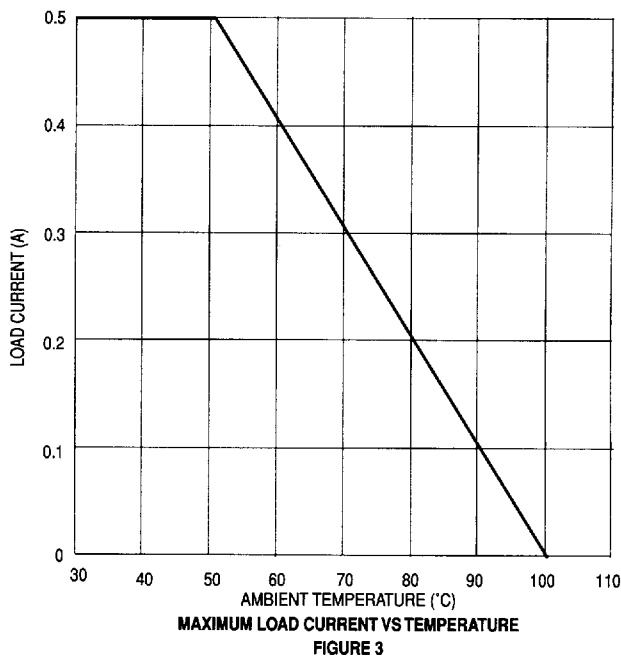
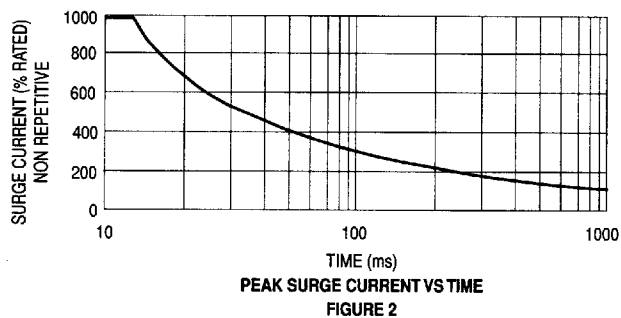
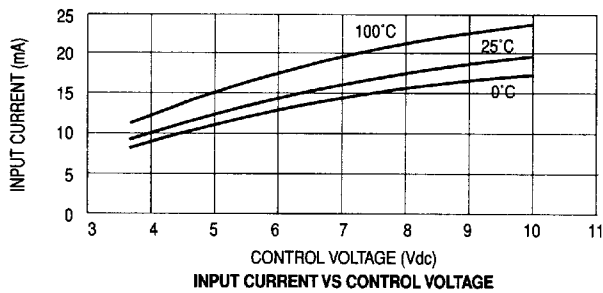
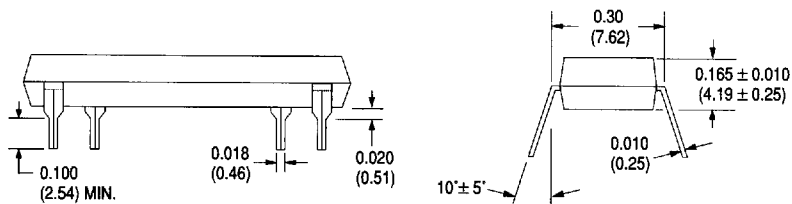


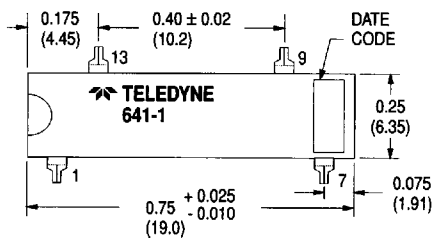
**CHARACTERISTIC CURVES**



**MECHANICAL SPECIFICATION**



**DIMENSIONS IN INCHES (MILLIMETERS)**  
Tolerances  $\pm 0.015$  (0.38) unless specified

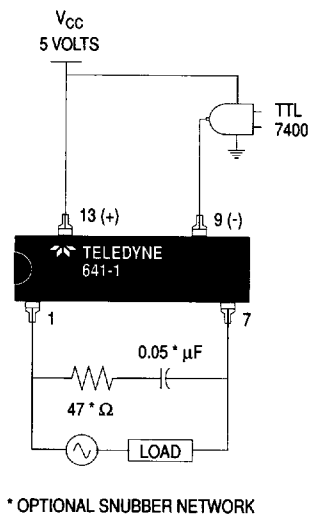


- Operating Temperature -20°C to 100°C
- Storage Temperature -20°C to 100°C
- Weight: 2.0 grams maximum
- Case: 14 pin Dual-In-Line (TO-116)
- Case Material: Epoxy, self extinguishing

**NOTES:**

1. UL rated at 0.5 Arms for motor starting and incandescent lamp control.
2. Triac may lose blocking capability during and after surge until  $T_j$  falls below 125°C maximum.

**TYPICAL 641 INTERFACE**



# AC Solid State Relay

# 641 Series

TELEDYNE RELAYS  
 查询641-1供应商

RANDOM TURN-ON - TRANSFORMER ISOLATED

## ELECTRICAL SPECIFICATIONS

(25°C UNLESS OTHERWISE SPECIFIED)

### INPUT (CONTROL) SPECIFICATIONS

Parameter	Min	Max	Units
Control Voltage Range (See Figure 1)	4.0	10	Vdc
Input Current at 5V Control Voltage		16	mAdc
Must Turn-On Voltage ( $0 \leq T_A \leq 100^\circ\text{C}$ )	4.0		Vdc
Must Turn-Off Voltage ( $0 \leq T_A \leq 100^\circ\text{C}$ )		0.5	Vdc

### OUTPUT (LOAD) SPECIFICATIONS

Parameter	Min	Max	Units	
Load Voltage Range	641-1	6.0	140	Vrms
	641-2	6.0	250	
Output Current Rating (See Figure 3, Note 1)	0.005	0.5	Arms	
Frequency Range		70	Hz	
Over Voltage Rating	641-1		200	Vpeak
	641-2		400	
On-State Voltage Drop at Rated Current		1.5	Vrms	
Surge Current Rating (Non repetitive 16 ms max. See Figure 2, Note 2)		5.0	A	
Turn-On Time (60 Hz)		20	$\mu\text{s}$	
Turn-Off Time (60 Hz)		8.3	$\mu\text{s}$	
Leakage Current (Off State at 100°C)		1.0	mArms	
Off-State dV/dt (Without RC Snubber, Typical)		50	V/ $\mu\text{s}$	
Isolation (Input to Output at 500 Vdc)	$10^9$		Ohms	
Dielectric Strength (Input to Output)	2500		Vac	
Capacitance (Input to Output)		5	pF	
Junction Temperature. ( $T_J$ )		125	°C	



### FEATURES/BENEFITS

- Fast Switching Speed - Where speed is important
- Floating Output - Eliminates ground loops and signal ground noise
- Random Turn On - For pulse width modulation
- Low Off State Leakage - For high off state impedance
- Switches High Voltages - To 250 Vrms
- Switches High Currents - To 0.5 Arms
- High Noise Immunity - Control signals isolated from switching noise
- High Dielectric Strength - For safety and for protection of control and signal level circuits
- UL & CUL registered File Number E55197

### DESCRIPTION

The 641 Series features random turn-on for controlling AC loads with a triac output rated at 0.5 amp up to 50 °C ambient without a heat sink. A high frequency input oscillator with isolation transformer coupled directly to the triac gate provides the added capability of driving very low current AC loads down to 5 mA. Internal design employs a unique patented lead frame construction molded in a 14 pin DIP package.

8917669 0000952 408