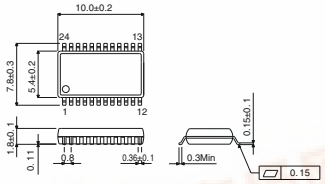
Sound processor for CD radio cassette player
BD3871FS

●Description

BD3871FS is a sound processor for CD/MD radio cassette player. This IC provides all functions, such as input selector (3 input sources), an input gain amplifier (25dB, 27dB, 29dB),and a surround, tone (bass, treble). This IC can be controlled by a 2-wire serial data interface.

●Dimension (Units : mm)



SSOP-A24

●Features

1) Can select center frequency and Q value of Bass characteristics by external components.
2) Mute switch at the input terminal can reduce cross talk.
3) Surround function is composed without external components.
4) Ideal for energy-saving designs with low current consumption due to the adoption of the BiCMOS process, allowing easy-design of the regulator blocks in the set.

●Applications

CD radio cassette player, MD radio cassette player, Micro component stereo

●Absolute Maximum Ratings (Ta=25˚C)

Parameter	Symbol	Limits	Unit
Power supply voltage	Vcc	10	V
Power dissipation	Pd	800	mW
Operating temperature range	Topr	–25 ~ +75	˚C
Storage temperature range	Tstg	–55 ~ +125	˚C

Derating : 8.0mW/˚C for operation above Ta=25˚C

●Recommended Operating Conditions (Ta=25˚C)

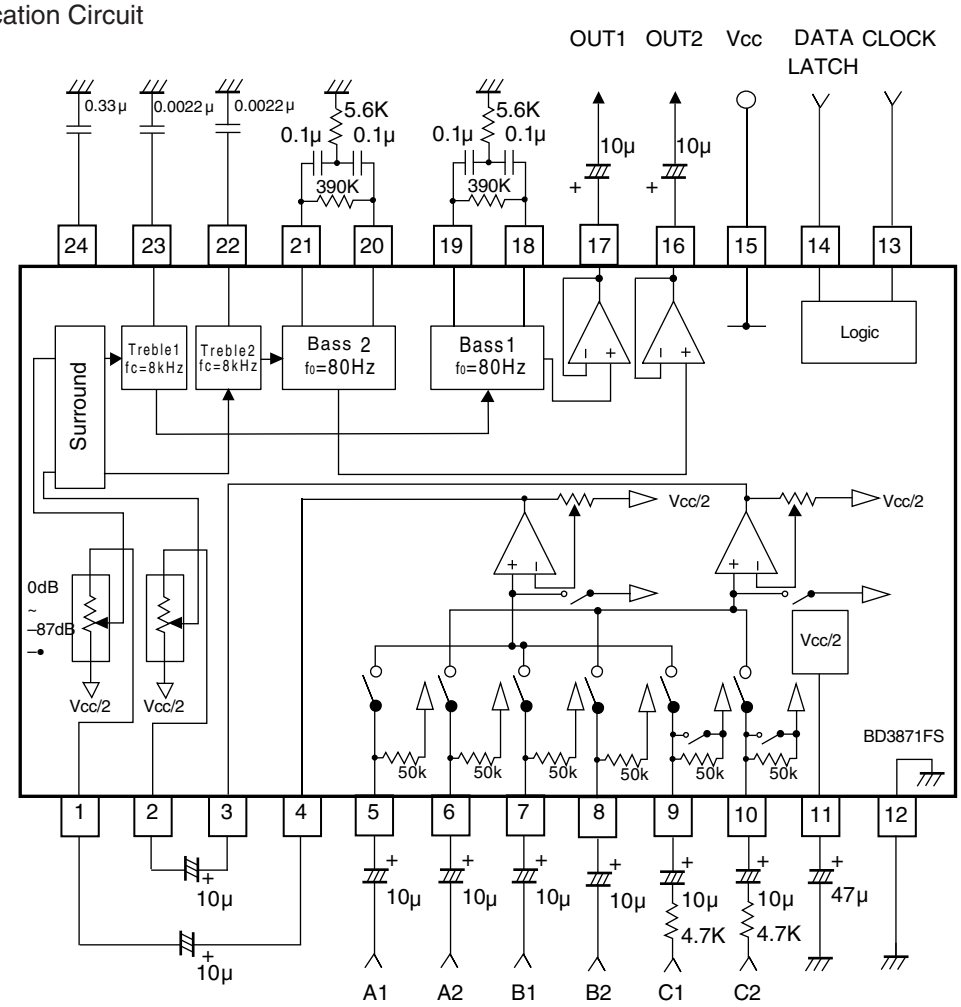
Parameter	Symbol	Min.	Typ.	Max.	Unit
Operating voltage	V_{DD}	4.5	8	9.5	V

● Electrical characteristics

(Unless otherwise noted ; Ta=25˚C, Vcc=8V, f=1kHz, Vi=50mVrms, RL=10k , Rg=600 ,
INPUT GAIN=24dB, Vol=0dB, bass,treble=0dB, surround=OFF)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Circuit current	IQ	—	8	21	mA	No signal
Output voltage gain	Gv	22	24	26	dB	
Total harmonic distortion	THD	—	0.01	0.1	%	VOUT=1Vrms, Bw=400~30kHz
Maximum output voltage	Vomax	1.6	2.1	—	Vrms	THD=1%, Bw=400~30kHz
Residual noise voltage	Vno	—	4.5	15	μVrms	Rg=0 , Vol=–• , Bw=IHF–A
Output residual noise voltage	Vmno	—	40	80	μVrms	Rg=0 , Vol=0dB, Bw=IHF–A
Volume control range	VRI	–90	–87	–84	dB	VIN=1Vrms, 1dB/STEP
Bass control range	GB	+12 –16	+14 –14	+16 –12	dB	VIN=100mVrms, 2dB/STEP
Treble control range	TB	+10 –14	+12 –12	+14 –10	dB	VIN=100mVrms, 2dB/STEP
Surround gain (Antiphase)	Vsur	8	10	12	dB	VIN=100mVrms

● Application Circuit



UNIT
RESISTANCE :
CAPACITOR : F

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