ULTRA LOW CAPACITANCE STEERING DIODE ARRAY



DESCRIPTION

The IO6LC is a low capacitance and low leakage steering diode array capable of protecting up to six (6) high speed data lines. Its ultra low capacitance allows maintenance of signal integrity for high-speed data lines while protecting the circuit ICs from the damage of severe transients. An extremely low leakage current makes the IO6LC suitable for battery powered devices.

The IO6LC is available in a SO-8 package. This device meets all the applicable voltage immunity standards, including IEC 61000-4-2 (ESD), 61000-4-4 (EFT) and 61000-4-5 (Surge).

APPLICATIONS

Computing Devices

• Set Top Box Interfaces

SMART PhonesPortable Electronics

• Sensors

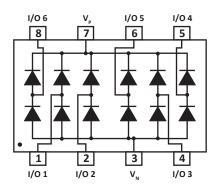
FEATURES

- Compatible with IEC 61000-4-2 (ESD): Air 15kV, Contact 8kV
- Compatible with IEC 61000-4-4 (EFT): 40A 5/50ns
- 350mW Continuous Power Dissipation
- Provides Six Lines of Protection
- Low Leakage Current: < 1.0μA
- Ultra Low Capacitance: 3pF Typical
- RoHS Compliant
- REACH Compliant

MECHANICAL CHARACTERISTICS

- Molded JEDEC SO-8 Package
- Approximate Weight: 70 milligrams
- Lead-Free Pure-Tin Plating (Annealed)
- Solder Reflow Temperature: Pure-Tin - Sn, 100: 260-270°C
- 12mm Tape and Reel Per EIA Standard 481
- Flammability Rating UL 94V-0

PIN CONFIGURATION

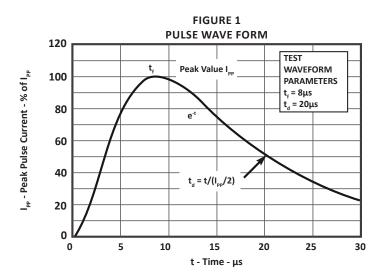


TYPICAL DEVICE CHARACTERISTICS

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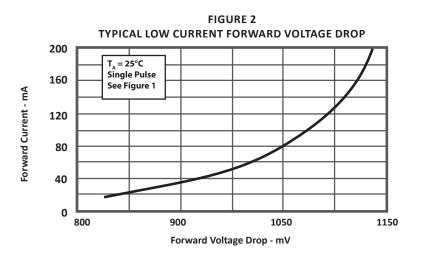
MAXIMUM RATINGS @ 25°C Unless Otherwise Specified							
PARAMETER SYMBOL VALUE							
Operating Temperature	T _A	-55 to 150	°C				
Storage Temperature	Τ _{stg}	-55 to 150	°C				
Continuous Power Dissipation	P _{PC}	350	mW				

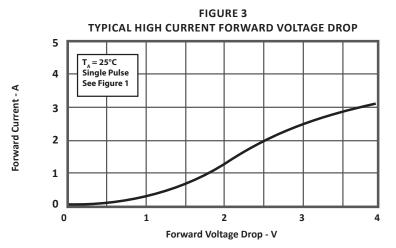
ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified									
PART NUMBER	DEVICE MARKING	REPETITIVE PEAK REVERSE VOLTAGE (Note 1)	MAXIMUM FORWARD VOLTAGE @ 20mA	MAXIMUM PEAK PULSE FORWARD CURRENT (Fig. 1) @ 8/20µs	MAXIMUM REVERSE LEAKAGE CURRENT V _{RRM} @ 5.5V	TYPICAL CAPACITANCE 0V, 1MHz			
		V _{RRM} VOLTS		AMPS	μA	pF			
IO6LC	IO6LC	30	0.95	3.5	0.1	3			
NOTE 1. V_{RRM} is V_{p} for pin 7, V_{N}	NOTE 1. V _{RRM} is V _P for pin 7, V _N for pin 3.								



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TYPICAL DEVICE CHARACTERISTICS





SO-8 PACKAGE INFORMATION

OUTLINE DIMENSIONS								
DIM	MILLIN	IETERS	INCHES					
	MIN	MAX	MIN	MAX				
А	4.80	5.00	0.189	0.196				
В	3.80	4.00	0.150	0.157				
С	1.35	1.75	0.054	0.068				
D	0.35	0.49	0.014	0.019				
F	0.40	1.25	0.016	0.049				
G	1.27 BSC		0.05 BSC					
J	0.18	0.25	0.007	0.009				
К	0.10	0.25	0.004	0.008				
Р	5.80	6.20	0.229	0.244				
R	0.25	0.50	0.010 0.019					



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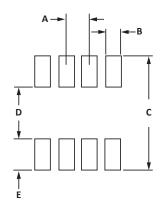
1. -T- = Seating plane and datum surface.

Dimensions "A" and "B" are datum.
 Dimensions "A" and "B" do not include mold protrusion.

Maximum mold protrusion is 0.015" (0.380mm) per side.
 Dimensioning and tolerances per ANSI Y14.5M, 1982.
 Dimensions are exclusive of mold flash and metal burrs.

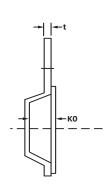
	(+) 0.010″ (0.25mm) (M) B (M) 4 PL
G→ ← → ←D _−C	—► R x 45°
(+) 0.010" (0.25mm) M T B S AS 8 PL	

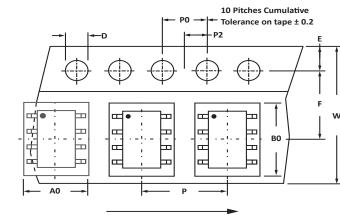
PAD LAYOUT DIMENSIONS								
DIM	MILLIN	IETERS	INC	HES				
DIIVI	MIN	MAX	MIN	MAX				
А	1.14	1.40	0.045	0.055				
В	0.64	0.89	0.025	0.035				
С	6.22	-	0.245	-				
D	3.94	4.17	0.155	0.165				
E 1.02 1.27 0.040 0.050								
NOTES 1. Controlling dimension: inches.								



TAPE AND REEL

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User Direction of Feed

SPECIFICATIONS												
REEL DIA.	TAPE WIDTH	A0	В0	КО	D	E	F	w	PO	P2	Р	tmax
178mm (7")	12mm	6.50 ± 0.10	5.40 ± 0.10	2.00 ± 0.10	1.50 ± 0.10	1.75 ± 0.10	5.50 ± 0.05	12.00 ± 0.30	4.00 ± 0.12	2.00 ± 0.10	4.00 ± 0.10	0.25
NOTES	NOTES 1. Dimensions are in millimeters.											

2. Surface mount product is taped and reeled in accordance with EIA-481.

3. Suffix - T7 = 7" Reel - 1,000 pieces per 12mm tape.

4. Suffix - T13 = 13" Reel - 2,500 pieces per 12mm tape.

5. Bulk product shipped in tubes of 98 pieces per tube.

6. Marking on Part - marking code (see page 2), date code, logo and pin one defined by dot on top of package.

Package outline, pad layout and tape specifications per document number 06009.R3 9/10.

ORDERING INFORMATION								
BASE PART NUMBER LEADFREE SUFFIX TAPE SUFFIX QTY/REL REEL SIZE TUBE QTY								
IO6LC	-LF	-T7	1,000	7″	98			
IO6LC	-LF	-T13	2,500	13"	98			
This device is only available in a Lead-Free configuration.								

COMPANY INFORMATION

COMPANY PROFILE

In business more than 20 years, ProTek Devices[™] is a privately-held company located in Tempe, Arizona, that offers a product line of transient voltage suppressors (TVS); avalanche breakdown diodes; steering diode TVS arrays and other surge suppressor component products. These TVS devices protect electronic systems from the effects of lightning, electrostatic discharge (ESD), nuclear electromagnetic pulses (NEMP), inductive switching and EMI / RFI. ProTek Devices also offers high performance interface and linear products that include analog switches; multiplexers; LED drivers; audio control ICs; RF and related high frequency products. The analog devices work in a host of consumer; industrial; automotive and other applications.

CONTACT US

Corporate Headquarters

2929 South Fair Lane Tempe, Arizona 85282 USA

By Telephone

General: 602-431-8101 Sales: & Marketing: 602-414-5109 Customer Service: 602-414-5114 Product Technical Support: 602-414-5107

By Fax

General: 602-431-2288

By E-mail:

Sales: <u>sales@protekdevices.com</u> Customer Service: <u>service@protekdevices.com</u> Technical Support: <u>support@protekdevices.com</u>

ProTek Devices (Asia Pacific) Pte. Ltd.

8 Ubi Road 2, #06-19 Zervex Singapore - 408538 Tel: +65-67488312 Fax: +65-67488313

Web www.protekdevices.com

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