

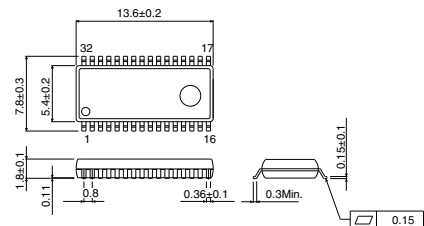
# Sound processor for DVD player

## BD3824FS

### ● Description

BD3824FS is a single chip IC for DVD recorder application. Each function of 5-channel input selector, input gain, tuner gain, ALC, line amplifier and power save ON/OFF can be controlled by I<sup>2</sup>C BUS.

### ● Dimension (Unit : mm)



SSOP-A32

### ● Features

- 1) Low distortion rate and low noise
- 2) Built-in ALC circuit can be used as RF output
- 3) Perfect for low current consumption and energy saving design due to BiCMOS process
- 4) SSOP-A32 package. Layout terminals for audio input and audio output are located together to arrange the flow of signal in the same direction enabling an easy pattern layout and saving space on the board.
- 5) Same PCB board as BD3822FS is available.  
I<sup>2</sup>C BUS software of BD3822FS can be used without any modification.
- 6) Original system is applied, which its input (tuner, FRONT, EXT) waveform is not distorted at I<sup>2</sup>C BUS standby mode.

### ● Applications

DVD recorder

### ● Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Maximum applied voltage	V <sub>cc</sub>	10.0	V
Power dissipation	P <sub>d</sub>	950 *	mW
Operating temperature range	T <sub>opr</sub>	D40 to +85	°C
Storage temperature range	T <sub>stg</sub>	D55 to +125	°C

\*Derating : 9.5mW/°C for operation above Ta=25°C

\*PCB (70mmX70mm,t=1.6mm) glass epoxy mounting.

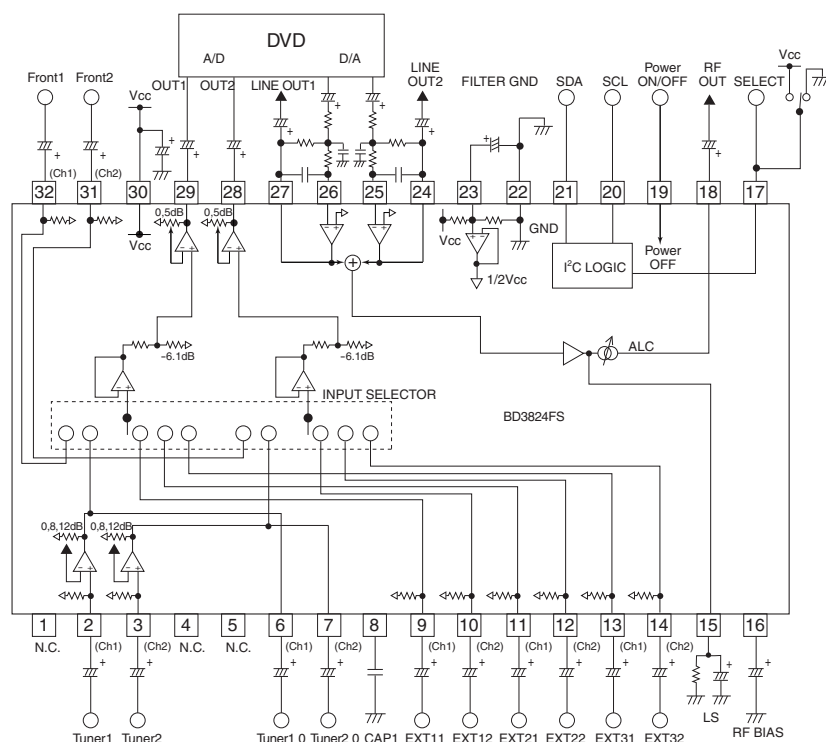
### ● Operating Conditions (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Supply voltage	V <sub>cc</sub>	7.0	9.0	9.5	V

- Electrical characteristics (Unless otherwise noted;  $T_a=25^{\circ}\text{C}$ ,  $V_{CC}=9\text{V}$ ,  $f=1\text{kHz}$ ,  $V_{IN}=1\text{Vrms}$ ,  $R_g=600\Omega$ ,  $R_{L1}=4.7\text{k}\Omega$  (LINE OUT1,2),  $R_{L2}=10\text{k}\Omega$  (OUT1, OUT2, RF OUT, Tuner1\_0, 2\_0), input terminal=Front1, Output terminal=OUT1, Gain amp=0dB, Tuner gain=0dB)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Circuit current at no signal mode	$I_Q$	—	6.4	19.2	mA	$V_{IN}=0\text{Vrms}$
Standby current	$I_{OFF}$	—	940	1760	mA	「Power OFF」 MODE
Maximum output voltage 1	$V_{OM1}$	1.68	2.1	—	Vrms	Output terminal=OUT1/OUT2, $R_{L2}=10\text{k}\Omega$ , $V_{OM}$ at $\text{THD}(V_{OUT})=1\%$ , Gain Amp=5dB, BW=400~30kHz
Maximum output voltage 2	$V_{OM2}$	2.2	2.5	—	Vrms	Output terminal=LINE OUT1/LINE OUT2, $R_{L1}=4.7\text{k}\Omega$ , $V_{OM}$ at $\text{THD}(V_{OUT})=1\%$ , External LPF Gvc=6dB, BW=400~30kHz
Channel balance	CB	-1.5	0	1.5	dB	$\text{CB}=G_{V1}-G_{V2}$
Total harmonic distortion rate	THD	—	0.0015	0.05	%	$V_{OUT}=2\text{Vrms}$ , BW=400-30kHz
Output noise voltage	$V_{NO}$	—	2.3	11.5	mVrms	$R_g=0\Omega$ , BW=IHF-A
Cross talk between channels	CTC	—	-100	-80	dB	$R_g=0\Omega$ , BW=IHF-A

## ● Application Circuit



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