

**SANYO****STK4048II**

## AF Power Amplifier (Split Power Supply)

(150W min, THD = 0.4%)

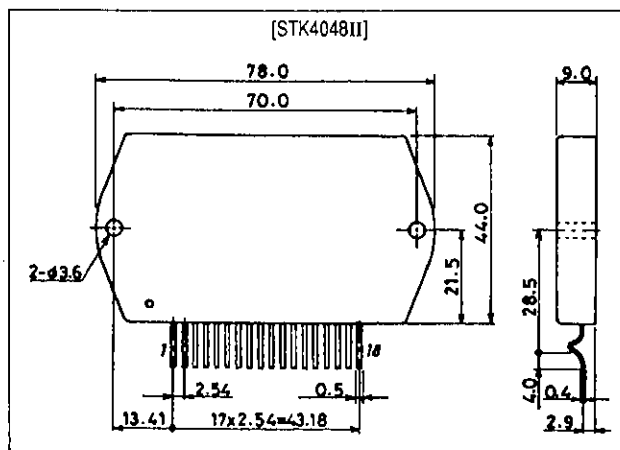
### Features

- 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          | $V_{CC \text{ max}}$ |            | $\pm 87$    | V                  |
| Thermal resistance              | $\theta_{j-c}$       |            | 1.2         | $^\circ\text{C/W}$ |
| 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 | $V_{CC}$ |            | $\pm 59$ | V        |
| Load resistance            | $R_L$    |            | 8        | $\Omega$ |

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**Operating Characteristics** at  $T_a = 25^\circ\text{C}$ ,  $V_{CC} = \pm 59\text{V}$ ,  $R_L = 8\Omega$  (noninductive load),  $R_g = 600\Omega$ ,  $V_G = 40\text{dB}$

| Parameter                 | Symbol     | Conditions                                      | min | typ       | max | Unit      |
|---------------------------|------------|-------------------------------------------------|-----|-----------|-----|-----------|
| Quiescent current         | $I_{CCO}$  | $V_{CC} = \pm 72\text{V}$                       | 15  | —         | 120 | mA        |
| Output power              | $P_O$      | THD = 0.4%, $f = 20\text{Hz}$ to $20\text{kHz}$ | 150 | —         | —   | W         |
| Total harmonic distortion | THD        | $P_O = 1.0\text{W}$ , $f = 1\text{kHz}$         | —   | —         | 0.3 | %         |
| Frequency response        | $f_L, f_H$ | $P_O = 1.0\text{W}$ , $+9_{-3}\text{dB}$        | —   | 20 to 50k | —   | Hz        |
| Input impedance           | $r_i$      | $P_O = 1.0\text{W}$ , $f = 1\text{kHz}$         | —   | 55        | —   | $k\Omega$ |
| Output noise voltage      | $V_{NO}$   | $V_{CC} = \pm 72\text{V}$ , $R_g = 10k\Omega$   | —   | —         | 1.2 | mVrms     |
| Neutral voltage           | $V_N$      | $V_{CC} = \pm 72\text{V}$                       | -70 | 0         | +70 | mV        |

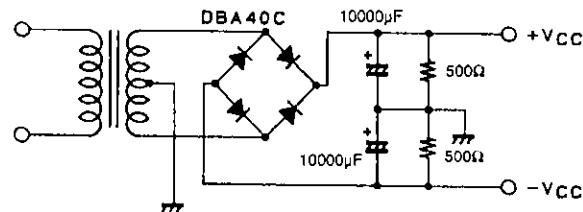
### Notes.

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

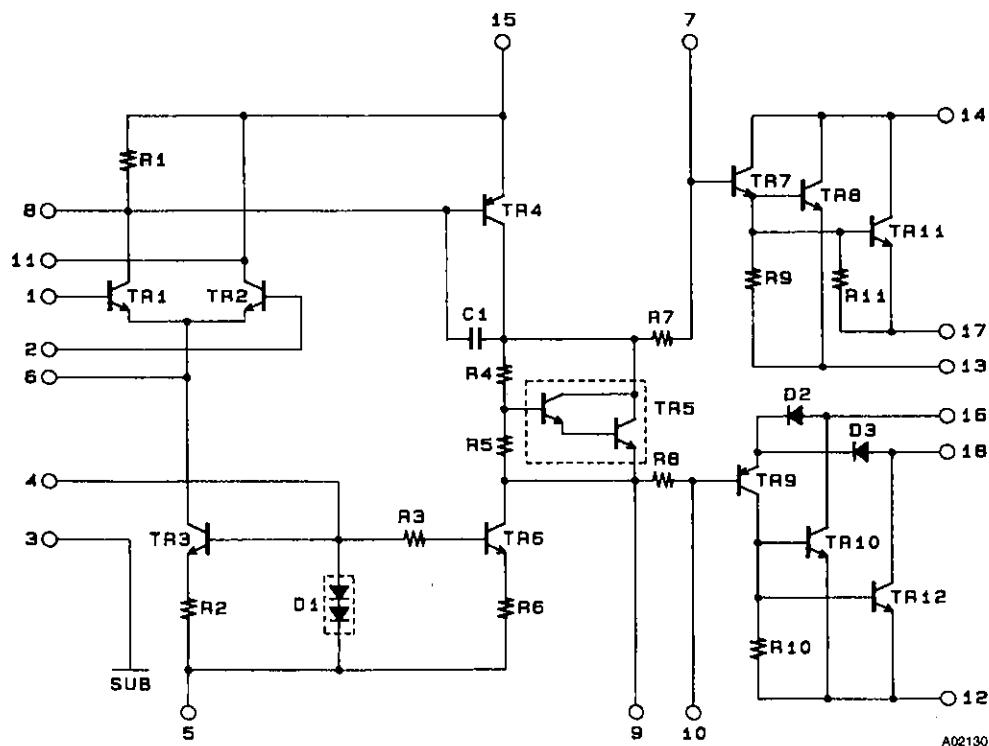
Output noise voltage is measured using the transformer supply specified below.

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.

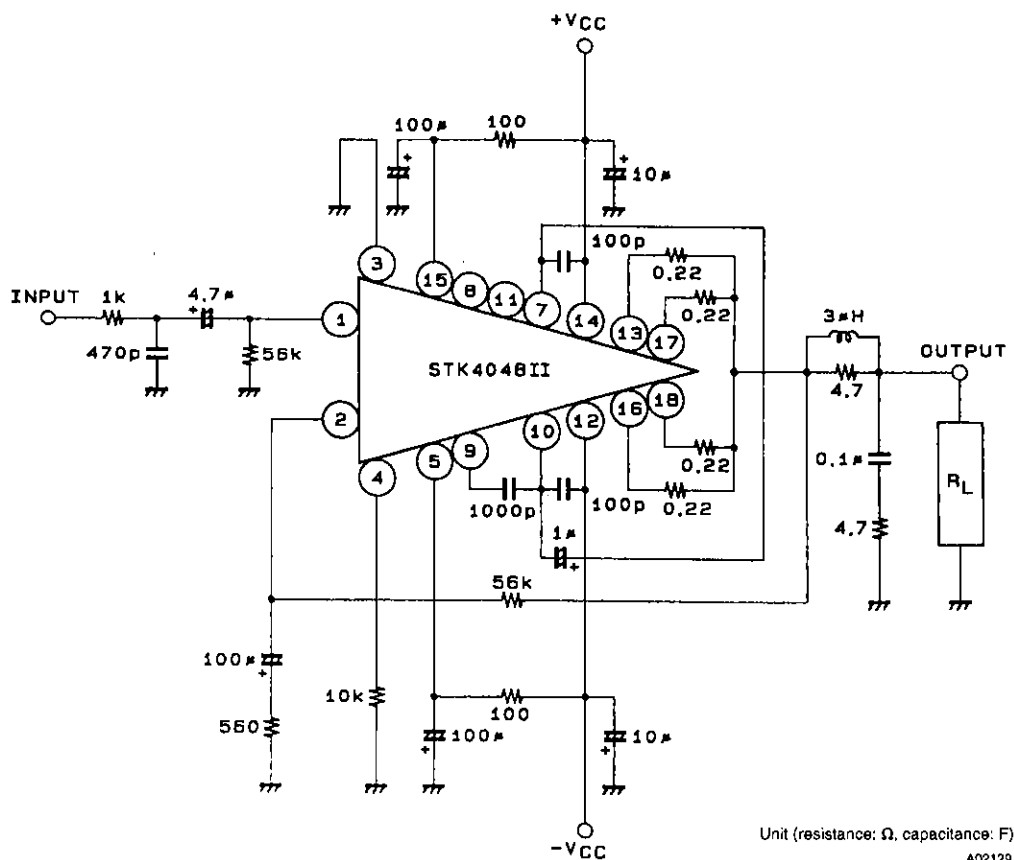
### Specified Transformer Supply (MG-250 or Equivalent)



### Equivalent Circuit



# Sample Application Circuit (150W min AF Power Amplifier)



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