



Micro Commercial Components

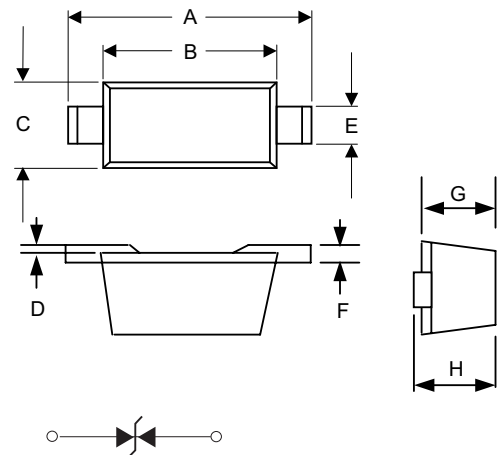


Micro Commercial Components  
 20736 Marilla Street Chatsworth  
 CA 91311  
 Phone: (818) 701-4933  
 Fax: (818) 701-4939

# ESD3V3D5B

## 3.3Volts ESD Protection Devices

### SOD523



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.059	.067	1.50	1.70	
B	.043	.051	1.10	1.30	
C	.030	.033	0.75	0.85	
D	.001	.003	0.01	0.07	
E	.010	.014	0.25	0.35	
F	.003	.006	0.08	0.15	
G	.020	.028	0.50	0.70	
H	.020	.031	0.51	0.77	

## Features

- Halogen free available upon request by adding suffix "-HF"
- Low operating voltage:3.3v
- Low clamping voltage
- Protects one data or power line.
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking: 3Y

## Maximum Ratings

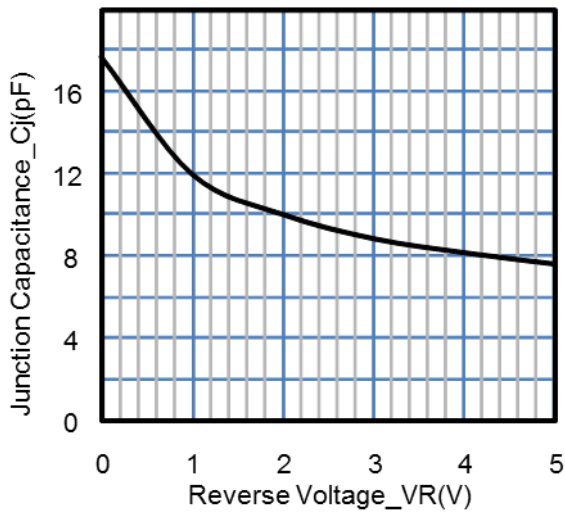
- Operating Junction Temperature: -55°C to +125°C
- Storage Temperature: -55°C to +150°C

Parameter	Symbol	Limits	unit
IEC61000-4-2(ESD) Air Contact		±30 ±30	KV
Peak Pulse Current(8/20 us)	I <sub>pp</sub>	8	A
Peak Pulse Power	P <sub>pk</sub>	96	W

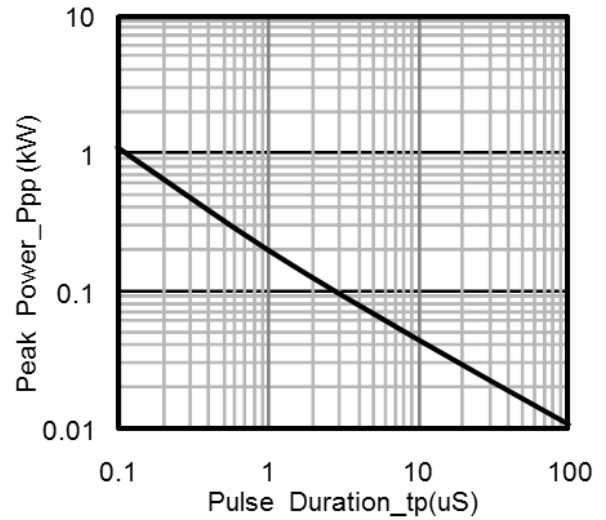
### ELECTRICAL CHARACTERISTICS (Ta = 25°C unless otherwise noted)

Parameter	Symbol	Min	Typ	Max	Test Condition
Reverse Working Voltage	VRWM			3.3V	
Breakdown Voltage	VBR	4.2		6.5V	
Reverse Leakage Current	I <sub>R</sub>			0.5uA	
Clamping Voltage	VC			8V	I <sub>PP</sub> = 1A (8 x 20µs pulse)
Clamping Voltage	VC			12V	I <sub>PP</sub> = 8A (8 x 20µs pulse)
Junction Capacitance	C <sub>J</sub>		16pF		VR = 0V, f = 1MHz

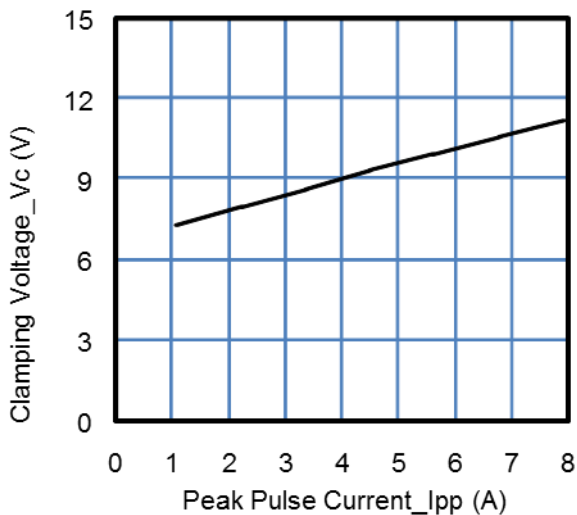
**Typical Performance Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise Specified)**



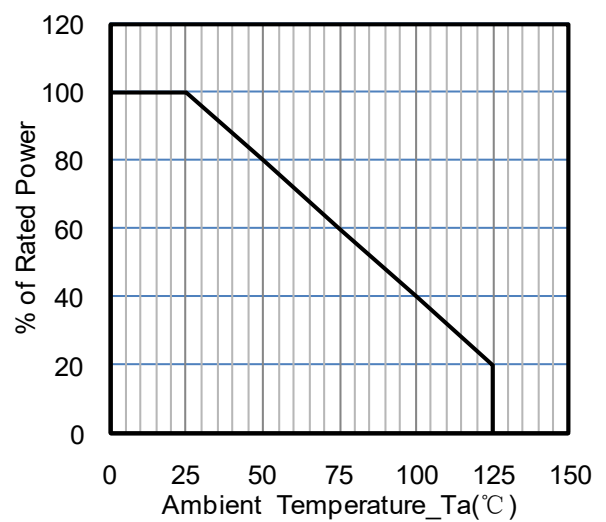
**Junction Capacitance vs. Reverse Voltage**



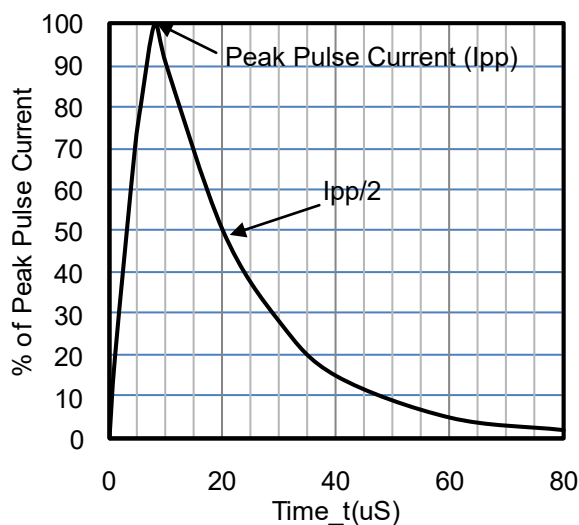
**Peak Pulse Power vs. Pulse Time**



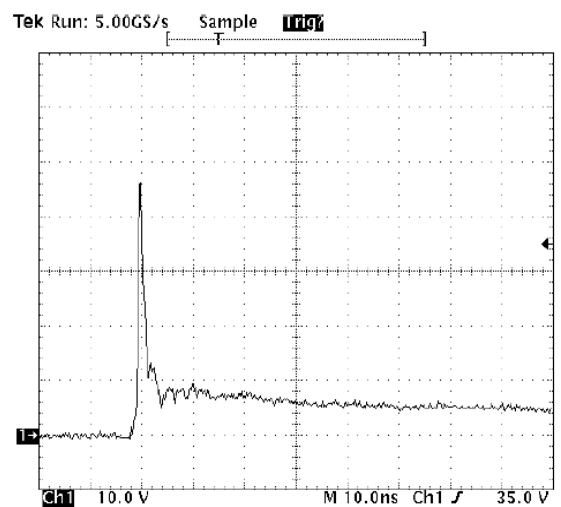
**Clamping Voltage vs. Peak Pulse Current ( $t_p = 8/20\mu\text{s}$ )**



**Power Derating Curve**



**8 X 20uS Pulse Waveform**



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



Micro Commercial Components

### Ordering Information :

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

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

#### \*\*\*IMPORTANT NOTICE\*\*\*

**Micro Commercial Components Corp.** reserves the right to make changes without further notice to any product herein to make corrections, modifications , enhancements , improvements , or other changes . **Micro Commercial Components Corp .** does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights ,nor the rights of others . The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp .** and all the companies whose products are represented on our website, harmless against all damages.

#### \*\*\*LIFE SUPPORT\*\*\*

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

#### \*\*\*CUSTOMER AWARENESS\*\*\*

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources.** MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.