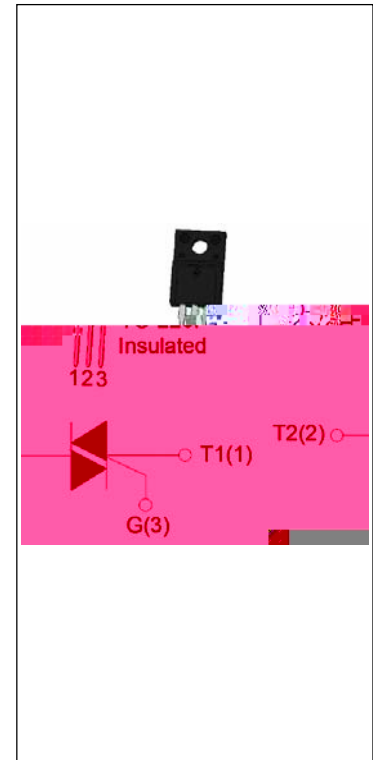




JST12X-1200CW 12A TRIAC

Rev.A.1.1

The JST12X-1200CW triac is suitable for general purpose AC switching. It is more suitable for the switch functions of washing machines' water valve, positive inversion of motor, heat pump...JST12X-1200CW snubberless triac is especially recommended for use on inductive loads. By using an external plastic package, JST12X-1200CW provides a rated insulation voltage of 2000 VRMS, complying with UL standards (File ref: E252906). Package TO-220F is RoHS compliant.



| Symbol | Value | Unit |
|-------------------|----------|------|
| $I_{T(RMS)}$ | 12 | A |
| V_{DRM}/V_{RRM} | 1200 | V |
| $I_{GT} / /$ | 35/35/35 | mA |

| 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} | 1200 | V |
| Repetitive peak reverse voltage ($T_j=25^\circ\text{C}$) | V_{RRM} | 1200 | V |
| RMS on-state current ($T_c = 80^\circ\text{C}$) | $I_{T(RMS)}$ | 12 | A |
| Non repetitive surge peak on-state current (full cycle, $t_p=20\text{ms}$, $T_j=25^\circ\text{C}$) | I_{TSM} | 130 | A |
| Non repetitive surge peak on-state current (full cycle, $t_p=16.6\text{ms}$, $T_j=25^\circ\text{C}$) | | 140 | |
| I^2t value for fusing ($t_p=10\text{ms}$, $T_j=25^\circ\text{C}$) | I^2t | 84.5 | 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} | 4 | A |
| Average gate power dissipation ($T_j=125^\circ\text{C}$) | $P_{G(AV)}$ | 0.5 | W |
| Peak gate power | P_{GM} | 10 | W |

J ST 12 X -1200 CW
JieJie Microelectronics Co., Ltd. Triacs

1200:VDRM /V

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

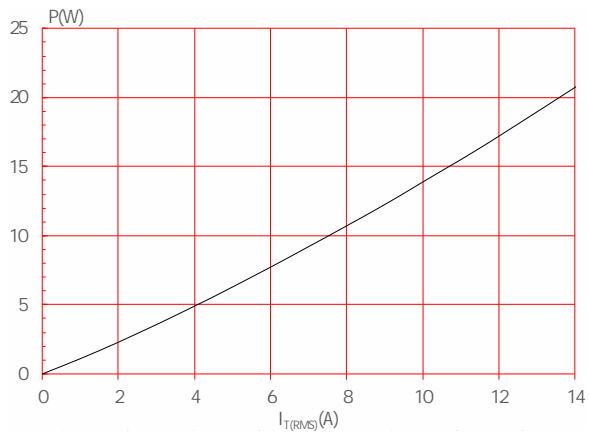


FIG.2: RMS on-state current versus case temperature

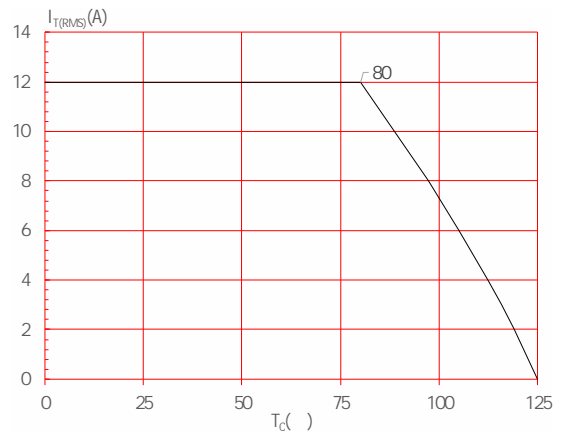


FIG.3: Surge peak on-state current versus number of cycles

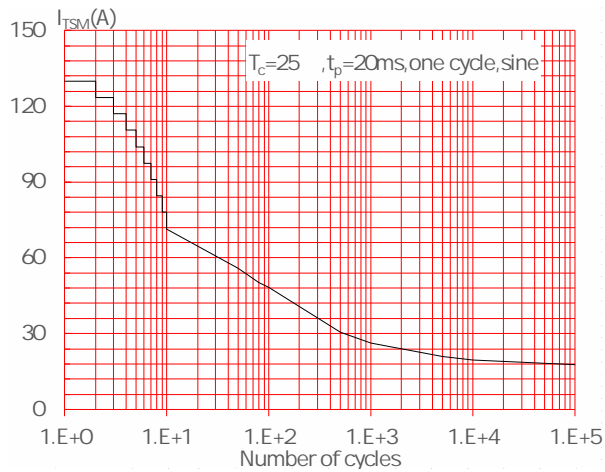


FIG.4: On-state characteristics

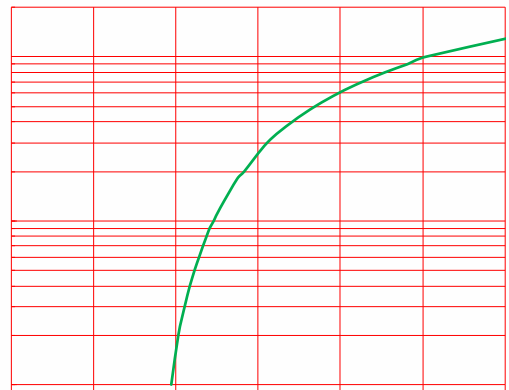
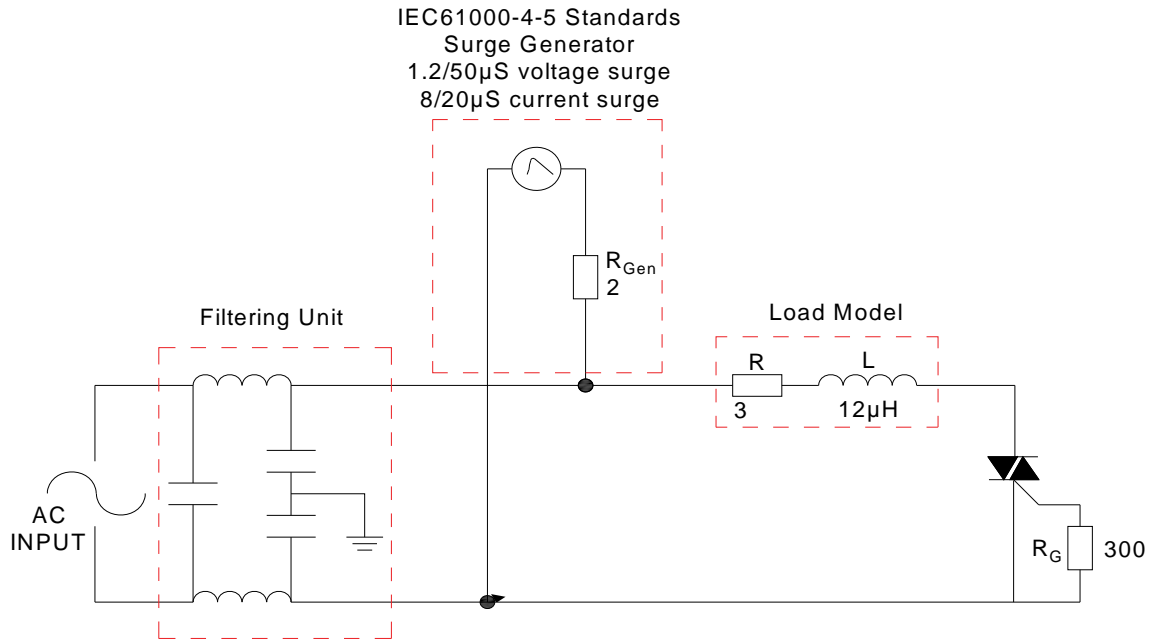


FIG.7 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards




| Order code | Voltage V _{DRM} /V _{R_{RRM}} (V) | IGT(mA) | Package | Base qty. (pcs) | Delivery mode |
|---------------|---|---------|--------------|--------------------|------------------|
| | | - - | | | |
| JST12X-1200CW | 1200 | 35 | TO-220F(Ins) | 50 | Tube |

Document Revision History

| Date | Revision | Changes |
|--------------|----------|--------------------------------|
| Apr.10, 2023 | A.1.0 | Last updated |
| Oct.15, 2025 | A.1.1 | Revise PACKAGE MECHANICAL DATA |



Information furnished in this document is believed to be accurate and reliable. However, Jiangsu JieJie Microelectronics Co., Ltd. assumes no responsibility for the consequences of use without consideration for such information nor use beyond it. Information mentioned in this document is subject to change without notice, apart from that when an agreement is signed, Jiangsu JieJie complies with the agreement. Products and information provided in this document have no infringement of patents. Jiangsu JieJie assumes no responsibility for any infringement of other rights of third parties which may result from the use of such products and information. This document supersedes and replaces all information previously supplied.

 is a registered trademark of Jiangsu JieJie Microelectronics Co., Ltd.

Copyright © 2025 Jiangsu JieJie Microelectronics Co., Ltd. All rights reserved.