

AN5265

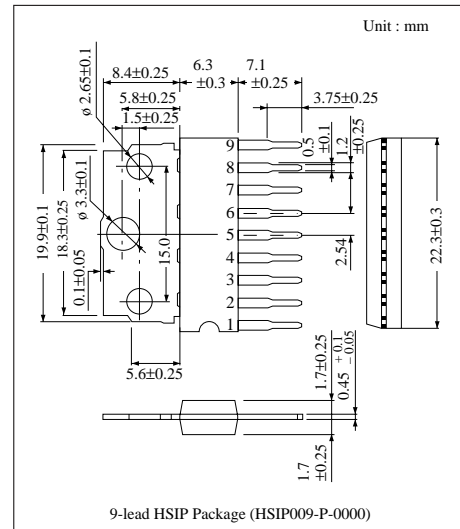
TV Sound Output Circuit

■ Overview

The AN5265 is a semiconductor integrated circuit designed for TV sound output circuit.

■ Features

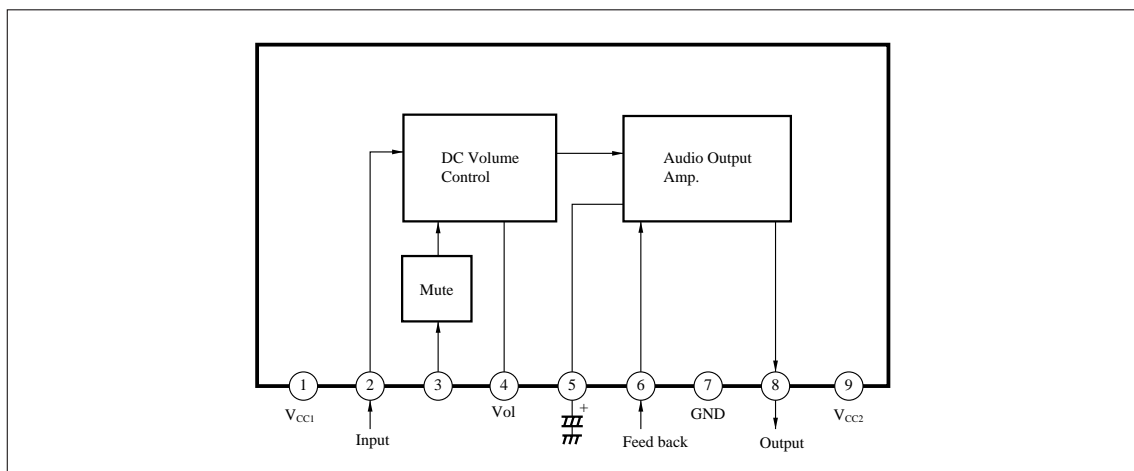
- DC volume adjustment method employed. Controlled with DC voltage.
- Fin-attached 9-lead SIP package employed



■ Pin Descriptions

| Pin No. | Pin Description |
|---------|-------------------|
| 1 | Supply Voltage 1 |
| 2 | Sound Input |
| 3 | Mute |
| 4 | Volume adjustment |
| 5 | Filter |
| 6 | Feedback |
| 7 | GND |
| 8 | Sound output |
| 9 | Supply voltage 2 |

■ Block Diagram

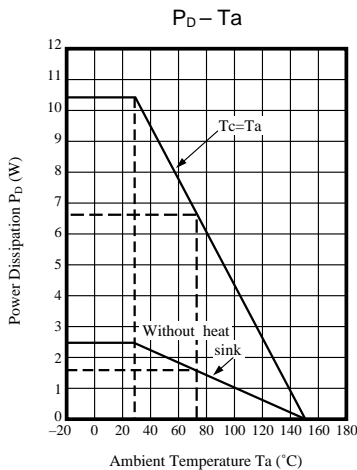


■ Absolute Maximum Ratings (Ta= 25°C)

| Parameter | | Symbol | Rating | | Unit |
|-------------------------------|-----------------|------------------|--------------|------------------|----------------------|
| Voltage | Supply Voltage | V ₁₋₇ | 14.4 | | V |
| | | V ₉₋₇ | 26 | | V |
| | Circuit Voltage | V ₃₋₇ | 0 | 7 | V |
| | | V ₄₋₇ | 0 | V ₁₋₇ | V |
| | | V ₆₋₇ | 0 | V ₉₋₇ | V |
| Current | Circuit Current | I ₄ | -10 | 3 | mA _(peak) |
| | | I ₈ | -1.2 | 1.2 | A _(peak) |
| Power Dissipation | | P _D | 1.6 | | W |
| Operating Ambient Temperature | | T _{opr} | - 20 ~ + 70 | | °C |
| Storage Temperature | | T _{stg} | - 55 ~ + 150 | | °C |

■ Electrical Characteristics (Ta= 25°C)

| Parameter | Symbol | Condition | min. | typ. | max. | Unit |
|----------------------------|--------------------|------------------------------------------------------------------------------|------|------|------|-------|
| Circuit Current | I ₁ | Pin1= Pin4 = 12V, Pin7= 0V, Pin9 = 18V | 7.1 | 9.5 | 11.9 | mA |
| Circuit Voltage | V ₂₋₇ | Pin1= 12V, Pin4 = Pin7= 0V, Pin9 = 18V | — | 5.4 | — | V |
| Circuit Voltage | V ₅₋₇ | Pin1= 12V, Pin4 = Pin7= 0V, Pin9 = 18V | — | 8.5 | — | V |
| Circuit Voltage | V ₆₋₇ | Pin1= 12V, Pin4 = Pin7= 0V, Pin9 = 18V | — | 8.8 | — | V |
| Circuit Voltage | V ₈₋₇ | Pin1= 12V, Pin7= Pin4 = 0V, Pin9=18V, Pin6-8: 10kΩ | — | 8.8 | — | V |
| Max. Output Power | P _{Omax.} | f= 1kHz, THD= 10%, V ₄ = 12V, R _L = 16Ω | 2.0 | 2.3 | — | W |
| Voltage Gain | G _V | f= 1kHz, V _i = 0.1Vrms, V ₄ = 12V | 28.5 | 30.5 | 32.5 | dB |
| Total Harmonics Distortion | THD | f= 1kHz, P _O = 1W, V ₄ = 12V | — | 0.8 | 1.2 | % |
| Max. Attenuation Amount | A _{it} | f= 1kHz, V _i = 0.1Vrms, V ₄ = Ratio between 12 and 0 V | — | -95 | -85 | dB |
| Output Noise Voltage | V _{no} | V _i = 0Vrms, V ₄ = 0V | — | 0.6 | 1.0 | mVrms |
| Muting Operation Voltage | V ₃₋₇ | f= 1kHz, V ₄ = 12V, V ₈ = 0Vrms | 2.45 | 2.65 | 2.85 | V |



■ Application Circuit

