

**FEATURES**

- **SOFT TERMINATIONS & AEC-Q200 QUALIFIED**
- MANUFACTURED AT ISO/TS 16949 PRODUCTION FACILITY
- SURFACE MOUNT CASE SIZES 0603, 0805, 1206 & 1210
- X7R DIELECTRIC
- VOLTAGE RATINGS TO 250VDC

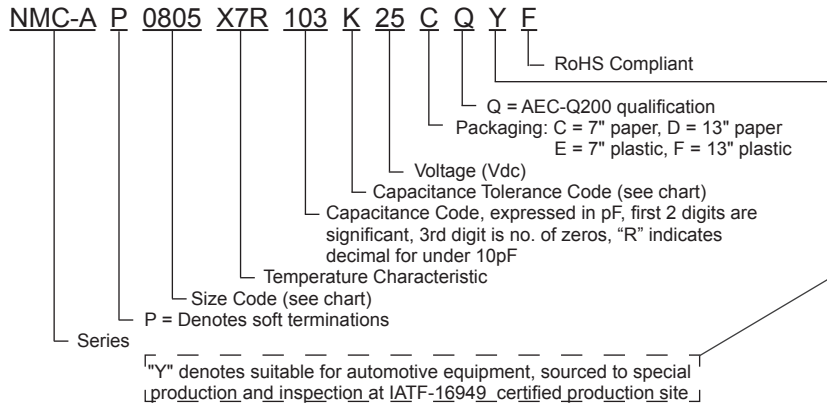


**SPECIFICATIONS**

Type	X7R (Class II)
Capacitance Range	1000pF ~ 4.7µF
Capacitance Tolerance	J (±5%), ±10% (K), ±20% (M)
Operating Temperature Range	-55°C ~ +125°C
Temperature Characteristics	±15%
Rated Voltages (VDC)	6.3, 10, 16, 25, 50, 100 & 250
Dissipation Factor (DF)	See Part Numbers & Specifications Table
Insulation Resistance @ 25°C @ ≤ Rated Voltage for 60 Sec.	
Dielectric Withstanding Voltage	
Test Conditions	
	1KHz, 1.0V ±0.2Vrms

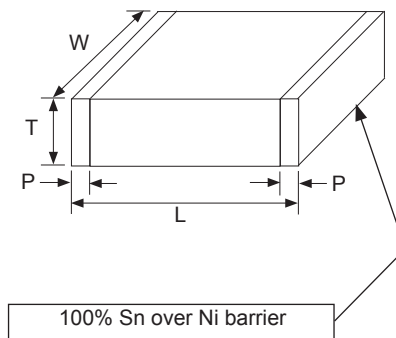
Note: Reflow soldering allowed for all case sizes. Contact NIC for wave soldering restrictions.

**PART NUMBER SYSTEM**



**CASE SIZE DIMENSIONS (mm)**

EIA Case Size	0603	0805	1206	1210
Length (L)	1.6 ± 0.20	2.0 ± 0.30	3.2 ± 0.40	3.2 ± 0.50
Width (W)	0.80 ± 0.15	1.25 ± 0.20	1.6 ± 0.20	2.5 ± 0.30
Thickness max. (T)	See Specifications Table			
Termination Width (P)	0.20 ~ 0.65	0.25 ~ 0.75	0.25 ~ 0.85	0.25 ~ 1.00





**Automotive Electronics Council**  
Component Technical Committee

**AEC-Q200 - STRESS TEST QUALIFICATION FOR PASSIVE COMPONENTS**

GRADE: 1

TEMPERATURE RANGE: -40°C ~ +125°C

PASSIVE COMPONENT TYPE: Capacitors, Ceramic Type (MLCCs)

ITEM	TEST	TEST CONDITIONS
1	High Temperature Exposure	AEC-Q200-3 150°C, 1,000Hr
2	Temperature Cycling	AEC-Q200-4 Min temp. → 25°C → Max temp., 1,000 cycle
3	Destructive Physical Analysis	AEC-Q200-5 Electrical Test not required
4	Moisture Resistance	AEC-Q200-6 25~65°C, 90%RH, 10 cycle
5	Biased Humidity	AEC-Q200-7 85°C, 85%RH, Vr, 1,000Hr
6	High Temperature Operating Life	AEC-Q200-8 Max temp, Vr for 1,000Hr
7	External Visual	AEC-Q200-9 All qualification parts submitted
8	Physical Dimensions	AEC-Q200-10 Vernier Calipers
9	Mechanical Shock	AEC-Q200-13 1,500G, 15.4ft/s, Half Sine, Total 18 times
10	Vibration	AEC-Q200-14 10~2,000Hz, 5G's for 20min, Total 36 cycles
11	Resistance to Solder Heat	AEC-Q200-15 260°C, 10sec
12	Thermal Shock	AEC-Q200-16 Min temp (15min)→Max temp (15min), air to air, 300 cycle
13	ESD	AEC-Q200-17 HMB > 4kV
14	Solderability	AEC-Q200-18 +245°C, 5 sec
15	Electrical Characterization	AEC-Q200-19 Normal Temperature +20°C
16	Board Flex	AEC-Q200-21 Deflection Point = 5mm, 1mm/sec, 5 sec.
17	Terminal Strength	AEC-Q200-22 17.7N, for 60±1 sec.
18	Beam Load	AEC-Q200-23 0805 size = 20N 1206 size thickness <1.25mm = 15N 1206 size thickness ≥1.25mm = 54N 1210 size = 54N

**NMC-AP Series**  
Surface Mount Ceramic Capacitors



**X7R PART NUMBERS AND SPECIFICATIONS**

Part Number	Case Size	Voltage (Vdc)	Cap. (µF)	Cap. Tol.	DF (%)	IR (GΩ)	DWV (Vdc)	Max. T (mm)
NMC-AP0603X7R102K16CQYF	0603	16	1000	10	3.50	10	40	0.95
NMC-AP0603X7R152K16CQYF	0603	16	1500	10	3.50	10	40	0.95
NMC-AP0603X7R222K16CQYF	0603	16	2200	10	3.50	10	40	0.95
NMC-AP0603X7R332K16CQYF	0603	16	3300	10	3.50	10	40	0.95
NMC-AP0603X7R472K16CQYF	0603	16	4700	10	3.50	10	40	0.95
NMC-AP0603X7R682K16CQYF	0603	16	6800	10	3.50	10	40	0.95
NMC-AP0603X7R103K16CQYF	0603	16	10000	10	3.50	10	40	0.95
NMC-AP0603X7R153K16CQYF	0603	16	15000	10	3.50	10	40	0.95
NMC-AP0603X7R223K16CQYF	0603	16	22000	10	3.50	10	40	0.95
NMC-AP0603X7R333K16CQYF	0603	16	33000	10	3.50	10	40	0.95
NMC-AP0603X7R473K16CQYF	0603	16	47000	10	3.50	10	40	0.95
NMC-AP0603X7R683K16CQYF	0603	16	68000	10	3.50	7.35	40	0.95
NMC-AP0603X7R104K16CQYF	0603	16	100000	10	3.50	5.0	40	0.95
NMC-AP0603X7R154K16CQYF	0603	16	150000	10	5.00	3.33	40	0.95
NMC-AP0603X7R224K16CQYF	0603	16	220000	10	5.00	2.27	40	0.95
NMC-AP0603X7R102K25CQYF	0603	25	1000	10	2.50	10	62.5	0.95
NMC-AP0603X7R152K25CQYF	0603	25	1500	10	2.50	10	62.5	0.95
NMC-AP0603X7R222K25CQYF	0603	25	2200	10	2.50	10	62.5	0.95
NMC-AP0603X7R332K25CQYF	0603	25	3300	10	2.50	10	62.5	0.95
NMC-AP0603X7R472K25CQYF	0603	25	4700	10	2.50	10	62.5	0.95
NMC-AP0603X7R682K25CQYF	0603	25	6800	10	2.50	10	62.5	0.95
NMC-AP0603X7R103K25CQYF	0603	25	10000	10	2.50	10	62.5	0.95
NMC-AP0603X7R153K25CQYF	0603	25	15000	10	2.50	10	62.5	0.95
NMC-AP0603X7R223K25CQYF	0603	25	22000	10	2.50	10	62.5	0.95
NMC-AP0603X7R333K25CQYF	0603	25	33000	10	2.50	10	62.5	0.95
NMC-AP0603X7R473K25CQYF	0603	25	47000	10	3.50	10	62.5	0.95
NMC-AP0603X7R563K25CQYF	0603	25	56000	10	3.50	8.92	62.5	0.95
NMC-AP0603X7R683K25CQYF	0603	25	68000	10	3.50	7.35	62.5	0.95
NMC-AP0603X7R823K25CQYF	0603	25	82000	10	3.50	6.09	62.5	0.95
NMC-AP0603X7R104K25CQYF	0603	25	100000	10	3.50	5.0	62.5	0.95
NMC-AP0603X7R154K25CQYF	0603	25	150000	10	3.50	3.33	62.5	0.95
NMC-AP0603X7R224K25CQYF	0603	25	220000	10	3.50	2.27	62.5	0.95
NMC-AP0603X7R102K50CQYF	0603	50	1000	10	2.50	10	125	0.95
NMC-AP0603X7R152K50CQYF	0603	50	1500	10	2.50	10	125	0.95
NMC-AP0603X7R222K50CQYF	0603	50	2200	10	2.50	10	125	0.95
NMC-AP0603X7R332K50CQYF	0603	50	3300	10	2.50	10	125	0.95
NMC-AP0603X7R472K50CQYF	0603	50	4700	10	2.50	10	125	0.95
NMC-AP0603X7R682K50CQYF	0603	50	6800	10	2.50	10	125	0.95
NMC-AP0603X7R103K50CQYF	0603	50	10000	10	2.50	10	125	0.95
NMC-AP0603X7R153K50CQYF	0603	50	15000	10	2.50	10	125	0.95
NMC-AP0603X7R223K50CQYF	0603	50	22000	10	2.50	10	125	0.95
NMC-AP0603X7R333K50CQYF	0603	50	33000	10	2.50	10	125	0.95
NMC-AP0603X7R473K50CQYF	0603	50	47000	10	3.50	10	125	0.95
NMC-AP0603X7R683K50CQYF	0603	50	68000	10	3.50	7.35	125	0.95
NMC-AP0603X7R104K50CQYF	0603	50	100000	10	3.50	5.0	125	0.95

(CONSULT FACTORY VALUES CONTINUE ON NEXT PAGE FOR CAPACITANCE VALUES NOT LISTED)

**Performance Passives By Design**

NIC Components Corp.  
100 Baylis Road. Melville, NY 11747

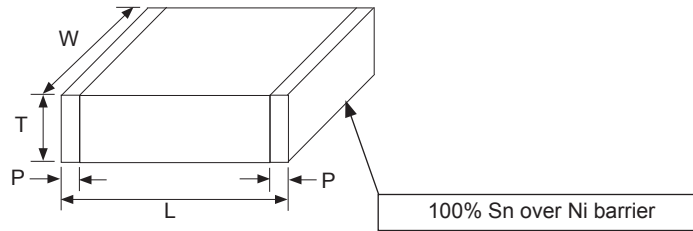


**X7R PART NUMBERS AND SPECIFICATIONS**

Part Number	Case Size	Voltage (Vdc)	Cap. (μF)	Cap. Tol.	DF (%)	IR (GΩ)	DWV (Vdc)	Max. T (mm)
NMC-AP0603X7R102K100CQYF	0603	100	1000	10	2.50	10	250	0.95
NMC-AP0603X7R152K100CQYF	0603	100	1500	10	2.50	10	250	0.95
NMC-AP0603X7R222K100CQYF	0603	100	2200	10	2.50	10	250	0.95
NMC-AP0603X7R332K100CQYF	0603	100	3300	10	2.50	10	250	0.95
NMC-AP0603X7R472K100CQYF	0603	100	4700	10	2.50	10	250	0.95
NMC-AP0603X7R682K100CQYF	0603	100	6800	10	2.50	10	250	0.95
NMC-AP0603X7R103K100CQYF	0603	100	10000	10	2.50	10	250	0.95
NMC-AP0603X7R153K100CQYF	0603	100	15000	10	5.00	10	250	0.95
NMC-AP0603X7R223K100CQYF	0603	100	22000	10	5.00	10	250	0.95
NMC-AP0603X7R333K100CQYF	0603	100	33000	10	5.00	10	250	0.95
NMC-AP0603X7R473K100CQYF	0603	100	47000	10	5.00	10	250	0.95

(CONSULT FACTORY FOR CAPACITANCE VALUES NOT LISTED)

VALUES CONTINUE ON NEXT PAGE



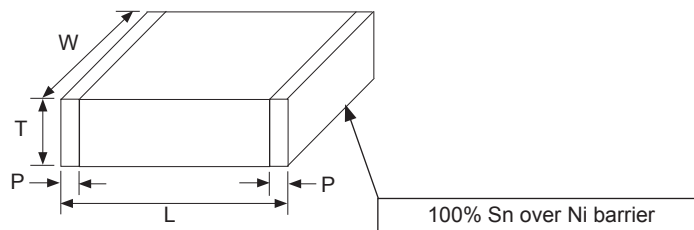


**X7R PART NUMBERS AND SPECIFICATIONS**

Part Number	Case Size	Voltage (Vdc)	Cap. (µF)	Cap. Tol.	DF (%)	IR (GΩ)	DWV (Vdc)	Max. T (mm)
NMC-AP0805X7R102K10CQYF	0805	10	0.001	10	5.00	10	25	1.00
NMC-AP0805X7R152K10CQYF	0805	10	0.0015	10	5.00	10	25	1.00
NMC-AP0805X7R222K10CQYF	0805	10	0.0022	10	5.00	10	25	1.00
NMC-AP0805X7R332K10CQYF	0805	10	0.0033	10	5.00	10	25	1.00
NMC-AP0805X7R472K10CQYF	0805	10	0.0047	10	5.00	10	25	1.00
NMC-AP0805X7R682K10CQYF	0805	10	0.0068	10	5.00	10	25	1.00
NMC-AP0805X7R103K10CQYF	0805	10	0.01	10	5.00	10	25	1.00
NMC-AP0805X7R153K10CQYF	0805	10	0.015	10	5.00	10	25	1.00
NMC-AP0805X7R223K10CQYF	0805	10	0.022	10	5.00	10	25	1.00
NMC-AP0805X7R333K10CQYF	0805	10	0.033	10	5.00	10	25	1.00
NMC-AP0805X7R473K10CQYF	0805	10	0.047	10	5.00	10	25	1.00
NMC-AP0805X7R683K10CQYF	0805	10	0.068	10	5.00	7.35	25	1.00
NMC-AP0805X7R104K10CQYF	0805	10	0.1	10	5.00	5.0	25	1.00
NMC-AP0805X7R102K16CQYF	0805	16	0.001	10	3.50	10	40	1.00
NMC-AP0805X7R152K16CQYF	0805	16	0.0015	10	3.50	10	40	1.00
NMC-AP0805X7R222K16CQYF	0805	16	0.0022	10	3.50	10	40	1.00
NMC-AP0805X7R332K16CQYF	0805	16	0.0033	10	3.50	10	40	1.00
NMC-AP0805X7R472K16CQYF	0805	16	0.0047	10	3.50	10	40	1.00
NMC-AP0805X7R682K16CQYF	0805	16	0.0068	10	3.50	10	40	1.00
NMC-AP0805X7R103K16CQYF	0805	16	0.01	10	3.50	10	40	1.00
NMC-AP0805X7R153K16CQYF	0805	16	0.015	10	3.50	10	40	1.00
NMC-AP0805X7R223K16CQYF	0805	16	0.022	10	3.50	10	40	1.00
NMC-AP0805X7R333K16CQYF	0805	16	0.033	10	3.50	10	40	1.00
NMC-AP0805X7R473K16CQYF	0805	16	0.047	10	3.50	10	40	1.00
NMC-AP0805X7R683K16CQYF	0805	16	0.068	10	3.50	7.35	40	1.00
NMC-AP0805X7R104K16CQYF	0805	16	0.1	10	3.50	5.0	40	1.00
NMC-AP0805X7R102K25CQYF	0805	25	0.001	10	2.50	10	62.5	1.00
NMC-AP0805X7R152K25CQYF	0805	25	0.0015	10	2.50	10	62.5	1.00
NMC-AP0805X7R222K25CQYF	0805	25	0.0022	10	2.50	10	62.5	1.00
NMC-AP0805X7R332K25CQYF	0805	25	0.0033	10	2.50	10	62.5	1.00
NMC-AP0805X7R472K25CQYF	0805	25	0.0047	10	2.50	10	62.5	1.00
NMC-AP0805X7R682K25CQYF	0805	25	0.0068	10	2.50	10	62.5	1.00
NMC-AP0805X7R103K25CQYF	0805	25	0.01	10	2.50	10	62.5	1.00
NMC-AP0805X7R153K25CQYF	0805	25	0.015	10	2.50	10	62.5	1.00
NMC-AP0805X7R223K25CQYF	0805	25	0.022	10	2.50	10	62.5	1.00
NMC-AP0805X7R333K25CQYF	0805	25	0.033	10	2.50	10	62.5	1.00
NMC-AP0805X7R473K25CQYF	0805	25	0.047	10	2.50	10	62.5	1.00
NMC-AP0805X7R683K25CQYF	0805	25	0.068	10	2.50	7.35	62.5	1.00
NMC-AP0805X7R104K25CQYF	0805	25	0.1	10	2.50	5.0	62.5	1.00

(CONSULT FACTORY FOR CAPACITANCE VALUES NOT LISTED)

VALUES CONTINUE ON NEXT PAGE



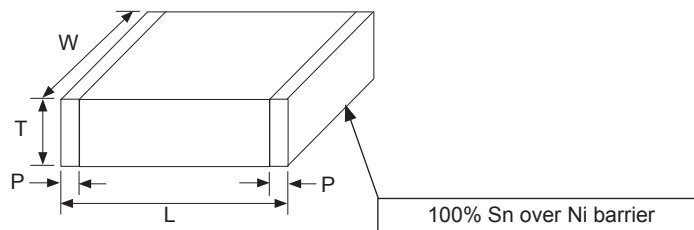


**X7R PART NUMBERS AND SPECIFICATIONS**

Part Number	Case Size	Voltage (Vdc)	Cap. (µF)	Cap. Tol.	DF (%)	IR (GΩ)	DWV (Vdc)	Max. T (mm)
NMC-AP0805X7R102K50CQYF	0805	50	0.001	10	2.50	10	125	1.00
NMC-AP0805X7R152K50CQYF	0805	50	0.0015	10	2.50	10	125	1.00
NMC-AP0805X7R222K50CQYF	0805	50	0.0022	10	2.50	10	125	1.00
NMC-AP0805X7R332K50CQYF	0805	50	0.0033	10	2.50	10	125	1.00
NMC-AP0805X7R472K50CQYF	0805	50	0.0047	10	2.50	10	125	1.00
NMC-AP0805X7R682K50CQYF	0805	50	0.0068	10	2.50	10	125	1.00
NMC-AP0805X7R103K50CQYF	0805	50	0.01	10	2.50	10	125	1.00
NMC-AP0805X7R153K50CQYF	0805	50	0.015	10	2.50	10	125	1.00
NMC-AP0805X7R223K50CQYF	0805	50	0.022	10	2.50	10	125	1.00
NMC-AP0805X7R333K50CQYF	0805	50	0.033	10	2.50	10	125	1.00
NMC-AP0805X7R473K50CQYF	0805	50	0.047	10	2.50	10	125	1.00
NMC-AP0805X7R683K50EQYF	0805	50	0.068	10	2.50	7.35	125	1.45
NMC-AP0805X7R104K50EQYF	0805	50	0.1	10	2.50	5.0	125	1.45
NMC-AP0805X7R102K100CQYF	0805	100	0.001	10	2.50	10	250	1.00
NMC-AP0805X7R152K100CQYF	0805	100	0.0015	10	2.50	10	250	1.00
NMC-AP0805X7R222K100CQYF	0805	100	0.0022	10	2.50	10	250	1.00
NMC-AP0805X7R332K100CQYF	0805	100	0.0033	10	2.50	10	250	1.00
NMC-AP0805X7R472K100CQYF	0805	100	0.0047	10	2.50	10	250	1.00
NMC-AP0805X7R682K100CQYF	0805	100	0.0068	10	2.50	10	250	1.00
NMC-AP0805X7R103K100CQYF	0805	100	0.01	10	2.50	10	250	1.00
NMC-AP0805X7R153K100CQYF	0805	100	0.015	10	2.50	10	250	1.00
NMC-AP0805X7R223K100CQYF	0805	100	0.022	10	2.50	10	250	1.00
NMC-AP0805X7R333K100CQYF	0805	100	0.033	10	2.50	10	250	1.00
NMC-AP0805X7R473K100CQYF	0805	100	0.047	10	2.50	10	250	1.00
NMC-AP0805X7R683K100EQYF	0805	100	0.068	10	2.50	7.35	250	1.45
NMC-AP0805X7R104K100EQYF	0805	100	0.1	10	2.50	5.0	250	1.45
NMC-AP1206X7R223K6.3CQYF	1206	6.3	0.022	10	5.00	10	15.75	1.00
NMC-AP1206X7R333K6.3CQYF	1206	6.3	0.033	10	5.00	10	15.75	1.00
NMC-AP1206X7R473K6.3CQYF	1206	6.3	0.047	10	5.00	10	15.75	1.00
NMC-AP1206X7R683K6.3CQYF	1206	6.3	0.068	10	5.00	7.35	15.75	1.00
NMC-AP1206X7R104K6.3CQYF	1206	6.3	0.1	10	5.00	5.0	15.75	1.00
NMC-AP1206X7R154K6.3EQYF	1206	6.3	0.15	10	5.00	3.33	15.75	1.45
NMC-AP1206X7R224K6.3EQYF	1206	6.3	0.22	10	5.00	2.27	15.75	1.45
NMC-AP1206X7R223K10CQYF	1206	10	0.022	10	5.00	10	25	1.00
NMC-AP1206X7R333K10CQYF	1206	10	0.033	10	5.00	10	25	1.00
NMC-AP1206X7R473K10CQYF	1206	10	0.047	10	5.00	10	25	1.00
NMC-AP1206X7R683K10CQYF	1206	10	0.068	10	5.00	7.35	25	1.00
NMC-AP1206X7R104K10CQYF	1206	10	0.1	10	5.00	5.0	25	1.00
NMC-AP1206X7R154K10EQYF	1206	10	0.15	10	5.00	3.33	25	1.45

(CONSULT FACTORY FOR CAPACITANCE VALUES NOT LISTED)

VALUES CONTINUE ON NEXT PAGE

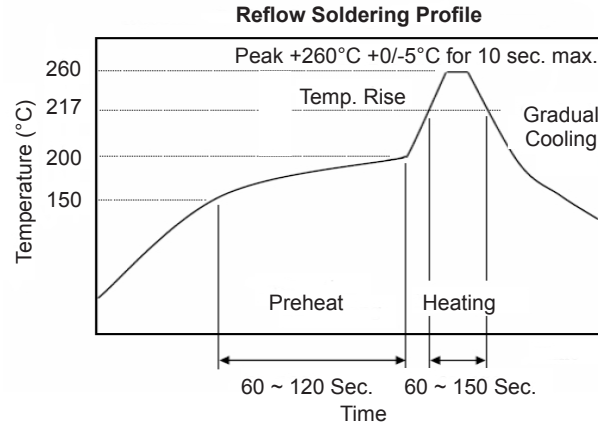




**X7R PART NUMBERS AND SPECIFICATIONS**

Part Number	Case Size	Voltage (Vdc)	Cap. (µF)	Cap. Tol.	DF (%)	IR (GΩ)	DWV (Vdc)	Max. T (mm)
NMC-AP1206X7R224K10EQYF	1206	10	0.22	10	5.00	2.27	25	1.45
NMC-AP1206X7R223K16CQYF	1206	16	0.022	10	3.50	10	40	1.00
NMC-AP1206X7R333K16CQYF	1206	16	0.033	10	3.50	10	40	1.00
NMC-AP1206X7R473K16CQYF	1206	16	0.047	10	3.50	10	40	1.00
NMC-AP1206X7R683K16CQYF	1206	16	0.068	10	3.50	7.35	40	1.00
NMC-AP1206X7R104K16CQYF	1206	16	0.1	10	3.50	5.0	40	1.00
NMC-AP1206X7R154K16EQYF	1206	16	0.15	10	3.50	3.33	40	1.45
NMC-AP1206X7R224K16EQYF	1206	16	0.22	10	3.50	2.27	40	1.45
NMC-AP1206X7R223K25CQYF	1206	25	0.022	10	2.50	10	62.5	1.00
NMC-AP1206X7R333K25CQYF	1206	25	0.033	10	2.50	10	62.5	1.00
NMC-AP1206X7R473K25CQYF	1206	25	0.047	10	2.50	10	62.5	1.00
NMC-AP1206X7R683K25CQYF	1206	25	0.068	10	2.50	7.35	62.5	1.00
NMC-AP1206X7R104K25CQYF	1206	25	0.1	10	2.50	5.0	62.5	1.00
NMC-AP1206X7R154K25CQYF	1206	25	0.15	10	2.50	3.33	62.5	1.45
NMC-AP1206X7R224K25CQYF	1206	25	0.22	10	2.50	2.27	62.5	1.45
NMC-AP1206X7R223K50CQYF	1206	50	0.022	10	2.50	10	125	1.00
NMC-AP1206X7R333K50CQYF	1206	50	0.033	10	2.50	10	125	1.00
NMC-AP1206X7R473K50CQYF	1206	50	0.047	10	2.50	10	125	1.00
NMC-AP1206X7R683K50CQYF	1206	50	0.068	10	2.50	7.35	125	1.00
NMC-AP1206X7R104K50CQYF	1206	50	0.1	10	2.50	5.0	125	1.00
NMC-AP1206X7R154K50CQYF	1206	50	0.15	10	2.50	3.33	125	1.45
NMC-AP1206X7R224K50CQYF	1206	50	0.22	10	2.50	2.27	125	1.45
NMC-AP1206X7R223K100CQYF	1206	100	0.022	10	2.50	10	250	1.00
NMC-AP1206X7R333K100CQYF	1206	100	0.033	10	2.50	10	250	1.00
NMC-AP1206X7R473K100CQYF	1206	100	0.047	10	2.50	10	250	1.00
NMC-AP1206X7R683K100EQYF	1206	100	0.068	10	2.50	7.35	250	1.45
NMC-AP1206X7R104K100EQYF	1206	100	0.1	10	2.50	5.0	250	1.45
NMC-AP1206X7R154K100EQYF	1206	100	0.15	10	2.50	3.33	250	1.45
NMC-AP1206X7R224K100EQYF	1206	100	0.22	10	2.50	2.27	250	1.45
NMC-AP1206X7R223K250EQYF	1206	250	0.022	10	2.50	10	425	1.45
NMC-AP1206X7R333K250EQYF	1206	250	0.033	10	2.50	10	425	1.45
NMC-AP1206X7R473K250EQYF	1206	250	0.047	10	2.50	10	425	1.45
NMC-AP1206X7R683K250EQYF	1206	250	0.068	10	2.50	7.35	425	1.45
NMC-AP1206X7R104K250EQYF	1206	250	0.1	10	2.50	5.0	425	1.80
NMC-AP1210X7R475K50EQYF	1210	50	4.7	10	5.00	0.1	125	2.80
NMC-AP1210X7R104K100EQYF	1210	100	0.1	10	2.50	5.0	250	2.80
NMC-AP1210X7R154K100EQYF	1210	100	0.15	10	2.50	3.33	250	2.80
NMC-AP1210X7R224K100EQYF	1210	100	0.22	10	2.50	2.27	250	2.80
NMC-AP1210X7R104K200EQYF	1210	200	0.1	10	2.50	5.0	300	2.80
NMC-AP1210X7R154K200EQYF	1210	200	0.15	10	2.50	3.33	300	2.80
NMC-AP1210X7R224K200EQYF	1210	200	0.22	10	2.50	2.27	300	2.80
NMC-AP1210X7R104K250EQYF	1210	250	0.1	10	2.50	5.0	325	2.80
NMC-AP1210X7R154K250EQYF	1210	250	0.15	10	2.50	3.33	325	2.80
NMC-AP1210X7R224K250EQYF	1210	250	0.22	10	2.50	2.27	325	2.80

(CONSULT FACTORY FOR CAPACITANCE VALUES NOT LISTED)



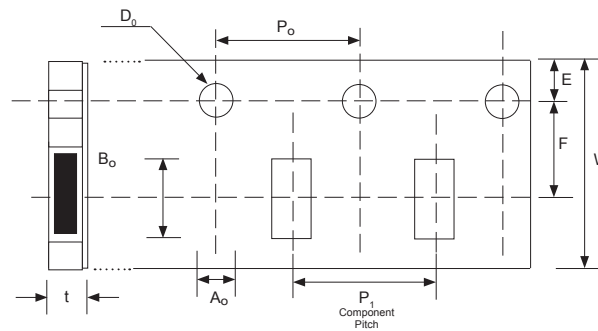
**REEL QUANTITIES & CARRIER TYPE**

Reel Size	0603	0805		1206		1210
	T < 1.0mm	T < 1.0mm	T > 1.0mm	T < 0.95mm	T ≥ 1.00mm	2.7mm max.
7"	4K Punch	4K Punch	3K Embossed	4K Punch	3K Embossed	1K Embossed
13"	15K Punch	15K Punch	10K Embossed	15K Punch	10K Embossed	n/a

**PUNCHED CARRIER TAPE DIMENSIONS (mm)**

Type	Thickness	A <sub>0</sub>	B <sub>0</sub>	W	F	E	P <sub>1</sub>	P <sub>0</sub>	D <sub>0</sub>	t max.
0603	≤1.0	0.95 ± 0.15	1.78 ± 0.15	8.0 ± 0.10	3.5 ± 0.05	1.75 ± 0.05	4.0 ± 0.10	4.0 ± 0.10	1.55 ± 0.05	1.10
0805		1.50 ± 0.20	2.30 ± 0.20							1.30
1206		1.90 ± 0.30	3.50 ± 0.50							1.30

**0603/0805/1206 CASE SIZE**

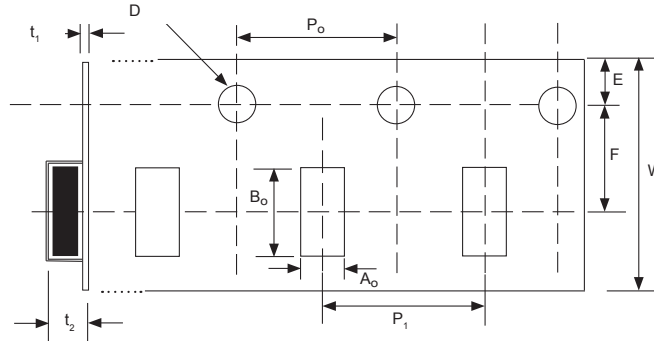




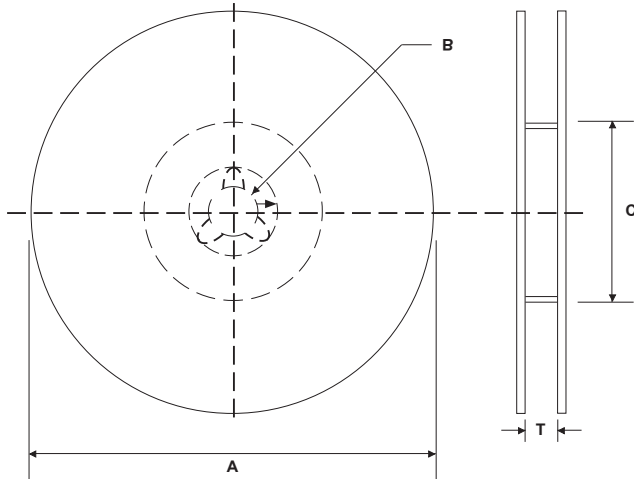
**EMBOSSED PLASTIC CARRIER TAPE DIMENSIONS (mm)**

Type	A <sub>0</sub>	B <sub>0</sub>	W	F	E	P1	P0	D0	t <sub>1</sub>	t <sub>2</sub>
0805	<1.80	<2.70	8.0 ± 0.30	3.5 ± 0.05	1.75 ± 0.10	4.0 ± 0.10	4.0 ± 0.10	1.50 +0.1/-0	0.23 ± 0.10	<2.50
1206	<2.30	<4.00								
1210	<3.05	<3.80								

**0805/1206/1210 CASE SIZE**



**REEL**



**REEL DIMENSIONS (mm)**

Reel Diameter (A)	B	C	T max.
7" (178 ± 0.1)	13.0 +0.5/-0.2	60.0 +1/-0	8.4 +1.5/-0
13" (330 ± 1.0)	13.0 +0.5/-0.2	100.0 ±1.0	8.4 +1.5/-0

**CARRIER TAPE MATERIAL**

Parts with a thickness of >1mm will be taped on embossed plastic carrier. Parts with a thickness of less than 1mm will be taped on paper carrier