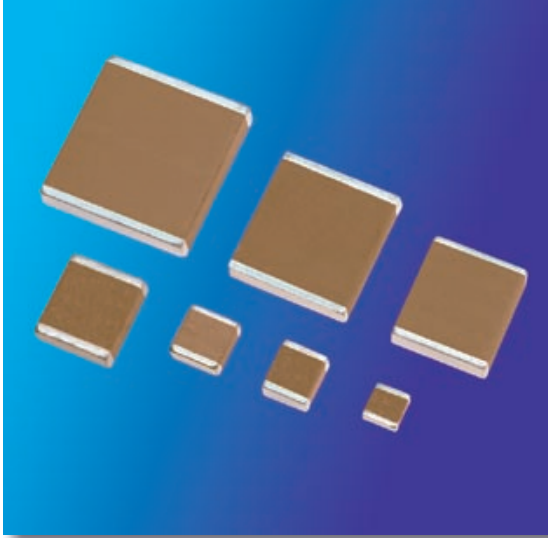


# HIGH TEMPERATURE SURFACE MOUNT CAPACITORS



## KEY FEATURES

- For Use at Temperatures Up to 200°C
- Rated Working Voltages from 50V to 200V
- MLC Designs Utilizing Military Grade Ceramics
- Custom Sizes, Values, and Voltages Available

## APPLICATIONS

- For Use in High Temperature Applications, Such as:
  - Oil Well Logging (Downhole)
  - Geophysical Probes
  - Jet Engine Controls

## CAPACITANCE / VOLTAGE SELECTION

Case Size	NPO Max Capacitance			X7R Max Capacitance		
	50 V	100 V	200 V	50 V	100 V	200 V
<b>T15</b>	1500 pF	1000 pF	470.0 pF	0.018 μF	8200 pF	3900 pF
<b>T18</b>	3900 pF	2200 pF	1000 pF	0.039 μF	0.022 μF	0.010 μF
<b>T41</b>	4700 pF	3300 pF	2200 pF	0.120 μF	0.056 μF	0.027 μF
<b>T43</b>	0.022 μF	0.010 μF	4700 pF	0.270 μF	0.150 μF	0.075 μF
<b>T49</b>	0.056 μF	0.039 μF	0.033 μF	0.750 μF	0.390 μF	0.220 μF
<b>T48</b>	0.075 μF	0.056 μF	0.039 μF	1.000 μF	0.560 μF	0.270 μF

## DIELECTRIC CHARACTERISTICS

TEMPERATURE COEFFICIENT:

CAP DROP AT 200°C:

DISSIPATION FACTOR:

INSULATION RESISTANCE:  
@25°C

INSULATION RESISTANCE:  
@200°C

DIELECTRIC STRENGTH:

TEST PARAMETERS:

### NPO DIELECTRIC

0 ± 30 ppm, -55 to 125°C

minus 0.5% max

.001 (0.1%) max, 1Khz, 25°C

1000 ΩF or 100 GΩ, whichever is less @ 25°C, WVDC

1 ΩF or 100 MΩ, whichever is less @ 200°C, WVDC

2.5 X WVDC, 25°C, 50 mA max

1Khz ± 50Hz, 1.0±0.2 VRMS, 25°C

### X7R DIELECTRIC

0 ± 15% , -55 to 125°C

minus 45% max

.025 (2.5%) max, 1KHz, 25°C

1000 ΩF or 100 GΩ, whichever is less @ 25°C, WVDC

1 ΩF or 100 MΩ, whichever is less @ 200°C, WVDC

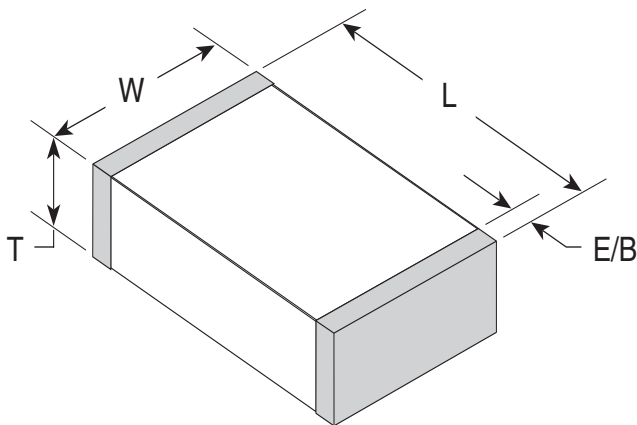
2.5 X WVDC, 25°C, 50 mA max

1Khz ± 50Hz, 1.0±0.2 VRMS, 25°C

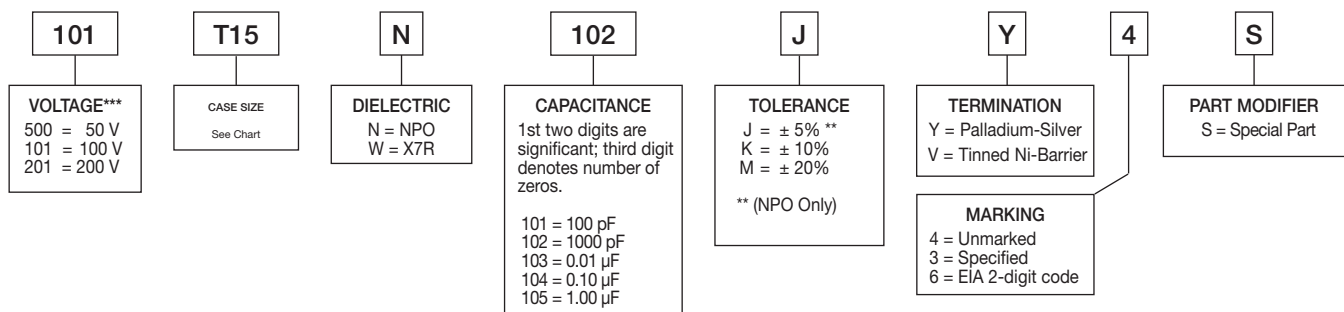
## MECHANICAL CHARACTERISTICS

Size Code	T (max)		W ( $\pm 10\%^*$ )		L ( $\pm 10\%^*$ )		E/B	
	mm.	In.	mm.	In.	mm.	In.	mm.	In.
<b>T15 / 0805</b>	1.27	<b>0.050</b>	1.27	<b>0.050</b>	2.03	<b>0.080</b>	0.51	0.020 $\pm$ 0.010
<b>T18 / 1206</b>	1.27	<b>0.050</b>	1.57	<b>0.062</b>	3.18	<b>0.125</b>		
<b>T41 / 1210</b>	1.65	<b>0.065</b>	2.41	<b>0.095</b>	3.18	<b>0.125</b>		
<b>T43 / 1812</b>	2.16	<b>0.085</b>	3.18	<b>0.125</b>	4.45	<b>0.175</b>	0.64	0.025 $\pm$ 0.015
<b>T49 / 1825</b>	2.79	<b>0.110</b>	6.35	<b>0.250</b>	4.57	<b>0.180</b>		
<b>T48 / 2225</b>	2.79	<b>0.110</b>	6.35	<b>0.250</b>	5.72	<b>0.225</b>		

\* Note: L and W tolerances are  $\pm 10\%$  or 0.010", whichever is larger



## HOW TO ORDER



\*\*\*Working Voltage (WVDC) is derated 50% at 200°C (see example)

Example Part number written: 101T15N102JY4 = Rated 100 VDC@125°C, 50VDC@200°C 1000pF  $\pm 5\%$  NPO in T15 (0805) size.