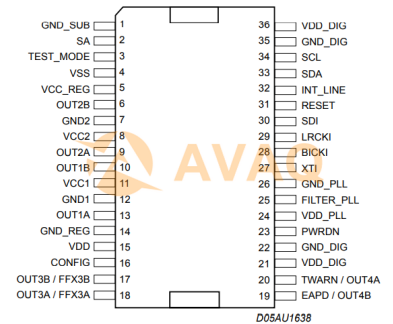


Audio Processor Bass/Treble 0.192MHz 2-OUT 36-Pin

PowerSSO EP

Manufacturer:	STMicroelectronics, Inc
Package/Case:	SSOP36
Product Type:	Embedded Processors & Controllers
Lifecycle:	Active



Images are for reference only

[Inquiry](#)

General Description

The STA339BW is an integrated solution of digital audio processing, digital amplifier control, and FFX-power output stage, thereby creating a high-power single-chip FFX® solution comprising high-quality, high-efficiency, all digital amplification.

STA339BW is based on FFX (fully flexible amplification) processor, an STMicroelectronics proprietary technology. FFX is the evolution and the enlargement of the ST ternary technology: the new processor can be configured to work in ternary, binary, binary differential and phase shift PWM modulation schemes. STA339BW contains the ternary, binary and binary differential implementations, a subset of the full capability of the FFX processor.

The STA339BW is part of the Sound Terminal® family that provides full digital audio streaming to the speaker, offering cost effectiveness, low power dissipation and sound enrichment.

The STA339BW power section consists of four independent half bridges. These can be configured via digital control to operate in different modes. 2.1 channels can be provided by two half bridges and a single full bridge, providing up to 2 x 9 W + 1 x 20 W of power output. Two channels can be provided by two full bridges, providing up to 2 x 20 W of power. The IC can also be configured as 2.1 channels with 2 x 20 W provided by the device and external power for FFX power drive.

Also provided in the STA339BW are a full assortment of digital processing features. This includes up to 8 programmable 28-bit biquads (EQ) per channel and bass/treble tone control. Available presets enable a time-to-market advantage by substantially reducing the amount of software development needed for certain functions. This includes audio preset volume loudness, preset volume curves and preset EQ settings. There are also new advanced AM radio interference reduction modes. Dual-band DRC dynamically equalizes the system to provide speaker linear frequency response regardless of the output power level. This feature independently processes the two bands, controlling dynamically the output power level in each band and so providing better sound quality.

The serial audio data input interface accepts all possible formats, including the popular I2S format. Three channels of FFX processing are provided. This high-quality conversion from PCM audio to FFX PWM switching waveform provides over 100 dB SNR and dynamic range.

Key Features

3 power output configurations

2.1 channels of 24-bit FFX100 dB SNR and dynamic range

Selectable 32 to 192 kHz input sample rates

I2C control with selectable device address

Digital gain/attenuation +48 dB to -80 dB with 0.5 dB/step resolution

Soft volume update with programmable ratio

Individual channel and master gain/attenuation

Two independent DRC configurable as a dual-band anti-clipper (B2DRC) or as independent limiters/compressors

EQ-DRC for DRC based on filtered signals

Dedicated LFE processing for bass boosting with 0.5 dB/step resolution

Audio presets:

Individual channel and master soft/hard mute

Independent channel volume and DSP bypass

Automatic zero-detect mute

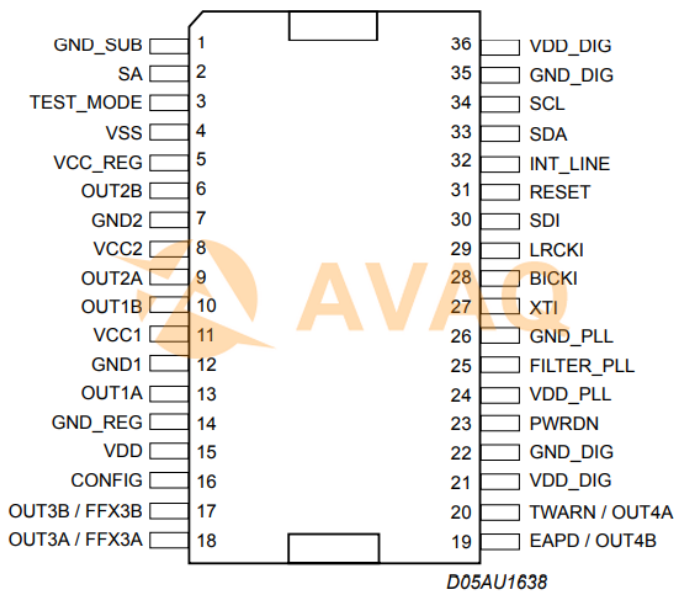
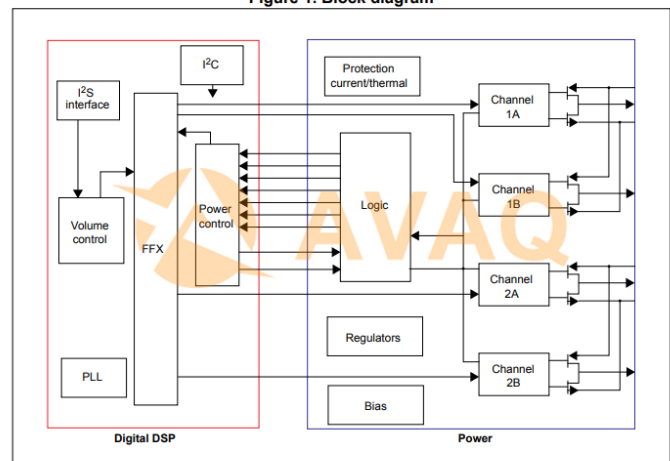


Figure 1. Block diagram



Recommended For You

STA540

STMicroelectronics, Inc

ZIP15

STA559BW

STMicroelectronics, Inc

SSOP36

STPA003OD-4WX

STMicroelectronics, Inc

144-LQFP

STA309A13TR

STMicroelectronics, Inc
QFP64

STA120D

STMicroelectronics, Inc
SOP28

STA308

STMicroelectronics, Inc
QFP

STA333W

STMicroelectronics, Inc
SSOP36

STA516B13TR

STMicroelectronics, Inc
HSSOP36

STABP01D

STMicroelectronics, Inc
SOP20

STA333ML

STMicroelectronics, Inc
SSOP36

STA333BW

STMicroelectronics, Inc
SSOP36

STA321

STMicroelectronics, Inc
TQFP64

STA304A

STMicroelectronics, Inc
QFP

STA333IS

STMicroelectronics, Inc
CSP-30

STABP01

STMicroelectronics, Inc
DIP