

ESD Suppressor 5V Bidirectional DFN1006

ME51B12D02

MERITEK

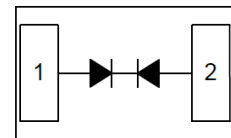
FEATURE

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



APPLICATION

- High Definition Multi-Media Interface (HDMI)
- Digital Visual Interface (DVI)
- USB 2.0 /3.0 Interfaces Protection
- 10/100/1000M Ethernet Protection
- Desktops and Notebooks



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
Peak Pulse Current ($t_p=8/20\mu\text{s}$)	I_{PP}	2.5	A
Operating Temperature Range	T_J	$-55\sim+125$	$^{\circ}\text{C}$
Storage Temperature Range	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}	6	--	9	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	--	8.5	12	V
Off State Junction Capacitance	$V_{dc}=0$, $f=1\text{MHz}$	C_J	--	0.5	0.9	pF

Notes:

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

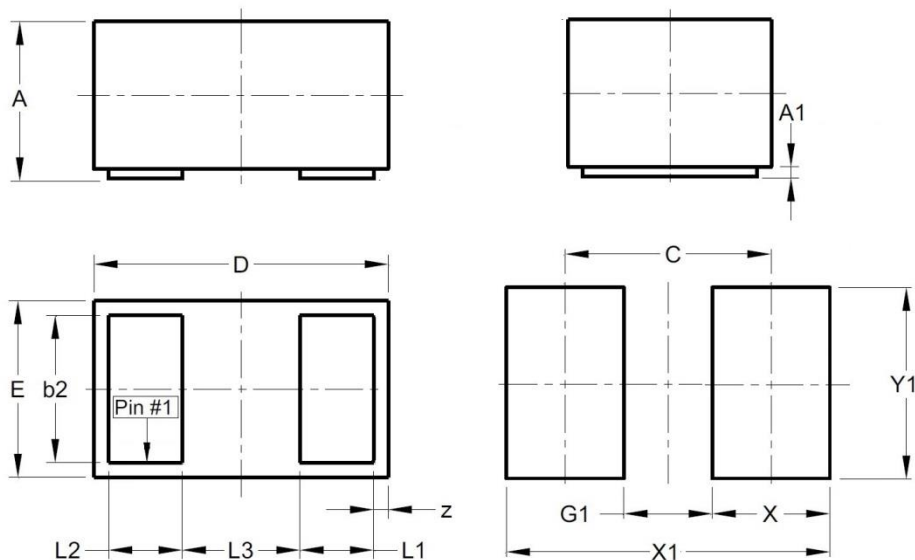
ESD Suppressor 5V Bidirectional DFN1006

ME51B12D02

MERITEK

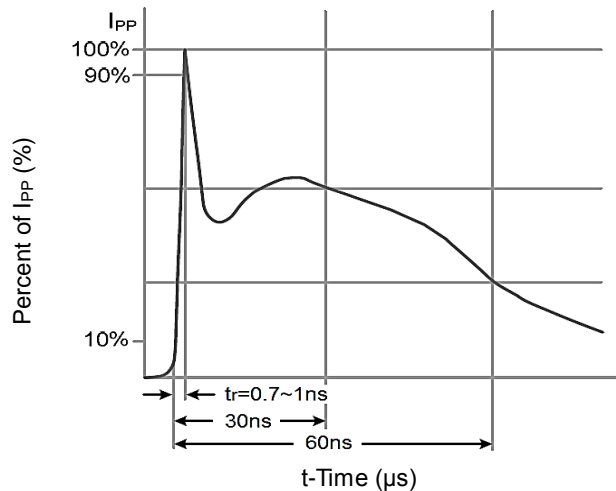
DIMENSIONS AND RECOMMENDED LAND PATTERN

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

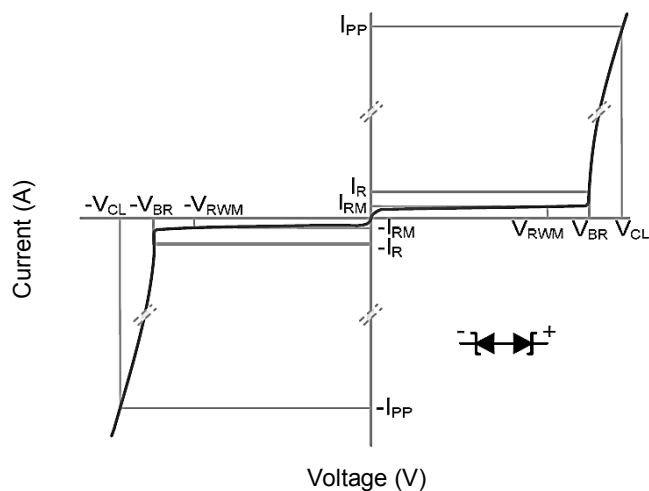


CHARACTERISTIC CURVES

ESD Pulse Waveform according to 61000-4-2



V-I Characteristics for Bidirectional ESD Diode



*Specifications subject to change without notice.