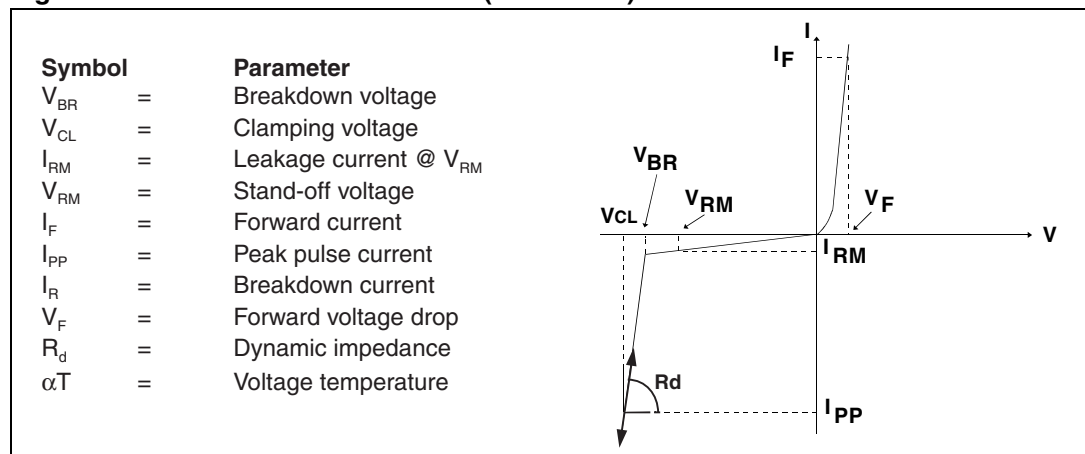


# 1 Characteristics

**Table 1. Absolute ratings ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ )**

Symbol	Parameter		Value	Unit
$V_{PP}$	ESD discharge	IEC 61000-4-2 air discharge IEC 61000-4-2 contact discharge	$\pm 15$ $\pm 8$	kV
$P_{PP}$	Peak pulse power (8/20 $\mu$ s)	$T_j$ initial = $T_{amb}$	150	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 10 s at 5mm for case		260	$^{\circ}\text{C}$
$T_{op}$	Operating temperature range <sup>(1)</sup>		-40 to +125	$^{\circ}\text{C}$

1. For a surge greater than the maximum values, the diode will fail in short-circuit.

**Figure 2. Electrical characteristics (definitions)**

**Table 2. Electrical characteristics (values,  $T_{amb} = 25\text{ }^{\circ}\text{C}$ )**

Order code	$V_{BR} @ I_R$			$I_{RM} @ V_{RM}$		$R_d$	$\alpha T$	$C$	$V_F @ I_F$	
	min.	max.		max.		typ. <sup>(1)</sup>	max. <sup>(2)</sup>	typ. 0V bias	max.	
	V	V	mA	nA	V	$\Omega$	$10^{-4}/^{\circ}\text{C}$	pF	V	mA
ESDA17-5SC6	17	19	1	75	14	1	10	33	1.2	10

1. Square pulse,  $I_{pp} = 15\text{ A}$ ,  $t_p = 2.5\text{ }\mu\text{s}$ .

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

Figure 3. Relative variation of peak pulse power versus initial junction temperature

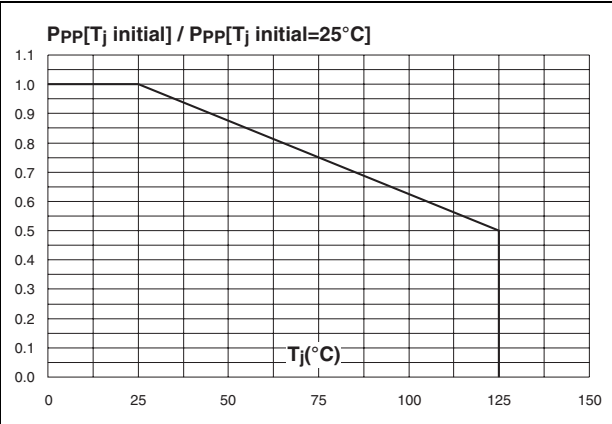


Figure 4. Peak pulse power versus exponential pulse duration

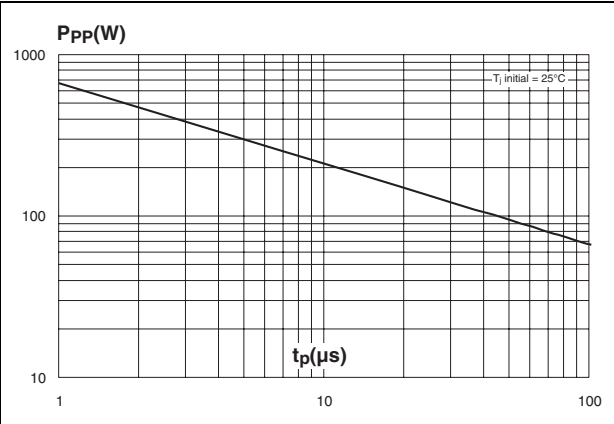


Figure 5. Clamping voltage versus peak pulse current (typical values, rectangular waveform)

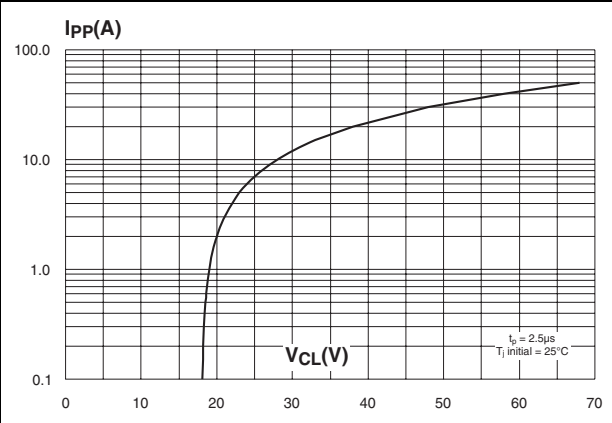


Figure 6. Forward voltage drop versus peak forward current (typical values)

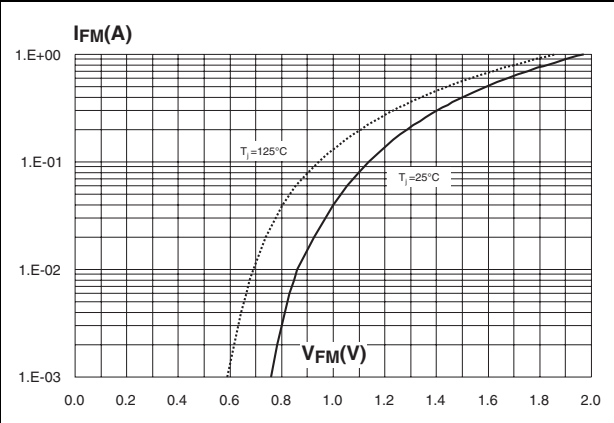


Figure 7. Junction capacitance versus reverse voltage applied (typical values)

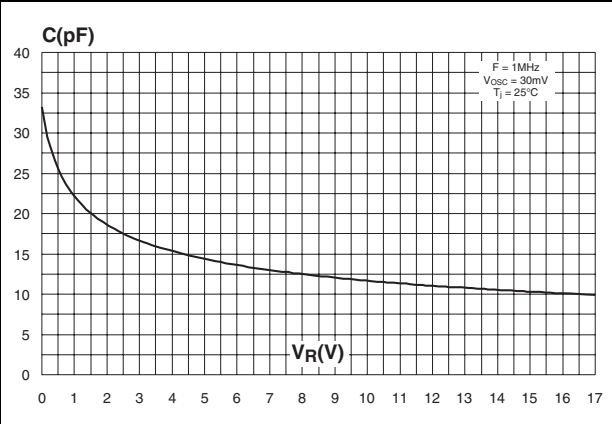
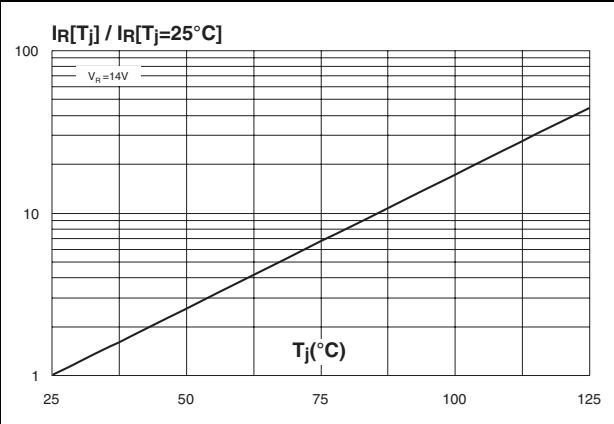
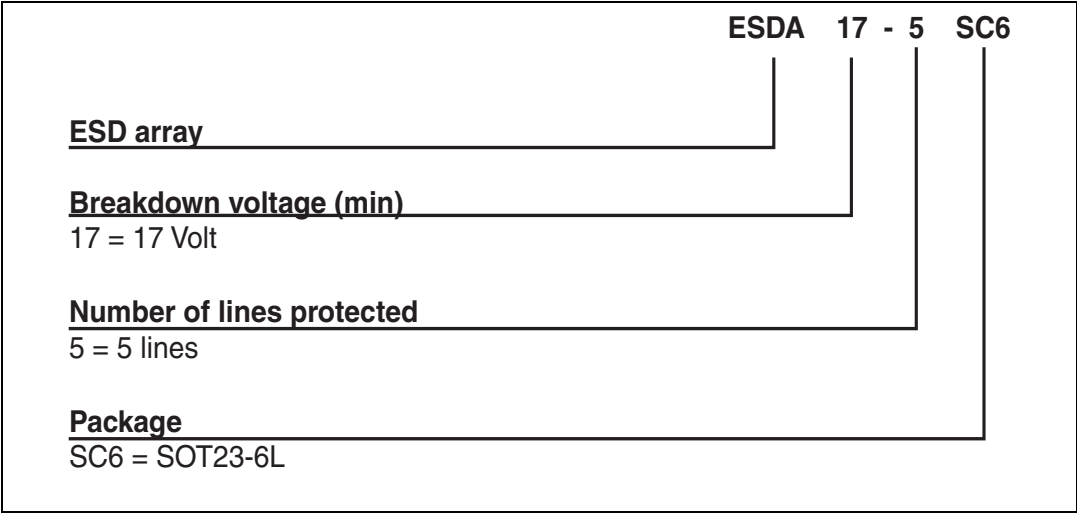


Figure 8. Relative variation of leakage current versus junction temperature (typical values)



## 2      Ordering information scheme

Figure 9.    Ordering information scheme



### 3 Package information

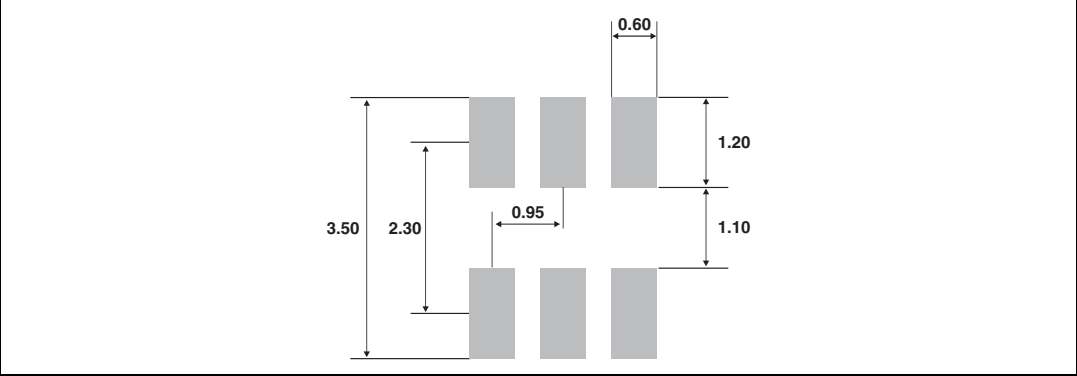
- Epoxy meets UL94, V0
- Lead-free package

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**Table 3. SOT23-6L dimensions**

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		0.020
c	0.09		0.20	0.004		0.008
D	2.80		3.05	0.11		0.118
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	0°		10°	0°		10°

**Figure 10. Footprint (dimensions in mm)**



## 4 Ordering information

**Table 4. Ordering information**

Order code	Marking	Package	Weight	Base qty	Delivery mode
ESDA17-5SC6	175	SOT23-6L	16.7 mg	3000	Tape and reel

## 5 Revision history

**Table 5. Document revision history**

Date	Revision	Changes
Nov-2002	1A	First issue.
4-Nov-2004	2	SOT23-6L package dimensions change for reference "D" from 3.0 millimeters (0.118 inches) to 3.05 millimeters (0.120 inches).
14-Sep-2011	3	Removed all references to order code ESDA19-5SC6.

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