Three New Active Multipliers Generate LO Signals From 6 to 31 GHz

Hittite Microwave Corporation announces the release of three new GaAs pHEMT based Active Multipliers which are ideal for automotive radar, microwave radio, medical, military, SatCom and Sensor applications from 6 to 31 GHz. The HMC917LP3E is a x4 Active Frequency Multiplier which provides an output frequency range of 6 to 10 GHz, while the HMC916LP3E is a x3 Active Frequency Multiplier with an output frequency range of 8 to 16 GHz. When driven by +5 dBm signals, these compact multiplier MMICs deliver +2 dBm of output power, and exhibit additive SSB (single sideband) phase noise as low as -152 dBc/Hz at 100 kHz offset from the carrier.

The HMC917LP3E and the HMC916LP3E are housed in footprint compatible, RoHS compliant 3mm x 3mm leadless QFN SMT packages, and consume between 83 and 91 mA from a single +5 V supply.

The HMC942LP4E is a high power x2 Active Frequency Multiplier which provides an output frequency range of 25 to 31 GHz. When driven by a +4 dBm signal, this powerful multiplier delivers output power as high as +21 dBm, and maintains an outstanding -55 dBc of fundamental signal isolation at the output port. This high performance Ka-band multiplier is housed in a convenient RoHS compliant 4x4 mm leadless QFN SMT package, and consumes only 214 mA from a single +4.5 V supply.

The HMC917LP3E, HMC916LP3E and HMC942LP4E can be used in LO multiplier chains in point-to-point and VSAT radios, while yielding reduced parts count and reduced PCB area compared to traditional discrete design approaches. These low noise multipliers are ideal for driving the LO port of many of Hittite’s high performance mixer and converter products, and complement Hittite’s broad line of active and passive multipliers with output frequencies to 90 GHz.

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