

## THz MultiFunction Converter Modules

### General Features

- Extend **signal generators/spectrum analyzers** or VNA's to mm-wave and THz
- Measure **Noise Figure** with compatible instruments
- **Block Up/Downconverter functions** with external sources
- Frequency range 75-500 GHz in full-band and narrow band options
- Optional internal local oscillator
- Single Sideband (SSB) versions eliminate image response (Option)
- Rugged screened enclosures machined from solid

### Outline Specifications

Model	THZBDC-06NF/UC	THZBDC-03NF/UC
Input Frequency (GHz)	110-170	220-330
Conversion Loss (dB), SSB typical	< 10.0	< 14.0
Input LO Range (GHz)*	6.875-10.62/13.75-21.25	9.17-14.17/18.33-27.5
<b>IF Range Block Converter Mode (GHz)</b>	<b>&gt; 13.5</b>	<b>&gt; 18</b>
Input 1 dB GCP (dBm)	-5 typical	-5 typical
<b>IF Range S/A Mode</b>	<b>15 KHz to 2 GHz</b>	<b>15 KHz to 2 GHz</b>
RF Input Damage Level (dBm)	➤ 10	➤ 10
Operating Temperature (deg C)	20 to 30	20 to 30
LO / IF Connectors	SMA/2.92mm K (F)	SMA/2.92 mm K (F)
RF Connector	WR6.5 ; UG387/U-M	WR3.4 ; UG387/U-M
Dimensions (mm)	200 x 150 x 100	200 x 150 x 100
AC Power Supply (external PSU)	110-240 VAC	110-240 VAC

### Notes

1. Compatible with Spectrum and Signal Analyzers eg. Keysight, R & S etc. DANL -140 dBm (1Hz) typical.
2. Internal or external Local Oscillator, standard level +10 to + 13 dBm
3. \*Low LO range spectrum analyzer; high LO range Upconverter / Downconverter mode
4. Dimensions, data, photographs are non-contractual and subject to revision



Fig 1 : Converter Model THZBDC-XX



Fig 2 : Converter (Internal Local Oscillator Option)

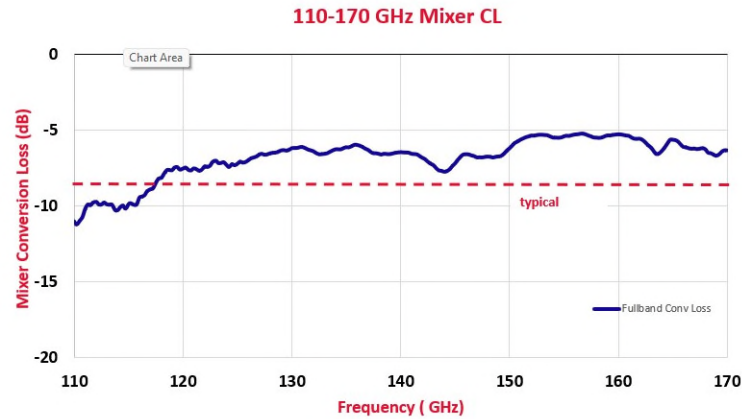


Fig 3 : 110-170 GHz Intrinsic Mixer Conversion Loss (SSB)

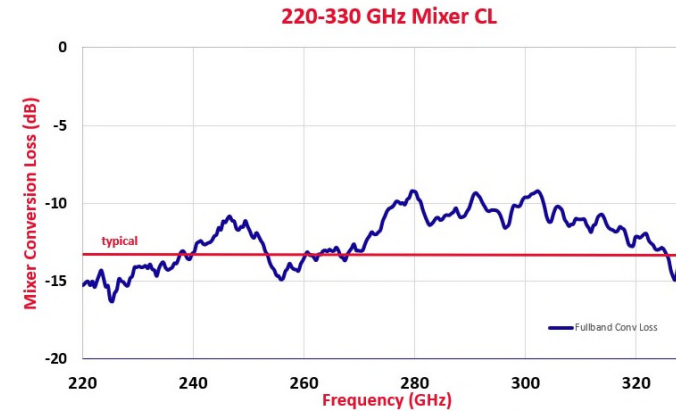


Fig 4 : 220-330 GHz Intrinsic Mixer Conversion Loss (SSB)

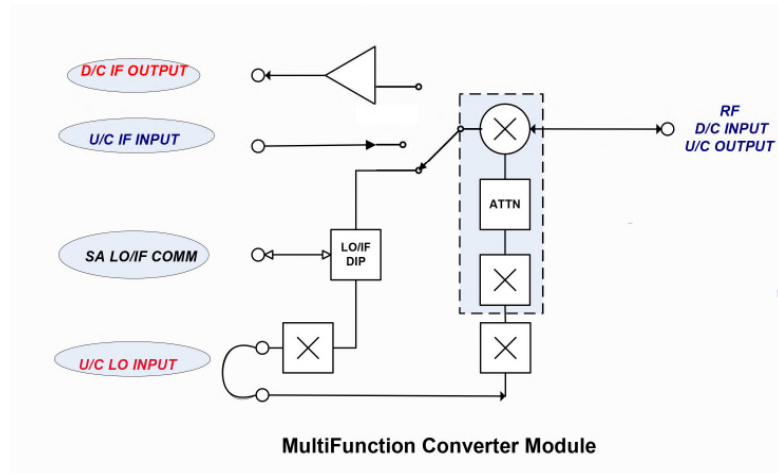


Fig 5 : Functional Schematic

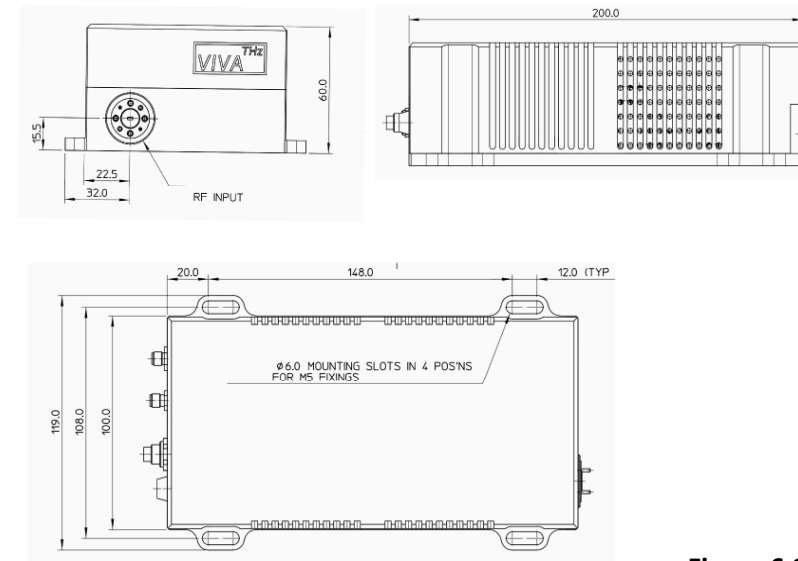


Figure 6 Outline

➤ **How to make a request:** choose Model, or state frequency range, required functions & interfaces, email to: [sales@vivatechthz.com](mailto:sales@vivatechthz.com)