

Protection in Portable Electronics Applications.

FEATURES

- Transient protection for data lines to
 - IEC61000-4-2(ESD) : Air mode $\pm 20\text{kV}$ / Contact mode $\pm 15\text{kV}$
 - IEC 61000-4-4(EFT) : $\pm 50\text{A}$ (5/50ns)
 - IEC 61000-4-5(Surge) : 4A (tp=8/20 μs)
- Low capacitance $C_T = 0.5\text{pF}$ (Max)
- Bi-directional, symmetrical working voltage up to : $V_{RWM} = \pm 5\text{V}$
- Extremely small Size $0.6 \times 0.3 \times 0.28\text{mm}^2$
- Low reverse current : 5nA typical ($V_R=5\text{V}$)



ELP-2A (leadless-type)

PRODUCT DESCRIPTION

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

Package dimensions (ELP-2A)	Pin configurations (Bi-directional)																				
<table border="1"> <thead> <tr> <th>DIM</th> <th>MILLIMETERS</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>0.6 ± 0.025</td> </tr> <tr> <td>B</td> <td>0.3 ± 0.025</td> </tr> <tr> <td>C</td> <td>0.28 ± 0.02</td> </tr> <tr> <td>D</td> <td>0.24 ± 0.01</td> </tr> <tr> <td>E</td> <td>0.14 ± 0.01</td> </tr> <tr> <td>F</td> <td>Typ 0.4</td> </tr> <tr> <td>G</td> <td>0.03 ± 0.02</td> </tr> <tr> <td>H</td> <td>Max 0.3</td> </tr> <tr> <td>I</td> <td>Typ 0.1</td> </tr> </tbody> </table>	DIM	MILLIMETERS	A	0.6 ± 0.025	B	0.3 ± 0.025	C	0.28 ± 0.02	D	0.24 ± 0.01	E	0.14 ± 0.01	F	Typ 0.4	G	0.03 ± 0.02	H	Max 0.3	I	Typ 0.1	<p>1. ANODE 2. ANODE</p>
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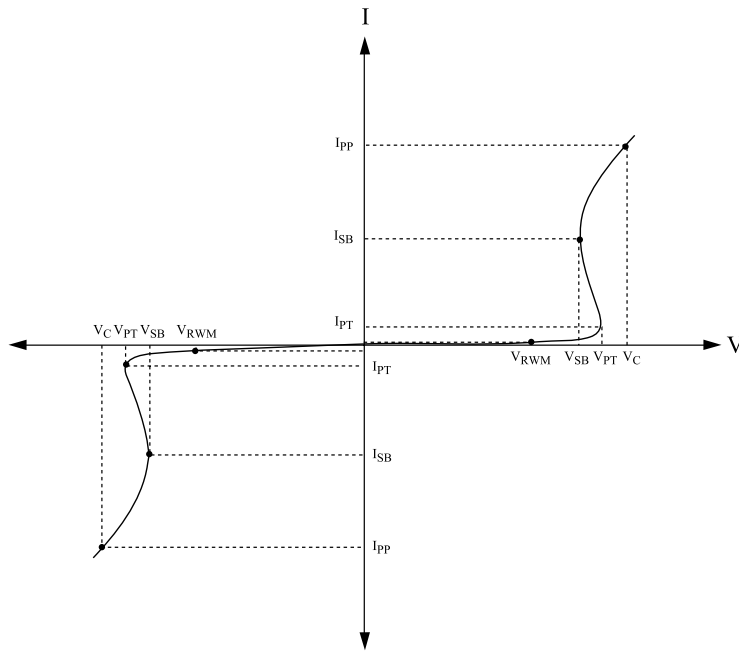
ORDERING INFORMATION

Part Number	Qty per Reel	Reel Size	Marking code
PS05TBEL2A-RTK	5,000	7 inch	S
PS05TBEL2A-RTL	10,000		
PS05TBEL2A-RTH	5,000		
PS05TBEL2A-RTR	10,000		

PS05TBEL2A

MAXIMUM RATING (Ta=25)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Peak Pulse Power (tp=8/20 μs)	P _{PK}	60	W
Peak Pulse Current (tp=8/20 μs)	I _{PP}	4	A
Junction Temperature	T _J	150	
Storage Temperature	T _{stg}	-55 150	

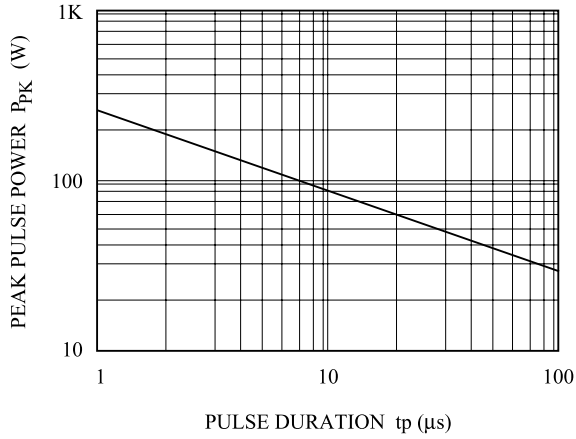


ELECTRICAL CHARACTERISTICS (Ta=25)

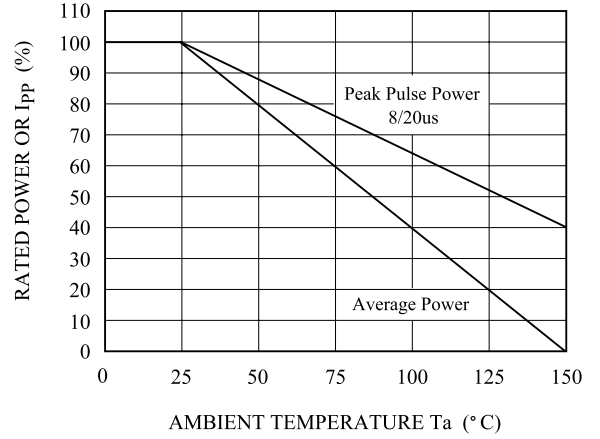
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Reverse Stand-Off Voltage	V _{RWM}	-	-	-	5	V
Reverse Leakage Current	I _R	V _{RWM} =5V	-	5	100	nA
Snab-back Voltage	V _{SB}	-	5.5	-	-	V
Punch-through Voltage	V _{PT}	-	6	-	-	V
Total Capacitance	C _T	V _R =0V, f=1MHz	-	0.35	0.5	pF
Clamping Voltage	V _C	I _{PP} =1A, tp=8/20 μs	-	10	13	V
		I _{PP} =4A, tp=8/20 μs	-	12	15	
		I _{TLP} =4A, tp=100ns	-	11	15	
		I _{TLP} =16A, tp=100ns	-	21	25	
Electrstatic Discharge	V _{ESD}	IEC61000-4-2	Air	± 20	-	kV
			Contact	± 15	-	

PS05TBEL2A

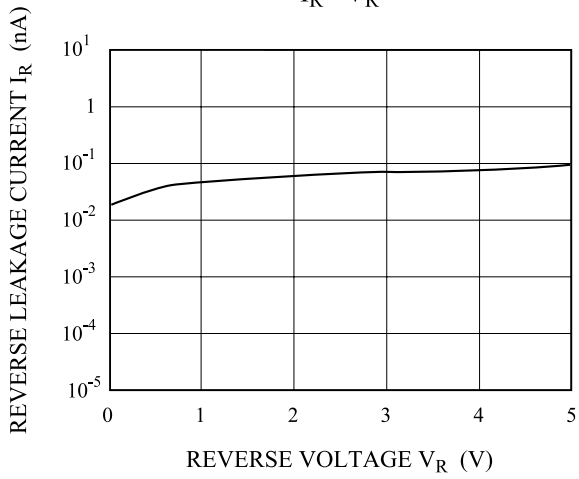
NON-REPETITIVE PEAK PULSE
POWER VS. PULSE TIME



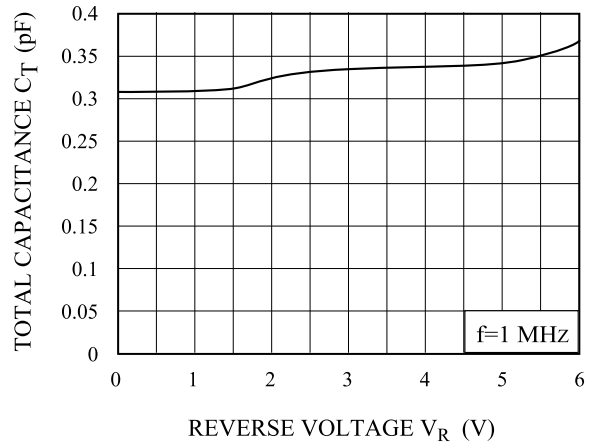
POWER DERATION CURVE



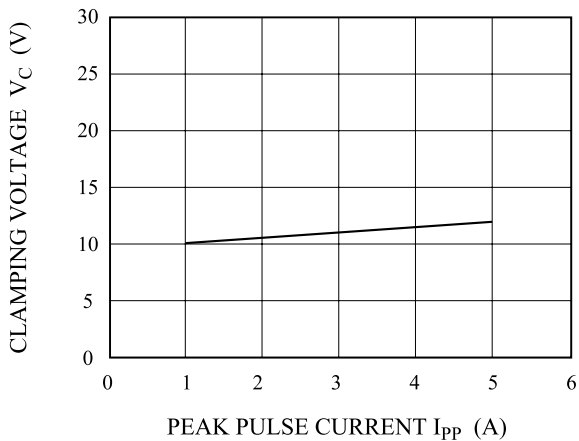
$I_R - V_R$



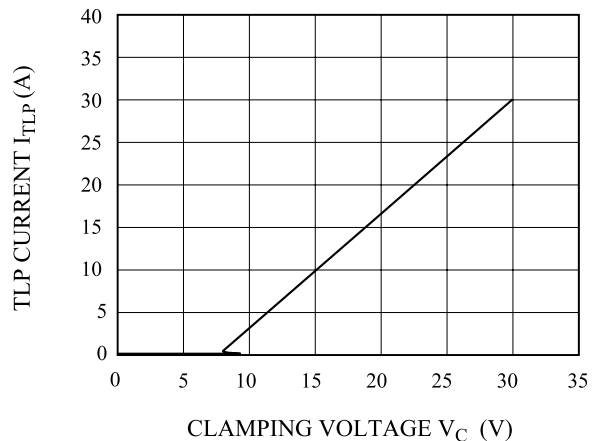
$C_T - V_R$



$V_C - I_{pp}$

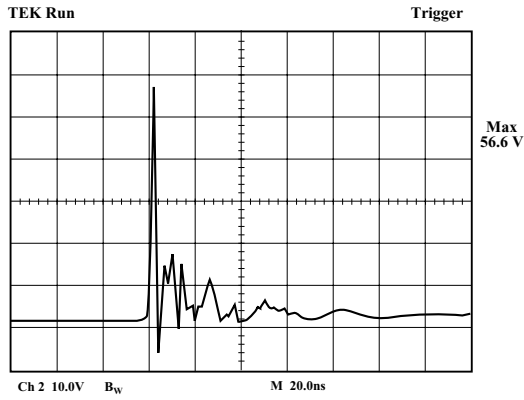


TLP CURVE



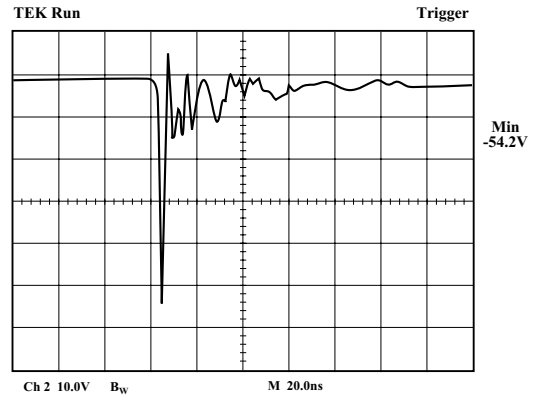
PS05TBEL2A

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



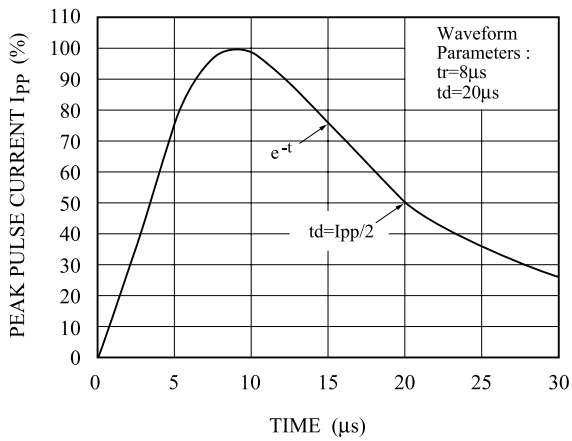
Note : Data is taken with a 10x attenuator

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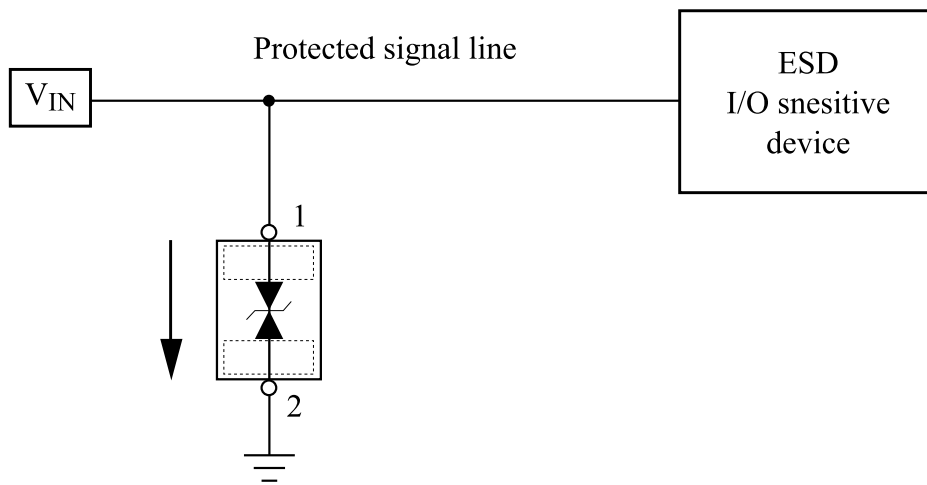
PULSE WAVEFORM



PS05TBEL2A

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
<p>Diagram showing the recommended pad dimensions for the diode. The pad width is 0.21, the pad height is 0.3, and the distance between the pads is 0.4.</p>	<p>Diagram showing the marking code 'S' on the diode pad. The cathode mark is indicated by a shaded area on the left side of the pad, labeled 'CATHODE MARK'. The pad is numbered 1 on the right and 2 on the left.</p>