General

The MPT is Focus’ flagship proprietary tuner technology. Its performance is unmatched and its capabilities make it the most versatile and popular tuner in the industry. Multi-purpose tuners (MPT or MPT-Classic) use three wideband probes, allowing independent control of the amplitude and phase of the reflection factor at three harmonic frequencies simultaneously. The MPT technology is widely used for advanced applications like high power/efficiency RF amplifier design. By controlling the harmonic impedances with an accuracy of >40dB at the source and load, users can generate more robust transistor behavior models and have better insight on how their device performs in all classes of operation. The MPT can be used to pre-match impedances at the fundamental and the harmonic frequencies making it ideal for hybrid active systems, reducing significantly the power needed to drive the load of high power devices to \(|\Gamma_{\text{LOAD}}| \leq 1\). MPT tuners use three probes and control the fundamental \(F_0\) and \(2F_0\) and \(3F_0\) harmonic frequencies.

<table>
<thead>
<tr>
<th>Model</th>
<th>Freq. Range (GHz)</th>
<th>Connector Type</th>
<th>VSWR</th>
<th>Maximum Power**</th>
<th>Repeatability (min, dB/ typical, dB)</th>
<th>Weight (lbs)</th>
<th>Length (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPT-804</td>
<td>0.4 - 8</td>
<td>7/16, N, APC-7</td>
<td>High VSWR*</td>
<td>110:1</td>
<td>10:1-100:1</td>
<td>1414</td>
<td>-40/-50</td>
</tr>
</tbody>
</table>

Harmonic tuning

\[ \Gamma_{F0}, \Gamma_{2F0}, \Gamma_{3F0} \]

High VSWR tuning

\[ \Gamma \]

\*measured at \(F_0 = 2.6\)GHz

**at 8GHz (connector limited)