

## TPA2012D2 – Stereo Class-D Speaker Amplifier

### One Page Overview

#### Product Description:

The TPA2012D2 is a stereo 2.1-W High-Efficiency, Filter-Free Class-D audio power amplifier that requires only two external components for operation. It is available in a tiny wafer chip scale package (WCSP) or a QFN package. The TPA2012D2 offers high-efficiency operation which is perfect for any battery operated device that use two speakers.

#### Key Parameters:

- Supply Voltage Range: 2.5 V – 5.5 V
- Output Power: 600 mW (at 3.6 V into 8  $\Omega$ )
- Power Supply Rejection Ratio (PSRR @ 217 Hz): 73 dB
- Noise Floor: 27  $\mu\text{V}_{\text{RMS}}$  (A-weighted)

#### Nano-Evaluation Module Description:

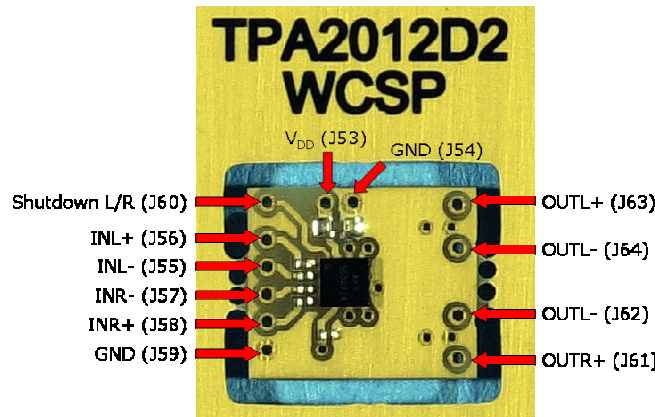
The TPA2012D2 NanoEVM included within this kit can easily be pushed out of the main NanoEVM PCB and has been made as small as possible to be soldered directly onto a customer's board for immediate evaluation of the device in the system. It contains all the external components needed for correct operation. For full evaluation, please request a standard size EVM (TPA2012D2EVM).

#### Nano-Evaluation Module Board Use:

Before you connect the NanoEVM to a power supply or please check the picture below to ensure the correct connections.

Please note following important device limitations:

- Maximum Supply Voltage: 5.5 V
- Recommended Supply Voltage Range: 2.5 V to 5.5 V
- Minimum Speaker Impedance: 4  $\Omega$



#### TPA2012D2 NanoEVM

**Note:** The actual TPA2012D2 device allows four gain settings. The gain has been fixed to 4 V/V or 12 dB on this NanoEVM.

The Nano EVM is not designed to test the full functionality of the device. For further product information including the board schematics, BOM and the link to the product folder, please visit the following web site: [www.ti.com/analogportable](http://www.ti.com/analogportable)

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