

# AN6410

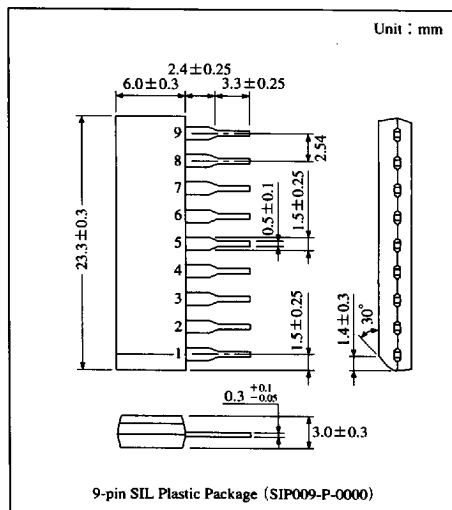
## Low Frequency Amplifier for Transmission Modulation Circuit

## ■ Overview

The AN6410 is an integrated circuit designed for low frequency amplifier for transmission. It consists of three low frequency amplifiers and a voltage stabilizer.

## ■ Features

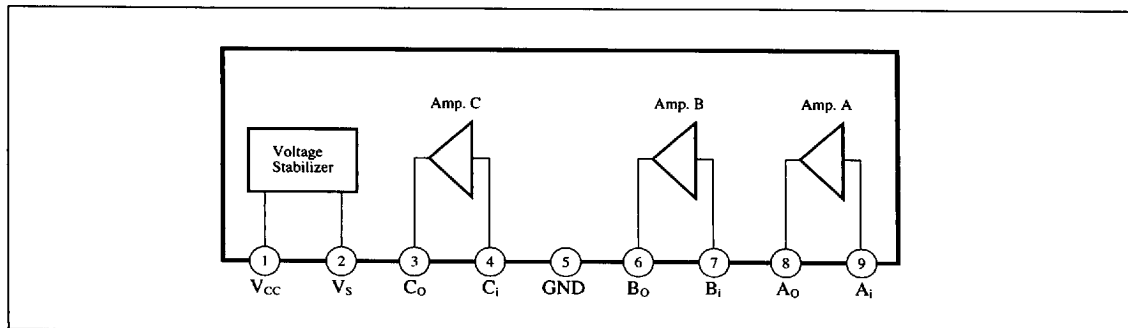
- Fewer peripheral components
- Built-in voltage stabilizer
- Wide range of operation voltages (6.2 to 17V)



## ■ Pin Descriptions

| Pin No. | Pin name           |
|---------|--------------------|
| 1       | Vcc                |
| 2       | Stabilized voltage |
| 3       | C amp. output      |
| 4       | C amp. input       |
| 5       | GND                |
| 6       | B amp. output      |
| 7       | B amp. input       |
| 8       | A amp. output      |
| 9       | A amp. input       |

### ■ Block Diagram

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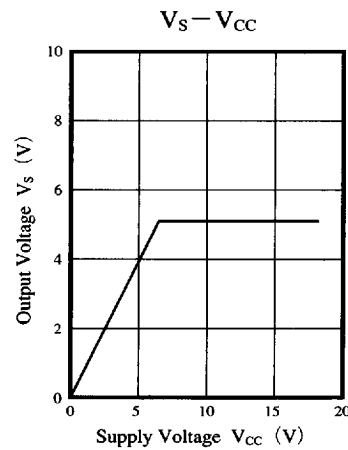
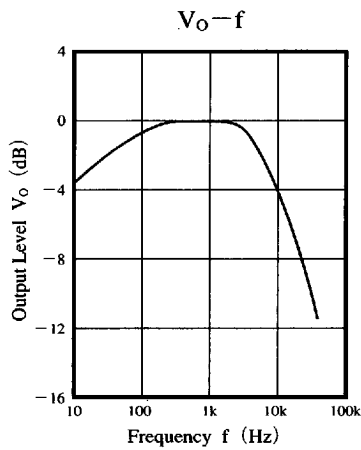
■ Absolute Maximum Ratings (Ta=25℃)

| Parameter                  |                               | Symbol           | Rating      |     | Unit |
|----------------------------|-------------------------------|------------------|-------------|-----|------|
| Voltage                    | Supply voltage                | V <sub>CC</sub>  | 6.2         | 17  | V    |
|                            | Circuit voltage               | V <sub>3-5</sub> | 0           | 4.5 | V    |
|                            | Circuit voltage               | V <sub>4-5</sub> | 0           | 4.5 | V    |
|                            | Circuit voltage               | V <sub>6-5</sub> | 0           | 4.5 | V    |
|                            | Circuit voltage               | V <sub>7-5</sub> | 0           | 4.5 | V    |
|                            | Circuit voltage               | V <sub>8-5</sub> | 0           | 4.5 | V    |
|                            | Circuit voltage               | V <sub>9-5</sub> | 0           | 4.5 | V    |
| Current                    | Supply current                | I <sub>CC</sub>  | 30          |     | mA   |
| Power dissipation (Ta=75℃) |                               | P <sub>D</sub>   | 300         |     | mW   |
| Temperature                | Operating ambient temperature | T <sub>opr</sub> | -30 to +75  |     | ℃    |
|                            | Storage temperature           | T <sub>sg</sub>  | -55 to +125 |     | ℃    |

■ Electrical Characteristics (Ta=25℃)

| Parameter                         | Symbol                      | Condition                    | min | typ  | max | Unit |
|-----------------------------------|-----------------------------|------------------------------|-----|------|-----|------|
| Total circuit current             | I <sub>tot</sub>            |                              | —   | 11.4 | —   | mA   |
| A amp. output voltage             | V <sub>O(A-Amp.)</sub>      | V <sub>i</sub> =10mV, f=1kHz | 176 | 220  | 264 | mV   |
| B amp. output voltage             | V <sub>O(B-Amp.)</sub>      | V <sub>i</sub> =1mV, f=1kHz  | 176 | 220  | 264 | mV   |
| B amp. saturation output voltage  | V <sub>O(sat. B-Amp.)</sub> | V <sub>i</sub> =10mV, f=1kHz | 625 | 695  | 765 | mV   |
| C amp. output voltage             | V <sub>O(C-Amp.)</sub>      | V <sub>i</sub> =1mV, f=1kHz  | 130 | 163  | 195 | mV   |
| C amp. output noise voltage       | V <sub>no(C-Amp.)</sub>     |                              | —   | 0.28 | —   | mV   |
| Stabilized circuit output voltage | V <sub>REF</sub>            |                              | 4.7 | 5.0  | 5.4 | V    |

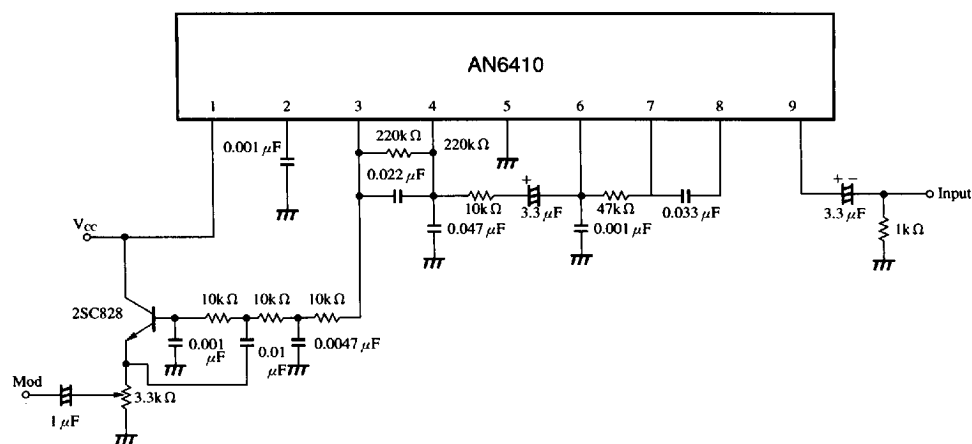
■ Characteristics Curve



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■ Application Circuit



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