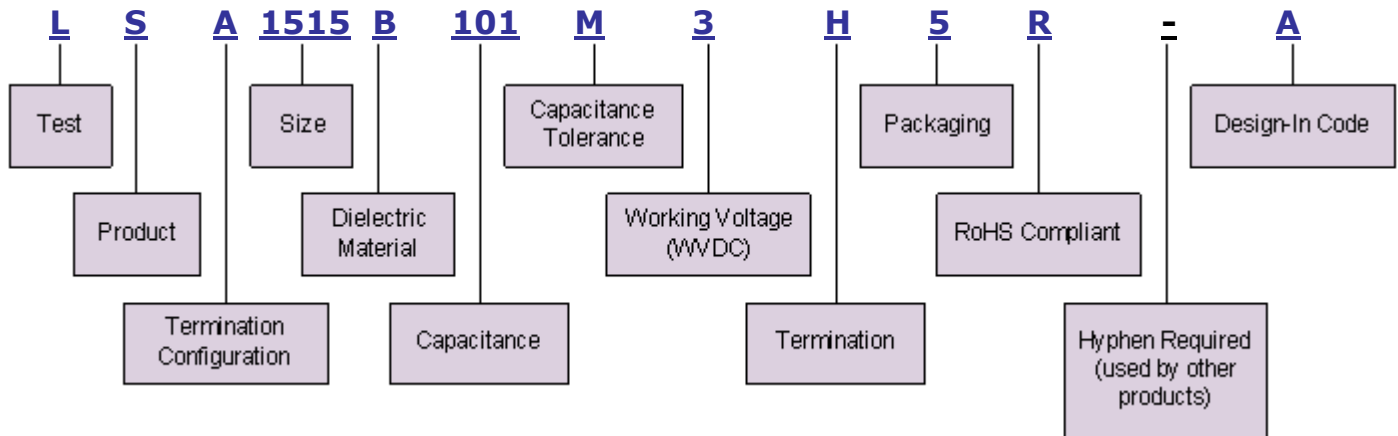


# Buried Single Layer™ Capacitors

## How To Order

### Global Part Number Example



### Testing Codes

Presidio Components' quality system is ISO 9001 compliant and approved to Mil-I-45208 and Mil-Std-790.

#### Code Description

##### Industrial Rating, 65°C Continuous Operating Temperature

- L** **Electrical:** 100% capacitance and dissipation factor (DF), AQL Level II 1% per ANSI/ASQ Z1.4 for insulation resistance (IR) and dielectric withstanding voltage (DWV)  
**Visual:** 100%, as per Mil-Std-883, Method 2032  
 Can be upgraded to test code H as per Mil-PRF-38534

##### Military Rating, 85°C Continuous Operating Temperature

- M** Electrical and visual testing same as L code  
 Can be upgraded to test codes H and K as per Mil-PRF-38534, and as per Mil-PRF-49464/B, Group A and B testing @ 125°C

##### Space/Military Rating, 100°C Continuous Operating Temperature

- N** Electrical and visual testing same as L code except 100% insulation resistance and dielectric withstanding voltage  
 Can be upgraded to test codes H and K as per Mil-PRF-38534, and as per Mil-PRF-49464/B, Group A and B testing

#### MIL-PRF-38534E

- H** **Class H** element evaluation (electrical, visual, wire bond)  
**K** **Class K** element evaluation (electrical\*, visual, temperature cycling, voltage conditioning, constant acceleration, wire bond)

#### High Reliability Testing as per Mil-C-49464A/B

Modified Moisture Resistance Test not Included

- A** **Group A**, subgroups 1,2,3,4 (100% thermal shock and voltage conditioning, visual mechanical, bond & die shear, temperature coefficient)  
**B** **Group B**, subgroups 1,2,3,4 (temperature coefficient and immersion, resistance to soldering heat, humidity, steady state, low voltage, 2000 hours life test)



# Buried Single Layer™ Capacitors How To Order

## D Special Instructions or as per Customer Source Control Drawing

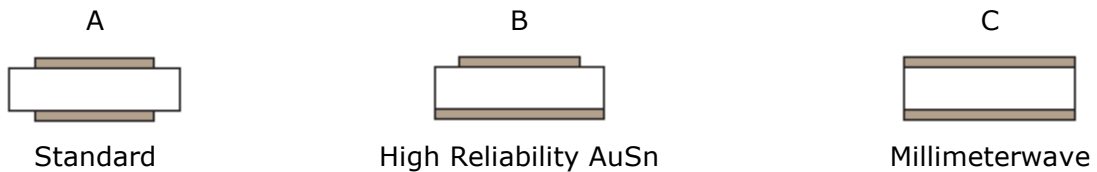
\* **Note:** Includes 100% testing: Capacitance, Dissipation Factor, Insulation Resistance and Dielectric Withstanding Voltage

## Product Code

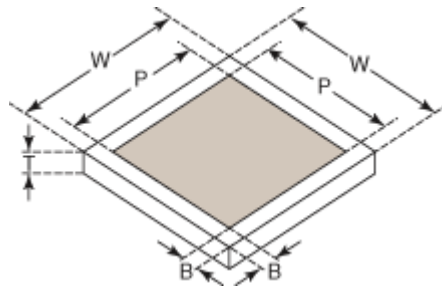
S Buried Single Layer™ Ceramic Capacitor

## Termination Configuration Codes

- A Borders top and bottom
- B Borders top, full metallization at bottom
- C Full metallization top and bottom



## Size Codes



Inches						
Size	Width	Tolerance	Thickness	Tolerance	Nominal P	Minimum B
1010	0.010	±0.002	0.005	±0.002	0.007	0.0005
1212	0.012	±0.002	0.005	±0.002	0.009	0.0005
1515	0.015	±0.002	0.005	±0.002	0.011	0.001
1717	0.017	±0.002	0.005	±0.002	0.013	0.001
2020	0.020	±0.002	0.005	±0.002	0.016	0.001
2222	0.022	±0.002	0.005	±0.002	0.018	0.001
2525	0.025	±0.002	0.005	±0.002	0.021	0.001
2727	0.027	±0.002	0.005	±0.002	0.023	0.001
3030	0.030	±0.002	0.005	±0.002	0.026	0.001
3535	0.035	±0.005	0.005	±0.002	0.031	0.001



## Buried Single Layer™ Capacitors How To Order

Millimeters (reference only)						
Size	Width	Tolerance	Thickness	Tolerance	Nominal P	Minimum B
1010	0.254	±0.051	0.127	±0.051	0.178	0.013
1212	0.305	±0.051	0.127	±0.051	0.229	0.013
1515	0.381	±0.051	0.127	±0.051	0.279	0.025
1717	0.432	±0.051	0.127	±0.051	0.330	0.025
2020	0.508	±0.051	0.127	±0.051	0.406	0.025
2222	0.559	±0.051	0.127	±0.051	0.457	0.025
2525	0.635	±0.051	0.127	±0.051	0.533	0.025
2727	0.686	±0.051	0.127	±0.051	0.584	0.025
3030	0.762	±0.051	0.127	±0.051	0.660	0.025
3535	0.889	±0.127	0.127	±0.051	0.787	0.025

Maximum thickness limits may not apply for values below 1.0 pF

### Dielectric Material Codes and Electrical Specifications

Dielectric Code	Global Part Code	Relative Er at 1 MHz	Temperature Coefficient -55°C to +125°C	Maximum Dissipation Factor	Insulation Resistance at 25°C	Dielectric Withstanding Voltage
NPQ	Q	27	0 ± 25 ppm	0.1%	> 10 <sup>5</sup> MΩ	2.5 times working voltage DC
NPO	N	85	0 ± 30 ppm	0.15%	> 10 <sup>5</sup> MΩ	
BX	B	2600	± 15%	2.5%, 3.5%,	> 10 <sup>5</sup> MΩ	

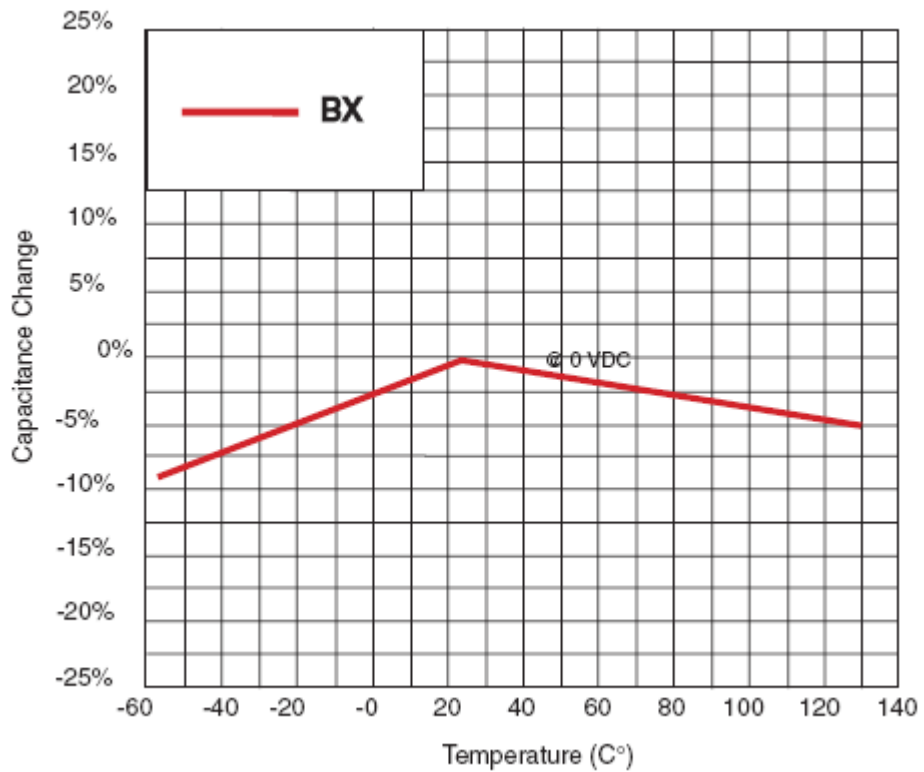
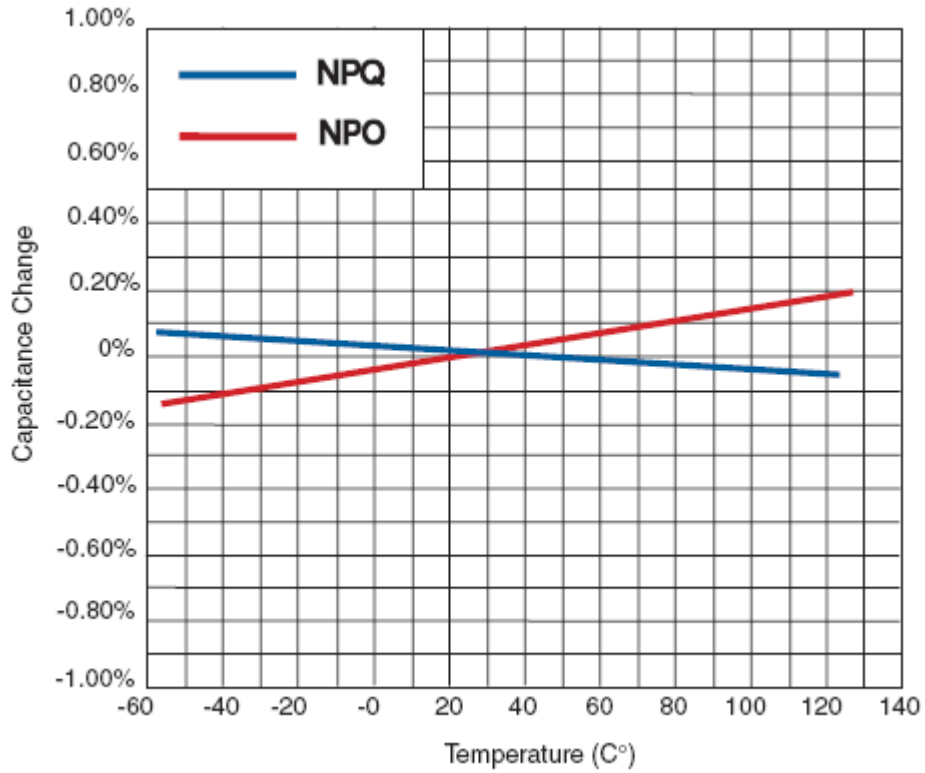
Aging Rate: BX material only = 2.5% max per decade hour

All testing as per Mil-C-49464/B with the exception of moisture resistance, unless otherwise specified

\* Voltage ratings applicable to: 2.5% = 100V and 50V, 3.5% = 25V and 16V, 5.0% = 10V



# Buried Single Layer™ Capacitors How To Order



# Buried Single Layer™ Capacitors

## How To Order

### Capacitance Codes

First two digits = Significant figures of capacitance in picofarads.

Third digit = Additional number of zeros.

Example: 0R1 = 0.1 pF

1R0 = 1.0 pF

100 = 10 pF

101 = 100 pF

### Capacitance Tolerance Codes

Code	Tolerance	Cap Range	Dielectrics
A	± .05 pF	< 2.2 pF	NPQ, NPO
B	± .1 pF	< 10 pF	NPQ, NPO
C	± .25 pF	< 10 pF	NPQ, NPO
D	± .5 pF	< 10 pF	NPQ, NPO
G	± 2%	> 9.1 pF	NPQ, NPO
J	± 5%	> 9.1 pF	NPQ, NPO
K	± 10%	> 0.45 pF	all
M	± 20%	> 0.45 pF	all
P	+ 100, - 0%	> 0.45 pF	all

\* Does not apply for the highest cap value per case size and voltage rating.

### Working Voltage Codes

Code	WVDC
3	100
2	50
1	25
G	16
E	10

See standard available capacitance values and voltage ratings on our Applications page.  
Contact Presidio Components for higher and lower voltage ratings.

### Termination Codes

Code	Material	Thickness	Wire	Attachment
H	99.95% Au	100 microinches minimum	Au	Conductive Epoxy or AuSn
J	99% Au Alloy		Al or Au	



# Buried Single Layer™ Capacitors How To Order

## Packaging Codes

Code	Description
5	Waffle Pack (400 max/waffle pack)
F	Grip Ring (blue tape)
1	Tape and Reel (minimum size 2020)

## RoHS Compliance Codes

Code	Compliant
N	No
R	Yes

