Capacitors placed vertically

This article talks about mounting capacitors with the electrodes parallel or perpendicular to this microstrip indicating that "By mounting the capacitor vertically, that is, with the electrodes perpendicular to the microstrip, the first parallel resonance will not be present thereby significantly extending the usable bandpass."

Proper orientation is upright, or horizontal with the vent at the top of the capacitor. Smaller electrolytic capacitors often do not have such a vent, instead having a scored top.

To minimize microwave parallel resonant effects, chip capacitors should be mounted on the microstripline in the orientation shown below. In this configuration, called Vertical Orientation, the capacitor plates are perpendicular to the microstripline conductor.

In schematic diagrams, a capacitor used primarily for DC charge storage is often drawn vertically in circuit diagrams with the lower, more negative, plate drawn as an arc.

Mounting the capacitor in the vertical manner would reduce the occurrence of the parasitic self resonances low down in the rf spectrum. The resonances then only become apparent at much higher frequencies. So the capacitors behave as capacitors and do NOT become inductive till the microwave regions.

Why do most suppliers put the capacitors in horizontal position (e.g. Korad KA3005P) or even up side down (e.g. Rigol DP832)? Would it not be better to place them vertical with the PCB on the bottom? Or does it not matter?

This thread is to discuss (and test) the difference between mounting the main electrolytic capacitors in controllers vertically vs horizontally, relative to the PCB, so that their leads are the shortest possible, causing the least resistance (and inductance) path between the PCB power planes and the capacitors" internals, enabling them to more ...

Two identical parallel plate capacitors 1 and 2 are placed vertically and connected in series to a battery. In capacitor-2 there is a charged small particle attached by a thin wire to a fixed point, as shown in the figure. Ignore the effect of the charged particle on the charge distribution on the capacitor plates.

This article talks about mounting capacitors with the electrodes parallel or perpendicular to this microstrip indicating that "By mounting the ...

There should be no change other than natural aging as capacitors may be mounted in any orientation unless the manufacturers data sheet specifies differently, (which ...

Capacitors placed vertically

Recently, customers in the automotive industry have successfully saved space and increased capacitance values by vertically mounting a series of capacitor pairs on their side as shown here.

There should be no change other than natural aging as capacitors may be mounted in any orientation unless the manufacturers data sheet specifies differently, (which will be a new one on me!)

To minimize microwave parallel resonant effects, chip capacitors should be mounted on the microstripline in the orientation shown below. In this configuration, called Vertical Orientation, ...

Web: https://www.batteryhqcenturion.co.za