



General description

The SLESD5N5.0C is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time , make these parts ideal for ESD protection on designs where board space is at a premium.

Features and benefits

- Reverse stand-off voltage: 5.0V Max
- Bidirectional ESD protection of one line
- Femtofarad capacitance: $C_j = 37\text{pF}$ (Typ)
- Response time is typically $< 1\text{ ns}$
- Low leakage current: nA Level
- ESD Protection: 30kV(air)/ 30kV(contact) (IEC61000-4-2)
- RoHS compliant

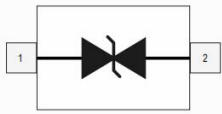
Application information

- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Microprocessor based equipment

Ordering information

Device	Package	Marking	Packaging	Reel Size
SLESD5N5.0C	SOD523	OC	3000/Tape & Reel	7 Inch

Schematic & Pin configuration

Mimensions	Circuit Diagram
	

Maximum Ratings ($T_A = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

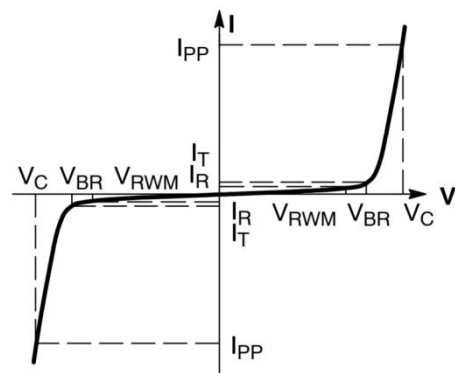
Parameter	Symbol	Value	Unit
Peak Pulse Power ($T_p = 8/20\text{ }\mu\text{s}$)	P_{PK}	200	W
Rated Peak Pulse Current ($T_p = 8/20\text{ }\mu\text{s}$)	I_{PP}	20	A
Maximum lead temperature for soldering during 10s	T_L	260	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^{\circ}\text{C}$
Operating Temperature Range	T_{OP}	-40 to +125	$^{\circ}\text{C}$
ESD voltage IEC 61000-4-2 (air discharge)	V_{ESD}	30	kV
ESD voltage IEC 61000-4-2 (contact discharge)	V_{ESD}	30	kV

Electrical Characteristics ($T_A = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

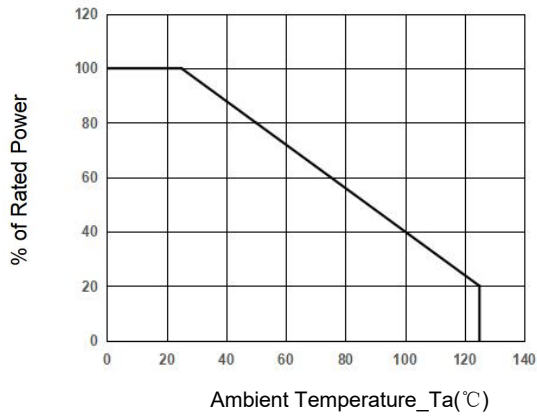
Parameter	Symbol	Min	Typ	Max	Unit	Condition
Reverse Working Voltage	V_{RWM}	--	--	5.0	V	
Breakdown Voltage	V_{BR}	6.2	--	7.5	V	$I_T = 1\text{mA}$
Leakage Current I_{Leak}	I_R	--	--	0.1	μA	$V_{RWM} = 5.0\text{V}$
Clamping Voltage	V_C	--	6.0	7.0	V	$I_{PP} = 1\text{A}, T_p = 8/20\text{ }\mu\text{s}$
Clamping Voltage	V_C	--	9.1	10.0	V	$I_{PP} = 20\text{A}, T_p = 8/20\text{ }\mu\text{s}$
Junction Capacitance	C_J	--	37.0	40.0	pF	$V_R = 0\text{V}, f = 1\text{MHz}$

Portion Electronics Parameter

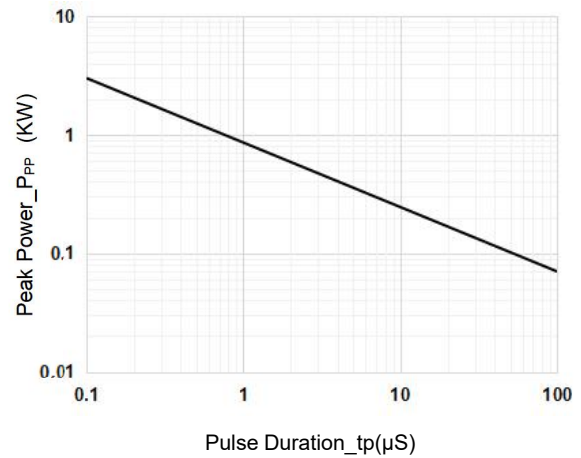
Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
I_T	Test Current
V_{BR}	VBR Breakdown Voltage @ I_T



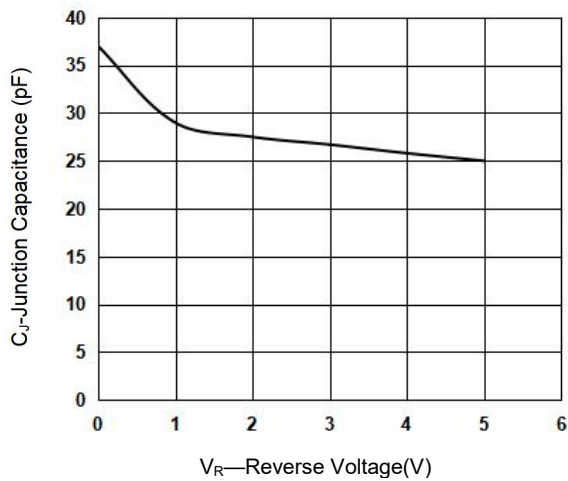
Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise Specified)



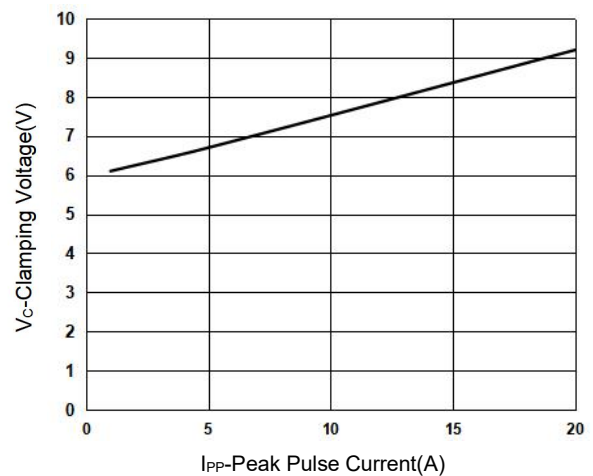
Power Derating Curve



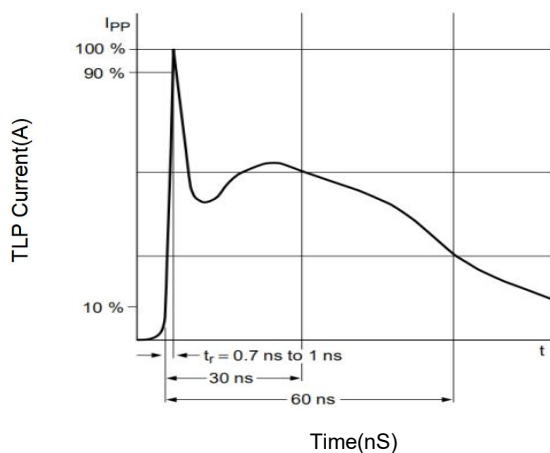
Peak Pulse Power vs. Pulse Time



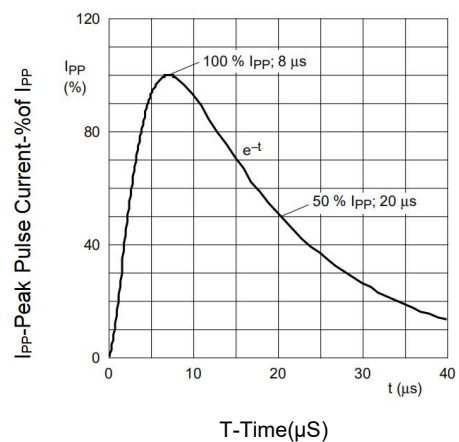
Junction Capacitance vs. Reverse Voltage



Clamping Voltage vs. Peak Pulse Current



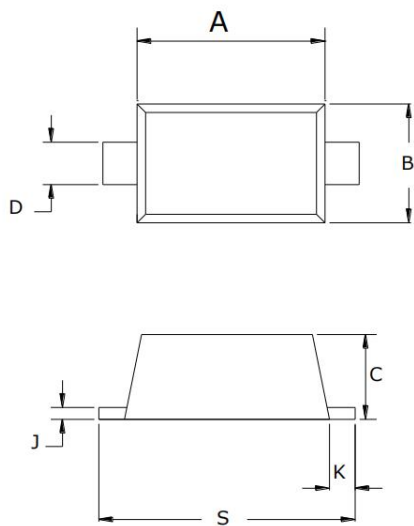
IEC61000-4-2 Pulse Waveform



IEC61000-4-5 8X20μs Pulse Waveform

Package Outline Dimensions

SOD523



SYMBOL	Dimensions In Millimet	
	MIN	MAX
A	1.10	1.30
B	0.70	0.90
C	0.50	0.70
D	0.25	0.35
J	0.07	0.20
K	0.15	0.25
S	1.50	1.70

Soldering Footprint (mm)

