

AN7050

Low Voltage Dual Power Amplifier Circuit

Description

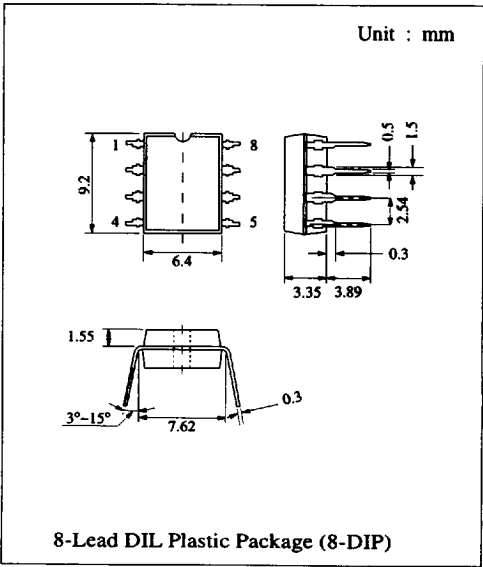
The AN7050 is a monolithic integrated circuit designed for portable cassette players and radios.

Features

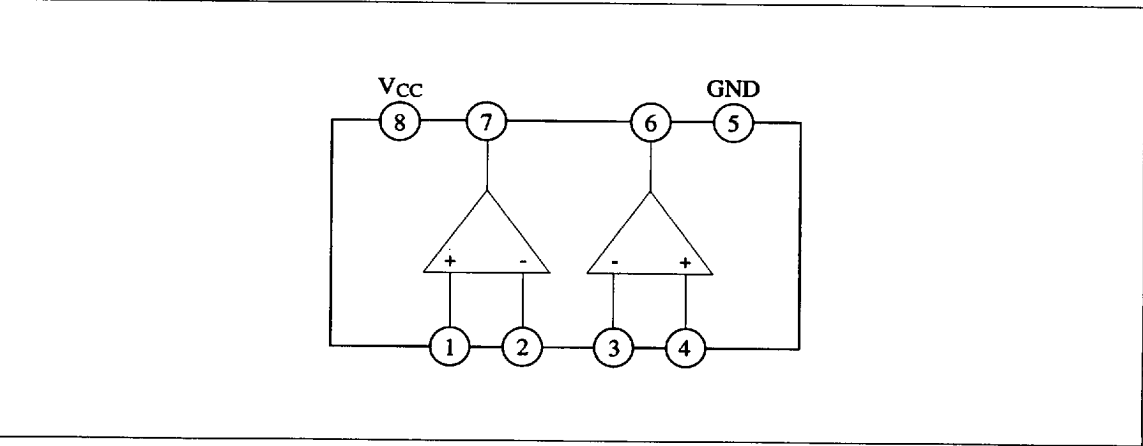
- Wide operating voltage range: $V_{CC} = 1.8V \sim 6.0V$
- Low quiescent current
- Stereo / BTL connection possible
- No external components for BTL connection
- No need negative feedback capacitor for stereo application

Pin

Pin No.	Pin Name
1	Positive Input Channel 1
2	Negative Input Channel 1
3	Negative Input Channel 2
4	Positive Input Channel 2
5	GND
6	Output Channel 2
7	Output Channel 1
8	VCC



Block Diagram



■ Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Rating	Unit
Supply Voltage	V _{CC}	9	V
Supply Current	I _{CC}	1000	mA
Power Dissipation	P _D	750	mW
Operating Ambient Temperature	T _{opr}	-30 ~ +75	°C
Storage Temperature	T _{stg}	-55 ~ +150	°C

Operating Supply Voltage Range: V_{CC} = 1.8V ~ 6.0V

■ Electrical Characteristics (V_{CC}=3V, f=1kHz, R_L=32Ω, Ta=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Quiescent Circuit Current	I _{CQ}	V _{in} = 0V, R _g = 0Ω		4.5	6.0	mA

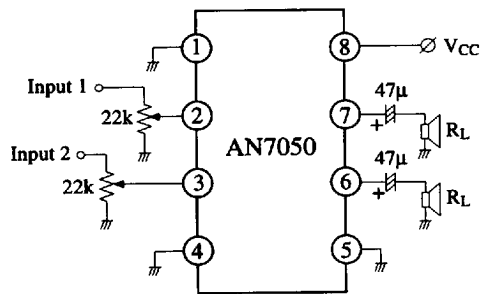
STEREO

Output Power	P _O	THD = 10%	20	25		mW
Voltage Gain	G _v	P _O = 10mW	24	25.5	27	dB
Total Harmonic Distortion	THD	P _O = 10mW		1.2	3.0	%
Output Noise	V _{no}	R _g = 5kΩ, DIN/AUDIO		140		μV
Channel Separation	CS	V _{in} = 28mV		43		dB

BTL

Output Power	P _O	THD = 10%		100		mW
Voltage Gain	G _v	P _O = 10mW		31.4		dB
Total Harmonic Distortion	THD	P _O = 10mW		1.7		%
Output Noise	V _{no}	R _g = 5kΩ, DIN/AUDIO		300		μV
DC Offset	V ₇₋₆	V _{in} = 0V	-500	300	500	mV

■ Application Circuit 1 (Stereo)



■ Application Circuit 2 (BTL)

