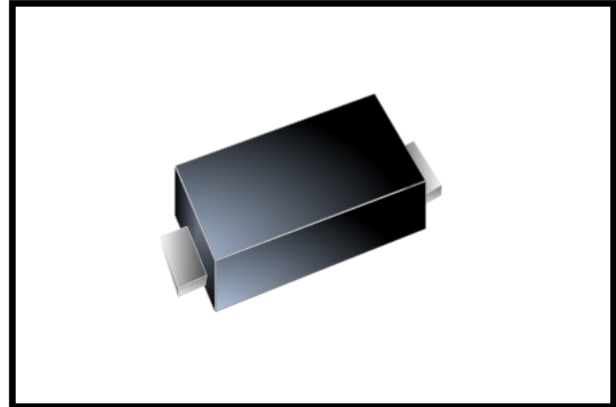


## SESD9D5C – ESD Protection Diode

### Feature

- 60 Watts peak pulse power (8/20μs)
- SOD-923 Package
- Protect one line
- Solid state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- IEC61000-4-2 (ESD) ±30kV (Air), ±30kV (Contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- IEC61000-4-5 (Lightning): 4A (8/20μs)



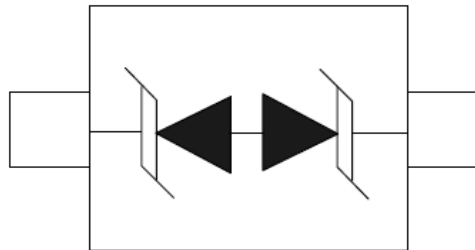
### Applications

- MP3 players
- Digital cameras
- Audio and video equipment
- Cellular handsets and accessories
- PDA
- Portable electronics

### Mechanical Data

- SOD-923 package
- Molding compound flammability rating: UL94 V-0
- Tape and Reel Packaging
- RoHS/WEEE Compliant

### Schematic and PIN Configuration



### Maximum Rating

Parameter	Symbol	Limit	Unit
IEC61000-4-2 ESD Voltage – Air Mode	V <sub>ESD</sub> <sup>(1)</sup>	±30	kV
IEC61000-4-2 ESD Voltage – Contact Mode		±30	
Peak Pulse Power	P <sub>PP</sub> <sup>(2)</sup>	60	W
Peak Pulse Current	I <sub>PP</sub> <sup>(2)</sup>	4	A
Maximum Lead Solder Temperature (10 seconds duration)	T <sub>L</sub>	260	°C
Junction Temperature	T <sub>J</sub>	-55~125	°C
Storage Temperature Range	T <sub>stg</sub>	-55~125	°C

Note:

1. Device stressed with ten non-repetitive ESD pulses.
2. Non-repetitive current pulse 8/20μs exponential decay waveform according to IEC61000-4-5.
3. All ratings are measured at environmental temperature of TA = 25 °C unless otherwise noted.

## SESD9D5C – ESD Protection Diode

### Electrical Characteristics

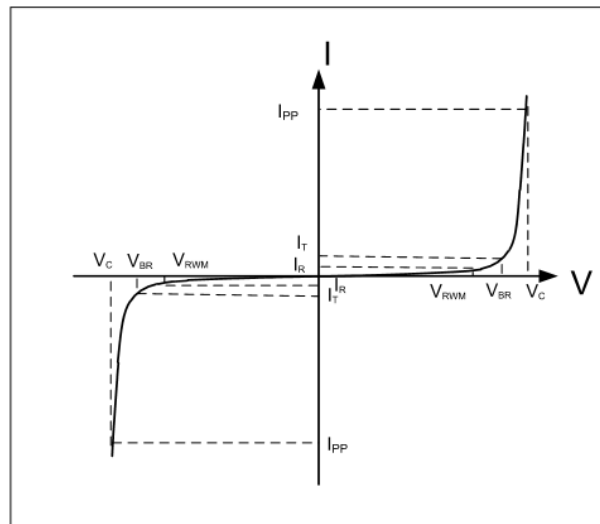
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse Stand-off Voltage	$V_{RWM}^{(1)}$				5.0	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T = 1\text{mA}$	6.0			V
Reverse Leakage Current	$I_R$	$V_{RWM} = 5\text{V}$			0.2	$\mu\text{A}$
Peak Pulse Current	$I_{PP}$				5	A
Clamping Voltage	$V_C^{(2)}$	$I_{PP} = 1\text{A}$		9.0	10	V
		$I_{PP} = 4\text{A}$		12.0	15.0	V
Junction Capacitance	$C_J$	$V_R = 0\text{V}, f = 1\text{MHz}$		8.0	15.0	pF

Note:

1. Other voltages available upon request.
2. Non-repetitive current pulse 8/20 $\mu\text{s}$  exponential decay waveform according to IEC61000-4-5.
3. All ratings are measured at environmental temperature of  $T_A = 25^\circ\text{C}$  unless otherwise noted.

### Electrical Parameters

Symbol	Parameter
$V_C$	Clamping Voltage @ $I_{PP}$
$I_{PP}$	Peak Pulse Current
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current
$I_R$	Reverse Leakage Current @ $V_{RWM}$
$V_{RWM}$	Reverse Stand-off Voltage



## SESD9D5C – ESD Protection Diode

### Typical Characteristics

Figure 1: Peak Pulse Power Vs Pulse Time

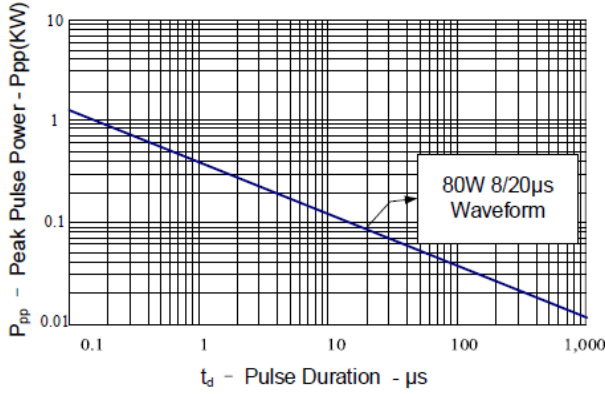


Figure 2: Power Derating Curve

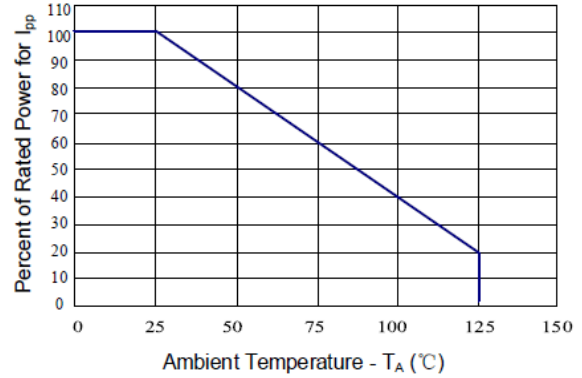


Figure 3: Clamping Voltage vs. Peak Pulse Current

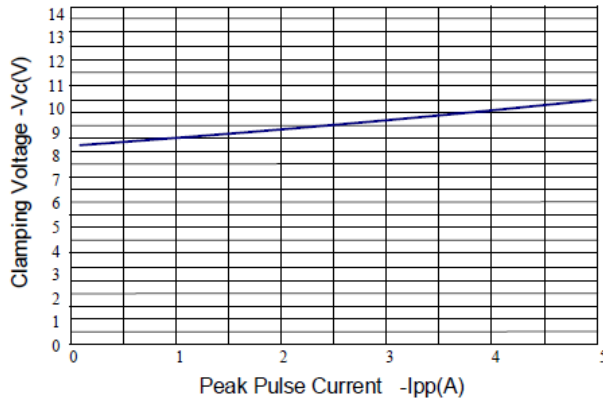


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

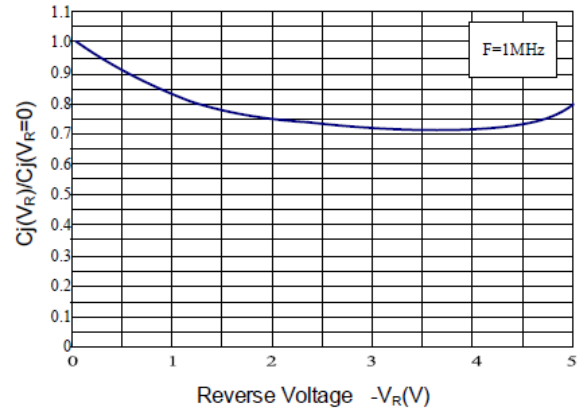


Figure 5: TLP Positive I-V Curve

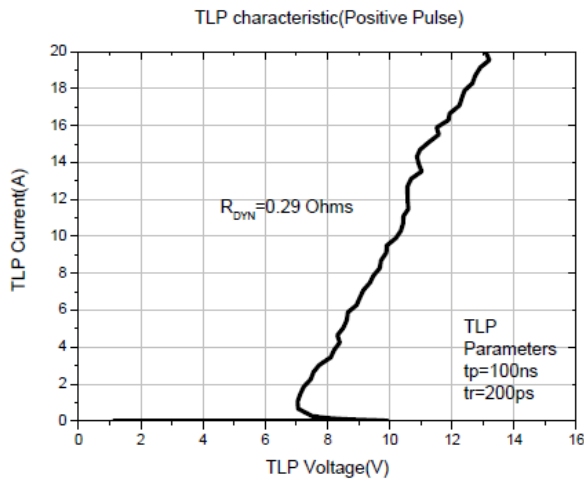
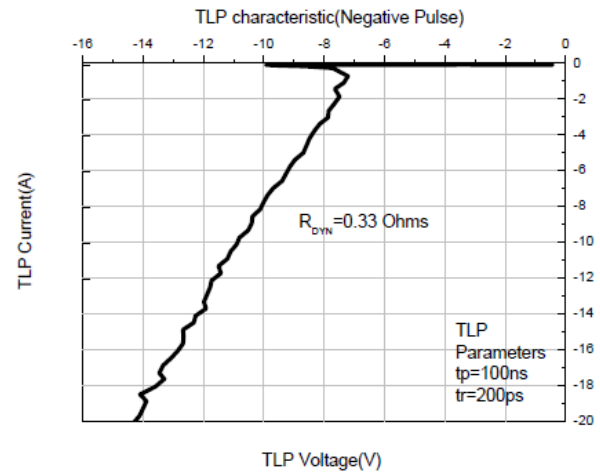
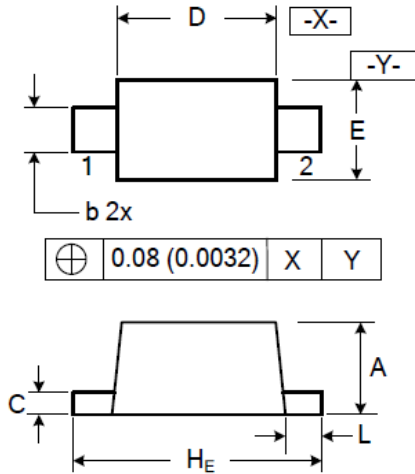


Figure 6: TLP Negative I-V Curve



## SESD9D5C – ESD Protection Diode

### SOD-923 Package Outline Dimensions



Symbol	Dimensions (mm)	
	Min	Max
A	0.39	0.45
b	0.15	0.30
C	0.06	0.20
D	0.70	0.90
E	0.55	0.65
H <sub>E</sub>	0.90	1.10
L	0.05	0.15

### Marking



C: Specific Device Code

E: Month Code

### Packaging Information

Order Code	Packaging	Reel Size	PCS/Reel
SESD9D5C	SOD-923	7 inch	8,000