



DLI•Johanson MFG•Novacap•Syfer•Voltronics

MULTILAYER CERAMIC CAPACITORS CROSS REFERENCE GUIDE

Chip Size - Quick Reference Chart

NOVACAP	0402	0603	0805	1206	1210	1808	1812	1825	2225
ATC	ATC0402	ATC0603	ATC0805	ATC1206	ATC1210		ATC1812		ATC2225
AVX	0402	0603	0805	1206	1210	1808	1812	1825	2225
CAL CHIP	GMC-04	GMC-10	GMC-21	GMC-31	GMC-31		GMC-43		GMC-57
JOHANSON	R07	R14	R15	R18	S41	R29	S43	S49	S48
KEMET	C0402	C0603	C0805	C1206	C1210		C1812	C1825	C2225
MURATA(NEW)	GRM15	GRM18	GRM21	GRM31	GRM32	GRM42	GRM43		
NIC	NMC0402	NMC0603	NMC0805	NMC1206	NMC1210		NMC1812		NMC2225
PANASONIC	0	1	2	3	4				
PRESIDIO	0402	0603	0805	1206	1210	1808	1812	1825	2225
ROHM	MCH15	MCH18	MCH21	MCH31	MCH32		MCH43		
SAMSUNG		CL10	CL21	CL31	CL32				
SYFER	0402	0603	0805	1206	1210	1808	1812	1825	2225
TDK	C1005	C1608	C2012	C3216	C3225		C4532		
TAIYO YUDEN	UMK105	UMK107	UMK212	UMK316	UMK325		UMK432		
VENKEL	C0402	C0603	C0805	C1206	C1210		C1812	C1825	C2225
VISHAY/VITRAMON	VJ0402	VJ0603	VJ0805		VJ1210	VJ1808	VJ1812		VJ2225

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MLCC CROSS REFERENCE GUIDE

NOVACAP: 1206B104K500NT

1206	B	104	K	500	N		T	
SIZE	DIELECTRIC	CAPACITANCE	TOLERANCE	VOLTAGE	TERMINATION	PACKAGING	MARKING	
0402 0504 0603 0805 1206 1210 1808 1812 1825 2221 2225 4540 6560 7565	N = NP0 B = X7R X = BX Z = Z5U Y = Y5V S = X8R	1st two digits are significant, third digit denotes number of zeros, R=decimal 1R0 = 1.0 pF 120 = 12 pF 471 = 470 pF 102 = 1,000 pF 273 = .027 μ F 474 = 0.47 μ F 105 = 1.0 μ F	B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$ Z = +80/-20% P = +100%/-0%	160 = 16V 250 = 25V 500 = 50V 101 = 100V 251 = 250V 501 = 500V 102 = 1000V 202 = 2000V 302 = 3000V 402 = 4000V 502 = 5000V 103 = 10000V	N=Nickel Barrier (100%Sn) P=Palladium Silver Y=Nickel Barrier (90%Sn/10%Pb)	THICKNESS X in Part number denotes special thickness other than EIA standard. If no X in part number then thickness is standard per Novacap catalog specifications.	T = Tape & Reel None = Bulk W = Waffle Pack	M = Marking None = Unmarked Marking not available on sizes 0603 & below

ATC: ATC1206X7R104KL2AT

ATC	1206	X7R	104	K	L	2	A	T
ATC Style	SIZE	DIELECTRIC	CAPACITANCE	TOLERANCE	TERMINATION	VOLTAGE	MARKING	PACKAGING
	0402 0603 0805 1206 1210 1808 1812 1825 2220 2225	NP0 X7R Z5U Y5V	1st two digits are significant, third digit denotes number of zeros, R=decimal 1R0 = 1.0 pF 120 = 12 pF 471 = 470 pF 102 = 1,000 pF 273 = .027 μ F 474 = 0.47 μ F 105 = 1.0 μ F	B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$ Z = +80/-20% P = +100%/-0%	L=Nickel Barrier	2 = 50V 3 = 100V 1 = 25V 5 = 500V 6 = 1000V	S = Marking A= Unmarked	T = 7" Reel R = 13" Reel B = Bulk

AVX: 12065C104KAT2A

1206	5	C	104	K	A	T	2	A
SIZE	VOLTAGE	DIELECTRIC	CAPACITANCE	TOLERANCE	FAILURE RATE	TERMINATION	PACKAGING	SPECIAL CODE
0402 0603 0805 1206 1210 1808 1812 1825 2220 2225	Z = 10V Y = 16V 3 = 25V 5 = 50V 1 = 100V 2 = 200V V = 250V 7 = 500V C = 600V A = 1000V S = 1500V G = 2000V H = 3000V J = 4000V K = 5000V P = 250V Telco Rating	A=NP0 C=X7R D=X5R E=Z5U G=Y5V	1st two digits are significant, third digit denotes number of zeros, R=decimal 1R0 = 1.0 pF 120 = 12 pF 471 = 470 pF 102 = 1,000 pF 273 = .027 μ F 474 = 0.47 μ F 105 = 1.0 μ F	B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$ Z = +80/-20% P = +100%/-0%	A=N/A	T=Nickel/Tin Plate 7=Nickel/Gold Plate 1=Palladium Silver	2 = 7" Reel 4 = 13" Reel 7 = Bulk Cassette 9 = Bulk	A=Standard

NOTE: Specifications are subject to change without notice. All statements, information and data given herein are believed to be accurate and reliable, but are presented without guarantee, warranty, or responsibility of any kind, expressed or implied. Specifications are typical and may not apply to all applications.

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NOVACAP: 1206B104K500NT

1206	B	104	K	500	N		T	
SIZE	DIELECTRIC	CAPACITANCE	TOLERANCE	VOLTAGE	TERMINATION	PACKAGING	MARKING	
0402 0504 0603 0805 1206 1210 1808 1812 1825 2221 2225 4540 6560 7565	N = NP0 B = X7R X = BX Z = Z5U Y = Y5V S = X8R	1st two digits are significant, third digit denotes number of zeros, R=decimal 1R0 = 1.0 pF 120 = 12 pF 471 = 470 pF 102 = 1,000 pF 273 = .027 μ F 474 = 0.47 μ F 105 = 1.0 μ F	B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$ Z = +80/-20% P = +100%/-0%	160 = 16V 250 = 25V 500 = 50V 101 = 100V 251 = 250V 501 = 500V 102 = 1000V 202 = 2000V 302 = 3000V 402 = 4000V 502 = 5000V 103 = 10000V	N=Nickel Barrier (100%Sn) P=Palladium Silver Y=Nickel Barrier (90%Sn/10%Pb)		THICKNESS X in Part number denotes special thickness other than EIA standard. If no X in part number then thickness is standard per Novacap catalog specifications.	
					T = Tape & Reel None = Bulk W = Waffle Pack	M = Marking None = Unmarked Marking not available on sizes 0603 & below		

CAL CHIP: GMC31X7R104K50NT

GMC	31	X7R	104	K	50	N	T	
SIZE	DIELECTRIC	CAPACITANCE	TOLERANCE	VOLTAGE	TERMINATION	PACKAGING	MARKING	
ATC Style	04 = 0402 10 = 0603 21 = 0805 31 = 1206 32 = 1210 43 = 1812 45 = 1825 55 = 2220 57 = 2225	CG (NP0) X7R Z5U Y5V	1st two digits are significant, third digit denotes number of zeros, R=decimal 1R0 = 1.0 pF 120 = 12 pF 471 = 470 pF 102 = 1,000 pF 273 = .027 μ F 474 = 0.47 μ F 105 = 1.0 μ F	B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$ Z = +80/-20% P = +100%/-0%	16 = 16V 25 = 25V 50 = 50V 100 = 100V 200 = 200V	N=Nickel Barrier	T = Paper Tape E = Plastic B = Bulk	M = Marking None = Unmarked

JOHANSON: 500R18W104KV4T

500	R18	W	104	K	V	4	T
VOLTAGE	SIZE	DIELECTRIC	CAPACITANCE	TOLERANCE	TERMINATION	MARKING	PACKAGING
100 = 10V 160 = 16V 250 = 25V 500 = 50V 101 = 100V 251 = 250V 501 = 500V 102 = 1000V 202 = 2000V 302 = 3000V	R07 = 0402 R09 = 0403 R11 = 0504 R14 = 0603 R15 = 0805 R18 = 1206 S41 = 1210 R29 = 1808 S43 = 1812 S49 = 1825 S48 = 2225	N=NP0 W=X7R B=BX X=X5R Z=Z5U Y=Y5V	1st two digits are significant, third digit denotes number of zeros, R=decimal 1R0 = 1.0 pF 120 = 12 pF 471 = 470 pF 102 = 1,000 pF 273 = .027 μ F 474 = 0.47 μ F 105 = 1.0 μ F	B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$ Z = +80/-20%	V=Nickel Barrier P=Palladium Silver	4 = Unmarked 6 = EIA "J" Code* not available on 0402& 0603 sizes	E = 7" Embossed T = 7" Paper U = 13" Embossed R = 13" Paper W = Waffle Pack None = Bulk Pack

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NOVACAP: 1206B104K500NT

1206	B	104	K	500	N		T	
SIZE	DIELECTRIC	CAPACITANCE	TOLERANCE	VOLTAGE	TERMINATION	PACKAGING	MARKING	
0402 0504 0603 0805 1206 1210 1808 1812 1825 2221 2225 4540 6560 7565	N = NP0 B = X7R X = BX Z = Z5U Y = Y5V S = X8R	1st two digits are significant, third digit denotes number of zeros, R=decimal 1R0 = 1.0 pF 120 = 12 pF 471 = 470 pF 102 = 1,000 pF 273 = .027 μ F 474 = 0.47 μ F 105 = 1.0 μ F	B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$ Z = +80/-20% P = +100%/-0%	160 = 16V 250 = 25V 500 = 50V 101 = 100V 251 = 250V 501 = 500V 102 = 1000V 202 = 2000V 302 = 3000V 402 = 4000V 502 = 5000V 103 = 10000V	N=Nickel Barrier (100%Sn) P=Palladium Silver Y=Nickel Barrier (90%Sn/10%Pb)		THICKNESS X in Part number denotes special thickness other than EIA standard. If no X in part number then thickness is standard per Novacap catalog specifications.	
					T = Tape & Reel None = Bulk W = Waffle Pack	M = Marking None = Unmarked Marking not available on sizes 0603 & below		

KEMET : C1206C104K5RAC

C	1206	C	104	K	5	R	A	C
SIZE	CAPACITANCE	TOLERANCE	VOLTAGE	DIELECTRIC	TERMINATION			
KEMET Style	0402 0603 0805 1206 1210 1808 1812 1825 2220 2225	1st two digits are significant, third digit denotes number of zeros, R=decimal 1R0 = 1.0 pF 120 = 12 pF 471 = 470 pF 102 = 1,000 pF 273 = .027 μ F 474 = 0.47 μ F 105 = 1.0 μ F	B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$ Z = +80/-20% P = +100%/-0%	8 = 10V 4 = 16V 3 = 25V 5 = 50V 1 = 100V 2 = 200V	G = NP0 R = X7R U = Z5U V = Y5V X = BX V = Y5V	FAILURE RATE A = Standard	C = Ni w/ Tin plate H = Ni w/ solder T = Silver G = Gold Plated	

MURATA (NEW GLOBAL) : GRM31R71H104KA01L

GR	M	31	---	R7	1H	104	K	A01	L
TERMINATION	SIZE	DIELECTRIC	VOLTAGE	CAPACITANCE	TOLERANCE	PACKAGING			
MURATA Style	M = Nickel Barrier P = Palladium Silver	15 = 0402 18 = 0603 21 = 0805 31 = 1206 32 = 1210 42 = 1808 43 = 1812 55 = 2220	THICK- NESS If speci- fied. None, Otherwise	5C = NP0 R7 = X7R E4 = Z5U F5 = Y5V	1C = 16V 1E = 25V 1H = 50V 2A = 100V 2E = 250V 2H = 500V 3A = 1000V 3D = 2000V	1st two digits are significant, third digit denotes number of zeros, R=decimal 1R0 = 1.0 pF 120 = 12 pF 471 = 470 pF 102 = 1,000 pF 273 = .027 μ F 474 = 0.47 μ F 105 = 1.0 μ F	B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$ Z = +80/-20%	MURATA SPECIFICATION Standard = A01	D = 7" Paper L = 7" Plastic K = 13" Plastic J = 13" Paper C = Bulk Case B = Bulk T = Bulk Tray

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NOVACAP: 1206B104K500NT

1206	B	104	K	500	N		T	
SIZE	DIELECTRIC	CAPACITANCE	TOLERANCE	VOLTAGE	TERMINATION	PACKAGING	MARKING	
0402 0504 0603 0805 1206 1210 1808 1812 1825 2221 2225 4540 6560 7565	N = NP0 B = X7R X = BX Z = Z5U Y = Y5V S = X8R	1st two digits are significant, third digit denotes number of zeros, R=decimal 1R0 = 1.0 pF 120 = 12 pF 471 = 470 pF 102 = 1,000 pF 273 = .027 μ F 474 = 0.47 μ F 105 = 1.0 μ F	B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$ Z = +80/-20% P = +100%/-0%	160 = 16V 250 = 25V 500 = 50V 101 = 100V 251 = 250V 501 = 500V 102 = 1000V 202 = 2000V 302 = 3000V 402 = 4000V 502 = 5000V 103 = 10000V	N=Nickel Barrier (100%Sn) P=Palladium Silver Y=Nickel Barrier (90%Sn/10%Pb)	THICKNESS X in Part number denotes special thickness other than EIA standard. If no X in part number then thickness is standard per Novacap catalog specifications.	T = Tape & Reel None = Bulk W = Waffle Pack	M = Marking None = Unmarked Marking not available on sizes 0603 & below

NIC : NMC1206X7R104K50TRPLP

NMC	1206	X7R	104	K	50	TRPLP	
SIZE	DIELECTRIC	CAPACITANCE	TOLERANCE	VOLTAGE	PACKAGING	MARKING	
NIC Style 0402 0603 0805 1206 1210 1812 2225	NP0 X7R Z5U Y5V	1st two digits are significant, third digit denotes number of zeros, R=decimal 1R0 = 1.0 pF 120 = 12 pF 471 = 470 pF 102 = 1,000 pF 273 = .027 μ F 474 = 0.47 μ F 105 = 1.0 μ F	B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$ Z = +80/-20% P = +100%/-0%	10 = 10V 16 = 16V 25 = 25V 50 = 50V 100 = 100V 200 = 200V 500 = 500V	TRP = T/R (Paper Carrier) TRPLP = T/R (Plastic Carrier)	M = Marked None = Unmarked	

PANASONIC : ECJ3YB1H104K

ECJ	3	Y	B	1H	104	K
SIZE	PACKAGING	DIELECTRIC	VOLTAGE	CAPACITANCE	TOLERANCE	
PANASONIC STYLE Q = 0402 1 = 0603 2 = 0805 3 = 1206 4 = 1210	E = 7" Paper 2mm V = 7" Paper 4mm F, Y = 7" Plastic 4mm W = 13" Reels 2mm Z = 13" Reels 4mm C = Bulk Case X = Bulk	C = NPO B = X7R F = Y5V	1A = 10V 1C = 16V 1E = 25V 1H = 50V 2A = 100V 2D = 200V	1st two digits are significant, third digit denotes number of zeros 010 = 1.0 pF 120 = 12 pF 471 = 470 pF 102 = 1,000 pF 273 = .027 μ F 474 = 0.47 μ F 105 = 1.0 μ F	C = ± 0.25 pF D = ± 0.50 pF F = $\pm 1\%$ J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$ Z = +80/-20%	

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NOVACAP: 1206B104K500NT

1206	B	104	K	500	N		T	
SIZE	DIELECTRIC	CAPACITANCE	TOLERANCE	VOLTAGE	TERMINATION	PACKAGING	MARKING	
0402 0504 0603 0805 1206 1210 1808 1812 1825 2221 2225 4540 6560 7565	N = NP0 B = X7R X = BX Z = Z5U Y = Y5V S = X8R	1st two digits are significant, third digit denotes number of zeros, R=decimal 1R0 = 1.0 pF 120 = 12 pF 471 = 470 pF 102 = 1,000 pF 273 = .027 μ F 474 = 0.47 μ F 105 = 1.0 μ F	B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$ Z = +80/-20% P = +100%/-0%	160 = 16V 250 = 25V 500 = 50V 101 = 100V 251 = 250V 501 = 500V 102 = 1000V 202 = 2000V 302 = 3000V 402 = 4000V 502 = 5000V 103 = 10000V	N=Nickel Barrier (100%Sn) P=Palladium Silver Y=Nickel Barrier (90%Sn/10%Pb)	THICKNESS X in Part number denotes special thickness other than EIA standard. If no X in part number then thickness is standard per Novacap catalog specifications.	T = Tape & Reel None = Bulk W = Waffle Pack	M = Marking None = Unmarked Marking not available on sizes 0603 & below

PRESIDIO : 1206X7R104K2NT91

1206	X7R	104	K	2	NT9	1
SIZE	DIELECTRIC	CAPACITANCE	TOLERANCE	VOLTAGE	TERMINATION	PACKAGING
0402 0603 0805 1206 1210 1808 1812 1825 2220 2225	NP0 X7R Z5U Y5V	1st two digits are significant, third digit denotes number of zeros, R=decimal 1R0 = 1.0 pF 120 = 12 pF 471 = 470 pF 102 = 1,000 pF 273 = .027 μ F 474 = 0.47 μ F 105 = 1.0 μ F	B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$ Z = +80/-20%	1 = 25V 2 = 50V 3 = 100V 4 = 200V 5 = 300V 6 = 500V 9 = 1000V 11 = 2000V 13 = 3000V 15 = 5000V	NT9 = Nickel Barrier P = Palladium Silver	1 = 7" Plastic/Unmarked 2 = 7" Plastic/Marked 3 = Bulk Unmarked 4 = Bulk Marked 5 = Waffle Unmarked 6 = Waffle Marked

ROHM : MCH315C104KP

MCH	31	5	C	104	K	P
TERMINATION	SIZE	VOLTAGE	DIELECTRIC	CAPACITANCE	TOLERANCE	PACKAGING
MCH = Nickel Barrier MC = Palladium Silver	15 = 0402 18 = 0603 21 = 0805 31 = 1206 32 = 1210 43 = 1812	3 = 16V 2 = 25V 5 = 50V 1 = 100V 6 = 200V 7 = 500V	A = NP0 C = X7R E = Z5U F = Y5V	1st two digits are significant, third digit denotes number of zeros 010 = 1.0 pF 120 = 12 pF 471 = 470 pF 102 = 1,000 pF 273 = .027 μ F 474 = 0.47 μ F 105 = 1.0 μ F	B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$ Z = +80/-20%	P = 7" Plastic Q = 13" Plastic K = 7" Paper L = 13" Paper C = Bulk Case B = Bulk Bags None = Bulk

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NOVACAP: 1206B104K500NT

1206	B	104	K	500	N		T	
SIZE	DIELECTRIC	CAPACITANCE	TOLERANCE	VOLTAGE	TERMINATION	PACKAGING	MARKING	
0402 0504 0803 0805 1206 1210 1808 1812 1825 2221 2225 4540 6560 7565	N = NP0 B = X7R X = BX Z = Z5U Y = Y5V S = X8R	1st two digits are significant, third digit denotes number of zeros, R=decimal 1R0 = 1.0 pF 120 = 12 pF 471 = 470 pF 102 = 1,000 pF 273 = .027 μ F 474 = 0.47 μ F 105 = 1.0 μ F	B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$ Z = +80/-20% P = +100%/-0%	160 = 16V 250 = 25V 500 = 50V 101 = 100V 251 = 250V 501 = 500V 102 = 1000V 202 = 2000V 302 = 3000V 402 = 4000V 502 = 5000V 103 = 10000V	N=Nickel Barrier (100%Sn) P=Palladium Silver Y=Nickel Barrier (90%Sn/10%Pb)	THICKNESS X in Part number denotes special thickness other than EIA standard. If no X in part number then thickness is standard per Novacap catalog specifications.	T = Tape & Reel None = Bulk W = Waffle Pack	M = Marking None = Unmarked Marking not available on sizes 0603 & below

SAMSUNG : CL31B104KBNE

CL	31	B	104	K	B	N	E
SIZE	DIELECTRIC	CAPACITANCE	TOLERANCE	VOLTAGE	TERMINATION	PACKAGING	
SAMSUNG Style 05 = 0402 01 = 0603 21 = 0805 31 = 1206 32 = 1210	C = NP0 B = X7R F = Z5U E = Y5V	1st two digits are significant, third digit denotes number of zeros, R=decimal 1R0 = 1.0 pF 120 = 12 pF 471 = 470 pF 102 = 1,000 pF 273 = .027 μ F 474 = 0.47 μ F 105 = 1.0 μ F	B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$ Z = +80/-20%	O = 16V A = 25V B = 50V C = 100V	N = Nickel Barrier P = Palladium Silver S = Silver	E = 7" Plastic C = 7" Paper B = Bulk Pack P = Cassette	

SYFER : 1206J0500104KXT

1206	J	050	0104	K	X	T
SIZE	TERMINATION	VOLTAGE	CAPACITANCE	TOLERANCE	DIELECTRIC	PACKAGING
0402 0603 0805 1206 1210 1808 1812 2220 2225	J = Nickel Barrier F = Palladium Silver A = Special Term.	016 = 16V 025 = 25V 050 = 50V 063 = 63V 100 = 100V 200 = 200V 250 = 250V 500 = 500V 630 = 630V 1K0 = 1000V to 5k0 = 5000V	1st digit = 0, 2nd & 3rd are significant, 4th denotes number of zeros, P=decimal 01P0 = 1.0 pF 0120 = 12 pF 0471 = 470 pF 0102 = 1,000 pF 0273 = .027 μ F 0474 = 0.47 μ F 0105 = 1.0 μ F	B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$ Z = +80/-20%	C = NP0 X = X7R B = BX Y = Y5V Q = HiFreQ	T = 7" Reel R = 13" Reel B = Bulk Pack C = Cassette

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NOVACAP: 1206B104K500NT

1206	B	104	K	500	N		T	
SIZE	DIELECTRIC	CAPACITANCE	TOLERANCE	VOLTAGE	TERMINATION	PACKAGING	MARKING	
0402 0504 0603 0805 1206 1210 1808 1812 1825 2221 2225 4540 6560 7565	N = NP0 B = X7R X = BX Z = Z5U Y = Y5V S = X8R	1st two digits are significant, third digit denotes number of zeros, R=decimal 1R0 = 1.0 pF 120 = 12 pF 471 = 470 pF 102 = 1,000 pF 273 = .027 μ F 474 = 0.47 μ F 105 = 1.0 μ F	B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$ Z = +80/-20% P = +100%/-0%	160 = 16V 250 = 25V 500 = 50V 101 = 100V 251 = 250V 501 = 500V 102 = 1000V 202 = 2000V 302 = 3000V 402 = 4000V 502 = 5000V 103 = 10000V	N=Nickel Barrier (100%Sn) P=Palladium Silver Y=Nickel Barrier (90%Sn/10%Pb)	THICKNESS X in Part number denotes special thickness other than EIA standard. If no X in part number then thickness is standard per Novacap catalog specifications.	T = Tape & Reel None = Bulk W = Waffle Pack	M = Marking None = Unmarked Marking not available on sizes 0603 & below

TDK : C3216X7R1H104KT

1206	X7R	1H	104	K	T
SIZE	DIELECTRIC	VOLTAGE	CAPACITANCE	TOLERANCE	PACKAGING
C1005 = 0402 C0603 = 0603 C2012 = 0805 C3216 = 1206 C3225 = 1210 C4532 = 1812 C5650 = 2220	CG X7R X5R Z5U Y5V	OJ = 6.3V 1A = 10V 1C = 16V 1E = 25V 1H = 50V 2A = 100V 2E = 250V 2J = 630V 3D = 2000V	1st two digits are significant, third digit denotes number of zeros, R=decimal 1R0 = 1.0 pF 120 = 12 pF 471 = 470 pF 102 = 1,000 pF 273 = .027 μ F 474 = 0.47 μ F 105 = 1.0 μ F	B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$ Z = +80/-20%	T = Tape & Reel B = Bulk Pack

TAIYO YUDEN : UMK316BJ104KQT

U	M	K	316	BJ	104	K	Q	T
VOLTAGE	SERIES Ceramic Caps	TERMINATION	SIZE	DIELECTRIC	CAPACITANCE	TOLERANCE	THICKNESS	PACKAGING
J = 6.3V L = 10V E = 16V T = 25V U = 50V		K= Nickel Barrier	105 = 0402 107 = 0603 212 = 0805 316 = 1206 325 = 1210 432 = 1812 550 = 2220	CG = NP0 CH = NP0 CJ = NP0 CK = NP0 BJ = X7R F = Y5V	1st two digits are significant, third digit denotes number of zeros. 010 = 1.0 pF 120 = 12 pF 471 = 470 pF 102 = 1,000 pF 273 = .027 μ F 474 = 0.47 μ F 105 = 1.0 μ F	B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = $\pm 1\%$ G = $\pm 2\%$ J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$ Z = +80/-20%	Dependent on dielectric and electrode system. Consult factory for further details.	T = Tape & Reel B = Bulk Pack

MLCC CROSS REFERENCE GUIDE

NOVACAP: 1206B104K500NT

1206	B	104	K	500	N		T	
SIZE	DIELECTRIC	CAPACITANCE	TOLERANCE	VOLTAGE	TERMINATION	PACKAGING	MARKING	
0402 0504 0603 0805 1206 1210 1808 1812 1825 2221 2225 4540 6560 7565	N = NP0 B = X7R X = BX Z = Z5U Y = Y5V S = X8R	1st two digits are significant, third digit denotes number of zeros, R=decimal 1R0 = 1.0 pF 120 = 12 pF 471 = 470 pF 102 = 1,000 pF 273 = .027 μF 474 = 0.47 μF 105 = 1.0 μF	B = ±0.10pF C = ±0.25pF D = ±0.50pF F = ±1% G = ±2% J = ±5% K = ±10% M = ±20% Z = +80/-20% P = +100%/-0%	160 = 16V 250 = 25V 500 = 50V 101 = 100V 251 = 250V 501 = 500V 102 = 1000V 202 = 2000V 302 = 3000V 402 = 4000V 502 = 5000V 103 = 10000V	N=Nickel Barrier (100%Sn) P=Palladium Silver Y=Nickel Barrier (90%Sn/10%Pb)	THICKNESS X in Part number denotes special thickness other than EIA standard. If no X in part number then thickness is standard per Novacap catalog specifications.	T = Tape & Reel None = Bulk W = Waffle Pack	M = Marking None = Unmarked Marking not available on sizes 0603 & below

VENKEL : C1206X7R500104KNP

C	1206	X7R	500	104	K	N		P
SIZE	DIELECTRIC	VOLTAGE	CAPACITANCE	TOLERANCE	TERMINATION	MARKING	PACKAGING	
VENKEL Style	0402 0603 0805 1206 1210 1808 1812 1825 2225	NP0 X7R X5R Z5U Y5V	100 = 10V 160 = 16V 250 = 25V 500 = 50V 101 = 100V 251 = 250V 501 = 500V 102 = 1000V 202 = 2000V 302 = 3000V	1st two digits are significant, third digit denotes number of zeros, R=decimal 1R0 = 1.0 pF 120 = 12 pF 471 = 470 pF 102 = 1,000 pF 273 = .027 μF 474 = 0.47 μF 105 = 1.0 μF	B = ±0.10pF C = ±0.25pF D = ±0.50pF F = ±1% G = ±2% J = ±5% K = ±10% M = ±20% Z = +80/-20%	N = Nickel Barrier P = Palladium Silver G = Gold/Nickel	6 = Marked 2 = Color Code None= Unmarked	P = Paper E = Embossed B = Bulk

VISHAY/VITRAMON : VJ1206Y104KXAAT

VJ	1206	Y	104	K	X	A	A	T
SIZE	DIELECTRIC	CAPACITANCE	TOLERANCE	TERMINATION	VOLTAGE	MARKING	PACKAGING	
VISHAY Style	0402 0603 0805 1206 1210 1812 1825 2225	A, N = NP0 Y = X7R U = Z5U X = BX H = X8R	1st two digits are significant, third digit denotes number of zeros, R=dec- imal 1R0 = 1.0 pF 120 = 12 pF 471 = 470 pF 102 = 1,000 pF 273 = .027 μF 474 = 0.47 μF 105 = 1.0 μF	B = ±0.10pF C = ±0.25pF D = ±0.50pF F = ±1% G = ±2% J = ±5% K = ±10% M = ±20% Z = +80/-20%	X = Nickel Barrier F = Palladium Silver	X = 25V A = 50V B = 100V C = 200V E = 500V G = 1000V	M = Marked A = Unmarked	T = 7" Plastic R = 13" Plastic C = 7" Paper P = 13" Paper B = Bulk Pack