

# UTC TA8207K LINEAR INTEGRATED CIRCUIT

## LOW FREQUENCY POWER AMPLIFIER

### DESCRIPTION

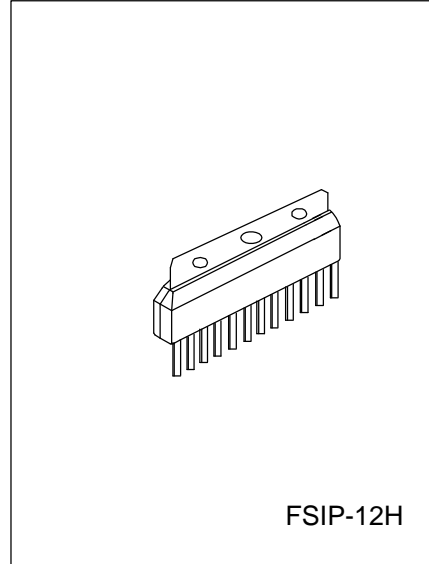
The UTC TA8207K is an audio power IC with built-in two channels developed for portable radio cassette tape recorder with power ON/OFF switch.

Because of the parts reduction and SIP (Single inline package), space merit is remarkable.

Thermal shut down protection circuit is built in.

### FEATURES

- \*High Power :  $P_{OUT}=2.5W / CH$  (Typ.)  
( $V_{CC}=9V$ ,  $R_L=4\Omega$ ,  $f=1KHz$ ,  $THD=10\%$ )  
:  $P_{OUT}=4.6W / CH$  (Typ.)  
( $V_{CC}=12V$ ,  $R_L=4\Omega$ ,  $f=1KHz$ ,  $THD=10\%$ )
- \*Low Popping Noise at Power ON
- \*Small Quiescent Current :  $I_{CCQ}=21mA$  (Typ.)  
( $V_{CC}=9V$ ,  $V_{IN}=0$ )
- \*Soft Clip
- \*Built-in Thermal Shut Down Protection Circuit
- \*Best for Supply Voltage 9V, 12V
- \*Operation Supply Voltage Range :  $V_{CC}=6-15V$



### ABSOLUTE MAXIMUM RATINGS ( $T_a=25^\circ C$ )

PARAMETER	SYMBOL	VALUE	UNIT
Supply Voltage	$V_{CC}$	20	V
Output Current (Peak / CH)	$I_o(\text{peak})$	2.5	A
Power Dissipation	PD	12.5	W
Operating Temperature	$T_{opr}$	-20 to + 75	$^\circ C$
Storage Temperature	$T_{stg}$	-55 to + 150	$^\circ C$

# UTC TA8207K LINEAR INTEGRATED CIRCUIT

## ELECTRICAL CHARACTERISTICS

(Vcc=9V, RL=4Ω, Rg=600Ω, f=1kHz, Ta=25°C, unless otherwise specified)

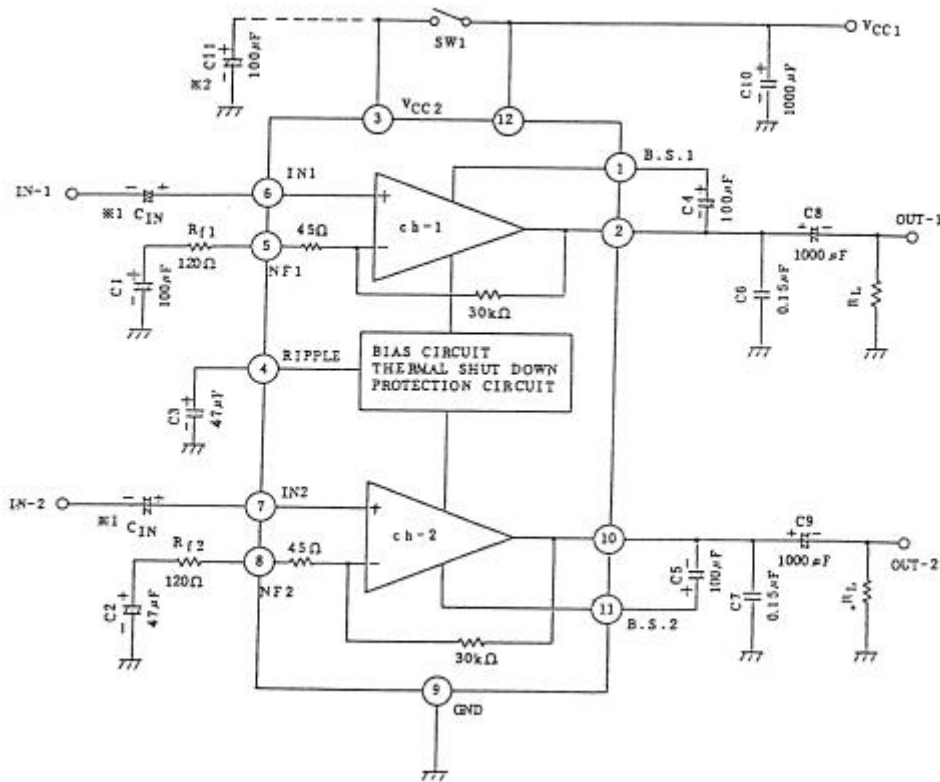
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Quiescent Current	IccQ	Vin=0		21	45	mA
Output Power	POUT(1)	THD=10%	2.0	2.5		W
	POUT(2)	Vcc=12V, THD=10%		4.6		W
Total Harmonic Distortion	THD	POUT=0.4W / ch		0.2	1.0	%
Voltage Gain	GV(1)	Rf=120Ω VOUT=0.775Vrms	43	45	47	dB
	GV(2)	Rf=0, VOUT=0.775Vrms		56.5		dB
Input Resistance	RIN			30		kΩ
Output Noise Voltage	VNO	Rg=10kΩ BW=20Hz ~ 20kHz		0.3	1.0	mVrms
Ripple Rejection Ratio	R.R.	Rg=600Ω Fripple=100Hz		52		dB
Cross Talk	C.T.	Rg=600Ω, Amp1<->2 VOUT=0dBm, f=1kHz		50		dB
Input Offset Voltage	V6, V7			30	60	mV
Stand-by Current		SW1->OFF		1		μA

## TYPICAL DC VOLTAGE OF EACH TERMINAL (Vcc=9V, Ta=25°C)

TERMINAL NO.	1	2	3	4	5	6	7	8	9	10	11	12
DC Voltage	8.7	4.5	Vcc	5.0	0.7	0.03	0.03	0.7	GND	4.5	8.7	Vcc

# UTC TA8207K LINEAR INTEGRATED CIRCUIT

## TEST CIRCUIT



REMARK 1 : This IC can be used without coupling capacitor (CIN). If volume slide noise occurred by input offset voltage is undesirable, it needs to use the capacitor (CIN).

REMARK 2 : The condenser between the pin3 and the GND (C11) is for reducing pop noise when the power ON/OFF switch (SW1) is set to ON/OFF.