

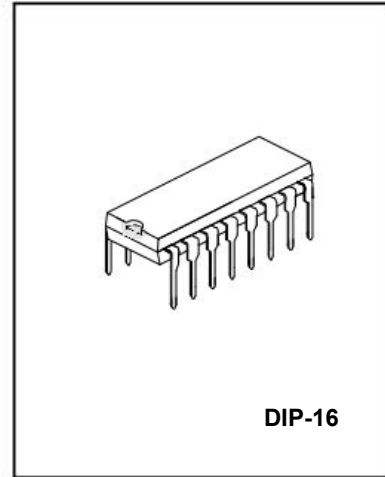
## 2.5W \* 2 Audio amplifier

### STEREO AUDIO AMPLIFIER DESCRIPTION

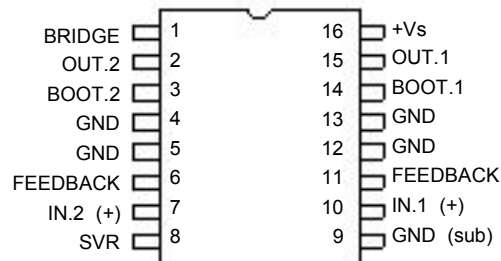
The TEA2025 is a monolithic integrated audio amplifier in a 16-pin plastic dual in line package. It is designed for portable cassette players and radios.

#### FEATURES

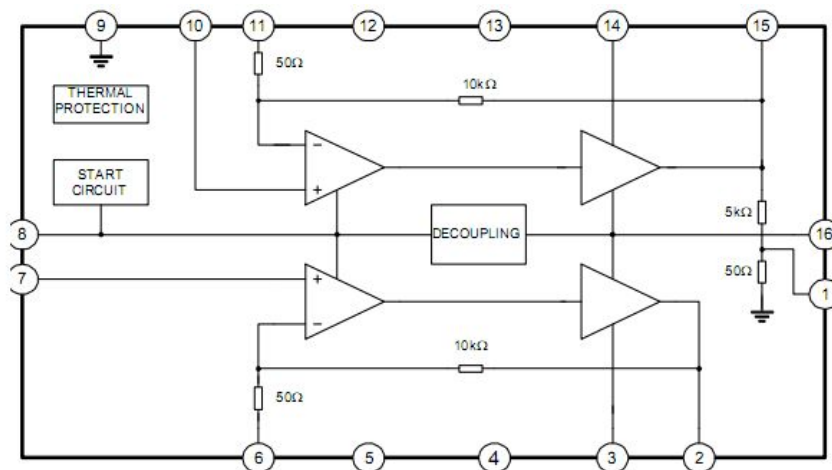
- \* Working Voltage down to 3V
- \* Few External components
- \* High Channel isolation
- \* Voltage gain up to 45dB(Adjustable with external resistor)
- \* Soft clipping
- \* Internal Thermal protection



#### PIN CONFIGURATIONS



#### BLOCK DIAGRAM



**ABSOLUTE MAXIMUM RATINGS**

PARAMETER	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

**ELECTRICAL CHARACTERISTICS** (Ta=25°C,Vcc=9V,Stereo,Unless otherwise specified)

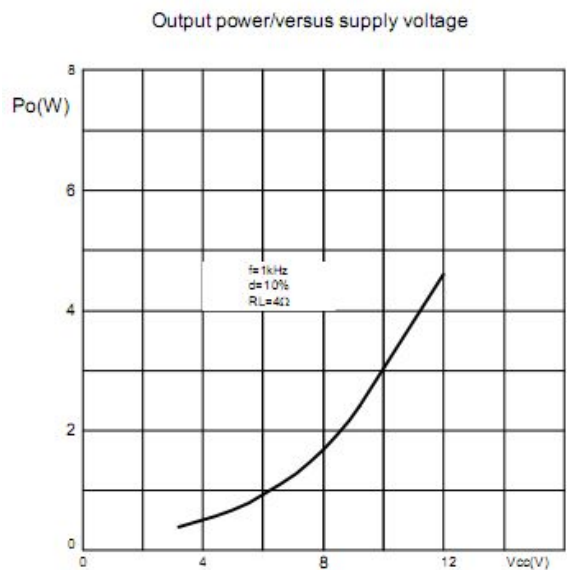
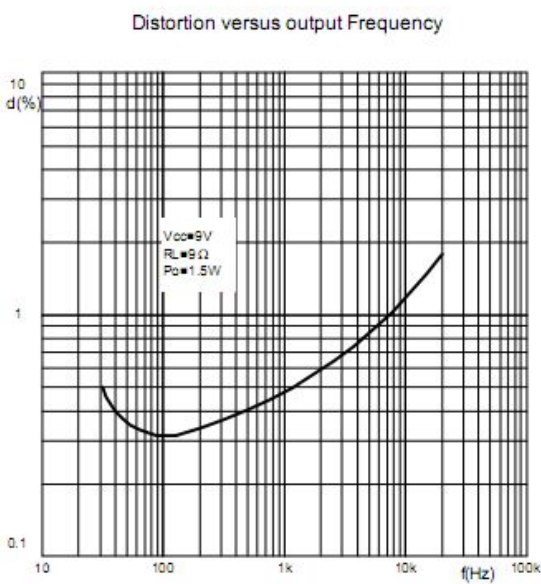
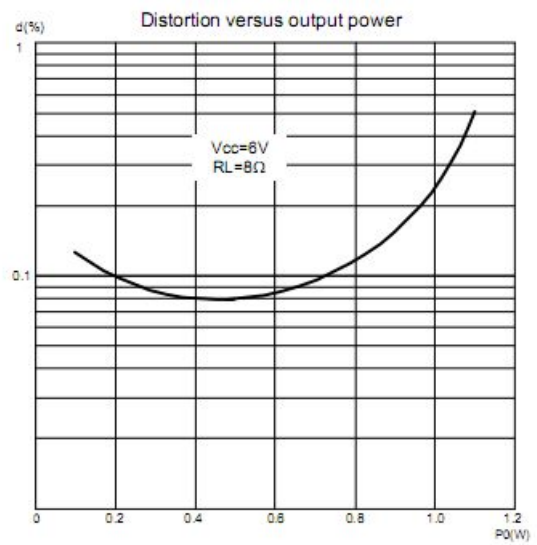
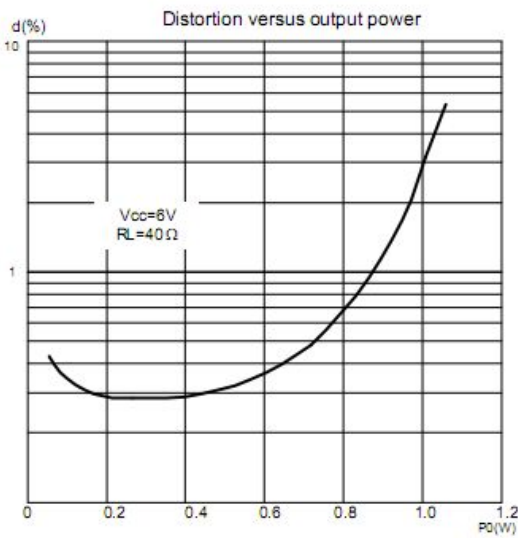
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Supply Voltage	Vs		3		12	V
Quiescent Current	Iq			40	50	mA
Quiescent output voltage	Vo			4.5		V
Voltage gain	Av	Stereo	43	45	47	dB
		Bridge	49	51	53	
Voltage gain difference	ΔAv				±1	dB
Input impedance	Ri			30		kΩ
Output Power	Po	f=1kHz;d=10% Stereo per channel Vcc=9V;RL=4Ω RL=8Ω	1.7	2.3 1.3		
		Vcc=6V;RL=4Ω RL=8Ω	0.7	1 0.6		W
		Vcc=3V;RL=4Ω		0.1		
		Bridge Vcc=9V;RL=8Ω Vcc=6V;RL=4Ω		4.7 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	3 6	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

TYPICAL PERFORMANCE CHARACTERISTICS



APPLICATION CIRCUIT

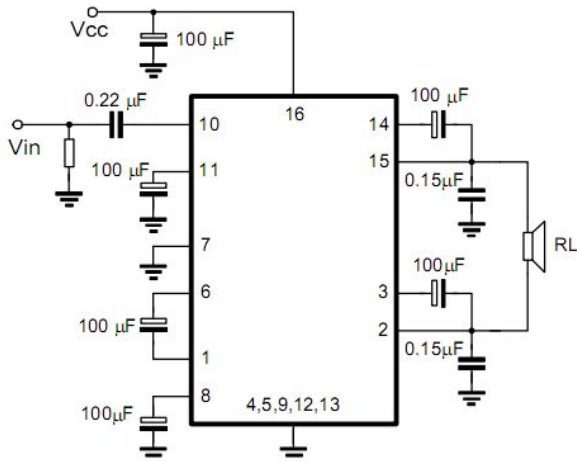


Fig. 5 Bridge Application

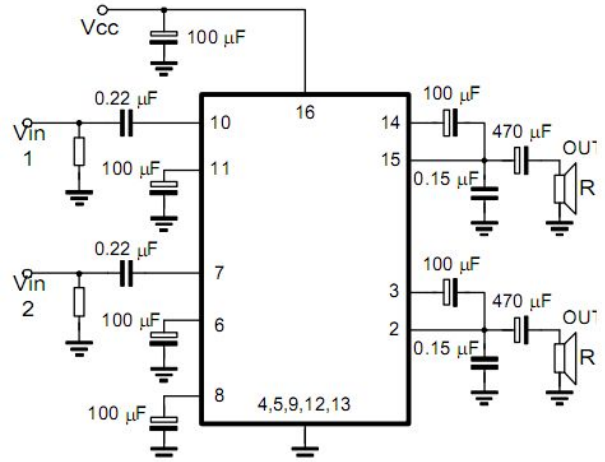
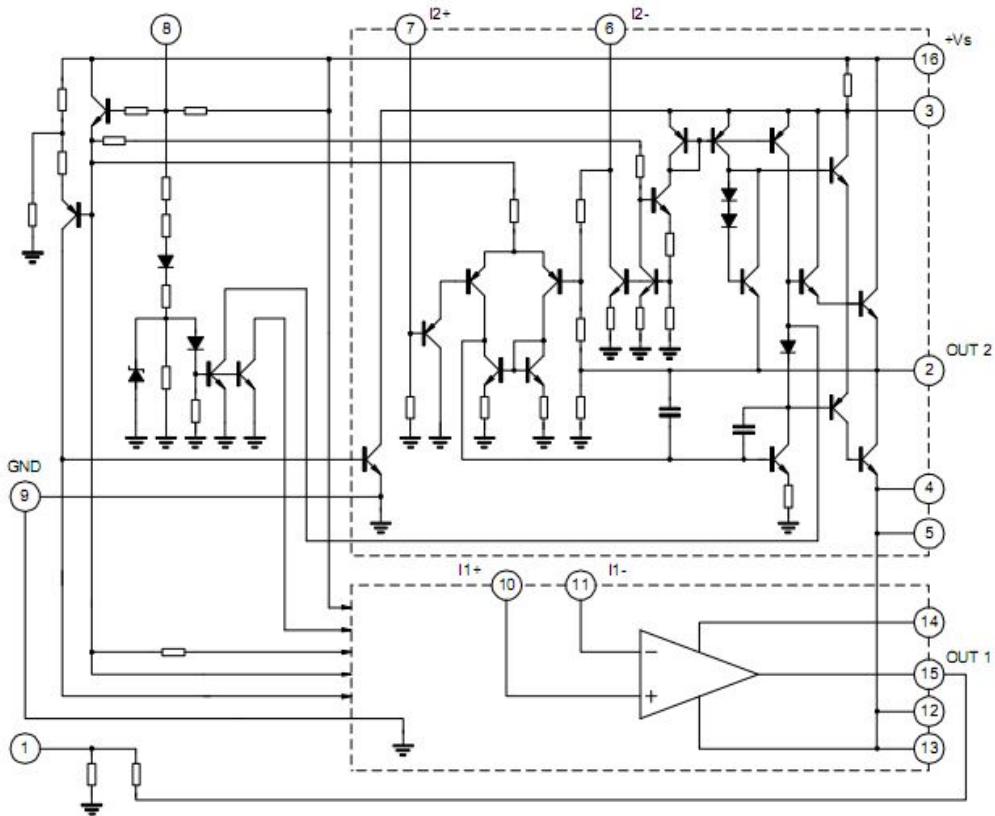


Fig. 6 Stereo Application

SCHEMATIC DIAGRAM



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