

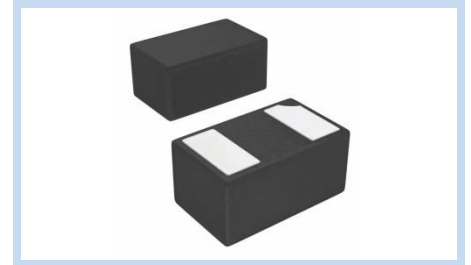
ESD Suppressor 5V Bidirectional SOD-882

ME51B12S882

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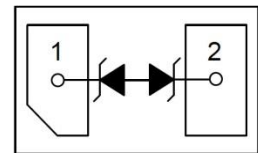
FEATURE

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



APPLICATION

- USB 3.0/USB 2.0
- MHL/MIPI/MDDI
- HDMI, Video Port, eSATA
- Smart Phones
- External Storage



MAXIMUM RATINGS AND CHARACTERISTICS

Parameter	Symbol	Value	Unit
ESD Voltage (Contact discharge)	V_{ESD}	± 8	KV
ESD Voltage (Air discharge)		± 15	
Peak Pulse Current ($t_p=8/20\mu s$)	I_{PP}	3	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}	6	--	8.5	V
Reverse Leakage Current	$V_R=5\text{V}$	I_R	--	--	5	μA
Clamping Voltage	$I_{PP}=1\text{A}, t_p=8/20\mu s$	V_C	--	--	12	V
	$I_{PP}=2\text{A}, t_p=8/20\mu s$		--	--	25	
Off State Junction Capacitance	$V_{dc}=0, f=1\text{MHz}$	C_J	--	0.3	0.4	pF

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

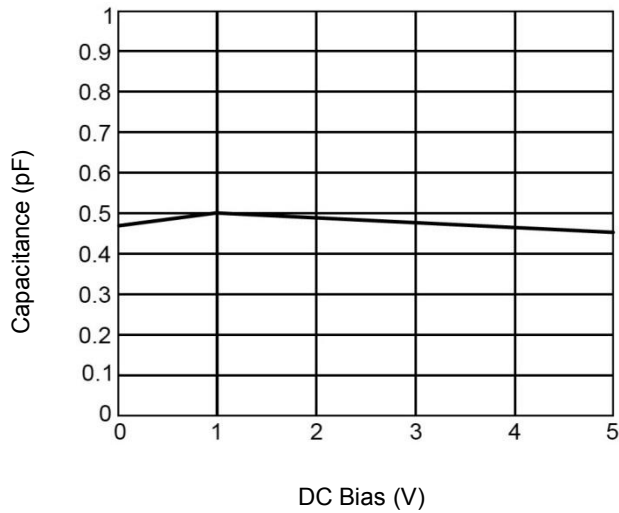
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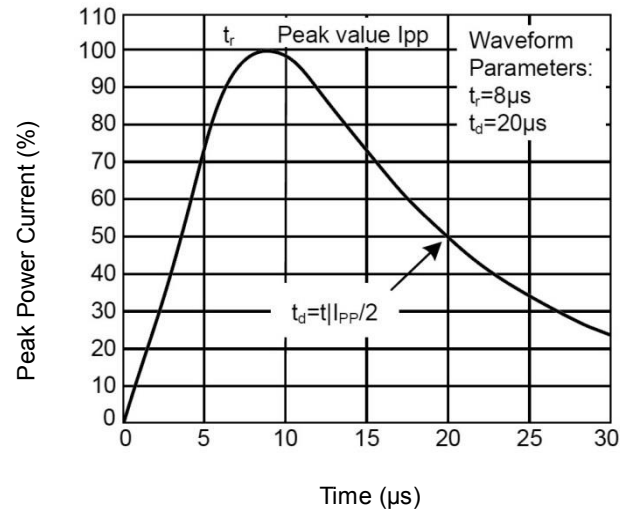
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CHARACTERISTIC CURVES

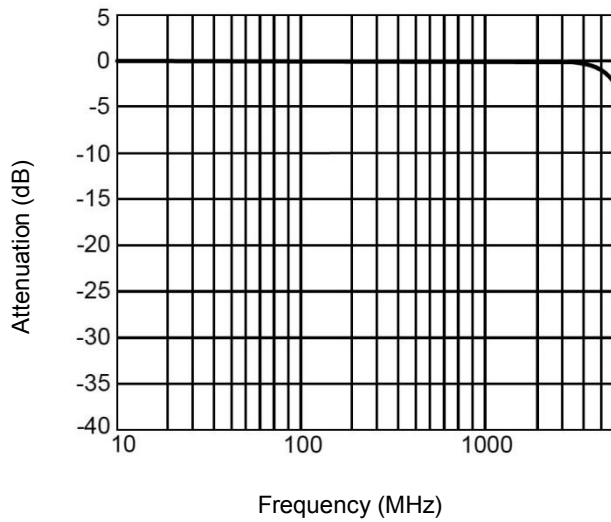
Capacitance vs. Bias Voltage



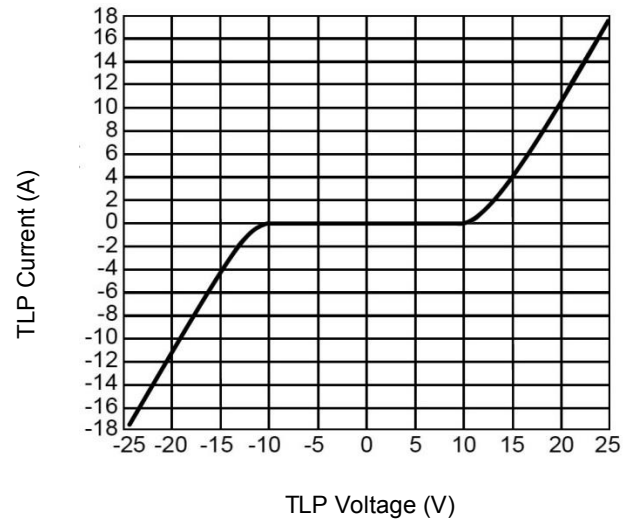
Pulse Waveforms



Insertion Loss (S21) I/O to GND



TLP Measurement



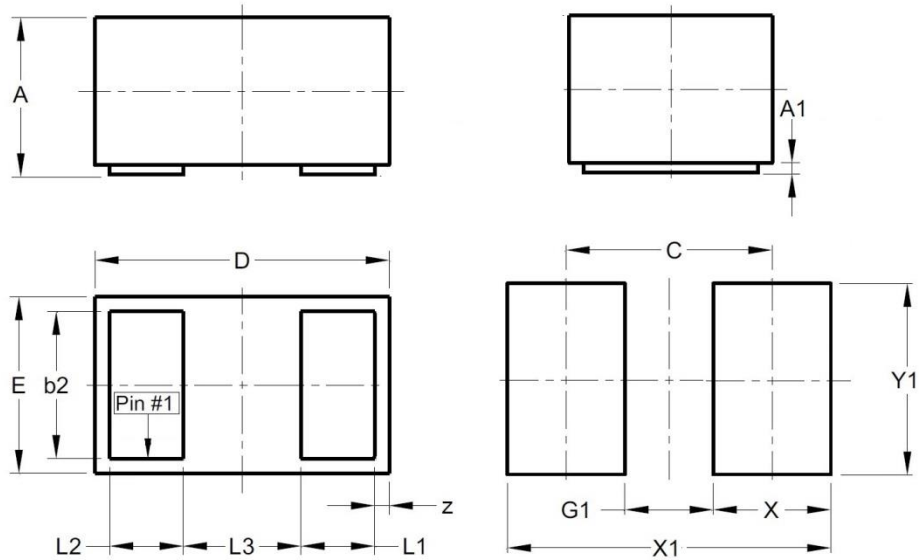
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DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A	0.32	0.55
A1	-	-
b2	0.45	0.55
D	0.95	1.05
E	0.55	0.65
z	0.05	0.05
L1	0.20	0.30
L2	0.20	0.30
L3	0.40	0.40
C	0.85	0.85
G1	0.30	0.30
X	0.55	0.55
X1	1.40	1.40
Y1	0.60	0.60



*Specifications subject to change without notice