

# 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, thus making itself most suitable for external interface circuit protection.

These products are can cope with more high density assembling.

### FEATURES

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

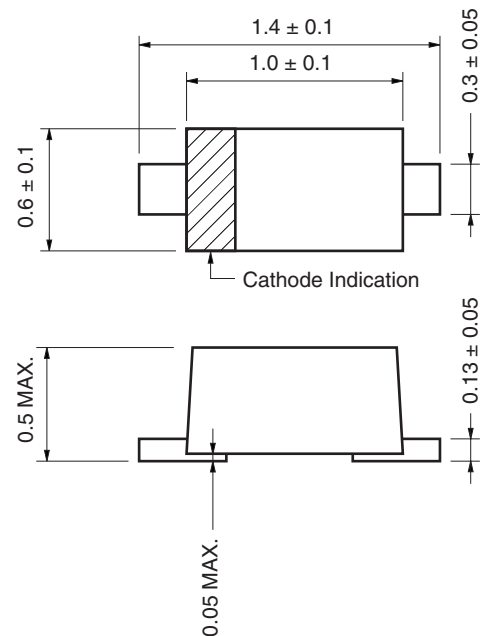
### APPLICATIONS

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

### MAXIMUM RATINGS (T<sub>A</sub> = 25°C)

Item	Symbol	Rating	Unit	Remark
Power Dissipation	P	150	mW	Total
Surge Reverse Power	P <sub>RSM</sub>	85 (t = 10 μs, 1 pulse)	W	
Junction Temperature	T <sub>j</sub>	150	°C	
Storage Temperature	T <sub>stg</sub>	-55 to +150	°C	

### PACKAGE DRAWING (Unit: mm)



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**ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C)**

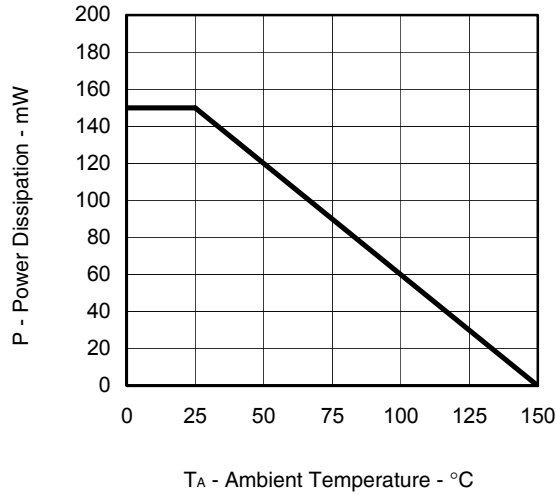
TYPE No.	Breakdown Voltage <sup>Note1</sup>			Capacitance		Reverse Leakage		ESD Voltage <sup>Note2</sup>	
	V <sub>BR</sub> (V)		I <sub>T</sub> (mA)	C <sub>i</sub> (pF)		I <sub>R</sub> (μA)		(kV)	
	MIN.	MAX.		TYP.	Condition	MAX.	V <sub>R</sub> (V)	MIN.	I <sub>T</sub> (mA)
NNCD5.6J	5.3	6.3	5	110	V <sub>R</sub> = 0 V f = 1 MHz	5	2.5	30	C = 150 pF R = 330 Ω Contact discharge
NNCD6.8J	6.2	7.1	5	90		2	3.5	30	
NNCD8.2J	7.7	8.7	5	70		2	5.0	30	
NNCD10J	9.0	11.0	5	55		2	7.0	30	
NNCD16J	15.0	17.0	5	30		2	12.0	30	
★ NNCD18J	16.2	19.8	5	25		2	13.0	23	
★ NNCD24J	22.0	26.0	5	20		2	19.0	15	
NNCD36J	34.0	38.0	2	15		2	27.0	12	

**Notes** 1. Tested with pulse (40 ms)

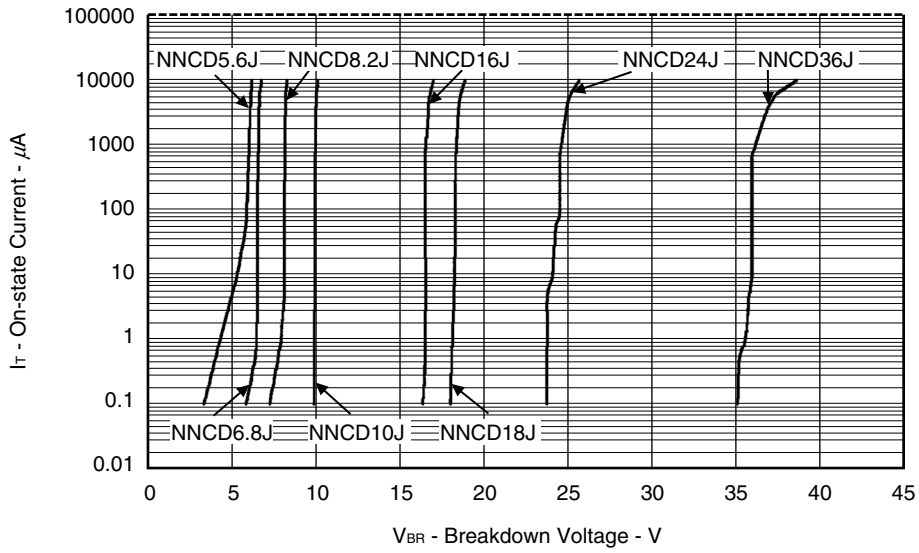
2. Based upon with IEC 61000-4-2

TYPICAL CHARACTERISTICS (T<sub>A</sub> = 25°C)

Figure 1. POWER DISSIPATION vs. AMBIENT TEMPERATURE



★ Figure 2. I<sub>T</sub> - V<sub>BR</sub> CHARACTERISTICS



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Figure 3.  $C_t - V_R$  CHARACTERISTICS

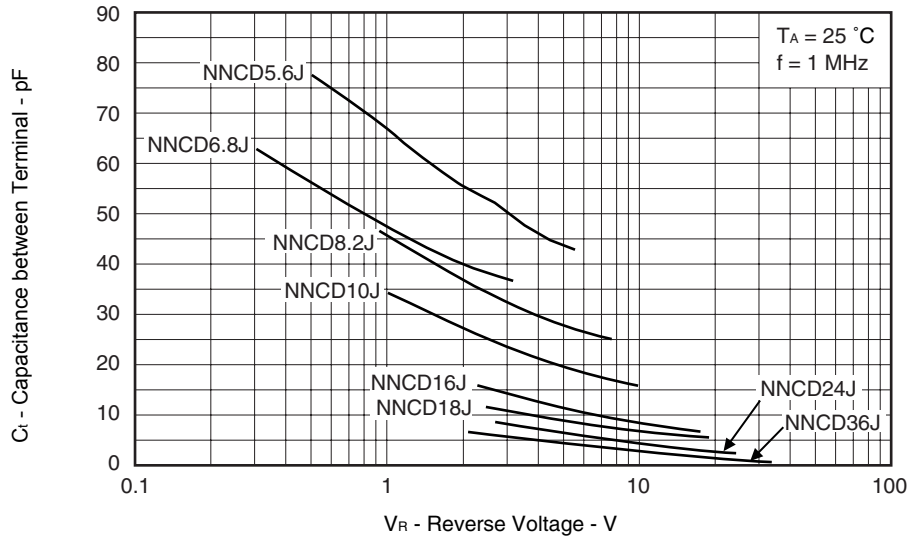


Figure 4. SURGE REVERSE POWER RATINGS

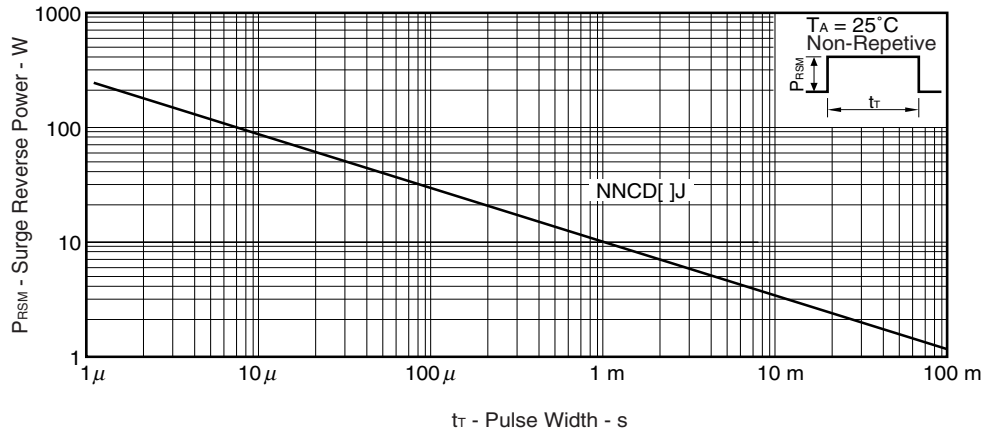
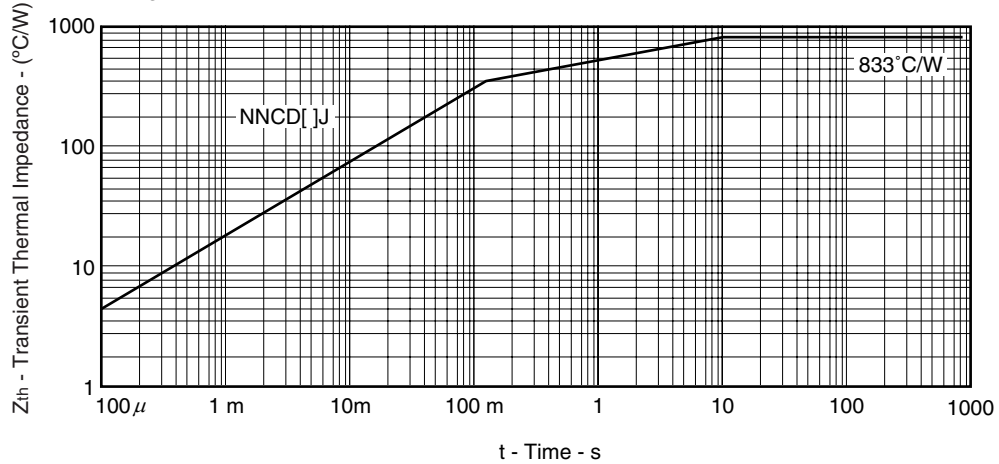


Figure 5. TRANSIENT THERMAL IMPEDANCE CHARACTERISTICS



**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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