

**STK4362**

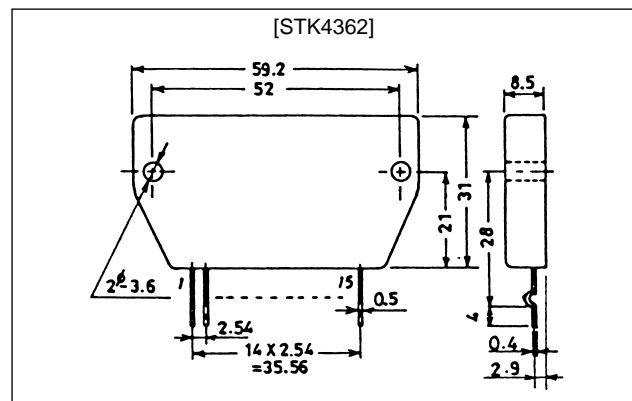
## AF Power Amplifier (10W + 10W min, THD = 1.0%)

### Features

- Capable of guaranteeing substrate temperature 125°C, thereby reducing heat sink.
- Excellent cost performance.

### Package Dimensions

unit: mm  
4033



### Specifications

Maximum Ratings at  $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	$V_{CC}$ max	Pin 4 to 7, 12	50	V
Thermal resistance	$\theta_{j-c}$	One power transistor	5	$^\circ\text{C}/\text{W}$
Junction temperature	$T_j$		150	$^\circ\text{C}$
Operating substrate temperature	$T_c$		125	$^\circ\text{C}$
Storage temperature	$T_{stg}$		-30 to +125	$^\circ\text{C}$
Available time for load short-circuit	$t_s$	$V_{CC} = 33\text{V}$ , $R_L = 8\Omega$ , $P_O = 10\text{W}$ , $f = 50\text{Hz}$	2	s

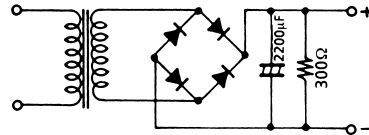
Recommended Operating Conditions at  $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	$V_{CC}$		33	V
Load resistance	$R_L$		8	$\Omega$

**Operating Characteristics** at  $T_a = 25^\circ\text{C}$ ,  $V_{CC} = 33\text{V}$ ,  $R_L = 8\Omega$ ,  $R_g = 600\Omega$ ,  $V_G = 40\text{dB}$ , at specified Test Circuit (based on Sample Application Circuit).

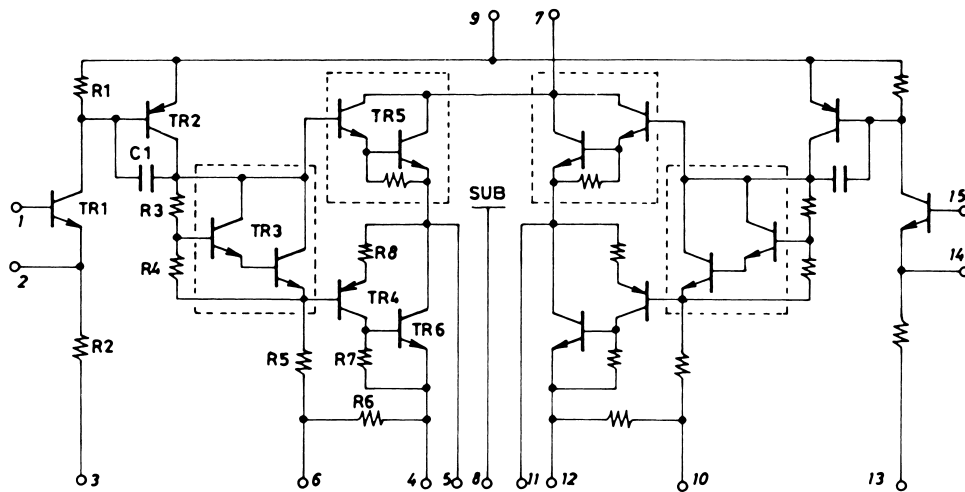
Parameter	Symbol	Conditions	min	typ	max	Unit
Quiescent current	$I_{CCO}$	$V_{CC} = 38\text{V}$	20	60	120	mA
Output power	$P_O(1)$	THD = 1.0%, $f = 1\text{kHz}$	10			W
	$P_O(2)$	THD = 1.0%, $f = 30\text{Hz to } 20\text{kHz}$	5			W
Total harmonic distortion	THD	$P_o = 0.1\text{W}$ , $f = 1\text{kHz}$			0.3	%
Frequency response	$f_L, f_H$	$P_o = 0.1\text{W}$ , $+0$ $-3$ dB		20 to 100k		Hz
Input impedance	$r_i$	$P_o = 0.1\text{W}$ , $f = 1\text{kHz}$		120k		$\Omega$
Output noise voltage	$V_{NO}$	$V_{CC} = 38\text{V}$ , $R_g = 10\text{k}\Omega$			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.

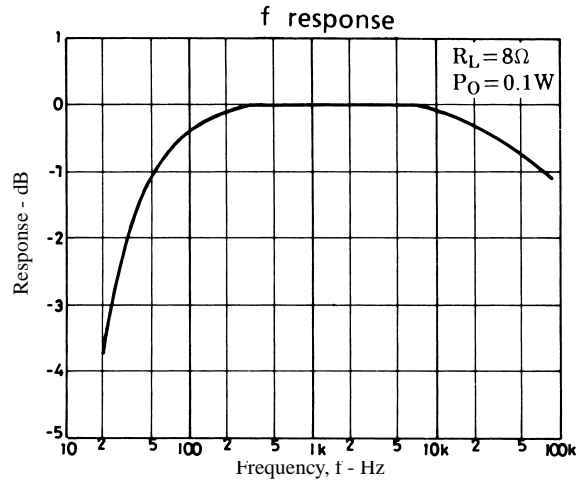
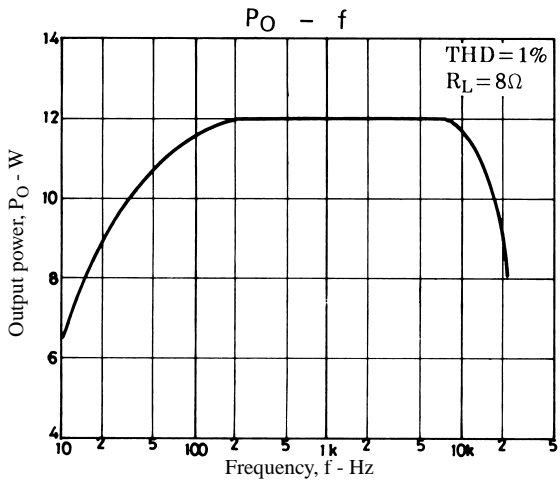
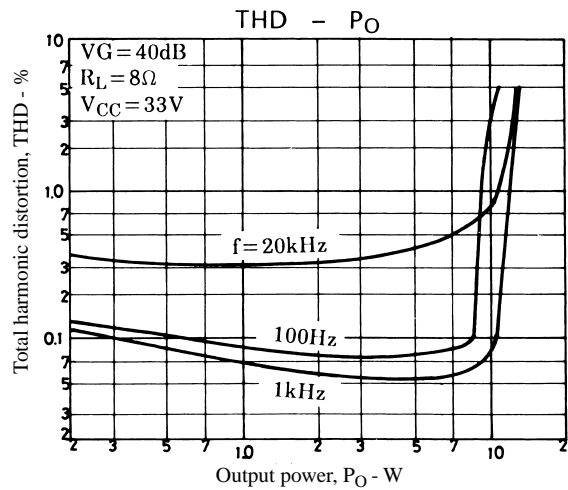
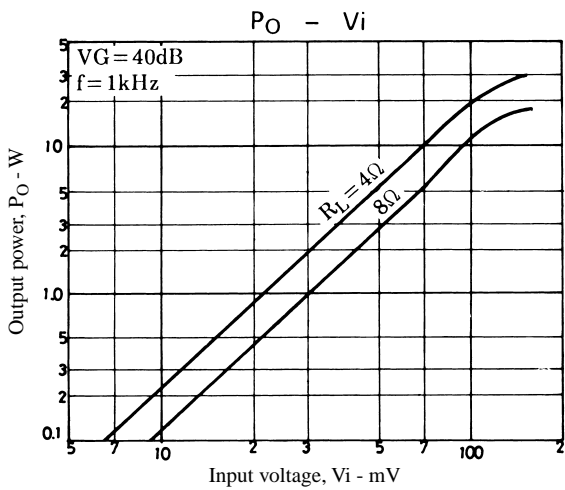
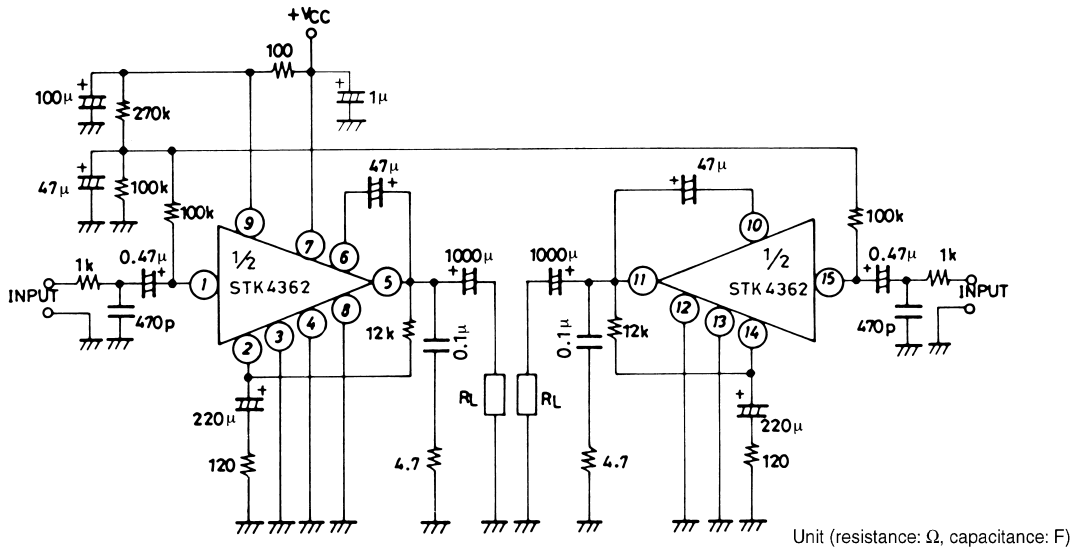


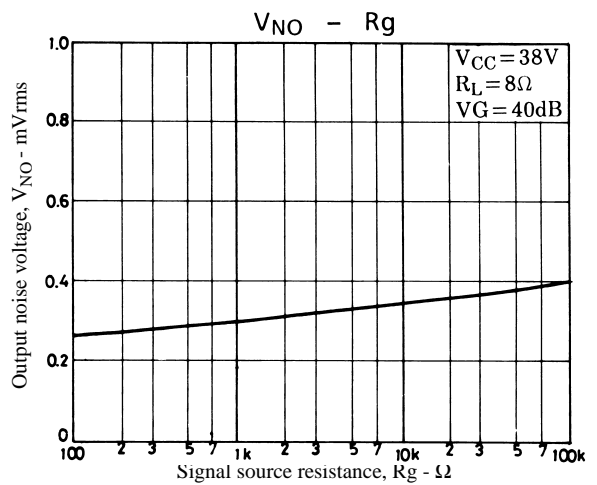
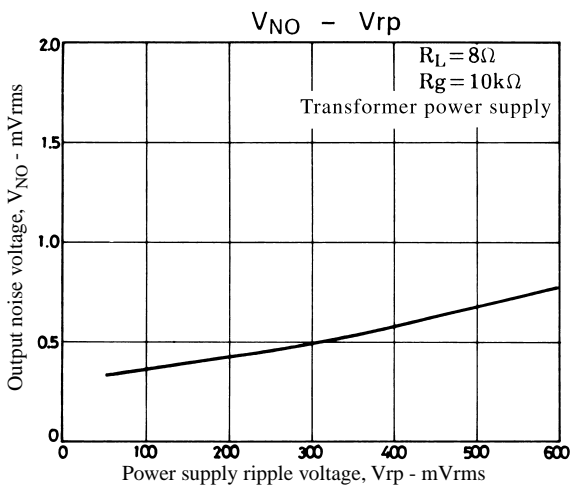
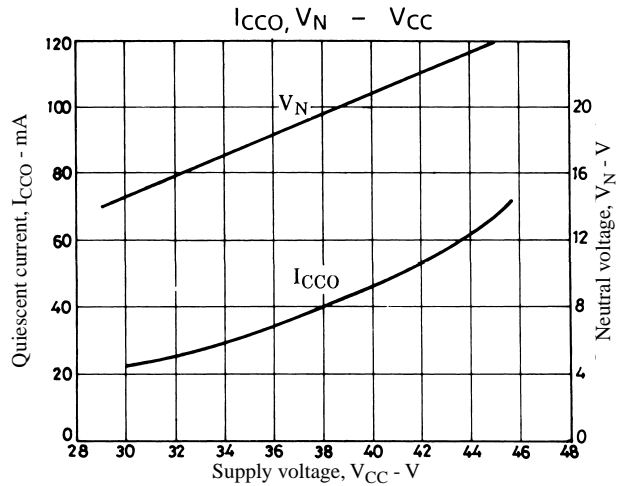
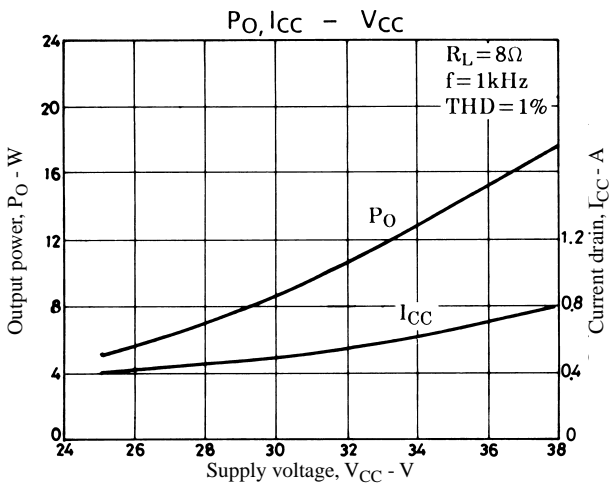
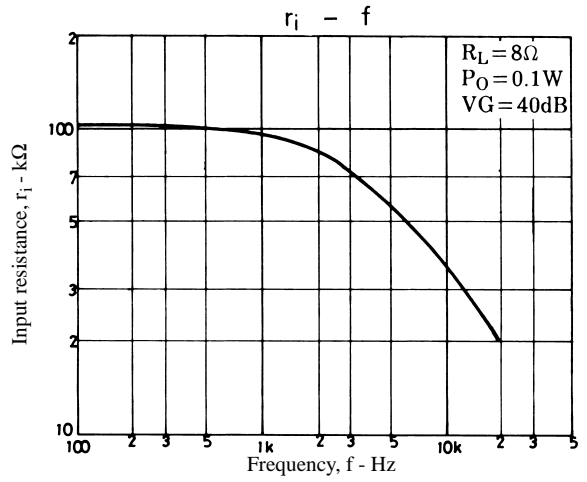
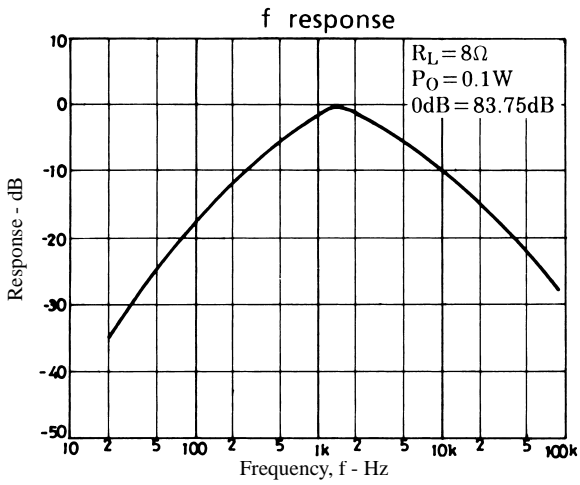
Specified Transformer Power Supply  
(Equivalent to RP-22)

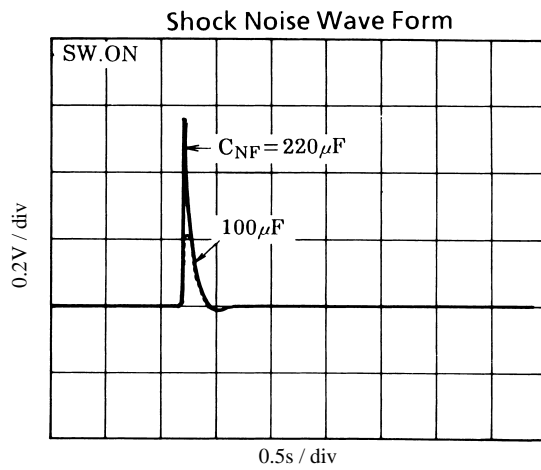
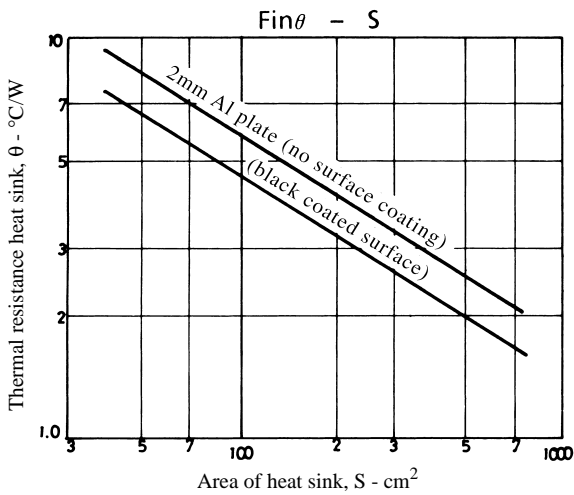
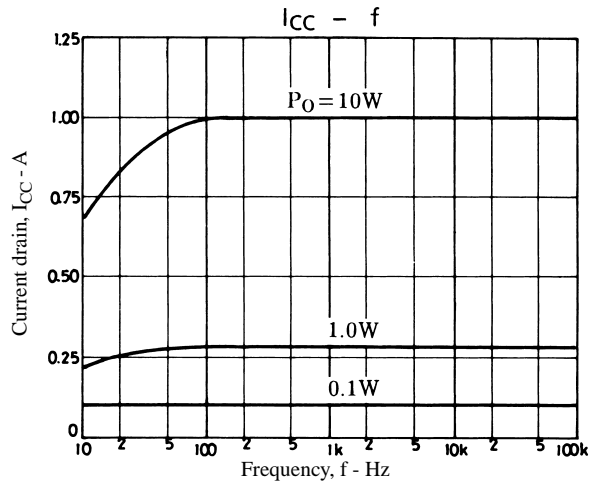
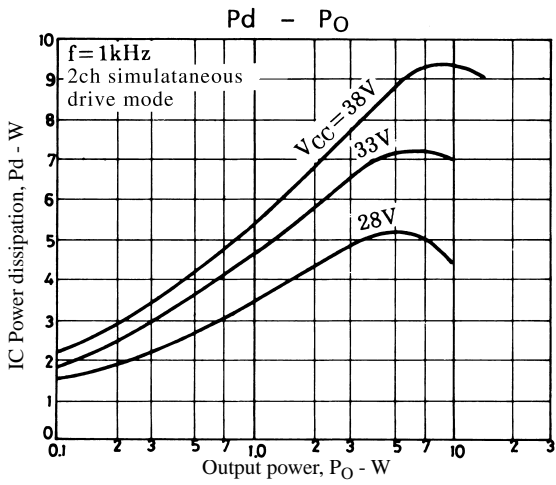
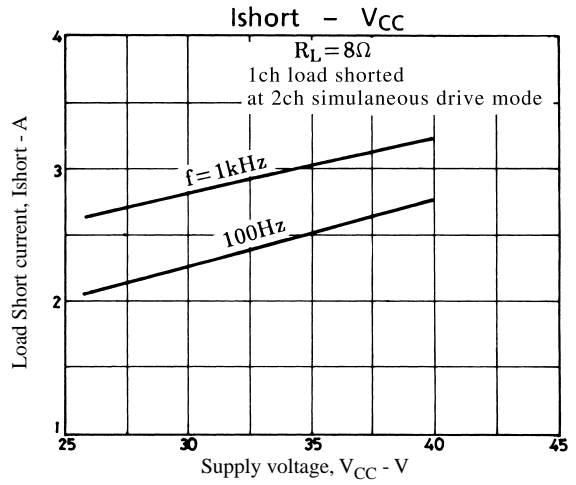
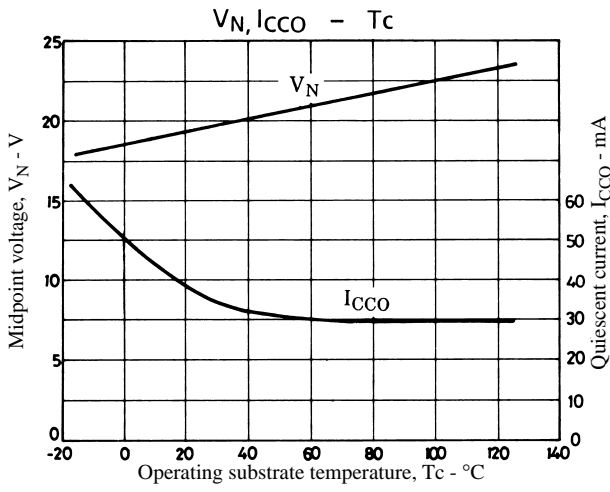
**Equivalent Circuit**

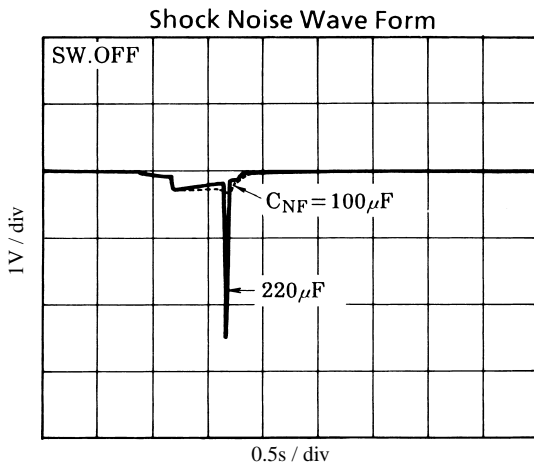


Sample Application Circuit: 10W min 2-channel AF power amplifier









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