

SOD-523 Plastic-Encapsulate ESD Protection Diodes

Features

- Low leakage current
- Low clamping voltage
- IEC 61000-4-2 (ESD Air): ±30kV
- IEC 61000-4-2 (ESD Contact): ±30kV
- IEC 61000-4-5 (Lightning 8/20μs): 11A

Applications

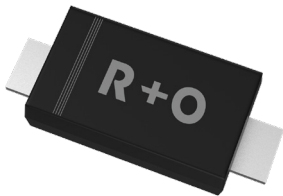
- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation, Digital Cameras
- Peripherals, Audio Players, Industrial Equipment

Function Diagram



Reverse Working Voltage
3.3V Max.
High capacitance
110pF(Max.)

SOD-523

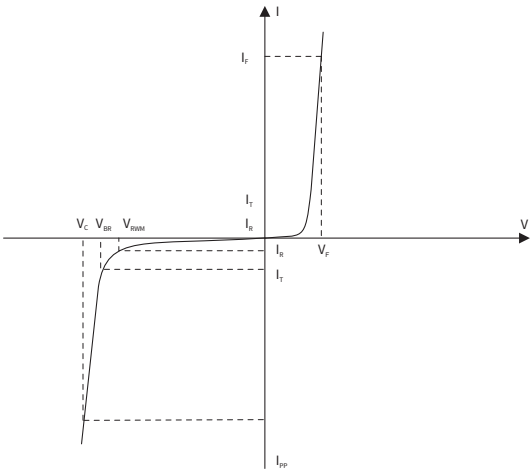


Maximum Ratings (Ta=25°C Unless otherwise specified)

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	150	W
I _{PP}	Rated Peak Pulse Current	tp = 8/20 μs	11	A
T _J	Operating JunctionTemperature Range	—	-55 to +150	°C
T _{STG}	Operating JunctionTemperature Range	—	-55 to +150	°C

Electrical Parameter

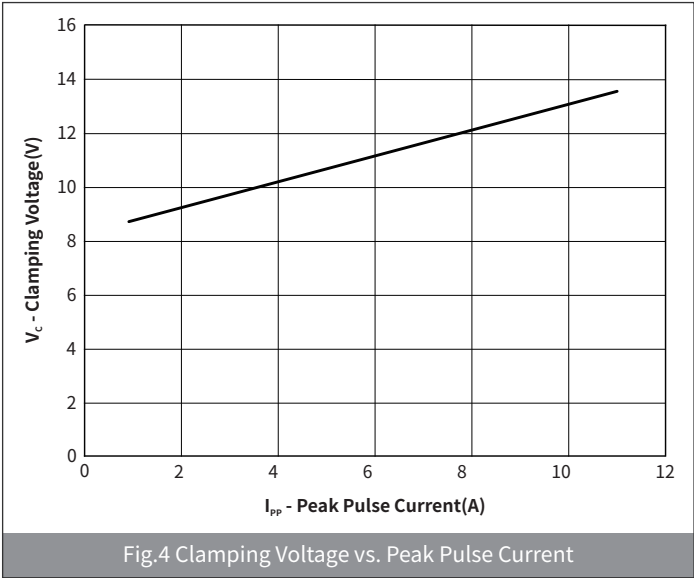
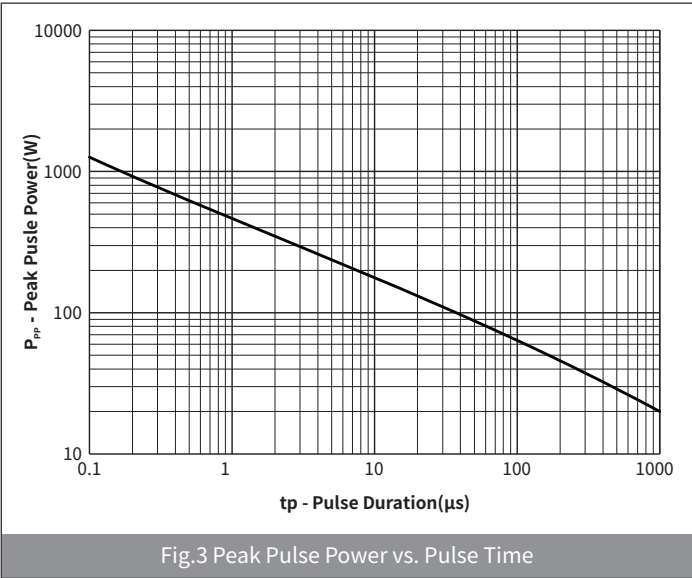
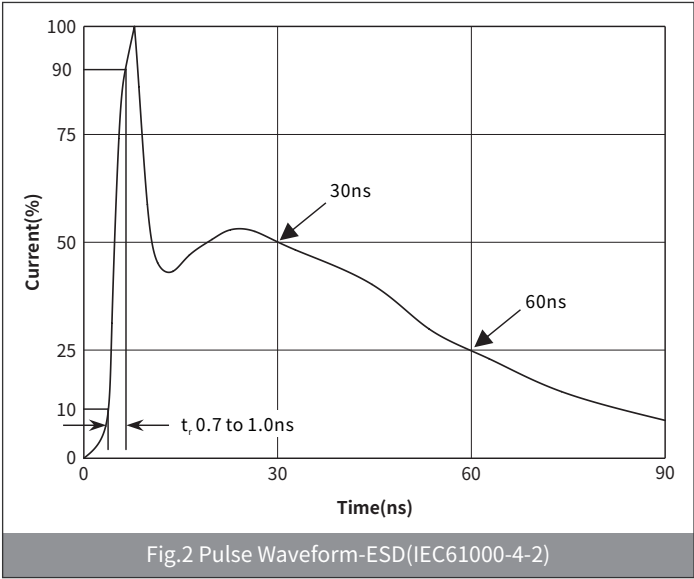
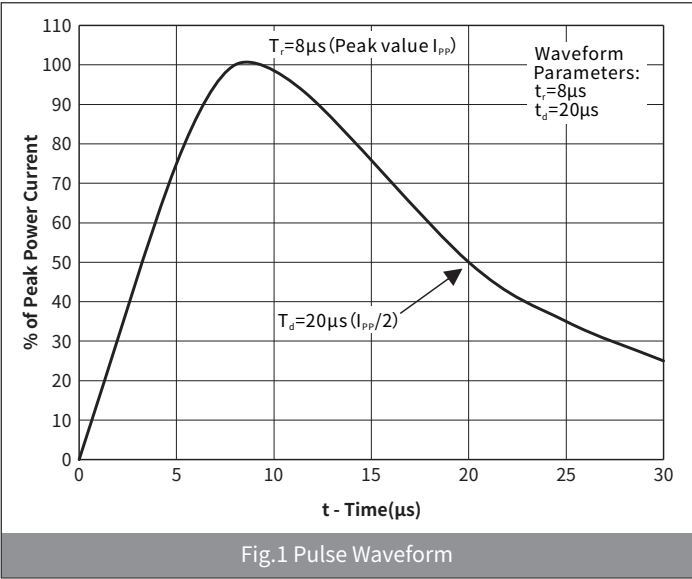
SYMBOL	PARAMETER
V _C	Clamping Voltage @ I _{pp}
V _{BR}	Breakdown Voltage @ I _T
I _{PP}	Peak Pulse Current
I _T	Test Current
I _R	Reverse Leakage Current @ VRWM
V _{RWM}	Peak Reverse Working Voltage
P _{PP}	Peak Pulse Power Dissipation
C _J	Junction Capacitance @ V _R =0V,f=1MHz
I _F	Forward Current
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}	$T_a=25^{\circ}\text{C}$	—	—	3.3	V
Breakdown Voltage	V_{BR}	$I_T=1\text{mA}, T_a=25^{\circ}\text{C}$	5	—	—	V
Reverse Leakage Current	I_R	$V_{RWM}=3.3\text{V}, T_a=25^{\circ}\text{C}$	—	—	0.2	μA
Clamping Voltage	V_C	$I_{PP}=1\text{A}, t_p=8/20\mu\text{s}$	—	—	9	V
Clamping Voltage	V_C	$I_{PP}=11\text{A}, t_p=8/20\mu\text{s}$	—	—	14	V
Junction Capacitance	C_J	$V_{RWM}=0\text{V}, f=1\text{MHz}$	—	—	110	pF

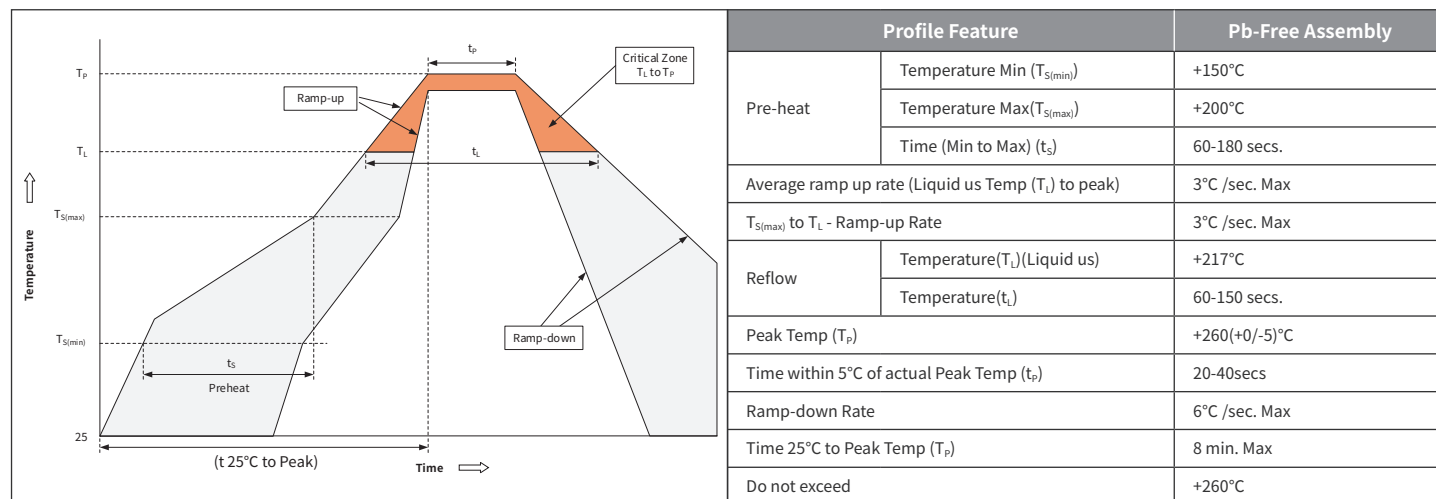
● Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)



● Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOD-523	R1	0.002	3000	45000	180000	7"

● Recommended Soldering Conditions



● Package Outline Dimensions (SOD-523)

Symbol	Dimensions			
	Millimeters		Inches	
	Min	Max	Min	Max
A	1.10	1.30	0.043	0.051
B	0.25	0.35	0.010	0.014
C	1.50	1.70	0.059	0.067
D	0.50	0.70	0.020	0.027
E	0.70	0.90	0.027	0.035
F	0.05	0.20	0.002	0.008

● Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
X	0.55	0.65	0.022	0.026
Y	0.65	0.75	0.026	0.029
Z	1.37	1.47	0.054	0.058