

# 4channel driver for CD/DVD players

## **BA5821FP**

The BA5821FP is a 4channel BTL driver for CD/ CD-ROM, DVD player motors and actuators.

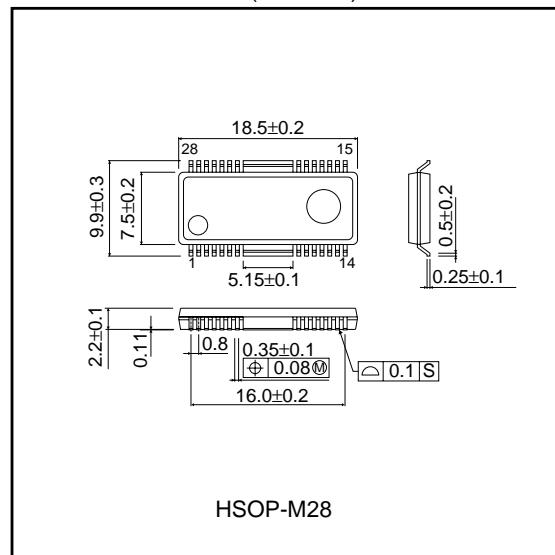
## ● Features

- 1) 4ch BTL Driver.
- 2) Small surface mounting power package (HSOP28).
- 3) Wide dynamic range.
- 4) Thermal shut down circuit built in.
- 5) Separating Vcc into Pre and Power (Power divides into CH1, CH2 and CH3/4), can make better power efficiency, by low supply voltage drive.
- 6) Mute operated individually CH1, CH2 and CH3/4.
- 7) Muting all channels causes the IC to enter the stand by mode.

## ● Applications

CD, CD-ROM, DVD

● **External dimensions** (Unit : mm)



### ● Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Supply voltage	PreV <sub>cc</sub> , PowV <sub>cc</sub>	13.5	V
Power dissipation	Pa	1.7 * <sup>1</sup>	W
Max. output current	I <sub>omax</sub>	1 * <sup>2</sup>	A
Operating temperature	T <sub>opr</sub>	-35 to +85	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

\*1 On less than 3% (percentage occupied by copper foil), 70×70mm<sup>2</sup>, t=1.6mm, glass epoxy mounting.

Reduce power by 13.6mW for each degree above 25°C.

\*2 The output current must not exceed the maximum Pd and ASO.

- Recommended operating conditions (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Operating supply voltage range	PreV <sub>CC</sub>	4.5	–	13.2	V
	PowV <sub>CC</sub>	4.5	–	PreV <sub>CC</sub>	

## Optical disc ICs

## ●Electrical characteristics

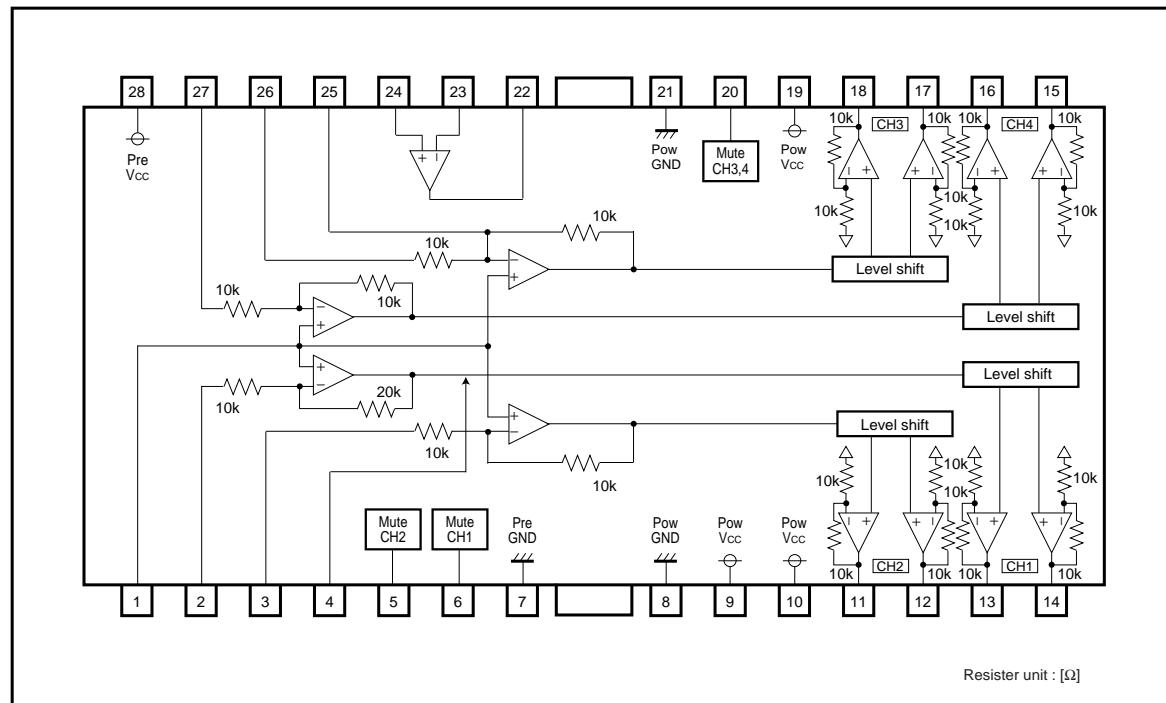
(Unless otherwise noted  $T_a=25^\circ C$ , Pre  $V_{cc}=12V$ , Pow  $V_{cc}=1/2=12V$ , Pow  $V_{cc3}=5V$ ,  $V_{BIAS}=1.65V$ ,  $RL=8\Omega$ )

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
<b>&lt; Driver block &gt;</b>						
Output offset voltage	VOOF	-50	0	+50	mV	
Maximum output voltage 1	VOM1	3.6	4.0	-	V	$V_{IN}=V_{BIAS}\pm 1.65V$
Maximum output voltage 2	VOM2	7.5	9.0	-	V	$V_{IN}=V_{BIAS}\pm V_{cc}/2$ , $V_{BIAS}=V_{cc}/2$ *
Maximum output voltage 3	VOM3	8.5	9.5	-	V	$V_{IN}=V_{BIAS}\pm 1.65V$ , $RL=10\Omega$ *
Closed loop voltage gain 1	GVC1	10	12	14	dB	CH2,3,4 $V_{IN}=V_{BIAS}\pm 0.5V$
Closed loop voltage gain 2	GVC2	16	18	20	dB	CH1, $V_{IN}=V_{BIAS}\pm 0.3V$ *
Voltage limit I/O gain	GVL	11	12	13	dB	CH1, $V_{LIMIT}\geq 1V$
Voltage limit input bias current	VBVL	-	-	300	nA	CH1
<b>&lt; Pre operational amplifier &gt;</b>						
Input offset voltage	VOFOP	-6	0	+6	mV	
High level output voltage	VOHOP	-6	0	+6	mV	$IL=+450\mu A$ , $V_{IN}=5V$
Low level output voltage	VOLOP	-	0.1	0.3	V	$IL=-1mA$ , $V_{IN}=GND$

◎This product is not designed for protection against radioactive rays.

\* Pow  $V_{cc}=12V$ 

## ●Block diagram



## Appendix

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