

STANDARD TVS COMPONENTS**APPLICATIONS**

- Noise Suppression for Data Lines
- Laptop Computers
- Cellular Phones
- Digital Cameras
- Personal Digital Assistant (PDA)

IEC COMPATIBILITY (EN61000-4)

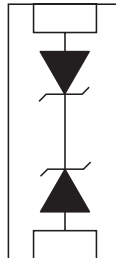
- 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- 61000-4-4 (EFT): 40A - 5/50ns

FEATURES

- 10 Watts Peak Pulse Power per Line ($t_p=10/1000\mu s$)
- Bidirectional Configuration
- Protects One Data Line
- Low Clamping Voltage
- Easy Placement for Manufacturing
- Low Capacitance
- RoHS Compliant

MECHANICAL CHARACTERISTICS

- DFN-2 Package
- Weight 0.8 milligrams (Approximate)
- Available in Lead-Free Pure-Tin Plating
- Solder Reflow Temperature:
Pure-Tin - Sn, 100: 260-270°C
- Flammability Rating UL 94V-0
- 8mm Tape and Reel Per EIA Standard 481
- Device Part Number on Reel & Marking Code on Device

**PIN CONFIGURATION**

PRSB6.8C

DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified			
PARAMETER	SYMBOL	VALUE	UNITS
Operating Temperature	T_{OPR}	-50 to 150	°C
Storage Temperature	T_{STG}	-55 to 150	°C
Junction Temperature	T_A	150	°C
Peak Pulse Power (tp = 10/1000µs) - See Figure 1	P_{PK}	10	Watts
Power Dissipation	P	150	mW

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified					
PART NUMBER	DEVICE MARKING CODE	RATED STAND-OFF VOLTAGE V_{WM} VOLTS	MINIMUM BREAKDOWN VOLTAGE @ 1mA $V_{(BR)}$ VOLTS	MAXIMUM LEAKAGE CURRENT @3.5V I_D MA	TYPICAL CAPACITANCE @0V, 1 MHz C pF
PRSB6.8C	A	4.7	5.7	1.0	15

GRAPHS

FIGURE 1
PEAK PULSE POWER VS PULSE TIME

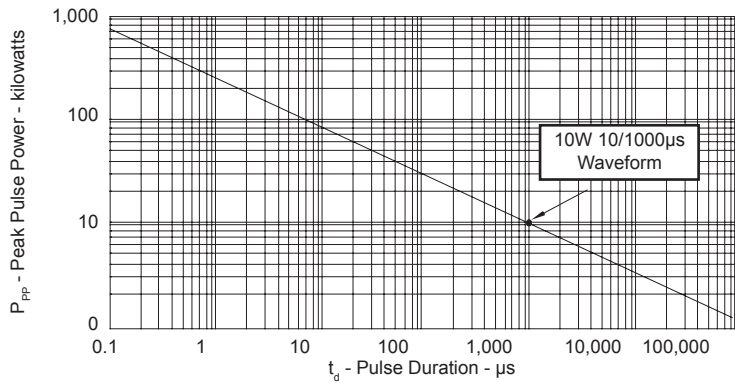


FIGURE 2
PULSE WAVE FORM

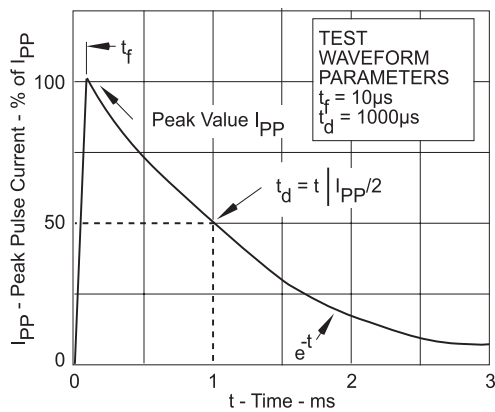
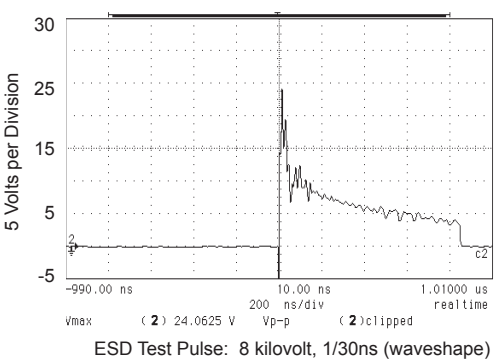


FIGURE 3
OVERSHOOT & CLAMPING VOLTAGE



DFN-2 PACKAGE OUTLINE & DIMENSIONS

PACKAGE OUTLINE

The package outline consists of three views: TOP, BOTTOM, and SIDE. The TOP view shows a rectangle with width A and height B. The BOTTOM view shows a rectangle with width H and height D, with a central square of side 1. The SIDE view shows a rectangle with width C and height E, with a central square of side 2. Dimensions F and H are also indicated.

PACKAGE DIMENSIONS

DIM	INCHES			MILLIMETERS		
	MIN	NOR	MAX	MIN	NOR	MAX
A	0.023	0.024	0.025	0.58	0.61	0.64
B	0.038	0.040	0.042	0.97	1.02	1.07
C	0.018	0.020	0.022	0.46	0.51	0.56
D	0.010	0.012	0.014	0.25	0.30	0.36
E	0.012	0.014	0.016	0.30	0.36	0.41
F	0.010	0.012	0.014	0.25	0.30	0.36
H	0.011	0.012	0.013	0.28	0.30	0.33

NOTES

1. Controlling dimensions in inches.
2. Decimal tolerances for mounting pad : $\pm 0.003"$ ($\pm 0.08\text{mm}$).
3. Maximum size: 0.052" (1.321mm) by 0.036" (0.914mm).

MOUNTING PAD

The mounting pad diagrams show top and side views. The top view shows a rectangle with width A and height B, with a central circle of diameter C. The side view shows a rectangle with width E and height F, with a central circle of diameter C. The Solder Print Diameter is indicated as 0.010" - 0.012".

PAD DIMENSIONS

DIM	MILLIMETERS	INCHES
A	0.762 ± 0.025	0.030 ± 0.001
B	0.356 ± 0.025	0.014 ± 0.001
C	0.381 ± 0.025	0.015 ± 0.001
E	1.473 ± 0.050	0.058 ± 0.002
F	0.559 ± 0.025	0.022 ± 0.001

TAPE & REEL ORIENTATION

The tape and reel orientation diagram shows a top view of a tape with two solder pads. The pads are represented by circles with crosshairs. The tape is shown as a rectangle with a dashed line indicating the center.

NOTE

1. Top view of tape. Solder PADS face down in tape package.

Outline & Dimensions: Rev 1 - 9/05, 0659

TAPE & REEL ORDERING NOMENCLATURE

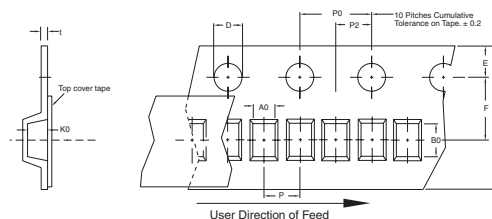
1. Surface mount product is taped and reeled in accordance with EIA-481.
2. Suffix - T75 = 7 Inch Reel - 5,000 pieces per 8mm tape, i.e., *PRSB6.8C-T75*.
3. Suffix - T710 = 7 Inch Reel - 10,000 pieces per 8mm tape, i.e., *PRSB6.8C-T710*.
4. Suffix - LF = Lead-Free, Pure-Tin Plating, i.e., *PRSB6.8C-LF-T75*.

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Tape & Reel Specifications (Dimensions in millimeters)

Reel Dia.	Tape Width	A0	B0	K0	D	E	F	W	P0	P2	P	tmax
178mm (7")/330mm(13")	8mm	0.80 ± 0.10	1.20 ± 0.10	0.70 ± 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	2.00 ± 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

PRSB6.8C

Tape & Reel Specifications (Dimensions in millimeters)

Reel Dia.	Tape Width	A0	B0	K0	D	E	F	W	P0	P2	P	tmax
178mm (7")	8mm	0.70±0.05	1.12±0.05	0.5±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	2.00 ±0.10	0.25

