



## 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.

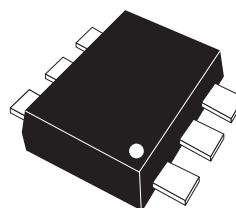
This device is ideal for applications where board space saving is required.

### BENEFITS

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

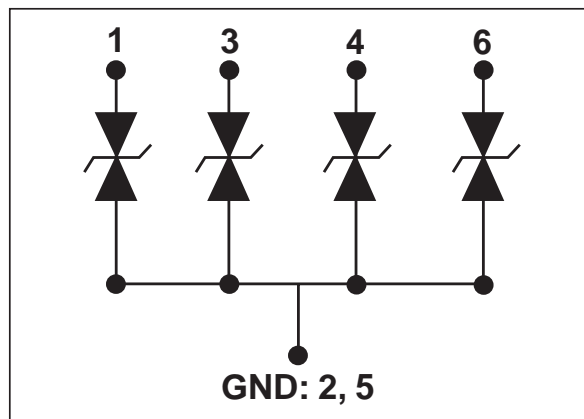
### COMPLIES WITH THE FOLLOWING STANDARDS :

- **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)



SOT-666

### FUNCTIONAL DIAGRAM



## ESDA14V2BP6

### ABSOLUTE RATINGS ( $T_{amb} = 25^{\circ}\text{C}$ )

Symbol	Parameter	Test conditions	Value	Unit
$V_{PP}$	ESD discharge - IEC61000-4-2 air discharge IEC61000-4-2 contact discharge		$\pm 15$ $\pm 8$	kV
$P_{PP}$	Peak pulse power dissipation(8/20 $\mu\text{s}$ ). Note 1	$T_j \text{ initial} = T_{amb}$	50	W
$T_j$	Junction temperature		125	$^{\circ}\text{C}$
$T_{stg}$	Storage temperature range		- 55 to + 150	$^{\circ}\text{C}$
$T_L$	Maximum lead temperature for soldering during 10s at 5mm for case		260	$^{\circ}\text{C}$
$T_{op}$	Operating temperature range		- 40 to + 125	$^{\circ}\text{C}$

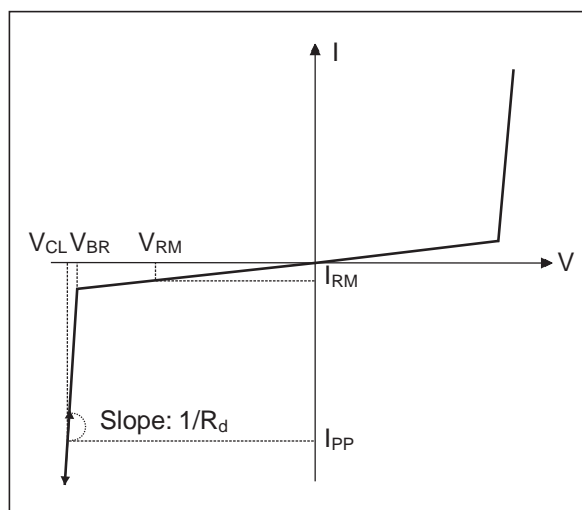
**Note 1:** for a surge greater than the maximum values, the diode will fail in short-circuit.

### THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-a)}$	Junction to ambient on printed circuit on recommended pad layout	220	$^{\circ}\text{C/W}$

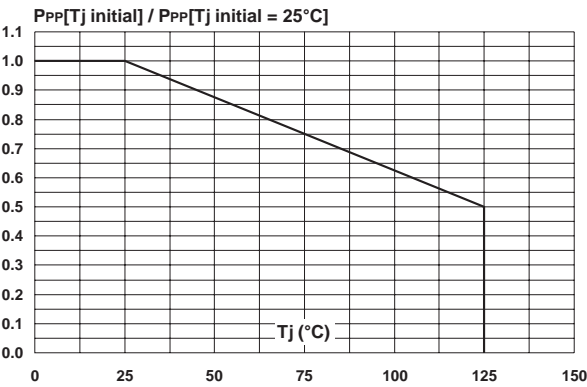
### ELECTRICAL CHARACTERISTICS ( $T_{amb} = 25^{\circ}\text{C}$ )

Symbol	Parameter
$V_{RM}$	Stand-off voltage
$V_{BR}$	Breakdown voltage
$V_{CL}$	Clamping voltage
$I_{RM}$	Leakage current @ $V_{RM}$
$I_{PP}$	Peak pulse current
$\alpha T$	Voltage tempature coefficient
$V_F$	Forward voltage drop

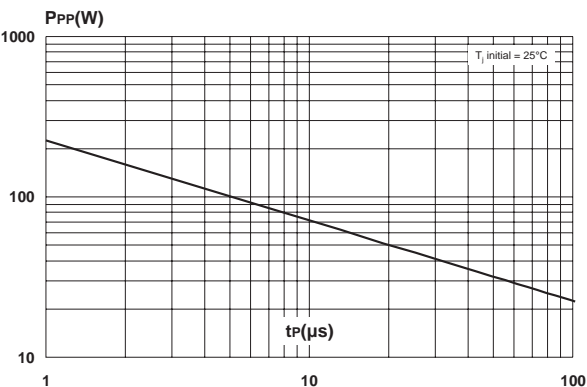


Types	$I_{RM} @ V_{RM}$		$V_{BR} @ I_R$		$R_d$ typ.	$\alpha T$ typ.	$C$ max.
	max. $\mu\text{A}$	$V$	min. $V$	max. $V$			
ESDA14V2BP6	1	12	14.2	18	1	5.8	25
	0.1	3					

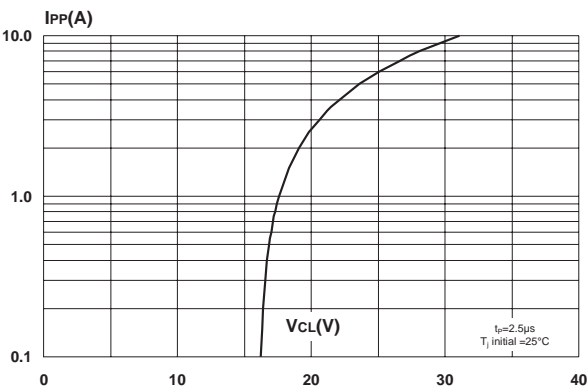
**Fig. 1:** Relative variation of peak pulse power versus initial junction temperature.



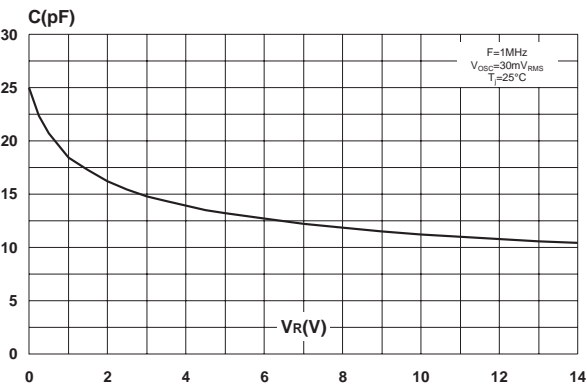
**Fig. 2:** Peak pulse power versus exponential pulse duration.



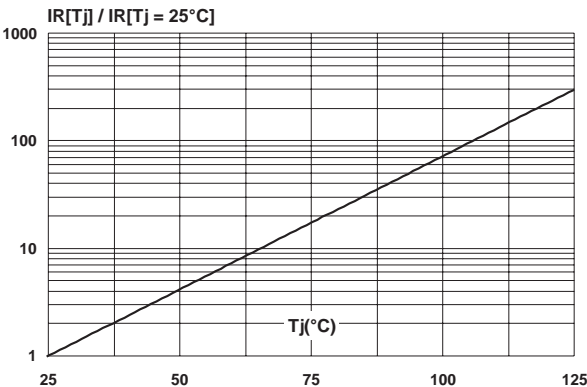
**Fig. 3:** Clamping voltage versus peak pulse current (typical values, rectangular waveform).



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



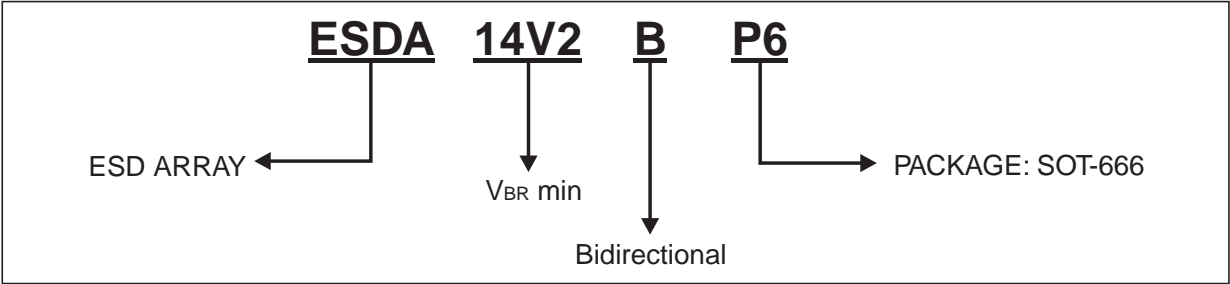
**Fig. 5:** Relative variation of leakage current versus junction temperature (typical values).



**ESDA14V2BP6**

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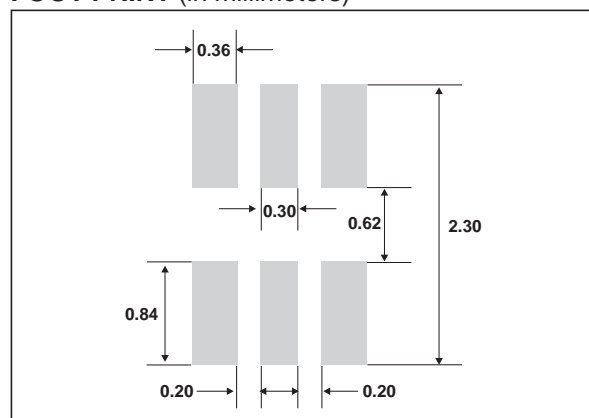
**ORDER CODE**



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**

REF.	DIMENSIONS			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.50	0.60	0.020	0.024
bp	0.17	0.27	0.007	0.011
c	0.08	0.18	0.003	0.007
D	1.50	1.70	0.060	0.067
E	1.10	1.30	0.043	0.051
e	1.00		0.040	
e1	0.50		0.020	
He	1.50	1.70	0.059	0.067
Lp	0.10	0.30	0.004	0.012

**FOOT PRINT (in millimeters)**


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