

# DATA SHEET

Part No.	AN34001A
Package Code No.	HZIP016-P-0665F

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# AN34001A

## Nine-Output Linear Voltage Regulator

### ■ Overview

AN34001A is a nine-output power supply IC, consisting of five linear regulator (one adjustable) and four voltage followers. Seven of the outputs are controlled by three control switches.

### ■ Features

- Thermal protection circuit.
- Short circuit protection circuit
- Over voltage protection circuit
- Operating supply voltage range: 6.6 V to 18.0 V (13.2 V typical)
- High maximum operating voltage: 26 V

### ■ Application

Voltage supply for car audio system

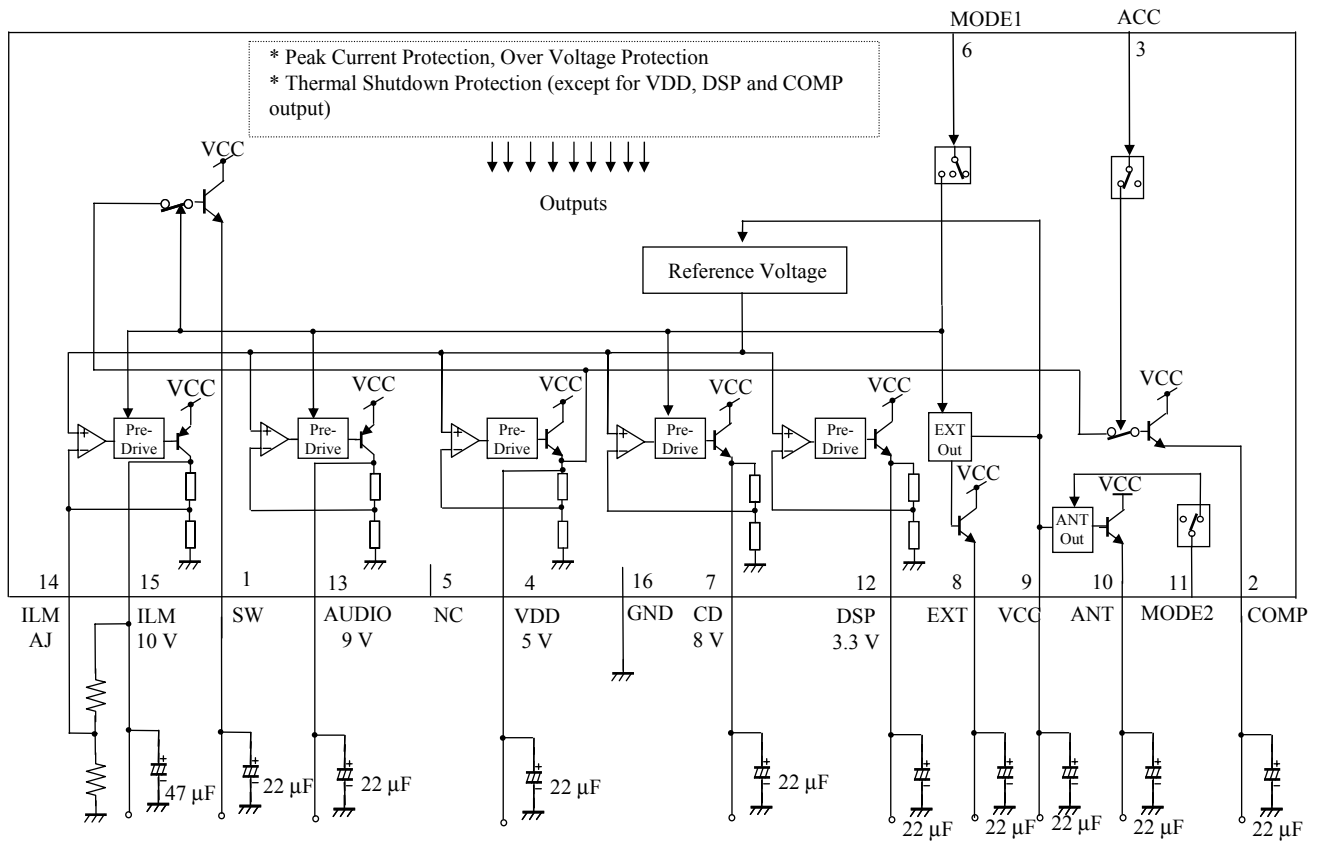
### ■ Package

16 pin plastic zigzag inline package with heat sink (ZIP type)

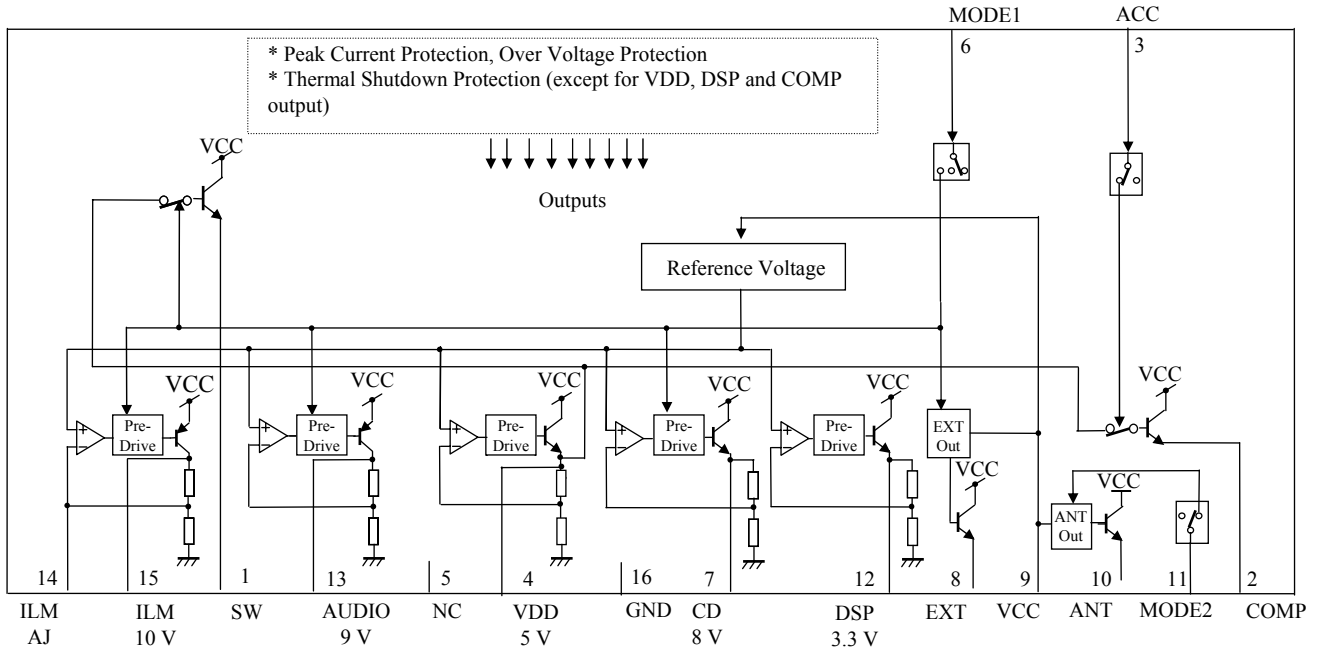
### ■ Type

Silicon monolithic bipolar IC

■ Application Circuit Example



■ Block Diagram



■ Pin Description

Pin No.	Pin name	Type	Description
1	SW	Output	When Mode 1 pin is “M” and “H”, SW output is $V_{DD}$ ( $I_O = 100 \text{ mA}$ )
2	COMP	Output	When ACC input pin is “H” COMP output is $V_{DD}$ ( $I_O = 100 \text{ mA}$ )
3	ACC	Input	“L”: COMP Output OFF and “H”: COMP Output ON
4	VDD	Output	5 V output voltage for a microcontroller ( $I_O = 100 \text{ mA}$ )
5	N.C.	—	Not connected to the IC die
6	MODE1	Input	Three-input “L”, “M”, and “H” control pin
7	CD	Output	When Mode 1 is “H” CD output is 8 V ( $I_O = 1\,200 \text{ mA}$ )
8	EXT	Output	When Mode 1 pin is “M” and “H”, SW output is $V_{CC} - 1 \text{ V}$ ( $I_O = 300 \text{ mA}$ )
9	VCC	Power Supply	Connected to car BACKUP power supply
10	ANT	Output	When Mode 2 pin is “H” ANT output is $V_{CC} - 1 \text{ V}$ ( $I_O = 300 \text{ mA}$ )
11	MODE2	Input	“L”: ANT Output OFF and “H”: ANT Output ON
12	DSP	Output	3.3 V output voltage for DSP IC ( $I_O = 150 \text{ mA}$ )
13	AUDIO	Output	When Mode 1 pin is “M” and “H”, AUDIO output is 9 V ( $I_O = 500 \text{ mA}$ )
14	ILM AJ	Input	A pin to adjust the ILM (illumination) output.
15	ILM	Output	When Mode 1 pin is “M” and “H”, ILM output is 10 V ( $I_O = 300 \text{ mA}$ )
16	GND	Ground	Connected to the IC substrate

### ■ Absolute Maximum Ratings

A No.	Parameter	Symbol	Rating	Unit	Note
1	Supply voltage	$V_{CC}$	26.0	V	*1
2	Supply current	$I_{CC}$	5.2	A	*2
3	Power dissipation	$P_D$	16.25	W	*3
4	Operating ambient temperature	$T_{opr}$	-30 to +85	°C	*4
5	Storage temperature	$T_{stg}$	-55 to +150	°C	*4

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

\*2 : Over current limiting circuit built-in.

\*3 : The power dissipation shown is the value at  $T_a = 85^\circ\text{C}$  with  $4^\circ\text{C} / \text{Watt}$  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  $T_a = 25^\circ\text{C}$ .

### ■ Operating power supply range

Parameter	Symbol	Range	Unit	Note
Operating supply voltage range	$V_{CC}$	6.6 to 18.0	V	*5 *6

Note) \*5: ILM output is not regulated for  $V_{CC}$  below 10.5V

\*6: AUDIO and CD output might not be functioning well for  $V_{CC}$  below 10V

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