The PAM8823 is a highly efficient, 25W Stereo / 50W Mono Class D digital audio amplifier with I2S input to drive stereo bridge-tied speakers. The PAM8823 does not require an external heat-sink or fan while playing music at these power levels.

With embedded Audio DSP to support advanced features – such as volume control, 30-band EQs, audio mixing, 3D surround sound and Dynamic Range Control (DRC), the PAM8823 provides a high-quality audio output with flexible digital audio processing capability.

These features are fully programmable via a simple I2C control interface, with robust protection circuits to protect the PAM8823 from damage by accidental erroneous operating condition.

The Diodes Advantage

- Supports 8~192kHz Sample Rate (LJ/RJ/I2S) with 16~24 Bits Digital Serial Input Interface
  
  I2S SATAO outputs for audio monitoring, sub-channel or echo-cancellation
  
  Supports superb audio quality and ease of programming & audio control interface

- Programmable High-Quality Audio Processor
  
  Configurable 30 EQs & 3 DRCs for satellite or separate sub-channel control
  
  3D sound effects processor with noise reduction/tone control delivers improved audio performance

- SNR 106dB (24V supply, A-weighted)
  
  Enhanced audio quality

- Integrated PLL with Enhanced Protections (SCP, OTP, OVP, UVLO)
  
  Robust protection with flexible power-saving control & minimized solution cost via integrated PLL support

- >90% Efficiency, with only two rails required (digital 3.3V, & PVDD 4.5~26V for speaker drive) with very low shutdown currents(20µA)
  
  Efficient solution with minimal power losses

Applications

- Flat Monitors & LCD TVs
- Multi-Media speaker systems, wireless speakers
- Boomboxes, sound bars, DVD players, game consoles
- Musical instruments & consumer electronic applications
New Product Announcement

PAM8823

Typical Application Circuit

Product Portfolio

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>Vin (V)</th>
<th>Load (Ω)</th>
<th>Iq (mA), PVDD</th>
<th>Efficiency</th>
<th>SNR (dB)</th>
<th>THD+N (Po 7.5W, BTL, 1kHz)</th>
<th>PSRR (dB)</th>
<th>Control Interface</th>
<th>Package</th>
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</thead>
<tbody>
<tr>
<td>PAM8823</td>
<td>25Wx2 Stereo /50Wx1 Mono Digital Audio Amplifier with EQ &amp; DRC</td>
<td>4.5 - 26</td>
<td>4/8</td>
<td>15</td>
<td>&gt;90%</td>
<td>106</td>
<td>0.07%</td>
<td>-73</td>
<td>I2C, I2S</td>
<td>LQFP7070-48EP</td>
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To find out more information: [https://www.diodes.com/part/view/PAM8823](https://www.diodes.com/part/view/PAM8823)

Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Package Code</th>
<th>Packaging</th>
<th>13” Tape and Reel</th>
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<td></td>
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<td>Quantity</td>
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<tr>
<td>PAM8823FBE48-13</td>
<td>FBE48</td>
<td>L-QFP7070-48EP</td>
<td>2000/Tape &amp; Reel</td>
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<tr>
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<td>T24E</td>
<td>TSSOP-24EP</td>
<td>2500/Tape &amp; Reel</td>
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