LCB111

Single Pole OptoMOS® Relay



	LCB111	Units
Load Voltage	350	V
Load Current	120	mA
Max R_{ON}	35	Ω

Description

LCB111 is a 350V, 120mA, 35Ω, 1-Form-B relay. It features high sensitivity.

Features

- Small 6 Pin DIP Package
- Low Drive Power Requirements (TTL/CMOS Compatible)
- No Moving Parts
- High Reliability
- Arc-Free With No Snubbing Circuits
- $3750V_{RMS}$ Input/Output Isolation
- FCC Compatible
- VDE Compatible
- No EMI/RFI Generation
- Machine Insertable, Wave Solderable
- Surface Mount and Tape & Reel Versions Available

Approvals

- UL/C-UL Recognized Component File #: E76270
- BSI Certified - Certificate #: 8416

Applications

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

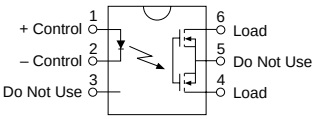
Ordering Information

Part #	Description
LCB111	6 Pin DIP (50/Tube)
LCB111S	6 Pin Surface Mount (50/Tube)
LCB111STR	6 Pin Surface Mount (1000/Reel)

Pin Configuration

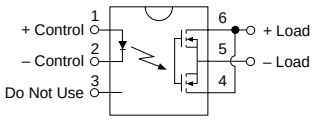
LCB111 Pinout

AC/DC Configuration

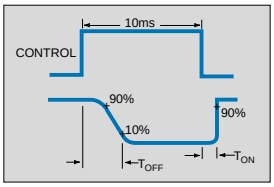


LCB111 Pinout

DC Only Configuration



Switching Characteristics of Normally Closed (Form B) Devices



Absolute Maximum Ratings (@ 25° C)

Parameter	Min	Typ	Max	Units
Input Power Dissipation	-	-	150[1]	mW
Input Control Current Peak (10ms)	- -	- -	50 1	mA A
Reverse Input Voltage	-	-	5	V
Total Power Dissipation	-	-	800[2]	mW
Isolation Voltage Input to Output	3750	-	-	V_{RMS}
Operational Temperature	-40	-	+85	°C
Storage Temperature	-40	-	+125	°C
Soldering Temperature DIP Package Surface Mount Package (10 Seconds Max.)	 - -	 - -	 +260 +220	 °C °C

[1] Derate Linearly 1.33 mw/°C

[2] Derate Linearly 6.67 mw/°C

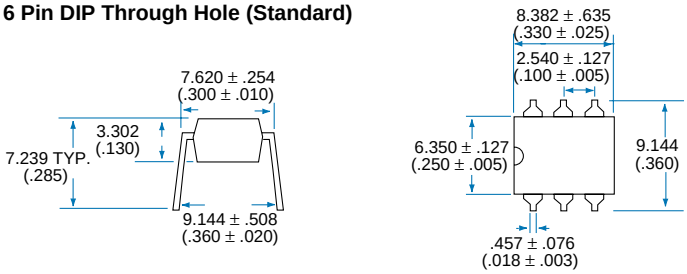
Absolute Maximum Ratings are stress ratings. Stresses in excess of these ratings can cause permanent damage to the device. Functional operation of the device at these or any other conditions beyond those indicated in the operational sections of this data sheet is not implied. Exposure of the device to the absolute maximum ratings for an extended period may degrade the device and effect its reliability.

Electrical Characteristics

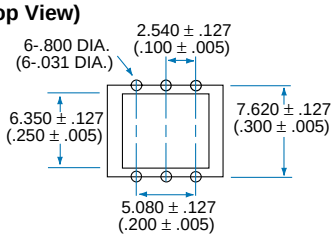
Parameter	Conditions	Symbol	Min	Typ	Max	Units
Output Characteristics @ 25°C						
Load Voltage (Peak)	-	V_L	-	-	350	V
Load Current (Continuous) AC/DC Configuration DC Configuration	 - -	 I_L I_L	 - -	 - -	 120 200	 mA mA
Peak Load Current	10ms	I_L	-	-	350	mA
On-Resistance AC/DC Configuration DC Configuration	 I_L=120mA I_L=200mA	 R_{ON} R_{ON}	 - -	 23 7	 35 10	 Ω Ω
Off-State Leakage Current	V_L=350V	I_{LEAK}	-	-	1	µA
Switching Speeds Turn-On Turn-Off	 I_F=2mA, V_L=10V I_F=2mA, V_L=10V	 T_{ON} T_{OFF}	 - -	 2 2	 5 5	 ms ms
Output Capacitance	50V; f=1MHz	C_{OUT}	-	25	-	pF
Capacitance Input to Output	 -	 -	 -	 3	 -	 pF
Input Characteristics @ 25°C						
Input Control Current	I_L=120mA	I_F	2	1	50	mA
Input Dropout Current	-	I_F	0.4	0.7	-	mA
Input Voltage Drop	I_F=2mA	V_F	0.9	1.2	1.4	V
Reverse Input Voltage	-	V_R	-	-	5	V
Reverse Input Current	V_R=5V	I_R	-	-	10	µA
Common Characteristics @ 25°C						
Input to Output Capacitance	-	$C_{I/O}$	-	3	-	pF
Input to Output Isolation	-	$V_{I/O}$	3750	-	-	V_{RMS}

MECHANICAL DIMENSIONS

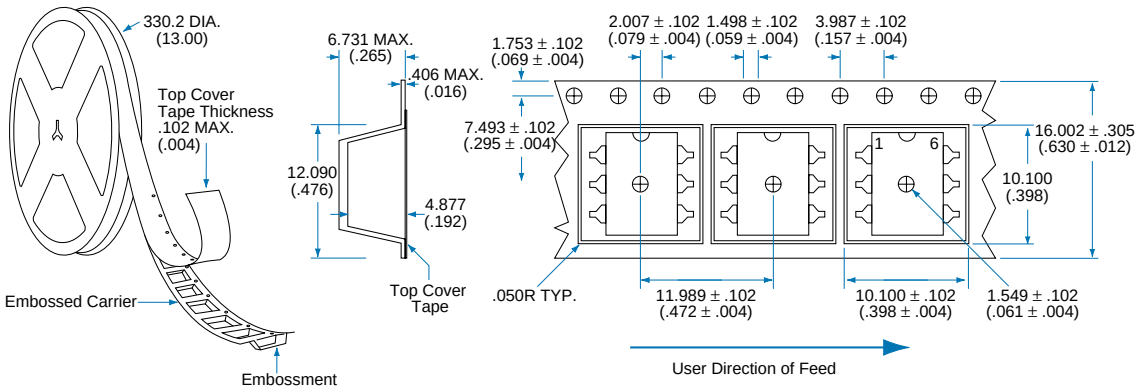
6 Pin DIP Through Hole (Standard)



PC Board Pattern (Top View)



Tape and Reel Packaging for 6 Pin Surface Mount Package



Dimensions
mm
(inches)

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Specification: DS-LCB111-R7
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1/31/01