Band-Pass MMIC Filters in Compact SMT Packages

Hittite Corporation has introduced three new SMT packaged MMIC Band-Pass Tunable Filters which are ideal for pre-selection in multi-band communication systems, wideband radar, and in test and measurement equipment. Tunable over a 4.0 GHz to 19.0 GHz frequency range, these three new, ultra-compact, varactor-tuned, MMIC filters are inherently stable and their small physical size and insensitivity to environmental conditions provide a superior alternative to competing resonant cavity and MEMS solutions.

The HMC892LP5E, HMC893LP5E and the HMC897LP4E are tunable band-pass filters with two independent voltage controls for adjustment of passband frequency and bandwidth. The HMC892LP5E filter center frequency is adjustable from 4.0 GHz to 7.7 GHz while the HMC893LP5E and HMC897LP4E filter center frequency is adjustable over an octave bandwidth of 4.8 to 9.5 GHz, and 9.0 to 19.0 GHz, respectively.

Pass-bandwidth for the HMC892LP5E and HMC893LP5E is adjustable to Â±3% of filter center frequency. Return loss for the HMC892LP5E, HMC893LP5E and the HMC897LP4E is better than 10 dB across the operating frequency and the wideband rejection is at least 30 dB out to 40 GHz.

The HMC892LP5E and the HMC893LP5E are available in compact, RoHS compliant 5 x 5 mm QFN SMT plastic packages and are specified for operation from -40Â°C to +85Â°C. The HMC897LP4E is available in a compact, RoHS compliant 4 x 4 mm QFN SMT plastic package. Samples and evaluation PC boards for all SMT packaged products are available from stock and can be ordered via the company's e-commerce site or via direct purchase order. Released data sheets are available on-line at www.hittite.com.

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