



STK4050II

## AF Power Amplifier (Split Power Supply) (200W min, THD = 0.4%)

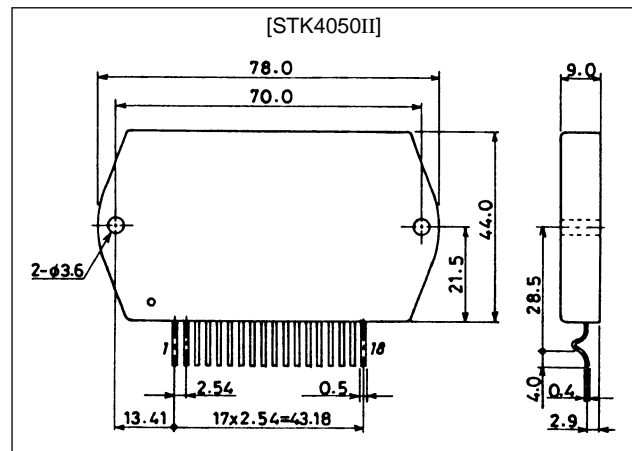
### Features

- Compact package for thin-type audio sets
- Member of pin-compatible series with outputs of 20 to 200W
- 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
- External supply switch-on and switch-off shock noise muting, load short-circuit protection, thermal shutdown and other circuits can be tailored-designed.

### Package Dimensions

unit: mm

4051A



### Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	$V_{CC \text{ max}}$		$\pm 95$	V
Thermal resistance	$\theta_{j-c}$		0.95	$^\circ\text{C/W}$
Junction temperature	$T_j$		150	$^\circ\text{C}$
Operating substrate temperature	$T_c$		125	$^\circ\text{C}$
Storage temperature	$T_{stg}$		$-30$ to $+125$	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	$V_{CC}$		$\pm 66$	V
Load resistance	$R_L$		8	$\Omega$

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**Operating Characteristics** at  $T_a = 25^\circ\text{C}$ ,  $V_{CC} = \pm 66\text{V}$ ,  $R_L = 8\Omega$  (noninductive load),  $R_g = 600\Omega$ ,  $V_G = 40\text{dB}$

Parameter	Symbol	Conditions	min	typ	max	Unit
Quiescent current	$I_{CCO}$	$V_{CC} = \pm 80\text{V}$	15	–	120	mA
Output power	$P_O$	THD = 0.4%, $f = 20\text{Hz}$ to $20\text{kHz}$	200	–	–	W
Total harmonic distortion	THD	$P_O = 1.0\text{W}$ , $f = 1\text{kHz}$	–	–	0.3	%
Frequency response	$f_L, f_H$	$P_O = 1.0\text{W}$ , $+3_{-3}\text{dB}$	–	20 to 50k	–	Hz
Input impedance	$r_i$	$P_O = 1.0\text{W}$ , $f = 1\text{kHz}$	–	55	–	$k\Omega$
Output noise voltage	$V_{NO}$	$V_{CC} = \pm 80\text{V}$ , $R_g = 10k\Omega$	–	–	1.2	mVrms
Neutral voltage	$V_N$	$V_{CC} = \pm 80\text{V}$	-70	0	+70	mV

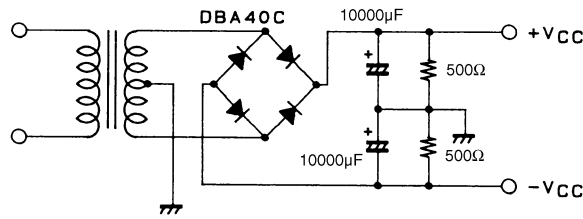
**Notes.**

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

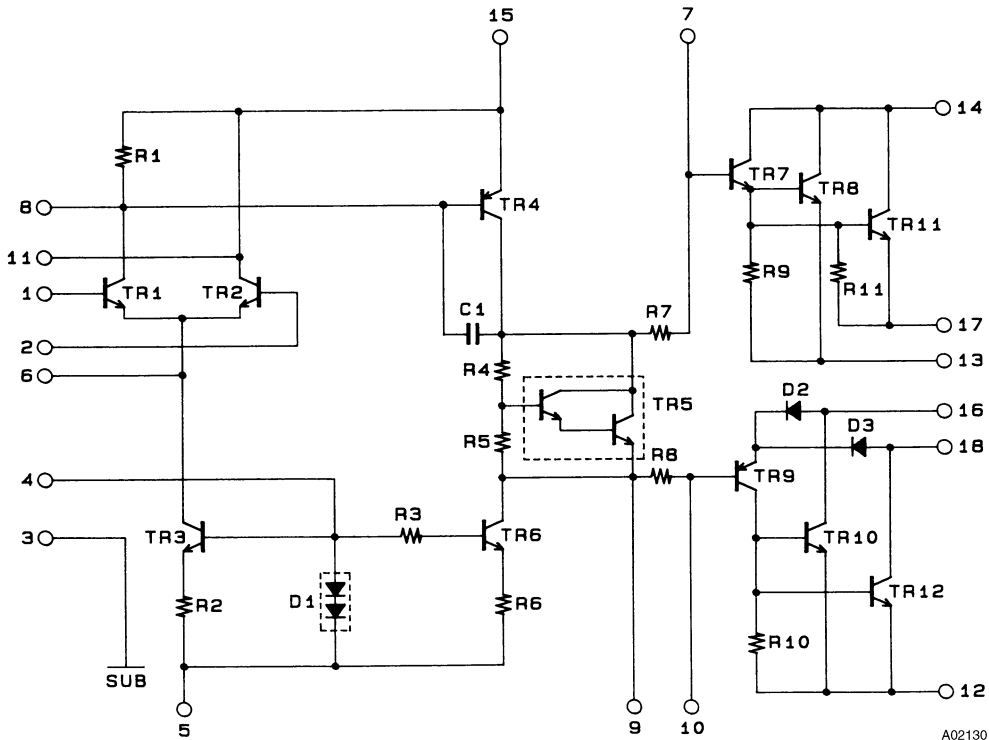
Output noise voltage is measured using the transformer supply specified below.

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.

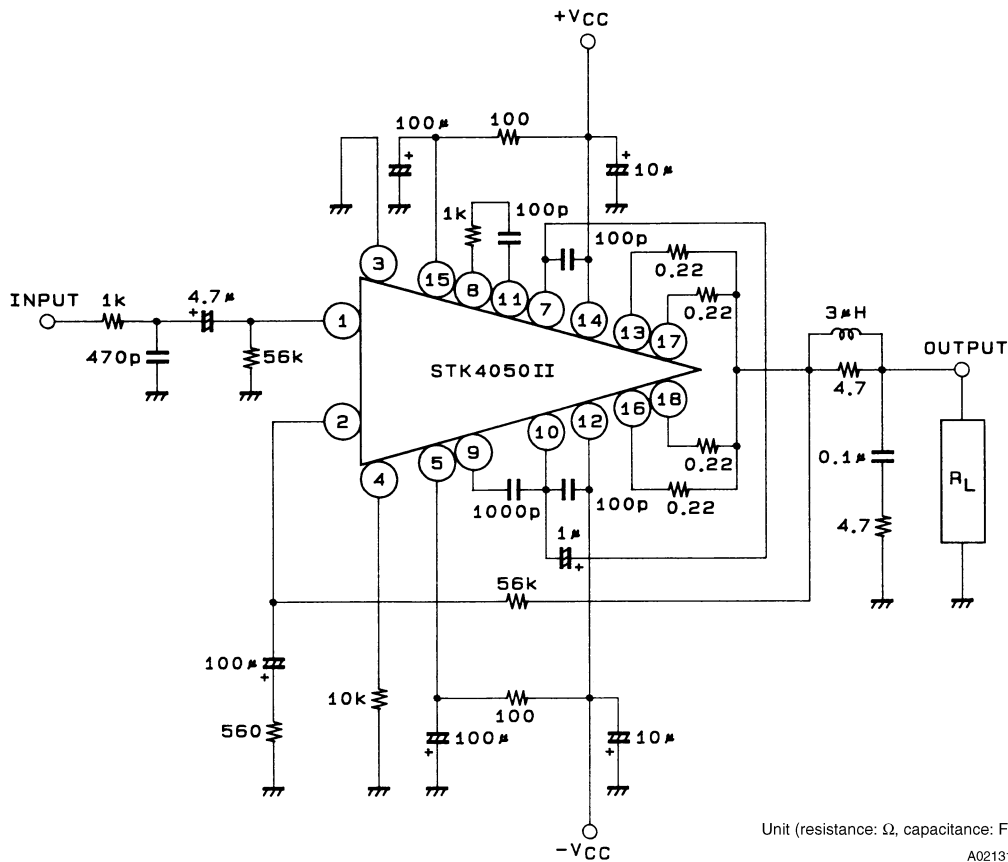
**Specified Transformer Supply (MG-250 or Equivalent)**



**Equivalent Circuit**



Sample Application Circuit (200W min AF Power Amplifier)



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