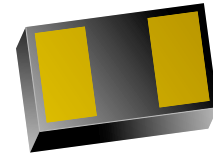


### Protection in Portable Electronics Applications.

### FEATURES

- Transient protection for data lines to
  - IEC61000-4-2(ESD) : Air mode  $\pm 30\text{kV}$  / Contact mode  $\pm 30\text{kV}$
  - IEC 61000-4-5(Surge) :  $5\text{A}(t_p=8/20 \mu\text{s})$
- Low capacitance  $C_T = 9\text{pF}(\text{Max})$
- Bi-directional, symmetrical working voltage up to :  $V_{RWM} = \pm 5\text{V}$
- Extremely small Size  $0.6 \times 0.3 \times 0.25\text{mm}$
- Low reverse current :  $10\text{nA}$  typical ( $V_{RWM}=5\text{V}$ )



ELP-2B (leadless-type)

### PRODUCT DESCRIPTION

- Molding compound flammability rating : UL 94V-0
- Pb-Free, Halogen-Free, RoHs Compliant

Package dimensions (ELP-2B)	Pin configurations (Bi-directional)																
<table border="1"> <thead> <tr> <th>DIM</th> <th>MILLIMETERS</th> </tr> </thead> <tbody> <tr> <td>A</td> <td><math>0.6 \pm 0.035</math></td> </tr> <tr> <td>B</td> <td><math>0.3 \pm 0.035</math></td> </tr> <tr> <td>C</td> <td><math>0.25 \pm 0.015</math></td> </tr> <tr> <td>C1</td> <td><math>0.02+0.005/-0.02</math></td> </tr> <tr> <td>D</td> <td><math>0.22 \pm 0.02</math></td> </tr> <tr> <td>E</td> <td><math>0.16 \pm 0.02</math></td> </tr> <tr> <td>F</td> <td>Typ 0.335</td> </tr> </tbody> </table>	DIM	MILLIMETERS	A	$0.6 \pm 0.035$	B	$0.3 \pm 0.035$	C	$0.25 \pm 0.015$	C1	$0.02+0.005/-0.02$	D	$0.22 \pm 0.02$	E	$0.16 \pm 0.02$	F	Typ 0.335	<p>1. ANODE 2. ANODE</p>
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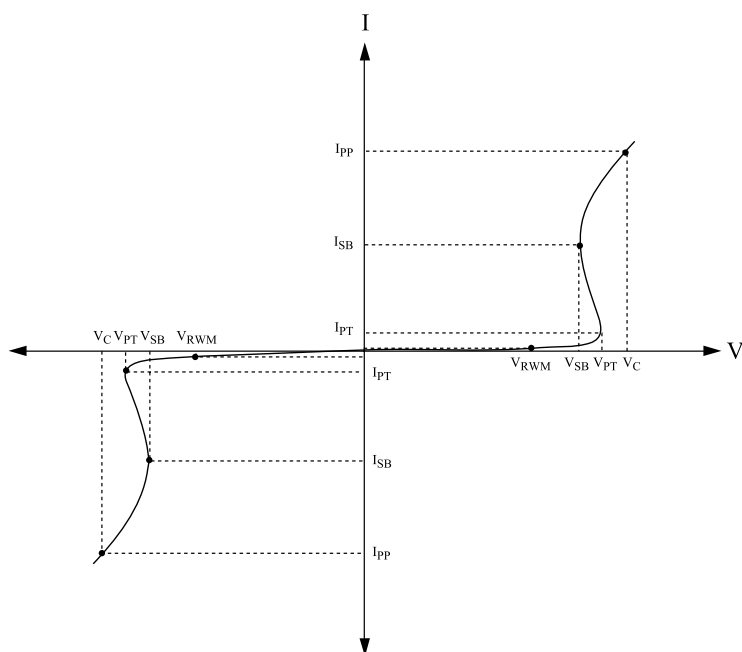
### ORDERING INFORMATION

Part Number	Qty per Reel	Reel Size	Marking code
PS05CBEL2B-RTK	5,000	7 inch	T
PS05CBEL2B-RTL	10,000		
PS05CBEL2B-RTH	5,000		
PS05CBEL2B-RTR	10,000		

# PS05CBEL2B

## MAXIMUM RATING (Ta=25 )

CHARACTERISTIC	SYMBOL	RATING	UNIT
Peak Pulse Power (tp=8/20 μs)	P <sub>PK</sub>	60	W
Peak Pulse Current (tp=8/20 μs)	I <sub>PP</sub>	5	A
Junction Temperature	T <sub>J</sub>	150	
Storage Temperature	T <sub>stg</sub>	-55 150	

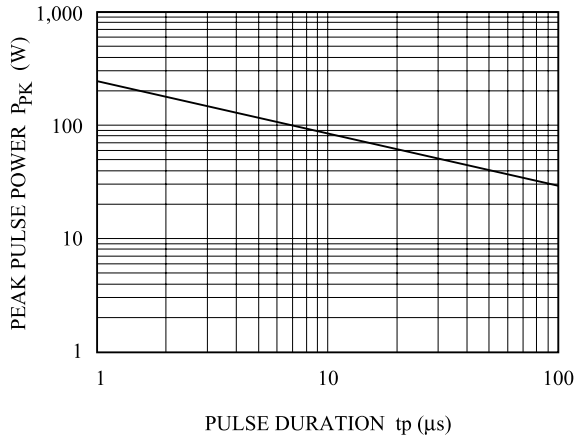


## ELECTRICAL CHARACTERISTICS (Ta=25 )

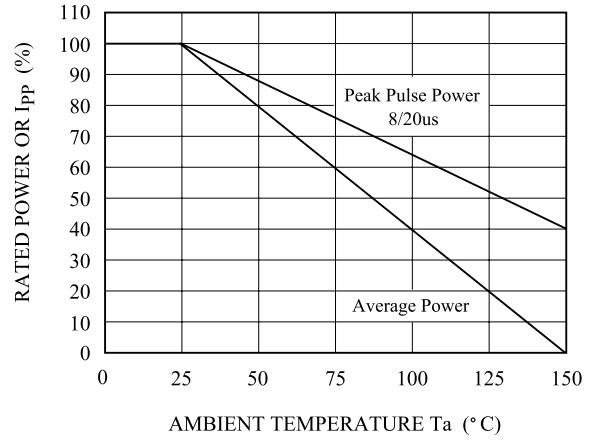
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Reverse Stand-Off Voltage	V <sub>RWM</sub>	-	-	-	5	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>RWM</sub> =5V	-	10	50	nA
Reverse Breakdown Voltage	V <sub>BR</sub>	I <sub>R</sub> =1mA	5.5	-	-	V
Punch-through Voltage	V <sub>PT</sub>	I <sub>PT</sub> =2 μA	6	8.2	9.5	V
Total Capacitance	C <sub>T</sub>	V <sub>R</sub> =0V, f=1MHz	-	6	9	pF
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> =1A, tp=8/20 μs	-	-	8	V
		I <sub>PP</sub> =5A, tp=8/20 μs	-	-	12	
		I <sub>TLP</sub> =4A, tp=100ns	-	7	12	
		I <sub>TLP</sub> =24A, tp=100ns	-	12	17	
Electrostatic Discharge	V <sub>ESD</sub>	IEC61000-4-2	Air	± 30	-	kV
			Contact	± 30	-	

# PS05CBEL2B

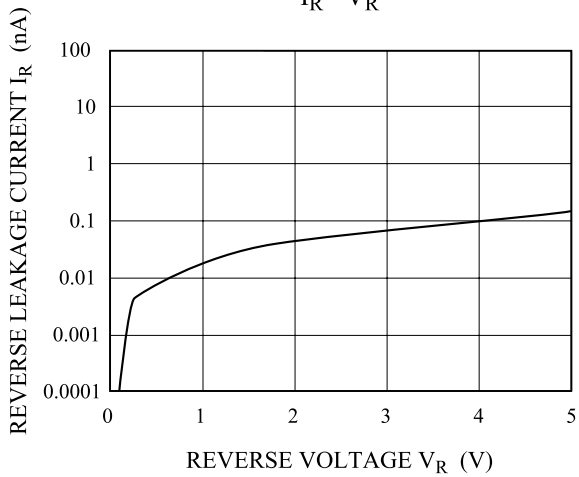
NON-REPETITIVE PEAK PULSE POWER VS. PULSE TIME



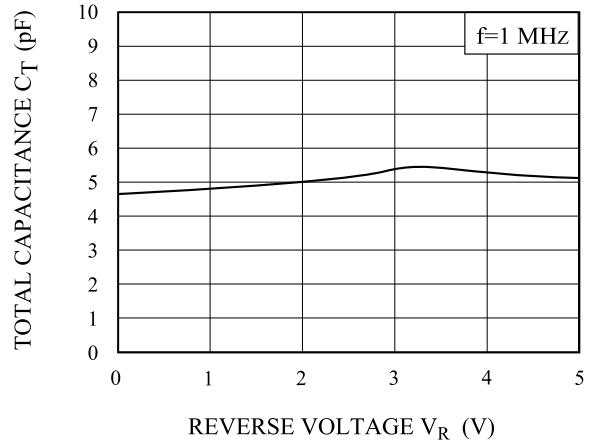
POWER DERATION CURVE



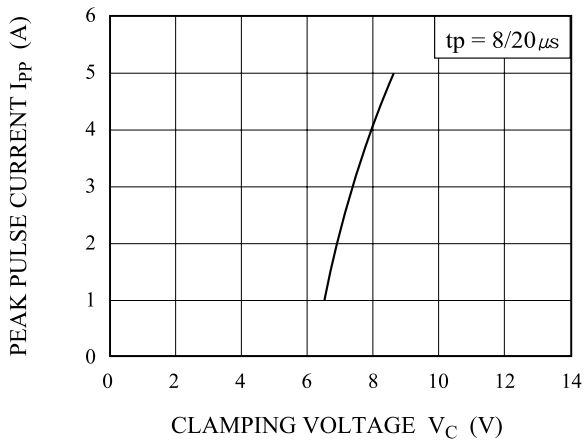
$I_R - V_R$



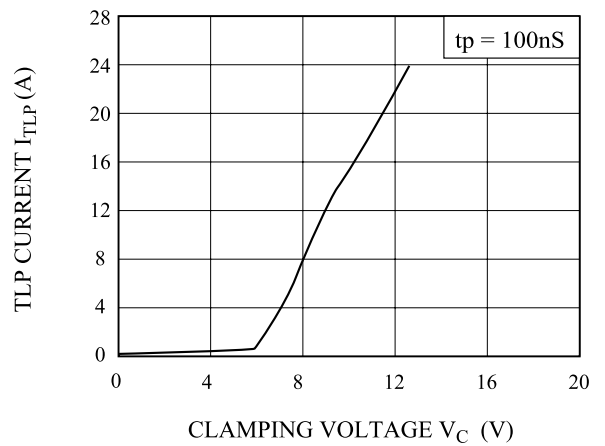
$C_T - V_R$



$I_{PP} - V_C$

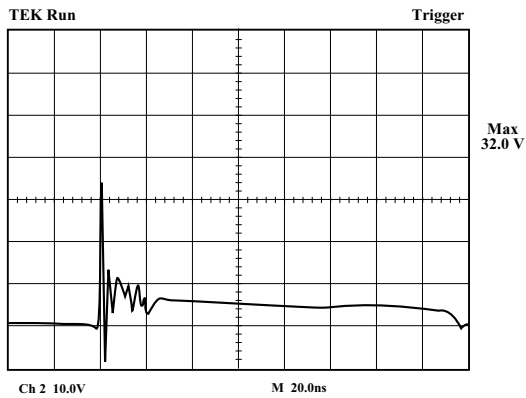


$I_{TLP} - V_C$



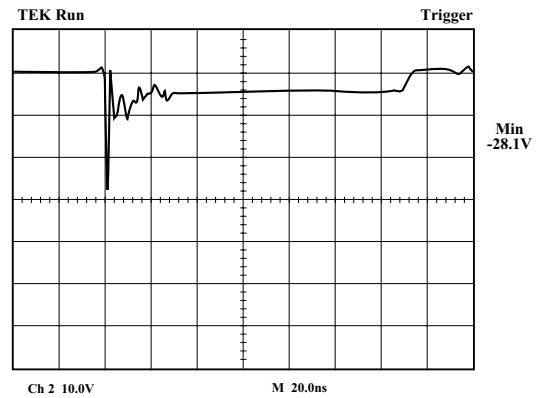
# PS05CBEL2B

ESD Clamping  
(+8 kV Contact per IEC 61000-4-2)



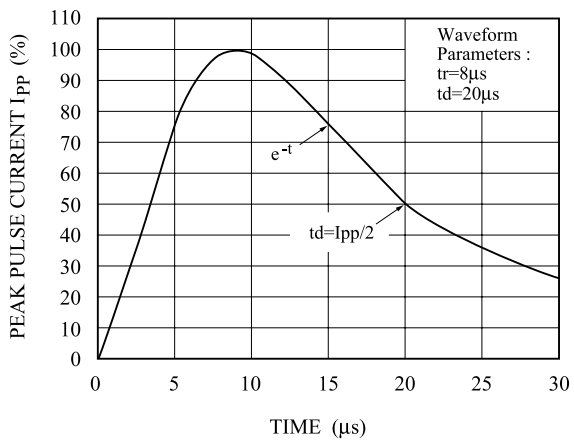
Note : Data is taken with a 10x attenuator

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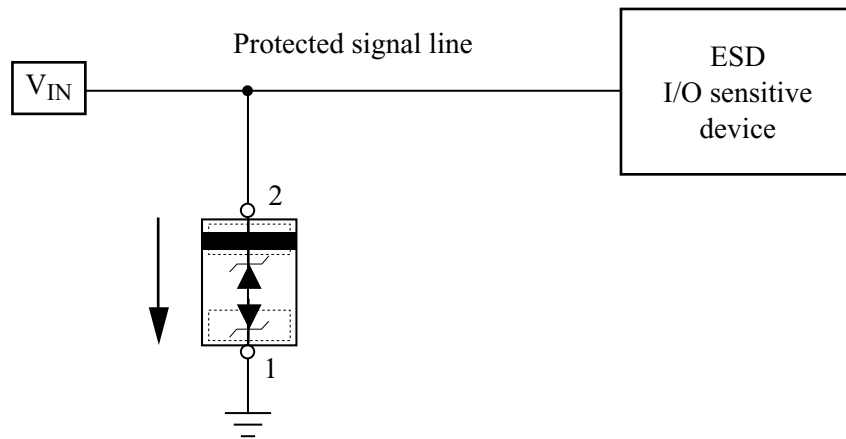
## PULSE WAVEFORM



# PS05CBEL2B

## APPLICATIONS

- USB 2.0, 10/100/1000 Ethernet, DVI, HDMI, S-ATA
- MDDI Port
- LCD-Display, Camera
- GPS / FM Antennas
- LVDS
- High speed data lines



## Recommended pad dimension & Marking Information

Recommended pad dimension	Marking Code