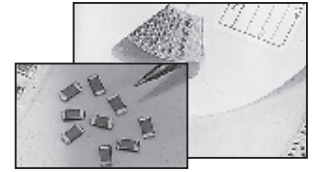


FEATURES

- CLASS I DIELECTRIC, TEMPERATURE COMPENSATING
- HIGH STABILITY OVER TIME, VOLTAGE AND TEMPERATURE CHANGES
- LOW DIELECTRIC LOSS
- NICKEL BARRIER TERMINATIONS AND EXCELLENT MECHANICAL STRENGTH

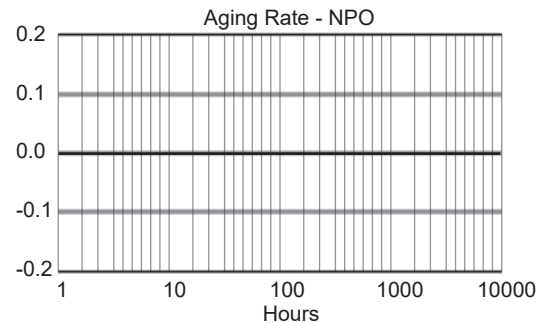
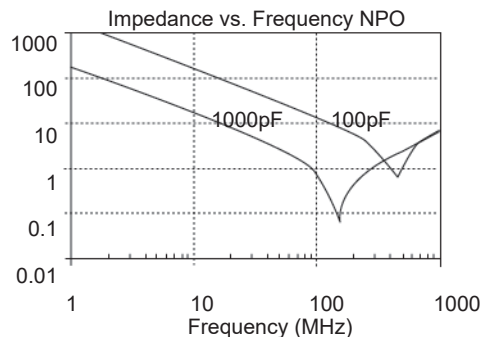
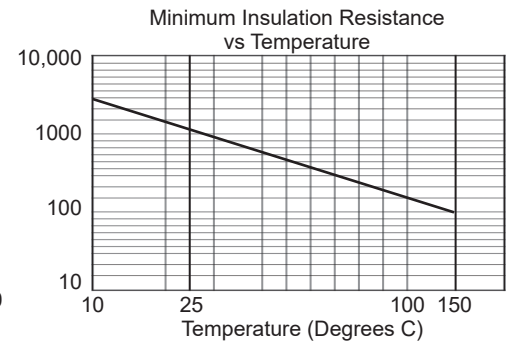
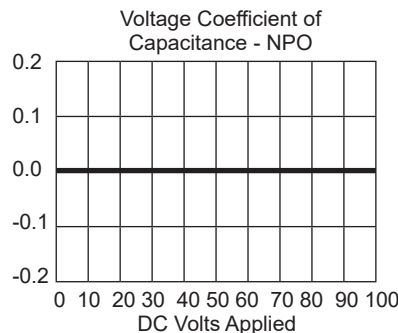
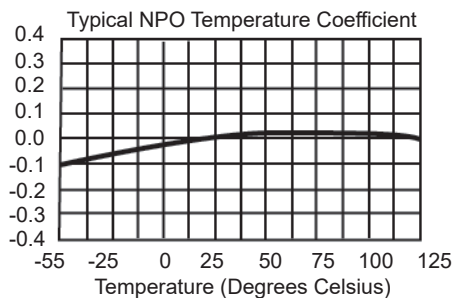
**Expanded
Value Range
Up to 0.1 μ F**



SPECIFICATIONS

Capacitance Range	0.3pF to 0.1 μ F
Capacitance Tolerance	<5pF: ± 0.1 pF(B), ± 0.25 pF(C) ≥ 5 pF to <10pF: ± 0.1 pF(B), ± 0.25 pF(C), ± 0.5 pF(D) 10pF and above: $\pm 1\%$ (F), $\pm 2\%$ (G), $\pm 5\%$ (J)
Operating Temperature Range	-55°C ~ +125°C
Temperature Characteristics	0 $\pm$ 30ppm/°C
Rated Voltages	10Vdc, 16Vdc, 25Vdc, 35Vdc, 50Vdc, 100Vdc (see NMC-H Series for higher voltages)
Dissipation Factor	For values > 30 pF 0.1% @ 25°C; For values ≤ 30 pF Q=400+20 x C (C in pF)
Insulation Resistance	10,000Megohms min. or 500Megohm/ μ F (min.), whichever is less @ +25°C
Dielectric Withstanding Voltage	250% of Rated Voltage for 1 ~ 5 seconds, 50mA maximum current
Test Conditions (EIA-198-2E)	≤ 1000 pF; 1MHz, 1.2Vrms max. or > 1000 pF; 1KHz, 1.2Vrms max.

Note: Reflow soldering allowed for all case sizes. Contact NIC for wave soldering restrictions.



PART NUMBER SYSTEM

NMC 0805 NPO 101 J 50 TRP or TRPLP 3K E

- NMC: Series
- 0805: Size Code (see chart)
- NPO: Temperature Characteristic
- 101: Capacitance Code, expressed in pF, first 2 digits are significant, 3rd digit is no. of zeros, "R" indicates decimal for under 10pF
- J: Capacitance Tolerance Code (see chart)
- 50: Voltage (Vdc)
- TRP or TRPLP: Tape & Reel (Punched carrier)
- 3K: Tape & Reel (Embossed Plastic Carrier)
- E: RoHS Compliant

"3K" denotes optional reel quantity or "4" denotes optional 4mm carrier width (01005 case size only)



Multilayer Ceramic Chip Capacitors

NMC Series NPO

EIA Case Size		01005	EIA Case Size		0201	0402	0603	0805												
Length (L)		0.4±0.02	Length (L)		0.6±0.03	1.0±0.05	1.6±0.15	2.0±0.2												
Width (W)		0.2±0.02	Width (W)		0.3±0.03	0.5±0.05	0.8±0.15	1.25±0.2												
Thickness max. (T)		0.22	Thickness max. (T)		0.33	0.6	1.0	1.35												
Termination Width (P)		0.10 +0.04/-0.03	Termination Width (P)		0.15±0.05	0.2±0.1	0.12 ~ 0.51	0.25 ~ 0.71												
Capacitance	Working Voltage (Vdc)																			
	16	Capacitance		Working Voltage (Vdc)																
		10	16	25	50	16	25	50	100	16	25	50	100	16	25	50	100			
0.5pF																				
0.6pF																				
0.7pF																				
0.8pF																				
0.9pF																				
1.0pF																				
1.1pF																				
1.2pF																				
1.3pF																				
1.5pF																				
1.6pF																				
1.8pF																				
2.0pF																				
2.2pF																				
2.4pF																				
2.5pF																				
2.7pF																				
3.0pF																				
3.3pF																				
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4.0pF																				
4.7pF																				
5.0pF																				
5.6pF																				
6.0pF																				
6.2pF																				
6.8pF																				
7.0pF																				
7.5pF																				
8.0pF																				
8.2pF																				
9.0pF																				
9.1pF																				
10pF																				
12pF																				
15pF																				
18pF																				
22pF																				
27pF																				
33pF																				
39pF																				
47pF																				
56pF																				
68pF																				
82pF																				
100pF																				
Highlighted values available on 4mm carrier, 40K pieces per reel.																				
(CONSULT FACTORY FOR CAPACITANCE VALUES NOT LISTED)		Capacitance		Working Voltage (Vdc)																
				10	16	25	50	16	25	50	100	16	25	50	100	16	25	50	100	
		0.3pF & 0.4pF																		
		0.47pF ~ 22pF																		
		24pF																		
		27pF																		
		30pF																		
		33pF																		
		36pF																		
		39pF																		
		43pF																		
		47pF																		
51pF																				
56pF																				
62pF																				
68pF																				
75pF																				
82pF																				
91pF																				
100pF																				
110pF																				
120pF																				
130pF																				
150pF																				
160pF																				
180pF																				
200pF																				
220pF																				
240pF																				
270pF																				
300pF																				
330pF																				
360pF																				
390pF																				
430pF																				
470pF																				
510pF																				
560pF																				
620pF																				
680pF																				
750pF																				
820pF																				
910pF																				
0.001μF																				
0.0012μF																				
0.0015μF																				
0.0018μF																				
0.0022μF																				
0.0027μF																		*		
0.0033μF																		*		
0.0039μF																*	*	*		
0.0047μF																*	*			
0.0056μF																*	*			
0.0068μF																*	*	*		
0.0082μF																*	*	*		
0.01μF															*	*	*	*		

Highlighted values available on 4mm carrier, 40K pieces per reel.

(CONSULT FACTORY
FOR CAPACITANCE
VALUES NOT LISTED)

*1.45mm maximum thickness



NIC COMPONENTS CORP.

www.niccomp.com

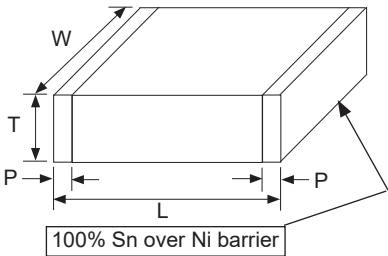
SPECIFICATIONS ARE SUBJECT TO CHANGE

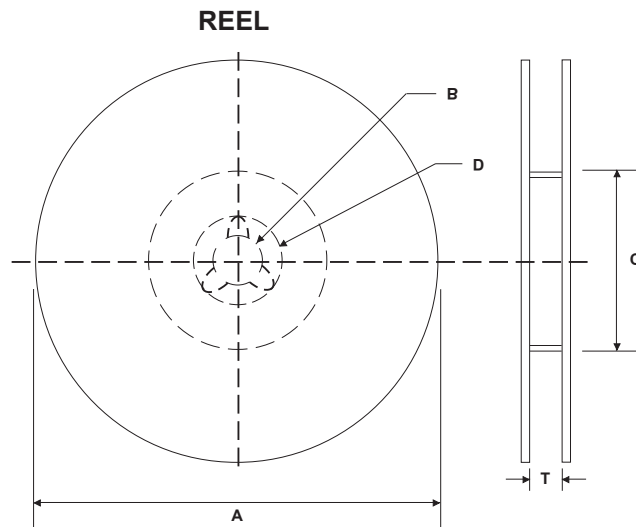
EIA Case Size	0805				1206				1210				1812				2225			
Length (L)	2.0±0.2				3.2±0.2				3.2±0.2				4.5±0.3				5.70±0.4			
Width (W)	1.25±0.2				1.6±0.2				2.5±0.2				3.2±0.25				6.35±0.25			
Thickness max. (T)	1.45				1.80				1.80				1.80				1.80			
Termination Width (P)	0.25 ~ 0.71				0.25 ~ 0.71				0.25 ~ 0.71				0.25 ~ 0.76				0.25 ~ 1.02			
Capacitance	Working Voltage (Vdc)																			
	16	25	50	100	10	16	25	50	100	10	16	25	50	100	25	50	100	50	100	
0.47pF ~ 9.1pF	See the previous page																			
10pF ~ 22pF																				
24pF ~ 0.001μF																				
0.0012μF																				
0.0015μF																				
0.0018μF																				
0.0022μF																				
0.0027μF																				
0.0033μF																				
0.0039μF																				
0.0047μF																				
0.0056μF																				
0.0068μF																				
0.0075μF																				
0.0082μF																				
0.0091μF																				
0.01μF																				
0.012μF																				
0.015μF																				
0.018μF																				
0.022μF																		**		
0.027μF																		**		
0.033μF																		**		
0.039μF																		**		
0.047μF																				
0.056μF																				
0.068μF																				
0.082μF																				
0.1μF															***					

Temporarily
Unavailable

*1.90mm maximum thickness, **2.60mm maximum thickness,
***4.5mm ± 0.40 x 3.2mm ± 0.40 x 2.80mm maximum thickness

See NMC High Capacitance datasheet for higher capacitance values
or NMC-H High Voltage datasheet for higher voltage ratings





REEL DIMENSIONS (mm)

Reel Diameter (A)	B	C	D	T max.
7" (178 ± 2.0)	13.0 ± 0.5	50 min.	21.0 ± 1.0	4mm Carrier: 5.0 ± 1.5
10" (250 ± 2.0)		100 ± 1.0		8mm Carrier: 8.4 ± 1.0
13" (330 ± 2.0)		100 ± 1.0		12mm Carrier: 12.8 ± 0.5

CARRIER TAPE MATERIAL

Parts with a thickness of $\geq 1\text{mm}$ will be taped on embossed plastic carrier. Parts with a thickness of less than 1mm will be taped on paper carrier

7 INCH REEL QUANTITIES*

Size	01005		0201	0402	0603	0805	1206	1210	1812	2225
Tape Size	4mm	8mm	8mm	8mm	8mm	8mm	8mm	8mm	12mm	12mm
Min. Qty Per Reel	40,000	20,000	15,000	10,000	4,000	4,000	4,000	2,000	1,000	400
Max. Qty Per Reel	40,000	20,000	15,000	10,000	4,000	5,000	5,000	5,000	2,000	1,000

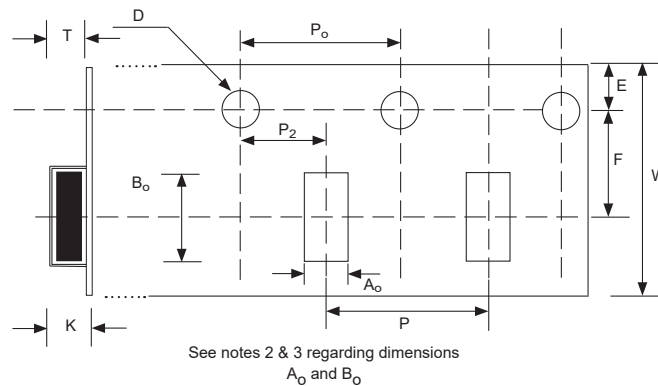
*Quantity dependent on chip thickness. Contact NIC for reel quantities on larger diameter reels.

8MM & 12MM EMBOSSED PLASTIC CARRIER TAPE DIMENSIONS (mm)

Carrier Width	W	F	E	P ₀	P ₂	D	K max.	T max.	P
8mm	8.0 ± 0.2	3.5 ± 0.05	1.75 ± 0.10	4.0 ± 0.1	2.0 ± 0.5	1.5 ^{+0.1} _{-0.0}	3.0	2.0	4.0 ± 0.1
12mm	12 ± 0.2	5.5 ± 0.05						4.5	8.0 ± 0.1

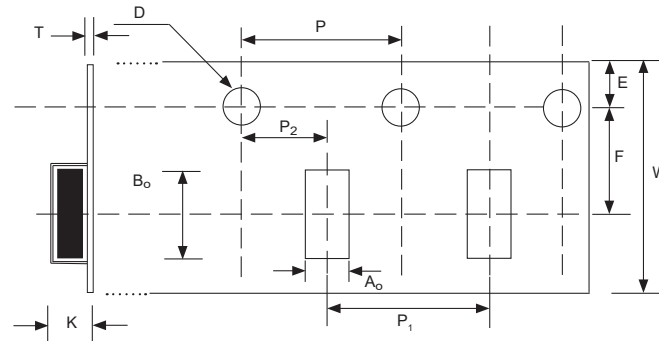
Notes:

1. Specifications are in compliance with EIA RS481-1-A
"Taping of surface Mount Components for Automatic Placement"
2. Dimensions A_0 (max.) equals component width dimension plus 0.5mm
3. Dimension B_0 (max.) equals component length dimension plus 0.5mm



4MM (01005 CASE SIZE) EMBOSSED PLASTIC CARRIER TAPE DIMENSIONS (mm)

Carrier Width	A ₀	B ₀	W	F	E	P	P ₁	P ₂	D	K max.	T max.
4mm	0.23 ± 0.02	0.43 ± 0.02	4.0 ± 0.05	1.8 ± 0.02	0.90 ± 0.05	2.0 ± 0.04	1.0 ± 0.02	1.0 ± 0.02	1.5 ^{+0.1} _{-0.0}	0.50	0.15 ~ 0.40



PUNCHED CARRIER TAPE DIMENSIONS (mm)

Type	A ₀	B ₀	W	F	E	P1	P0	D0	T1 max.	T2 max.	Mounting Hole			
01005	0.25 ± 0.04	0.45 ± 0.04	8.0 ± 0.3	3.5 ± 0.05	1.75 ± 0.1	2.0 ± 0.05	4.0 ± 0.1	1.5 +0.1/-0.0	0.27	0.36	Angular Punch Hole			
0201	0.37 ± 0.03	0.67 ± 0.05							0.45	0.80				
0402	0.65 ± 0.05	1.15 ± 0.05				4.0 ± 0.10			1.1	1.4				
0603	1.1 ± 0.2	1.9 ± 0.2												
0805	1.65 ± 0.2	2.4 ± 0.2												
1206	2.0 ± 0.2	3.6 ± 0.2												

PUNCHED CARRIER TAPE

