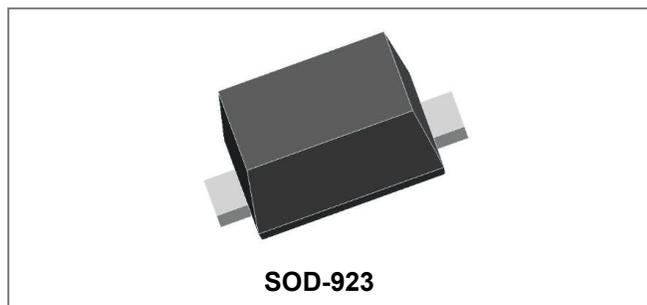


SD92303 SD92305 ESD Protection Diodes



Description

The SD92303 SD92305 are designed to protect voltage sensitive components from ESD. Excellent clamping capability, low leakage, and fast response time provide best in class protection on designs that are exposed to ESD. Because of its small size, it is suited for use in cellular phones, MP3 players, digital cameras and many other portable applications where board space is at a premium.

Schematic & Pin Configuration



Mechanical Data

- Stand-off Voltage: 3.3 V, 5 V
- Low Leakage
- ESD Rating of Class 3B per Human Body Model
- IEC61000-4-2 Level 4 ESD Protection
- These are Pb-Free Devices
- Terminals finish: 100% Pure Tin
- "-A" is an AEC-Q101 qualified device

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

Parameter	Symbol	Value	Units
ESD per IEC 61000-4-2 (Air)	V_{ESD}	± 17	kV
ESD per IEC 61000-4-2 (Contact)		± 12	
Peak Power Dissipation	P_{DK}	92	W
Power Dissipation	P_{D}	150	mW
Lead Temperature	T_{L}	260	$^\circ\text{C}$
Junction Temperature Range	T_{J}	150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to + 150	$^\circ\text{C}$

Electrical Characteristics@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 Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
C	Max. Capacitance @ $V_R=0$ and $f=1\text{MHz}$

Ratings and Characteristics Curves

Device*	Device Marking	V_{RWM} (V)	$I_R(\mu\text{A})$ @ V_{RWM}	$V_{BR}(V)$ @ I_T	I_T	$I_{pp}(A)$ $t_p=8/20\mu\text{s}$	$V_C(V)$ @ Max I_{pp} $t_p=8/20\mu\text{s}$	$C(pF)$ @ $V_R = 0V$, $f = 1\text{MHz}$
		Max.	Max.	Min.	mA	Max.	Max.	Typ.
SD92303	A	3.3	2.5	5.0	1.0	9.8	10.4	80
SD92305	E	5.0	1	6.2	1.0	7.5	12.3	40

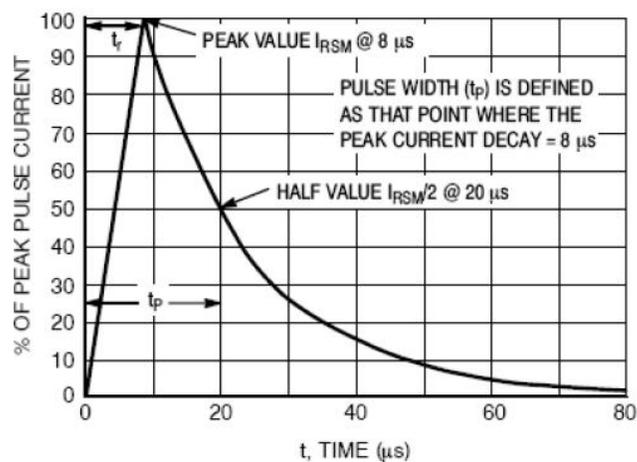


Figure 1. 8 x 20 μs Pulse Waveform

Ordering Information

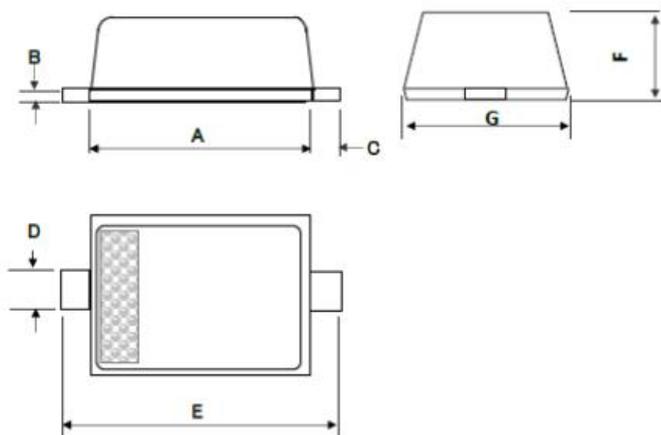
Device	Package	Shipping
SD92303 SD92305	SOD-923 (Pb-Free)	8000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram

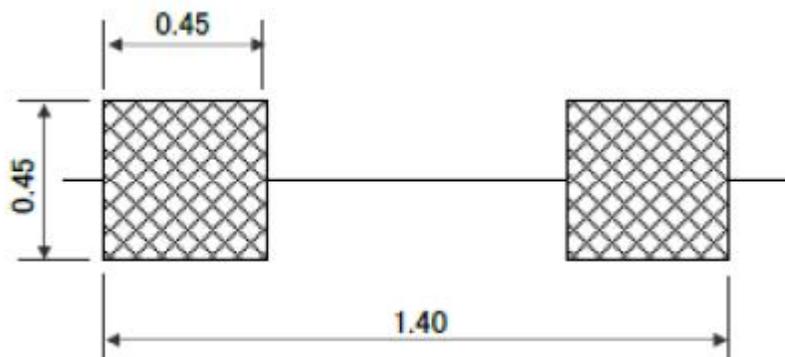


Mechanical Dimensions SOD-923



SYMBOL	Millimeters	
	Min.	Max.
A	0.70	0.90
B	0.05	0.20
C	0.05	0.15
D	0.15	0.30
E	0.90	1.10
F	0.39	0.45
G	0.55	0.65

and Pattern Recommendation SOD-923 (Millimeters)



Tolerance: $\pm 0.05\text{mm}$



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