



Surfacemount Ceramic Capacitor Part Number Cross Reference

<i>MANUFACTURER</i>	<i>PAGE</i>	<i>QUICK P/N REFERENCE</i>
Johanson	2	500R15W103KV4T
ATC	2	ATCX7R103KL2AT
AVX	2	08055C103KAT2A
CALCHIP	2	GMC21X7R103K50NT
Kemet	3	C0805C103K5RAC
Murata	3	GRM40X7R103K050AD
NIC	3	NMC0805X7R103K50TRP
Novacap	3	0805B103K500NT
Panasonic	4	ECU1H103KBX
Philips	4	08052R103K9B2EA
Presidio	4	0805X7R103K2NT91
ROHM	5	MCH215C103KK
Samsung	5	CL21B103KBNC
Syfer	5	0805J0500103JXT
TDK	5	CC08051HX7R103K
Taiyo Yuden	6	UMK212_B103KQ-T
Venkel	6	C0805Y103KXATA
Vitramon	6	VJ0805Y103KXATA

JOHANSON DIELECTRICS, INC.
 15191 Bledsoe St., Sylmar, California 91342
 TEL (818) 364-9800 • FAX (818) 364-6100
<http://www.johanson-caps.com>

HOW TO ORDER JOHANSON

EXAMPLE - 500R15W103KV4T

500	R15	W	103	K	V	4	T
VOLTAGE 100 = 10 V 160 = 16 V 250 = 25 V 500 = 50 V 101 = 100 V 201 = 200 V 251 = 250 V 501 = 500 V 102 = 1000 V 202 = 2000 V 302 = 3000 V 402 = 4000 V 502 = 5000 V	SIZE (EIA) R07 = 0402 R09 = 0403 R11 = 0504 R14 = 0603 R15 = 0805 R18 = 1206 S41 = 1210 R29 = 1808 S43 = 1812 S49 = 1825 S48 = 2225	DIELECTRIC N = NPO W = X7R B = BX X = X5R Z = Z5U Y = Y5V	CAPACITANCE 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	TOLERANCE * B = ± 0.10 pF * C = ± 0.25 pF * D = ± 0.50 pF F = ± 1 % G = ± 2 % J = ± 5 % K = ± 10 % M = ± 20 % Z = +80/-20 % * For values less than 10 pF only	TERMINATION V = Nickel Barrier P = Palladium Silver	MARKING 4 = Unmarked 6 = EIA "J" Code* *Not available on 0402 & 0603 sizes	PACKAGING E = 7" Embossed T = 7" Paper U = 13" Embossed R = 13" Paper W = Waffle pack None = Bulk pack

ATC: EXAMPLE - ATC0805X7R103KL2AT

JOHANSON: 500R15W103KV4T

ATC	0805	X7R	103	K	L	2	A	T
ATC Style	SIZE (EIA) 0402 0504 0603 0805 1206 1210 1808 1812 1825 2225	DIELECTRIC NPO X7R Z5U Y5V	CAPACITANCE 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	TOLERANCE B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = ± 1 % G = ± 2 % J = ± 5 % K = ± 10 % M = ± 20 % Z = +80/-20 %	TERMINATION L = Nickel Barrier	VOLTAGE 2 = 50 V 3 = 100 V	MARKING A = Unmarked S = Marked	PACKAGING T = 7" Reel R = 13" Reel B = Bulk Pack

AVX: EXAMPLE - 08055C103KAT2A

JOHANSON - 500R15W103KV4T

0805	5	C	103	K	A	T	4	A
SIZE (EIA) 0402 0403 0504 0603 0805 1206 1210 1808 1812 1825 2225	VOLTAGE Z = 10 V Y = 16 V 3 = 25 V 5 = 50 V 1 = 100 V 2 = 200 V 7 = 250 V 7 = 500 V C = 600 V A = 1000 V S = 1500 V G = 2000 V W = 2500 V H = 3000 V J = 4000 V K = 5000 V	DIELECTRIC A = NPO C = X7R D = X5R E = Z5U G = Y5V	CAPACITANCE 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	TOLERANCE B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = ± 1 % G = ± 2 % J = ± 5 % K = ± 10 % M = ± 20 % Z = +80/-20 %	FAILURE RATE A = N/A	TERMINATION T = Nickel / Tin Plate 7 = Nickel / Gold Plate 1 = Palladium Silver	PACKAGING & MARKING 1 = 7" Reel Embossed/Unmarked 2 = 7" Reel Paper/Unmarked 3 = 13" Reel Embossed/Unmarked 4 = 13" Reel Paper/Unmarked M = 7" Reel Embossed/Marked N = 7" Reel Paper/Marked R = 13" Reel Embossed/Marked S = 13" Reel Paper/Marked 9 = Bulk/Unmarked B = Bulk/Marked	SPECIAL CODE A = Standard

CAL CHIP: EXAMPLE - GMC21X7R103K50NT

JOHANSON: 500R15W103KV4T

GMC	21	X7R	103	K	50	N	T	
ATC Style	SIZE (EIA) 04 = 0402 10 = 0603 21 = 0805 31 = 1206 32 = 1210 43 = 1812 45 = 1825 55 = 2220 57 = 2225	DIELECTRIC CG (NPO) X7R Z5U Y5V	CAPACITANCE 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	TOLERANCE B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = ± 1 % G = ± 2 % J = ± 5 % K = ± 10 % M = ± 20 % Z = +80/-20 %	VOLTAGE 16 = 16 V 25 = 25 V 50 = 50 V 100 = 100 V 200 = 200 V	TERMINATION N = Nickel Barrier	PACKAGING T = Paper Tape E = Embossed B = Bulk Pack	MARKING M = Marked None = Unmarked

KEMET: EXAMPLE - C0805C103K5RAC

JOHANSON - 500R15W103KV4T

C	0805	C	103	K	5	R	A	C
KEMET Style	SIZE (EIA) 0402 0603 0805 1206 1210 1808 1812 1825 2220 2225	SPEC. C = Standard	CAPACITANCE 1st two digits are significant; third digit denotes number of zeros. 109 = 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	TOLERANCE B = \pm 0.10 pF C = \pm 0.25 pF D = \pm 0.50 p F = \pm 1 % G = \pm 2 % J = \pm 5 % K = \pm 10 % M = \pm 20 % Z = +80/-20 % P = GMV	VOLTAGE 8 = 10 V 4 = 16 V 3 = 25 V 5 = 50 V 1 = 100 V 2 = 200 V	DIELECTRIC G = NPO R = X7R U = Z5U V = Y5V	FAILURE RATE A = Standard	TERMINATION C = Tin Plated Nickel Barrier

MURATA: EXAMPLE - GRM40X7R103K050AD

JOHANSON - 500R15W103KV4T

GRM	40	X7R	103	K	050	A	D
Murata Style	SIZE (EIA) 36 = 0402 39 = 0603 40 = 0805 42-6 = 1206 42-2 = 1210 43 = 1812 43-2 = 1825 55 = 2220 57 = 2225	DIELECTRIC NPO X7R X5R Z5U Y5V	CAPACITANCE 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	TOLERANCE B = \pm 0.10 pF C = \pm 0.25 pF D = \pm 0.50 p F = \pm 1 % G = \pm 2 % J = \pm 5 % K = \pm 10 % M = \pm 20 % Z = +80/-20 %	VOLTAGE 010 = 10 V 016 = 16 V 025 = 25 V 050 = 50 V 100 = 100 V 1KV = 1000 V 2KV = 2000 V	MARKING A = Unmarked B = Marked	PACKAGING D = 7" Paper L = 7" Embossed J = 13" Paper K = 13" Embossed B = Bulk C = Bulk Cassette Q = 7" Paper 2mm Pitch

NIC: EXAMPLE - NMC40X7R103K50TRP

JOHANSON - 500R15W103KV4T

NMC	0805	X7R	103	K	50	TRP	
NIC Style	SIZE (EIA) 0402 0603 0805 1206 1210 1808 1812 1825 2220 2225	DIELECTRIC NPO X7R X5R Z5U Y5V	CAPACITANCE 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	TOLERANCE B = \pm 0.10 pF C = \pm 0.25 pF D = \pm 0.50 p F = \pm 1 % G = \pm 2 % J = \pm 5 % K = \pm 10 % M = \pm 20 % Z = +80/-20 %	VOLTAGE 10 = 10 V 16 = 16 V 25 = 25 V 50 = 50 V 100 = 100 V 200 = 200 V 500 = 500 V 1000 = 1000 V	PACKAGING TRP = Paper Tape / Plastic Reel TRPLP = Plastic Tape / Plastic Reel	MARKING M = Marked None = Unmarked

NOVACAP: EXAMPLE - 0805B103K500NT

JOHANSON - 500R15W103KV4T

0805	W	103	K	500	N	T	
SIZE (EIA) 0402 0603 0805 1206 1210 1808 1812 1825 2220 2225	DIELECTRIC N = NPO B = X7R X = BX Z = Z5U Y = Y5V	CAPACITANCE 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	TOLERANCE B = \pm 0.10 pF C = \pm 0.25 pF D = \pm 0.50 p F = \pm 1 % G = \pm 2 % J = \pm 5 % K = \pm 10 % M = \pm 20 % Z = +80/-20 %	VOLTAGE 100 = 10 V 160 = 16 V 250 = 25 V 500 = 50 V 101 = 100 V 251 = 250 V 501 = 500 V 102 = 1000 V 202 = 2000 V 302 = 3000 V	TERMINATION N = Nickel Barrier P = Palladium Silver	PACKAGING T = 7" Paper P = Bulk Cassette None = Bulk	MARKING M = Marked None = Unmarked

COLOR CODE	VOLTAGE	CHIP SIZE	DIELECTRIC	TERMINATION	MARKING	PACKAGING
------------	---------	-----------	------------	-------------	---------	-----------

HOW TO ORDER JOHANSON

EXAMPLE - 500R15W103KV4T

500	R15	W	103	K	V	4	T
VOLTAGE 100 = 10 V 160 = 16 V 250 = 25 V 500 = 50 V 101 = 100 V 201 = 200 V 251 = 250 V 501 = 500 V 102 = 1000 V 202 = 2000 V 302 = 3000 V 402 = 4000 V 502 = 5000 V	SIZE (EIA) R07 = 0402 R09 = 0403 R11 = 0504 R14 = 0603 R15 = 0805 R18 = 1206 S41 = 1210 R29 = 1808 S43 = 1812 S49 = 1825 S48 = 2225	DIELECTRIC N = NPO W = X7R B = BX X = X5R Z = Z5U Y = Y5V	CAPACITANCE 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	TOLERANCE * B = ± 0.10 pF * C = ± 0.25 pF * D = ± 0.50 pF F = ± 1 % G = ± 2 % J = ± 5 % K = ± 10 % M = ± 20 % Z = +80/-20 % * For values less than 10 pF only	TERMINATION V = Nickel Barrier P = Palladium Silver	MARKING 4 = Unmarked 6 = EIA "J" Code* *Not available on 0402 & 0603 sizes	PACKAGING E = 7" Embossed T = 7" Paper U = 13" Embossed R = 13" Paper W = Waffle pack None = Bulk pack

PANASONIC: EXAMPLE - ECUV1H103KBX

JOHANSON - 500R15W103KV4T

ECU	V	1H	103	K	B	X
PANASONIC Style Contact factory for ECJ cross reference.	PACKAGING E = 7" Paper Tape 2mm V = 7" Paper Tape 4mm Y = 7" Embossed Tape W = 13" 2mm Z = 13" 4mm C = Bulk Case X = Bulk	VOLTAGE 1A = 10V 1C = 16V 1E = 25V 1H = 50V	CAPACITANCE 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 μF 474 = 0.47 μF 105 = 1.0 μF	TOLERANCE B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = ± 1 % G = ± 2 % J = ± 5 % K = ± 10 % M = ± 20 % Z = +80/-20 %	DIELECTRIC C = NPO B = X7R F = Y5V	SIZE (EIA) Q = 0402 V = 0603 N = 0805 G = 0805 N = 0805 M = 1206 H = 1206 W = 1206

PHILIPS: EXAMPLE - 08052R103K9B2EA

JOHANSON - 500R15W103KV4T

0805	2R	103	K	9	B	2	EA
SIZE (EIA) 0402 0603 0805 1206 1812 1825 2220	DIELECTRIC CG = NPO 2R = X7R 2E = Z5U 2F = Y5V	CAPACITANCE 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	TOLERANCE B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = ± 1 % G = ± 2 % J = ± 5 % K = ± 10 % M = ± 20 % Z = +80/-20 %	VOLTAGE 7 = 16 V 8 = 25 V 9 = 50 V 0 = 100 V B = 200 V D = 500 V E = 1.0 KV F = 2.0 KV G = 3.0 KV	TERMINATION B = Nickel Barrier A = Silver Palladium	PACKAGING B = 7" Plastic F = 13" Plastic 2 = 7" Paper 3 = 13" Paper P = Bulk Case	SERIES O = Ceramic EA = Compact MA = Microwave

PRESIDIO: EXAMPLE - 0805X7R103K2NT91

JOHANSON - 500R15W103KV4T

0805	X7R	103	K	2	NT9	1	
SIZE (EIA) 0402 0403 0504 0603 0805 1206 1210 1808 1812 1825 2221 2225	DIELECTRIC NPO X7R BX Z5U	CAPACITANCE 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	TOLERANCE B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = ± 1 % G = ± 2 % J = ± 5 % K = ± 10 % M = ± 20 % Z = +80/-20 %	VOLTAGE 1 = 25V 2 = 50V 3 = 100V 4 = 200V 5 = 300V 6 = 500V 9 = 1000V 11 = 2000V 13 = 3000V 15 = 5000V	TERMINATION NT9 = Nickel Barrier P = Palladium Silver	PACKAGING 1=7" Plastic/Unmarked 2=7" Plastic/Marked 3=Bulk Unmarked 4=Bulk Marked 5=Waffle Unmarked 6=Waffle Marked	SPECIAL CODE None = Standard Dimensions

ROHM: EXAMPLE - MCH215C103KK

JOHANSON - 500R15W103KV4T

MCH	21	5	C	103	K	K
TERMINATION MCH = Nickel Barrier MC = Palladium Silver	CASE SIZE 15 = 0402 18 = 0603 21 = 0805 31 = 1206 32 = 1210 43 = 1812	VOLTAGE 3 = 16V 2 = 25V 5 = 50V 1 = 100V 6 = 200V 7 = 500V	DIELECTRIC A = NPO C = X7R E = Z5U F = Y5V	CAPACITANCE 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 μF 474 = 0.47 μF 105 = 1.0 μF	TOLERANCE B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = ± 1 % G = ± 2 % J = ± 5 % K = ± 10 % M = ± 20 % Z = +80/-20 %	PACKAGING P = 7" Plastic PB = 13" Plastic K = 7" Paper KB = 13" Paper C = Bulk Case None = Bulk

SAMSUNG: EXAMPLE - CL21B103KBNC

JOHANSON - 500R15W103KV4T

CL	21	B	103	K	B	N	C
SAMSUNG Style	CASE SIZE 05 = 0402 10 = 0603 21 = 0805 31 = 1206 32 = 1210	DIELECTRIC C = NPO B = X7R F = Z5U E = Y5V	CAPACITANCE 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	TOLERANCE B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = ± 1 % G = ± 2 % J = ± 5 % K = ± 10 % M = ± 20 % Z = +80/-20 %	VOLTAGE O = 16V A = 25V B = 50V C = 100V	TERMINATION N = Nickel Barrier	PACKAGING E = 7" Plastic C = 7" Paper B = Bulk Pack P = Cassette

SYFER: EXAMPLE - 0805J0500103KXT

JOHANSON - 500R15W103KV4T

0805	J	050	0103	K	X	T
SIZE (EIA) 0402 0603 0805 1206 1210 1808 1812 2220 2225	TERMINATION J = Nickel Barrier F = Palladium Silver A = Special Term.	VOLTAGE 016 = 16 V 025 = 25 V 050 = 50 V 063 = 63 V 100 = 100 V 200 = 200 V 250 = 250 V 500 = 500 V 630 = 630 V 1K0 = 1000 V to 5K0 = 5000 V	CAPACITANCE 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 μF 0474 = 0.47 μF 0105 = 1.0 μF	TOLERANCE B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = ± 1 % G = ± 2 % J = ± 5 % K = ± 10 % M = ± 20 % Z = +80/-20 %	DIELECTRIC C = NPO X = X7R B = BX Y = Y5V Q = Hi FreQ	PACKAGING T = 7" Reel R = 13" Reel B = Bulk Pack C = Cassette

TDK: EXAMPLE - CC08051HX7R103K

JOHANSON - 500R15W103KV4T

CC	0805	1H	X7R	103	K
TDK Style	SIZE (EIA) 0402 0603 0805 1206 1210 1808 1812 1825 2225	VOLTAGE 0J = 6.3 V 1A = 10 V 1C = 16 V 1E = 25 V 1H = 50 V 2A = 100 V 2E = 250 V 2J = 630 V 3D = 2000 V 3F = 2000 V	DIELECTRIC NPO X7R X5R Z5U Y5V	CAPACITANCE 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	TOLERANCE B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = ± 1 % G = ± 2 % J = ± 5 % K = ± 10 % M = ± 20 % Z = +80/-20 %

How To ORDER JOHANSON

EXAMPLE - 500R15W103KV4T

500	R15	W	103	K	V	4	T
VOLTAGE 100 = 10 V 160 = 16 V 250 = 25 V 500 = 50 V 101 = 100 V 201 = 200 V 251 = 250 V 501 = 500 V 102 = 1000 V 202 = 2000 V 302 = 3000 V 402 = 4000 V 502 = 5000 V	SIZE (EIA) R07 = 0402 R09 = 0403 R11 = 0504 R14 = 0603 R15 = 0805 R18 = 1206 S41 = 1210 R29 = 1808 S43 = 1812 S49 = 1825 S48 = 2225	DIELECTRIC N = NPO W = X7R B = BX X = X5R Z = Z5U Y = Y5V	CAPACITANCE 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	TOLERANCE * B = ± 0.10 pF * C = ± 0.25 pF * D = ± 0.50 pF F = ± 1 % G = ± 2 % J = ± 5 % K = ± 10 % M = ± 20 % Z = +80/-20 % * For values less than 10 pF only	TERMINATION V = Nickel Barrier P = Palladium Silver	MARKING 4 = Unmarked 6 = EIA "J" Code* *Not available on 0402 & 0603 sizes	PACKAGING E = 7" Embossed T = 7" Paper U = 13" Embossed R = 13" Paper W = Waffle pack None = Bulk pack

TAIYO YUDEN: EXAMPLE - UMK212_B103KQ-T

JOHANSON - 500R15W103KV4T

U	M	K	212	_B	103	K	Q	T
VOLTAGE J = 6.3 V L = 10 V E = 16 V T = 25 V G = 35 V U = 50 V	SERIES Ceramic Caps	TERMINATION K = Nickel Barrier	CASE SIZE 105 = 0402 107 = 0603 212 = 0805 316 = 1206 325 = 1210 432 = 1812 550 = 2220	DIELECTRIC CG = NPO CH = NPO CJ = NPO CK = NPO BJ = X7R BJ = X5R _B = X7R _B = X5R _F = Y5V	CAPACITANCE 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 μF 474 = 0.47 μF 105 = 1.0 μF	TOLERANCE B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = ± 1 % G = ± 2 % J = ± 5 % K = ± 10 % M = ± 20 % Z = +80/-20 %	THICKNESS Dependent on dielectric and electrode system. Consult factory if absolute thickness cross is required.	PACKAGING T = Tape&Reel B = Bulk Pack

VENKEL: EXAMPLE - C0805X7R500103KNP

JOHANSON: 500R15W103KV4T

C	0805	X7R	500	103	K	N		P
Venkel Style	SIZE (EIA) 0402 0504 0603 0805 1206 1210 1808 1812 1825 2225	DIELECTRIC NPO X7R X5R Z5U Y5V	VOLTAGE 100 = 10 V 160 = 16 V 250 = 25 V 500 = 50 V 101 = 100 V 251 = 250 V 501 = 500 V 102 = 1000 V 202 = 2000 V 302 = 3000 V	CAPACITANCE 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	TOLERANCE B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = ± 1 % G = ± 2 % J = ± 5 % K = ± 10 % M = ± 20 % Z = +80/-20 %	TERMINATION V = Nickel Barrier P = Palladium Silver G = Gold/Nickel	MARKING 6 = Marked 2 = Color code None = Unmarked	TAPE P = Paper E = Embossed B = Bulk

VISHAY/VITRAMON: EXAMPLE - VJ0805Y103KXATA

JOHANSON: 500R15W103KV4T

VJ	0805	Y	103	K	X	A	T	A
VISHAY Style	SIZE (EIA) 0402 0603 0805 1206 1210 1812 1825 2225	DIELECTRIC A = NPO Y = X7R U = Z5U X = BX H = X8R	CAPACITANCE 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	TOLERANCE B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = ± 1 % G = ± 2 % J = ± 5 % K = ± 10 % M = ± 20 % Z = +80/-20 %	TERMINATION X = Nickel Barrier P = Palladium Silver	VOLTAGE X = 25 V A = 50 V B = 100 V C = 200 V E = 500 V G = 1000 V	TAPE T = 7" Plastic R = 13" Plastic C = 7" Paper P = 13" Paper B = Bulk Pack	MARKING M = Marked A = Unmarked

COLOR CODE	VOLTAGE	CHIP SIZE	DIELECTRIC	TERMINATION	MARKING	PACKAGING
------------	---------	-----------	------------	-------------	---------	-----------