



# Frequency Extenders

## QBE

### Characteristics

- ◆ Broadband and Sweepable
- ◆ Output Frequency up to 110 GHz
- ◆ Excellent Power Flatness



### Product Description

QuinStar Technology's series **QBE frequency extenders** utilize a chain of passive or active multipliers and amplifiers to extend a microwave source to cover the frequency range of 18 to 110 GHz. The extenders also allow the use of network analyzers, sweepers and synthesizers operating in the 2-20 GHz range to frequencies in the 20-110 GHz range. Multiplication factors of 2 to 12 are available and integral

filters guarantee low spurious levels. Both full waveguide bandwidth/moderate output power and narrow bandwidth/high output power versions are available. The standard product has all extender components integrated and mounted on a baseplate. Typically, input is a coaxial SMA-F or K connector and output is waveguide. Other RF interface configurations are available.

### Specifications

OUTPUT FREQUENCY BAND	K	Ka	Q	U	V	E	W
<b>Multiplying Factor</b>	2	2-4	2-6	2-8	2-8	2-12	2-12
<b>Input Power Range (dBm)</b>	10-20	10-20	10-20	10-20	10-20	10-20	10-20
<b>Output Frequency Range (GHz)</b>	18-26.5	26.5-40	33-50	40-60	50-75	60-90	75-110
<b>Fullband Output Power (dBm min)</b>	20	20	15	10	6	2	0
<b>Narrowband Output Power (dBm min)<sup>1</sup></b>	23	23	20	17	18	17	20
<b>Input Connector</b>	SMA	SMA	SMA	SMA	SMA or K	SMA or K	SMA or K
<b>Output Waveguide Size</b>	WR-42	WR-28	WR-22	WR-19	WR-15	WR-12	WR-10

Other frequency bands and input and output interfaces are available.

<sup>1</sup> Typical bandwidth 2 GHz. Larger bandwidth available. Please contact QuinStar for power output level for moderate bandwidth versions.

### Ordering Information

