FOD410, FOD4108, FOD4116, FOD4118

6-Pin DIP High dv/dt Zero-Cross Triac Drivers

Description

The FOD410, FOD4108, FOD4116 and FOD4118 devices consist of an infrared emitting diode coupled to a hybrid triac formed with two inverse parallel SCRs which form the triac function capable of driving discrete triacs. The FOD4116 and FOD4118 utilize a high efficiency infrared emitting diode which offers an improved trigger sensitivity. These devices are housed in a standard 6−pin dual in−line (DIP) package.

Features

- 300 mA_{peak} On−State Current
- Zero−Voltage Crossing
- High Blocking Voltage
  - 600 V (FOD410, FOD4116)
  - 800 V (FOD4108, FOD4118)
- High Trigger Sensitivity
  - 1.3 mA (FOD4116, FOD4118)
  - 2 mA (FOD410, FOD4118)
- High Static dv/dt (10,000 V/μs)
- Safety and Regulatory Approvals:
  –

SAFETY AND INSULATION RATINGS

Parameter		Characteristics

Symbol	Parameter	Value	Unit
		≥	
		≥	
		≥	

ABSOLUTE MAXIMUM RATINGS °

Symbol	Parameter	Device	Value	Unit
				°
				°
				°
				°
	°			
	°			°

EMITTER

	°			
	°			°

DETECTOR

	°			
	°			°

ELECTRICAL CHARACTERISTICS ◦

Symbol	Parameter	Test Conditions	Device	Min	Typ	Max	Unit
INDIVIDUAL COMPONENT CHARACTERISTICS							
Emitter							

ZERO CROSSING CHARACTERISTICS

Symbol	Parameter	Test Conditions	Device	Min	Typ	Max	Unit
							µ

ISOLATION CHARACTERISTICS

TYPICAL APPLICATION

Figure 1 shows a typical circuit for when hot line switching is required. In this circuit the “hot” side of the line is switched and the load connected to the cold or neutral side. The load may be connected to either the neutral or hot line.

Rin is calculated so that IF is equal to the rated IFT of the part, 2 mA for FOD410 and FOD4108, 1.3 mA for FOD4116 and FOD4118. The 39 Ω resistor and 0.01 μF capacitor are for snubbing of the triac and may or may not be necessary depending upon the particular triac and load use.

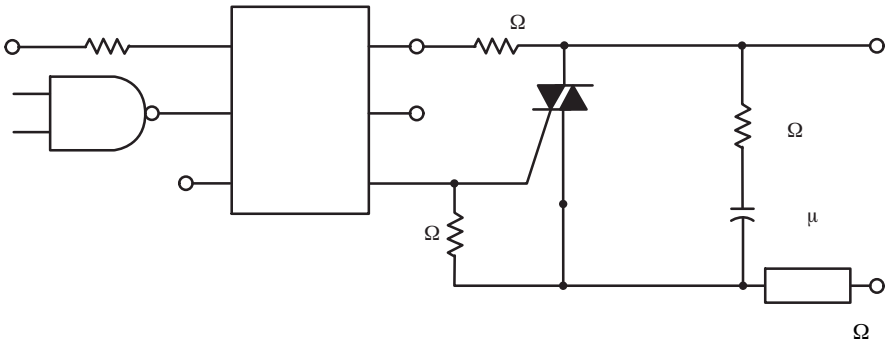


Figure 1. Hot Line Switching Application Circuit

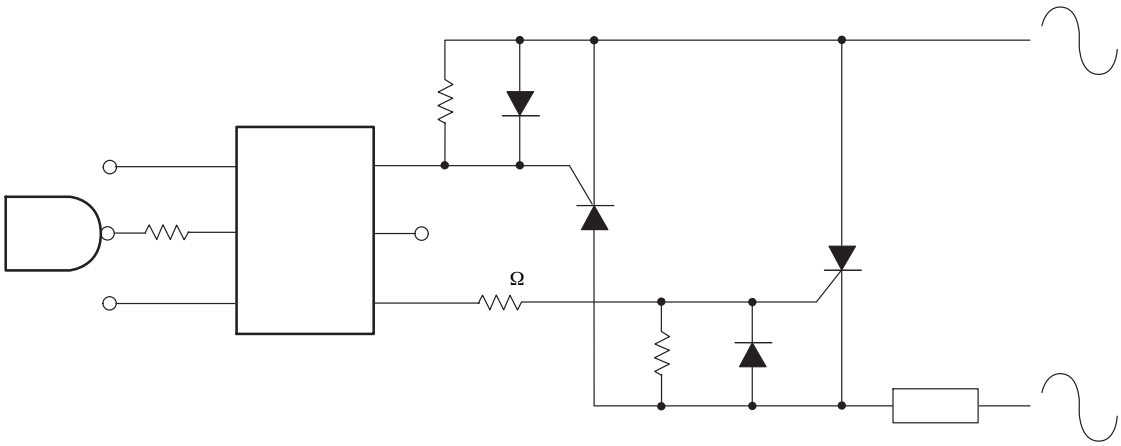
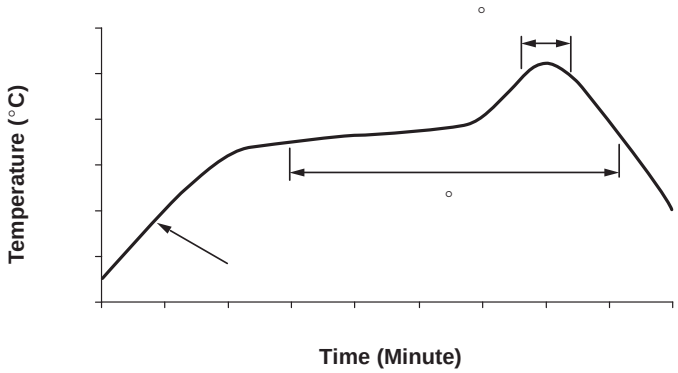


Figure 2. Inverse Parallel SCR Driver Circuit

Suggested method of firing two, back−to−back SCR’s with a ON Semiconductor triac driver. Diodes can be 1N4001; resistors, R1 and R2, are optional 330 Ω.

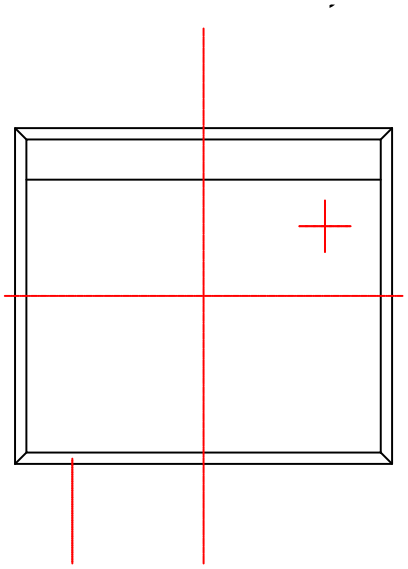
NOTE: This optoisolator should not be used to drive a load directly. It is intended to be a discrete triac driver device only.

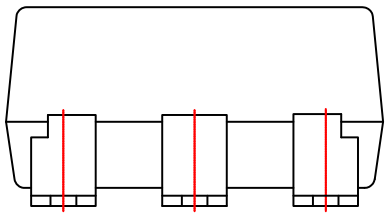
REFLOW PROFILE

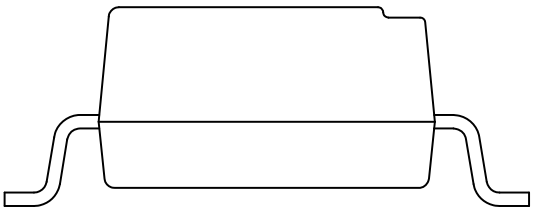


PDIP6 7.3x6.5, 2.54P
CASE 646CE
ISSUE O

DATE 31 JUL 2016

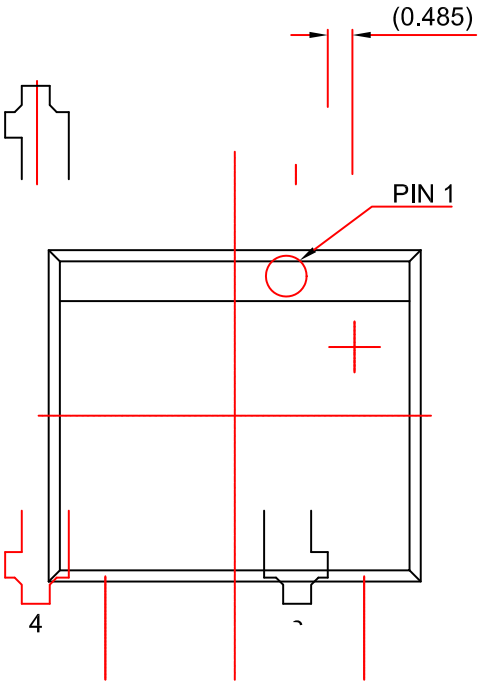






PDIP6 7.3x6.5, 2.54P
CASE 646CF
ISSUE O

DATE 31 JUL 2016

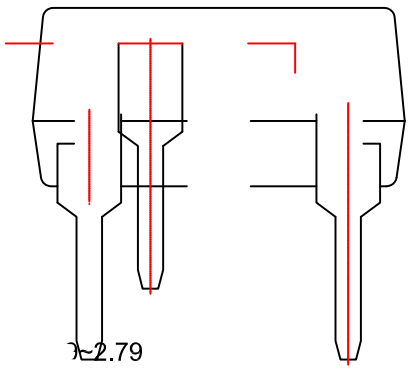


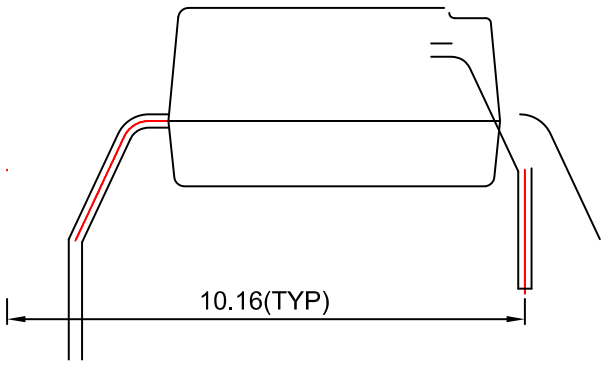
NOTES:

A) NO STANDARD APPLIES TO THIS PACKAGE.

B) ALL DIMENSION

USION





DATE 31 JUL 2016

NOTES:

A) N

E) ALL DIMENSIONS ARE IN MILLIMETERS

C) DIMENSIONS ARE EXCLU