DIODES
I N C O R P O R A T E D ®

New Product Announcement

PAMS58xx

Digital Input Class-D Amplifier with Advanced Audio Effects Tuning Supports Highest Quality Audio

The PAMS58xx family consists of fully integrated, high-efficiency, stereo Class-D audio amplifiers with digital inputs. The PAMS58xx family includes five members: PAMS5803, PAMS5804, PAMS5825, PAMS5826, and PAMS5827, each offering a wealth of features. All devices have the same pin sequence definition and can share the same PCB layout design, only the maximum output power and audio tuning differ.

This family supports PVDD with an operation range of 4.5V to 16–26.4V, while DVDD supports either 3.3V or 1.8V. With the integration of a few passive components, these devices deliver stereo output powers ranging from 24W to 41W per channel, or mono output power between 40W and 82W, at 1% total harmonic distortion plus noise (THD+N).

The PAMS58xx devices have enhanced audio performance features, such as a noise value lower than $37\mu V_{RMS}$, THD+N down to 0.02%, and efficiency over 90%.

The PAMS58xx supports Class-H and SSM functions. The advanced audio-tuning provides DRC/EQ/DRB for audio designs.

The PAMS58xx is available in the thermally enhanced TSSOP-28EP package.

The DIODES Advantage

The PAMS58xx family consists of fully integrated, high-efficiency, stereo Class-D audio amplifiers with digital inputs.

- **Close Loop Feedback with 24-Bit Digital Serial Input Interface**
  - Compliant with industry-standard digital serial data I/O control interface
  - I2S SDOUT outputs for audio monitoring, sub-channels, or acoustic echo-cancelation (AEC)
  - Supports high-resolution audio(24-Bit) for superb audio quality
  - Close loop feedback design

- **Programmable High-Quality Audio Processor**
  Utilizes advanced DSP: EQ, DRC, AGL, DRB, tone tuner, 3D support

- **Extremely Low THD+N (0.02%) with Noise Less than $37\mu V_{RMS}$**
  Delivers exceptional audio fidelity in system applications

- **>90% Efficiency and Class-H Support**
  Extends operating time while minimizing heat in portable equipment
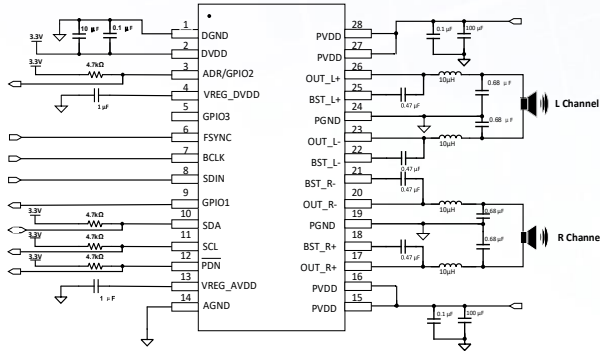
Applications

- Portable speakers: Bluetooth®, smart speakers with voice assistance
- PCs and laptops
- Home audio: TVs, soundbars, set top boxes (STBs), home theaters in a box (HITB)
- Conference call systems

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Typical Application

Stereo Connection
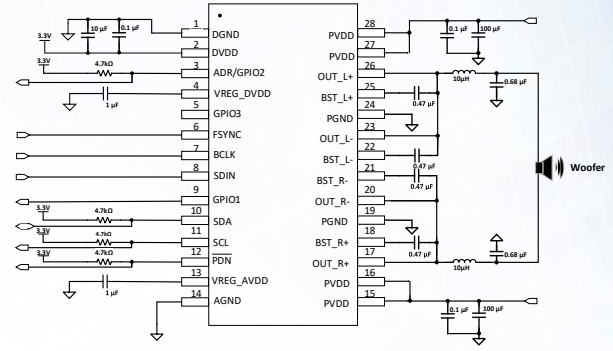
Mono Connection

Digital Audio Amplifier Portfolio

Part Number	Description	Vin	Efficiency (2*10W)	Noise (µVRMS)	THD+N (Po 5W, BTL, 1kHz)	PSRR	Class-H	SSM	Control Interface	Package
		V				dB				
[PAMS5803](#)	2×24W Stereo | 1×40W Mono, Digital Audio Amplifier with Basic Audio Effect Tuning	4.5 to 17	92	35	0.02%	-72	Yes	Yes	I2C, I2S	TSSOP-28EP (Type TH-1)
[PAMS5804](#)	2×33W Stereo | 1×66W Mono, Digital Audio Amplifier with Basic Audio Effect Tuning	4.5 to 26.4	90	35	0.02%	-72	Yes	Yes	I2C, I2S	TSSOP-28EP (Type TH-1)
[PAMS5825](#)	PAMS5825 2×33W Stereo | 1×51W Mono, Digital Audio Amplifier with Rich Audio Effect Tuning	4.5 to 21	92	35	0.02%	-72	Yes	Yes	I2C, I2S	TSSOP-28EP (Type TH-1)
[PAMS5826](#)	PAMS5825 2×40W Stereo | 1×80W Mono, Digital Audio Amplifier with Rich Audio Effect Tuning	4.5 to 26.4	90	37	0.02%	-72	Yes	Yes	I2C, I2S	TSSOP-28EP (Type TH-1)
[PAMS5827](#)	2×41W Stereo | 1×82W Mono, Digital Audio Amplifier With Advanced Audio Effect Tuning	4.5 to 26.4	91	37	0.02%	-72	Yes	Yes	I2C, I2S	TSSOP-28EP (Type TH-1)

Ordering Information

Orderable Part Number	Compliance (Only Automotive Supports PPAP)	Package	Moisture Sensitivity	Packing	
				Quantity	Carrier
[PAMS5803T28ZE-13](#)	[Standard](#)	TSSOP-28EP (Type TH-1)	MSL-3	3,000	13" Tape & Reel
[PAMS5804T28ZE-13](#)	[Standard](#)	TSSOP-28EP (Type TH-1)	MSL-3	3,000	13" Tape & Reel
[PAMS5825T28ZE-13](#)	[Standard](#)	TSSOP-28EP (Type TH-1)	MSL-3	3,000	13" Tape & Reel
[PAMS5826T28ZE-13](#)	[Standard](#)	TSSOP-28EP (Type TH-1)	MSL-3	3,000	13" Tape & Reel
[PAMS5827T28ZE-13](#)	[Standard](#)	TSSOP-28EP (Type TH-1)	MSL-3	3,000	13" Tape & Reel