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NTE1373
Integrated Circuit
Dual Audio Power Amplifier Circuit, 7.5W

Description:

The NTE1373 is an integrated circuit designed for use as a 7.5W (16W, 4Ω) power amplifier output with low noise and low distortion suitable for TV sets with multi–sound.

Stereo operation is possible due to incorporating two amplifiers on one 12–Lead SIP type chip.

Features:

- Built–In Protection Circuits (Surge, Thermal Protection, etc.)
- Automatic Operating Point Stabilizer Circuit
- Low Distortion, Low 1/f Noise
- Low Shock Noise from Power ON/OFF Operation
- Better Channel Separation
- Few External Components Required

Absolute Maximum Ratings: (T_A = +25°C unless otherwise specified)

Supply Voltage, V_{CC}
- Note 1 . . . . . 24V
- Note 2 . . . . . 20V

Supply Current, I_{CC} 4A

Power Dissipation (T_A = +45°C), P_D 30W

Operating Ambient Temperature Range, T_{opr} . . . . . –30° to +75°C

Storage Temperature Range, T_{stg} . . . . . –55° to +150°C

Note 1. Without signal V_{CC} = 24V (For non–stabilized supply)

Note 2. Operation V_{CC} = 20V (For stabilized supply)

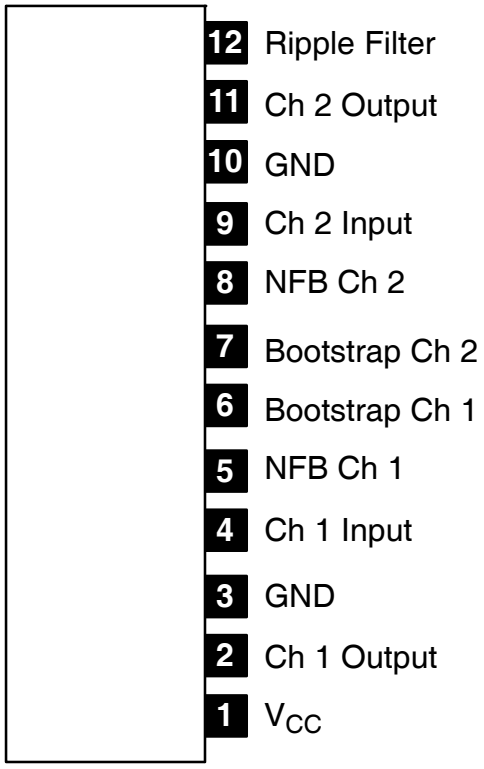
Electrical Characteristics: (T_A = +25°C, V_{CC} = 13.2V, R_L = 4Ω, f = 1kHz unless otherwise specified)

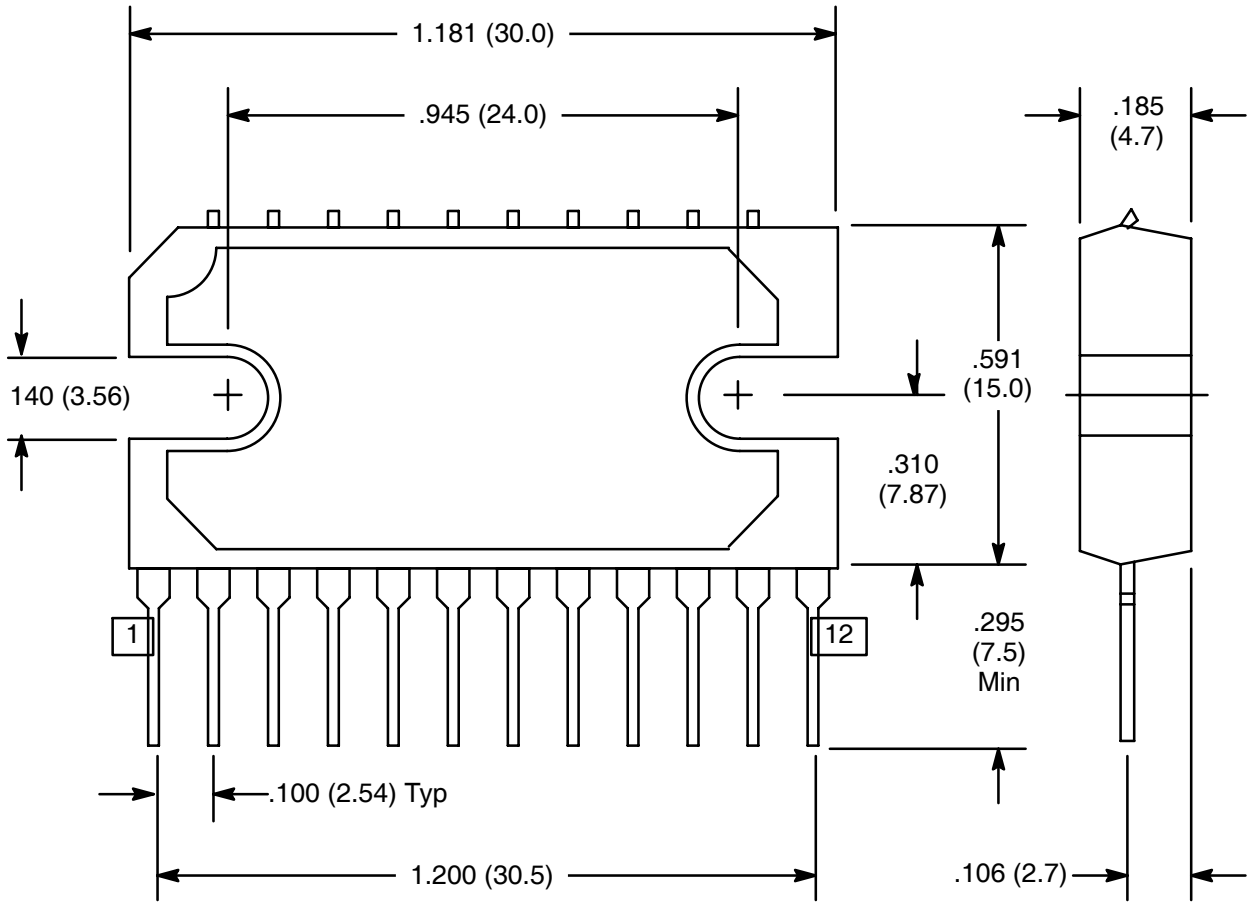
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Curcuit Current	I_{CQ}	V_i = 0	40	70	120	mA
		V_{CC} = 16V, R_L = 8Ω, V_i = 0	40	80	150	mA
Voltage Gain	G_V	V_i = 3mV	52	54	56	dB
		V_{CC} = 16V, R_L = 8Ω, V_i = 4mV	53	54	56	dB

Electrical Characteristics (Cont'd): (T_A = +25°C, V_{CC} = 13.2V, R_L = 4Ω, f = 1kHz unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Power	P_O	THD = 10%	4.8	5.5	–	W
		V_{CC} = 16V, THD = 10%	–	7.5	–	W
		V_{CC} = 16V, R_L = 8Ω, THD = 10%	4.0	4.5	–	W
Total Harminic Distortion	THD	V_i = 3mV	–	0.15	1.0	%
		V_{CC} = 16V, R_L = 8Ω, V_i = 4mV	–	0.1	1.0	%
Output Noise Voltage	V_{no}	R_g = 10kΩ	–	1	3	mV
		V_{CC} = 16V, R_L = 8Ω, R_g = 10kΩ	–	1	3	mV
Channel Balance	CB	V_i = 3mV	–	0	1	dB
Channel Separation	Sep	V_i = 3mV	45	50	–	dB
Ripple Rejection	RR	f = 60Hz, R_g = 600Ω	–	40	–	dB
Crosstalk	CT	V_{CC} = 16V, R_l = 8Ω, V_i = 4mV, R_g = 10kΩ	45	–	–	dB

Pin Connection Diagram
(Front View)




1.181 (30.0)
.945 (24.0)
.185
(4.7)
140 (3.56)
.591
(15.0)
.310
(7.87)
1
12
.295
(7.5)
Min
.100 (2.54) Typ
1.200 (30.5)
.106 (2.7)