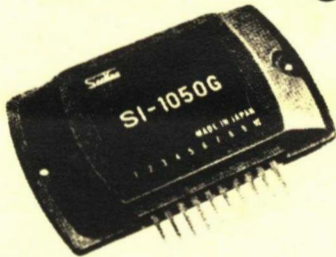


SERIES SI-1000G



sanken hybrid audio power amplifier



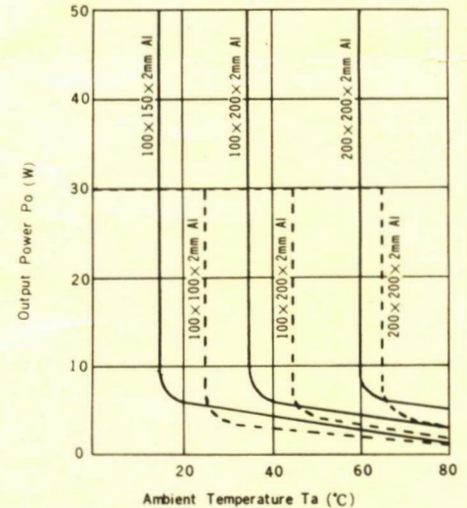
SI-1010G (10W output) SI-1020G (20W output)
 SI-1030G (30W output) SI-1050G (50W output)

- * Multi-purpose linear amplifiers for commercial and industrial applications.
- * Less than 0.5% harmonic distortion at full power level.
- * 1/2dB response from 20 to 100,000Hz.
- * Single or split (dual) power supply.
- * Rugged, compact and light weight packages.
- * Built-in current limiting for SI-1050G and efficient heat radiating construction.

SANKEN Series SI-1000G amplifiers are self-contained power hybrid amplifiers designed for Hi-Fi, stereo, musical instruments, public address systems and other audio applications. The amplifiers have quasi-complementary class B output. The circuit employs flip-chip transistors with high reliability and passivated chip power transistors with excellent secondary breakdown strength. Built-in current limiting is provided for SI-1050G and all devices can be operated from a single or split power supply.

POWER DERATING (SI-1030G & SI-1050G)

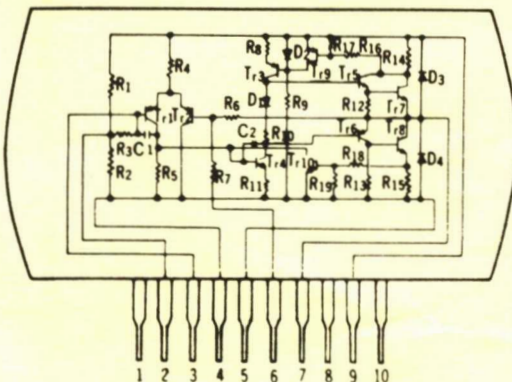
SI-1030G (.....) Vcc: 54V or ±27V, R_L: 8Ω
 SI-1050G (—) Vcc: 66V or ±33V, R_L: 8Ω



Note: Design heat sink to keep case temperature below 80°C

SCHEMATIC

SI-10 (SI-1030G & SI-1050G)



TERMINAL ASSIGNMENTS

- | | |
|--|--|
| <p>A. With single power supply</p> <ol style="list-style-type: none"> 1 Spare 2 - terminal of noise suppression capacitor 3 Input (+) 4 Input (-) 5 Ground for power supply & ground for output 6 Feedback 7 Output 8 Spare 9 Power supply (-) 10 Spare | <p>B. With split dual power supply</p> <ol style="list-style-type: none"> 1 Spare 2 Input (-) & ground terminal 3 Input (+) 4 Not used 5 Power supply (-Vcc) 6 Feedback 7 Output 8 Spare 9 Power supply (-Vcc) 10 Spare |
|--|--|



ANCRONA

11080 Jefferson Blvd. Culver City, CA 90230 Phone: (213) 390-3595	1300 E. Edinger Ave. Santa Ana, CA 92705 Phone: (714) 547-8424	4518 E. Broadway Tucson, AZ 85711 Phone: (602) 881-2348	1125 N.E. 82nd Ave. Portland, OR 97220 Phone: (503) 254-5541	3330 Piedmont Road, N.E. Atlanta, GA 30305 Phone: (404) 261-7100	2649 Richmond Houston, TX 77098 Phone: (713) 529-3489	5656 Fraser St. Vancouver, B.C. V5W 2Z4 Phone: (403) 324-0707
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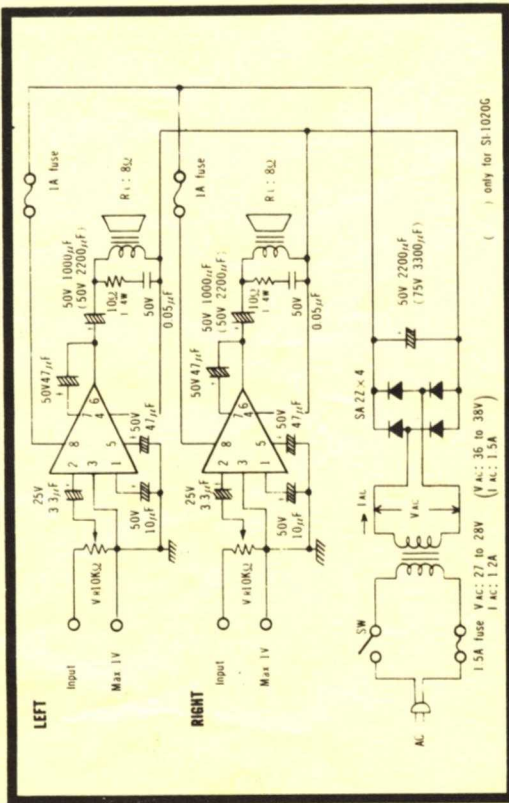
ELECTRICAL CHARACTERISTICS

Characteristic	SI-1010G	SI-1020G	SI-1030G	SI-1050G
Maximum rms Power	10W	20W	30W	50W
Output Load	8 ohms	8 ohms	8 ohms	8 ohms
Supply Voltage	34V or $\pm 17V$	46V or $\pm 23V$	54V or $\pm 27V$	66V or $\pm 33V$
Absolute Max. Supply Voltage	45V or $\pm 22.5V$	55V or $\pm 25V$	60V or $\pm 30V$	80V or $\pm 40V$
Supply Current (ave.)	0.50A	0.72A	0.86A	1.1A
Protective Fusing	1A Quick Blow	1A Quick Blow	1.5A Quick Blow	2A Quick Blow
Harmonic Distortion at Full Output	0.5% max.	0.5% max.	0.5% max.	0.5% max.
Input Voltage	0.30V typ.	0.42V typ.	0.52V typ.	0.70V typ.
Maximum Input Voltage (p-p)	10V	10V	10V	10V
Voltage Gain Full Feedback ($P_o=1W$)	30dB typ.	30dB typ.	30dB typ.	30dB typ.
Input Impedance	40,000 ohms typ.	40,000 ohms typ.	40,000 ohms typ.	40,000 ohms typ.
Output Impedance ($P_o=1W$)	0.2 ohm typ.	0.2 ohm typ.	0.2 ohm typ.	0.2 ohm typ.
Load Current (rms)	0.89A typ.	1.58A typ.	2.00A typ.	2.50A typ.
Load Current (p-p)	2.52A typ.	4.45A typ.	5.66A typ.	7.00A typ.
Output Voltage (rms)	8.9V typ.	12.7V typ.	16.0V typ.	20.0V typ.
Signal to Noise Ratio (Input Shorted)	90dB typ.	90dB typ.	90dB typ.	90dB typ.
Idling Current	20mA typ.	20mA typ.	20mA typ.	20mA typ.
Frequency Range ($P_o=1W$)	20Hz to 100kHz	20Hz to 100kHz	20Hz to 100kHz	20Hz to 100kHz
Power Bandwidth (-3dB)	20Hz to 20kHz	20Hz to 20kHz	20Hz to 20kHz	20Hz to 20kHz
Operating Temperature	-10°C to +70°C	-20°C to +80°C	-20°C to +80°C	-20°C to +80°C
Storage Temperature	-25°C to +85°C	-30°C to +100°C	-30°C to +100°C	-30°C to +100°C
Built-in Protection	————	————	current limiting	current limiting

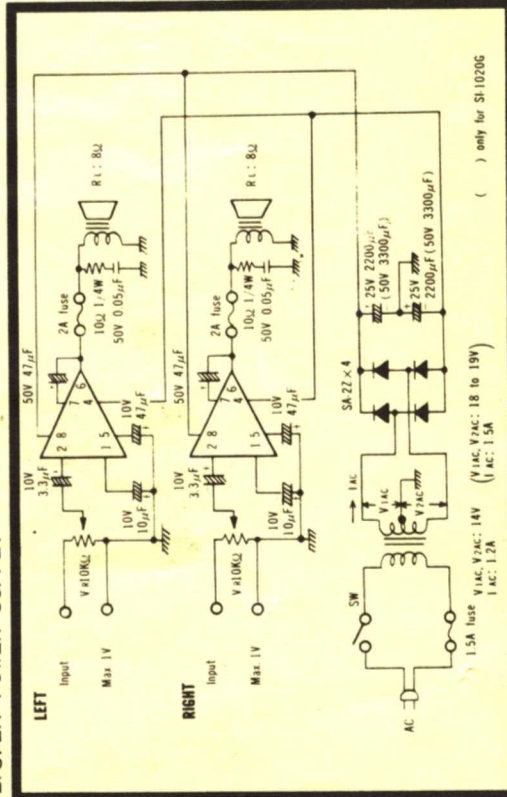
At 25°C ambient, 1kHz, $R_L=8$ ohms

RECOMMENDED CONNECTIONS (SI-1010G & SI-1020G)

A. SINGLE POWER SUPPLY

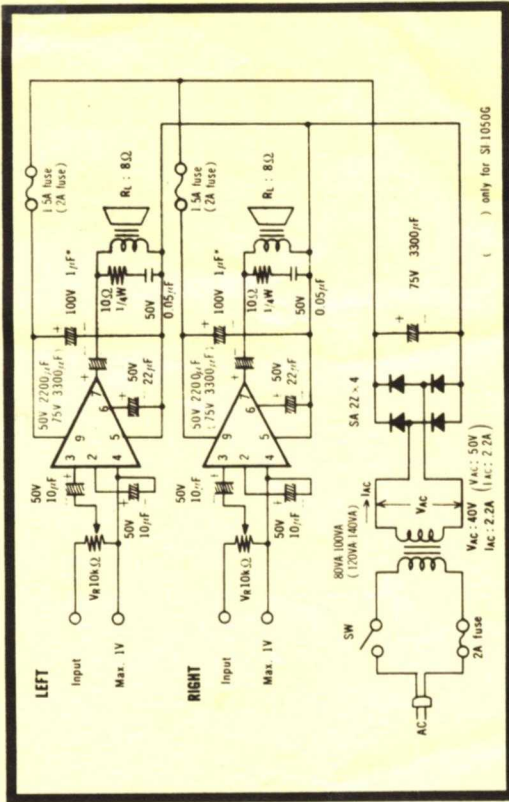


B. SPLIT POWER SUPPLY

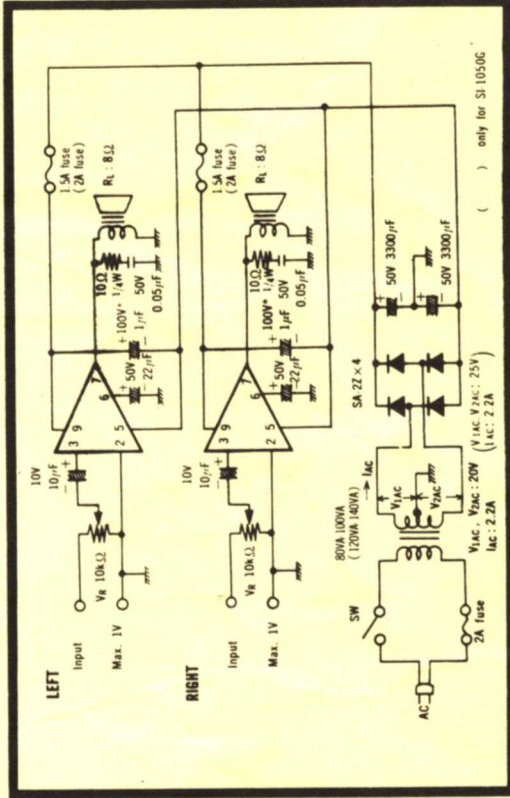


RECOMMENDED CONNECTIONS (SI-1030G & SI-1050G)

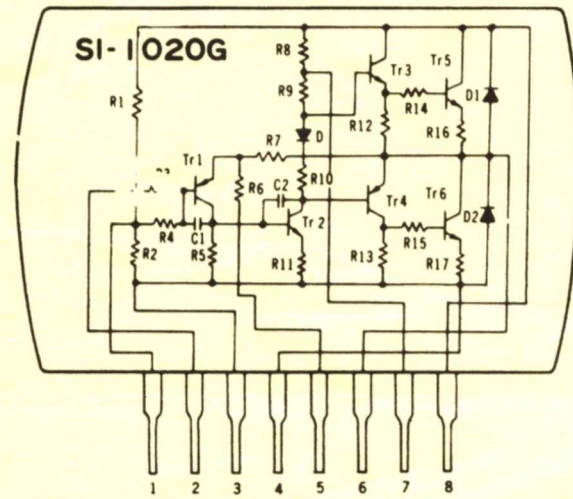
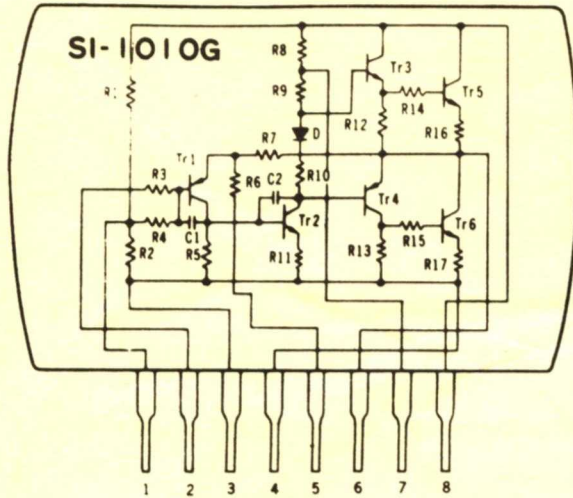
A. SINGLE POWER SUPPLY



B. SPLIT POWER SUPPLY



SCHEMATICS for SI-1010G (10W) SI-1020G (20W)



TERMINAL ASSIGNMENTS

A. With single power supply

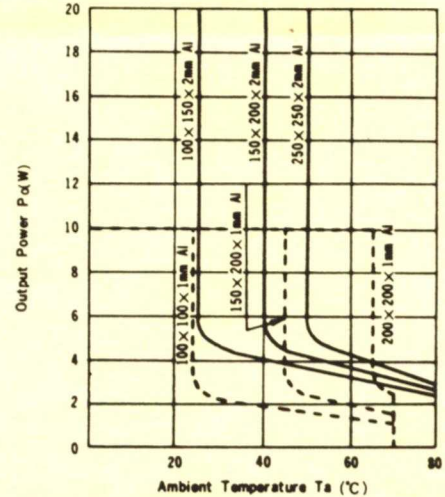
1. Ripple filter capacitor (+)
2. Input (+)
3. Input (-)
4. Ground for power supply & ground for output
5. Feedback
6. Output
7. Boot strap capacitor (+)
8. Power supply (+)

B. With split (dual) power supply

1. Ripple filter capacitor (-)
2. Input (+)
3. Spare
4. Power supply (-)
5. Feedback
6. Output
7. Boot strap capacitor (+)
8. Power supply (+)

POWER DERATING SI-1010G & SI-1020G

SI-1010G (.....) $V_{cc} = 34V$ or $\pm 17V$, $R_L = 8\Omega$
 SI-1020G (—) $V_{cc} = 46V$ or $\pm 23V$, $R_L = 8\Omega$

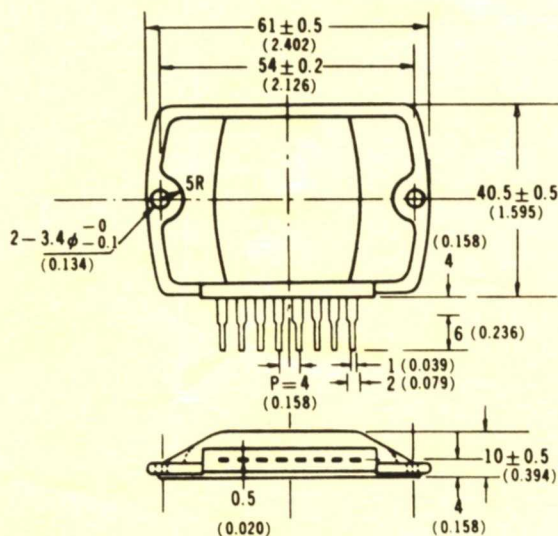


Note: Design heat sink to keep case temperature below 70°C for SI-1010G and below 80°C for SI-1020G

OUTLINE DRAWINGS

in mm (approx. inch)

SI-1010G & SI-1020G



(SI-1030G & SI-1050G)

