

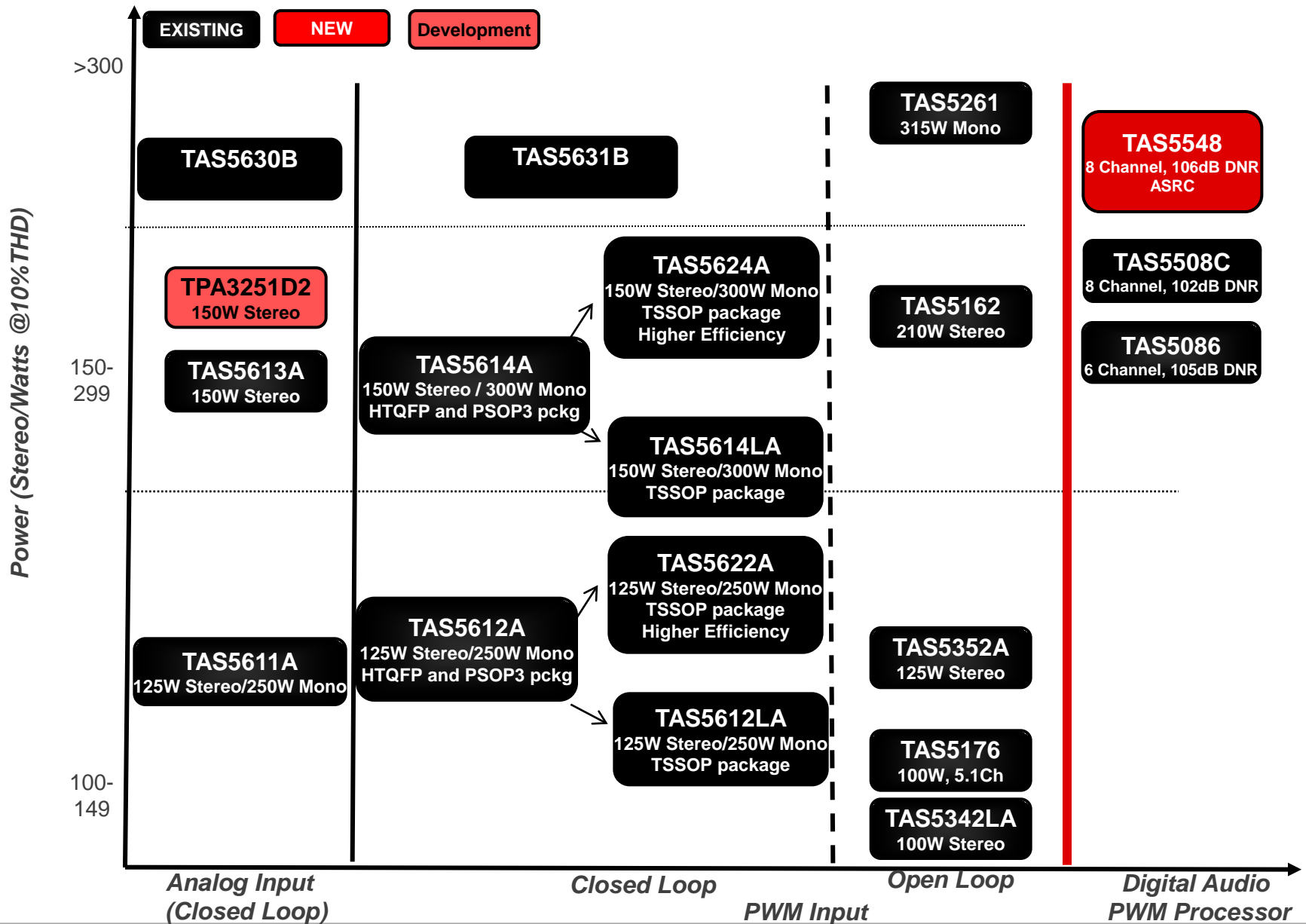
# Audio Portfolio

Texas Instruments' complete line of audio products feature over 2000 devices within our DAC, ADC, CODEC, AMP, Line driver, Interface, USB Audio, and other product families.

ADC		AMP		CODEC		DAC		Smart AMP	
HW / SW Controlled		Stereo/Mono Class D		Power and Performance Optimized		Current Output, Voltage Output, 2VRMS Output, Delta Sigma Integrated Amplifiers		Low and Mid Power Amplifiers with Smart Speaker Protection	
1.8-3.3-5V Power		Analog/Digital Input		Integrated Amplifiers		DSP integration		Integrated IV Sense, Excursion and Temp sensing options	
Audio PLL		Integrated DSP		Integrated DSP					
Energy Sense									
#ADC	1-4	Inputs	1-6	#ADC/DAC	0-6 / 1-8	#DAC	1-8	Output	7.5 – 50W
SNR	92-123dB	Output Power	0.35-400W	ADC/DAC SNR	72-112dB	SNR	92-127dB	PSRR	75 – 80 dB
PWR	17-600mW			PWR	6.7mw +	THD (%)	0.0004-0.04	Inputs	Analog/Dig.
Packages: 5.3 - 144mm <sup>2</sup>		Packages: 2 - 517mm <sup>2</sup>		Packages: 7.8 - 170mm <sup>2</sup>		Packages: 6.4 - 144mm <sup>2</sup>		Packages: 7.5 - 76mm <sup>2</sup>	
1K: \$0.80 - \$8.55		1K: \$0.26 - \$10.75		1K: \$1.23 - \$19.25		1K: \$0.89 - \$11.18		1K: \$1.39 - \$3.75	



# High Power Class D Amplifiers





# TAS5614LA

Cost effective 150W Stereo PMW input Class-D Audio Amp with feedback

## Features

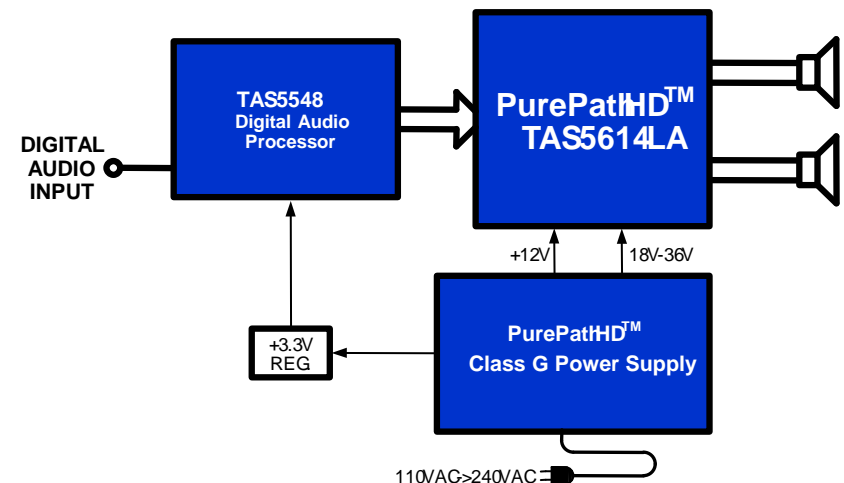
- Up to 90% Efficient Class-D operation (4 ohm, stereo) with 69mΩ MOSFETs
- Class-G compliant for reduced power losses
- Configurable in either 2xBTL, 1xBTL+2xSE, 4xSE or 1xPBTL
- Few external components and full featured protection system integrated
- Capable of:
  - 4x50W/3Ω, 2x150W/4Ω, 1x300W/2Ω (10% THD+N)
  - <0.025% THD+N at 1W/4Ω

## Applications

- Blue-ray / DVD receivers
- High power soundbar
- Powered subwoofer and active speakers
- Mini compo systems

## Benefits

- Highly efficient amplifier requires the same small heatsink used with the TAS5612A
- Reduces power by up to 75% when compared to no class-G operation
- Very flexible architecture. Can use the same amplifiers for products with different channel count
- Highly integrated amplifier reduces components count when compared to a discrete solution lowering system cost
- Flexible Output Power Levels/Modes



# TAS5612LA

## Cost effective 125W Stereo PMW input Class-D Audio Amp with feedback

### Features

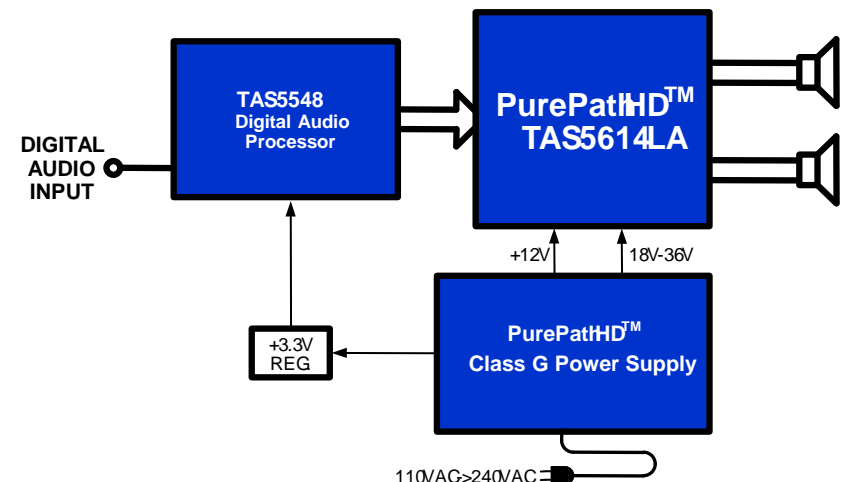
- Up to 90% Efficient Class-D operation (4 ohm, stereo) with 69mΩ MOSFETs
- Class-G compliant for reduced power losses
- Configurable in either 2xBTL, 1xBTL+2xSE, 4xSE or 1xPBTL
- Few external components and full featured protection system integrated
- Capable of:
  - 4x43W/3Ω, 2x125W/4Ω, 1x250W/2Ω (10% THD+N)
  - <0.025% THD+N at 1W/4Ω

### Applications

- Blue-ray / DVD receivers
- High power soundbar
- Powered subwoofer and active speakers
- Mini compo systems

### Benefits

- Highly efficient amplifier requires the same small heatsink used with the TAS5612A
- Reduces power by up to 75% when compared to no class-G operation
- Very flexible architecture. Can use the same amplifiers for products with different channel count
- Highly integrated amplifier reduces components count when compared to a discrete solution lowering system cost
- Flexible Output Power Levels/Modes



# TAS5622A

High Efficient 125W Stereo PMW input Class-D Audio Amp with feedback

## Features

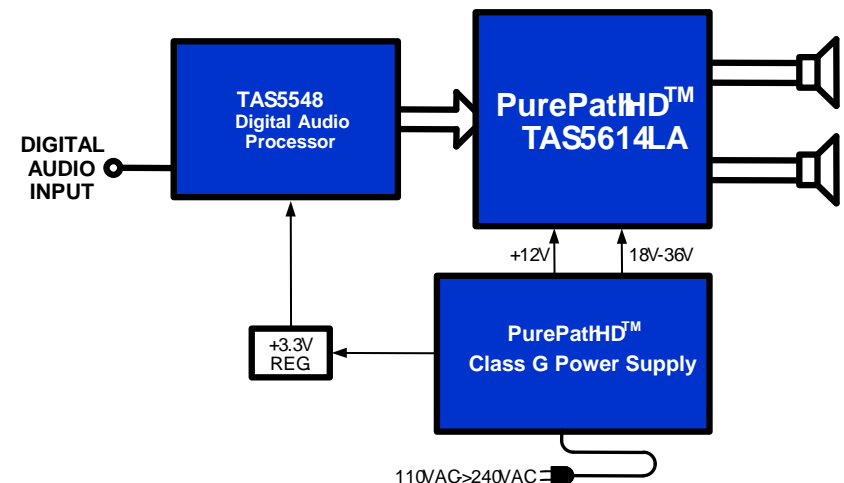
- Up to 90% Efficient Class-D operation (4 ohm, stereo) with 43mΩ MOSFETs
- Class-G compliant for reduced power losses
- Configurable in either 2xBTL, 1xBTL+2xSE, 4xSE or 1xPBTL
- Few external components and full featured protection system integrated
- Capable of:
  - 4x43W/3Ω, 2x125W/4Ω, 1x250W/2Ω (10% THD+N)
  - <0.025% THD+N at 1W/4Ω

## Applications

- Blue-ray / DVD receivers
- High power soundbar
- Powered subwoofer and active speakers
- Mini compo systems

## Benefits

- Highly efficient amplifier requires the same small heatsink used with the TAS5612A
- Reduces power by up to 75% when compared to no class-G operation
- Very flexible architecture. Can use the same amplifiers for products with different channel count
- Highly integrated amplifier reduces components count when compared to a discrete solution lowering system cost
- Flexible Output Power Levels/Modes



# TAS5624A

High Efficient 150W Stereo PMW input Class-D Audio Amp with feedback

## Features

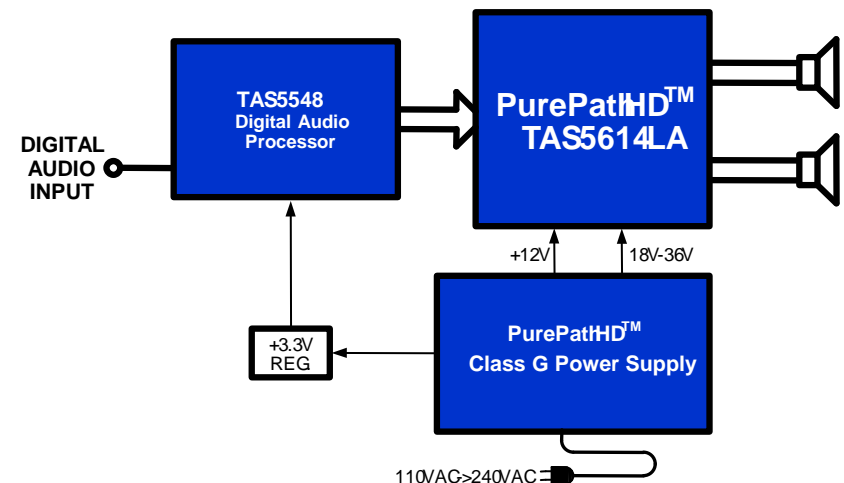
- Up to 90% Efficient Class-D operation (4 ohm, stereo) with 43mΩ MOSFETs
- Class-G compliant for reduced power losses
- Configurable in either 2xBTL, 1xBTL+2xSE, 4xSE or 1xPBTL
- Few external components and full featured protection system integrated
- Capable of:
  - 4x50W/3Ω, 2x150W/4Ω, 1x300W/2Ω (10% THD+N)
  - <0.025% THD+N at 1W/4Ω

## Applications

- Blue-ray / DVD receivers
- High power soundbar
- Powered subwoofer and active speakers
- Mini compo systems

## Benefits

- Highly efficient amplifier requires the same small heatsink used with the TAS5612A
- Reduces power by up to 75% when compared to no class-G operation
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- Flexible Output Power Levels/Modes



# High power Families functionality

	Input	Class-G	DC protect (AD-BTL)	Closed loop gain	Nom load	Min load	SE config	Startup	Package
TPA3251D2 /61D1	Analog 2VRMS	Yes	Yes	23dB 20dB	4Ω	3Ω	Split cap	Lo-Z	DDV-44
TAS5630B TAS5613A	Analog 2VRMS	Yes	No	23dB 21dB	4Ω	4Ω	Split cap	Mid-Z	PHD-64 DKD-44
TAS5631B TAS5614A	PWM	No	No		4Ω	4Ω	DC blocking cap	Mid-Z	PHD-64 DKD-44
TAS5612LA TAS5622A TAS5624A	PWM	Yes	No		4Ω	3Ω	DC blocking cap	Lo-Z	DDV-44
TAS5614LA	PWM	Yes	No		4Ω	4Ω	DC blocking cap	Lo-Z	DDV-44
TAS5632 TAS5634	PWM	Yes	Yes		6Ω	6Ω	DC blocking cap	Lo-Z	DKQ-48





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Medical	<a href="http://www.ti.com/medical">www.ti.com/medical</a>
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