



DESCRIPTION

The ESD9D5.0C 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. 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.

The ESD9D5.0C is available in SOD-923 package.

ORDERING INFORMATION

Package Type	Part Number
SOD-923	ESD9D5.0C
Note	SPQ: 8,000pcs/Reel
AiT provides all RoHS Compliant Products	

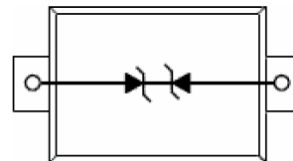
FEATURES

- Small Body Outline Dimensions
- Low Body Height
- Peak Power up to 150 Watts @ 8 x 20 μ s Pulse
- Low Leakage current
- Response Time is Typically <1 ns
- ESD Rating of Class 3 (>16 kV) per Human Body Model
- IEC61000-4-2 Level 4 ESD Protection
- IEC61000-4-4 Level 4 EFT Protection
- Available in SOD-923 package

APPLICATIONS

- Cellular phones
- Portable devices
- Digital cameras
- Power supplies

PIN DESCRIPTION





ABSOLUTE MAXIMUM RATINGS

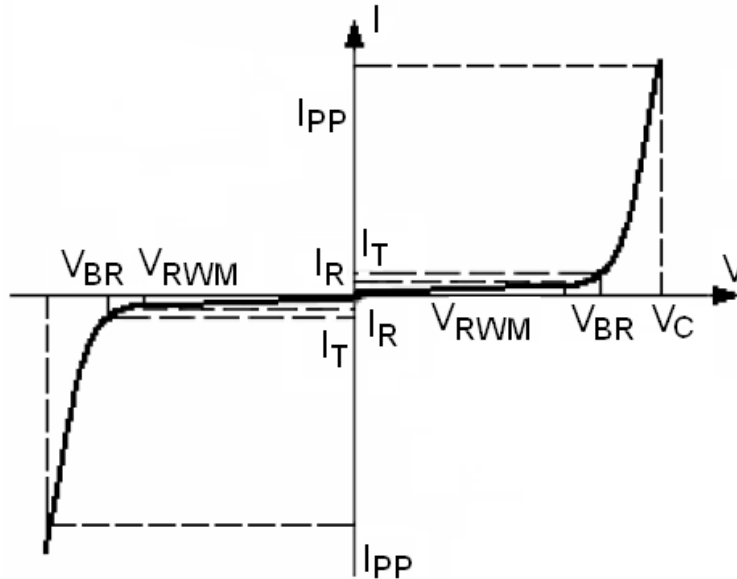
T_{amb} = 25°C

P _{PP} , Peak Pulse Power (t _p = 8/20μs)	150W
T _L , Maximum lead temperature for soldering during 10s	260°C
T _{stg} , Storage Temperature Range	-55°C to +155°C
T _{op} , Operating Temperature Range	-40°C to +125°C
T _j , Maximum junction temperature	150°C
IEC61000-4-2 (ESD)	air discharge ±15KV
	contact discharge ±8KV
IEC61000-4-4 (EFT)	40A
ESD Voltage	Per Human Body Model 16KV

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.



ELECTRICAL 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}	Breakdown Voltage @ I_T



ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. $V_F = 0.9V$ at $I_F = 10mA$

Part Number	V_{RWM} (V)	$I_{R1}(uA)$ @ V_{RWM}	$I_{R2}(uA)$ @ $V_R=3.5V$	$V_{BR}(V)$ @ I_T NOTE1	I_T	$V_C(V)$ @ $I_{PP} = 5A$ NOTE2	$V_C(V)$ @ MAX I_{PP} NOTE2	$I_{PP}(A)$ NOTE2	$P_{PK}(W)$ NOTE2	$C(pF)$
	MAX	MAX	MAX	MIN	mA	TYP	MAX	MAX	MAX	TYP
ESD9D5.0C	5.0	0.5	0.3	5.6	1.0	11.6	18.6	9.4	174	15

NOTE1: V_{BR} is measured with a pulse test current I_T at an ambient temperature of 25°C.

NOTE2: Surge current waveform per Figure 1.

TYPICAL CHARACTERISTICS

Figure1. Pulse Waveform

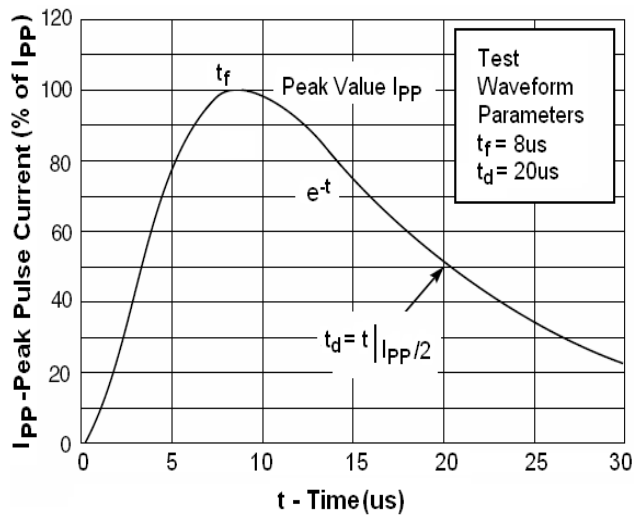
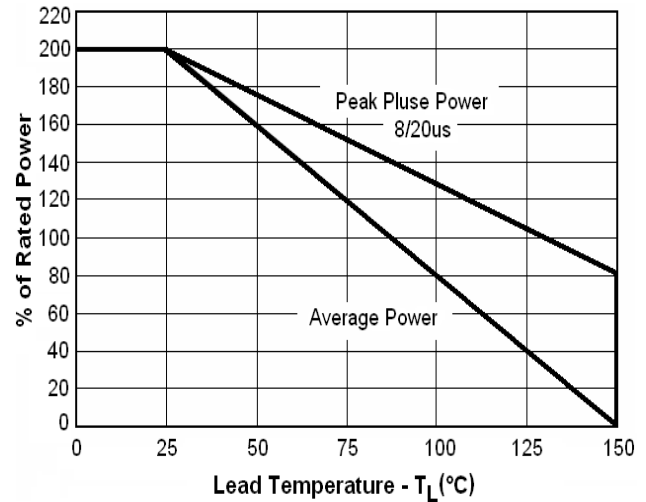


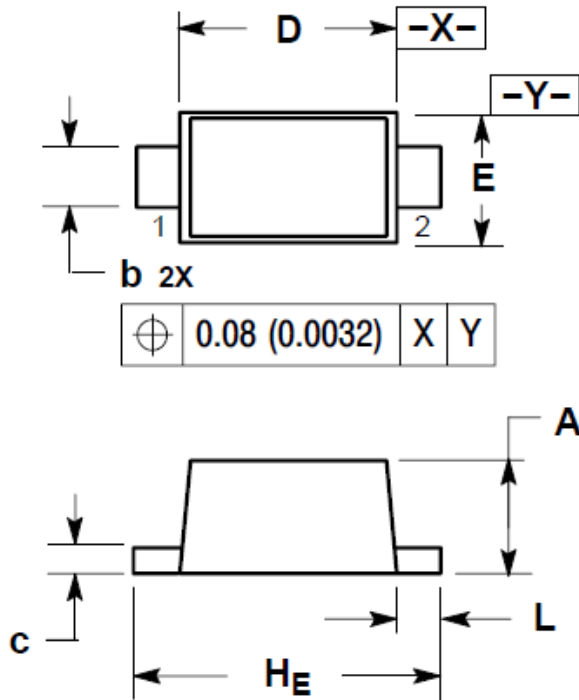
Figure 2. Power Derating Curve



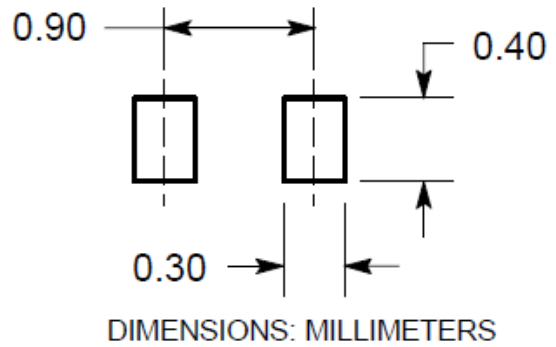


PACKAGE INFORMATION

Dimension in SOD-923 Package (Unit: mm)



SOLDERING FOOTPRINT*



DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.013	0.016	0.34	0.40
b	0.006	0.010	0.15	0.25
c	0.003	0.007	0.07	0.17
D	0.030	0.033	0.75	0.85
E	0.022	0.026	0.55	0.65
HE	0.037	0.041	0.95	1.05
L	0.002	0.006	0.05	0.15



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