PT2334
Stereo 2W Class-D Amplifier with Built-In Audio Processor

DESCRIPTION

The PT2334 is an integrated stereo 2W Class-D amplifier accompany with a Class-AB headphone driver. The input interface accepts both analog and digital audio sources; the chip included a 16-bit DAC to convert digital audio source to analog signal. The signal process is basically in analog domain to maintain the high performances and low power consumption. The PT2334 also provide very useful multi-sources selection (Up to 4 sources) and tone control functions, thanks for the advanced CMOS technology now we could combine both audio processing and amplification into a single chip. The whole chip functions are controlled via I^2C bus.

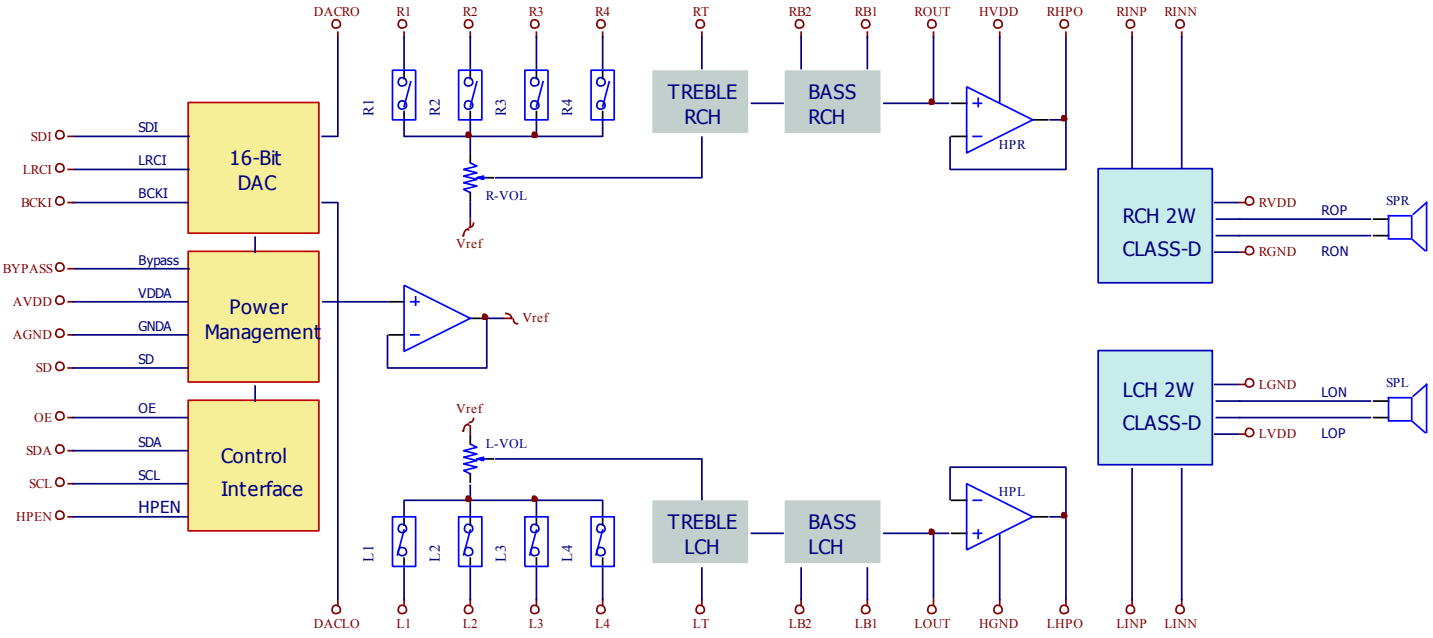
APPLICATIONS

- Flat panel display and TV
- Portable media player
- Portable player ducking system
- Digital photo frame
- Other audio applications

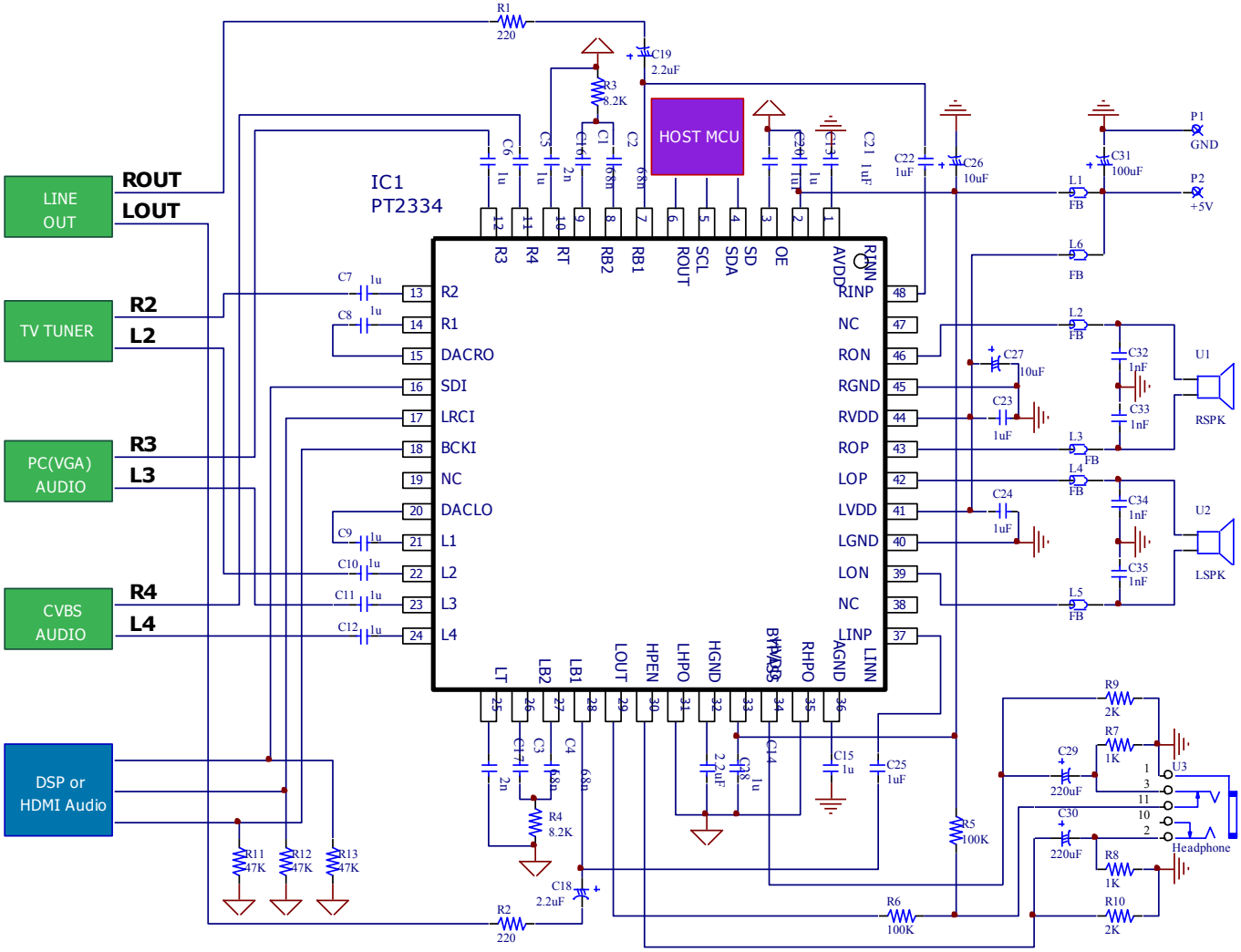
FEATURES

- Supply Voltage: 3.7~6V
- Differential input power amplifier for improved CMRR.
- 2W X 2 Class-D power amplifier (VDD=5V, RL=4Ω)
- 70mW X 2 Class-AB headphone driver (RL=32Ω)
- BASS and TREBLE control
- 32 steps volume controller
- 4 Inputs selection
- Audio line out (same level with volume and tone)
- Built-In 16 bits DAC for digital audio sources
- Pop-Free circuitry eliminates unpleasant noises during power ON/OFF.
- Low power shutdown
- Over Heat/Over current protection circuitry
- Controlled by I^2C interface
- High Power CMOS processing
- Available in 48 Pins, LQFP

BLOCK DIAGRAM



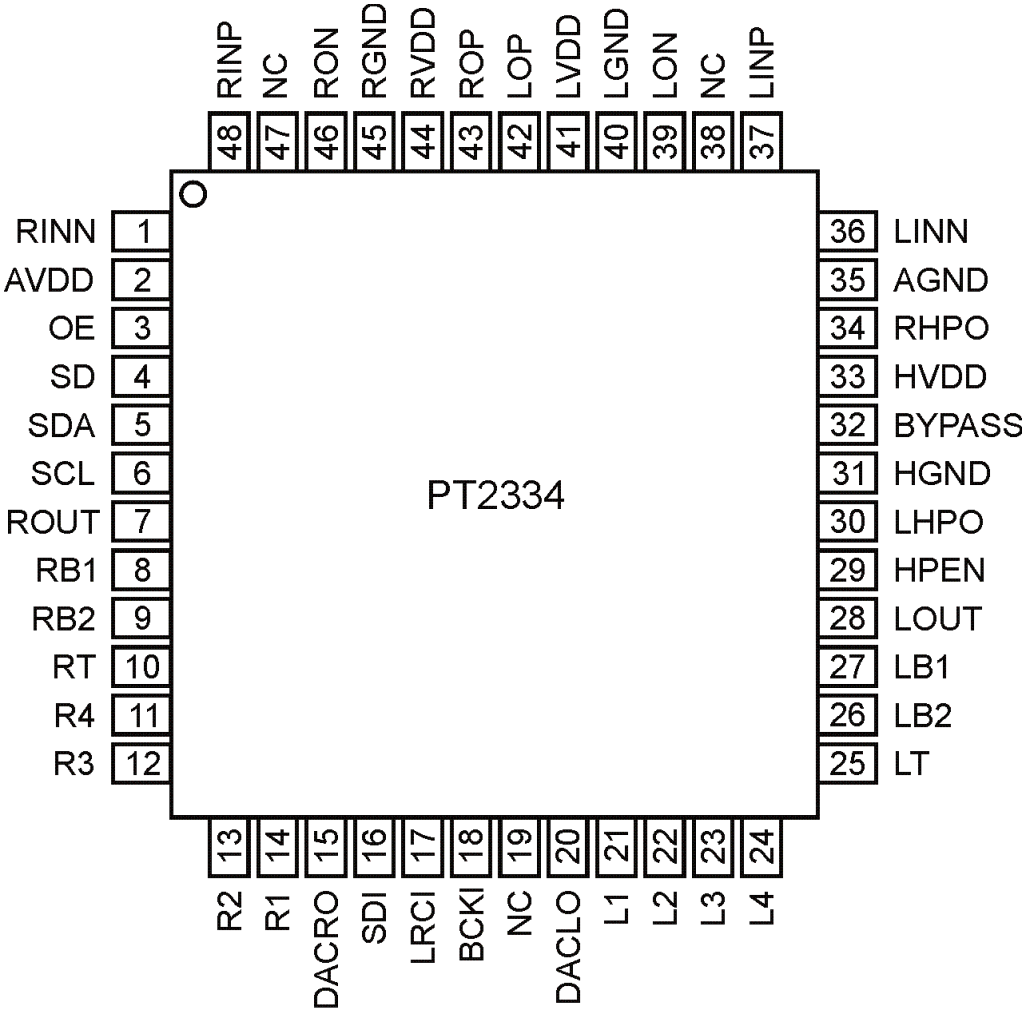
APPLICATION CIRCUIT



ORDER INFORMATION

Valid Part Number	Package Type	Top Code
PT2334-LQ	48 Pins, LQFP	PT2334-LQ

PIN CONFIGURATION



PIN DESCRIPTION

Pin Name	I/O	Description	Pin No.
RINN	I	Negative input of right channel Class-D amp	1
AVDD	P	Power input for DAC and internal circuits	2
OE	I	Output Enable setting, connect a 0.22μF cap to GND.	3
SD	I	Shutdown Sets to low level will turn off whole chip and pull up to High level is back to normal operation.	4
SDA	I	I^2C bus data input	5
SCL	I	I^2C bus clock input	6
ROUT	O	Right channel line out	7
RB1	I	Capacitor 1 for right channel Bass controller	8
RB2	O	Capacitor 2 for right channel Bass controller	9
RT	I	Capacitor for right channel Treble controller	10
R4	I	Input 4 of right channel	11
R3	I	Input 3 of right channel	12
R2	I	Input 2 of right channel	13
R1	I	Input 1 of right channel	14
DACRO	O	Right channel DAC output	15
SDI	I	Serial data input of DAC	16
LRCI	I	Channel clock input of DAC	17
BCKI	I	Bit clock input of DAC	18
NC	-	No connect	19
DACLO	O	Left channel DAC output	20
L1	I	Input 1 of left channel	21
L2	I	Input 2 of left channel	22
L3	I	Input 3 of left channel	23
L4	I	Input 4 of left channel	24
LT	I	Capacitor for left channel Treble controller	25
LB2	I	Capacitor 2 for left channel Bass controller	26
LB1	O	Capacitor 1 for left channel Bass controller	27
LOUT	O	Left channel line out	28
HPEN	I	Headphone sense input	29
LHPO	O	Left channel headphone driver output.	30
HGND	P	Ground of headphone driver.	31
BYPASS	P	Bypass cap for Internal Voltage Reference, a 2.2μF cap is recommended.	32
HVDD	P	Power input for headphone amplifier	33
RHPO	O	Right channel headphone driver output	34
AGND	P	Ground for DAC and internal circuits	35
LINN	I	Negative input of left channel Class-D amp	36
LINP	I	Positive input of left channel Class-D amp	37
NC	-	No connect	38
LON	O	Negative output of left channel Class-D amp	39
LGND	P	Power ground of left channel Class-D amp	40
LVDD	P	Power input of left channel Class-D amp	41
LOP	O	Positive output of left channel Class-D amp	42
ROP	O	Positive output of right channel Class-D amp	43
RVDD	P	Power input of right channel Class-D amp	44
RGND	P	Power ground of right channel Class-D amp	45
RON	O	Negative output of right channel Class-D amp	46
NC	-	No connect	47
RINP	I	Positive input of right channel Class-D amp	48

IMPORTANT NOTICE

Princeton Technology Corporation (PTC) reserves the right to make corrections, modifications, enhancements, improvements, and other changes to its products and to discontinue any product without notice at any time.
PTC cannot assume responsibility for use of any circuitry other than circuitry entirely embodied in a PTC product. No circuit patent licenses are implied.

Princeton Technology Corp.
2F, 233-1, Baociao Road,
Sindian Dist, New Taipei City 23145, Taiwan
Tel: 886-2-66296288
Fax: 886-2-29174598
http://www.princeton.com.tw