



## DESCRIPTION

The PT8402B is a single chip MPEG audio decoder capable of decoding all layers compressed elementary streams, as specified in MPEG 1 and MPEG 2 ISO standards, including the so called MP3. In addition to decoding function, this chip also include a high-performance D/A converter and headphone driver, so user can eliminate the need of external DAC and output circuit. With external A/D converter, it can also compress incoming signal by using ADPCM algorithm, therefore it can also playback ADPCM bitstream.

## FEATURES

- Support all the sampling frequency of MPEG1 (32/44.1/48KHz), MPEG2(16/22.05/24KHz) and MPEG2.5(12/11.025/8KHz).
- Parallel/Serial bit stream input interface
- I<sup>2</sup>S/Normal audio data output format delivered via an serial bus
- Power save mode support
- DAC master clock (256\*fs / 384\*fs for 16 / 24 bit DAC) is supported
- Build-in DAC and headphone amp.
- Build-in Volume and Digital Equalizer Control
- Aux input for additional analog music source through AUXR and AUXL ports
- Bass Booster, 3D Sound.
- Low Operating Voltage, 2.5V.
- Available in 100 pins and 80 pins, TQFP and LQFP Package

## APPLICATIONS

- Portable MP3 player
- PDA
- CD/MP3 player
- All other MP3 applications.





MP3 Audio Decoder IC

PT8402B

			GPIO1	GND	TEST1	GPIO2	GPIO3	GPIO4	GPIO5	GND	VCC	GPIO6	DSPRDY	GND	CLKI	VCC	PWR DWN	NC	/RST	GND PLL	VCC PLL	DVSS			
VCC	1	P	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61			
GND	2	P	I/O	P	I	I/O	I/O	I/O	I/O	P	P	I/O	O	P	I	P	I			I	P	P	P		
GPIO0	3	I/O																			O	60	DACL		
GPIO15	4	I/O																			I	59	LPF1L IN		
GPIO14	5	I/O																			O	58	LPF1L OUT		
VCC	6	P																			I	57	LPF2L IN		
GND	7	P																			O	56	LPF2L OUT		
GPIO13	8	I/O																			I	55	DACIN L		
GPIO12	9	I/O																			I	54	AUXL		
VCC	10	P																			P	53	AVDD12		
GND	11	P																			P	52	AVSS0		
GPIO11	12	I/O																			O	51	OUTL		
GPIO10	13	I/O																			P	50	AVSS12		
GPIO9	14	I/O																			O	49	OUTR		
GPIO8	15	I/O																			P	48	AVDD0		
VCC	16	P																			O	47	VREF2		
GND	17	P																			P	46	AVDD12		
PD_REQ	18	O																			I	45	AUXR		
PD_ACK	19	O																			I	44	DACin R		
PD_ENA	20	I																			O	43	LPF2R OUT		
			I	P	P	I	I	I	I/O	I/O	P	O	P	O	O	O	P	P	I	P	O	I	42	LPF2R IN	
			21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	O	41	LPF1R OUT
B_ENA1			VCC	GND	BD1	BCK1	MCLKIN	IICC	IICD	VCC	MCLKO	GND	ADQO	ALRQO	ACKO	VCC	GND	TE	DVDD	DACR	LPF1R_IN				

PT8402B-80

Figure 2. 80 Pin Assignment (P: Power pins, I/O: IO pins)



# APPLICATION CIRCUIT

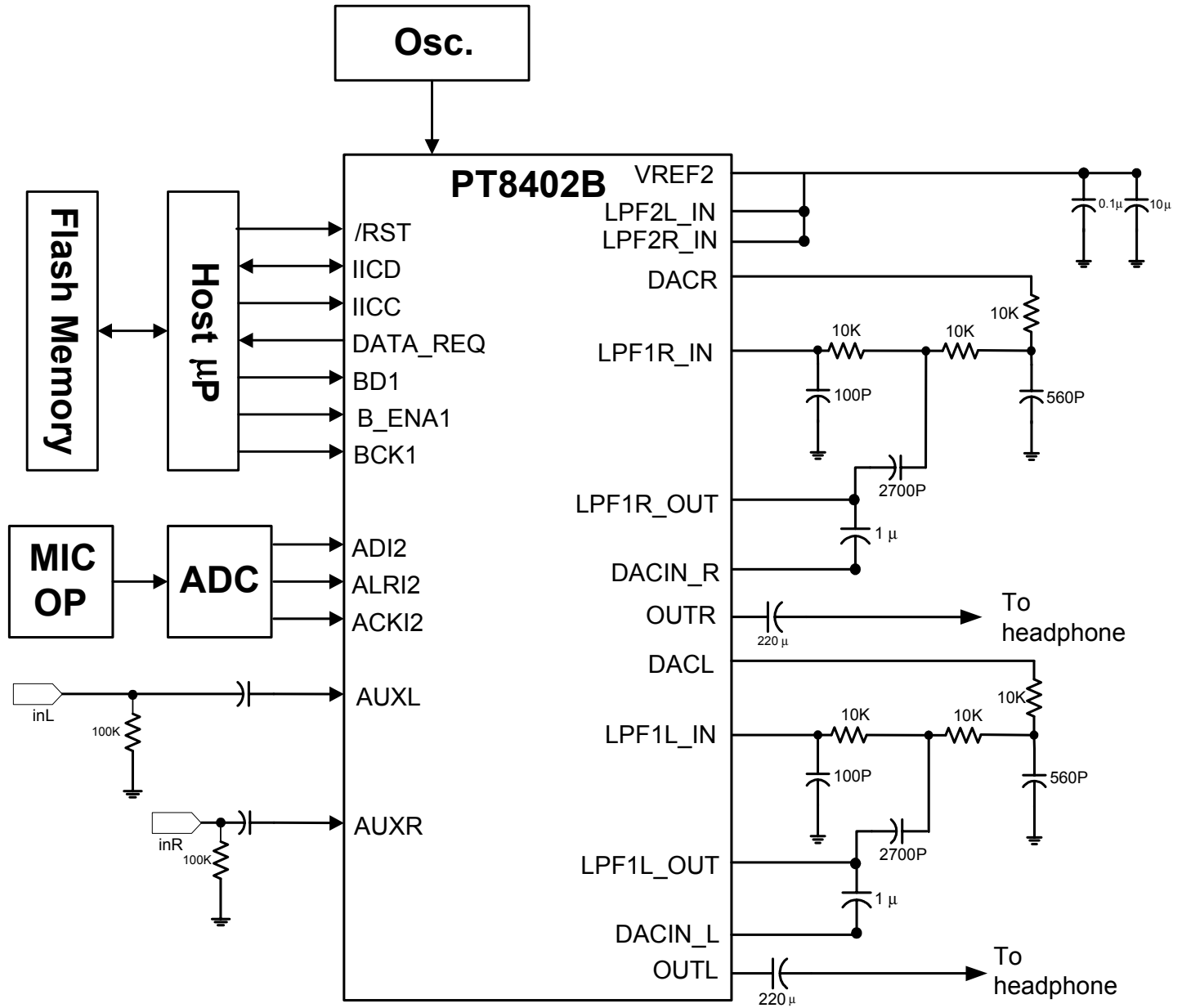


Figure 3. PT8402B Typical Connection Diagram



## ORDER INFORMATION

Valid Part Number	Package Type	Top Code
PT8402B-80LQ	80Pins, LQFP	PT8402B-80LQ
PT8402B-LQ	100Pins, LQFP	PT8402B-LQ
PT8402B-TQ	100Pins, TQFP	PT8402B-TQ