AN5262N

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

■ Overview

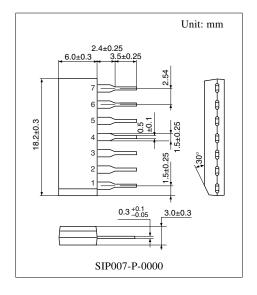
The AN5262N is an IC for sound volume control of TV set. It incorporates a DC-voltage controlled volume which has a linear characteristic to hearing sensation, sound preamplifiers and a mute function.

■ Features

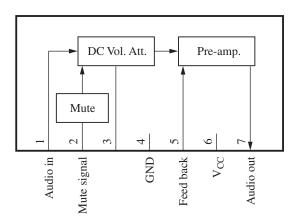
- Volume maximum attenuation = 95 dB
- Built-in preamplifier ($G_V = 22 \text{ dB}$)
- Maximum output voltage = 2.9 V[rms]
- Operating supply voltage range; 8 V to 12 V

■ 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 $T_a = 25$ °C.

■ Recommended Operating Range

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

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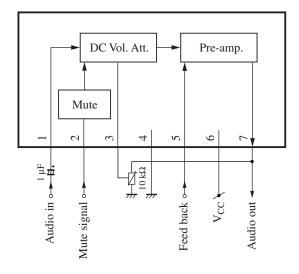
^{*2:} $T_a = 70^{\circ}C$

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

Parameter	Symbol	Conditions	Min	Тур	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	$f = 1 \text{ kHz}, V_I = 180 \text{ mV}[\text{rms}]$ $V_3 = V_{CC}$	19.5	22.0	23.5	dB
Mute operating voltage	V ₂₋₄	$f = 1 \text{ kHz}, V_I = 180 \text{ mV}[\text{rms}]$ $V_3 = V_{CC}, V_O \le 0.6 \text{ mV}[\text{rms}]$	2.45	2.7	2.95	V
Maximum attenuation amount	A _{tt}	$f = 1 \text{ kHz}, V_I = 180 \text{ mV}[\text{rms}]$ the ratio at $V_3 = V_{CC}$ to at $V_3 = 0 \text{ V}$	72	95	_	dB
Harmonic distortion rate	THD	$f = 1 \text{ kHz}, V_I = 180 \text{ mV[rms]}$ $V_3 = V_{CC}$	_	0.3	1.0	%
Maximum undistorted power output	V _O	f = 1 kHz $V_3 = V_{CC} \text{ at THD} = 10\%$	2.6	2.9	3.2	V[rms]

■ Application Circuit Example



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