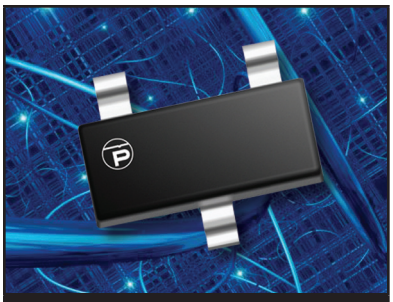
LOW CAPACITANCE TVS ARRAY



SOT-23 PACKAGE

DESCRIPTION

The ESOT24LCC-2, a high frequency, transient suppression protector for handheld devices and wireless telecommunications applications. This device is packaged in a SOT-23 plastic case and is available in a 24 volt, bidirectional configuration.

Due to its low capacitance, the ESOT24LCC-2 is ideal protection of Ethernet or USB port interfaces against the effects of electrostatic discharge (ESD) and electrical fast transients (EFT). This device meets the requirements of IEC 61000-4-2 and IEC 61000-4-4.

FEATURES

- Compatible with IEC 61000-4-2 (ESD): Air 15kV, Contact 8kV
- Compatible with IEC 61000-4-4 (EFT): 40A, 5/50ns
- 100 Watts Peak Pulse Power per Line(tp = 8/20µs)
- Protects Two Bidirectional Lines
- Bidirectional Configuration
- Low Leakage Current < 1.0µA
- Low Capacitance < 6pF per Line
- RoHS Compliant
- REACH Compliant

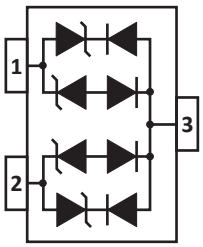
APPLICATIONS

- Ethernet - 10/100/1000 Base T
- CAN Bus
- Cellular Phones
- Audio/Video Inputs
- SMART Phones
- E1/T1 & E3/T3

MECHANICAL CHARACTERISTICS

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

PIN CONFIGURATION



TYPICAL DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified			
PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power (tp = 8/20µs) - See Figure 1	P_{PP}	100	Watts
Operating Temperature	T_L	-55 to 150	°C
Storage Temperature	T_{STG}	-55 to 150	°C
Peak Pulse Current (tp = 8/20µs)	I_{PP}	2	Amps

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified					
PART NUMBER (Note 1-2)	DEVICE MARKING	RATED STAND-OFF VOLTAGE V_{WM} VOLTS	MINIMUM BREAKDOWN VOLTAGE @ 1mA $V_{(BR)}$ VOLTS	MAXIMUM LEAKAGE CURRENT @V_{WM} I_D µA	TYPICAL CAPACITANCE @0V, 1MHz C pF
ESOT24LCC-2	24L	24.0	26.6	1	6

NOTES
1. Test between pins 1 to 3 and 2 to 3 in both directions.
2. Per IEC 61000-4-2, ESD ±24kV.

TYPICAL DEVICE CHARACTERISTICS

FIGURE 1
PEAK PULSE POWER VS PULSE TIME

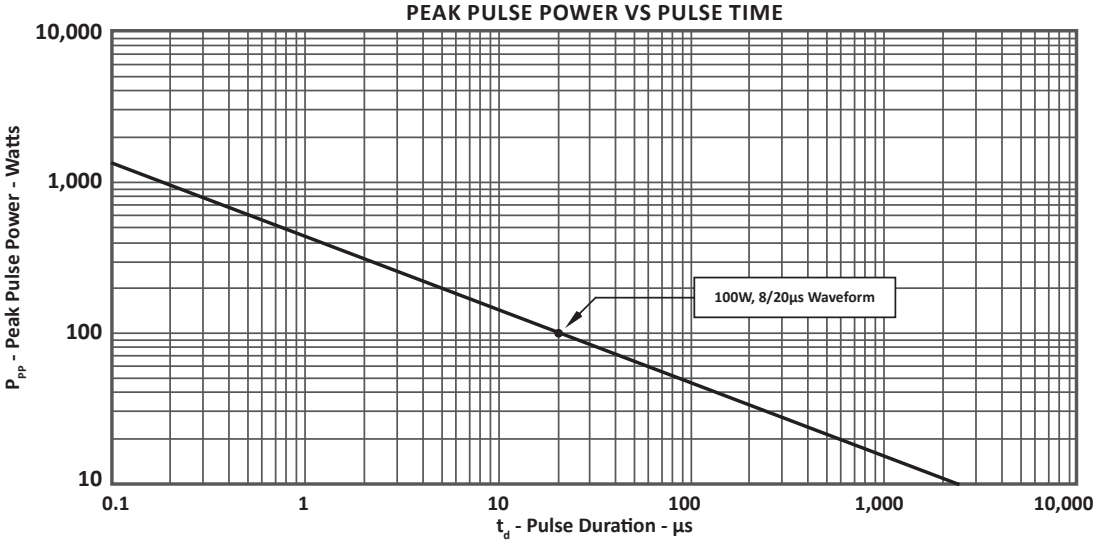
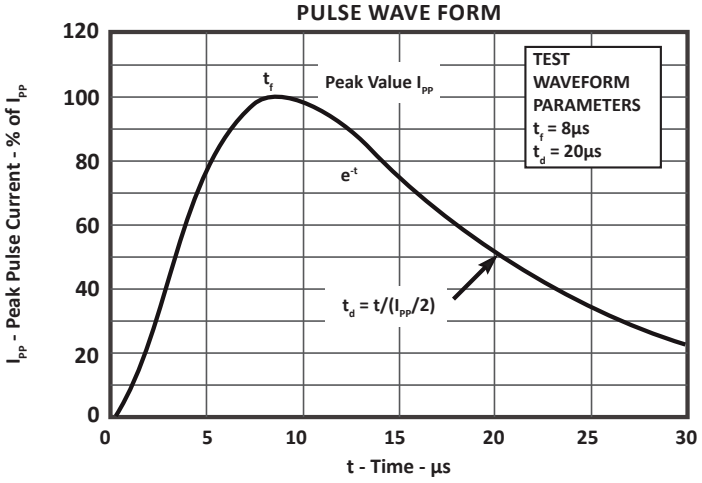


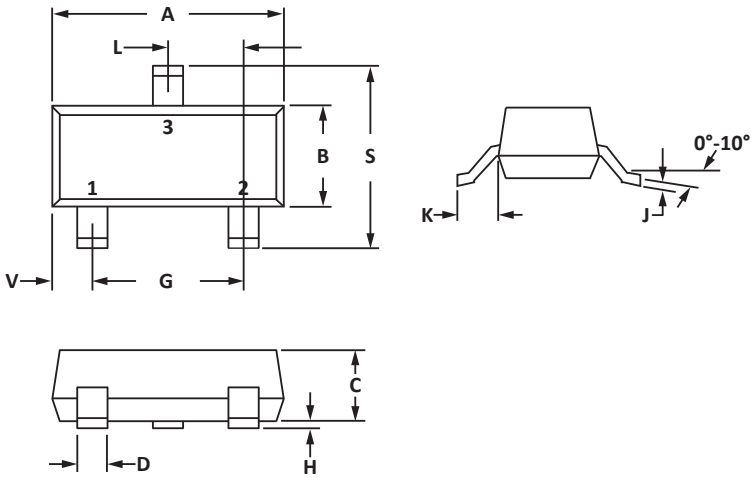
FIGURE 2
PULSE WAVE FORM



SOT-23 PACKAGE INFORMATION

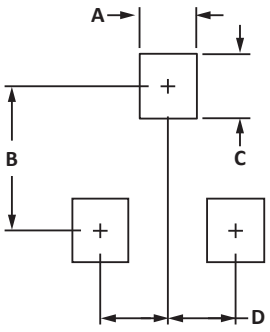
OUTLINE DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.80	3.04	0.110	0.120
B	1.20	1.40	0.047	0.055
C	0.89	1.11	0.035	0.044
D	0.37	0.50	0.015	0.020
G	1.78	2.04	0.070	0.081
H	0.013	0.100	0.001	0.004
J	0.085	0.177	0.003	0.007
K	0.45	0.60	0.018	0.024
L	0.89	1.02	0.035	0.040
S	2.10	2.50	0.083	0.098
V	0.45	0.60	0.018	0.024

NOTES
1. Controlling dimension: inches.
2. Dimensioning and tolerances per ANSI Y14.5M, 1985.
3. Pin 3 is the cathode (Unidirectional Only)
4. Dimensions are exclusive of mold flash and metal burrs.

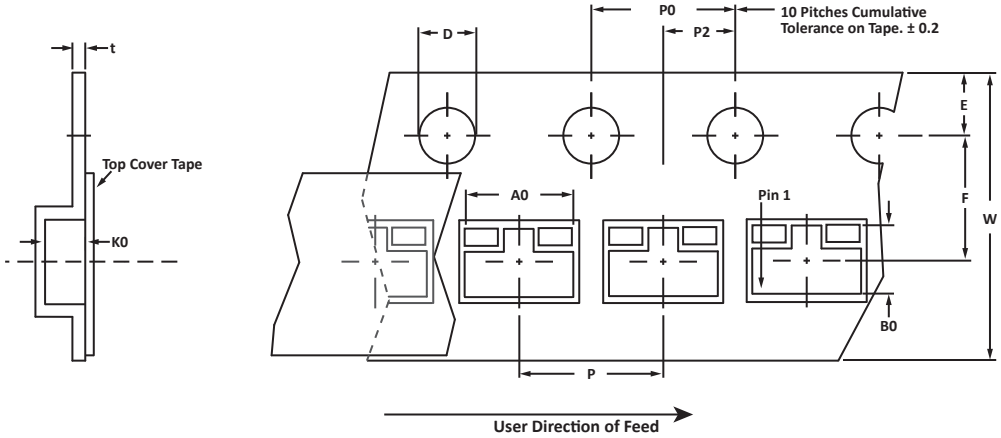


PAD LAYOUT DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.71	0.97	0.028	0.038
B	1.88	2.13	0.074	0.084
C	0.71	0.97	0.028	0.038
D	0.81	1.07	0.032	0.042

NOTES
1. Controlling dimension: inches.



TAPE AND REEL



SPECIFICATIONS												
REEL DIA.	TAPE WIDTH	A0	B0	K0	D	E	F	W	P0	P2	P	tmax
178mm (7")	8mm	3.15 ± 0.10	2.77 ± 0.10	1.30 ± 0.10	1.55 ± 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	0.228

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. Suffix - T13 = 13" Reel - 10,000 pieces per 8mm tape.
5. Marking on Part - marking code (see page 2) and date code.

Package outline, pad layout and tape specifications per document number 06012.R2 8/10.

ORDERING INFORMATION					
BASE PART NUMBER	LEADFREE SUFFIX	TAPE SUFFIX	QTY/REEL	REEL SIZE	TUBE QTY
ESOT24LCC-2	n/a	-T7	3000	7"	n/a
ESOT24LCC-2	n/a	--T13	10,000	13"	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