



No.4479A

STK4042 II

## AF Power Amplifier (Split Power Supply) (80 W min, THD = 0.4%)

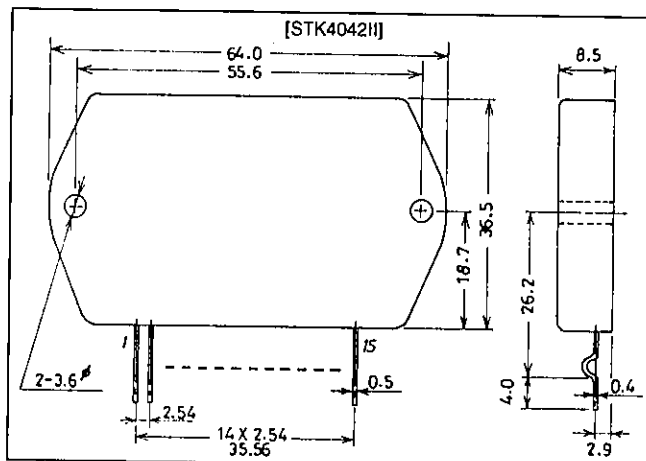
### Features

- Miniature package allows audio sets to be made slimmer.
- Pin-compatible amplifiers with outputs of 20 to 200 W are available.
- Facilitates thermal design of slim stereo sets by distributing the heat dissipating ICs in the set.
- The adoption of constant current circuits reduces pop noise when the power supply is turned on or off.
- 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

4075



### Specifications

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

Parameter	Symbol	Condition	Rating	Unit
Maximum supply voltage	$V_{CC \text{ max}}$		$\pm 65$	V
Thermal resistance	$\theta\text{-c}$		1.2	$^\circ\text{C}/\text{W}$
Junction temperature	$T_j$		150	$^\circ\text{C}$
Operating case temperature	$T_c$		125	$^\circ\text{C}$
Storage temperature	$T_{stg}$		-30 to +125	$^\circ\text{C}$
Available time for load shorted	$t_s^*$	$V_{CC} = \pm 45 \text{ V}, R_L = 8 \Omega, f = 50 \text{ Hz}, P_O = 80 \text{ W}$	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 $T_a = 25^\circ\text{C}$

Parameter	Symbol	Condition	Rating	Unit
Recommended supply voltage	$V_{CC}$		$\pm 45$	V
Load resistance	$R_L$		8	$\Omega$

#### Operating Characteristics at $T_a = 25^\circ\text{C}, V_{CC} = \pm 45 \text{ V}, R_L = 8 \Omega$ (noninductive load), $R_g = 600 \Omega, V_G = 40 \text{ dB}$

Parameter	Symbol	Condition	Rating			Unit
			min	typ	max	
Quiescent current	$I_{CCO}$	$V_{CC} = \pm 54 \text{ V}$	15		120	mA
Output power	$P_O$	THD = 0.4%, $f = 20 \text{ Hz to } 20 \text{ kHz}$	80			W
Total harmonic distortion	THD	$P_O = 1.0 \text{ W}, f = 1 \text{ kHz}$			0.3	%
Frequency response	$f_L, f_H$	$P_O = 1.0 \text{ W}, +0, -3 \text{ dB}$		20 to 50 k		Hz
Input resistance	$r_i$	$P_O = 1.0 \text{ W}, f = 1 \text{ kHz}$		55		k $\Omega$
Output noise voltage	$V_{NO}^{**}$	$V_{CC} = \pm 54 \text{ V}, R_g = 10 \text{ k}\Omega$			1.2	mVrms
Neutral voltage	$V_N$	$V_{CC} = \pm 54 \text{ V}$	-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**

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN



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