

## STEERING DIODE ARRAY

### APPLICATIONS

- ✓ USB Interface Ports
- ✓ Cellular Phones
- ✓ Set Top Box Interface
- ✓ Sensor Interface
- ✓ Video Interface Ports
- ✓ Handheld Electronics
- ✓ Desktop Computers
- ✓ Personal Digital Assistant (PDA)

### IEC COMPATIBILITY (EN61000-4)

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

### FEATURES

- ✓ ESD Protection > 25 kilovolts
- ✓ 500 Milliwatt Continuous Power Dissipation
- ✓ Provides Four (4) Lines of Protection
- ✓ Low Leakage Current < 1.0 $\mu$ A
- ✓ Ultra Low Capacitance: 5pF per Diode
- ✓ RoHS Compliant

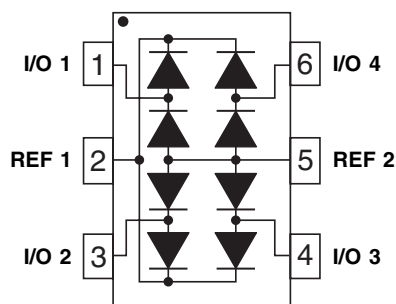
### MECHANICAL CHARACTERISTICS

- ✓ Molded JEDEC SOT-23-6 Package
- ✓ Weight 16 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
- ✓ 8mm Tape and Reel Per EIA Standard 481
- ✓ Marking: Marking Code & Pin One Defined By Dot on Top of Package



SOT-23-6

### PIN CONFIGURATION



## DEVICE CHARACTERISTICS

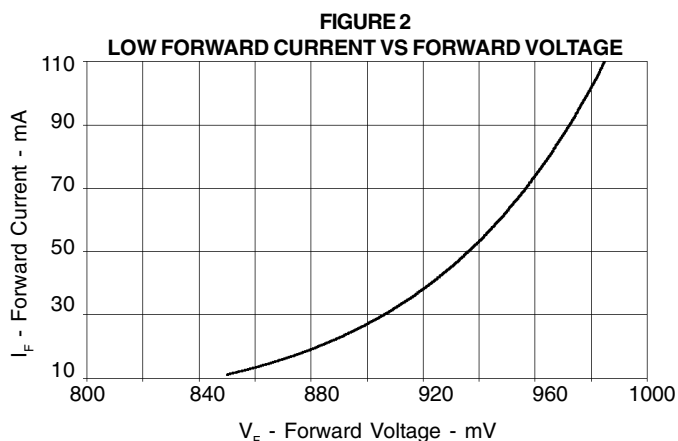
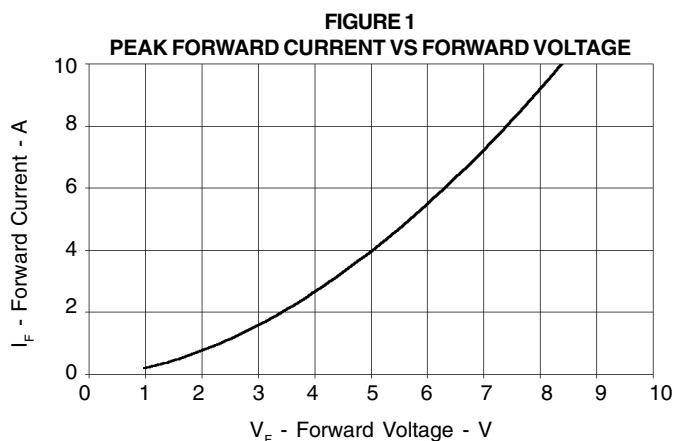
### MAXIMUM RATINGS @ 25°C Unless Otherwise Specified

PARAMETER	SYMBOL	VALUE	UNITS
Operating Temperature	$T_A$	-55 to 150	°C
Storage Temperature	$T_{STG}$	-55 to 150	°C
Continuous Power Dissipation	$P_{PC}$	500	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  @ 10 $\mu A$ $V_{RRM}$ VOLTS	MAXIMUM REVERSE LEAKAGE CURRENT (PER DIODE) $V_{RRM}$ @ 5V $I_R$ $\mu A$	TYPICAL FORWARD VOLTAGE  @ 50mA $V_F$ VOLTS	MAXIMUM CAPACITANCE (See Note 1)  $C_j$ pF
USB208	PSB	20	1	1.2	5

**Note 1:** Apply a 5V bias between pins 2 (REF 1) to pin 5 (REF 2). Measure  $C_j$  between any I/O pins to pin 5 (REF 2) and divide by two.



## SOT-23-6 PACKAGE OUTLINE & DIMENSIONS

### PACKAGE OUTLINE

### SOT-23-6

#### PACKAGE DIMENSIONS

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.80	3.05	0.110	0.120
B	1.50	1.75	0.059	0.070
C	0.90	1.30	0.036	0.051
D	0.35	0.50	0.014	0.020
E	0.85	1.05	0.033	0.040
F	1.70	2.10	0.067	0.083
G	0.90	1.45	0.036	0.057
J	0.09	0.20	0.003	0.008
K	2.60	3.00	0.102	0.118
L	0.20 TYP	0.20 TYP	0.007 TYP	0.007 TYP
M	0.35	0.55	0.014	0.022

### MOUNTING PAD

TYPICAL		
DIM	Millimeters	Inches
1	0.70	0.028
2	1.90	0.074
3	0.95	0.037
4	2.40	0.094
5	1.00	0.039

### NOTES

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

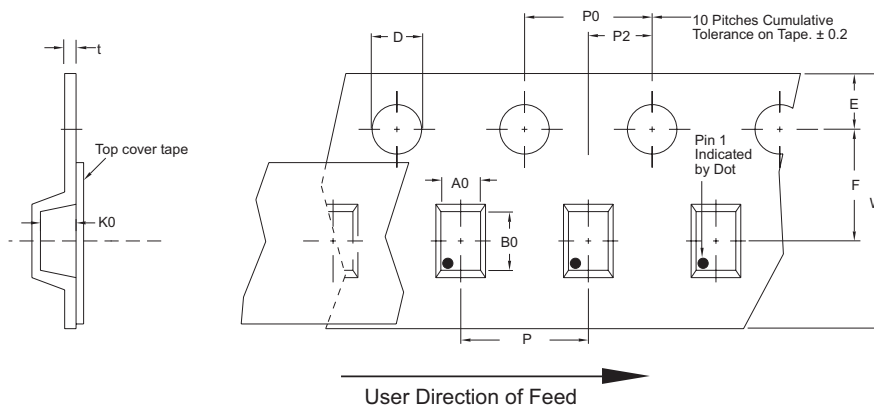
#### TAPE & REEL/BULK ORDERING NOMENCLATURE

- Surface mount product is taped and reeled in accordance with EIA-481.
- Suffix -T7 = 7 Inch Reel - 3,000 pieces per 8mm tape, i.e., *USB208-T7*
- Suffix -LF = Lead-Free, Pure-Tin Plating, i.e., *USB208-LF-T7*.

**Outline & Dimensions: Rev 2 - 10/05, 06013**

### Tape & Reel Specifications (Dimensions in millimeters)

Reel Dia.	Tape Width	A0	B0	K0	D	E	F	W	P0	P2	P	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



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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](mailto:sales@protekdevices.com)  
 Web Site: [www.protekdevices.com](http://www.protekdevices.com)