



**JST12A-1200SW 12A TRIAC**

Rev.A.1.1

**DESCRIPTION:**

The JST12A-1200S

12A

|  |             |     |    |
|--|-------------|-----|----|
| Average gate power dissipation ( $T_j=125$ )                         | $P_{G(AV)}$ | 0.5 | W  |
| Peak gate power  | $P_{GM}$    | 10  | W  |
| Peak pulse voltage<br>( $T_j=25$ ; non-repetitive, off-state; FIG.7) | $V_{pp}$    | 4   | kV |

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

| Symbol      | Test Condition                                | Quadrant | Value |     | Unit       |
|-------------|---|----------|-------|-----|------------|
| $I_{GT}$    | $V_D=12V$ $R_L=33$                            | - -      | MAX.  | 10  | mA         |
| $V_{GT}$    |   | - -      | MAX.  | 1   | V          |
| $V_{GD}$    | $V_D=V_{DRM}$ $T_j=125$<br>$R_L=3.3k$         | - -      | MIN.  | 0.2 | V          |
| $I_L$       | $I_G=1.2I_{GT}$                               | -        | MAX.  | 25  | mA         |
|             |   |          |       | 30  |            |
| $I_H$       | $I_T=500mA$                                   |          | MAX.  | 15  | mA         |
| $dV/dt$     | $V_D=800V$ Gate Open $T_j=125$                |          | MIN.  | 100 | V/ $\mu s$ |
| $(dI/dt)_c$ | $(dV/dt)_c=10V/\mu s$ $T_j=125$               |          | MIN.  | 3   | A/ms       |
| $t_{on}$    | $I_G=20mA$ $I_A=200mA$ $I_R=20mA$<br>$T_j=25$ |          | TYP.  | 2.5 | $\mu s$    |
| $t_{off}$   |   |          |       | 25  |            |

**STATIC CHARACTERISTICS**

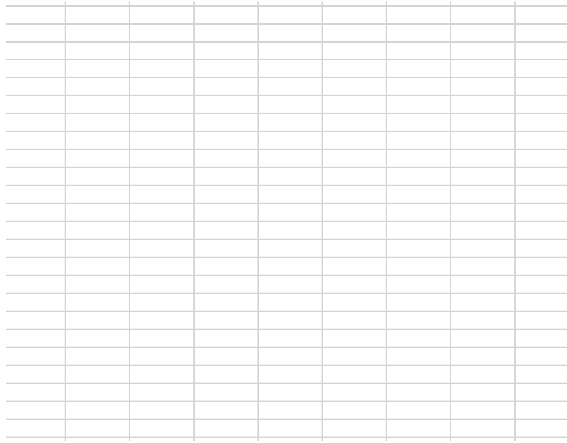
| Symbol    | Parameter                   |           | Value(MAX.) | Unit    |
|-----------|-----------------------------|-----------|-------------|---------|
| $V_{TM}$  | $I_{TM}=17A$ $t_p=380\mu s$ | $T_j=25$  | 1.5         | V       |
| $V_{TO}$  | Threshold voltage           | $T_j=125$ | 0.78        | V       |
| $R_D$     | Dynamic resistance          | $T_j=125$ | 37          | m       |
| $I_{DRM}$ | $V_D=V_{DRM}$ $V_R=V_{RRM}$ | $T_j=25$  | 10          | $\mu A$ |
| $I_{RRM}$ |                             | $T_j=125$ | 2           | mA      |

**THERMAL RESISTANCES**

| Symbol        | Parameter                | Value | Unit        |
|---------------|--------------------------|-------|-------------|
| $R_{th(j-c)}$ | junction to case (AC)    | 2.3   | $\text{/W}$ |
| $R_{th(j-a)}$ | junction to ambient (AC) | 60    | $\text{/W}$ |



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



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

**JST12A-1200SW**

ORDERING INFORMATION

| Order code    | Voltage<br>$V_{DRM}/V_{RRM}$ (V) | IGT(mA) | Package      | Base qty.<br>(pcs) | Delivery<br>mode |
|---------------|----------------------------------|---------|--------------|--------------------|------------------|
|               |                                  | - -     |              |                    |                  |
| JST12A-1200SW | 1200                             | 10      | TO-220A(Ins) | 50                 | Tube             |

Document Revision History

| Date | Revision |
|------|----------|
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