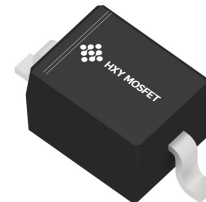




Discription

The BV05C protects sensitive semiconductor components from damage or upset due to electrostatic discharge (ESD) and other voltage induced transient events. Excellent clamping capability, low leakage, low capacitance, and fast response time provide best in class protection on designs that are exposed to ESD.

It gives designer the flexibility to protect one bi-directional line in applications where arrays are not practical.



SOD-323

Features

- ★ Ultra Low Capacitance 0.6 pF(Typ)
- ★ 300W peak pulse power (8/20uS)
- ★ Working Voltage 5V
- ★ Low leakage current nA Level
- ★ Complies with following standards
 - IEC 61000-4-2(ESD) immunity test :
 - Air discharge : $\pm 30\text{KV}$
 - Contact discharge : $\pm 30\text{KV}$
 - IEC61000-4-5 (Lightning) 10A (8/20uS)
- ★ RoHS compliant



Circuit Diagram

Ordering Information

Product ID	Pack	Qty(PCS)
BV05C	SOD-323	3000

Absolute Ratings ($T_{\text{amb}}=25^{\circ}\text{C}$)

Symbol	Parameter	Value	Units
P_{PP}	Peak Pulse Power ($t_p = 8/20 \mu\text{s}$)	160	W
T_L	Maximum lead temperature for soldering during 10s	260	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55 to +155	$^{\circ}\text{C}$
T_{op}	Operating Temperature Range	-40 to +125	$^{\circ}\text{C}$
T_j	Maximum junction temperature	150	$^{\circ}\text{C}$
	IEC61000-4-2 (ESD)	air discharge contact discharge	± 30 ± 30 KV



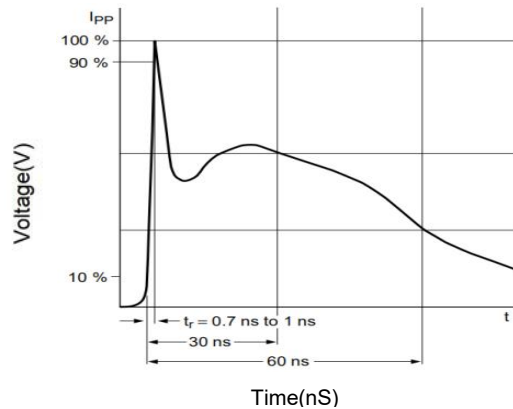
Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Device	V_{RWM} (V)	$I_R(\mu A)$ @ V_{RWM}	V_{BR} (V) @ I_T (Note 1)	I_T	V_C (V) @ $I_{PP}=10 A^*$	V_C (V) @ $I_{PP}=10 A^*$	I_{PP} (A)*	P_{PK} (W)*	C (pF)
	Max	Max	Min	mA	Typ	Max	Max	Max	Typ
BV05C	5.0	0.1	6.1	1	14	16	10	160	0.6

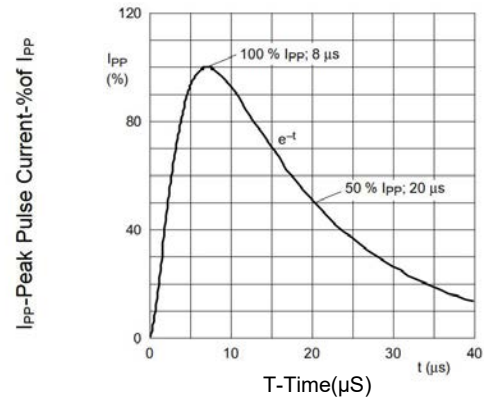
*Surge current waveform per Figure 1.

1. V_{BR} is measured with a pluse test current I_T at an ambient temperature of 25°C.

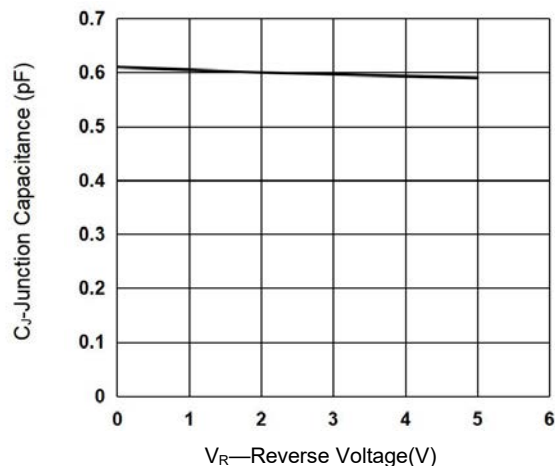
Typical Performance Characteristics ($T_A=25^\circ C$ unless otherwise Specified)



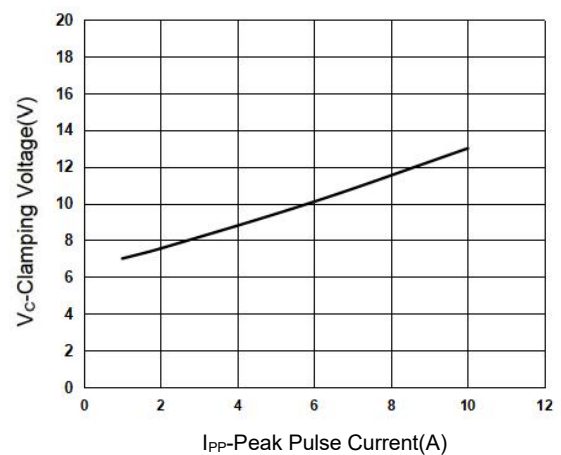
IEC61000-4-2 Pulse Waveform



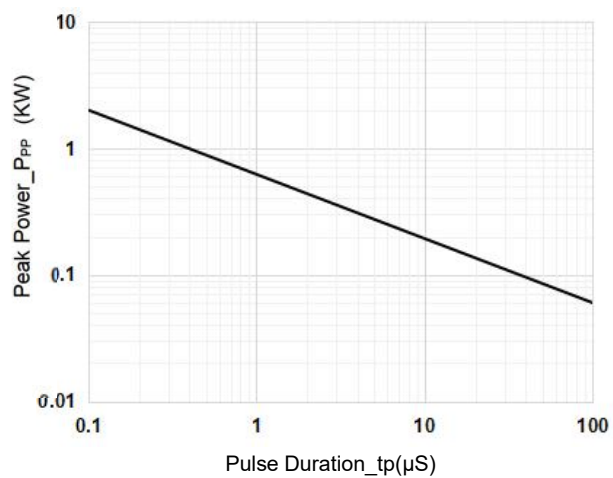
IEC61000-4-5 8X20µs Pulse Waveform



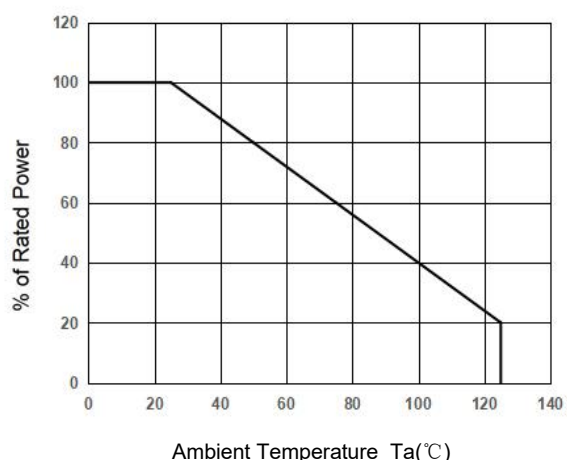
Junction Capacitance vs. Reverse Voltage



Clamping Voltage vs. Peak Pulse Current



Peak Pulse Power vs. Pulse Time

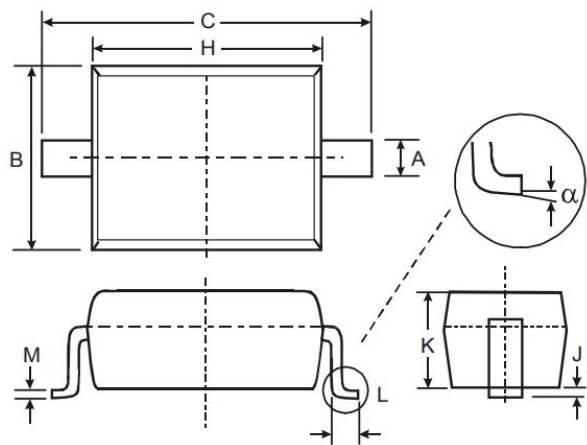


Power Derating Curve



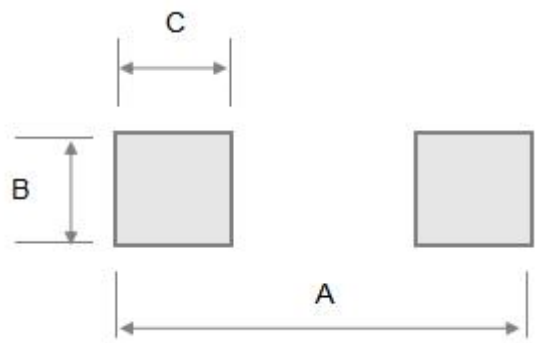
Package Outline Dimensions

SOD-323



Symbol	Dimensions	
	Min	Max
A	0.25	0.40
B	1.20	1.40
C	2.35	2.75
H	1.50	1.80
J	0.01	0.15
K	0.75	1.05
L	0.20	0.40
M	0.08	0.25
α	0°	8°

Soldering Footprint (mm)



Symbol	Dimensions
A	3.20
B	0.80
C	0.80



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