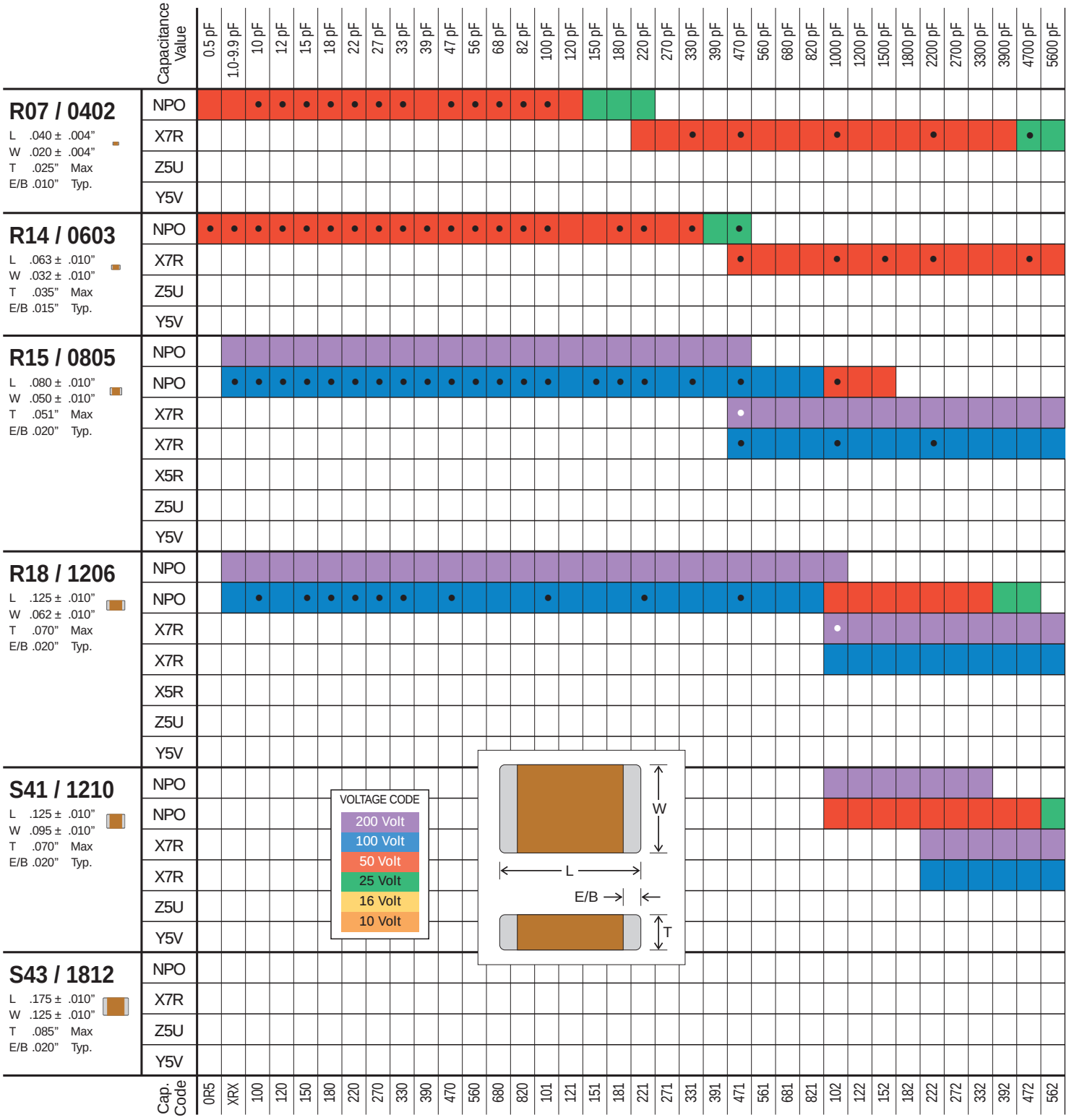
JOHANSON DIELECTRICS

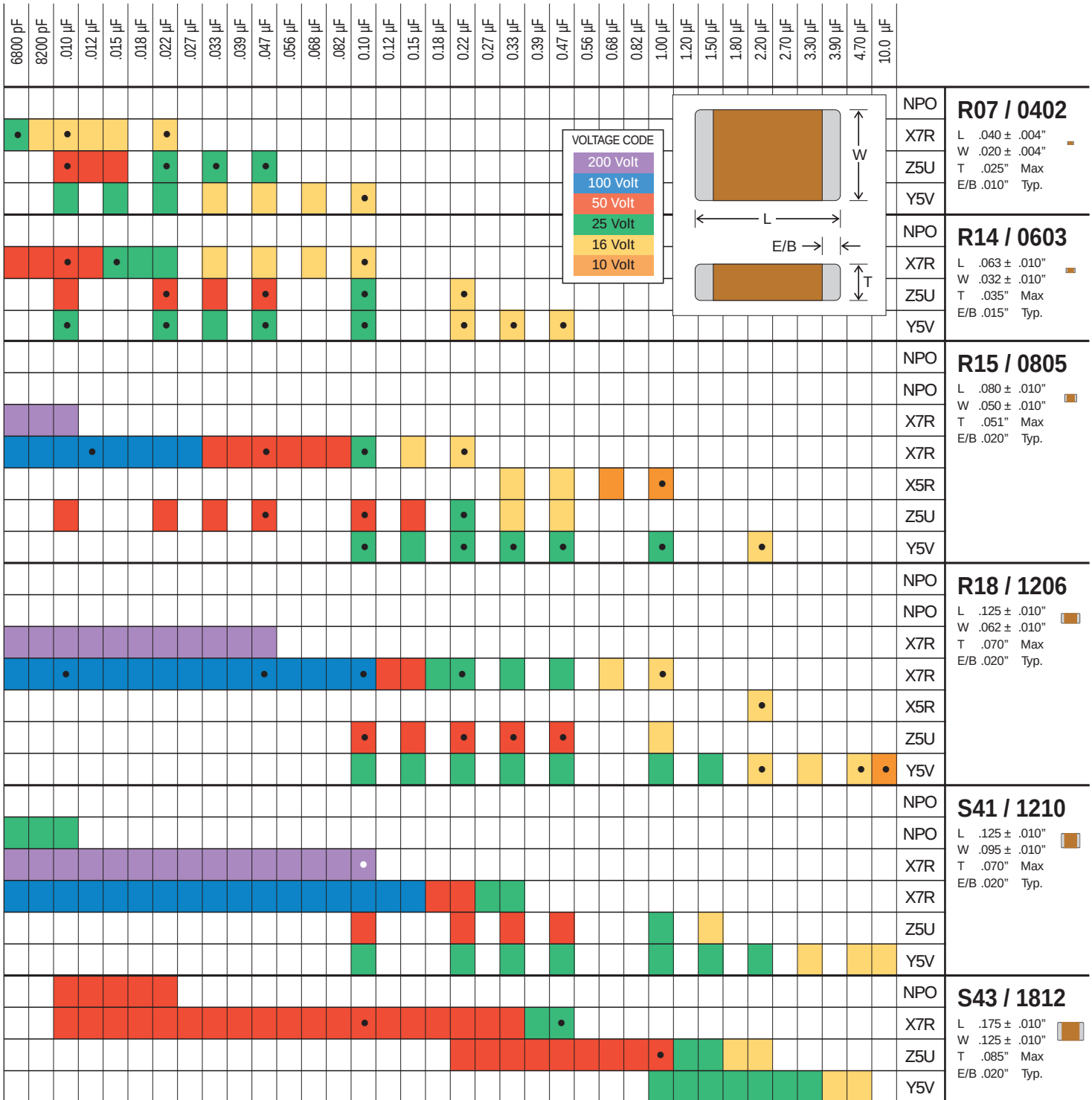
www.johanson-caps.com

SURFACEMOUNT CERAMIC MLCC'S (10 - 200 VOLTS DC)



Notes: • Indicates popular values. Complete Electrical & Mechanical Charateristics may be found at www.johanson-caps.com

15191 Bledsoe St., Sylmar, California 91342 • (818) 364-9800 • FAX (818) 364-6100



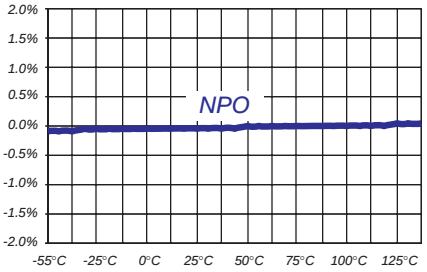
For other size/voltage/capacitance combinations please contact the factory

CERAMIC DIELECTRIC CHARATERISTICS

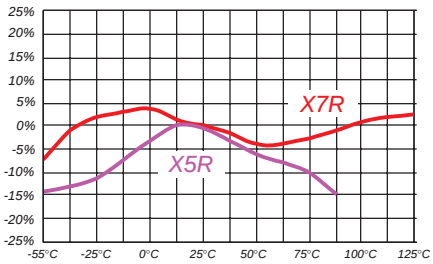
SPECIFICATION	NPO	X7R	X5R	Z5U	Y5V - Tanceram®
Temperature Coefficient:	0 ± 30 ppm/°C	± 15%	± 15%	+ 22% - 56%	+ 22% - 82%
Temperature Range:	-55 to +125°C	-55 to +125°C	-55 to +85°C	+10 to +85°C	-30 to 85°C
Dissipation Factor, Max.:	All Rated Voltages: 0.1%	For ≥ 50 WVDC: 2.5% For 25 WVDC: 3.0% For 16 WVDC: 3.5%	For ≥ 25 WVDC: 3.0% For 16 WVDC: 3.5% For 10 WVDC: 5.0%	For ≥ 25 WVDC: 4.0% For 16 WVDC: 5.0%	For ≥ 25 WVDC: 5.0% For 16 WVDC: 7.0% For 10 WVDC: 9.0%
Ageing, Typical per decade hr:	None	2.5%	2.5%	5.0%	7.0%
Insulation Resistance, Min. (1):	1000ΩF or 100 GΩ	1000ΩF or 100 GΩ	1000ΩF or 100GΩ	100ΩF or 10 GΩ	100 ΩF or 10 GΩ
Dielectric Strength, Min. (2):	2.5 X WVDC	2.5 X WVDC	2.5 X WVDC	2.5 X WVDC	2.5 X WVDC

Test Notes: *25°C, WVDC., Test Freq. = 1Khz ±50Hz, 1.0±0.2 VRMS, (1Mhz ±50kHz, 1.0±0.2 VRMS For NPO Values ≤ 100 pF), (1) whichever less, (2) 50 mA Max*

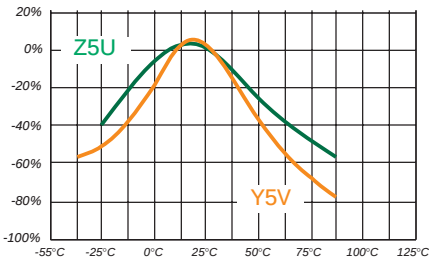
Typical Capacitance Change vs Temperature



Typical Capacitance Change vs Temperature



Typical Capacitance Change vs Temperature



HOW TO ORDER

500	R15	N	101	J	V	4	E

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

CASE SIZE
R07=0402
R14=0603
R15=0805
R18=1206
S41=1210
R29=1808
S43=1812
S49=1825
S48=2225

DIELECTRIC
N = NPO
W = X7R
X = X5R
Z = Z5U
Y = Y5V

CAPACITANCE
1st two digits are significant; third digit denotes number of zeros, R = decimal.
1R0 = 1.0 pF
100 = 10 pF
102 = 1,000 pF
474 = 0.47 µF

TOLERANCE
* B = ± 0.10 pF
* C = ± 0.25 pF
* D = ± 0.50 p
F = ± 1 %
G = ± 2%
J = ± 5%
K = ± 10%
M = ± 20%
Z = +80 -20%
*Values < 10 pF only

TERMINATION
V = Nickel Barrier

MARKING
4 = Unmarked
6 = EIA "J" Code*
*Not available on 0402 & 0603 sizes

TAPE MODIFIER

Tape Code	Tape Type	Reel Size
U	Embossed	13"
R	Punched	7"
E	Embossed	7"
T	Punched	7"
Z	Embossed	5"
Y	Punched	5"

Tape specifications conform to EIA RS481

Part number written: 500R15N101JV4E