Solid State Broadband High Power Pallet Amplifier  
470-860 MHz, 200W (DVBT Signal)

The RPAP470860M200 is a highly linear pallet amplifier designed for use in the UHF band. Utilizing the newest 50V Rugged RF LDMOS from Freescale Semiconductor, this pallet is ideal for systems broadcasting under the Digital TV standards. Superior performance is provided offering high gain, efficiency and power in a small pallet footprint using advanced broadband RF matching networks and RF LDMOS transistors. Matched for 50 ohms input and output, the pallet can be easily combined to provide higher power when required.

**Key Features:**
- 200W of Linear Power when driven by DVB signals
- 50 ohms input/output
- Built with Highly Rugged RF LDMOS technology
- Over temperature Protection
- Survives VSWR 3:1

**Specifications:** \((V_{supply} = +50\text{Vdc}, \text{Idq} = 2.80\text{A}, \text{TBase} = 25^\circ\text{C})\)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Min</th>
<th>Nom</th>
<th>Max</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>470</td>
<td></td>
<td>862</td>
<td>MHz</td>
</tr>
<tr>
<td>Gain</td>
<td>19</td>
<td></td>
<td></td>
<td>dB</td>
</tr>
<tr>
<td>Pout (DVBT-DVBT-H w/o Pre-correction -30dBc Shoulders)</td>
<td>180</td>
<td>200</td>
<td></td>
<td>Watts</td>
</tr>
<tr>
<td>Pout (ATSC DTV) w/o Pre-correction -40dBc from carrier</td>
<td>200</td>
<td>250</td>
<td></td>
<td>Watts</td>
</tr>
<tr>
<td>Pout (PEP)</td>
<td>600</td>
<td>800</td>
<td></td>
<td>Watts</td>
</tr>
<tr>
<td>Efficiency 200W DVBT-T</td>
<td></td>
<td>26</td>
<td></td>
<td>%</td>
</tr>
<tr>
<td>Baseplate Operating Temp</td>
<td>0</td>
<td></td>
<td>+60</td>
<td>°C</td>
</tr>
</tbody>
</table>
Mechanical Dimensions

Dimensions: 133 x 98 x 26 mm, 5.25” x 3.85” x 1.0”
Utilize 8 pieces of M3 Screws with lock washers and flat washers to attach pallet to the external heatsink

Additional Notes:
1 – Proper heatsinking is required. Contact Richardson RFPD for possible recommendations.
2 – Proper shielding is required to isolate this high gain final stage from any driver stages used in the system.
3 – This unit is designed for Digital applications. If sustained CW performance is required above 300W, please contact Richardson RFPD for recommendations of other potential solutions.
Ordering Information

| Part Number | RPAP470860M200 |

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