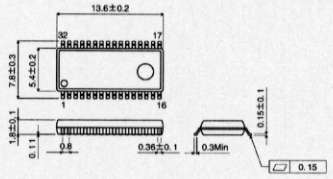
Audio Sound Control LSI
BD3861FS

●Description

The BD3861FS is a sound control LSI developed for micro component stereo. Volume and tone quality can be controlled easily from a micro component stereo, through a 2 wire serial control interface.

●Dimension (Units : mm)



SSOP-A32

●Features

1)Built-in Volume, Tone (Bass, Middle, Treble), Input gain amplifier, input selector control is available.
2)Low distortion and low noise
3)2-wire serial interface
4)Perfect for saving space design with few external components due to a built-in input gain amplifier.
5)Residual noise can be reduced by setting pre-volume and post-volume

●Applications

Micro component stereo, Radio cassette tape recorder, Mini component stereo

March, 2000

●Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Limits	Unit
Supply voltage	V_{CC}	10	V
Power dissipation	Pd	800 *	mW
Operating temperature range	Topr	−25 ～ +75	℃
Storage temperature range	Tstg	−55 ～ +150	℃

*Derating : 6.4mW／℃ for operation above Ta=25℃.

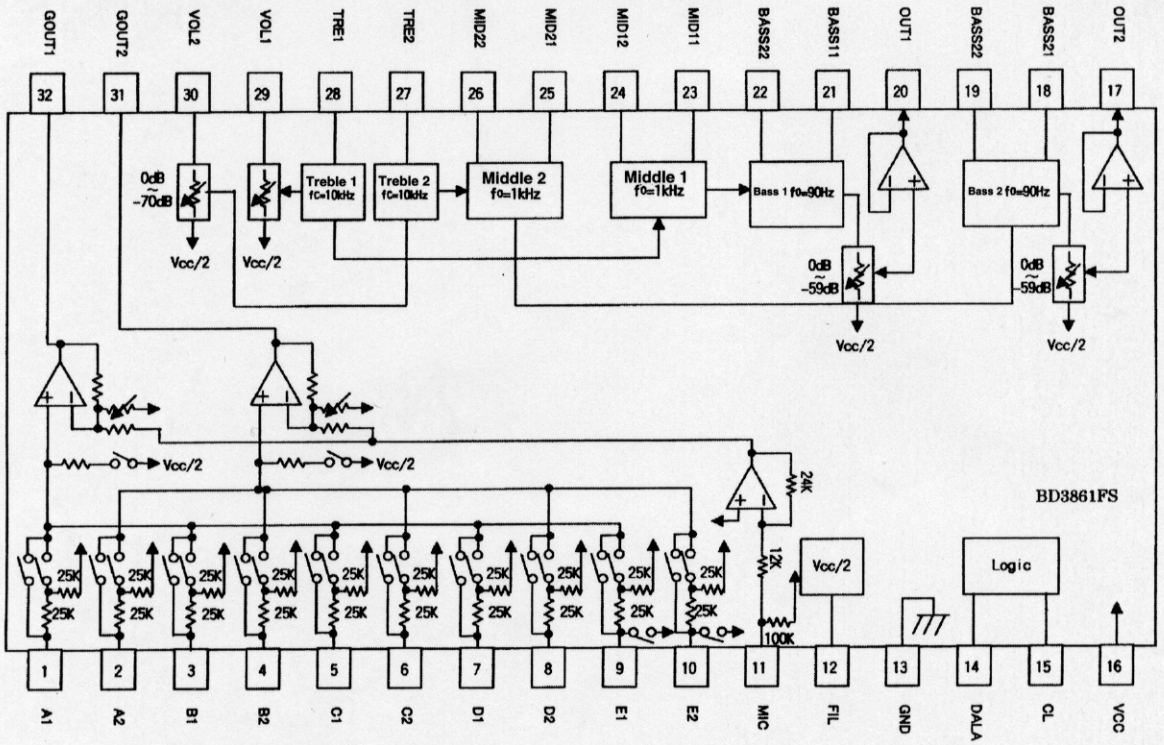
●Recommended Operating Conditions (Ta=25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Supply voltage	V_{CC}	6.5	−	9.5	V

●Electrical characteristics (Unless otherwise noted, Ta=25℃, Vcc=9V, f=1kHz, Vi=1Vrms, R_L=10kΩ)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Circuit current	IQ	−	13.0	26.0	mA	Rg=0kΩ
Total output voltage gain	Gv	−1.5	0	1.5	dB	
Total harmonic distortion rate	THD	−	0.02	0.08	%	
Maximum output voltage	V_{OM}	2.0	2.5	−	Vrms	THD=1%
Total output noise voltage	V_{NO}	−	8.0	15.0	μVrms	Rg=0kΩ, IHF−A
Input volume control range	VRI	−73.0	−70.0	−67.0	dB	
Output volume control range	VRO	−61.0	−59.0	−57.0	dB	
Bass boost・Cut gain	G_B	±12.0	±14.0	±16.0	dB	
Middle boost・Cut gain	G_M	±10.0	±12.0	±14.0	dB	
Treble boost・Cut gain	G_T	±10.0	±12.0	±14.0	dB	

●Application circuit



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