

4-CHANNEL LOW CAPACITANCE ESD PROTECTION DIODES ARRAY

The LRC1043-04DT1G is a 4-channel ultra low capacitance rail clam ESD protection diodes array . Each channel consists of a pair of diodes that steer positive or negative ESD current to either the positive or negative rail . A zener diode is integrated in to the array between the positive and negative supply rails. In the typical applications, the negative rail pin (assigned as GND) is connected with system ground . The Positive ESD current is steered to the ground through an ESD diode and Zener diode and the positive ESD voltage is clamped to the zener voltage.

The LRC1043-04DT1G is idea to protect high speed data lines.

● APPLICATIONS

- 1) HDMI / DVI ports
- 2) Display Port interface
- 3) 10M / 100M / 1G Ethernet
- 4) USB 2.0 interface
- 4) VGA interface
- 5) Set-top box
- 6) Flat panel Monitors / TVs
- 7) PC / Note book

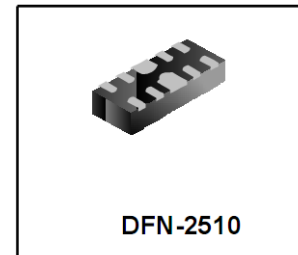
● FEATURES

- 1) 4 channels of ESD protection;
- 2) Provides ESD protection to IEC61000-4-2 level 4
 - ±15kV air discharge
 - ±10kV contact discharge;
- 3) Channel I/O to GND capacitance: 0.65pF(Max)
- 4) Channel I/O to I/O capacitance: 0.6pF(Max)
- 5) Low clamping voltage;
- 6) Low operating voltage;
- 7) Improved zener structure;
- 8) Optimized package for easy high speed data lines PCB layout;
- 9) RoHS compliant and Halogen Free.

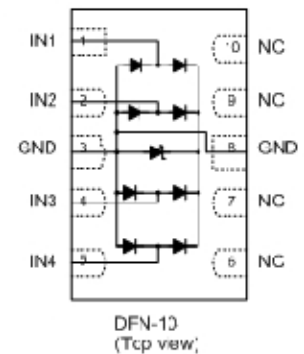
● DEVICE MARKING AND ORDERING INFORMATION

| Device | Marking | Package | Shipping |
|----------------|---------|----------|----------------|
| LRC1043-04DT1G | 59 | DFN-2510 | 3000/Tape&Reel |

LRC1043-04DT1G



PIN CONFIGURATION



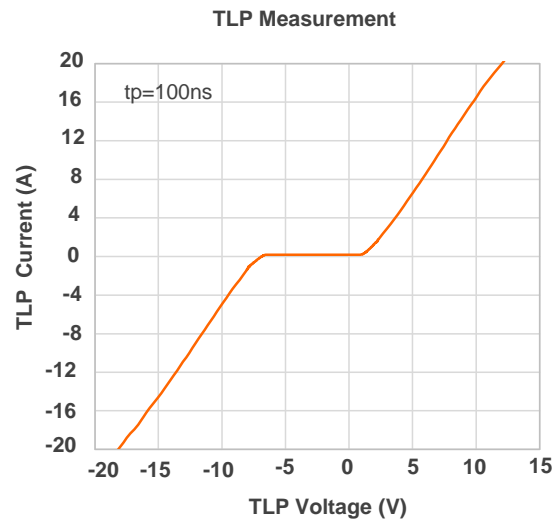
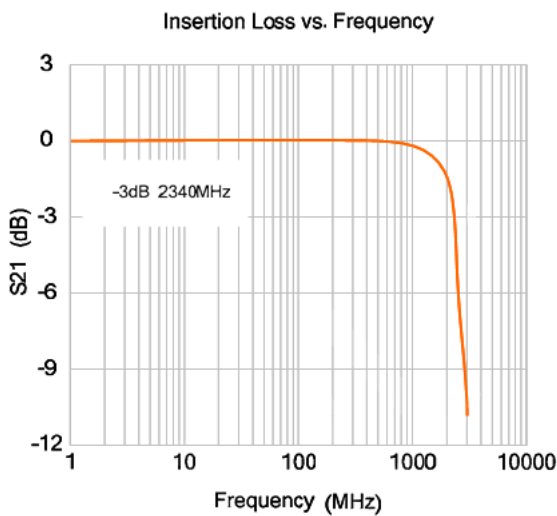
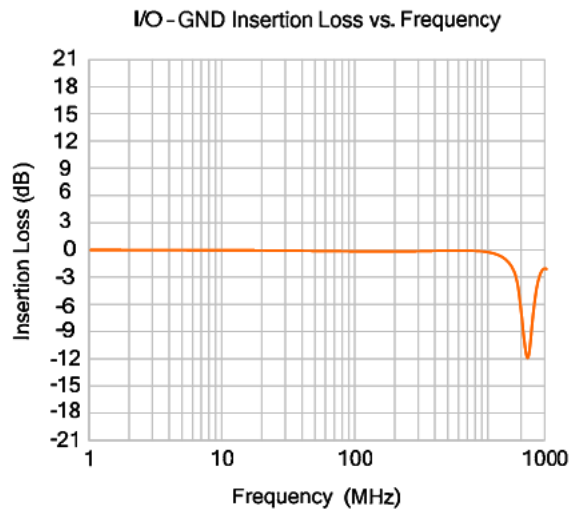
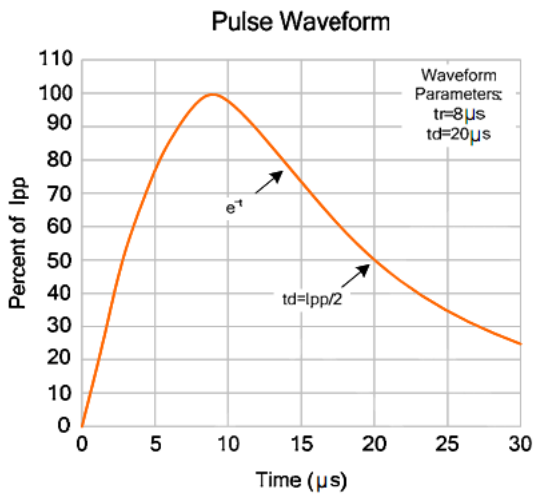
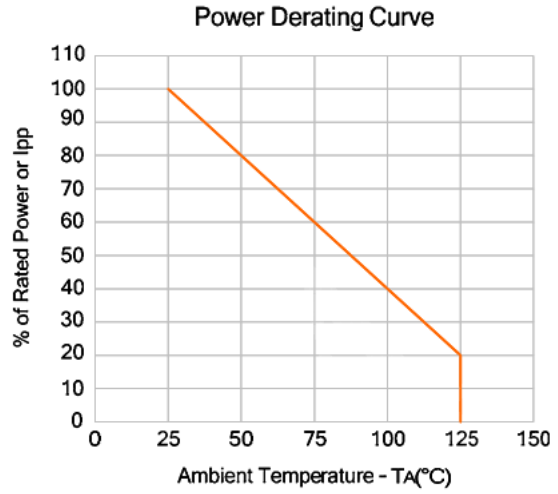
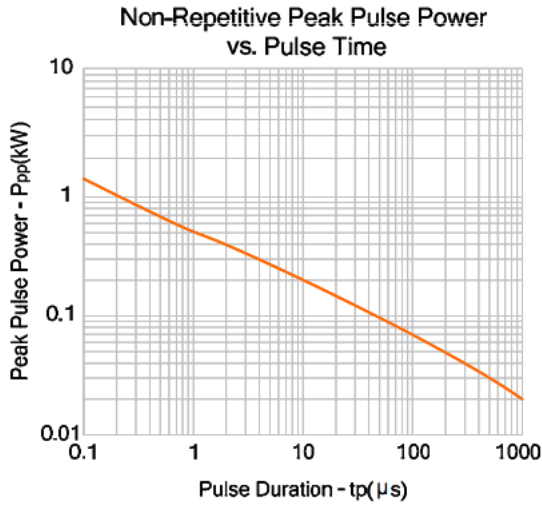
● ABSOLUTE MAXIMUM RATINGS

| Parameter | Symbol | Limits | Unit |
|--------------------------------|--------|------------|------|
| Peak Pulse Power(8/20us) | PPP | 70 | W |
| Peak Pulse Current(8/20us) | IPP | 5 | A |
| ESD per IEC 61000-4-2(Air) | VESD1 | ±15kV | kV |
| ESD per IEC 61000-4-2(Contact) | VESD2 | ±10kV | kV |
| Operating Temperature Range | Topr | -55 ~ +125 | ℃ |
| Storage Temperature Range | Tstg | -55 ~ +150 | ℃ |

● ELECTRICAL CHARACTERISTICS (Ta= 25℃)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|---|--------|------|------|------|------|---|
| Reverse Working Voltage | VRWM | – | – | 3.3 | V | Any I/O pin to GND |
| Reverse Breakdown Voltage | VBR | 5.6 | – | – | V | It =1mA; Any I/O pin to GND |
| Reverse Leakage Current | IR | – | – | 1 | μA | VRWM =3V, T=25℃; Any I/O pin to GND |
| Positive Clamping Voltage | VC1 | – | 8 | 13 | V | IPP=5A, tP=8/20μs; Positive pulse; Any I/O pin to GND |
| Negative Clamping Voltage | VC2 | – | 1.8 | – | V | IPP=1A, tP=8/20μs; Negative pulse; Any I/O pin to GND |
| Junction Capacitance Between Channel | CJ1 | – | 0.45 | 0.65 | pF | VR=0V, f=1MHz; Between I/O pins |
| Junction Capacitance Between I/O And GND | CJ2 | – | 0.5 | 0.6 | pF | VR=0V, f=1MHz; Any I/O pin to GND |

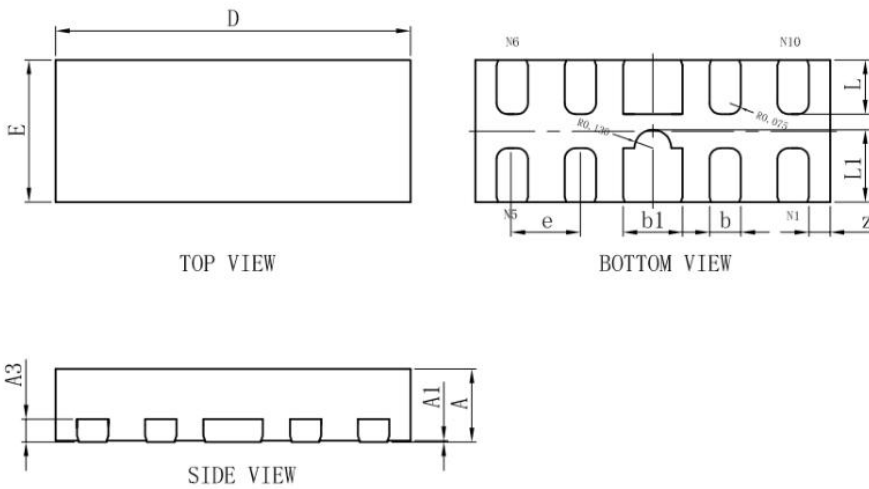
ELECTRICAL CHARACTERISTIC CURVES



LRC1043-04DT1G

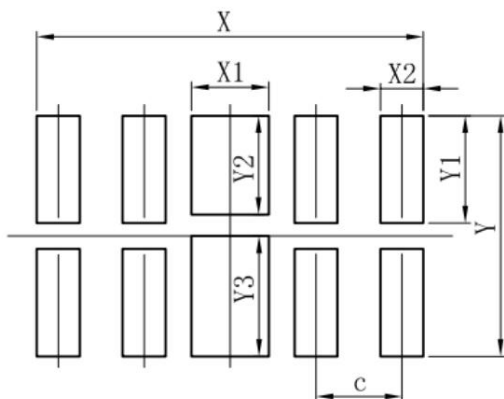
Package Outline Dimension

DFN2510



| DFN2510 | | | |
|----------------------|------|-------|------|
| Dim | Min | Typ | Max |
| A | 0.48 | 0.53 | 0.58 |
| A1 | 0 | 0.02 | 0.05 |
| A3 | - | 0.152 | - |
| b | 0.17 | 0.22 | 0.27 |
| b1 | 0.37 | 0.42 | 0.47 |
| D | 2.45 | 2.50 | 2.55 |
| e | 0.45 | 0.50 | 0.55 |
| E | 0.95 | 1.00 | 1.05 |
| L | 0.33 | 0.38 | 0.43 |
| L1 | 0.46 | 0.51 | 0.56 |
| z | 0.10 | 0.15 | 0.20 |
| All Dimensions in mm | | | |

Suggested Pad layout



| DFN2510 | mm |
|---------|-------|
| c | 0.5 |
| X | 2.25 |
| X1 | 0.45 |
| X2 | 0.25 |
| Y | 1.4 |
| Y1 | 0.625 |
| Y2 | 0.575 |
| Y3 | 0.7 |

单击下面可查看定价，库存，交付和生命周期等信息

[>>LRC\(乐山无线电\)](#)