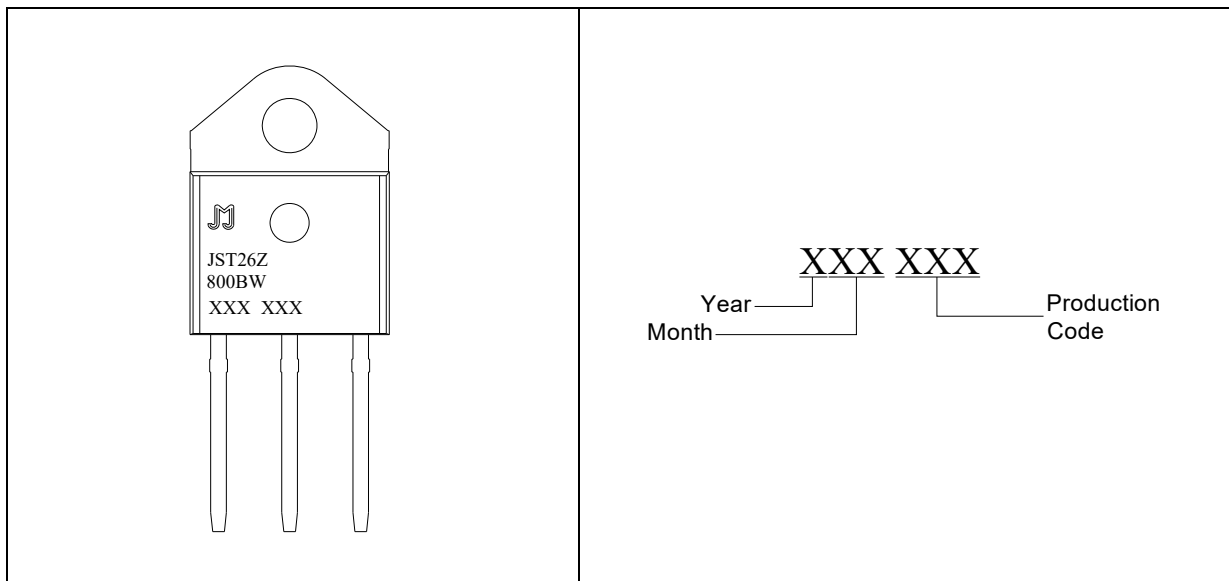


FIG.1: Maximum power dissipation versus RMS on-state current

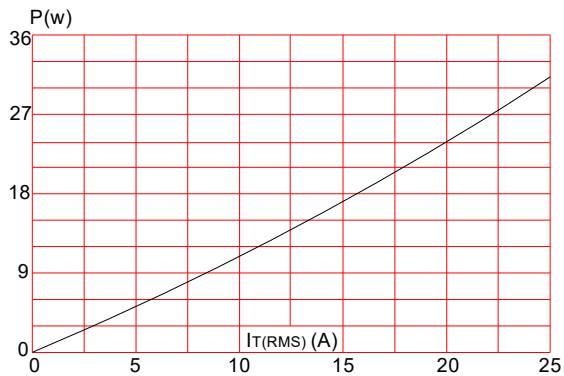


FIG.3: Surge peak on-state current versus number of cycles

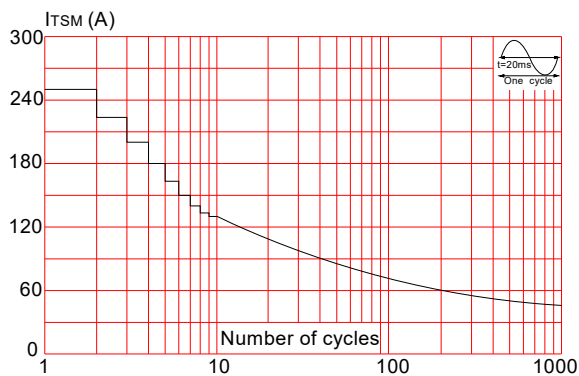


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 20\text{ms}$, and corresponding value of $\int i^2 t$ ($di/dt < 50\text{A}/\mu\text{s}$)

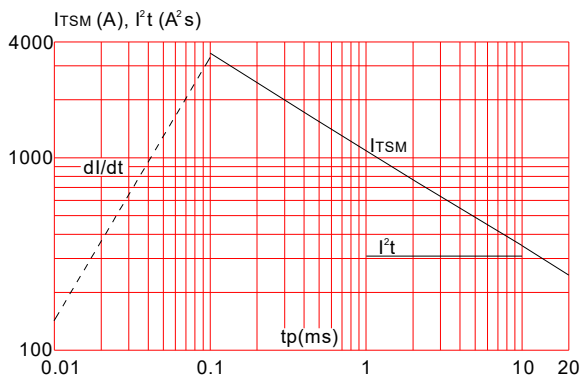


FIG.2: RMS on-state current versus case temperature

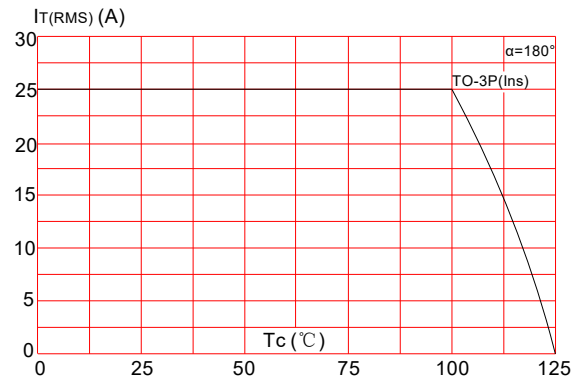


FIG.4: On-state characteristics (maximum values)

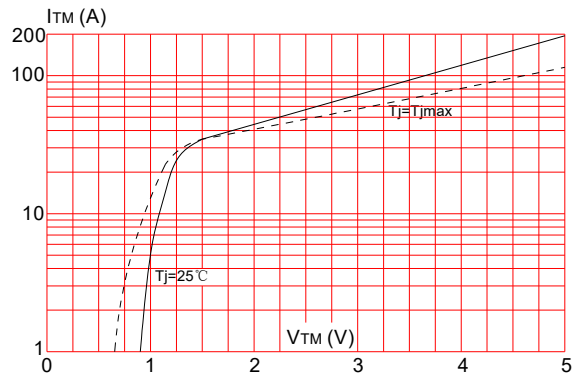


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature

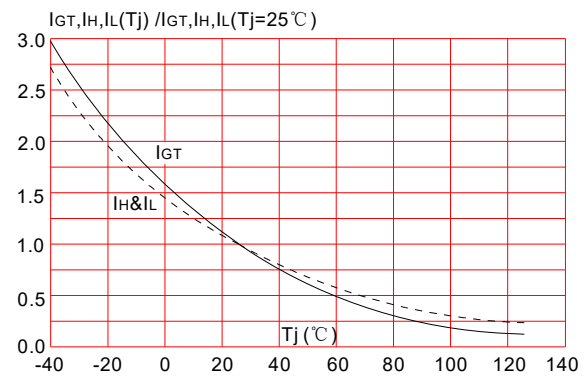
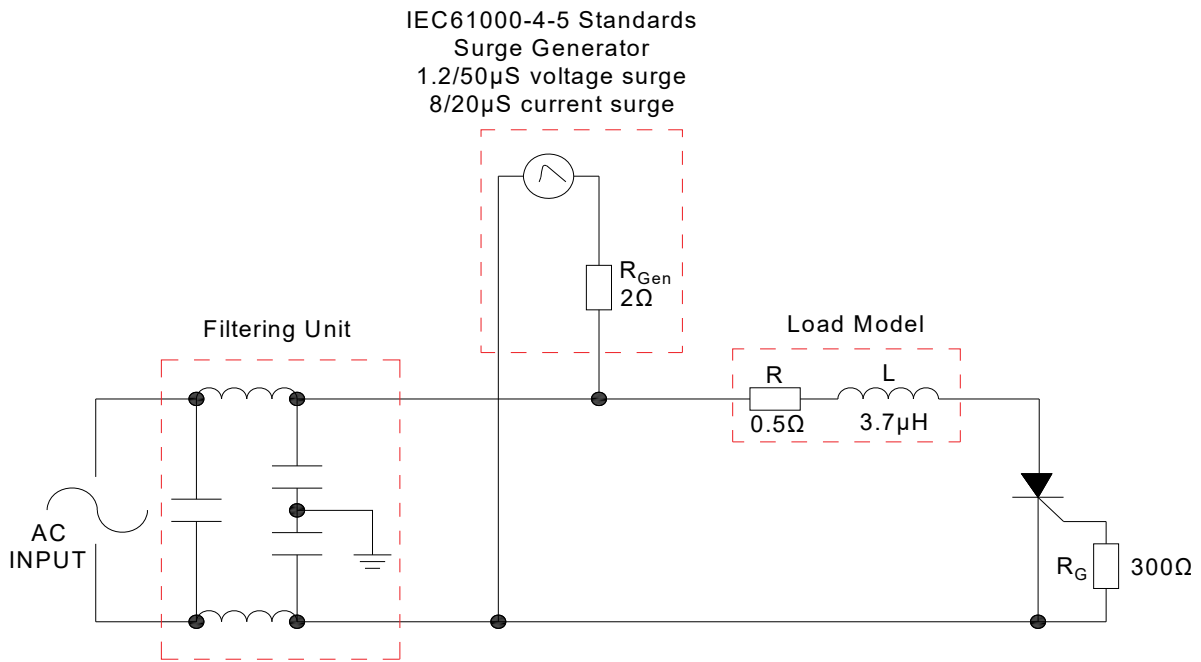


FIG.7: Test circuit for inductive and resistive loads to IEC-61000-4-5 standards



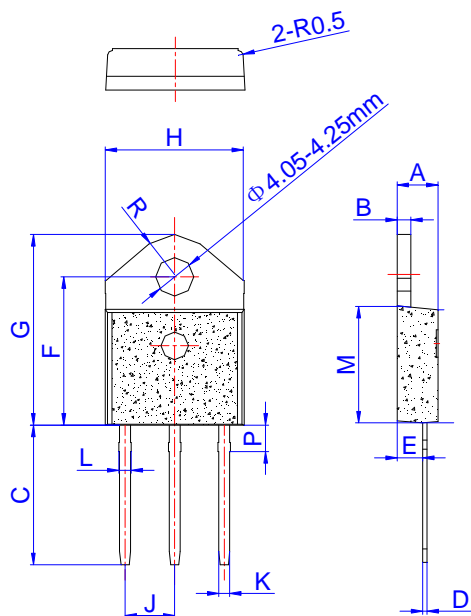
ORDERING INFORMATION

| Order code | Voltage V_{DRM}/V_{RRM} (V) | IGT(mA) | Package | Base qty. (pcs) | Delivery mode |
|---------------|----------------------------------|---------|---------|--------------------|---------------|
| JST26Z -800BW | 800 | 50 | TO-3P | 30 | Tube |

Document Revision History

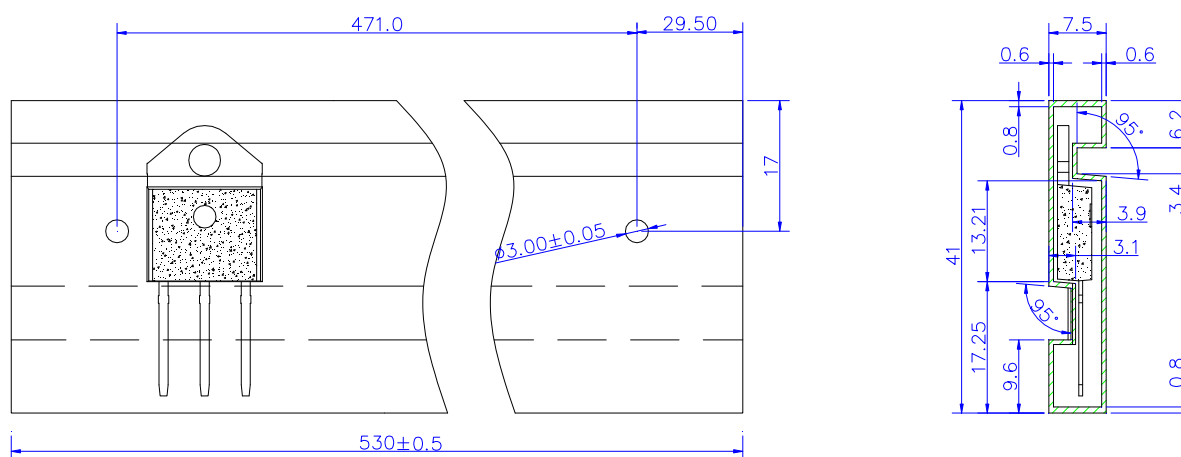
| Date | Revision | Changes |
|--------------|----------|---|
| Mar 27, 2022 | 1 | Last update |
| Jun 17,2022 | 2 | Add t_{on} & t_{off} & V_{TO} & R_d |

PACKAGE MECHANICAL DATA



| Ref. | Dimensions | | | | | |
|------|-------------|------|-------|--------|-------|-------|
| | Millimeters | | | Inches | | |
| | Min. | Typ. | Max. | Min. | Typ. | Max. |
| A | 4.40 | | 4.60 | 0.173 | | 0.181 |
| B | 1.45 | | 1.55 | 0.057 | | 0.061 |
| C | 14.35 | | 15.60 | 0.565 | | 0.614 |
| D | 0.50 | | 0.70 | 0.020 | | 0.028 |
| E | 2.70 | | 2.90 | 0.106 | | 0.114 |
| F | 15.80 | | 16.50 | 0.622 | | 0.650 |
| G | 20.40 | | 21.10 | 0.803 | | 0.831 |
| H | 15.10 | | 15.50 | 0.594 | | 0.610 |
| J | 5.40 | | 5.65 | 0.213 | | 0.222 |
| K | 1.10 | | 1.40 | 0.043 | | 0.055 |
| L | 1.25 | | 1.45 | 0.049 | | 0.057 |
| M | 12.37 | | 12.77 | 0.487 | | 0.503 |
| P | 2.80 | | 3.00 | 0.110 | | 0.118 |
| R | | 4.35 | | | 0.171 | |

DELIVERY MODE



| PACKAGE | OUTLINE | TUBE (PCS) | INNER BOX (PCS) | PER CARTON |
|---------|---------|------------|-----------------|------------|
| TO-3P | TUBE | 30 | 450 | 2,250 |



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