

STK4332

AF Power Amplifier (5W + 5W min, THD = 1.0%)

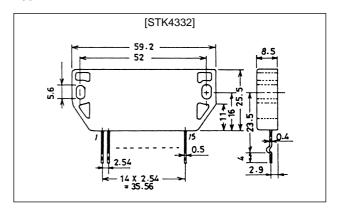
#### **Features**

- Small and slim package with 25.5 mm height.
- Capable of guaranteeing substrate temperature 125°C, thereby reducing heat sink.
- Excellent cost performance.

## **Package Dimensions**

unit: mm

#### 4032



## **Specifications**

### **Maximum Ratings** at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V <sub>CC</sub> max	Pin 4 to 7, 12	32	V
Thermal resistance	Өј-с	One power transistor	7	°C/W
Junction temperature	Tj		150	°C
Operating substrate temperature	Tc		125	°C
Storage temperature	Tstg		-30 to +125	°C
Available time for load short-circuit	t <sub>s</sub>	$V_{CC} = 23V, R_L = 8\Omega, P_O = 5W, f = 50Hz$	2	S

### **Recommended Operating Conditions** at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	V <sub>CC</sub>		23	V
Load resistance	R <sub>L</sub>		8	Ω

Operating Characteristics at Ta = 25°C,  $V_{CC}$  = 23V,  $R_L$  = 8 $\Omega$ , Rg = 600 $\Omega$ , VG = 40 dB, at specified Test Circuit (based on Sample Application Circuit).

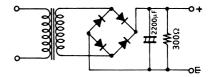
Parameter	Symbol	Conditions	min	typ	max	Unit
Quiescent current	Icco	V <sub>CC</sub> = 27V	20	60	120	mA
Output power	P <sub>O</sub> (1)	THD = 1.0%, f = 1kHz	5			W
	P <sub>O</sub> (2)	THD = 1.0%, f = 60Hz to 10kHz	2.5			W
Total harmonic distortion	THD	P <sub>O</sub> = 0.1W, f = 1kHz			0.5	%
Frequency response	f <sub>L</sub> , f <sub>H</sub>	$P_0 = 0.1W, +0 \\ -3 dB$		50 to 50k		Hz
Input impedance	r <sub>i</sub>	P <sub>O</sub> = 0.1W, f = 1kHz		110k		Ω
Output noise voltage	V <sub>NO</sub>	$V_{CC}$ = 27V, Rg = 10k $\Omega$			0.8	mVrms

Notes.

Unless otherwise specified for the power supply at the time of test, use the constant voltage power supply.

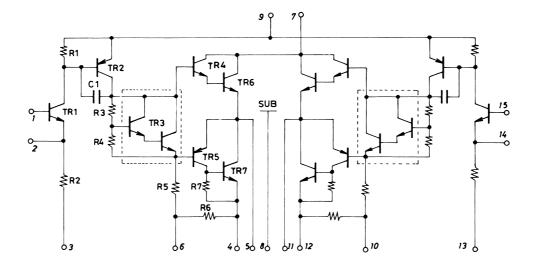
When testing the available time for load short-circuit and output noise voltage, use the specified transformer as shown right.

The output noise voltage is the peak value on the mean value indicating rms reading (VTVM), and should not involve impulse noise.

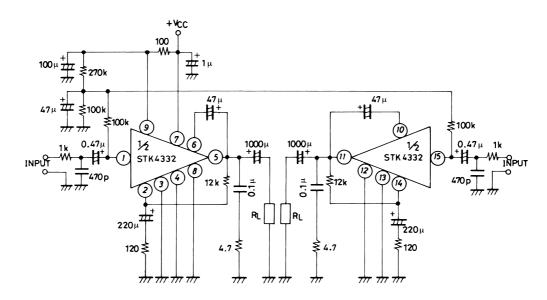


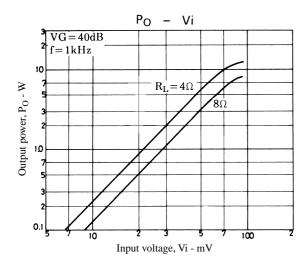
Specified Transformer Power Supply (Equivalent to RP-22)

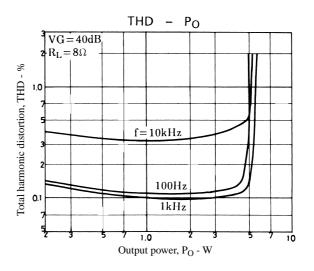
# **Equivalent Circuit**

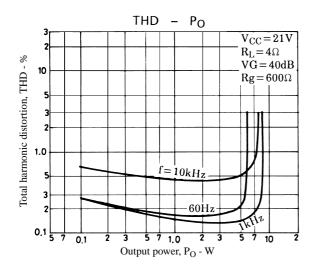


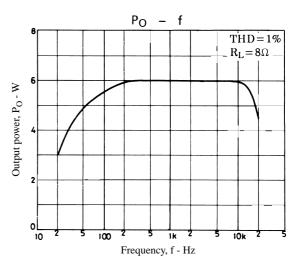
### Sample Application Circuit: 5W min 2-channel AF power amplifier

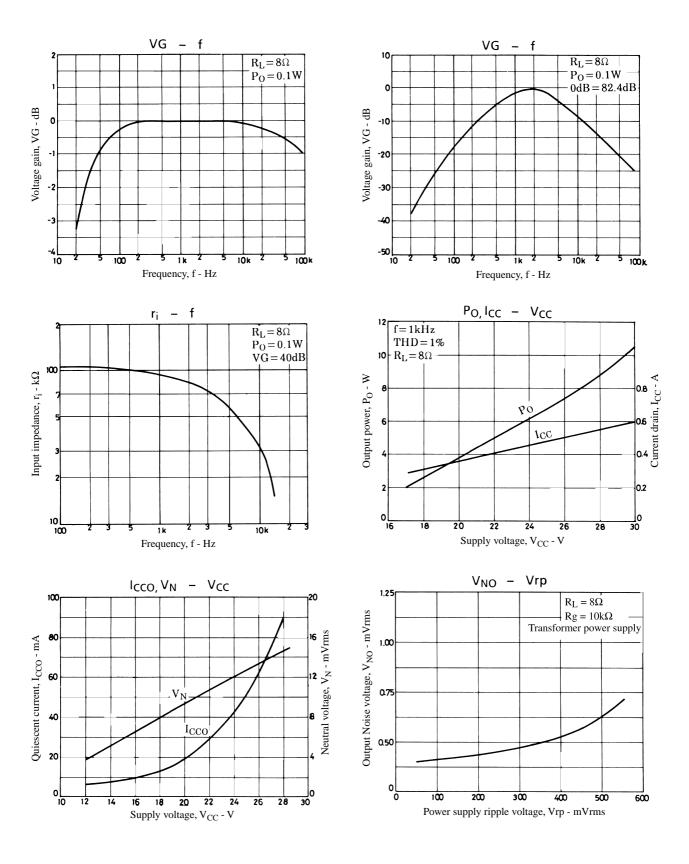


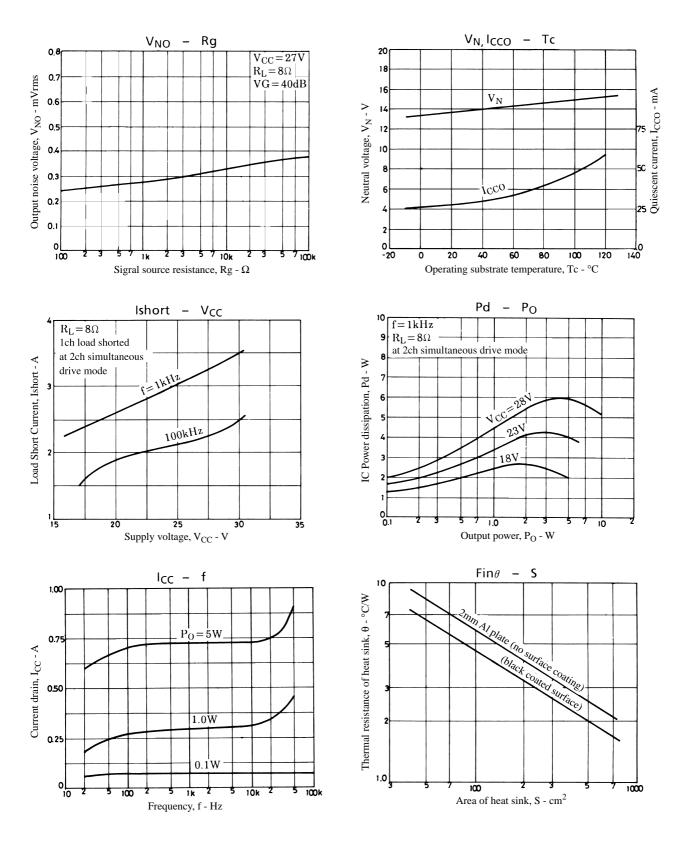


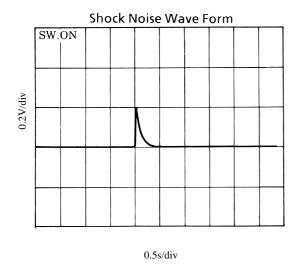


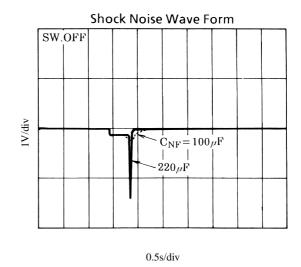












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