



Notes:

- Q1: 2SK170BL
- Q2: 2SJ74BL
- Q3, Q7: BC550C
- Q4: BC560C
- Q5: MJE243 or BD139 (on heatsink)
- Q6: MJE253 or BD140 (on heatsink)
- R11, R12: 1W 5% metal oxide type
- All other resistors are miniature 1% metal film type
- C1, C2: 35V low ESR aluminum electrolytic capacitor
- C3: multilayer ceramic capacitor NP0/C0G
- C4: 50V metallized polyester film capacitor

Voltage gain	R14	R13	C3
1 (0dB)	(short)	(open)	(open)
2 (6dB)	1K	1K	47pF
3 (9.5dB)	1K	499R	47pF
4 (12dB)	1K	332R	47pF
5 (14dB)	1K	249R	47pF
6 (15.6dB)	1K	200R	47pF
7 (17dB)	1K	165R	47pF
8 (18dB)	1K	143R	47pF
9 (19dB)	1K	125R	47pF
10 (20dB)	1K	110R	47pF
15 (23.5dB)	1K	71R5	47pF
20 (26dB)	1K	52R3	47pF

Note: Actual gain will be a fraction of a dB less.

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alpha20 line amplifier

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