

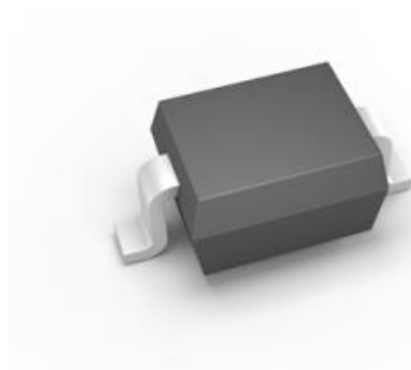
WHTA3V30P8B

Product Datasheet

ESD Protection Diodes

1.Description

The WHTA3V30P8B is a low capacitance transient voltage suppressor array, designed to protect applications such as portable electronics and SMART phones. This product is available in bidirectional configurations and is rated at 350 Watts for an 8/20 μ s waveshape. This product offers a low capacitance and low leakage current in a miniature SOD323 package.



2.Features

- IEC 61000-4-2 (ESD)
 - ± 30 kV Contact Discharge
 - ± 30 kV Air Discharge
- 400W Peak pulse Power (8/20 μ s)
- IEC 61000-4-4 EFT Protection
 - 40A (5/50ns)
- Halogen free and RoHS compliant
- Protects one directional I/O line
- Transient protection for high-speed data lines
- Low clamping voltage
- Low leakage current

3.Mechanical Data

- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants
- Notebooks / Desktops / Servers
- Portable Instrumentation
- Peripherals & Pagers

4.Ordering Information

Part Number	Package	Marking	Material	Packing	Quantity per reel	Flammability Rating	Reel Size
WHTA3V30P8B	SOD-323	CC	Halogen free	Tape & Reel	3,000 PCS	UL 94V-0	7 inches

Table-1 Ordering information

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5.Pin Configuration and Functions


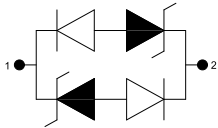
Pin	Name	Description	Outline	Circuit Diagram
1	IO	Connect to IO		
2	IO	Connect to IO		

Table-2 Pin configuration

6. Absolute Maximum rating

Over operating free-air temperature range (unless otherwise noted)

Parameters	Symbol	Min.	Max.	Unit
Peak pulse power (tp=8/20us)@25°C	P _{pk}	-	400	W
Peak pulse current (tp=8/20us)@25°C	I _{PP}	-	25	A
ESD (IEC61000-4-2 air discharge) @25°C	V _{ESD}	-	±30	kV
ESD (IEC61000-4-2 contact discharge) @25°C	V _{ESD}	-	±30	kV
Junction temperature	T _J	-	125	°C
Operating temperature	T _{OP}	-40	125	°C
Storage temperature	T _{STG}	-55	150	°C
Lead temperature	T _L	-	260	°C

Table-3 Absolute Maximum rating

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7. Electrical Characteristics

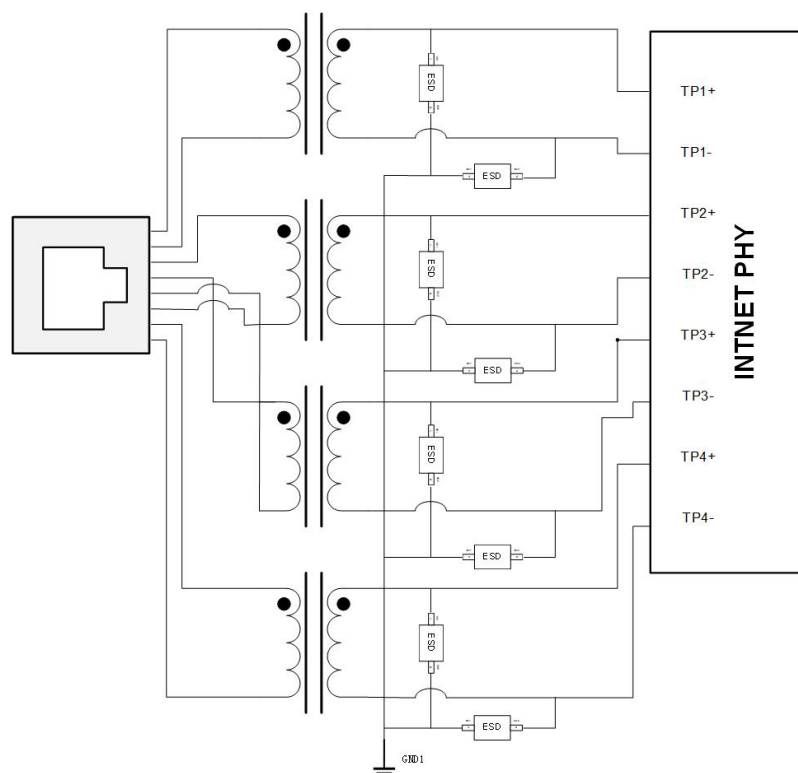
At TA = 25°C unless otherwise noted

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	V_{RWM}				3.3	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	4.0			V
Reverse Leakage Current	I_R	$V_{RWM}=3.3V$			1	μA
Clamping Voltage	V_C	$I_{PP}=1A$; $t_p=8/20\mu s$		8.5		V
Clamping Voltage	V_C	$I_{PP}=25A$; $t_p=8/20\mu s$		15		V
Junction Capacitance	C_J	I/O to GND; $V_R=0V$; $f=1MHz$		0.8		pF

Table-4 Electrical Characteristics

8. Typical Application

Typical Internet 1G Interface Application



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9.Ratings and Characteristic Curves (TA =25℃ unless otherwise noted)

Figure 1. Pulse rating curve

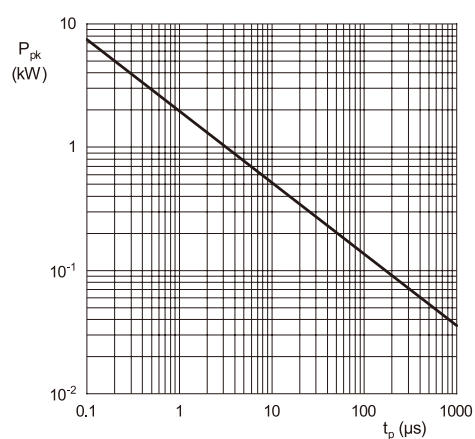


Figure 2 Peak pulse power derating curve

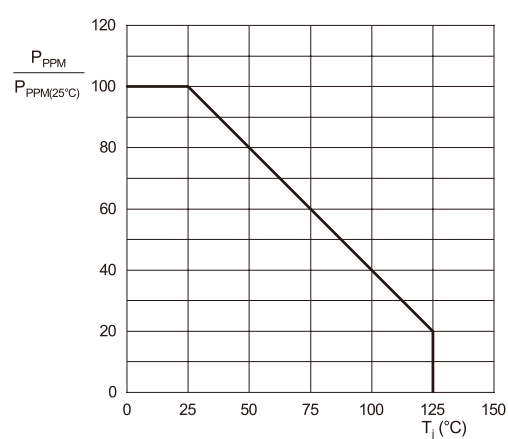


Figure 3 Pulse waveform

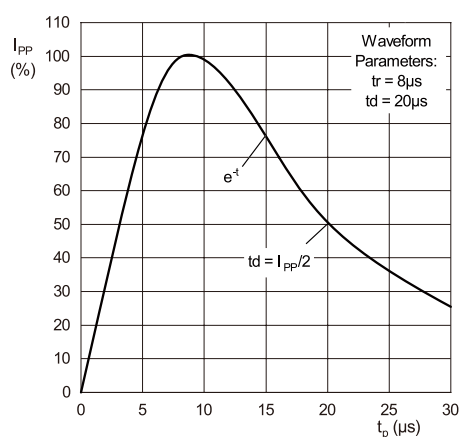
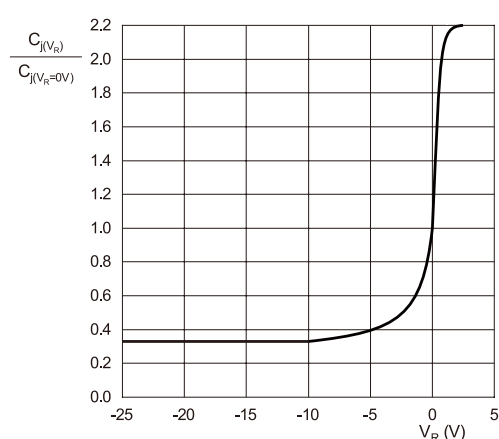


Figure 4 Capacitance vs reverse voltage

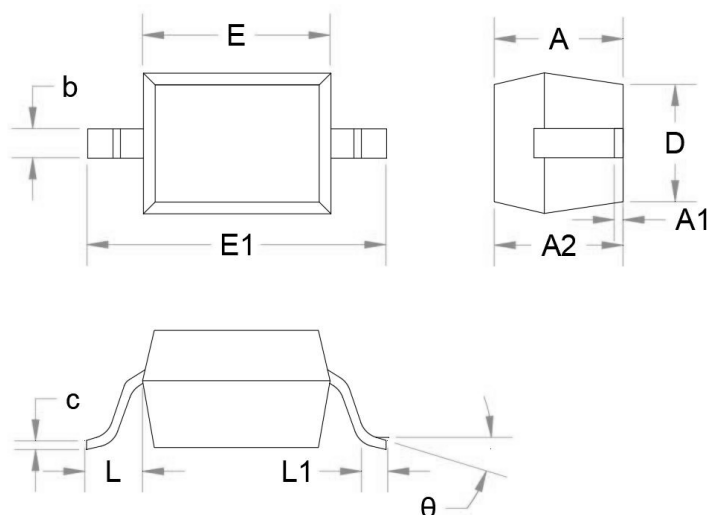


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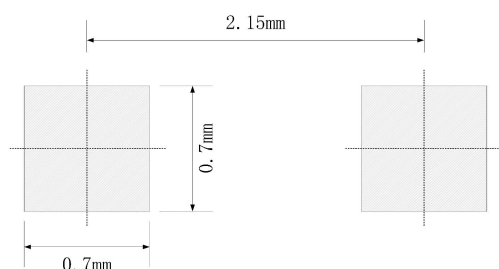
10.Dimension



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min.	Max.	Min.	Max.
A		1.000		0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.950	0.031	0.037
b	0.250	0.350	0.010	0.014
C	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.400	2.750	0.094	0.108
L	0.475REF		0.019REF	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

Table-5 product dimensions

11.Recommended Land Pattern



Note:

1. Controlling dimension: in millimeters
2. General tolerance: $\pm 0.05\text{mm}$
3. The pad layout is for reference only