



Micro Commercial Components



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# ESDBV5V0D5

## ESD Protection Device

### Features

- Bi-directional ESD protection of one line
- Low capacitance:3pF(Typ.)
- Low leakage current
- Low reverse clamping voltage
- IEC 61000-4-2 level 4 ESD protection
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking:HD

### Maximum Ratings

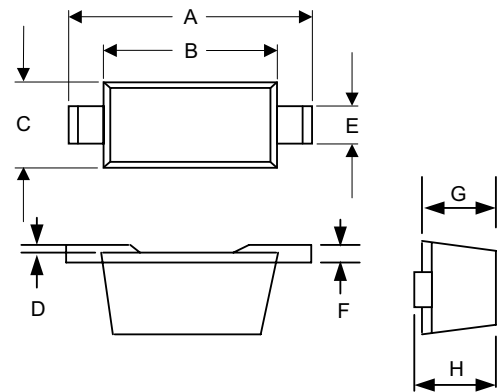
- Operating Junction & Storage Temperature: -55°C to +150°C

Parameter	Symbol	Limits	unit
IEC61000-4-2(ESD) Air Contact	$V_{ESD}^{(1)}$	$\pm 15$	KV
ESD Voltage per human body model		$\pm 15$	KV
ESD Voltage Machine Modele		16	V
Peak Pulse Power(8/20us Waveform)	$P_{PP}^{(2)}$	52	W
Peak Pulse Current(8/20us Waveform)	$I_{PP}^{(2)}$	4	A

(1).Device stressed with ten non-repetitive ESD pulses.

(2).Non-repetitive current pulse 8/20 $\mu$ s exponential decay waveform according to IEC61000-4-5.

### SOD-523



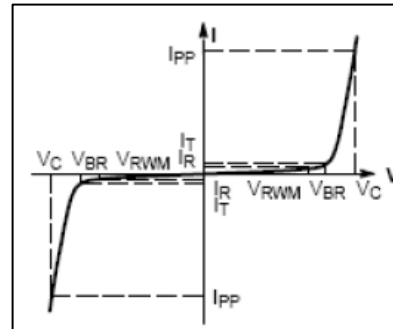
#### Pin Configuration



DIM	INCHES				NOTE
	MIN	MAX	MIN	MAX	
A	.59	.067	1.50	1.70	
B	.43	.051	1.10	1.30	
C	.30	.033	0.75	0.85	
D	.01	.003	0.01	0.07	
E	.10	.014	0.25	0.35	
F	.003	.006	0.08	0.15	
G	.20	.028	0.50	0.70	
H	.020	.031	0.51	0.77	

**ELECTRICAL PARAMETER**

Symbol	Parameter
$V_C$	Clamping Voltage @ $I_{PP}$
$I_{PP}$	Peak Pulse Current
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current
$I_R$	Reverse Leakage Current @ $V_{RWM}$
$V_{RWM}$	Reverse Standoff Voltage



V-I characteristics for a Bi-directional TVS

**ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$  unless otherwise specified)**

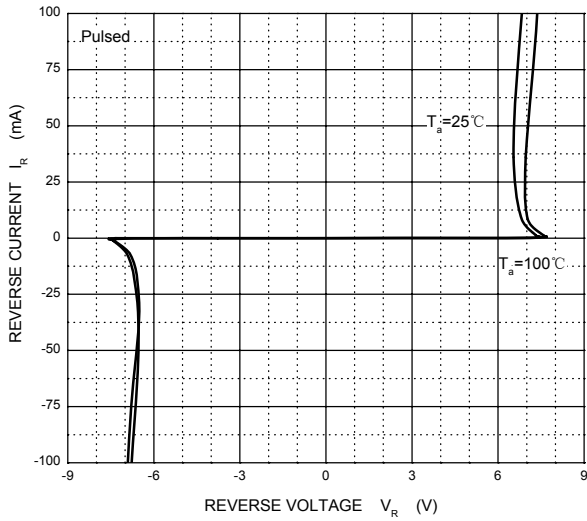
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse stand off voltage	$V_{RWM}^{(1)}$				5	V
Reverse leakage current	$I_R$	$V_{RWM}=5\text{V}$			1	$\mu\text{A}$
Breakdown voltage	$V_{(BR)}$	$I_T=1\text{mA}$	5.6		8	V
Clamping voltage	$V_C^{(2)}$	$I_{PP}=4\text{A}$			13	V
Junction capacitance	$C_J$	$V_R=0\text{V}, f=1\text{MHz}$		3		pF

(1). Other voltages available upon request.

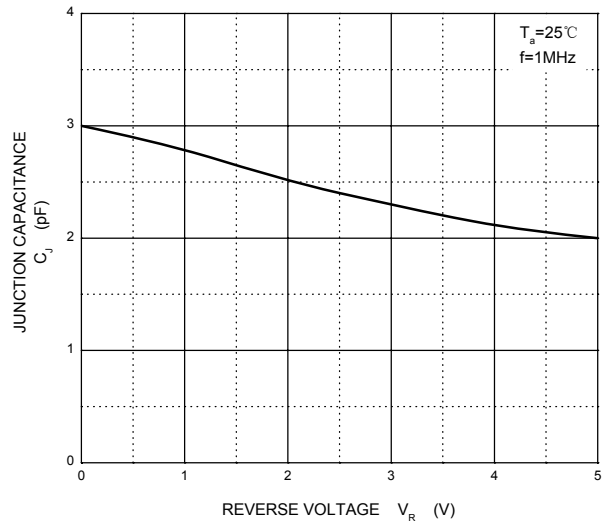
(2). Non-repetitive current pulse 8/20 $\mu\text{s}$  exponential decay waveform according to IEC61000-4-5

**TYPICAL CHARACTERISTICS**

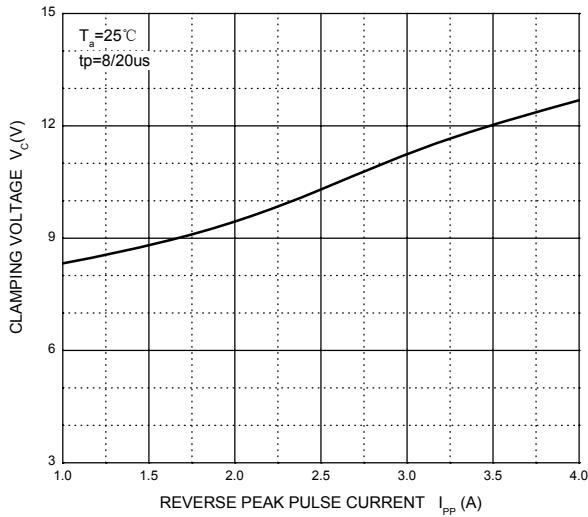
**Reverse Characteristics**



**Capacitance Characteristics**



$V_C$  ---  $I_{PP}$





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**Ordering Information :**

Device	Packing
Part Number-TP	Tape&Reel: 8Kpcs/Reel

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