Description

The F4481 is a 400MHz to 1100MHz Quad Path Tx DVGA with matched 100Ω differential input and 50Ω single-ended output impedances for ease of integration into the signal path.

Using a single 3.3V power supply and only 520mA of ICC, the F4481 provides four independent transmit paths, each with 28dB typical maximum gain, +17dBm output P1dB. Each channel includes a glitch-free digital step attenuator that reduces gain by up to 31.5dB in precise 0.5dB steps.

Packaged in an 8 × 8 mm, 56-LGA package, this device is part of a complete family of VGAs targeting FDD and TDD applications within the 400MHz to 4200MHz frequency range.

Typical Applications

- 4G and 5G multi-mode, multi-carrier transmitters
- LTE and UMTS/WCDMA base stations
- Active antenna systems
- Digital radio

Features

- Independent quad channels for FDD Tx applications
- RF range: 400MHz to 1100MHz
  - F4482: 1300MHz to 2800MHz
  - F4483: 3000MHz to 4200MHz
- 28dB typical max gain at 900MHz
- Precise SPI-controlled Glitch-Free™ gain adjustment
  - 31.5dB gain range with 0.5dB step size
- +17dBm output P1dB at 900MHz
- 3.3V supply voltage
- ICC = 520mA
- 100Ω differential input impedances
- 50Ω single-ended output impedances
- 1.8V and 3.3V logic support
- Independent Channel Standby modes for power savings
- Operating temperature (TEP) range: -40°C to +115°C
- 8 × 8 mm, 56-LGA package

Block Diagram

Figure 1. Block Diagram

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May 11, 2020
## Ordering Information

<table>
<thead>
<tr>
<th>Orderable Part Number</th>
<th>Package</th>
<th>MSL Rating</th>
<th>Shipping Packaging</th>
<th>Temperature</th>
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<tbody>
<tr>
<td>F4481LKGI</td>
<td>8.0 × 8.0 × 0.65 mm 56-LGA</td>
<td>TBD</td>
<td>Tray</td>
<td>-40° to +115°C</td>
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<td>F4481LKGI8</td>
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<td>TBD</td>
<td>Reel</td>
<td>-40° to +115°C</td>
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<td>F4481EVB</td>
<td>Evaluation Board</td>
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<td>F4481EVS</td>
<td>Evaluation Kit</td>
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## Revision History

<table>
<thead>
<tr>
<th>Revision Date</th>
<th>Description of Change</th>
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<tr>
<td>May 11, 2020</td>
<td>Initial release.</td>
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