

## FEATURES

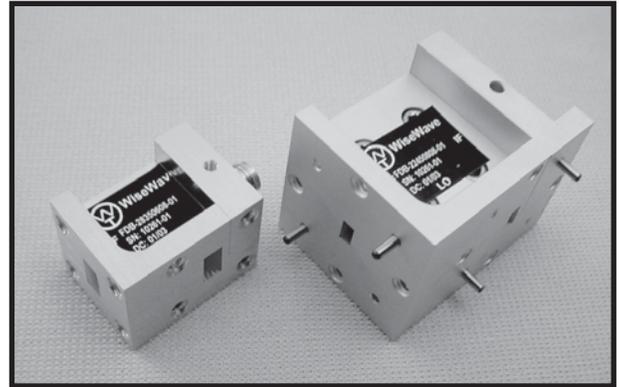
- ❖ Low conversion loss
- ❖ Low LO drive power
- ❖ Full waveguide band operation
- ❖ Compact and rugged package

## APPLICATIONS

- ❖ Test equipment
- ❖ Communication systems
- ❖ Radar receivers

## DESCRIPTION

**FUB** series balanced up-converters are offered in seven waveguide bands to cover frequency spectra from 18 to 110 GHz. These converters employ high performance GaAs Schottky beamlead diodes and balanced configuration to produce superior performance with a moderate LO pumping level. The converters are designed for full RF waveguide band operation with extremely wide IF bandwidth. Better performance can be obtained by operating the converters in narrower bandwidth. These converters offer moderate port to port isolation, which is high enough for most applications to eliminate additional filtering requirement. The standard converters are offered as double sideband operation and signal sideband version can be realized by adding an optional low pass or band pass filter. These converters are ideal candidates for test equipment, communication systems, frequency extenders and radar transmitters where frequency up conversion is desired.



**FUB Series**

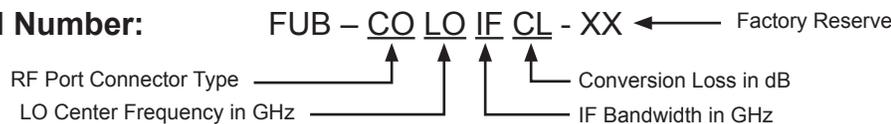
## FULL BAND MODEL SPECIFICATIONS

Waveguide Band	K	Ka	Q	U	V	E	W
Waveguide Size	WR-42	WR-28	WR-22	WR-19	WR-15	WR-12	WR-10
Model Number	FUB-42-01	FUB-28-01	FUB-22-01	FUB-19-01	FUB-15-01	FUB-12-01	FUB-10-01
RF & LO Frequency Range (GHz)	18 to 26.5	26.5 to 40	33 to 50	40 to 60	50 to 75	60 to 90	75 to 110
IF Frequency Range (GHz)	DC to 8	DC to 14	DC to 17	DC to 18	DC to 18	DC to 18	DC to 18
LO Pumping Level (dBm)	10 to 13	10 to 13	10 to 13	10 to 13	10 to 13	10 to 13	10 to 13
Conversion Loss (dB, Typical)	6.0	6.5	7.0	7.5	8.0	8.5	9.0
Port Isolation (dB, Typical)	20	20	20	20	20	20	20
Input Signal Level (max)	+17 dBm						
Outline Drawing	WT-F-3	WT-F-3	WT-F-3	WT-F-3	WT-F-3	WT-F-3	WT-F-3
Temperature Range	0 to +50°C						

## NARROW BAND MODELS

The lower cost model with narrow operating bandwidth. Customer may submit the specifications along with the model number per following instruction.

### Specify Model Number:



*Example: To order a W band balanced up-converter with 94 GHz LO frequency, 8 GHz IF bandwidth and 8 dB conversion loss, specify FUB-10940808-XX.*

**WT-F-1**

BAND	W	H
K <sub>a</sub>	0.75	1.25
K	0.88	1.33

*Dimensions are in inches*

**WT-F-2**

BAND	Q & U	V,E & W
H	0.72	0.65

*Dimensions are in inches*

**WT-F-3**

BAND	W	L	LW
K	0.88	1.25	0.81
K <sub>a</sub>	0.75	1.00	0.63
Q & U	1.13	1.50	0.94
V,E & W	0.75	1.16	0.78

*Dimensions are in inches*

**WT-F-4**

BAND	Q & U	V,E & W
H	1.25	0.88
W	1.40	1.25

*Dimensions are in inches*

**WT-F-5**

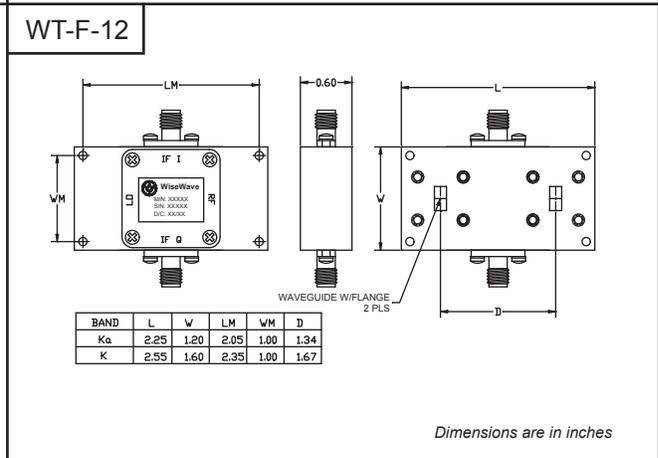
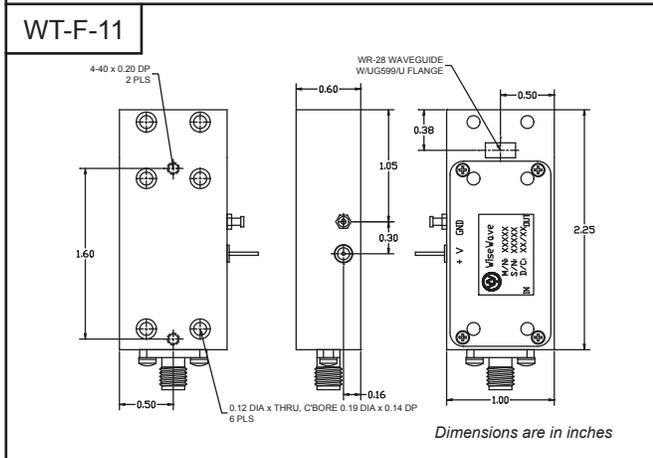
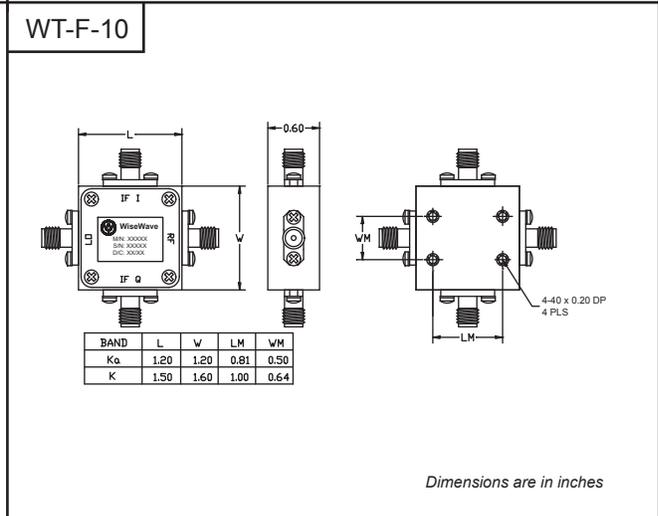
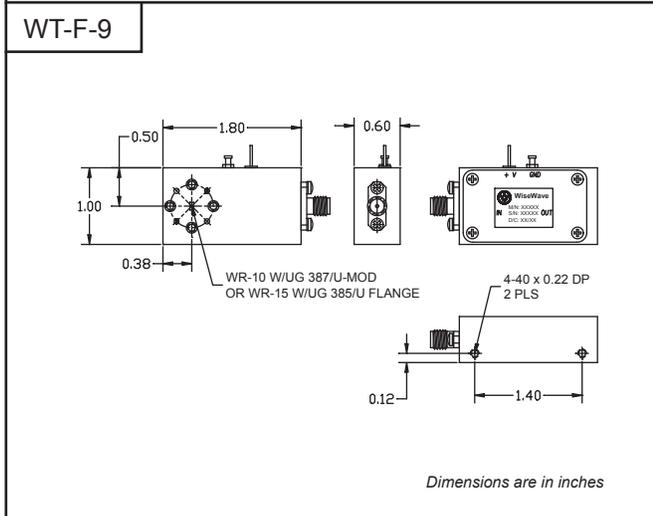
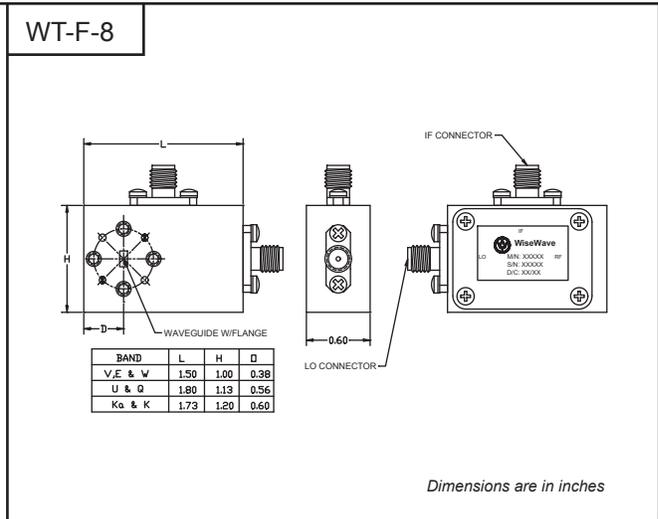
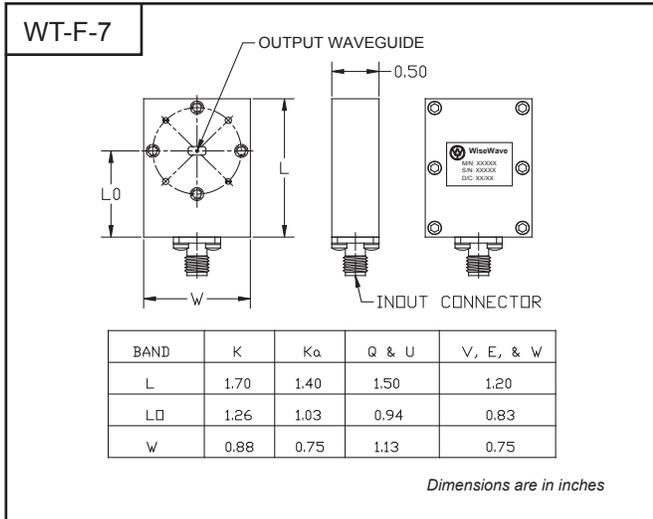
BAND	L	H
V,E & W	1.50	1.00
K <sub>a</sub> & K	1.73	1.20

*Dimensions are in inches*

**WT-F-6**

*Dimensions are in inches*

The flange pattern shown is for illustration purpose. Refer to Technical Reference Section for flange pattern details. The outline drawings shown are standard versions. Contact factory for your specific package requirements.



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