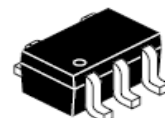


4-CHANNEL LOW CAPACITANCE ESD PROTECTION DIODES ARRAY

DESCRIPTIONS

The LRC099-04CT1G 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 LRC099-04CT1G is idea to protect high speed data lines. Three package type is provided for easy PCB layout.

LRC099-04CT1G



SC-88A/SOT-353

FEATURES

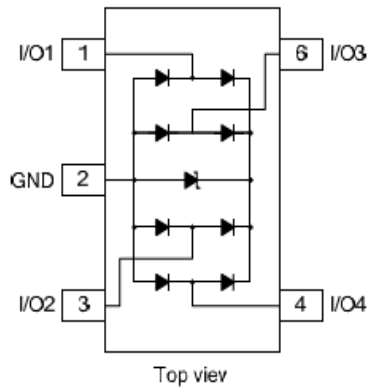
- * 4 channels of ESD protection;
- * Provides ESD protection to IEC61000-4-2 level 4
 - ± 15 kV air discharge
 - ± 8 kV contact discharge;
- * Channel I/O to GND capacitance: 0.9pF(Max)
- * Channel I/O to I/O capacitance: 0.45pF(Max)
- * Low clamping voltage;
- * Low operating voltage;
- * Improved zener structure;
- * Optimized package for easy high speed data lines PCB layout;
- * RoHS compliant.

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
LRC099-04CT1G	SC-88A	C4	Halogen Free	3000Tape&Reel

LRC099-04CT1G
PIN CONFIGURATION

ABSOLUTE MAXIMUM RATINGS

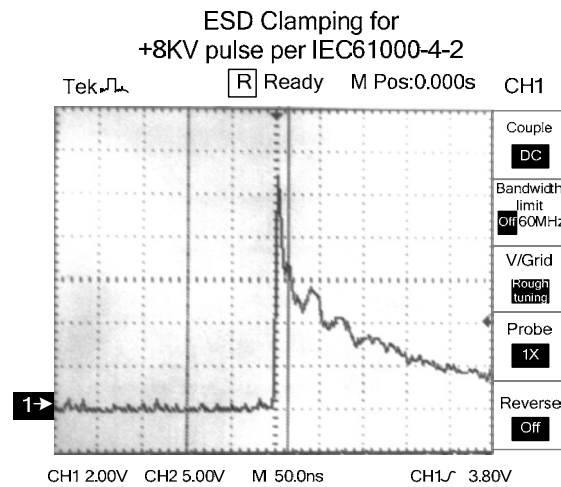
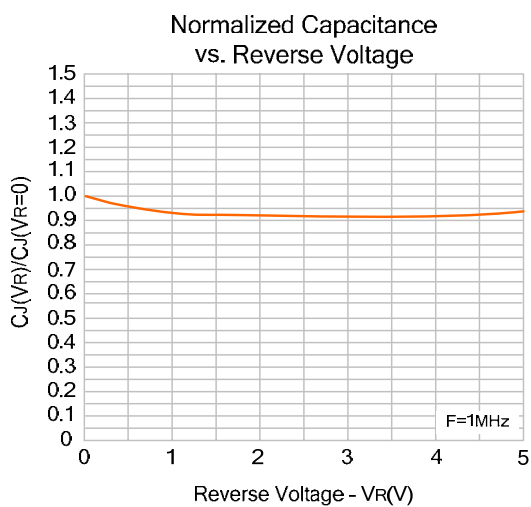
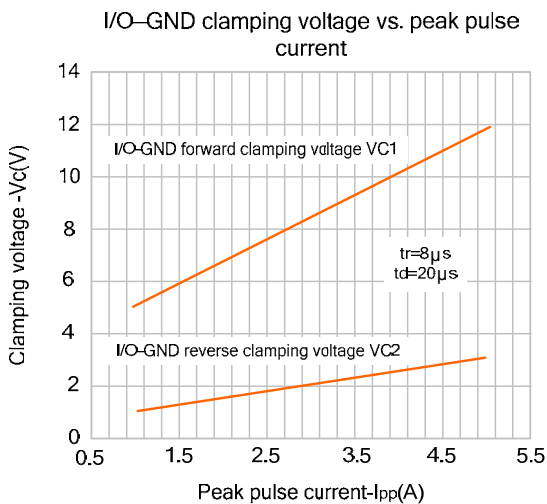
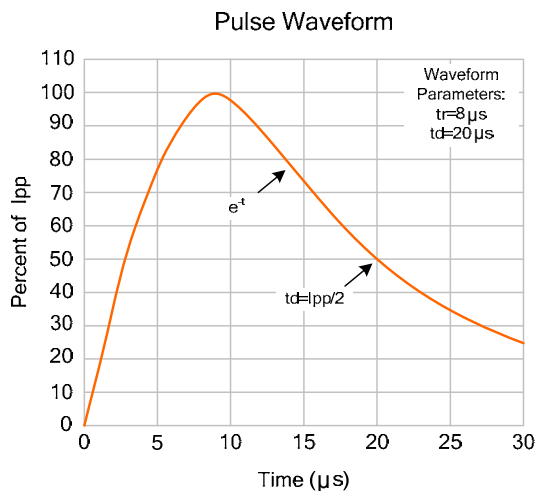
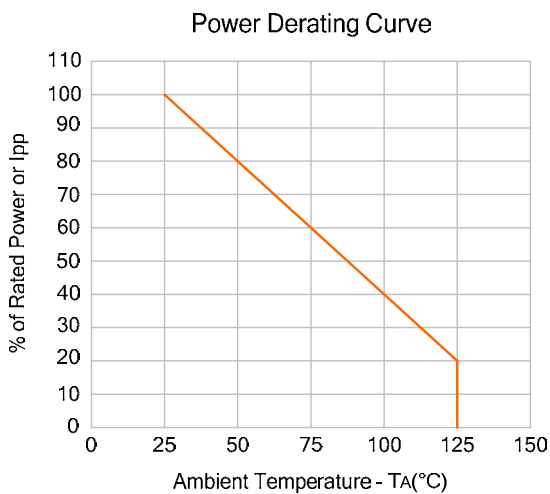
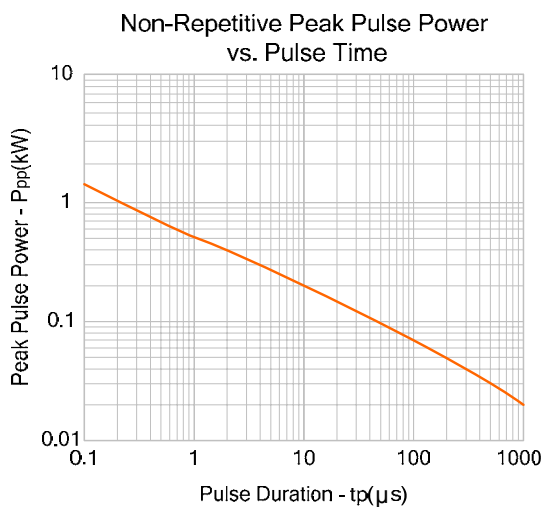
Characteristics	Symbol	Ratings	Unit
Peak Pulse Power(8/20 μ s)	P _{PP}	150	W
Peak Pulse Current(8/20 μ s)	I _{PP}	5	A
ESD per IEC 61000-4-2(Air)	V _{ESD1}	± 15 kV	kV
ESD per IEC 61000-4-2(Contact)	V _{ESD2}	± 8 kV	kV
Operating Temperature Range	T _{opr}	-55 ~ +125	$^{\circ}$ C
Storage Temperature Range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

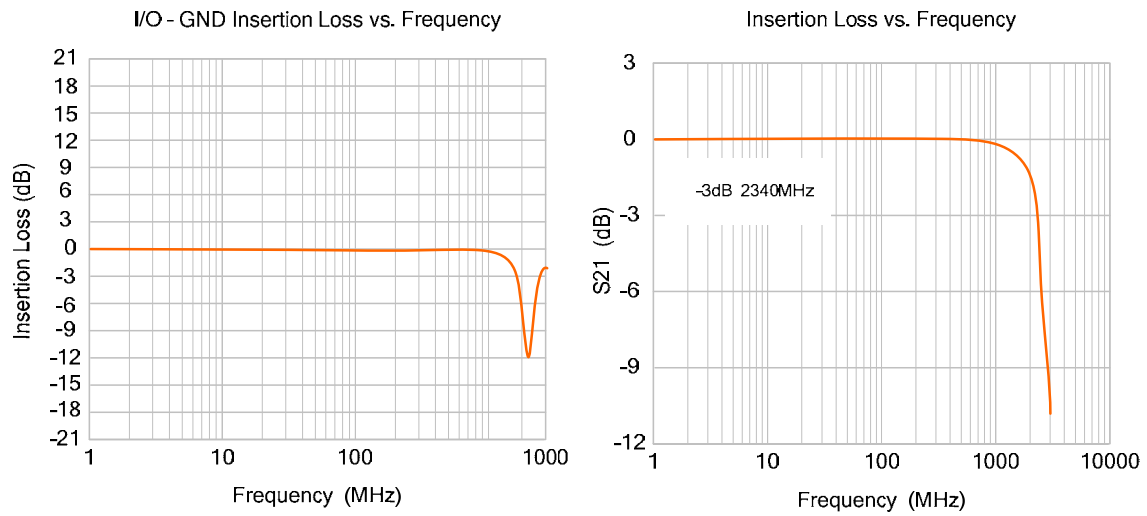
ELECTRICAL CHARACTERISTICS(T_{amb}=25 $^{\circ}$ C)

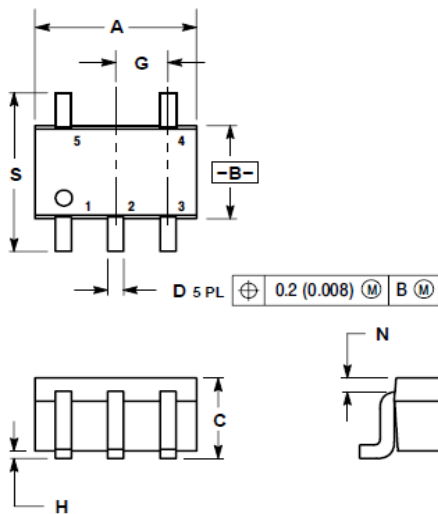
Characteristics	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Reverse Working Voltage	V _{RWM}	Any I/O pin to GND			5	V
Reverse Breakdown Voltage	V _{BR}	I _T =1mA; Any I/O pin to GND	6			V
Reverse Leakage Current	I _R	V _{RWM} =5V, T=25 $^{\circ}$ C; Any I/O pin to GND			1	μ A
Positive Clamping Voltage	V _{C1}	I _{PP} =1A, t _p =8/20 μ s; 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 μ s; 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

LRC099-04CT1G

TYPICAL ELECTRICAL CHARACTERISTICS CURVE



LRC099-04CT1G**TYPICAL ELECTRICAL CHARACTERISTICS CURVE**

SC-88A/SOT-353

NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. 419A-01 OBSOLETE. NEW STANDARD 419A-02.
4. DIMENSIONS A AND B DO NOT INCLUDE MOLD FLASH, PROTRUSIONS, OR GATE BURRS.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.071	0.087	1.80	2.20
B	0.045	0.053	1.15	1.35
C	0.031	0.043	0.80	1.10
D	0.004	0.012	0.10	0.30
G	0.026 BSC		0.65 BSC	
H	---	0.004	---	0.10
J	0.004	0.010	0.10	0.25
K	0.004	0.012	0.10	0.30
N	0.008 REF		0.20 REF	
S	0.079	0.087	2.00	2.20

SOLDERING FOOTPRINT*
