

# AN7523

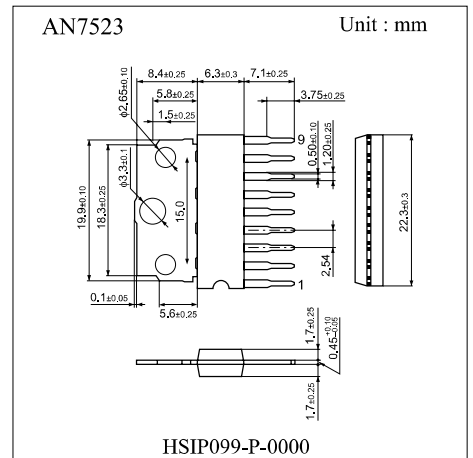
## 3W BTL Audio Power Amplifier Circuit

### ■ Features

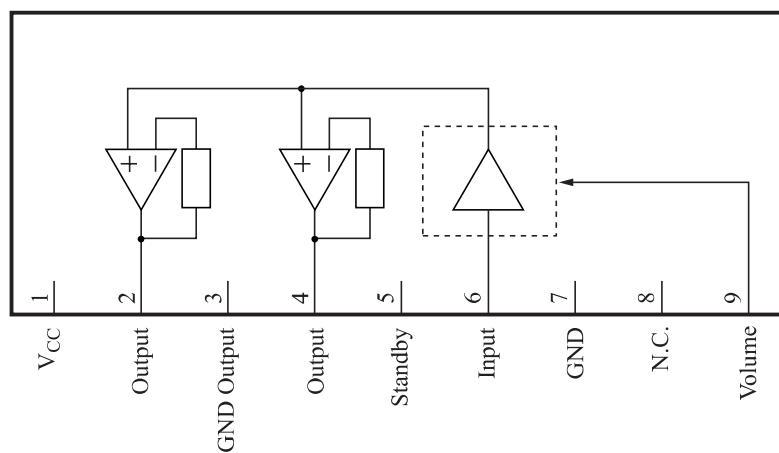
- $V_{CC}=8V$ , Output=3W( $8\Omega$ )
- Built-in Standby function.
- Built-in DC volume circuits.

### ■ Applications

- TVs, Audio equipment



### ■ Block Diagram



## ■ Pin Descriptions

Pin No.	Function
1	Vcc
2	ch1 Output(+)
3	GND(Output1)
4	ch1 Output(-)
5	Standby
6	ch1 Input
7	GND
8	N.C
9	DC volume

## ■ Absolute Maximum Ratings

Parameter	Symbol	Ratio	Unit	Note
Storage temperature	T <sub>stg</sub>	-55 to +150	°C	1
Operating ambient temperature	T <sub>opr</sub>	-25 to +70	°C	1
Supply voltage	V <sub>cc</sub>	14	V	2
Supply current	I <sub>cc</sub>	1.0	A	
Power dissipation	P <sub>D</sub>	1220	mW	T <sub>a</sub> =70°C

Note1) T<sub>a</sub>=25°C except storage temperature and operating ambient temperature.

Note2) At no-signal.

## ■ Operating Supply Voltage Range

Operating supply voltage range	V <sub>cc</sub>	3.5V to 13.5V
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### ■ Electrical Characteristics (Vcc=5.0V, RL=8Ω, freq=1kHz, Ta=25°C ±2 °C)

Parameter	Symbol	Condition	min.	typ.	max.	Unit	Note
Quiescent current	ICQ	VIN=0mV, Vol.=0V	–	25	60	mA	
Standby current	ISTB	VIN=0mV, Vol.=0V	–	1	10	μA	
Output noise voltage	VNO	Rg=10kΩ, Vol.=0V	–	0.10	0.4	mVrms	1
Voltage gain	GV	PO=0.25W, Vol.=1.25V	31	33	35	dB	
Total harmonic distortion	THD	PO=0.25W, Vol.=1.25V	–	0.10	0.5	%	
Maximum power output	PO	THD=10%, Vol.=1.25V	2.4	3.0	–	W	
Ripple rejection ratio	RR	Rg=10kΩ, Vol.=0V Vr=0.5Vrms, fr=120Hz	30	50	–	dB	1
Output offset voltage	Voff	Rg=10kΩ, Vol.=0V	-250	0	250	mV	
Maximum attenuation	Att	PO=0.5W, Vol=0V	70	85	–	dB	1
Center voltage gain	GVM	PO=0.5W, Vol=0.6V	20.5	23.5	26.5	dB	
Standby terminal current	ISTB	VIN=0mV, VSTB=3V	–	–	25	μA	
Volume terminal current	Ivol	VIN=0mV, Vol=0V	-12	–	–	μA	

Note1) For this measurement, use the filter <Bandwidth:15Hz to 30kHz(12dB/octave)>

### ■ Application Circuit

