

## ESDA6V1-5SC6

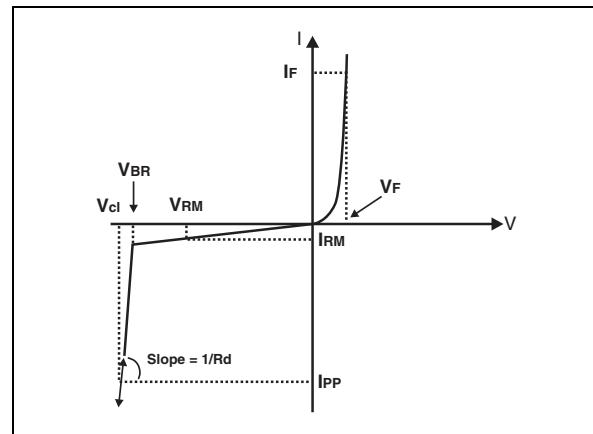
**Table 2: Absolute Maximum Ratings ( $T_{amb} = 25^\circ C$ )**

Symbol	Parameter	Value	Unit
$V_{PP}$	ESD discharge MIL STD 883E - Method 3015-7 IEC61000-4-2 air discharge IEC61000-4-2 contact discharge	25 20 15	kV
$P_{PP}$	Peak pulse power (8/20μs)	100	W
$T_j$	Junction temperature	150	°C
$T_{stg}$	Storage temperature range	-55 to +150	°C
$T_L$	Maximum lead temperature for soldering during 10 s at 5mm for case	260	°C
$T_{op}$	Operating temperature range (note 1)	-40 to +125	°C

Note 1: The evolution of the operating parameters versus temperature is given by curves and  $\alpha T$  parameter.

**Table 3: Electrical Characteristics ( $T_{amb} = 25^\circ C$ )**

Symbol	Parameter
$V_{RM}$	Stand-off voltage
$V_{BR}$	Breakdown voltage
$V_{CL}$	Clamping voltage
$I_{RM}$	Leakage current
$I_{PP}$	Peak pulse current
$\alpha T$	Voltage temperature coefficient
$V_F$	Forward voltage drop
C	Capacitance
$R_d$	Dynamic resistance

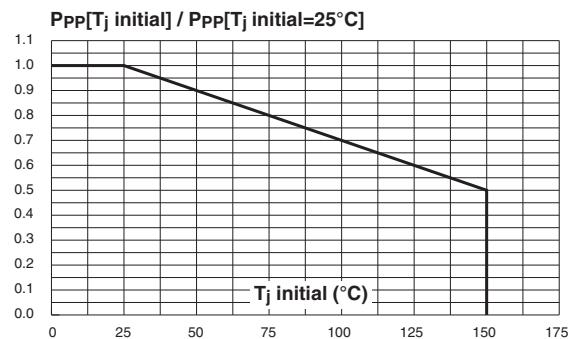


Type	$V_{BR}$ @ $I_R$		$I_{RM}$ @ $V_{RM}$		$R_d$ typ. note 2	$\alpha T$ max. note 3	C typ. 0V bias	$V_F$ @ $I_F$				
	min.	max.	mA	μA				V	mΩ	10 <sup>-4</sup> /°C	pF	V
ESDA6V1-5SC6	6.1	7.2	1	1	3	590	6	50	1.25	200		

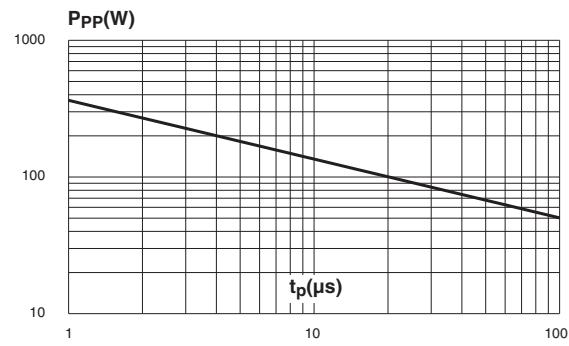
Note 2: Square pulse,  $I_{PP} = 15A$ ,  $t_p=2.5\mu s$ .

Note 3:  $\Delta V_{BR} = \alpha T^* (T_{amb} - 25^\circ C) * V_{BR} (25^\circ C)$ .

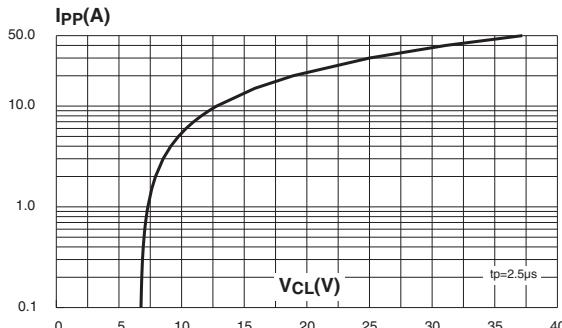
**Figure 3: Peak power dissipation versus initial junction temperature**



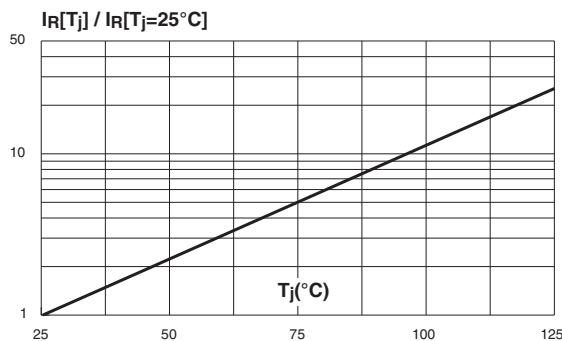
**Figure 4: Peak pulse power versus exponential pulse duration ( $T_j$  initial = 25 °C)**



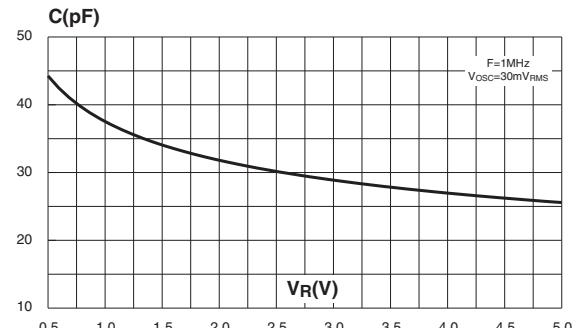
**Figure 5: Clamping voltage versus peak pulse current ( $T_j$  initial = 25 °C).  
Rectangular waveform ( $t_p$  = 2.5 µs)**



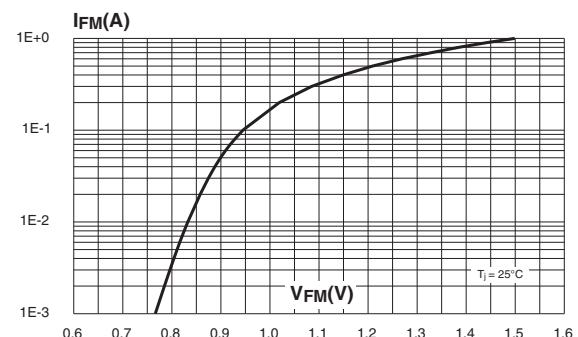
**Figure 7: Relative variation of leakage current versus junction temperature (typical values)**



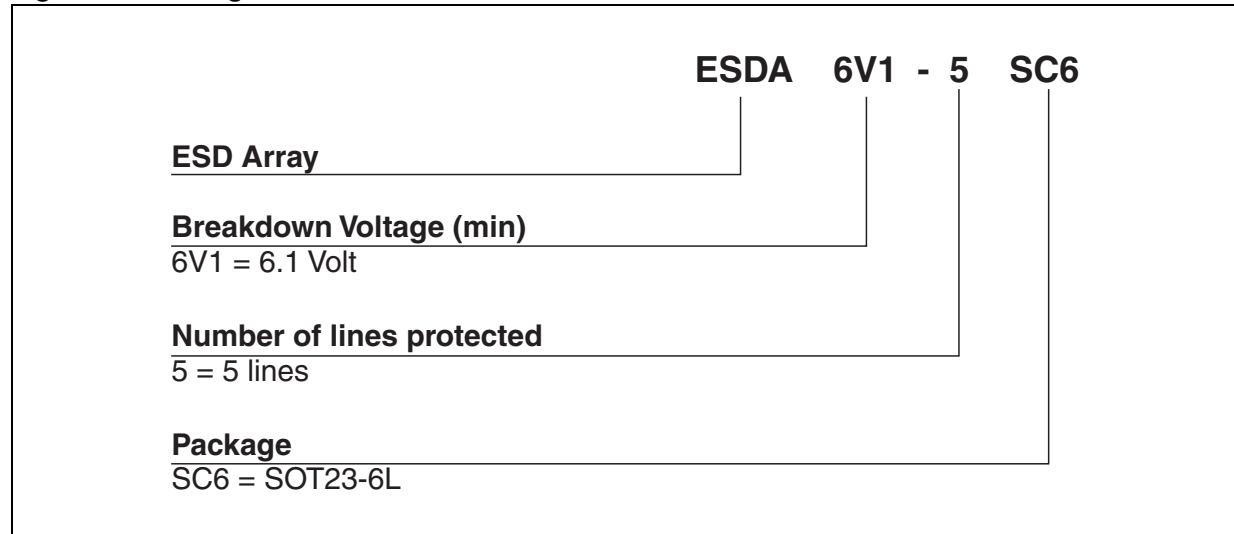
**Figure 6: Capacitance versus reverse applied voltage (typical values)**



**Figure 8: Peak forward voltage drop versus peak forward current (typical values)**



**Figure 9: Ordering information scheme**



## ESDA6V1-5SC6

Figure 10: SOT23-6L Package Mechanical Data

REF.	DIMENSIONS					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	0.90		1.45	0.035		0.057
A1	0		0.10	0		0.004
A2	0.90		1.30	0.035		0.051
b	0.35		0.50	0.014		0.02
C	0.09		0.20	0.004		0.008
D	2.80		3.05	0.110		0.120
E	1.50		1.75	0.059		0.069
e		0.95			0.037	
H	2.60		3.00	0.102		0.118
L	0.10		0.60	0.004		0.024
θ			10°			10°

Figure 11: Foot Print Dimensions (in millimeters)

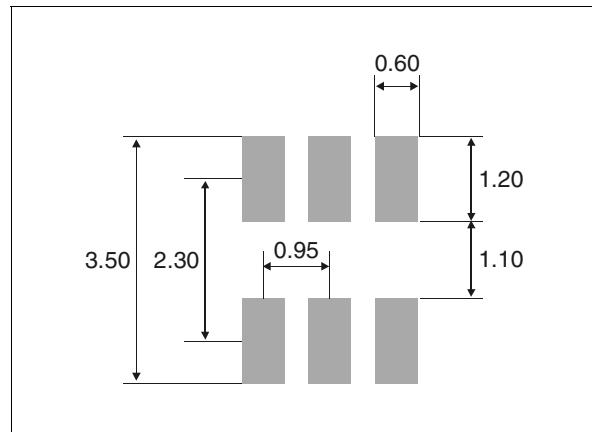


Table 4: Ordering Information

Part Number	Marking	Package	Weight	Base qty	Delivery mode
ESDA6V1-5SC6	EC62	SOT23-6L	16.7 mg	3000	Tape & reel

Table 5: Revision History

Date	Revision	Description of Changes
Feb-2002	2B	Last update.
4-Nov-2004	3	SOT23-6L package dimensions change for reference "D" from 3.0 millimeters (0.118 inches) to 3.05 millimeters (0.120 inches).

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