



上海晟芯微电子有限公司

Shanghai Senchip Microelectronics Co., Ltd

Electro-static Discharge (ESD)

SESD5D series

Features

- 200 Watts peak Power Line($t_p = 8/20\mu s$)
- Replacement for MLV(0603)
- Protects one I/O or power line
- Low clamping voltage
- Low leakage current
- Response Time is Typically $< 1ns$



IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD) $\pm 15kV$ (air), $\pm 8kV$ (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)

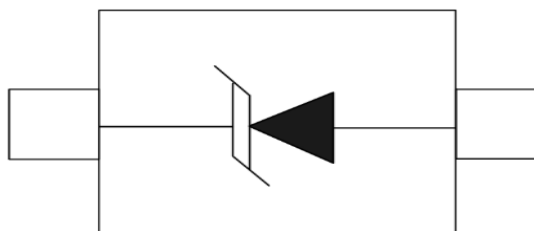
Mechanical Characteristics

- JEDEC SOD-523 package
- Molding compound flammability rating:
UL 94V-0
- Marking : Marking Code
- Packaging : Tape and Reel per EIA 481
- RoHS/WEEE Compliant

Applications

- Cellular Handsets & Accessories
- Personal Digital Assistants (PDAs)
- Notebooks & Handhelds
- Portable Instrumentation
- Digital Cameras
- MP3 players

Schematic & PIN Configuration



SOD-523 (Top View)



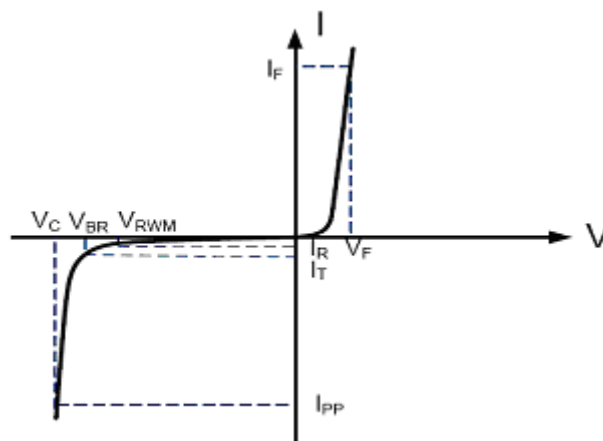
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Absolute Maximum Rating			
Rating	Symbol	Value	Units
Peak Pulse Power($t_P=8/20 \mu s$)	PPp	200	Watts
Peak Forward Voltage($I_F=1A$, $t_P=8/20 \mu s$)	VFP	1.4	V
Operating Temperature	TJ	-55to+125	°C
Storage Temperature	TSTG	-55to+150	°C

Electrical Parameters (T=25°C)

Symbol	Parameter
I _{PP}	Maximum Reverse Peak Pulse Current
V _C	Clamping Voltage @ I _{PP}
V _{RWM}	Working Peak Reverse Voltage
I _R	Maximum Reverse Peak Pulse Current @ V _{RWM}
V _{BR}	Breakdown Voltage @ I _T
I _T	Test Current
I _F	Forward Current
V _F	Forward Voltage @ I _F



Electrical Characteristics

Part No.	V _{RWM} (V)	I _R (μA)	V _{BR} (V)	C(PF)	P _{PK} (W)	Package
SESD5D3V3	3.3	1.0	5.0-6.2	35	200	SOD523
SESD5D5V	5.0	1.0	6.2-7.2	60	200	SOD523
SESD5D5C	5.0	1.0	6.2-7.8	30	200	SOD523
SESD5D7V	7.0	1.0	7.5-8.7	55	200	SOD523
SESD5D12V	12.0	1.0	12.5-15.7	50	200	SOD523



Typical Characteristics

Figure 1: Peak Pulse Power Vs Pulse Time

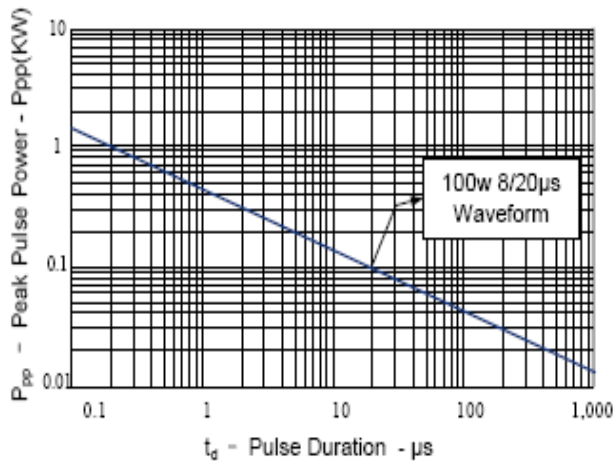


Figure 2: Power Derating Curve

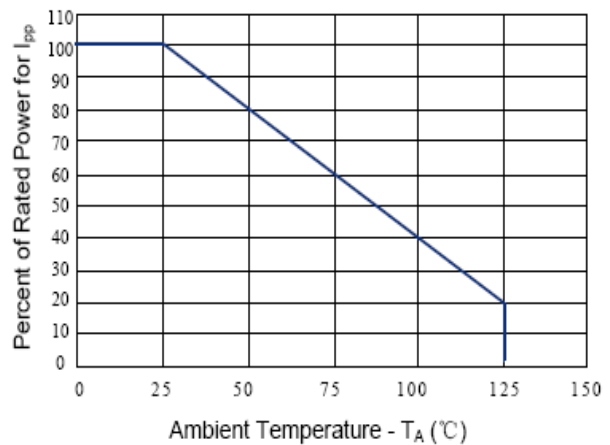


Figure 3: Clamping Voltage vs. Peak Pulse Current

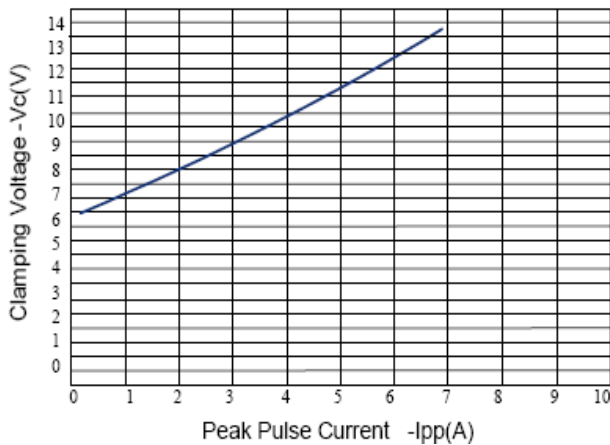


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

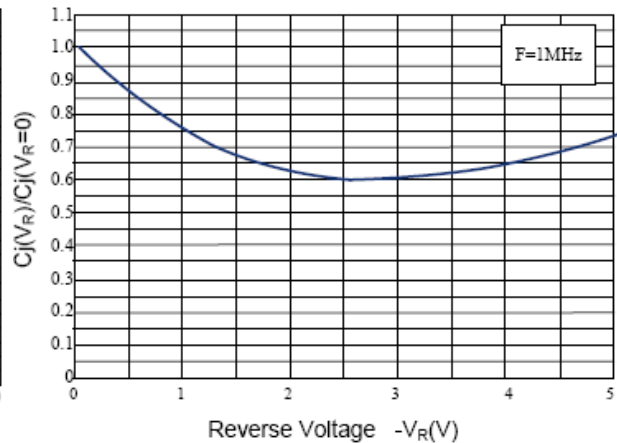


Figure 5: Pulse Waveform

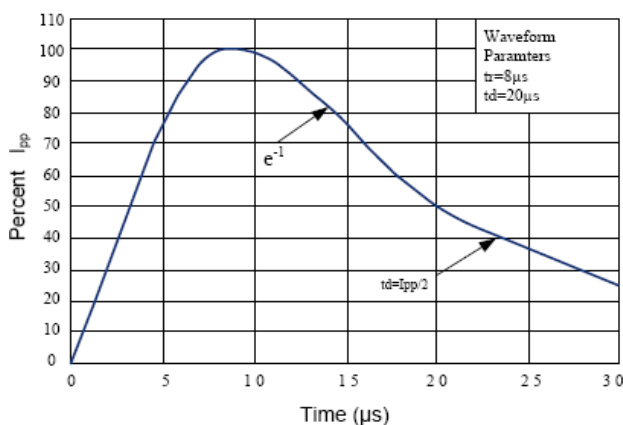
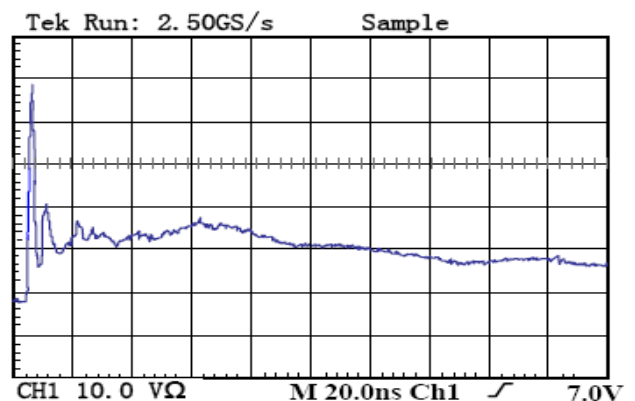
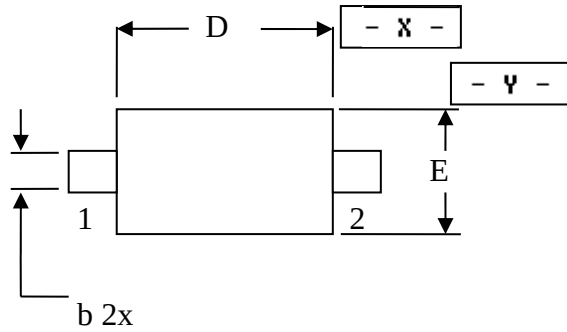


Figure 6: ESD Clamping(8kV Contact per IEC 61000-4-2)

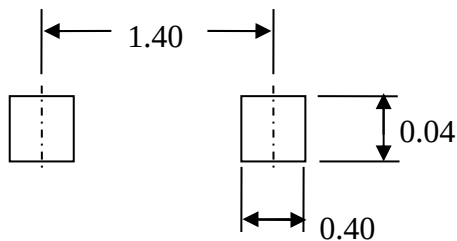
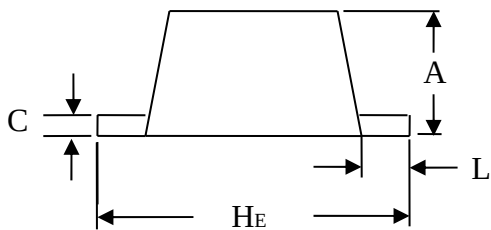


Outline Drawing – SOD-523

PACKAGE OUTLINE



$\oplus$	0.08(0.0032)	X	Y
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DIMENSIONS:MILLIMETERS



SOD-523

DIMENSIONS

SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.50	0.70	0.020	0.028
b	0.25	0.35	0.101	0.014
C	0.07	0.20	0.0028	0.0079
D	1.10	1.30	0.043	0.051
E	0.70	0.90	0.028	0.035
H _E	1.50	1.70	0.059	0.067
L	0.15	0.25	0.006	0.010

Notes:

- Controlling Dimensions in Millimeters.
- Dimensions are exclusive of mold flash and metal burns.

CONTACT INFORMATION

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