

# AN5262N

## Preamplifier-Incorporated Volume IC for TV (1-channel)

### ■ Overview

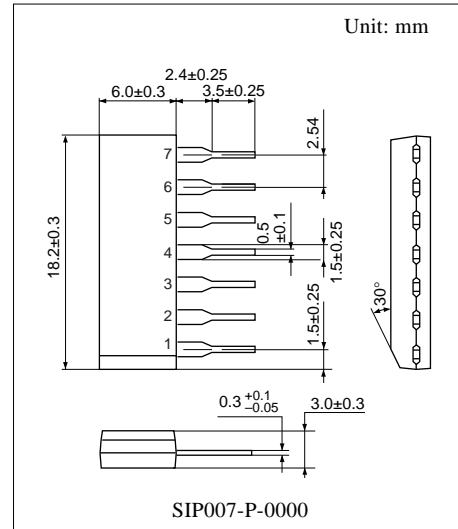
The AN5262N is an IC for sound volume control of TV set. It incorporates a DC-voltage controlled volume which has a linear characteristic to hearing sensation, sound preamplifiers and a mute function.

### ■ Features

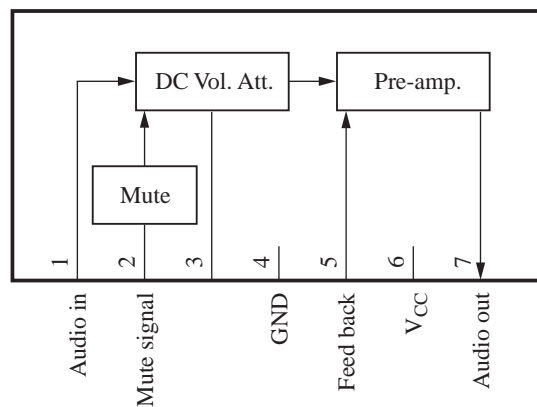
- Volume maximum attenuation = 95 dB
- Built-in preamplifier ( $G_V = 22$  dB)
- Maximum output voltage = 2.9 V[rms]
- Operating supply voltage range; 8 V to 12 V

### ■ Applications

- TV



### ■ Block Diagram



### ■ Pin Description

Pin No.	Description
1	Sound input
2	Mute signal input
3	Sound adjustment
4	Grounding
5	Feedback input
6	Power supply
7	Sound output

### ■ Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
Supply voltage	$V_{CC}$	12	V
Circuit voltage	$V_{2-4}$	0 to 7	V
	$V_{3-4}$	0 to $V_{6-4}$	
Supply current	$I_{CC}$	18	mA
Circuit current	$I_2$	-10 to +5	mA
	$I_3$	-10 to +3	
	$I_5$	-5 to +1	
	$I_7$	-20 to +0.3	
Power dissipation *2	$P_D$	216	mW
Operating ambient temperature *1	$T_{opr}$	-20 to +70	°C
Storage temperature *1	$T_{stg}$	-55 to +150	°C

Note) 1. Do not apply external currents or voltages to any pins not specifically mentioned.

For circuit currents, '+' denotes current flowing into the IC, and '-' denotes current flowing out of the IC.

2. \*1: Except for the operating ambient temperature and storage temperature, all ratings are for  $T_a = 25^\circ\text{C}$ .

\*2:  $T_a = 70^\circ\text{C}$

### ■ Recommended Operating Range

Parameter	Symbol	Range	Unit
Supply voltage	$V_{CC}$	8 to 12	V

■ Electrical Characteristics at  $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Circuit current	$I_6$		9	12	15	mA
Pin voltage	$V_{1-4}$		3.3	4.5	5.7	V
	$V_{5-4}$		0.7	1.4	1.8	
	$V_{7-4}$		3.0	4.1	5.2	
Voltage gain	$A_{7-4}$	$f = 1 \text{ kHz}$ , $V_1 = 180 \text{ mV[rms]}$ $V_3 = V_{CC}$	19.5	22.0	23.5	dB
Mute operating voltage	$V_{2-4}$	$f = 1 \text{ kHz}$ , $V_1 = 180 \text{ mV[rms]}$ $V_3 = V_{CC}$ , $V_O \leq 0.6 \text{ mV[rms]}$	2.45	2.7	2.95	V
Maximum attenuation amount	$A_{tt}$	$f = 1 \text{ kHz}$ , $V_1 = 180 \text{ mV[rms]}$ the ratio at $V_3 = V_{CC}$ to at $V_3 = 0 \text{ V}$	72	95	—	dB
Harmonic distortion rate	THD	$f = 1 \text{ kHz}$ , $V_1 = 180 \text{ mV[rms]}$ $V_3 = V_{CC}$	—	0.3	1.0	%
Maximum undistorted power output	$V_O$	$f = 1 \text{ kHz}$ $V_3 = V_{CC}$ at THD = 10%	2.6	2.9	3.2	V[rms]

■ Application Circuit Example

