

# Passive Frequency Multipliers

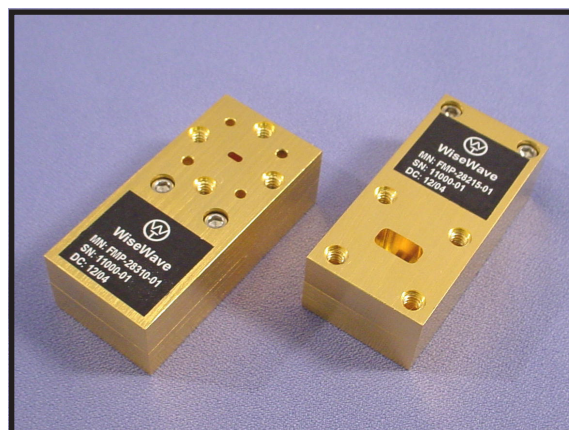
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## FEATURES

- ❖ High output power
- ❖ Full waveguide bandwidth
- ❖ Or narrow band with higher output power
- ❖ Low conversion loss
- ❖ Frequency up to 110 GHz

## APPLICATIONS

- ❖ Frequency extenders
- ❖ Test set
- ❖ Local oscillators
- ❖ Subsystems



**FMP Series**

## DESCRIPTION

**FMP** series of passive frequency multipliers utilize high performance GaAs Schottky beamlead diodes and balanced configuration to produce an extremely broad bandwidth performance. The multipliers cover the output frequency range of 18 to 110 GHz with seven waveguide bands. The balanced design enhances either even or odd harmonics while suppressing unwanted odd or even harmonics. External bias is not required for ease system integration. The maximum input power for these standard units are rated at +23 dBm. While SMA or K female coaxial connector is equipped for input and waveguide for output interface, WR-28 waveguide input is available as an option for V band doubler and W band tripler design.

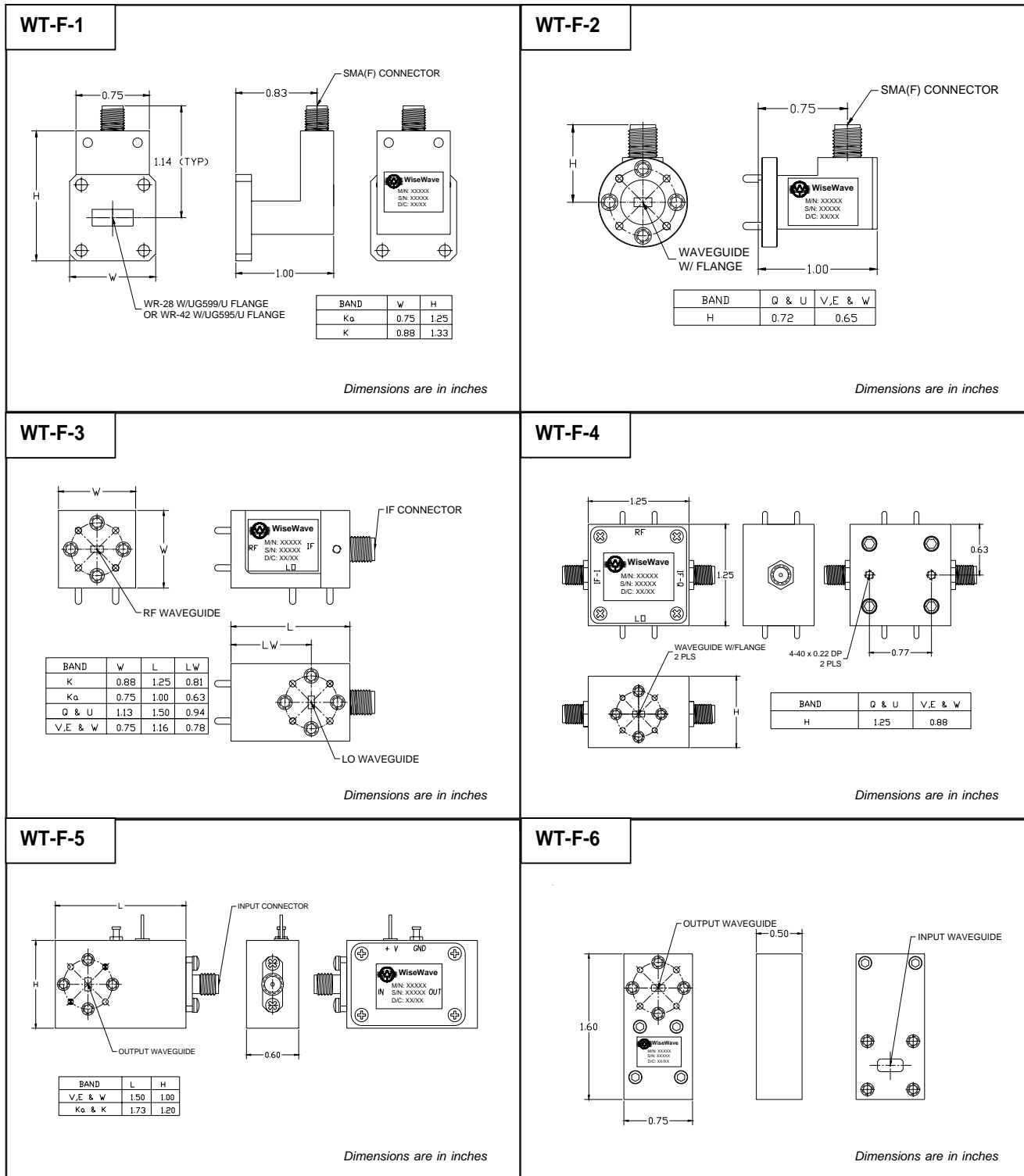
**WiseWave** also offers passive frequency multipliers with higher output power and narrower bandwidth by utilizing high performance varactor diodes. These multipliers offer several GHz bandwidth with 10 dB typical conversion loss. Contact factory for your detailed requirements.

## STANDARD PASSIVE MULTIPLIER SPECIFICATIONS (Input Power: 20 dBm)

Model Number	Output Freq. (GHz)	Multiplying Factor	Input Freq. (GHz)	Output Power (dBm, Min)	Output Waveguide	Input Connector	Outline Drawings
FMP-SF242-01	18.0-26.5	X 2	9.00-13.25	6.0	WR-42	SMA(F)	WT-F-7
FMP-SF228-01	26.5-40.0	X 2	13.25-20.00	5.0	WR-28	SMA(F)	WT-F-7
FMP-SF328-01		X 3	8.67-13.33	3.0	WR-28	SMA(F)	WT-F-7
FMP-SF322-01	33.0-50.0	X 3	11.00-16.67	3.0	WR-22	SMA(F)	WT-F-7
FMP-SF319-01	40.0-60.0	X 3	13.33-20.00	2.0	WR-19	SMA(F)	WT-F-7
FMP-KF215-01	50.0-75.0	X 2	25.00-37.50	3.0	WR-15	K(F)	WT-F-7
FMP-28215-01		X 2	25.00-37.50	3.0	WR-15	WR-28	WT-F-6
FMP-KF315-01		X 3	16.67-25.00	0.0	WR-15	K(F)	WT-F-7
FMP-KF312-01	60.0-90.0	X 3	20.00-30.00	-1.0	WR-12	K(F)	WT-F-7
FMP-KF310-01	75.0-110.0	X 3	25.00-36.67	-3.0	WR-10	K(F)	WT-F-7
FMP-28310-01		X 3	25.00-36.67	-3.0	WR-10	WR-28	WT-F-6
Temperature Range		0 to +50°C					

# Frequency Converter Outline Drawings #1

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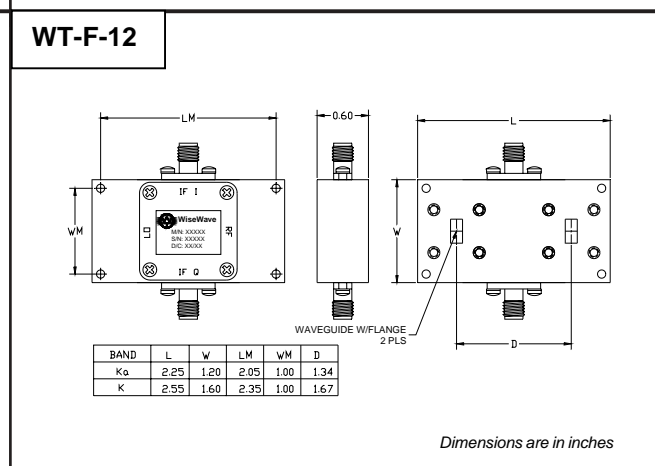
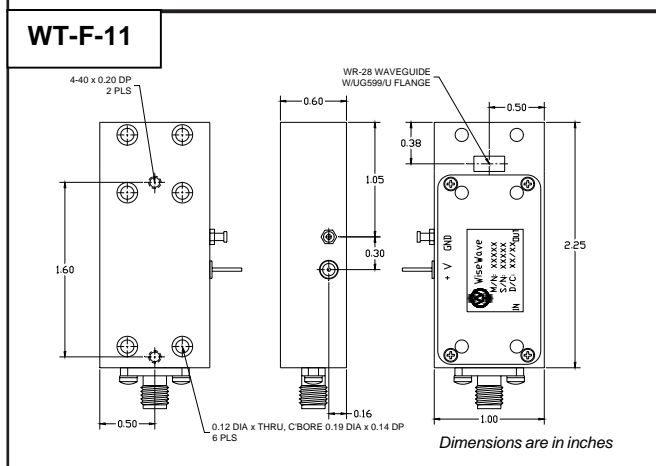
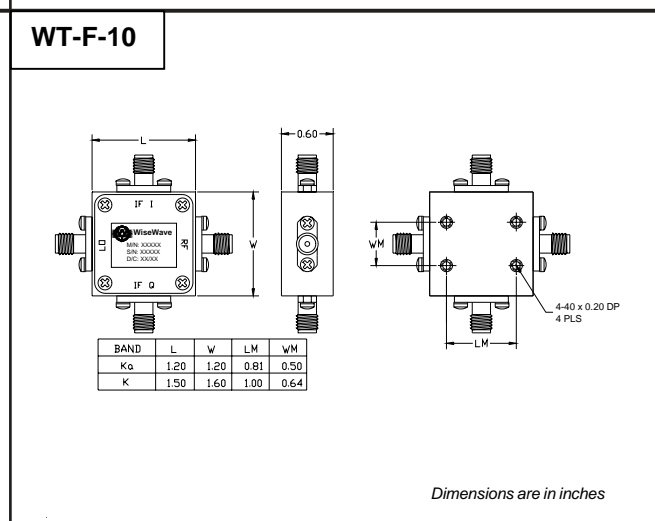
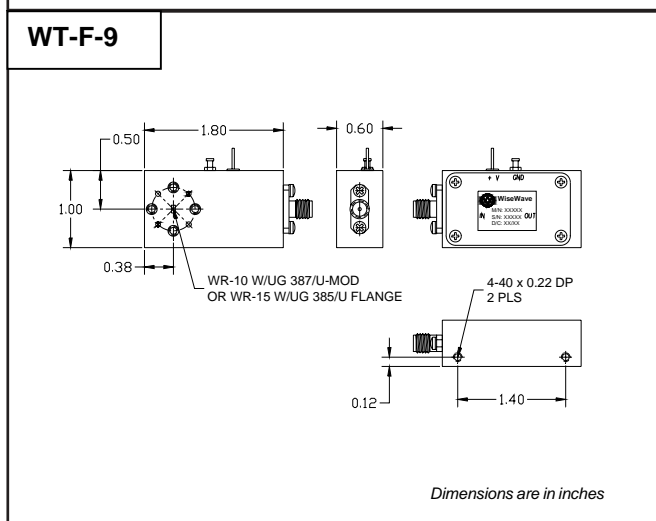
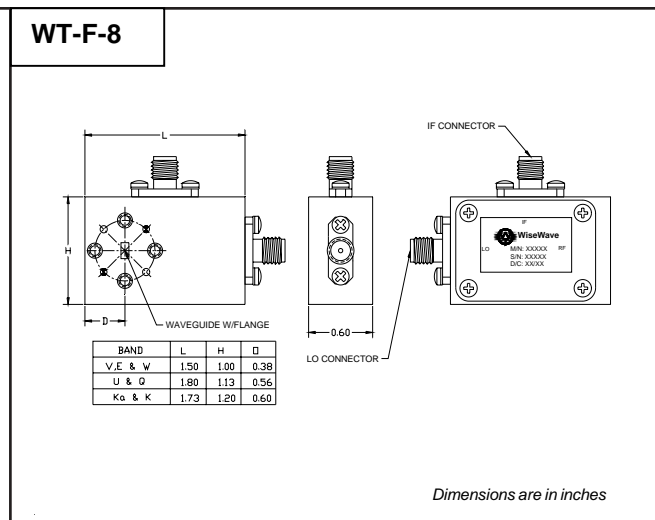
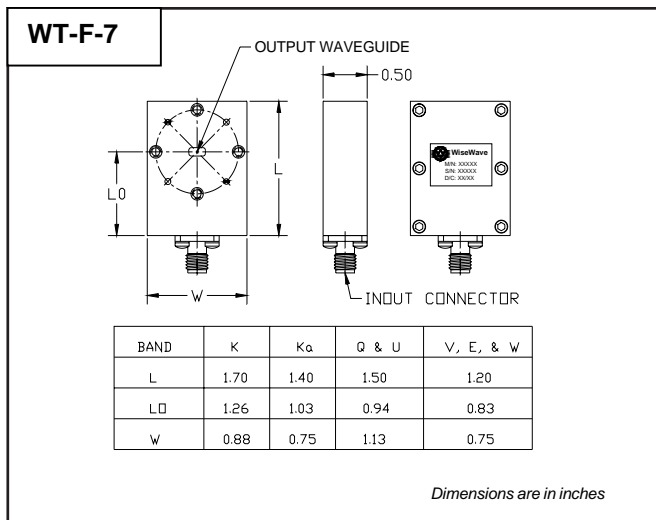


The flange pattern shown is for illustration purpose. Refer to Technical Reference Section, P.9-1 for flange pattern details. The outline drawings shown are standard versions. Contact factory for your specific package requirements.

## Frequency Converter Outline Drawings #2

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The flange pattern shown is for illustration purpose. Refer to Technical Reference Section, P.9-1 for flange pattern details. The outline drawings shown are standard versions. Contact factory for your specific package requirements.