

## Full Band Waveguide Harmonic Mixers

### General Features

- Frequency coverage: 75 – 330 GHz
- Waveguide full bandwidth as standard
- Zero bias, common or separate LO / IF ports
- General purpose frequency extension for Spectrum Analyzers
- Even mixing harmonics

### Specifications

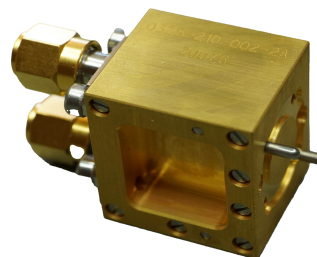


Figure 1 3-port Waveguide Harmonic Mixer

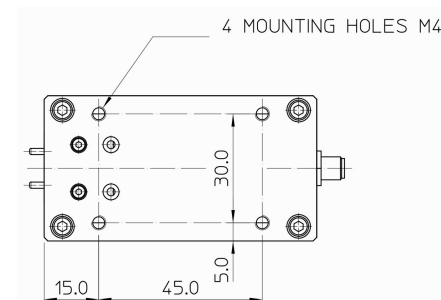
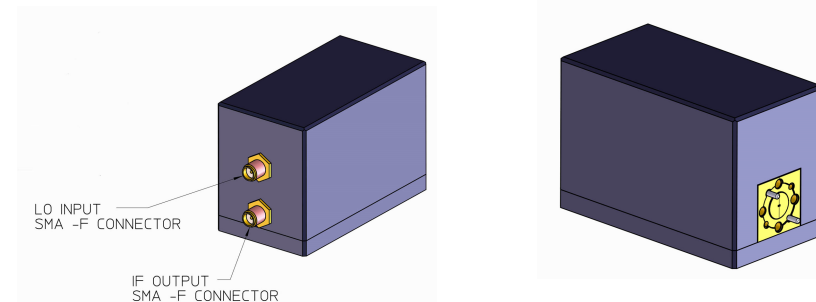


Figure 2 Model THZW HM-10P (DC port not shown)

RF Frequency (GHz)	Model	Conversion Loss (dB) <sup>-1</sup>	LO Frequency (GHz) Maximum	RF <sub>MAX</sub> (dBm)	Waveguide
75 – 110	THZW HM-10	20 typical	9.37-13.75	+15	WR 10, UG 387/U-M
<b>75 – 110</b>	<b>THZW HM-10P</b>	<b>20 typical</b>	<b>9.37-13.75</b>	<b>+15</b>	<b>WR 10, UG 387/U-M</b>
90 – 140	THZW HM-08	30 to 35	18	+3	WR 08, UG 387/U-M
110 – 170	THZW HM-06	25 typical, 35 max	20	+3	WR 06, UG 387/U-M
140 – 220	THZW HM-05	35 typical	20	0	WR 05, UG 387/U-M
170 - 260	THZW HM-04	35 to 42	18	0	WR 04, UG 387/U-M
220 – 330	THZW HM-03	35 to 40	18	0	WR 3.4, UG 387/U-M

### Notes

1. Conversion loss, LO range 8 - 20 GHz @ +13 to +17 dBm, IF DC – 3 GHz; value depends on harmonic number
2. **-P low LO power version, LO +5 to + 10 dBm typical, packaged with internal LO amplifier, +12V DC required**
3. LO/IF bandwidths up to 18 GHz. Common or separate LO/IF ports. No DC bias required
4. External isolators are available up to 325 GHz
5. **How to make a request:** specify model or waveguide sizes, RF/IF/LO frequency range, conversion loss, email to: [sales@vivatechthz.com](mailto:sales@vivatechthz.com)

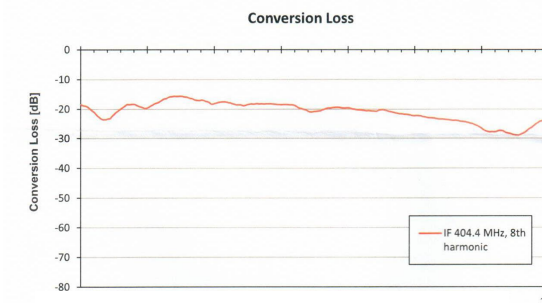


Figure 3 THZW HM-10P Conversion Loss