NEC

ESD NOISE CLIPPING DIODE
NNCD5.6J to NNCD36J

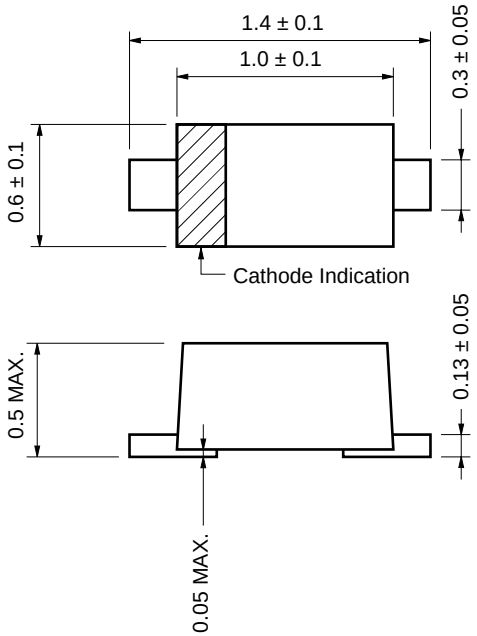
ELECTROSTATIC DISCHARGE NOISE CLIPPING DIODE
2-PIN ULTRA SUPER MINI MOLD (FLAT TYPE)

DESCRIPTION

These products are 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.

These products are can cope with more high density assembling.

PACKAGE DRAWING (Unit: mm)



FEATURES

- Base on the electrostatic discharge immunity test (IEC 61000-4-2), the product assures the minimum endurance of 30 kV.
- Mounted in the ultra super mini mold (flat) package, the product can achiever high density and automatic packaging.

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	150	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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The mark ★ shows major revised points.

ELECTRICAL CHARACTERISTICS (T_A = 25°C)

	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)	MAX.	I_T (mA)
★	NNCD5.6J	5.3	6.3	5	110	V_R = 0 V	5	2.5	30	C = 150 pF
	NNCD6.8J	6.2	7.1	5	90	f = 1 MHz	2	3.5	30	R = 330 Ω
	NNCD8.2J	7.7	8.7	5	70		2	5.0	30	Contact
★	NNCD10J	9.0	11.0	5	55		2	7.0	30	discharge
	NNCD16J	15.0	17.0	5	30		2	12.0	30	
	NNCD36J	34.0	38.0	2	15		2	27.0	12	

Notes 1. Tested with pulse (40 ms)

2. Based upon with IEC 61000-4-2

TYPICAL CHARACTERISTICS (T_A = 25°C)

Figure 1. POWER DISSIPATION vs. AMBIENT TEMPERATURE

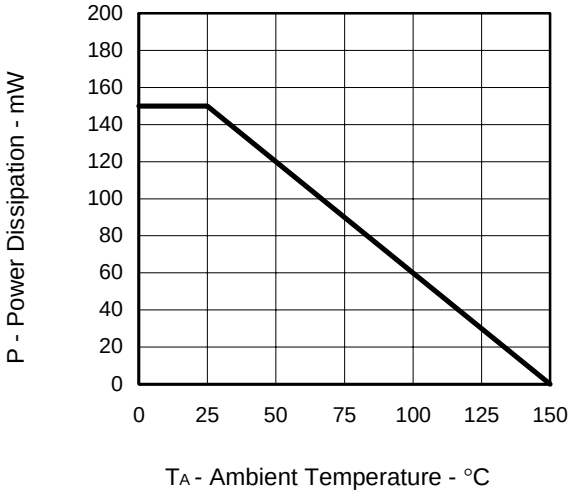


Figure 2. I_T - V_{BR} CHARACTERISTICS

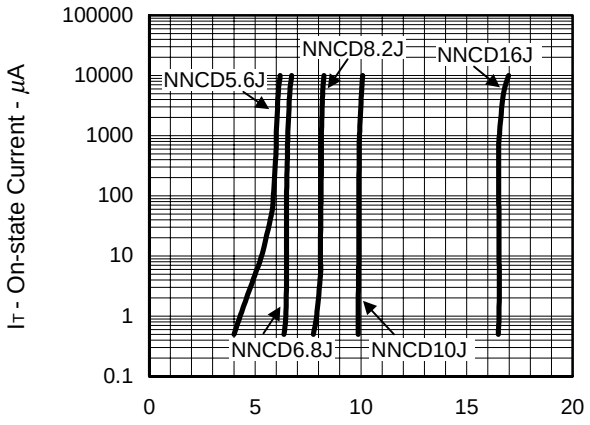


Figure 3. I_T - V_{BR} CHARACTERISTICS

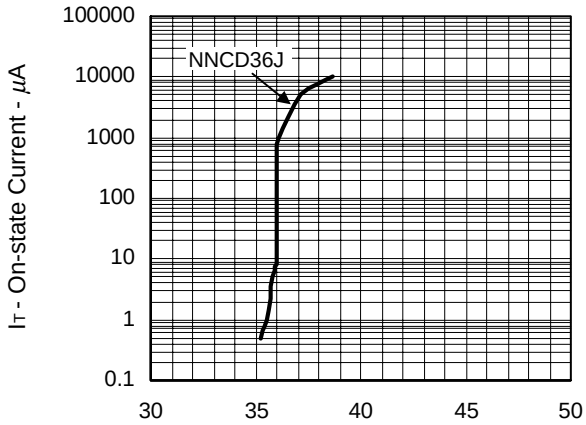


Figure 4. C_t - V_R CHARACTERISTICS

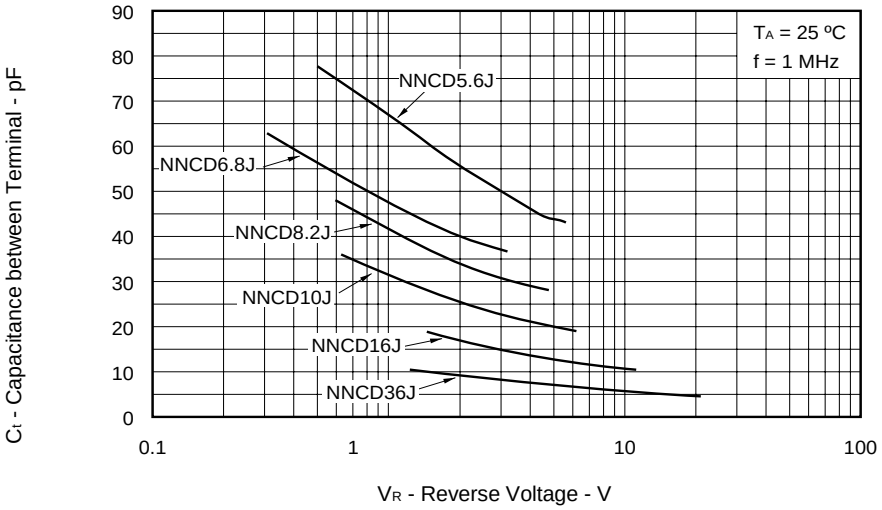


Figure 5. SURGE REVERSE POWER RATINGS

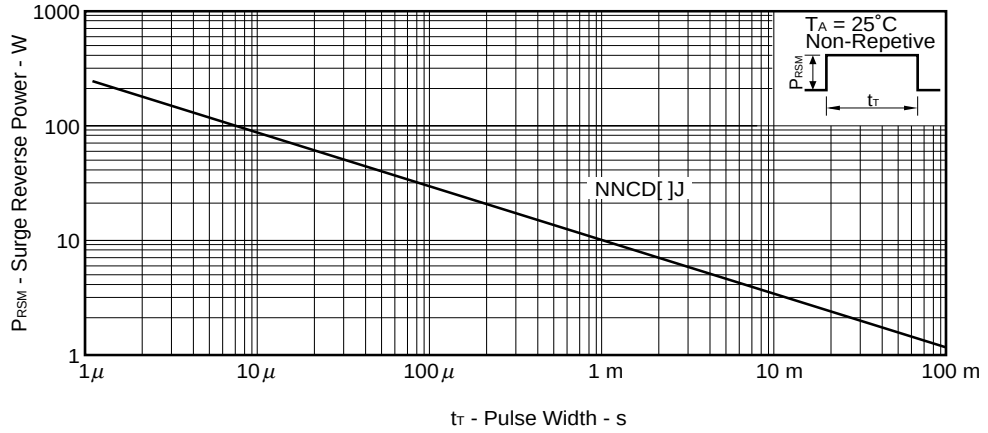
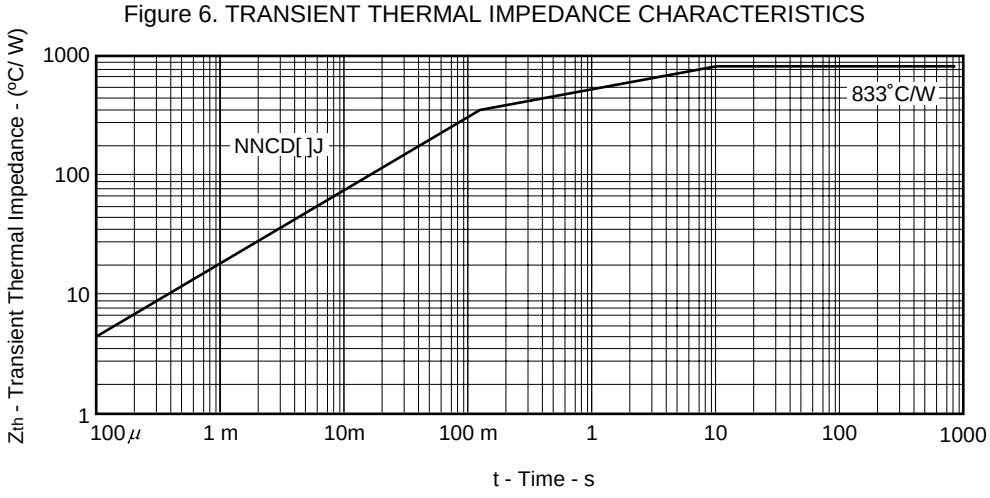


Figure 6. TRANSIENT THERMAL IMPEDANCE CHARACTERISTICS



Remark When using ceramic board of 10 x 7.5 x 0.75 mm (Cu film 11 x 2 x 0.035 mm)

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