## ELECTRICAL CHARACTERISTICS ($T_j$=25 unless otherwise specified)

| Symbol | Test Condition | Quadrant | Value | | Unit |
|---|---|---|---|---|---|
| $I_{GT}$ | $V_D$=12V $R_L$=33 | - - | MAX. | 50 | mA |
| | | | | 70 | |
| $V_{GT}$ | | ALL | MAX. | 1 | V |
| $V_{GD}$ | $V_D$=$V_{DRM}$ $T_j$=125 $R_L$=3.3k | ALL | MIN. | 0.2 | V |
| $I_L$ | $I_G$=1.2$I_{GT}$ | - - | MAX. | 50 | mA |
| | | | | 100 | |
| $I_H$ | $I_T$=200mA | | MAX. | 60 | mA |
| dV/dt | $V_D$=540V Gate Open $T_j$=125 | | MIN. | 1000 | V s |
| (dV/dt)c | (dI/dt)c=3.5A/ms, $T_j$=125 | | MIN. | 12 | 9 V |
| $t_{on}$ | $I_G$=80mA $I_A$=400mA $I_R$=40mA $T_j$=25 | | TYP. | 5 | s |
| $t_{off}$ | | | | 30 | |

## STATIC CHARACTERISTICS

| Symbol | Parameter | | Value(MAX.) | Unit |
|---|---|---|---|---|
| $V_{TM}$ | $I_{TM}$=11A $t_p$=380 s | $T_j$=25 | 1.5 | V |
| $V_{TO}$ | Threshold voltage | $T_j$=125 | 0.81 | V |
| $R_D$ | Dynamic resistance | $T_j$=125 | 44 | P |
| $I_{DRM}$ | $V_D$=$V_{DRM}$ $V_R$=$V_{RRM}$ | $T_j$=25 | 5 | A |
| $I_{RRM}$ | | $T_j$=125 | 0.35 | mA |

## THERMAL RESISTANCES

| Symbol | Parameter | Value | Unit |
|---|---|---|---|
| $R_{th(j-c)}$ | junction to case (AC) | 1.6 | /W |
| $R_{th(j-a)}$ | junction to ambient (AC, in free air, S=2cm | | |

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

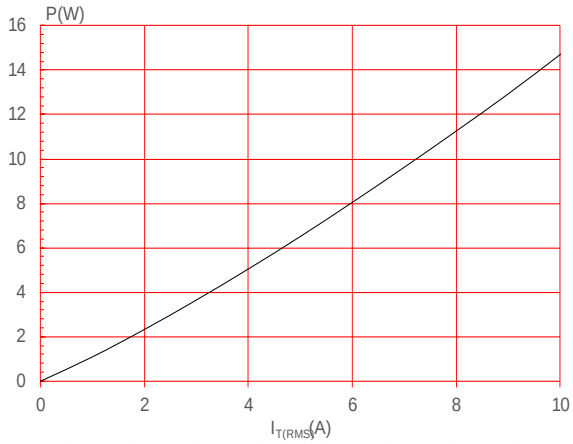



FIG.2: RMS on-state current versus case temperature

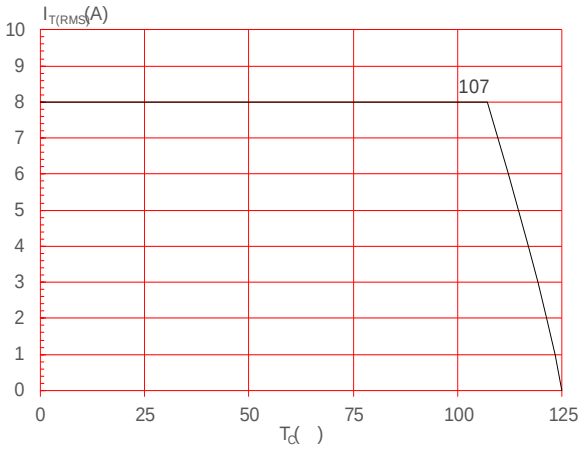



FIG.3: RMS on-state current versus ambient temperature (printed circuit board FR4,copper W K L F N Q H V V P I X O O F \ F O H

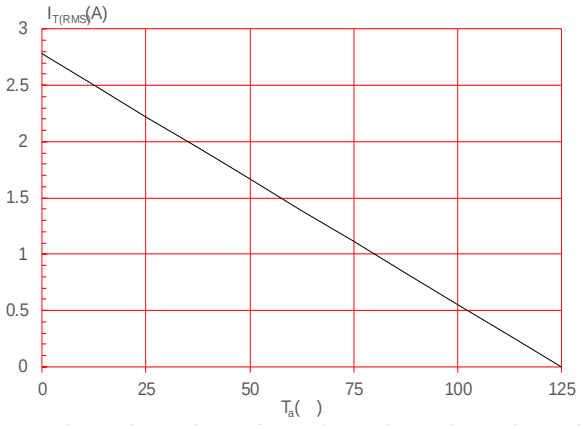



FIG.4: Surge peak on-state current versus number of cycles

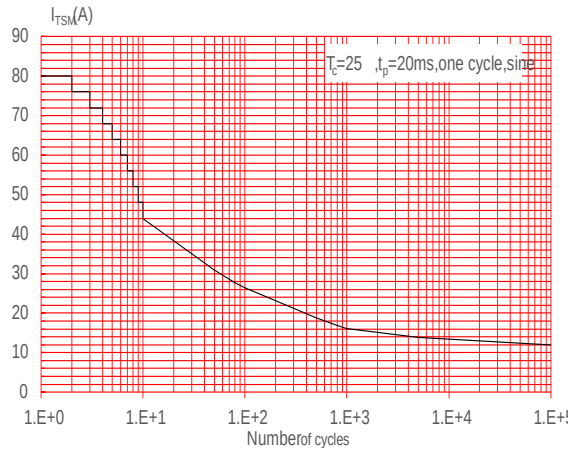


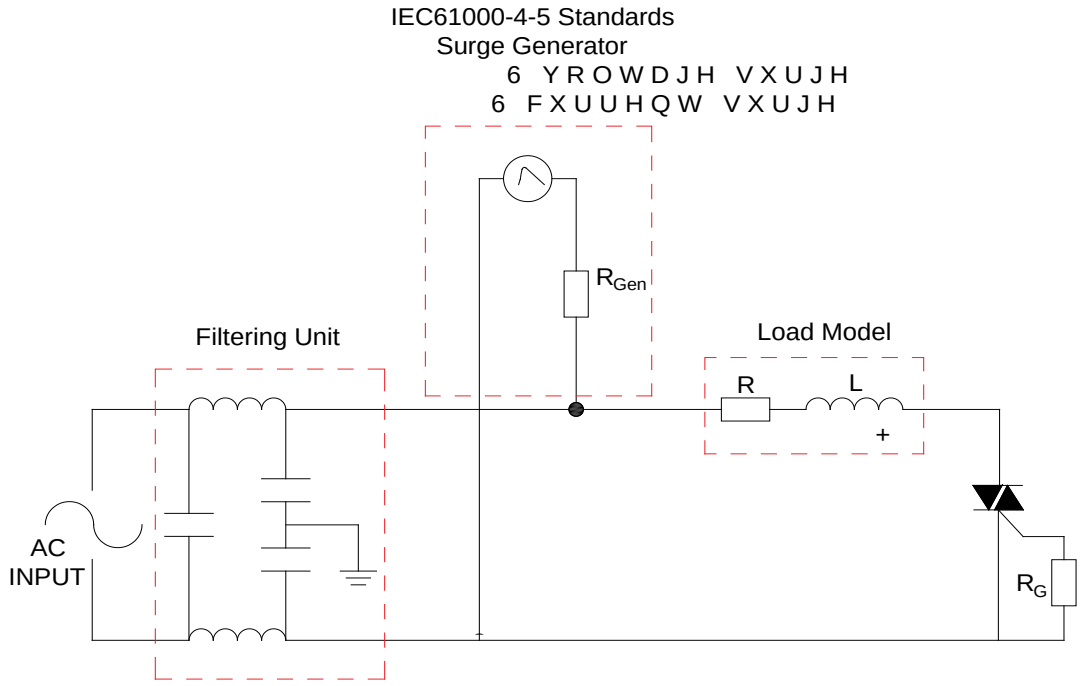

FIG.5: On-state characteristics

FIG.6: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p$<20ms, and corresponding value of $I^2t$

( -

FIG.7: Relative variations of gate trigger current, holding current and latching current versus junction temperature

FIG.8: 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 |
|---|---|---|---|---|---|---|
| | | - - | | | | |
| JST08E-800B | 800 | 50 | 70 | TO-263 | 50 | Tube |
| JST08E-800B-TR | | | | | 800 | Tape & Reel |

### Document Revision History

| Date | Revision | Changes |
|---|---|---|
| Apr.14, 2023 | A.1.0 | Last updated |
| Oct.20, 2025 | A.1.1 | Revise PACKAGE MECHANICAL DATA |

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## DELIVERY MODE

