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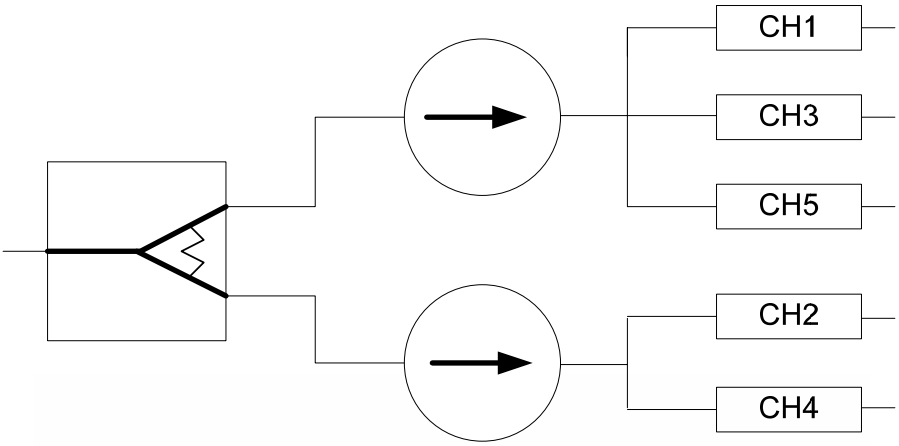
8-18 GHz Multiplexer with Overlapping Bands

For wideband receiver applications, the 8-18 GHz spectrum is divided into medium-size slices (2 GHz) prior to the amplification stage. The role of the multiplexer is to pass the spectrum with flat insertion loss (1.25dB) and provide adequate isolation of 70dB between the channels, which affects directly the dynamic range of the signal detection. At cross-over regions, the requirement is to have overlapping channels, leaving the ambiguity of detection to finer filtration schemes further down the chain. Spectral overlapping regions can be realized using a power divider and isolators, as depicted in the block diagram, splitting of RF signals into equal paths.

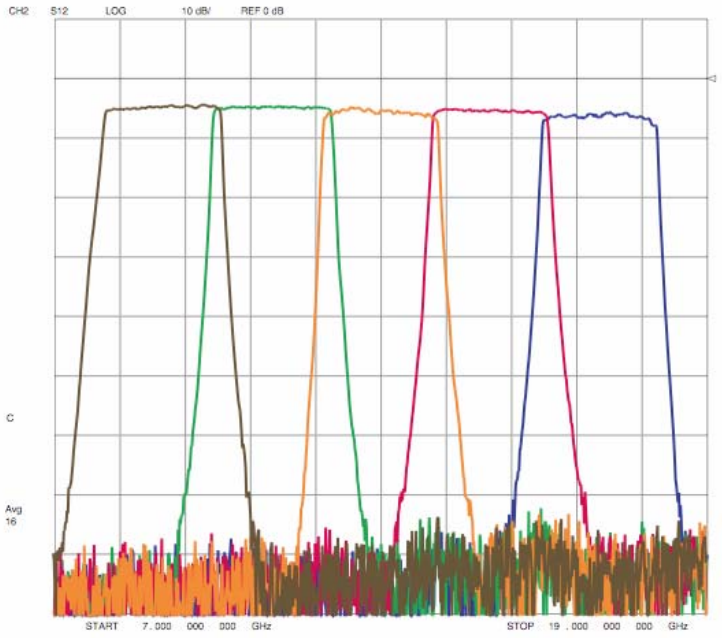
SS-00159 is K&L Microwave's solution for passband flatness and tight isolation, achieved using degree 10 cavity TEM comb-line filters, with resonators machined directly into the housing. This reduces the number of parts and provides greater control over RF leakages.

The unit measures 4" x 3" x 0.5" with SMA connectors located on one side. Typical data is shown below.

For further information and performance data, please contact K&L Microwave.



Block Diagram



5 Channels-Frequency Response