

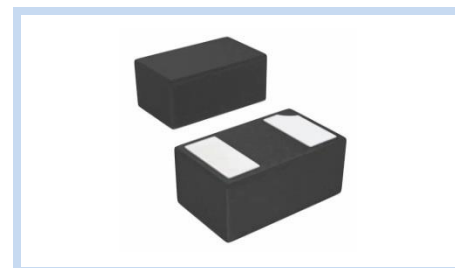
ESD Suppressor 5V Bidirectional DFN1006

ME51B9D02

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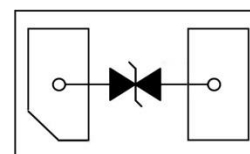
FEATURE

- IEC 61000-4-2 ESD: $\pm 30\text{KV}$ (Air) $\pm 30\text{KV}$ (Contact)
- ESD Protection for one Bidirectional Channel
- Low Clamping Voltage



APPLICATION

- Cell Phone Handsets and Accessories
- Notebooks, Desktops, and Servers
- PCI Express, SATA, USB 2.0, DVI, Display Port
- Portable Instrumentation



MAXIMUM RATINGS AND CHARACTERISTICS

Parameter	Symbol	Value	Unit
ESD Voltage (Contact discharge)	V_{ESD}	± 30	KV
ESD Voltage (Air discharge)		± 30	
Maximum Peak Pulse Current (tp=8/20 μ s)	I_{PP}	7.9	A
Peak Pulse Power (tp=8/20 μ s)	P_{PP}	138	W
Operating Temperature Range	T_J	-55~+125	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS

Parameter	Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	--	V_{RWM}	--	--	5.0	V
Reverse Breakdown Voltage	$I_{BR}=1\text{mA}$	V_{BR}	6.0	--	8.5	V
Reverse Leakage Current	$V_R=5\text{V}$	I_R	--	--	50	nA
Clamping Voltage	$I_{PP}=1\text{A}$, tp=8/20 μ s	V_C	--	--	9.0	V
	$I_{PP}=7.9\text{A}$, tp=8/20 μ s		--	--	17.5	
Off State Junction Capacitance	$V_{dc}=0$, f=1MHz, Between I/O pin and GND	C_J	--	10	20	pF

Notes: $T_J=25^{\circ}\text{C}$ unless otherwise specified

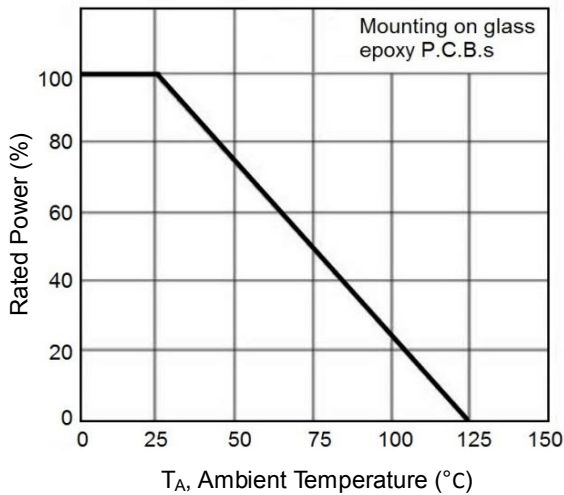
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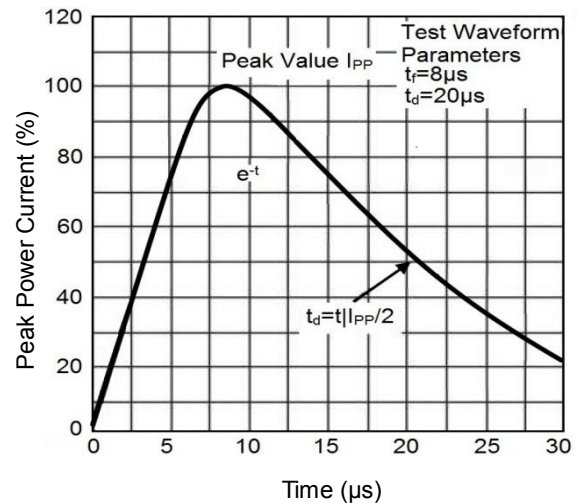
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CHARACTERISTIC CURVES

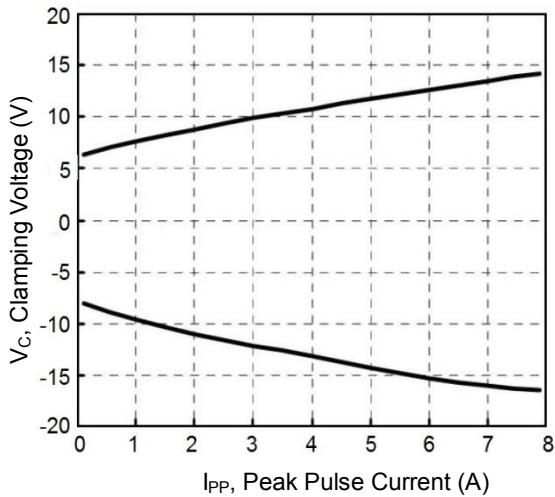
Derating Curve



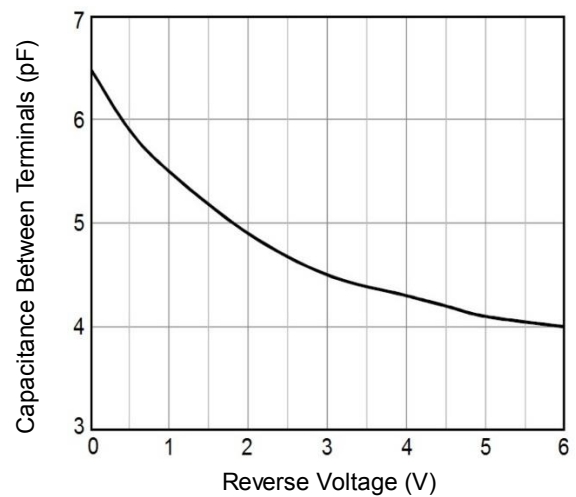
Pulse Waveforms



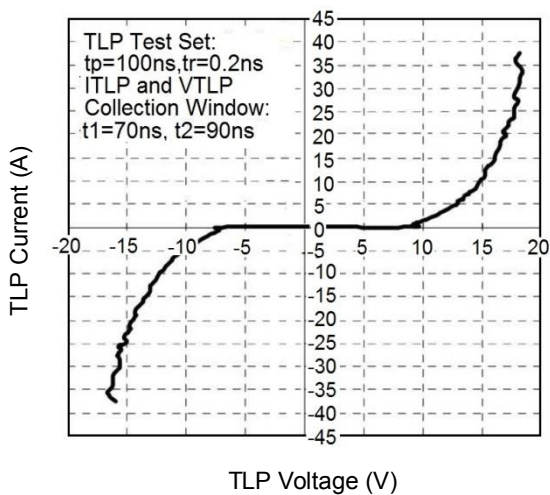
Clamping Voltage vs. Peak Pulse Current



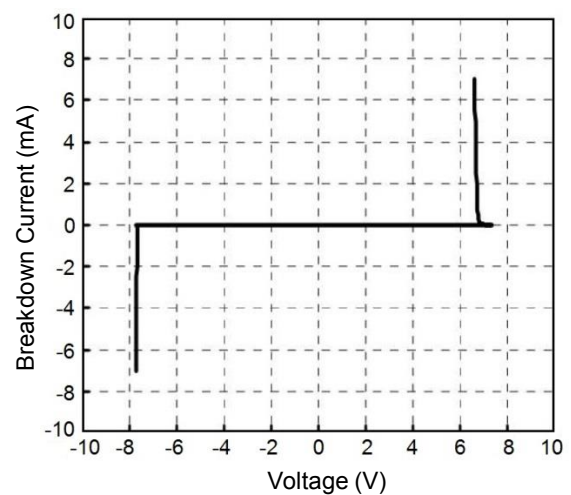
Capacitance vs. Reverse Voltage



TLP Measurement



Reverse Characteristics



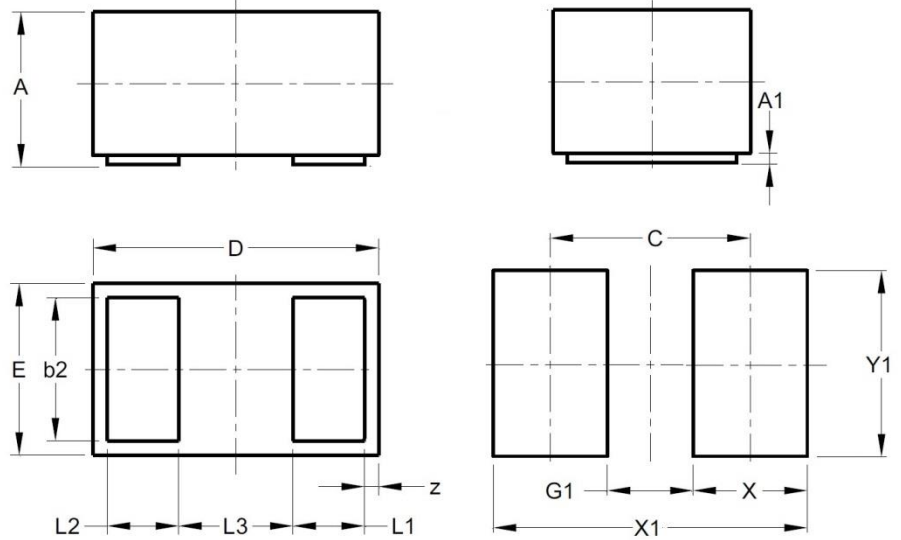
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DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A	0.45	0.55
A1	-	-
b2	0.50	0.50
D	0.95	1.05
E	0.55	0.65
z	-	-
L1	0.35	0.35
L2	0.35	0.35
L3	0.30	0.30
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.