SOLID STATE OPTRONICS

AD4C101




Dual 1 Form A
Solid State Relay

RoHS compliant

DESCRIPTION

The AD4C101 is a bi-directional, double-pole, single-throw, normally open MOSFET output solid-state relay. This device offers two discrete optically isolated SSRs in one miniature 8 pin DIP/SMD package. Each discrete relay consists of an infrared LED, optically coupled to a Photo Diode Array, which in turn drives a pair of back-to-back MOSFETs. Its high blocking voltage (600V) and the integration of 2 devices in one package make the AD4C101 ideal in applications with board space constraints where high load voltages are encountered.

FEATURES

- High Blocking Voltage (600V)
- Two discrete relays in compact 8 pin DIP/SMD package
- High Input-Output Isolation (3.75kV)
- 120mA Continuous Load Current (each pole, individually)
- On-Resistance 40 ohms MAX
- Long Life / High Reliability
- Lead-Free / RoHS - WEEE Compliant

APPLICATIONS

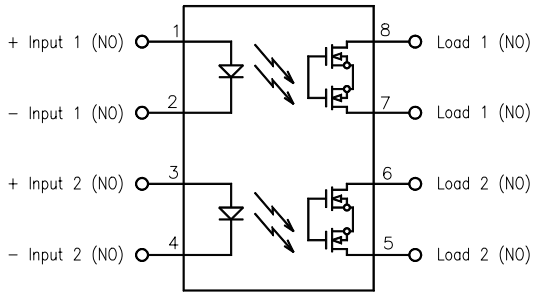
- EMR replacement
- Meter Reading Systems
- Medical Equipment
- Battery Monitoring
- Multiplexers

OPTIONS/SUFFIXES*

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

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

SCHEMATIC DIAGRAM



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

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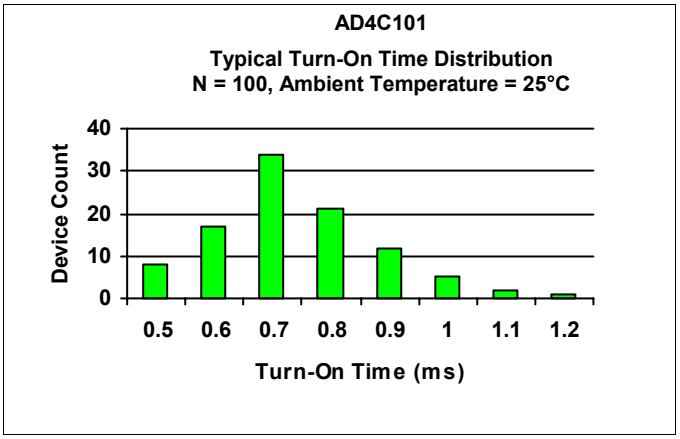
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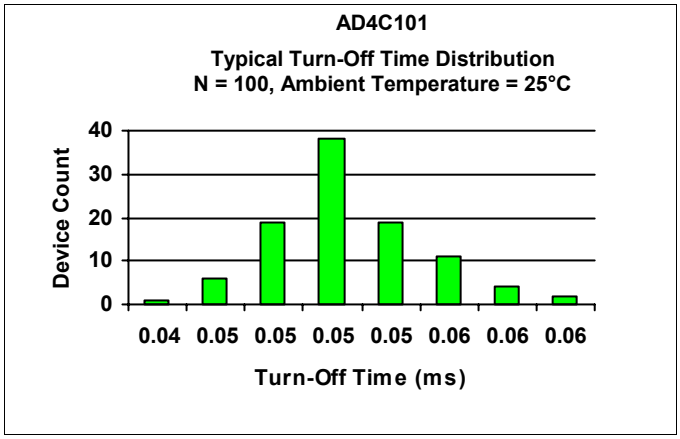
ELECTRICAL CHARACTERISTICS - 25°C

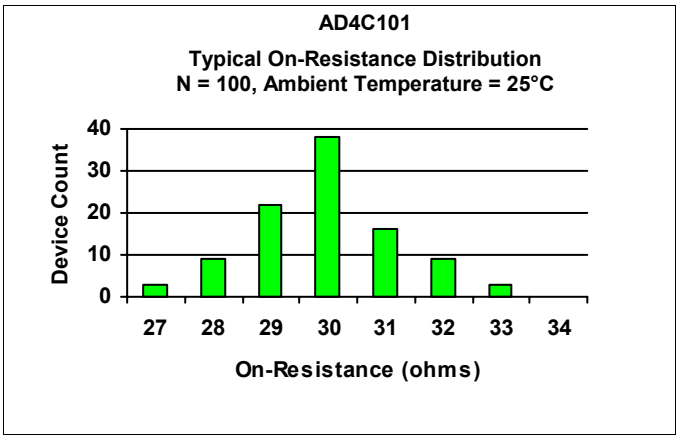
PARAMETER	UNIT	MIN	TYP	MAX	TEST CONDITIONS
INPUT SPECIFICATIONS					
LED Forward Voltage	V		1.8	2	If = 10mA
LED Reverse Votlage	V		0.5		Ir = 10uA
Turn-On Current	m A		1.75	5	Io = 120mA
Turn-Off Current	m A	0.2			
OUTPUT SPECIFICATIONS					
Blocking Voltage	V	600			Io = 1uA
Continuous Load Current	m A			120	If = 5mA, each pole, individually
On-Resistance	Ω		30	40	Io = 120mA
Leakage Current	μ A		0.2	1	Vo = 600V
Output Capacitance	p F	6			If = 0, 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		0.75	5	If = 5mA, Io = 120mA
Turn-Off Time	m s		0.05	2	If = 0mA, Io = 120mA
Isolation Resistance	G Ω	100			
Coupled Capacitance	p F		3		
Contact Transient Ratio	V / μ s	2000	7000		dV = 50V

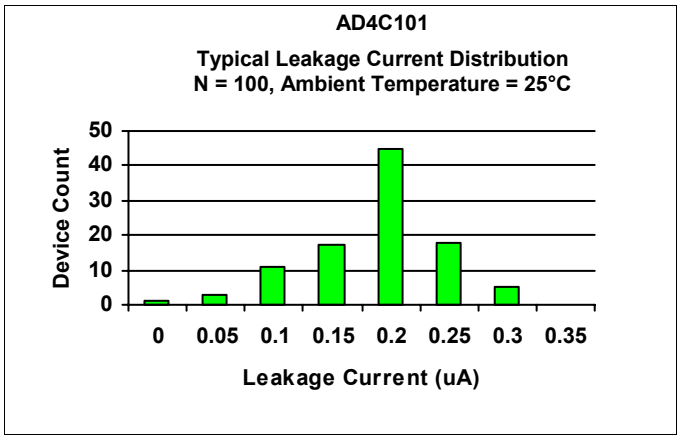
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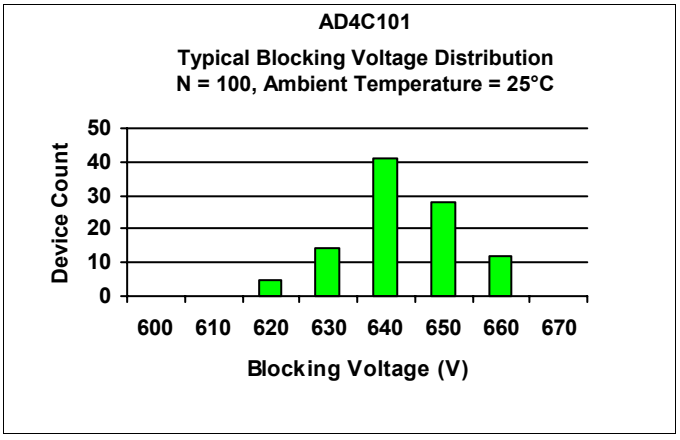
PERFORMANCE DATA

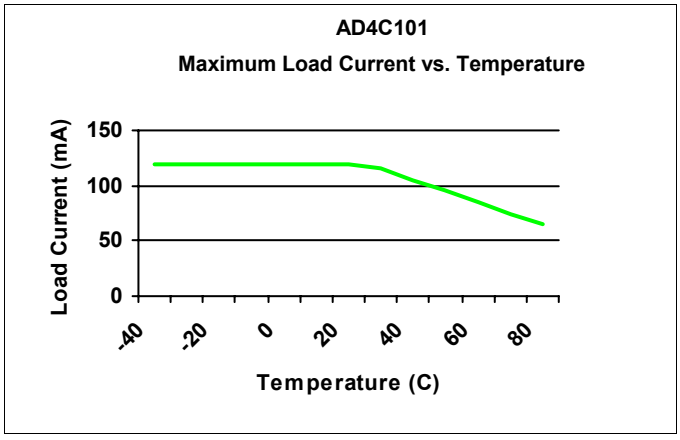






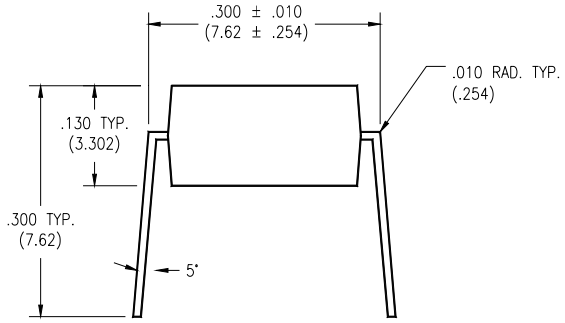




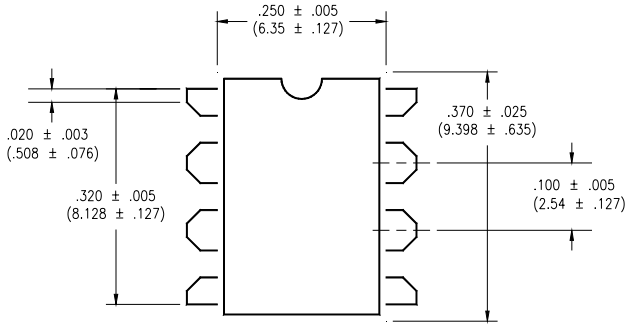


MECHANICAL DIMENSIONS

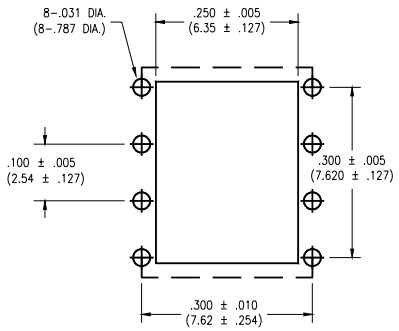
8 PIN DUAL IN-LINE PACKAGE



END VIEW

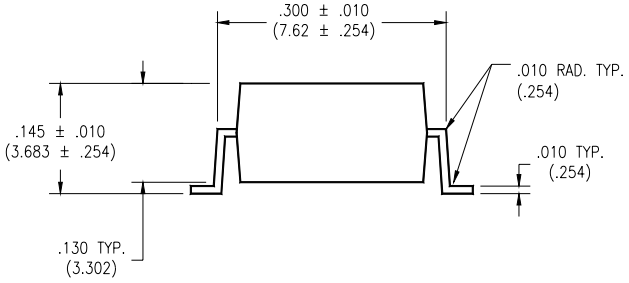


TOP VIEW

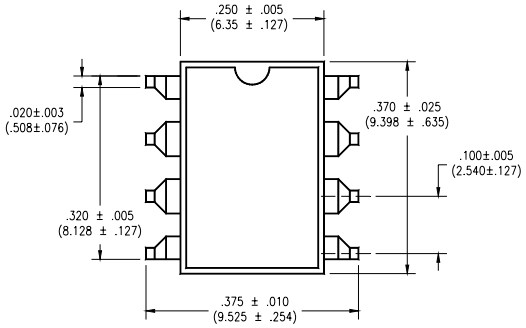


BOTTOM VIEW/
BOARD PATTERN

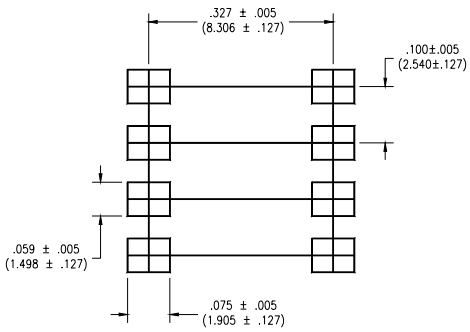
8 PIN SURFACE MOUNT DEVICE



END VIEW



TOP VIEW



BOTTOM VIEW/
BOARD PATTERN

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