

What is a high frequency capacitor?

About High-Frequency Capacitors High-frequency capacitors are marketed as such due to their ability to retain ideal capacitive behavior up to very high frequencies. Capacitors will not exhibit ideal behavior up to the intended operating frequencies in RF systems, even if they are marketed as "high-frequency" or "RF" components.

Which high-frequency ceramic capacitor is best for high power RF design?

The GQM/GJM high-frequency ceramic capacitors are the best choice for high performance and high power RF designs requiring voltages up to 500V DC. These capacitors offer EIA sizes 0201, 0402, 0603, 0805, and the 1111 size with a capacitance range of 0.1pF to 100pF.

What are Murata high frequency ceramic capacitors?

These Murata High-Frequency Ceramic Capacitors feature low power consumption for mobile telecommunications, the GQM and GJM capacitors come with copper electrodes that allow for ultra-low ESR, high Q in the GHz frequencies, and high RF current handling capability.

Why are high-stability capacitors important in high-speed RF applications?

While high-stability capacitors are valuable in many instances, they shine in high-speed RF applications. As capacitors tend to leak more energy at high frequencies, preventing loss to the environment is energy efficient and prevents heat-related aging of components and the substrate. Capacitors fill a wide variety of roles across a circuit.

Do you need discrete capacitors in a high frequency board?

If you need discrete capacitors in a very high frequency board, then you need to account for these values in your circuit model. These values are determined by the following factors: The result is that the above curve is not necessarily observed once the components are placed on a real PCB.

What is the Q-factor of a capacitor?

In simple terms, the Q-factor measures the efficiency of a capacitor; it's thermodynamically impossible to have a perfect energy store, so capacitors (and many other devices) are evaluated by relating the losses to the total storage capabilities of the capacitor.

By devising ceramic materials and electrode materials, low dissipation is achieved in frequency bands of VHF, UHF and microwave or beyond. This capacitor is designed so that the parasitic inductance component (ESL) that the capacitor has on the high frequency side becomes lower.

Ceramic Chip Capacitors for High Frequency Applications [LINKS TO ADDITIONAL RESOURCES](#)  
FEATURES o Case size 0402, 0505, 0603, 0805, 1111, 2525, and 3838 o High frequency o Ultra-stable, high

Q dielectric material o Non-magnetic copper termination "C" o Lead (Pb)-free terminations code "X" o Tin / lead termination code "L"

High Frequency, Ceramic, Capacitors manufactured by Vishay, a global leader for ...

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Equivalent high frequency capacitor model. This means that the important characteristic distinguishing different capacitors for different frequency ranges is the capacitor's self-resonant frequency. At this particular frequency, the capacitor will exhibit its minimum impedance and a very strong current response.

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Capacitance (max.) High Frequency, Capacitors manufactured by Vishay, a global leader for semiconductors and passive electronic components.

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