



DESCRIPTION

The AD6C541 is a bi-directional, single-pole, single-throw, normally open multipurpose relay. It is designed to replace electro-mechanical relays in general purpose switching applications. The relay consists of an integrated circuit that drives two rugged drain-to-drain enhancement type DMOS transistors - optically coupled to a light emitting diode. The output MOS transistors have extremely low on resistance making the relays ideal where minimal signal attenuation is desired.

FEATURES

- High input-to-output isolation
- Low input control power consumption
- 700mA maximum continuous load current
- 1 ohm maximum on-resistance
- Long life/high reliability

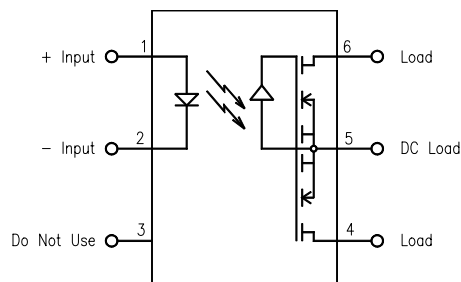
APPLICATIONS

- Telecom switching
- Tip/Ring control
- PCMCIA modules
- Multiplexers
- Meter reading systems
- Data acquisition
- Medical equipment
- Battery monitoring
- Home/Safety security systems

OPTIONS/SUFFIXES

- -H High Output Isolation
- -S Surface Mount Option
- -TR Tape and Reel

SCHEMATIC DIAGRAM



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			500

APPROVALS

- UL and C-UL Approved File#E201932



1 Form A
Solid State Relay

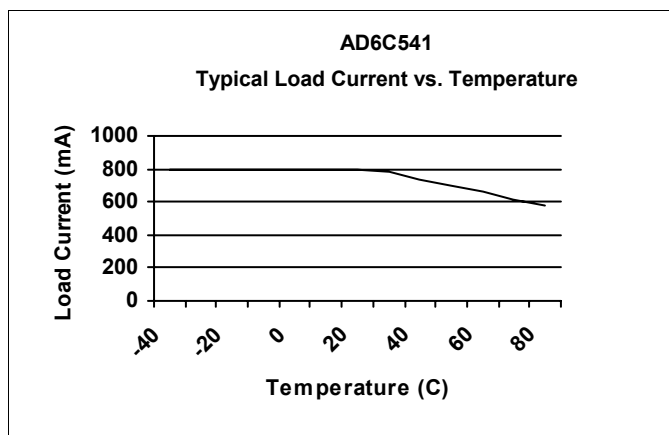
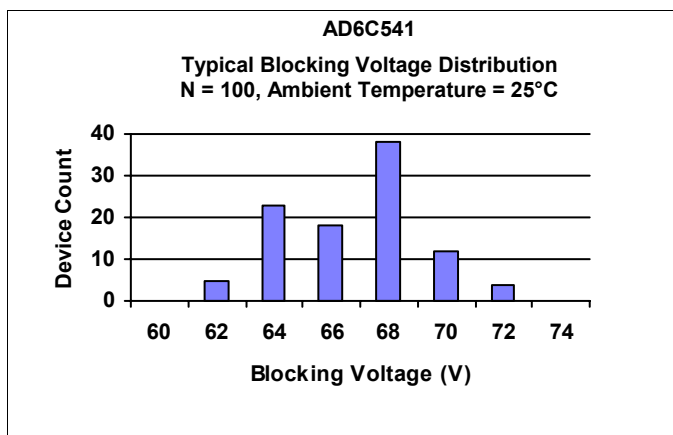
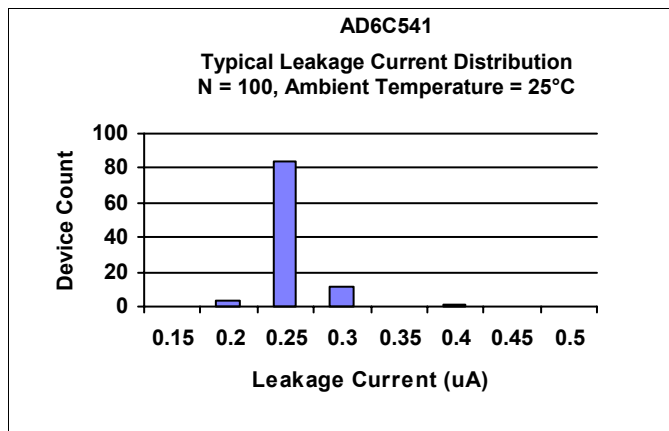
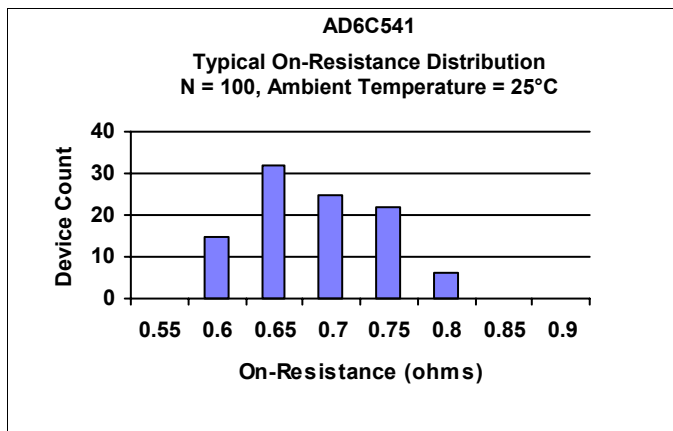
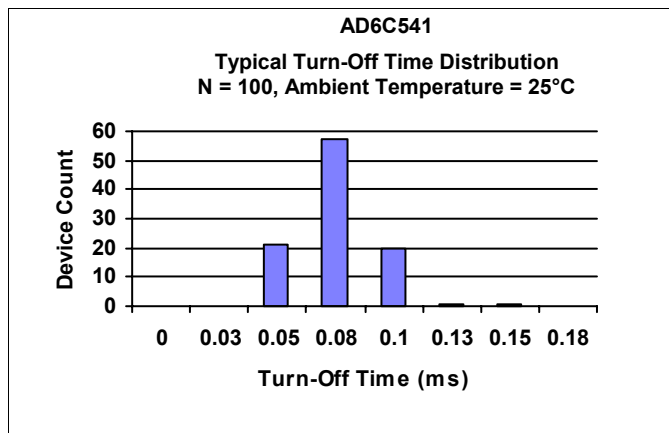
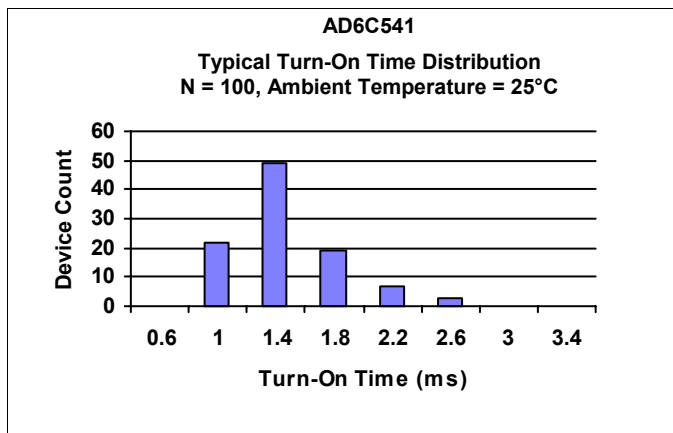
ELECTRICAL CHARACTERISTICS - 25°

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 = 700mA
Turn-Off Current	m A		0.5		
OUTPUT SPECIFICATIONS					
Blocking Voltage	V	60			Io = 10uA
Continuous Load Current	m A			700	If = 5mA
On-Resistance	Ω		0.7	1	Io = 700mA
Leakage Current	μ A		0.2	10	Vo = 60V
Output Capacitance	p F		125	200	Vo = 25V, f = 1.0MHz
Offset Voltage	m V			0.2	If = 5mA
COUPLED SPECIFICATIONS					
Isolation Voltage	V	2500			T = 1 minute
-H Suffix	V	3750			T = 1 minute
Turn-On Time	m s		2	5	If = 5mA, Io = 700mA
Turn-Off Time	m s		0.2	0.5	If = 5mA, Io = 700mA
Isolation Resistance	G Ω	100			
Coupled Capacitance	p F		2		
Contact Transient Ratio	V / μ s	2000	7000		dV = 50V



1 Form A
Solid State Relay

PERFORMANCE DATA

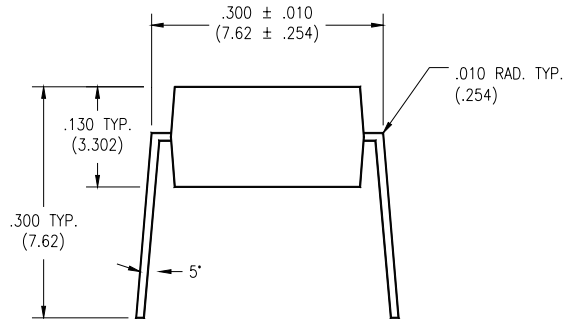




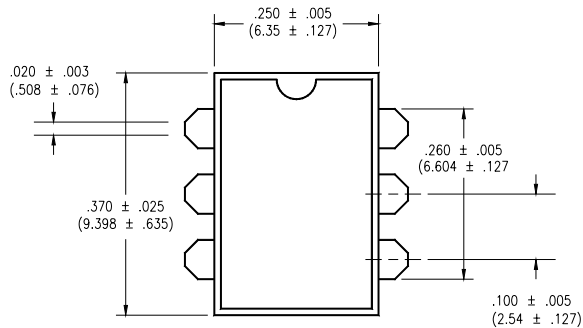
1 Form A
Solid State Relay

MECHANICAL DIMENSIONS

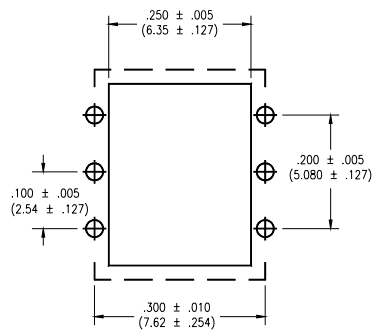
6 PIN DUAL IN-LINE PACKAGE



END VIEW

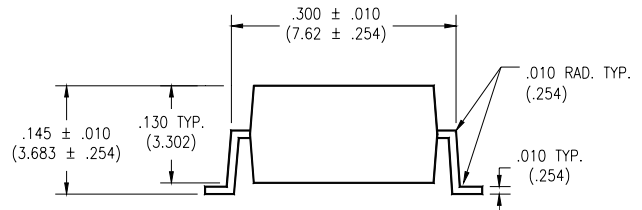


TOP VIEW

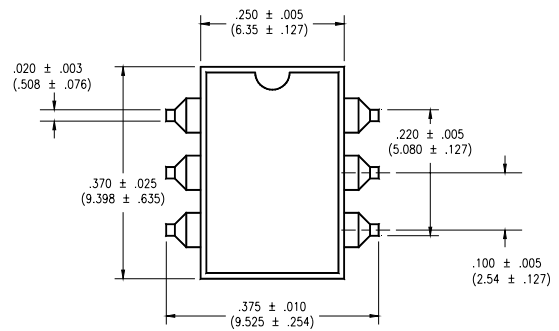


BOTTOM VIEW/
BOARD PATTERN

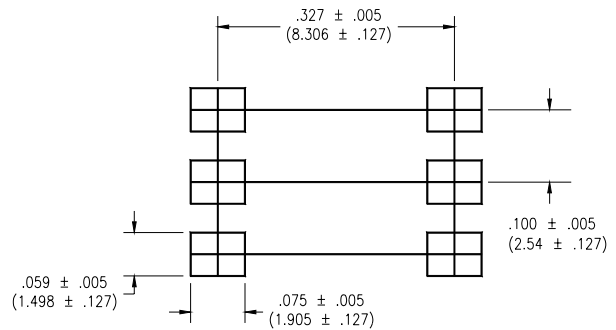
6 PIN SURFACE MOUNT DEVICE



END VIEW



TOP VIEW



BOTTOM VIEW/
BOARD PATTERN