

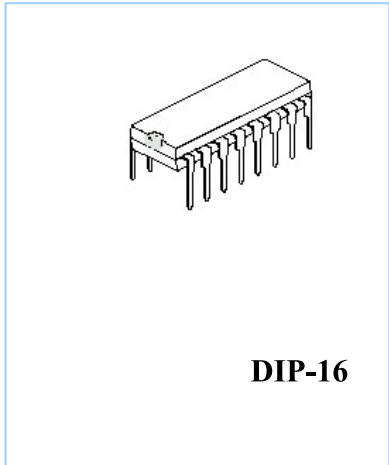
# STEREO AUDIO AMPLIFIER

## DESCRIPTION

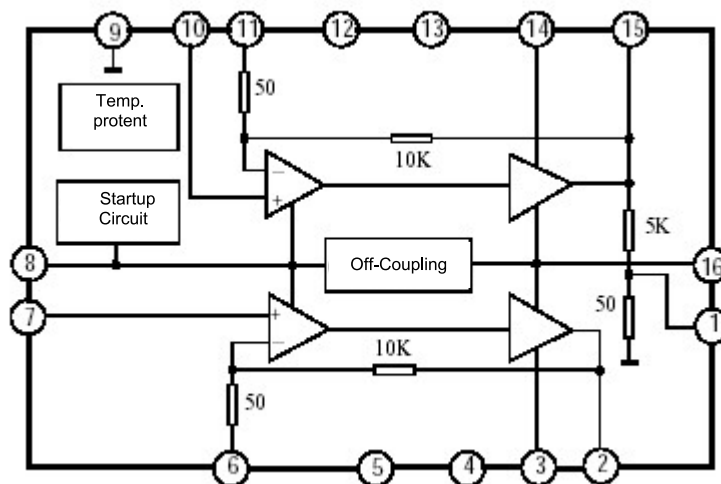
The AV2025 is a monolithic integrated circuit consisting of a 2 channel power amplifier. It is suitable for stereo and bridge amplifier application of radio cassette tape recorders.

## FEATURES

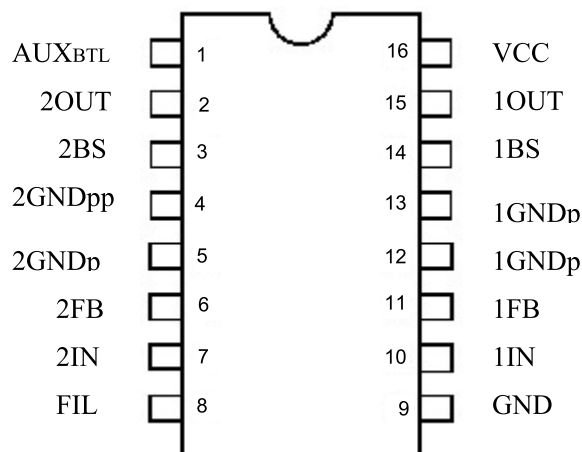
- Bridge or stereo configuration.
- Few External components
- High Channel isolation
- Voltage range : 3V to 12V
- Power on/off no noise
- Voltage gain up to 45dB(Adjustable with external resistor)
- Soft clipping
- Internal Thermal protection
- Working Voltage down to 3V



## BLOCK DIAGRAM



## PIN CONFIGURATION



**ORDERING INFORMATION**

PIN	SYMBOL	PIN	SYMBOL
1	AUX <sub>BTL</sub>	9	GND
2	2OUT	10	1IN
3	2BS	11	1FB
4	2GND <sub>p</sub>	12	1GND <sub>p</sub>
5	2GND <sub>p</sub>	13	1GND <sub>p</sub>
6	2FB	14	1BS
7	2IN	15	1OUT
8	FIL	16	VCC

**ABSOLUTE MAXIMUM RATINGS (T<sub>amb</sub>=25°C)**

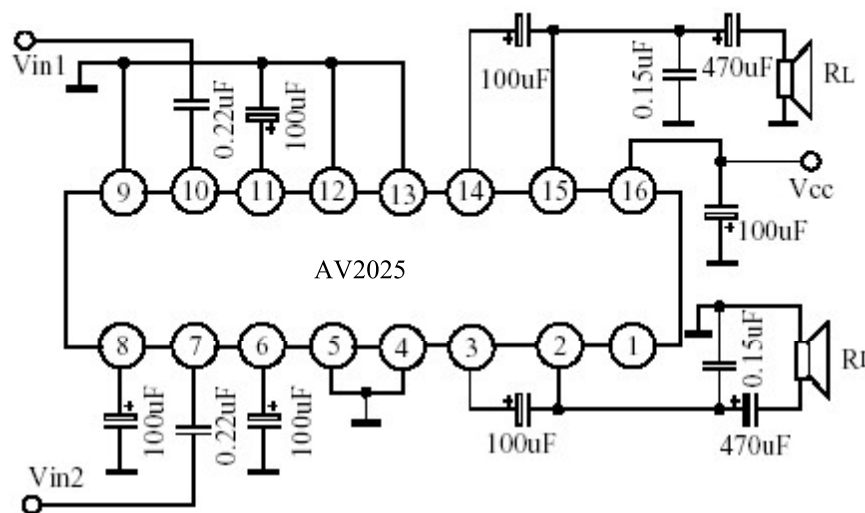
PARAMETER	SYMBOL	VALUE	UNIT
Supply	V <sub>cc</sub>	15	V
Output Peak Current	I <sub>op</sub>	1.5	A
Junction Temperature	T <sub>j</sub>	150°C	°C
Storage Temperature	T <sub>s</sub>	-40°C ~+150°C	°C

**ELECTRICAL CHARACTERISTICS**(T<sub>A</sub>=+25°C, V<sub>cc</sub>=9V, f=1KHz, R<sub>L</sub>=8Ω, unless otherwise specified).

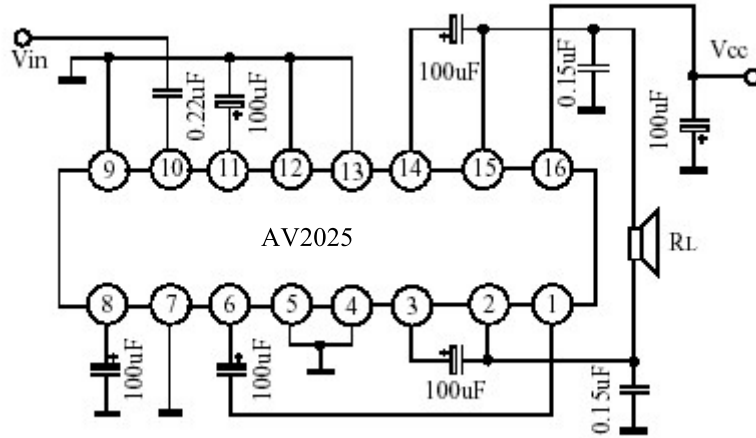
PARAMETER	SYMBOL	TEST CONDITIONS		MIN	TYP	MAX	UNIT
Supply Voltage	V <sub>cc</sub>			3	-	12	V
Quiescent Current	I <sub>cc</sub>	V <sub>i</sub> =0, Stereo		-	40	50	mA
Quiescent Output Voltage	V <sub>o</sub> (DC)			4.0	4.5	5.0	V
Closed Loop Voltage Gain	A <sub>v</sub>	Stereo	V <sub>i</sub> =-45dBm	43	45	47	dB
		Bridge		49	51	53	
Channel Balance	CB	Stereo		-1	0	+1	dB
Total Harmonic Distortion	THD	Stereo	P <sub>o</sub> =250mW, f=1kHz, R <sub>L</sub> =4Ω, V <sub>cc</sub> =9V	-	0.3	1.5	%
		Bridge		-	0.5	-	

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT		
Input Resistance	Zi			30		KΩ		
Channel Separation	CSR	Rg=10KΩ, f=1kHz, RL=4Ω, Po=1W	40	55	-	dB		
Ripple Rejection	Srip	Rg=0, frip=100Hz, Vrip=150mV, Av=45dB	40	46	-	dB		
Input Noise Voltage	VNI	BW:20Hz-20kHz, Av=200	Rg=0Ω	-	1.5	3	uV	
			Rg=10KΩ	-	3	6		
Output Power	Po	THD=10%, f=1kHz	Stereo	Vcc=9V, RL=4Ω	1.7	2.3	-	W
				Vcc=6V, RL=8Ω	-	1.3	-	
				Vcc=6V, RL=4Ω	0.7	1.0	-	
			Vcc=6V, RL=8Ω	-	0.6	-		
			Vcc=3V, RL=4Ω	-	0.1	-		
			Bridge	Vcc=9V, RL=8Ω	-	4.7	-	
Vcc=6V, RL=4Ω	-	2.8		-				

**APPLICATION CIRCUIT**



( 1. STEREO )



( 2.BRIDGE)

TYPICAL PERFORMANCE CHARACTERISTICS

