

Series Configured Capacitors for Microwave Applications



Gap Cap

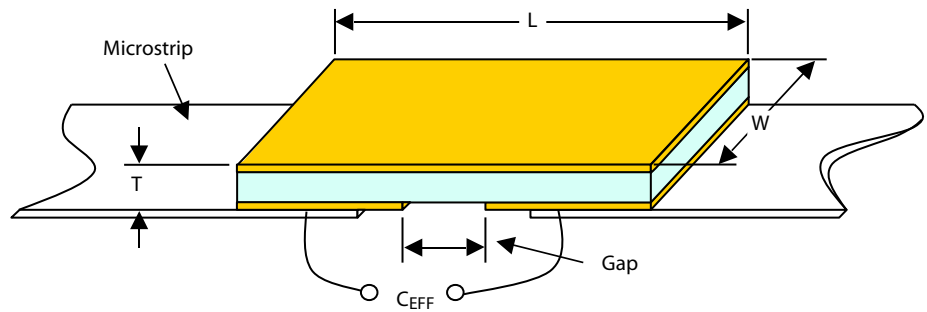
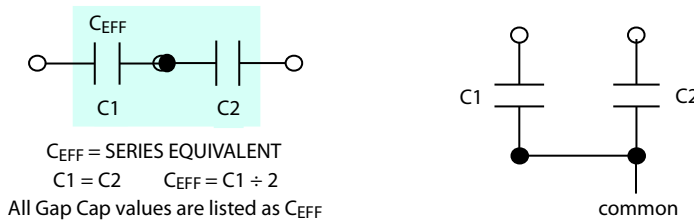
Gap Caps are designed for DC Blocking and RF Bypassing. The low insertion loss and high resonant frequencies make it an ideal device for this type of application. This product's unique configuration eliminates the need for wirebonding, therefore reducing performance variations.

Functional Applications:

DC Blocking, RF Bypassing, and Elimination of wirebond.

Benefits:

- Consistent performance
- Coplanar waveguide
- Gap Cap configuration eliminates wirebonding



25 Volt Gap Cap Dimensions

Style	G Gap (Nom.)		W Width		L Length (Maximum)		T Thickness Range		Standard Capacitance pF
	Inches	mm	Inches	mm	Inches	mm	Inches (±.001)	mm (±.025)	
G10	.005	.127	.010 ^{+0.000} / _{-0.003}	.254 ^{+0.000} / _{-0.076}	.030	.762	.004	.102	.01 - 70
G15	.008	.203	.015 ^{+0.000} / _{-0.003}	.381 ^{+0.000} / _{-0.076}	.040	1.016	.004	.102	.02 - 130
G20	.010	.254	.020 ^{+0.000} / _{-0.003}	.508 ^{+0.000} / _{-0.076}	.050	1.270	.004	.102	.03 - 200
G25	.020	.508	.025 ^{+0.000} / _{-0.003}	.635 ^{+0.000} / _{-0.076}	.060	1.524	.004	.102	.03 - 300
G30	.020	.508	.030 ^{+0.000} / _{-0.003}	.762 ^{+0.000} / _{-0.076}	.060	1.524	.004	.102	.04 - 360
G35	.020	.508	.035 ±.005	.889 ±.127	.060	1.524	.004	.102	.04 - 400

UX thickness only available in .005", .010" and .015".

Gap Cap

50 Volt Gap Cap Dimensions

Style	G Gap (Nom.)		W Width		L Length (Maximum)		T Thickness Range		Standard Capacitance pF
	Inches	mm	Inches	mm	Inches	mm	Inches (±.001)	mm (±.025)	
G10	.005	.127	.010 ^{+0.000} _{-.003}	.254 ^{+0.000} _{-.076}	.030	.762	.006	.152	.01 - 36
G15	.008	.203	.015 ^{+0.000} _{-.003}	.381 ^{+0.000} _{-.076}	.040	1.016	.006	.152	.02 - 68
G20	.010	.254	.020 ^{+0.000} _{-.003}	.508 ^{+0.000} _{-.076}	.050	1.270	.006	.152	.02 - 110
G25	.020	.508	.025 ^{+0.000} _{-.003}	.635 ^{+0.000} _{-.076}	.080	2.032	.006	.152	.03 - 200
G30	.020	.508	.030 ^{+0.000} _{-.003}	.762 ^{+0.000} _{-.076}	.080	2.032	.006	.152	.03 - 240
G35	.020	.508	.035 ±.005	.889 ±.127	.080	2.032	.006	.152	.04 - 300
G50	.020	.508	.050 ±.010	1.270 ±.254	.080	2.032	.006	.152	.04 - 510

Gap 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.
G10XXKITAPX05	.010"	Class I, see codes on pg. 5		.05	A	.2	A	.4	A	.6	C
				.14	A	.3	A	.5	B	.8	C
		Class II, see codes on pg. 5		1.0	C	2.2	D	5.6	M	10	M
				1.5	C	4.7	M	8.2	M	15	M
G15XXKITAPX08	.015"	Class I, see codes on pg. 5		.08	A	.4	A	.6	B	1.5	D
				.2	A	.5	B	1.0	C	2.2	D
G20XXKITAPX010	.020"	Class II, see codes on pg. 5		3.3	D	5.6	M	8.2	M	15	M
				4.7	M	6.8	M	10	M	20	M
G25XXKITAPX010	.025"	Class I, see codes on pg. 5		.4	A	.77	B	1.5	C	3.3	D
				.5	B	1.0	C	2.2	D	4.7	D
		Class II, see codes on pg. 5		5.6	M	8.2	M	15	M	33	M
				6.8	M	10	M	20	M	51	M

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

Part Number Identification

G	BU	10	100	K	5	P	X	10	
Product G = GAP Capacitors	Material See material tables on page 5.	Case Size 10 15 20 25 30 35 50	Capacitance (pF) R01 = 0.01 pF 0R5 = 0.5 pF 1R0 = 1.0 pF 5R1 = 5.1 pF 100 = 10 pF 511 = 510 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 5 = 50V	Termination P = Ni / Au M = Au	Test Level Y, X, A, B, D and E. See test level definitions on page 7.	Gap Width In mils 5 8 10 15	Packaging D = Black Dotted E = Repopulated T = Tape and Reel Leave blank for generic waffle pack. See packaging definitions on page 32.

Series Configured Capacitors for Microwave Applications

Gap Cap

25 Volt Gap Cap Capacitance Ranges (pF)

Case Size	Std. Gap	DLI Class I Dielectrics															
		LA	PI	PG	AH	CF	NA	CD	NG	CG	DB	NP	NR	NS	NU	NV	
G10	.005"	Min	0.01	0.02	0.02	0.04	0.04	0.04	0.06	0.07	0.15	0.15	0.15	0.25	0.50	0.95	1.4
		Max	0.02	0.03	0.05	0.08	0.09	0.08	0.10	0.15	0.25	0.25	0.30	0.60	1.2	2.4	3.6
G15	.008"	Min	0.02	0.03	0.04	0.06	0.08	0.07	0.15	0.15	0.25	0.25	0.30	0.50	0.90	1.8	2.7
		Max	0.04	0.07	0.10	0.15	0.15	0.15	0.25	0.30	0.50	0.55	0.65	1.2	2.2	4.3	6.8
G20	.010"	Min	0.03	0.04	0.05	0.08	0.10	0.09	0.15	0.20	0.30	0.30	0.35	0.65	1.2	2.4	3.6
		Max	0.07	0.10	0.15	0.25	0.30	0.25	0.45	0.55	0.90	0.90	1.1	2.0	3.9	7.5	11
G25	.020"	Min	0.03	0.05	0.07	0.10	0.15	0.15	0.20	0.20	0.35	0.35	0.40	0.75	1.4	3.0	4.3
		Max	0.09	0.15	0.20	0.30	0.35	0.35	0.60	0.65	1.1	1.1	1.3	2.4	4.7	9.1	13
G30	.020"	Min	0.04	0.06	0.08	0.15	0.15	0.15	0.25	0.30	0.45	0.45	0.55	0.95	1.8	3.6	5.6
		Max	0.10	0.15	0.25	0.35	0.45	0.40	0.70	0.80	1.3	1.4	1.6	3.0	5.6	11	16
G35	.020"	Min	0.04	0.07	0.09	0.15	0.20	0.15	0.30	0.30	0.50	0.50	0.60	1.1	2.2	4.3	6.2
		Max	0.10	0.20	0.25	0.45	0.50	0.50	0.80	0.95	1.6	1.6	1.9	3.6	6.8	13	20

Case Size	Std. Gap	DLI Class II Dielectrics								DLI Class III Dielectrics			
		BF*	BD	BG*	BC	BE	BL	BJ	BN	BT*	BU	BV	
G10	.005"	Min	0.70	1.1	1.4	2.0	2.0	3.3	5.1	7.5	7.5	15	22
		Max	1.7	2.7	3.6	5.1	4.7	7.5	13	18	18	33	51
G15	.008"	Min	1.4	2.2	2.7	3.9	3.9	6.2	10	15	15	27	43
		Max	3.3	5.1	6.8	10	9.1	15	24	33	33	62	100
G20	.010"	Min	1.7	2.7	3.6	5.1	5.1	8.2	13	18	18	33	51
		Max	5.6	9.1	11	16	16	24	43	56	56	110	160
G25	.020"	Min	2.2	3.3	4.3	6.2	6.2	10	16	22	22	43	68
		Max	6.8	11	13	20	20	30	51	68	68	130	200
G30	.020"	Min	2.7	4.3	5.6	8.2	7.5	12	20	27	27	51	82
		Max	8.2	13	16	24	24	39	62	82	82	160	240
G35	.020"	Min	3.3	5.1	6.2	9.1	9.1	15	24	33	33	62	100
		Max	10	16	20	27	27	43	75	100	100	180	300

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

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						

Gap Cap

25 Volt, Ultra High K, UX Dielectric Gap Cap Dimensions and Capacitance Ranges (pF)

Case Size	G Gap (Nom.)		W Width				L Length (Maximum)		Capacitance Range (Min/Max) Thickness		
	Inches	mm	Inches		mm		Inches	mm	0.0005"	0.010"	0.015"
G10	0.005	0.127	0.010	+0.000 -0.003	.254	+0.000 -.076	0.030	0.762	50/65	*	*
G15	0.008	0.203	0.015	+0.000 -0.003	.381	+0.000 -.076	0.040	1.016	110/130	60/70	*
G20	0.010	0.254	0.020	+0.000 -0.003	.508	+0.000 -.076	0.050	1.270	200/220	100/120	70/82
G25	0.020	0.508	0.025	+0.000 -0.003	.635	+0.000 -.076	0.060	1.524	250/280	140/160	100/110
G30	0.020	0.508	0.030	+0.000 -0.003	.762	+0.000 -.076	0.060	1.524	310/340	180/190	120/140
G35	0.020	0.508	0.035	±0.005	.889	±.127	0.060	1.524	350/450	200/250	140/180
G50	0.020	0.508	0.050	±0.010	1.270	±.254	0.080	2.032	700/1000	380/550	260/380

50 Volt Gap Cap Capacitance Ranges (pF)

Case Size	Std. Gap	DLI Class I Dielectrics															
		LA	PI	PG	AH	CF	NA	CD	NG	CG	DB	NP	NR	NS	NU	NV	
G10	.005"	Min	0.01	0.02	0.02	0.03	0.03	0.03	0.04	0.05	0.08	0.08	0.09	0.20	0.35	0.65	0.95
		Max	0.01	0.02	0.03	0.05	0.06	0.05	0.09	0.10	0.15	0.15	0.20	0.40	0.80	1.6	2.4
G15	.008"	Min	0.02	0.03	0.03	0.05	0.06	0.05	0.08	0.10	0.15	0.20	0.20	0.35	0.65	1.3	2.0
		Max	0.02	0.05	0.06	0.10	0.10	0.10	0.15	0.20	0.35	0.35	0.40	0.80	1.5	3.0	4.7
D20	.010"	Min	0.02	0.03	0.04	0.06	0.07	0.07	0.15	0.15	0.20	0.25	0.25	0.45	0.85	1.7	2.7
		Max	0.04	0.08	0.10	0.15	0.20	0.15	0.30	0.35	0.60	0.60	0.70	1.3	2.4	5.1	7.5
G25	.020"	Min	0.03	0.04	0.05	0.08	0.09	0.08	0.15	0.20	0.30	0.30	0.35	0.60	1.1	2.2	3.3
		Max	0.09	0.15	0.20	0.30	0.35	0.35	0.55	0.65	1.1	1.1	1.3	2.4	4.7	9.1	13
G30	.020"	Min	0.03	0.05	0.07	0.10	0.15	0.15	0.20	0.20	0.35	0.35	0.40	0.75	1.4	3.0	4.3
		Max	0.10	0.15	0.25	0.35	0.45	0.40	0.70	0.80	1.3	1.3	1.6	3.0	5.6	11	16
D35	.020"	Min	0.04	0.06	0.07	0.15	0.15	0.15	0.20	0.25	0.40	0.40	0.50	0.90	1.6	3.3	5.1
		Max	0.10	0.20	0.25	0.45	0.5	0.45	0.80	0.95	1.5	1.6	1.9	3.6	6.2	13	20
G50	.020"	Min	0.04	0.07	0.09	0.15	0.20	0.20	0.30	0.30	0.50	0.50	0.60	1.2	2.2	4.3	6.2
		Max	0.20	0.35	0.50	0.75	0.90	0.85	1.4	1.6	2.7	2.7	3.3	6.2	11	22	33

Case Size	Std. Gap	DLI Class II Dielectrics						DLI Class III Dielectrics					
		BF*	BD	BG*	BC	BE	BL	BJ	BN	BT*	BU	BV	
G10	.005"	Min	0.50	0.75	0.95	1.4	1.4	2.2	3.6	5.1	5.1	9.1	15
		Max	1.1	1.8	2.4	3.3	3.3	5.1	8.2	12	12	22	36
G15	.008"	Min	0.95	1.5	2.0	3.0	2.7	4.3	7.5	10	10	20	30
		Max	2.2	3.6	4.7	6.8	6.2	10	16	22	22	43	68
G20	.010"	Min	1.3	2.0	2.7	3.9	3.6	6.2	10	13	13	24	39
		Max	3.6	5.6	7.5	11	10	16	27	39	39	68	110
G25	.020"	Min	1.7	2.7	3.3	4.7	4.7	7.5	12	18	18	33	51
		Max	6.8	11	13	20	20	30	51	68	68	130	200
G30	.020"	Min	2.2	3.3	4.3	6.2	6.2	10	16	22	22	43	68
		Max	8.2	13	16	24	24	36	62	82	82	160	240
G35	.020"	Min	2.4	3.9	5.1	7.5	6.8	11	18	24	24	47	75
		Max	10	15	20	27	27	43	68	100	100	180	300
G50	.020"	Min	3.3	5.1	6.2	9.1	9.1	15	24	33	33	62	100
		Max	16	27	33	51	47	75	120	160	160	330	510

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