cover story

Low-Noise VCOs Conquer Wide Bands

These low-cost, surface-mount sources offer better than octave tuning ranges and low phase noise while consuming minimal power through 4200 MHz.

Bandwidth and phase noise are two of the leading requirements for signal-generating components in modern communications equipment. Voltage-controlled oscillators (VCOs) have been the frequency source of choice for many wired-, wireless-, and optical-communications systems, even though traditionally limited to less than an octave tuning range to maintain low phase noise. Fortunately, the new DCFO and DCMO series of VCOs from Synergy Microwave Corp. (Paterson, NJ) break with tradition and overcome the long-time hurdle of achieving very low phase noise while also delivering broadband frequency coverage. The low-cost, surface-mountable VCOs are currently available in bands from 350 to 4200 MHz.

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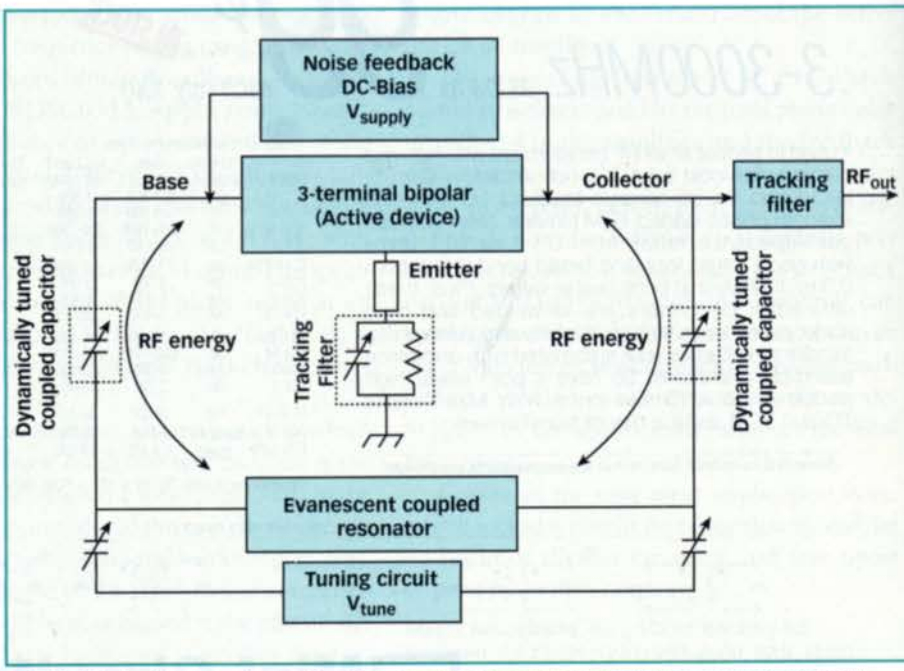

1. This block diagram shows the discrete-device approach with evanescent-coupled resonator used in the DCFO and DCMO broadband VCOs.