

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

**RoHS
Compliant**

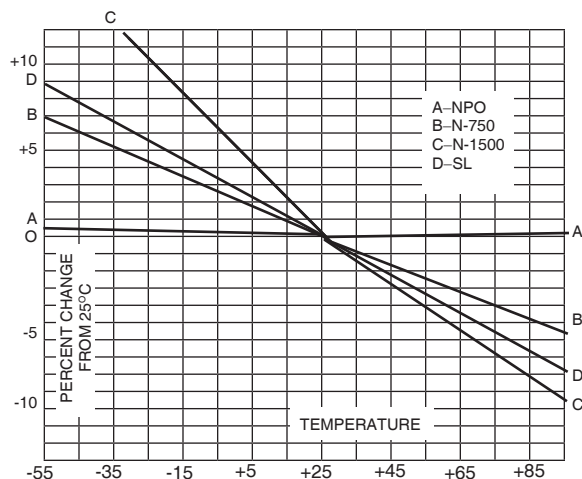
includes all homogeneous materials

*See Part Number System for Details



SPECIFICATIONS

Temperature Characteristics		NPO	N750	SL	N1500
Operating Temperature Range		-30°C ~ +85°C			
Capacitance Range		0.5 ~ 22pF	22 ~ 470pF	0.5 ~ 1000pF	22 ~ 2200pF
Standard Tolerance		±5% (J)			
Capacitance Change Over Temperature Range		±1%	-5% ~ +7.5%	-5% ~ +9%	-10% ~ +20%
Q Factor (Min. 1MHz)		1000 (C≥30pF) 400+20C (<30pF)			500 (C≥30pF) 200+10C (<30pF)
Insulation Resistance		Minimum 10,000 Megohms			
Temperature Coefficient		0±60ppm	N750±120ppm	N330±500ppm	N1500±250ppm
Working Voltage Range		50Vdc ~ 1KVdc			
Dielectric Withstanding Voltage (Test Voltage)		2.5 Times Rated Voltage For Not Less Than 1 Second, 50mA Maximum			
Load Life	Cap. Change	±3%	±15%	±30%	±50%
Test @ 85°C 1,000 Hours	Q Factor (min.)	Shall Conform To Initial Measurements Above			
	I.R. (min.)	10,000 Megohms			
Test Conditions		<1,000pF: 1MHz, 1.2Vrms Max., >1,000pF: 1KHz, 1.2Vrms Max.			



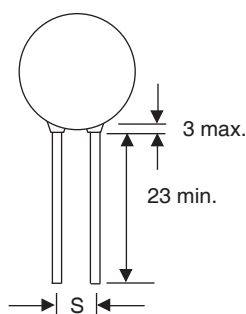
NCD 100 J 500 NPO J .100LS TR E

- RoHS compliant
- Optional Packaging
TR = Taped and Reel
TB = Tape and Box (Ammo)
- Optional Lead Space (LS) and/or Lead Length (LL) in inches
- Optional Lead Style
C = Cut Lead
D = Inside Kink (Short Leads)
E = Outward Kink (Short Leads)
J = Inside Kink (Long Leads)
K = Outward Kink (Long Leads)
- Temperature Coefficient
- Working Voltage DC
- Tolerance Code
C = ± 0.25pF K = ± 10%
D = ± 0.5pF M = ± 20%
J = ± 5% Z = + 80% / - 20%
- Capacitance code, expressed in pfd,
First two digits are significant, third digit is no. of zeros. "R" indicates decimal for under 10pfd.
- Series

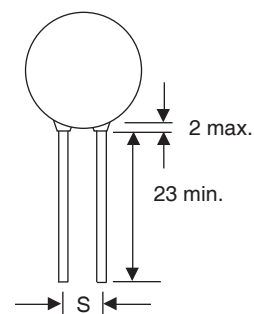


Lead Spacing (mm) - S				
Body Diameter	Standard Bulk	Standard T&R	Optional Bulk mm (inches)	Optional T&R mm (inches)
5 ~ 11	6.35 ± 0.8	5.0 ± 0.8	5.0 ± 0.8 (0.200LS)	2.5 ± 0.8 (0.100LS)
≥12	6.35 ± 0.8	5.0 ± 0.8	7.5 ± 0.8 (0.295LS)	7.5 ± 0.8 (0.295LS)
			10.0 ± 0.8 (0.395LS)	10.0 ± 0.8 (0.395LS)

Standard
500Vdc & Up



Low Voltage
100Vdc & Below



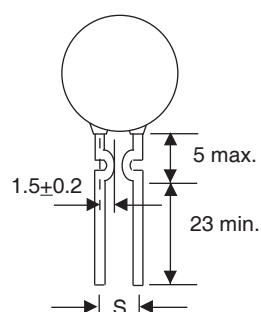
LEAD DIAMETER

0.6MM IS STANDARD

BODY THICKNESS

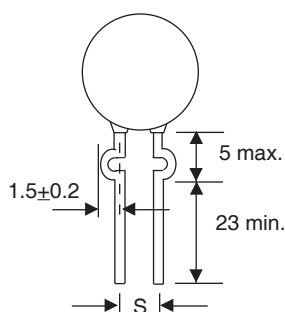
2 ~ 4MM DEPENDENT ON CV

J Style

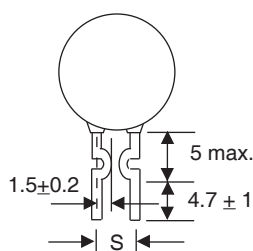


(BULK AND TAPED STYLES)

K Style

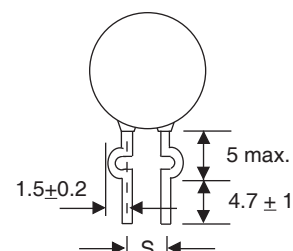


D Style



(BULK ONLY)

E Style



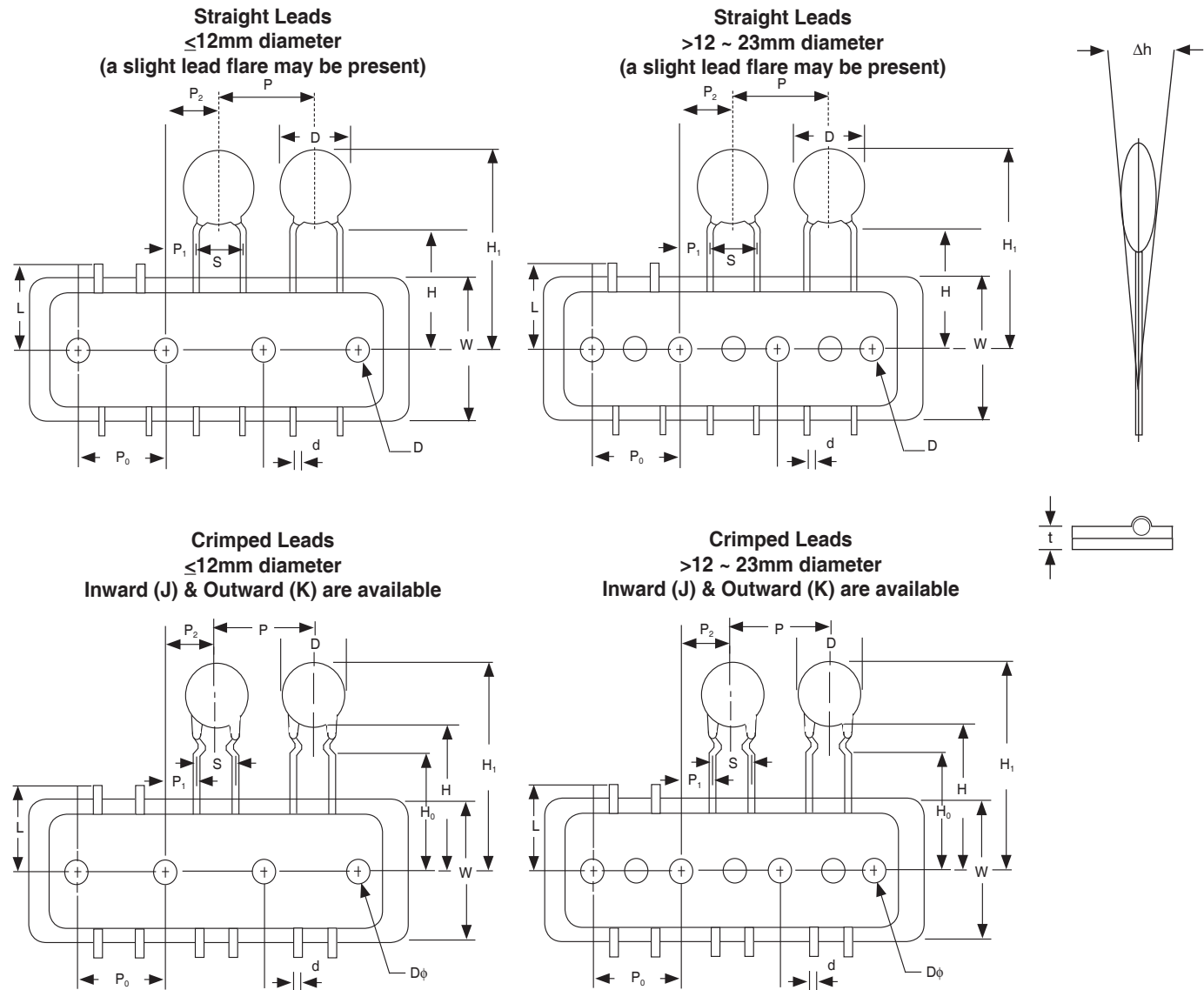
STANDARD PRODUCTS AND MAXIMUM DIAMETER (mm) BY T.C. AND VOLTAGE

Cap. (pF)	NPO			N750			SL			N1500		
	Working Voltage (Vdc)											
	50 100	500	1K	50 100	500	1K	50 100	500	1K	50 100	500	1K
0.5 ~ 15	6	6	6	-	-	-	6	6	6	-	-	-
18	6	6	-	-	-	-	6	6	6	-	-	-
20	6	6	-	6	6	6	6	6	6	-	-	-
22	6	6	-	6	6	6	6	6	6	6	6	6
27	-	-	-	6	6	6	6	6	6	6	6	6
33	-	-	-	6	6	7	6	6	6	6	6	6
39	-	-	-	6	6	7	6	6	6	6	6	6
47	-	-	-	6	7	8	6	6	6	6	6	6
56	-	-	-	7	7	8	6	6	6	6	6	6
68	-	-	-	7	7	9	6	6	6	6	6	6
75	-	-	-	7	7	9	6	6	7	6	6	7
82	-	-	-	7	7	9	6	6	7	6	6	7
100	-	-	-	8	8	10	6	6	7	6	7	7
120	-	-	-	8	8	10	6	6	7	6	7	7
150	-	-	-	9	9	12	6	7	8	6	8	8
180	-	-	-	9	9	14	6	7	8	6	8	8
220	-	-	-	10	10	16	7	8	9	7	9	9
270	-	-	-	12	12	16	8	9	10	8	9	10
330	-	-	-	14	14	18	8	10	12	8	10	12
470	-	-	-	16	16	20	9	12	14	9	12	14
560	-	-	-	-	-	-	10	12	14	10	14	14
680	-	-	-	-	-	-	10	14	16	10	14	16
750	-	-	-	-	-	-	12	16	16	12	16	16
820	-	-	-	-	-	-	12	16	16	12	16	16
1000	-	-	-	-	-	-	14	16	18	14	16	18

NIC RESERVES THE RIGHT TO REQUEST MINIMUM QUANTITIES ON CERTAIN VALUES



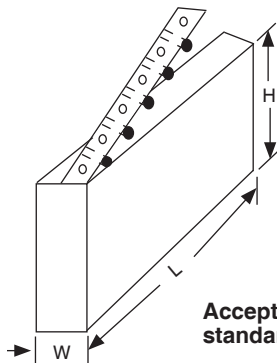
DIMENSIONS (mm)



Symbol	D max.	d	P	P ₀	P ₁	P ₂	S	H	H ₀	H ₁	Dφ	W	L	t	Δh
Value	≤ 12	0.6	12.7	12.7	5.1	6.35	2.5	20.0	Applies to Parts with Crimped Leads 16.0	32.25 max.	4.0	18.0	11.0 max.	0.6	0.0
					3.85		5.0								
					3.18		6.35								
	>12 ~ 23	0.6 or 0.8*	25.4		8.95	12.7	7.5								
					7.7		9.5								
Tolerance	≤ 12	+0.06 -0.05	±1.0	±0.2	±0.7	±1.0	+0.8 -0.2	+1.5 -1.0	±0.5	---	±0.2	±0.5	---	±0.3	±2.0
	>12 ~ 23				±1.5										

*Lead diameter dependent on capacitor diameter. Contact NIC for details

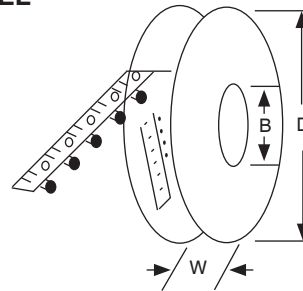
AMMO PACK



$$\begin{aligned} H &\leq 372 \text{ (14.64")} \\ L &\leq 377 \text{ (14.84")} \\ W &\leq 55 \text{ (2.16")} \end{aligned}$$

Acceptable to standard radial type cartridge.

REEL



$$\begin{aligned} D &\leq 354 \text{ (13.93")} \\ B &\geq 21 \text{ (.83")} \text{ but} \\ &\leq 30 \text{ (1.18")} \\ W &\leq 55 \text{ (2.16")} \end{aligned}$$

Acceptable to standard radial type cartridge with a few extra accessories.

PART NUMBER SUFFIX FOR OPTIONAL TAPE & REEL OR TAPE & BOX PACKAGING

Tape & Reel Straight Lead Options

TRF = Tape & Reel with 5mm lead-space
 TR.100LSF = Tape & Reel with 2.0mm lead-space
 TR.250LSF = Tape & Reel with 6.35mm lead-space
 TR.300LSF = Tape & Reel with 7.5mm lead-space
 TR.375LSF = Tape & Reel with 9.5mm lead-space

Tape & Reel Crimped Lead Options (J = Inward Crimp, K = Outward Crimp)

JTRF or KTRF = Tape & Reel with 5mm lead-space
 JTR.250LSF or KTR.250LSF = Tape & Reel with 6.35mm lead-space
 JTR.300LSF or KTR.300LSF = Tape & Reel with 7.5mm lead-space
 JTR.375LSF or KTR.375LSF = Tape & Reel with 9.5mm lead-space

Tape & Box Straight Lead Options

TBF = Tape & Reel with 5mm lead-space
 TB.100LSF = Tape & Reel with 2.0mm lead-space
 TB.250LSF = Tape & Reel with 6.35mm lead-space
 TB.300LSF = Tape & Reel with 7.5mm lead-space
 TB.375LSF = Tape & Reel with 9.5mm lead-space

Tape & Box Crimped Lead Options (J = Inward Crimp, K = Outward Crimp)

JTBF or KTBF = Tape & Reel with 5mm lead-space
 JTB.250LSF or KTB.250LSF = Tape & Reel with 6.35mm lead-space
 JTB.300LSF or KTB.300LSF = Tape & Reel with 7.5mm lead-space
 JTB.375LSF or KTB.375LSF = Tape & Reel with 9.5mm lead-space

Notes:

1. The above lead-space options may not be available in all part diameters. Contact NIC for details.
2. Inward "J style" and outward "K style" may not be available in all part diameters and voltages. Contact NIC for details.