

UTC TA7738P LINEAR INTEGRATED CIRCUIT

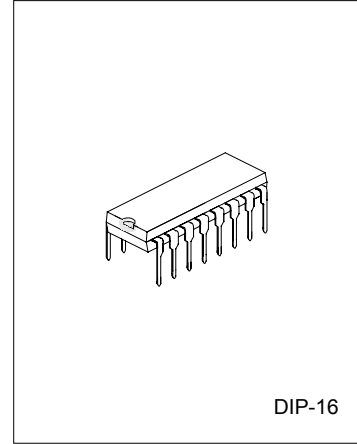
AMPLIFIER SYSTEM FOR CASSETTE TAPE RECORDER

DESCRIPTION

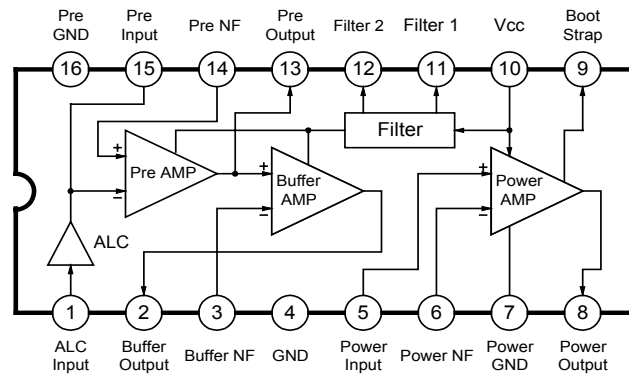
The UTC TA7738P is an amplifier system, designed for a stereo set and a radio cassette tape recorder.

FEATURES

- *Recorder play balk for pre-amplifier
- *Buffer amplifier(recorder amplifier)
- *Power amplifier
- *Wide operating voltage range(3.5V to 9V)



BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATING (Ta=25°C)

PARAMETER	SYMBOL	VALUE	UNIT
Supply Voltage	VCC	14	V
Output Current	I O(peak)	1.5	A
Power Dissipation*	PD	1200	mW
Operating Temperature	TOPR	-25~75	°C
Storage Temperature	TSTG	-55~150	°C

*Note: De-rated above Ta=25°C in proportion of 9.6mW/°C

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ELECTRONIC CHARACTERISTICS (Ta=25°C, Vcc=6V, f=1kHz, unless otherwise specified)

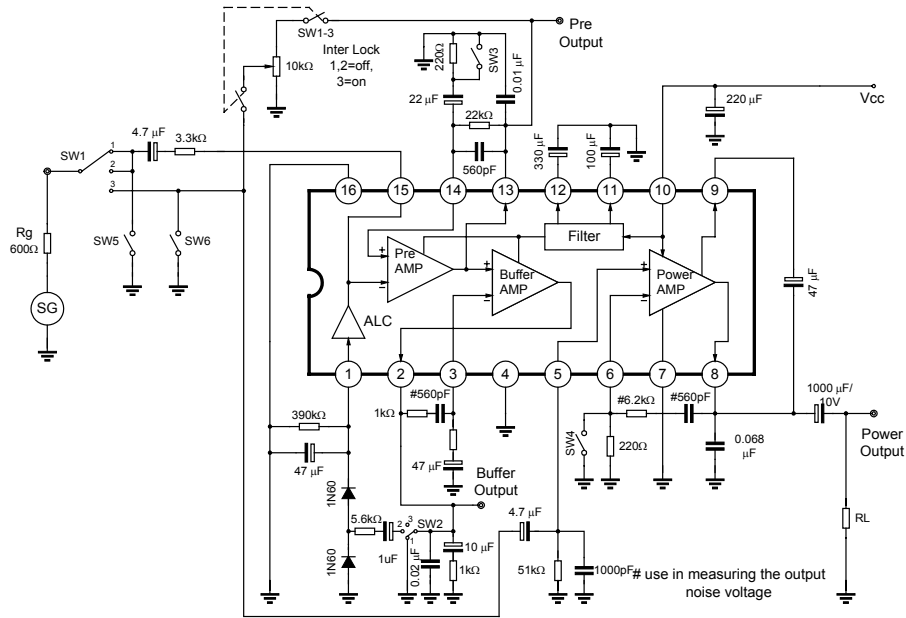
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Total						
Quiescent Current	IccQ1	VCC=3.5V	7.5			mA
	IccQ2	VCC=6V	11		35	
Pre-amplifier						
Open Loop Voltage Gain	Gv01		55	70		dB
Closed Loop Voltage Gain	Gv1			40		dB
Maximum Output Voltage	VOUT1	THD<1%		0.7		Vrms
Input Impedance	RIN1	VOUT=0.5Vrms		30		kΩ
Equivalent Input Noise Voltage	VNI	Rg=0		1.4	2.5	μΩVrms
Pre-amplifier + Buffer amplifier						
Closed Loop Voltage Gain	Gv2	Pre-AMP GV=40dB Buff-AMP GV=20dB		60		dB
Maximum Output Voltage	VOUT2	THD=3%	1.5	1.7		Vrms
Equivalent Input Noise Voltage	VNO2	Rg=0, GV2=60dB		1.2	2.5	mVrms
ALC Effect	ALC1	VIN= -60dBm~ -20dBm		2		dB
ALC Range	ALC2	THD<1%		60		dB
Power amplifier						
Open Loop Voltage Gain	Gv01		60	70		dB
Closed Loop Voltage Gain	Gv1			40		dB
Maximum Output Power	POM	RL=4Ω, THD=10%	0.8	0.96		W
		VCC=9V, RLΩ, THD=10%		2		
Output Noise Voltage	VNO3	Rg=0, GV=40dB		0.3	1	mVrms

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UTC TA7738P LINEAR INTEGRATED CIRCUIT

TEST CIRCUIT



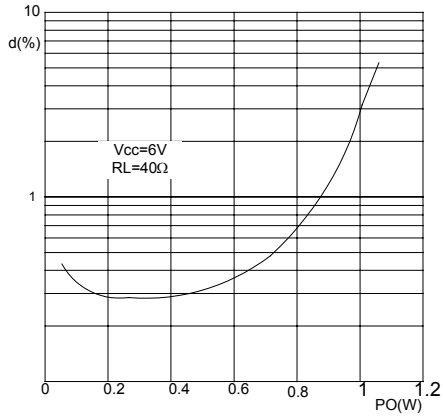
SWITCH MODE

TEST ITEM	SW1	SW2	SW3	SW4	SW5	SW6
GVO1	1	1	ON	OFF	OFF	OFF
GV1	1	1	OFF	OFF	OFF	OFF
VOUT1	1	1	OFF	OFF	OFF	OFF
GV2	1	3	OFF	OFF	OFF	OFF
VOUT2	1	3	OFF	OFF	OFF	OFF
VNO2	1	3	OFF	OFF	ON	OFF
ALC	1	2	OFF	OFF	OFF	OFF
GVO3	2	1	OFF	ON	OFF	OFF
GV3	2	1	OFF	OFF	OFF	OFF
PO	2	1	OFF	OFF	OFF	OFF
VNO3	2	1	OFF	OFF	OFF	ON

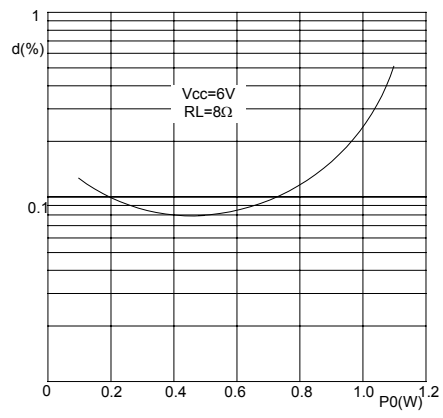
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TYPICAL PERFORMANCE CHARACTERISTICS

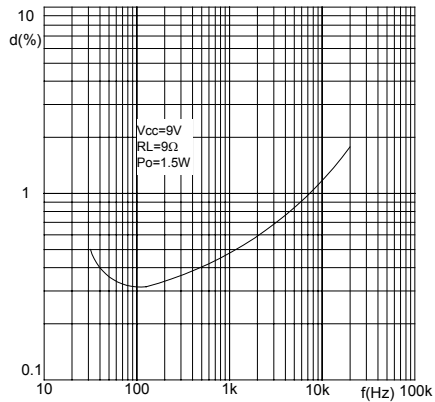
THD vs Output Power 1



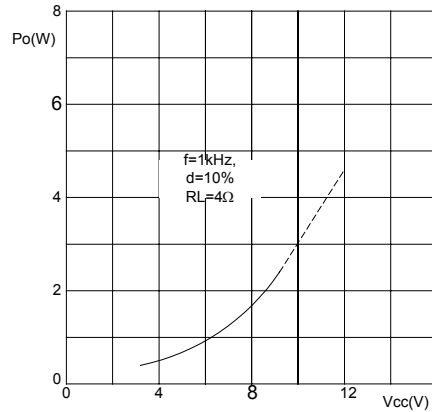
THD vs Output Power 2



THD vs Output Frequency



Double Channel Mode Output Power vs Supply Voltage



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