TD3043

Zero-Volt Switching
Triac Driver



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

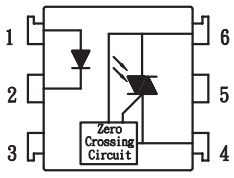
APPLICATIONS

- 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

SCHEMATIC DIAGRAM



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

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

APPROVALS

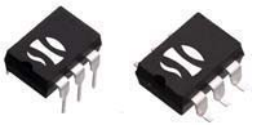
- UL and C-UL Approved File #E201932
- VDE Approved, License#40011225

Solid State Optronics, Inc.
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www.ssousa.com

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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

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PERFORMANCE DATA

Fig.1 On-State Characteristics

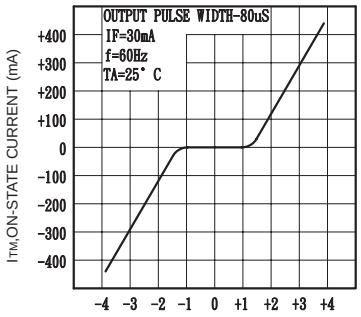


Fig.2 Inhibit Voltage versus Temperature

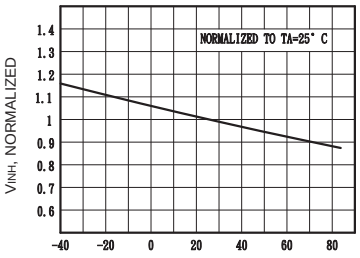


Fig.3 Leakage with LED Off versus Temperature

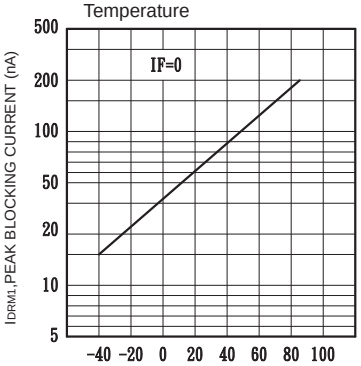


Fig.4 I_{DRM2} ,Leakage in Inhibit State versus Temperature

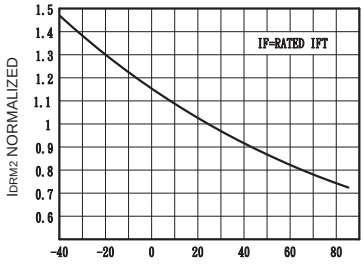
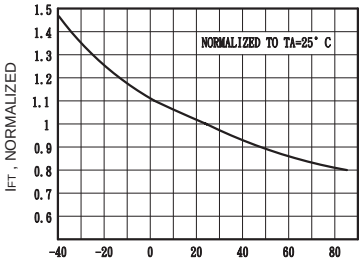


Fig.5 Trigger Current versus Temperature



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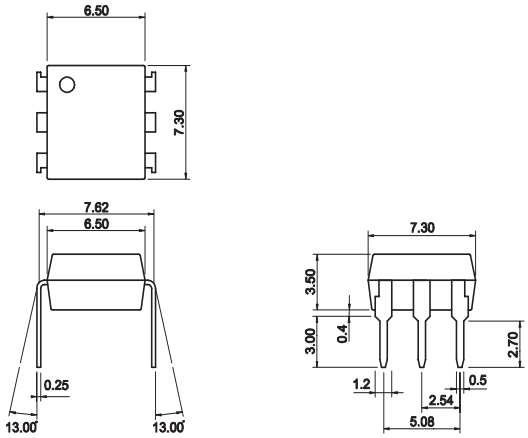
TD3043



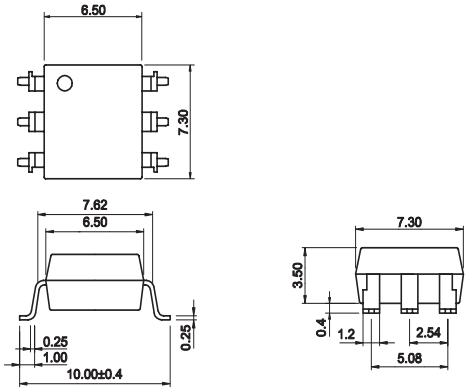
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MECHANICAL DIMENSIONS

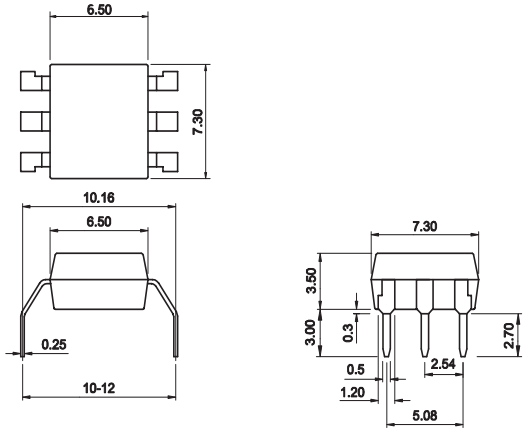
6 PIN DUAL IN-LINE PACKAGE (Through Hole)



6 PIN SURFACE MOUNT DEVICE (SMD)



0.4" Lead Spacing



TOLERANCE :+ 0.25mm

Unit in (mm)

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