ELECTRICAL SPECIFICATIONS

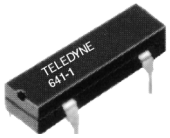
25°C UNLESS OTHERWISE SPECIFIED)

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£TA£100°C)	4.0		Vdc
Must Turn-Off Voltage (0£TA£100°C)		0.5	Vdc

OUTPUT (LOAD) SPECIFICATIONS

Parameter	Part	Min	Max	Units
Load Voltage Rating	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			1.5	Vrms
Surge Current Rating (Non-repetitive 16 ms mac. See Figure 2, Note 2)			5.0	A
Turn-On Time (60 Hz)			20	µs
Turn-Off Time (60 Hz)			8.3	µs
Leakage Current (Off State at 100°C)			1.0	mArms
Off-State dV/dt (Without RC Snubber, Typical)			50	V/µs
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



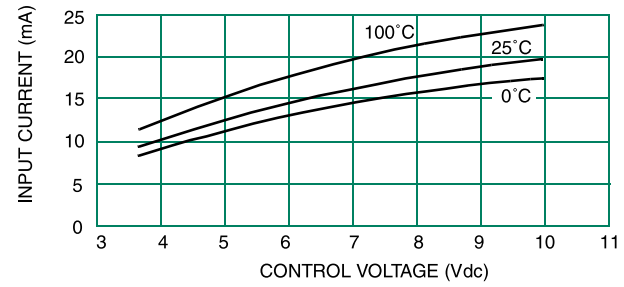
FEATURES/BENEFITS

- 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

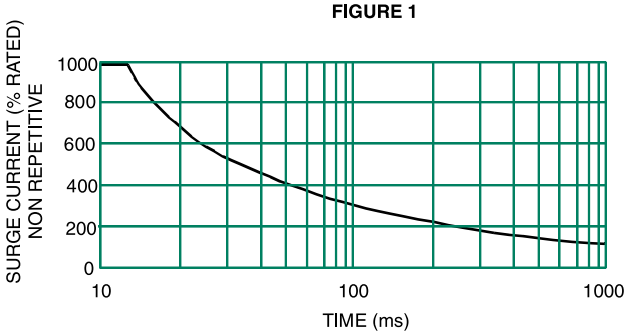
DESCRIPTION

The 641 Series features random turn-on for controlling AC loads with a triac output rated at 0.5 amp up to 50 ½C 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.

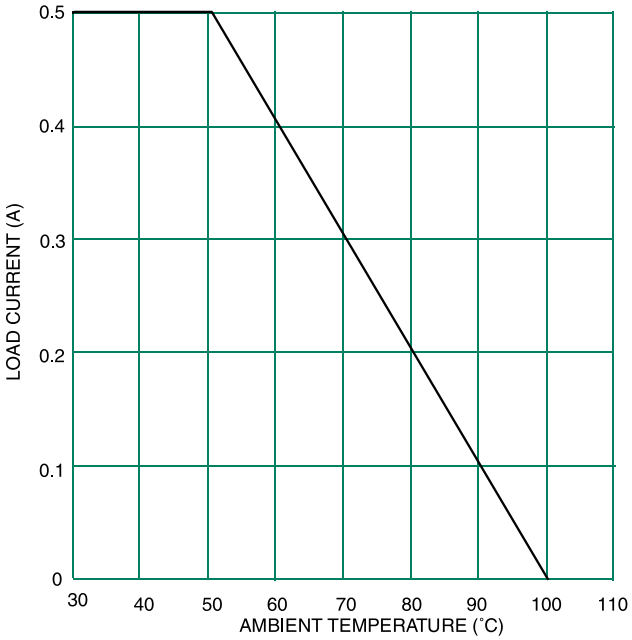
CHARACTERISTIC CURVES



INPUT CURRENT VS CONTROL VOLTAGE
FIGURE 1

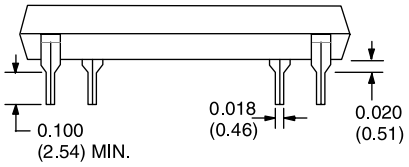


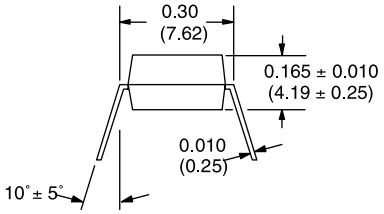
PEAK SURGE CURRENT VS TIME
FIGURE 2



MAXIMUM LOAD CURRENT VS TEMPERATURE
FIGURE 3

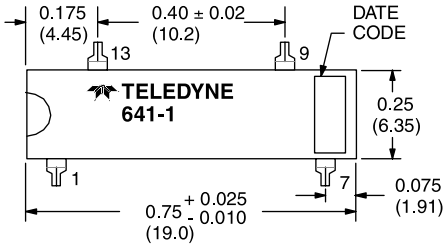
MECHANICAL SPECIFCATIONS



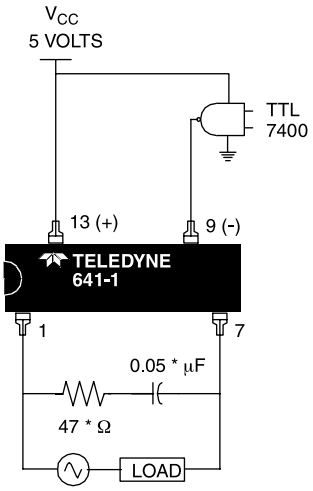


DIMENSIONS IN INCHES (MILLIMETERS)
Tolerances ± 0.015 (0.38) unless specified

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



TYPICAL 641 INTERFACE



* OPTIONAL SNUBBER NETWORK

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.