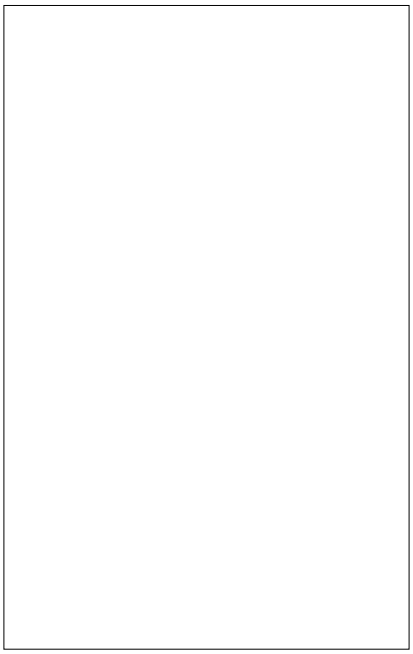
## JCT1208E 8A SCR

Rev.A.1.1

## DESCRIPTION:

With high ability to withstand the shock loading of large current, JCT1208E provides high dV/dt rate with strong resistance to electromagnetic interference. It is especially recommended for use on hair straightener motorcycle voltage regulator etc. Package TO-263 is RoHS compliant.



## MAIN FEATURES

| Symbol | Value | Unit |
|---|---|---|
| $I_{T(RMS)}$ | 8 | A |
| $V_{DRM}/V_{RRM}$ | 1200 | V |
| $I_{GT}$ | ≤15 | mA |

## 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 ) | $V_{DRM}$ | 1200 | V |
| Repetitive peak reverse voltage ($T_j$=25 ) | $V_{RRM}$ | 1200 | V |
| Average on-state current ($T_C \leq 92$ ) | $I_{T(AV)}$ | 5 | A |
| RMS on-state current ($T_C \leq 92$ ) | $I_{T(RMS)}$ | 8 | A |
| Non repetitive surge peak on-state current ($t_p$=10ms, $T_j$=25 ) | $I_{TSM}$ | 85 | A |
| Non repetitive surge peak on-state current ($t_p$=8.3ms, $T_j$=25 ) | | 94 | |
| $I^2t$ value for fusing ($t_p$=10ms , $T_j$=25 ) | $I^2t$ | 36 | $A^2s$ |
| Critical rate of rise of on-state current | | | |

| | | | |
|---|---|---|---|
| Peak gate power | $P_{GM}$ | 5 | W |
| Peak pulse voltage ($T_j$=25 ; non-repetitive,off-state;FIG.8) | $V_{pp}$ | 1 | kV |

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

| Symbol | Test Condition | Value | | | Unit |
|---|---|---|---|---|---|
| | | MIN. | TYP. | MAX. | |
| $I_{GT}$ | $V_D$=12V $R_L$=33Ω | - | - | 15 | mA |
| $V_{GT}$ | | - | - | 1 | V |
| $V_{GD}$ | $V_D$=$V_{DRM}$ $T_j$=125 $R_L$=3.3kΩ | 0.2 | - | - | V |
| $I_L$ | $I_G$=1.2$I_{GT}$ | - | - | 40 | mA |
| $I_H$ | $I_T$=500mA | - | - | 30 | mA |
| dV/dt | $V_D$=800V Gate Open $T_j$=125 | 1000 | - | - | V/μs |
| $t_{on}$ | $I_G$=20mA $I_A$=200mA $I_R$=20mA $T_j$=25 | - | 5 | - | μs |
| $t_{off}$ | | - | 100 | - | μs |

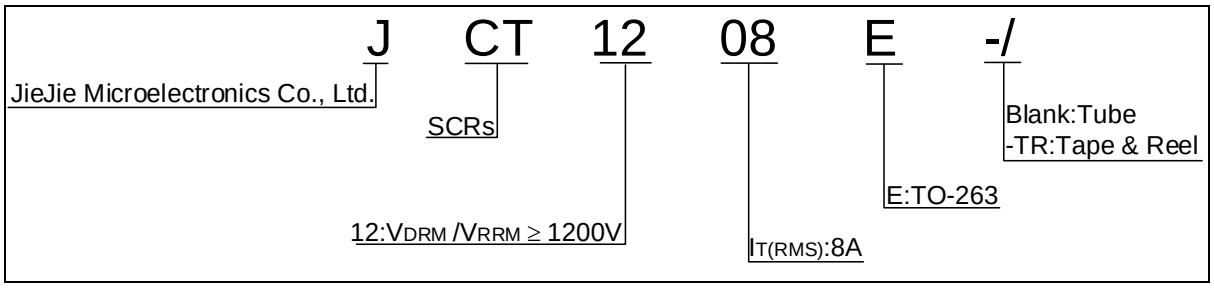
## STATIC CHARACTERISTICS

| Symbol | Parameter | | Value(MAX.) | Unit |
|---|---|---|---|---|
| $V_{TM}$ | $I_{TM}$=16A $t_p$=380μs | $T_j$=25 | 1.6 | V |
| $V_{TO}$ | Threshold voltage | $T_j$=125 | 0.8 | V |
| $R_D$ | Dynamic resistance | $T_j$=125 | 28 | mΩ |
| $I_{DRM}$ | $V_D$=$V_{DRM}$ $V_R$=$V_{RRM}$ | $T_j$=25 | 10 | μA |
| $I_{RRM}$ | | $T_j$=125 | 1 | mA |

## THERMAL RESISTANCES

| Symbol | Parameter | Value | Unit |
|---|---|---|---|
| $R_{th(j-c)}$ | junction to case (DC) | 2.9 | /W |
| $R_{th(j-a)}$ | junction to ambient (DC, in free air, S=1cm$^2$) | 60 | /W |

## ORDERING INFORMATION




## MARKING

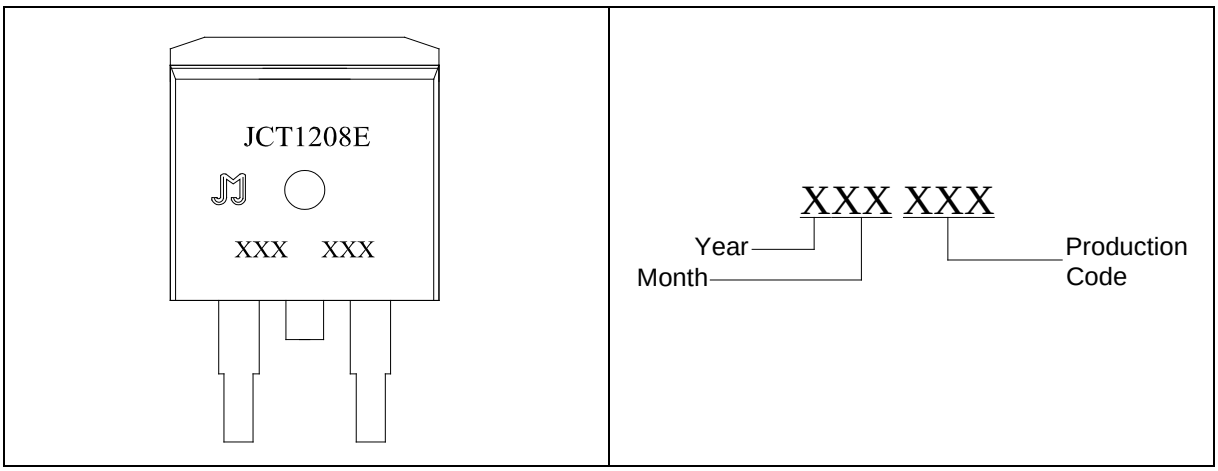


**FIG.7:** Relative variations of gate trigger current, holding current and latching current versus junction temperature

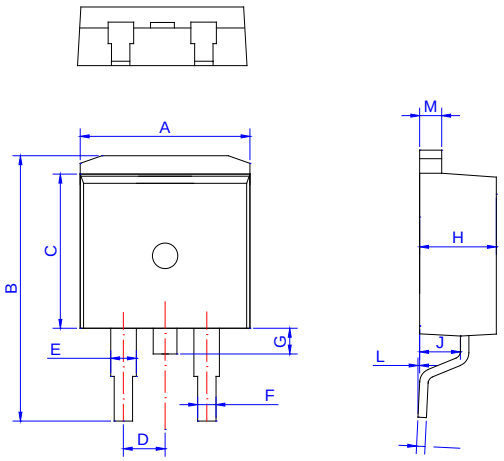
## ATION

| oltage $_{RRM}$/$V_{RRM}$ (V) | IGT(mA) | Package | Base qty. (pcs) | Delivery mode |
|---|---|---|---|---|
| 1200 | 15 | TO-263 | 50 | Tube |
| | | | 800 | Tape & Reel |

### Document Revision History

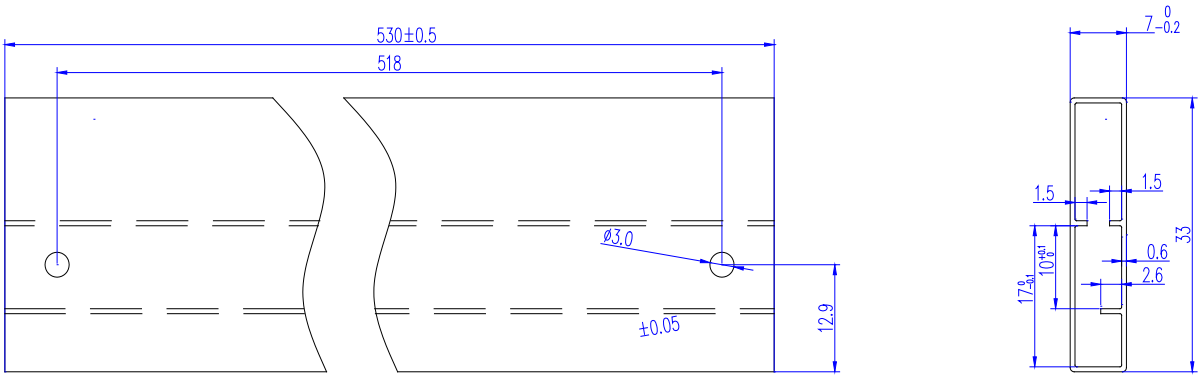
| Revision | Changes |
|---|---|
| A.1.0 | Last update |

## PACKAGE MECHANICAL DATA




| Ref. | Dimensions | | | | | |
|---|---|---|---|---|---|---|
| | Millimeters | | | Inches | | |
| | Min. | Typ. | Max. | Min. | Typ. | Max. |
| A | 9.90 | | 10.20 | 0.390 | | 0.402 |
| | | | | | | |
| B | 14.70 | | 15.80 | 0.579 | | 0.622 |
| | | | | | | |
| C | 9.40 | | 9.60 | 0.370 | | 0.378 |
| | | | | | | |
| D | 2.40 | | | 0.094 | | |
| E | 1.20 | | 1.50 | 0.047 | | 0.059 |
| F | 0.75 | | 0.85 | 0.029 | | 0.033 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
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## DELIVERY MODE



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