



DESCRIPTION

The AD6C311-L is a bi-directional, single-pole, single-throw, normally open solid-state relay. The combination of high load voltage, low on-resistance, and current limit protection make the AD6C311-L a unique device.

The AD6C311-L is composed of an IR LED, optically coupled to an IC, which in turn drives back-to-back MOSFETs on the output. The IC provides current limit protection. During transient current spikes, this circuitry limits the current on the output of the device, thereby offering an additional measure of protection to itself and downstream components.

FEATURES

- Current limiting protection
- High load current (200mA)
- High load voltage (400V MIN)
- Low input (turn-on) current (2.5mA TYP)
- Low On-Resistance (15 Ohms MAX)
- High input-to-output isolation (3.75kV MIN)
- Long life/high reliability
- RoHS / Lead-Free / REACH Compliant

APPLICATIONS

- Multiplexers
- Meter reading systems
- Data Acquisition
- Medical equipment
- Battery monitoring
- Home/Safety security systems

OPTIONS/SUFFIXES*

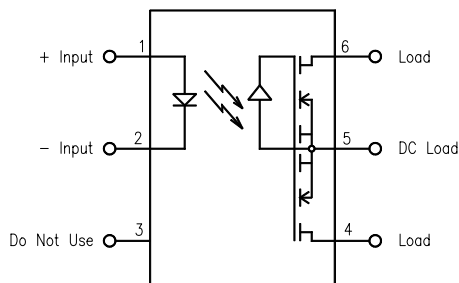
- -S Surface Mount Leadform Option (50pcs/tube)
- -TR Tape and Reel Packing Option (1,000pcs/reel)

NOTE: Suffixes listed above are not included in marking on device for part number identification.

ABSOLUTE MAXIMUM RATINGS*

PARAMETER	UNIT	MIN	TYP	MAX
Storage Temperature	°C	-55		125
Operating Temperature	°C	-40		85
Continuous Input Current	mA			50
Transient Input Current	mA			400
Reverse Input Control Voltage	V	6		
Output Power Dissipation	mW			800
Solder Temperature - Wave (10s)	°C			260
Solder Temperature - IR Reflow (10s)	°C			260

SCHEMATIC DIAGRAM



*The values indicated are absolute stress ratings. Functional operation of the device is not implied at these or any conditions in excess of those defined in electrical characteristics section of this document. Exposure to Absolute Ratings may cause permanent damage to the device and may adversely affect reliability.

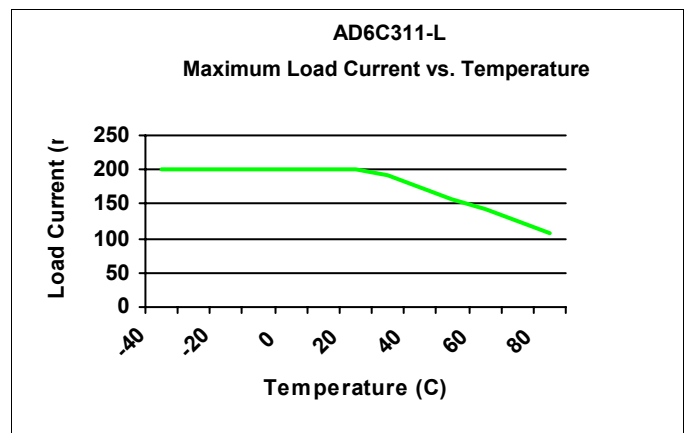
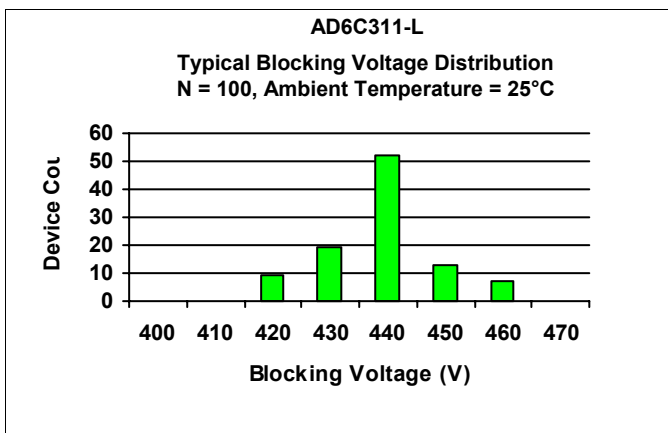
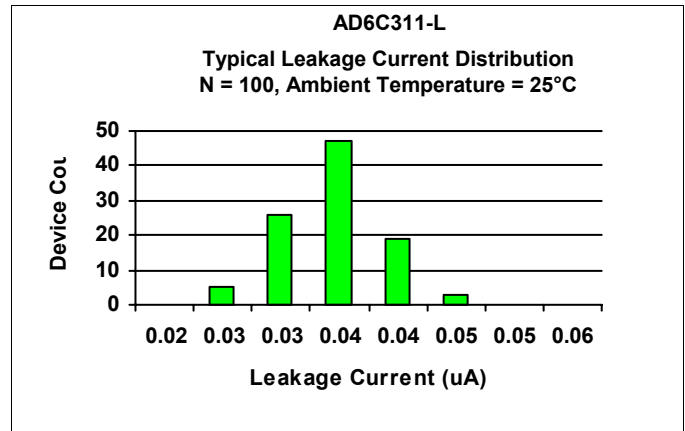
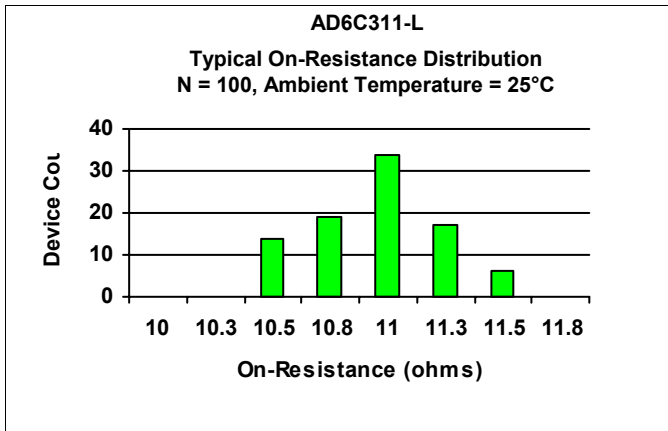
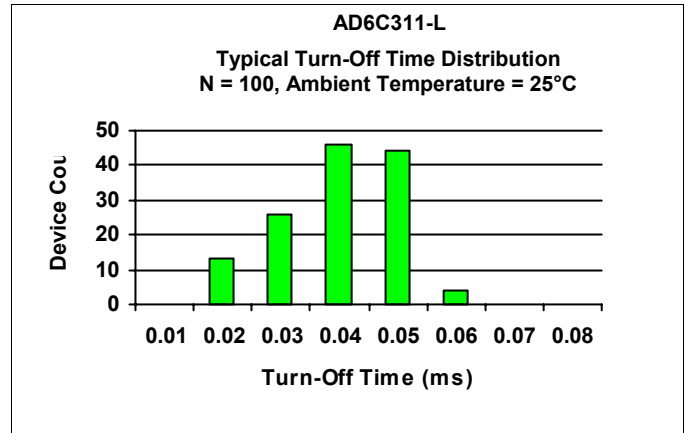
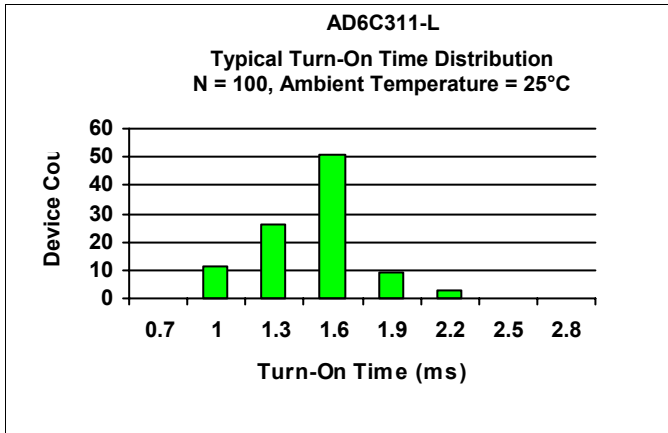
APPROVALS

- UL / C-UL Approved: File E90096
- CSA Approved: Certificate# LR111581-1

ELECTRICAL CHARACTERISTICS - 25°C

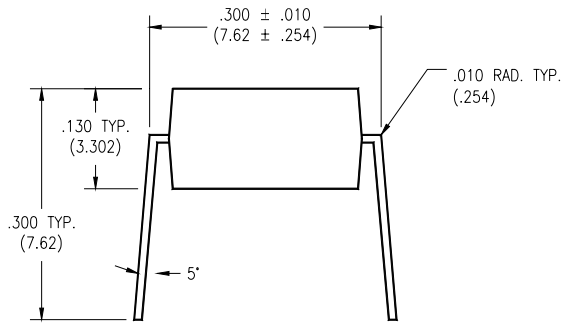
PARAMETER	UNIT	MIN	TYP	MAX	TEST CONDITIONS
INPUT SPECIFICATIONS					
LED Forward Voltage	V		1.2	1.5	If = 10mA
LED Reverse Voltage	V	6	12		Ir = 10uA
Turn-On Current	m A		2.5	5	Io = 200mA
Turn-Off Current	m A		0.5		
OUTPUT SPECIFICATIONS					
Blocking Voltage	V	400			Io = 1uA
Continuous Load Current	m A			200	If = 5mA
Current Limit	m A	250	300	330	If = 5mA
On-Resistance	Ω		11	15	Io = 200mA
Leakage Current	μ A		0.03	1	Vo = 400V
Output Capacitance	p F		25	50	Vo = 25V, f = 1.0MHz
Offset Voltage	m V			0.2	If = 5mA
COUPLED SPECIFICATIONS					
Isolation Voltage	V	3750			T = 1 minute
Turn-On Time	m s		2	5	If = 5mA, Io = 200mA
Turn-Off Time	m s		0.04	1	If = 0mA, Io = 200mA
Isolation Resistance	G Ω	100			
Coupled Capacitance	p F		2		
Contact Transient Ratio	V / μ s	2000	7000		dV = 50V

PERFORMANCE DATA

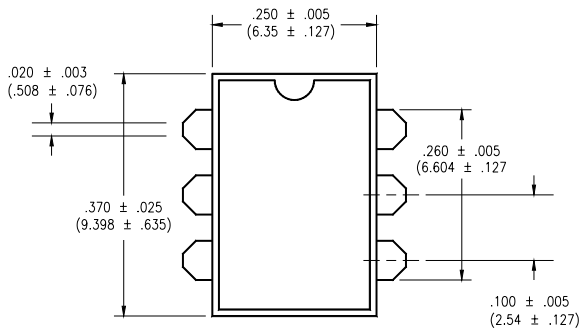


MECHANICAL DIMENSIONS

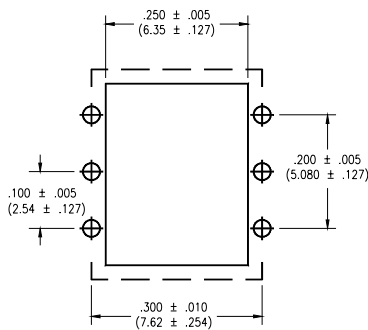
6 PIN DUAL IN-LINE PACKAGE



END VIEW

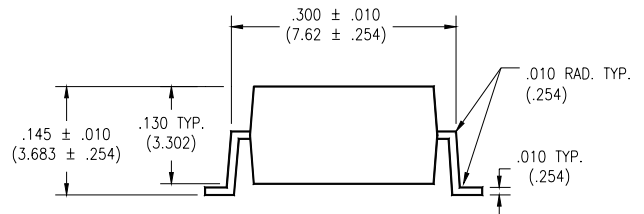


TOP VIEW

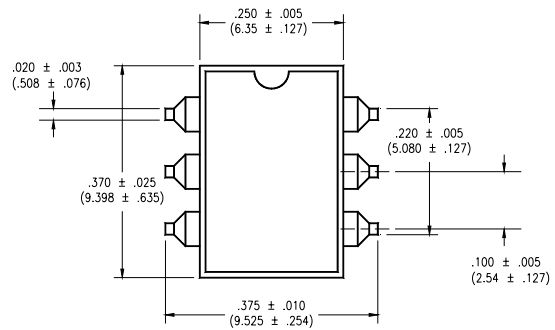


**BOTTOM VIEW/
BOARD PATTERN**

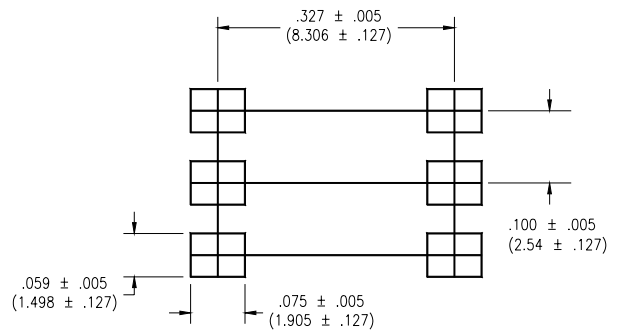
6 PIN SURFACE MOUNT DEVICE



END VIEW



TOP VIEW



**BOTTOM VIEW/
BOARD PATTERN**

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