

<b>SANYO</b>	No. 4673A	STK4034X
	<b>AF Power Amplifier (Split Power Supply)</b> <b>(45 W min, THD = 0.008%)</b>	

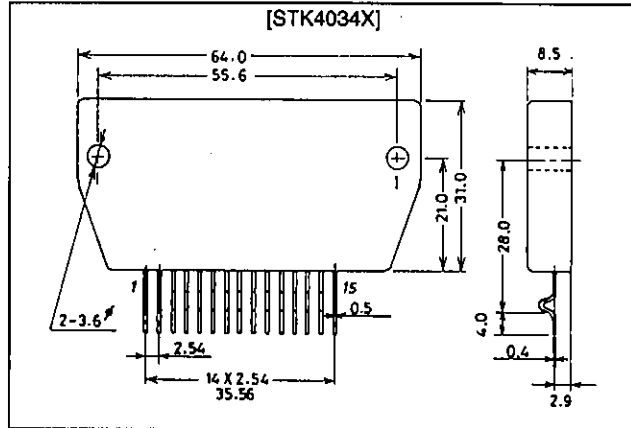
### Features

- Miniature package allows audio sets to be made slimmer.
- Pin-compatible amplifiers with outputs of 30 to 100 W are available.
- Facilitates thermal design of slim stereo sets by distributing the heat dissipating ICs in the set.
- Current mirror circuit application reduces distortion to 0.008%.
- Supports the design of supplementary electronic circuits (thermal shutdown, load short protection, and pop noise muting at power on and off).

### Package Dimensions

unit: mm

4062



### Specifications

#### Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V <sub>CC</sub> max		±50	V
Thermal resistance	θ <sub>J-C</sub>		1.8	°C/W
Junction temperature	T <sub>J</sub>		150	°C
Operating substrate temperature	T <sub>C</sub>		125	°C
Storage temperature	T <sub>stg</sub>		-30 to +125	°C
Available time for load shorted	t <sub>S</sub> *	V <sub>CC</sub> = ±35 V, R <sub>L</sub> = 8 Ω, f = 50 Hz, P <sub>O</sub> = 45 W	2	s

Note: Use a constant-voltage power supply as the test power supply unless otherwise specified.

\* Use the transformer power supply shown on the next page when measuring the available time for load shorted and the output noise voltage.

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

Parameter	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	V <sub>CC</sub>		±35	V
Load resistance	R <sub>L</sub>		8	Ω

### Operating Characteristics

at Ta = 25°C, V<sub>CC</sub> = ±35 V, R<sub>L</sub> = 8 Ω, V<sub>G</sub> = 40 dB, R<sub>g</sub> = 600 Ω, 100 k LPF ON, R<sub>L</sub> (noninductive load)

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Quiescent current	I <sub>CCO</sub>	V <sub>CC</sub> = ±41 V	15		120	mA
Output power	P <sub>O</sub> (1)	THD = 0.008%, f = 20 Hz to 20 kHz	45			W
	P <sub>O</sub> (2)	V <sub>CC</sub> = ±31 V, THD = 0.04%, R <sub>L</sub> = 4 Ω, f = 1 kHz	50			
Total harmonic distortion	THD	P <sub>O</sub> = 1.0 W, f = 1 kHz			0.008	%
Frequency response	f <sub>L</sub> , f <sub>H</sub>	P <sub>O</sub> = 1.0 W, <sup>+0</sup> / <sub>-3</sub> dB		20 to 50 k		Hz
Input resistance	r <sub>i</sub>	P <sub>O</sub> = 1.0 W, f = 1 kHz		55		kΩ
Output noise voltage	V <sub>NO</sub> *	V <sub>CC</sub> = ±41 V, R <sub>g</sub> = 10 kΩ			1.2	mVrms
Neutral voltage	V <sub>N</sub>	V <sub>CC</sub> = ±41 V	-70	0	+70	mV

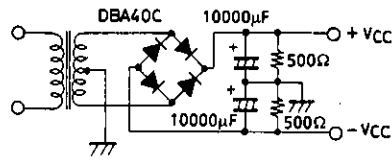
Note: Use a constant-voltage power supply as the test power supply unless otherwise specified.

\* The output noise voltage is the peak value measured with an averaging rms scale volt meter. The noise voltage waveform should not include pulse noise.

**SANYO Electric Co., Ltd. Semiconductor Business Headquarters**

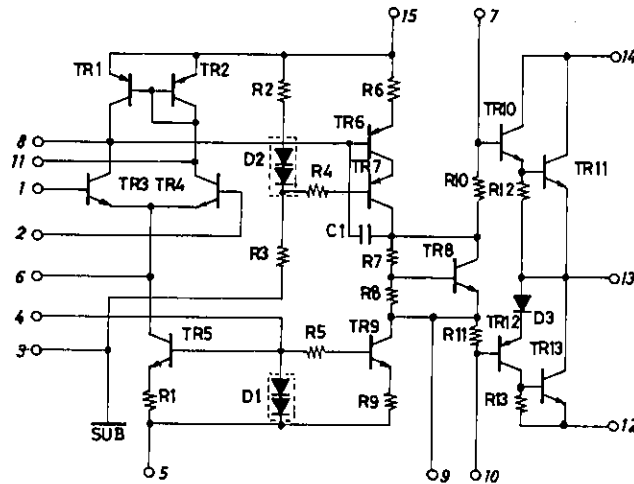
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# STK4034X

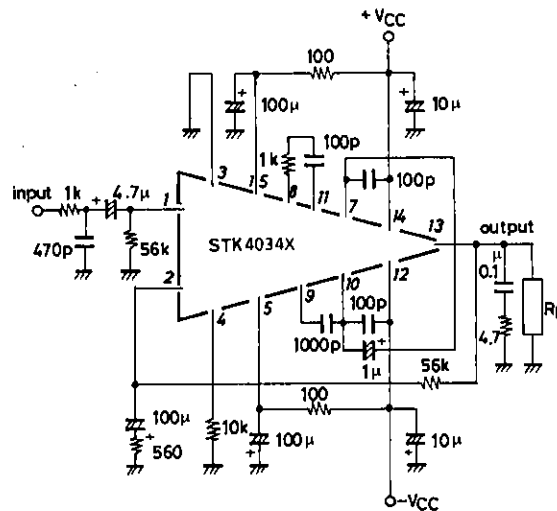


**Specified Transformer Power Supply  
(MG-200 equivalent)**

## Equivalent Circuit



## Sample Application Circuit: Single Channel 45 W (minimum) AF Power Amplifier



Unit (resistance: Ω, capacitance: F)

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