

UTC2025

LINEAR INTEGRATED CIRCUIT

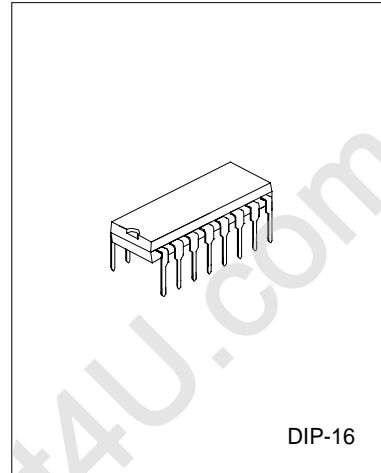
STEREO AUDIO AMPLIFIER

DESCRIPTION

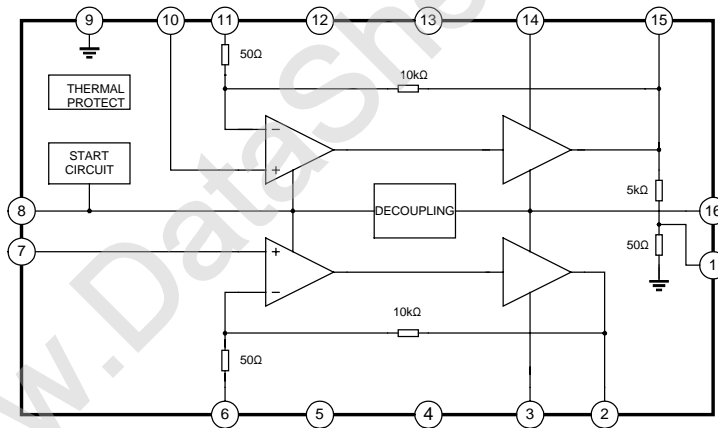
The UTC2025 is a monolithic integrated audio amplifier in a 16-pin plastic dual in line package. It is designed for portable cassette players and radios.

FEATURES

- *Working Voltage down to 3V
- *Few External components
- *High Channel isolation
- *Voltage gain up to 45dB(Adjustable with external resistor)
- *Soft clipping
- *Internal Thermal protection



BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Characteristic	Symbol	Value	Unit
Supply Voltage	Vs	15	V
Output Peak Current	Io	1.5	A
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-40~+150	°C

YW YOUWANG ELECTRONICS CO LTD

ELECTRICAL CHARACTERISTICS

(Tamb=25°C, Vcc=9V, Stereo, Unless otherwise specified)

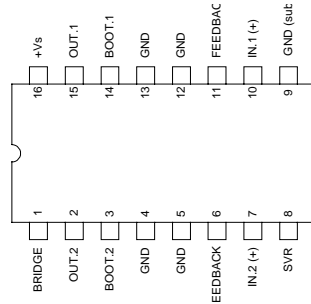
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Supply Voltage	Vs		3	—	12	V
Quiescent Current	Iq		—	40	50	mA
Quiescent output voltage	Vo		—	4.5	—	V
Voltage gain	Av	Stereo	43	45	47	dB
		Bridge	49	51	53	
Voltage gain difference	ΔAv		—	—	±1	dB
Input impedance	Ri		—	30	—	kΩ
Output Power	Po	f=1kHz; d=10% Stereo per channel Vcc=9V; RL=4Ω RL=8Ω	1.7	2.3	—	
		Vcc=6V; RL=4Ω RL=8Ω	0.7	1	—	W
		Vcc=3V; RL=4Ω	—	0.1	—	
		Bridge Vcc=9V; RL=8Ω	—	4.7	—	
		Vcc=6V; RL=4Ω	—	2.8	—	
Distortion	d	Vcc=9V; RL=4Ω f=1kHz; Po=250mW Stereo	-	0.3	1.5	%
		Bridge	-	0.5	-	
Supply voltage Rejection	SVR	RG=0; Av=45dB Vripple=150mVRMS Fripple=100Hz	40	46	-	dB
Input noise Voltage	Vn	Av=200 Bandwidth: 20Hz to 20kHz RG=0 RG=10kΩ	-	1.5	3	μV
Cross-Talk	C.T.	RG=10kΩ; f=1kHz; RL=4Ω Po=1W	40	55	-	dB

THERMAL RESISTANCE

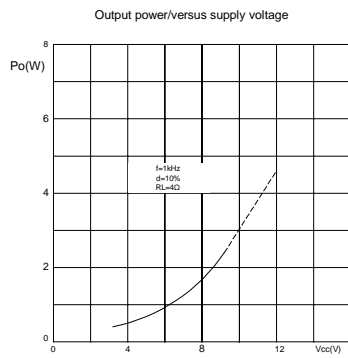
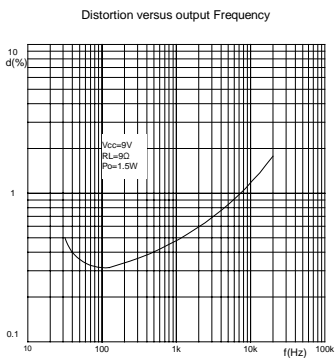
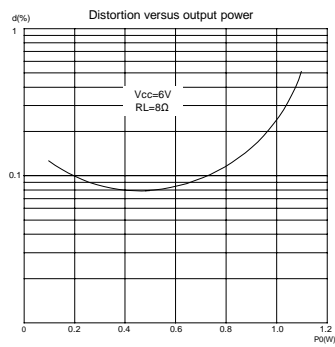
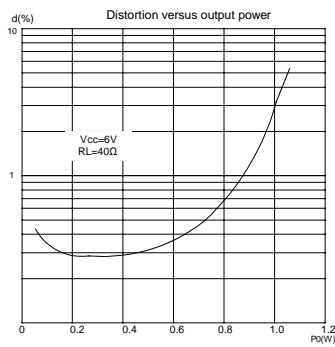
Rth(j-c): Junction to case thermal resistance 15°C/W

Rth(j-a): Junction to ambient thermal resistance 60°C/W

PIN CONNECTION



TYPICAL PERFORMANCE CHARACTERISTICS



APPLICATION CIRCUITS

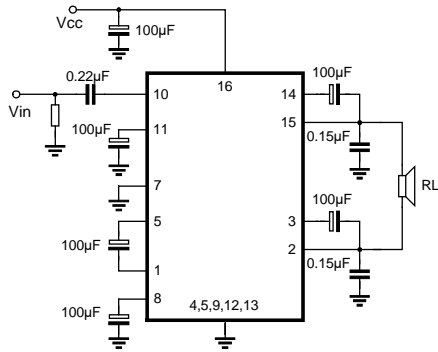


Fig. 5 Bridge Application

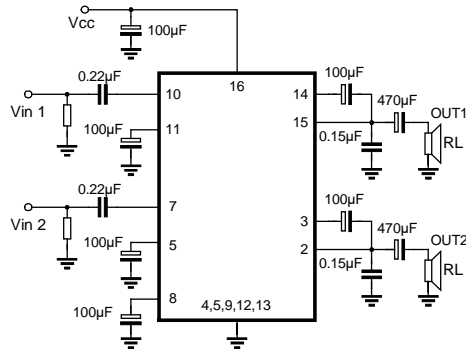


Fig.6 Stereo Application

SCHEMATIC DIAGRAM

