

STEERING DIODE ARRAY

**APPLICATIONS**

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

**IEC COMPATIBILITY (EN61000-4)**

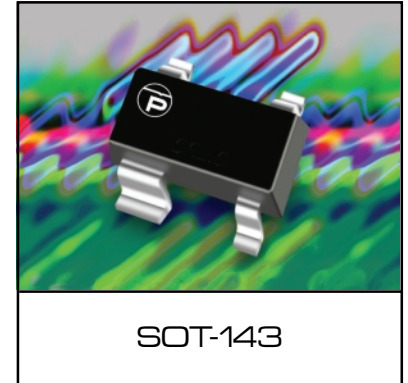
- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns

**FEATURES**

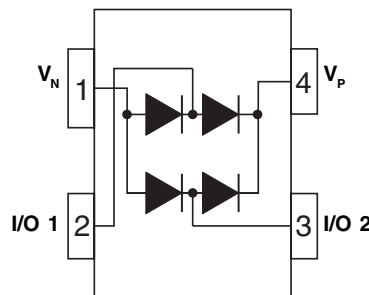
- ✓ ESD Protection > 40 kilovolts
- ✓ 225 Milliwatt Continuous Power Dissipation
- ✓ Provides Two (2) Lines of Protection
- ✓ **LOW LEAKAGE CURRENT < 1.0μA**
- ✓ **ULTRA LOW CAPACITANCE: 3pF Typical**

**MECHANICAL CHARACTERISTICS**

- ✓ Molded JEDEC SO-143
- ✓ Weight 35 milligrams (Approximate)
- ✓ Flammability rating UL 94V-0
- ✓ 8mm Tape and Reel Per EIA Standard 481
- ✓ Marking: Marking Code



**PIN CONFIGURATION**



## DEVICE CHARACTERISTICS

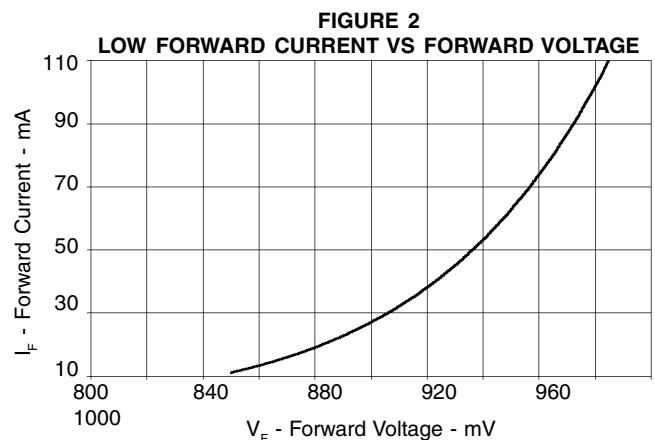
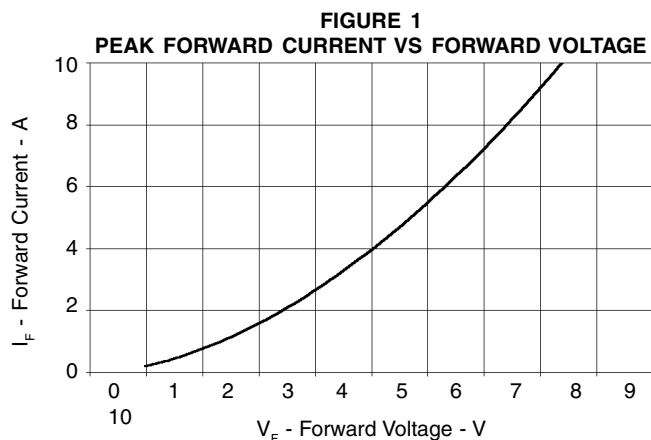
MAXIMUM RATINGS @ 25°C Unless Otherwise Specified			
PARAMETER	SYMBOL	VALUE	UNITS
Operating Temperature	$T_J$	-55°C to 150°C	°C
Storage Temperature	$T_{STG}$	-55°C to 150°C	°C
Continuous Power Dissipation	$P_{PC}$	225	mW
Repetitive Peak Forward Current @ $t_p=5\mu s, F=50kHz$ (Pin 2 - 3)	$I_{FRM}$	700	mA

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified					
PART NUMBER	DEVICE MARKING CODE	REPETITIVE PEAK REVERSE VOLTAGE (See Note 1) @ 10 $\mu A$ $V_{RRM}$ VOLTS	MAXIMUM REVERSE LEAKAGE CURRENT (See Note 2) $V_{RRM}$ @ 5V $I_R$ $\mu A$	MAXIMUM DIODE FORWARD VOLTAGE @ 20mA $V_F$ VOLTS	MAXIMUM CAPACITANCE (See Note 3) (Between Line and Ground) $C_j$ pF
USB004	PSA	20	1	0.95	6

**Note 1:**  $V_P - V_N = 20V$ .

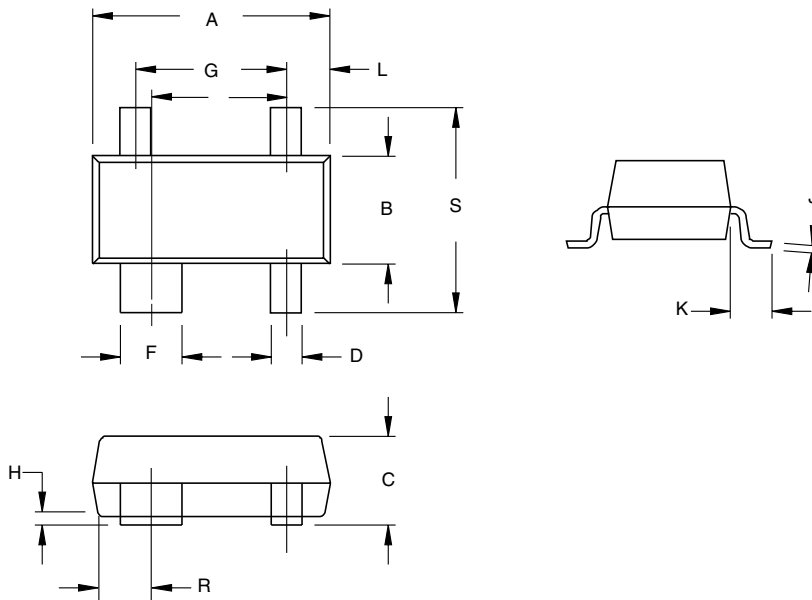
**Note 2:**  $V_P - V_N = 5.5V$ .

**Note 3:**  $V_P = 5V, f = 1MHz, V_{IO} = 2.5V, V_N = 0V$



## PACKAGE OUTLINE & DIMENSIONS

### PACKAGE OUTLINE



### SOT-143

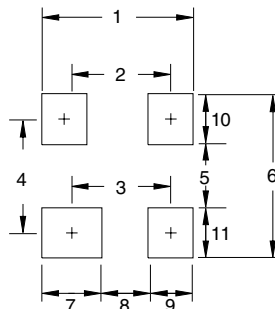


### PACKAGED DIMENSIONS

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.80	3.04	0.110	0.0120
B	1.20	1.39	0.047	0.055
C	0.84	1.14	0.033	0.045
D	0.39	0.50	0.015	0.020
F	0.79	0.93	0.031	0.037
G	1.78	2.03	0.070	0.080
H	0.013	0.10	0.0005	0.004
J	0.08	0.15	0.003	0.006
K	0.46	0.60	0.018	0.024
L	0.445	0.60	0.0175	0.024
R	0.72	0.83	0.028	0.033
S	2.11	2.48	0.083	0.098

### MOUNTING PAD

TYPICAL		
DIM	Millimeters	Inches
1	2.85	0.112
2	2.00	0.079
3	1.80	0.071
4	1.90	0.075
5	1.05	0.041
6	2.75	0.108
7	1.20	0.047
8	0.80	0.031
9	0.85	0.033
10	0.85	0.033
11	0.85	0.033



### NOTES

1. Dimensioning and tolerances per ANSI Y14.5M, 1985.
2. Controlling Dimension: Inches
3. Dimensions are exclusive of mold flash and metal burrs.

### 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., *USB004-T7*.
3. Suffix-T13 = 13 Inch Reel - 10,000 pieces per 8mm tape, i.e., *USB004-T13*.

Outline & Dimensions: Rev 1 - 11/01, 06011

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