

# Multilayer Ceramic Chip Capacitors

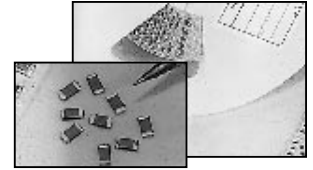
NMC Series Y5V

## FEATURES

- HIGH K DIELECTRIC
- HIGH CAPACITANCE DENSITY
- EXCELLENT MECHANICAL STRENGTH
- NICKEL BARRIER TERMINATIONS

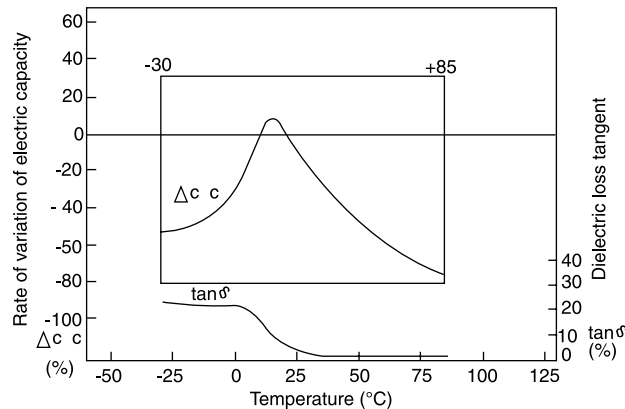
**RoHS  
Compliant**  
includes all homogeneous materials

\*See Part Number System for Details

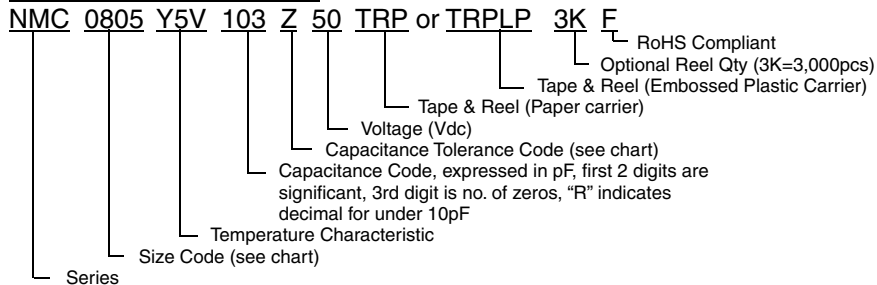


Capacitance Range	0.01 $\mu$ F ~ 0.82 $\mu$ F (see high CV datasheet for higher capacitance values)
Capacitance Tolerance	+80%/-20% (Z)
Operating Temperature Range	-30°C ~ +85°C
Temperature Characteristics	+22%, -82% max. capacitance $\Delta$ over temperature range
Rated Voltages	6.3Vdc, 16Vdc, 25Vdc, 50Vdc & 100Vdc (see NMC-H Series for higher voltages)
Dissipation Factor	(See Values Table)
Insulation Resistance	10Gigohms min. or 500Megohm/ $\mu$ F min. whichever is less @ +25°C
Dielectric Withstanding Voltage	150% of Rated Voltage for 5 $\pm$ 1 seconds, 50mA maximum current
Test Conditions (EIA-198-2E)	1KHz, 1.0V $\pm$ 0.2Vrms

Typical Y5V C and DF Change over Temp.



## PART NUMBER SYSTEM

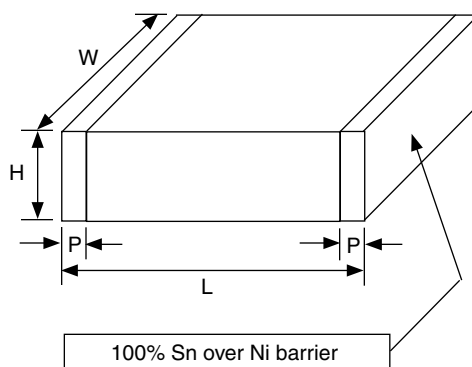


## Y5V CAPACITOR SIZE AND DISSIPATION FACTOR CHART (mm)

EIA Case Size	0201					0402					0603					0805					1206				
Length (L)	0.6 ± 0.05					1.0 ± 0.05					1.6 ± 0.15					2.0 ± 0.2					3.2 ± 0.2				
Width (W)	0.3 ± 0.05					0.5 ± 0.05					0.8 ± 0.15					1.25 ± 0.2					1.6 ± 0.2				
Thickness max. (T)	0.33					0.6					1.0					1.30					1.80				
Termination Width (P)	0.10 ~ 0.20					0.2±0.1					0.12 ~ 0.51					0.25 ~ 0.71					0.25 ~ 0.71				
Capacitance	Working Voltage (Vdc)																								
	4	10	6.3	10	16	25	50	10	16	25	50	6.3	10	16	25	50	100	6.3	10	16	25	50	100		
0.01µF				12.5%	9%	7%	7%	12.5%	7%	5%	5%	16%	12.5%	9%	5%	5%	5%	16%	12.5%	9%	5%	5%	5%		
0.015µF				12.5%	9%	7%	7%	12.5%	7%	5%	5%	16%	12.5%	9%	5%	5%	5%	16%	12.5%	9%	5%	5%	5%		
0.022µF	16%	12.5%	16%	12.5%	9%	7%	7%	12.5%	7%	5%	5%	16%	12.5%	9%	5%	5%	5%	16%	12.5%	9%	5%	5%	5%		
0.027µF	16%	12.5%	16%	12.5%	9%	7%	7%	12.5%	7%	5%	5%	16%	12.5%	9%	5%	5%	5%	16%	12.5%	9%	5%	5%	5%		
0.033µF	16%	12.5%	16%	12.5%	9%	7%	7%	12.5%	7%	5%	5%	16%	12.5%	9%	5%	5%	5%	16%	12.5%	9%	5%	5%	5%		
0.036µF	16%	12.5%	16%	12.5%	9%	7%		12.5%	7%	5%	5%	16%	12.5%	9%	5%	5%	5%	16%	12.5%	9%	5%	5%	5%		
0.039µF	16%	12.5%	16%	12.5%	9%	7%		12.5%	7%	5%	5%	16%	12.5%	9%	5%	5%	5%	16%	12.5%	9%	5%	5%	5%		
0.047µF	16%	12.5%	16%	12.5%	9%	7%		12.5%	7%	5%	5%	16%	12.5%	9%	5%	5%	5%	16%	12.5%	9%	5%	5%	5%		
0.056µF	16%		16%	12.5%	9%			12.5%	7%	5%	5%	16%	12.5%	9%	5%	5%	5%	16%	12.5%	9%	5%	5%	5%		
0.068µF	16%		16%	12.5%	9%			12.5%	7%	5%	5%	16%	12.5%	9%	5%	5%	5%	16%	12.5%	9%	5%	5%	5%		
0.075µF	16%		16%	12.5%	9%			12.5%	7%	5%	5%	16%	12.5%	9%	5%	5%	5%	16%	12.5%	9%	5%	5%	5%		
0.082µF	16%		16%	12.5%	9%			12.5%	7%	5%	5%	16%	12.5%	9%	5%	5%	5%	16%	12.5%	9%	5%	5%	5%		
0.1µF			16%	12.5%	9%			12.5%	7%	7%	7%	16%	12.5%	9%	5%	5%	5%	16%	12.5%	9%	5%	5%	5%		
0.15µF			16%	12.5%				12.5%	9%	9%	9%	16%	12.5%	9%	5%	5%		16%	12.5%	9%	5%	5%	5%		
0.18µF			16%	12.5%				12.5%	9%	9%	9%	16%	12.5%	9%	5%	5%		16%	12.5%	9%	5%	5%	5%		
0.22µF			16%	12.5%				12.5%	9%	9%	9%	16%	12.5%	9%	5%	5%		16%	12.5%	9%	5%	5%	5%		
0.27µF			16%	12.5%				12.5%	12.5%	9%		16%	12.5%	9%	5%	5%		16%	12.5%	9%	5%	5%			
0.33µF			16%	12.5%				12.5%	12.5%	9%		16%	12.5%	9%	7%	7%		16%	12.5%	9%	5%	5%			
0.36µF			16%	12.5%				12.5%	12.5%	9%		16%	12.5%	9%	9%			16%	12.5%	9%	5%	5%			
0.39µF			16%	12.5%				12.5%	12.5%	9%		16%	12.5%	9%	9%			16%	12.5%	9%	5%	5%			
0.47µF			16%	12.5%				12.5%	12.5%	9%		16%	12.5%	9%	9%			16%	12.5%	9%	5%	5%			
0.56µF			16%					12.5%	12.5%	9%		16%	12.5%	9%	9%			16%	12.5%	9%	5%	5%			
0.68µF			16%					12.5%	12.5%	9%		16%	12.5%	9%	9%*			16%	12.5%	9%	5%	5%			
0.82µF			16%					12.5%	12.5%	9%		16%	12.5%	9%	9%*			16%	12.5%	9%	5%	5%			

\*1.35mm maximum thickness

(CONSULT FACTORY FOR CAPACITANCE VALUES NOT LISTED)



See NMC high CV series for values above 0.82µF