C-Array

Features

- Space saving than 50% board as compared to equivalent discrete space.
- More capacitance per area high volumetric Efficiency from:
  -------side margins
  -------larger thickness
- Increased throughput 1 c-array=1/4 the time of placing 4 discrete caps.
- Cost savings cost savings on:(pick and place costs, manufacturing time, equipment overhead, storage, incoming inspections, visual inspections, board costs).
- Easy of manufacturing as SMT components become smaller, banding become more difficult.

Application

- Applied in PCB which requests more Board space, such as note book computer, PDA, portable telephone & better in I/O circuits.

Electrical Characteristics

Item	0603x4	Y5V	X7R	NPO/COG
Application Temperature		-30°C～+85°C	-55°C～+125°C	-55°C～+125°C
Capacitance Range		10nF～150nF	470pF～47nF	1pF～470pF
Capacitance Tolerance		±20% +80%/-20%	±10%,±20%	±5%,±10%
Rated Voltage		50V/25V/16V	50V/25V/16V	50V/25V/16V
Insulation Resistance		RC>500s	C<10nF,R>10^{11}Ω C≥10nF,RC≥1000s	R>10^{11}Ω
Dissipation Factor		≤5%(25V，50V) ≤7%(16V)	≤2.5%(25V,50V) ≤3.5%(16V)	≤0.15%
Dielectric withstanding Voltage		>2.5xVr	>2.5xVr	>2.5xVr
Temperature Coefficient		+22% -82%	±15%	(0±30)ppm/°C
Termination		Ag or Ni/Sn	Ag or Ni/Sn	Ag or Ni/Sn

Notice: Measured at 1V 1MHz for NPO

NPO：1MHz/1V

X7R：1KHz/1V

Y5V：1KHz/0.3V

How to Order

CA	B	103	K	500	N	T	2	G
↑	↑	↑	↑	↑	↑	↑	↑	↑
A	B	C	D	E	F	G	H	I

A

Series Code	
CA4	CA series, 0603×4 Type

B

Dielectric Type	
B	X7R
N	COG/NPO
Y	Y5V

C

Normal Capacitance	
102	10×10^2
103	10×10^3

Express by three figures. Unit used is pF (pico-farad)

First two figures are significant digit, third figure expresses number of zeros which follow the two significant digit

If there is a decimal place it is represented by a “R”. In this scenario all figures are significant digit

D

Capacitance Tolerance	
K	±10%
J	±5%
M	±20%

E

Rated Voltage	
500,	50V
250,	25V
160	16V

First two figures are significant digit, third figure expresses number of zeros which follow the two significant digit

F

Termination Type	
N	Nickel Barrier Termination
S	Solderable Termination

G

Package type	
T	Tape and Reel
None	Bulk Package

H

Thickness	
1	0.8mm,
2	1.0mm,
3	1.2mm

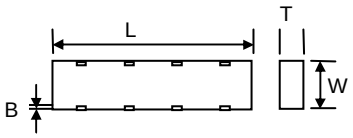
I

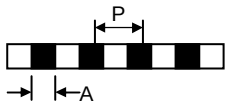
Lead Free	
G	Lead Free
	*

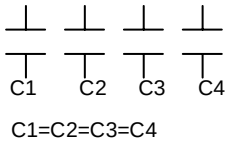
*May contain toxin material if left blanked

Dimensions

Size	Unit	L	W	T	A	B	P
0603X4	mm	3.20±0.15	1.60±0.15	0.8±0.10 1.00±0.10 1.20±0.10	0.45±0.15	0.30±0.15	0.80±0.15
	inch	0.125±0.006	0.063±0.006	0.031±0.004 0.039±0.004 0.047±0.004	0.018±0.006	0.012±0.006	0.031±0.006







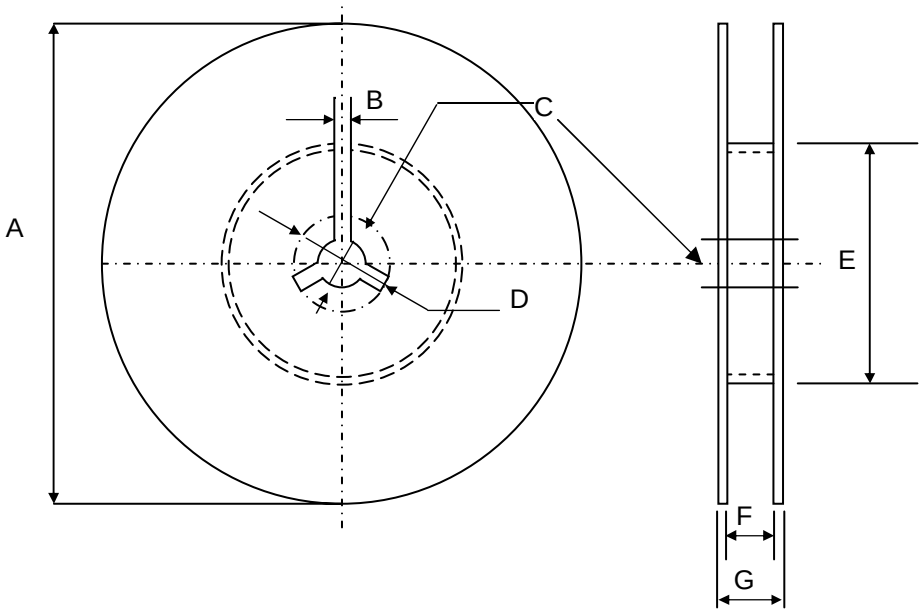
C1=C2=C3=C4

Packaging

Tape and Reel

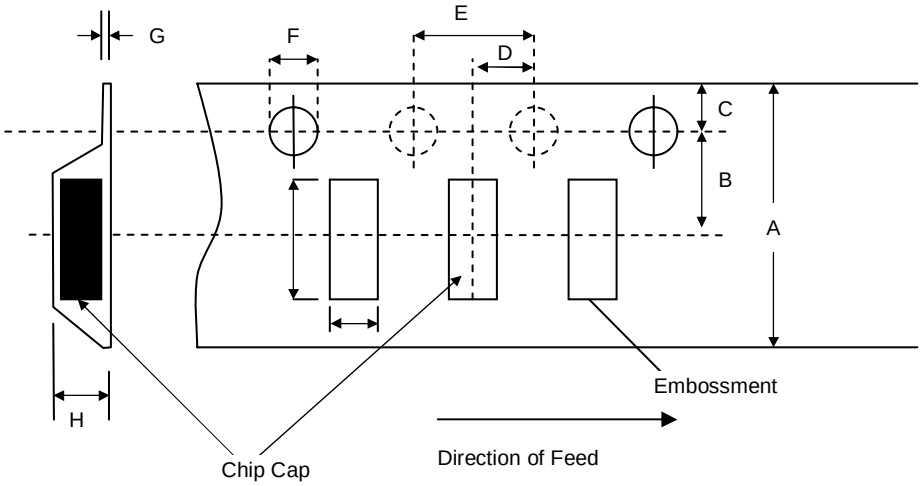
Dimensional (mm)

A	B*	C	D*	E	F	G
178±2.0	3.0	13±0.5	φ32	59MIN φ78±1	10.0±1.5	14.9 12±2.0



Packaging

A	B*	C	D*	E	F	G	H
8.0±0.2	3.0±0.05	1.75±0.1	2.0±0.1	4.0±0.1	1.5±0.1-0	0.3MAX	2.0MAX



Packaging Quantity

Size Code	piece/reel	piece/reel	Size	1	J
1206	5000	5000	1206	3.6±0.2	2.0±0.2