



## 2206

## LINEAR INTEGRATED CIRCUIT

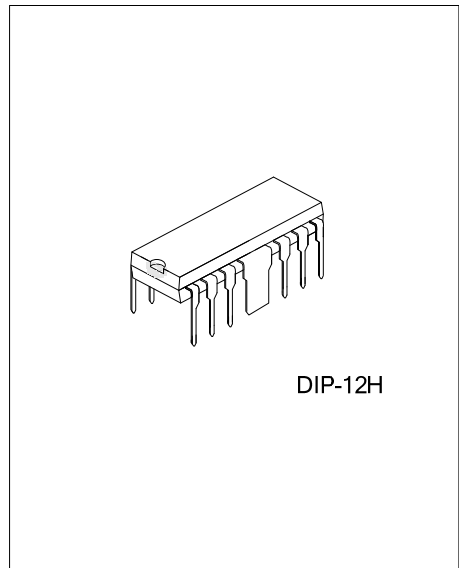
### 2.5W DUAL AUDIO POWER AMP

#### DESCRIPTION

The UTC **2206** is a monolithic integrated circuit consisting of a 2-channel power amplifier .It is suitable for stereo and bridge amplifier application of radio cassette tape recorders.

#### FEATURES

- \*High output power  
Stereo:  $P_o=2.3W(Typ)$  at  $V_{CC}=9V, RL=4\Omega$ .  
Bridge:  $P_o=4.7W(Typ)$  at  $V_{CC}=9V, RL=8\Omega$ .
- \*Low switching distortion at high frequency.
- \*Small shock noise at the time of power on/off due to a built-in muting circuit
- \*Good ripple rejection due to a built-in ripple filter.
- \*Good channel separation.
- \*Closed loop voltage gain fixed 45dB(Bridge: 51dB) but availability with external resistor added.
- \*Minimum number of external parts required .
- \*Easy to design radiator fin.



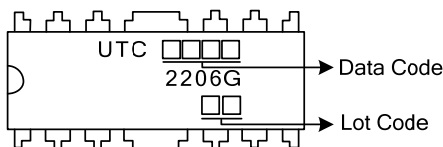
DIP-12H

#### ORDERING INFORMATION

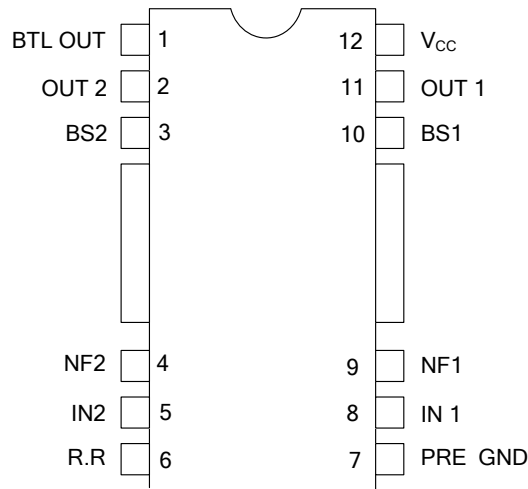
Order Number	Package	Packing
2206G-D12H-T	DIP-12H	Tube

<p>2206G-D12H-T</p> <p>(1)Packing Type (2)Package Type (3)Green Package</p>	<p>(1) T: Tube (2) D12H: DIP-12H (3) G: Halogen Free and Lead Free</p>
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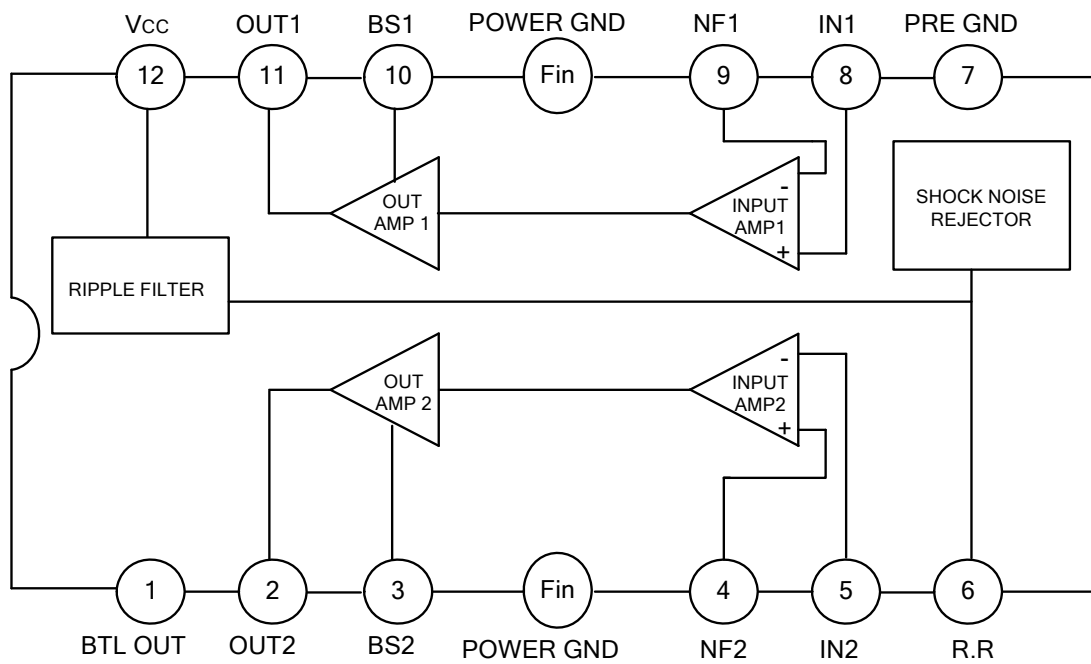
#### MARKING



■ PIN CONFIGURATION



■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATING	UNIT
Supply Voltage	V <sub>CC</sub>	15	V
Power Dissipation	P <sub>D</sub>	4 (Note)	W
Operating Temperature	T <sub>OPR</sub>	-20~+70	°C
Storage Temperature	T <sub>STG</sub>	-40~+150	°C

Note: Fin is soldering on the PCB

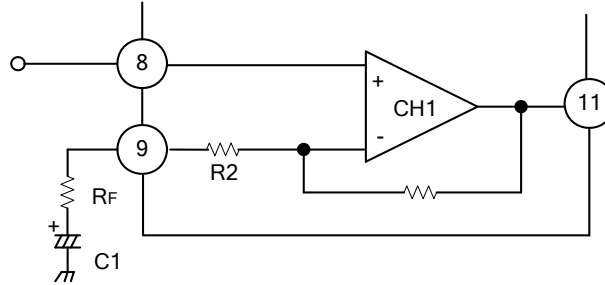
■ ELECTRICAL CHARACTERISTICS

(T<sub>A</sub>=25°C, V<sub>CC</sub>=9V, f=1KHz, R<sub>G</sub>=600Ω, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT	
Operating Supply Voltage	V <sub>CC</sub>			9	11	V	
Quiescent Circuit Current	I <sub>CCQ</sub>	V <sub>I</sub> =0, Stereo		40	55	mA	
Closed Loop Voltage Gain	G <sub>VC</sub>	Stereo	V <sub>I</sub> = -45dBm	43	45	47	dB
		Bridge		49	51	53	
Output Power	P <sub>O</sub>	Stereo	R <sub>L</sub> =4Ω, T <sub>HD</sub> =10%	1.7	2.3		W
			R <sub>L</sub> =8Ω, T <sub>HD</sub> =10%		1.3		W
		Bridge	R <sub>L</sub> =8Ω, T <sub>HD</sub> =10%		4.7		W
Channel Balance	C <sub>B</sub>	Stereo	-1	0	1	dB	
Total Harmonic Distortion	THD	Stereo	R <sub>O</sub> =250mW, R <sub>L</sub> =4Ω		0.3	1.5	%
		Bridge			0.5		%
Input Resistance	R <sub>I</sub>		21	30		KΩ	
Ripple Rejection Ratio	RR	Stereo, R <sub>G</sub> =0Ω, V <sub>R</sub> =150mW, f = 100Hz	40	46		dB	
Output Noise Voltage	V <sub>NO</sub>	Stereo, R <sub>G</sub> =0Ω		0.3	1.0	mW	
		Stereo, R <sub>G</sub> =10KΩ		0.5	2.0	mV	
Cross Talk	C <sub>T</sub>	Stereo, R <sub>G</sub> =10KΩ, V <sub>O</sub> =0dBm	40	55		dB	

■ APPLICATION INFORMATION

Stereo application



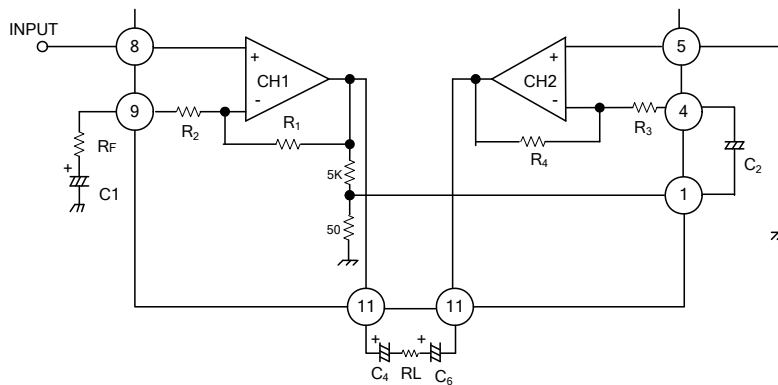
- 1.Fixed voltage gain  
(Pin 9 connected to GND directly)

$$Gv=20 \log \frac{R1}{R2} \text{ (dB)}$$

- 2.Variable voltage gain  
(RF and C1 connected with pin 9)

$$Gv=20 \log \frac{R1}{R2+RF} \text{ (dB)}$$

Bridge application



1. Fixed voltage gain (Pin 9 connected to GND directly)

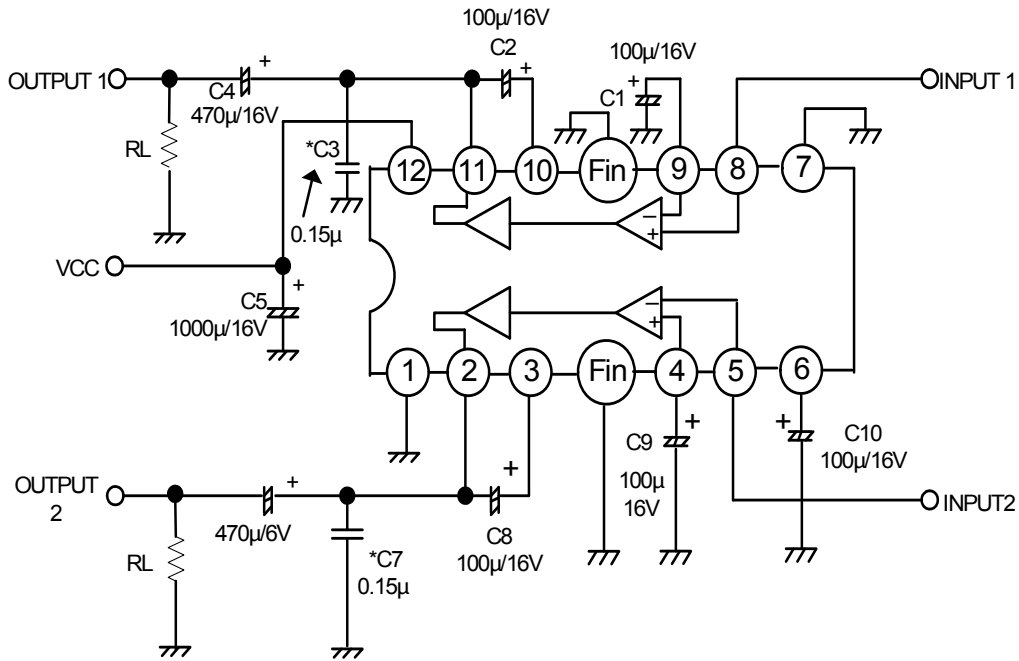
$$Gv=20 \log \frac{R1}{R2} + 6 \text{ (dB)}$$

2. Variable voltage gain RF and C1 connected with pin 9)

$$Gv=20 \log \frac{R1}{R2+RF} + 6 \text{ (dB)}$$

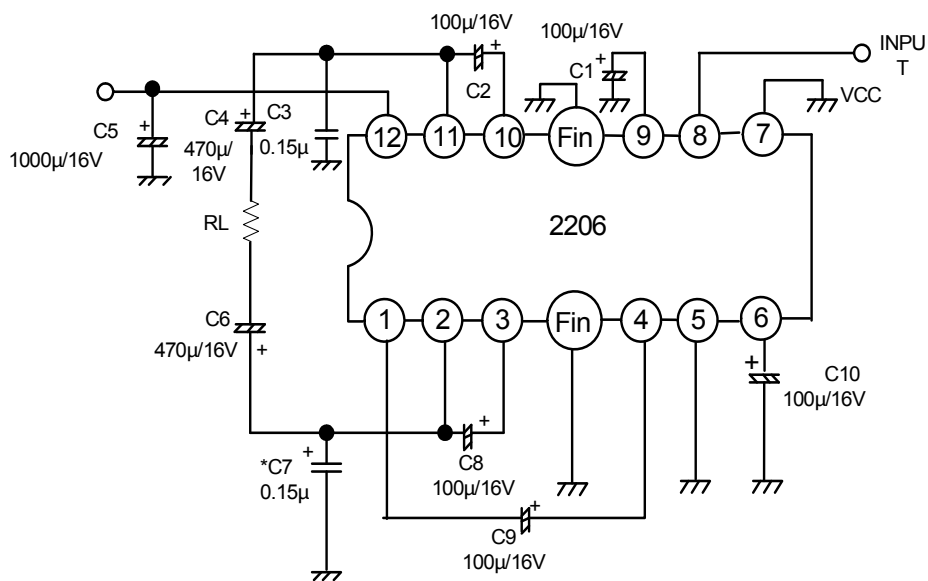
■ APPLICATION CIRCUIT

Stereo Amplifier



\*polyester film capacitor

Bridge Amplifier



\*polyester film capacitor

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