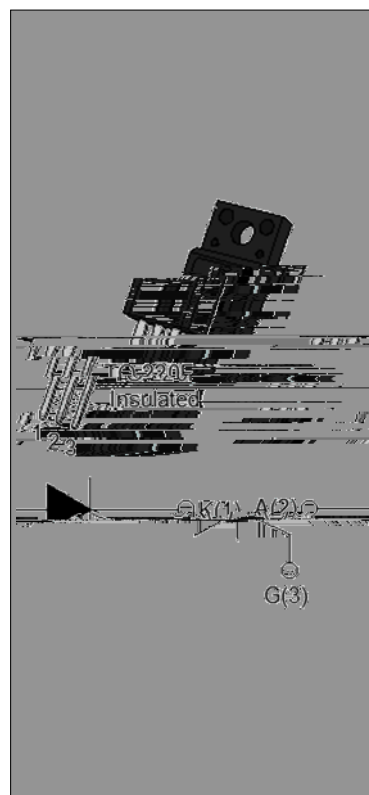




With high ability to withstand the shock loading of large current, JCT812F of silicon controlled rectifiers provides high dV/dt rate with strong resistance to electromagnetic interference. It is especially recommended for use on solid state relay, motorcycle, power charger, T-tools etc. From all three terminals to external heatsink, JCT812F provides a rated insulation voltage of 2000 V_{RMS} , 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} | 800 | V |
| I_{GT} | 15 | mA |

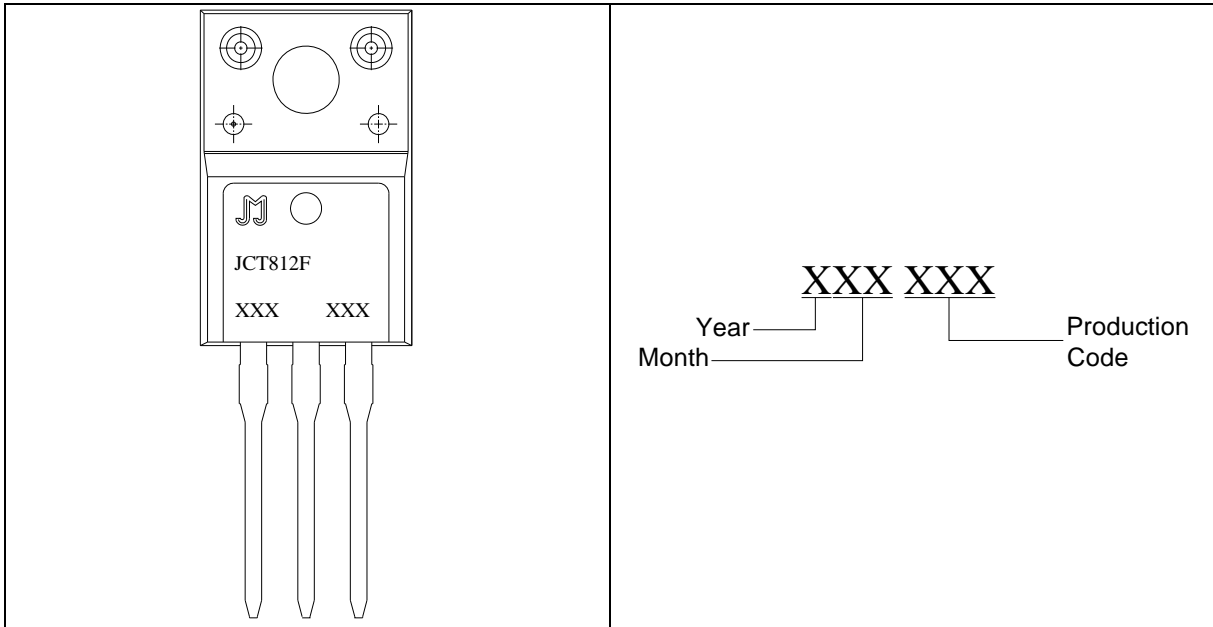
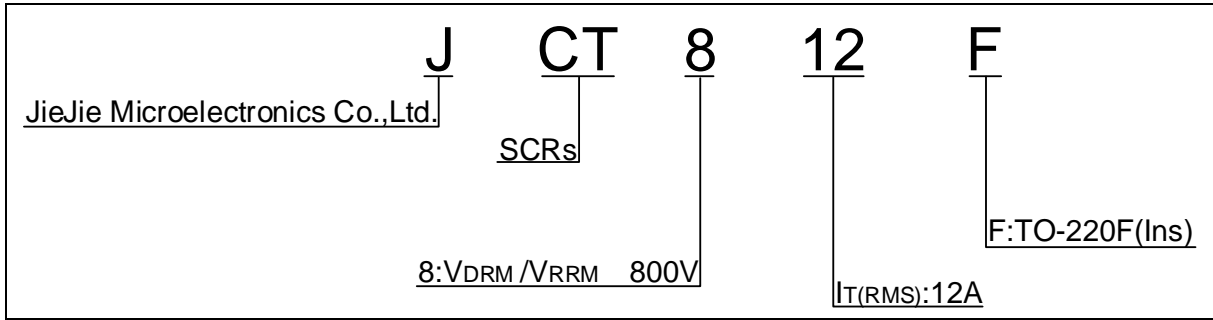
| | | | |
|---|--------------|---------|-----------|
| Storage junction temperature range | T_{stg} | -40-150 | |
| Operating junction temperature range | T_j | -40-125 | |
| Repetitive peak off-state voltage ($T_j=25^\circ C$) | V_{DRM} | 800 | V |
| Repetitive peak reverse voltage ($T_j=25^\circ C$) | V_{RRM} | 800 | V |
| Average on-state current ($T_c = 86^\circ C$) | $I_{T(AV)}$ | 7.6 | A |
| RMS on-state current ($T_c = 86^\circ C$) | $I_{T(RMS)}$ | 12 | A |
| Non repetitive surge peak on-state current ($t_p=10ms, T_j=25^\circ C$) | I_{TSM} | 140 | A |
| Non repetitive surge peak on-state current ($t_p=8.3ms, T_j=25^\circ C$) | | 154 | |
| I^2t value for fusing ($t_p=10ms, T_j=25^\circ C$) | I^2t | 98 | A^2s |
| Critical rate of rise of on-state current ($I_G=2 \times I_{GT}, f=100Hz, T_j=125^\circ C$) | di/dt | 150 | $A/\mu s$ |



| | | | |
|--|-------------|-----|----|
| Peak gate current ($t_p=20\mu s$, $T_j=125$) | I_{GM} | 4 | A |
| Average gate power dissipation ($T_j=125$) | $P_{G(AV)}$ | 1 | W |
| Peak gate power | P_{GM} | 10 | W |
| Peak pulse voltage ($T_j=25$; non-repetitive, off-state; FIG.7) | V_{pp} | 0.5 | kV |

($T_j=25$ unless otherwise specified)

| 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 |
| I_L | $I_G=1.2I_{GT}$ | - | - | 60 | mA |
| I_H | $I_T=500mA$ | - | - | 50 | mA |
| dV/dt | $V_D=540V$ Gate Open $T_j=125$ | 500 | - | - | V/ μs |
| t_{on} | $I_G=20mA$ $I_A=200mA$ $I_R=20mA$ $T_j=25$ | - | 5 | - | μs |

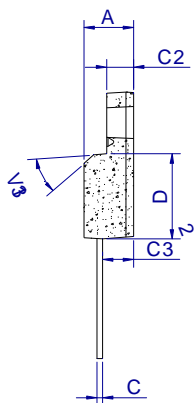
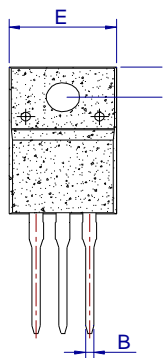
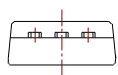




Maximum power dissipation versus
M



TEL




A

M



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