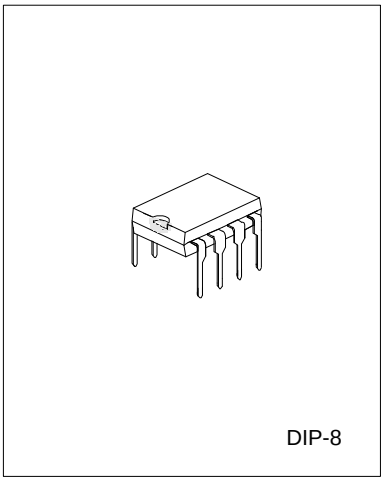
UTC TBA820M LINEAR INTEGRATED CIRCUIT

1.2W AUDIO POWER AMPLIFIER



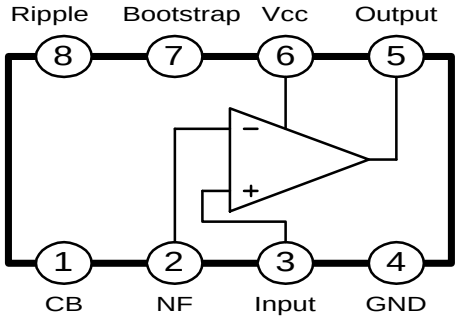
DESCRIPTION

The UTC TBA820M is a monolithic integrated audio amplifier.
It is designed for audio frequency class b amplifier.

FEATURES

*Wide operating supply voltage:Vcc=3~14V
*Medium output power
Po=1.2W at Vcc=9V,RL=8 ohm ,Thd=10%
*Low quiesent circuit current:ICCQ=4mA(type)
*Good ripple rejection.
*Minimum number of external parts required.

BLOCK DIAGRAM



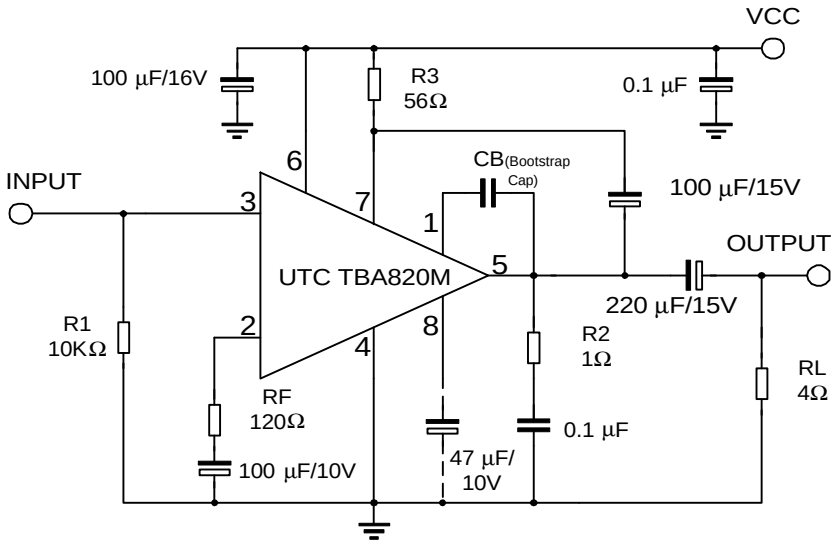
ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

PARAMETER	SYMBOL	VALUE	UNIT
Supply Voltage	Vcc	16	V
Output Peak Current	Ipeak	1.5	A
Power Dissapation	PD	1.25	W
Operating Temperature	Topr	-20 ~ +70	°C
Storage Temperature	Tstg	-40 ~ +150	°C

ELECTRICAL CHARACTERISTICS(Ta=25°C,Vcc=9V,f=1kHz,RG=600Ω,RF=120Ω,RL=8Ω,unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Quiescent Circuit Current	I_{CCQ}	VI=0		4	12	mA
Output Power	Po	Vcc=9V,R_L=4Ω,THD=10%		1.6		W
		Vcc=9V,R_L=8Ω,THD=10%	0.9	1.2		
		Vcc=6V,R_L=4Ω,THD=10%		0.75		
		Vcc=6V,R_L=8Ω,THD=10%	0.4	0.5		
		Vcc=12V,R_L=8Ω,THD=10%		2		
Total Harmonic Distortion	THD	Po=500mW		0.3	1	%
Open Loop Voltage Gain	Gvo	R_F=0		75		dB
Closed Loop Voltage Gain	Gvc	R_F=120Ω	33	36	39	dB
Input Resistance	RI			5		MΩ
Output Noise Voltage	V_{NO}	RG=10kΩ BW(-3dB)=50~20kHz		0.3	1	mW

TEST CIRCUIT



TYPICAL PERFORMANCE CHARACTERISTICS

Fig 1 Quienscent circuit current vs Supply Voltage

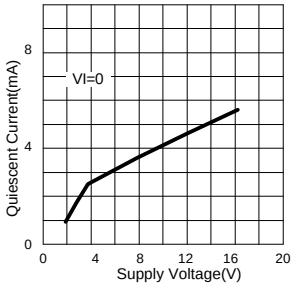


Fig 2 Output power vs Supply Voltager

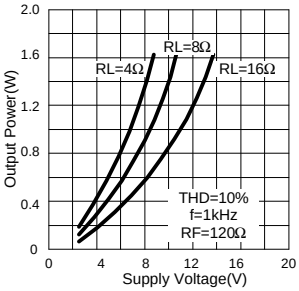


Fig 3 Total harmonic Distortion vs Output power

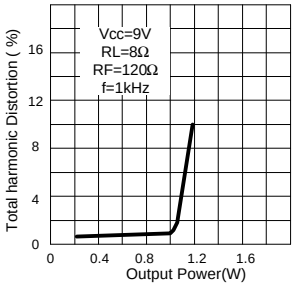


Fig 4 Voltage Gain vs Feedback resistance

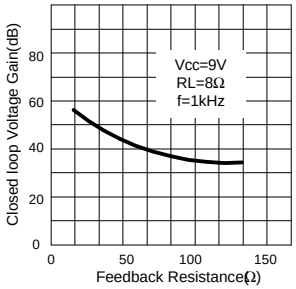


Fig 5 Power Dissipation vs Output power

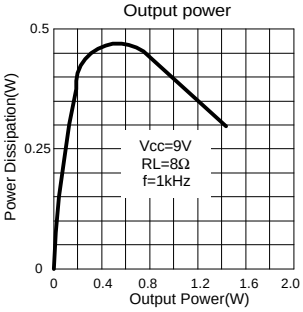


Fig 6 Power Dissipation vs Supply Voltage

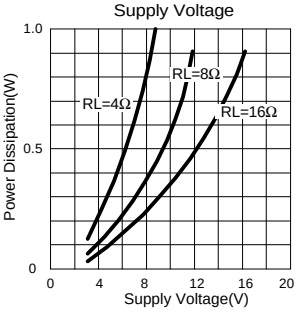


Fig 7 Frequency response

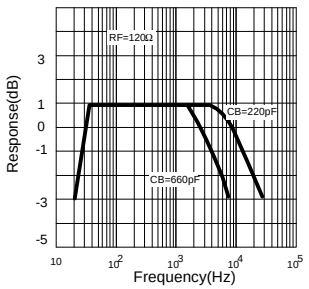


Fig 8 Total Harmonic distortion vs frequency