ULTRA LOW CAPACITANCE STEERING DIODE ARRAY



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, 8/20μs 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

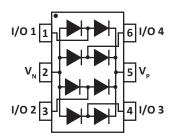
MECHANICAL CHARACTERISTICS

- 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

APPLICATIONS

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

PIN CONFIGURATION



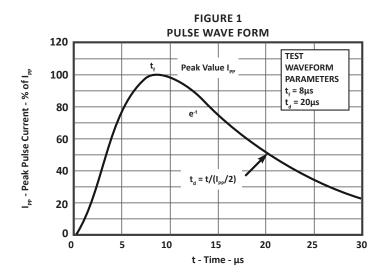
TYPICAL DEVICE CHARACTERISTICS

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				

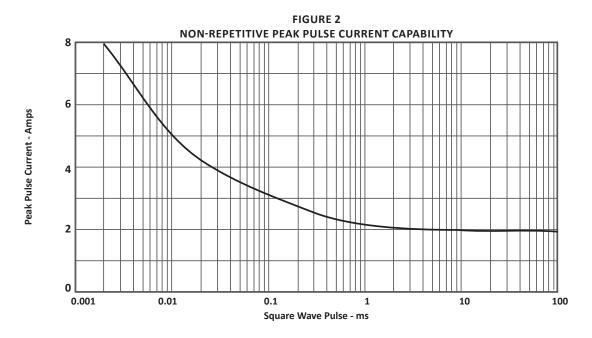
	ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified								
PART NUMBER	DEVICE MARKING	REPETITIVE PEAK REVERSE VOLTAGE (Note 1)	TYPICAL FORWARD VOLTAGE 8/20µs	MAXIMUM PEAK PULSE FORWARD CURRENT	MAXIMUM REVERSE LEAKAGE CURRENT (Note 2)	MAXIMUM QUIESCENT SUPPLY CURRENT (Note 3)	TYPICAL CAPACITANCE		
		V _{RRM} VOLTS	@ 1A V _F VOLTS	@ 8/20μs Ι _{FM} AMPS	V _{RRM} I _R nA	@ 20V I _{RQ} nA	@0V, 1MHz C _j pF		
ET724	724	20	2	12	10	100	3		

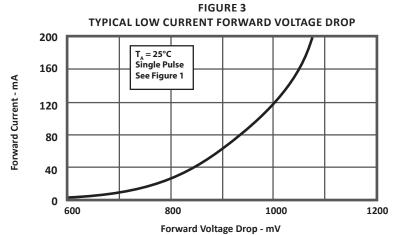
NOTE

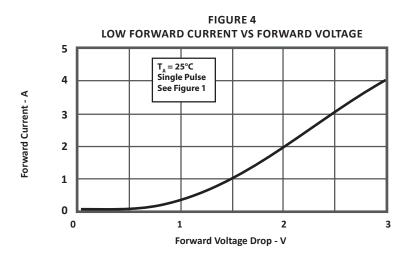
- 1. V_{RRM} is $+V_{CC}$ for pin 5, $-V_{EE}$ for pin 2. Pin 2 also represents ground for unidirectional applications.
- 2. +20V from pin 5 to 1, 5 to 4, 5 to 3 and 5 to 6. -20V from pin 2 to 1, 2 to 3, 2 to 4 and 2 to 6.
- 3. +20V from pin 5 to 2.



TYPICAL DEVICE CHARACTERISTICS









SOT-23-6 PACKAGE INFORMATION

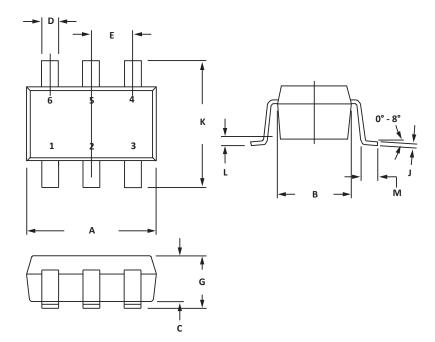
	OUTLINE DIMENSIONS								
DIM	MILLIN	METERS	INCHES						
DIM	MIN	MAX	MIN	MAX					
А	2.80	3.05	0.110	0.120					
В	1.50	1.75	0.059	0.070					
С	0.90	1.30	0.036	0.051					
D	0.30	0.40	0.012	0.016					
Е	0.85	1.05	0.033	0.040					
G	0.90	1.45	0.036	0.057					
J	0.09	0.20	0.003	0.008					
К	2.60	3.00	0.102	0.118					
L	0.0	0.15	0.0	0.006					
M 0.30		0.60	0.012	0.024					

NOTES

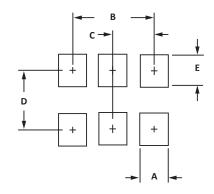
1. Controlling dimension: inches.

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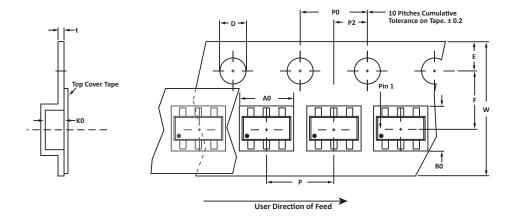
- 2. Dimensioning and tolerances per ANSI Y14.5M, 1985.
- 3. Dimensions are exclusive of mold flash and metal burrs.



PAD LAYOUT DIMENSIONS								
DIM	MILLIMETERS	INCHES						
	NOMINAL	NOMINAL						
А	0.70	0.028						
В	1.90	0.074						
С	0.95	0.037						
D	2.40	0.094						
Е	1.00	0.039						
NOTES								



TAPE AND REEL



SPECIFICATIONS												
REEL DIA.	TAPE WIDTH	A0	В0	КО	D	E	F	W	P0	P2	Р	tmax
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			
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.

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