

SOD-323 Plastic-Encapsulate ESD Protection Diodes

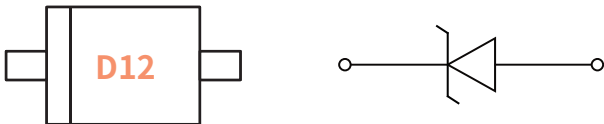
Features

- Low leakage current
- SOD-323 surface mount package
- IEC 61000-4-2 (ESD Air): ±30kV
- IEC 61000-4-2 (ESD Contact): ±30kV
- IEC 61000-4-5 (Lightning 8/20μs): 35A

Applications

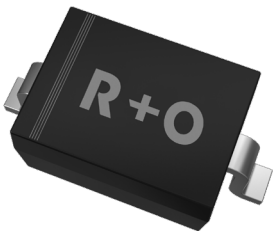
- Laptop Computers
- Cellular Phones
- Digital Cameras
- Personal Digital Assistants(PDAs)

Function Diagram



Reverse Working Voltage
12V Max.
Normal capacitance
85 pF(Max.)

SOD-323



Maximum Ratings (Ta=25°C Unless otherwise specified)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
VESD	Electrostatic Discharge Voltage	ESD per IEC 61000-4-2(Air)	±30	KV
		ESD per IEC 61000-4-2(Contact)	±30	KV
P _{PP}	Peak Pulse Power	tp = 8/20 μs	1260	W
I _{PP}	Rated Peak Pulse Current	tp = 8/20 μs	35	A
T _J	Operating JunctionTemperature Range	—	-55 to +125	°C
T _{STG}	Operating JunctionTemperature Range	—	-55 to +150	°C

Electrical Parameter

SYMBOL	PARAMETER
V _C	Clamping Voltage @ I _{pp}
V _{BR}	Breakdown Voltage @ I _T
I _{PP}	Peak Pulse Current
I _T	Test Current
I _R	Reverse Leakage Current @ VRWM
V _{RWM}	Peak Reverse Working Voltage
P _{PP}	Peak Pulse Power Dissipation
C _J	Junction Capacitance @ V _R =0V,f=1MHz
I _F	Forward Current
V _F	Forward Voltage @I _F

● Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	CONDITION	Min	Typ	Max	UNIT
Peak Reverse Working Voltage	V_{RWM}	$T_a=25^{\circ}C$	—	—	12	V
Breakdown Voltage	V_{BR}	$I_R=1.0mA, T_a=25^{\circ}C$	13.3	—	15	V
Reverse Leakage Current	I_R	$V_R=12V, T_a=25^{\circ}C$	—	—	0.2	μA
Clamping Voltage	V_C	$I_{PP}=1A, t_p=8/20\mu s$	—	—	16	V
		$I_{PP}=13A, t_p=8/20\mu s$	—	—	24	
		$I_{PP}=35A, t_p=8/20\mu s$	—	—	36	
Junction Capacitance	C_J	$V_R=0V, f=1MHz$	—	—	85	pF

● Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)

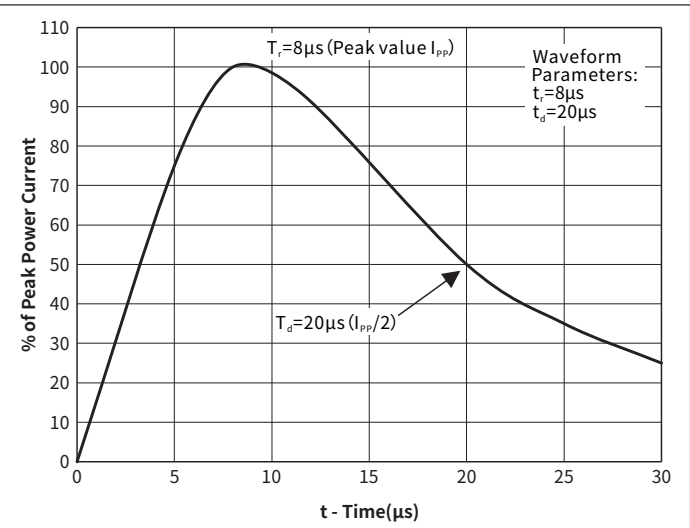


Fig.1 Pulse Waveform

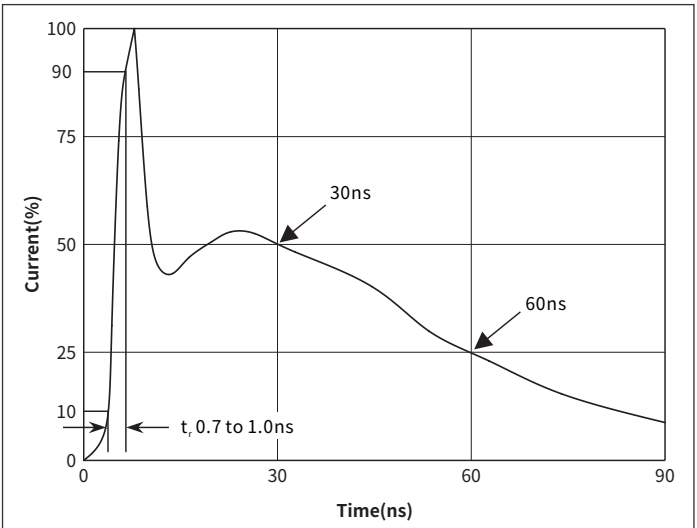


Fig.2 Pulse Waveform-ESD(IEC61000-4-2)

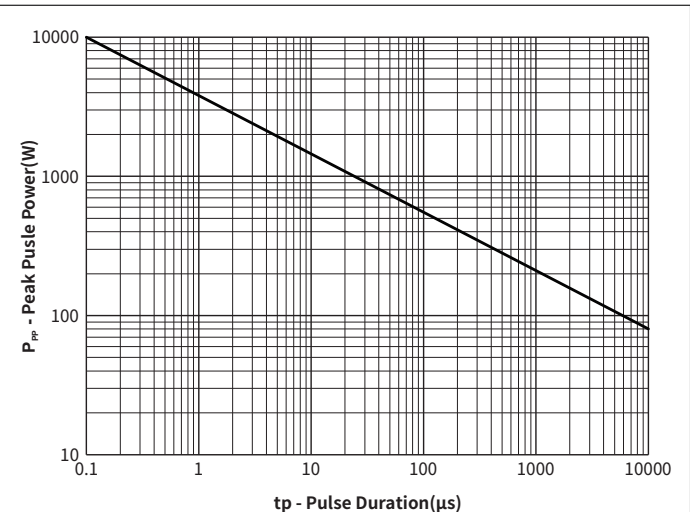


Fig.3 Peak Pulse Power vs. Pulse Time

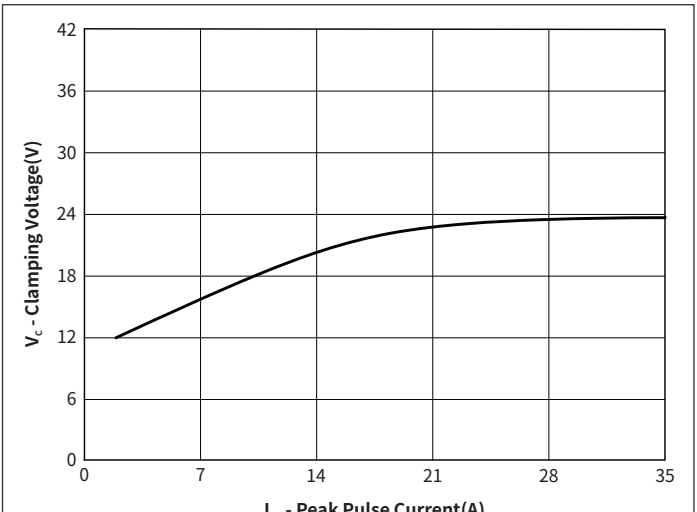
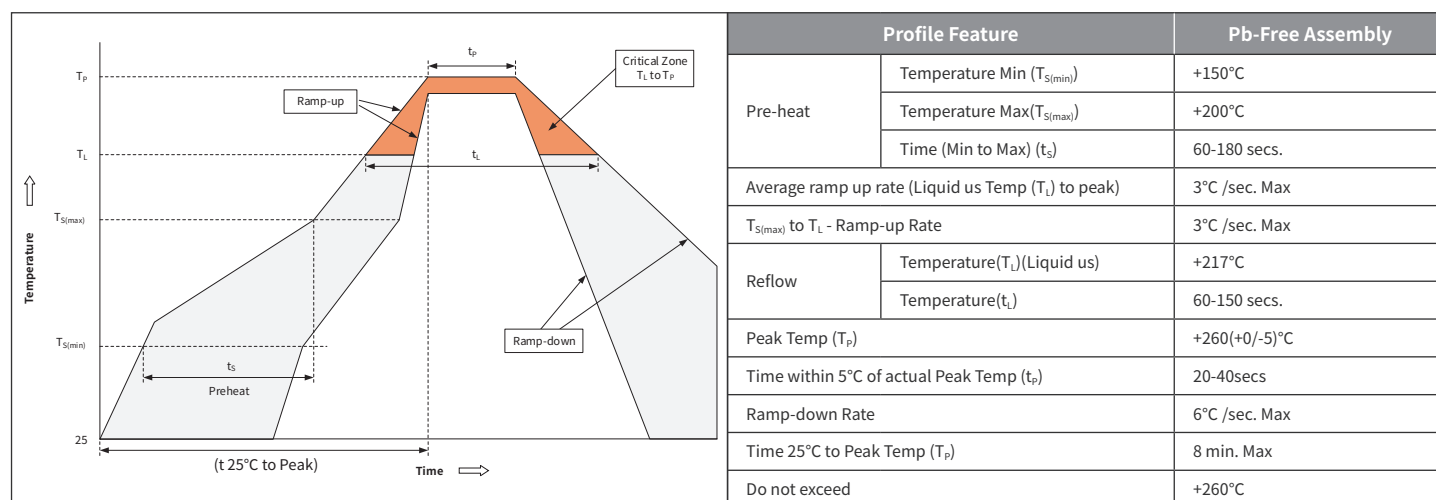


Fig.4 Clamping Voltage vs. Peak Pulse Current

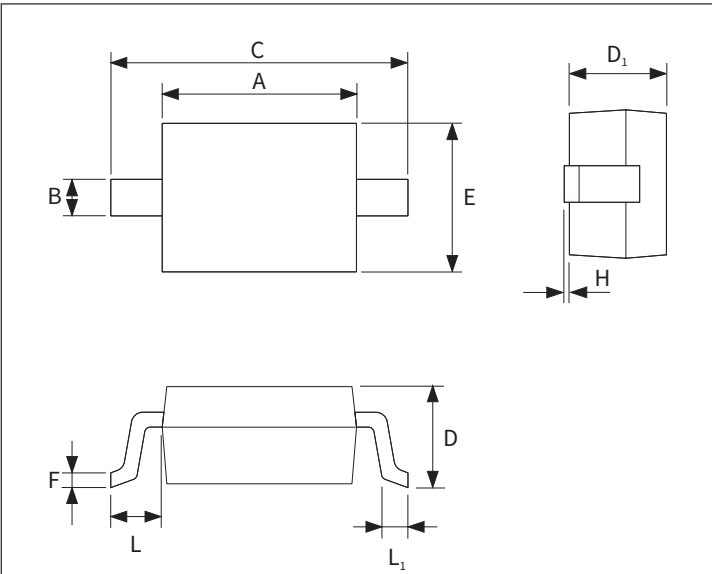
● Ordering Information

PREFERED P/N	PACKAGE	SIZE(mm)	DELIVERY MODE	MPQ(PCS)
H12VHD3U	SOD-323	2.55×1.30×0.95	7" REEL	3000

● Recommended Soldering Conditions

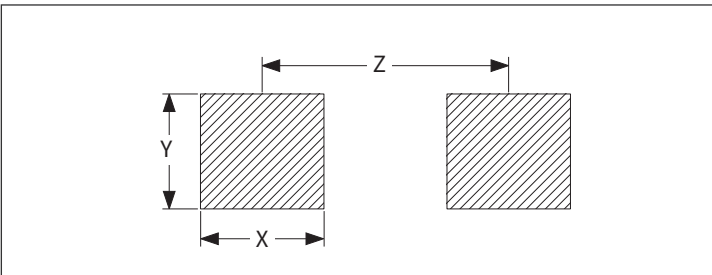


● Package Outline Dimensions (SOD-323)



Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.60	1.80	0.063	0.071
B	0.25	0.40	0.010	0.016
C	2.30	2.80	0.091	0.110
D	0.80	1.10	0.031	0.043
D ₁	0.80	0.90	0.031	0.035
E	1.20	1.40	0.047	0.055
F	0.08	0.18	0.003	0.007
L	0.475REF		0.019REF	
L ₁	0.25	0.40	0.010	0.016
H	-	0.14	-	0.006

● Suggested Pad Layout



Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
X	0.65	0.75	0.026	0.030
Y	0.65	0.75	0.026	0.030
Z	2.10	2.20	0.084	0.088