

## Features

- Small Package Saves Board Space
- Protects Four(4) I/O Lines
- Low Clamping Voltage
- Low Capacitance
- Can Handle Multiple ESD Strikes
- Halogen Free. "Green" Device (Note 1)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

## Maximum Ratings

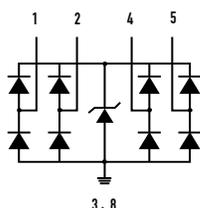
- Operating Junction Temperature Range: -55°C to +125°C
- Storage Temperature Range: -55°C to +150°C

MCC Part Number	Device Marking
ESDLC3324DFN10	3324P

IEC61000-4-2(ESD)	Air Contact	±15KV ±10KV
IEC61000-4-5(Surge)@8/20µs	I <sub>PP</sub>	5A
Peak Pulse Power @ 8/20µs	P <sub>PP</sub>	65W

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

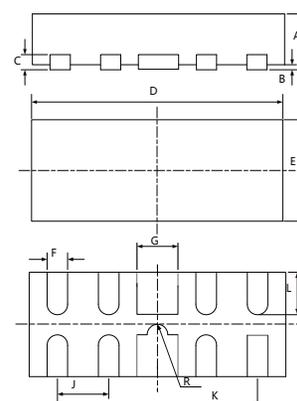
## Pin Configuration



Pin	Identification
1,2,4,5	Input lines
6,7,9,10	Output Lines (No Internal Connection)
3,8	Ground

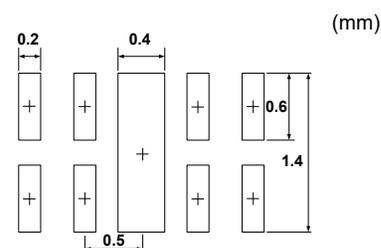
# ESD Protection Device

## DFN-10



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.016	0.020	0.40	0.50	
B	0.000	0.002	0.00	0.05	
C	0.004	0.008	0.10	0.20	
D	0.098	0.102	2.45	2.55	
E	0.038	0.042	0.95	1.05	
F	0.006	0.010	0.15	0.25	
G	0.014	0.018	0.35	0.45	
J	0.020		0.500		TYP.
K	0.080		2.000		TYP.
L	0.012	0.018	0.30	0.46	
R	0.005		0.125		TYP.

## SUGGESTED SOLDER PAD LAYOUT



**Electrical Characteristics per line @ 25°C (Unless Otherwise Specified)**

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	$V_{RWM}$	Any I/O Pin to GND			3.3	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$ , Any I/O Pin to GND	5.0		8.0	V
Reverse Leakage Current	$I_R$	$V_{RWM}=3.3V$ , Any I/O Pin to GND			1.0	$\mu A$
Clamping Voltage	$V_C$	$I_{PP}=1A$ , $t_p=8/20\mu s$			9	V
Clamping Voltage	$V_C$	$I_{PP}=5A$ , $t_p=8/20\mu s$			13	V
Junction Capacitance	$C_{I/O-GND}$ $C_{I/O-I/O}$	$V_R=0V$ , $f=1MHz$		0.5 0.25	0.65 0.4	pF

## Curve Characteristics

Fig. 1 - 8 X 20 $\mu$ s Pulse Waveform

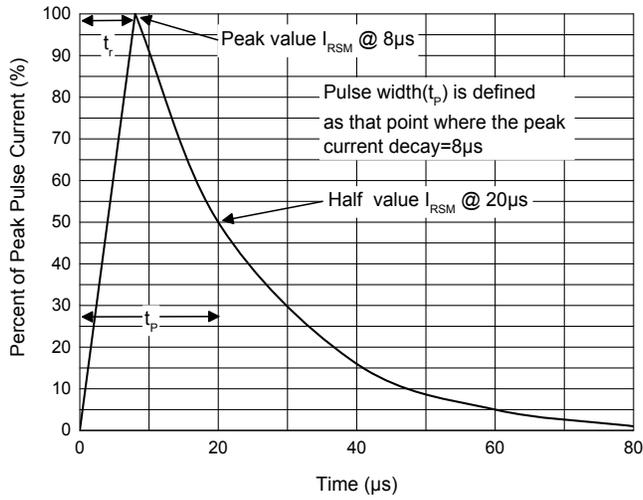


Fig. 2 - Pulse Derating Curve

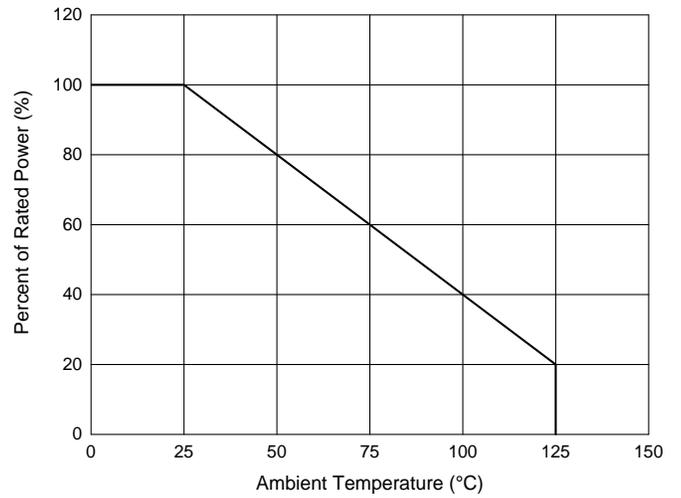


Fig. 3 - Peak Pulse Power Rating Curve

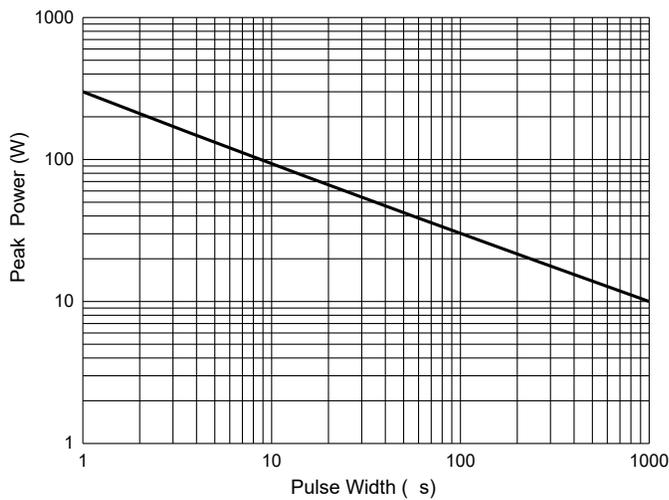


Fig. 4 - Capacitance Characteristics

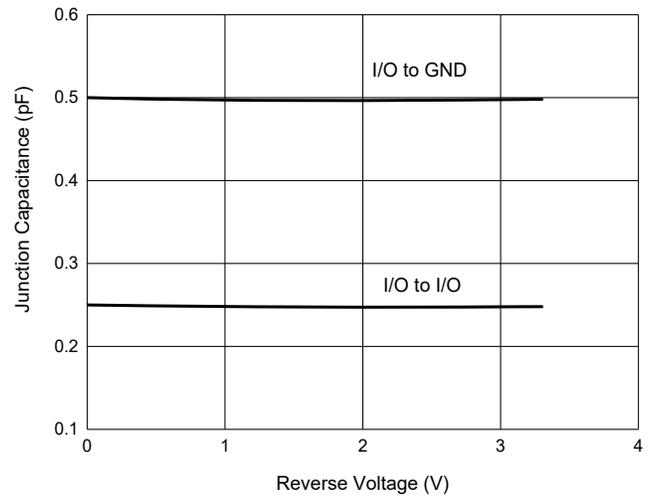
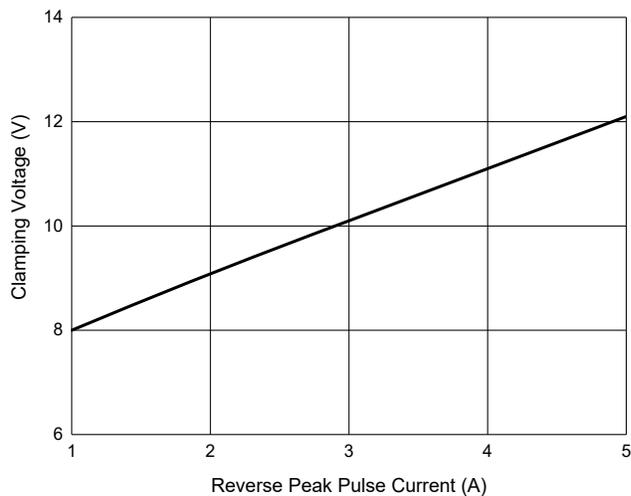


Fig. 5 - Clamping Voltage Characteristics



## Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

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