Sound processor for radio cassette recorder and mini component stereo

BD3881FV/BD3882FV

●Description

The BD3881FV incorporates a sound controller with built-in EQ for playing and recording of cassette tape recorder. When the tape recorder is not used, the equalizer can be used as an ordinary input selector. The sound controller block is simply composed of 2-band tones and volume.
The BD3882FV incorporates rear volume for improving SN and 3-band tones. The BD3882FV has nearly the same pin assignment as the BD3881FV and both can be used in a variety of applications.

●Features

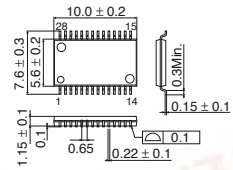
1) Built-in EQ for recording and playing of cassette tape recorder
2) Suitable for karaoke (soft)
3) Enable to design boards easily for set series due to the same pin assignment of BD3881FV and BD3882FV
4) Low noise, low distortion and low power consumption

●Applications

CD radio cassette recorder, Mini component stereo, Micro component stereo

●Dimension (Unit : mm)

BD3881FV



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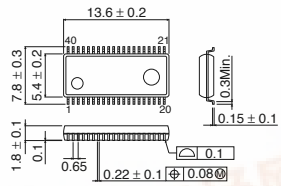
BD3882FV



SSOP-B40

●Absolute Maximum Ratings (Ta=25˚C)

Parameter		Symbol	Limits	Unit
Applied voltage		VDD	5	V
		VEE	−5	
Power dissipation	BD3881FV	Pd	850 *1	mW
	BD3882FV		900 *2	
Operating temperature range		Topr	−20 ~ +75	˚C
Storage temperature range		Tstg	−55 ~ +125	˚C

*1 Derating : 8.5mW/˚C for operation above Ta=25˚C
*2 Derating : 9.0mW/˚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
Operating voltage range	VDD	3.5	−	4.75	V
Operating voltage range	VEE	−4.75	−	−3.5	V

●Electrical characteristics

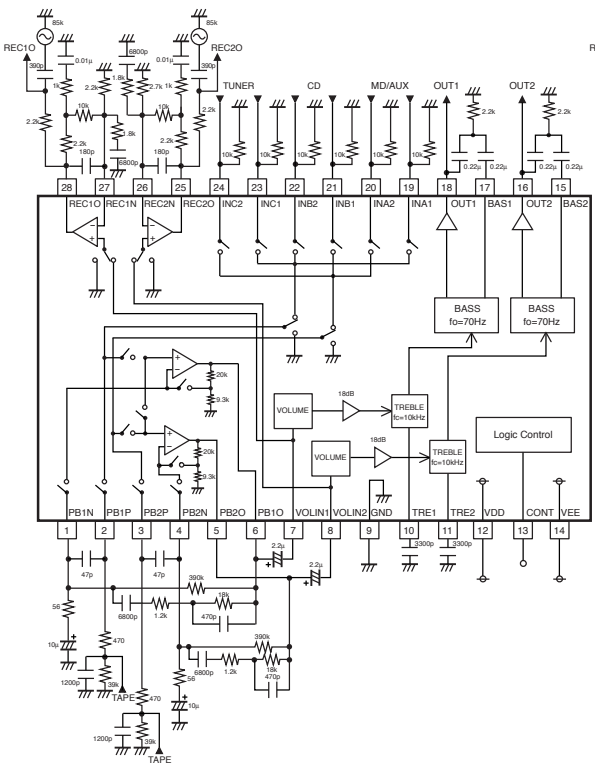
(Unless otherwise noted; Ta=25˚C, VDD=4.5V, VEE=-4.5V, f=1kHz, Vin=50mVrms, Rg=600Ω, RL=10kΩ, Input selector=Ach, Volume=0dB, Bass=0dB, Treble=0dB)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
VDD circuit current at no signal	IQVDD	–	3.0(4.5)	8.0(10.0)	mA	VIn=0Vrms
VEE circuit current at no signal	IQVEE	−8.0(−10.0)	−3.0(−4.5)	–		
Total harmonic distortion rate	THD	–	0.02(0.01)	0.1	%	BPF=400−30kHz
Output noise voltage	Vno	–	12(22)	20(60)	μVrms	(BPF=IHF−A), Rg=0Ω
Residual noise voltage	Vmno	–	12(3)	20(8)	μVrms	(BPF=IHF−A), Rg=0Ω
Bass control range	Gbcr	+18(±11)	+21(±14)	+24(±17)	dB	Vin=5mVrms, (Vin=10mVrms)
Treble control range	Gtcr	+12(±11)	+14(±14)	+16(±17)	dB	(Vin=10mVrms), TREBLE=±14dB
Middle control range	Gmcr	(±11)	(±14)	(±17)	dB	Vin=10mVrms, MIDDLE=±14dB

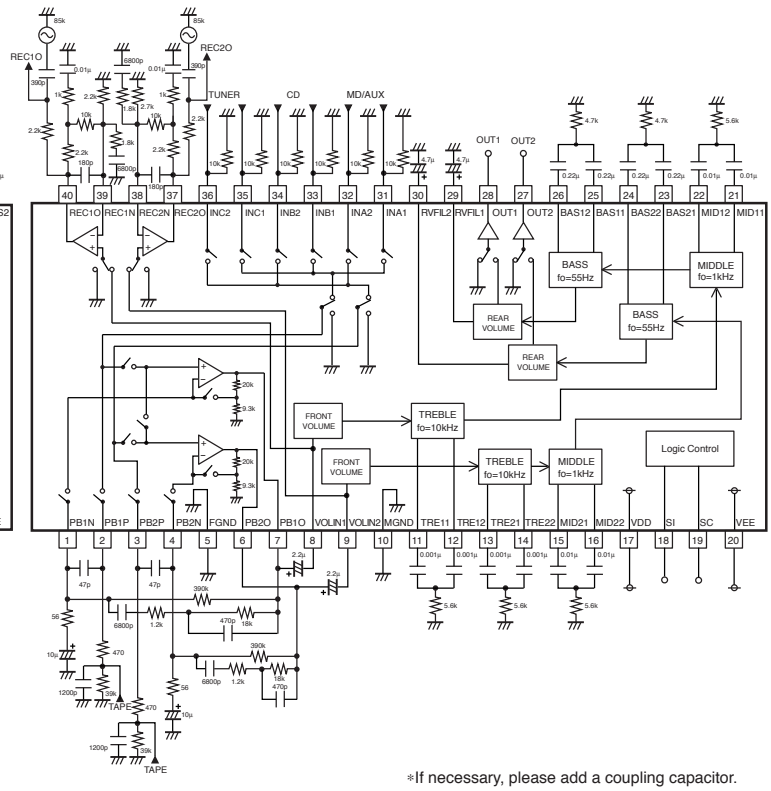
( ) is a characteristic of BD3882FV.
∗Phase relation between I/O signal terminals is the same phase.
∗This product is not designed for protection against radioactive rays.

●Application Circuit (BD3881FV/BD3882FV)

BD3881FV



BD3882FV



∗If necessary, please add a coupling capacitor.

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