

ESD Suppressor

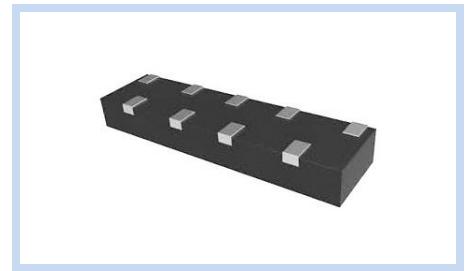
3.3V 8-Unidirectional DFN3810

ME3V38U13D3810

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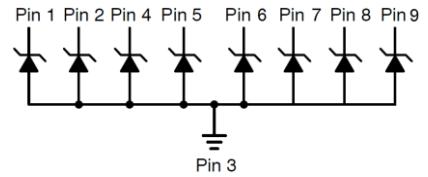
FEATURE

- IEC 61000-4-2 ESD: $\pm 18\text{KV}$ (Air) $\pm 15\text{KV}$ (Contact)
- IEC 61000-4-4 EFT: 40A (5/50ns)
- IEC 61000-4-5 Lightning: 3A (8/20 μs)
- ESD Protection for eight Unidirectional Channels
- Low Capacitance
- Low Clamping Voltage
- Solid-State Silicon-Avalanche Technology



APPLICATION

- USB Type-C Interface
- High Definition Multi-Media Interface (HDMI) 2.0 Version
- V-By-One Interface
- LVDS Interface
- Display Port Interface



MAXIMUM RATINGS AND CHARACTERISTICS

Parameter	Symbol	Value	Unit
ESD Voltage per IEC61000-4-2 (Contact discharge)	V_{ESD}	± 15	KV
ESD Voltage per IEC61000-4-2 (Air discharge)		± 18	KV
Operating & Storage Temperature Range	T_J, T_{STG}	-55~+150	°C

ELECTRICAL CHARACTERISTICS

Parameter	Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	--	V_{RWM}	--	--	3.3	V
Reverse Breakdown Voltage	$I_{BR}=1\text{mA}$	V_{BR}	4	--	--	V
Reverse Leakage Current	$V_R=3.3\text{V}$	I_R	--	--	50	nA
Clamping Voltage	$I_{PP}=1\text{A}, tp=8/20\mu\text{s}$	V_C	--	--	9	V
	$I_{PP}=3\text{A}, tp=8/20\mu\text{s}$		--	--	13	
Clamping Voltage TLP	$I_{PP}=8\text{A}, tp=100\text{ns}$	V_C	--	15	--	V
	$I_{PP}=16\text{A}, tp=100\text{ns}$		--	22	--	
Dynamic Resistance	$tp=100\text{ns}$	R_{DYN}	--	0.88	--	Ω
Off State Junction Capacitance	$V_{dc}=0, f=1\text{MHz}$, Any I/O pins to GND	C_J	--	--	0.4	pF
	$V_{dc}=0, f=1\text{MHz}$, Between any I/O pins		--	--	0.2	

Notes:

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

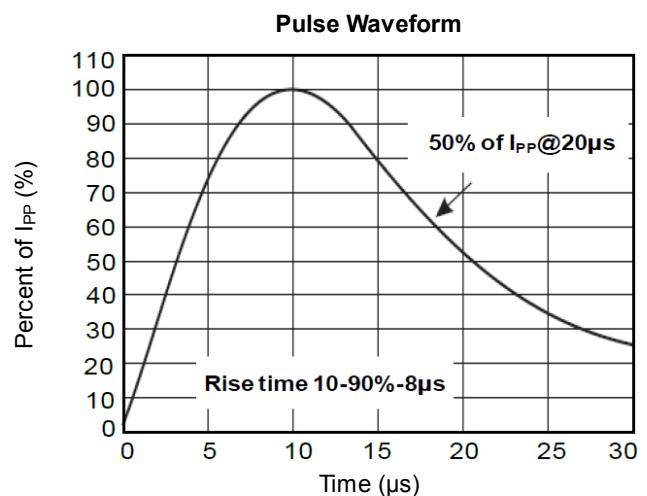
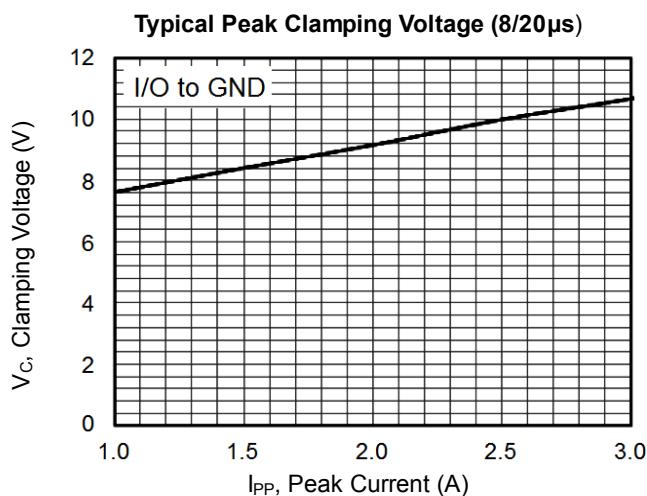
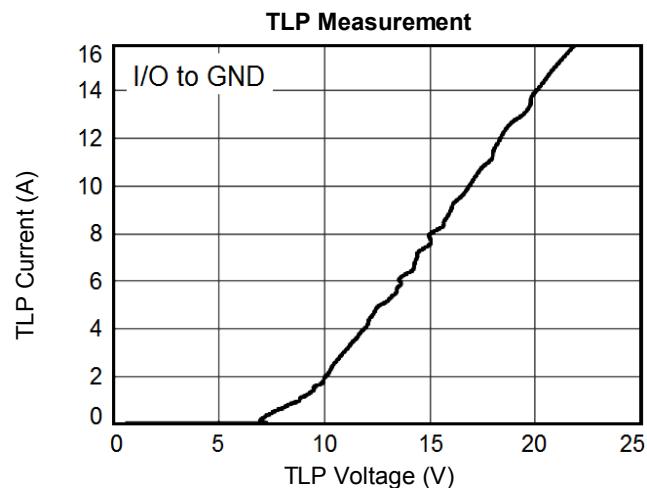
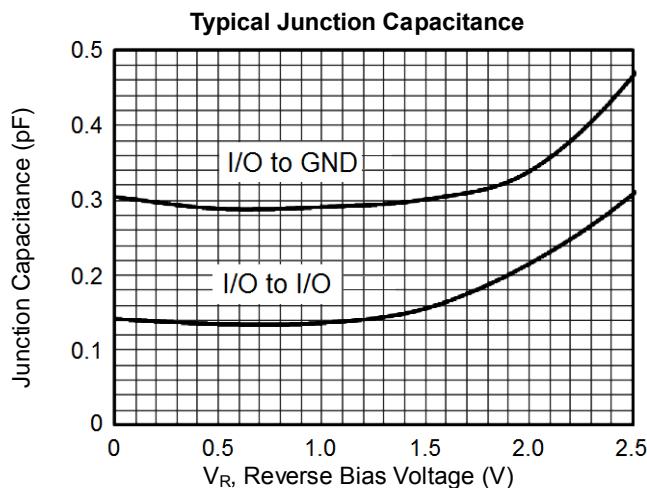
2. Transmission Line Pulse (TLP) test condition: $Z_0=50\Omega, tp=100\text{ns}$

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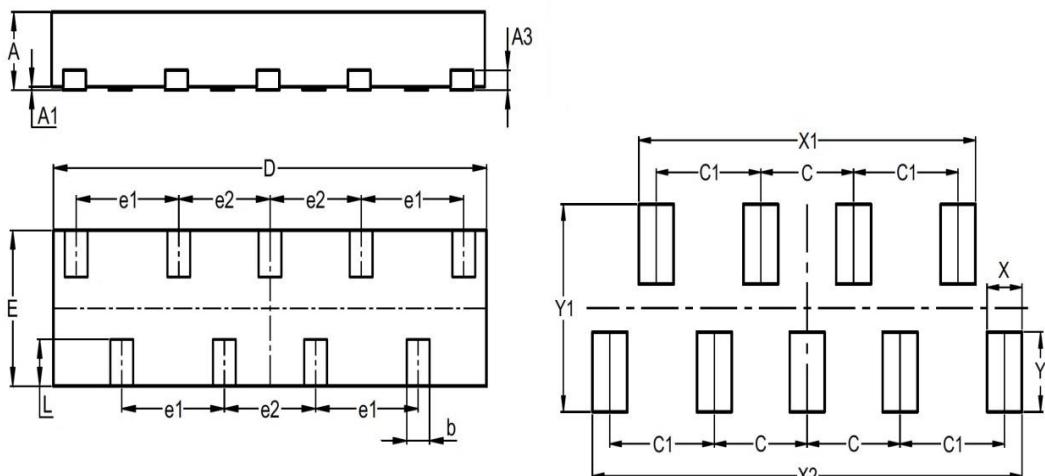
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CHARACTERISTIC CURVES



DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A	0.45	0.55
A1	-	0.05
A3	0.10	0.20
b	0.15	0.25
D	3.70	3.90
e1	0.90	0.90
e2	0.80	0.80
E	0.90	1.10
L	0.20	0.40
C	0.80	0.80
C1	0.90	0.90
X	0.30	0.30
X1	2.9	2.9
X2	3.7	3.7
Y	0.5	0.5
Y1	1.3	1.3



*Specifications subject to change without notice.