ELECTRICAL SPECIFICATIONS

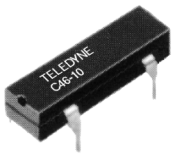
(25°C UNLESS OTHERWISE SPECIFIED)

INPUT (CONTROL) SPECIFICATIONS

Parameter	Min	Max	Units
Control Voltage Range (See Figures 1, 2 and Note 1)	3.8	32	Vdc
Input Current @ 5 V (See Figures 1 and 2)		14	mAdc
Must Turn-On Voltage	3.8		Vdc
Must Turn-Off Voltage (Guaranteed Off)	1.5		Vdc
Reverse Voltage Protection		-32	Vdc

OUTPUT (LOAD) SPECIFICATIONS

Parameter		DC		Bi-directional		
Parameter		**Min**	**Max**	**Min**	**Max**	**Units**
Load Voltage Rating	C47F-10		50	C46F-10	±50	Vdc
	C47F-20		90	C46F-20	±90	
	C47F-30		180	C46F-30	±180	
	C47F-40		360	C46F-40	±360	
(See Figure 3) Output Current Rating	C47F-10		1.75	C46F10	1.0	Adc
	C47F-20		1.0	C46F-20	0.75	
	C47F-30		0.6	C46F-30	0.4	
	C47F-40		0.4	C46F-40	0.25	
On Resistance (See Note 3)	C47F-10		0.15	C46F-10	0.3	Ohms
	C47F-20		0.35	C46F-20	0.7	
	C47F-30		1.0	C46F-30	2.0	
	C47F-40		2.0	C46F-40	4.0	
Leakage Current at 80% of VL			1.0		1.0	mAdc
Surge Rating (% of Rated) <1 sec			200		200	%
Turn On Time	C47F-10		3	C46F-10,30,40	2.5	ms
	C47F-20,30,40		1.5	C46F-10,20	3	
Turn Off Time			1.0		1.0	ms
Output Capacitance (Typical)	C47F-10		700	C46F-10	700	pF
	C47F-20		350	C46F-20	350	
	C47F-30		300	C46F-30	300	
	C47F-40		250	C46F-40	250	
Isolation (Input to Output)			10^9		10^9	Ohms
Dielectric Strength (Input to Output)			1500		1500	Vac
Capacitance (Input to Output)			10		10	pF
Junction Temperature (T_J)			125		125	°C

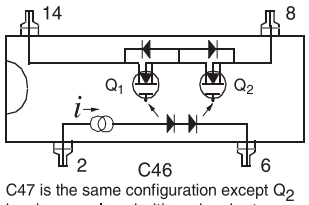


FEATURES/BENEFITS

- Power FET output with Very Low On Resistance - Virtually no offset with low leakage and voltage drop.
- Switches High Voltages and Currents - Voltages to 360 Vdc. Current to 1.75 Adc. DC, Bi-directional or AC models
- Optical Isolation - Isolates control elements from load transients. Eliminates ground loops and signal ground noise.
- Floating Output - Allows for high and low side switching.
- High Noise Immunity - Control circuit can not be triggered by output switching noise.
- 14 Pin DIP Package

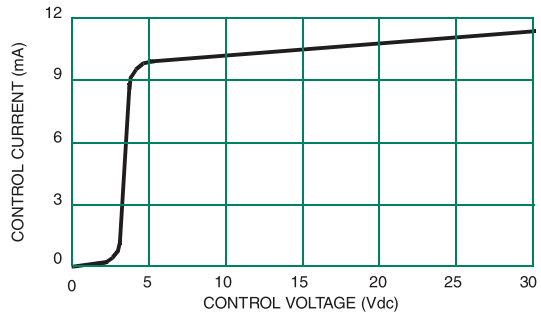
DESCRIPTION

These miniature solid state relays utilize a photo-voltaic generator driving high performance power FET chips to provide low output on-resistance and high output switching capability. The series includes DC switching versions with output current ratings up to 1.75 amp, and bi-directional versions to switch AC or DC up to 1.0 amp. Output voltage ratings of both types range from 50 to 360 volts. The virtual elimination of offset voltage makes them ideal for low level switching applications as well. Input and output are optically isolated to protect input logic circuits from output voltage transients.

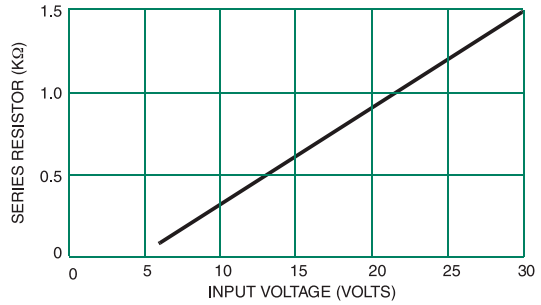


C47 is the same configuration except Q_2 has been replaced with a wire short

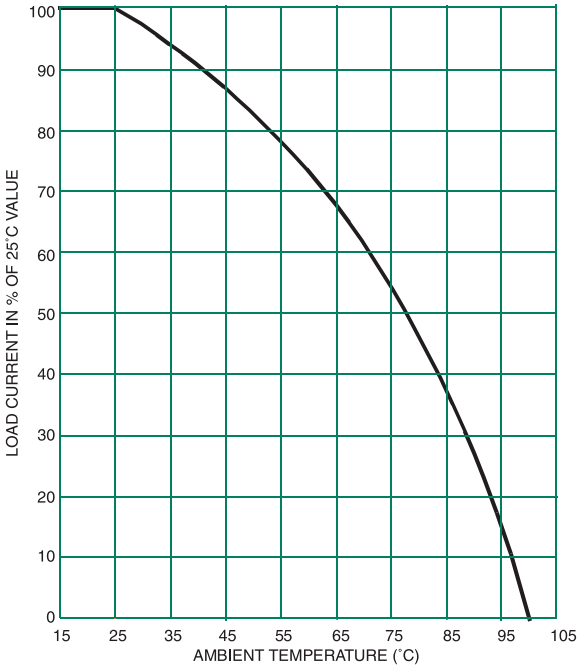
CHARACTERISTIC CURVES



CONTROL CURRENT VS CONTROL VOLTAGE
FIGURE 1

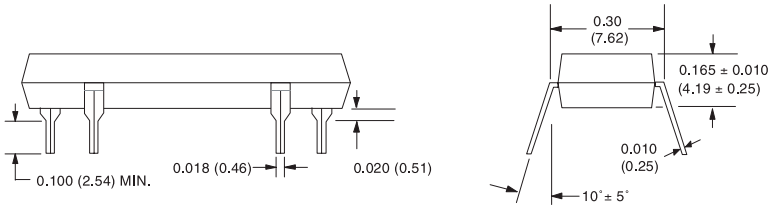


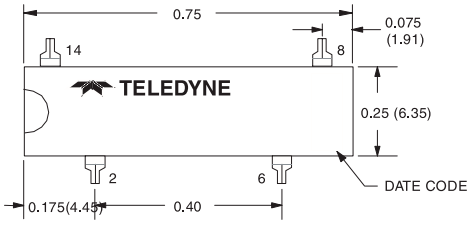
SERIES LIMIT RESISTOR VS INPUT VOLTAGE
FIGURE 2



MAXIMUM LOAD CURRENT VS TEMPERATURE
FIGURE 3

MECHANICAL SPECIFICATION

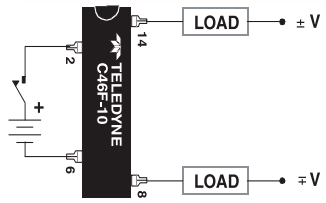




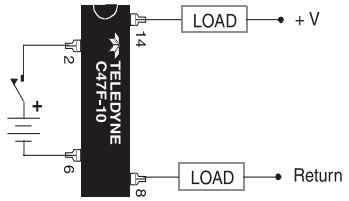
- Operating Temperature -40˚C to 100˚C.
- Storage Temperature -40˚C to 100˚C.
- Weight: 2.0 grams maximum
- Case: 14 pin Dual-In-Line (TO-116)
- Case Material: Epoxy, self extinguishing

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

TYPICAL INTERFACE



BI-DIRECTIONAL OR AC MODEL



DC MODELS

Loads maybe connected in either output terminal

NOTES:

1. For control voltages above 6 volts a series resistor is required. Use standard value selected from Figure 2.
2. Surge current duty cycle 10% maximum. Surge duration not to exceed 1 second.
3. To calculate output On-Resistance for junction temperatures other than 25˚C use the following equation:

$R_T = R_{25}\, e^{0.006 \times \Delta T}$ where R_{25} = Resistance at 25˚C

R_T = Resistance at elevated temperature

ΔT = Elevated temperature - 25˚C

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.
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