



Parameter	Rating	Units
Blocking Voltage	250	V _P
Load Current	250	mA _{rms} / mA _{DC}
On-Resistance (max)	7	Ω

Features

- 3750V_{rms} Input/Output Isolation
- Low Drive Power Requirements
- High Reliability
- Arc-Free With No Snubbing Circuits
- FCC Compatible
- VDE Compatible
- No EMI/RFI Generation
- Small 6-Pin Package
- Flammability Rating UL 94 V-0
- Surface Mount Tape & Reel Version Available

Applications

- Telecommunications
 - Telecom Switching
 - Tip/Ring Circuits
 - Modem Switching (Laptop, Notebook, Pocket Size)
 - Hook Switch
 - Dial Pulsing
- Instrumentation
- Multiplexers
- Data Acquisition
- Electronic Switching
- I/O Subsystems
- Meters (Watt-Hour, Water, Gas)
- Medical Equipment—Patient/Equipment Isolation
- Security Systems
- Aerospace
- Industrial Controls

Description

PLB150 is a 250V, 250mA, 7Ω, single-pole, normally closed (1-Form-B) solid state relay that uses optically coupled technology to provide an enhanced 3750V_{rms} isolation barrier between the input and the output of the relay. The efficient MOSFET switches use IXYS Integrated Circuits' patented OptoMOS architecture while the optically coupled output is controlled by a highly efficient infrared LED.

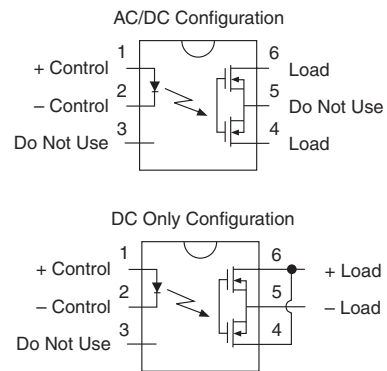
Approvals

- UL Recognized Component: File E76270
- CSA Certified Component: Certificate 1175739
- EN/IEC 60950-1 Certified Component:
Certificate available on our website

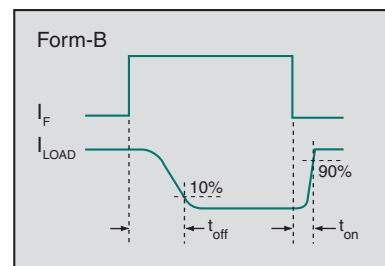
Ordering Information

Part Number	Description
PLB150	6-Pin DIP (50/Tube)
PLB150S	6-Pin Surface Mount (50/Tube)
PLB150STR	6-Pin Surface Mount (1,000/Reel)

Pin Configuration



Switching Characteristics of Normally Closed Devices



Absolute Maximum Ratings @ 25°C

Parameter	Ratings	Units
Blocking Voltage	250	V _P
Reverse Input Voltage	5	V
Input Control Current	50	mA
Peak (10ms)	1	A
Input Power Dissipation ¹	150	mW
Total Power Dissipation ²	800	mW
Isolation Voltage, Input to Output (60 sec.)	3750	V _{rms}
Operational Temperature	-40 to +85	°C
Storage Temperature	-40 to +125	°C

¹ Derate linearly 1.33 mW / °C

² Derate linearly 6.67 mW / °C

Absolute Maximum Ratings are stress ratings. Stresses in excess of these ratings can cause permanent damage to the device. Functional operation of the device at conditions beyond those indicated in the operational sections of this data sheet is not implied.

Typical values are characteristic of the device at +25°C, and are the result of engineering evaluations. They are provided for information purposes only, and are not part of the manufacturing testing requirements.

Electrical Characteristics @ 25°C (Unless Otherwise Noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Units
Output Characteristics						
Load Current (Continuous)						
AC/DC Configuration	-	I _L	-	-	250	mA _{rms} / mA _{DC}
DC Configuration	-		-	-	350	mA _{DC}
Peak Load Current	10ms	I _{LPK}	-	-	±500	mA _P
On-Resistance						
AC/DC Configuration	I _L =250mA	R _{ON}	-	-	7	Ω
DC Configuration	I _L =350mA		-	-	3	
Off-State Leakage Current	V _L =250V _P	I _{LEAK}	-	-	1	μA
Switching Speeds						
Turn-On	I _F =5 mA, V _L =10V	t _{on}	-	-	1	ms
Turn-Off		t _{off}	-	-	2.5	
Output Capacitance	I _F =5mA, V _L =50V, f=1MHz	C _{OUT}	-	110	-	pF
Input Characteristics						
Input Control Current to Activate	I _L =250mA	I _F	-	-	5	mA
Input Control Current to Deactivate	-	I _F	0.4	0.7	-	mA
Input Voltage Drop	I _F =5mA	V _F	0.9	1.2	1.5	V
Reverse Input Current	V _R =5V	I _R	-	-	10	μA
Common Characteristics						
Input to Output Capacitance	V _{IO} =0V, f=1MHz	C _{IO}	-	3	-	pF

Manufacturing Information

Moisture Sensitivity



All plastic encapsulated semiconductor packages are susceptible to moisture ingress. IXYS Integrated Circuits classifies its plastic encapsulated devices for moisture sensitivity according to the latest version of the joint industry standard, **IPC/JEDEC J-STD-020**, in force at the time of product evaluation. We test all of our products to the maximum conditions set forth in the standard, and guarantee proper operation of our devices when handled according to the limitations and information in that standard as well as to any limitations set forth in the information or standards referenced below.

Failure to adhere to the warnings or limitations as established by the listed specifications could result in reduced product performance, reduction of operable life, and/or reduction of overall reliability.

This product carries a Moisture Sensitivity Level (MSL) classification as shown below, and should be handled according to the requirements of the latest version of the joint industry standard **IPC/JEDEC J-STD-033**.

Device	Moisture Sensitivity Level (MSL) Classification
PLB150 / PLB150S	MSL 1

ESD Sensitivity



This product is **ESD Sensitive**, and should be handled according to the industry standard **JESD-625**.

Soldering Profile

Provided in the table below is the Classification Temperature (T_C) of this product and the maximum dwell time the body temperature of this device may be ($T_C - 5$)°C or greater. The classification temperature sets the Maximum Body Temperature allowed for this device during lead-free reflow processes. For through-hole devices, and any other processes, the guidelines of **J-STD-020** must be observed.

Device	Classification Temperature (T_C)	Dwell Time (t_p)	Max Reflow Cycles
PLB150	250°C	30 seconds	1
PLB150S	250°C	30 seconds	3

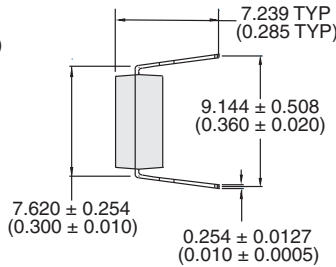
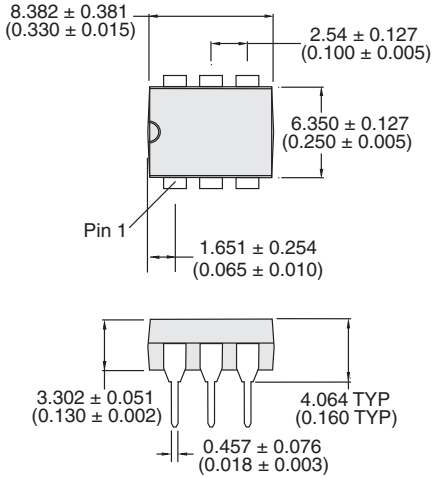
Board Wash

IXYS Integrated Circuits recommends the use of no-clean flux formulations. Board washing to reduce or remove flux residue following the solder reflow process is acceptable provided proper precautions are taken to prevent damage to the device. These precautions include, but are not limited to: using a low pressure wash and providing a follow up bake cycle sufficient to remove any moisture trapped within the device due to the washing process. Due to the variability of the wash parameters used to clean the board, determination of the bake temperature and duration necessary to remove the moisture trapped within the package is the responsibility of the user (assembler). Cleaning or drying methods that employ ultrasonic energy may damage the device and should not be used. Additionally, the device must not be exposed to flux or solvents that are Chlorine- or Fluorine-based.

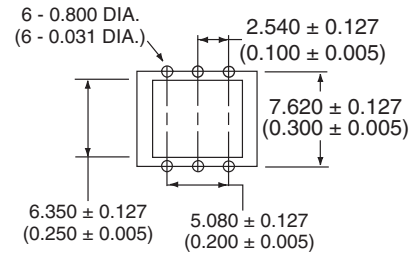


Mechanical Dimensions

PLB150

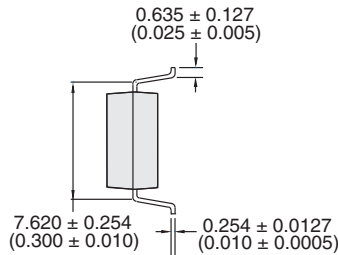
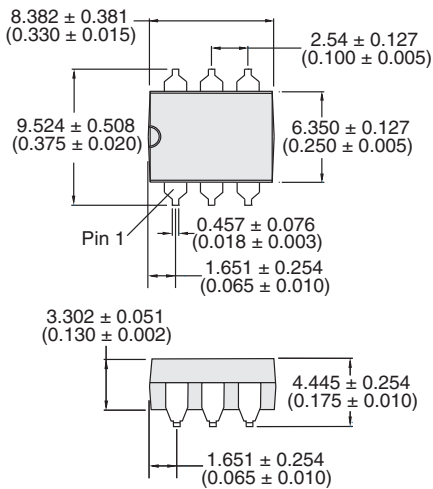


PCB Hole Pattern

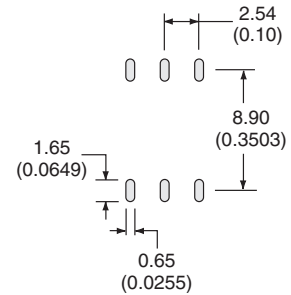


Dimensions
mm
(inches)

PLB150S

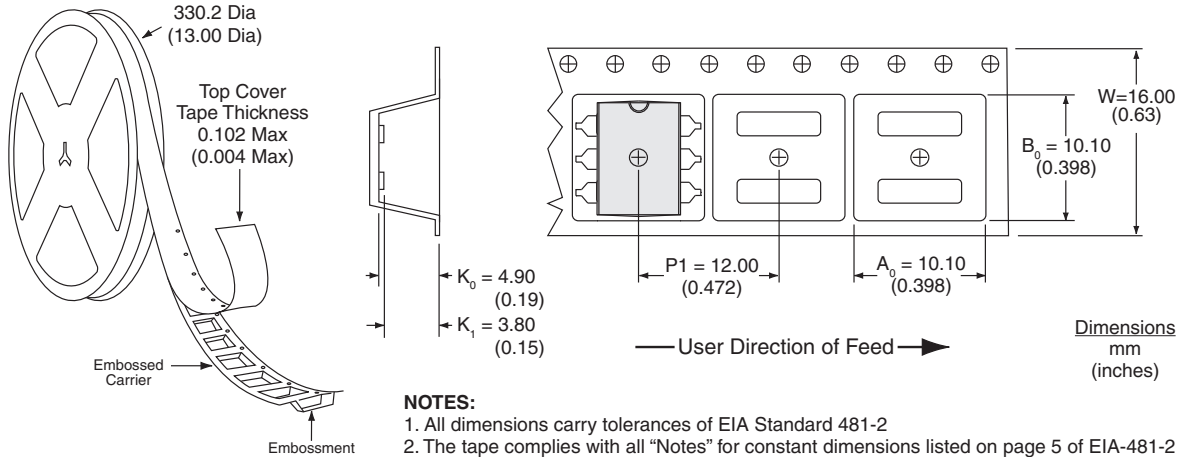


PCB Land Pattern



Dimensions
mm
(inches)

PLB150STR Tape & Reel



For additional information please visit our website at: www.ixysic.com

IXYS Integrated Circuits makes no representations or warranties with respect to the accuracy or completeness of the contents of this publication and reserves the right to make changes to specifications and product descriptions at any time without notice. Neither circuit patent licenses nor indemnity are expressed or implied. Except as set forth in IXYS Integrated Circuits' Standard Terms and Conditions of Sale, IXYS Integrated Circuits assumes no liability whatsoever, and disclaims any express or implied warranty, relating to its products including, but not limited to, the implied warranty of merchantability, fitness for a particular purpose, or infringement of any intellectual property right.

The products described in this document are not designed, intended, authorized or warranted for use as components in systems intended for surgical implant into the body, or in other applications intended to support or sustain life, or where malfunction of IXYS Integrated Circuits' product may result in direct physical harm, injury, or death to a person or severe property or environmental damage. IXYS Integrated Circuits reserves the right to discontinue or make changes to its products at any time without notice.

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкуренеспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



Тел: +7 (812) 336 43 04 (многоканальный)
Email: org@lifeelectronics.ru