

# AN7332S

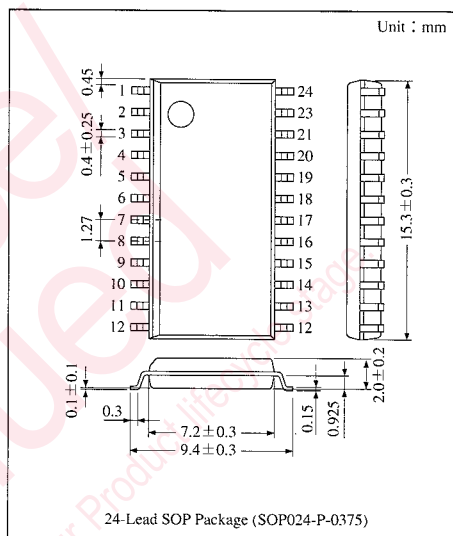
## Dual 4-Band Graphic Equalizer IC

### Overview

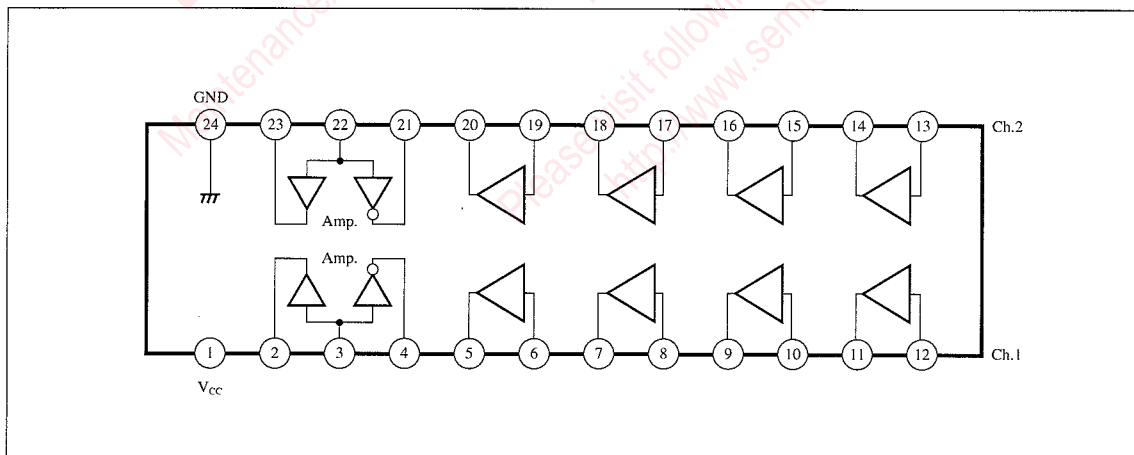
The AN7332S is an integrated circuit designed for dual 4 bands graphic equalizer most suitably used for radio cassette recorder and portable stereo set. Two channel 4 bands graphic equalizer can be composed by applying resonance frequency setting capacitor and variable resistor externally. Boost and cutting quantity is adjusted.

### Features

- Wide operating supply voltage range :  $V_{CC (opr)} = 3 \sim 14.4V$
- The resonance frequency is fixed by using suitable capacitors.
- Dual-channel IC : compact circuit design possible.
- Low current consumption : 2.8mA typ. ( $V_{CC} = 5V$ )



### Block Diagram



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## Pin Descriptions

Pin No.	Pin Name	Pin No.	Pin Name
1	V <sub>CC</sub>	13	Base 4 Ch.2
2	Non Inverting Output Ch.1	14	Negative Feedback 4 Ch.2
3	Input Ch.1	15	Base 3 Ch.2
4	Inverting Output Ch.1	16	Negative Feedback 3 Ch.2
5	Negative Feedback 1 Ch.1	17	Base 2 Ch.2
6	Base 1 Ch.1	18	Negative Feedback 2 Ch.2
7	Negative Feedback 2 Ch.1	19	Base 1 Ch.2
8	Base 2 Ch.1	20	Negative Feedback 1 Ch.2
9	Negative Feedback 3 Ch.1	21	Inverting Output Ch.2
10	Base 3 Ch.1	22	Input Ch.2
11	Negative Feedback 4 Ch.1	23	Non Inverting Output Ch.2
12	Base 4 Ch.1	24	GND Ch.2

## Absolute Maximum Ratings (T<sub>a</sub> = 25°C)

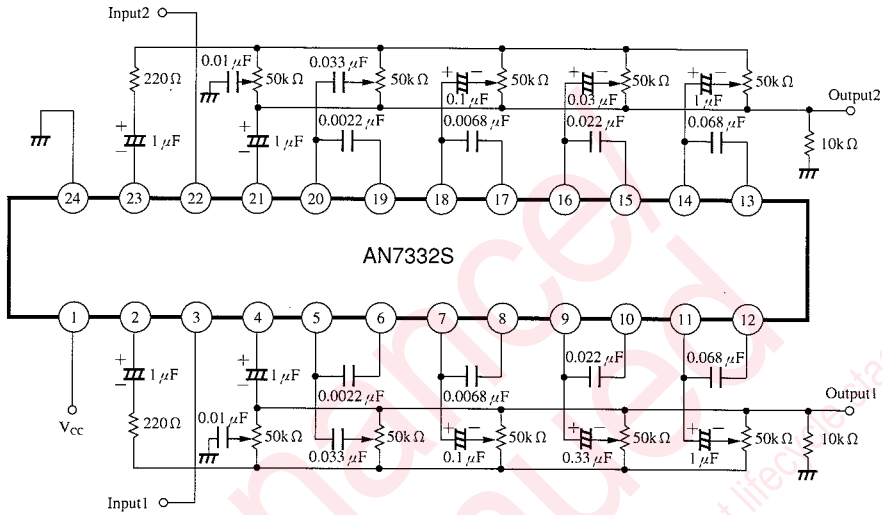
Parameter	Symbol	Rating	Unit
Supply Voltage	V <sub>CC</sub>	14.4	V
Supply Current	I <sub>CC</sub>	30	mA
Power Dissipation	P <sub>D</sub>	432	mW
Operating Ambient Temperature	T <sub>opr</sub>	-20 ~ +75	°C
Storage Temperature	T <sub>stg</sub>	-55 ~ +125	°C

## Electrical Characteristics (V<sub>CC</sub> = 5V, R<sub>g</sub> = 10kΩ, T<sub>a</sub> = 25°C)

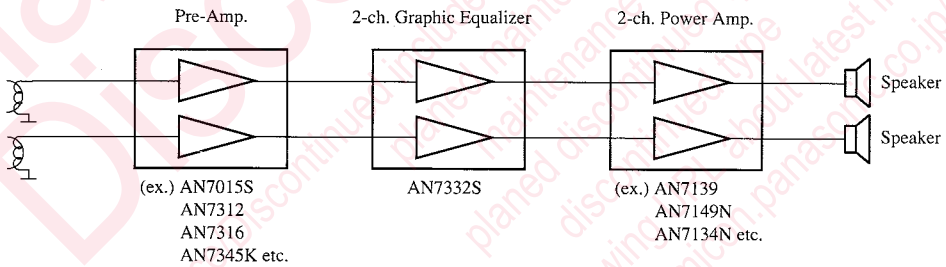
Parameter	Symbol	Condition	min.	typ.	max.	Unit
Total Circuit Current (1)	I <sub>tot1</sub>	V <sub>CC</sub> = 5V	1.6	2.8	4.0	mA
Total Circuit Current (2)	I <sub>tot2</sub>	V <sub>CC</sub> = 9V	2.0	3.8	5.5	mA
Voltage Gain	G <sub>v</sub>	f = 1kHz, All Flat, V <sub>o</sub> = -10dB	—	-3	—	dB
Boost Quantity	Boost	f = 100Hz	6.5	8.5	—	dB
Boost Quantity	Boost	f = 340Hz	6.5	8.5	—	dB
Boost Quantity	Boost	f = 1kHz	6.5	8.5	—	dB
Boost Quantity	Boost	f = 3.4kHz	6.5	8.5	—	dB
Cutting Quantity	Cut	f = 100Hz	-7.5	-9.5	—	dB
Cutting Quantity	Cut	f = 340Hz	-7.5	-9.5	—	dB
Cutting Quantity	Cut	f = 1kHz	-7.5	-9.5	—	dB
Cutting Quantity	Cut	f = 3.4kHz	-7.5	-9.5	—	dB
Total Harmonic Distortion	THD	f = 1kHz, V <sub>o</sub> = -20dB	—	0.2	0.4	%
Output Noise Voltage	V <sub>no</sub>	R <sub>g</sub> = 0Ω, All Flat, DIN/AUDIO	—	15	—	μV
Crosstalk	CT	f = 1kHz, All Flat, R <sub>g</sub> = 0Ω	—	-64	—	dB

Note) Boost and cutting quantity show the value when each element is operated.  
V<sub>o</sub> = -10dB is set to 0dB in all flat in each frequency.

■ Application Circuit



■ Block diagram for cassette tape recorder with built-in graphic equalizer



ICs for Audio Common Use

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