

### Features

- Ultra low capacitance: 0.29pF typical
- Ultra low leakage: nA level
- Low operating voltage: 5V
- Low clamping voltage
- Protects eight data lines
- Leadless flow-through package
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test  
Air discharge:  $\pm 15\text{kV}$   
Contact discharge:  $\pm 8\text{kV}$
  - IEC61000-4-4 (EFT) 40A (5/50ns)
  - IEC61000-4-5 (Lightning) 5A (8/20 $\mu\text{s}$ )
- RoHS Compliant

### Applications

- USB 3.0, 3.1 and type C
- HDMI 1.4
- High-Speed Data Lines

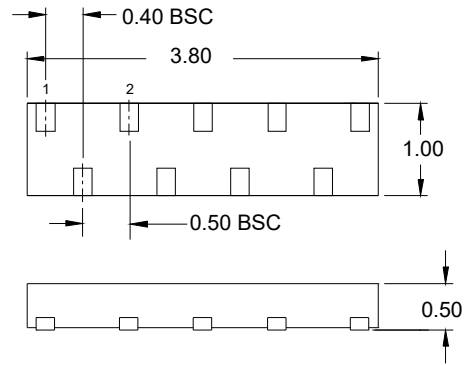
### Mechanical Characteristics

- Package: DFN3810-9
- Lead Finish: NiPdAu
- Case Material: “Green” Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below
- Marking Information: See Below

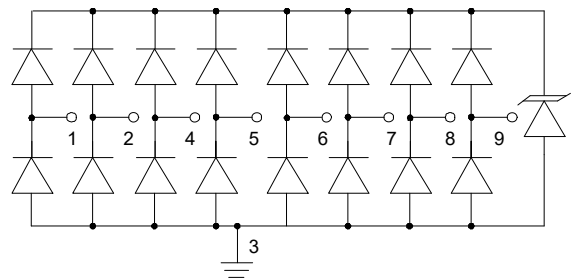
### Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 $\mu\text{s}$ )	Ppp	100	W
ESD per IEC 61000-4-2 (Air)	V <sub>ESD</sub>	$\pm 15$	Kv
ESD per IEC 61000-4-2 (Contact)		$\pm 8$	
Operating Temperature Range	T <sub>J</sub>	-55 to +150	°C
Storage Temperature Range	T <sub>STJ</sub>	-55 to +150	°C

### Dimensions DFN3810-9



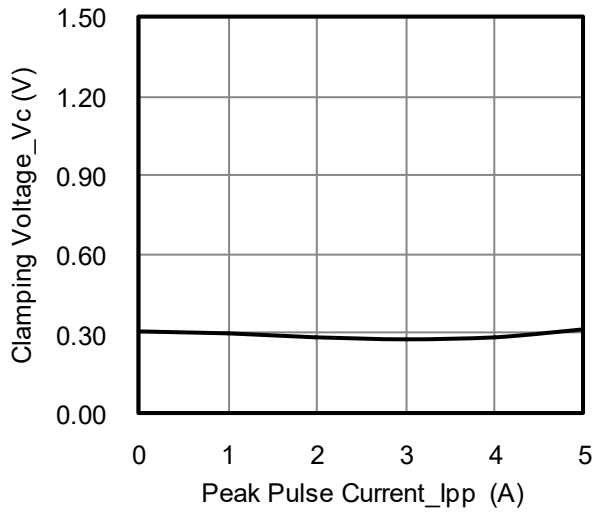
### Pin Configuration



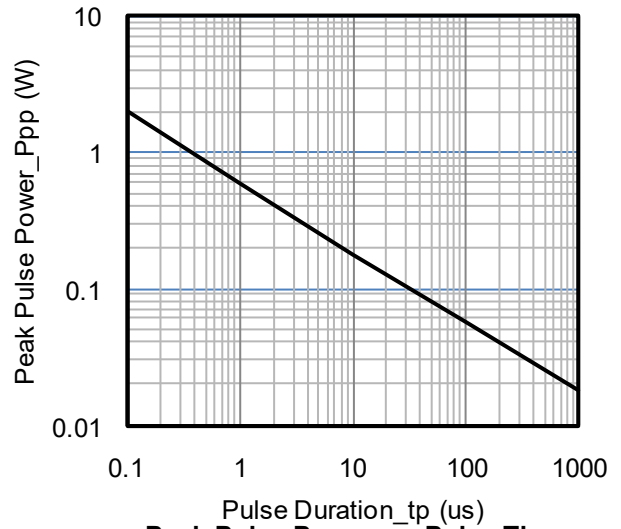
## Electrical Characteristics (TA=25°C unless otherwise specified)

Part Number	Device Marking	V <sub>RWM</sub> (V)	V <sub>BR</sub> (V)	I <sub>T</sub> (mA)	V <sub>C</sub> @1A	V <sub>C</sub>		I <sub>R</sub> μA (Max)	C (Pf) (Typ.)
						(Max)	(@A)		
ULC3344P8	0508P	5	6	1	15	20.5	0.5	0.5	0.29

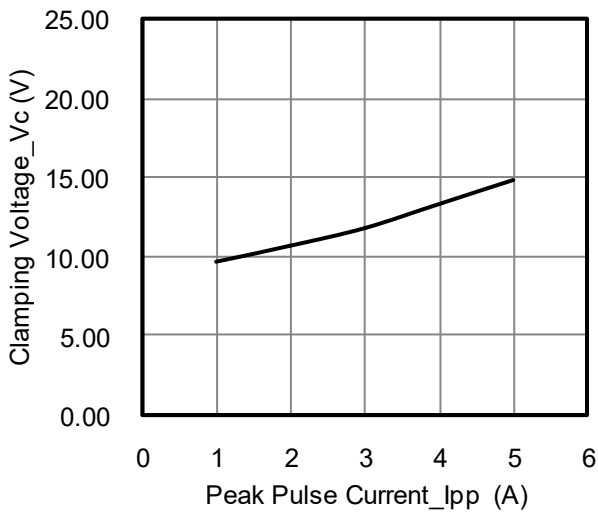
Typical Performance Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise Specified)



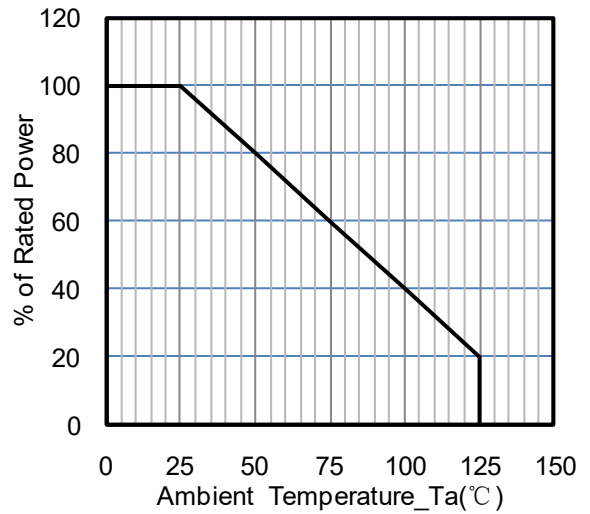
Junction Capacitance vs. Reverse Voltage



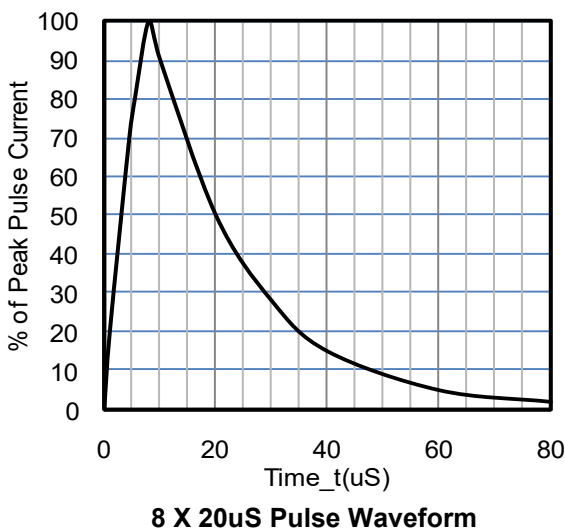
Peak Pulse Power vs. Pulse Time



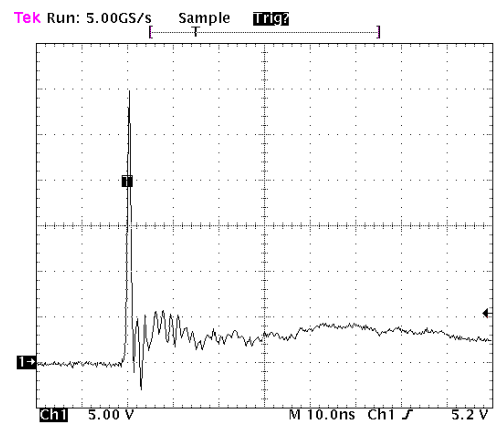
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



8 X 20uS Pulse Waveform

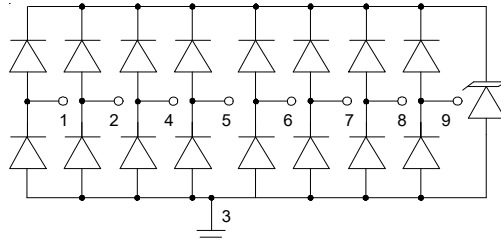


ESD Clamping Voltage

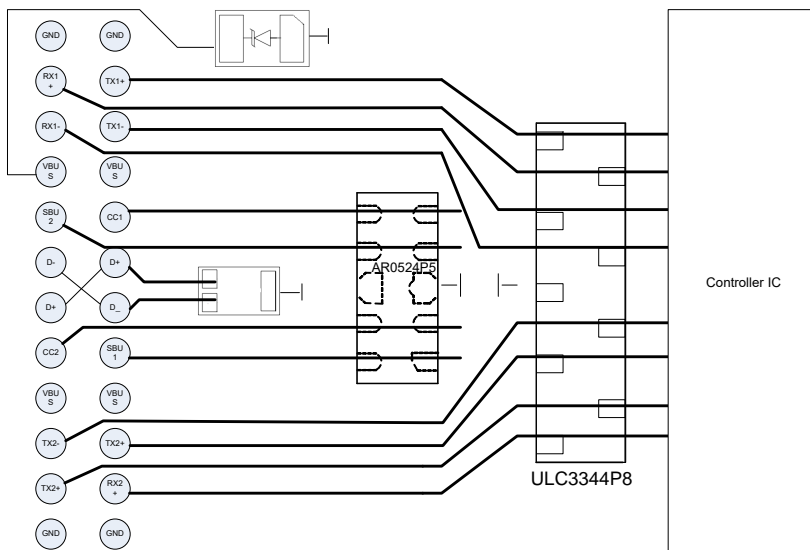
8 kV Contact per IEC61000-4-2

## Typical Application

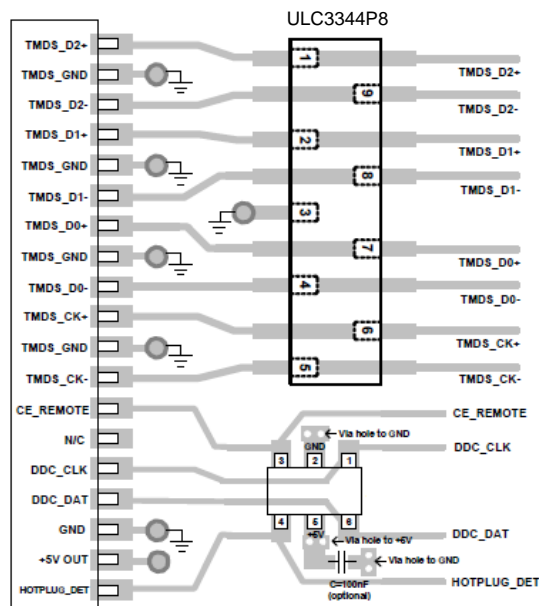
The ULC3344P8 is designed for easy PCB layout by allowing the traces to run straight through the device. The protected data lines are normally connected at pins 1, 2, 4, 5, 6, 7, 8, and 9, pin 3 is connected to ground. The connection to ground should be made directly to a ground plane. The path length should also be kept as short as possible to minimize parasitic inductance.



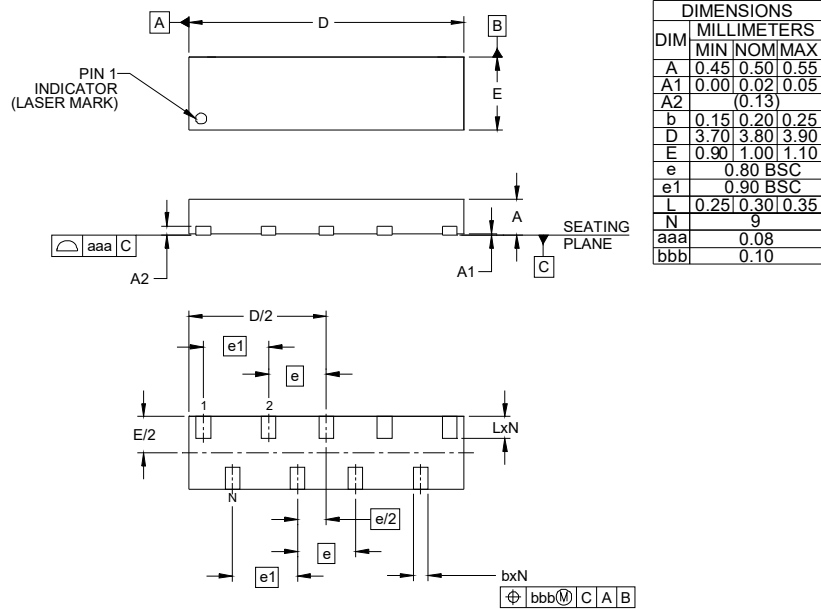
## ULC3344P8 on USB 3.1 Type C Application



## ULC3344P8 on HDMI Application

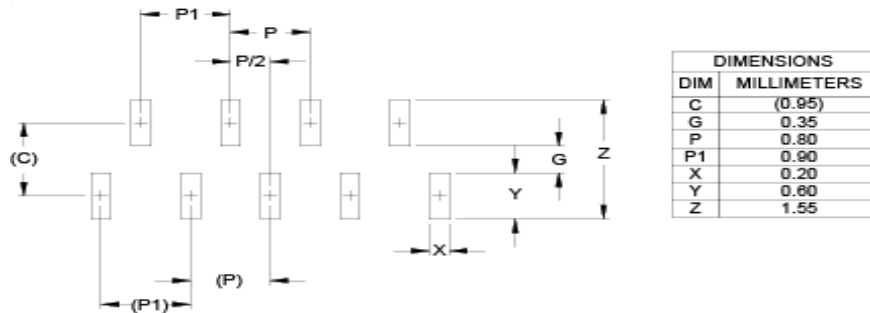


## DFN3810-9 Package Outline Drawing



- NOTES:
1. CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).

## Suggested Land Pattern



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1. CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).
  2. THIS LAND PATTERN IS FOR REFERENCE PURPOSES ONLY. CONSULT YOUR MANUFACTURING GROUP TO ENSURE YOUR COMPANY'S MANUFACTURING GUIDELINES ARE MET.