



2206

LINEAR INTEGRATED CIRCUIT

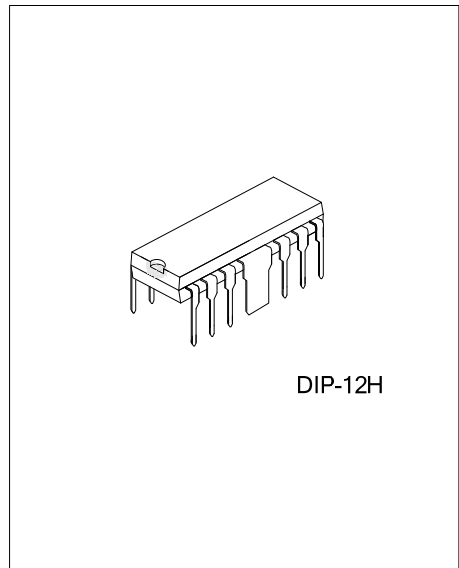
2.5W DUAL AUDIO POWER AMP

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.



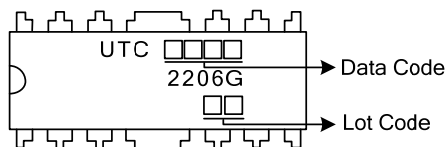
DIP-12H

ORDERING INFORMATION

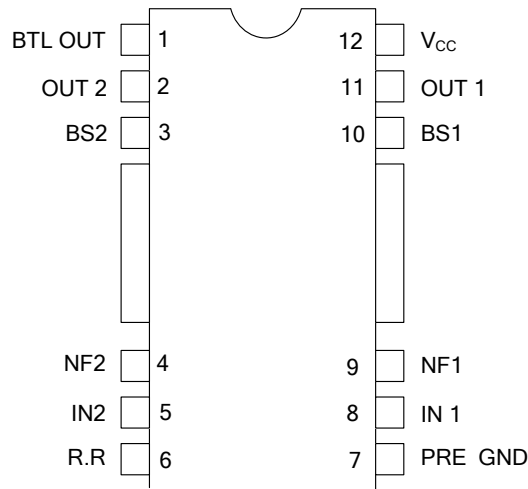
Order Number	Package	Packing
2206G-D12H-T	DIP-12H	Tube

<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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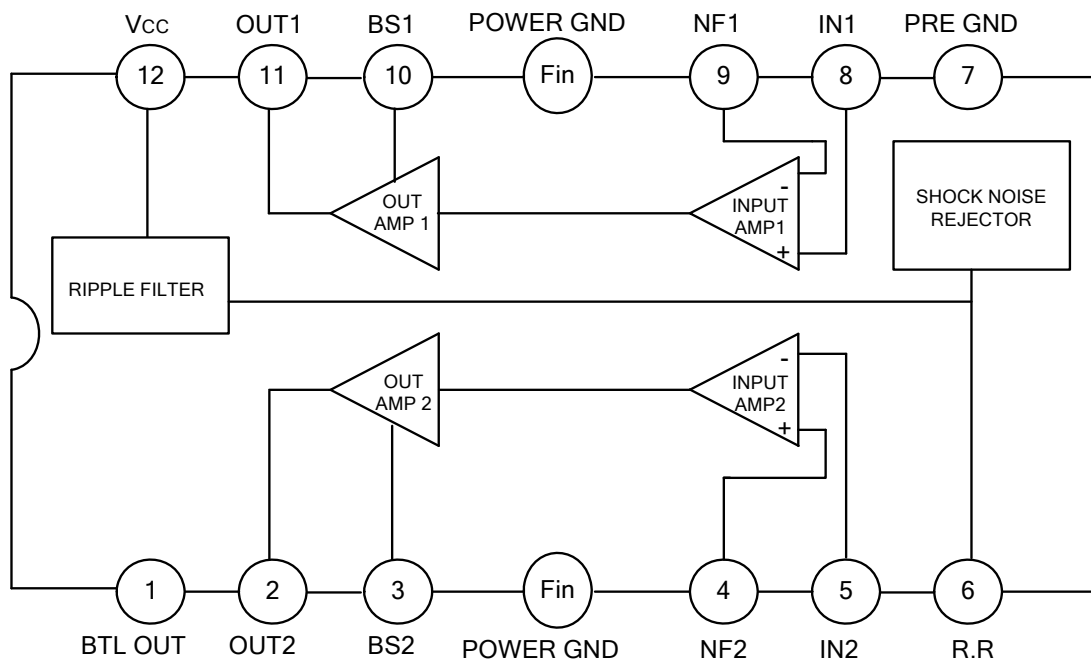
MARKING



■ PIN CONFIGURATION



■ BLOCK DIAGRAM



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

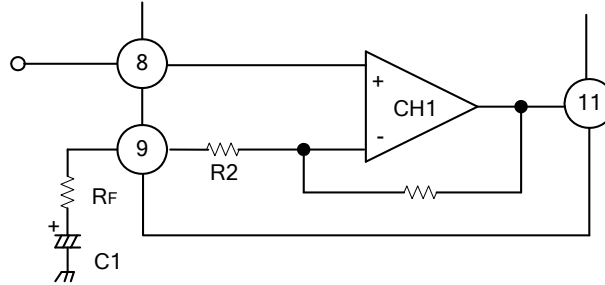
■ ELECTRICAL CHARACTERISTICS

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



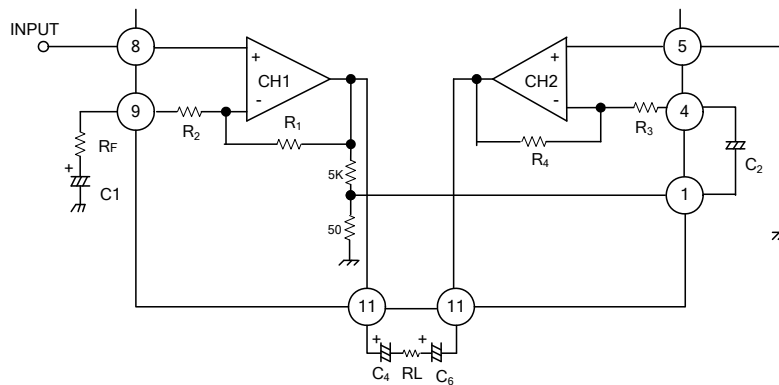
1. Fixed voltage gain
(Pin 9 connected to GND directly)

$$G_v = 20 \log \frac{R_1}{R_2} \text{ (dB)}$$

2. Variable voltage gain
(R_f and C_1 connected with pin 9)

$$G_v = 20 \log \frac{R_1}{R_2 + R_F} \text{ (dB)}$$

Bridge application



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

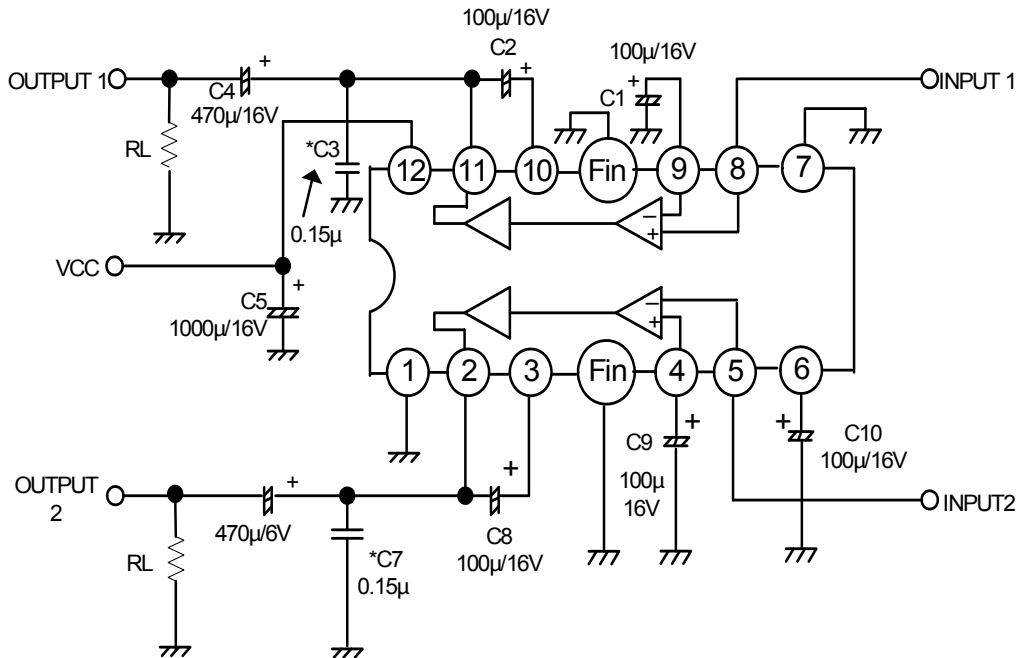
$$G_v = 20 \log \frac{R_1}{R_2} + 6 \text{ (dB)}$$

2. Variable voltage gain R_F and C_1 connected with pin 9)

$$G_v = 20 \log \frac{R_1}{R_2 + R_F} + 6 \text{ (dB)}$$

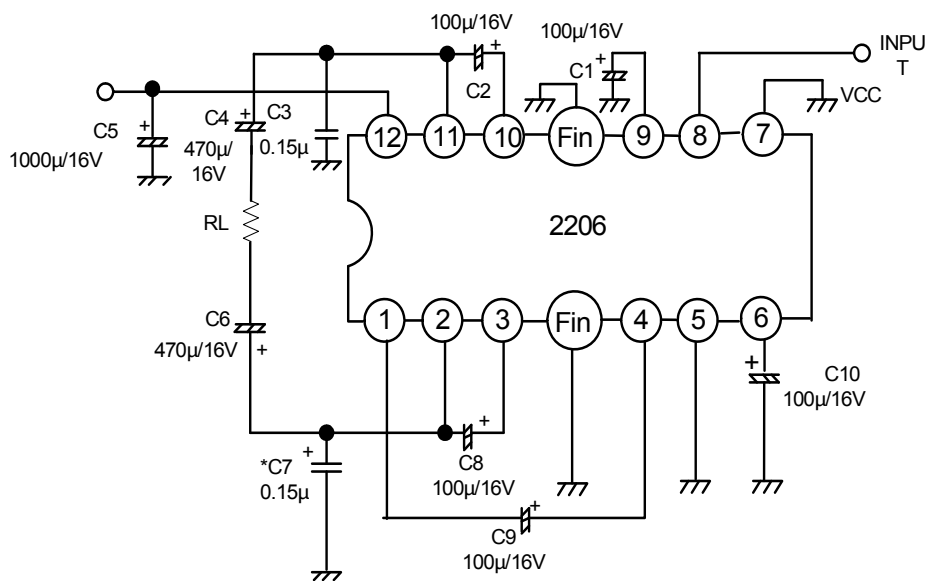
■ APPLICATION CIRCUIT

Stereo Amplifier



*polyester film capacitor

Bridge Amplifier



*polyester film capacitor

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