

## STANDARD TVS COMPONENTS

### APPLICATIONS

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

### IEC COMPATIBILITY (EN61000-4)

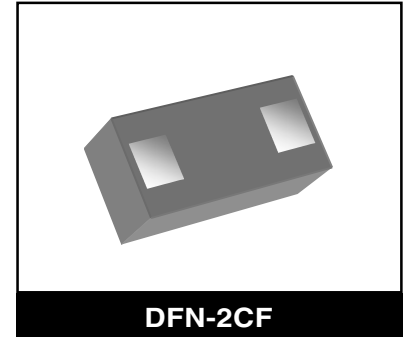
- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns

### FEATURES

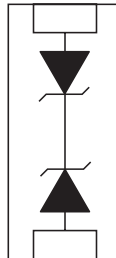
- ✓ ESD Protection > 40 kilovolts
- ✓ 10 Watts Peak Pulse Power per Line ( $t_p=10/1000\mu s$ )
- ✓ Bidirectional Configuration
- ✓ Protects One Data Line
- ✓ Low Clamping Voltage
- ✓ Low Capacitance
- ✓ Easy Placement for Manufacturing
- ✓ RoHS Compliant

### MECHANICAL CHARACTERISTICS

- ✓ DFN-2CF Package
- ✓ Weight 0.8 milligrams (Approximate)
- ✓ Available in Lead-Free Pure-Tin Plating
- ✓ 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
- ✓ Device Marking: Marking Code



## PIN CONFIGURATION



# PRSB6.8CF

## DEVICE CHARACTERISTICS

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

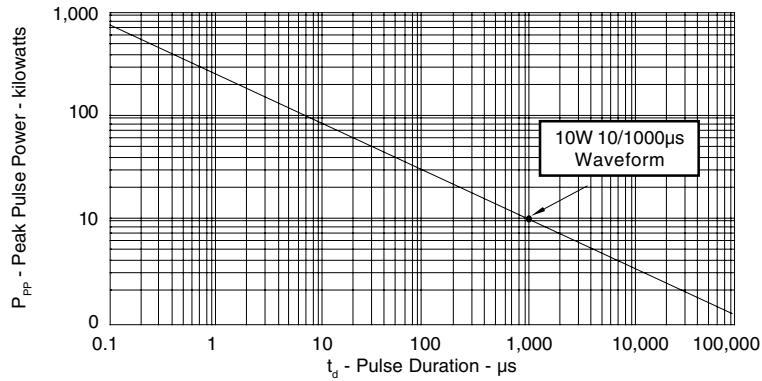
PARAMETER	SYMBOL	VALUE	UNITS
Operating Temperature	$T_A$	-50 to 150	°C
Storage Temperature	$T_{STG}$	-55 to 150	°C
Junction Temperature	$T_J$	150	°C
Peak Pulse Power (tp = 10/1000µs) - See Figure 1	$P_{PP}$	10	Watts
Power Dissipation	$P$	150	mW

### ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

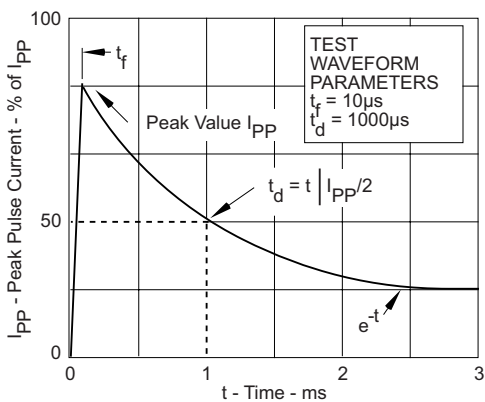
PART NUMBER	DEVICE MARKING CODE	RATED STAND-OFF VOLTAGE  $V_{WM}$ VOLTS	MINIMUM BREAKDOWN VOLTAGE  @ 1mA $V_{(BR)}$ VOLTS	MAXIMUM BREAKDOWN VOLTAGE  @ 1mA $V_{(BR)}$ VOLTS	MAXIMUM LEAKAGE CURRENT  @3.5V $I_b$ µA	TYPICAL CAPACITANCE  @0V, 1 MHz C pF
PRSB6.8CF	A	4.7	5.7	7.82	0.5	15

## GRAPHS

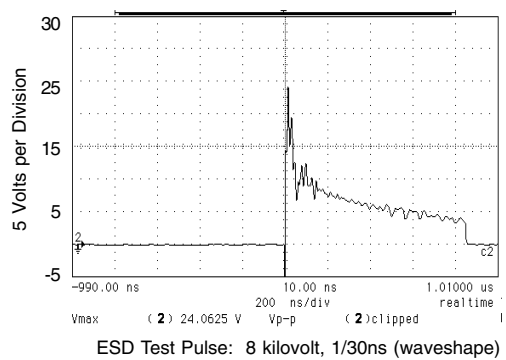
**FIGURE 1  
PEAK PULSE POWER VS PULSE TIME**



**FIGURE 2  
PULSE WAVE FORM**



**FIGURE 3  
OVERSHOOT & CLAMPING VOLTAGE**



# PRSB6.8CF

## DFN-2CF PACKAGE OUTLINE & DIMENSIONS

### PACKAGE OUTLINE

### MOUNTING PAD

### PACKAGE DIMENSIONS

DIM	INCHES			MILLIMETERS		
	MIN	NOR	MAX	MIN	NOR	MAX
A	0.036	0.039	0.042	0.914	0.991	1.067
B	0.020	0.023	0.025	0.508	0.584	0.635
C	0.015	0.017	0.020	0.381	0.432	0.508
H	0.0015	0.002	0.0025	0.038	0.051	0.064
m	0.008	0.009	0.010	0.203	0.228	0.254
L1	0.010	0.012	0.014	0.254	0.304	0.356
L2	0.010	0.012	0.014	0.254	0.304	0.356
L3	0.010	0.012	0.014	0.254	0.304	0.356

**NOTES**

- Controlling dimensions in inches.
- Decimal tolerances for mounting pad :  $\pm 0.003''$  ( $\pm 0.08\text{mm}$ ).
- Maximum size: 0.042" by 0.025"

### PAD DIMENSIONS

DIM	MILLIMETERS	INCHES
a	$0.762 \pm 0.025$	$0.030 \pm 0.001$
b	$0.356 \pm 0.025$	$0.014 \pm 0.001$
c	$0.381 \pm 0.025$	$0.015 \pm 0.001$
e	$1.473 \pm 0.050$	$0.058 \pm 0.002$
f	$0.559 \pm 0.025$	$0.022 \pm 0.001$
d	0.25 - 0.30	0.010 - 0.012

### TAPE & REEL ORIENTATION

**NOTE**

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

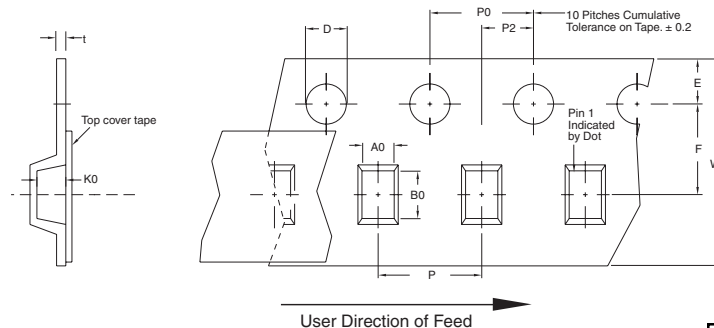
**TAPE & REEL ORDERING NOMENCLATURE**

- Surface mount product is taped and reeled in accordance with EIA-481.
- Suffix -T75 = 7 Inch Reel - 5,000 pieces per 8mm tape, i.e., *PRSB6.8CF-T75*.
- Suffix -LF = Lead-Free, Pure-Tin Plating, i.e., *PRSB6.8CF-LF75*.

Outline & Dimensions: Rev 0 - 1/07, 06072

### 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	$0.80 \pm 0.10$	$1.20 \pm 0.10$	$0.70 \pm 0.10$	$1.50 \pm 0.10$	$1.75 \pm 0.10$	$3.50 \pm 0.05$	$8.00 \pm 0.30$	$4.00 \pm 0.10$	$2.00 \pm 0.05$	$4.00 \pm 0.10$	0.25



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