

Microwave SLCs

Multi-Cap Arrays

GENERAL INFORMATION

AVX Multi-Cap Arrays can be manufactured with 2, 3, 4, 5 or 6 capacitors on one single layer ceramic substrate. These arrays are available in our X7S (Z), Maxi and Maxi+ family of GBBL dielectrics and offer a broad range of capacitance values as detailed in the accompanying tables.

These arrays have advantages over single components in the form of smaller overall size, reduced handling and lower average unit costs. They are, therefore, a good choice for broad-band bypass applications where circuit board layouts can utilize these configurations.

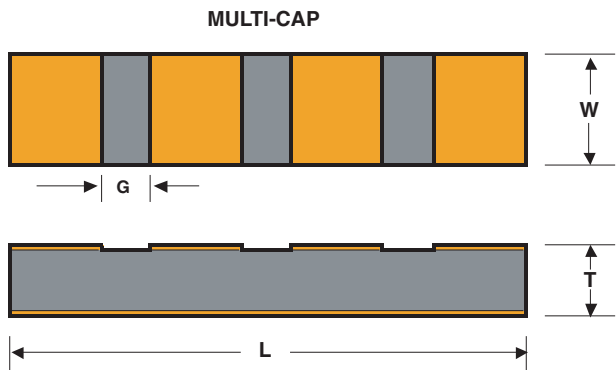
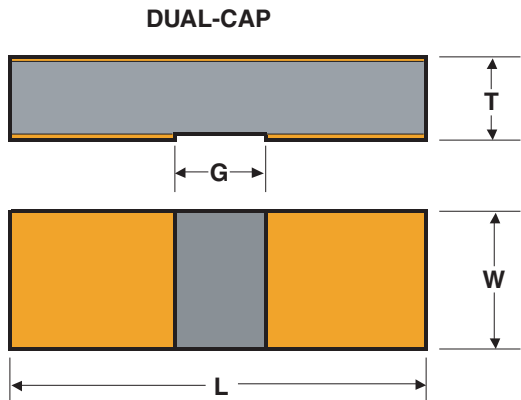
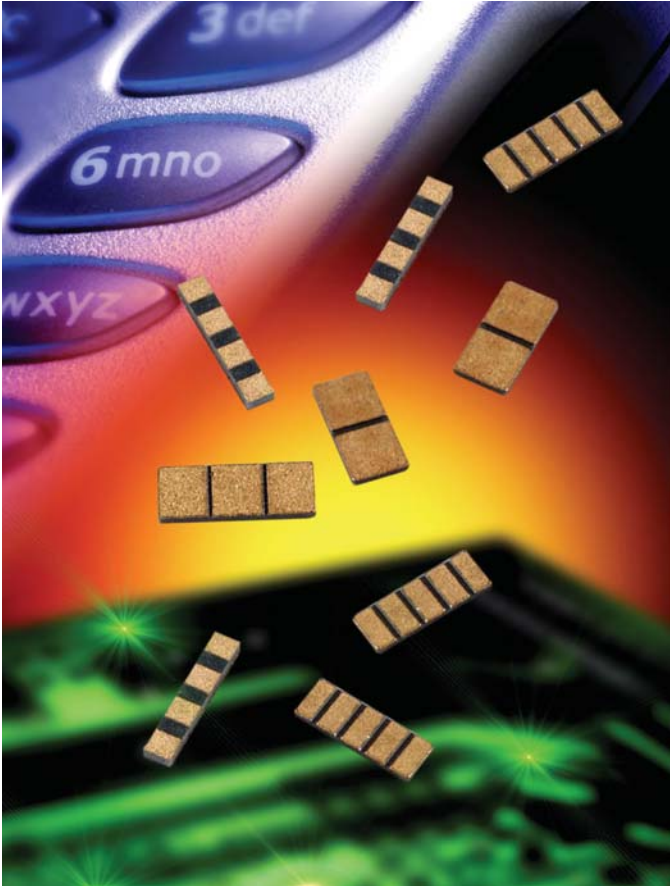
The designs, shown along with the range of maximum capacitance values, represent typical parts. Since most applications require specific form factors, custom designs on all multi-cap arrays are available to meet individual customer requirements and are offered with quick turn around. No charge samples are generally shipped within two weeks of the design sign-off.

Both standard and custom designs are available with borders for those applications where conductive epoxy run up exposes the parts to the possibility of shorting. Maximum capacitance per pad for bordered devices will be necessarily somewhat lower than shown on the adjacent page.

2 and 3 cap arrays can be designed with different capacitance values per pad in circuit designs where identical values pad-to-pad are, for one reason or another, not altogether suitable.

Additionally, the dual-caps are available to match micro strip widths as dictated by circuit considerations. When mounted with the individual pads down, the need for wire bonding is eliminated. The maximum capacitance values indicated on the typical designs shown represent capacitance per pad. Mounted with both pads down puts two capacitors in series. The effective series capacitance (C_{Eff}), can be determined by $1/C_{\text{Eff}} = 1/C_1 + 1/C_2$.

Contact the factory or your local AVX representative.



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Multi-Cap Arrays

GHB SERIES: DUAL CAP SINGLE LAYER CAPACITORS

DIMENSIONS: inches (millimeters)

| | GHB2 | GHB4 | GHB3 | GHB4 | GHB5 |
|---------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| (L) Length | .050±.010 (1.27±.254) | .080±.010 (2.03±.254) | | | |
| (W) Width | .020+.000,-.003 (.508+.000,-.076) | .025+.000,-.003 (.635+.000,-.076) | .030+.000,-.003 (.762+.000,-.076) | .040+.000,-.003 (1.02+.000,-.076) | .050+.000,-.003 (1.27+.000,-.076) |
| (T) Thickness | .008±.002 (.203±.051) | | | | |
| (G) Gap | .005 min/.010 max (.127/.254) | | | | |

| Dielectric | Cap/Pad (pF) | | Cap/Pad (pF) | | Cap/Pad (pF) | | Cap/Pad (pF) | | Cap/Pad (pF) | |
|------------|--------------|-----|--------------|------|--------------|------|--------------|------|--------------|------|
| | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max |
| Z | 25 | 220 | 54 | 500 | 65 | 600 | 88 | 770 | 100 | 960 |
| Maxi | 200 | 350 | 430 | 780 | 520 | 940 | 700 | 1200 | 870 | 1500 |
| Maxi+ | 270 | 450 | 600 | 1000 | 730 | 1200 | 980 | 1500 | 1200 | 1900 |

GH-SERIES: MULTI-CAP ARRAY SINGLE LAYER CAPACITORS

DIMENSIONS: inches (millimeters)

| | GH*2 | GH*Y | GH*3 | GH*6 |
|----------------------------|-------------------------------|--------------------------|--------------------------|--------------------------|
| Length - Code (C) - 3 Caps | .065±.010 (1.65±.254) | | | |
| Length - Code (D) - 4 Caps | .090±.010 (2.29±.254) | | | |
| Length - Code (E) - 5 Caps | .115±.010 (2.92±.254) | | | |
| Length - Code (F) - 6 Caps | .140±.010 (3.56±.254) | | | |
| (W) Width | .020±.005 (.508±.127) | .025±.005 (.635±.127) | .030±.005 (.762±.127) | .040±.005 (1.02±.127) |
| (T) Thickness | .008±.002 (.203±.051) | | | |
| Pad Size (nominal) | .020x.015 (.508x.381) | .025x.015 (.635x.381) | .030x.015 (.762x.381) | .040x.015 (1.02x.381) |
| (G) Gap (All Arrays) | .005 min/.010 max (.127/.254) | | | |

| Dielectric | Cap/Pad (pF) | | Cap/Pad (pF) | | Cap/Pad (pF) | | Cap/Pad (pF) | |
|------------|--------------|-----|--------------|-----|--------------|-----|--------------|-----|
| | Min | Max | Min | Max | Min | Max | Min | Max |
| Z | 20 | 120 | 25 | 150 | 30 | 180 | 40 | 250 |
| Maxi | 140 | 200 | 170 | 250 | 210 | 300 | 280 | 400 |
| Maxi+ | 200 | 300 | 250 | 370 | 300 | 450 | 400 | 600 |

HOW TO ORDER

| | | | | | | | | |
|-----------|---|--|----------------------|----------------------------------|--------------------|--|---|-----------------------------|
| GH | B | 5 | 5 | 8 | 102 | P | A | 6N |
| Type Code | Array Code | Size Code | Working Voltage Code | Dielectric Code | Cap Code | Cap Tolerance | Termination Code | Packaging Code |
| | B = 2 C = 3 D = 4 E = 5 F = 6 | 2 = .020" W Y = .025" W 3 = .030" W 4 = .040" W 5 = .050" W S = Special | 5 = 50VDC | Z = X7S 8 = Maxi 9 = Maxi+ | EIA Cap Code in pF | P = +100% -0% Z = +80% -20% Dual-Caps M = ±20% available | A = Au (100 μ-in min) over TiW (1000 Å nom) also available N = TiW-Ni-Au | 6N = Antistatic Waffle Pack |

