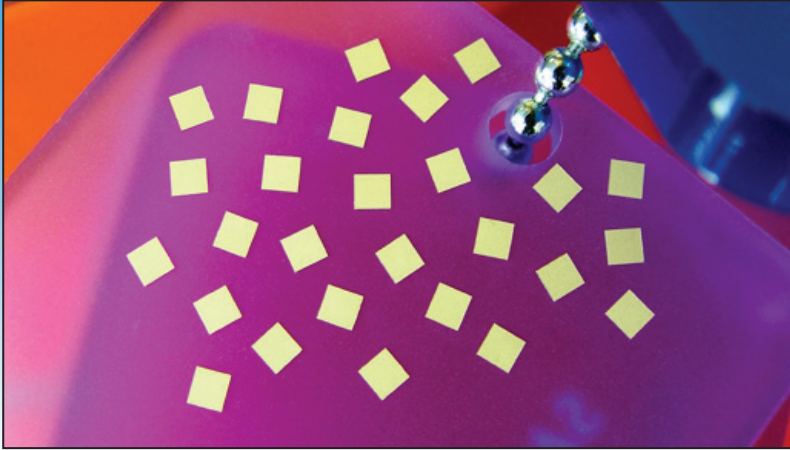


Di-Cap®

Single Layer Capacitor



Description

High Performance Single Layer Capacitors for RF, Microwave and Millimeter Wave Applications.

- Available from 0.03pF to 10,000pF
- Operating frequency up to 100GHz
- Wire Bondable
100μ" Au with a Ni Barrier Layer
- Customized solutions available

Applications

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

Benefits

- ESD Proof
- Gold metallization for wire bonding
- Rugged construction

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
P	± 0.01pF
A	± 0.05pF
B	± 0.1pF
C	± 0.25pF
D	± 0.50pF
G	± 2%
J	± 5%
K	± 10%
L	± 15%
M	± 20%
X	GMV (Guarantee Minimum Value)
Z	+80%, -20%

Voltage

Code	Voltage
2	25 Volts
5	50 Volts
1	100 Volts

Part Number Identification

D	10	CF	OR1	B	5	P	X	
Product D = Di-Cap®	Case Size 10 12 15 20 25 30 35 50 70 90	Material See material tables.	Capacitance (pF) R02 = 0.02pF OR5 = 0.5pF 1R0 = 1.0pF 5R1 = 5.1pF 100 = 10pF 101 = 100pF 432 = 4300pF 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 5 = 50V 1 = 100V	Termination P = Ni / Au T = Ni / AuSn M = Au L = Single Beam Lead A = Axial Beam Lead S = Standing Axial Beam Lead	Test Level Y, X, A, B, D and E. See test level definitions.	Packaging T = Tape and Reel Leave blank for generic wafer pack.

*For custom designs contact applications engineering.



www.knowlesc capacitors.com

North America

Knowles (Cazenovia)
Phone: +1 315 655 8710
KCCSales@knowles.com

Europe

Knowles (UK) Ltd
Phone: +44 1603 723300
SyferSales@knowles.com

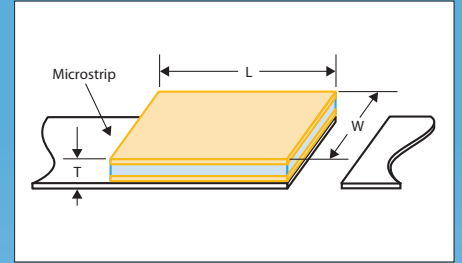
Far East

Knowles Capacitors
Phone: +86 512 62588258-6243
KCAsiaSales@knowles.com

Dimensions

Style	Length	Width	Thickness	
			50 Volt	100 Volt
D10	0.010" Max. (0.254mm Max.)	0.010" +0/-0.003" (0.254mm +0/-0.076mm)	0.004" ±0.001" (0.102mm ±0.025mm)	-
D12	0.015" Max. (0.381mm Max.)	0.012" +0.002"/-0.003" (0.305mm +0.051mm/-0.076mm)	0.004" ±0.001" (0.102mm ±0.025mm)	-
D15	0.020" Max. (0.508mm Max.)	0.015" +0/-0.003" (0.381mm +0/-0.076mm)	0.004" ±0.001" (0.102mm ±0.025mm)	0.006" ±0.001" (0.152mm ±0.025mm)
D20	0.020" Max. (0.508mm Max.)	0.020" +0/-0.003" (0.508mm +0/-0.076mm)	0.004" ±0.001" (0.102mm ±0.025mm)	0.006" ±0.001" (0.152mm ±0.025mm)
D25	0.030" Max. (0.762mm Max.)	0.025" +0/-0.003" (0.635mm +0/-0.076mm)	0.004" ±0.001" (0.102mm ±0.025mm)	0.006" ±0.001" (0.152mm ±0.025mm)
D30	0.030" Max. (0.762mm Max.)	0.030" +0/-0.003" (0.762mm +0/-0.076mm)	0.004" ±0.001" (0.102mm ±0.025mm)	0.006" ±0.001" (0.152mm ±0.025mm)
D35	0.040" Max. (1.016mm Max.)	0.035" ±0.005" (0.889mm ±0.127mm)	0.004" ±0.001" (0.102mm ±0.025mm)	0.007" ±0.002" (0.178mm ±0.051mm)
D50	0.060" Max. (1.524mm Max.)	0.050" ±0.010" (1.270mm ±0.254mm)	-	0.007" ±0.002" (0.178mm ±0.051mm)
D70	0.080" Max. (1.778mm Max.)	0.070" ±0.010" (1.778mm ±0.254mm)	-	0.007" ±0.002" (0.178mm ±0.051mm)
D90	0.100" Max. (2.54mm Max.)	0.090" ±0.010" (2.286mm ±0.254mm)	-	0.007" ±0.002" (0.178mm ±0.051mm)

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



Capacitance values - 50 Volt Rated Di-Cap®

Style	D10			D12			D15			D20			D25			D30			D35		
CAPACITANCE (pF)																					
MATERIAL	MIN.	MAX.	TOL.	MIN.	MAX.	TOL.	MIN.	MAX.	TOL.	MIN.	MAX.	TOL.	MIN.	MAX.	TOL.	MIN.	MAX.	TOL.	MIN.	MAX.	TOL.
PI	0.03	0.05	P	0.04	0.1	P	0.06	0.15	P	0.09	0.2	P,A	0.2	0.4	A,B	0.25	0.45	A,B	0.35	0.85	A,B
PG	0.04	0.06	P	0.06	0.1	P	0.08	0.2	P,A	0.15	0.25	P,A	0.25	0.5	A,B	0.3	0.6	A,B	0.5	1.1	A,B
AH	0.06	0.1	P	0.08	0.2	P,A	0.15	0.3	P,A	0.2	0.4	A,B	0.35	0.8	A,B	0.45	0.95	A,B	0.7	1.8	A,B,C
CF	0.07	0.1	P	0.1	0.25	P,A	0.15	0.35	P,A	0.2	0.5	P,A,B	0.45	0.95	A,B	0.55	1.1	A,B	0.85	2	A,B,C
NA	0.06	0.1	P	0.09	0.2	P,A	0.15	0.3	P,A	0.2	0.45	A,B	0.4	0.9	A,B	0.5	1	A,B	0.8	1.9	B,C
CD	0.1	0.15	P	0.15	0.35	P,A	0.25	0.55	A,B	0.35	0.75	A,B	0.65	1.5	A,B,C	0.85	1.8	B,C	1.3	3.3	B,C
CG	0.2	0.35	P,A	0.3	0.75	A,B	0.45	1.1	A,B	0.65	1.4	A,B,C	1.2	2.7	B,C	1.6	3.3	B,C	2.7	6.2	C,D
NP	0.25	0.4	A	0.35	0.9	A,B	0.5	1.3	A,B,C	0.75	1.8	B,C	1.5	3.3	C,D	1.9	3.9	C,D	3	7.5	C,D
NR	0.45	0.8	A,B	0.65	1.7	B,C	1	2.4	B,C	1.5	3.3	C,D	2.7	6.2	C,D,K	3.6	7.5	D	5.6	13	D,J,K
NS	0.8	1.5	B,C	1.2	3	B,C	1.8	4.7	C,D	2.7	6.2	C,D	5.1	12	K	6.8	13	K	11	27	K
NU	1.6	3	B,C	2.4	6.2	C,D	3.6	9.1	D,K	5.6	12	D,K	11	24	K	15	27	K	22	51	K
NV	2.4	4.3	C,D	3.6	9.1	D,K	5.6	13	D,K	8.2	18	K	16	36	K	20	43	K	33	75	K
BD	1.8	3.6	K	3	7.5	K	4.3	11	K	6.2	13	K	12	27	K	16	33	K	27	62	K
BC	3.6	6.2	K	5.1	13	K	7.5	20	K	12	27	K	22	51	K	30	62	K	47	110	K
BE	3.3	6.2	K	5.1	13	K	7.5	18	K	12	24	K	22	51	K	30	62	K	47	110	K
BL	5.6	10	K,M	8.2	20	K,M	12	30	K,M	18	39	K,M	36	82	K,M	47	91	K,M	75	180	K,M
BJ	9.1	16	K	13	33	K	20	51	K	30	68	K	56	130	K	75	160	K	120	270	K
BN	12	22	K,M	18	47	K,M	27	68	K,M	43	91	K,M	82	180	K,M	100	220	K,M	160	390	K,M
BU	22	43	M	36	91	M	51	130	M	75	180	M	150	330	M	200	390	M	300	750	M
BV	36	68	M	56	130	M	82	200	M	120	270	M	240	510	M	300	620	M	510	1200	M

Capacitance values - 100 Volt Rated Di-Cap®

Style	D15			D20			D25			D30			D35			D50			D70			D90		
CAPACITANCE (pF)																								
MATERIAL	MIN.	MAX.	TOL.	MIN.	MAX.	TOL.	MIN.	MAX.	TOL.	MIN.	MAX.	TOL.	MIN.	MAX.	TOL.	MIN.	MAX.	TOL.	MIN.	MAX.	TOL.	MIN.	MAX.	TOL.
PI	0.04	0.1	P	0.06	0.1	P	0.15	0.25	P,A	0.15	0.3	P,A	0.2	0.55	A,B	0.5	1.3	A,B	0.95	2	B,C	1.2	3	B,C
PG	0.06	0.1	P	0.08	0.15	P	0.2	0.35	A	0.2	0.4	A,B	0.25	0.75	A,B	0.6	1.7	B,C	1.2	2.7	B,C	1.5	3.9	B,C
AH	0.08	0.2	P,A	0.15	0.25	P,A	0.25	0.5	A,B	0.35	0.65	A,B	0.4	1.2	A,B,C	0.95	2.7	B,C	1.9	3.9	B,C	2.4	6.2	C,D
CF	0.1	0.25	P,A	0.15	0.3	P,A	0.3	0.65	A,B	0.4	0.75	A,B	0.45	1.4	A,B,C	1.1	3	B,C	2.4	4.7	C,D	3	7.5	C,D
NA	0.09	0.2	P,A	0.15	0.3	P,A	0.3	0.6	A,B	0.35	0.7	A,B	0.45	1.3	A,B,C	1.1	3	B,C	2.2	4.3	C,D	2.7	6.8	C,D
CD	0.15	0.35	P,A	0.25	0.5	A,B	0.45	1	A,B	0.6	1.2	A,B,C	0.7	2.2	B,C	1.7	4.7	C,D	3.6	7.5	C,D	4.3	12	D,J,K
CG	0.3	0.7	A,B	0.45	0.95	A,B	0.85	1.9	A,B,C	1.1	2.2	B,C	1.3	3.9	B,C,D	3.3	9.1	C,D,K	6.8	13	D,K	8.2	22	J,K
DB	0.3	0.75	A,B	0.45	1	A,B	0.85	1.9	B,C	1.1	2.2	B,C	1.4	4.3	C,D	3.3	9.1	C,D,K	6.8	15	D,K	8.2	22	J,K
NP	0.35	0.85	A,B	0.55	1.2	B,C	1	2.2	B,C	1.3	2.7	B,C,D	1.6	5.1	C,D	3.9	11	C,D,K	8	16	J,K	10	27	J,K
NR	0.65	1.6	B,C	1	2.2	B,C	1.9	4.3	C,D	2.7	5.1	C,D	3	9.1	D,K	7.5	20	J,K	15	33	J,K	20	51	J,K
NS	1.2	3	C,D	1.9	3.9	C,D	3.6	8.2	D,K	4.7	9.1	D,K	5.6	18	K	15	39	K	30	62	K	36	91	K
NU	2.4	6.2	C,D	3.9	8.2	C,D,K	7.5	16	D,J,K	9.1	18	J,K	12	36	J,K	30	82	J,K	56	120	K	68	180	K
NV	3.6	9.1	D,K	5.6	12	D,K	11	24	K	15	27	K	18	51	K	43	120	K	91	180	K	110	270	K
BD	3	6.8	K	4.3	9	K	8	18	K	11	22	K	13	39	K	33	91	K	68	130	K	82	220	K
BC	5.6	13	K	8	18	K	16	33	K	20	43	K	24	75	K	62	160	K	120	270	K	150	390	K
BE	5.1	13	K	8	16	K	15	33	K	20	39	K	24	75	K	62	160	K	120	240	K	150	390	K
BL	8.2	20	K,M	13	27	K,M	24	51	K,M	33	62	K,M	39	120	K,M	100	270	K,M	200	390	K,M	240	620	K,M
BJ	13	33	K	20	47	K	39	82	K	51	100	K	62	180	K	160	430	K	330	680	K	390	1000	K
BN	18	47	K,M	30	62	K,M	56	120	K,M	68	130	K,M	91	270	K,M	220	560	K,M	430	910	K,M	510	1300	K,M
BU	36	82	M	56	120	M	100	220	M	130	270	M	160	510	M	390	1100	M	820	1600	M	1000	2700	M
BV	56	130	M	82	180	M	160	360	M	220	430	M	270	750	M	620	1800	M	1300	2700	M	1600	4300	M

UX Material Capacitance Table

Style	D10		D12		D15		D20		D25		D30		D35		D50		D70		D90	
CAPACITANCE (pF)																				
MATERIAL	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
25V	51	75	75	180	110	250	170	340	280	650	390	800	620	1400	1600	3200	3500	5900	6200	10000
50V							100	200	170	390	240	470	360	850	940	2000	2100	3500	3700	5500

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Knowles:](#)

<u>D15BU101KPX</u>	<u>D30BJ111K1EX</u>	<u>D10BJ100K5PX</u>	<u>D10BL100K1BX</u>	<u>D50BN471K1EX</u>	<u>D30BJ151M1EX</u>
<u>D20BN820K1BX</u>	<u>D30UX102M2BX</u>	<u>D35BL101K5AX</u>	<u>D15BG100K5PX</u>	<u>D30NR6R2K1EX</u>	<u>D20BL300K1BX</u>
<u>D50BU102K1BX</u>	<u>D20BU101M1EX</u>	<u>D20BJ390K1EX</u>	<u>D15BV101M1BX</u>	<u>D20BG100K1EX</u>	<u>D10NS1R0A5PX</u>
<u>D35BD330K1EX</u>	<u>D15CG0R8J5PX</u>	<u>D25BJ101K5PX</u>	<u>D35BJ121M1EX</u>	<u>D12BV101K5BX</u>	<u>D20BJ470K1EX</u>
<u>D20NS3R3C1EX</u>					