

# AN7337N

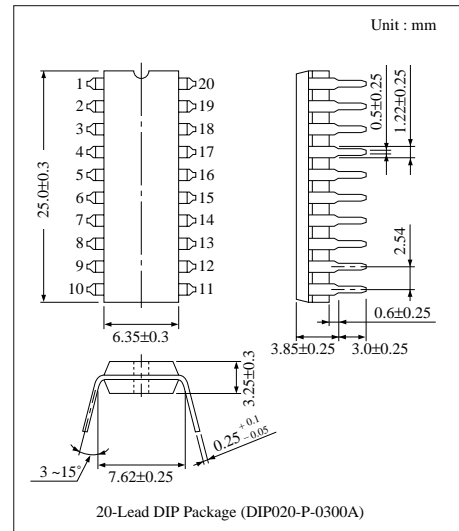
## 7-Element Graphic Equalizer IC for Hi-Fi

### ■ Overview

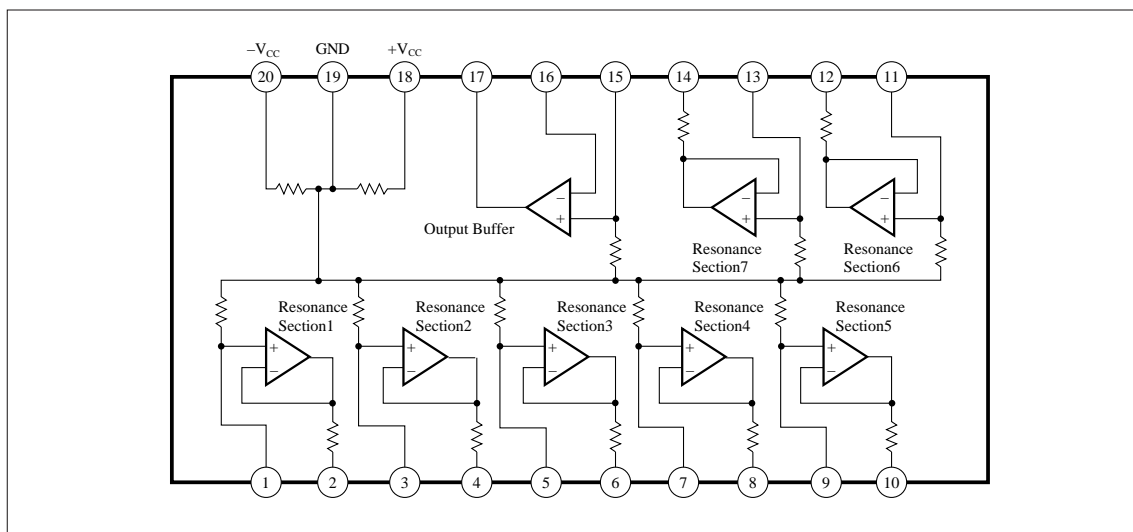
The AN7337N is a graphic equalizer IC for high performance Hi-Fi developed for deck. It incorporates output buffer circuit and 7 resonance buffer circuits, can set resonance frequency by external capacitor.

### ■ Features

- Low noise :  $V_{no} = 4\mu V_{rms}$  typ.
- Low distortion : THD = 0.002% typ. (at  $V_O = 1V_{rms}$ )
- High output power :  $V_{O(max)} = 9.5V_{rms}$  typ. (at THD = 0.1%)
- Wide operating supply voltage range :  $V_{CC(opr.)} = \pm 4 \sim \pm 18V$



### ■ Block Diagram



### ■ Absolute Maximum Ratings (Ta = 25°C)

Parameter	Symbol	Rating	Unit
Supply Voltage	V <sub>CC</sub>	±18	V
Supply Current	I <sub>CC</sub>	±50	mA
Power Dissipation	P <sub>D</sub>	1,000	mW
Operating Ambient Temperature	T <sub>opr</sub>	-20 ~ +75	°C
Storage Temperature	T <sub>stg</sub>	-55 ~ +150	°C

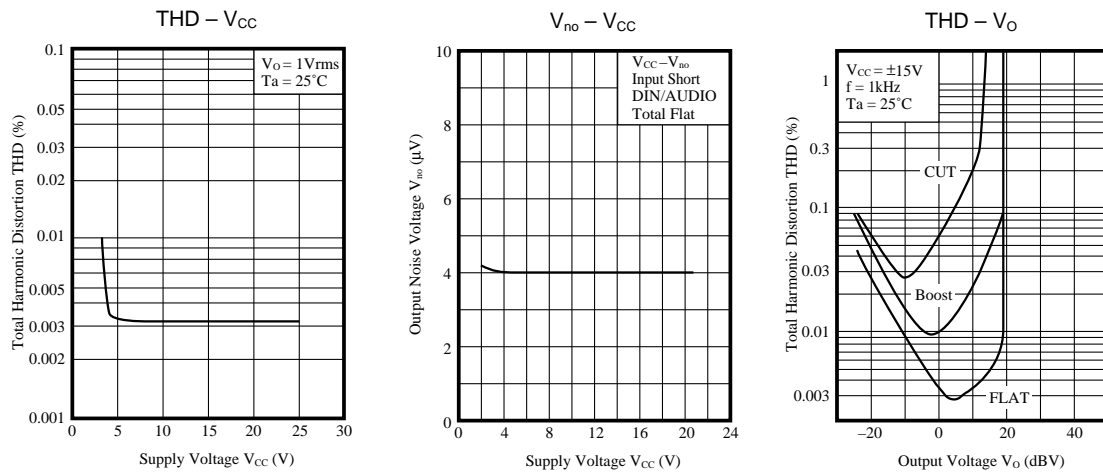
### ■ Recommended Operating Range (Ta = 25°C)

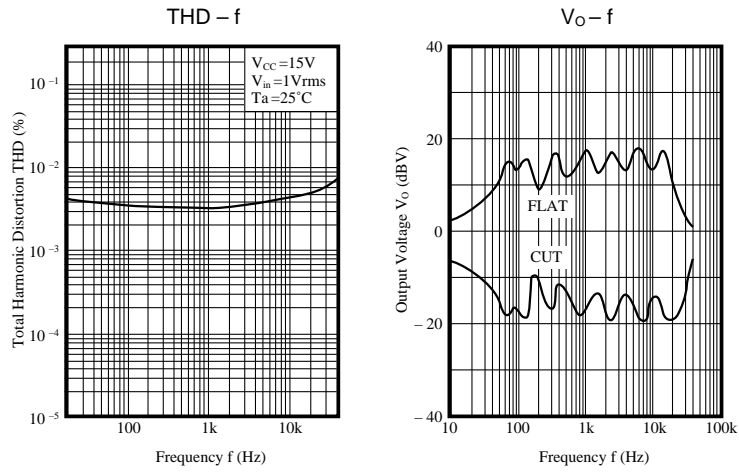
Parameter	Symbol	Range
Operating Supply Voltage Range	V <sub>CC</sub>	±4V ~ ±18V

### ■ Electrical Characteristics (V<sub>CC</sub> = ±15V, Ta = 25°C)

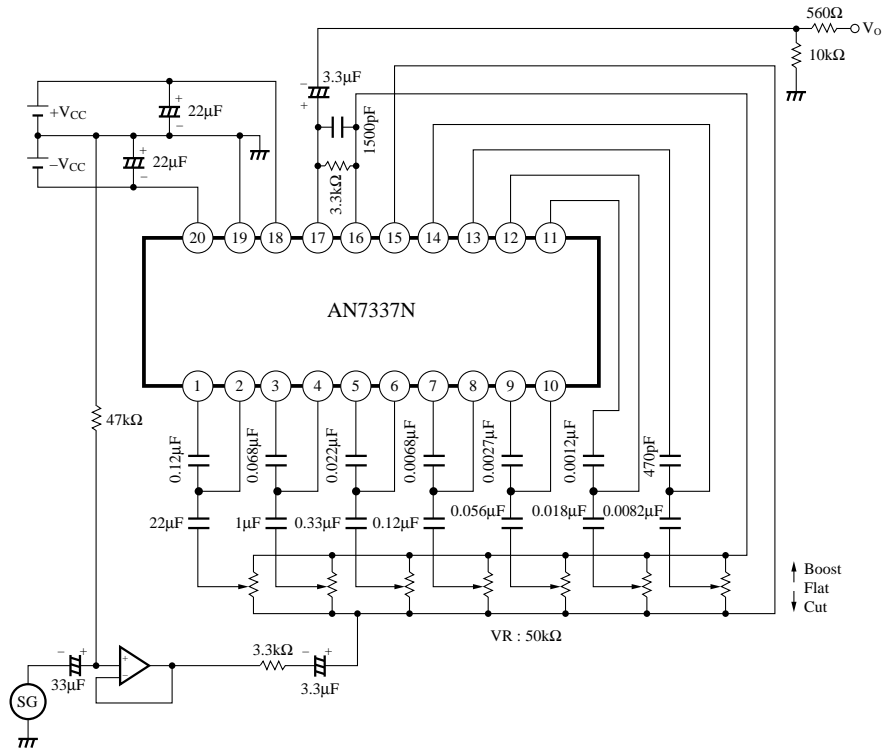
Parameter	Symbol	Condition	min.	typ.	max.	Unit
Total Circuit Current	I <sub>CC</sub>	V <sub>in</sub> = 0mV	8	12	16	mA
Voltage Gain FLAT	G <sub>V (FLAT)</sub>	f = 1kHz, V <sub>in</sub> = -10dBm	-0.6	-0.3	0	dB
Voltage Gain BOOST	G <sub>V (Boost)</sub>	FLAT V <sub>O</sub> = 0dB, V <sub>in</sub> = -10dBm	10.4	12	14	dB
Voltage Gain CUT	G <sub>V (CUT)</sub>	FLAT V <sub>O</sub> = 0dB, V <sub>in</sub> = -10dBm	-14	-12	-10.4	dB
Total Harmonic Distortion	THD	f = 1kHz, V <sub>O</sub> = 1Vrms	—	0.002	0.03	%
Max. Output Voltage	V <sub>O (max.)</sub>	f = 1kHz, THD = 0.1%	8	9.5	—	Vrms
Output Noise Voltage	V <sub>no</sub>	Input Short, DIN/AUDIO	—	4	35	μVrms
Output Noise Voltage	V <sub>no (max.)</sub>	Input Short, ALL Boost	—	31	100	μVrms

### ■ Characteristics Curve





■ Application Circuit



### ■ Pin Descriptions

Pin No.	Pin Name	Pin Voltage (V)	Description	Equivalent Circuit
1, 3, 5, 7, 9, 11, 13	Input	Center electric potential (GND)	Resonance circuit input pin	
2, 4, 6, 8, 10, 12, 14	Negative Feedback	Center electric potential (GND)	Resonance circuit negative feedback pin	
15	Non Inverting Input	Center electric potential (GND)	Output buffer circuit non-inverting input pin	
16	Inverting Input	Center electric potential (GND)	Output buffer circuit inverting input pin	
17	Output	Center electric potential (GND)	Output buffer circuit output pin	
18	Positive Power Supply	+15	Positive supply pin	
19	GND	0	GND pin	
20	Negative Feedback	-15	Negative supply pin	

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