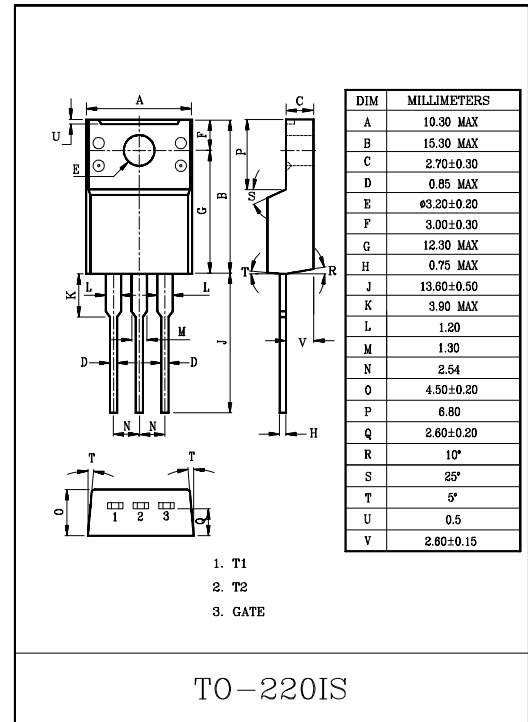


FEATURES

- Repetitive Peak Off-state Voltage : $V_{DRM}=600V$.
- R.M.S On-State Current : $I_{T(RMS)}=5A$.
- High Commutation (dv/dt)
- Isolation Voltage : $V_{ISOL}=1500V$ AC
(UL Recognized : E166398)

APPLICATIONS

- Switching Mode Power Supply
- Speed Control of Small Motors
- Solid State Relay
- Light Dimmer
- Washing Machine
- Temperature Control of Heater



MAXIMUM RATINGS (Ta=25°C)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|---|--------------|--|------------------|
| Non-Repetitive Peak Off-state Voltage | V_{DSM} | 700 | V |
| Repetitive Peak Off-state Voltage | V_{DRM} | 600 | V |
| R.M.S On-state Current (Full Sine Waveform Tc=96°C) | $I_{T(RMS)}$ | 5 | A |
| Peak One Cycle Surge On-state Current (Non-Repetitive) | I_{TSM} | 45 (50Hz 1 Cycle) 50 (60Hz 1 Cycle) | A |
| I^2t Limit Value (1mS ≤ t ≤ 10mS) | I^2t | 10.4 | A ² S |
| Peak Gate Power Dissipation | P_{GM} | 5 | W |
| Average Gate Power Dissipation | $P_{G(AV)}$ | 0.5 | W |
| Peak Gate Voltage | V_{GM} | 10 | V |
| Peak Gate Current | I_{GM} | 2 | A |
| Junction Temperature | T_j | -40~125 | °C |
| Storage Temperature Range | T_{stg} | -40~125 | °C |
| Isolation Voltage (Ac, t=1min.) | V_{ISOL} | 1500 | V |

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ELECTRICAL CHARACTERISTICS (Ta=25°C)

| CHARACTERISTIC | | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT | |
|---|-----|---------------|--|--------------------------|------|------|---------------------------|----|
| Repetitive Peak Off-state Current | | I_{DRM} | $V_{DRM}=\text{Rated}$ | - | - | 20 | μA | |
| Gate Trigger Voltage | I | V_{GT} | $V_D=12\text{V}, R_L=20\Omega$ | $T_2(+), \text{Gate}(+)$ | - | - | 1.5 | V |
| | II | | | $T_2(+), \text{Gate}(-)$ | - | - | 1.5 | |
| | III | | | $T_2(-), \text{Gate}(-)$ | - | - | 1.5 | |
| | IV | | | $T_2(-), \text{Gate}(+)$ | - | - | - | |
| Gate Trigger Current | I | I_{GT} | | $T_2(+), \text{Gate}(+)$ | - | - | 30 | mA |
| | II | | | $T_2(+), \text{Gate}(-)$ | - | - | 30 | |
| | III | | | $T_2(-), \text{Gate}(-)$ | - | - | 30 | |
| | IV | | | $T_2(-), \text{Gate}(+)$ | - | - | - | |
| Peak On-State Voltage | | V_{TM} | $I_{TM}=7\text{A}$ | - | - | 1.5 | V | |
| Gate Non-Trigger Voltage | | V_{GD} | $V_D=\text{Rated}, T_c=125^\circ\text{C}$ | 0.2 | - | - | V | |
| Holding Current | | I_H | $V_D=12\text{V}, I_{TM}=1\text{A}$ | - | - | 50 | mA | |
| Critical Rate of Rise of Off-state Voltage | | dV/dt | $T_j=125^\circ\text{C}, V_{DRM}=\text{Rated}$ Exponential Rise | - | 300 | - | $\text{V}/\mu\text{S}$ | |
| Critical Rate of Rise of Off-state Voltage at commutation | | $(dV/dt)_C$ | $T_j=125^\circ\text{C},$ $(di/dt)_C=-2.5\text{A}/\text{mS}$ $V_D=2/3V_{DRM}$ | 10 | - | - | $\text{V}/\mu\text{S}$ | |
| Thermal Resistance | | $R_{th(j-c)}$ | Junction to Case, AC | - | - | 3.8 | $^\circ\text{C}/\text{W}$ | |

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