



Application Specific Discretes
A.S.D.TM

ESDA17/19-5SC6 TRANSILTM ARRAY FOR ESD PROTECTION

APPLICATIONS

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

- Computers
- Printers and other peripherals
- Communications systems
- Cellular phone handsets and accessories
- Other telephone sets
- Consumer Electronics (Set top boxes, DVD players, TV sets)

DESCRIPTION

The ESDA17/19-5SC6 is a monolithic array designed to protect up to 5 lines against ESD transients.

The device is ideal for applications where board space savind is required.

FEATURES

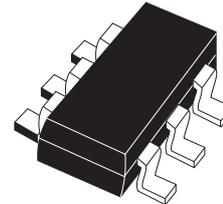
- 5 Unidirectional transilTM functions
- Minimum breakdown voltage range $V_{BRmin} = 17V$ or 19V
- Peak pulse power (8/20 μ s); 150W
- Tiny leakage current at stand-off voltage: < 100nA

BENEFITS

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

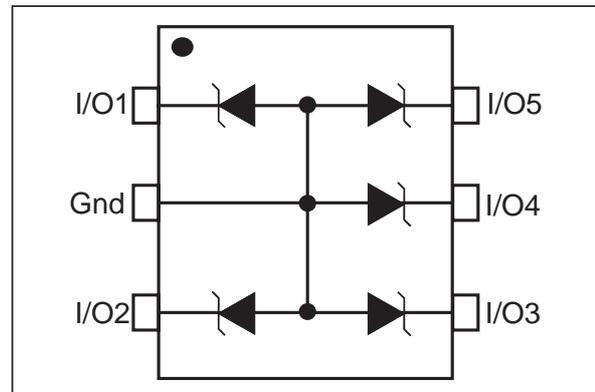
COMPLIES WITH THE FOLLOWING STANDARDS:

- IEC61000-4-2: 15 kV (air discharge)
8 kV (contact discharge)
- MIL STD 883E-Method 3015-7: class3
25kV (human body model)



SOT23-6L
ESDAxx-5SC6

FUNCTIONAL DIAGRAM SOT23-6L



ESDA17/19-5SC6

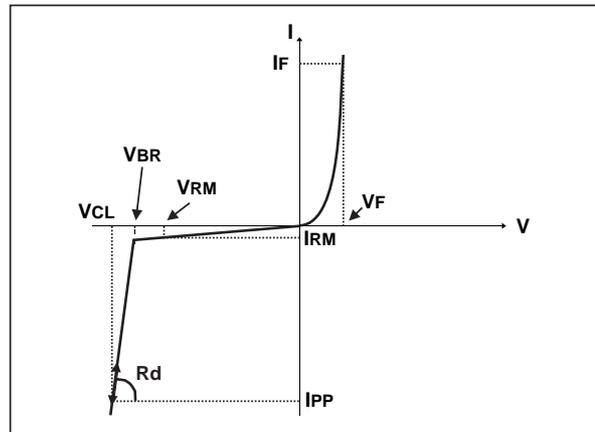
ABSOLUTE MAXIMUM RATINGS (T_{amb} = 25°C)

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

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

ELECTRICAL CHARACTERISTICS (T_{amb} = 25°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
αT	Voltage temperature coefficient
V _F	Forward voltage drop



Type	V _{BR} @ I _R		I _{RM} @ V _{RM}		R _d note 1	αT max. note 2	C typ. 0V bias	V _F @ I _F		
	min.	max.						max.		
	V	V	mA	nA	V	Ω	10 ⁻⁴ /°C	pF	V	mA
ESDA17-5SC6	17	19	1	75	14	1	10	33	1.2	10
ESDA19-5SC6	19	21	1	100	15	1	8.5	33	1.2	10

Note 1: Square pulse, I_{pp} = 15A, t_p = 2.5µs.

Note 2: Δ V_{BR} = αT * (T_{amb} - 25°C) * V_{BR}(25°C)

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

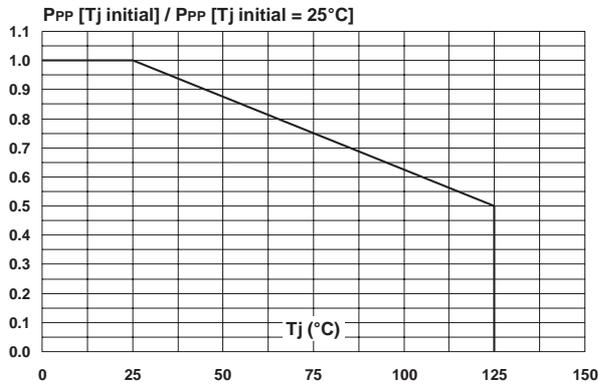


Fig. 2: Peak pulse power versus exponential pulse duration.

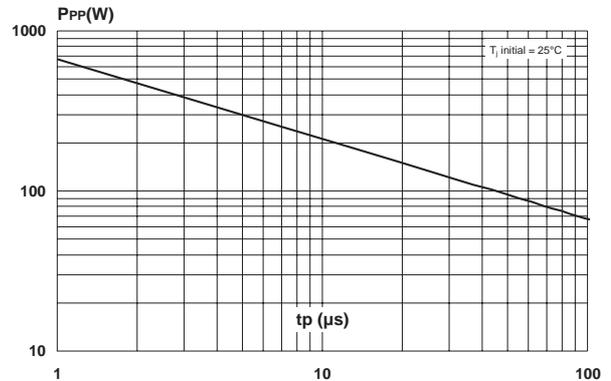


Fig. 3: Clamping voltage versus peak pulse current (typical values, rectangular waveform).

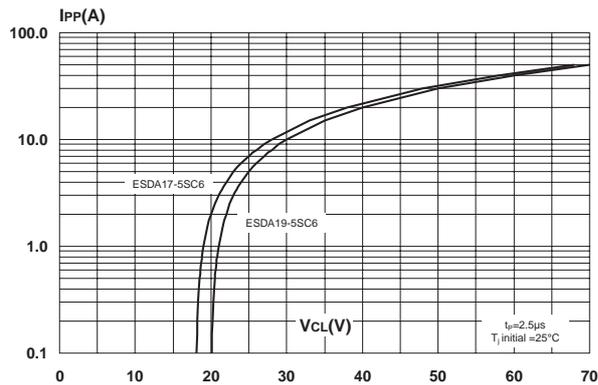


Fig. 4: Forward voltage drop versus peak forward current (typical values).

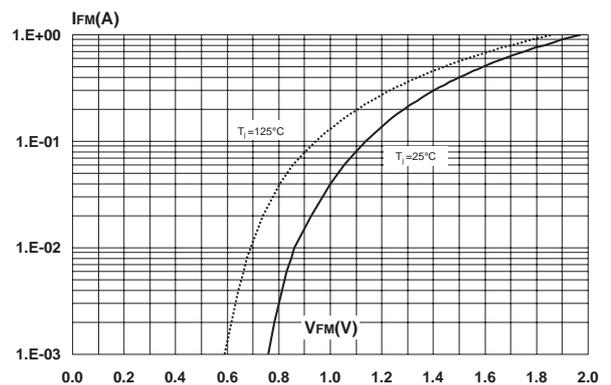


Fig. 5: Junction capacitance versus reverse voltage applied (typical values).

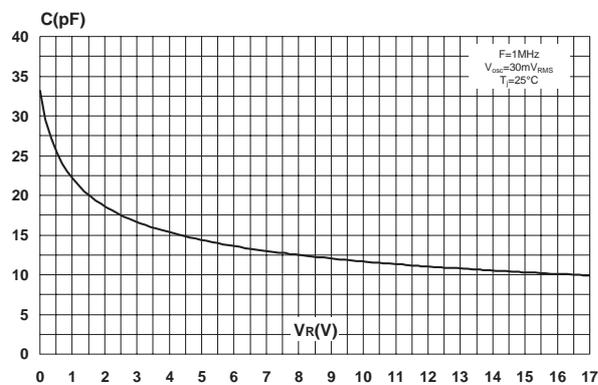
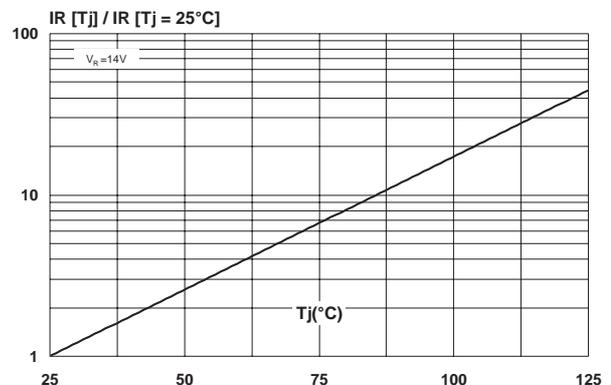
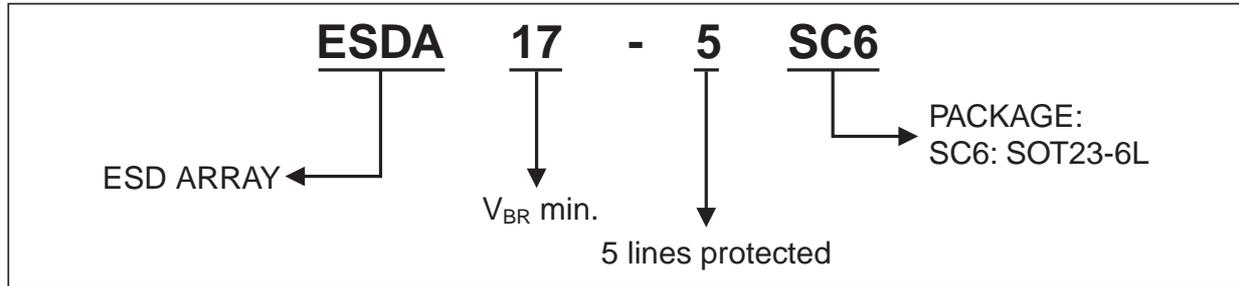


Fig. 6: Relative variation of leakage current versus junction temperature (typical values).



ESDA17/19-5SC6

ORDER CODE

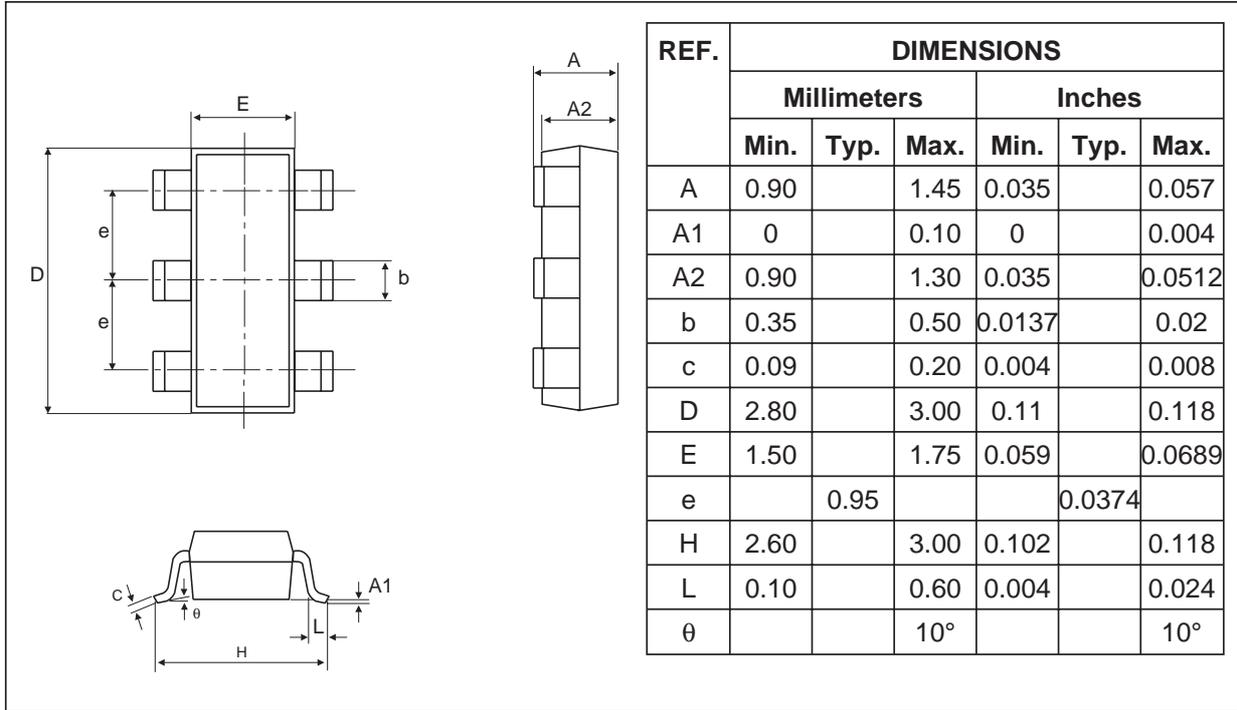


OTHER INFORMATIONS

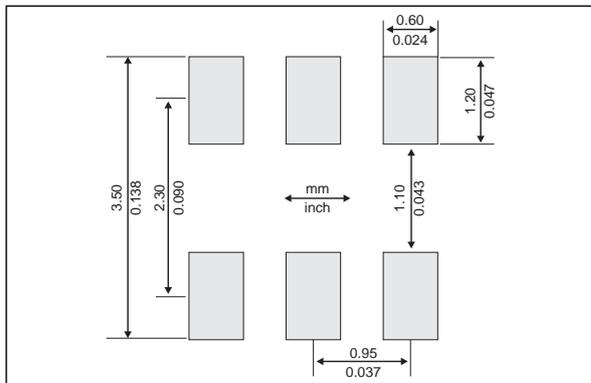
Type	Marking	Package	Weight	Base Qty	Delivery mode
ESDA17-5SC6	175	SOT23-6L	16.7mg	3000	Tape & Reel
ESDA19-5SC6	195	SOT23-6L	16.7mg	3000	Tape & Reel

- Epoxy meets UL94, V0

PACKAGE MECHANICAL DATA
SOT23-6L



FOOTPRINT



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