

# TRIAC(Through Hole/Isolated)

# TMG2C80F

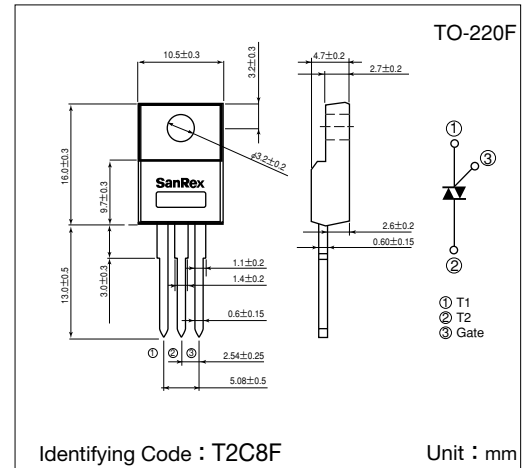
**SanRex** Triac TMG2C80F is designed for full wave AC control applications. It can be used as an ON/OFF function or for phase control operation.

### Typical Applications

- Home Appliances : Washing Machines, Vacuum Cleaners, Rice Cookers, Micro Wave Ovens, Hair Dryers, other control applications
- Industrial Use : SMPS, Copier Machines, Motor Controls, Dimmer, SSR, Heater Controls, Vending Machines, other control applications

### Features

- $I_{T(RMS)}=2A$
- High Surge Current
- Lead-Free Package



### Maximum Ratings

(T<sub>j</sub>=25°C unless otherwise specified)

| Symbol              | Item                                | Reference                                       | Ratings  | Unit             |
|---------------------|-------------------------------------|---|----------|------------------|
| V <sub>DRM</sub>    | Repetitive Peak Off-State Voltage   |   | 800      | V                |
| I <sub>T(RMS)</sub> | R.M.S. On-State Current             | T <sub>c</sub> =105°C                           | 2        | A                |
| I <sub>TSM</sub>    | Surge On-State Current              | One cycle, 50Hz/60Hz, Peak value non-repetitive | 18/20    | A                |
| I <sup>2</sup> t    | I <sup>2</sup> t (for fusing)       |   | 1.67     | A <sup>2</sup> S |
| P <sub>GM</sub>     | Peak Gate Power Dissipation         |   | 1.5      | W                |
| P <sub>G(AV)</sub>  | Average Gate Power Dissipation      |   | 0.1      | W                |
| I <sub>GM</sub>     | Peak Gate Current                   |   | 1        | A                |
| V <sub>GM</sub>     | Peak Gate Voltage                   |   | 7        | V                |
| V <sub>ISO</sub>    | Isolation Breakdown Voltage (R.M.S) | A.C.1minute                                     | 1500     | V                |
| T <sub>j</sub>      | Operating Junction Temperature      |   | -40~+125 | °C               |
| T <sub>stg</sub>    | Storage Temperature                 |   | -40~+150 | °C               |
|                     | Mass                                |   | 2        | g                |

### Electrical Characteristics

| Symbol                        | Item  | Reference   | Ratings |      |      | Unit |
|-------------------------------|---|---|---------|------|------|------|
|                               |   |   | Min.    | Typ. | Max. |      |
| I <sub>DRM</sub>              | Repetitive Peak Off-State Current                         | V <sub>D</sub> =V <sub>DRM</sub> , Single phase, half wave, T <sub>j</sub> =125°C |         |      | 1    | mA   |
| V <sub>TM</sub>               | Peak On-State Voltage                                     | I <sub>T</sub> =3A, Inst. measurement   |         |      | 1.6  | V    |
| I <sub>GT1</sub> <sup>+</sup> | Gate Trigger Current                                      | V <sub>D</sub> =6V, R <sub>L</sub> =10Ω   |         |      | 15   | mA   |
| I <sub>GT1</sub> <sup>-</sup> |   |   |         |      | 15   |      |
| I <sub>GT3</sub> <sup>+</sup> |   |   |         |      | —    |      |
| I <sub>GT3</sub> <sup>-</sup> |   |   |         |      | 15   |      |
| V <sub>GT1</sub> <sup>+</sup> | Gate Trigger Voltage                                      |   |         |      | 1.5  | V    |
| V <sub>GT1</sub> <sup>-</sup> |   |   |         |      | 1.5  |      |
| V <sub>GT3</sub> <sup>+</sup> |   |   |         |      | —    |      |
| V <sub>GT3</sub> <sup>-</sup> |   |   |         |      | 1.5  |      |
| V <sub>GD</sub>               | Non-Trigger Gate Voltage                                  | T <sub>j</sub> =125°C, V <sub>D</sub> =1/2V <sub>DRM</sub>                        | 0.2     |      |      | V    |
| [dv/dt] <sub>c</sub>          | Critical Rate of Rise of Off-State Voltage at Commutation | T <sub>j</sub> =125°C, [di/dt] <sub>c</sub> =-1A/ms, V <sub>D</sub> =400V         | 3       |      |      | V/μs |
| I <sub>H</sub>                | Holding Current   |   |         | 2    |      | mA   |
| R <sub>th(j-c)</sub>          | Thermal Resistance  | Junction to case  |         |      | 7.5  | °C/W |
| R <sub>th(j-a)</sub>          |   | Junction to ambient   |         |      | 50   | °C/W |

