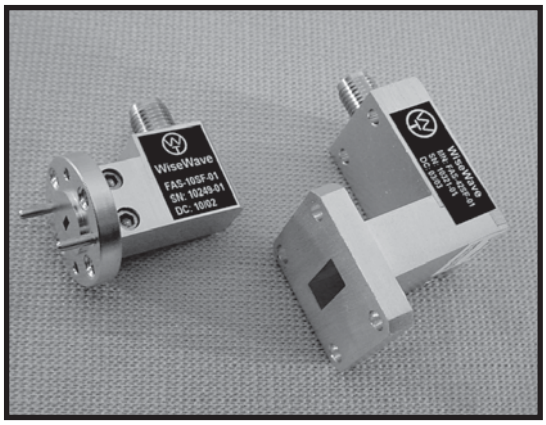
FEATURES

- Full waveguide bandwidth
- High sensitivity
- Zero biased
- No mechanical tuning
- Compact size

APPLICATIONS

- Instrumentation
- Power detection
- Direct detection receiver



FAS Series

DESCRIPTION

FAS series broadband waveguide detectors are offered in seven waveguide bands to cover frequency spectrums from 18 to 110 GHz. These detectors employ high performance GaAs Schottky beamlead diodes and a proprietary circuit design to produce high sensitivity and broad bandwidth without external DC bias or mechanical tuning. The standard detectors are equipped with SMA(F) connector for video output and offered negative output voltage polarity for various applications. The matched pairs with similar sensitivity response cross the entire bandwidth are available. These detectors are idea devices where power detection or power monitoring is required.

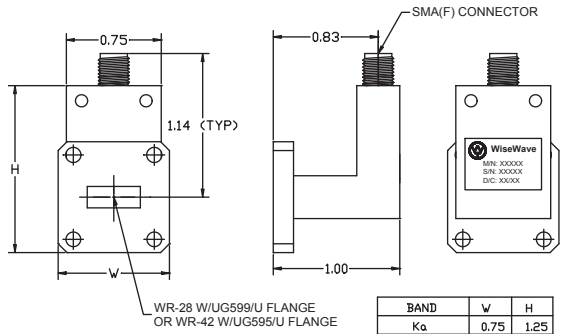
SPECIFICATIONS

Waveguide Band	K	Ka	Q	U	V	E	W
Model Number[1]	FAS-42SF-01	FAS-28SF-01	FAS-22SF-01	FAS-19SF-01	FAS-15SF-01	FAS-12SF-01	FAS-10SF-01
Waveguide Size	WR-42	WR-28	WR-22	WR-19	WR-15	WR-12	WR-10
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
Sensitivity (mV/mW, Min)	1000	1000	800	800	700	600	500
Video Bandwidth (MHz, Min)	1	1	1	1	1	1	1
Output Video Imp. (M ohm, Typ)	1	1	1	1	1	1	1
Outlines	WT-F-1	WT-F-1	WT-F-2	WT-F-2	WT-F-2	WT-F-2	WT-F-2
Voltage Output Polarity[2]	Negative						
Input RF Power (dBm, Max)	+ 20						
Temperature Range	0 to +50°C						

Note:

1. SMA(F) output connector is offered as standard model while SMA(M) is available per customer request. For example, the model number for a WR-22 detector with SMA(M) connector is specified as FAS-22SM-01;
2. Positive polarity is available per request. Specify model number with –P1. For example: FAS-10SF-P1.

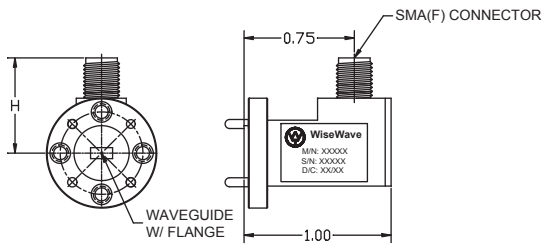
WT-F-1



BAND	W	H
Ka	0.75	1.25
K	0.88	1.33

Dimensions are in inches

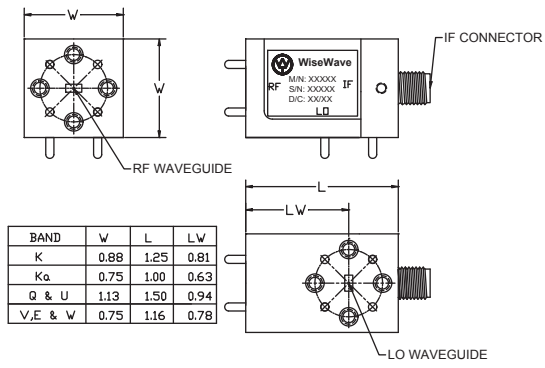
WT-F-2



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

Dimensions are in inches

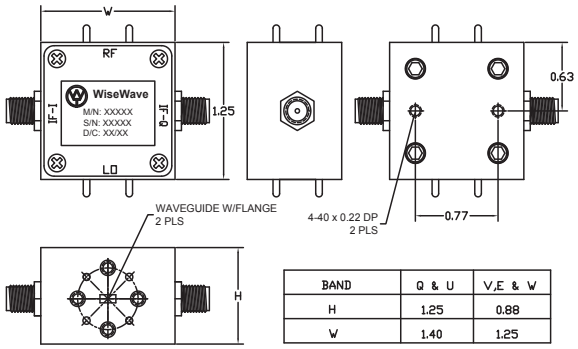
WT-F-3



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

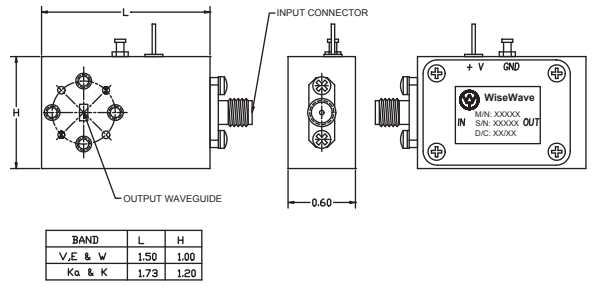
WT-F-4



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

Dimensions are in inches

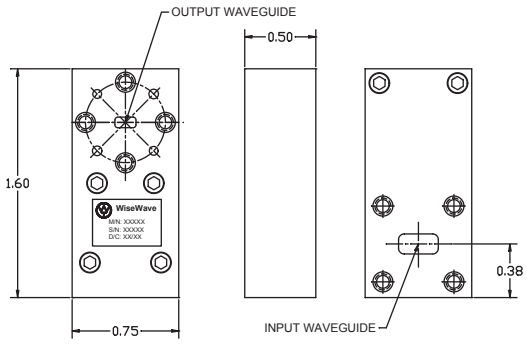
WT-F-5



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

Dimensions are in inches

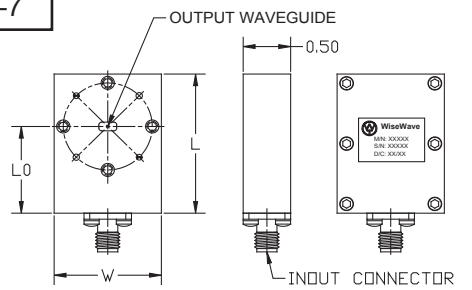
WT-F-6



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.

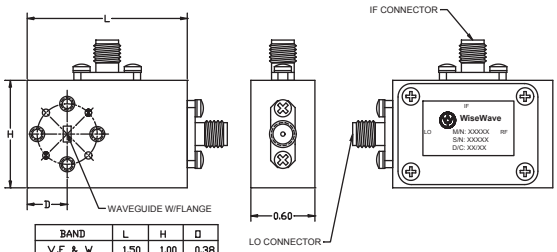
WT-F-7



BAND	K	Ka	Q & U	V, E, & W
L	1.70	1.40	1.50	1.20
LO	1.26	1.03	0.94	0.83
W	0.88	0.75	1.13	0.75

Dimensions are in inches

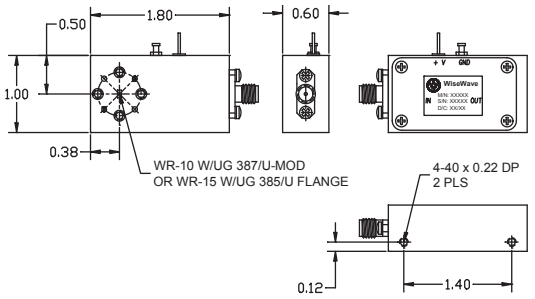
WT-F-8



BAND	L	H	D
V,E & W	1.50	1.00	0.38
U & Q	1.80	1.13	0.56
Ka & K	1.73	1.20	0.60

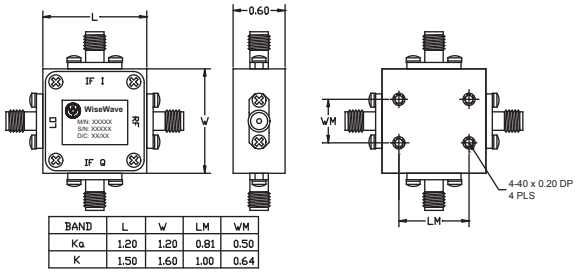
Dimensions are in inches

WT-F-9



Dimensions are in inches

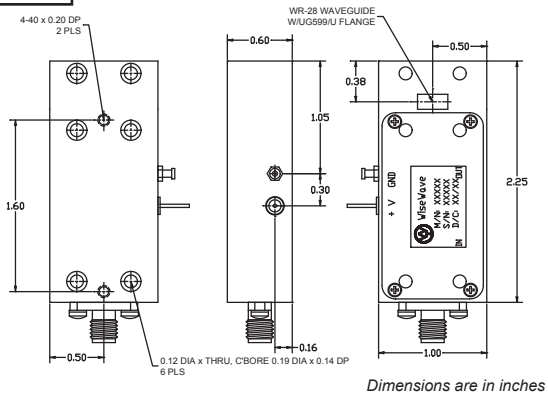
WT-F-10



BAND	L	W	LM	WM
Ka	1.20	1.20	0.81	0.50
K	1.50	1.60	1.00	0.64

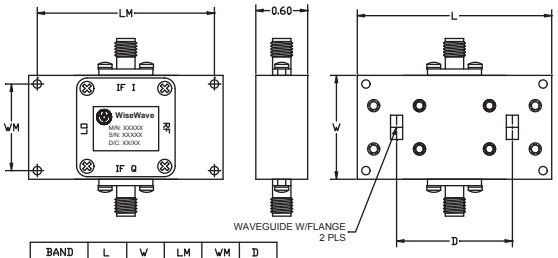
Dimensions are in inches

WT-F-11



Dimensions are in inches

WT-F-12



BAND	L	W	LM	WM	D
Ka	2.25	1.20	2.05	1.00	1.34
K	2.55	1.60	2.35	1.00	1.67

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.