

# DATA SHEET

Part No.	AN41010A
Package Code No.	HSOP042-P-0400D

Maintenance/Discontinued includes following product lifecycle stage.  
planned maintenance type  
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# AN41010A

## 5-ch. linear driver IC for CD and DVD-Player

### ■ Overview

AN41010A is a 5-ch. linear driver IC incorporating the high-power operational amplifier system and suitable for CD and DVD-Player actuator and motor driver applications.

[ch.1 & ch.2 : Actuator, ch.3 : Loading, ch.4 : Spindle, ch.5 : Sled]

### ■ Feature

- Wide output dynamic range : Maximum output voltage of 6.2 V(typ.) when  $SV_{CC} = PV_{CC} = 8\text{ V}$  and  $RL = 8\ \Omega$ .
- About ch.1, ch.2, ch.4 and ch.5, driver input/output gain settings made through external resistance.
- Ch.3 is a loading channel.  
Loading driver output voltage settings made through external resistance.  
Also, loading input control is 2-state or 3-state.
- Built-in thermal shutdown circuit.
- Built-in one general purpose operational amplifier.
- Built-in stand-by function.
- Built-in two power line systems. ( $SV_{CC}$ ,  $PV_{CC}$ )
- Built-in three mute functions. [Ch.1 & ch.2, ch.4, ch.5]
- Driver gain. [Ch.1 & ch.2 : 20 dB(typ.), ch.4 & ch.5 : 15.5 dB(typ.)]

### ■ Application

- CD and DVD-player actuator and motor driver applications.

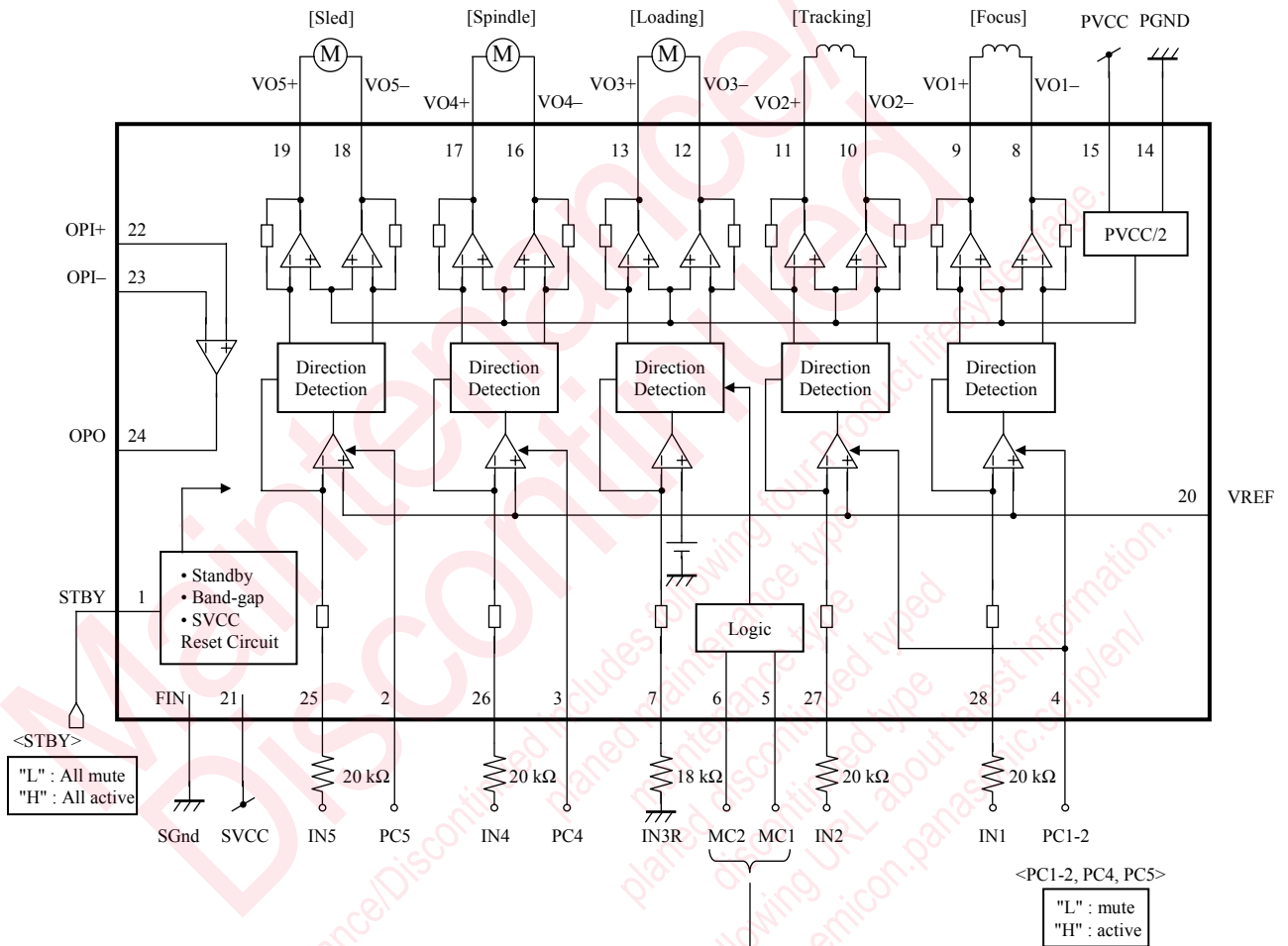
### ■ Package

- 28-pin plastic small outline package with heat sink (SOP Type)

### ■ Type

- Silicon monolithic bipolar IC

■ Application Circuit Example



Note) For use inputting 3-state, MC1 is fixed to "L"

<MC1, MC2>		
MC1	MC2	MODE
"L"	"L"	Forward
"L"	"Hi-Z"	Brake
"L"	"H"	Reverse
"H"	"L"	Stand-by
"H"	"H"	Brake

## ■ Pin Descriptions

Pin No.	Pin Name	Type	Description
1	STBY	Input	Standby input
2	PC5	Input	Power cut input(Ch.5 mute)
3	PC4	Input	Power cut input(Ch.4 mute)
4	PC1-2	Input	Power cut input(Ch.1 & ch.2 mute)
5	MC1	Input	MC1 input>Loading)
6	MC2	Input	MC2 input>Loading)
7	IN3R	Input	Output voltage control input>Loading)
8	VO1-	Output	Driver 1 negative output
9	VO1+	Output	Driver 1 positive output
10	VO2-	Output	Driver 2 negative output
11	VO2+	Output	Driver 2 positive output
12	VO3-	Output	Driver 3 negative output
13	VO3+	Output	Driver 3 positive output
14	PGND	Ground	Ground for driver
15	PVCC	Power supply	Power supply for driver
16	VO4-	Output	Driver 4 negative output
17	VO4+	Output	Driver 4 positive output
18	VO5-	Output	Driver 5 negative output
19	VO5+	Output	Driver 5 positive output
20	VREF	Input	VREF input
21	SVCC	Power supply	Power supply
22	OPI+	Input	OP-Amp positive input
23	OPI-	Input	OP-Amp negative input
24	OPO	Output	OP-Amp output
25	IN5	Input	Driver 5 input
26	IN4	Input	Driver 4 input
27	IN2	Input	Driver 2 input
28	IN1	Input	Driver 1 input
FIN	SGND	Ground	Ground

### ■ Absolute Maximum Ratings

A No.	Parameter	Symbol	Rating	Unit	Note
1	Supply voltage	$SV_{CC}$	14	V	*1
		$PV_{CC}$	14		
2	Supply current	$IS_{VCC}$	0.2	A	*2
		$IP_{VCC}$	1.2		
3	Power dissipation	$P_D$	582	mW	*3
4	Operating ambient temperature	$T_{opr}$	-40 to +85	°C	*4
5	Storage temperature	$T_{stg}$	-55 to +150	°C	*4
6	Supply voltage application range	$SV_{CC}$ $PV_{CC}$	-0.3 to +14.0	V	—
7	Driver output current	$Io(n)$	±1.0	A	*5
8	Control signal input voltage	$Vn$	0 to $SV_{CC}$	V	*6

Notes) \*1 : The values under the condition not exceeding the above absolute maximum ratings and the power dissipation.

\*2 : Make sure that all channels operate within 1 A current flow.

\*3 : The power dissipation shown is the value at  $T_a = 85^\circ\text{C}$  for the independent (unmounted) IC package without a heat sink.

When using this IC, refer to the  $P_D$ - $T_a$  diagram of the package standard and use under the condition not exceeding the allowable value.

\*4 : Except for the power dissipation, operating ambient temperature, and storage temperature, all ratings are for  $T_a = 25^\circ\text{C}$ .

\*5 : At  $Io(n)$ , "n" is Pin No., n = 8, 9, 10, 11, 12, 13, 16, 17, 18, 19.

Do not apply current or voltage from external sources to any pin not listed above. For the current denotation, (+) means current flowing into IC (-) means current flowing out from IC.

\*6 : At  $Vn$ , "n" is Pin No., n = 1, 2, 3, 4, 5, 6, 7, 20, 22, 23, 25, 26, 27, 28.

Do not apply current or voltage from external sources to any pin not listed above. For the current denotation, (+) means current flowing into IC (-) means current flowing out from IC.

### ■ Operating supply voltage range

Parameter	Symbol	Rating	Unit	Note
Supply voltage range	$SV_{CC}$ $PV_{CC}$	4.5 to 13.5	V	*

Note) \* : Operate on the condition  $PV_{CC} \leq SV_{CC}$ .

The values under the condition not exceeding the above absolute maximum ratings and the power dissipation.

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