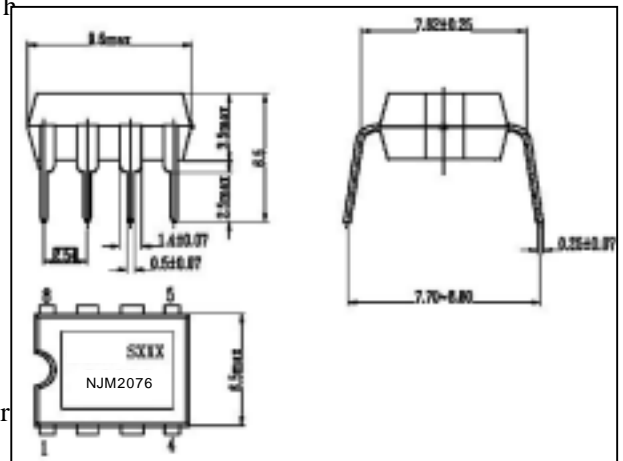


DUAL LOW VOLTAGE POWER AMPLIFIER NJM2076

DESCRIPTION

The NJM2076 is a dual power amplifier, which operates with 1.0V minimum supply voltage. The NJM2076 is suitable radio and head-phone of stereo and single BTL application.

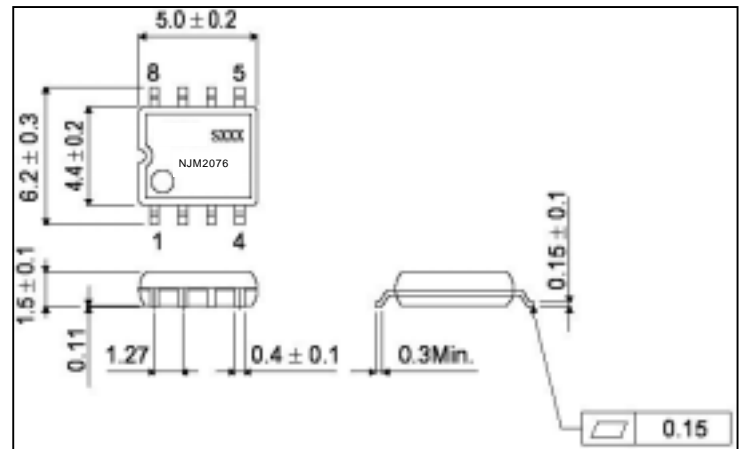
Outline Drawing



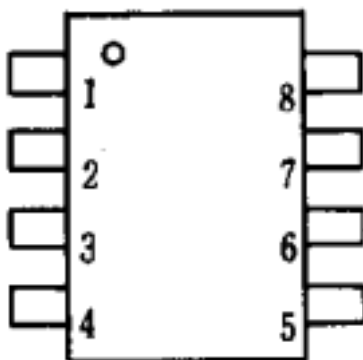
FEATURE

- BTL operation $P_o=90mW$ type.
- Minimum external components.
- Headphone stereo Amp. with external transistor
- Low operation voltage (1.0V min)
- Low operating current (4.7mA Typ.)

DIP—8



PIN CONNECTION



PIN FUNCTION

SOP-8

1. Inverting Amp. Input (A)
2. Non-Inverting Amp. Input (B)
3. V^+
4. Base (B)
5. (B) Output
6. GND
7. (A) Output
8. Base (A)

ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Characteristic	Symbol	Value	Unit
Supply Voltage	Vcc	4.5	V
Maximum input signal	V _{IN}	200	mVrms
Power dissipation	P _D	500	mW
Operating temperature range	Topr	-20~75	°C
Storage Temperature range	Tstg	-40~125	°C

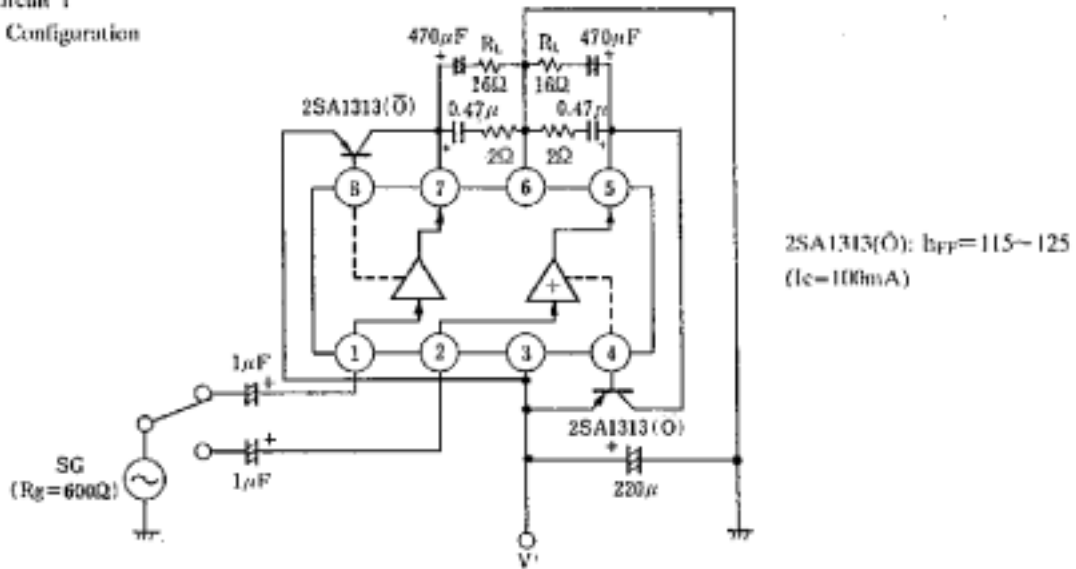
ELECTRICAL CHARACTERISTICS

(Unless otherwise specified: Ta=25°C, V⁺=1.5V)

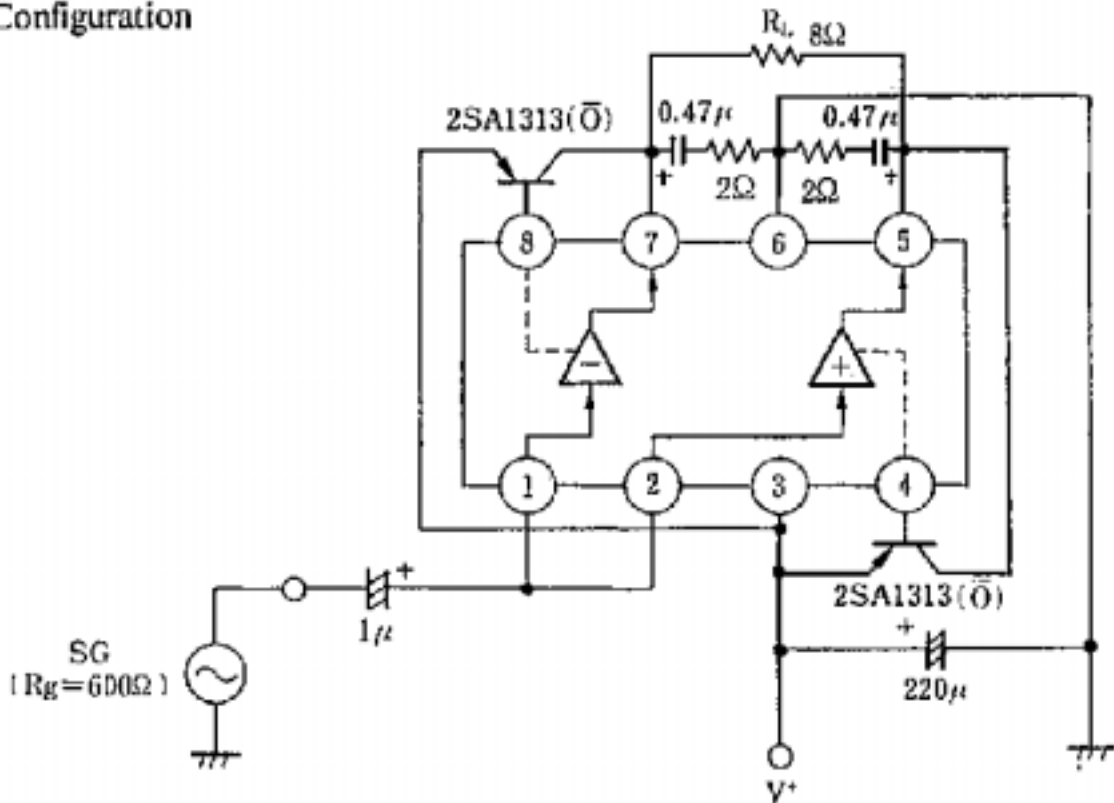
Characteristics	Symbol	Test conditions	Min	Typ	Max	Unit
Operating Current	I _{cc}	Input: Open		4.7	7.0	mA
() Stereo Configuration (Test Circuit 1: R _L =16Ω)						
Voltage Gain	A _v	V _{IN} =10mVrms	26.5	28	29.5	dB
Max. Output Power	P _{O1}	THD=10% (D, M-Type)	15	17.5		mW
	P _{O2}	THD=10%, V ⁺ =1.0V		3		mW
Total Harmonic Distortion	THD ₁	P _O =1mW(126mVrms/16Ω)		0.4	0.8	%
Output Noise Voltage	V _{NO1}	R _g =0, A curve		50	150	μV
Ripple Rejection Ratio	RR ₁	R _g =0, f _R =1kHz, V _R =30mVrms	25	35		dB
Input Resistance	R _{IN}		25	33	43	kΩ
Output Pin Voltage	V _{O(DC)}		0.62	0.7	0.77	V
() BTL Configuration (Test Circuit 2: R _L =8Ω)						
Max. Output Power	P _{O3}	THD=10% (D, M-Type)	75	90		mW
	P _{O4}	THD=10%, V ⁺ =1.0V (D, M-Type)		20		mW
Total Harmonic Distortion	THD ₂	P _O =10mW(283mVrms/8Ω)		1.5	4.5	%
Output Noise Voltage	V _{NO2}	R _g =0, A curve		85	250	μV
Ripple Rejection Ratio	RR ₂	R _g =0, f _R =1kHz, V _R =30mVrms	20	25		dB
Voltage Difference Between Two Output Pins	ΔV _{O(DC)}				50	mV

TEST CIRCUIT

- Test Circuit 1
Stereo Configuration

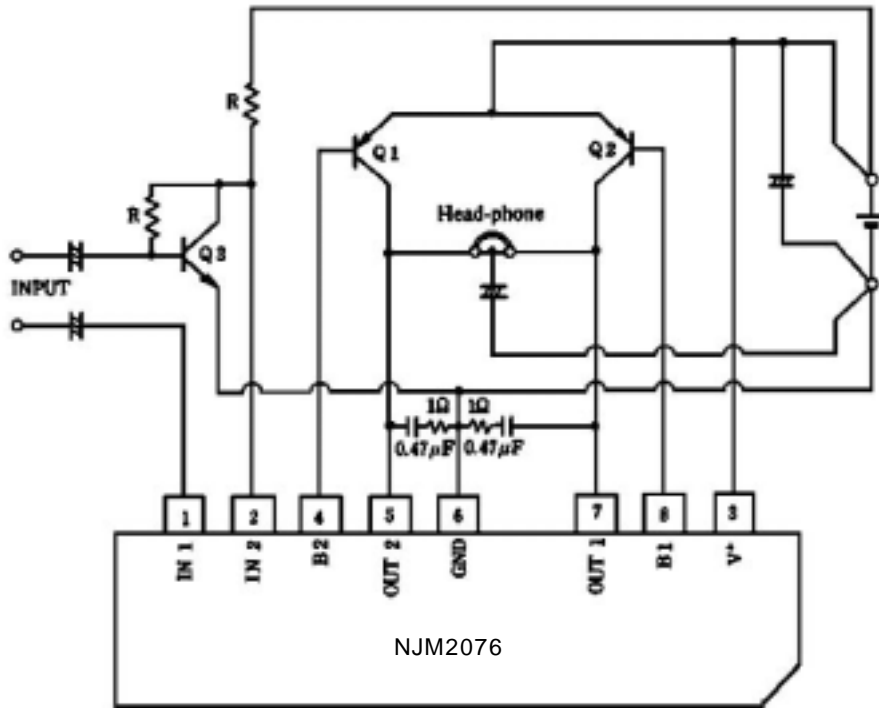


- Test Circuit 2
BTL Configuration

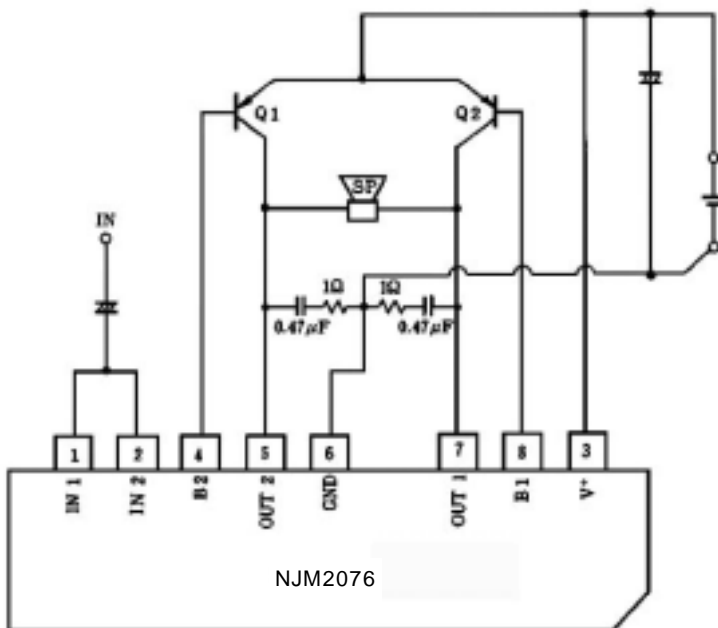


APPLICATION CIRCUIT

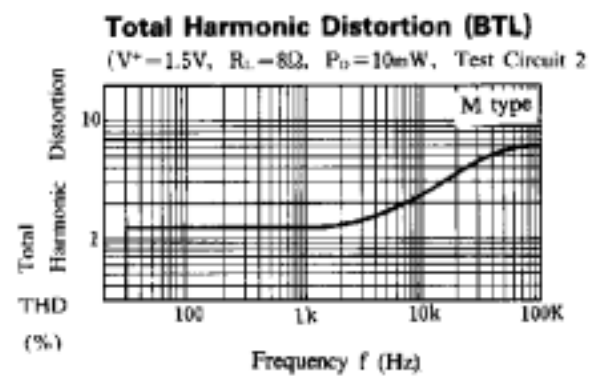
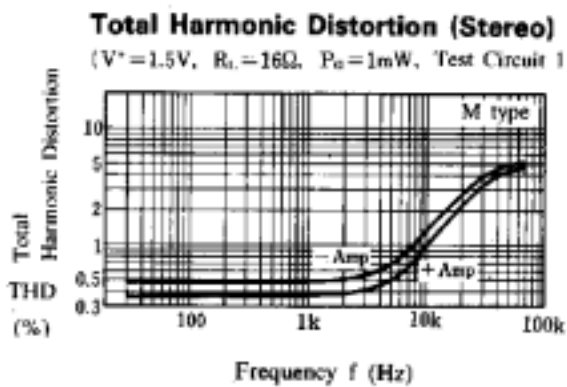
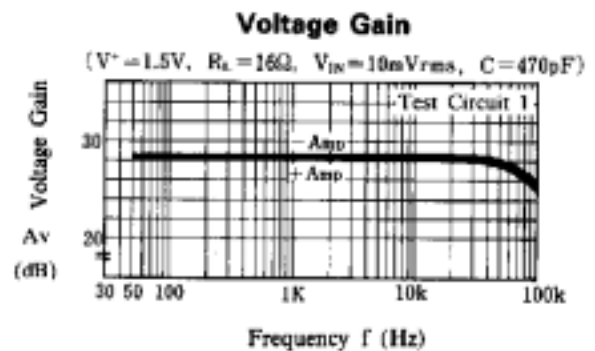
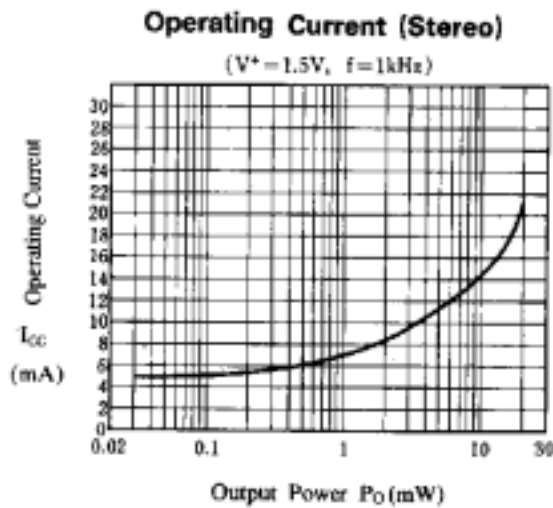
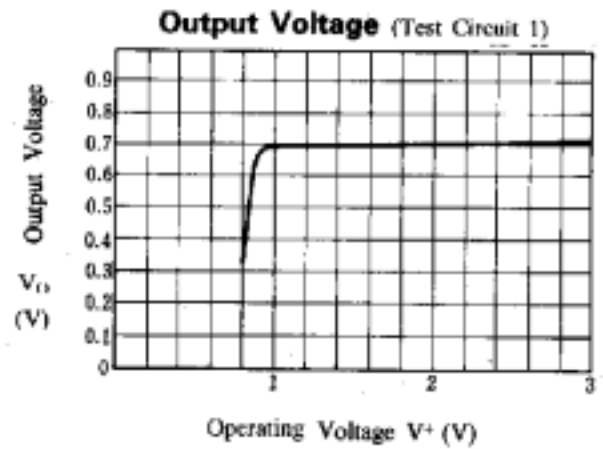
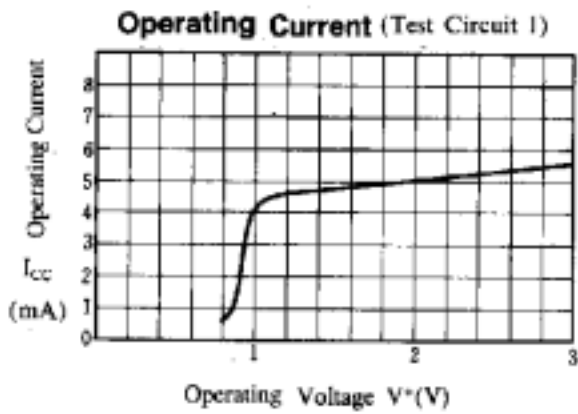
1. For Stereo Head-Phone



2. BTL Amp. for Speaker

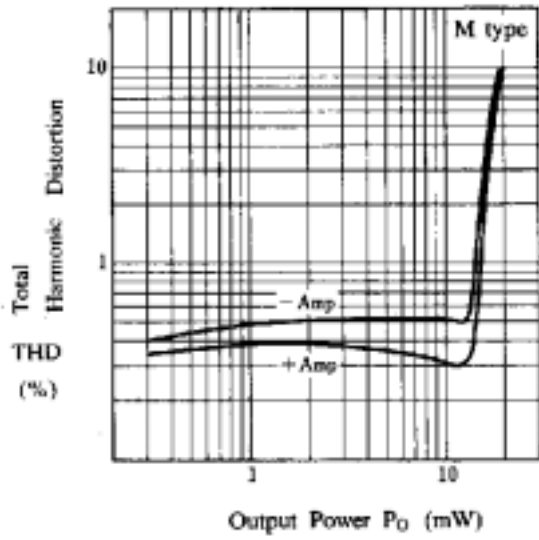


CHARACTERISTIC CURVES



Total Harmonic Distortion (Stereo)

($V^+ = 1.5V$, $R_L = 16\Omega$, $f = 1kHz$, Test Circuit 1)



Total Harmonic Distortion (BTL)

($V^+ = 1.5V$, $R_L = 8\Omega$, $f = 1kHz$, Test Circuit 2)

