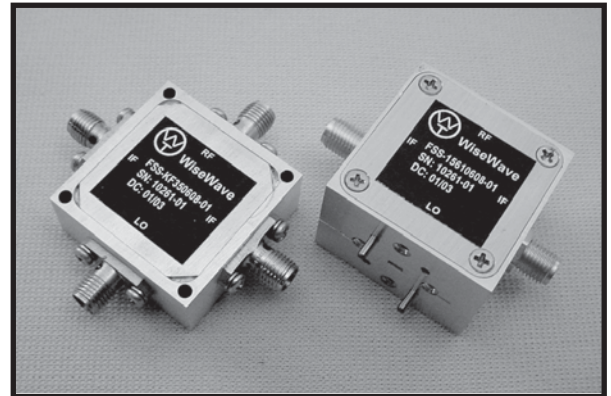


FEATURES

- ❖ Low conversion loss
- ❖ High image rejection
- ❖ Separate I/Q IF inputs
- ❖ LO/RF in-line configuration
- ❖ Compact size

APPLICATIONS

- ❖ Single sideband modulation
- ❖ Communication system
- ❖ Radar system



FSS Series

DESCRIPTION

FSS series single sideband modulators are offered in seven waveguide bands to cover frequency spectra from 18 to 110 GHz with 5 % minimum bandwidth. These modulators employ high performance GaAs Schottky beamlead diodes and balanced configuration to produce superior performance with moderate LO pumping level. The modulators are constructed with fully integrated two balanced mixers, two 3-dB power splitters and phase shifters. The modulators are internally phase matched and often be used as single sideband up-converters without adding external filter. The modulators are ideal candidates for test equipment, communication and Radar systems where the single sideband modulation is required.

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
RF Bandwidth (Min)	5%	5%	5%	5%	5%	5%	5%
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 1.0	DC to 1.0	DC to 1.0	DC to 1.0	DC to 1.0	DC to 1.0	DC to 1.0
LO Pumping Level (dBm)	15	15	16	16	16	16	16
Conversion Loss (dB, Typical)	9.5	10.0	11.0	11.0	11.0	12.0	12.0
Image Rejection (dB, Min)	20	20	20	20	20	20	20
Outline Drawing	WT-F-10	WT-F-10	WT-F-4	WT-F-4	WT-F-4	WT-F-4	WT-F-4
Port Isolation (dB, Typical)	30	30	30	30	30	30	30
RF Bandwidth (Min)	5%	5%	5%	5%	5%	5%	5%
Maximum Input Signal Level	+ 23 dBm				+ 20 dBm		
Temperature Range	0 to +50°C						

HOW TO ORDER

Specify Model Number:

FSS – CO LO IF CL - XX ← Factory Reserve

RF Port Connector Type ↑ ↑ ↑ ↑ ↑ ↑ ↑

LO Center Frequency in GHz ↑ ↑ ↑ ↑ ↑ ↑ ↑

Conversion Loss in dB ↑ ↑ ↑ ↑ ↑ ↑ ↑

IF Bandwidth in 1/10 GHz ↑ ↑ ↑ ↑ ↑ ↑ ↑

Example: To order a V band, 60 GHz single sideband modulator with 0.5 GHz IF frequency and 11.0 dB conversion loss, specify FSS-15600511-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

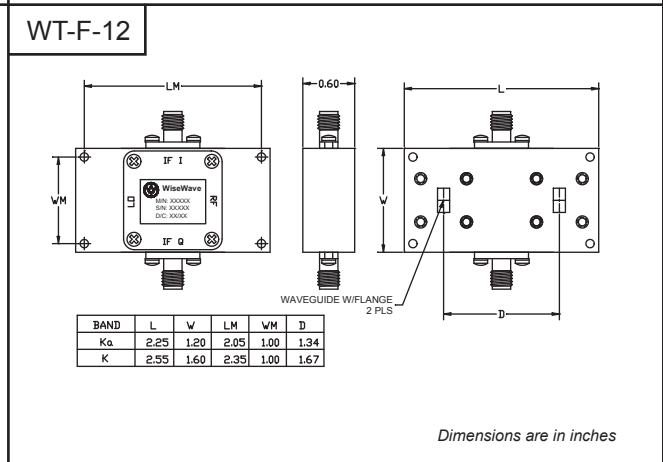
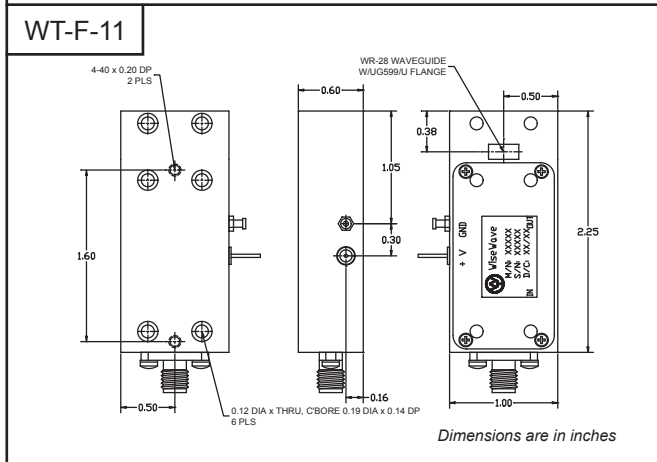
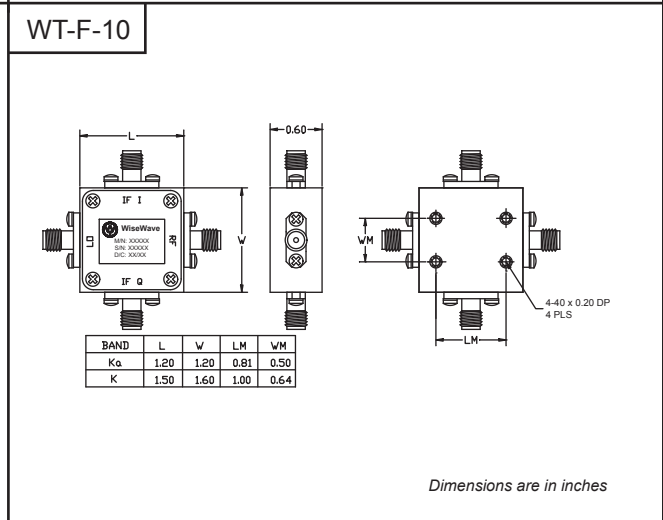
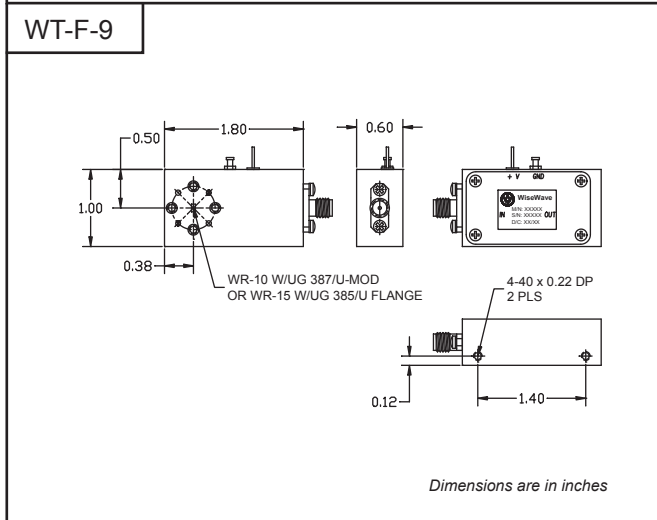
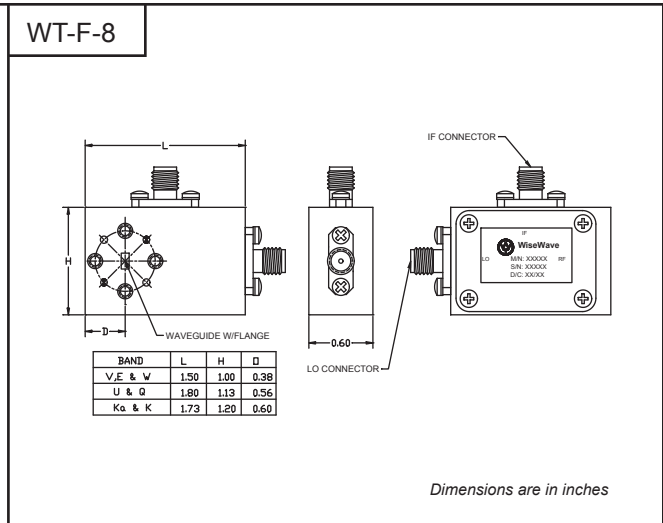
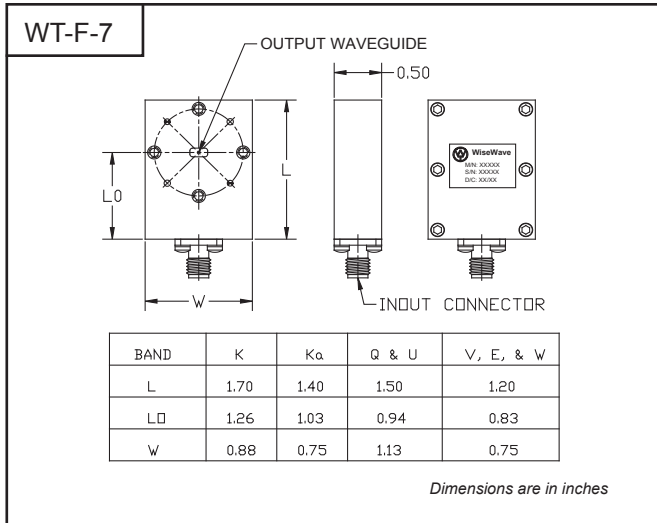
BAND	L	H
V,E & W	1.50	1.00
Ka & K	1.73	1.20

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.



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.