

ESD Suppressor 5V Bidirectional DFN1006

ME51B7V5D02

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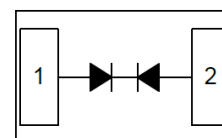
FEATURE

- IEC 61000-4-2 ESD: $\pm 30\text{KV}$ (Air) $\pm 30\text{KV}$ (Contact)
- ESD Protection for one Bidirectional Channel
- Low Clamping Voltage
- Response Time $< 1\text{ns}$
- Solid-State Silicon-Avalanche Technology



APPLICATION

- Mobile Phone Accessories
- Portable Instrumentation
- Computer Interfaces Protection
- Microprocessors Protection
- Serial and Parallel Ports Protection



MAXIMUM RATINGS AND CHARACTERISTICS

Parameter	Symbol	Value	Unit
ESD Voltage per IEC61000-4-2 (Contact discharge)	V_{ESD}	± 30	KV
ESD Voltage per IEC61000-4-2 (Air discharge)		± 30	KV
Peak Pulse Current ($t_p=8/20\mu\text{s}$)	I_{PP}	5.5	A
Operating & Storage Temperature Range	T_J, T_{STG}	$-55\sim+150$	$^{\circ}\text{C}$

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}	5.5	--	--	V
Reverse Leakage Current	$V_R=5\text{V}$	I_R	--	--	1	μA
Clamping Voltage	$I_{PP}=1\text{A}, t_p=8/20\mu\text{s}$	V_C	--	--	7.5	V
Off State Junction Capacitance	$V_{dc}=0, f=1\text{MHz}$	C_J	--	35	--	pF

Notes:

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

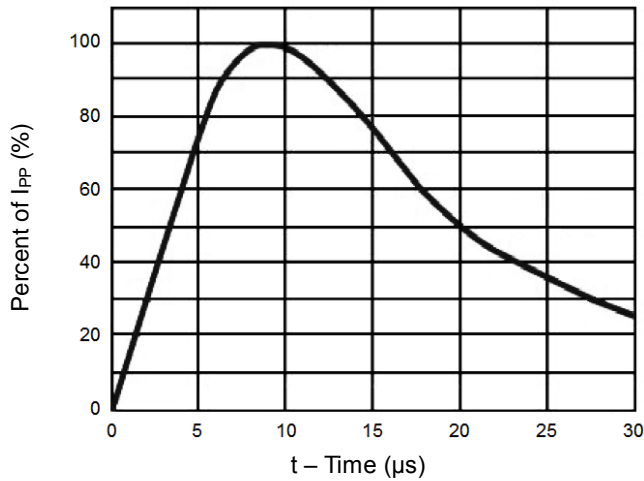
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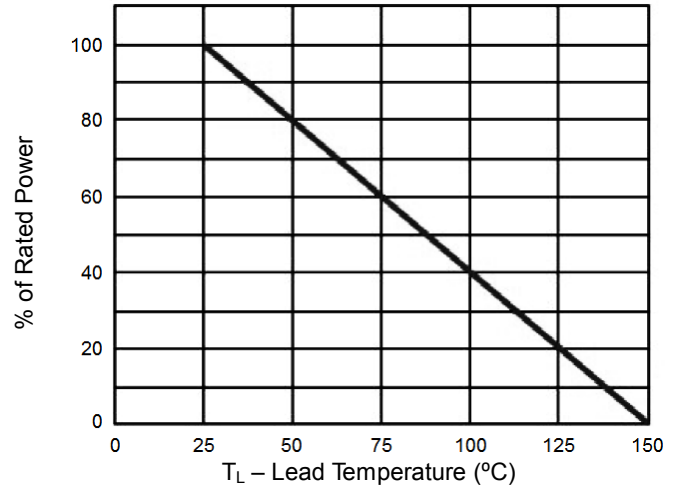
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CHARACTERISTIC CURVES

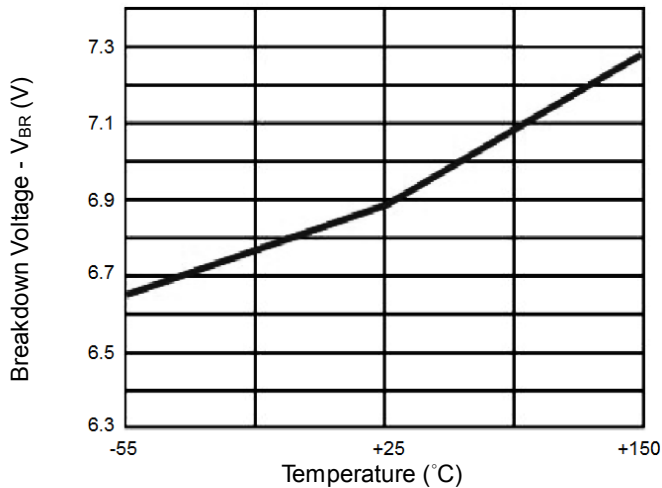
Pulse Waveform



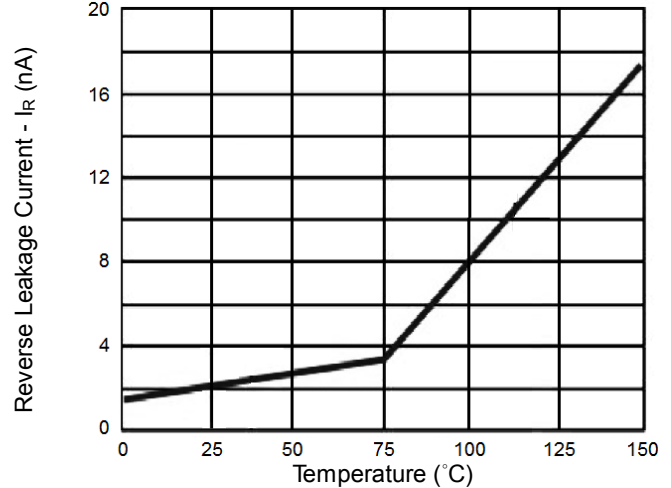
Power Derating Curve



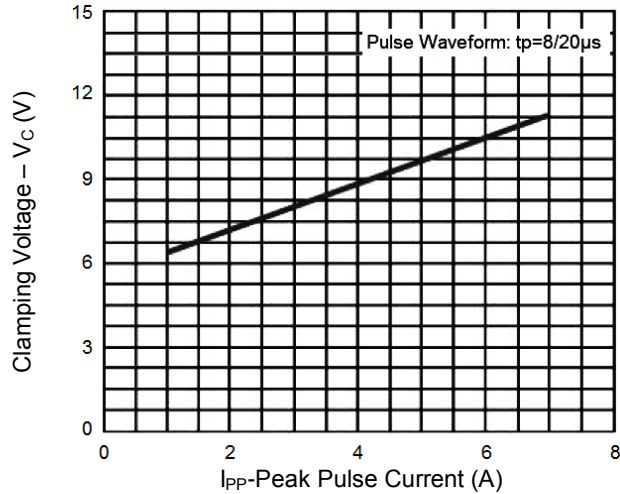
Typical Breakdown Voltage vs Temperature



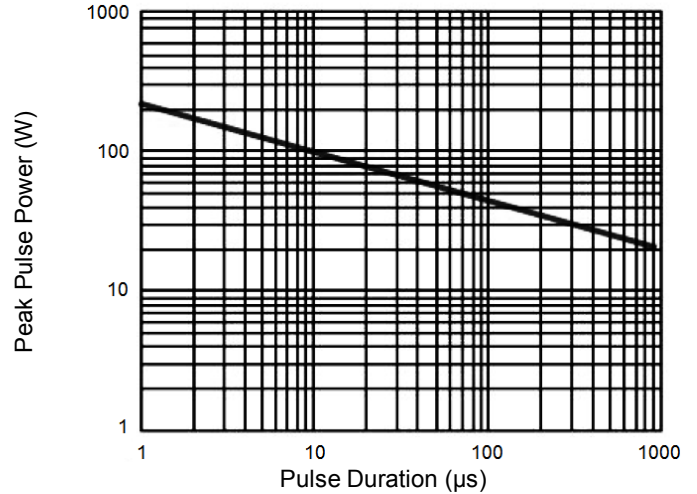
Typical Leakage Current vs. Temperature



Clamping Voltage vs Peak Pulse Current



Non-Repetitive Peak Pulse Power vs. Pulse Time



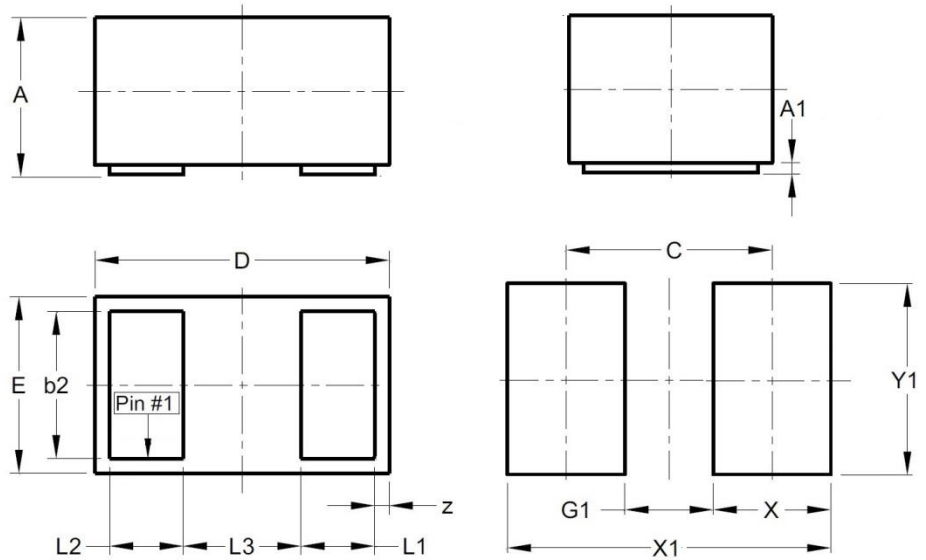
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DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A	0.34	0.40
A1	0.00	0.05
b2	0.40	0.60
D	0.95	1.05
E	0.55	0.65
z	-	-
L1	0.20	0.30
L2	0.20	0.30
L3	0.40	0.40
C	0.85	0.85
G1	0.25	0.25
X	0.60	0.60
X1	1.45	1.45
Y1	0.55	0.55



*Specifications subject to change without notice.