

## DESCRIPTION

The PT2812 is an integrated 3W stereo Class-D amplifier with audio processor. The input selector supports 2 Single-Ended and 1 Fully-Differential input can be chose. The highly integration of the audio processor and class-D amplifier can further reduce external components BOM and provides better audio experience. All of functions are controlled via I2C bus.

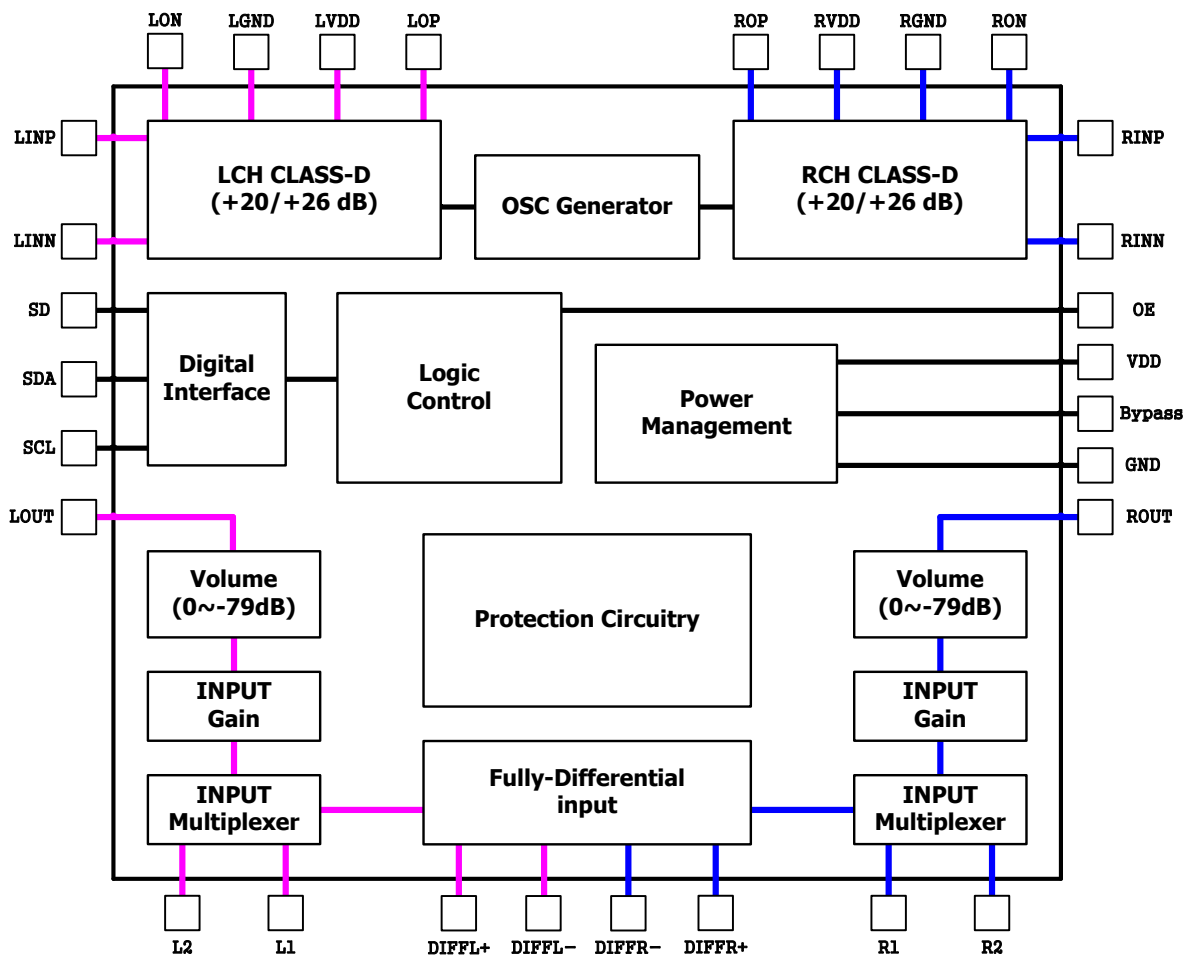
## APPLICATIONS

- PC/Video Projector
- Portable media player
- Audio duck system
- Flat panel display with audio inputs

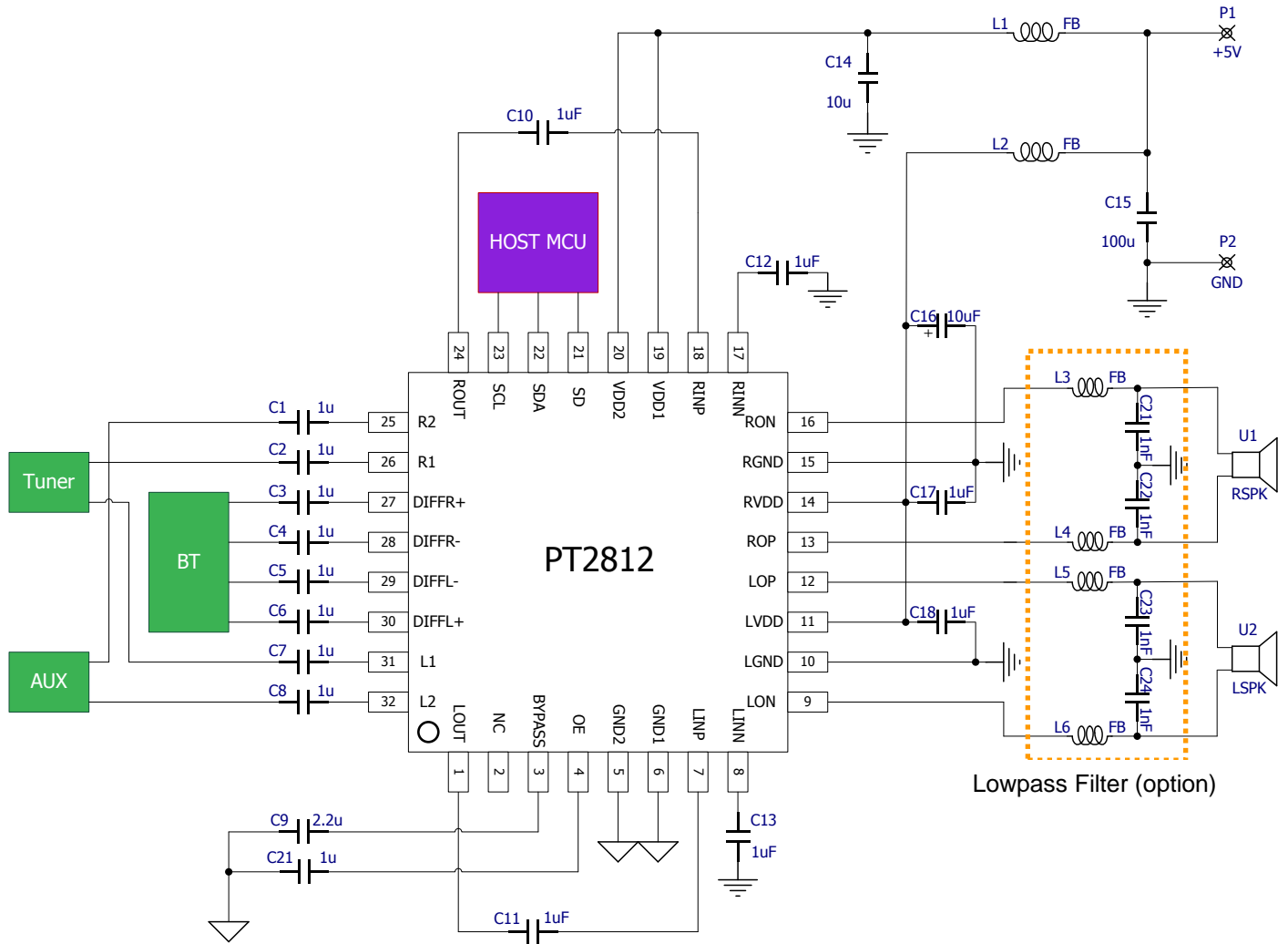
## FEATURES

- Supply Voltage: 3~6V
- 3W X 2 Class-D power amplifier (VDD=5V, RL=4Ω)
- 1 Fully-Differential input
- 2 Single-Ended audio inputs
- Programmable input gain from 0 to +15dB
- Master volume in 1dB/step from 0 to -79dB
- Advanced soft-mute and multiple soft-step volume technology eliminate audible click during volume and input sources changing.
- Built-in RF noise filter
- Shutdown function for power saving
- Over temperature and over current protection
- Controlled by I<sup>2</sup>C interface
- Available in 32 Pins, 4x4 mm QFN package

## BLOCK DIAGRAM



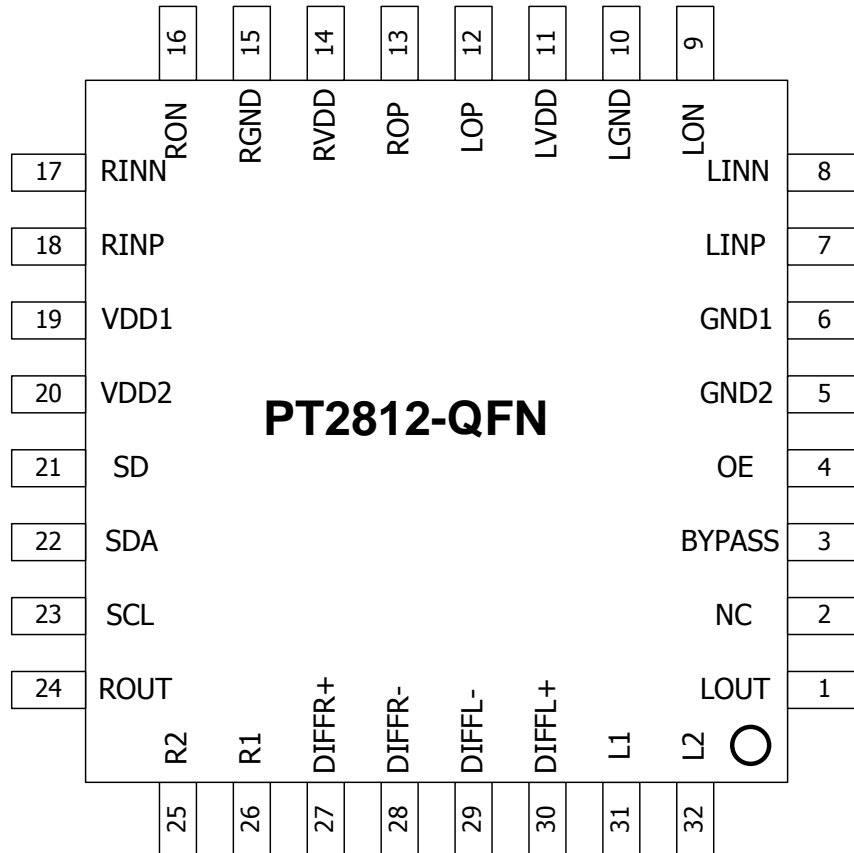
# APPLICATION CIRCUIT



## ORDER INFORMATION

Valid Part Number	Package Type	Top Code
PT2812-QFN	32 Pins, QFP, 4 X 4 mm	PT2812-QFN

## PIN CONFIGURATION



## PIN DESCRIPTION

Pin Name	I/O	Description	Pin No.
LOUT	O	Left channel line out	1
NC	-	No connection	2
BYPASS	P	Bypass cap for Internal Voltage Reference, a 2.2 $\mu$ F cap is recommended.	3
OE	I	Output Enable setting, connect a 0.22 $\mu$ F cap to GND.	4
GND1	P	Ground for internal circuits	5
GND2	P	Ground for internal circuits	6
LINP	I	Positive input of left channel Class-D amp	7
LINN	I	Negative input of left channel Class-D amp	8
LON	O	Negative output of left channel Class-D amp	9
LGND	P	Power ground of left channel Class-D amp	10
LVDD	P	Power input of left channel Class-D amp	11
LOP	O	Positive output of left channel Class-D amp	12
ROP	O	Positive output of right channel Class-D amp	13
RVDD	P	Power input of right channel Class-D amp	14
RGND	P	Power ground of right channel Class-D amp	15
RON	O	Negative output of right channel Class-D amp	16
RINN	I	Negative input of right channel Class-D amp	17
RINP	I	Positive input of right channel Class-D amp	18
VDD1	P	Power input for internal circuits	19
VDD2	P	Power input for internal circuits	20
SD	I	Shutdown. Sets to low level will turn off whole chip and pull up to High level is back to normal operation.	21
SDA	I	I <sup>2</sup> C bus data input	22
SCL	I	I <sup>2</sup> C bus clock input	23
ROUT	O	Right channel line out	24
R2	I	Input 2 of right channel	25
R1	I	Input 1 of right channel	26
DIFFR+	I	Differential right channel "+" input	27
DIFFR-	I	Differential right channel "-" input	28
DIFFL-	I	Differential left channel "-" input	29
DIFFL+	I	Differential left channel "+" input	30
L1	I	Input 1 of left channel	31
L2	I	Input 2 of left channel	32

## **IMPORTANT NOTICE**

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