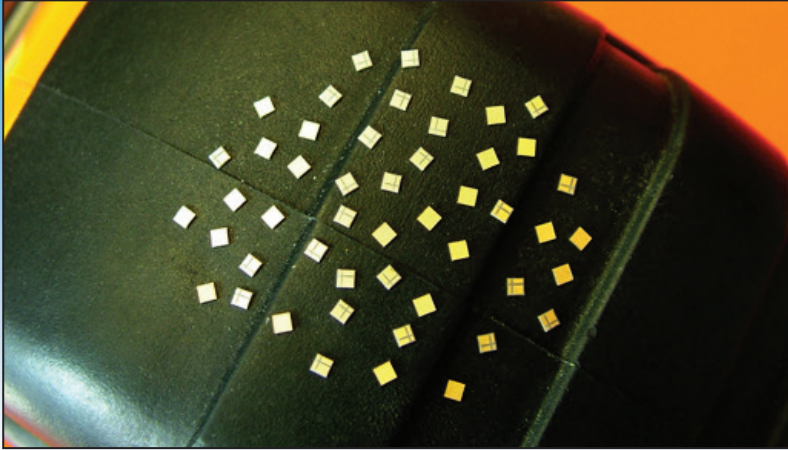


Bi-Cap[®]

Single Layer Capacitor



Description

Binary Tunable Caps for Single-Layer Hybrids.

Applications

- Matching Networks
- Tank Circuits
- Tuning
- Coupling

Benefits

- Small size compatible with microwave geometries
- Hybrid Circuits – Engineering designs
- Operating frequency up to 30GHz
- Customized solutions

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
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

F	15	NR	OR1	M	1	P	X	3	
Product F = Binary Capacitors	Case Size 15 20 25 35 40	Material See material tables.	Capacitance (pF) See material tables. R08 = .080pF OR1 = .1pF OR2 = .2pF OR4 = .4pF OR5 = .5pF Consult an inside Sales Representative for custom solutions.	Tolerance M = ± 20%	Voltage 2 = 25V 5 = 50V 1 = 100V	Termination P = Ni / Au M = Au	Test Level Y or X See test level definitions.	Pad Quantity 3 4	Packaging D = Black Dotted E = Repopulated T = Tape and Reel Leave blank for generic waffle pack.



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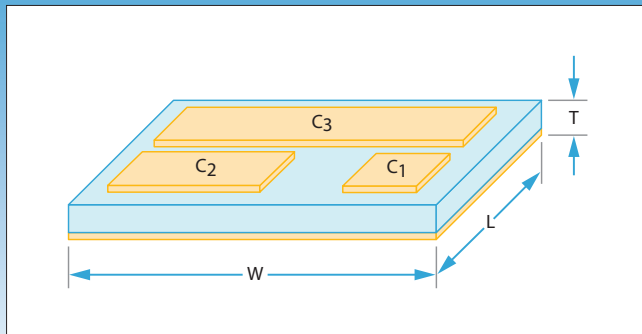
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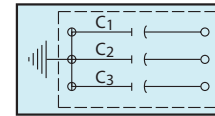
Specifications - Bi-Cap

Part Number	No. of Caps	Values (pF)	Voltage (WVDC)	Length	Width	Thickness	Border
F15CGR08M5PX3	3	0.08, 0.15, 0.3	50	0.015" $\pm$ 0.001" (0.381mm $\pm$ 0.025mm)	0.015" $\pm$ 0.001" (0.381mm $\pm$ 0.025mm)	0.004" $\pm$ 0.001" (0.102mm $\pm$ 0.025mm)	0.002" (0.051mm)
F15NR0R1M1PX3	3	0.1, 0.2, 0.4	100	0.015" $\pm$ 0.001" (0.381mm $\pm$ 0.025mm)	0.015" $\pm$ 0.001" (0.381mm $\pm$ 0.025mm)	0.006" $\pm$ 0.001" (0.152mm $\pm$ 0.025mm)	
F20CG0R1M1PX3	3	0.1, 0.2, 0.4	100	0.020" $\pm$ 0.001" (0.508mm $\pm$ 0.025mm)	0.020" $\pm$ 0.001" (0.508mm $\pm$ 0.025mm)	0.006" $\pm$ 0.001" (0.152mm $\pm$ 0.025mm)	
F20NR0R2M1PX3	3	0.2, 0.4, 0.8	100	0.020" $\pm$ 0.001" (0.508mm $\pm$ 0.025mm)	0.020" $\pm$ 0.001" (0.508mm $\pm$ 0.025mm)	0.006" $\pm$ 0.001" (0.152mm $\pm$ 0.025mm)	
F25CFR08M5PX3	3	0.08, 0.15, 0.3	50	0.025" $\pm$ 0.001" (0.635mm $\pm$ 0.025mm)	0.025" $\pm$ 0.001" (0.635mm $\pm$ 0.025mm)	0.004" $\pm$ 0.001" (0.102mm $\pm$ 0.025mm)	
F25CG0R2M1PX3	3	0.2, 0.4, 0.8	100	0.025" $\pm$ 0.001" (0.635mm $\pm$ 0.025mm)	0.025" $\pm$ 0.001" (0.635mm $\pm$ 0.025mm)	0.006" $\pm$ 0.001" (0.152mm $\pm$ 0.025mm)	
F25NR0R4M1PX3	3	0.4, 0.8, 1.6	100	0.025" $\pm$ 0.001" (0.635mm $\pm$ 0.025mm)	0.025" $\pm$ 0.001" (0.635mm $\pm$ 0.025mm)	0.006" $\pm$ 0.001" (0.152mm $\pm$ 0.025mm)	
F35CF0R1M1PX3	3	0.1, 0.2, 0.4	100	0.035" $\pm$ 0.001" (0.889mm $\pm$ 0.025mm)	0.035" $\pm$ 0.001" (0.889mm $\pm$ 0.025mm)	0.006" $\pm$ 0.001" (0.152mm $\pm$ 0.025mm)	
F35CG0R4M1PX3	3	0.4, 0.8, 1.6	100	0.035" $\pm$ 0.001" (0.889mm $\pm$ 0.025mm)	0.035" $\pm$ 0.001" (0.889mm $\pm$ 0.025mm)	0.006" $\pm$ 0.001" (0.152mm $\pm$ 0.025mm)	
F40NR0R5M1PX4	4	0.5, 1, 2, 4	100	0.040" $\pm$ 0.001" (1.016mm $\pm$ 0.025mm)	0.040" $\pm$ 0.001" (1.016mm $\pm$ 0.025mm)	0.0075" $\pm$ 0.001" (0.191mm $\pm$ 0.025mm)	

Dimensions - Bi-Cap



Circuit Diagram - Bi-Cap



$C_1 = 1$
 $C_2 = 2 \times C_1$
 $C_3 = 4 \times C_1$
 (4 pad - $C_4 = 8 \times C_1$)
 Pads may be used singularly or
 in combination to tune circuit.