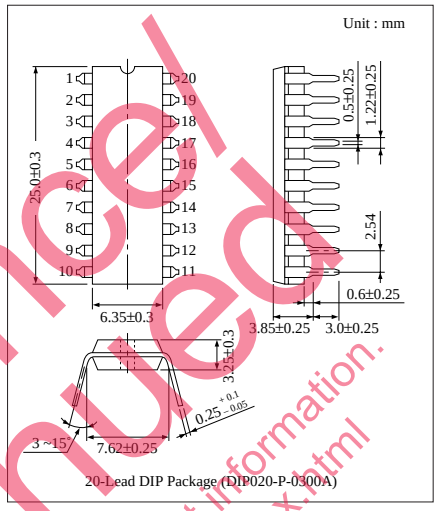
AN7337N

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.

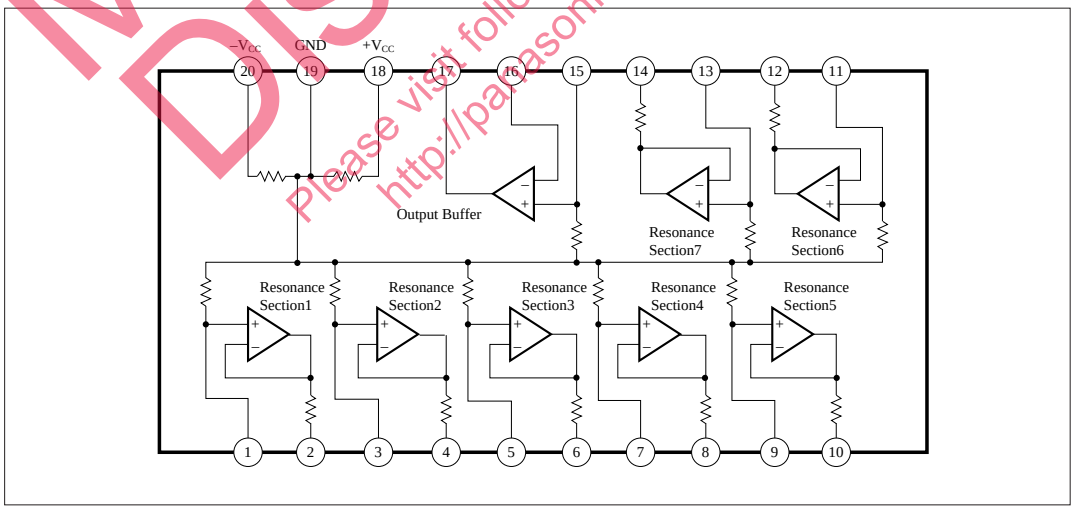


20-Lead DIP Package (DIP020-P-0300A)

■ Features

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

■ Block Diagram



■ Absolute Maximum Ratings (Ta= 25˚C)

Parameter	Symbol	Rating	Unit
Supply Voltage	V_{CC}	±18	V
Supply Current	I_{CC}	±50	mA
Power Dissipation	P_D	1,000	mW
Operating Ambient Temperature	T_{opr}	–20 ~ + 75	˚C
Storage Temperature	T_{stg}	–55 ~ +150	˚C

■ Recommended Operating Range (Ta = 25˚C)

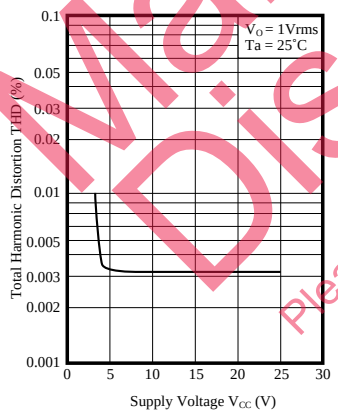
Parameter	Symbol	Range
Operating Supply Voltage Range	V_{CC}	±4V ~ ±18V

■ Electrical Characteristics (V_{CC} = ±15V, Ta = 25˚C)

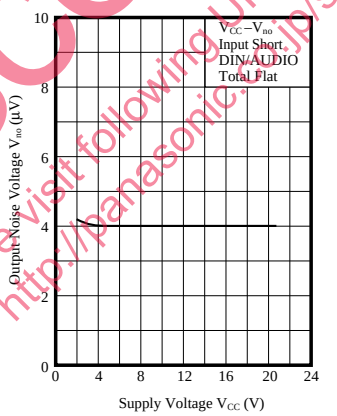
Parameter	Symbol	Condition	min.	typ.	max.	Unit
Total Circuit Current	I_{CC}	V_{in}= 0mV	8	12	16	mA
Voltage Gain FLAT	$G_{V\ (FLAT)}$	f= 1kHz, V_{in}= –10dBm	– 0.6	– 0.3	0	dB
Voltage Gain BOOST	$G_{V\ (Boost)}$	FLAT V_O = 0dB, V_{in}= –10dBm	10.4	12	14	dB
Voltage Gain CUT	$G_{V\ (CUT)}$	FLAT V_O = 0dB,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

■ Characteristics Curve

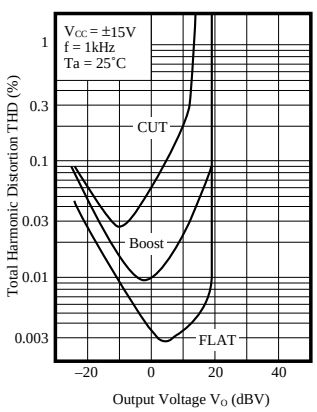
THD – V_{CC}



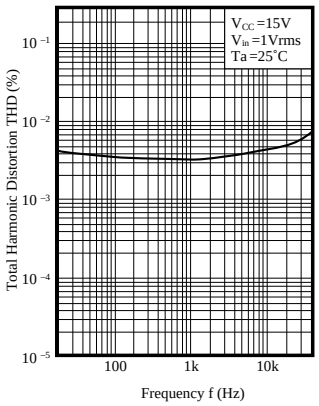
V_{no} – V_{CC}



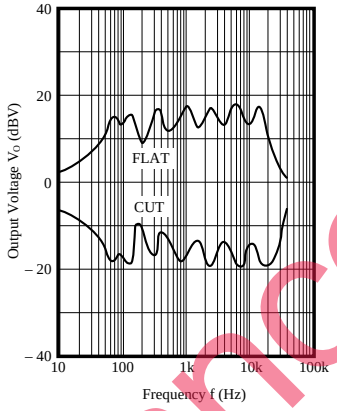
THD – V_O



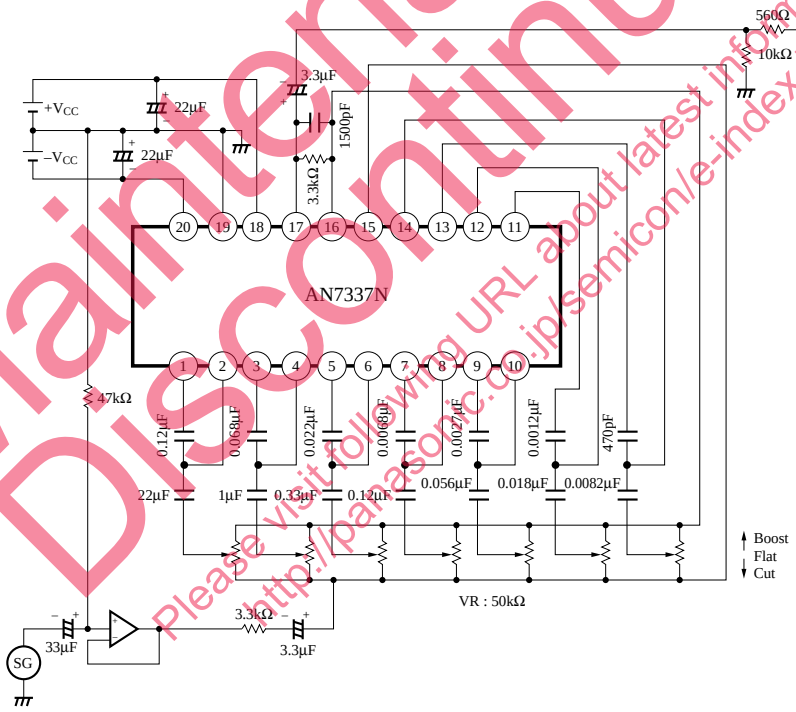
THD – f



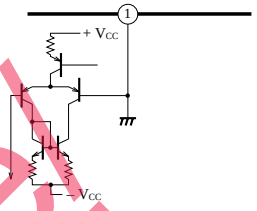
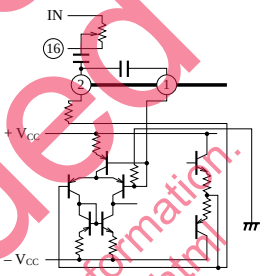
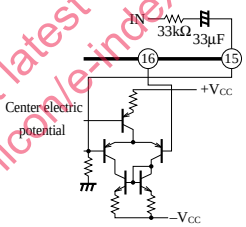
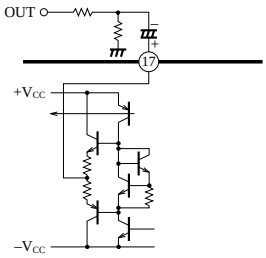
V_O – f



■ 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 putput 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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