



## 2206

## LINEAR INTEGRATED CIRCUIT

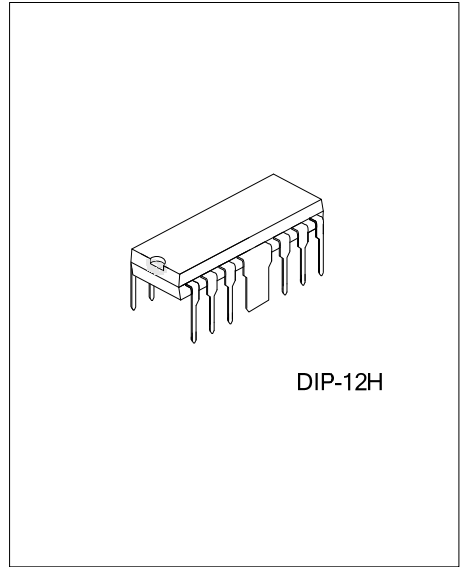
### 2.5W DUAL AUDIO POWER AMP

#### 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.



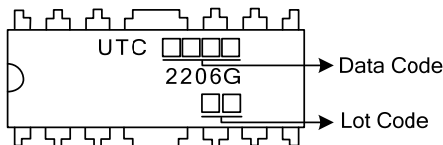
DIP-12H

#### ORDERING INFORMATION

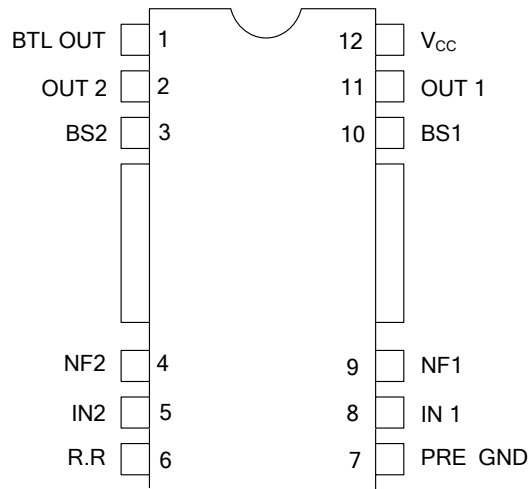
Order Number	Package	Packing
2206G-D12H-T	DIP-12H	Tube

<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>
---	--

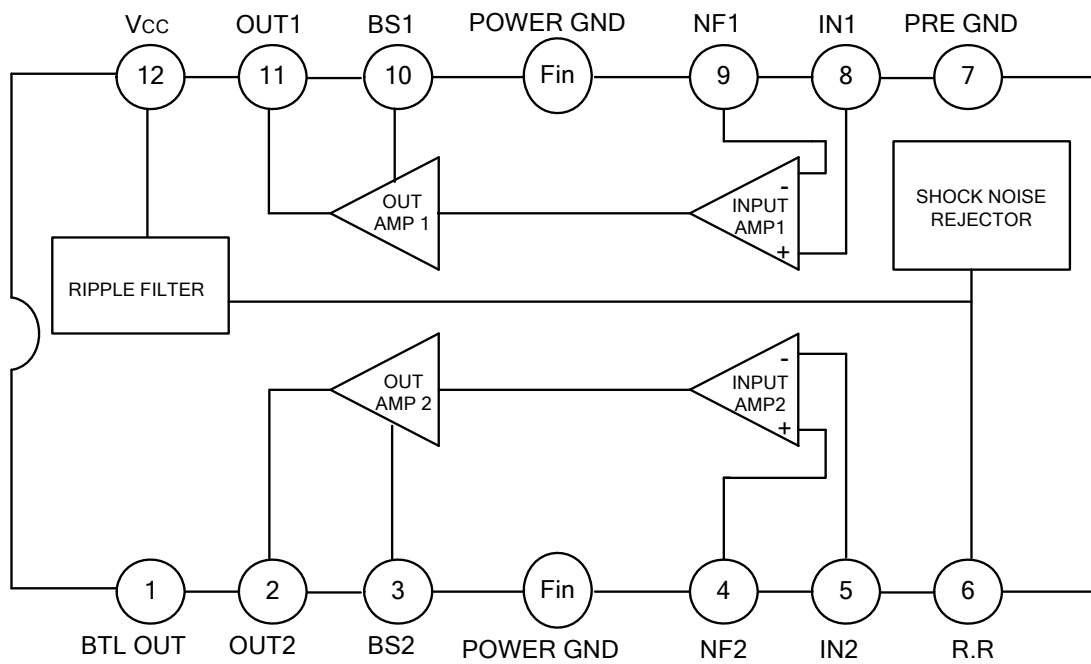
#### MARKING



■ PIN CONFIGURATION



■ BLOCK DIAGRAM



FLYING 汎翔國際有限公司  
[www.flying1688.com](http://www.flying1688.com)

■ ABSOLUTE MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ , unless otherwise specified)

PARAMETER	SYMBOL	RATING	UNIT
Supply Voltage	$V_{CC}$	15	V
Power Dissipation	$P_D$	4 (Note)	W
Operating Temperature	$T_{OPR}$	-20~+70	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-40~+150	$^\circ\text{C}$

Note: Fin is soldering on the PCB

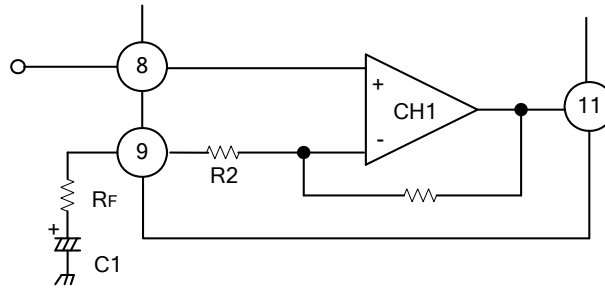
■ ELECTRICAL CHARACTERISTICS

( $T_A=25^\circ\text{C}$ ,  $V_{CC}=9\text{V}$ ,  $f=1\text{KHz}$ ,  $R_G=600\Omega$ , unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT	
Operating Supply Voltage	$V_{CC}$			9	11	V	
Quiescent Circuit Current	$I_{CCQ}$	$V_I=0, \text{Stereo}$		40	55	mA	
Closed Loop Voltage Gain	$G_{VC}$	Stereo	$V_I=-45\text{dBm}$	43	45	47	dB
		Bridge		49	51	53	dB
Output Power	$P_O$	Stereo	$R_L=4\Omega, T_{HD}=10\%$	1.7	2.3		W
			$R_L=8\Omega, T_{HD}=10\%$		1.3		W
		Bridge	$R_L=8\Omega, T_{HD}=10\%$		4.7		W
Channel Balance	$C_B$	Stereo	-1	0	1	dB	
Total Harmonic Distortion	THD	Stereo	$R_O=250\text{mW}, R_L=4\Omega$		0.3	1.5	%
		Bridge			0.5		%
Input Resistance	$R_I$		21	30		K $\Omega$	
Ripple Rejection Ratio	RR	Stereo, $R_G=0\Omega, V_R=150\text{mW}, f=100\text{Hz}$	40	46		dB	
Output Noise Voltage	$V_{NO}$	Stereo, $R_G=0\Omega$		0.3	1.0	mW	
		Stereo, $R_G=10\text{K}\Omega$		0.5	2.0	mV	
Cross Talk	$C_T$	Stereo, $R_G=10\text{K}\Omega, V_O=0\text{dBm}$	40	55		dB	

APPLICATION INFORMATION

Stereo application



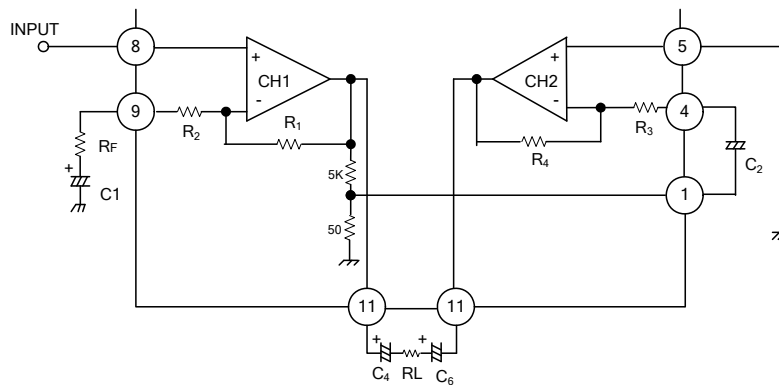
- 1.Fixed voltage gain  
(Pin 9 connected to GND directly)

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

- 2.Variable voltage gain  
(Rf and C1connected with pin 9)

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

Bridge application



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

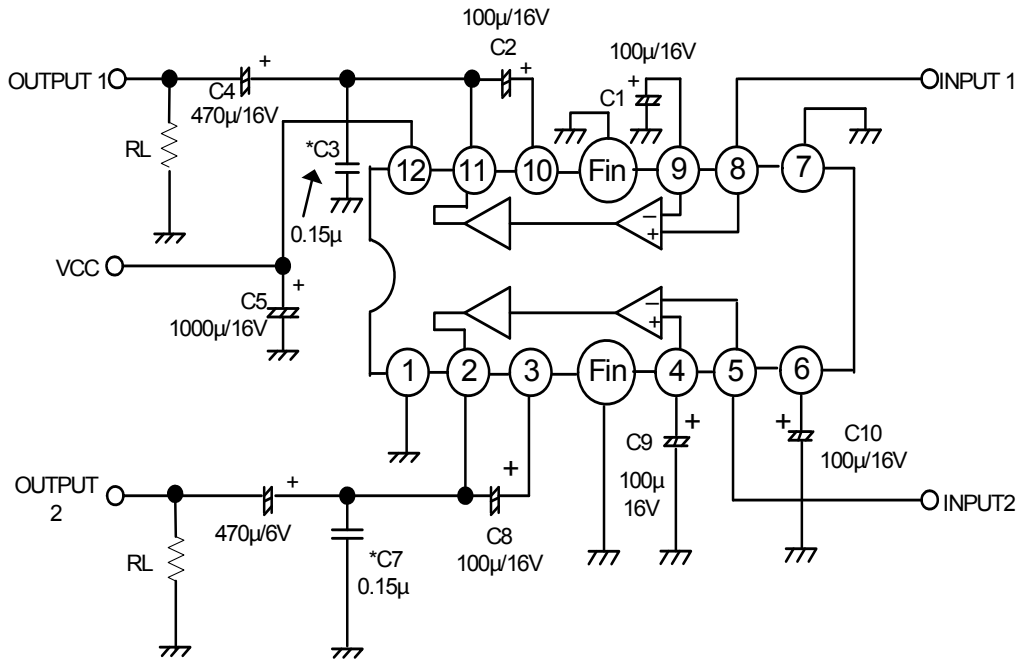
$$Gv=20 \log \frac{R1}{R2} + 6\text{(dB)}$$

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

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

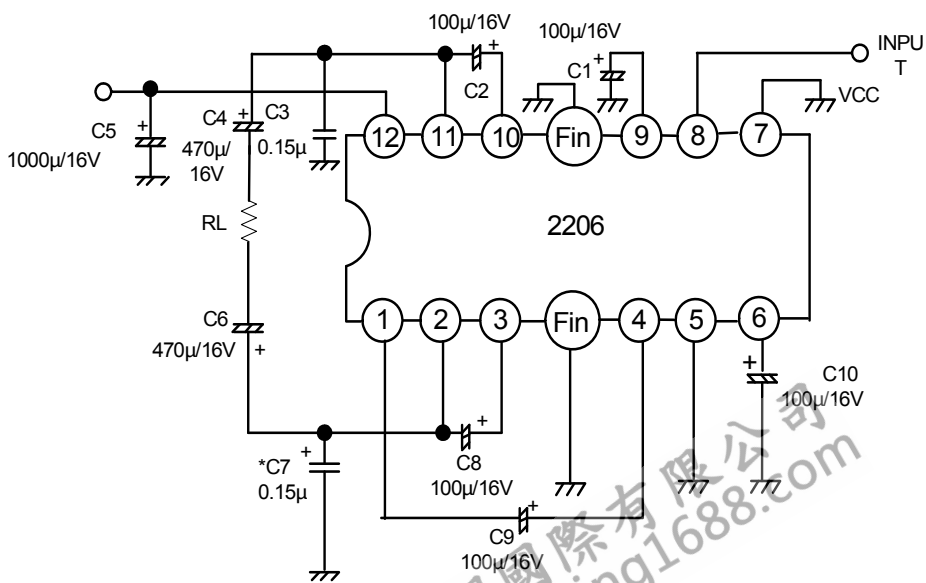
■ APPLICATION CIRCUIT

Stereo Amplifier



\*polyester film capacitor

Bridge Amplifier



\*polyester film capacitor

UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.