

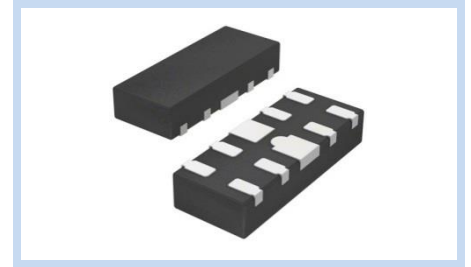
ESD Suppressor 5V 4-Unidirectional DFN2510

ME54U12D2510

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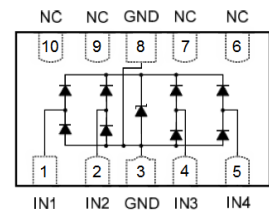
FEATURE

- IEC 61000-4-2 ESD: $\pm 15\text{KV}$ (Air) $\pm 8\text{KV}$ (Contact)
- ESD Protection for four Unidirectional Channels
- 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 Interface
- 10/100/1000M Ethernet Port
- Display Port Interface



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}	5	A
Peak Pulse Power ($t_p=8/20\mu\text{s}$)	P_{PP}	150	W
Operating Junction Temperature (10 Seconds)	T_L	260	$^{\circ}\text{C}$
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	Any I/O pin to GND	V_{RWM}	--	--	5	V
Forward Voltage	$I_F=10\text{mA}$, GND to any I/O pins	V_F	0.4	0.8	1.5	V
Reverse Breakdown Voltage	$I_{\text{BR}}=1\text{mA}$	V_{BR}	6.0	7.0	--	V
Reverse Leakage Current	$V_R=5\text{V}$	I_R	--	0.03	1	μA
Clamping Voltage	$I_{\text{PP}}=1\text{A}$, $t_p=8/20\mu\text{s}$	V_C	--	8.5	12	V
Off State Junction Capacitance	$V_{\text{dc}}=0$, $f=1\text{MHz}$ Any I/O pin to GND	C_J	--	0.50	--	pF
Off State Junction Capacitance	$V_{\text{dc}}=0$, $f=1\text{MHz}$ Between I/O pins	C_J	--	0.35	--	pF

Notes:

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

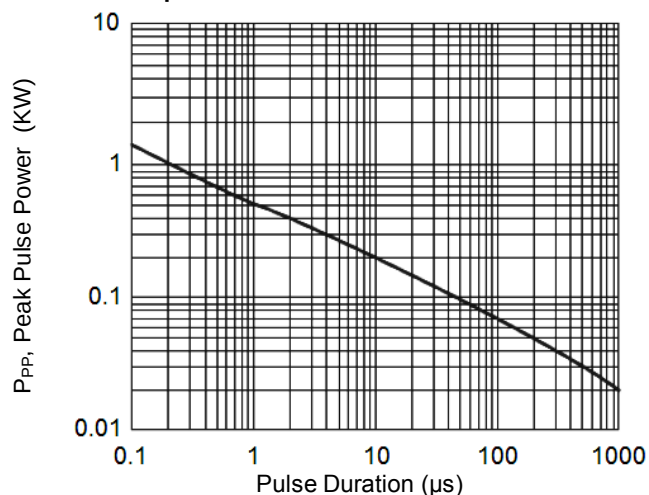
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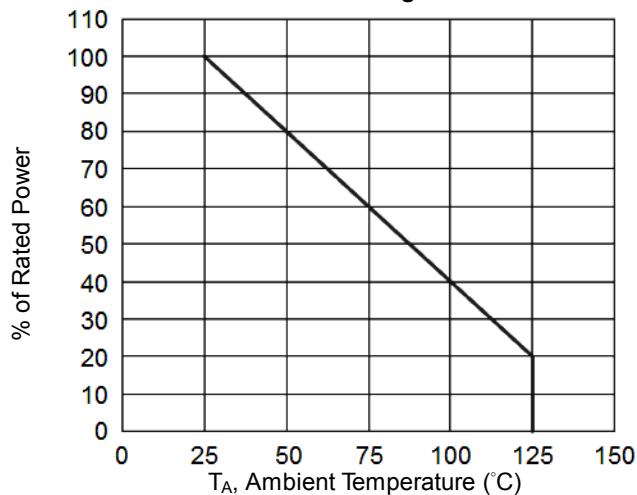
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CHARACTERISTIC CURVES

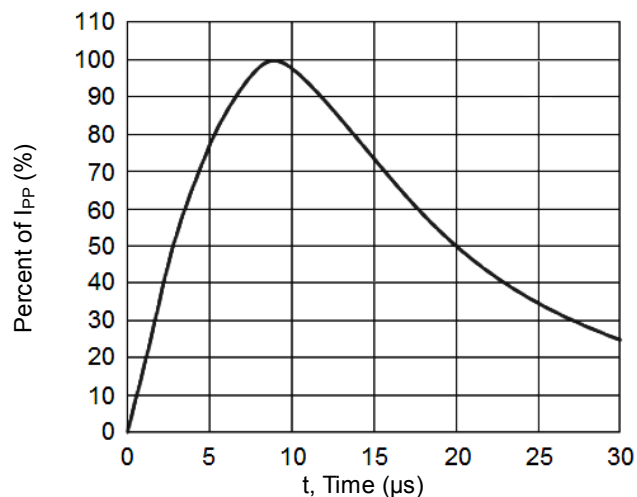
Non-repetitive Peak Pulse Power vs. Pulse Time



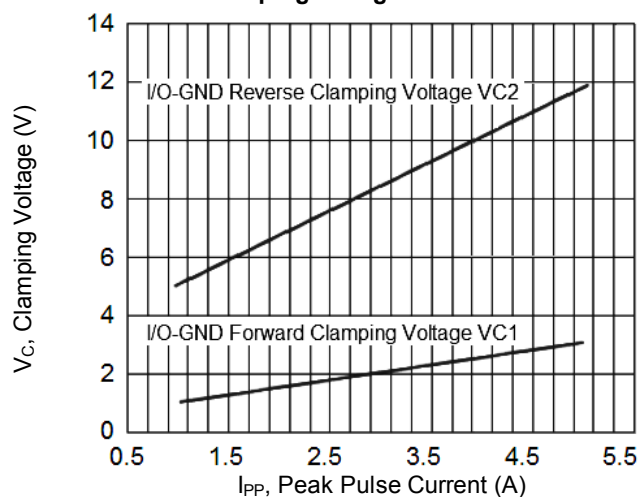
Power Derating Curve



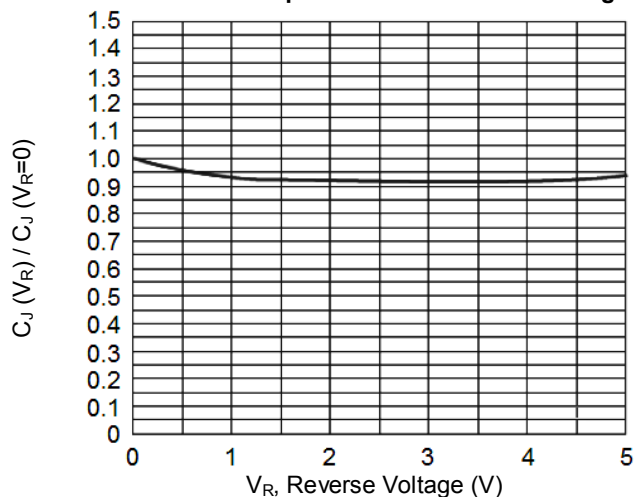
Pulse Waveform



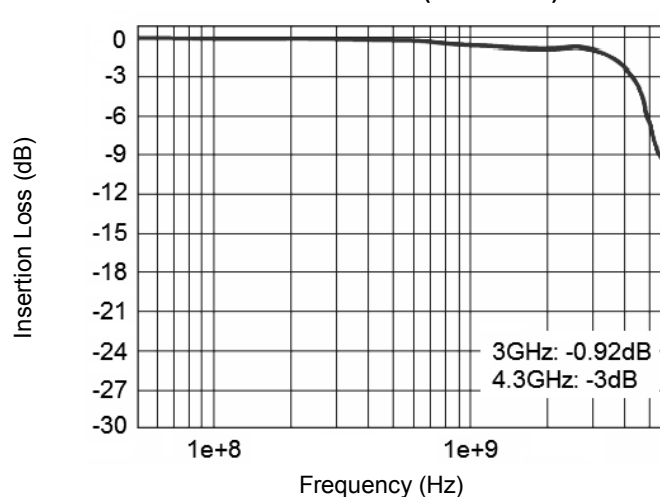
I/O-GND Clamping Voltage vs. Peak Pulse Current



Normalized Capacitance vs. Reverse Voltage



Insertion Loss S_{21} (I/O to GND)



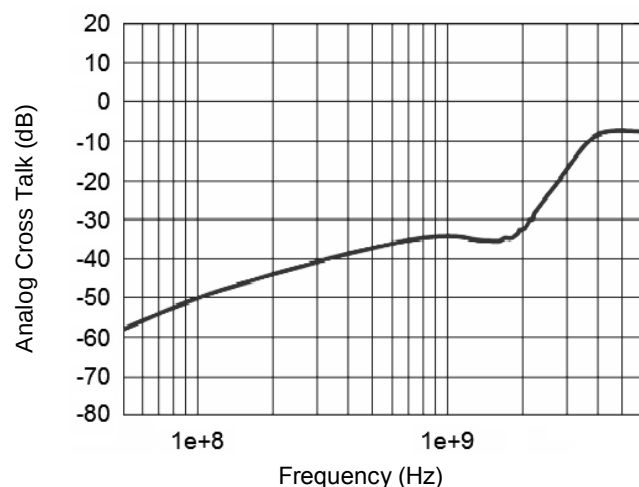
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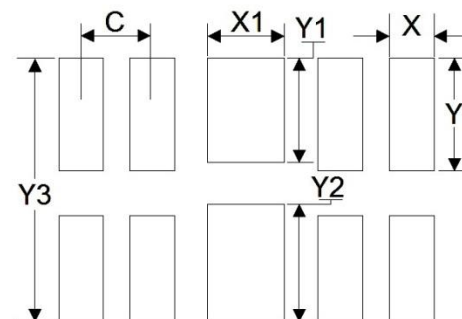
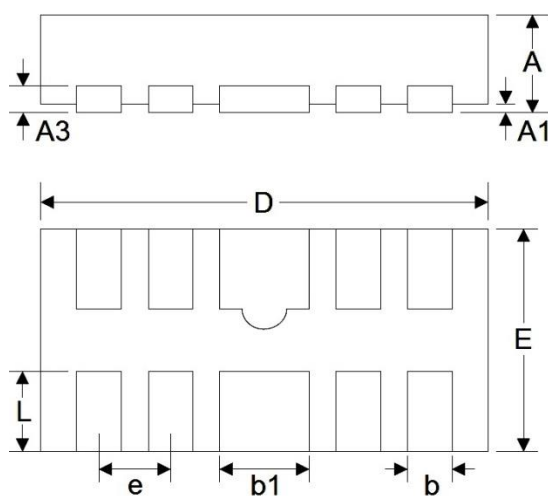
CHARACTERISTIC CURVES

Analog Cross Talk



DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A	0.45	0.55
A1	0.00	0.05
A3	0.15	0.15
b	0.15	0.25
b1	0.30	0.50
D	2.40	2.60
e	0.50	0.50
E	0.90	1.10
L	0.30	0.46
C	0.50	0.50
X	0.25	0.25
X1	0.45	0.45
Y	0.63	0.63
Y1	0.58	0.58
Y2	0.70	0.70
Y3	1.40	1.40



*Specifications subject to change without notice.