

## SOD-523 Plastic-Encapsulate ESD Protection Diodes

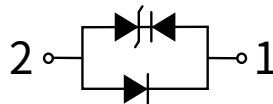
### ● Features

- Low leakage current
- SOD-523 surface mount package
- IEC 61000-4-2 (ESD Air):  $\pm 25\text{kV}$
- IEC 61000-4-2 (ESD Contact):  $\pm 20\text{kV}$
- IEC 61000-4-5 (Lightning 8/20 $\mu\text{s}$ ): 5A

### ● Applications

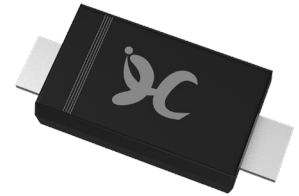
- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation, Digital Cameras
- Peripherals, Audio Players
- Industrial Equipment

### ● Function Diagram



**Reverse Working Voltage**  
5V Max.  
**Ultra Small capacitance**  
0.8pF(Max.)

SOD-523

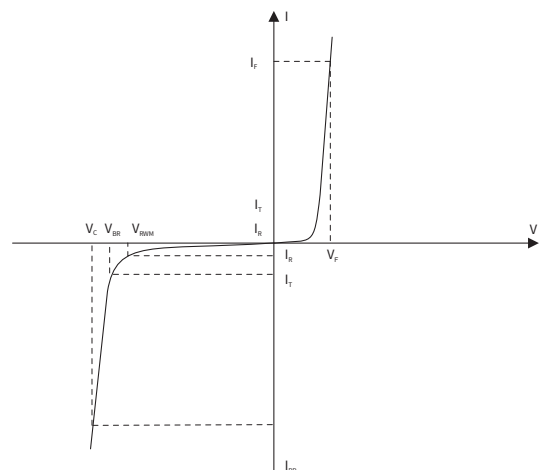


### ● Maximum Ratings (Ta=25°C Unless otherwise specified)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>ESD</sub>	Electrostatic Discharge Voltage	ESD per IEC 61000-4-2( Air )	$\pm 25$	KV
		ESD per IEC 61000-4-2( Contact)	$\pm 20$	KV
P <sub>PP</sub>	Peak Pulse Power	tp = 8/20 $\mu\text{s}$	75	W
I <sub>PP</sub>	Rated Peak Pulse Current	tp = 8/20 $\mu\text{s}$	5.0	A
T <sub>J</sub>	Operating JunctionTemperature Range	—	-55 to +125	°C
T <sub>STG</sub>	Operating JunctionTemperature Range	—	-55 to +150	°C

### ● Electrical Parameter

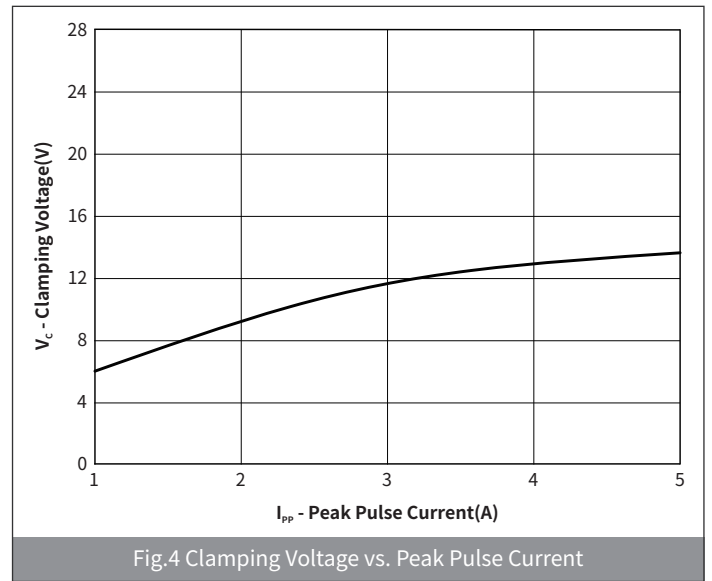
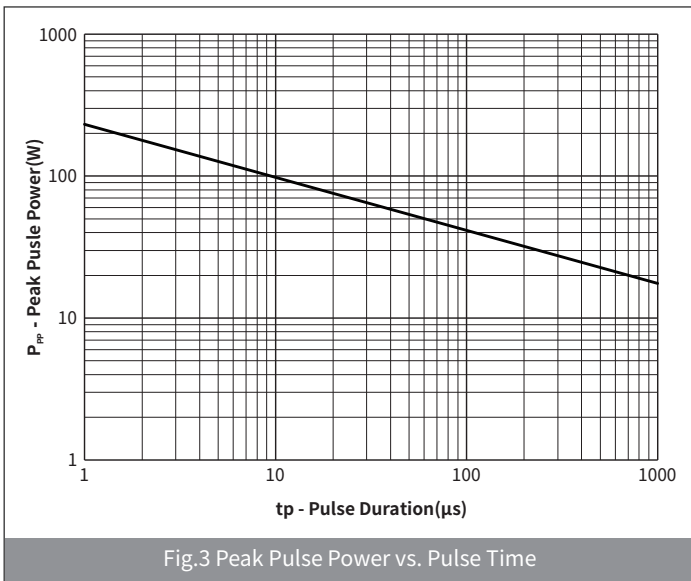
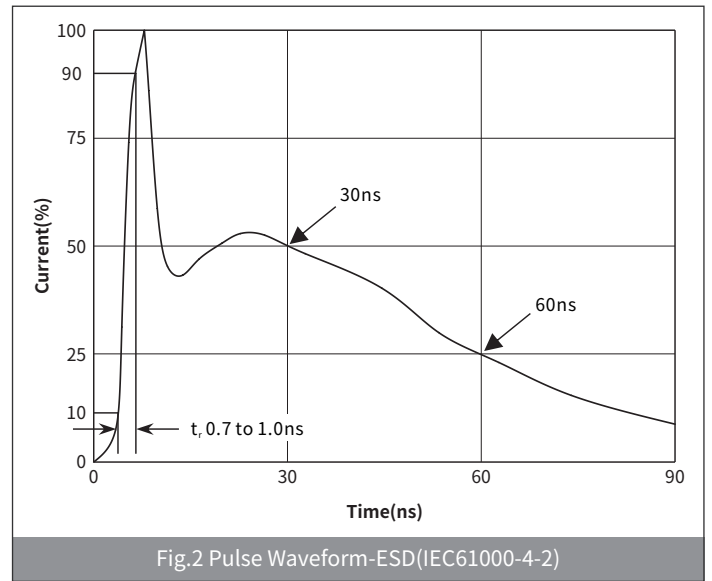
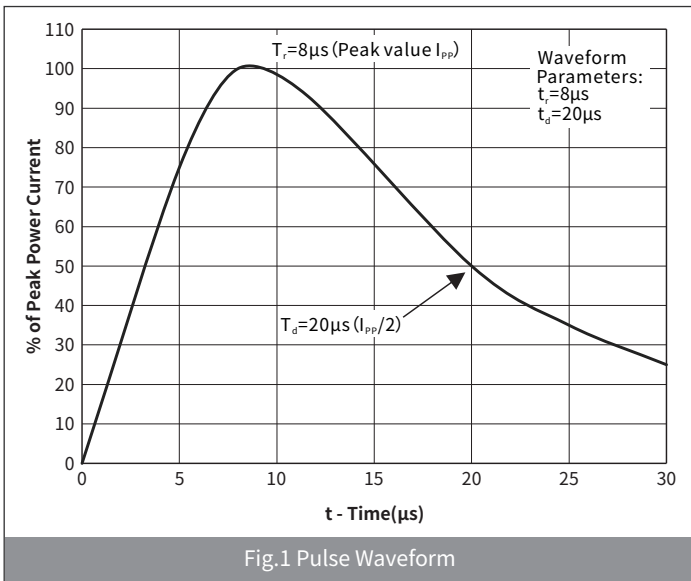
SYMBOL	PARAMETER
V <sub>C</sub>	Clamping Voltage @ I <sub>PP</sub>
V <sub>BR</sub>	Breakdown Voltage @ I <sub>T</sub>
I <sub>PP</sub>	Peak Pulse Current
I <sub>T</sub>	Test Current
I <sub>R</sub>	Reverse Leakage Current @ VRWM
V <sub>RWM</sub>	Peak Reverse Working Voltage
P <sub>PP</sub>	Peak Pulse Power Dissipation
C <sub>J</sub>	Junction Capacitance @ V <sub>R</sub> =0V, f=1MHz
I <sub>F</sub>	Forward Current
V <sub>F</sub>	Forward Voltage @ I <sub>F</sub>



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

PARAMETER	SYMBOL	CONDITION	Min	Typ	Max	UNIT
Peak Reverse Working Voltage	$V_{RWM}$	$T_a=25^\circ\text{C}$	—	—	5.0	V
Breakdown Voltage	$V_{BR}$	$I_R=1\text{mA}, T_a=25^\circ\text{C}$	6.0	—	9.0	V
Reverse Leakage Current	$I_R$	$V_R=5\text{V}, T_a=25^\circ\text{C}$	—	—	0.2	$\mu\text{A}$
Clamping Voltage	$V_C$	$I_{PP}=1\text{A}, t_p=8/20\mu\text{s}$	—	—	10	V
		$I_{PP}=5\text{A}, t_p=8/20\mu\text{s}$	—	—	15	
Junction Capacitance	$C_J$	$V_R=0\text{V}, f=1\text{MHz}$	—	0.6	0.8	pF

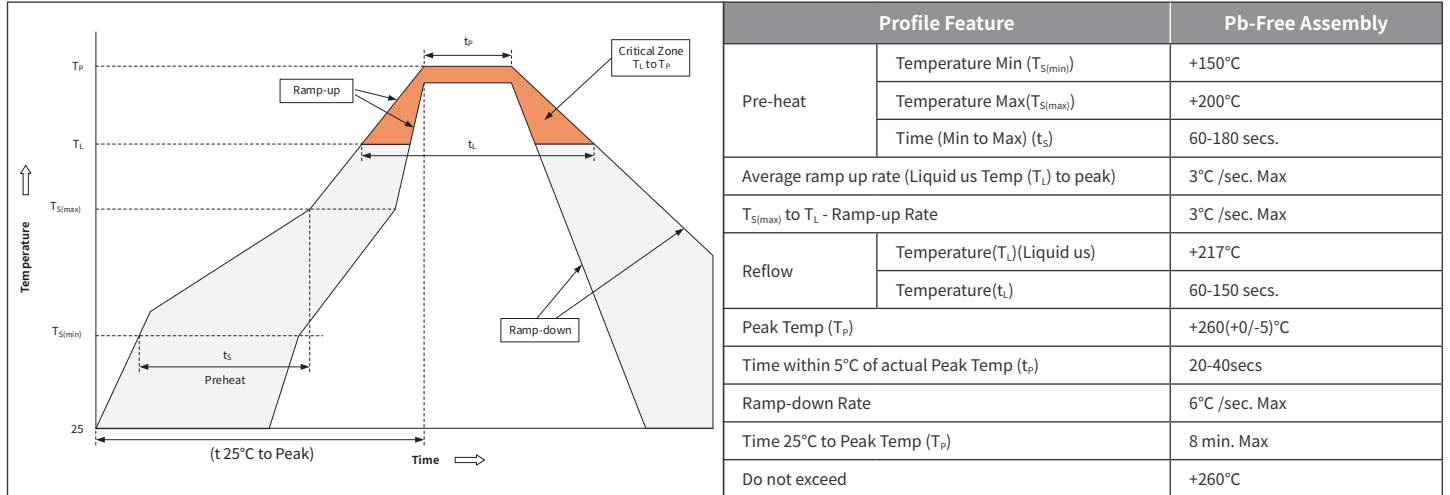
● **Ratings And Characteristics Curves** (Ta=25°C Unless otherwise specified)



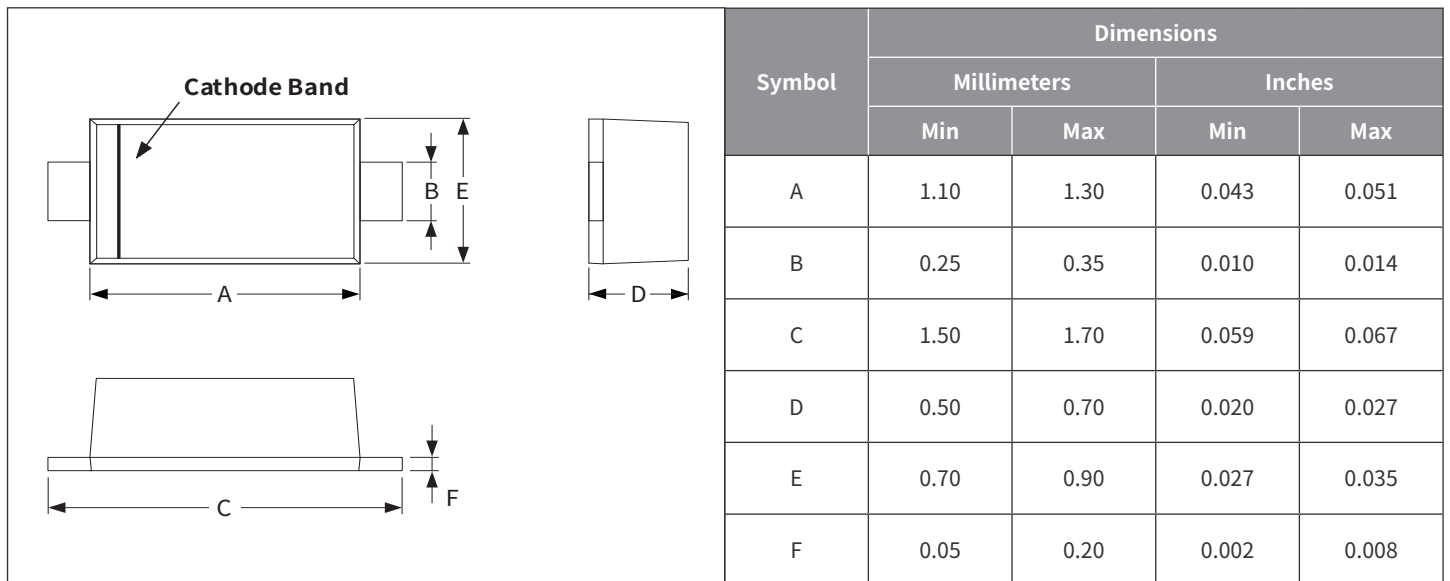
## Ordering Information

PREFERRED P/N	PACKAGE CODE	PACKAGE	SIZE(mm)	DELIVERY MODE	MPQ(PCS)
H5VLD5BA	R1	SOD-523	0.30×0.80×0.115	7" REEL	3000
	R1H	SOD-523	0.30×0.80×0.115	7" REEL	8000

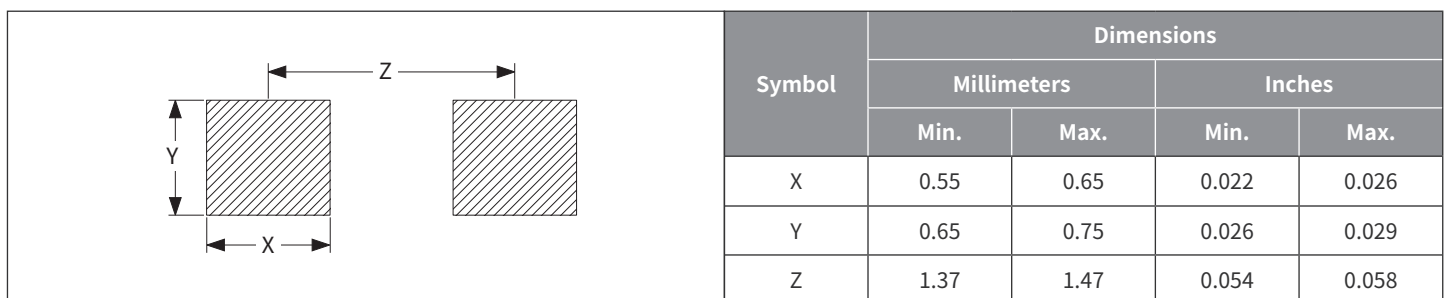
## Recommended Soldering Conditions



## Package Outline Dimensions (SOD-523)



## Suggested Pad Layout



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