

**ABSTRACT**

**Filter arrangement applicable to ADSL splitters**

A low-pass filter arrangement (LP) associated to clamping means (T1) for limiting unwanted transient signals to be transmitted through the filter. Mainly the variations ( $di/dt$ ) of the current (I) flowing through the filter are eliminated. The filter may form part of a splitter used in an ADSL system to separate low frequency POTS signals from high frequency ADSL signals simultaneously transmitted over a same copper twisted-pair transmission line (TP). The filter basically comprises the series connection of a coil (L1) and the main path of a transistor (T1) of which the gate terminal is connected to the opposite end of the coil. It has been proved that, in case of an ADSL system, a classical 7<sup>th</sup> order low-pass filter may advantageously be replaced by a 3<sup>rd</sup> order filter arrangement as of the present invention.

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This Sheet Has Been Replaced

