



# ESDA14V2BP6

Application Specific Discretes  
A.S.D.™

TRANSIL™

## MAIN APPLICATIONS

Where transient overvoltage protection in ESD sensitive equipment is required, such as :

- Computers
- Printers
- Communication systems and cellular phones
- Video equipment

This device is particularly adapted to the protection of symmetrical signals.

## FEATURES

- 4 Bidirectional Transil™ functions.
- ESD Protection: IEC61000-4-2 level 4
- Stand off voltage: 12V MIN
- Low leakage current < 1µA

## DESCRIPTION

The ESDA14V2BP6 is a monolithic array designed to protect up to 4 lines in a bidirectional way against ESD transients.

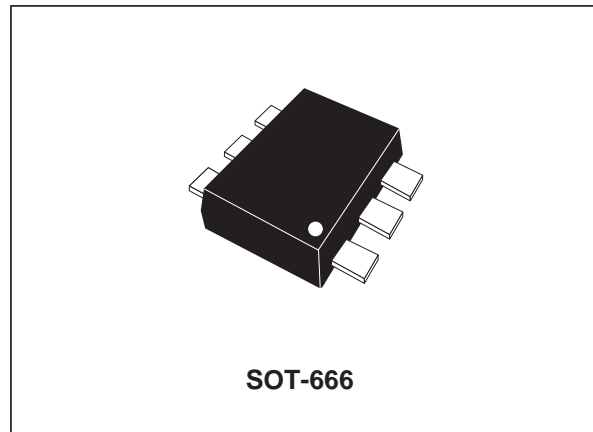
This device is ideal for applications where board space saving is required.

## BENEFITS

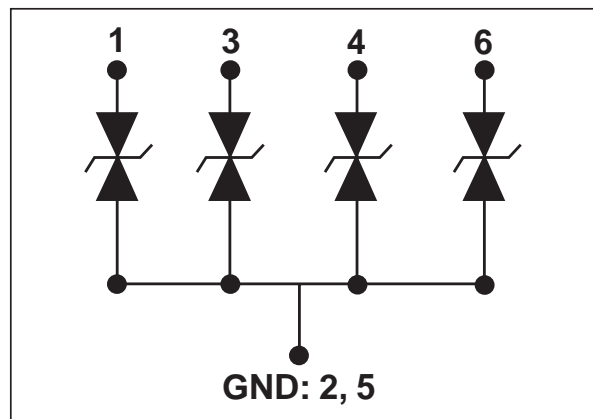
- High ESD protection level.
- High integration.
- Suitable for high density boards.

## COMPLIES WITH THE FOLLOWING STANDARDS :

- **IEC61000-4-2 level 4:** 15 kV (air discharge)  
8 kV (contact discharge)
- **MIL STD 883E-Method 3015-7:** class 3  
25kV HBM (Human Body Model)



## FUNCTIONAL DIAGRAM



# ESDA14V2BP6

## ABSOLUTE RATINGS (T<sub>amb</sub> = 25°C)

Symbol	Parameter	Test conditions	Value	Unit
V <sub>PP</sub>	ESD discharge - IEC61000-4-2 air discharge IEC61000-4-2 contact discharge		± 15 ± 8	kV
P <sub>PP</sub>	Peak pulse power dissipation(8/20 μs). Note 1	T <sub>j</sub> initial = T <sub>amb</sub>	50	W
T <sub>j</sub>	Junction temperature		125	°C
T <sub>stg</sub>	Storage temperature range		- 55 to + 150	°C
T <sub>L</sub>	Maximum lead temperature for soldering during 10s at 5mm for case		260	°C
T <sub>op</sub>	Operating temperature range		- 40 to + 125	°C

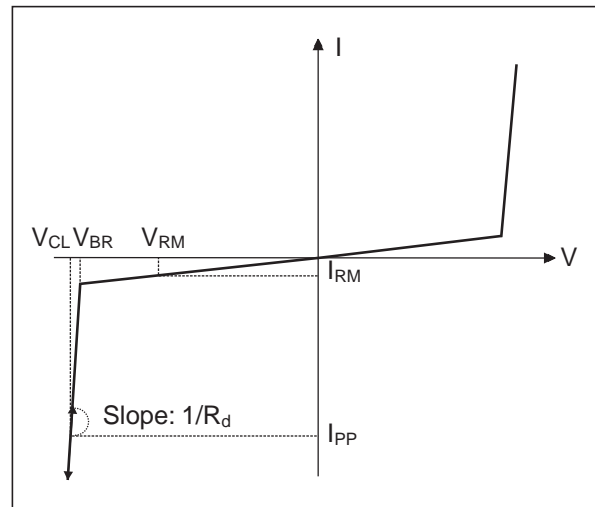
**Note 1:** for a surge greater than the maximum values, the diode will fail in short-circuit.

## THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
R <sub>th(j-a)</sub>	Junction to ambient on printed circuit on recommended pad layout	220	°C/W

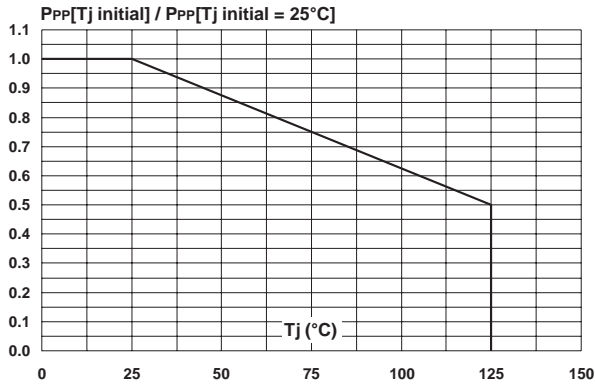
## ELECTRICAL CHARACTERISTICS (T<sub>amb</sub> = 25°C)

Symbol	Parameter
V <sub>RM</sub>	Stand-off voltage
V <sub>BR</sub>	Breakdown voltage
V <sub>CL</sub>	Clamping voltage
I <sub>RM</sub>	Leakage current @ V <sub>RM</sub>
I <sub>PP</sub>	Peak pulse current
αT	Voltage temperature coefficient
V <sub>F</sub>	Forward voltage drop

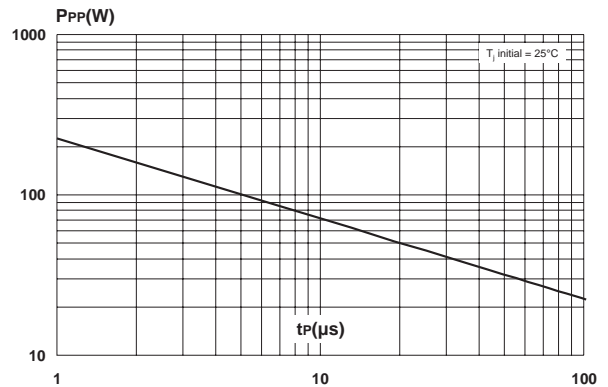


Types	I <sub>RM</sub> @ V <sub>RM</sub>		V <sub>BR</sub> @ I <sub>r</sub>		R <sub>d</sub> typ.	αT typ.	C max.	
	max. μA	V	min. V	max. V				
ESDA14V2BP6	1	12	14.2	18	1	1.5	5.8	25
	0.1	3						

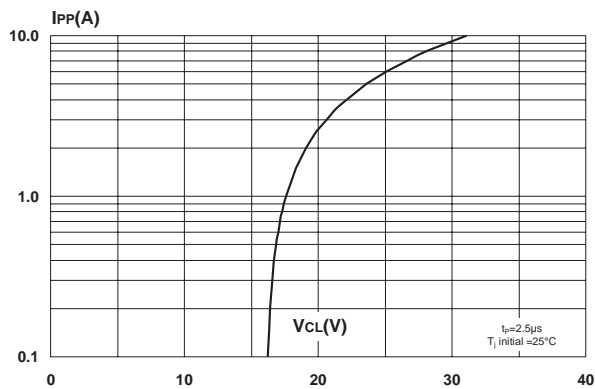
**Fig. 1:** Relative variation of peak pulse power versus initial junction temperature.



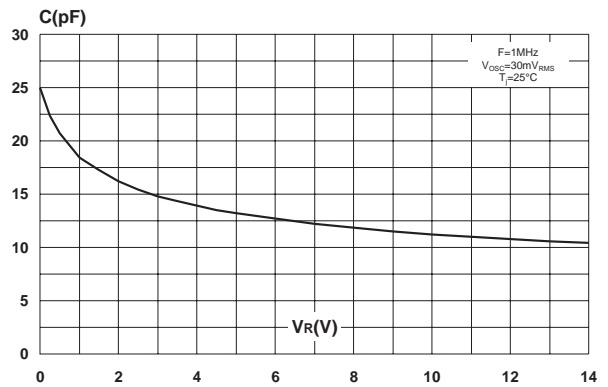
**Fig. 2:** Peak pulse power versus exponential pulse duration.



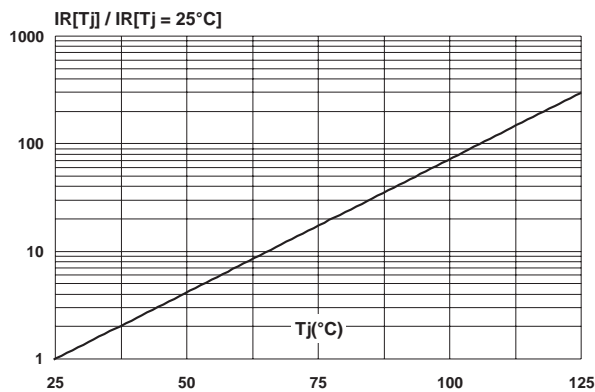
**Fig. 3:** Clamping voltage versus peak pulse current (typical values, rectangular waveform).



**Fig. 4:** Junction capacitance versus reverse voltage applied (typical values).



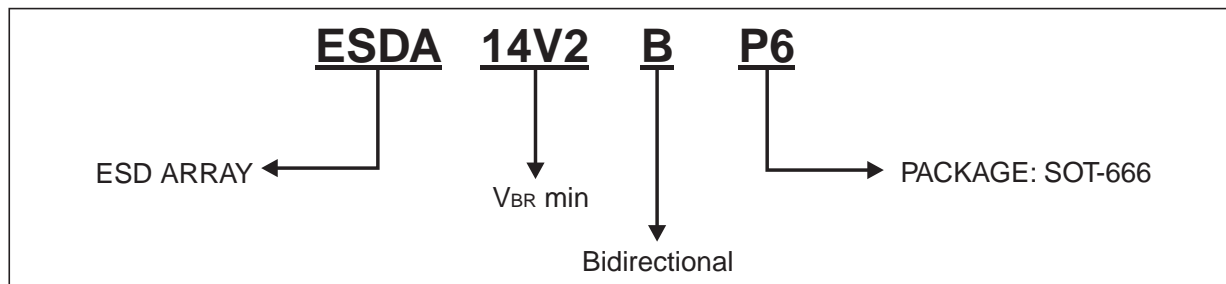
**Fig. 5:** Relative variation of leakage current versus junction temperature (typical values).



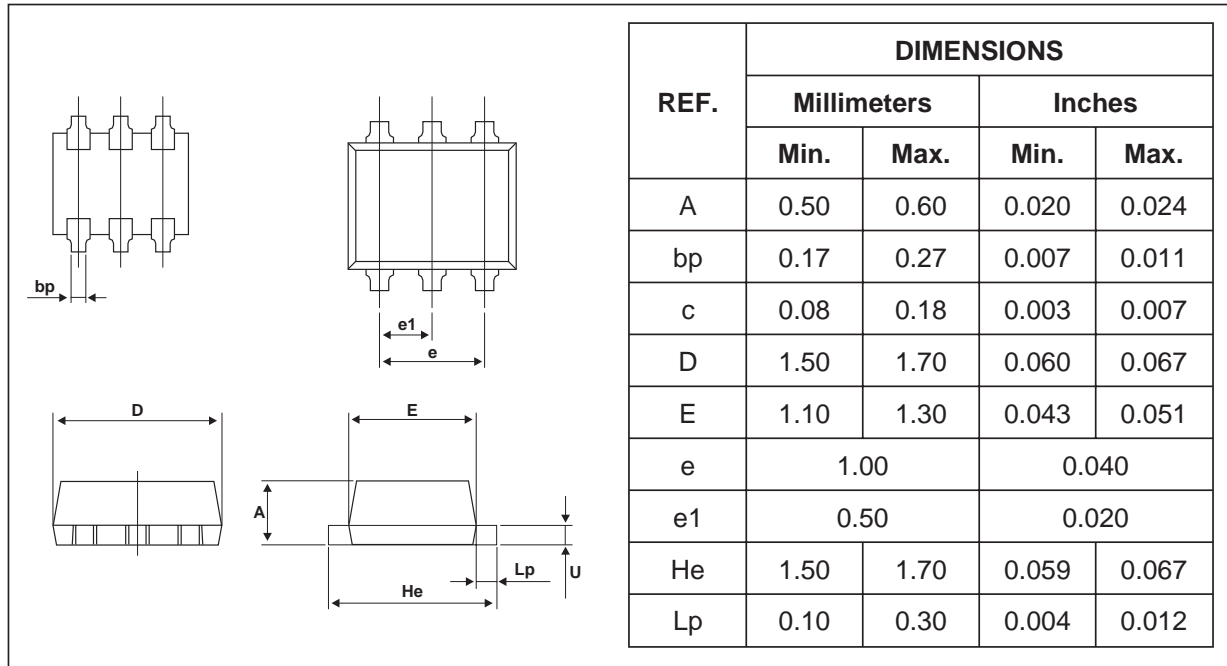
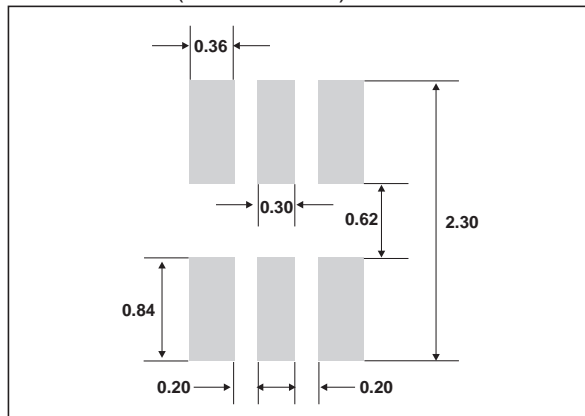
## ESDA14V2BP6

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### ORDER CODE



Ordering type	Marking	Package	Weight	Base qty	Delivery mode
ESDA14V2BP6	A	SOT-666	2.9 mg.	3000	Tape & reel 7"

**PACKAGE MECHANICAL DATA**  
 SOT-666

**FOOT PRINT (in millimeters)**


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