

SLC with recessed metallization available with border on one or both sides

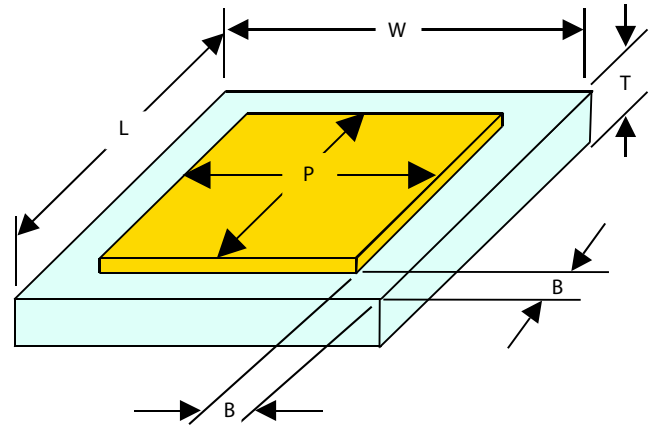
Border Cap®

Functional Applications:

DC Blocking, RF Bypass, Filtering, Tuning and Submounts.

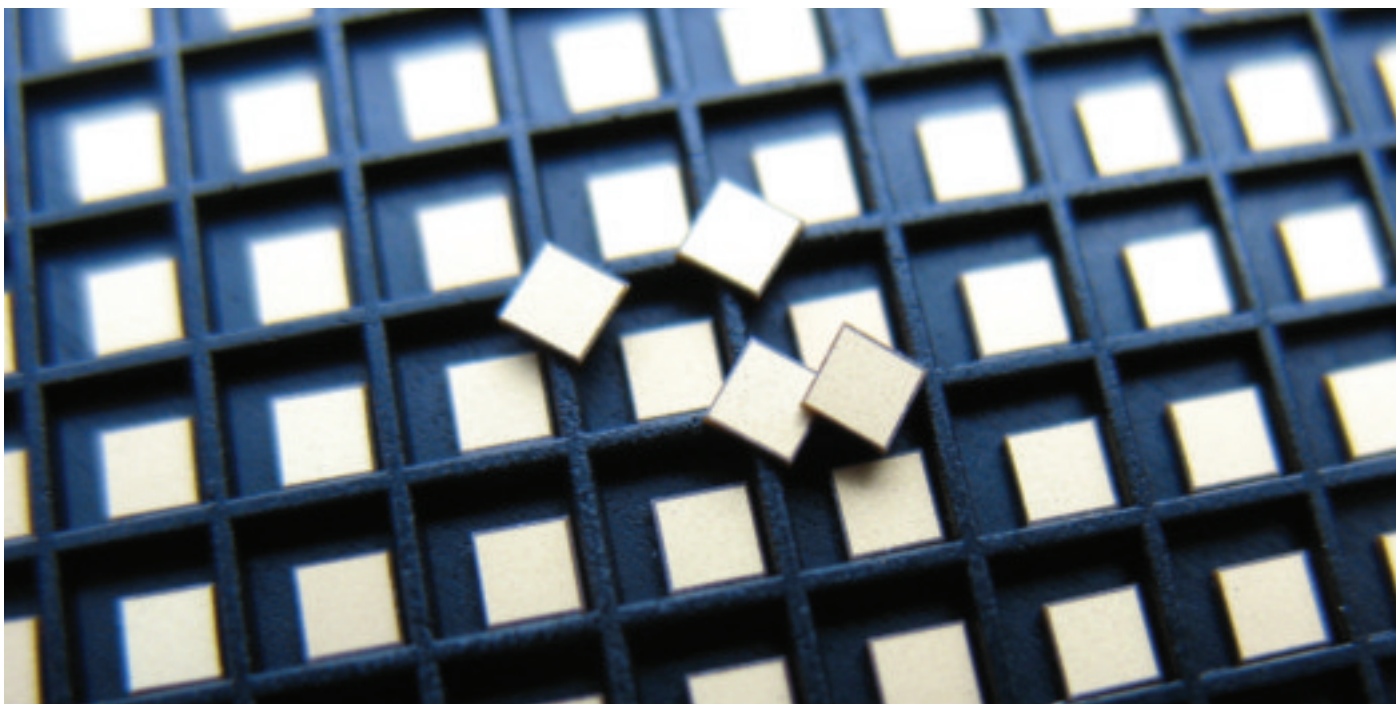
Benefits:

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



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	0.025		
D12	.03 - 100	0.012	0.305	0.010	0.254	(+.001,-.0005)	(+.025,-.013)		
D15	.03 - 200	0.015	0.381	0.011	0.279				
D20	.06 - 430	0.020	0.508	0.016	0.406			0.0035	0.089
D25	.10 - 700	0.025	0.635	0.021	0.533	0.002	0.051	-0.008	-0.203
D30	.15 - 1000	0.030	0.762	0.026	0.660	(+.002,-.0015)	(+.005, -.038)		
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				



Border Cap®

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	B	.6	C	1.5	C	2.7	D
			.4	B	1.0	C	2.2	D	3.3	D
		Class II, see codes on pg. 5	3.9	D	5.6	M	8.2	M	20	M
			4.7	D	6.2	M	10	M	33	M
D15XXKITA1EX	.015"	Class I, see codes on pg. 5	.1	B	.7	C	1.5	C	3.3	D
			.4	B	1.0	C	2.2	C	6.4	D
D20XXKITA1EX	.020"	Class II, see codes on pg. 5	6.8	K	10	K	20	M	50	M
			8.2	K	15	K	33	M	100	M
D25XXKITA1EX D30XXKITA1EX	.025"	Class I, see codes on pg. 5	.4	B	1.7	C	4.0	D	8.2	K
			.6	C	1.9	C	5.0	D	10	K
	.030"	Class II, see codes on pg. 5	0.9	C	2.7	C	5.6	D	20	K
			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	1100	1200	1300	1500	1600	1800
2000	220	2400	2700	3000	3300	3600	3900	4300
5300	6500	10,000						

Part Number Identification

D	BN	10	100	K	1	E	X	
Product D = Border Cap®	Material See material tables on page 5.	Case Size 10 12 15 20 25 30 35 40 50	Capacitance (pF) R02 = 0.02 pF OR5 = 0.5 pF 1R0 = 1.0 pF 5R1 = 5.1 pF 100 = 10 pF 101 = 100 pF 152 = 1500 pF Refer to Capacitance range tables for available values. Consult an inside sales rep. 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 2 = 25V 1 = 100V	Termination Ni / Au B = Single Border E = Double Border	Test Level Y, X, A, B, C, D and E. See test level definitions on page 7.	Packaging D = Black Dotted E = Repopulated T = Tape and Reel Leave blank for generic waffle pack. See packaging definitions on page 32.

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Border Cap®

Single Border Cap® Capacitance Ranges (pF)

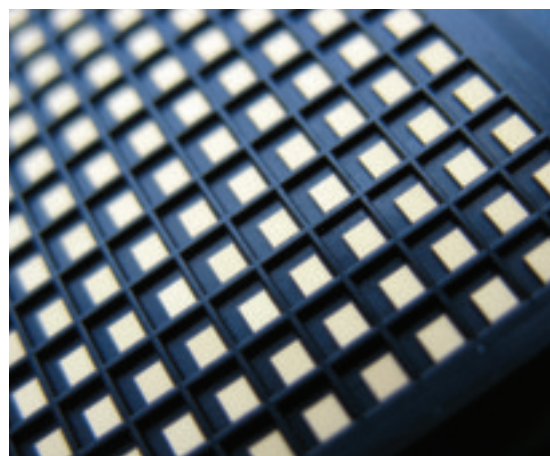
Case Size		DLI Class I Dielectrics												
		LA	PF	PG	AH	CF	NA	CD	NG	CG	NR	NS	NU	NV
D10	Min	0.02	0.03	0.04	0.06	0.07	0.07	0.15	0.15	0.25	0.50	0.90	1.8	2.7
	Max	0.02	0.05	0.06	0.10	0.10	0.10	0.15	0.20	0.35	0.80	1.5	3.0	4.3
D12	Min	0.03	0.05	0.06	0.09	0.10	0.15	0.20	0.20	0.30	0.70	1.3	2.7	3.9
	Max	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

Case Size		DLI Class II Dielectrics							DLI Class III Dielectrics			
		BF*	BD	BG*	BC	BE	BL	BJ	BN	BT*	BU	BV
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
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
	Max	4.3	6.8	8.2	13	12	20	33	43	43	82	130
D20	Min	5.1	8.2	10	15	15	24	39	51	51	100	150
	Max	8.2	13	16	24	22	36	62	82	82	160	240
D25	Min	8.2	13	16	24	24	36	62	82	82	150	240
	Max	13	20	27	39	36	56	100	130	130	240	390
D30	Min	12	18	24	36	33	56	91	120	120	220	360
	Max	20	30	39	56	56	91	150	200	200	360	560
D35	Min	16	27	33	47	47	75	120	160	160	300	510
	Max	27	43	56	75	75	120	200	270	270	510	820
D40	Min	22	33	43	62	62	100	160	220	220	430	680
	Max	33	51	62	91	91	130	240	330	330	620	1000
D50	Min	33	51	68	100	91	150	270	330	330	620	1000
	Max	51	82	100	150	130	220	390	510	510	1000	1500

*Recommended for commercial use only. Please contact an inside sales representative for additional information.

25 Volt, Ultra High K, UX Dielectric Single Border Cap® Cap. Ranges (pF)

Case Size		Available Thickness		
		0.005"	0.010"	0.015"
D10	Min	90	—	—
	Max	110	—	—
D12	Min	140	—	—
	Max	160	—	—
D15	Min	200	—	—
	Max	230	—	—
D20	Min	370	200	—
	Max	410	225	—
D25	Min	600	320	—
	Max	660	350	—
D30	Min	900	470	—
	Max	960	500	—
D35	Min	1200	650	440
	Max	1300	690	470
D40	Min	1600	850	570
	Max	1700	900	600
D50	Min	2600	1350	900
	Max	2700	1400	950



Border Cap®

Double Border Cap® Capacitance Ranges (pF)

Case Size	DLI Class I Dielectrics													
	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	0.20	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

Case Size	DLI Class II Dielectrics								DLI Class III Dielectrics			
	BF*	BD	BG*	BC	BE	BL	BJ	BN	BT*	BU	BV	
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
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
	Max	3.6	5.6	6.8	10	10	16	27	36	36	68	110
D20	Min	4.7	7.5	9.1	13	13	20	33	47	47	91	150
	Max	6.8	11	13	20	20	30	51	68	68	130	220
D25	Min	7.5	12	15	22	22	33	56	75	75	150	220
	Max	12	18	24	33	33	51	82	120	120	220	360
D30	Min	11	18	22	33	30	51	82	110	110	220	330
	Max	18	27	36	51	51	82	130	180	180	330	510
D35	Min	15	24	30	43	43	68	110	150	150	300	470
	Max	24	39	51	68	68	110	180	240	240	470	750
D40	Min	20	33	43	62	56	91	150	200	200	390	620
	Max	30	47	62	82	82	130	220	300	300	560	910
D50	Min	33	51	68	91	91	150	240	330	330	620	1000
	Max	47	75	100	130	130	220	360	470	470	910	1500

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25 Volt, Ultra High K, UX Dielectric Double Border Cap® Cap. Ranges (pF)

Case Size		Available Thickness		
		0.005"	0.010"	0.015"
D10	Min	90	—	—
	Max	110	—	—
D12	Min	130	—	—
	Max	160	—	—
D15	Min	160	—	—
	Max	190	—	—
D20	Min	320	180	—
	Max	360	200	—
D25	Min	540	300	—
	Max	600	320	—
D30	Min	820	440	300
	Max	880	470	320
D35	Min	1150	610	420
	Max	1200	650	450
D40	Min	1500	810	550
	Max	1600	860	580
D50	Min	2500	1300	880
	Max	2600	1350	920

