

Quadrature Mixers and Phase Detectors

FEATURES:

- ❖ Frequency coverage: 18 to 110GHz
- ❖ Balanced configuration for low conversion loss
- ❖ Readily to be configured as image rejection mixers
- ❖ IF port DC coupling for phase detection
- ❖ Standard temperature range: -10 to +60°C

APPLICATIONS:

- ❖ Phase detector
- ❖ Ranging radar systems
- ❖ Communication systems
- ❖ Test instrumentations



DESCRIPTION:

CQMP Series

Quadrature mixers are also known as I/Q mixers. **CQMP series** quadrature mixers are GaAs Schottky beamlead diode or MMIC based mixers. These mixers are offered in seven common waveguide bands in the frequency range from 18 to 110 GHz. Since the IF port of the quadrature mixers is DC coupled, the mixers can be used as phase detectors. In addition, these mixers can readily be configured into image rejection mixers or single side-band modulators by adding IF quadrature coupler. The typical LO to RF port isolation of these mixers are 30dB, which is high enough for most applications without the requirement of additional port filtering. The catalog models are designed for narrow bandwidth operations to address industry focused frequencies. While catalog models focus on specific operation frequencies and package styles, custom designed models are designed and optimized to meet customers' unique applications needs. Subharmonically pumped quadrature mixers are available per request.

SPECIFICATIONS:

Frequency Band	K	Ka	Q	U	V	E	W
RF & LO Frequency Range (GHz)	23.0 to 25.0	34.0 to 36.0	41.0 to 45.0	49.0 to 51.0	58.0 to 62.0	75.0 to 79.0	92.0 to 96.0
IF Frequency Range (GHz)	DC to 1.0	DC to 1.0	DC to 1.0	DC to 1.0	DC to 3.0	DC to 1.0	DC to 1.0
Conversion Loss (dB)	9.0	10.0	11.0	11.0	11.0	12.0	12.0
LO Power (dBm)	16	16	16	16	16	16	16
Port Isolation (dB)	30.0	30.0	30.0	30.0	30.0	30.0	30.0
RF & LO Connectors	WR-42	WR-28	WR-22	WR-19	WR-15	WR-12	WR-10

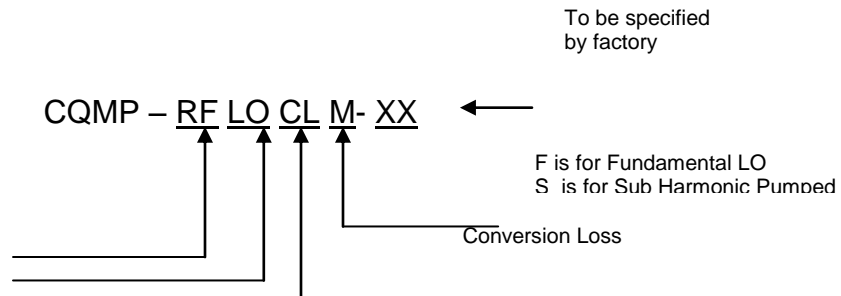
Quadrature Mixers and Phase Detectors

HOW TO ORDER:

Specify Model Number

RF High End Frequency

LO High End Frequency



Example: To order a Quadrature Mixer and Phase Detector, specify, CQMP-XX.

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