Border Cap®

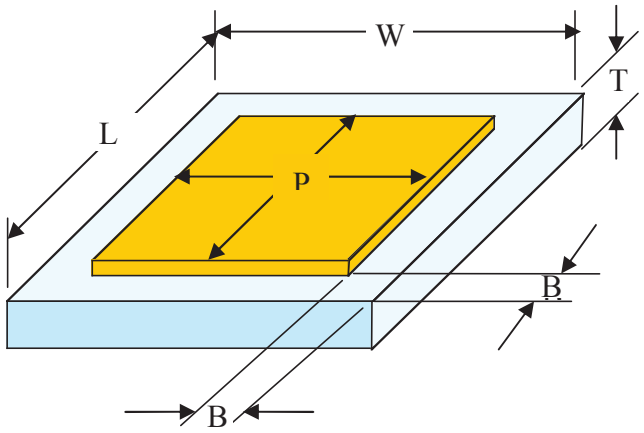
SLC with recessed metallization available with

Functional Applications:

- DC Blocking
- RF Bypass
- Filtering
- Tuning
- Submounts

Benefits:

- Recessed metallization minimizes the potential for shorting during die attach
- Bordered area provides contrast for vision recognition during auto placement and bonding



Please see the Border Cap® Dimension chart below



Border Cap® Dimensions

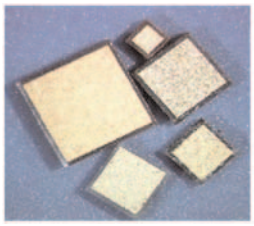
Style	Standard Capacitance Range	L & W Length & Width		P Pad Size		B Border		T Thickness	
	pF	Inches (± .001)	mm (± .025)	Inches (Nom.)	mm (Nom.)	Inches	mm	Inches	mm
D10	.02 – 100	0.010	0.254	0.008	0.203	0.001 (+.001,-.0005)	0.025 (+.025,-.013)	0.0035 – 0.008	0.089 – 0.203
D12	.03 – 100	0.012	0.305	0.010	0.254				
D15	.03 – 200	0.015	0.381	0.011	0.279	0.002 (+.002, -.0015)	0.051 (+.005, -.038)		
D20	.06 – 430	0.020	0.508	0.016	0.406				
D25	.10 – 700	0.025	0.635	0.021	0.533				
D30	.15 – 1000	0.030	0.762	0.026	0.660				
D35	.20 – 1300	0.035	0.889	0.031	0.787				
D40	.25 – 1800	0.040	1.016	0.036	0.914				
D50	.40 - 3000	0.050	1.270	0.046	1.168				

UX contain special dimensional tolerances - consult factory.
UX thickness only available in .005", .010" and .015"

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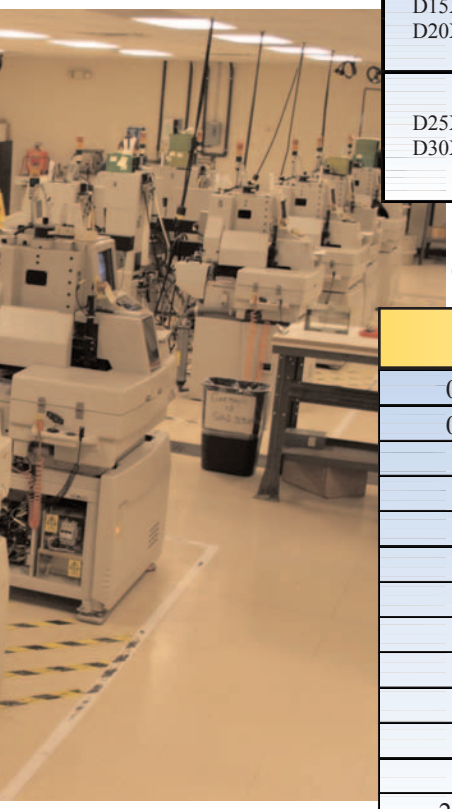
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either single- or double-width border on one or both sides



Border Cap® Designer Kits
160 Capacitors, 10 Each of 16 Values

Part Number	Capacitor Width	10 Capacitors of each value							
		Dielectric	pF	Tol.	pF	Tol.	pF	Tol.	pF	Tol.
D10XXKITA1EX	.010"	Class I, see codes on pg. 5	.1 .4	B B	.6 1.0	C C	1.5 2.2	C D	2.7 3.3	D D
		Class II, see codes on pg. 5	3.9 4.6	D D	5.6 6.2	M M	8.2 10	M M	20 33	M M
D15XXKITA1EX D20XXKITA1EX	.015" .020"	Class I, see codes on pg. 5	.15 .35	B B	.7 1.0	C C	1.6 2.2	C C	3.3 6.4	D D
		Class II, see codes on pg. 5	6.8 8.2	K K	10 15	K K	20 33	M M	50 100	M M
D25XXKITA1EX D30XXKITA1EX	.025" .030"	Class I, see codes on pg. 5	.4 .6 0.9	B C C	1.7 1.9 2.7	C C C	4.0 5.0 5.6	D D D	8.2 10 20	K K K
		Class II, see codes on pg. 5	33	M	50	M	100	M	180	M



DLI reserves the right to substitute values as required.
Customer may request particular cap value and material for sample kit to prove out designs.

Table of Standard Values (pF)

0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1
0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5	0.55
0.6	0.65	0.7	0.75	0.8	0.85	0.9	0.95	1
1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9
2	2.2	2.4	2.7	3	3.3	3.6	3.9	4.3
4.7	5.1	5.6	6.2	6.8	7.5	8.2	9.1	10
11	12	13	15	16	18	20	22	24
27	30	33	36	39	43	47	51	56
62	68	75	82	91	100	110	120	130
150	160	180	200	220	240	270	300	330
360	390	430	470	510	560	620	680	750
820	910	1000	110	1200	1300	1500	1600	1800
2000	220	2400	2700	3000	3300	3600	3900	4300
5300	6500	10,000						

Border Cap® Part Number Identification

D	10	BJ	100	K	1	E	X
Product D = Single Layer Capacitor (Border Cap)	**Case Size** 10 12 15 20 25 30 35 40 50	**Material** See Material tables on page 5 in the General Section.	**Capacitance(pF)** R02 = 0.02 pF 0R5 = 0.5 pF 1R0 = 1.0 pF 5R1 = 5.1 pF 100 = 10 pF 101 = 100 pF 152 = 1500 pF See Capacitance tables for available values. Consult Factory for custom solutions.	**Tolerance** A = ± 0.05pF B = ± 0.10pF C = ± 0.25pF D = ± 0.5pF F = ± 1% G = ± 2% J = ± 5% K = ± 10% L = ± 15% M = ± 20% Z = + 80% -20%	**Voltage** C = 16V 1 = 100V	**Termination** Ni / Au B= single border E = double border	**Test Level** Y, X, A, B, D and E. SeeTest Level Codes on page 7 in the General section.

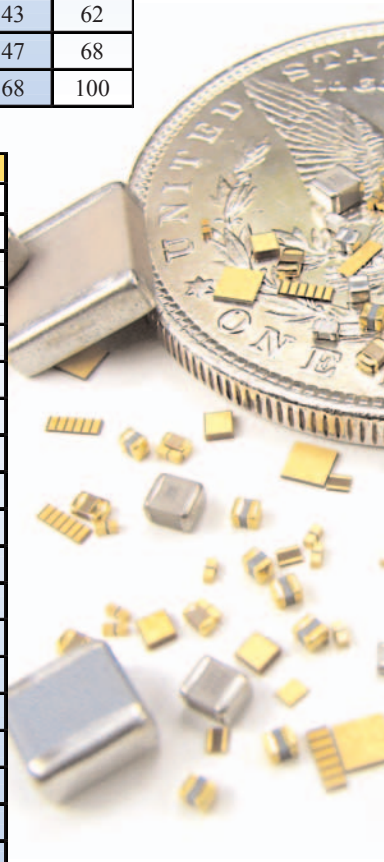
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Single Border Capacitors

Capacitance Range vs. Case Size by Dielectric Material

Style		Class I Dielectric Materials												
		LA	PF	PG	AH	CF	NA	CD	NG	CG	NR	NS	NU	NV
D10	Min	0.02	0.03	0.04	0.06	0.07	0.07	0.15	0.15	0.25	0.50	0.90	1.8	2.7
	Max	0.02	0.05	0.06	0.10	0.10	0.10	0.15	0.20	0.35	0.80	1.5	3.0	4.3
D12	Min	0.03	0.05	0.06	0.09	0.10	0.15	0.20	0.20	0.30	0.70	1.3	2.7	3.9
	Max	0.04	0.07	0.09	0.10	0.15	0.15	0.25	0.30	0.50	1.1	2.2	4.3	6.2
D15	Min	0.04	0.06	0.08	0.15	0.15	0.15	0.25	0.30	0.45	1.00	1.9	3.9	5.6
	Max	0.05	0.09	0.10	0.20	0.20	0.20	0.35	0.40	0.70	1.6	3.0	5.6	8.2
D20	Min	0.07	0.15	0.15	0.25	0.25	0.25	0.45	0.50	0.80	1.8	3.6	6.8	10
	Max	0.10	0.15	0.20	0.35	0.40	0.45	0.70	0.80	1.3	3.0	5.6	11	16
D25	Min	0.15	0.20	0.25	0.40	0.40	0.45	0.70	0.80	1.3	3.0	5.6	11	16
	Max	0.15	0.30	0.40	0.60	0.65	0.70	1.1	1.3	2.0	4.7	9.1	18	27
D30	Min	0.15	0.30	0.35	0.55	0.60	0.65	0.95	1.2	1.8	4.3	8.2	16	24
	Max	0.25	0.45	0.55	0.90	1.0	1.0	1.6	1.9	3.0	6.8	13	27	39
D35	Min	0.25	0.35	0.50	0.75	0.80	0.85	1.4	1.6	2.7	6.2	11	22	33
	Max	0.35	0.60	0.80	1.2	1.3	1.5	2.2	2.7	4.3	10	18	36	56
D40	Min	0.30	0.50	0.65	1.0	1.1	1.2	1.8	2.0	3.3	7.5	15	30	43
	Max	0.40	0.70	0.95	1.4	1.6	1.7	2.7	3.0	5.1	11	22	43	62
D50	Min	0.45	0.8	1.0	1.5	1.7	1.8	2.7	3.3	5.1	12	22	47	68
	Max	0.65	1.1	1.5	2.2	2.4	2.7	4.3	4.7	8.2	18	33	68	100

Style		Class II Materials											
		BF	BD	BG	BC	BE	BL	BJ	BN	BT	BU	BV	UX*
D10	Min	1.3	2.2	2.7	3.9	3.6	6.2	10	13	13	27	39	
	Max	2.2	3.3	4.3	6.2	6.2	10	16	22	22	43	68	100
D12	Min	1.9	3.0	3.9	5.6	5.6	9.1	15	20	20	36	62	
	Max	3.3	5.1	6.2	9.1	9.1	13	24	33	33	62	100	
D15	Min	2.7	4.3	5.6	8.2	8.2	13	20	30	30	56	82	130
	Max	4.3	6.8	8.2	13	12	20	33	43	43	82	130	200
D20	Min	5.1	8.2	10	15	15	24	39	51	51	100	150	150
	Max	8.2	13	16	24	22	36	62	82	82	160	240	430
D25	Min	8.2	13	16	24	24	36	62	82	82	150	240	250
	Max	13	20	27	39	36	56	100	130	130	240	390	700
D30	Min	12	18	24	36	33	56	91	120	120	220	360	370
	Max	20	30	39	56	56	91	150	200	200	360	560	1000
D35	Min	16	27	33	47	47	75	120	160	160	300	510	500
	Max	27	43	56	75	75	120	200	270	270	510	820	1300
D40	Min	22	33	43	62	62	100	160	220	220	430	680	700
	Max	33	51	62	91	91	130	240	330	330	620	1000	1800
D50	Min	33	51	68	100	91	150	270	330	330	620	1000	1000
	Max	51	82	100	150	130	220	390	510	510	1000	1500	3000



Consult factory for additional information or special requirements

*UX Capacitors are 16 volt rated

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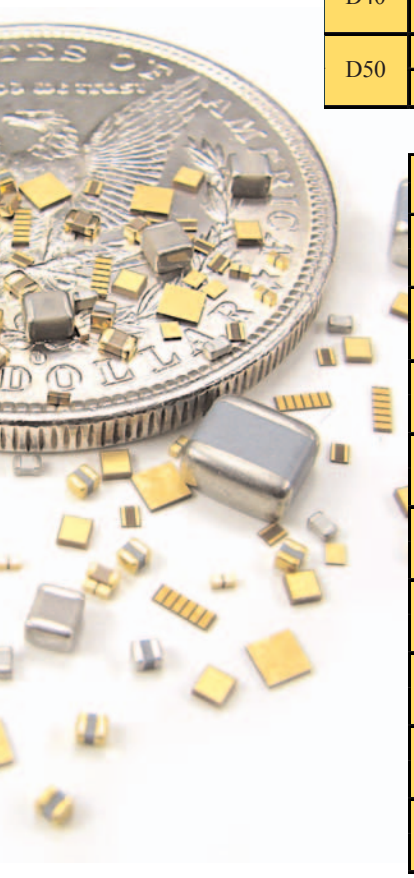
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Double Border Capacitors

Capacitance Range vs. Case Size by Dielectric Material

Style		Class II Materials												
		LA	PI	PG	AH	CF	NA	CD	NG	CG	NR	NS	NU	NV
D10	Min	0.02	0.03	0.04	0.06	0.07	0.07	0.15	0.15	0.20	0.45	0.85	1.7	2.7
	Max	0.02	0.04	0.06	0.09	0.10	0.10	0.15	0.15	0.30	0.70	1.3	2.7	3.9
D12	Min	0.03	0.04	0.06	0.09	0.10	0.09	0.15	0.20	0.30	0.65	1.3	2.7	3.9
	Max	0.03	0.06	0.08	0.10	0.15	0.15	0.25	0.25	0.45	1.1	2.0	3.9	6.2
D15	Min	0.03	0.06	0.07	0.15	0.15	0.15	0.20	0.25	0.40	0.85	1.6	3.3	5.1
	Max	0.04	0.08	0.10	0.15	0.15	0.15	0.30	0.35	0.55	1.3	2.4	4.7	6.8
D20	Min	0.06	0.10	0.15	0.20	0.25	0.25	0.40	0.45	0.70	1.6	3.0	6.2	9.1
	Max	0.09	0.15	0.20	0.30	0.35	0.35	0.60	0.70	1.1	2.4	4.7	9.1	13
D25	Min	0.10	0.20	0.25	0.35	0.40	0.40	0.60	0.70	1.2	2.7	5.1	10	15
	Max	0.15	0.25	0.35	0.50	0.65	0.60	1.0	1.1	1.9	4.3	8.2	16	24
D30	Min	0.15	0.25	0.35	0.50	0.60	0.55	0.90	1.1	1.7	3.9	7.5	15	22
	Max	0.20	0.40	0.50	0.80	0.95	0.90	1.5	1.7	2.7	6.2	12	24	36
D35	Min	0.20	0.35	0.45	0.70	0.80	0.75	1.3	1.5	2.4	5.6	10	20	30
	Max	0.30	0.55	0.70	1.1	1.3	1.2	2.0	2.4	3.9	9.1	16	33	51
D40	Min	0.25	0.45	0.60	0.90	1.1	1.0	1.7	1.9	3.3	7.5	15	27	43
	Max	0.35	0.65	0.90	1.3	1.6	1.5	2.4	2.7	4.7	11	20	39	62
D50	Min	0.40	0.70	0.95	1.4	1.7	1.6	2.7	3.0	5.1	12	22	43	68
	Max	0.60	1.1	1.4	2.2	2.4	2.4	3.9	4.7	7.5	16	33	62	100



Style		Class II Materials											
		BF	BD	BG	BC	BE	BL	BJ	BN	BT	BU	BV	UX*
D10	Min	1.3	2.0	2.7	3.6	3.6	5.6	9.1	13	13	24	39	
	Max	2.0	3.0	3.9	5.6	5.6	9.1	15	20	20	39	62	100
D12	Min	1.8	3.0	3.9	5.6	5.1	8.2	15	20	20	36	56	
	Max	3.0	4.7	6.2	8.2	8.2	13	22	30	30	56	91	
D15	Min	2.4	3.9	5.1	6.8	6.8	11	18	24	24	47	75	100
	Max	3.6	5.6	6.8	10	10	16	27	36	36	68	110	200
D20	Min	4.7	7.5	9.1	13	13	20	33	47	47	91	150	150
	Max	6.8	11	13	20	20	30	51	68	68	130	220	370
D25	Min	7.5	12	15	22	22	33	56	75	75	150	220	220
	Max	12	18	24	33	33	51	82	120	120	220	360	600
D30	Min	11	18	22	33	30	51	82	110	110	220	330	340
	Max	18	27	36	51	51	82	130	180	180	330	510	900
D35	Min	15	24	30	43	43	68	110	150	150	300	470	470
	Max	24	39	51	68	68	110	180	240	240	470	750	1300
D40	Min	20	33	43	62	56	91	150	200	200	390	620	600
	Max	30	47	62	82	82	130	220	300	300	560	910	1800
D50	Min	33	51	68	91	91	150	240	330	330	620	1000	1000
	Max	47	75	100	130	130	220	360	470	470	910	1500	2800

Consult factory for additional information or special requirements

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