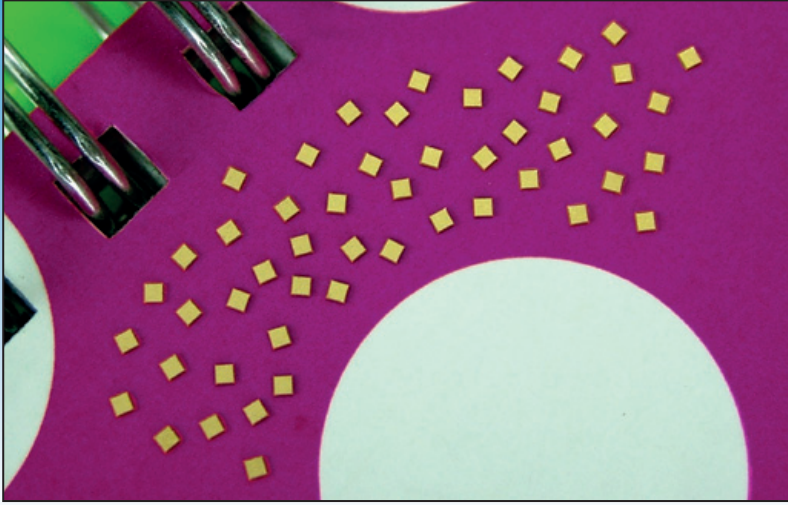


Border Cap® Single Layer Capacitor



Description

SLC with recessed metallization, available with borders on one or both sides.

Recessed metallization have been designed to minimize the potential of shorting during attachment (epoxy or solder).

- Available from 0.03pF to 2400pF
- Operating frequency up to 100GHz
- Wire Bondable:
100μ" Au with a Ni Barrier Layer
- 25, 50 and 100 Volt options
- Customized designs are available, please contact sales office

Applications

- DC Blocking
- RF Bypassing
- Filtering
- Tuning
- Coupling

Benefits

- Eliminates rollback and burrs
- Improved vision recognition
- Tighter control on dimensions
- Facilitates pick and place – thus reducing handling damage

Border Cap®



Configuration B

**Double
Border Cap®**



Configuration E

Test Level Codes

Commercial Level

Y	1% AQL 2-Side Visual
X	100% 4-Side Visual 1% AQL Electrical (CAP/DF/IR & DWV)

High Reliability

A	MIL-PRF-49464 Group A • 100% Thermal Shock • 100% Voltage Conditioning • 100% Electrical (CAP/DF/IR & DWV) • 100% 6-Side Visual • Bond Strength • Die Shear • Temperature Coefficient	B	MIL-PRF-49464 Group B • MIL-PRF-49464 Group A • Immersion • Low Voltage Humidity • Life
		D	• Customer Defined
		E	• 6-Side Visual

Tolerance

Code	Description
A	± 0.05pF
B	± 0.1pF
C	± 0.25pF
D	± 0.50pF
K	± 10%
L	± 15%
M	± 20%
X	GMV (Guarantee Minimum Value)
Z	+80%, -20%

Border Caps need to have a tolerance that is effectively 10%.

Voltage

Code	Voltage
2	25 Volts
5	50 Volts
1	100 Volts

Configuration

Code	Description
B	Single-Sided
E	Double-Sided

Part Number Identification

D	10	BN	100	K	1	E	X	
Product D = Border Cap®	Case Size 10 12 15 20 25 30 35 40 50	Material See material tables.	Capacitance (pF) R02 = 0.02pF OR5 = 0.5pF 1R0 = 1.0pF 5R1 = 5.1pF 100 = 10pF 101 = 100pF 152 = 1500pF 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 *For capacitors with UX material only	Termination P = Ni / Au B = Single Border E = Double Border M = Au *For capacitors with UX material only	Test Level Y, X, A, B, D and E. See test level definitions.	Packaging D = Black Dotted E = Repopulated T = Tape and Reel Leave blank for generic waffle pack.



DLI•JohansonMFG•Novacap•Syfer•Voltronics

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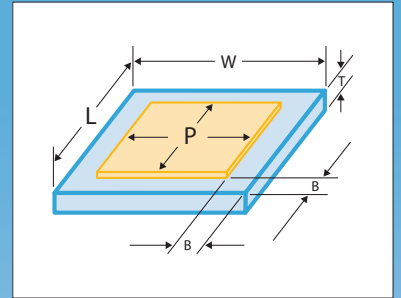
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Dimensions

Style	Length / Width	Pad Size	Border	Thickness
D10	0.010" ±0.001" (0.254mm ±0.025)	0.008" (0.203mm)	0.001" (0.025mm)	0.006" ±0.0025" (0.152mm ± 0.064mm)
D12	0.012" ±0.001" (0.305mm ±0.025)	0.010" (0.254mm)	0.001" (0.025mm)	0.006" ±0.0025" (0.152mm ± 0.064mm)
D15	0.015" ±0.001" (0.381mm ±0.025)	0.011" (0.279mm)	0.002" (0.051mm)	0.006" ±0.0025" (0.152mm ± 0.064mm)
D20	0.020" ±0.001" (0.508mm ±0.025)	0.016" (0.406mm)	0.002" (0.051mm)	0.006" ±0.0025" (0.152mm ± 0.064mm)
D25	0.025" ±0.001" (0.635mm ±0.025)	0.021" (0.533mm)	0.002" (0.051mm)	0.006" ±0.0025" (0.152mm ± 0.064mm)
D30	0.030" ±0.001" (0.762mm ±0.025)	0.026" (0.660mm)	0.002" (0.051mm)	0.006" ±0.0025" (0.152mm ± 0.064mm)
D35	0.035" ±0.001" (0.889mm ±0.025)	0.031" (0.787mm)	0.002" (0.051mm)	0.006" ±0.0025" (0.152mm ± 0.064mm)
D40	0.040" ±0.001" (1.016mm ±0.025)	0.036" (0.914mm)	0.002" (0.051mm)	0.006" ±0.0025" (0.152mm ± 0.064mm)
D50	0.012" ±0.001" (1.27mm ±0.025)	0.046" (1.168mm)	0.002" (0.051mm)	0.006" ±0.0025" (0.152mm ± 0.064mm)



*UX material available in 25V (0.006" Thick) and 50V (0.010" Thick)

Capacitance values - Single-Sided

Style	D10		D12		D15		D20		D25		D30		D35		D40		D50	
CAPACITANCE (pF)																		
MATERIAL	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
PI	0.03	0.05	0.05	0.07	0.06	0.09	0.15	0.15	0.2	0.3	0.3	0.45	0.35	0.6	0.5	0.7	0.8	1.1
PG	0.04	0.06	0.06	0.09	0.08	0.1	0.15	0.2	0.25	0.4	0.35	0.55	0.5	0.8	0.65	0.95	1	1.5
AH	0.06	0.1	0.09	0.1	0.15	0.2	0.25	0.35	0.4	0.6	0.55	0.9	0.75	1.2	1	1.4	1.5	2.2
CF	0.07	0.1	0.1	0.15	0.15	0.2	0.25	0.45	0.45	0.7	0.65	1	0.8	1.3	1.1	1.6	1.7	2.4
NA	0.07	0.1	0.15	0.15	0.15	0.2	0.25	0.45	0.45	0.7	0.65	1	0.85	1.5	1.2	1.7	1.8	2.7
CD	0.15	0.15	0.2	0.25	0.25	0.35	0.45	0.7	0.7	1.1	0.95	1.6	1.4	2.2	1.8	2.7	2.7	4.3
CG	0.25	0.35	0.3	0.5	0.45	0.7	0.8	1.3	1.3	2	1.8	3	2.7	4.3	3.3	5.1	5.1	8.2
DB	0.25	0.35	0.35	0.5	0.45	0.7	0.8	1.3	1.3	2.2	1.9	3	2.7	4.3	3.6	5.1	5.6	8.2
NP	0.25	0.4	0.4	0.6	0.55	0.85	0.95	1.6	1.5	2.4	2.2	3.6	3	5.1	4.3	6.2	6.2	10
NR	0.5	0.8	0.7	1.1	1	1.6	1.8	3	3	4.7	4.3	6.8	6.2	10	7.5	11	12	18
NS	0.9	1.5	1.3	2.2	1.9	3	3.6	5.6	5.6	9.1	8.2	13	11	18	15	22	22	33
NU	1.8	3	2.7	4.3	3.9	5.6	6.8	11	11	18	16	27	22	36	30	43	47	68
NV	2.7	4.3	3.9	6.2	5.6	8.2	10	16	16	27	24	39	33	56	43	62	68	100
BD	2.2	3.3	3	5.1	4.3	6.8	8.2	13	13	20	18	30	27	43	33	51	51	82
BC	3.9	6.2	5.6	9.1	8.2	13	15	24	24	39	36	56	47	75	62	91	100	150
BE	3.6	6.2	5.6	9.1	8.2	12	15	22	24	36	33	56	47	75	62	91	91	130
BL	6.2	10	9.1	13	13	20	24	36	36	56	56	91	75	120	100	130	150	220
BJ	10	16	15	24	20	33	39	62	62	100	91	150	120	200	160	240	270	390
BN	13	22	20	33	30	43	51	82	82	130	120	200	160	270	220	330	330	510
BU	27	43	36	62	56	82	100	160	150	240	220	360	300	510	430	620	620	1000
BV	39	68	62	100	82	130	150	240	240	390	360	560	510	820	6800	1000	1000	1500
UX	82	100	120	140	100	200	200	370	300	590	450	860	600	1200	800	1600	1200	2400

Capacitance values - Double-Sided

Style	D10		D12		D15		D20		D25		D30		D35		D40		D50	
CAPACITANCE (pF)																		
MATERIAL	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
PI	0.03	0.04	0.04	0.06	0.06	0.08	0.1	0.15	0.2	0.25	0.25	0.4	0.35	0.55	0.45	0.65	0.7	1.1
PG	0.04	0.06	0.06	0.08	0.07	0.1	0.15	0.2	0.25	0.35	0.35	0.5	0.45	0.7	0.6	0.9	0.95	1.4
AH	0.06	0.09	0.09	0.1	0.15	0.15	0.2	0.3	0.35	0.5	0.5	0.8	0.7	1.1	0.9	1.3	1.4	2.2
CF	0.07	0.1	0.1	0.15	0.15	0.15	0.25	0.35	0.4	0.65	0.6	0.95	0.8	1.3	1.1	1.6	1.7	2.4
NA	0.07	0.1	0.09	0.15	0.15	0.15	0.25	0.35	0.4	0.6	0.55	0.9	0.75	1.2	1	1.5	1.6	2.4
CD	0.15	0.15	0.15	0.25	0.2	0.3	0.4	0.6	0.6	1	0.9	1.5	1.3	2	1.7	2.4	2.7	3.9
CG	0.2	0.3	0.3	0.45	0.4	0.55	0.7	1.1	1.2	1.9	1.7	2.7	2.4	3.9	3.3	4.7	5.1	7.5
DB	0.25	0.35	0.35	0.5	0.5	0.7	0.9	1.3	1.4	2.1	2	3.1	2.8	4.3	3.6	5.6	5.6	9.1
NP	0.25	0.4	0.4	0.6	0.55	0.8	1	1.5	1.7	2.5	2.4	3.7	3.3	5.1	4.3	6.8	6.8	10
NR	0.45	0.7	0.65	1.1	0.85	1.3	1.6	2.4	2.7	4.3	3.9	6.2	5.6	9.1	7.5	11	12	16
NS	0.85	1.3	1.3	2	1.6	2.4	3	4.7	5.1	8.2	7.5	12	10	16	15	20	22	33
NU	1.7	2.7	2.7	3.9	3.3	4.7	6.2	9.1	10	16	15	24	20	33	27	39	43	62
NV	2.7	3.9	3.9	6.2	5.1	6.8	9.1	13	15	24	22	36	30	51	43	62	68	100
BD	2	3	3	407	309	506	75.1	11	12	18	18	27	24	39	33	47	51	75
BC	3.6	5.6	5.6	8.2	6.8	10	13	20	22	33	33	51	43	68	62	82	91	130
BE	3.6	5.6	5.1	8.2	6.8	10	13	20	22	33	30	51	43	68	56	82	91	130
BL	5.6	9.1	8.2	13	11	16	20	30	33	51	51	82	68	110	91	130	150	2209.1
BJ	9.1	15	15	22	18	27	33	51	56	82	82	130	110	180	150	220	240	360
BN	13	20	20	30	24	36	47	68	75	120	110	180	150	240	200	300	330	470
BU	24	39	36	56	47	68	91	130	150	220	220	330	300	470	390	560	620	910
BV	39	62	56	91	75	110	150	220	220	360	330	510	470	750	620	910	1000	1500
UX	75	91	110	130	100	170	200	320	300	540	450	800	600	1100	800	1500	1200	2400

UX material is offered in two voltage's 25V (0.006") & 50V (0.010"), contact factory for values per voltage rating.