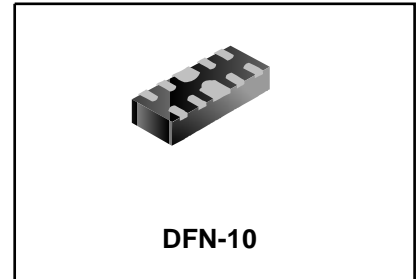


4-CHANNEL LOW CAPACITANCE ESD PROTECTION DIODES ARRAY

DESCRIPTIONS

The LRC099-04DT1G is a 4-channel ultra low capacitance rail clamp ESD protection diodes array. Each channel consists of a pair of ESD 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 LRC099-04DT1G is idea to protect high speed data lines. Three package type is provided for easy PCB layout.

LRC099-04DT1G
S-LRC099-04DT1G



FEATURES

- * 4 channels of ESD protection;
- * Provides ESD protection to IEC61000-4-2 level 4
 - ± 15 kV air discharge
 - ± 8 kV contact discharge;
- * Channel I/O to GND capacitance: 0.9pF(Max)
- * Channel I/O to I/O capacitance: 0.45pF(Max)
- * Low clamping voltage;
- * Low operating voltage;
- * Improved zener structure;
- * Optimized package for easy high speed data lines PCB layout;
- * RoHS compliant.
- * S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.

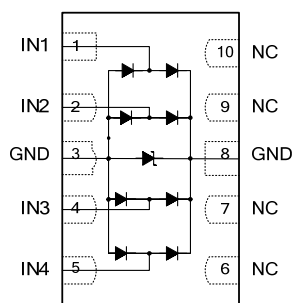
APPLICATIONS

- * HDMI / DVI ports;
- * Display Port interface;
- * 10M / 100M / 1G Ethernet;
- * USB 2.0 interface;
- * VGA interface
- * Set-top box;
- * Flat panel Monitors / TVs;
- * PC / Note book

ORDERING INFORMATION

Part No.	Package	Marking	Material	Shipping
LRC099-04DT1G	DFN-10	24P	Halogen Free	Tape&Reel

PIN CONFIGURATION



DFN-10-2.5x1.0x0.6-0.5
(Top view)

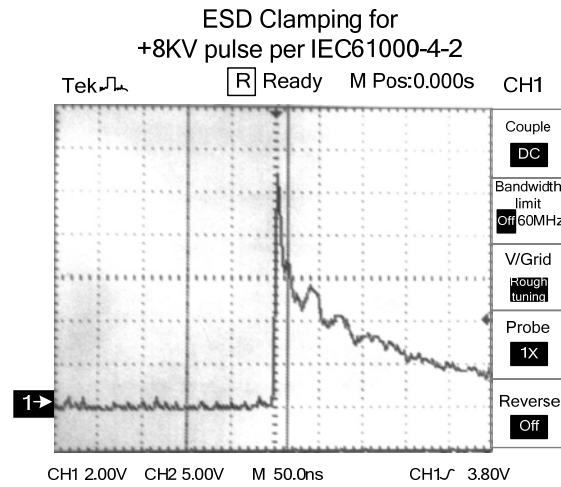
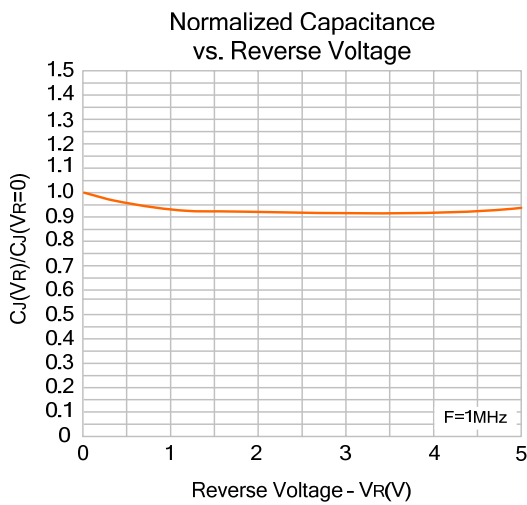
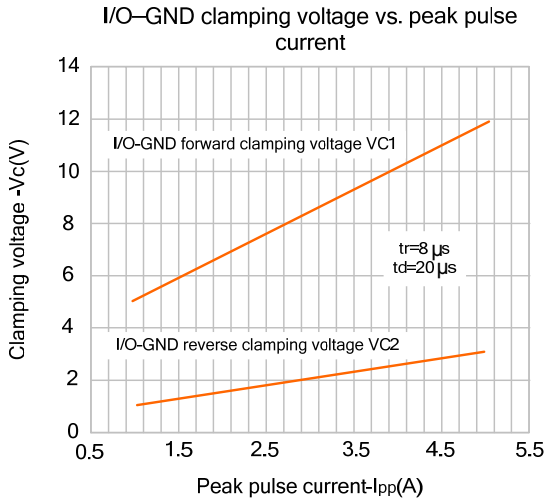
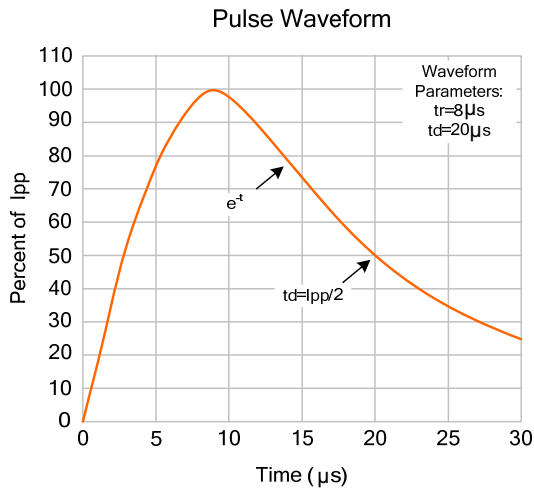
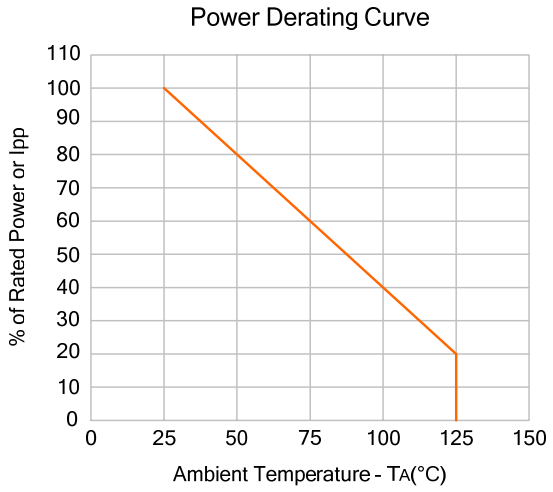
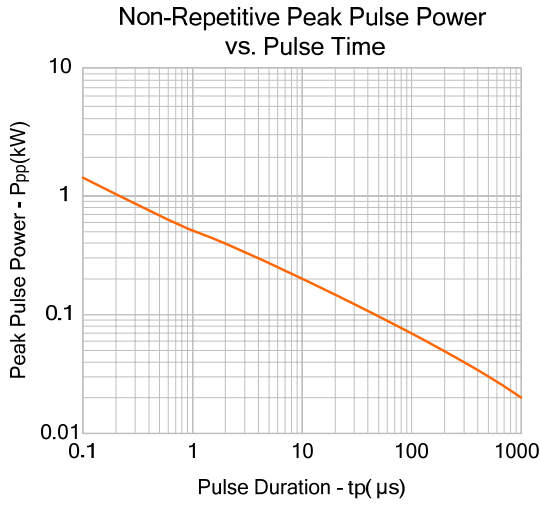
ABSOLUTE MAXIMUM RATINGS

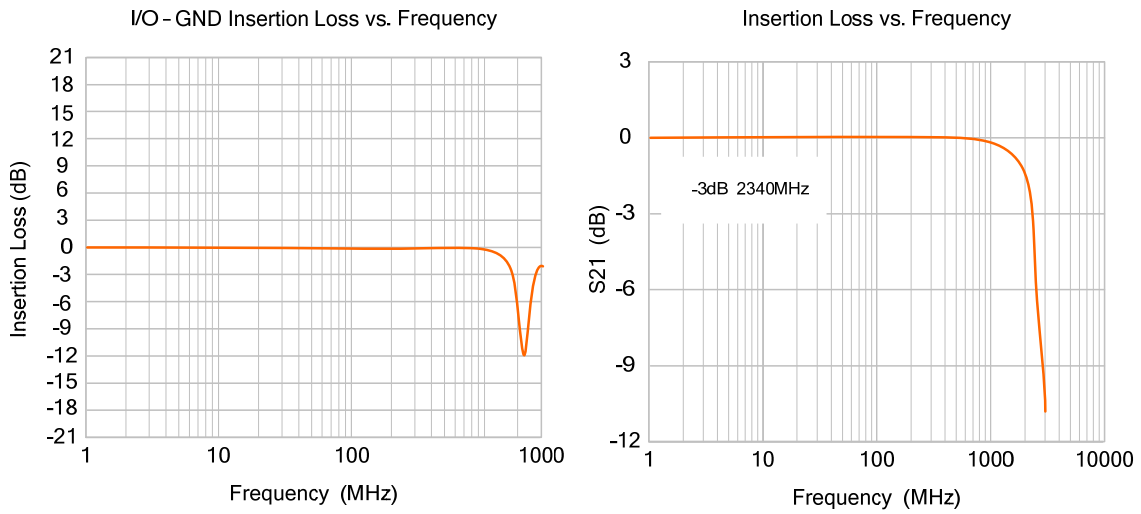
Characteristics	Symbol	Ratings	Unit
Peak Pulse Power(8/20μs)	P _{PP}	150	W
Peak Pulse Current(8/20μs)	I _{PP}	5	A
ESD per IEC 61000-4-2(Air)	V _{ESD1}	±15kV	kV
ESD per IEC 61000-4-2(Contact)	V _{ESD2}	±8kV	kV
Operating Temperature Range	T _{opr}	-55 ~ +125	°C
Storage Temperature Range	T _{stg}	-55 ~ +150	°C

ELECTRICAL CHARACTERISTICS(T_{amb}=25°C)

Characteristics	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Reverse Working Voltage	V _{RWM}	Any I/O pin to GND			5	V
Reverse Breakdown Voltage	V _{BR}	I _t = 1mA; Any I/O pin to GND	6			V
Reverse Leakage Current	I _R	V _{RWM} = 5V, T = 25°C; Any I/O pin to GND			1	μA
Positive Clamping Voltage	V _{C1}	I _{PP} = 1A, t _p = 8/20 μs; Positive pulse; Any I/O pin to GND		8.5	12.0	V
Negative Clamping Voltage	V _{C2}	I _{PP} = 1A, t _p = 8/20 μs; Negative pulse; Any I/O pin to GND		1.8		V
Junction Capacitance Between Channel	C _{J1}	V _R = 0V, f = 1MHz; Between I/O pins		0.35	0.45	pF
Junction Capacitance Between I/O And GND	C _{J2}	V _R = 0V, f = 1MHz; Any I/O pin to GND			0.9	pF

TYPICAL ELECTRICAL CHARACTERISTICS CURVE



TYPICAL ELECTRICAL CHARACTERISTICS CURVE

LRC099-04DT1G S-LRC099-04DT1G**DFN-10**

UNIT: mm

