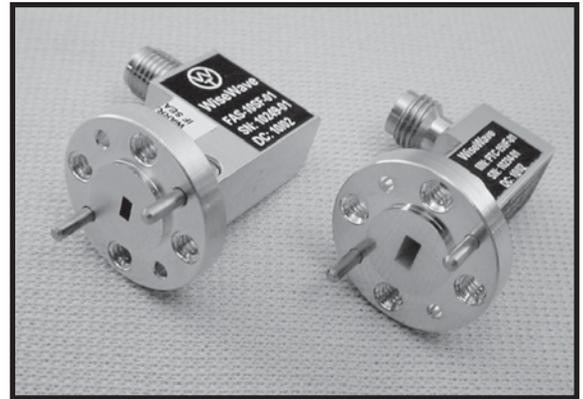


FEATURES

- ❖ Low conversion loss
- ❖ High Sensitivity
- ❖ Full waveguide band operation
- ❖ Compact and rugged package

APPLICATIONS

- ❖ Spectrum analyzer
- ❖ Frequency counter
- ❖ Phase lock loop



FDH Series

DESCRIPTION

FDH series harmonic mixers are offered in seven waveguide bands to cover frequency spectra from 18 to 110 GHz. These mixers employ high performance GaAs Schottky beamlead diode to produce superior performance with a moderate LO pumping level. The mixers are designed for full RF waveguide band operation with wide IF bandwidth. The LO and IF frequency range for standard models are 2 to 15 GHz and DC to 4 GHz, respectively. These harmonic mixers are designed for use with spectrum analyzers and frequency counters with built-in frequency diplexer. When used with external diplexer, these mixers can be used to phase lock the high frequency sources. The standard model equipped with SMA(F) connector for LO/IF port connection.

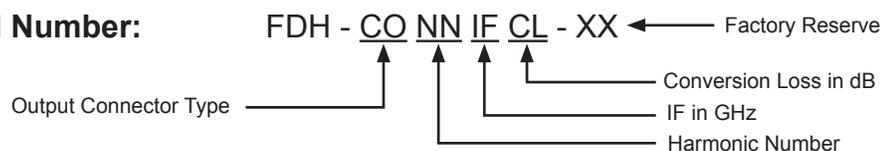
SPECIFICATIONS

Waveguide Band	K	Ka	Q	U	V	E	W
RF Waveguide Size	WR-42	WR-28	WR-22	WR-19	WR-15	WR-12	WR-10
RF 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
LO Frequency Range (GHz)	2 to 4 GHz, 4 to 8 GHz and 8 to 15 GHz						
IF Frequency Range (GHz)	DC to 1 GHz, DC to 2.5 GHz and DC to 4.0 GHz						
LO Pumping Level (dBm)	15	15	15	15	15	15	15
Conversion Loss (dB, Typ)*	20	22	24	26	28	30	32
Maximum Input Signal Level	+ 20 dBm						
Temperature Range	0 to +50°C						

* The conversion loss is a typical value with harmonic mixing number 8 or lower.

HOW TO ORDER

Specify Model Number:



Example: To order a 6th harmonic mixer with 1 GHz IF Bandwidth and 20 dB Conversion Loss and WR-22 waveguide RF port and SMA(F) LO/IF port, specify FDH-22060120-XX.

WT-F-1

BAND	W	H
Ka	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
Ka	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

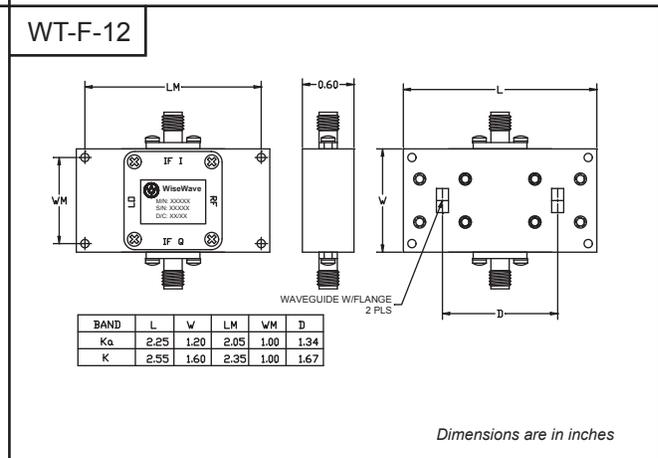
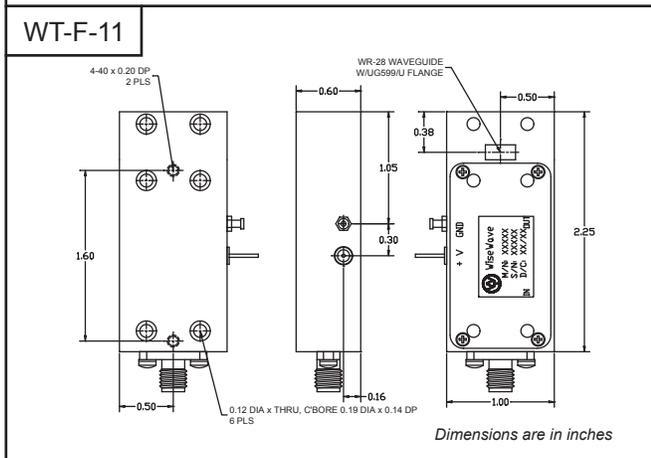
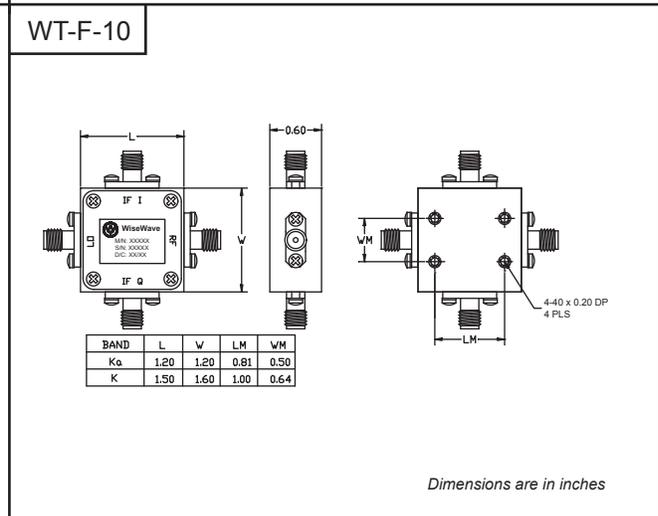
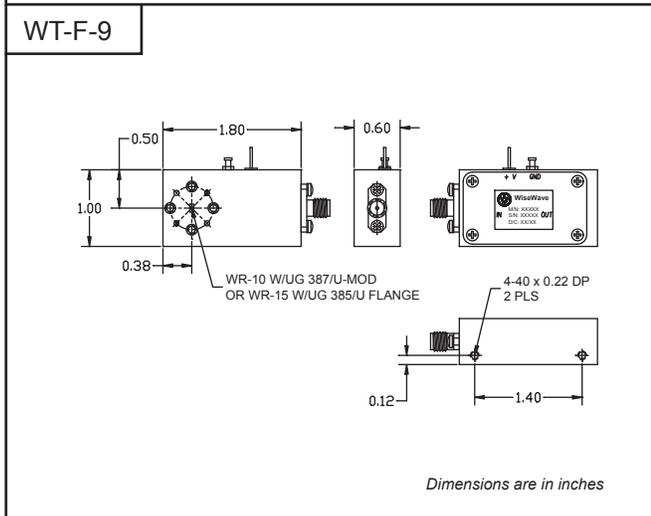
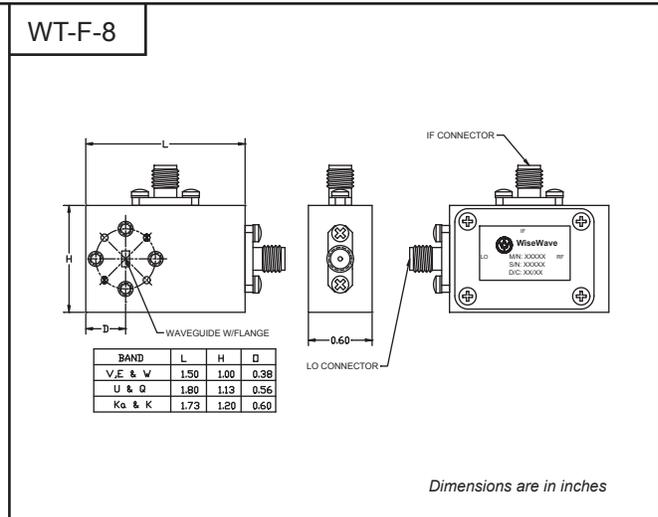
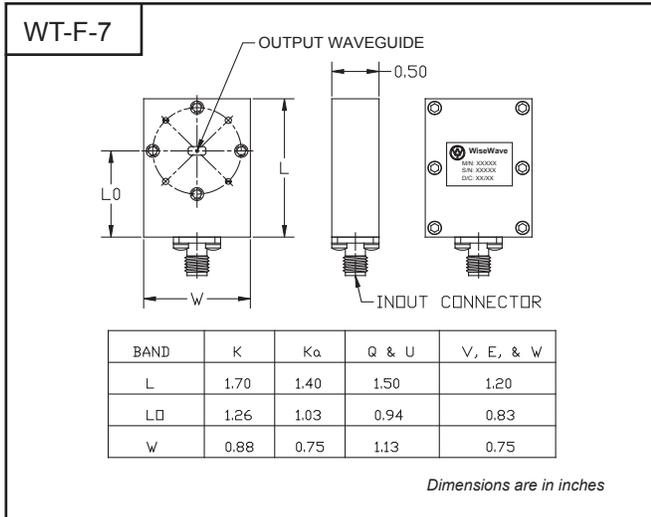
BAND	L	H
V,E & W	1.50	1.00
Ka & K	1.73	1.20

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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