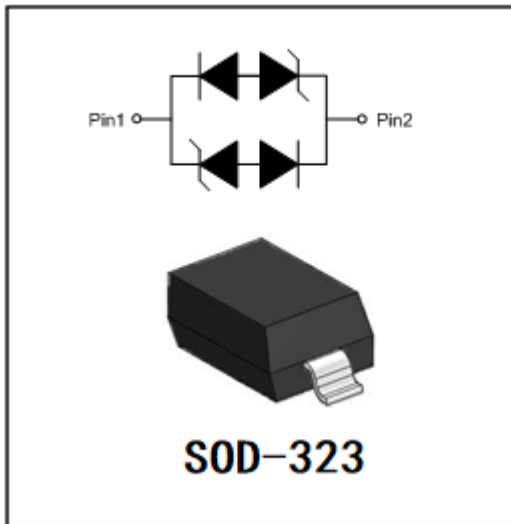


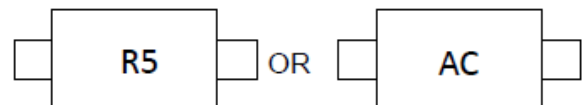
## 1-Line Low Capacitance Bi-directional TVS Diode



### Features

- 360W peak pulse power (8/20 $\mu$ s)
- Ultra low capacitance: 1pF typical
- Ultra low leakage: nA level
- Operating voltage: 5V
- Low clamping voltage
- Protects one power line or data line
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
  - Air discharge:  $\pm 30$ Kv
  - Contact discharge:  $\pm 30$ kV
  - IEC61000-4-5 (Lightning) 30A (8/20 $\mu$ s)
- RoHS Compliant

### Marking Information



### Maximum Ratings

PARAMETER	SYMBOL	VALUE	UNIT
Peak Pulse Power (8/20 $\mu$ s)	Ppk	360	W
Peak Pulse Current (8/20 $\mu$ s)	I <sub>pp</sub>	18	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V <sub>ESD</sub>	$\pm 30$ $\pm 30$	KV
Operating Temperature Range	T <sub>J</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to +150	°C



# ESD5V0D3BA

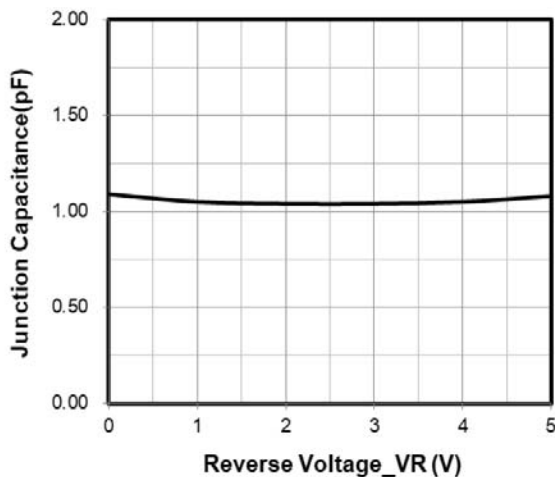
## ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	CONDITIONS	MIN	TYP	MAX
Reverse Working Voltage	V <sub>RWM</sub>	V				5
Breakdown Voltage	V <sub>BR</sub>	V	I <sub>T</sub> = 1mA	6		
Reverse Leakage Current	I <sub>R</sub>	μA	V <sub>RWM</sub> = 5V			0.2
Clamping Voltage	V <sub>C</sub>	V	I <sub>PP</sub> = 1A (8/20μs pulse)			10
Clamping Voltage	V <sub>C</sub>	V	I <sub>PP</sub> = 18A (8/20μs pulse)			20
Junction Capacitance	C <sub>J</sub>	pF	V <sub>R</sub> = 0V, f = 1MHz		1	

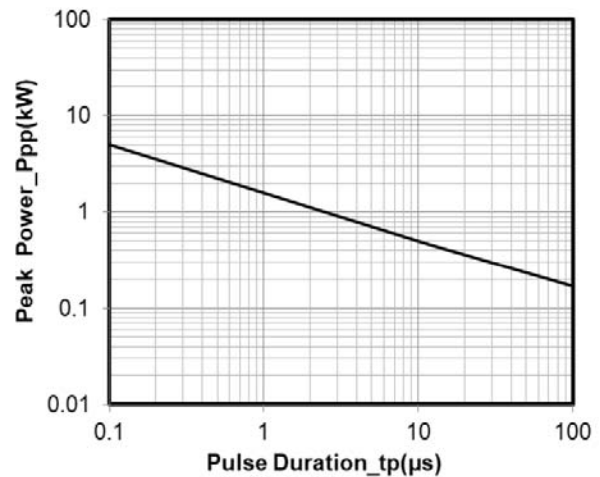
## ■ Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESD5V0D3BA	F2	Approximate 0.004	3000	30000	120000	7" reel

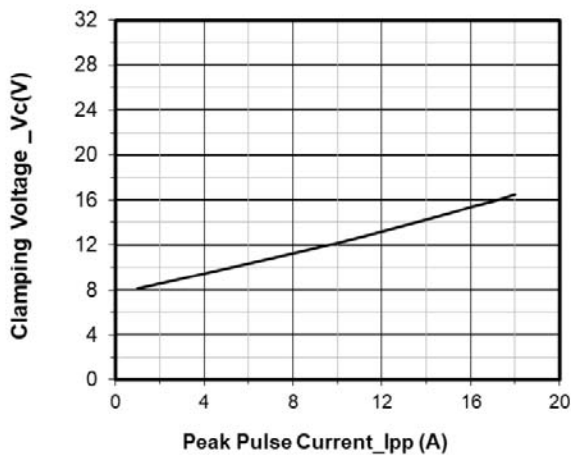
## ■ Characteristics (Typical)



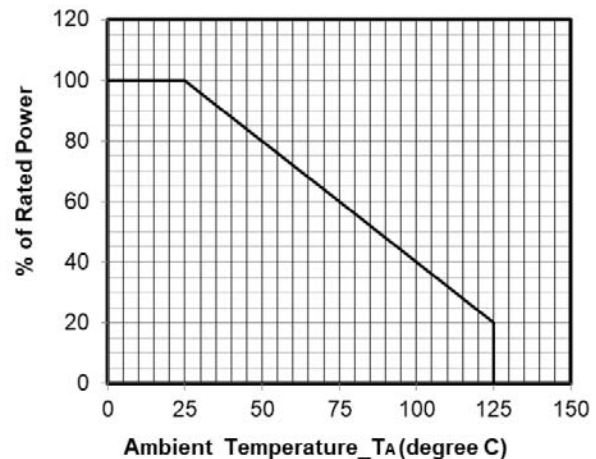
Junction Capacitance vs. Reverse Voltage



Peak Pulse Power vs. Pulse Time



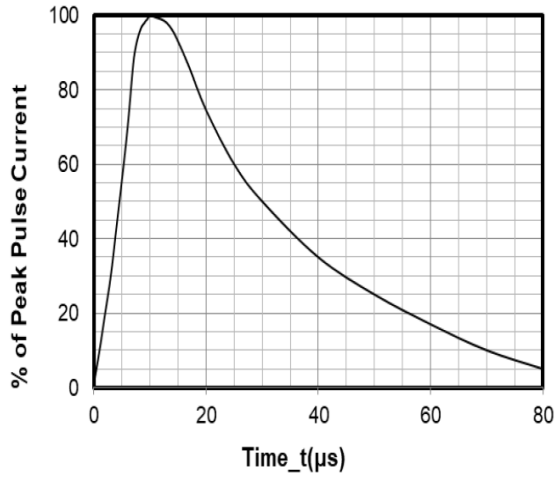
Clamping Voltage vs. Peak Pulse Current



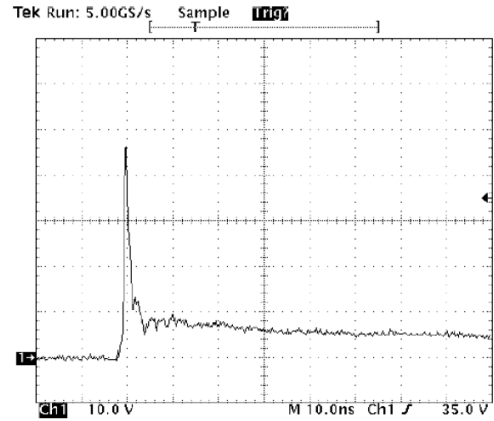
Power Derating Curve



# ESDSL5V0D3BA



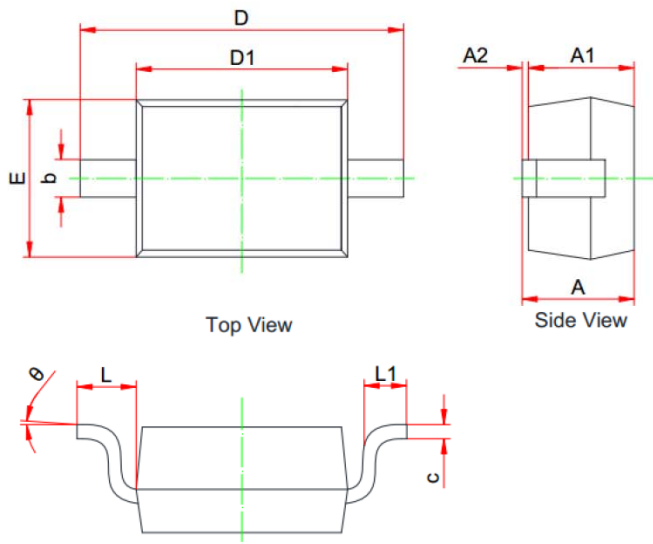
8 X 20µs Pulse Waveform



Note: Data is taken with a 10x attenuator

ESD Clamping Voltage  
8 kV Contact per IEC61000-4-2

## ■ Outline Dimensions



SYM	MILLIMETERS		
	MIN	NOM	MAX
A	0.800	--	1.100
A1	0.800	--	0.900
A2	0.000	--	0.100
b	0.250	--	0.400
c	0.080	--	0.177
D1	1.600	1.700	1.800
D	2.300	--	2.800
E	1.150	--	1.400
L	0.475REF		
L1	0.100	--	0.500
Θ	0°	--	8°

## ■ Soldering Footprint



Unit: mm



## ESDSL5V0D3BA

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