

# HLF

# TEA2025B(12V) LINEAR INTEGRATED CIRCUIT

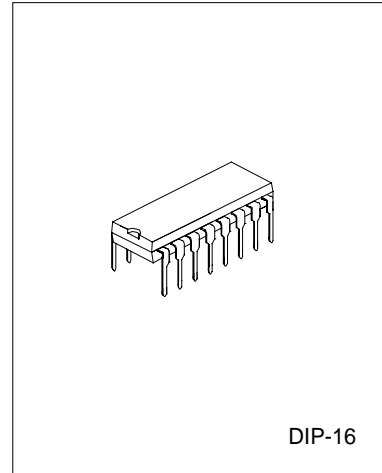
## STEREO AUDIO AMPLIFIER

### DESCRIPTION

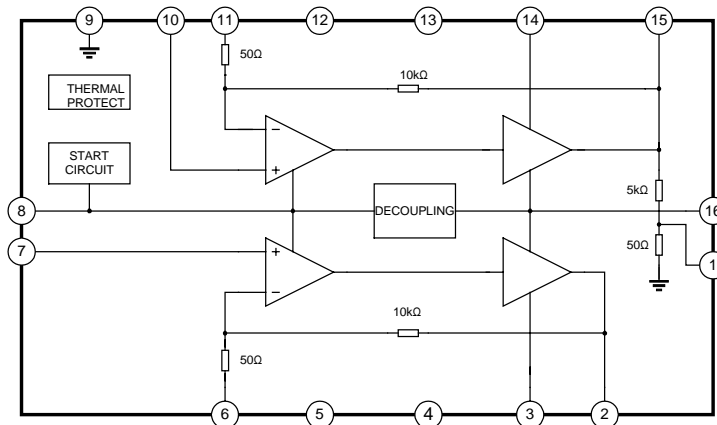
The TEA2025B is a monolithic integrated audio amplifier in a 16-pin plastic dual in line package. It is designed for portable cassette players and radios.

### 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	12	V
Output Peak Current	Io	1.5	A
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-40~+150	°C

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### 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

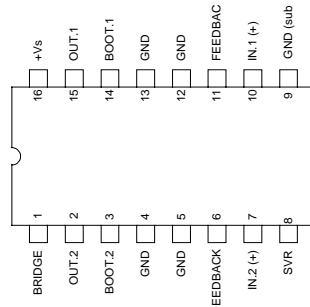
Rth(j-c): Junction to case thermal resistance 15°C /W

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

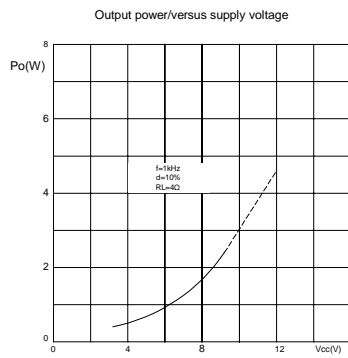
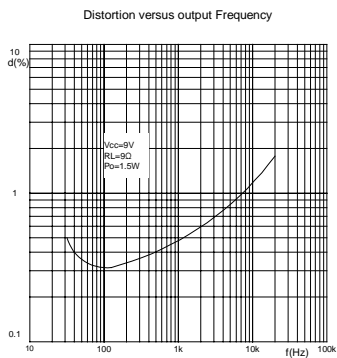
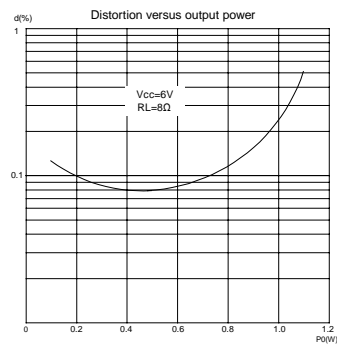
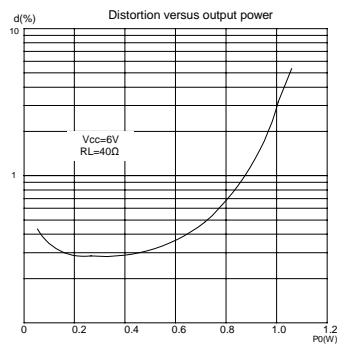
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## PIN CONNECTION



## TYPICAL PERFORMANCE CHARACTERISTICS



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## APPLICATION CIRCUITS

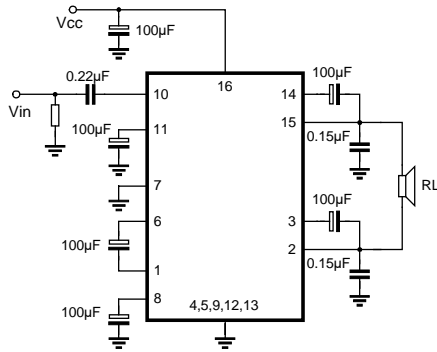


Fig. 5 Bridge Application

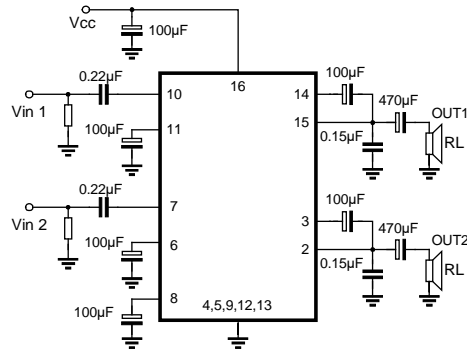


Fig. 6 Stereo Application

## SCHEMATIC DIAGRAM

