

STEERING DIODE ARRAY

APPLICATIONS

- ✓ USB Interface Ports
- ✓ Cellular Phones
- ✓ Video
- ✓ Handheld Electronics
- ✓ Personal Computers

IEC COMPATIBILITY (EN61000-4)

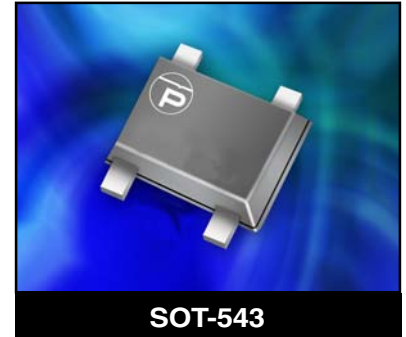
- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns

FEATURES

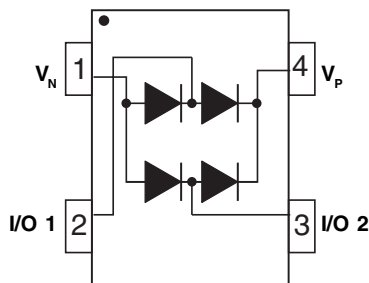
- ✓ ESD Protection > 40 kilovolts
- ✓ 225 Milliwatt Continuous Power Dissipation
- ✓ Provides Two (2) Lines of Protection
- ✓ Low Leakage Current < 1.0 μ A
- ✓ Ultra Low Capacitance: 0.6pF
- ✓ RoHS Compliant

MECHANICAL CHARACTERISTICS

- ✓ Molded JEDEC SOT-543
- ✓ Weight 3 milligrams (Approximate)
- ✓ Available in Lead-Free Nickel-Paladium-Gold Plating
- ✓ Solder Reflow Temperature:
Nickel-Paladium-Gold (Ni/Pd/Au) Sn/Ag/Cu: 260-270°C
- ✓ Flammability Rating UL 94V-0
- ✓ 8mm Tape and Reel Per EIA Standard 481
- ✓ Marking: Marking Code



PIN CONFIGURATION



DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified

PARAMETER	SYMBOL	VALUE	UNITS
Operating Temperature	T_J	-55 to 150	°C
Storage Temperature	T_{STG}	-55 to 150	°C
Continuous Power Dissipation	P_{PC}	225	mW
Repetitive Peak Forward Current @ $t_p = 5\mu s$, $F = 50kHz$ (Pin 1-2)	I_{FRM}	700	mA

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

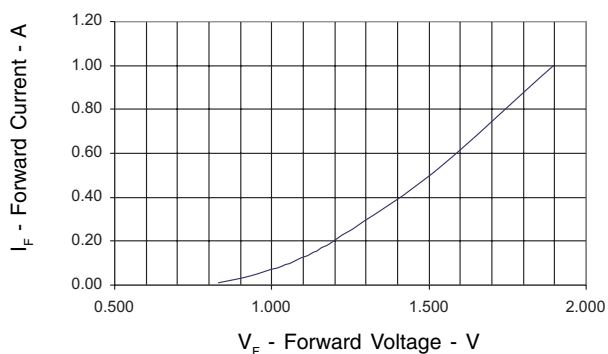
PART NUMBER	DEVICE MARKING CODE	REPETITIVE PEAK REVERSE VOLTAGE (See Note 1) @ 10 μA V_{RRM} VOLTS	MAXIMUM REVERSE LEAKAGE CURRENT (See Note 2) V_{RRM} @ 5V I_R μA	MAXIMUM DIODE FORWARD VOLTAGE @ 10mA V_F VOLTS	MAXIMUM CAPACITANCE (See Note 3) (Between Line-Gnd) C_j pF
USB002	U2	20	1	1.4	0.6

Note 1: $V_p - V_N = 20V$.

Note 2: $V_p - V_N = 5.5V$.

Note 3: Between Line and Ground - $V_p = 5V$, $f = 1MHz$, $V_{IO} = 2.5V$, $V_N = 0V$.

FIGURE 1
PEAK FORWARD CURRENT VS FORWARD VOLTAGE



SOT-543 PACKAGE OUTLINE & DIMENSIONS

PACKAGE OUTLINE		PACKAGE DIMENSIONS			
DIM	MILLIMETERS		INCHES		
	MIN	MAX	MIN	MAX	
A	1.50	1.70	0.059	0.067	
B	1.10	1.30	0.043	0.051	
C	0.50	0.60	0.020	0.024	
D	0.17	0.27	0.007	0.011	
G	0.50 BSC	-	0.020 BSC	-	
H	1.50	1.70	0.059	0.067	
J	0.08	0.16	0.003	0.007	
K	0.10	0.30	0.004	0.012	

NOTES

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

TYPICAL		
DIM	Millimeters	Inches
1	0.30	0.012
2	1.02	0.040
3	1.40	0.055
4	0.51	0.020

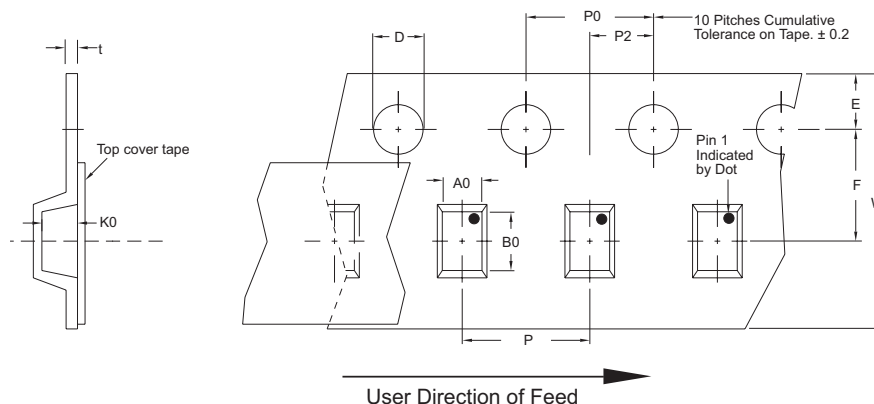
TAPE & REEL ORDERING NOMENCLATURE

1. Surface mount product is taped and reeled in accordance with EIA-481.
2. Suffix-T7 = 7 Inch Reel - 3,000 pieces per 8mm tape, i.e., USB002-T7.
3. Suffix-T13 = 13 Inch Reel - 10,000 pieces per 8mm tape, i.e., USB002-T13.
4. Suffix - LF = Lead-Free Plating, i.e., USB002-LF-T7.

Outline & Dimensions: Rev 0 - 1/07, 06070

Tape & Reel Specifications (Dimensions in millimeters)

Reel Dia.	Tape Width	A0	B0	K0	D	E	F	W	P0	P2	P	tmax
178mm (7")	8mm	1.78 ± 0.05	1.78 ± 0.05	0.69 ± 0.05	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



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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