NEC

ESD NOISE CLIPPING DIODE

NNCD6.8PG

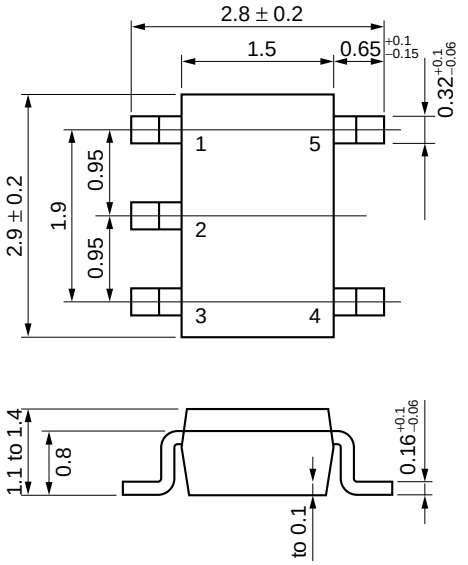
LOW CAPACITANCE TYPE ELECTROSTATIC DISCHARGE NOISE CLIPPING DIODE (QUARTO TYPE: COMMON ANODE) 5-PIN MINI MOLD

DESCRIPTION

The NNCD6.8PG is a diode developed for ESD (Electrostatic Discharge) absorption. Based on the IEC-61000-4-2 test on electromagnetic interference (EMI), the diode assures an endurance of no less than 30 kV, thus making itself most suitable for external interface circuit protection.

With four elements mounted in the 5-PIN mini mold package, the product can cope with more high density assembling.

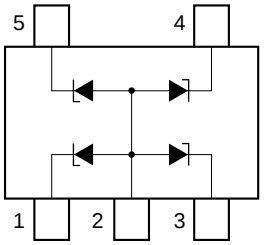
PACKAGE DIMENSION (Unit: mm)



FEATURES

- Base on the electrostatic discharge immunity test (IEC 61000-4-2), the product assures the minimum endurance of 30 kV.
- With four elements in the MINI MOLD package, the product can achieve high density and automatic packaging.

ELECTRODE CONNECTION



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

APPLICATIONS

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

MAXIMUM RATINGS (T_A = 25°C)

ITEM	SYMBOL	RATING	UNIT	REMARK
Power Dissipation	P	200	mW	Total
Surge Reverse Power	P_{RSM}	85 (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 to K1, A to K2, A to K3, A to K4)

TYPE No.	BREAKDOWN VOLTAGE Note1 V_{BR} (V)			CAPACITANCE C_t (pF)		REVERSE LEAKAGE I_R (μA)		DYNAMIC IMPEDANCE Note2 Z_z (Ω)		ESD VOLTAGE Note3 (kV)	
	MIN.	MAX.	I_T (mA)	TYP.	Condition	MAX.	V_R (V)	MAX.	I_T (mA)	MIN.	Condition
NNCD6.8PG	6.2	7.1	5	90	V_R = 0 V f = 1 MHz	2	3.5	40	5	30	C = 150 pF R = 330 Ω Contact discharge

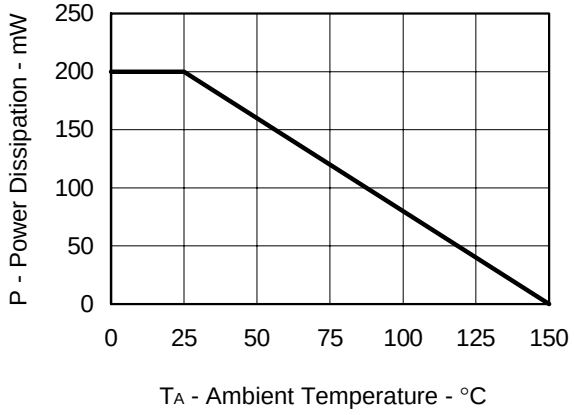
Notes 1. Tested with pulse (40 ms)

2. Z_z is measured at I_T given a small A.C. signal.

3. Based upon with IEC 61000-4-2

TYPICAL CHARACTERISTICS (T_A = 25°C)

Figure 1. POWER DISSIPATION vs. AMBIENT TEMPERATURE



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

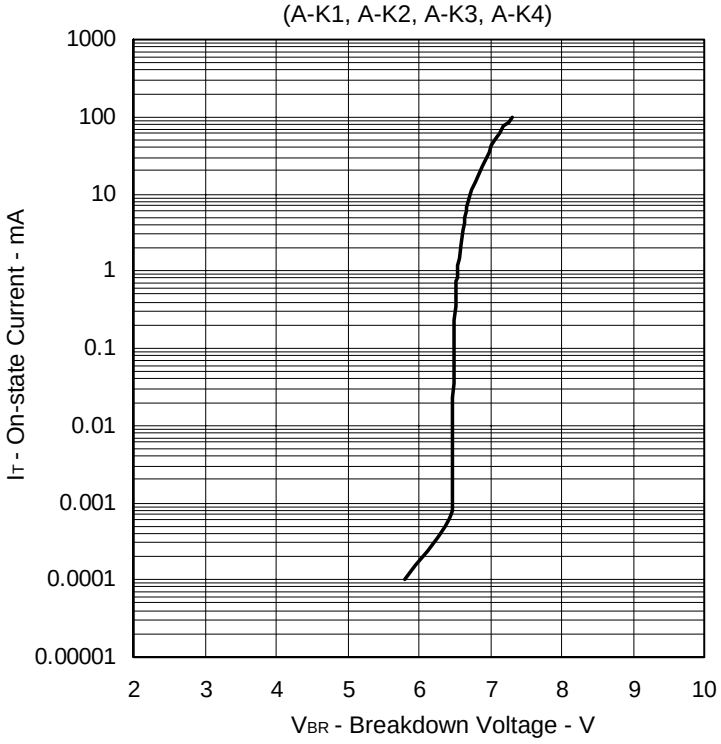


Figure 3. Z_Z - I_T

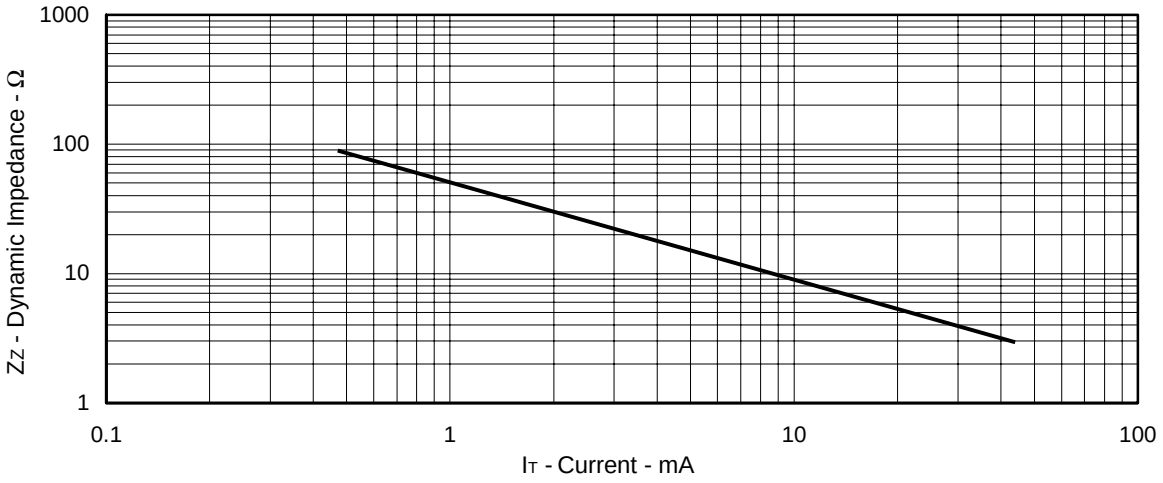


Figure 4. C_t - V_R CHARACTERISTICS

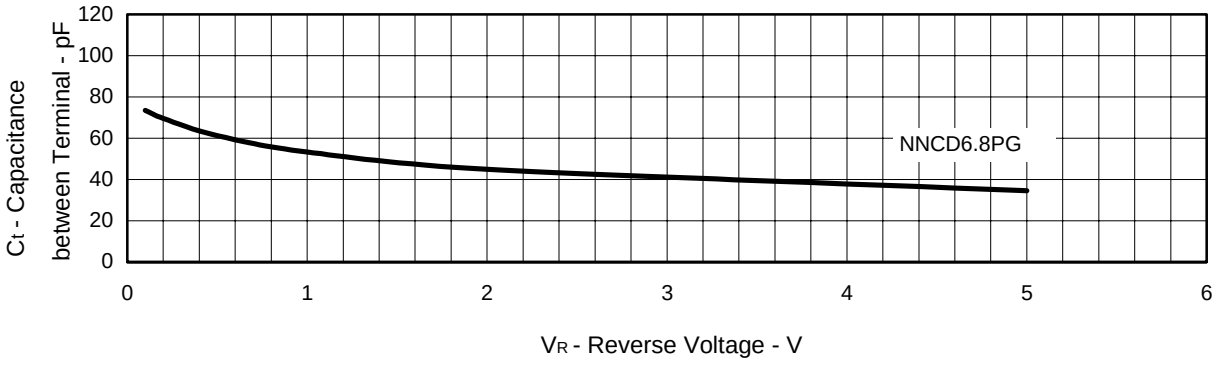
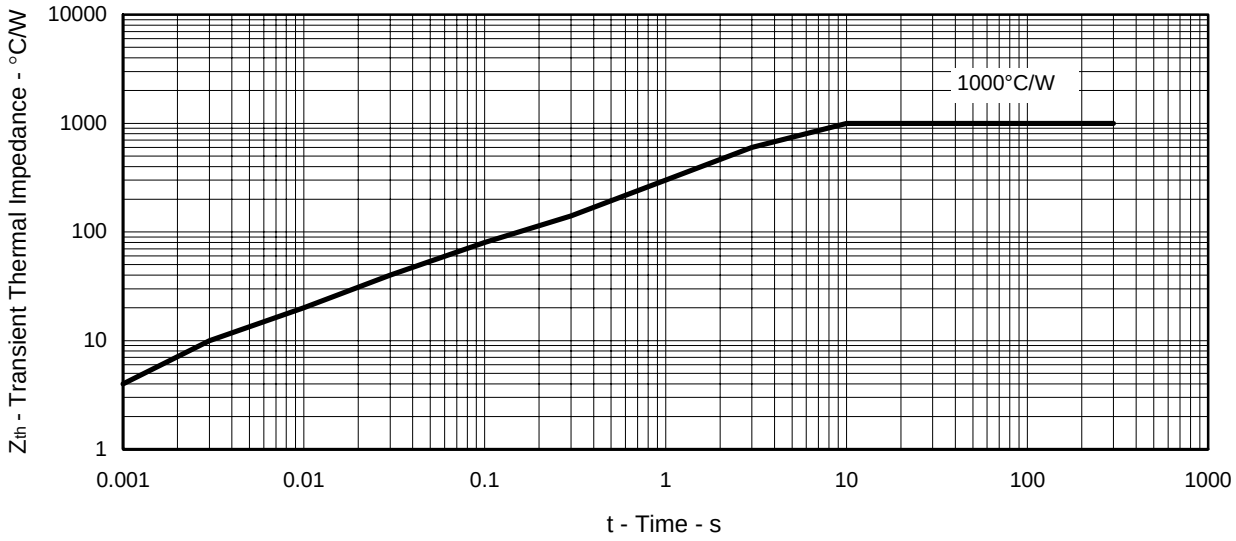
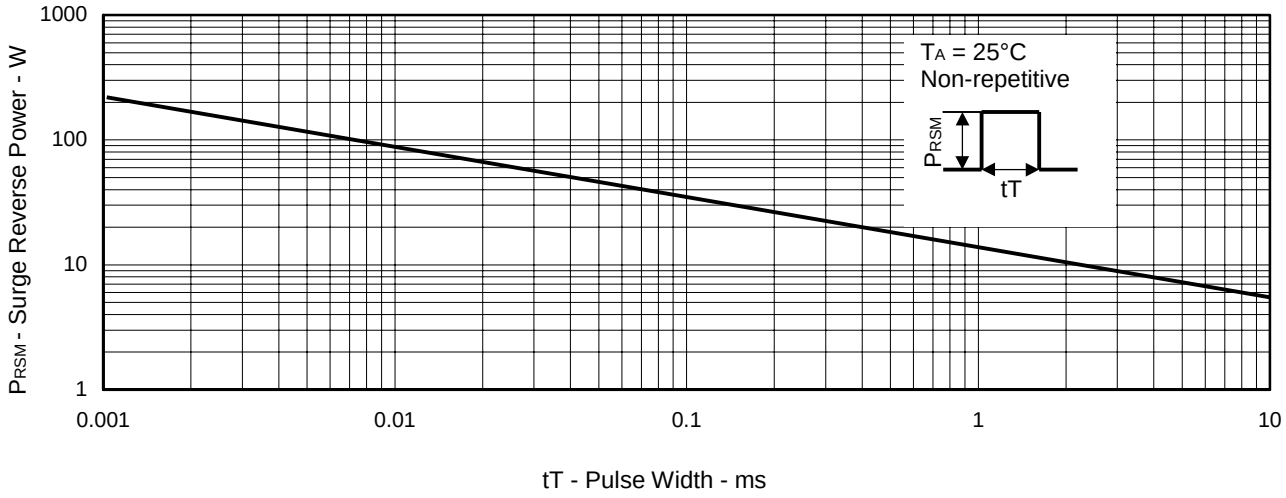


Figure 5. TRANSIENT THERMAL IMPEDANCE CHARACTERISTICS



★ Figure 6. SURGE REVERSE POWER RATINGS



[MEMO]

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