

Ceramic Disc Capacitors

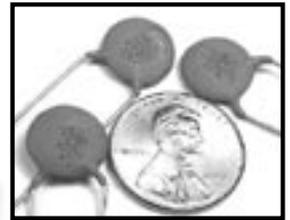
NCD Series Class I

TEMPERATURE COMPENSATING AND TEMPERATURE STABLE TYPES (CLASS I)

FEATURES

- PROVIDES AN ACCURATE, PREDICTABLE LINEAR CAPACITANCE CHANGE WITH VARIATIONS IN OPERATING TEMPERATURE
- NPO TYPES PROVIDE DRIFT FREE PERFORMANCE
- TIGHT TOLERANCES AVAILABLE
- AVAILABLE WITH FORMED LEADS AND ON TAPE FOR AUTOMATIC INSERTION

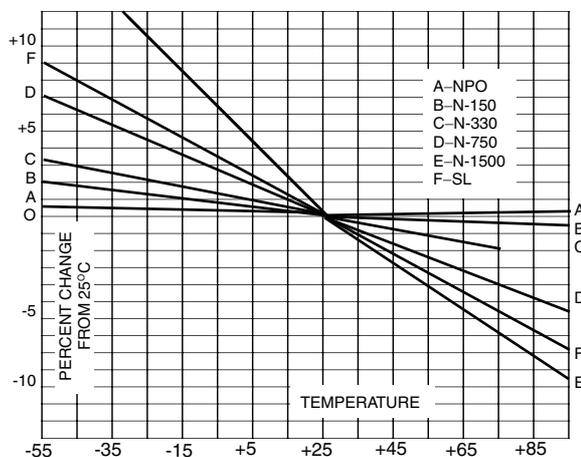
**RoHS
Compliant**



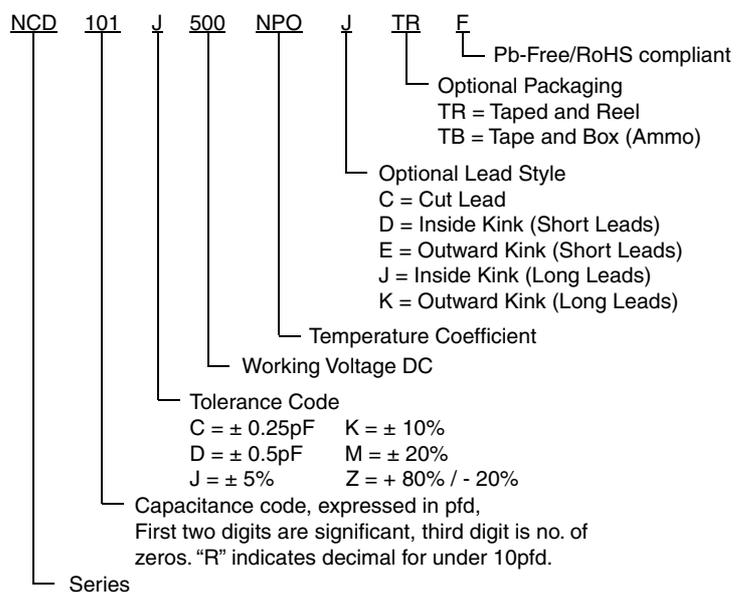
*See Part Number System for Details

SPECIFICATIONS

Temperature Characteristics	NPO	N150	N470	N750	SL	N1500	N3300
Operating Temperature Range	-30° ~ +85° C						
Capacitance Range	0.5~470pF	3~220pF	3~150pF	22~470pF	0.5~1000pF	22~1000pF	47 ~ 1000pF
Standard Tolerance	J=+/-5%	J=+/-5%	J=+/-5%	J=+/-5%	J=+/-5%	J=+/-5%	J=+/-5%
Capacitance Change Over Temperature Range	±1%	-1~ +2%	-2~ +3.5%	-5~ +7.5%	-6~ +9%	-10~ +20%	-13~ +12%
Q Factor (Min. 1MHz)	1000(C≥30pfd) 400 + 20C (C<30pfd)	1000(C≥30pfd) 400 + 20C (C<30pfd)	1000(C≥30pfd) 400 + 20C (C<30pfd)	1000(C≥30pfd) 400 + 20C (C<30pfd)	1000(C≥30pfd) 400 + 20C (C<30pfd)	500(C≥30pfd) 200 + 10C (C<30pfd)	500(C≥30pfd) 200 + 10C (C<30pfd)
Insulation Resistance	Minimum 10,000 Megohms						
Temperature Coefficient	0±60PPM	N150±60PPM	N470±60PPM	N750±120PPM	N330±500PPM	N1500±250PPM	N3300±500PPM
Working Voltage Range	50 Vdc ~ 1K Vdc						
Dielectric Withstanding Voltage (Test Voltage)	2.5 Times Rated Voltage For Not Less Than 1 Second, 50mA maximum						
Load Life	Cap. Change	±3%	±5%	±8%	±15%	±30%	±50%
Test 85°C	Q Factor (Min)	Shall Conform To Initial Measurements Above					
1000 Hrs	I.R. (Min)	10,000 Megohms					
Test Conditions	< 1,000 pF; 1Mhz, 1.2Vrms Max. >1,000 pF; 1Khz, 1.2Vrms Max.						



PART NUMBERING SYSTEM

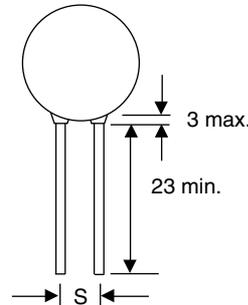


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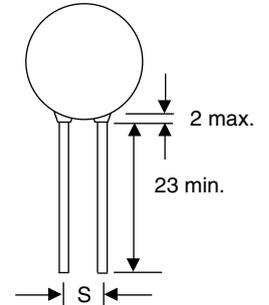
NCD Series Class I

Lead Spacing (mm) - S				
Body Diameter	Standard Bulk	Standard T & R	Optional Bulk	Optional T & R
5 ~ 11	6.35 ±0.8	5.0 ±0.8	5.0 ±0.8	2.5 ±0.8
≥ 12	6.35 ±0.8	5.0 ±0.8	7.5 ±0.8	7.5 ±0.8
			10.0 ±0.8	10.0 ±0.8

Standard
500Vdc & Up



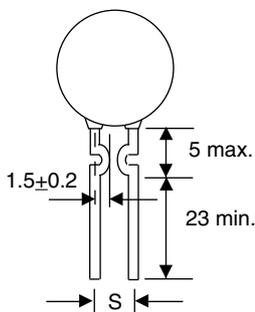
Low Voltage
100Vdc & Below



LEAD DIAMETER
0.6MM IS STANDARD

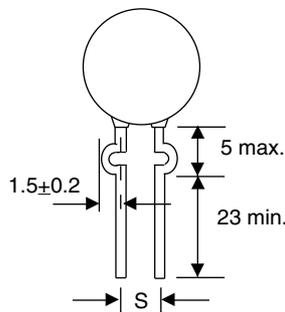
BODY THICKNESS
2 ~ 4MM DEPENDENT ON CV

J Style

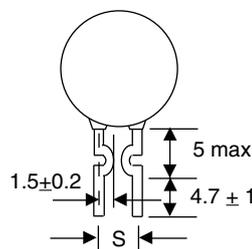


(BULK AND TAPED STYLES)

K Style

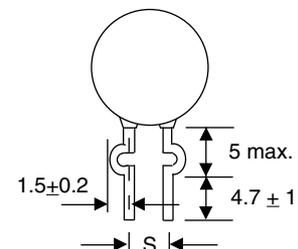


D Style



(BULK ONLY)

E Style



STANDARD PRODUCTS AND MAXIMUM DIAMETER (mm) BY T.C. AND VOLTAGE

Cap. (pF)	NPO			N150 ~ N470			N750			SL			N1500			N3300		
	50V 100V	500V	1KV															
0.5 ~ 18	6	6	6	6	6	7				6	6	6						
20	6	6	6	6	7	8	6	6	6	6	6	6						
22	6	6	6	6	7	8	6	6	6	6	6	6	6	6	6			
27	6	6	6	7	8	9	6	6	6	6	6	6	6	6	6			
33	6	6	7	7	8	9	6	6	7	6	6	6	6	6	6			
39	6	7	7	8	8	10	6	6	7	6	6	6	6	6	6			
47	6	7	8	8	8	10	6	7	8	6	6	6	6	6	6		6	
56	7	7	8	8	10	12	7	7	8	6	6	6	6	6	6		6	6
68	7	7	9	8	12	14	7	7	9	6	6	6	6	6	6		6	6
75	7	7	9	10	12	14	7	7	9	6	6	7	6	6	7		6	6
82	7	7	9	10	14		7	7	9	6	6	7	6	6	7	6	6	6
100	8	8	10	10	14		8	8	10	6	6	7	6	7	7	6	6	6
120	8	8	10	10	14		8	8	10	6	6	7	6	7	7	6	6	6
150	9	9	12	12/14			9	9	12	6	7	8	6	8	8	6	6	7
180	9	9	14	14			9	9	14	6	7	8	6	8	8	6	7	7
220	10	10	16	14			10	10	16	7	8	9	7	9	9	7	7	7
270	12	12	16				12	12	16	8	9	10	8	9	10	7	7	7
330	14	14	18				14	14	18	8	10	12	8	10	12	7	7	8
470	16	16	20				16	16	20	9	12	14	9	12	14	7	8	9
560										10	12	14	10	14	14	8	9	11
680										10	14	16	10	14	16	8	10	11
750										12	16	16	12	16	16	8	10	11
820										12	16	16	12	16	16	8	10	11
1000										14	16	18	14	16	18	10	12	13

NIC RESERVES THE RIGHT TO REQUEST MINIMUM QUANTITIES ON CERTAIN VALUES

