



## ESDLC0524DFN10

### Features

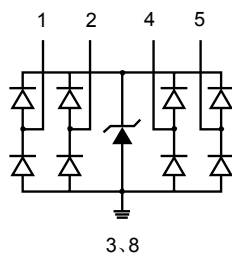
- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Small package saves board space
- Protects four(4) I/O lines
- Low clamping voltage
- 150W peak pulse power (tp=8/20us)

### Maximum Ratings

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

| Parameter                      | Symbol | Limits               | unit |
|--------------------------------|--------|----------------------|------|
| IEC61000-4-2(ESD) Air Contact  |        | $\pm 17$<br>$\pm 12$ | KV   |
| IEC61000-4-5 (Surge): @ 8/20us |        | 5                    | A    |
| Peak Pulse Power: @ 8/20us     | Ppp    | 150                  | W    |

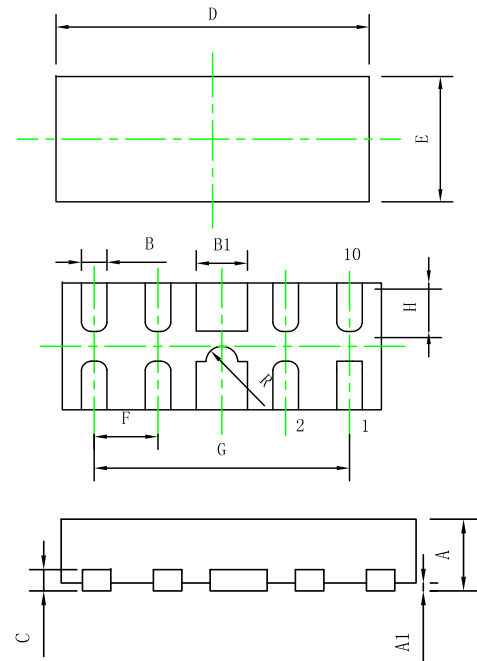
### Pin Configuration



| Pin      | Identification |
|----------|----------------|
| 1,2,4,5  | Input lines    |
| 6,7,9,10 | Output Lines   |
| 3,8      | Ground         |

## 5 Volts ESD Protection Device

### DFN-10



| DIM | INCHES  |      | MM      |       | NOTE |
|-----|---------|------|---------|-------|------|
|     | MIN     | MAX  | MIN     | MAX   |      |
| A   | .016    | .020 | 0.40    | 0.50  |      |
| A1  | ---     | .002 | ---     | 0.05  |      |
| B   | .006    | .010 | 0.15    | 0.25  |      |
| B1  | .014    | .018 | 0.35    | 0.45  |      |
| C   | .004    | .008 | 0.10    | 0.20  |      |
| D   | .095    | .102 | 2.40    | 2.60  |      |
| E   | .035    | .043 | 0.90    | 1.10  |      |
| F   | .020BSC |      | 0.50BSC |       |      |
| G   | .079BSC |      | 2.00BSC |       |      |
| H   | .012    | .017 | 0.30    | 0.425 |      |
| R   | .005    | .005 | 0.12    | 0.13  |      |

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             |      |      | 5          | V       |
| Reverse Breakdown voltage | $V_{BR}$                       | $I_Z=1mA$ Any I/O Pin to GND   | 6.1  |      | 8.5        | V       |
| Reverse Leakage Current   | $I_R$                          | $V_R=5V$ Any I/O Pins to GND   |      |      | 0.9        | $\mu A$ |
| Forward Voltage           | $V_F$                          | $I_F=15mA$ GND to any I/O Pins |      |      | 1.15       | V       |
| Junction Capacitance      | $C_{I/O-GND}$<br>$C_{I/O-I/O}$ | $V_R=0V$ $f = 1MHz$            |      |      | 0.8<br>0.4 | pF      |
| Clamping voltage          | $V_C$                          | $I_{pp}=1A$ $t_p=8/20$ us      |      |      | 15         | V       |
| Clamping voltage          | $V_C$                          | $I_{pp}=5A$ $t_p=8/20$ us      |      |      | 28         | V       |

## Typical Characteristics

FIGURE 1  
Non-repetitive Peak pulse power V.S pulse time

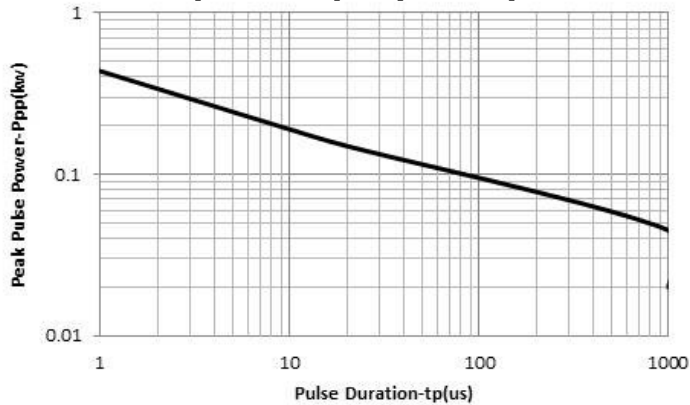
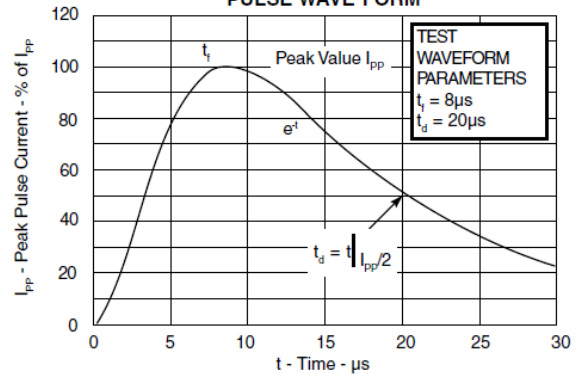


FIGURE 2  
PULSE WAVE FORM



## Typical Characteristics

FIGURE 3  
Power Derating Curve

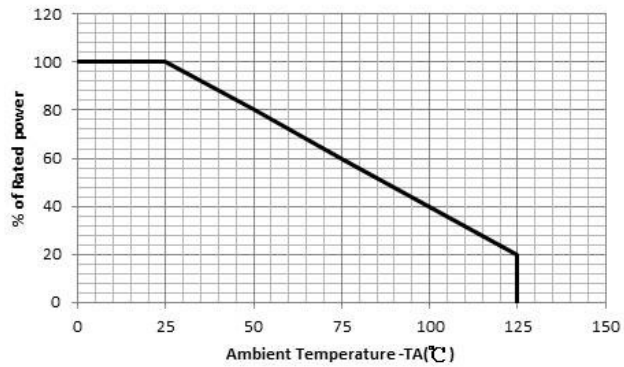


FIGURE 4  
Normalized Capacitance vs.Reverse Voltage

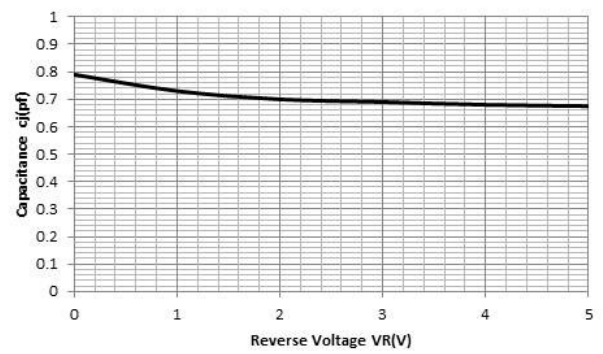


FIGURE 5  
Forward Voltage VF Map GND to I/O pins

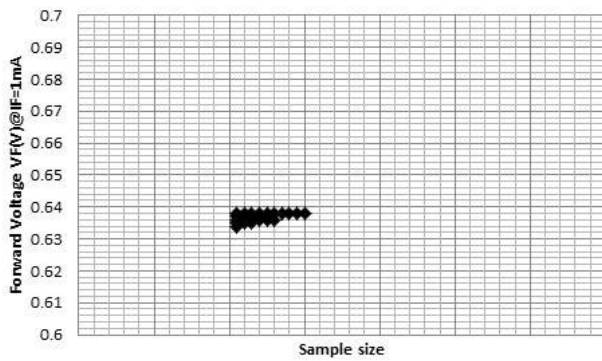
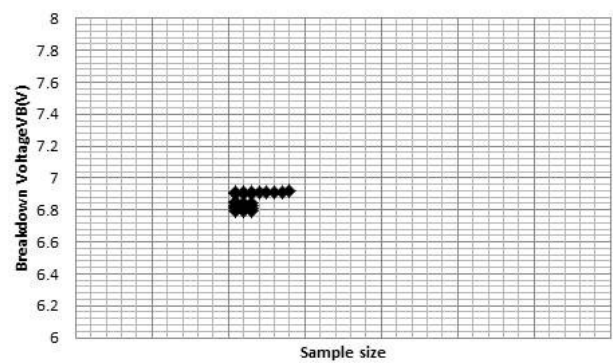


FIGURE 6  
Breakdown Voltage VB Map Any I/OPin to GND.





## Ordering Information :

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

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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