

UTC TA8207K LINEAR INTEGRATED CIRCUIT

LOW FREQUENCY POWER AMPLIFIER

DESCRIPTION

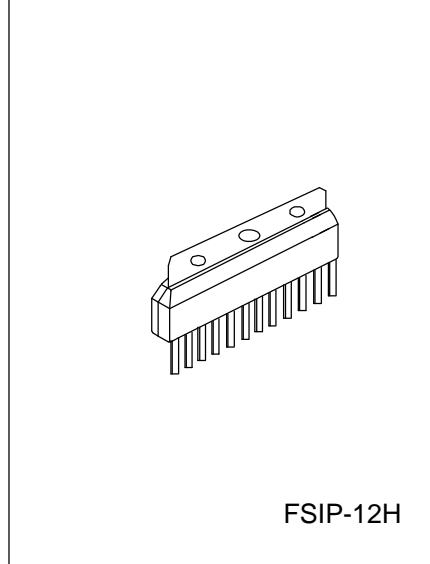
The UTC TA8207K is an audio power IC with built-in two channels developed for portable radio cassette tape recorder with power ON/OFF switch.

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	$^\circ C$

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ELECTRICAL CHARACTERISTICS

(V_{cc}=9V, R_L=4Ω, R_g=600Ω, f=1kHz, T_a=25°C, unless otherwise specified)

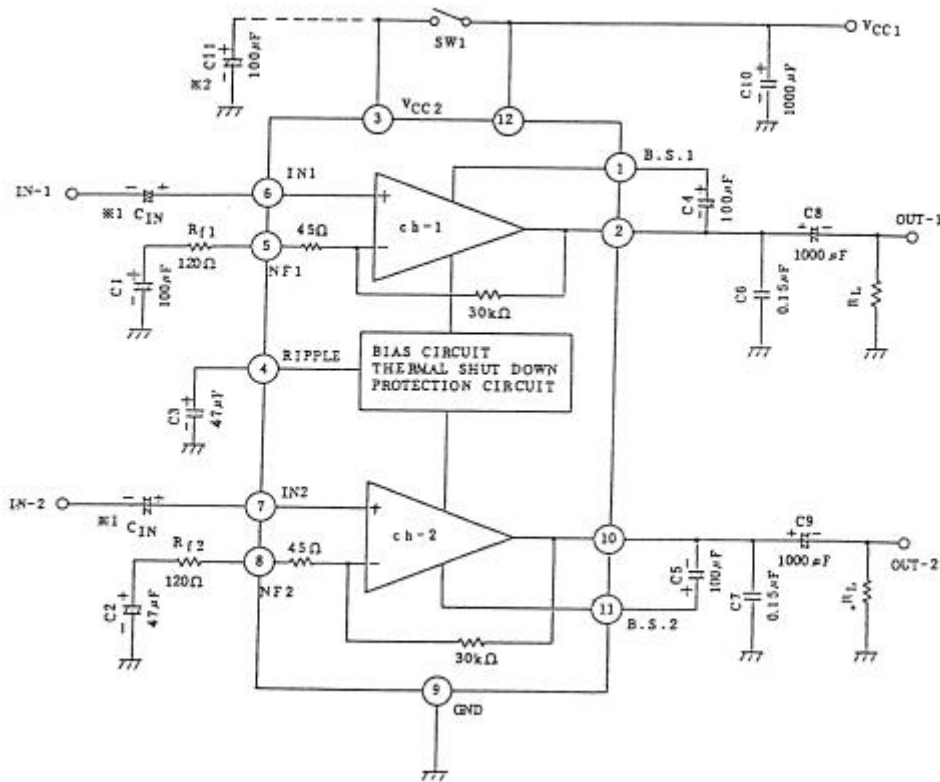
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Quiescent Current	I _{CCQ}	V _{in} =0		21	45	mA
Output Power	POUT(1)	THD=10%	2.0	2.5		W
	POUT(2)	V _{cc} =12V, THD=10%		4.6		W
Total Harmonic Distortion	THD	POUT=0.4W / ch		0.2	1.0	%
Voltage Gain	GV(1)	R _f =120Ω V _{OUT} =0.775V _{rms}	43	45	47	dB
	GV(2)	R _f =0, V _{OUT} =0.775V _{rms}		56.5		dB
Input Resistance	R _{IN}			30		kΩ
Output Noise Voltage	V _{NO}	R _g =10kΩ BW=20Hz ~ 20kHz		0.3	1.0	mV _{rms}
Ripple Rejection Ratio	R.R.	R _g =600Ω F _{ripple} =100Hz		52		dB
Cross Talk	C.T.	R _g =600Ω, Amp1<->2 V _{OUT} =0dBm, f=1kHz		50		dB
Input Offset Voltage	V ₆ , V ₇			30	60	mV
Stand-by Current		SW1->OFF		1		μA

TYPICAL DC VOLTAGE OF EACH TERMINAL (V_{cc}=9V, T_a=25°C)

TERMINAL NO.	1	2	3	4	5	6	7	8	9	10	11	12
DC Voltage	8.7	4.5	V _{cc}	5.0	0.7	0.03	0.03	0.7	GND	4.5	8.7	V _{cc}

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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.