Discription

The HGBLC12C 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

Siscription Features

★ Ultra Low capacitance 0.6 pF(Typ)
★ 400W peak pulse power (8/20us)
★ Working Voltage 12V
★ Complies with following standards:
--EC 61000-4-2(ESD) immunity test
Air discharge: +30KV
Contact discharge: +30KV
--EC61000-4-5(Lightning)15A(8/20uS)
--EC61000-4-4(EFT)80A(5/50ns)
★ RoHS compliant

Circuit Diagram

Ordering information

Product ID	Pack	Qty(PCS)
HGBLC12C	SOD-323	3000

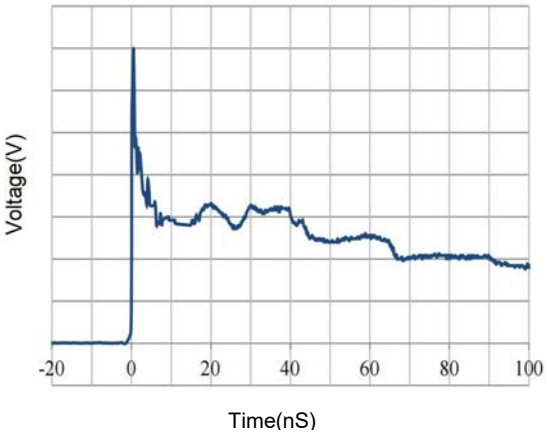
Absolute Ratings (T_{amb}=25°C)

Symbol	Parameter	Value	Units
P_{PP}	Peak Pulse Power (t_p = 8/20 μ s)	400	W
T_L	Maximum lead temperature for soldering during 10s	260	°C
T_{stg}	Storage Temperature Range	-55 to +155	°C
T_{op}	Operating Temperature Range	-40 to +125	°C
T_j	Maximum junction temperature	150	°C
	IEC61000-4-2 (ESD) air discharge contact discharge	±30 ±30	KV

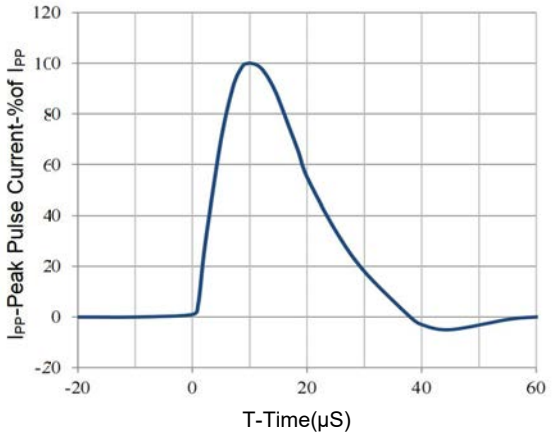
Electrical Characteristics (T_A = 25°C unless otherwise noted)

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Reverse Working Voltage	V_{RWM}	--	--	12	V	
Breakdown Voltage	V_{BR}	14.0	15.0	16.5	V	I_T=1mA
Leakage Current ILeak	I_R	--	--	0.2	μA	V_{RWM}=12V
Clamping Voltage	V_C	--	16.5	--	V	I_{PP}=1A,Tp=8/20μs
Clamping Voltage	V_C	--	26.0	30.0	V	I_{PP}=15A,Tp=8/20μs
Junction Capacitance	C_J	--	0.6	1.0	pF	V_R=0V, f=1MHz

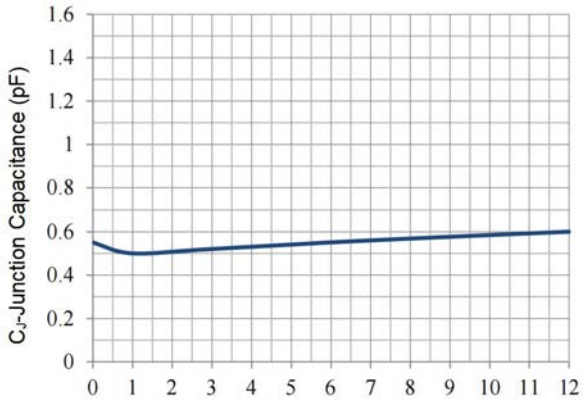
Typical Performance Characteristics



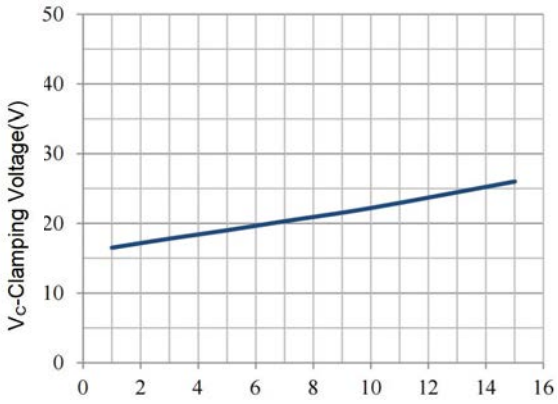
IEC61000−4−2 Pulse Waveform



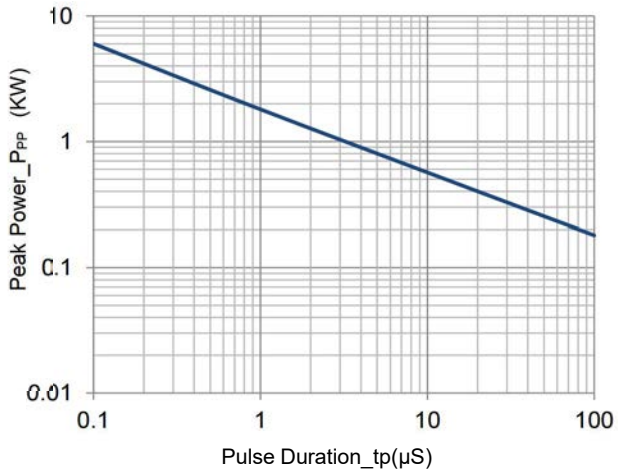
IEC61000−4−5 8X20μs Pulse Waveform



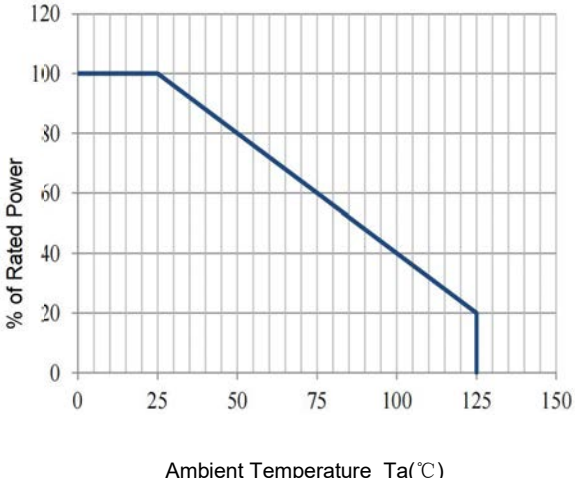
Junction Capacitance vs. Reverse Voltage



Clamping Voltage vs. Peak Pulse Current



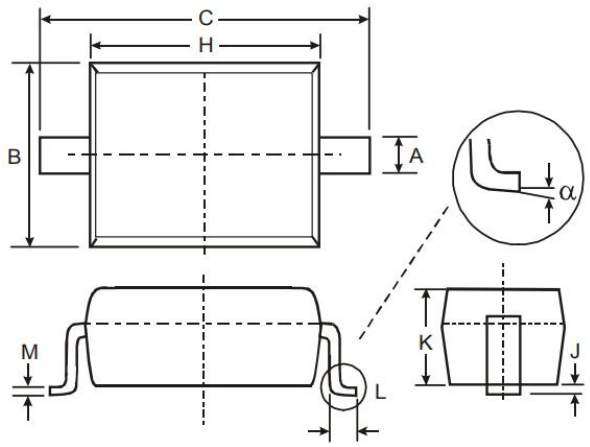
Peak Pulse Power vs. Pulse Time



Power Derating Curve

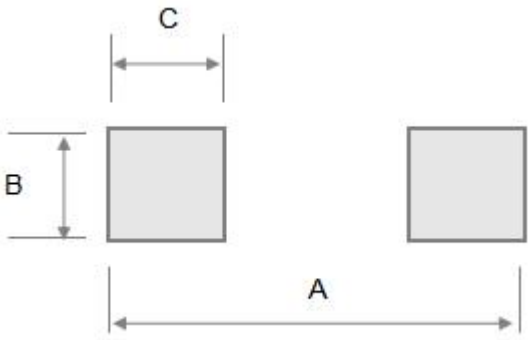
Package Outline Dimensions

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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