NXP’s top-side cooling technology helps radio designers create thinner, lighter 5G radio units while reducing design and manufacturing complexities.

This 8 W module series is designed for massive MIMO radios covering 3.3 GHz to 3.8 GHz — typically 32T32R (200 W) or 64T64R (320 W) radios. The devices combine NXP’s in-house LDMOS and GaN semiconductor technologies to enable high gain and efficiency with wideband performance.

**TARGET APPLICATIONS:**
- Communication infrastructure
- 5G mMIMO active antenna systems
- Driver for high power 5G macro remote radio heads
- Outdoor small cells
- Suitable for open RAN and proprietary networks

**BENEFITS**
- Clean separation of thermal and RF paths
- Lower thermal resistance
- Heatsink serves as RF shield
- Fewer, shorter connections
- Enables > 30% thinner and lighter radio unit
A5M36TG140-TC EVALUATION BOARD

TYPICAL PERFORMANCE:

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
<th>Avg. Power (dBm)</th>
<th>Gain (dB)</th>
<th>Lineup Efficiency (%)</th>
<th>OBO (dB)</th>
<th>VDD (V)</th>
<th>Top-side Cooling Evaluation Board Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>3400-3800</td>
<td>40.2</td>
<td>30.7</td>
<td>46.6</td>
<td>9.3</td>
<td>5/48</td>
<td>A5M36TG140TC-EVB</td>
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</tbody>
</table>

Example of mMIMO Active Antenna System

BOARD DESIGN FILES INCLUDE:

• Board layout
• Schematic
• Board parts list
• Mechanical drawings

RELATED PRODUCTS

• A5M36TG140-TC: Top-side cooling power amplifier module
• A5M35TG140-TC: Top-side cooling power amplifier module
• A5M34TG140-TC: Top-side cooling power amplifier module

LEARN MORE

Get the latest information on NXP’s top-side cooled front-end modules: nxp.com/TSCEVB