Dual Path RF Switch with LNA and DVGA 3.3GHz to 4.2GHz

Description
The F0473 is an integrated dual-path RF front-end consisting of an RF switch and two gain stages with 6dB gain control used in the analog front-end receiver of an Active Antenna System (AAS). The F0473 supports frequencies from 3.3GHz to 4.2GHz.

The F0473 provides 35dB gain with +15dBm OP1dB, and 1.3dB noise figure (NF). Gain is reduced 6dB in a single step with a maximum settling time of 35ns. The device uses a single 3.3V supply and 130mA of IDD.

The F0473 is offered in a 5 x 5 x 0.8 mm, 32-pin package with 50Ω input and output amplifier impedances for ease of integration into the signal path.

Typical Applications
- Multi-mode, Multi-carrier receivers
- 4.5G (LTE Advanced)
- 5G NR bands n77 and n78

Features
- Gain
  - 35dB typical in High Gain Mode
  - 29dB typical in Low Gain Mode
- 1.3dB typical NF
- OP1dB
  - +15dBm typical in High Gain Mode
  - +14dBm typical in Low Gain Mode
- 50Ω single-ended input / output amplifier impedances
- IDD = 130mA
- Independent Standby Mode for power savings
- Supply voltage: +3.15V to +3.45V
- 5 x 5 mm, 32-VFQFPN package
- -40°C to +105°C exposed pad operating temperature range

Block Diagram
Ordering Information

<table>
<thead>
<tr>
<th>Orderable Part Number</th>
<th>Package</th>
<th>MSL Rating</th>
<th>Shipping Packaging</th>
<th>Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>RA81F0473STGNH#KB0</td>
<td>5 x 5 x 0.8 mm 32-VFQFPN</td>
<td>TBD</td>
<td>Tray</td>
<td>-40°C to +105°C</td>
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<td>RA81F0473STGNH#BB0</td>
<td>5 x 5 x 0.8 mm 32-VFQFPN</td>
<td>TBD</td>
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<td>-40°C to +105°C</td>
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<td>RTKA81F0473ST000RU</td>
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<td></td>
<td>Evaluation Board</td>
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Revision History

<table>
<thead>
<tr>
<th>Revision Date</th>
<th>Description of Change</th>
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<tbody>
<tr>
<td>May 19, 2020</td>
<td>Initial release.</td>
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