SOLID STATE OPTRONICS

AD6C741



1 Form A
Solid State Relay

RoHS compliant

DESCRIPTION

The AD6C741 is a bi-directional, single-pole, single-throw, normally open high-load current relay. The relay consists of a Infrared LED optically coupled to a Photo Diode Array that drives two extremely low on-resistance, rugged drain-to-drain enhancement type DMOS transistors. Total device output resistance is guaranteed to be less than 0.25 ohms, making this device the ideal choice where high load current and minimal signal attenuation is required.

FEATURES

- Low on-resistance (0.17 ohms TYP)
- High load current rating (1.8A MAX continuous load current)
- Low input power consumption
- High input-output isolation voltage
- RoHS / Lead-Free / REACH Compliant

APPLICATIONS

- Security Systems
- Multiplexers
- Battery Monitoring
- Meter Reading Systems
- Data Acquisition
- Medical Equipment

ORDERING INFO/SUFFIXES*

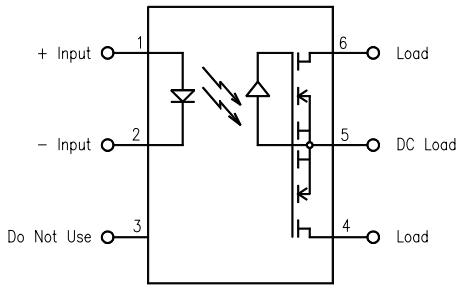
AD6C741: DIP/Thru Hole (50 pcs / tube)

AD6C741-S: SMD/Surface Mount Leadform Option (50 pcs / tube)

AD6C741-STR: SMD/Tape & Reel packing option (1000 pcs / reel)

NOTE: Suffixes listed above are not included in marking on device for part number identification but must be included when ordering.

SCHEMATIC DIAGRAM



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)	ºC			260
Solder Temperature - IR Reflow (10s)	ºC			260

*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 Recognized Component: File # E201932
- EN/IEC 60950-01 Compliant

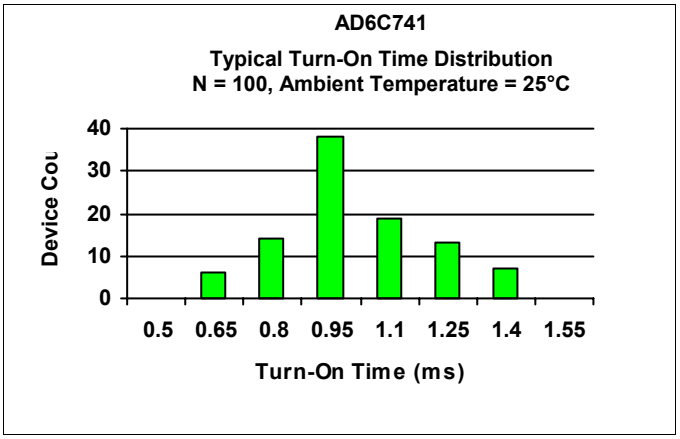
ELECTRICAL CHARACTERISTICS - 25°C

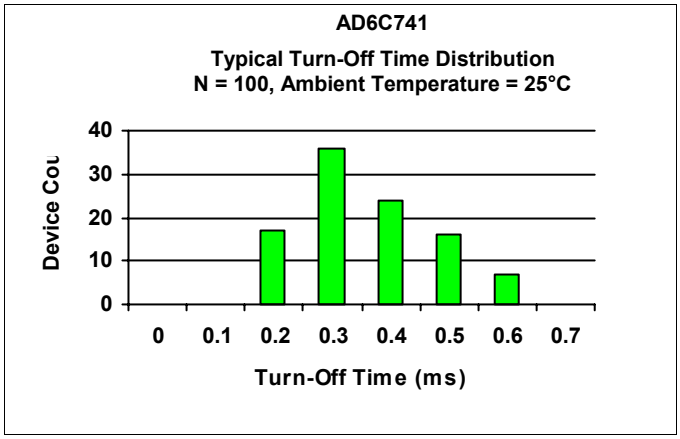
PARAMETER	UNIT	MIN	TYP	MAX	TEST CONDITIONS
INPUT SPECIFICATIONS					
LED Forward Voltage	V		1.2	1.5	If = 5mA
LED Reverse Voltage	V	6	12		Ir = 10uA
Turn-On Current	m A		2.5	5	Io = 1.5A
Turn-Off Current	m A		1		
OUTPUT SPECIFICATIONS					
Blocking Voltage	V	60			Io = 1uA
Continuous Load Current	m A			1.8	If = 10mA
On-Resistance	Ω		0.17	0.25	Io = 1A
Leakage Current	µ A		0.2	1	Vo = 60V
Output Capacitance	p F		130		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		0.95	2.5	If = 10mA, Io = 1A
Turn-Off Time	m s		0.03	0.25	If = 0mA, Io = 1A
Isolation Resistance	G Ω	100			
Coupled Capacitance	p F		3		
Contact Transient Ratio	V / µ s	2000	7000		dV = 50V

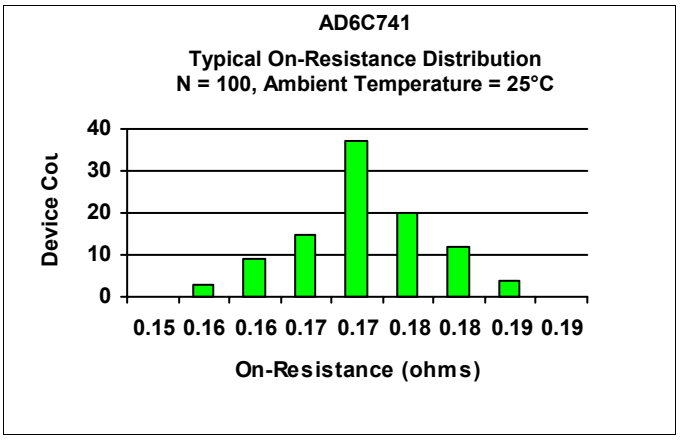
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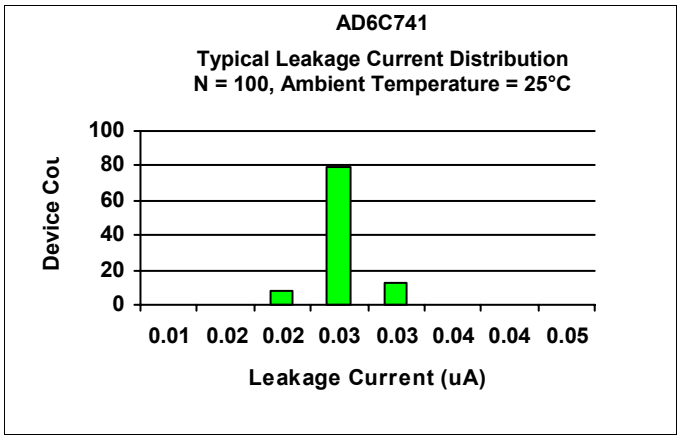
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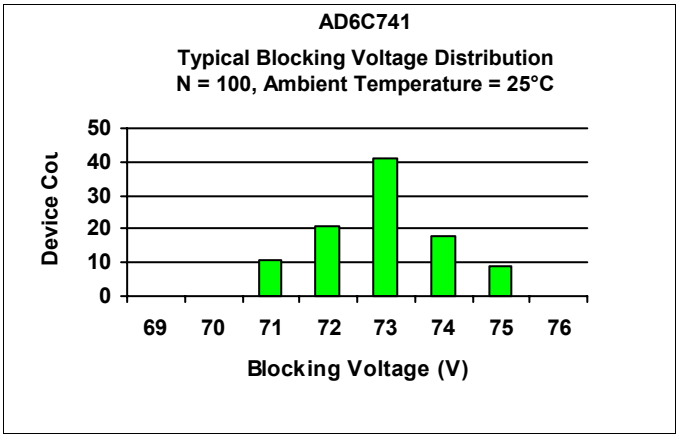
PERFORMANCE DATA

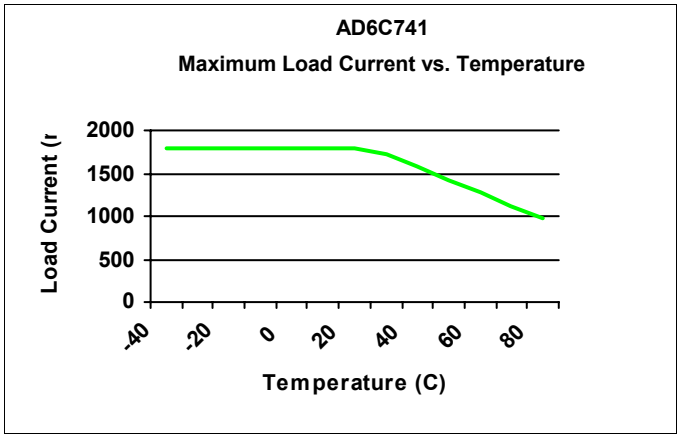






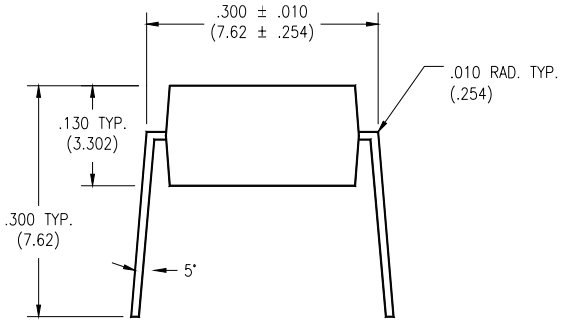




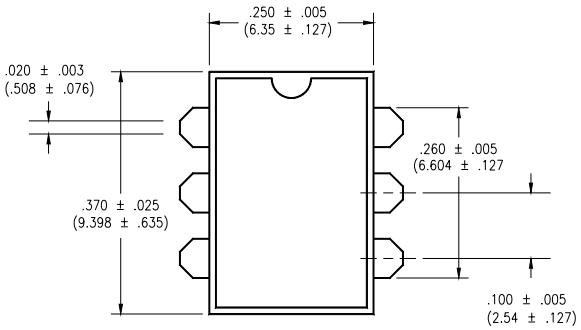


MECHANICAL DIMENSIONS

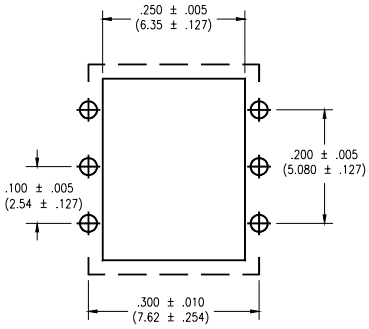
6 PIN DUAL IN-LINE PACKAGE



END VIEW

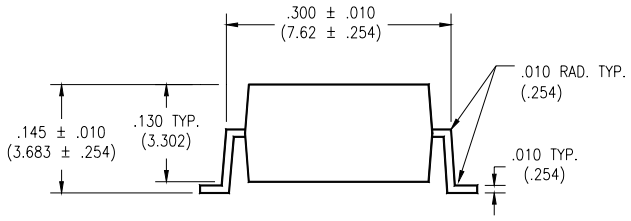


TOP VIEW

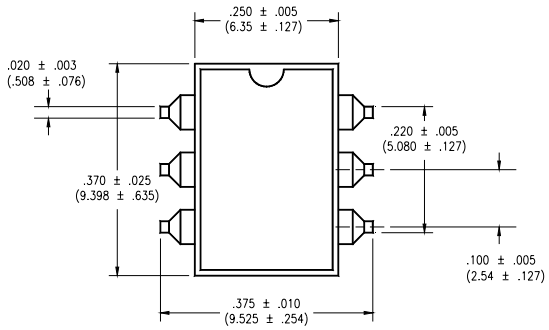


BOTTOM VIEW/
BOARD PATTERN

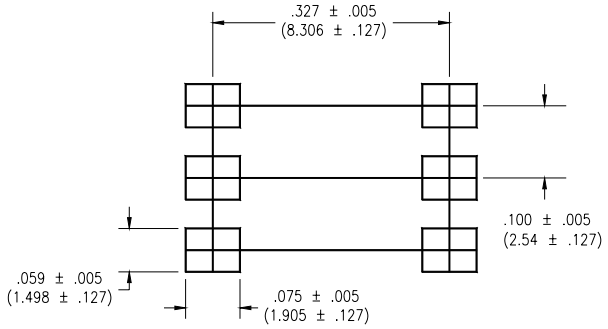
6 PIN SURFACE MOUNT DEVICE



END VIEW



TOP VIEW



BOTTOM VIEW/
BOARD PATTERN

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