

Features

- Stringgent dimensional tolerance allow highly reliable, highly speed automaric chip placement on PCBs.
- Terminations are plated with Ni and solder, suited to flow and reflow soldering.
- High insulation resistance and high reliabibty.
- These capacitors have temperature characteristics ranging from COG to Y5V, applied to general electronic equipment, and instrument panel house electronic



Capacitor Selection The choice of dielectric is largely determined by the temperature stability required:

Stable Class II dielectric, with predictable change of properties with temperature, $voltage, frequency\ and\ time.\ Used\ as\ blocking,\ coupling,\ by\mbox{-}\ passing\ and\ frequency$

 $temperature, \ voltage, \ frequency \ and \ time. \ Used \ in circuits \ requiring \ stable \ performance.$

discriminating elements. This dielectric is ferroelectric and offers higher capacitance ranges than class I. Y5V(Z5U) General purpose Class II dielectric with highest dielectric constant and greater variation of

 $properties\ with\ temperature\ and\ test\ conditions.\ Very\ high\ capacitance\ per\ unit\ volume\ and\ suited$

for application as well as filtering, transient suppression blocking, and charge storage application.

General Specification COG(NPO) X7R Y5V (Z5U)

	COG(NFO)	ATR	150 (250)	
Capacitance Range	0.2pF∼10nF	100pF∼4.7uF	1000pF∼10uF	
Capacitance Tolerance	Preferred ±5%,±10%. For values≤10pF,Preferred tolerance is ±5%pF,also available±0.25pF	Preferred $\pm 10\%, \pm 20\%$.	+80/~20%	
Operating Temperature Range	-55∼125℃	-55~125℃	-30~85°C	
Temperature Characteristic	0±30ppm ⁺ C	within \pm 15%	within+22/-82%	
Rated Voltage	25V,50V,100V,200V	6.3V,10V,16V,25V,50V,100V	10V,16V,25V,50V	
Dissipation Factor and "Q"	C _R ≥30pF, Q≥1000 C _R <30pF, Q≥400+20	For 6.3V:DF ≤ 5.0%; For 16V and 10V:DF ≤ 3.5%; For 25V min:DF ≤ 2.5%.	For 10V:12.5% max; For 16V :9.0% max; For 25Vmin :5.0% max.	
Insulation Resistance	more than 10G Ω	10G Ω min. or 500 Ω F min, Whichever is less	10G Ω min. or 500 Ω F min, Whichever is less	
Dielectric Withstanding Voltage	250% rated voltage	250% rated voltage	250% rated voltage	
Test Voltage	250% rated voltage	1±0.2Vrms	1±0.2Vrms	
Test Frequency	For value s ≥ 1000 pF:1KHz For value s ≤ 1000 pF:1MHz	1KHz	1KHz	



Capacitance

TMCC05 SMD Multilayer Ceramic Capacitor

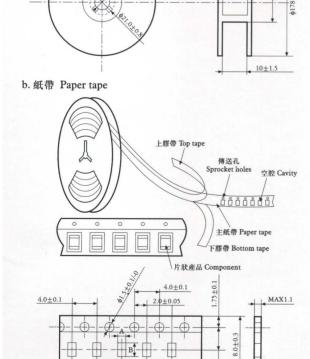
Dimension (mm)

Siza					Valtage				
Size	L	W	т	е	g min	Voltage	COG(NPO)	X7R	Y5V(Z5U)
0402 1.0±		0.5±0.05	0.5±0.05	0.15~0.3	0.4	10V		100pF~0.1uF	1.0nF~0.22uF
						16V		100pF~47nF	1.0nF~0.1uF
	4.01.0.05					25V	0.2pF~100pF	100pF~22nF	1.0nF~22nF
	1.0±0.05					50V		100pF~22nF	1.0nF~10nF
						100V			
						200V			
				0.2~0.5	0.5	10V		100pF~0.22uF	2.2nF~1.0uF
						16V		100pF~0.1uF	2.2nF~0.33uF
						25V	0.2pF~1.0nF	100pF∼47nF	2.2nF~0.22uF
0603	1.6±0.1	0.8±0.1	0.8±0.1			50V	0.2pF~1.0nF	100pF∼15nF	2.2nF~56nF
						100V	0.2pF~300pF	100pF~47nF	
						200V			
0805 2.0			0.6±0.1	0.2~0.7	0.7	10V		1.0nF~2.2uF	10nF~4.7uF
		1.25±0.1				16V		100pF~0.47uF	10nF~2.2uF
	20104		0.85±0.1			25V	0.5pF~4.7nF	100pF~0.22uF	10nF~1.0uF
	2.0±0.1					50V	0.5pF~2.2nF	100pF~0.1uF	10nF~0.33uF
			1.25±0.1			100V	0.5pF~1.0nF	100pF~22nF	
						200V	0.5pF~470pF		
1206 3		1.6±0.2	0.6±0.1	0.2~0.7	0.7	10V		1.0nF~4.7uF	10nF~10uF
	3.2±0.2		0.6±0.1			16V		1.0nF~1.0uF	10nF~4.7uF
			0.85±0.1			25V	0.5pF~10nF	1.0nF~1.0uF	10nF~2.2uF
			1.15±0.1			50V	0.5pF~4.7nF	1.0nF~2.2uF	10nF~1.0uF
						100V	0.5pF~2.2nF	1.0nF~0.1uF	
			0.6±0.2			200V	0.5pF~1.0nF		

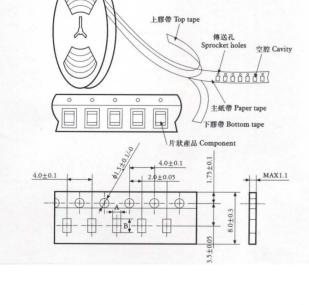


TOPMAY

TMCC05 SMD Multilayer Ceramic Capacitor



φ 180mm 盤 Reel



	2.5±0.5	10±1.5
c. 塑料帶 Embossed	l tape	
	塑料费	t holes 空腔 Cavity
	片狀產品 Compone	ent
4.0±0.1	方	0.2±0.1
	B + 50	90 HOW
型号Type	A	В
0805(T=1.25mm) 1.45±0.2		2.25±0.2

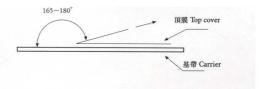
φ 330mm 盤 Reel

- 型号 Type Α В 0603 1.05 ± 0.1 1.85 ± 0.1 1.55 ± 0.15 0805(T≤1.0mm) 2.3 ± 0.15 2.0 ± 0.2 1206(T≤1.0mm) 3.6 ± 0.2
- 1.9 ± 0.2 3.5 ± 0.2 1206(T>1mm) 2.8 ± 0.2 1210(T>1mm) 3.5 ± 0.2

- (1) Tapes for capacitors are wound clockwise. The sprocket holes are to the right as the tape is pulled toward the user. (2) The top tape and base tape are nor attached at the end of the tape for a minimum of 5 pitches. (3) Part of the leader and part of the empty tape shall be attached to the end of the tape as follows.
- (4) Number of missing capacitor is less than 0.1% of the total number quoted per reel or 1 pc, whichever is greater, and are nor continuous.
- (5) The top tape and bottom tape shall nor protrude beyond the edges of the tape and shall nor cover sprocker holes . (6) Cumulative tolerance of sprocker holes ,10 pitches : ± 0.3 mm.
- (7) Peeling off force:0.1 to 0.6N in the direction shown down.

(單位unit:毫米mm)

抽出方向 Feeding direction



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