



Dual 1 Form A  
Solid State Relay



## DESCRIPTION

The AD4C211-L is a bi-directional, double-pole, single-throw, normally open multipurpose solid-state relay. It is designed to replace electromechanical relays in general purpose switching applications. The relay consists of two integrated circuits, each driving a pair of rugged source-to-source enhancement type DMOS transistors. Each integrated circuit is optically coupled to a light emitting diode. This device also includes current-limiting circuitry. During increased load currents or transient current spikes, this circuitry acts to bring the current down, protecting downstream components.

## FEATURES

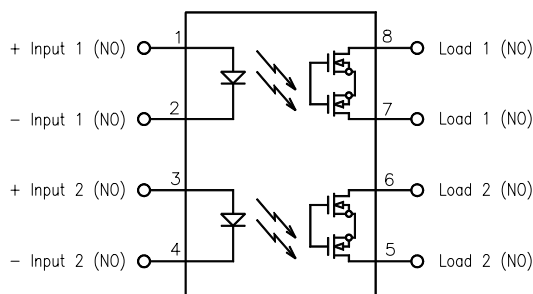
- Current limiting (over-current protection)
- Low input control power consumption (1.5mA TYP)
- 140mA maximum continuous load current
- 25 ohms maximum on-resistance
- High input-to-output isolation
- Long life/high reliability

## OPTIONS/SUFFIXES\*

- -H High Input / Output isolation
- -S Surface Mount Option
- -TR Tape and Reel Option

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

## SCHEMATIC DIAGRAM



## APPLICATIONS

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

## ABSOLUTE MAXIMUM RATINGS\*

PARAMETER	UNIT	MIN	TYP	MAX
Storage Temperature	°C	-55		125
Operating Temperature	°C	-40		85
Continuous Input Current	mA			40
Transient Input Current	mA			400
Reverse Input Control Voltage	V	6		
Output Power Dissipation	mW			800

\*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.

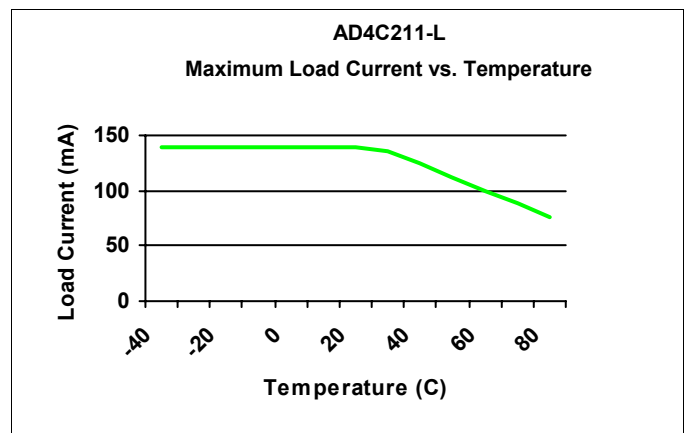
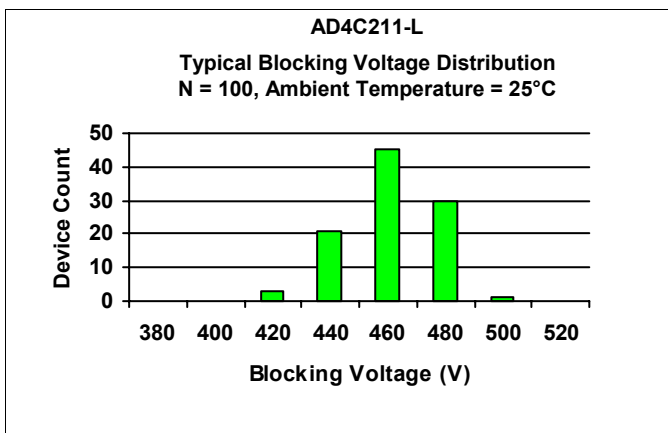
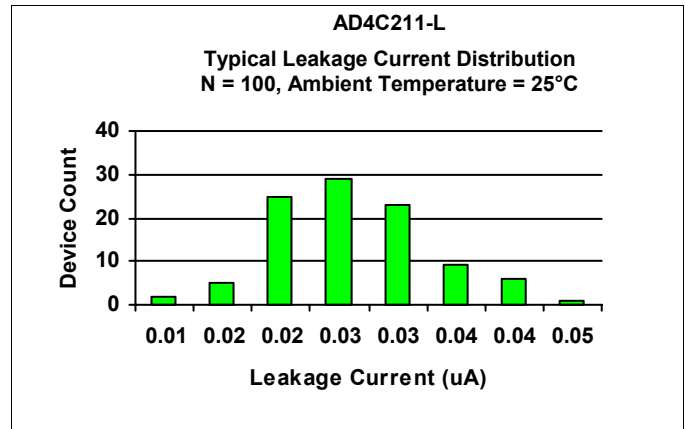
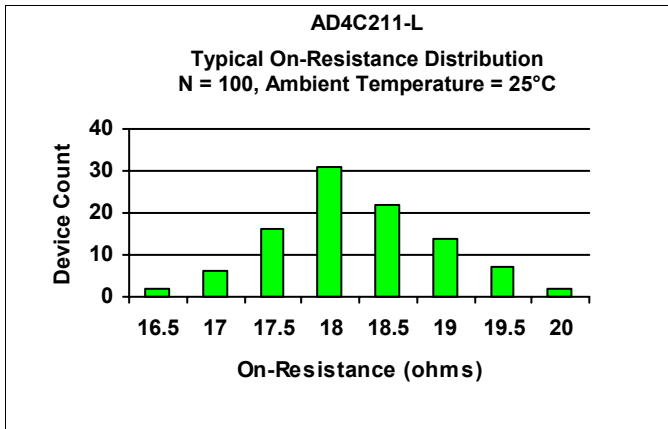
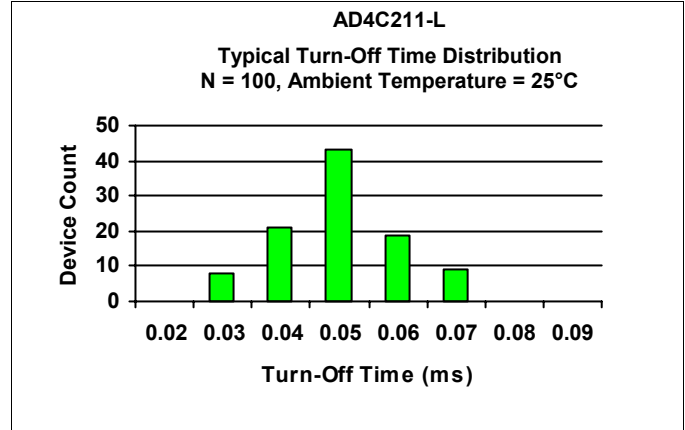
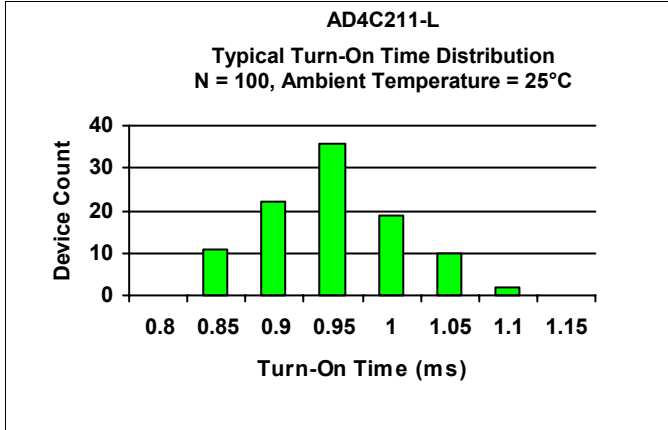
## APPROVALS

- UL / C-UL Approved: File # E90096, E201932
- CSA Approved: Certificate #LR111581-1

**ELECTRICAL CHARACTERISTICS - 25°C**

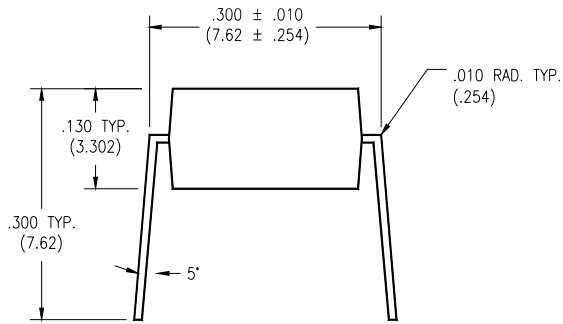
PARAMETER	UNIT	MIN	TYP	MAX	TEST CONDITIONS
<b>INPUT SPECIFICATIONS</b>					
LED Forward Voltage	V		1.2	1.5	If = 10mA
LED Reverse Voltage	V	6	12		Ir = 10uA
Turn-On Current	m A		1.5	5	Io = 140mA
Turn-Off Current	m A		0.5		
<b>OUTPUT SPECIFICATIONS</b>					
Blocking Voltage	V	400			Io = 1μA
Continuous Load Current	m A			140	If = 5mA
Current Limit	m A	180	220	250	If = 5mA
On-Resistance	Ω		18	25	Io = 140mA
Leakage Current	μ A		0.2	1	Vo = 400V
Output Capacitance	p F		25	50	Vo = 25V, f = 1.0MHz
Offset Voltage	m V			0.2	If = 5mA
<b>COUPLED SPECIFICATIONS</b>					
Isolation Voltage	V	2500			T = 1 minute
-H Suffix	V	3750			T = 1 minute
Turn-On Time	m s		1	3	If = 5mA, Io = 140mA
Turn-Off Time	m s		0.05	1	If = 0mA, Io = 140mA
Isolation Resistance	G Ω	100			
Coupled Capacitance	p F		2		
Contact Transient Ratio	V / μ s	2000	7000		dV = 50V

**PERFORMANCE DATA**

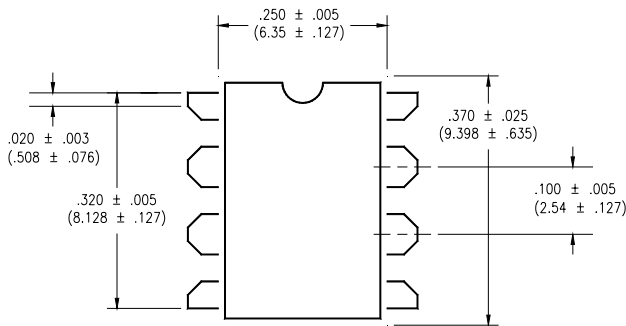


**MECHANICAL DIMENSIONS**

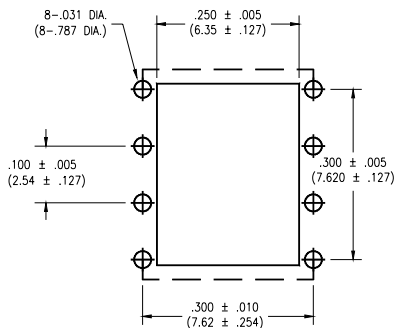
**8 PIN DUAL IN-LINE PACKAGE**



**END VIEW**

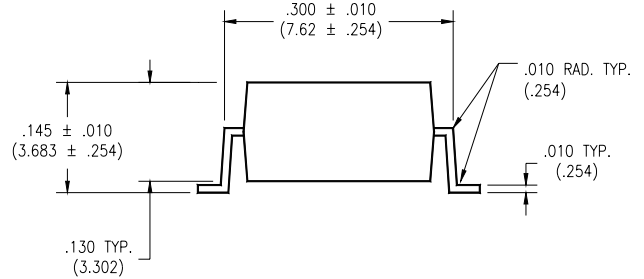


**TOP VIEW**

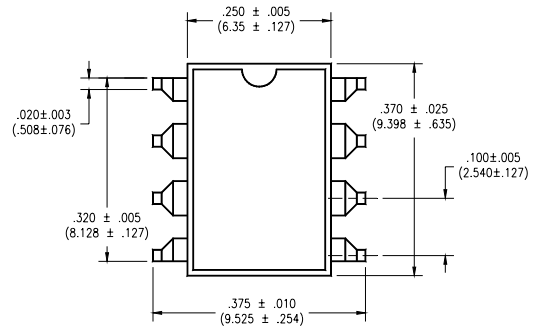


**BOTTOM VIEW/  
BOARD PATTERN**

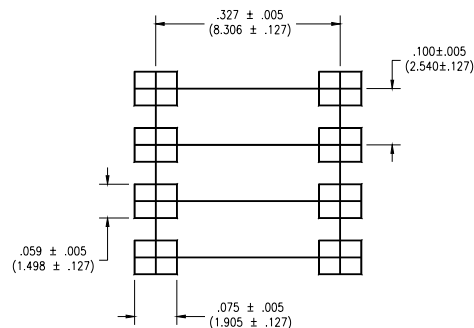
**8 PIN SURFACE MOUNT DEVICE**



**END VIEW**



**TOP VIEW**



**BOTTOM VIEW/  
BOARD PATTERN**

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