8TR1110 Preliminary Product Brief

868 MHz / 915MHz ISM Band RF Front-End IC

**Features**
- Integrated High Power PA and Antenna Switch
- +27dBm Psat at 3.3V
- 1.8V to 3.6V Operation
- 1.2dB Rx Bypass Insertion Loss
- For 863-870MHz, and 902-928MHz ISM Bands
- Combined Tx/Rx Port Interface
- Temperature Range: -40°C to +125°C
- 3.0 x 3.0 x 0.55mm 16-pin QFN package
- Die in Wafer Form Available

**Applications**
- IoT (Internet of Things) Nodes, Gateways
- LoRaWAN™, Sigfox, WPAN, LPWAN
- Z-wave®, Weightless™, Wireless M2M
- Smart: Home, City, Lighting, Energy
- Industrial and Building Automation
- Proprietary ISM-Band Wireless Systems

**Description**
The 8TR1110 is an integrated RF front-end IC designed for sub-GHz wireless systems including: LoRaWAN™, Sigfox, WPAN, LPWAN, Z-wave®, Weightless™ and other proprietary ISM band wireless systems.

**Functional Block Diagram**

**Key Specifications**

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<th>Parameter</th>
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<tbody>
<tr>
<td>Small-Signal Gain</td>
<td>37dB</td>
<td>Rx Insertion Loss</td>
<td>1.2dB</td>
<td>Frequency Range</td>
<td>863-928MHz</td>
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<tr>
<td>Saturated Output Power @ 3.3V</td>
<td>+27dBm</td>
<td>P0.1dB</td>
<td>28dBm</td>
<td>Supply Voltage</td>
<td>1.8 - 3.6V</td>
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<tr>
<td>Output Current @ 3.3V, +27dBm</td>
<td>400mA (35%PAE)</td>
<td>Quiescent Current</td>
<td>0.1uA</td>
<td>Control Voltage (Logic High)</td>
<td>1.2V - Vdd</td>
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<tr>
<td>2nd/3rd Harmonics @ +27dBm at ANT</td>
<td>0dBm/MHz</td>
<td>Shutdown Current</td>
<td>0.1uA</td>
<td>Temperature Range</td>
<td>-40 to 125°C</td>
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<tr>
<td>Tx-Rx Isolation (Tx Mode)</td>
<td>22dB</td>
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