





# Ultra SLC™ - The New High K Single Layer Capacitor Solution

DLI is pleased to introduce our Ultra SLC™ product family using our new high K "UX" dielectric that gives you the advantage of a 10-fold increase in dielectric constant, so the choice is yours -

- Increased capacitance in the same package size
- or:
- The same capacitance in a smaller package

Ultra SLC™ products are available in DLI's broad range of standard SLC architectures, including Di-Cap®, Border Cap™, Bar Cap™ and GapCap™, or to your custom design. Call us for details.

### Typical Applications:

- SONET & Ultra-Broadband Modules
- Microwave T/R Modules
- Millimeter Wave Modules
- ECM & ECCM Modules

### Circuit function:

- Ultra-Broadband Decoupling
- Broadband DC Blocking
- Amplifier Stabilization
- Energy storage

### Features:

- Highest Capacity Density SLC
- X7R Temperature Stability
- Rugged Ceramic & Thin Film Gold
- Ideal for Epoxy & Wire Bond Assembly
- Excellent Dimensional Tolerance

Here's an example of how Ultra SLC™ can help you - Compare the maximum capacitance values for new Ultra SLC™ Di-Cap® compared to a typical Di-Cap®:

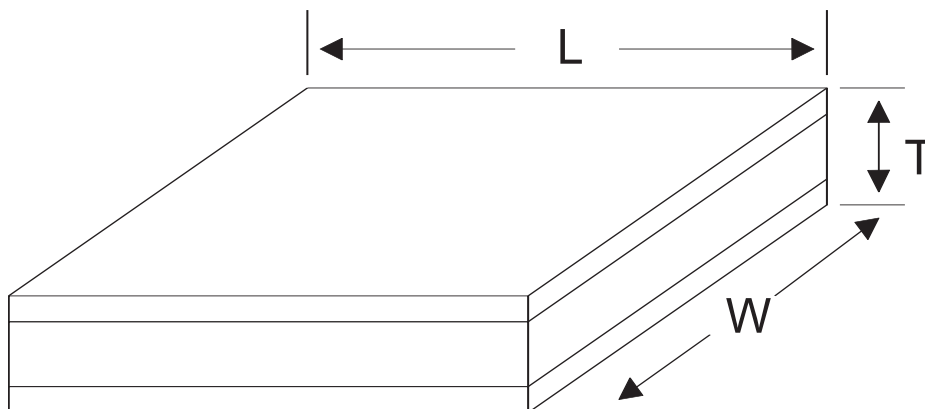
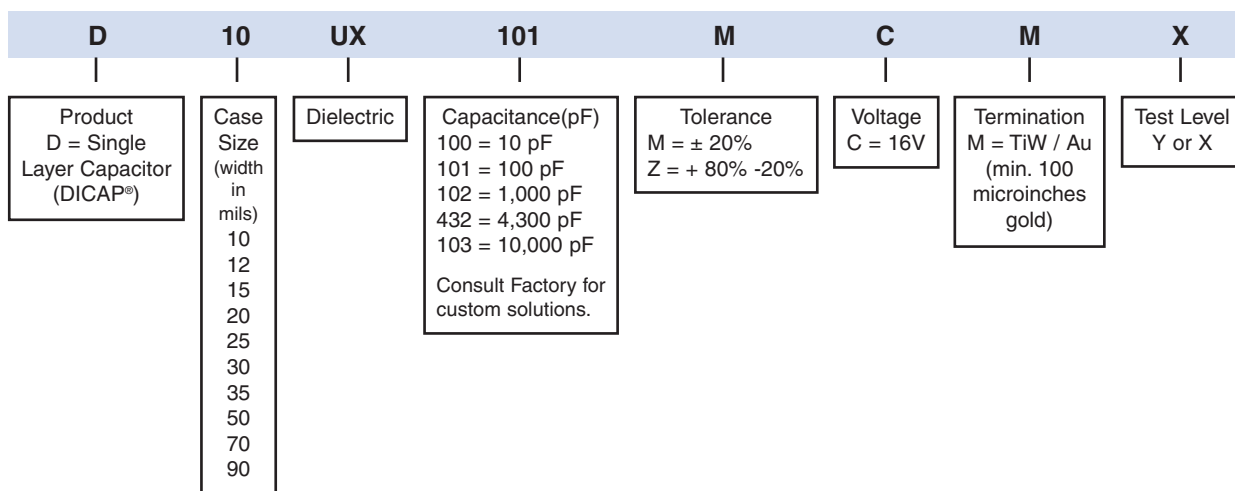
Maximum Capacitance Value (pF)		
Chip Size	Typical X7R Di-Cap®	Ultra SLC Di-Cap®
D10	11	100
D15	24	350
D20	43	470
D25	68	800
D30	97	1,000
D35	132	1,500
D50	270	3,700
D70	530	6,500
D90	875	10,000

More capacitance, same size

# Ultra SLC™ Di-Cap®

Fully electroded on each major face

## Ultra SLC™ DiCap® Part Number Convention:



## Typical Ultra SLC™ Di-Cap® Values :

Style	Width		Length (max)		Capacitance (pF)		
	Inches	mm	Inches	mm	Thickness		
					Inches *t = 0.015	Inches *t = 0.010	Inches *t = 0.005
D10	.010 +.000, -.003	.254 +.000, -.076	.010	.254	NA	NA	100
D12	.012 +.002, -.003	.305 + .051 -.076	.015	.381	NA	NA	200
D15	.015 +.000, -.003	.381 +.000, -.076	.020	.508	NA	NA	350
D20	.020 +.000, -.003	.508 +.000, -.076	.020	.508	NA	200	470
D25	.025 +.000, -.003	.635 +.000, -.076	.030	.762	270	460	800
D30	.030 +.000, -.003	.762 +.000, -.076	.030	.762	360	510	1,000
D35	.035 ± .005	.889 ± .127	.040	1.016	560	800	1,500
D50	.050 ± .010	1.270 ± .254	.060	1.524	1,200	1,800	3,700
D70	.070 ± .010	1.778 ± .254	.080	1.778	2,200	3,300	6,500
D90	.090 ± .010	2.286 ± .254	.100	2.540	3,500	5,300	10,000

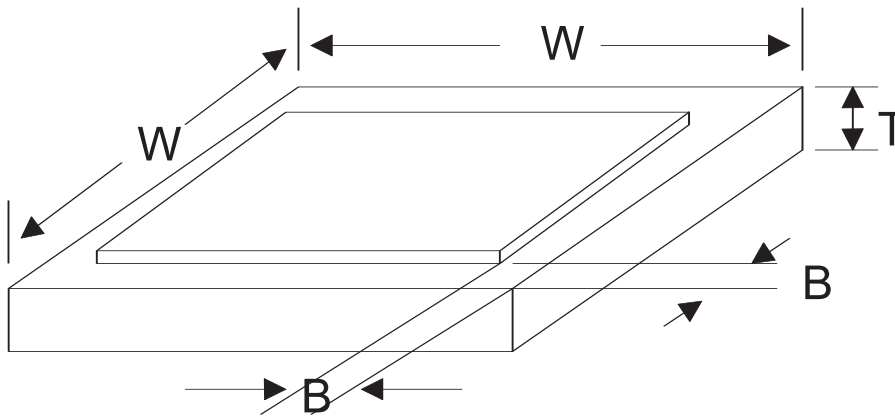
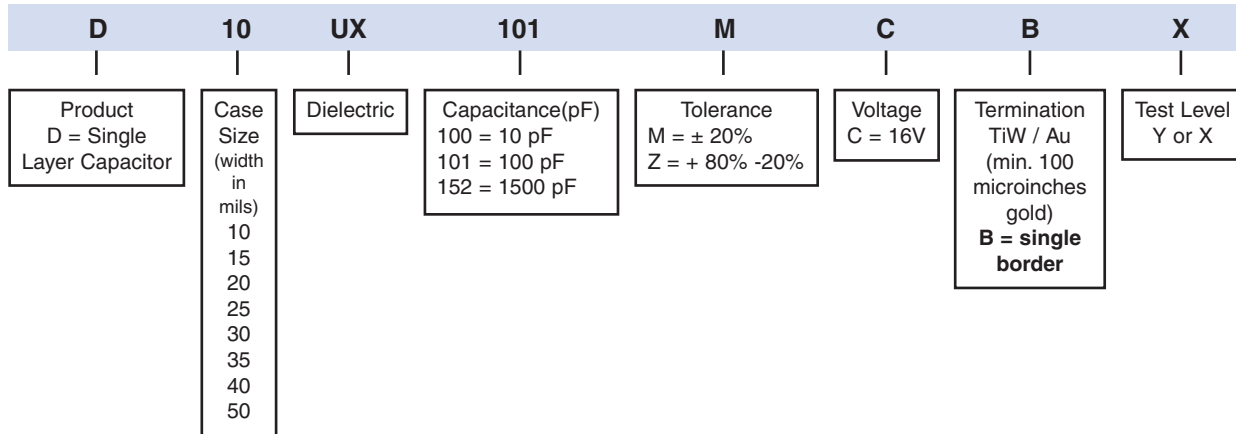
\*t = thickness

Consult factory for special requirements.

# Ultra SLC™ Border-Cap™ – Single Border

Non-electroded border on top face. Reduces opportunities for shorting during mounting

## Ultra SLC™ Border-Cap™ Part Number Convention:



## Typical Ultra SLC™ Border-Cap™ Values – Single Border:

Style	Length & Width		Pad Size		Border Dimensions		Capacitance (pF)		
	Inches (± .002)	mm (±.025)	Inches (nom.)	mm (nom.)	Inches	mm	Inches *t = 0.015	Inches *t = 0.010	Inches *t = 0.005
D10	0.010	0.254	0.008	0.203	0.001 (+.002, -.0005)	0.0254 (+.0508, -.0127)	NA	NA	100
D15	0.015	0.381	0.011	0.279	0.002 (+.003, -.0015)	0.508 (+.0762, -.0381)	NA	130	200
D20	0.020	0.508	0.016	0.406			150	220	430
D25	0.025	0.635	0.021	0.533			250	370	700
D30	0.030	0.762	0.026	0.660			370	540	1,000
D35	0.035	0.889	0.031	0.787			500	820	1,300
D40	0.040	1.016	0.036	0.914			700	1,000	1,800
D50	0.050	1.270	0.046	1.168			1,000	1,500	3,000

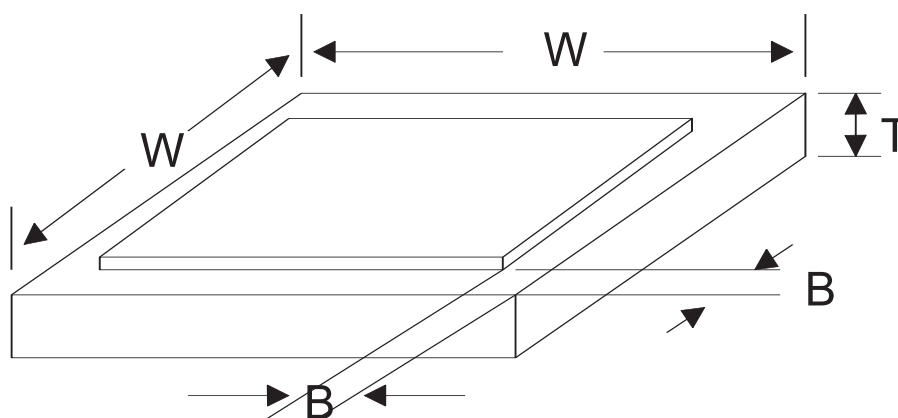
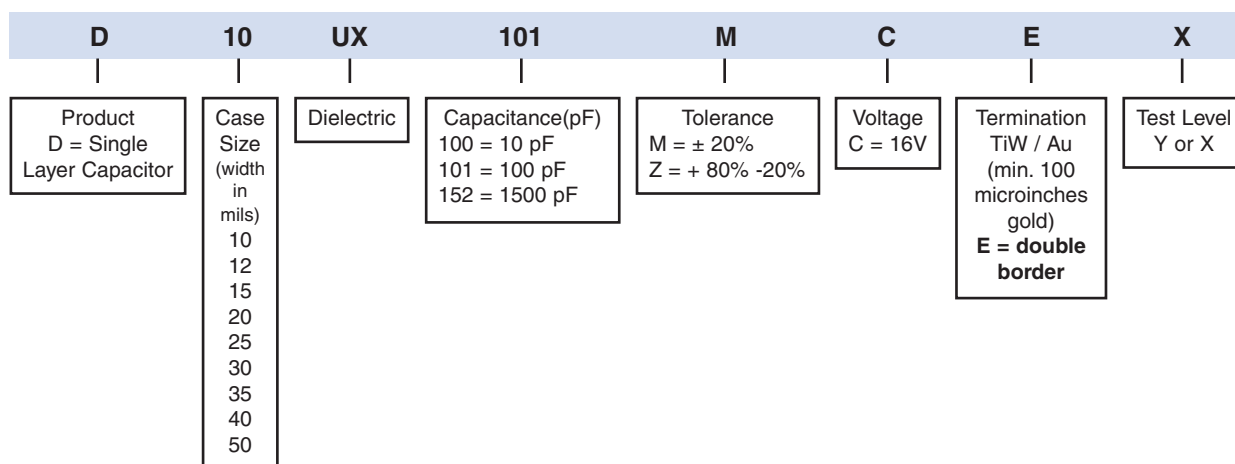
\*t = thickness

Consult factory for special requirements.

# Ultra SLC™ Border-Cap™ – Double Border

Non-electroded border on top and bottom faces – Reduces opportunities for shorting during mounting

## Ultra SLC™ Border-Cap™ Part Number Convention:



## Typical Ultra SLC™ Border-Cap™ Values – Double Border:

Style	Length & Width		Pad Size		Border Dimensions		Capacitance (pF)		
	Inches (± .002)	mm (±.025)	Inches (nom.)	mm (nom.)	Inches	mm	Inches *t = ± 0.015	Inches *t = ± 0.010	Inches *t = ± 0.005
D10	0.010	0.254	0.008	0.203	0.001 (+.002, -.0005)	0.0254 (+.0508, -.0127)	NA	NA	100
D12	0.012	0.305	0.010	0.254			NA	NA	NA
D15	0.015	0.381	0.011	0.279	0.002 (+.003, -.0015)	0.0508 (+.0762, -.0381)	NA	100	200
D20	0.020	0.508	0.016	0.406			150	240	370
D25	0.025	0.635	0.021	0.533			220	340	600
D30	0.030	0.762	0.026	0.660			340	500	900
D35	0.035	0.889	0.031	0.787			470	700	1,300
D40	0.040	1.016	0.036	0.914			600	920	1,800
D50	0.050	1.270	0.046	1.168			1,000	1,500	2,800

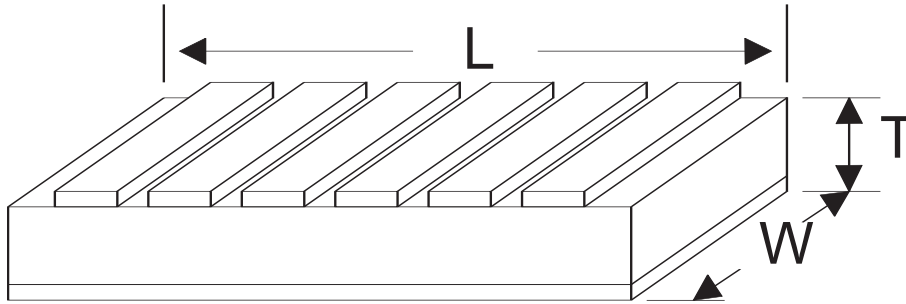
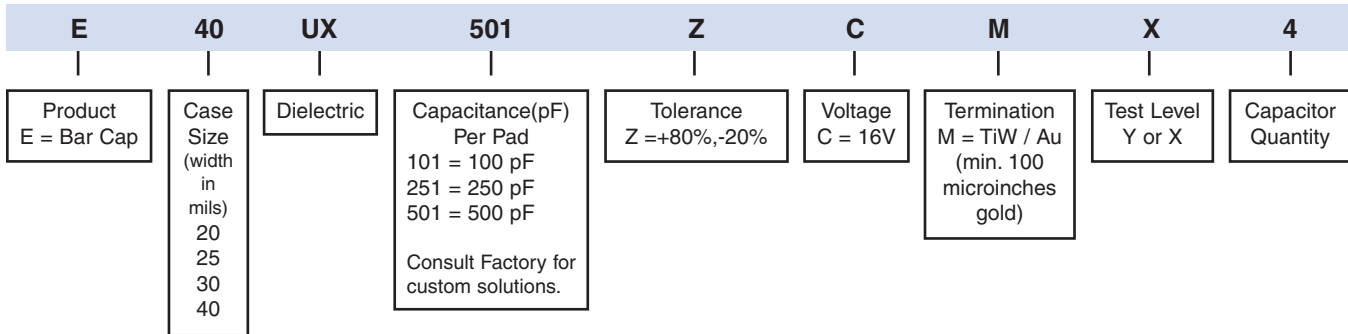
\*t = thickness

Consult factory for special requirements.

# Ultra SLC™ Bar-Cap™

Single substrate capacitor array – Multiple capacitor insertion in a single operation

## Ultra SLC™ Bar Cap™ Part Number Convention:



## Typical Ultra SLC™ Bar Cap™ Values:

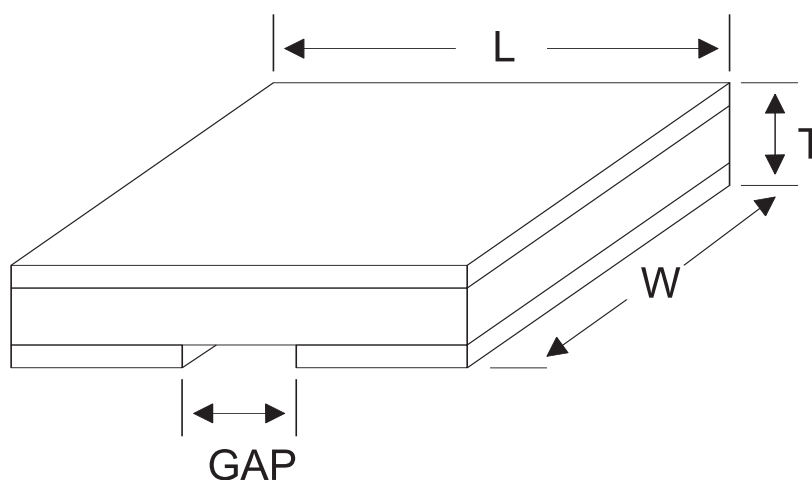
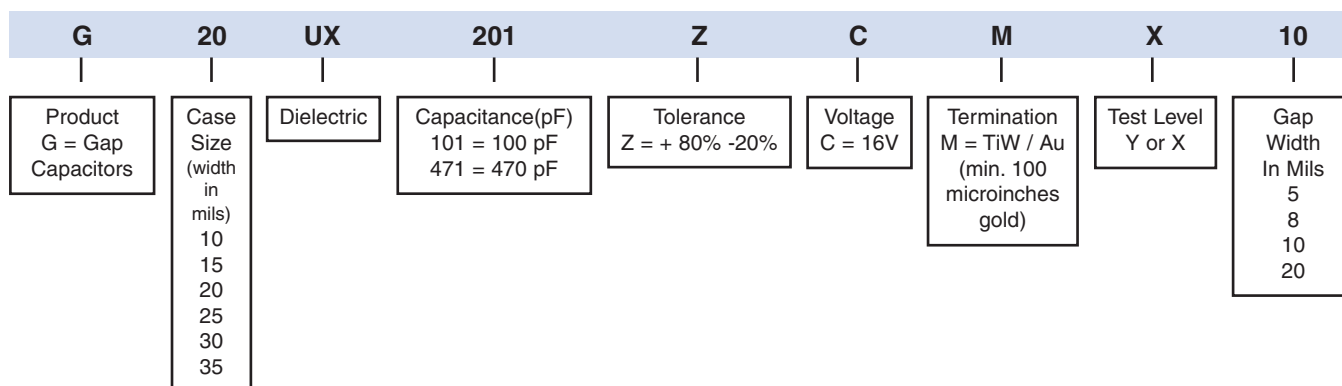
Part #	# of Caps	Value of Each Cap (pF)	Width		Length		Pad Size		Thickness	
			Inches (± .003)	mm (±.076)	Inches (± .005)	mm (±.127)	Inches (± .005)	mm (±.127)	Inches (± .001)	mm (±.0254)
E20UX251ZCMX3	3	250	0.020	0.508	0.065	1.651	.020 x .015	.508 x .381	0.010	0.254
E20UX251ZCMX4	4				0.085	2.159				
E20UX251ZCMX6	6				0.125	3.175				
E25UX321ZCMX3	3	320	0.025	0.635	0.065	1.651	.025 x .015	.635 x .381		
E25UX321ZCMX4	4				0.085	2.159				
E25UX321ZCMX6	6				0.125	3.175				
E30UX381ZCMX3	3	380	0.030	0.762	0.065	1.651	.030 x .015	.762 x .381		
E30UX381ZCMX4	4				0.085	2.159				
E30UX381ZCMX6	6				0.125	3.175				
E40UX501ZCMX3	3	500	0.040	1.016	0.065	1.651	.040 x .015	1.016 x .381		
E40UX501ZCMX4	4				0.085	2.159				
E40UX501ZCMX6	6				0.125	3.175				

Consult factory for special requirements.

# Ultra SLC™ Gap-Cap™

## Two SLCs in a series configuration – Eliminates wire bonding

### Ultra SLC™ Gap-Cap™ Part Number Convention:



### Typical Ultra SLC™ Gap-Cap™ Values :

Case size	Gap (nom.)		Width		Length (Max)		Capacitance (pF)		
	Inches	mm	Inches	mm	Inches	mm	Inches *t = 0.015	Inches *t = 0.010	Inches *t = 0.005
G10	.005	.127	.010 +.000, -.003	.254 +.000, -.076	.030	.762	NA	NA	70
G15	.008	.203	.015 +.000, -.003	.381 +.000, -.076	.040	1.016	NA	70	130
G20	.010	.254	.020 +.000, -.003	.508 +.000, -.076	.050	1.270	90	120	200
G25	.020	.508	.025 +.000, -.003	.635 +.000, -.076	.060	1.524	120	160	300
G30	.020	.508	.030 +.000, -.003	.762 +.000, -.076	.060	1.524	150	200	360
G35	.020	.508	.035 ± .005	.889 ± .127	.060	1.524	160	240	400

\*t = thickness

Consult factory for special requirements.

