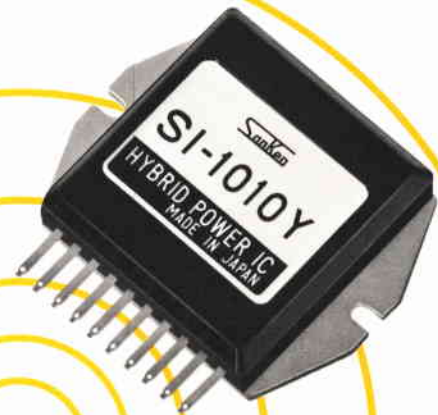


Bulletin No.
QA — 03B
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sanken hybrid audio power amplifier



In the
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Sanken[®]

SANKEN ELECTRIC CO., LTD., TOKYO, JAPAN

HYBRID AUDIO POWER AMPLIFIER

SI-1010Y (10W output)

- * Have a single-ended push-pull output.
- * Withstand a 5 second output short-circuit.
- * Have less than 1/2% distortion at 10W.

Model SI-1010Y SANKEN audio amplifiers are medium power hybrid amplifiers for Hi-Fi, stereo, musical instruments, public address systems and other audio applications. The amplifiers do not require a heat sink for operation at 25°C ambient or less.



SPECIFICATIONS

Power: Output power rating is maximum continuous at 1000 Hz with a distortion less than 1/2%, a load of 8 ohms, at 25°C ambient.

Response: Flat within 1/2 dB from 20 Hz to 100,000 Hz, with specified external components, as measured at 1 watt output.

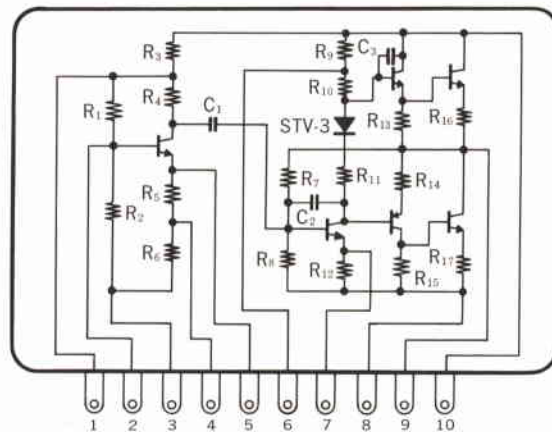
Temperature Compensation: An internal compensating diode is used to provide minimum cross-over distortion and protection from thermal runaway.

Power Supply: Maximum voltage value is absolute maximum. A transformer with 10% regulation is recommended to assure withstanding a 5 second output short. Idling current increases exponentially with supply voltage, increasing heating.

Derating: Internal power loss reaches its maximum when the output is 60% of the rated maximum output. When heat sinks are used, a silicone grease such as GE Insulgrease G-640 should be used to provide good thermal contact from base to heat sink. Refer to Bulletin 71-05QA for complete application data.

Application: (1) Amplifiers may be damaged by oscillation or overdriving. (2) Provide separate ground connections to both input and output. (3) For loads less than 8 ohms see Technical Bulletin 71-05QA. (4) Do not exceed recommended power supply voltage. (5) Fuses connected to the terminal 10 should be quick-acting type such as Bussman type AGC.

SCHEMATIC



1. To filtering capacitor
2. Input
3. Ground for input
4. To feedback resistor
5. To bypass capacitor
6. To boost trap capacitor
7. To bypass capacitor
8. Ground for output
9. Output to coupling capacitor
10. Vcc

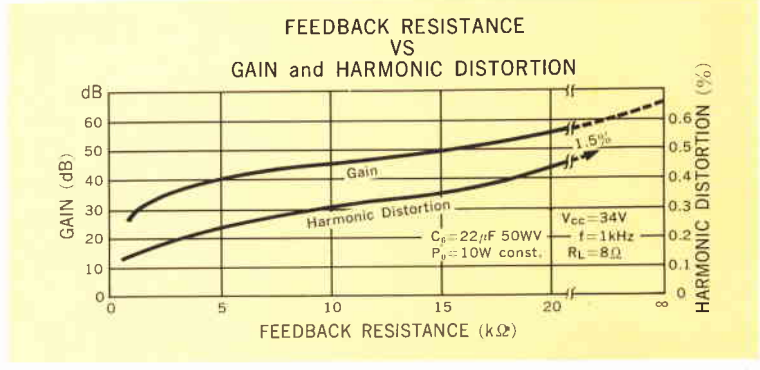
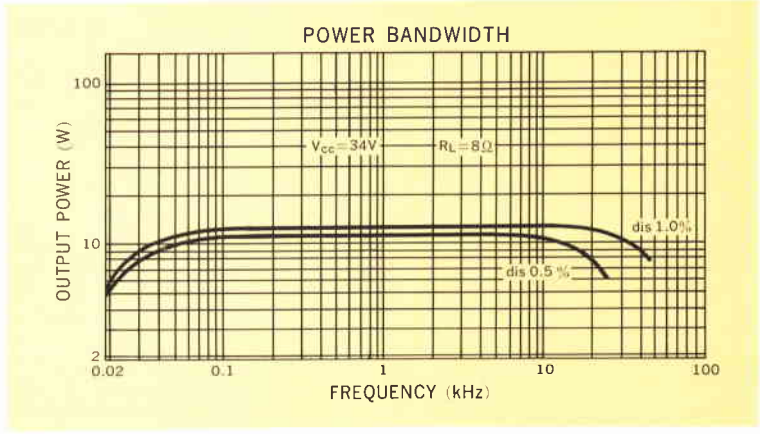
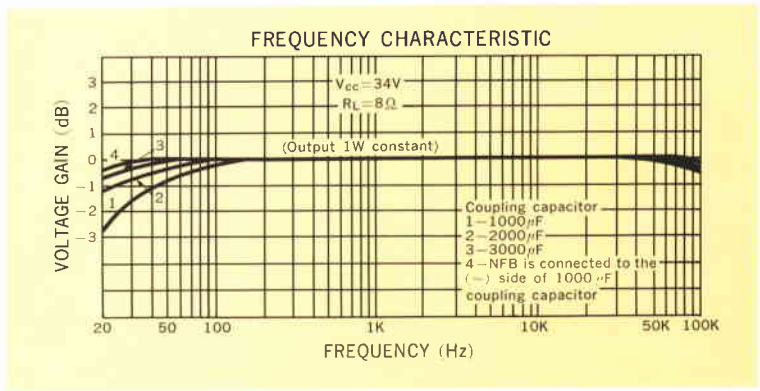
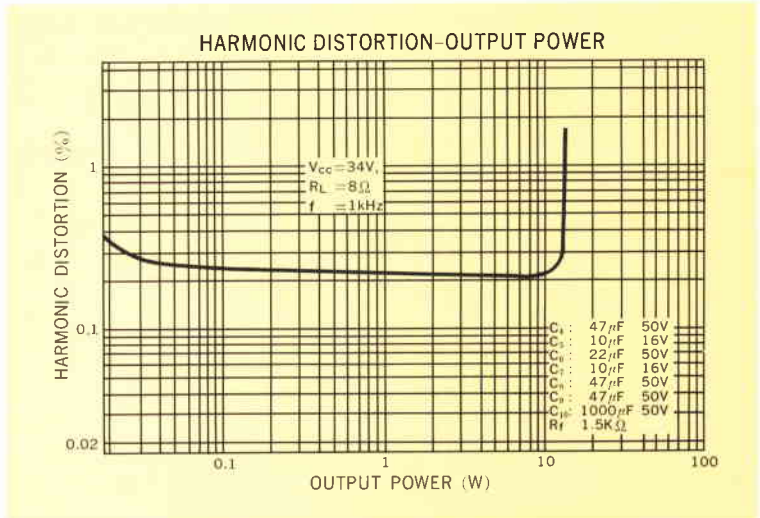
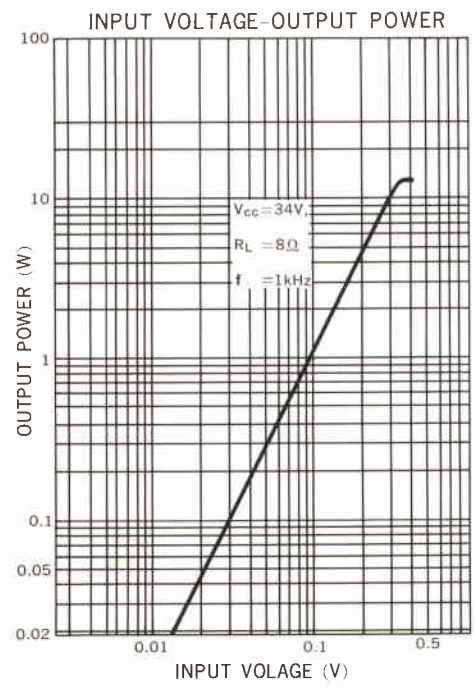
ELECTRICAL CHARACTERISTICS

Characteristic	SI - 1010Y
Maximum rms power*	10W
Output Load	8 ohms
Supply Voltage	34V
Absolute Max. Supply Voltage	40V
Supply Current	0.65A
Suggested Fuse	1A
Harmonic Distortion at Full Output	0.5% max.
Voltage Gain, * Full Feedback	30 dB type.
Input Impedance	60,000 ohms typ.
Output Impedance	0.3 ohms typ.
Signal to Noise Ratio	90 dB typ.
Idling Current	30 mA typ.
Operating Temperature	-10°C to +70°C
Storage Temperature	-25°C to +85°C

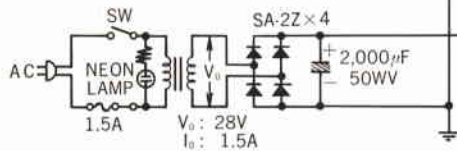
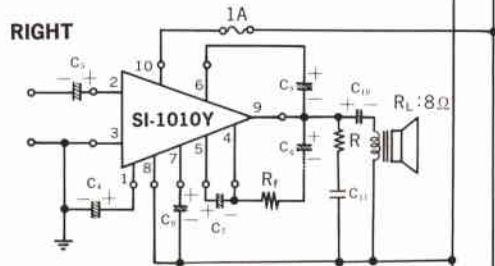
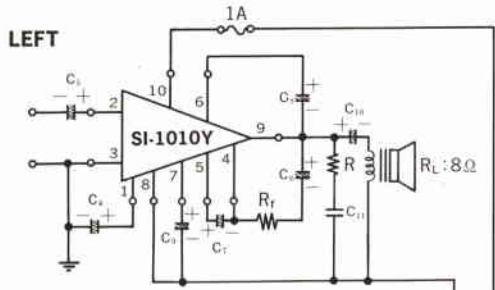
※ Obtained with external components given in connection diagram and vary depending on external components.

At 25°C ambient, 1 KHz, $R_L=8$ ohms.

TYPICAL CHARACTERISTIC CURVES

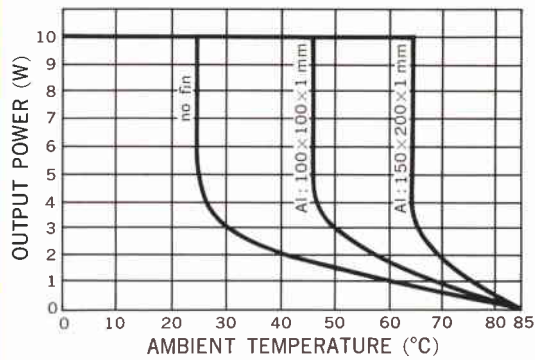


RECOMMENDED CONNECTIONS POWER DERATING

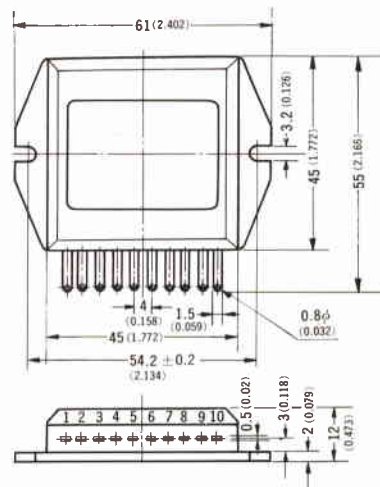


C ₄	47µF, 50WV	C ₉	47µF, 10WV
C ₅	10µF, 16WV	C ₁₀	1000µF, 50WV
C ₆	22µF, 50WV	C ₁₁	0.05µF, 50WV
C ₇	10µF, 16WV	R _f	1.50kΩ
C ₈	47µF, 50WV	R	10Ω, 1/4W

※ Where line voltage fluctuates by $\pm 10\%$ or more V_0 is to be decreased to 26V.



OUTLINE DRAWINGS in mm (approx. inch)



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