



STK4040 II

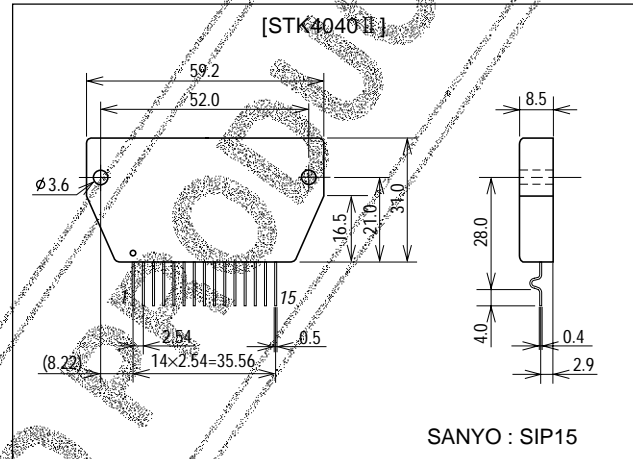
1ch AF Power Amplifier (Split Power Supply) (70W min, THD = 0.4%)

Features

- Compact package for thin-type audio sets
- Member of pin-compatible series with output of 6 to 70W
- Easy heatsink design to disperse heat generated in thin-type stereo sets
- Constant-current circuit to reduce supply switch-on and switch-off shock noise
- Supports external circuits such as supply switch-on and switch-off shock noise muting, load short-circuit protection, thermal shutdown and other circuits.

Package Dimensions

unit:mm
4033



Specifications

Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V _{CC max}		±60	V
Thermal resistance	θ _{J-C}	Per power transistor	1.5	°C/W
Junction temperature	T _J		150	°C
Operating substrate temperature	T _C		125	°C
Storage temperature	T _{stg}		-30 to +125	°C
Available time for load short-circuit ¹	t _s	V _{CC} =±42V, R _L =8Ω, f=50Hz, P _O =70W	1	s

Recommended Operating Conditions at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Supply voltage	V _{CC}		±42	V
Load resistance	R _L		8	Ω

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Operating Characteristics at $T_a = 25^\circ\text{C}$, $V_{CC} = \pm 42\text{V}$, $R_L = 8\Omega$ (non-inductive load), $R_g = 600\Omega$, $V_G = 40\text{dB}$

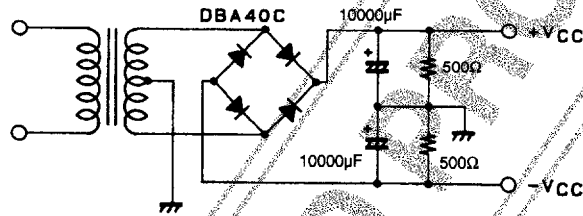
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Quiescent current	I_{CCO}	$V_{CC} = \pm 50.5\text{V}$	10	20	50	mA
Output power	P_O	THD=0.4%, $f=20\text{Hz}$ to 20kHz	70			W
Total harmonic distortion	THD	$P_O = 1.0\text{W}$, $f = 1\text{kHz}$			0.3	%
Frequency response	f_L, f_H	$P_O = 1.0\text{W}$, $+0_{-3}$ dB		20 to 50k		Hz
Input resistance	r_i	$P_O = 1.0\text{W}$, $f = 1\text{kHz}$		55		k Ω
Output noise voltage ²	V_{NO}	$V_{CC} = \pm 50.5\text{V}$, $R_g = 10\text{k}\Omega$			1.2	mVrms
Neutral voltage	V_N	$V_{CC} = \pm 50.5\text{V}$	-70	0	+70	mV

Notes.

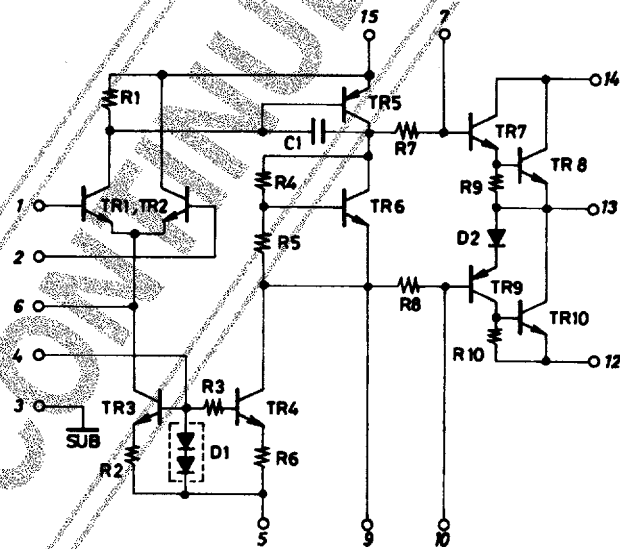
All tests are made using a constant-voltage supply unless otherwise specified.

1. Available time for load short-circuit and output noise voltage are measured using the transformer supply specified below.
2. The output noise voltage is the peak value of an average-reading meter with an rms value scale. The noise voltage waveform does not include any pulse noise.

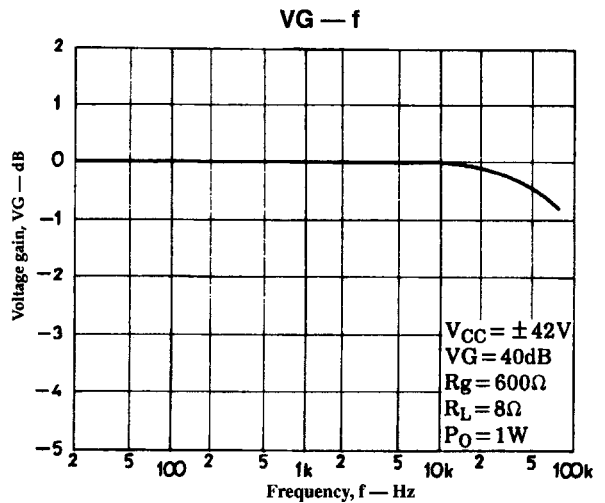
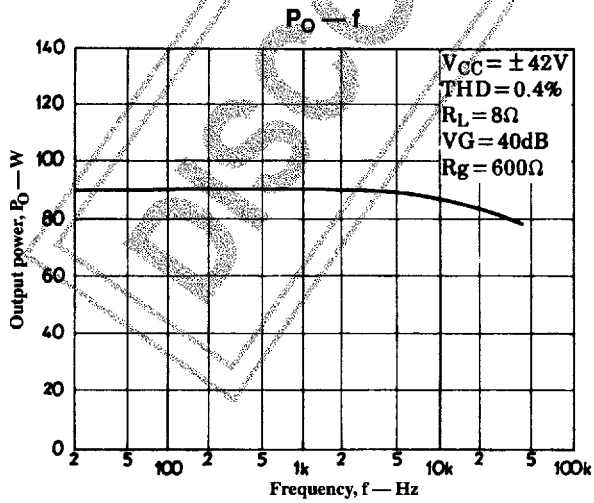
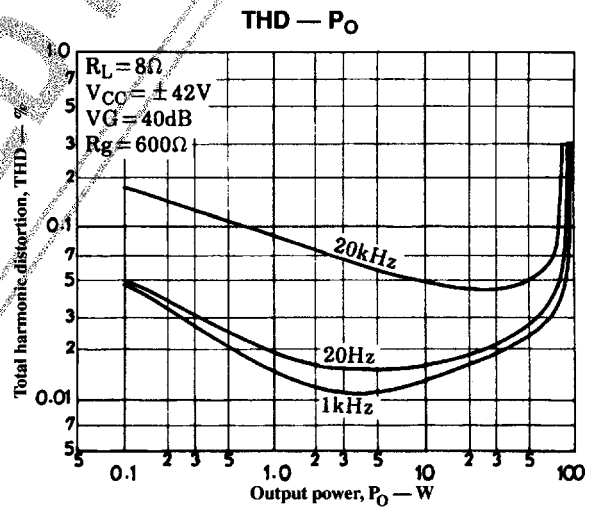
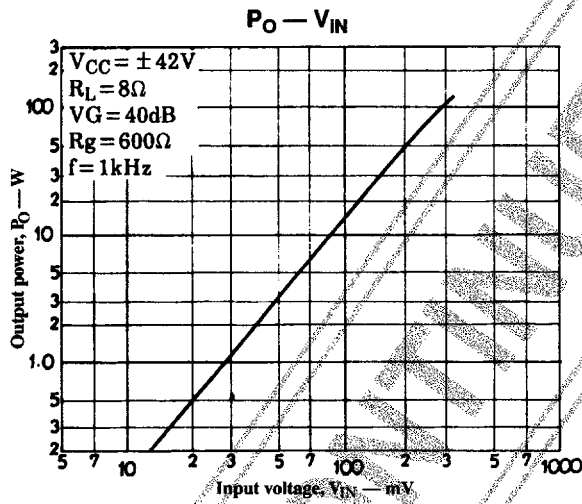
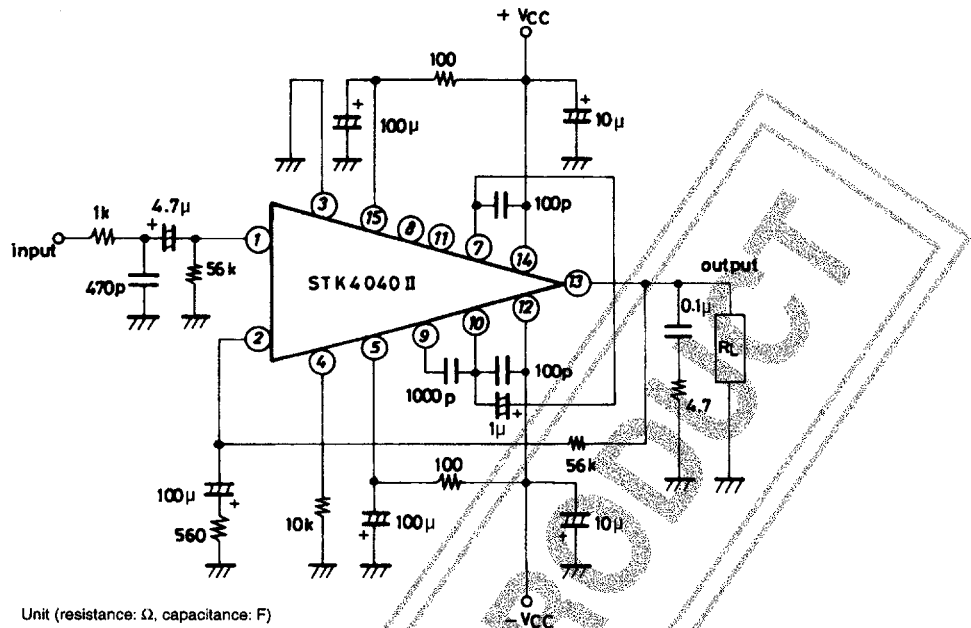
Specified Transformer Supply (MG-200 or Equivalent)



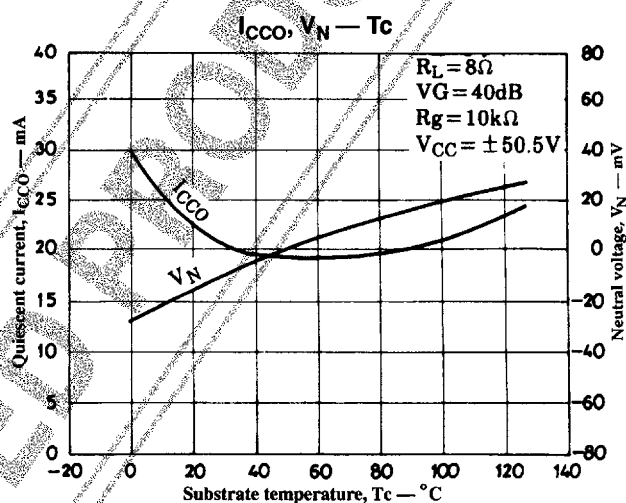
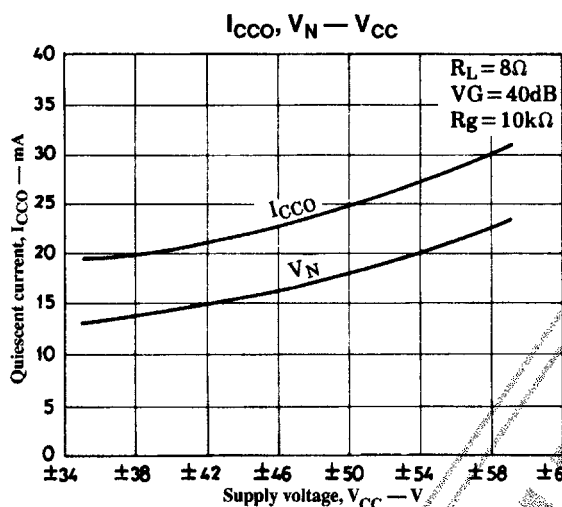
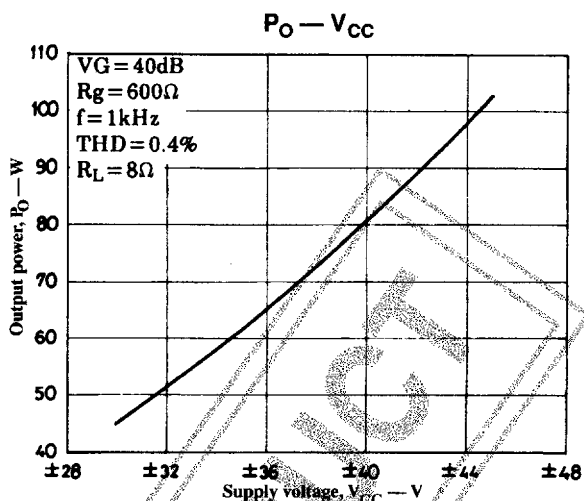
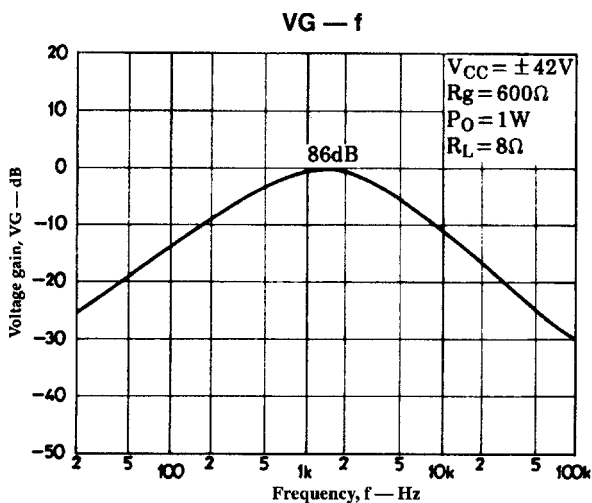
Internal Equivalent Circuit



Sample Application Circuit



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