



DESCRIPTION

The TD3043 consists of a single input LED optically coupled to a zero-volt crossing triac driver. The TD3043 provides high input-to-output isolation and is designed to drive high-powered triacs. Typical uses include interfacing logic level control signals to equipment powered from 110Vac and 220Vac lines.

FEATURES

- Zero-volt switching
- 400V blocking voltage
- High input-to-output isolation (5000 Vrms)
- High reliability

APPLICATIONS

- Home appliances
- Motor/Drive controls
- Solid state relays
- Solenoid/Valve control
- Solenoids
- Exercise equipment
- Temperature Controls

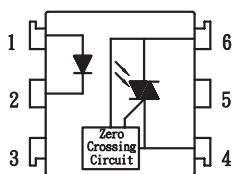
OPTIONS/SUFFIXES

- -TR 0.4" Lead Spacing Option
- -S Surface Mount Option
- -H 0.4" Lead Spacing

MAXIMUM RATINGS

| PARAMETER | UNIT | MIN | TYP | MAX |
|------------------------------------|------|-----|-----|-----|
| Storage Temperature | °C | -55 | | 125 |
| Operating Temperature | °C | -40 | | 85 |
| Continuous Input Current | mA | | | 40 |
| Transient Input Current | mA | | | 400 |
| Reverse Input Control Voltage | V | | | 6 |
| Total Power Dissipation | mW | | | 330 |
| Soldering Temperature (10 seconds) | °C | | | 260 |

SCHEMATIC DIAGRAM



1. Anode
2. Cathode
3. NC
4. MAIN TERMINAL
5. SUBSTRATE DO NOT CONNECT
6. MAIN TERMINAL

APPROVALS

- UL and C-UL Approved File #E201932
- VDE Approved, License#40011225


ELECTRICAL CHARACTERISTICS - 25°

| PARAMETER | UNIT | MIN | TYP | MAX | TEST CONDITIONS |
|-------------------------------|---------|------|-----|-----|---------------------------------|
| INPUT SPECIFICATIONS | | | | | |
| LED Forward Voltage | V | | 1.2 | 1.5 | If = 10mA |
| LED Reverse Voltage | V | 6 | 12 | | Ir = 10uA |
| Reverse Leakage Current | μ A | | | 10 | Vr=4V |
| OUTPUT SPECIFICATIONS | | | | | |
| Blocking Voltage | V | 400 | | | Io = 1uA |
| Peak Blocking Current | n A | | 60 | 500 | VDRM=Rated |
| | V | | 1.8 | 3 | ITM=100mA |
| Critical Rate of Rise | V / μ s | 600 | | | |
| COUPLED SPECIFICATIONS | | | | | |
| Isolation Voltage | V | 5000 | | | T = 1 minute |
| Trigger Current | mA | | | 5 | Main Terminal Voltage=3V |
| Inhibit Voltage | V | | 5 | 20 | IF=5mA |
| Isolation Resistance | G Ω | 50 | | | DC500V |
| Holding Current | μA | | 100 | | |
| Leakage Current | μA | | | 1 | IF=Rated, VDRM=Rated, Off State |



Zero-Volt Switching
Triac Driver

PERFORMANCE DATA

Fig.1 On-State Characteristics

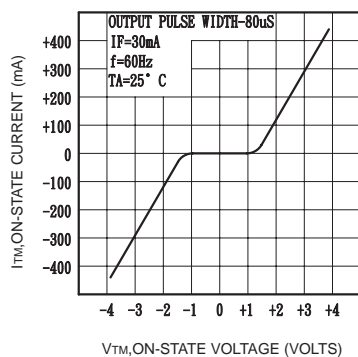


Fig.2 Inhibit Voltage versus Temperature

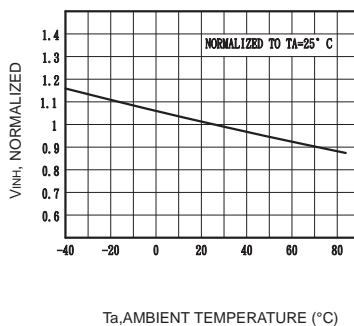


Fig.3 Leakage with LED Off versus Temperature

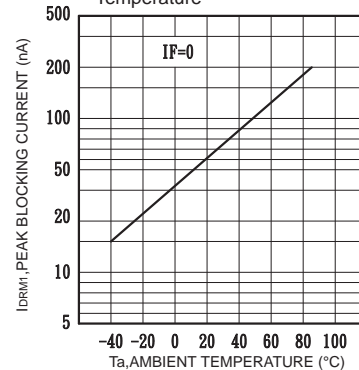


Fig.4 I_{DRM2} , Leakage in Inhibit State versus Temperature

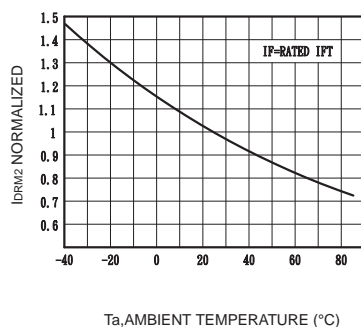
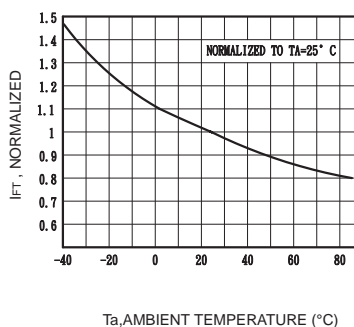


Fig.5 Trigger Current versus Temperature

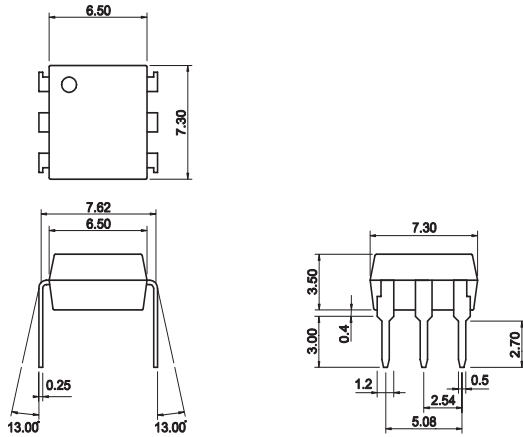


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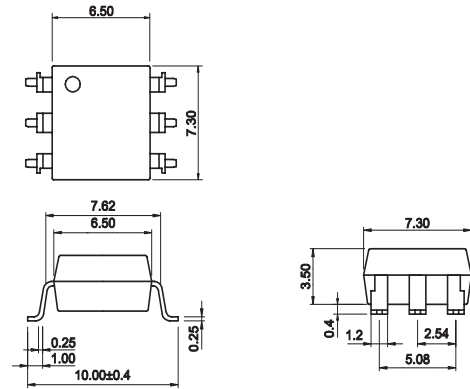


MECHANICAL DIMENSIONS

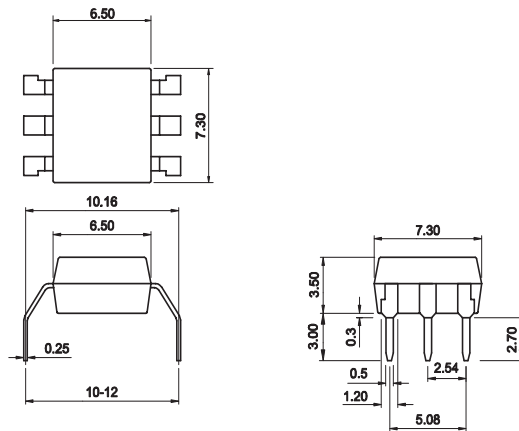
6 PIN DUAL IN-LINE PACKAGE (Through Hole)



6 PIN SURFACE MOUNT DEVICE (SMD)



0.4" Lead Spacing



TOLERANCE :+ 0.25mm

Unit in (mm)