

# ESD Suppressor AEC-Q101 5V Bidirectional DFN1608

ME51B11D03A

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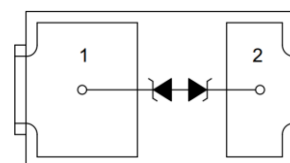
## FEATURE

- 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
- AEC-Q101 Qualified



## APPLICATION

- USB 2.0 and USB 3.0
- High Definition Multi-Media Interface (HDMI)
- Display Port Interface
- SATA and eSATA Interface
- Desktops and Notebooks



## MAXIMUM RATINGS AND CHARACTERISTICS

Parameter	Symbol	Value	Unit
ESD Voltage (Contact discharge)	$V_{ESD}$	$\pm 8$	KV
ESD Voltage (Air discharge)		$\pm 15$	
Peak Pulse Current ( $t_p=8/20\mu\text{s}$ )	$I_{PP}$	3	A
Operating & Storage Temperature Range	$T_J, T_{STG}$	-55~+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	$V_R=5\text{V}$	$I_R$	--	--	0.5	$\mu\text{A}$
Clamping Voltage	$I_{PP}=1\text{A}, t_p=8/20\mu\text{s}$	$V_C$	--	--	11	V
	$I_{PP}=2\text{A}, t_p=8/20\mu\text{s}$		--	--	14	
Off State Junction Capacitance	$V_{dc}=0, f=1\text{MHz}$	$C_J$	--	0.5	--	pF

Notes:

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

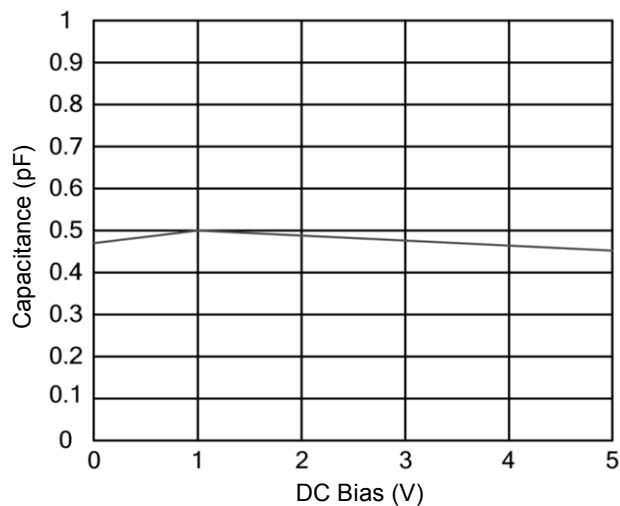
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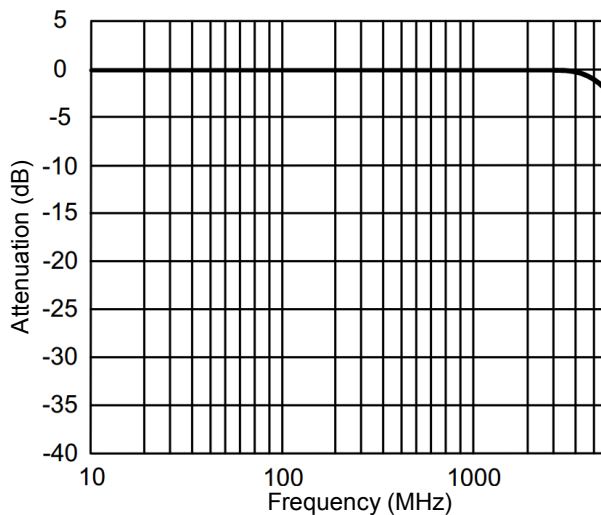
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## CHARACTERISTIC CURVES

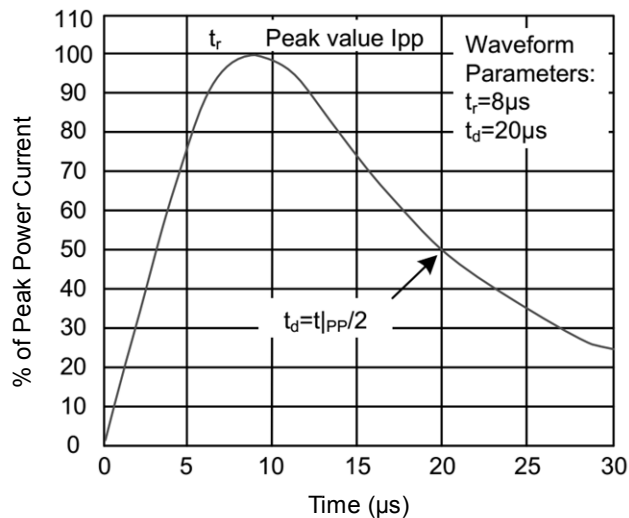
Capacitance vs. Bias Voltage



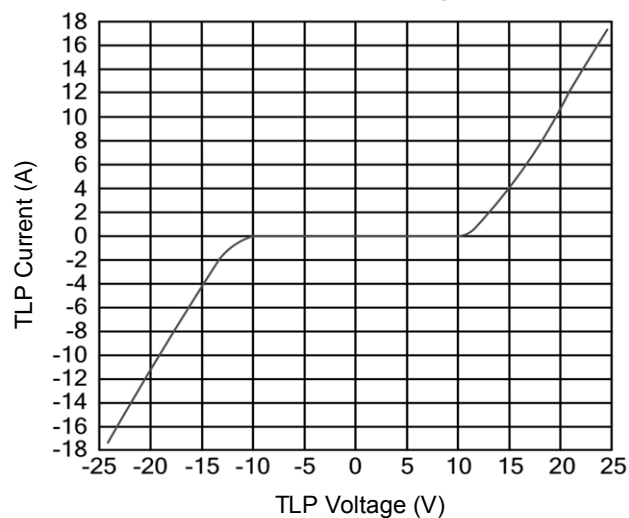
Insertion Loss (S21) I/O to GND



Pulse Waveform



Transmission Line Pulsing (TLP) Plot



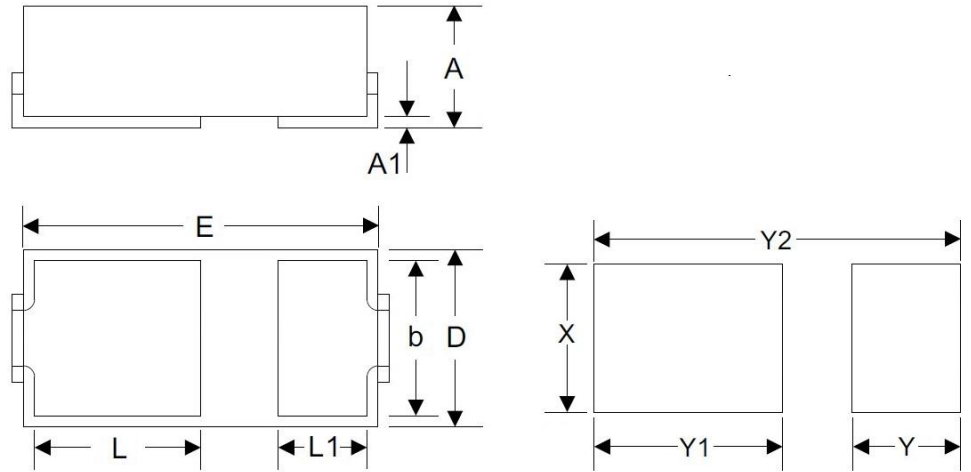
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## DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A	0.45	0.65
A1	0.04	0.04
b	0.67	0.75
D	0.75	0.85
E	1.55	1.65
L	0.72	0.80
L1	0.32	0.50
X	0.80	0.80
Y	0.65	0.65
Y1	1.05	1.05
Y2	1.90	1.90



\*Specifications subject to change without notice.