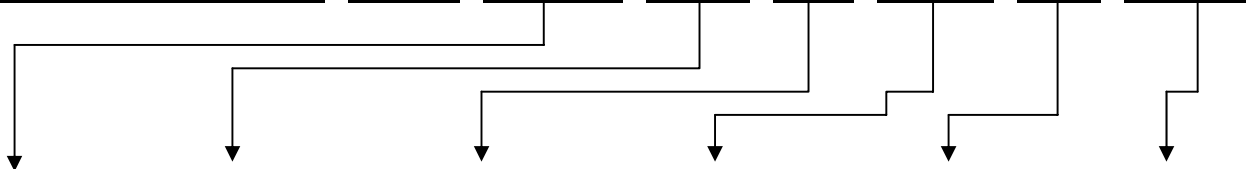


- SUBJECT:** This specification applies on the chip capacitor array made by SYNTON-TECH Corporation.
- PART NUMBER:** Part number of the chip capacitor array is identified by the Size, Cap.Nr. Dielectric, Cap. Value, tolerance and Voltage.

Example : **DESCRIPTION : CA 0603 4C NPO 100PF K 50V**

SYNTON CODE : CA 0603 4C N 101 K 50V



<u>Size</u>	<u>Cap. Nr.</u>	<u>Dielectric</u>	<u>Cap. value</u>	<u>Tolerance</u>	<u>Voltage</u>
0603	4C	N: NPO X: X7R Y: Y5V	3 Digits : 5R1 : 5.1PF 100 : 10PF 101 : 100PF 102 : 1NF 103 : 10NF 104 : 0.1UF	A: ±0.05PF B : ±0.10PF C : ±0.25PF D : ±0.5PF F : ±1% G : ±2% J : ±5% K : ±10% M : ±20% Z: -20~+80%	10V 16V 25V 50V 63V 100V 200V 250V 500V 1KV 2KV 3KV

3. ELECTRICAL CHARACTERISTICS FOR CLASS 2, CAPACITOR

Class 2 capacitors; X7R dielectric; NiSn terminations

DESCRIPTION	VALUE
Capacitors(E12 SERIES)	
16V	Under evaluation
25V	Under development
50V	220 pF to 10nF
Tolerance on capacitance after 1000hrs	$\pm 5\%$; $\pm 10\%$, $\pm 20\%$
Test Voltage (DC) for 1 minute	$2.5 \times U_R$
Tan δ ; note1	
16V	
25V and 50V	2.5%
Insulation resistance after 1 minute at U_R (DC)	
C ≤ 10 nF	$R_{ins} \times C \geq 10^5 \text{ M}\Omega$
C > 10 nF	$R_{ins} \times C > 1000s$
Ageing	Typical 1% per time decade
Resistance to soldering heat	260 ;10 seconds

Note:

1.Measured at 1V, 1KHz, using a four-gauge method.

Class 1 capacitors; NPO dielectric;NiSn terminations

DESCRIPTION	VALUE
Capacitance range ors(E12 series);note 1	22pF to 1 nF
Tolerance on capacitance	$\pm 5\%$; $\pm 10\%$
Tan δ ; note 1	0.1%
Test Voltage(DC) for 1 minute	$2.5 \times U_R$
Insulation resistance after 1 minute at U_R (DC)	$> 100000 \text{ M}\Omega$
Temperature coefficient	$(0 \pm 30) \times 10^{-6}/K$
	260 ; 10 seconds

Note:

1.Measured at 1V, 1MHz for C ≤ 1000 pF and at 1V, 1KHz for C > 1000 Pf,
Using a four-gauge method.

4. MECHANICAL DATA

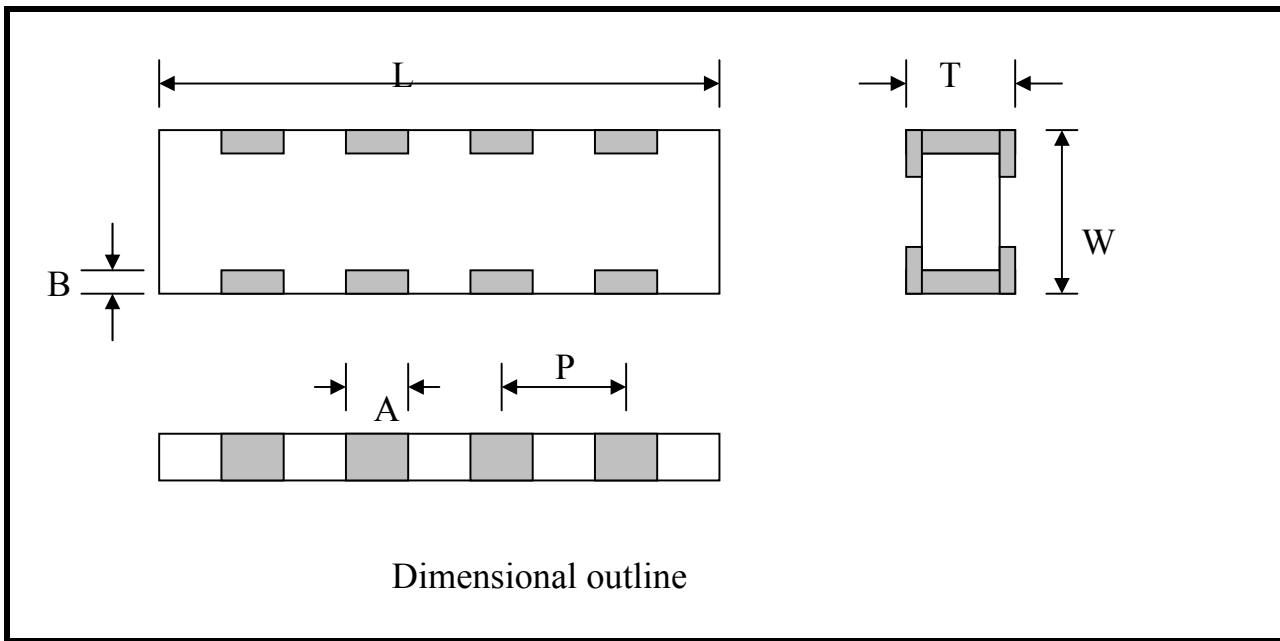


Table 1 Capacitor dimensions for product size 0612 (4x0603)

CASE SIZE	L	W	T		A	B	P
			MIN.	MAX.			
Dimensions in millimeters							
(4x0603)	3.20±0.15	1.60±0.15	0.80	1.20	0.40±0.1	0.30±0.15	0.80±0.15
Dimensions in inches							
(4x0603)	0.125±0.006	0.063±0.006	0.031	0.047	0.018±0.006	0.012±0.006	0.031±0.006

5. DIMENSIONS OF SOLDER LANDS

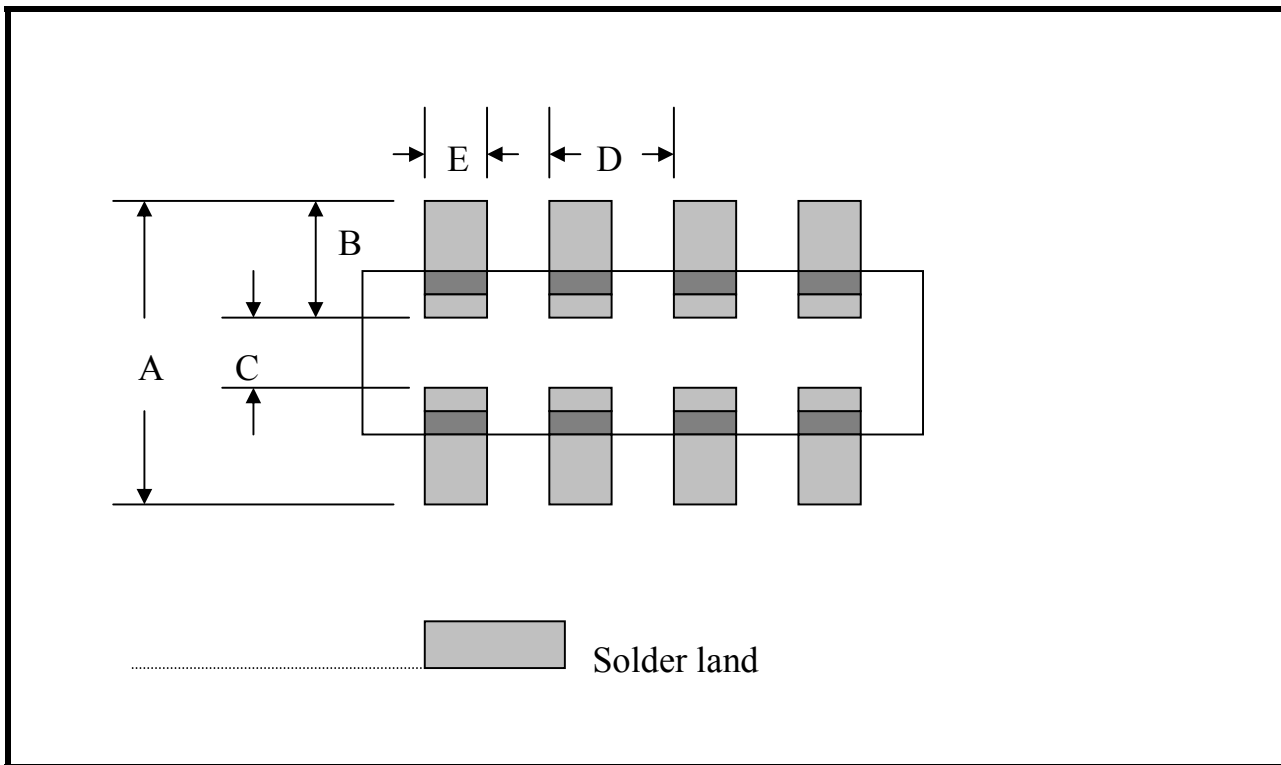


Table 2 Solder land dimensions

CASE SIZE	TOOTPRINT DIMENSIONS(mm)				
	A	B	C	D	E
(4x0603)	2.54 ± 0.15	0.89 ± 0.10	0.76 ± 0.10	0.80 ± 0.10	0.45 ± 0.10

6. TESTS AND REQUIREMENTS

IEC 384-10	Test items	Conditions	Requirements		
			NPO	X7R	Y5V
4.9	Bending	Bending rate 1mm/s,jig,Radius 340mm	C/C 1%	C/C 10%	C/C 20%
4.10	Resistance to soldering heat	260±5 for 10±0.5s in static solder bath	C/C 0.5% or 0.5pF,whichever is greater	-5% C/C 10%	-10% C/C 20%
4.11	Solderability	235±5 for 2±0.5s in a static solder bath	75% minimum coverage of metallic area		
4.12	Rapid change of temperature	NPO/X7R:-55 to +125 5 cycles Y5V:-25 to +85,5cycles	C/C 1% or 1pF,whichever is greater	C/C: 15%	C/C: 20%
4.14	Damp heat, Steady state	At 40 ,90 to 95% RH and Ur Applied for 56 days	C/C;2% or 1pF whichever is greater Tan 2xspecified Value IR:2500MΩ or RxC 25s whichever is less	C/C; 15% Tan 7% IR:1000MΩ or RxC 25s whichever is less	C/C; 30% Tan 7% IR:1000MΩ or RxC 25s whichever is less
4.15	Endurance	At upper category temperature 2xUr applied for 42 days	C/C;2% or 1pF whichever is greater Tan 2xspecified Value IR:4000MΩ or RxC 40s whichever is less	C/C; 15% Tan 7% IR:2000MΩ or RxC 50s whichever is less	C/C; 30% Tan 7% IR:2000MΩ or RxC 50s whichever is less

7. TESTS AND REQUIREMENTS

Tape Width:mm

NPO

		50V	25V	16V
Cap.(pF)	Code 15-17	CA0612	under development	
22	220	0.8+/-0.1	<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: auto;"> In Columns: Thickness Class </div>	
27	270			
33	330			
39	390			
47	470			
56	560			
68	680			
82	820			
100	101			
120	121			
150	151			
180	181			
220	221			
270	271			
330	331			
390	391			
470	471			
560	561			

THICKNESS CLASS AND PACKAGING QUANTITIES

8mm TAPE WIDTH AMOUNT PER REEL

Thickness	180mm/7"	
Classes(mm)	Paper	BLISTER
0.8+/-0.1	4000	4000

8. SPECIFICATION & PACKING

Tape Width:mm

X7R

		50V	25V	16V
Cap.(pF)	Code 15-17	CA0612	under development	
220	221	0.8+/-0.1	<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: auto;"> In Columns: Thickness Class </div>	
270	271			
330	331			
390	391			
470	471			
560	561			
680	681			
820	821			
1000	102			
1200	122			
1500	152			
1800	182			
2200	222			
2700	272			
3300	332			
3900	392			
4700	472			
5600	562			
6800	682			
8200	822			
10000	103			

THICKNESS CLASS AND PACKAGING QUANTITIES

8mm TAPE WIDTH AMOUNT PER REEL

Thickness	180mm/7"		330mm/13"	
	Paper	BLISTER	Paper	BLISTER
0.8+/-0.1	4000	4000	10000	10000