To our customers,

Old Company Name in Catalogs and Other Documents

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Renesas Electronics website: http://www.renesas.com

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (http://www.renesas.com)

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RENESAS

ESD NOISE CLIPPING DIODE

NNCD6.8RL

5-PIN SUPER SMALL MINI MOLD (FLAT LEAD TYPE)
ELECTROSTATIC DISCHARGE NOISE CLIPPING DIODE
(QUAD TYPE: COMMON ANODE)

DESCRIPTION

The NNCD6.8RL is a low capacitance type diode developed for ESD (Electrostatic Discharge) absorption. Based on the IEC61000-4-2 test on electromagnetic interference (EMI), the diode assures an endurance of no less than 8 kV, thus making itself most suitable for external interface circuit protection.

With four elements mounted in the 5-pin super mini mold (flat lead type) package, the product can cope with more high density assembling.

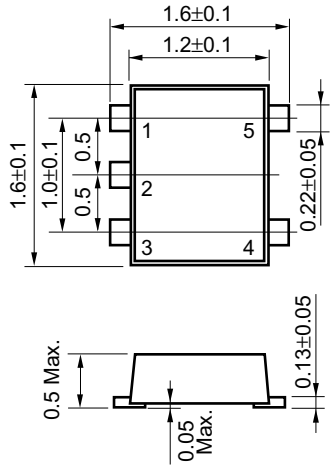
FEATURES

- Based on the electrostatic discharge immunity test (IEC61000-4-2), the product assures the minimum endurance of 8 kV.
- With four elements mounted (common anode)
  Super small mini mold package, the product can achiever high density and automatic packing.

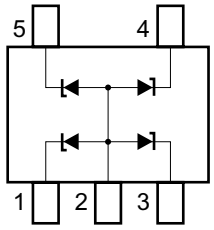
APPLICATIONS

- External interface circuit ESD absorption
- Circuits for waveform clipper, surge absorber

PACKAGE DRAWING (Unit: mm)



ELECTRODE CONNECTION



1. K1: Cathode 1
2. A : Anode (common)
3. K2: Cathode 2
4. K3: Cathode 3
5. K4: Cathode 4

MAXIMUM RATINGS (T_A = 25°C)

ITEM	SYMBOL	RATING	UNIT	REMARK
Power Dissipation	P	200	mW	Total
Surge Reverse Power	P_{RSM}	2 (t = 10 μs, 1 pulse)	W	
Junction Temperature	T_j	150	°C	
Storage Temperature	T_{stg}	–55 to +150	°C	

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ELECTRICAL CHARACTERISTICS (T_A = 25°C) (A - K1, A - K2, A - K3, A - K4)

TYPE No.	BREAKDOWN VOLTAGE Note1 V_{BR} (V)			CAPACITANCE C_t (pF)		REVERSE LEAKAGE I_R (μA)		ESD VOLTAGE Note2 (kV)	
	MIN.	MAX.	I_T (mA)	TYP.	Condition	MAX.	V_R (V)	MIN.	Condition
NNCD6.8RL	6.2	7.1	5	10	V_R = 0 V f = 1 MHz	2	3.5	8	C = 150 pF R = 330 Ω Contact discharge

Notes 1. Tested with pulse (40 ms).

2. Based upon with IEC61000-4-2.

TYPICAL CHARACTERISTICS (T_A = 25°C)

Figure 1. P vs. T_A RATING

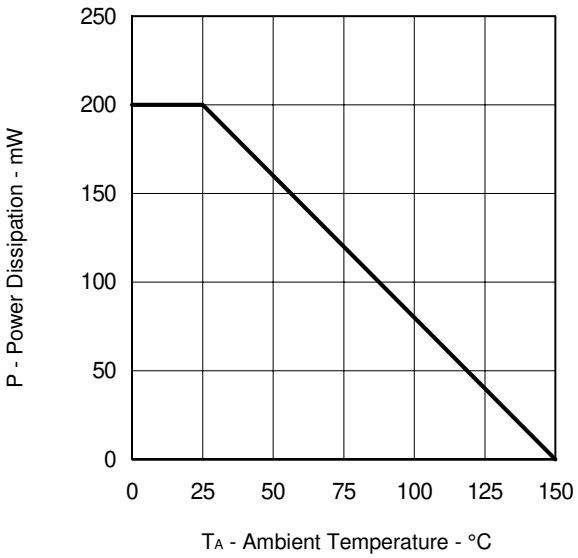


Figure 2. I_T vs. V_{BR} CHARACTERISTICS (A - K1, A - K2, A - K3, A - K4)

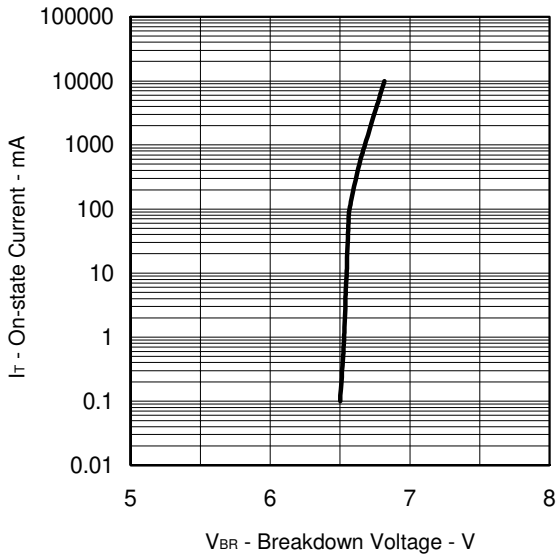


Figure 3. C_t vs. V_R CHARACTERISTICS

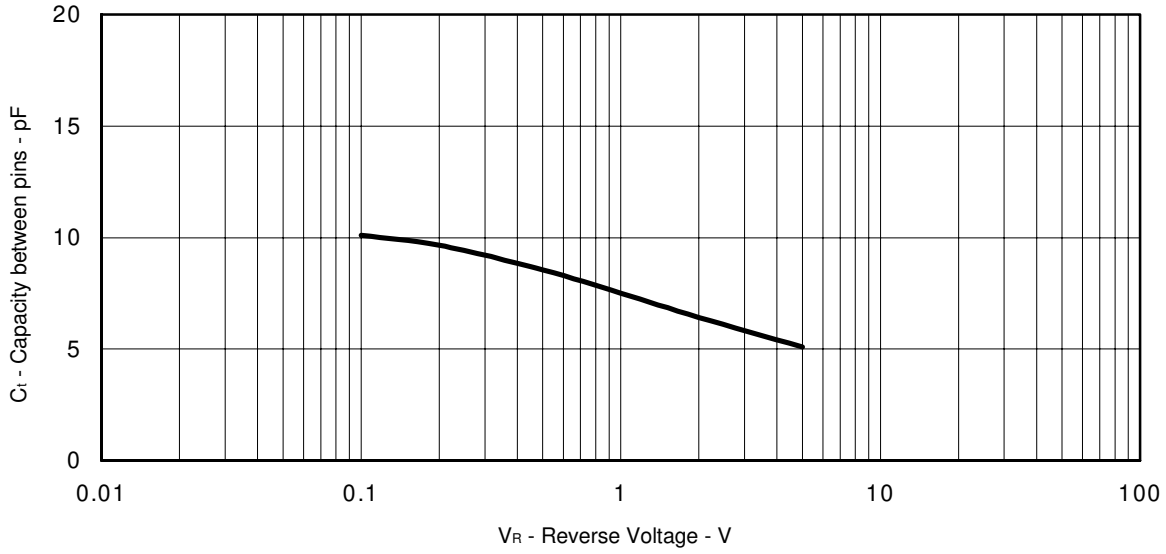


Figure 4. SURGE REVERSE POWER RATING

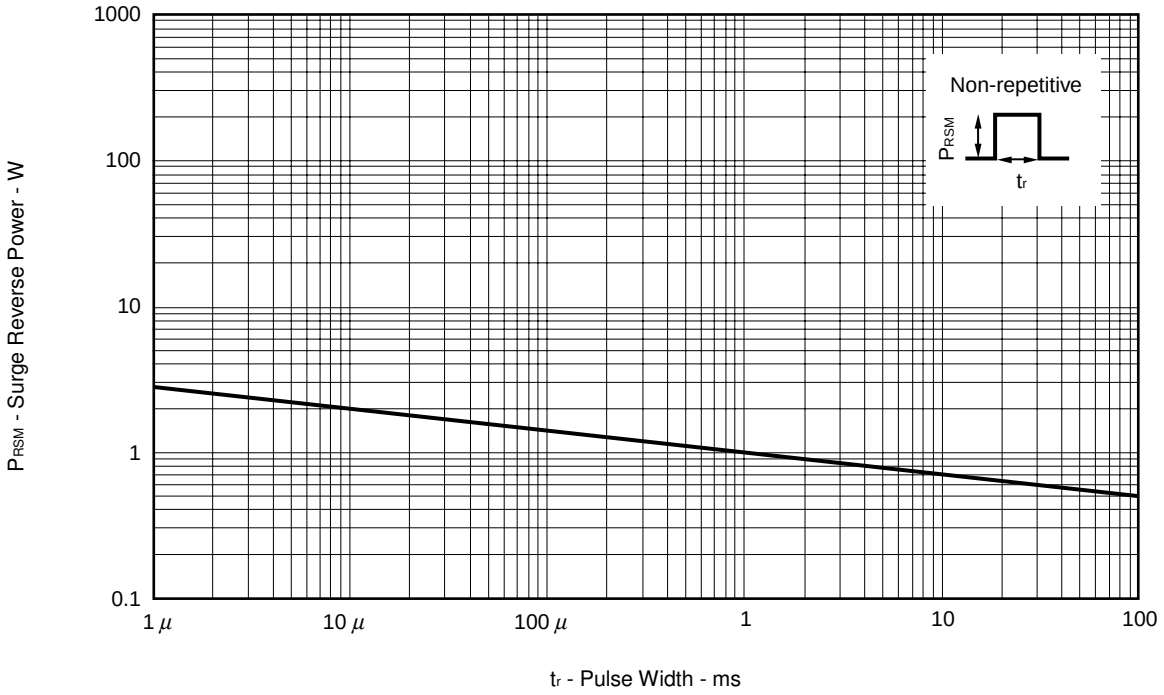
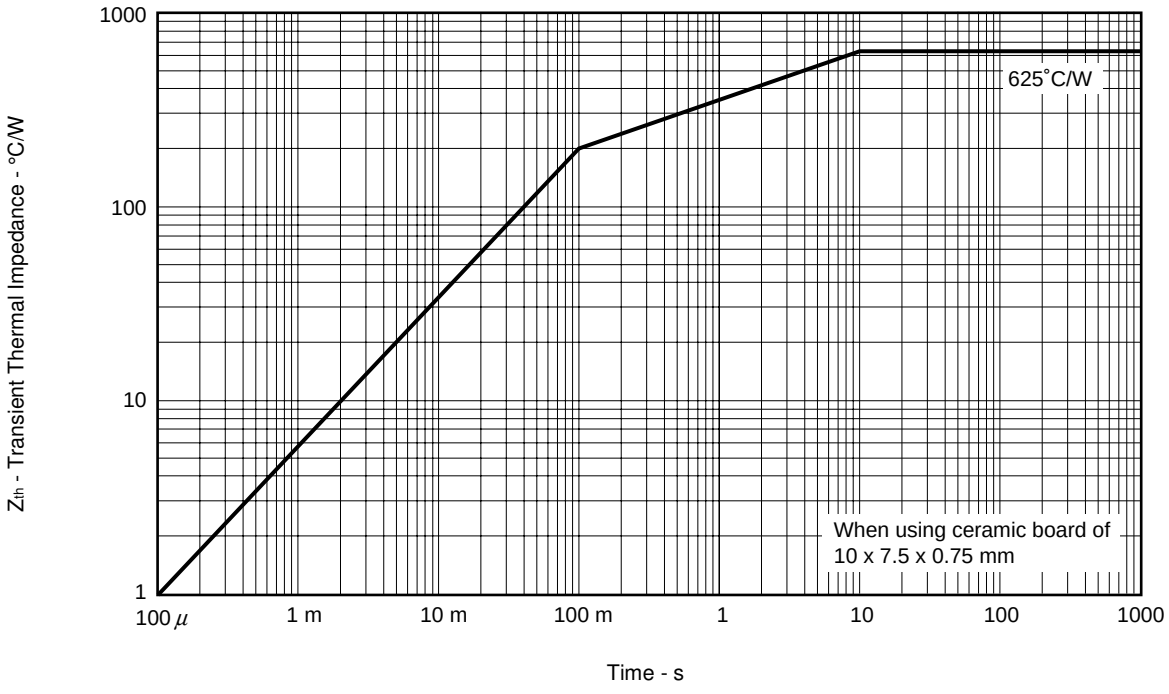


Figure 5. TRANSIENT THERMAL IMPEDANCE CHARACTERISTICS



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