

## Features

- Protects Four(4) I/O Lines
- Ultra Low Capacitance
- Ultra Low Leakage
- Low Clamping Voltage
- Fast Response, Response Time Less than 1ns
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. "Green" Device (Note 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

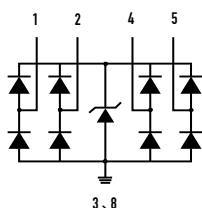
MCC Part Number	Device Marking
ESDSL0534DFN10	0534

IEC61000-4-2(ESD)	Air Contact	±25KV ±20KV
Peak Pulse Current(8/20µs)	I <sub>PP</sub>	3A
Peak Pulse Power (8/20µs)	P <sub>PK</sub>	50W

Note:

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

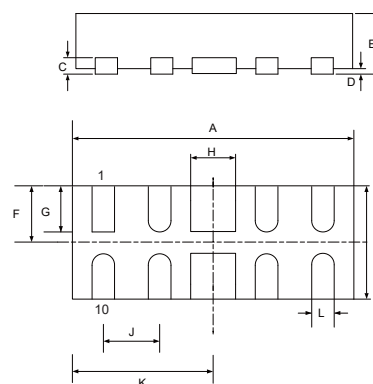
## Internal Structure



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	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.094	0.102	2.40	2.60	
B	0.035	0.043	0.90	1.10	
C	0.005		0.13		TYP.
D	0.000	0.002	0.00	0.05	
E	0.020	0.026	0.50	0.65	
F	0.017	0.022	0.45	0.55	
G	0.012	0.017	0.30	0.425	
H	0.014	0.018	0.35	0.45	
J	.020		0.5		TYP.
K	0.047	0.056	1.20	1.30	
L	0.006	0.010	0.15	0.25	

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

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Working Voltage	$V_{RWM}$				5	V
Reverse Leakage Current	$I_R$	$V_{RWM}=5V$			200	nA
Reverse Breakdown Voltage	$V_{BR}$	$I_T = 1mA$	6	7.5	8.5	V
Clamping Voltage <sup>(Note 2)</sup>	$V_C$	$I_{PP}=16A, t_p=100ns$		16.5		V
Dynamic Resistance <sup>(Note 2)</sup>	$R_{DYN}$			0.68		$\Omega$
Clamping Voltage <sup>(Note 3)</sup>	$V_C$	$I_{PP}=1A, t_p=8/20\mu s$			9	V
		$I_{PP}=3A, t_p=8/20\mu s$			15	V
Junction Capacitance	$C_{I/O-GND}$	$V_R=0V, f=1MHz$		0.4	0.5	pF
	$C_{I/O-I/O}$			0.2	0.25	pF

Note:

- TLP Parameter:  $Z_0=50\Omega, t_p=100ns, t_r=2ns$ , Averaging Window from 60ns to 80ns.  $R_{DYN}$  is Calculated from 4A to 16A.
- Non-repetitive Current Pulse, According to IEC61000-4-5.

## Curve Characteristics

Fig. 1 - 8 X 20µs Pulse Waveform

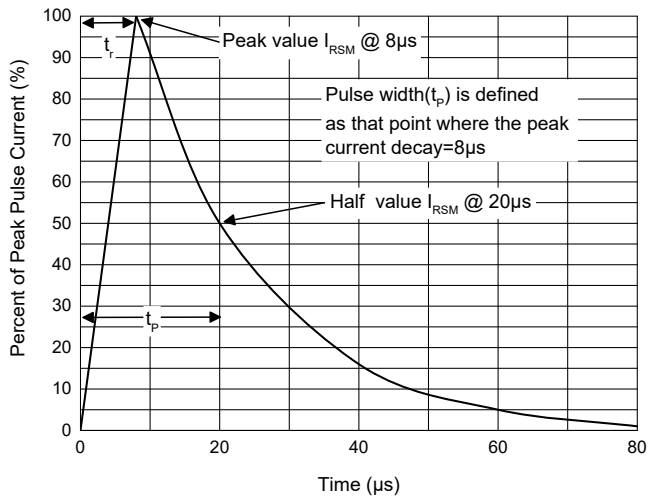


Fig. 2 - Capacitance Characteristics

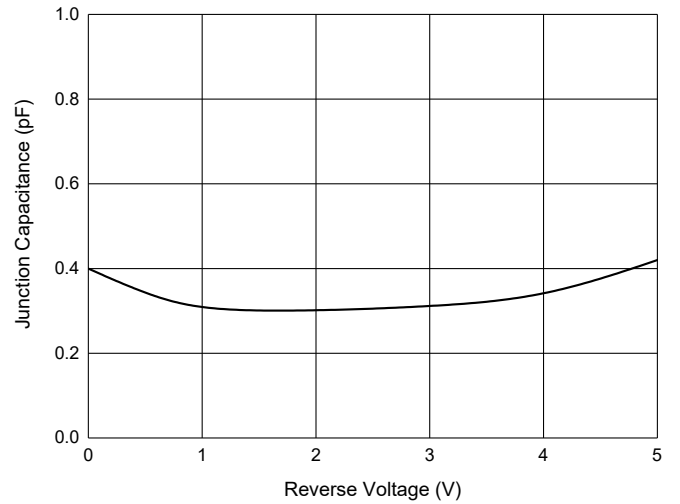


Fig. 3 - Clamping Voltage Characteristics

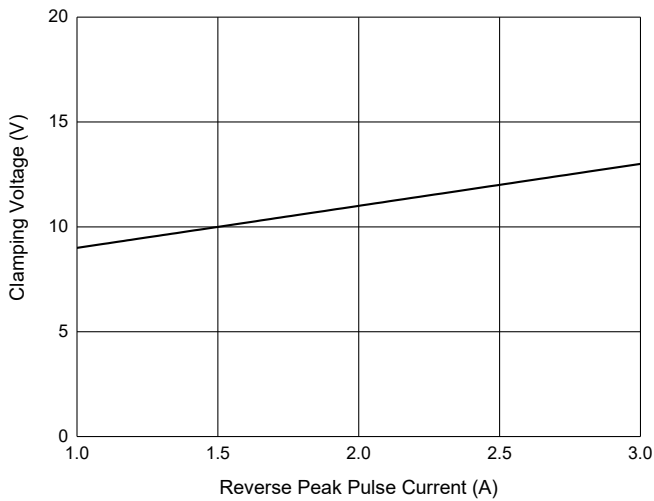


Fig. 4 - Pulse Derating Curve

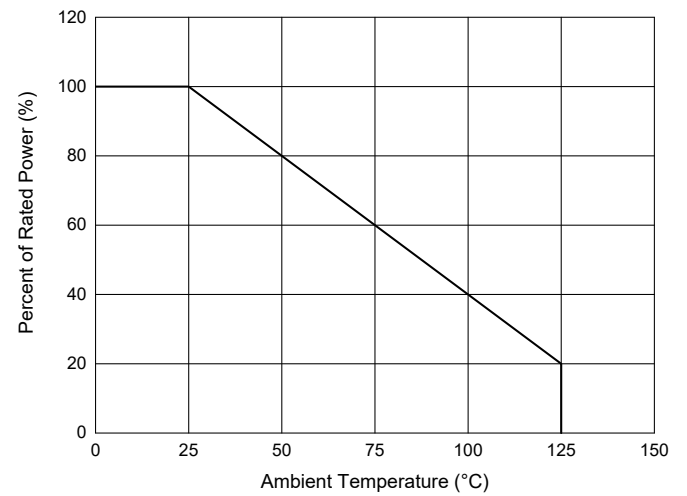


Fig. 5 - TLP Measurement

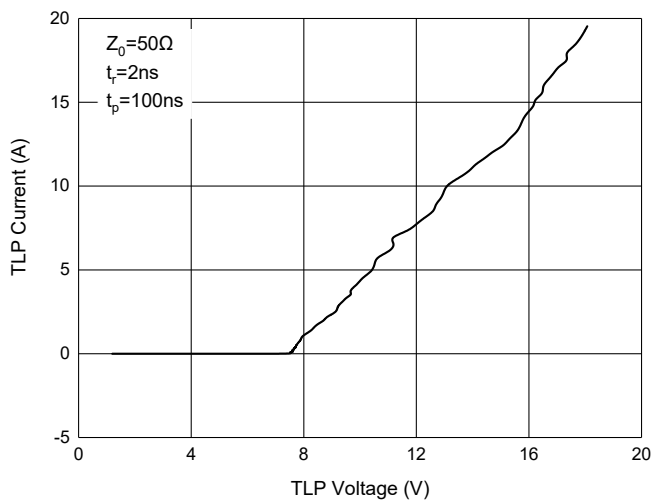
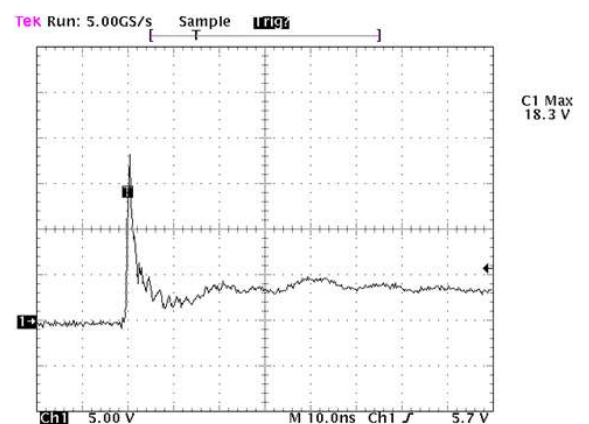


Fig. 6 - ESD Clamping Voltage



Note: Data is taken with a 10x attenuator  
8 kV Contact per IEC61000-4-2

## Ordering Information

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

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