

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

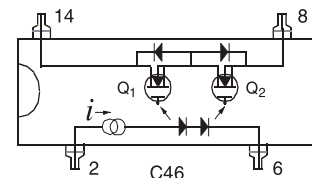
| Parameter | DC | | Bi-directional | | Units |
|---|---------------|-----------------|----------------|-----------------|-------|
| | Min | Max | Min | Max | |
| Load Voltage Rating | C47F-10 | 50 | C46F-10 | ±50 | Vdc |
| | C47F-20 | 90 | C46F-20 | ±90 | |
| | C47F-30 | 180 | C46F-30 | ±180 | |
| | C47F-40 | 360 | C46F-40 | ±360 | |
| (See Figure 3) Output Current Rating | C47F-10 | 1.75 | C46F-10 | 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 Q₂ has been replaced with a wire short

CHARACTERISTIC CURVES



CONTROL CURRENT VS CONTROL VOLTAGE
FIGURE 1

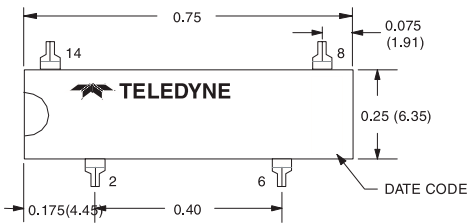
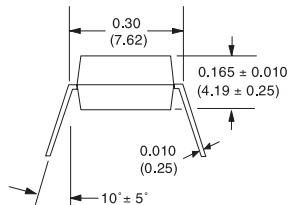


SERIES LIMIT RESISTOR VS INPUT VOLTAGE
FIGURE 2



MAXIMUM LOAD CURRENT VS TEMPERATURE
FIGURE 3

MECHANICAL SPECIFICATION



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

- 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

TYPICAL INTERFACE



BI-DIRECTIONAL OR AC MODEL



DC MODELS

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:

$$R_T = R_{25} e^{0.006 \times \Delta T} \quad \text{where } R_{25} = \text{Resistance at } 25^\circ\text{C}$$

R_T = Resistance at elevated temperature
 ΔT = Elevated temperature - 25°C

Loads maybe connected in either output terminal

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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