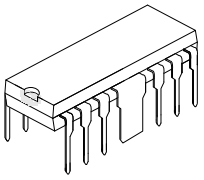
2.5W DUAL AUDIO POWER AMP



DIP-12H

■ 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

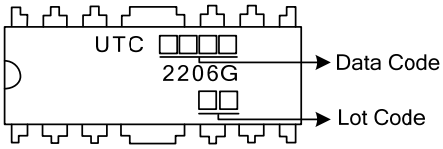
*High output power
Stereo:P_O=2.3W(Typ) at V_{CC}=9V,RL=4Ω.
Bridge: P_O=4.7W(Typ) at V_{CC}=9V,RL=8Ω.
*Low switching distortion at high frequency.
*Small shock noise at the time of power on/off due to a built-in muting circuit
*Good ripple rejection due to a built-in ripple filter.
*Good channel separation.
*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.

■ ORDERING INFORMATION

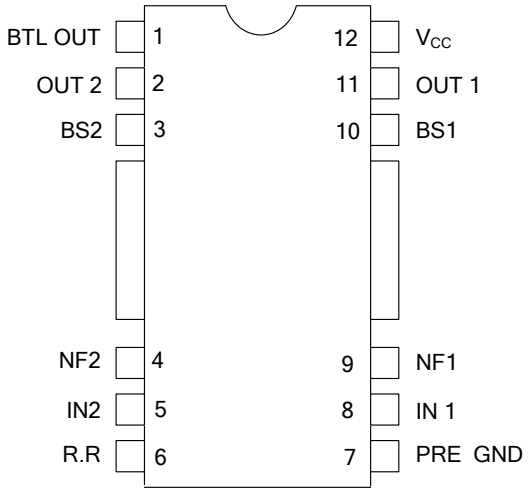
Order Number	Package	Packing
2206G-D12H-T	DIP-12H	Tube

2206G-D12H-T (1)Packing Type (2)Package Type (3)Green Package	(1) T: Tube (2) D12H: DIP-12H (3) G: Halogen Free and Lead Free

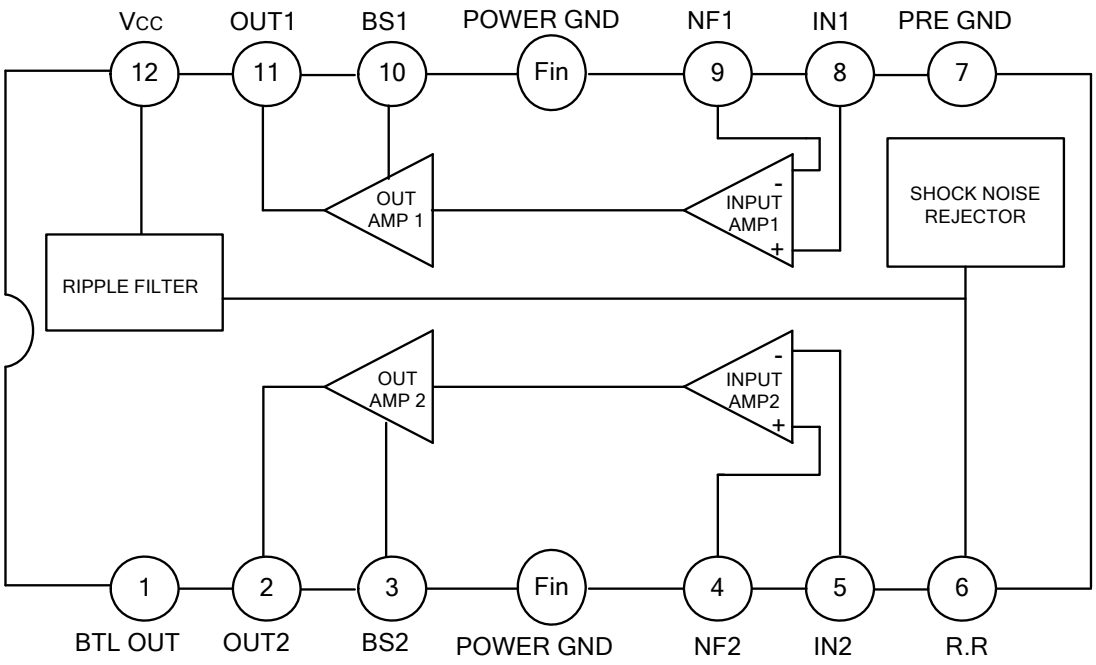
■ MARKING



■ PIN CONFIGURATION



■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATINGS (T_A=25°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	°C
Storage Temperature	T_{STG}	-40～+150	°C

Note: Fin is soldering on the PCB

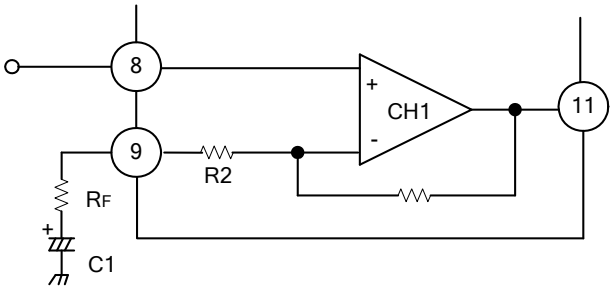
■ ELECTRICAL CHARACTERISTICS

(T_A=25°C, V_{CC}=9V, f=1Khz, R_G=600Ω, unless otherwise specified)

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

■ APPLICATION INFORMATION

Stereo application



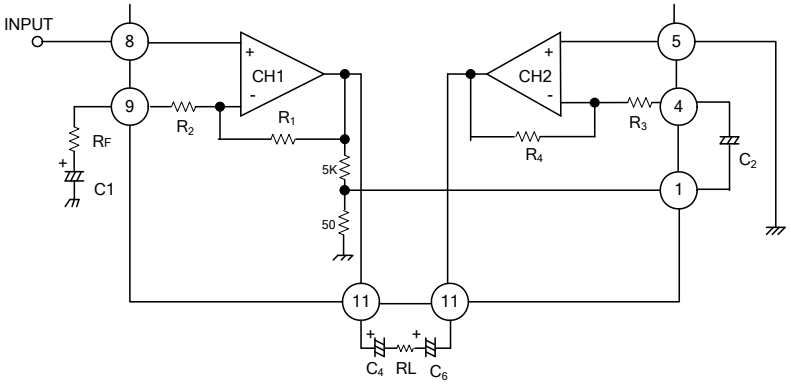
1.Fixed voltage gain
(Pin 9 connected to GND directly)

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

2.Variable voltage gain
(R_f and C_1connected with pin 9)

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

Bridge application



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

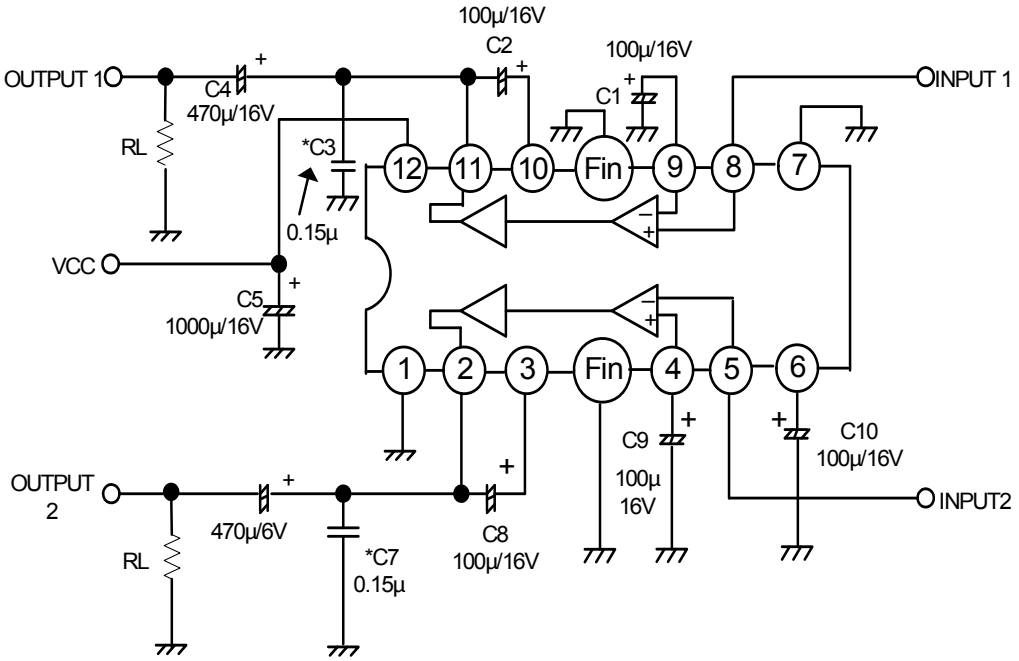
$$Gv=20 \log \frac{R1}{R2} + 6(dB)$$

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

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

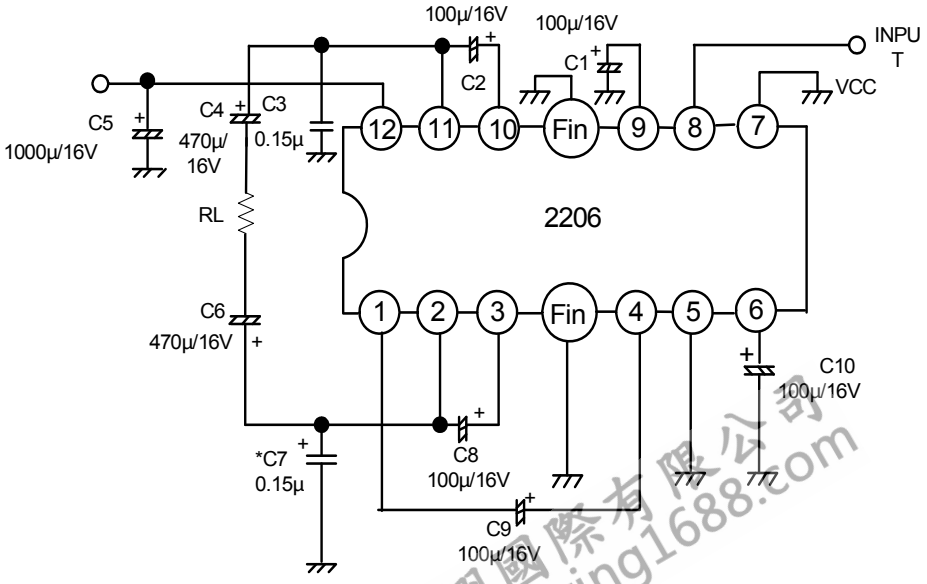
■ APPLICATION CIRCUIT

Stereo Amplofier



*polyester film capacltor

Bridge Amplifier



*polyester film capacltor