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We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Micro Commercial Components



Micro Commercial Components  
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# ESDA6V1L

## Features

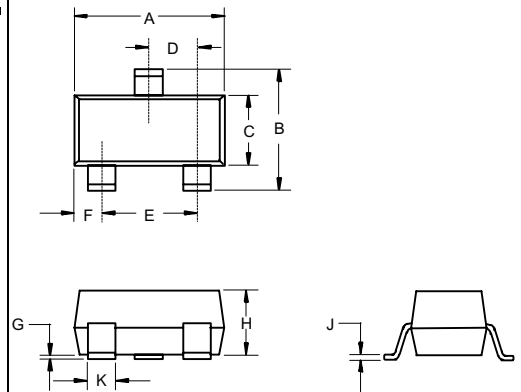
- Dual Transil Array For ESD Protection
- 2 Unidirectional Transil Functions
- Low leakageCurrent:  $I_{Rmax} < 20 \mu A$  at  $V_{WM}$
- 300W peak pulse power (8/20 us)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"

## 6.1Volts ESD Protection Device

## Maximum Ratings

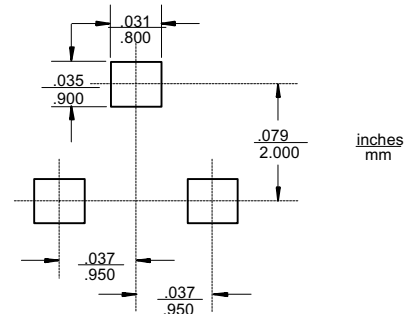
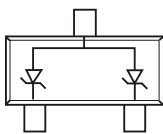
Parameter	Symbol	Limits	unit
Electrostatic discharge MIL STD 883C-Method 3015-6	$V_{PP}$	25	KV
IEC61000-4-2 air discharge		16	KV
IEC61000-4-2 contact discharge		9	KV
Peak pulse power 8/20us	$P_{PP}$	300	W
Junction temperature	$T_j$	150	°C
Storage temperature range	$T_{stg}$	-55~+150	°C
Maximum lead temperature 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	.104	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	

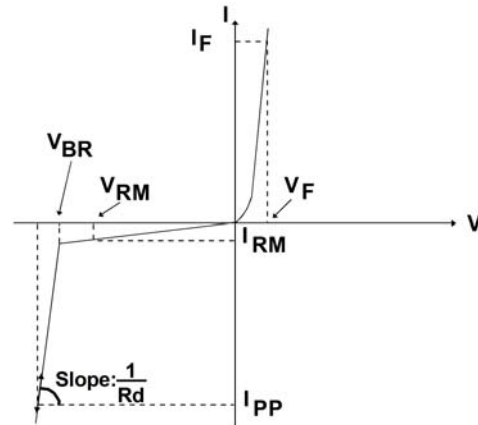
## Pin Configuration-Top View



# ESDA6V1L

**ELECTRICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

Symbol	Parameter
$V_{WM}$	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
C	Capacitance
$R_d$	Dynamic resistance
$V_F$	Forward voltage drop



Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Breakdown voltage	$I_R = 1.0\text{mA}$	$V_{BR}$	6.1	6.65	7.2	V
Leakage current	$V_{WM} = 5.25\text{V}$	$I_R$	-	-	20	$\mu\text{A}$
Capacitance	0V bias	C	-	140	-	pF
Forward voltage drop	$I_F = 200\text{mA}$	$V_F$	-	-	1.25	V



# ESDA6V1L

## TYPICAL CHARACTERISTICS

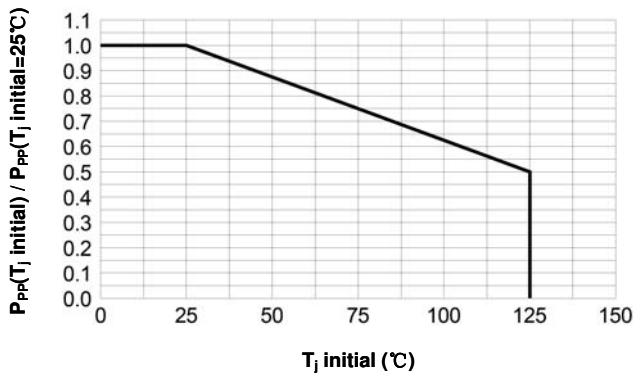


Fig.1: Peak power dissipation vs. initial junction temperature

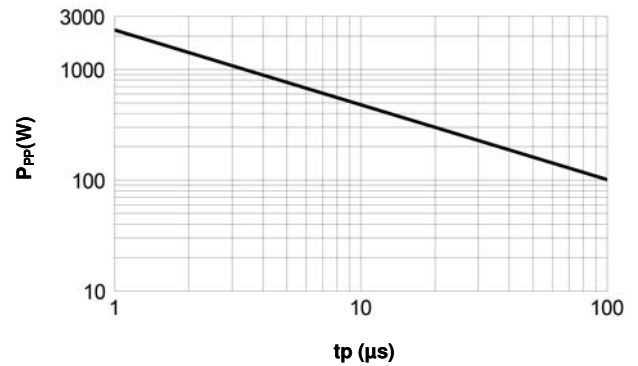


Fig.2: Peak pulse power vs. exponential pulse duration (T<sub>j</sub> initial = 25°C)

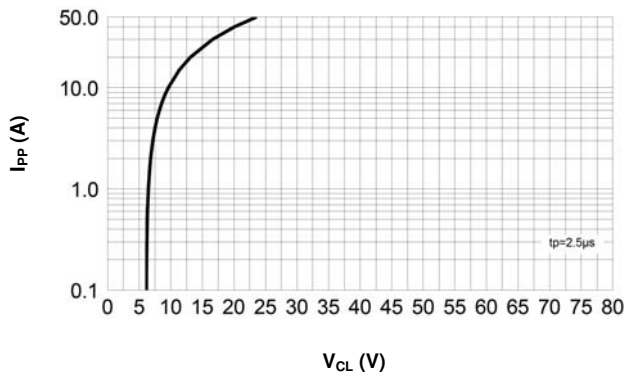


Fig.3: Clamping voltage vs. peak pulse current (T<sub>j</sub> initial = 25°C, rectangular waveform tp = 2.5µs)

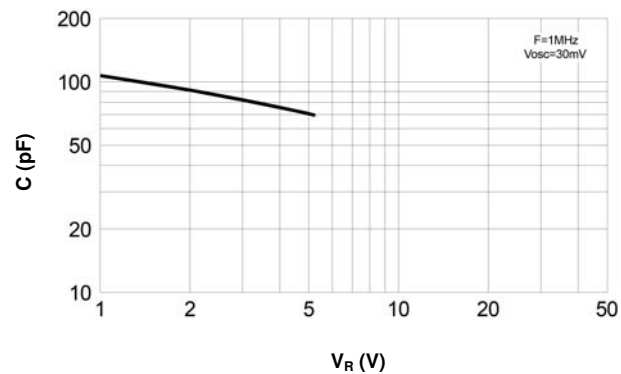


Fig.4: Capacitance vs. reverse applied voltage (typical values)

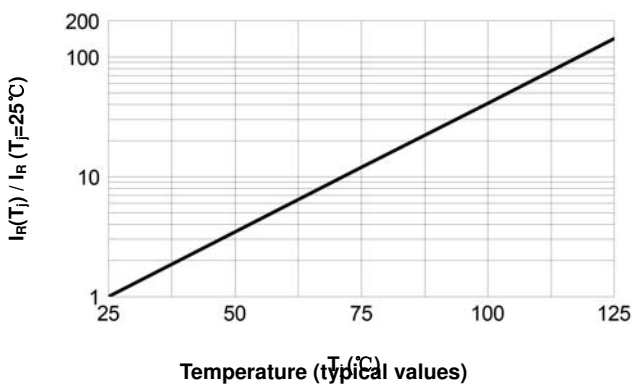


Fig.5: Relative variation of leakage current vs. junction temperature

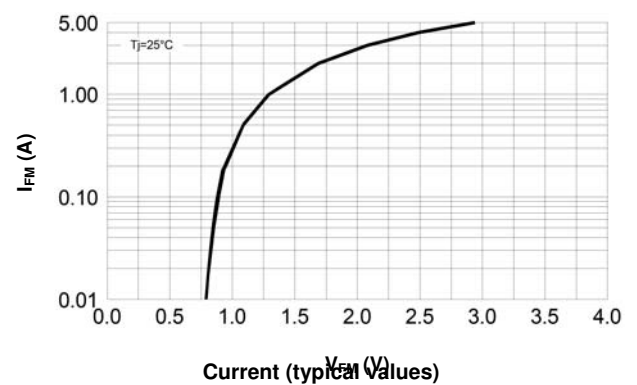


Fig.6: Peak forward voltage drop vs. peak forward current



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### Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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