

# TYPICAL DEVICE CHARACTERISTICS

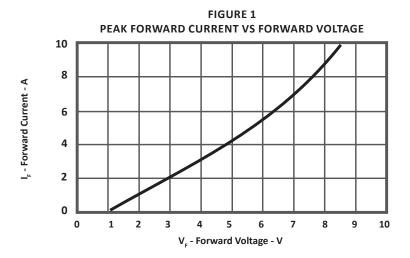
MAXIMUM RATINGS @ 25°C Unless Otherwise Specified						
PARAMETER	VALUE	UNITS				
Operating Temperature	T <sub>A</sub>	-55 to 150	°C			
Storage Temperature	T <sub>stg</sub>	-55 to 150	°C			
Continuous Power Dissipation	P <sub>PC</sub>	500	mW			
Repetitive Peak Forward Current @ tp = 5µs, F = 50kHz (Pin 2-3)	I <sub>FRM</sub>	700	mA			

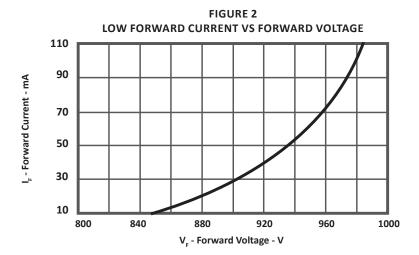
ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified									
PART NUMBER	DEVICE MARKING	REPETITIVE PEAK REVERSE VOLTAGE @ 10µA V RRM VOLTS	MAXIMUM REVERSE LEAKAGE CURRENT PER DIODE @ V <sub>RRM</sub> @ 5V I <sub>R</sub> µA	TYPICAL FORWARD VOLTAGE  @ 50mA V <sub>F</sub> VOLTS	MAXIMUM CAPACITANCE (Note 1)  C, pF				
USB208	PSB	20	1	1.2	5				

# NOTES

<sup>1.</sup> Apply a 5V bias between pin 2 (REF 1) to pin 5 (REF 2). Measure Cj between I/O pins to pin 5 (REF 2) and divide by two.

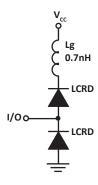
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# **SPICE MODEL**

### FIGURE 1 SPICE MODEL



LCRD - Low Capacitance Rectifier Diode Lg - Lead Inductance

TABLE 1 - SPICE PARAMETERS								
PARAMETER	UNIT	LCRD						
BV	V	200						
IBV	μΑ	0.01						
C <sub>jo</sub>	pF	5						
I <sub>s</sub>	А	1E-13						
Vj	V	0.6						
М	-	0.33						
N	-	1						
$R_s$	Ohms	0.31						
TT	S	1E-8						
EG	eV	1.11						



# **SOT-23-6 PACKAGE INFORMATION**

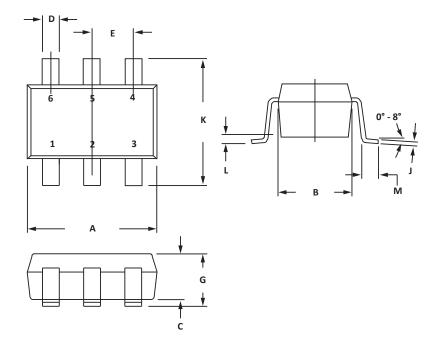
OUTLINE DIMENSIONS							
DIM	MILLIN	IETERS	INCHES				
	MIN	MAX	MIN	MAX			
А	2.80	3.05	0.110	0.120			
В	1.50	1.75	0.059	0.070			
С	0.90	1.30	0.036	0.051			
D	0.30	0.40	0.012	0.016			
Е	0.85	1.05	0.033	0.040			
G	0.90	1.45	0.036	0.057			
J	0.09	0.20	0.003	0.008			
К	2.60	3.00	0.102	0.118			
L	0.0	0.15	0.0	0.006			
М	0.30	0.60	0.012	0.024			

### NOTES

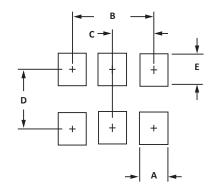
1. Controlling dimension: inches.

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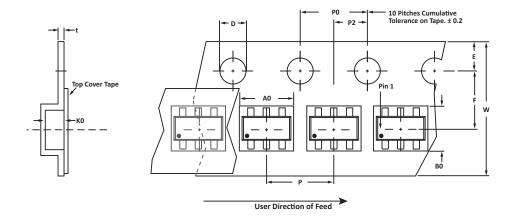
- 2. Dimensioning and tolerances per ANSI Y14.5M, 1985.
- 3. Dimensions are exclusive of mold flash and metal burrs.



PAD LAYOUT DIMENSIONS								
DIM	MILLIMETERS	INCHES						
	NOMINAL	NOMINAL						
А	0.70	0.028						
В	1.90	0.074						
С	0.95	0.037						
D	2.40	0.094						
E	1.00	0.039						
NOTES	NOTES							



# **TAPE AND REEL**



SPECIFICATIONS												
REEL DIA.	TAPE WIDTH	A0	В0	КО	D	E	F	W	P0	P2	Р	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

## 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. Marking on Part marking code (see page 2) and pin one defined by dot on package.

Package outline, pad layout and tape specifications per document number 06013.R5 2/11

ORDERING INFORMATION								
BASE PART NUMBER	LEADFREE SUFFIX	TAPE SUFFIX	QTY/REEL	REEL SIZE	TUBE QTY			
USB208	-LF	-T7	3,000	7"	n/a			
This device is only available in a Lead-Free configuration.								

05141.R12 10/12 Page 6 ISO 9001: 2015 CERTIFIED



### COMPANY INFORMATION

#### **COMPANY PROFILE**

In business more than 25 years, ProTek Devices™ is a privately held semiconductor company. The company offers a product line of overvoltage protection and overcurrent protection components. These include transient voltage suppressor array (TVS arrays) avalanche breakdown diode, steering diode TVS array and electronics SMD chip fuses. These components deliver circuit protection in electronic systems from numerous overvoltage and overcurrent events. They include lightning; electrostatic discharge (ESD); nuclear electromagnetic pulses (NEMP); inductive switching; and electromagnetic interference (EMI) / radio frequency interference (RFI). ProTek Devices also offers LED wafer die for ESD protection and related high frequency products. ProTek Devices is ISO 9001:2015 certified.

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