Interdigitated Capacitor

Leading passive component manufacturer, AVX Corp. has expanded its family of low inductance capacitors by introducing new InterDigitated Capacitors (IDCs). AVX's IDCs are now available in 0508 and 0612 case sizes with 8 or 10 terminals. AVX's IDCs connect with eight/ten vias to power and ground planes, offering a decoupling solution, which meets the requirements of today's high-speed microprocessing applications. These devices allow engineers to speed up board interconnect for current and next generation microprocessors.
The patented design of AVX's IDC offers design engineers a smaller, space-saving solution for a wide variety of decoupling needs. With high-speed microprocessors approaching 2 Ghz and beyond, the need for reliable, low inductance decoupling capacitors becomes critical. This device can lower inductance of entire systems such as those found in computers, data communications and telecommunications. The IDC capacitor works by connecting the single capacitor with a series of eight or ten vias to power and ground planes in an alternating (or interdigited) pattern. This patented internal construction geometry alternates the polarity of these elements, allowing the alternating inductance values to cancel each other. Available in 0508 and 0612 case sizes, the AVX IDC chip offers capacitance values ranging from .01 &#956F to .68 &#956F at 16 V; .01 &#956F to 2.2 &#956F at 10 V; and .01 &#956F to 3.3 &#956F at 4 V with tolerances of &#177 20 percent in an X7R/X5R dielectric. Terminations are available in plated nickel and solder. The IDC capacitors are available in tape and reel packaging and are compatible with automated pick-and-place equipment.

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