TAS5508C Status: ACTIVE

8 Channel PWM Processor

Overall Rating ☆☆☆☆☆   No reviews yet. Add your review and give us feedback

Image shown is for reference only.
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Datasheet

📄 **TAS5508C 8-Channel Digital Audio PWM Processor** (PDF 1107 KB)
   10 Sep 2010

   View all technical documents (1)

Description

The TAS5508C is an 8-channel digital pulse-width modulator (PWM) that provides both advanced performance and a high level of system integration. The TAS5508C is designed to interface seamlessly with most audio digital signal processors. The TAS5508C automatically adjusts control configurations in response to clock and data rate changes and idle conditions. This enables the TAS5508C to provide an easy-to-use control interface with relaxed timing requirements.

The TAS5508C can drive eight channels of H-bridge power stages. Texas Instruments H-bridge parts TAS5111, TAS5112, or TAS5182 with FETs are designed to work seamlessly with the TAS5508C. The TAS5508C supports both single-ended or bridge-tied load configurations.

View full Description in Datasheet

Features

General Features
   Automated Operation With an Easy-to-Use Control Interface
   I^2C Serial-Control Slave Interface
   Integrated AM Interference-Avoidance Circuitry
   Single, 3.3-V Power Supply
   64-Pin TQFP Package
   5-V Tolerant Inputs
Audio Input/Output
   Automatic Master Clock Rate and Data Sample Rate Detection
   Eight Serial Audio Input Channels
   Eight PWM Audio Output Channels Configurable as Six Channels
   With Stereo Lineout or Eight Channels
   Line Output Is a PWM Output to Drive an External
   Differential-Input Operational Amplifier
   Headphone PWM Output to Drive an External Differential Amplifier
   Like the TPA112
   PWM Outputs Support Single-Ended and Bridge-Tied Loads
   32-, 38-, 44.1-, 48-, 88.2-, 96-, 176.4-, and 192-kHz Sampling Rates
   Data Formats: 16-, 20-, or 24-Bit Left-Justified, I^2S,
   or Right-Justified Input Data
   64-Fs Bit-Clock Rate
   128-, 192-, 256-, 384-, 512-, and 768-Fs Master Clock Rates
   (Up to a Maximum of
   50 MHz)
Audio Processing
   48-Bit Processing Architecture With 76 Bits of Precision
   for Most Audio Processing Features

View All Features in Datasheet

Parametrics

	TAS5508C
Audio Output Channels (PWM)(#)	8
Dynamic Range(dB)	110
Data Resolution	16, 20, 24
Digital Supply (up to 5 V)(V)	3 - 3.6
Fs(Min)(kHz)	32
Fs(Max)(kHz)	192
PWM Headphone Output	Yes
Serial Interface	I2C, R, L
Volume Control	Yes
Loudness Compensation	Yes

Mute	Yes
Output	PWM
EQ	Yes
Bass/Treble Tone Control	Yes
	Samples
	Inventory

Sample & Buy

Part #	Status	Price | QTY	Package | Pins	Top Side Marking	Package QTY | Carrier	Distributor Inventory	TI 1k Lead Time	Sample & Buy
TAS5508CPAG	ACTIVE	6.90 | 1ku	TQFP (PAG) | 64	View	160 | JEDEC TRAY (10+1)	176	For lead times contact TI Authorized Distributor or local TI sales office	Add to Cart
TAS5508CPAGR	ACTIVE	6.25 | 1ku	TQFP (PAG) | 64	View	1500 | LARGE T&R	>5k	1k quantity lead time: In stock	Add to Cart

* Suggested Resale Price per unit (USD) for BUDGETARY USE ONLY. For higher volume price quotes, prices in local currency or delivery quotes, please contact your local Texas Instruments Sales Office or Authorized Distributor.

Related Products

Part #	Name	Product Family	Comments
TAS5086	6 Channel Digital Audio PWM Processor	SPEAKER AMPLIFIER AND MODULATOR - PWM PROCESSOR	6 Channel Digital Audio PWM Processor
TAS5342L	100-W Stereo Digital Amplifier Power Stage	SPEAKER AMPLIFIER AND MODULATOR - MID/HIGH-POWER AMPLIFIER	
TAS5342LA	100-W Stereo Digital Amplifier Power Stage	SPEAKER AMPLIFIER AND MODULATOR - MID/HIGH-POWER AMPLIFIER	
TAS5352A	125-W Stereo Digital Amplifier Power Stage	SPEAKER AMPLIFIER AND MODULATOR - MID/HIGH-POWER AMPLIFIER	
TAS5614A	150W Stereo/300W MONO PurePath HD DIgital-Input Power Stage	SPEAKER AMPLIFIER AND MODULATOR - MID/HIGH-POWER AMPLIFIER	
TAS5631	PWM input 300W Stereo (600W total) class D amplifier with integrated feedback	SPEAKER AMPLIFIER AND MODULATOR - MID/HIGH-POWER AMPLIFIER	

Technical Documents

Datasheet

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10 Sep 2010

Quality and Environmental Data

Device	Product Content Eco Plan*	Lead / Ball Finish	MSL Rating / Peak Reflow	Details	DPPM / MTBF / FIT Rate Details
TAS5508CPAG 🌐	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-4-260C-72 HR	View	View
TAS5508CPAGR 🌐	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-4-260C-72 HR	View	View

* The planned eco-friendly classification: Pb-Free (RoHS) or Pb-Free (RoHS Exempt) or Green (RoHS & no Sb/Br) - please click on the Product Content Details "View" link in the table above for the latest availability information and additional product content details.

If the information you are requesting is not available online at this time, contact one of our Product Information Centers regarding the availability of this information.

Support and Community

Contents are provided "AS IS" by the respective TI and Community contributors and do not constitute TI specifications. See Terms of Use.

Training & Events

Name	Type	Available During
Integrated PoL solutions in portable applications Today's low-power and portable processors can be easily powered by TI's Point of Load (PoL) solutions.	On-Line Training	On Demand
Battery charging, gauging and protection Learn how TI can provide solutions for different battery technologies.	On-Line Training	On Demand
TI LED Lighting Power Solutions Overview This training will present an overview of the LED general light solutions available at TI.	On-Line Training	On Demand
Digital Signal Isolation Techniques This session will cover the basics of isolation, digital isolation techniques and their comparison.	On-Line Training	On Demand
Sensors and the Analog Interface In this presentation we will discuss the way to monitor temperature, air flow, humidity, and power.	On-Line Training	On Demand

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Blogs

Amp up your TV audio with a Sound Bar: Demo at AES 2010

I replaced an old analog TV with a new thin flat screen TV in my spare bedroom not too long ago. It looked perfect in the corner but one thing became clear very quickly: the sound quality was not so great. The old school fix would be to install an A/V...

Posted to Analog Wire on 1 Nov 2010
Speaker, Class D, Audio, Audio converter, Audio amplifier, Audio processor, CC2590, Scalable audio, PCM9211, AES, DA807, PurePath Studio, PCM3070, TAS5176, PCM1808, Dolby Digital, TAS5713, DA703, PCM1770, sound bar, SRSTruVolume, BQ2015, Speaker EQ, TPA3110, TV, Wireless Audio, TAS5707, TAS5086, CC8520, TLV320AIC3204, miniDSP, SRS TruSurround

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Isn't it always a pleasure when you are recognized for a job well done? When it comes to corporations "thanking" corporations, its really the people who make it all possible who matter. A few days ago, Siemens named Texas Instruments (TI...

Posted to Analog Wire on 26 Oct 2010
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Killing the Buzz: Filtering out EMI

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Posted to Analog Wire on 16 Sep 2010
EMI, ESD, Electro Static Discharge, Filters, Audio, TPD2F702, Electromagnetic Inteference

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Posted to Analog Wire on 12 Aug 2010
DRC, Electronic reader, Biquadratic IIR, Speaker, E-Book, Ebook, Class AB, Filters, Electronic book, Tablet, 3D Effects, MID, Class D, Audio, Headphone, Audio DSP, Mobile internet device, Battery Life, E-reader, Audio converter, Audio amplifier, Audio processor, Microphone

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Customer Reviews BETA

Overall Rating ☆☆☆☆☆
No reviews yet.

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> TPS65148
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