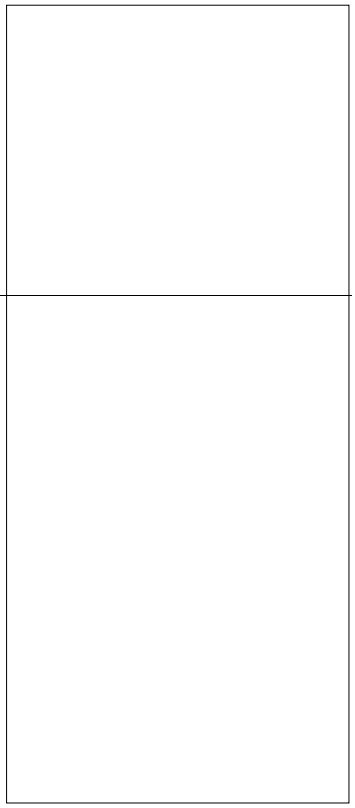
JCT620A 20A SCR

Rev.A.1.1

## DESCRIPTION:

With high ability to withstand the shock loading of large current, JCT620A SCR provides high dV/dt rate with strong resistance to electromagnetic interference.It is especially recommended for use on solid state relay, motorcycle, power charger, T-tools etc. From all three terminals to external heatsink,JCT620A provides a rated insulation voltage of 2500 $V_{RMS,}$ complying with UL standards (File ref: E252906). Package TO-220A is RoHS compliant.



## MAIN FEATURES

## 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 ) | $V_{DRM}$ | 600 | V |
| Repetitive peak reverse voltage ($T_j$=25 ) | $V_{RRM}$ | 600 | V |
| Average on-state current ($T_C$ 0 69 ) | $I_{T(AV)}$ | 13 | A |
| RMS on-state current ($T_C$ 069 ) | $I_{T(RMS)}$ | 20 | A |
| Non repetitive surge peak on-state current ($t_p$=10ms, $T_j$=25 ) | $I_{TSM}$ | 250 | A |
| Non repetitive surge peak on-state current ($t_p$=8.3ms, $T_j$=25 ) | | 275 | |
| $I^2t$ value for fusing ($t_p$=10ms , $T_j$=25 ) | $I^2t$ | 312.5 | $A^2s$ t |
| Critical rate of rise of on-state current | | | |

| | | | |
|---|---|---|---|
| Peak gate current ($t_p$=20 s , $T_j$=125 ) | $I_{GM}$ | 5 | A |
| Average gate power dissipation ($T_j$=125 ) | $P_{G(AV)}$ | 1 | W |
| Peak gate power | $P_{GM}$ | 20 | W |
| Peak pulse voltage ($T_j$=25 ; non-repetitive,off-state;FIG.7) | $V_{pp}$ | 0.5 | kV |

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

| Symbol | Test Condition | Value | | | Unit |
|---|---|---|---|---|---|
| | | MIN. | TYP. | MAX. | |
| $I_{GT}$ | $V_D$=12V $R_L$=33 | - | - | 15 | mA |
| $V_{GT}$ | | - | - | 1 | V |
| $V_{GD}$ | $V_D$=$V_{DRM}$ $T_j$=125 $R_L$=3.3k | 0.2 | - | - | V |

## ORDERING INFORMATION

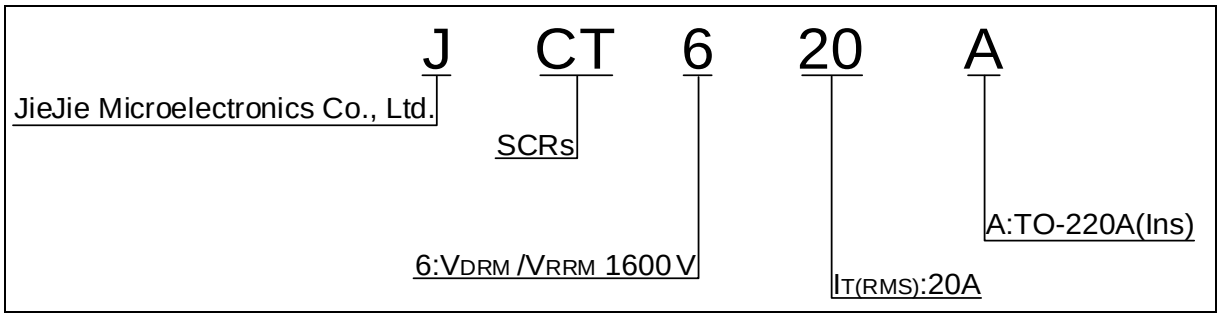
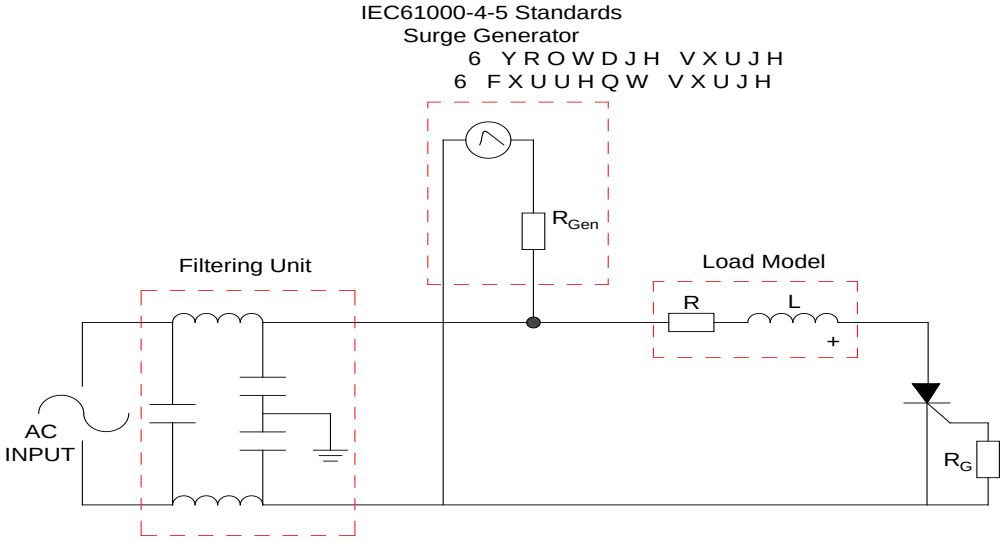


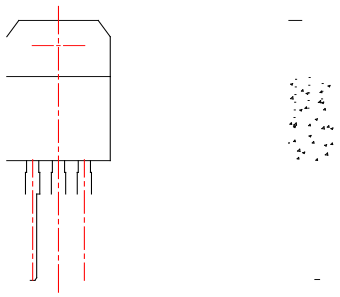
FIG.1: Maximum power dissipation versus RMS on-state current

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

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



## PACKAGE MECHANICAL DATA



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