

# ESDA6V1L

## Features

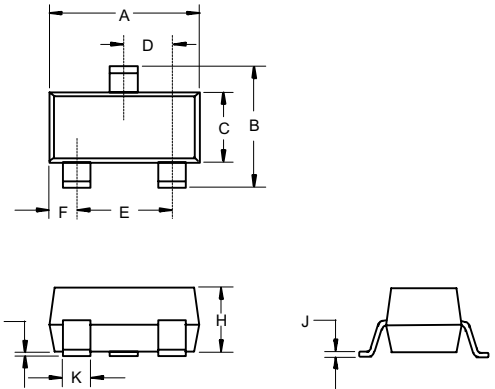
- Dual Transil Array For ESD Protection
- 2 Unidirectional Transil Functions
- Low leakageCurrent:  $I_{Rmax} < 20 \mu A$  at  $V_{WM}$
- 300W peak pulse power (8/20 us)
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0and MSL rating 1

## 6.1Volts ESD Protection Device

## Maximum Ratings

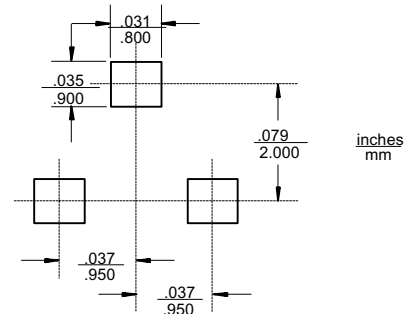
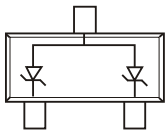
Parameter	Symbol	Limits	unit
Electrostatic discharge MIL STD 883C-Method 3015-6	$V_{PP}$	25	KV
IEC61000-4-2 air discharge		16	KV
IEC61000-4-2 contact discharge		9	KV
Peak pulse power 8/20us	$P_{PP}$	300	W
Junction temperature	$T_j$	150	°C
Storage temperature range	$T_{stg}$	-55~+150	°C
Maximum lead temperature For soldering during 10s	$T_L$	260	°C

## SOT-23



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

## Pin Configuration-Top View

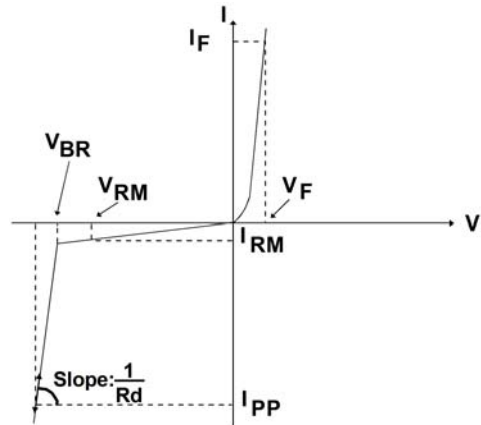


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TM

## ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C unless otherwise noted)

Symbol	Parameter
V <sub>WM</sub>	Stand-off voltage
V <sub>BR</sub>	Breakdown voltage
V <sub>CL</sub>	Clamping voltage
I <sub>RM</sub>	Leakage current
I <sub>PP</sub>	Peak pulse current
αT	Voltage temperature coefficient
C	Capacitance
R <sub>d</sub>	Dynamic resistance
V <sub>F</sub>	Forward voltage drop



Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Breakdown voltage	I <sub>R</sub> =1.0mA	V <sub>BR</sub>	6.1	6.65	7.2	V
Leakage current	V <sub>WM</sub> =5.25V	I <sub>R</sub>	-	-	20	μA
Capacitance	0V bias	C	-	140	-	pF
Forward voltage drop	I <sub>F</sub> =200mA	V <sub>F</sub>	-	-	1.25	V

# ESDA6V1L

## TYPICAL CHARACTERISTICS

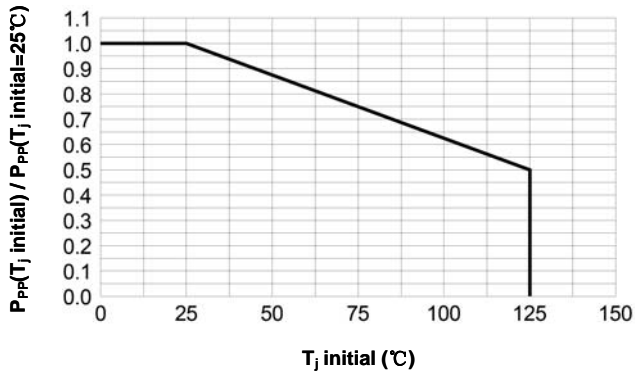


Fig.1: Peak power dissipation vs. initial junction temperature

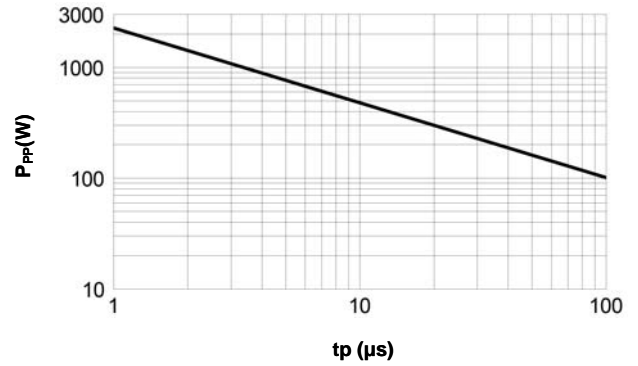


Fig.2: Peak pulse power vs. exponential pulse duration ( $T_j$  initial = 25°C)

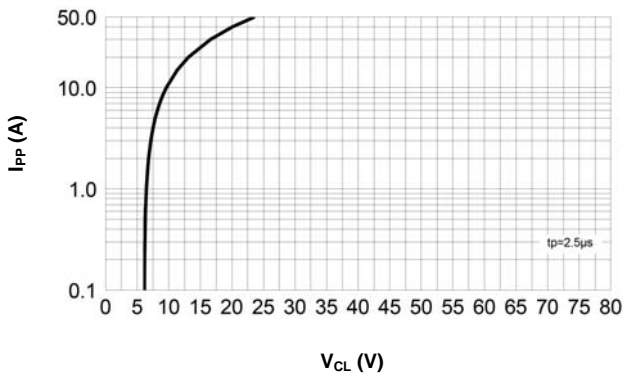


Fig.3: Clamping voltage vs. peak pulse current ( $T_j$  initial = 25°C, rectangular waveform  $t_p = 2.5\mu\text{s}$ )

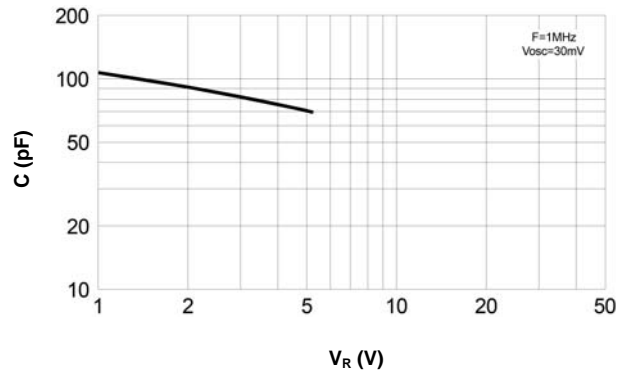


Fig.4: Capacitance vs. reverse applied voltage (typical values)

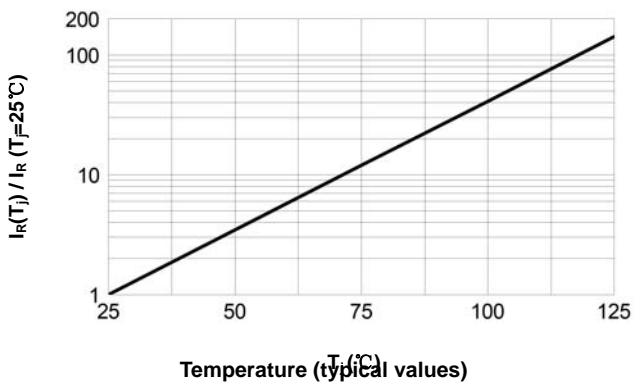


Fig.5: Relative variation of leakage current vs. junction temperature (typical values)

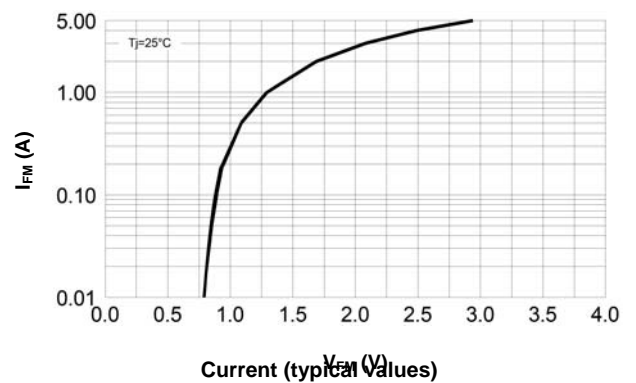


Fig.6: Peak forward voltage drop vs. peak forward current (typical values)

# Ordering Information

Device	Packing
(Part Number)-TP	Tape&Reel;3Kpcs/Reel