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 3fo and 4fo, which makes the filter with wide stop band region. It offers stop band region up to 11 GHz with rejection better than 40dB (upto 4fo). This is useful in wireless communication system products where harmonic suppression is essential.

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