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(57) Abstract :

The invention illustrates design of a narrow band pass filter with wide stop band and harmonic rejections in suspended substrate stripline medium. The additional loading circuits build a harmonic suppression circuit into the filter. The harmonic suppression circuit consists of parallel plate capacitors 9 loaded at the end of the coupled lines 6 using top 3 and bottom layers 4 of the PCB 1 and open circuited shunt lines 7 loaded at the centre of the half wavelength coupled lines. The circuit comprises the PCB 1 enclosed in a housing, which forms SSS configuration. The open circuited shunt lines 7 are embedded with coupled lines 6 for harmonic suppressions at $3f_0$ and $4f_0$, which makes the filter with wide stop band region. It offers stop band region up to 11 GHz with rejection better than 40dB (upto $4f_0$). This is useful in wireless communication system products where harmonic suppression is essential.

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