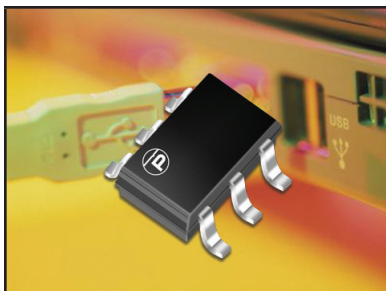


ULTRA LOW CAPACITANCE STEERING DIODE ARRAY



SOT-23-6 PACKAGE

DESCRIPTION

The ET724 is an ultra low capacitance steering diode array. This device provides circuit protection for interfaces and wireless bus applications and portable electronics. The ET724 is ideally suited to protect USB data I/O ports against the effects of ESD and EFT.

The ET724 meets the requirements of IEC 61000-4-2 (ESD) and IEC 61000-4-4 (EFT). At higher operating frequencies or faster edge rates, insertion loss and signal integrity are a major concern. The ET724 offers an ultra low capacitance and low leakage current in a SOT-23-6 package.

FEATURES

- Compatible with IEC 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- Compatible with IEC 61000-4-4 (EFT): 40A - 5/50ns
- Compatible with IEC 61000-4-5 (Surge): 12A, 8/20 μ s - Level 1(Line-Gnd) & Level 2(Line-Line)
- ESD Protection > 25 kilovolts
- Low Clamping Voltage
- Protection for 4 Lines
- Low Leakage Current < 100nA
- Ultra Low Capacitance: 3pF Typical
- RoHS Compliant
- REACH Compliant

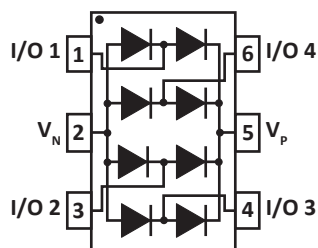
APPLICATIONS

- USB & FireWire Interface Ports
- SMART Phones
- Gigabit Ethernet
- Sensor Interfaces
- Set-Top Box Interfaces

MECHANICAL CHARACTERISTICS

- Molded JEDEC SOT-23-6 Package
- Approximate Weight: 16 milligrams
- Lead-Free Pure-Tin Plating (Annealed)
- Solder Reflow Temperature:
Pure-Tin - Sn, 100: 260-270°C
- 8mm Tape and Reel Per EIA Standard 481
- Flammability Rating UL 94V-0

PIN CONFIGURATION



TYPICAL DEVICE CHARACTERISTICS
MAXIMUM RATINGS @ 25°C Unless Otherwise Specified

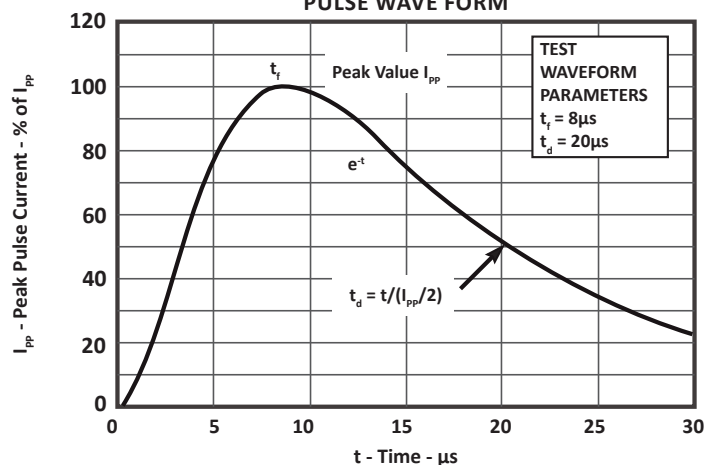
PARAMETER	SYMBOL	VALUE	UNITS
Operating Temperature	T_A	-55 to 150	°C
Storage Temperature	T_{STG}	-55 to 150	°C
Continuous Power Dissipation	P_{PC}	125	mW

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

PART NUMBER	DEVICE MARKING	REPETITIVE PEAK REVERSE VOLTAGE (Note 1) V_{RRM} VOLTS	TYPICAL FORWARD VOLTAGE 8/20 μ s @ 1A V_F VOLTS	MAXIMUM PEAK PULSE FORWARD CURRENT @ 8/20 μ s I_{FM} AMPS	MAXIMUM REVERSE LEAKAGE CURRENT (Note 2) V_{RRM} I_R nA	MAXIMUM QUIESCENT SUPPLY CURRENT (Note 3) @ 20V I_{RQ} nA	TYPICAL CAPACITANCE @0V, 1MHz C_J pF
ET724	724	20	2	12	10	100	3

NOTE

- V_{RRM} is $+V_{CC}$ for pin 5, $-V_{EE}$ for pin 2. Pin 2 also represents ground for unidirectional applications.
- +20V from pin 5 to 1, 5 to 4, 5 to 3 and 5 to 6. -20V from pin 2 to 1, 2 to 3, 2 to 4 and 2 to 6.
- +20V from pin 5 to 2.

**FIGURE 1
PULSE WAVE FORM**


TYPICAL DEVICE CHARACTERISTICS

FIGURE 2
NON-REPETITIVE PEAK PULSE CURRENT CAPABILITY

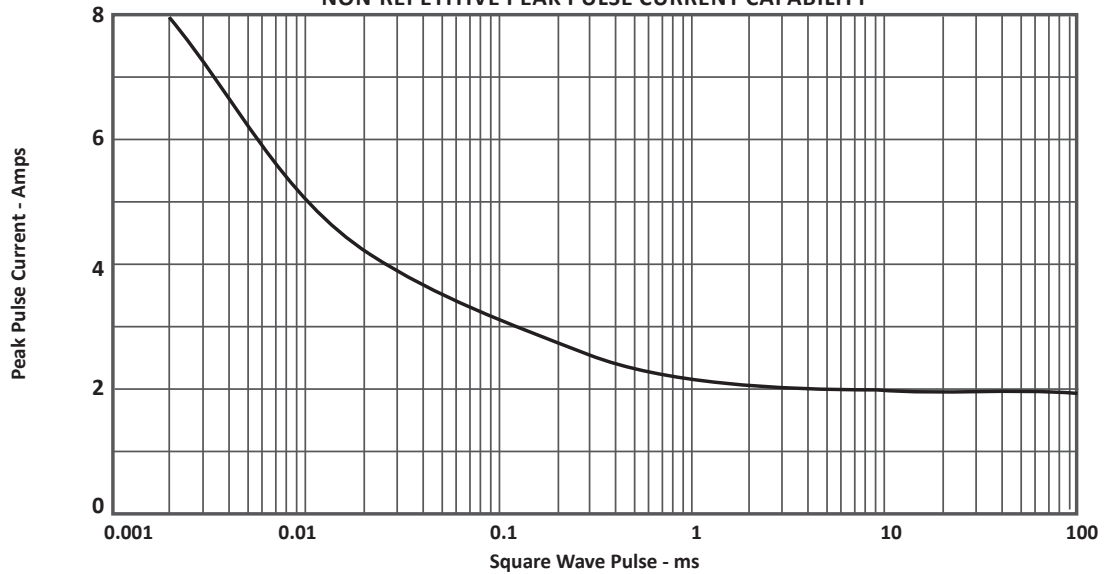


FIGURE 3
TYPICAL LOW CURRENT FORWARD VOLTAGE DROP

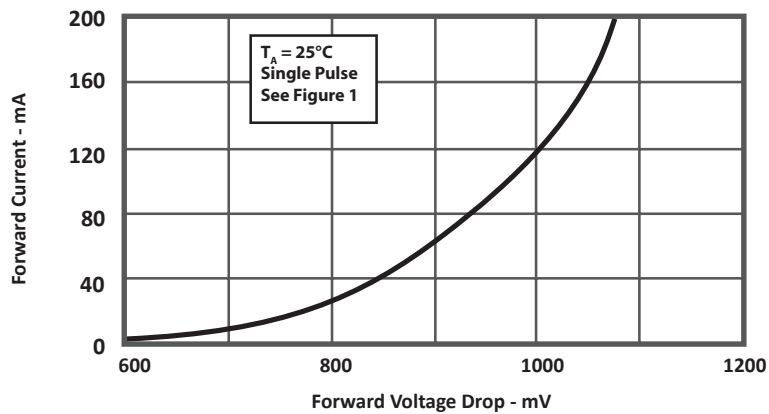
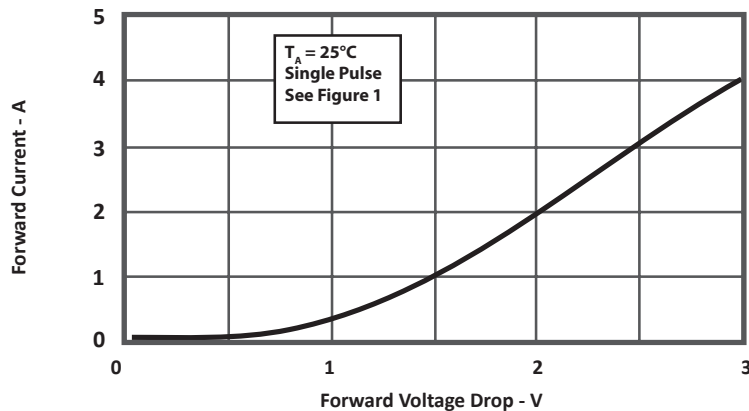


FIGURE 4
LOW FORWARD CURRENT VS FORWARD VOLTAGE

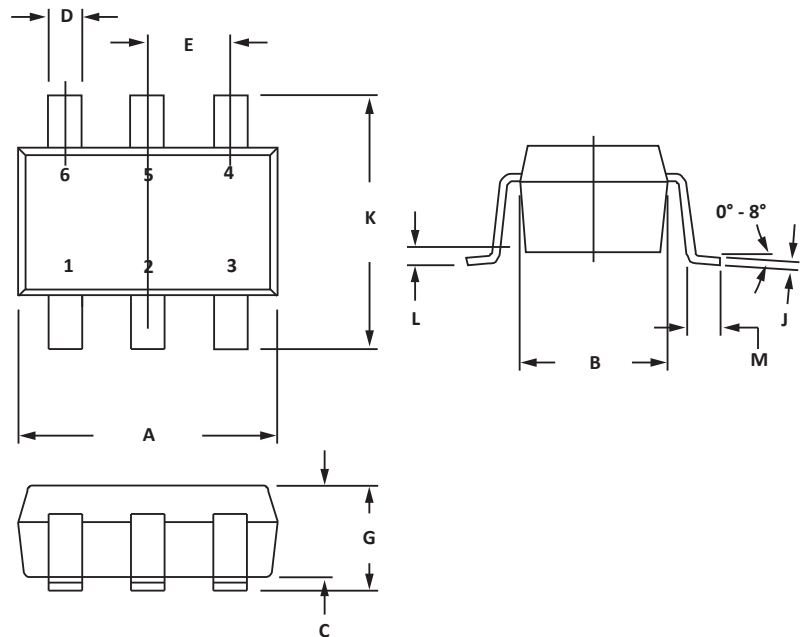


SOT-23-6 PACKAGE INFORMATION
OUTLINE DIMENSIONS

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.80	3.05	0.110	0.120
B	1.50	1.75	0.059	0.070
C	0.90	1.30	0.036	0.051
D	0.30	0.40	0.012	0.016
E	0.85	1.05	0.033	0.040
G	0.90	1.45	0.036	0.057
J	0.09	0.20	0.003	0.008
K	2.60	3.00	0.102	0.118
L	0.0	0.15	0.0	0.006
M	0.30	0.60	0.012	0.024

NOTES

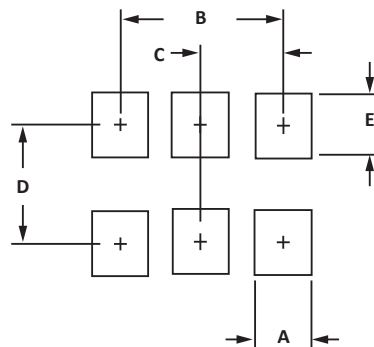
- Controlling dimension: inches.
- Dimensioning and tolerances per ANSI Y14.5M, 1985.
- Dimensions are exclusive of mold flash and metal burrs.

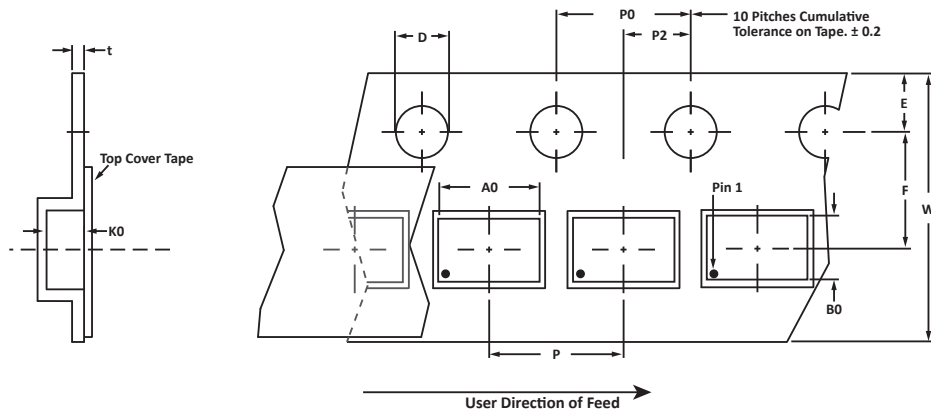

PAD LAYOUT DIMENSIONS

DIM	MILLIMETERS	INCHES
	NOMINAL	NOMINAL
A	0.70	0.028
B	1.90	0.074
C	0.95	0.037
D	2.40	0.094
E	1.00	0.039

NOTES

- Controlling dimension: inches.



TAPE AND REEL

SPECIFICATIONS

REEL DIA.	TAPE WIDTH	A0	B0	K0	D	E	F	W	P0	P2	P	t _{max}
178mm (7")	8mm	3.20 ± 0.10	3.20 ± 0.10	1.65 ± 0.10	1.50 ± 0.10	1.75 ± 0.10	3.50 ± 0.05	8.00 ± 0.30	4.00 ± 0.10	2.00 ± 0.05	4.00 ± 0.10	0.25

NOTES

1. Dimensions are in millimeters.
2. Surface mount product is taped and reeled in accordance with EIA-481.
3. Suffix - T7 = 7" Reel - 3,000 pieces per 8mm tape.
4. Marking on Part - marking code (see page 2) and pin one defined by dot on package.

Package outline, pad layout and tape specifications per document number 06013.R5 2/11

ORDERING INFORMATION

BASE PART NUMBER	LEADFREE SUFFIX	TAPE SUFFIX	QTY/REEL	REEL SIZE	TUBE QTY
ET724	-LF	-T7	3,000	7"	n/a

COMPANY INFORMATION

COMPANY PROFILE

ProTek Devices, based in Tempe, Arizona USA, is a manufacturer of Transient Voltage Suppression (TVS) products designed specifically for the protection of electronic systems from the effects of lightning, Electrostatic Discharge (ESD), Nuclear Electromagnetic Pulse (NEMP), inductive switching and EMI/RFI. With over 25 years of engineering and manufacturing experience, ProTek designs TVS devices that provide application specific protection solutions for all electronic equipment/systems.

ProTek Devices Analog Products Division, also manufactures analog interface, control, RF and power management products.

CONTACT US

Corporate Headquarters

2929 South Fair Lane
Tempe, Arizona 85282
USA

By Telephone

General: 602-431-8101
Sales: 602-414-5109
Customer Service: 602-414-5114

By Fax

General: 602-431-2288

By E-mail:

Sales: sales@protekdevices.com
Customer Service: service@protekdevices.com
Technical Support: support@protekdevices.com

Web

www.protekdevices.com
www.protekanalog.com

COPYRIGHT © ProTek Devices 2007 - This literature is subject to all applicable copyright laws and is not for resale in any manner.

SPECIFICATIONS: ProTek reserves the right to change the electrical and or mechanical characteristics described herein without notice.

DESIGN CHANGES: ProTek reserves the right to discontinue product lines without notice and that the final judgement concerning selection and specifications is the buyer's and that in furnishing engineering and technical assistance. ProTek assumes no responsibility with respect to the selection or specifications of such products. ProTek makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does ProTek assume any liability arising out of the application or use of any product or circuit and specifically disclaims any and all liability without limitation special, consequential or incidental damages.

LIFE SUPPORT POLICY: ProTek Devices products are not authorized for use in life support systems without written consent from the factory.