



Image-Reject and Single Sideband Mixers Single-Sideband Upconverters

QSM

Product Description

QuinStar offers Image-Reject or Single Sideband Mixers/Upconverters for applications in the 18-110 GHz frequency range. These mixers are specially designed and configured to meet specific performance needs of customer's application. The construction of image reject and single sideband mixers involves a pair of balanced mixers and a set of hybrids for RF, LO and IF to create the

required performance. Figure 2 below shows various possible arrangements. These mixers can be offered with either fundamental or sub-harmonic LO (LO at half RF frequency). QuinStar can test and optimize the component assembly to meet the required specifications for these special purpose mixers.

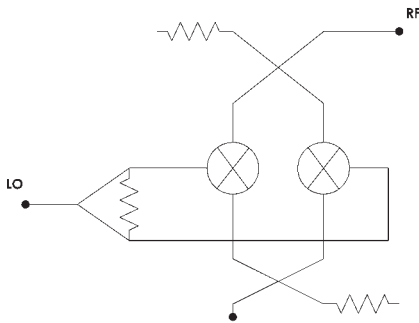


Figure 2:
Single Sideband and Image-Reject Mixers and Upconverters.

Product Description

QuinStar offers millimeter wave IQ detectors over the frequency range of 18-110 GHz for radar and digital communication systems. Figure 3 below shows the configuration of the components used to produce the

I-Q detectors. These are custom-designed, tested and optimized to meet customer's specific performance needs.

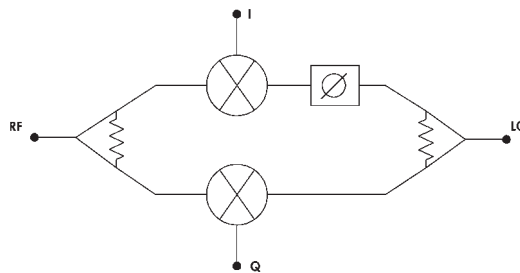


Figure 3:
Mixer with I-Q output

I-Q Mixer

QMI

Product Description

QuinStar Series QBP phase modulators are specially optimized to generate bi-phase modulated output for digital signal input. A driver that converts the input digital data to appropriate drive levels for bi-phase modulation

(with suppressed carrier) is also included with the mixer. Both fundamental and second harmonic (LO at one half of output RF frequency) Bi-phase modulators are offered.

Bi-phase Modulator

QBP