

CAPATRONICS MALAYSIA SDN. BHD.
凱普電子工業(馬)有限公司

ORDERING TERMINOLOGY

T 0.6 F NPO 4 B 121 J TB E
 (1) (2) (3) (4) (5) (6) (7) (8) (9) (10)

FREQ: _____
 H: 1KHZ
 T: 1MHZ

SIZE CODE: _____
 D/a Code
 3.4 + 04
 5.8 + 06
 12.4 + 13
 14.5 + 15

WORKING VOLTAGE: _____
 C = 12V 3G = 4KV DC
 D = 16V 3H = 5KV DC
 E = 25V 3I = 6KV DC
 F = 50V 3J = 8KV DC
 H = 100V 4A = 10KV DC
 K = 250V 4B = 12.5KVDC
 L = 500V 4C = 15KV DC
 N = 1KV 4D = 20KV DC
 R = 2KV 2Q = 125KV AC
 S = 3KV 2T = 250V AC
 2V = 400V AC

TEMPERATURE CHARACTERISTIC: _____
 CH = NPO = COH
 HH = N33 = S1H
 TH = N470 = T2H

LEAD CONFIGURATION
 (REFER TO PAGE 4)

COATING:
 E : EPOXY
 D : DUREZ

PACK:
 TB = Taping Box
 TR = Taping Reel
 BK = Bulk

CAPACITANCE TOLERANCE CODE:

C = ± 0.25pF J = ± 5%
 D = ± 0.5pF K = ± 10%
 F = ± 1pF M = ± 20%
 G = ± 2%

RANGE: Z = + 80%
 - 20%
 P = + 100%

CAP RANGE
 0.5 TO 10pF ABOVE 10pF

CAPACITANCE (pF):1

12 1 = 12 X 10 = 120pF
 XX X

Multiplier (Numeric)
 First (s) Significant
 Figures (Numeric)

Significant Figure	Multiplier
0	0 = x 1
1	1 = x 10
2	2 = x 10 ²
3	3 = x 10 ³
4	4 = x 10 ⁴
5	5 = x 10 ⁵
8	8 = x 10 ²
9	9 = x 10 ¹

LEAD SPACING

A = 2.5 m/m D = 7.6 m/m
 B = 5 m/m E = 9.5 m/m
 C = 6.4 m/m

CAPACITANCE TOLERANCE.

CODE	TOLERANCE VALUE	APPLY T.C.	REMARK
C	$\pm 0.25PF$	NPO – N750	FOR SMALLER THAN 10PF
D	$\pm 0.50PF$	NPO – N750	FOR SMALLER THAN 10PF
F	$\pm 1.00PF$	NPO – N750	FOR SMALLER THAN 10PF
J	$\pm 5\%$	NPO – N3300	FOR OVER 10PF
K	$\pm 10\%$	NPO – N3300 (Y5F, Y5P)	FOR OVER 10PF
M	$\pm 20\%$	NPO – N3300 (Y5F, Y5P, Y5U, Z5U)	FOR OVER 10PF
S	+ 50%–20%	Y5U, Z5U, Z5V.	
Z	+ 80%–20%	Y5U, Z5U, Z5V	
P	+ 100%–0	Y5U, Z5U, Z5V	

TEMPERATURE COMPENSATING:

CODE	PPM / °C	T.C.	EIA CODE	COLOUR	SYMBOL
CH	0 ± 60	NPO	COH	Black	C
HH	$- 30 \pm 60$	N33	SIH	Brown	H
LH	$- 80 \pm 60$	N75	UIH	Red	I
PH	$- 150 \pm 60$	N150	P2H	Orange	P
RH	$- 220 \pm 60$	N220	R2H	Yellow	R
SH	-330 ± 60	N330	S2H	Green	S
TH	$- 470 \pm 60$	N470	T2H	Blue	T
UJ	-750 ± 120	N750	U2J	Violet	U
SL	+ 350 - - 1.000	N330±500	S2L		

CAPACITANCE VALUE

3R9D = $3.9pF \pm 0.5pF$

4R7D = $4.7pF \pm 0.5pF$

8R0D = $8pF \pm 0.5pF$

100J = $10pF \pm 5\%$

300K = $30pF \pm 10\%$

101K = $100pF \pm 10\%$

121J = $120pF \pm 5\%$

331K = $330pF \pm 10\%$

102 = $1000pF = 1nF = .001\mu F$

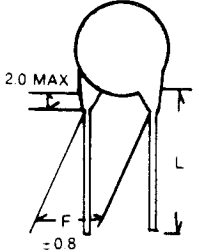
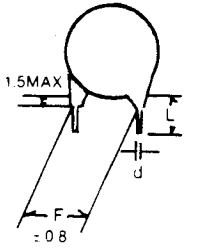
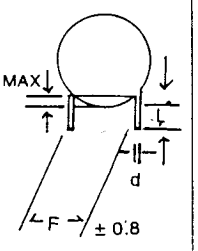
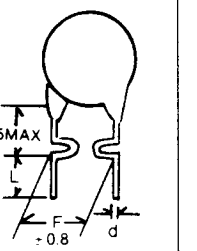
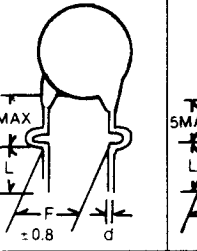

472 = $4700pF = 4.7nF = .0047\mu F$

103 = $10,000pF = 10nF = .01\mu F$

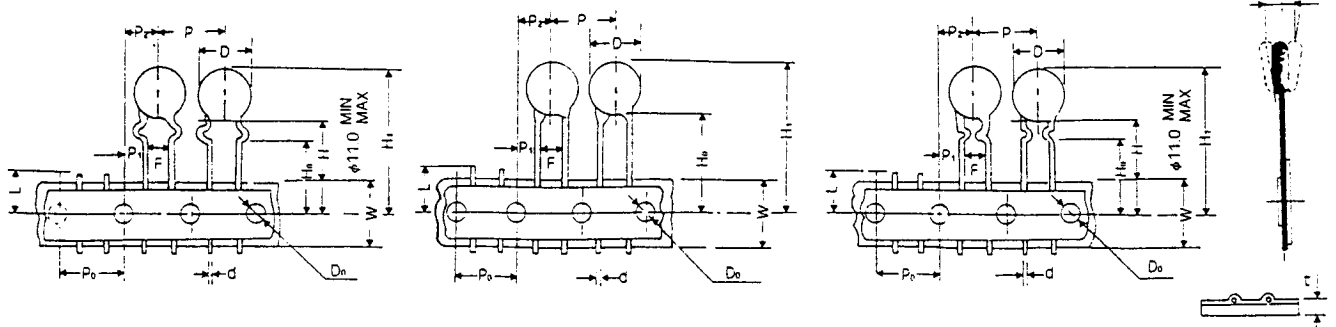
503 = $50000pF = 50nF = .05\mu F$

104 = $100000pF = 100nF = .1\mu F$

LEAD CONFIGURATION

	1	2	3	4	5	6
						
F	Shown on specified Disc Spec Sheet	5.0 - 6.4 or 9.5	5.0 - 6.4 or 9.5	5.0 - 6.4 or 9.5	5.0 - 6.4 or 9.5	6.4 or 9.5
d	0.45 - 0.6	0.45 - 0.6	0.45 - 0.6	0.45 - 0.6	0.5 - 0.6	0.6
L	25 min	3.0 - 4.7 - 5.0 - 7.5 - 10				

TAPING LEAD TAPING CAPACITORS FOR AUTOMATIC INSERTION

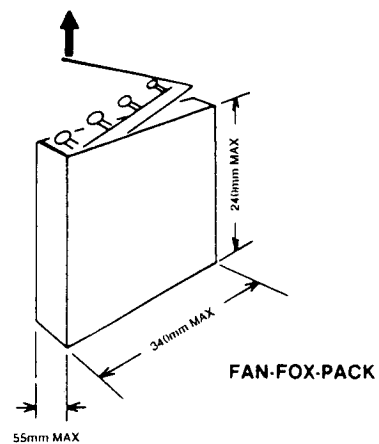
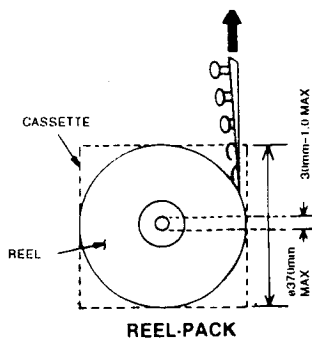


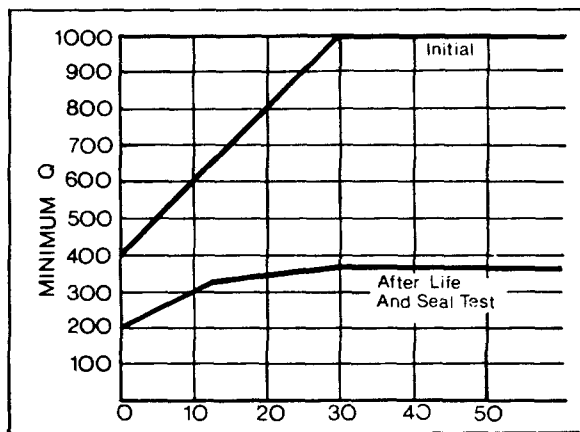
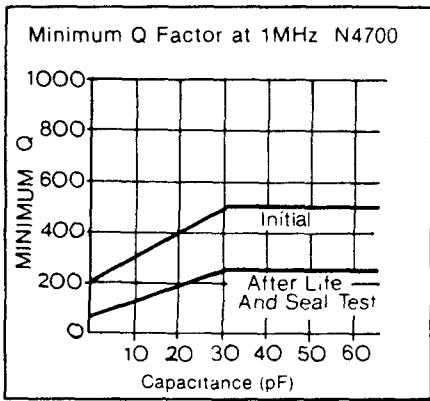
SYMBOL	D	d	P	P ₀	P ₁	P ₂	F	H ₀	H	H ₁	D ₀	W	L	t
VALUE	MAX 11.0	0.6	12.7	12.7	3.85	6.35	5.0	16.0 18.0	20	MAX 32.25	4.0	18.0	MAX 11.0	0.7
TOLERANCE	-	+ 0.06 - 0.05	± 1	± 0.2	± 0.7	± 1.0	+ 0.8 - 0.2	+ 1.5 - 1.0	- 1.5 - 1.0	-	± 0.2	± 0.5	-	± 0.2

PACKAGING QUANTITY:

PACKAGE	ONE BOX	CARTON BOX
REEL PACK	2000 PCS	20,000 PCS
ZIGZAG PACK	1500 PCS	15,000 PCS

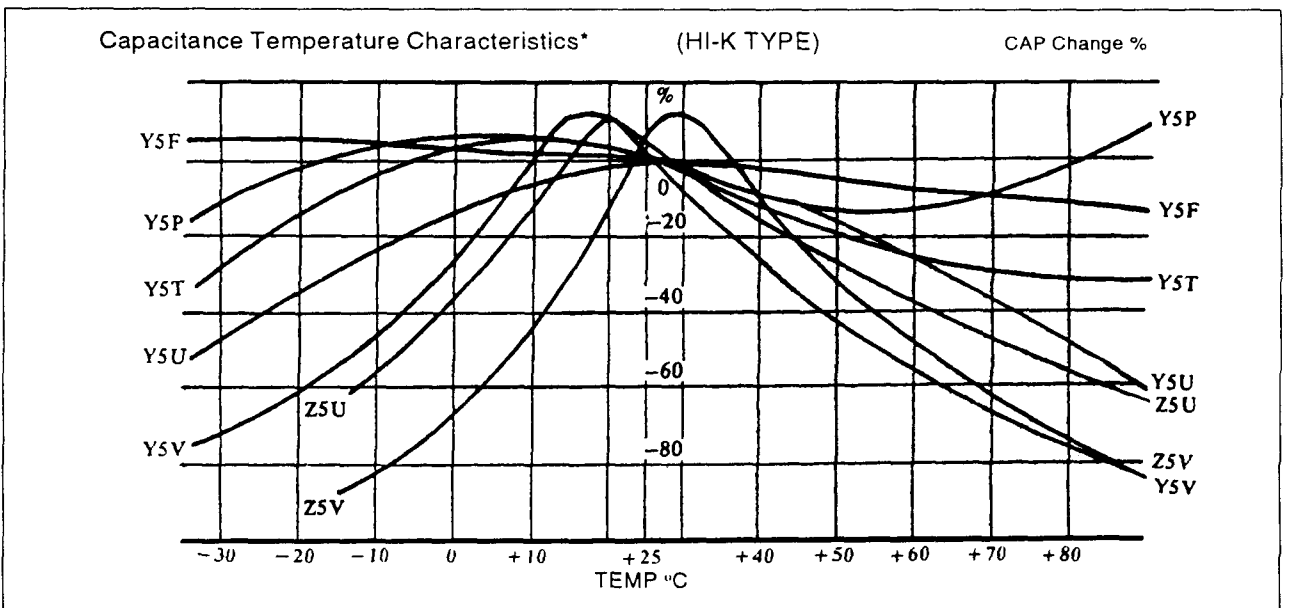
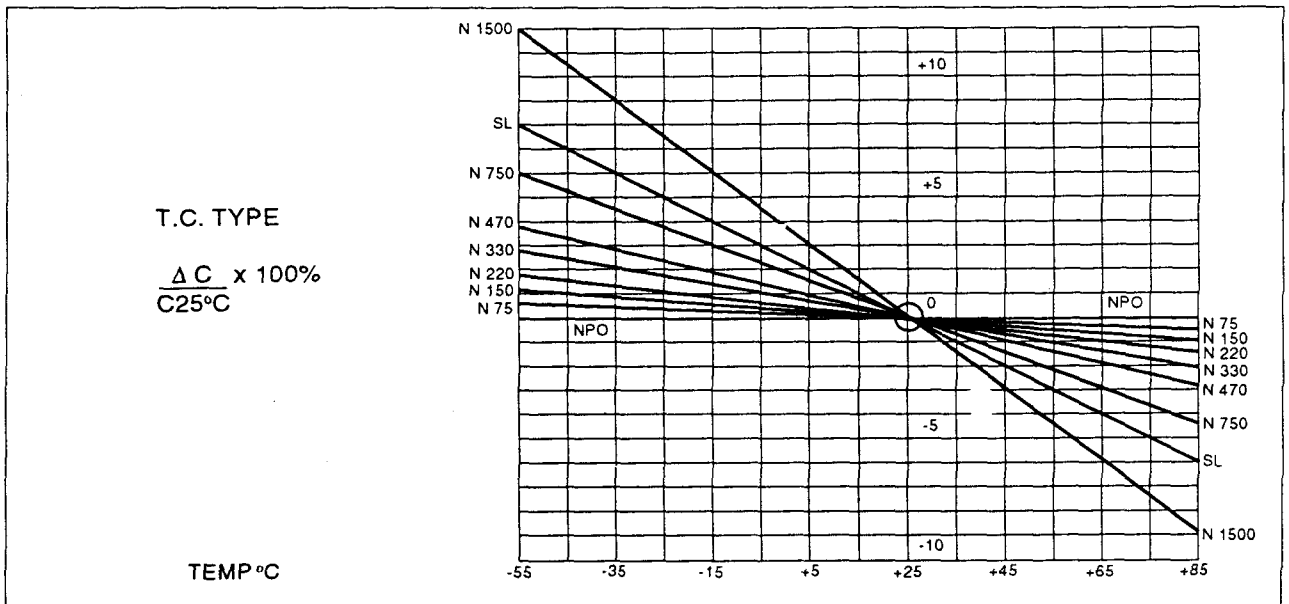
REEL and BOX DIMENSIONS (mm)





- Q Factor
- Life Test
- Lead Wire
- Insulation
- Coating on Lead
- Lead Spacing Tolerance

T.C. CHART



METHOD OF TEST FOR CLASS 1 SERIES (T.C. TYPE)

Capacitance

Test Frequency: 1MHZ \pm 100KHZ For \leq 100pF.
1KHZ \pm 100HZ For \geq 1000pF.

Test Voltage: Shall not exceed 1 ± 0.2 Vrms.

Test temperature: $25^\circ \pm 2^\circ\text{C}$

Quality Factor (Q)

For NPO to N1500 When $C \leq 30\text{pF}$ $Q = 400 + 20C$. $C > 30\text{pF}$ $Q > 1000$.

Over N1500 When $C \leq 30\text{pF}$ $Q = 200 + 10C$. $C > 30\text{pF}$ $Q > 500$.

For C above 1000pF at 1KHZ D.F. 0.2% Max

Insulation Resistance

1000M Ω Min, Shall be measured 1 minute after with rated voltage.

Dielectric Withstanding Voltage

Capacitors shall withstand, for not less than 1 second, a D.C. test Voltage of 2.5 times rated working Voltage.uil/

T.C TYPE CAPACITANCE RANGE CHART (BY PF)

50WV – 100WVDC & UNDER

DIAMETER	TEMPERATURE CHARACTERISTIC								
	NPO	N75	N150	N220	N330	N470	N750	SL(GP)	N1500
D ϕ \pm 1m/m									
4 – 5	1-24	1-12	1-24	1-27	1-27	1-33	1-43	1-68	27-56
5	25-47	13-22	25-47	28-47	28-47	34-47	44-82	72-100	62-100
6	50-100	24-33	50-100	50-100	50-100	50-100	83-100	120-220	120-220
8	120-150	35-68	120-150	120-150	120-150	120-150	120-150	250-470	250-470
10	180-220	72-130	180-220	180-220	180-220	180-220	180-250	500-620	500-620
12	250-300	140-180	250-300	250-300	250-300	250-300	270-390	680-1000	620-1000