

LOW FREQUENCY POWER AMPLIFIER—YD8227

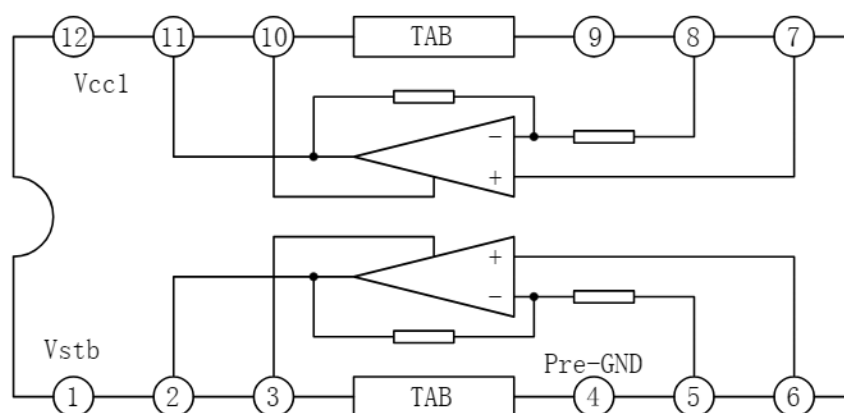
DESCRIPTION

The YD8227P is the audio power amplifier with built-in two channels developed for portable radio cassette tape recorder with power ON/OFF switch.

FUNCTIONS

- *Wide operating supply voltage: $V_{CC}=5\sim 12V$;
- *Low quiescent supply current ($I_{CC}=21mA$, typical, at $V_{CC}=9V$, $V_i=0$);
- *Output power: $P_o=2.50W/CH$ at $V_{CC}=9V$, $R_L=4\Omega$, $f=1kHz$, $THD=10\%$;
- *Soft clip;
- *Built-in Thermal shut-down protection circuit;
- *Stand-by switch.

BLOCK DIAGRAM



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ABSOLUTE MAXIMUM RATINGS($T_{amb}=25^{\circ}\text{C}$)

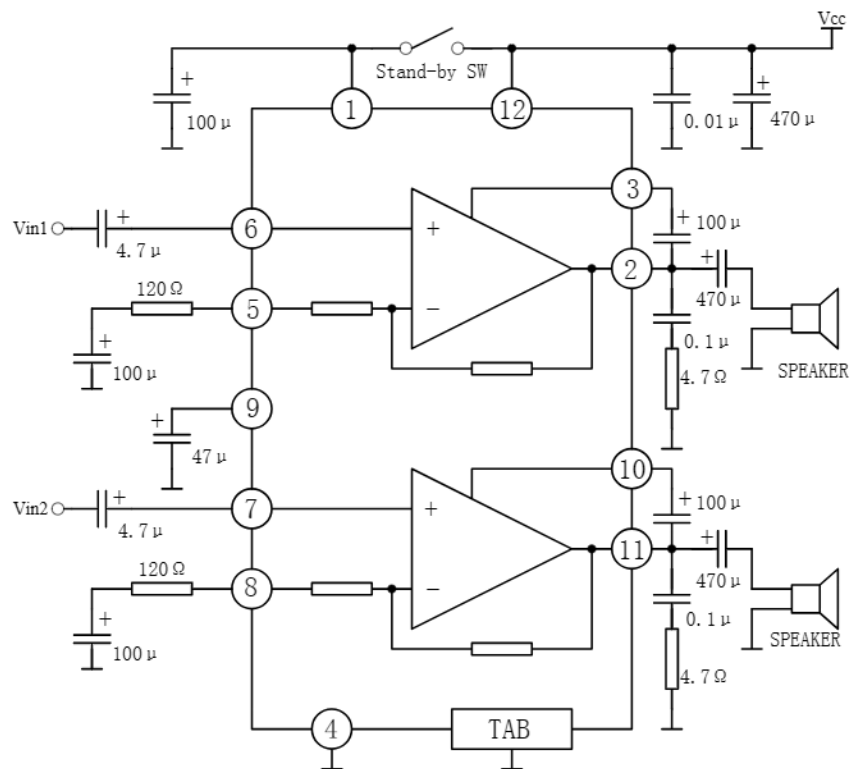
PARAMETER	SYMBOL	VALUE	UNIT
Supply Voltage	V_{CC}	20	V
Output Peak Current	I_{op}	2.5	A
Power Dissipation ($80*60*1.2\text{mm}^3$ PCB)	P_D	4.0	W
Operating Temperature	T_{opr}	-25 to +75	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^{\circ}\text{C}$

ELECTRICAL CHARATERISTICS

($V_{CC}=9\text{V}$, $R_g=600\ \Omega$, $f=1\text{kHz}$, $T_{amb}=25^{\circ}\text{C}$, all voltage referenced to GND unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Quiescent Current	I_{ccq}	$V_{in}=0$		21	45	mA
Output Power	P_o	THD=10%, $R_L=4\ \Omega$	2.0	2.5		W
		THD=10%, $R_L=3\ \Omega$		3.0		
Total Harmonic Distortion	THD	$P_o=0.4\text{W/CH}$		0.2	1.0	%
Voltage Gain	G_v	$R_f=120\ \Omega$ $V_o=0.775\text{V}$	43	45	47	dB
		$R_f=0\ \Omega$ $V_o=0.775\text{V}$		56.5		
Input Resistance	Z_i	$f=1\text{kHz}$		30		k Ω
Output Noise Voltage	V_{N0}	$R_g=10\text{k}\ \Omega$ BPF=20Hz~20KHz		0.3	1.0	mV
Ripple Rejection Ratio	RR	$f=100\text{Hz}$ $R_g=600\ \Omega$		52		dB
Cross Talk	CT	$V_o=0.775\text{V}$		50		dB
Input Offset Voltage	V_{7-8}			30	60	mV
Standby Current	I_{SBY}			1		μA

APPLICATION CIRCUIT



OUTLINE DRAWING

12-DIPH-300

