

SOD-323 Plastic-Encapsulate ESD Protection Diodes

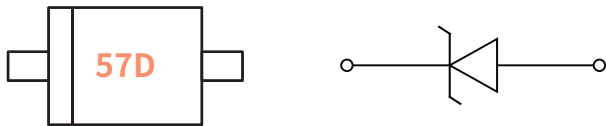
Features

- 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): 130A

Applications

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

Function Diagram



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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{ESD}	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	2080	W
I _{PP}	Rated Peak Pulse Current	tp = 8/20 μs	130	A
T _J	Operating JunctionTemperature Range	—	-55 to +125	°C
T _{STG}	Operating JunctionTemperature Range	—	-55 to +150	°C

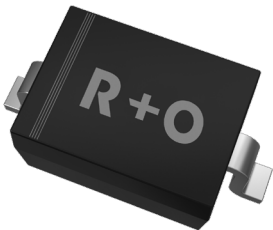
Electrical Parameter

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

The graph plots current (I) on the vertical axis against voltage (V) on the horizontal axis. It shows the diode's behavior in both forward and reverse bias. Key points marked on the graph include: V_C (clamping voltage), V_{BR} (breakdown voltage), V_{RWM} (peak reverse working voltage), I_{PP} (peak pulse current), I_T (test current), I_R (reverse leakage current), and I_F (forward current). The forward bias curve shows a sharp increase in current at a certain voltage, while the reverse bias curve shows a very low leakage current until breakdown.

Reverse Working Voltage
5V Max.
High capacitance
850pF(Typ.)

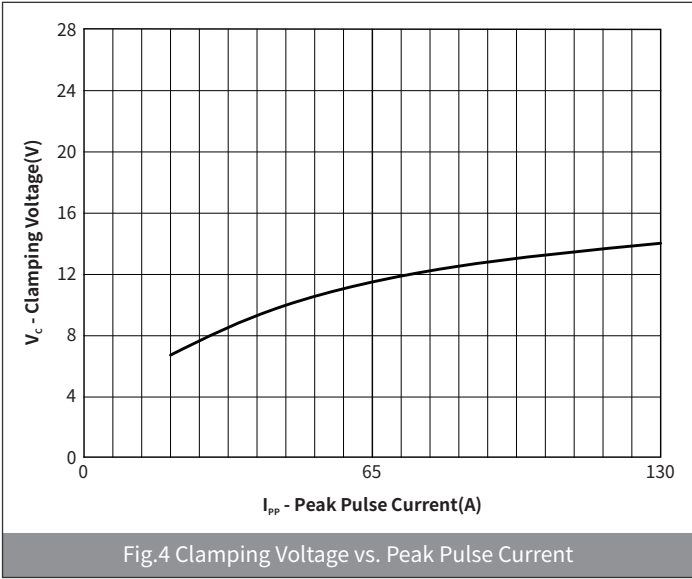
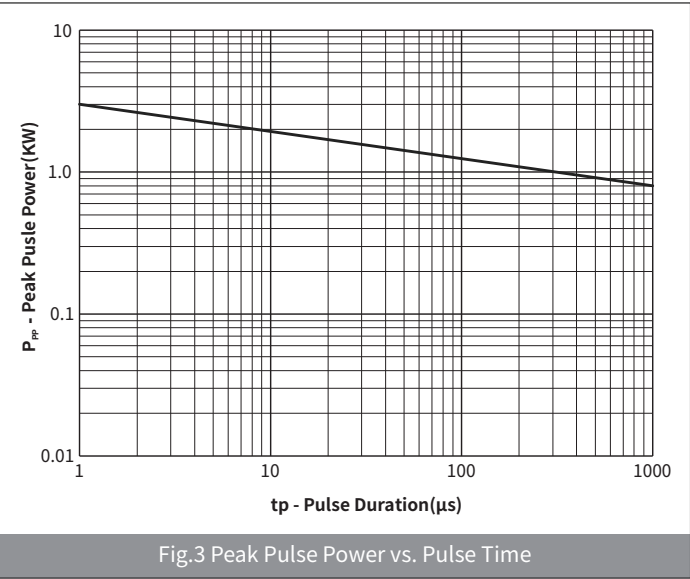
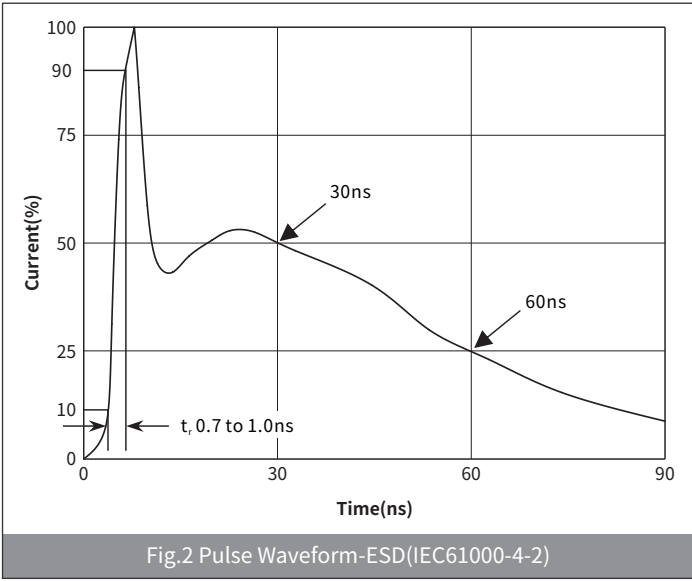
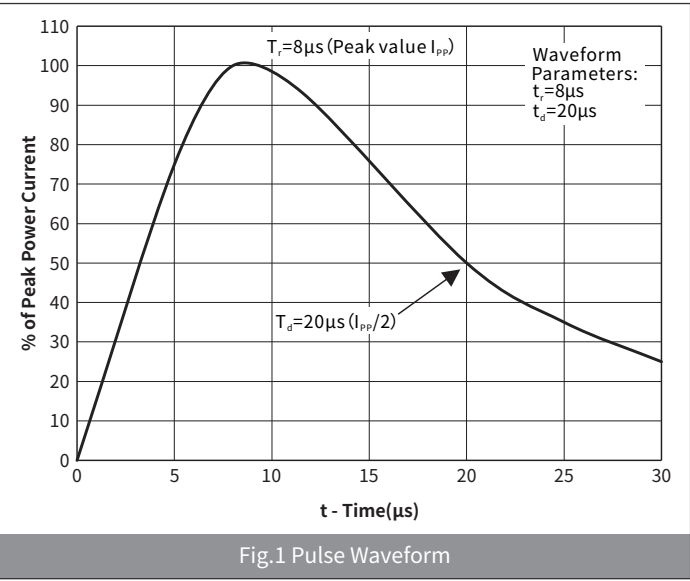
SOD-323



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

PARAMETER	SYMBOL	CONDITION	Min	Typ	Max	UNIT
Peak Reverse Working Voltage	V_{RWM}	$T_a=25^{\circ}C$	—	—	5.0	V
Breakdown Voltage	V_{BR}	$I_R=1.0mA, T_a=25^{\circ}C$	6.0	—	9.0	V
Reverse Leakage Current	I_R	$V_R=5V, T_a=25^{\circ}C$	—	—	1.0	μA
Clamping Voltage	V_C	$I_{PP}=20A, t_p=8/20\mu s$	—	—	9.5	V
		$I_{PP}=130A, t_p=8/20\mu s$	—	—	16	
Junction Capacitance	C_J	$V_R=0V, f=1MHz$	—	850	1100	pF

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



H5VHD3UA

Uni-directional 5V High Capacitance ESD

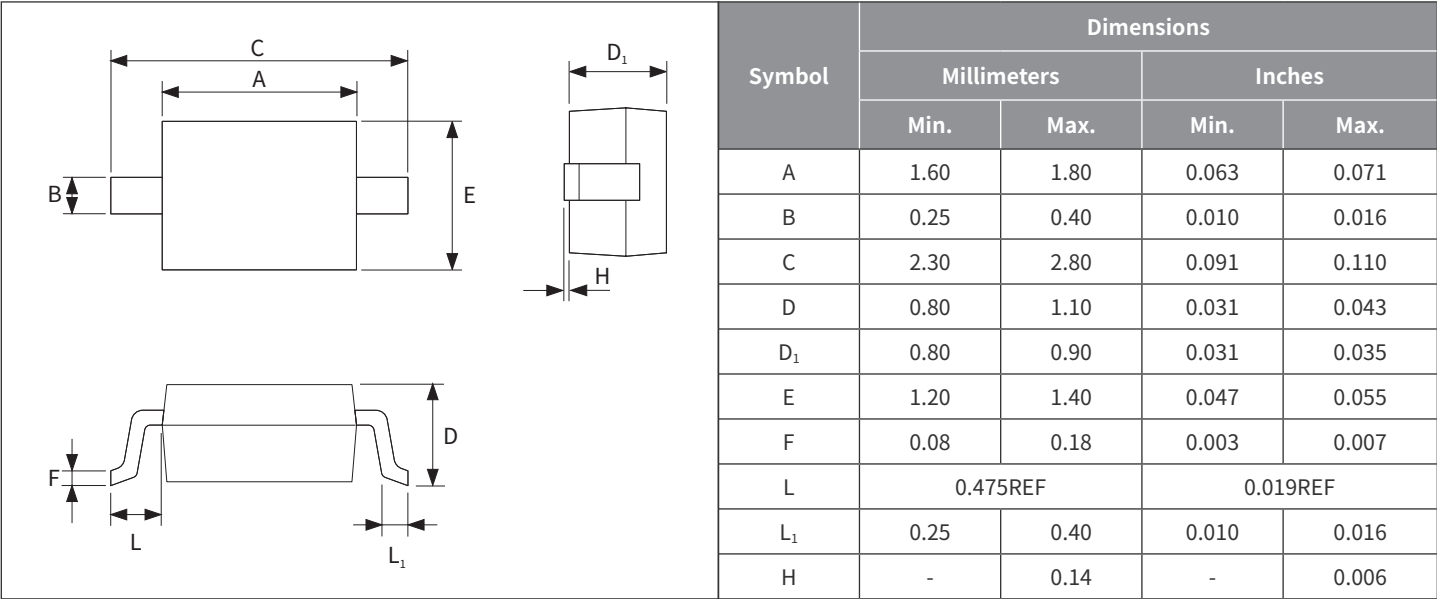
Ordering Information

PREFERED P/N	PACKAGE	SIZE(mm)	DELIVERY MODE	MPQ(PCS)
H5VHD3UA	SOD-323	2.55×1.30×0.95	7" REEL	3000

Recommended Soldering Conditions



Package Outline Dimensions (SOD-323)



Suggested Pad Layout

