PROTEK DEVICES

ET721

STEERING DIODE ARRAY

SO-8

APPLICATIONS

✔ Ethernet - 10/100/1000 Base T
✔ Set Top Box Interfac
✔ Handheld Electronics
✔ FireWire
✔ USB Interface
✔ Sensor Interface

IEC COMPATIBILITY (EN61000-4)

✔ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
✔ 61000-4-4 (EFT): 40A - 5/50ns
✔ 61000-4-5 (Surge): 12A, 8/20μs - Level 1(Line-Gnd) & Level 2(Line-Line)

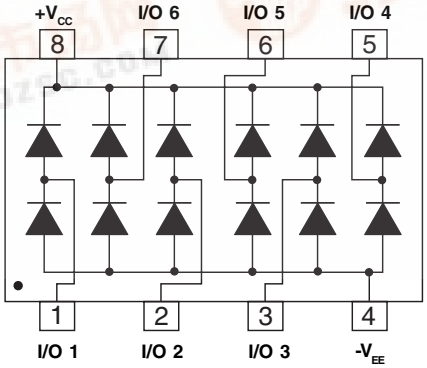
FEATURES

✔ ESD Protection > 40 kilovolts
✔ Low Clamping Voltage
✔ Provides Six (6) Lines of Protection
✔ Low Leakage Current < 200nA
✔ Low Capacitance: 3pF Typical
✔ RoHS Compliant

MECHANICAL CHARACTERISTICS

✔ Molded JEDEC SO-8
✔ Weight 70 milligrams (Approximate)
✔ Available in Lead-Free Pure-Tin Plating(Annealed)
✔ Solder Reflow Temperature:
Pure-Tin - Sn, 100: 260-270°C
✔ Consult Factory for Leaded Device Availability
✔ Flammability Rating UL 94V-0
✔ 12mm Tape and Reel Per EIA Standard 481
✔ Marking: Marking Code, Logo, Date Code & Pin One Defined By Dot on Top of Package

PIN CONFIGURATION



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}	145	mW

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

PART NUMBER	DEVICE MARKING	REPETITIVE PEAK REVERSE VOLTAGE (See Note 1) V_{RRM} VOLTS	TYPICAL FORWARD VOLTAGE 8/20µs @1A V_F VOLTS	MAXIMUM PEAK PULSE FORWARD CURRENT 8/20µs I_{FM} AMPS	MAXIMUM REVERSE LEAKAGE CURRENT (See Note 2) @V_{RRM} I_R nA	MAXIMUM QUIESCENT SUPPLY CURRENT (See Note 3) @20V I_{BQ} nA	TYPICAL CAPACITANCE @0V, 1MHz Cj pF
ET721	STA	50	2	12	20	200	3

Note 1: V_{RRM} is $+V_{CC}$ for pin 8, $-V_{EE}$ for pin 4.
Note 2: +20V from pin 8 to 1, 2, 3, 5, 6, and 7. -20V from pin 4 to 1, 2, 3, 5, 6 and 7.
Note 3: +20V from pin 8 to 4.

FIGURE 1
NON-REPETITIVE PEAK PULSE CURRENT CAPABILITY

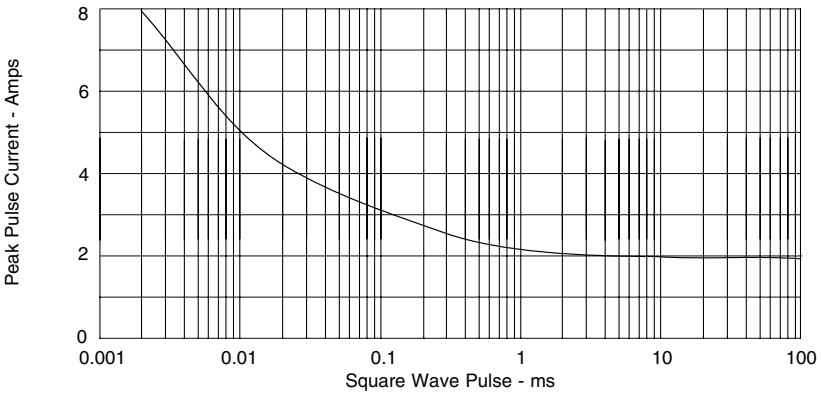
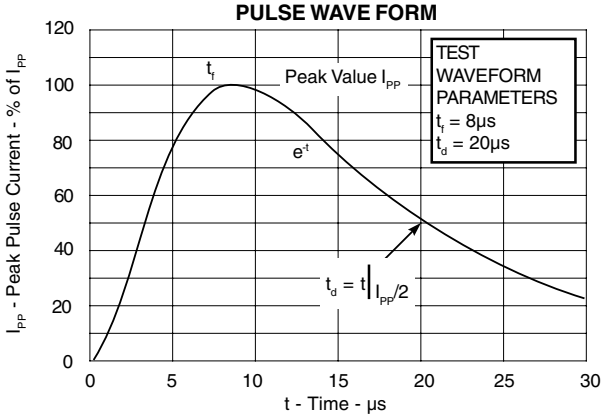


FIGURE 2
PULSE WAVE FORM



GRAPHS

FIGURE 3
TYPICAL LOW CURRENT FORWARD VOLTAGE DROP

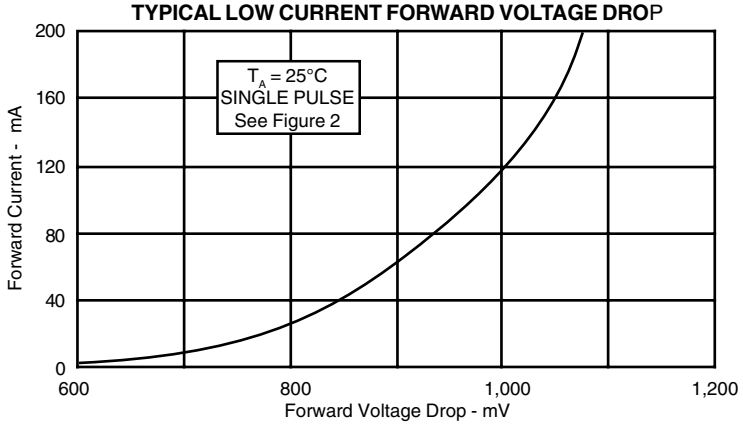
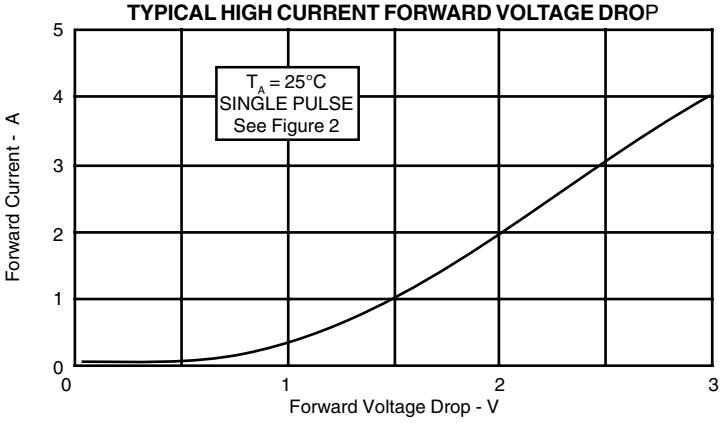
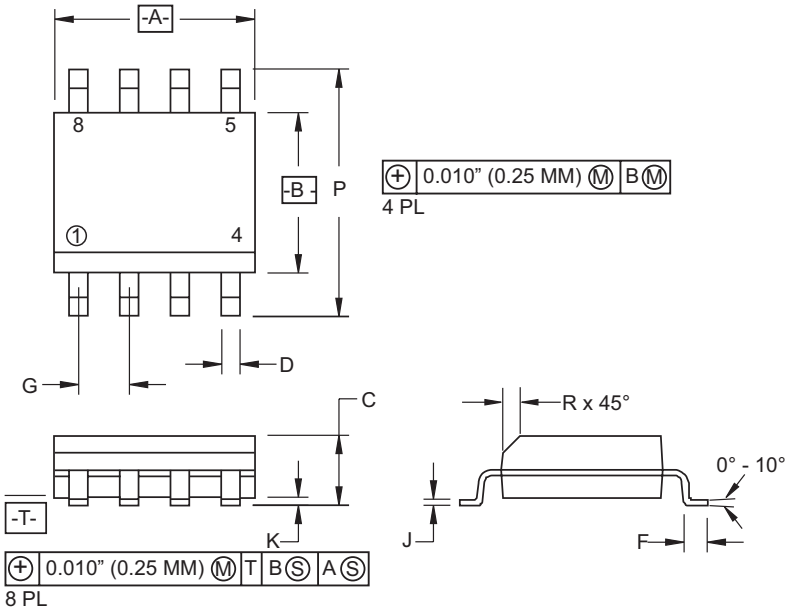


FIGURE 4
TYPICAL HIGH CURRENT FORWARD VOLTAGE DROP

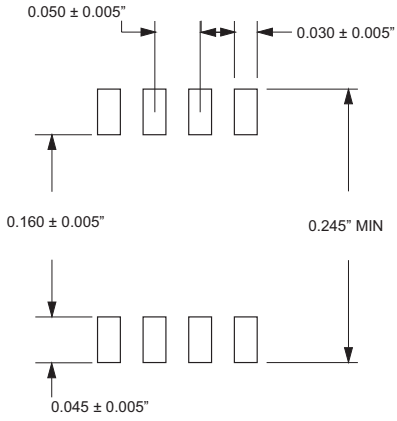


SO-8 PACKAGE OUTLINE & DIMENSIONS

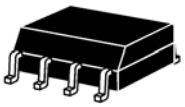
PACKAGE OUTLINE



MOUNTING PAD



SO-8



PACKAGE DIMENSIONS

DIM	MILLIMETERS MIN	MILLIMETERS MAX	INCHES MIN	INCHES MAX
A	4.80	5.00	0.189	0.196
B	3.80	4.00	0.150	0.157
C	1.35	1.75	0.054	0.068
D	0.35	0.49	0.014	0.019
F	0.40	1.250	0.016	0.049
G	1.27 BSC	1.27 BSC	0.05 BSC	0.05 BSC
J	0.18	0.25	0.007	0.009
K	0.10	0.25	0.004	0.008
P	5.80	6.20	0.229	0.244
R	0.25	0.50	0.010	0.019

NOTES

1. - T - = Seating Plane and Datum Surface.
2. Dimensions “A” and “B” are Datum.
3. Dimensions “A” and “B” do not include mold protrusion.
4. Maximum mold protrusion is 0.015” (0.380 mm) per side.
5. Dimensioning and tolerances per ANSI Y14.5M, 1982.
6. Dimensions are exclusive of mold flash and metal burrs.

TAPE & REEL/BULK ORDERING NOMENCLATURE

1. Surface mount product is taped and reeled in accordance with EIA-481.
2. Suffix-T7 = 7 Inch Reel - 1,000 pieces per 12mm tape, i.e. ET721-T7.
3. Suffix-T13 = 13 Inch Reel - 2,500 pieces per 12mm tape, i.e., ET721-T13.
4. Suffix - LF = Lead-Free, Pure-Tin Plating, i.e., ET721-LF-T7.
5. No Suffix = Product Shipped in Tubes of 98 pcs per Tube.

Outline & Dimensions: Rev 1 - 11/01, 06009

ProTek Devices
2929 South Fair Lane, Tempe, AZ 85282
Tel: 602-431-8101 Fax: 602-431-2288
E-Mail: sales@protekdevices.com
Web Site: www.protekdevices.com