

ESD Suppressor 5V Unidirectional DFN1006

ME51U14D02

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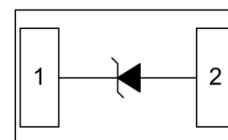
FEATURE

- 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
ESD Voltage per IEC61000-4-2 (Contact discharge)	V_{ESD}	± 8	KV
ESD Voltage per IEC61000-4-2 (Air discharge)		± 15	KV
ESD Voltage (HBM)		± 25	KV
Peak Pulse Current ($t_p=8/20\mu s$)	I_{PP}	18	A
Peak Pulse Power ($t_p=8/20\mu s$)	P_{PP}	200	W
Operating & Storage Temperature Range	T_J, T_{STG}	$-50 \sim +150$	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS

Parameter	Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	--	V_{RWM}	--	--	5	V
Reverse Breakdown Voltage	$I_{BR}=1\text{mA}$	V_{BR}	6.0	--	7.2	V
Reverse Leakage Current	$V_R=5\text{V}$	I_R	--	--	1	μA
Clamping Voltage	$I_{PP}=5\text{A}, t_p=8/20\mu s$	V_C	--	--	11	V
	$I_{PP}=15\text{A}, t_p=8/20\mu s$		--	--	14	
Off State Junction Capacitance	$V_{dc}=0, f=1\text{MHz}$	C_J	--	--	160	pF
	$V_{dc}=5, f=1\text{MHz}$		--	--	80	

Notes:

1. $T_J=25^{\circ}\text{C}$ unless otherwise specified

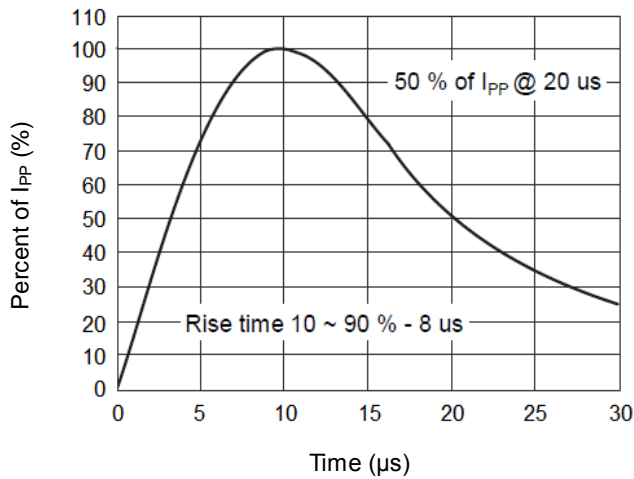
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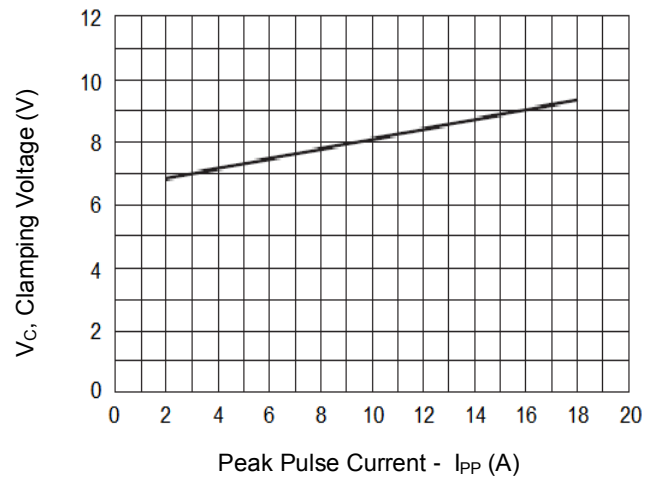
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CHARACTERISTIC CURVES

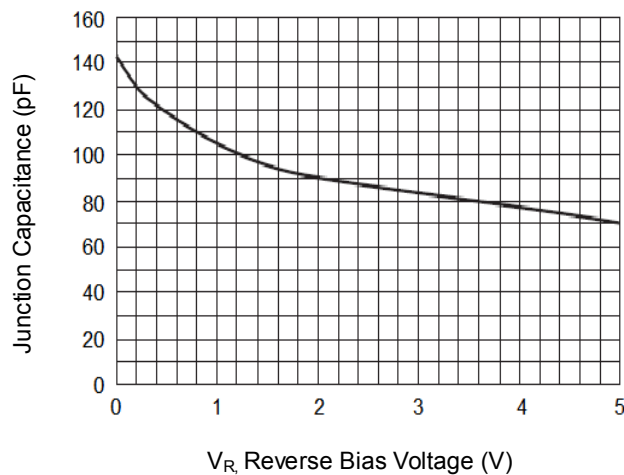
Peak Pulse Current Waveform



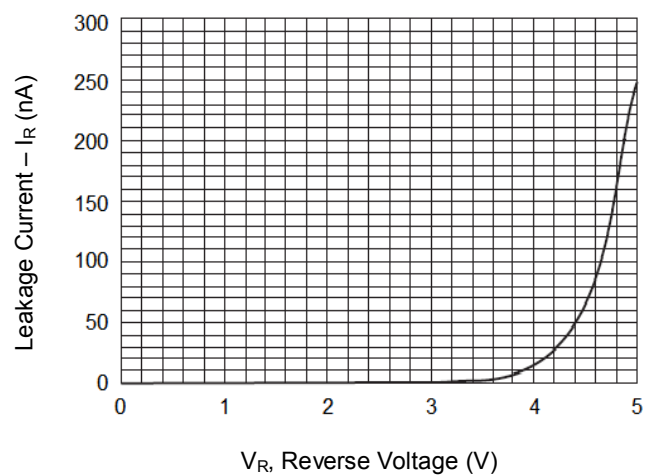
Typical Peak Clamping Voltage



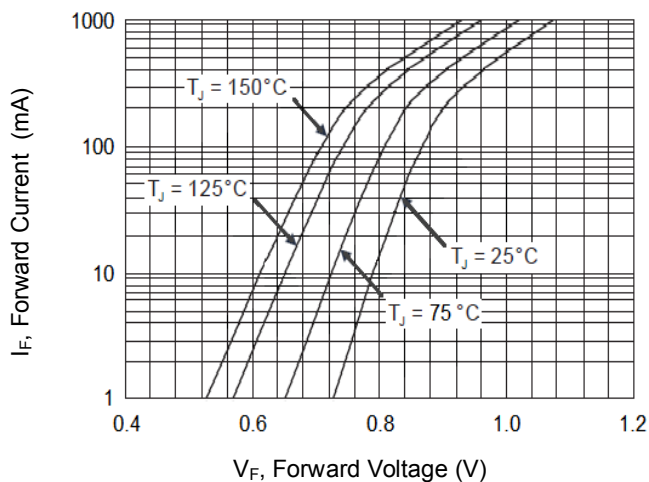
Typical Junction Capacitance



Typical Reverse Characteristics



Typical Forward Characteristics



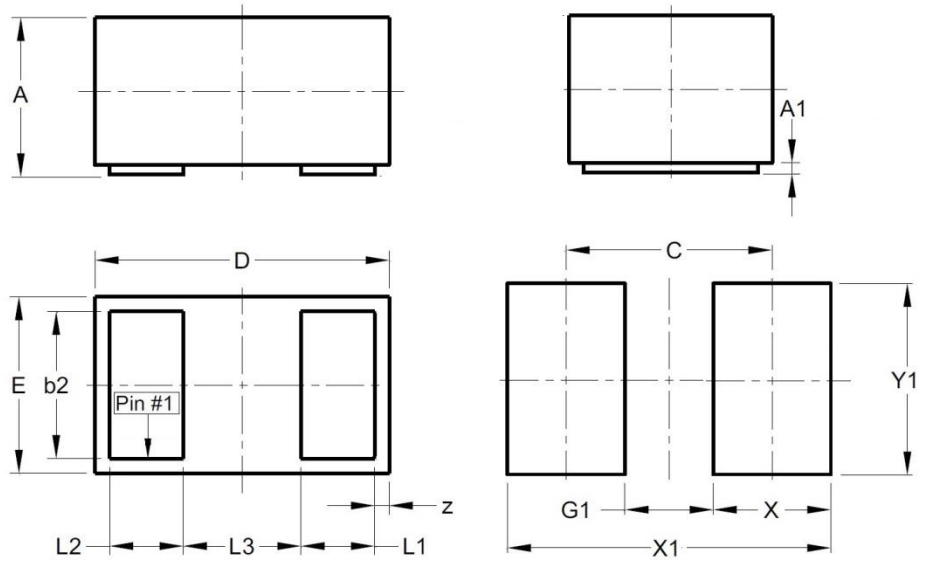
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DIMENSIONS AND RECOMMENDED LAND PATTERN

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.