

TRIAC (ISOLATED TYPE)

TMG12C60F

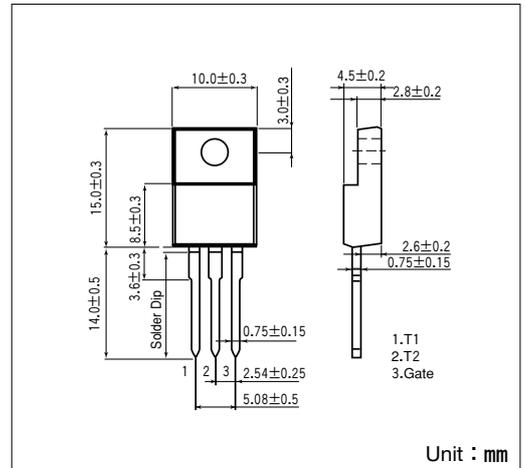
TOP



UL;E76102 (M)

TMG12C40/60F are isolated mold triac suitable for wide range of applications like copier, microwave oven, solid state switch, motor control, light and heater control.

- I_{T(RMS)} 12A
- High surge capability 130A
- Full molded isolated type



Maximum Ratings

(T_j=25°C unless otherwise specified)

| Symbol | Item | Ratings | | Unit |
|------------------|-----------------------------------|-----------|-----------|------|
| | | TMG12C40F | TMG12C60F | |
| V _{DRM} | Repetitive Peak Off-State Voltage | 400 | 600 | V |

| Symbol | Item | Conditions | Ratings | Unit |
|---------------------|--------------------------------------|--|-------------|------------------|
| I _{T(RMS)} | R.M.S. On-State Current | T _c =79°C | 12 | A |
| I _{TSM} | Surge On-State Current | One cycle, 50Hz/60Hz, peak, non-repetitive | 119/130 | A |
| I ² t | I ² t | | 71 | A ² S |
| P _{GM} | Peak Gate Power Dissipation | | 5 | W |
| P _{G(AV)} | Average Gate Power Dissipation | | 0.5 | W |
| I _{GM} | Peak Gate Current | | 2 | A |
| V _{GM} | Peak Gate Voltage | | 10 | V |
| V _{ISO} | Isolation Breakdown Voltage (R.M.S.) | A.C.1 minute | 1500 | V |
| T _j | Operating Junction Temperature | | -40 to +125 | °C |
| T _{stg} | Storage Temperature | | -40 to +125 | °C |
| | Mass | | 2 | g |

Electrical Characteristics

| Symbol | Item | Conditions | Ratings | | | Unit |
|-------------------------------|--|---|---------|------|------|------|
| | | | Min. | Typ. | Max. | |
| I _{DRM} | Reptitive Peak Off-State Current | V _D =V _{DRM} , Single phase, half wave, T _j =125°C | | | 2 | mA |
| V _{TM} | Peak On-State Voltage | I _T =20A, Inst. measurement | | | 1.4 | V |
| I _{GT1} ⁺ | Gate Trigger Current | V _D =6V, R _L =10Ω | | | 30 | mA |
| I _{GT1} ⁻ | | | | | 30 | |
| I _{GT3} ⁺ | | | | | — | |
| I _{GT3} ⁻ | | | | | 30 | |
| V _{GT1} ⁺ | Gate Trigger Voltage | V _D =6V, R _L =10Ω | | | 1.5 | V |
| V _{GT1} ⁻ | | | | | 1.5 | |
| V _{GT3} ⁺ | | | | | — | |
| V _{GT3} ⁻ | | | | | 1.5 | |
| V _{GD} | Non-Trigger Gate Voltage | T _j =125°C, V _D =1/2 V _{DRM} | 0.2 | | | V |
| (dv/dt) _c | Critical Rate of Rise off-State Voltage at commutation | T _j =125°C, [di/dt] _c =-6A/ms, V _D =2/3 V _{DRM} | 10 | | | V/μs |
| I _H | Holding Current | | | 20 | | mA |
| R _{th(j-c)} | Thermal Impedance | Junction to case | | | 3.3 | °C/W |

