

# ESD Suppressor 5V Unidirectional DFN1006

ME51U9V8D02

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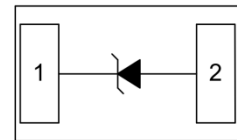
## FEATURE

- IEC 61000-4-2 ESD:  $\pm 15\text{KV}$  (Air)  $\pm 8\text{KV}$  (Contact)
- ESD Protection for one Unidirectional Channel
- Low Leakage Current
- Low Clamping Voltage
- Solid-State Silicon-Avalanche Technology



## APPLICATION

- Video I/O Ports Protection
- Mobile Phones and Accessories
- Notebooks and Desktops
- Set Top Boxes
- Portable Devices



## MAXIMUM RATINGS AND CHARACTERISTICS

Parameter	Symbol	Value	Unit
Peak Pulse Power (tp=8/20 $\mu$ s)	P <sub>PP</sub>	40	W
Total Power Dissipation on FR-4 Board	P <sub>D</sub>	250	mW
Thermal Resistance	R <sub><math>\theta</math>JA</sub>	500	$^{\circ}\text{C}/\text{W}$
Maximum Lead Soldering Temperature (10 Seconds)	T <sub>L</sub>	260	$^{\circ}\text{C}$
Operating & Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55~+150	$^{\circ}\text{C}$

## ELECTRICAL CHARACTERISTICS

Parameter	Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	--	V <sub>RWM</sub>	--	--	5	V
Reverse Breakdown Voltage	I <sub>BR</sub> =1mA	V <sub>BR</sub>	6.2	--	--	V
Reverse Leakage Current	V <sub>R</sub> =5.0V	I <sub>R</sub>	--	--	1	$\mu\text{A}$
Clamping Voltage	I <sub>PP</sub> =4A, tp=8/20 $\mu$ s	V <sub>C</sub>	--	--	9.8	V
Off State Junction Capacitance	V <sub>dC</sub> =0, f=1MHz	C <sub>J</sub>	--	--	35	pF

Notes:

1. T<sub>J</sub>= 25 $^{\circ}\text{C}$  unless otherwise specified
2. FR4=70x60x1mm

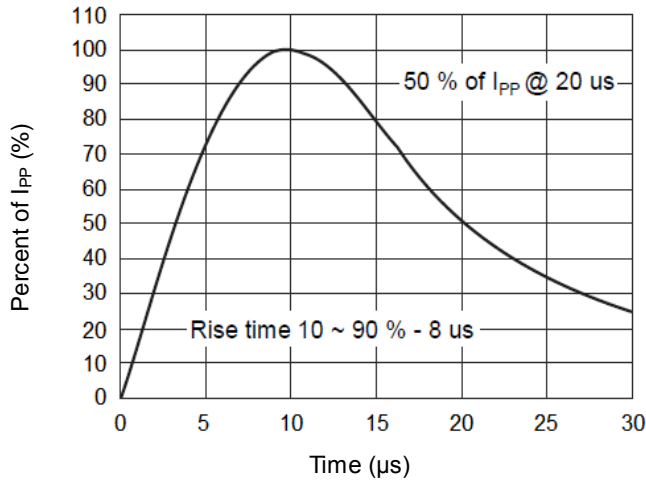
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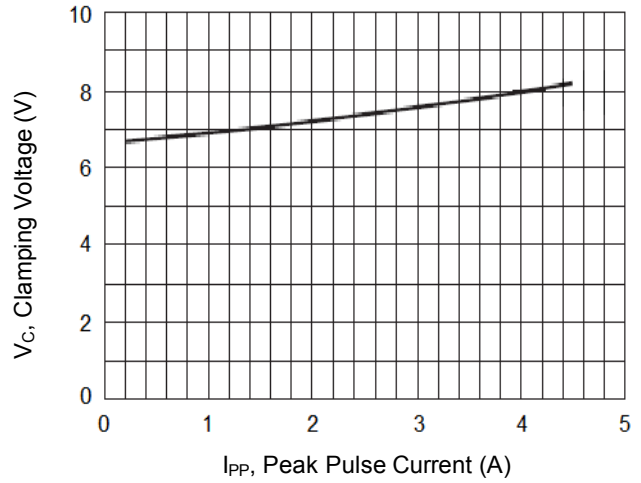
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## CHARACTERISTIC CURVES

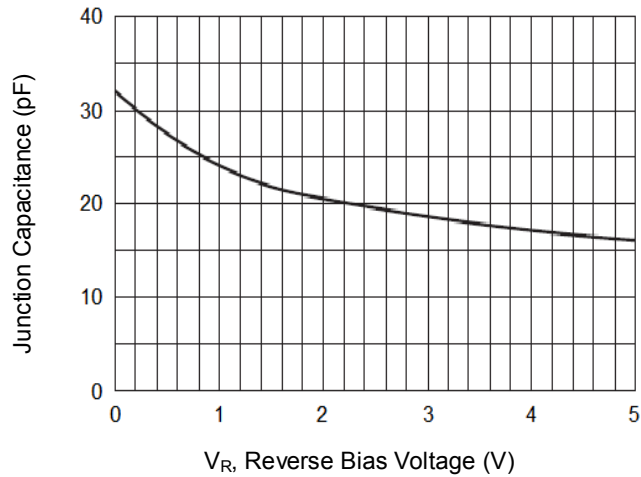
Peak Pulse Current Waveform



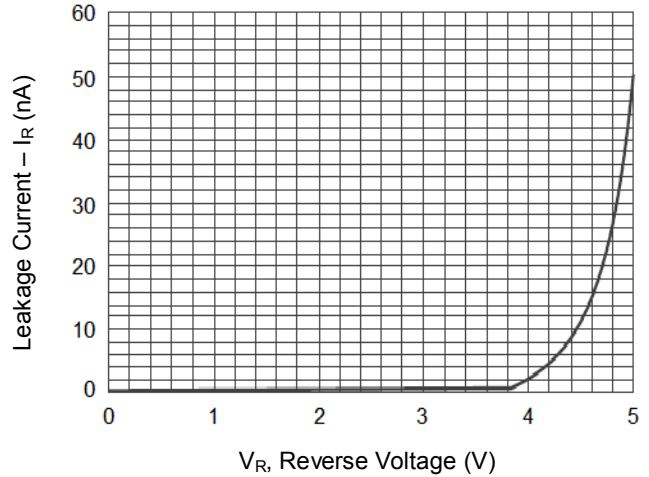
Typical Peak Clamping Voltage



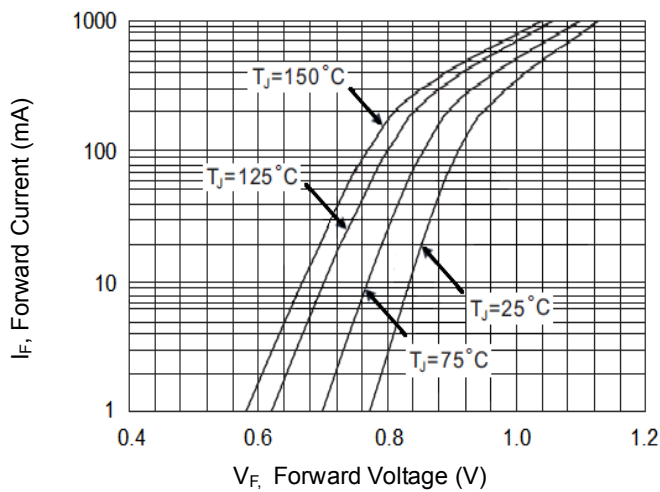
Typical Junction Capacitance



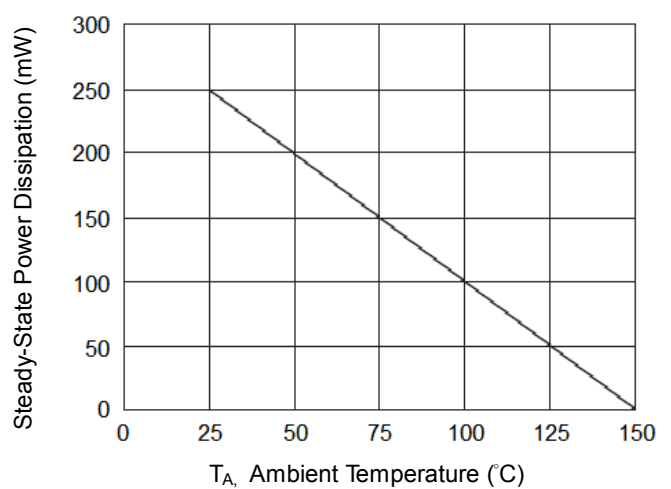
Typical Reverse Characteristics



Typical Forward Characteristics



Power Derating Curve



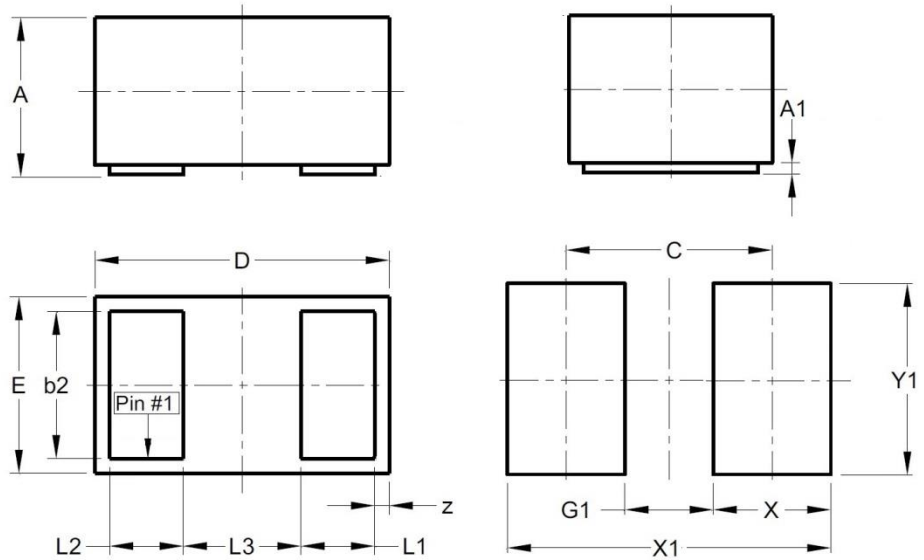
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## DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A	0.45	0.55
A1	-	0.05
b2	0.45	0.55
D	0.95	1.05
E	0.55	0.65
z	0.10	0.10
L1	0.20	0.30
L2	0.20	0.30
L3	0.40	0.40
C	0.70	0.70
G1	0.30	0.30
X	0.40	0.40
X1	1.10	1.10
Y1	0.60	0.60



\*Specifications subject to change without notice.