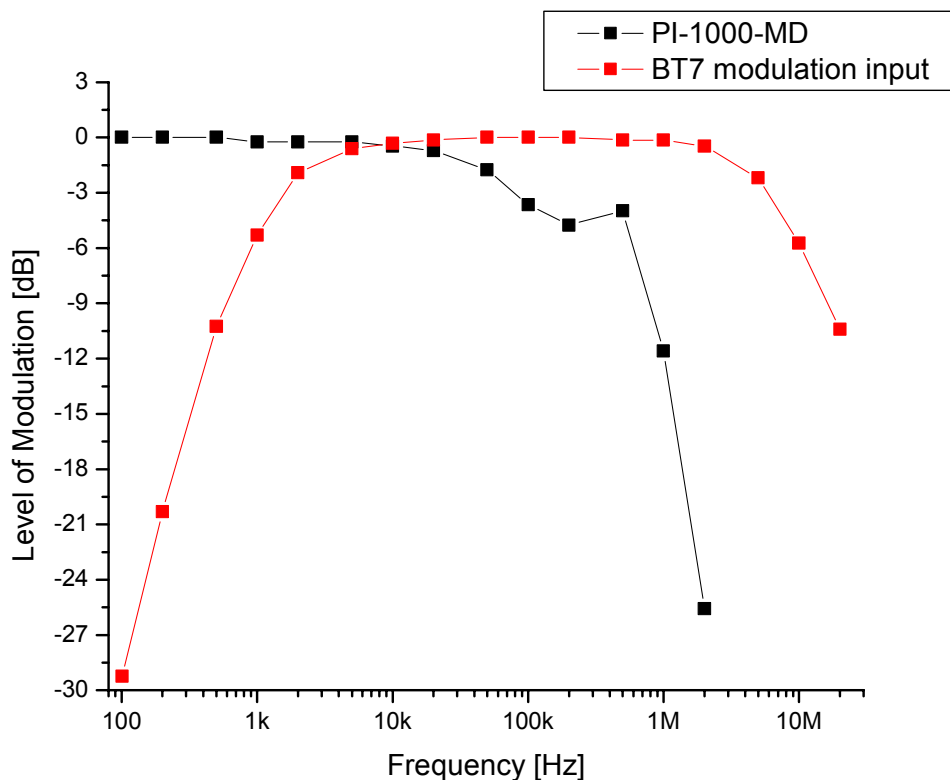


Technical Note: Bias Tee Model BT7

Many diode laser applications require high frequency modulation of the injection current. Typical examples are lock-in measurements, and noise compensation schemes, like the Pound Drever Hall stabilisation for external cavity diode lasers.

Therefore, we include within the protection circuit of our laser heads a high frequency Bias Tee.

The idea behind the use of a bias-T is to set the laser above the threshold using a DC current source and to independently modulate the power around its average value determined by the DC current.



- A) PI-1000-MD with the low frequency branch of the BT7: The laser current can be controlled from DC to 100kHz
- B) High frequency branch of the BT7: The laser current can be modulated from 1.55kHz to 5.6MHz using the SMA connector on the laser head

The Bias Tee is an in-house design of Sacher Lasertechnik Group. It offers a flat transmission function from 1.55kHz up to more than 5MHz. This transmission function is suitable for most laser applications. Since this bias tee is under the full intellectual property of Sacher Lasertechnik Group, we may easily customise the bias tee according to your requirements.