

## LA-S4GS 4-channel gain stage with on-board PS - BOM and pricing

version A: complete board including power supply and transformer(s)

version B: board without power supply components (powered by another board or external PS)

| description           | QTY | cost in this QTY | subtotal | Supplier | suggested part number | used in version | board location      | Notes:     |
|-----------------------|-----|------------------|----------|----------|-----------------------|-----------------|---------------------|------------|
| LA-S4GS rev.A PCB     | 1   | \$0.00           | \$0.00   |          | LA-S4GS               | A,B             |                     |            |
| transformer(s)        | 1   | \$11.00          | \$11.00  | Antek    | AN-0215               | A               |                     | see NOTE 1 |
| rectifier             | 2   | \$1.47           | \$2.94   | Mouser   | 905-KBU6D             | A               |                     |            |
| AC terminal block     | 2   | \$1.00           | \$2.00   | Mouser   | 649-220316-H021B01LF  | A               |                     |            |
| smoothing cap         | 4   | \$1.00           | \$4.00   | Mouser   | 647-UHE1E182MHD6      | A               | C21,C22,C31,C32     |            |
| 2.2R, 1W resistor, 5% | 2   | \$0.06           | \$0.12   | Mouser   | 594-5073NW2R200JA100  | A               | R20,R30             |            |
| 1k, 1W resistor, 5%   | 2   | \$0.10           | \$0.20   | Mouser   | 594-5073NW1K000JA100  | A               | R21, R31            |            |
| 1N4001 diodes         | 4   | \$0.08           | \$0.32   | Mouser   | 1N4001E-E3/73         | A               | D1-D4               |            |
| LM317A                | 1   | \$0.75           | \$0.75   | Mouser   | 512-LM317AHVT         | A               |                     |            |
| LM337K                | 1   | \$0.88           | \$0.88   | Mouser   | 595-LM337KCSE3        | A               |                     |            |
| 22uF EL cap           | 2   | \$0.33           | \$0.66   | Mouser   | 661-EKYB800E220MF11D  | A               | C24,C34             |            |
| 220uF EL cap          | 2   | \$0.47           | \$0.94   | Mouser   | 667-EEU-EB1E221SB     | A,B             | C23,C33             |            |
| DC terminal block     | 1   | \$1.04           | \$1.04   | Mouser   | 649-220316-H031B01LF  | A,B             |                     |            |
| 0.1uF cap (bypassing) | 4   | \$0.79           | \$3.16   | Mouser   | 810-FK26C0G1H104J     | A,B             | C9,C10,C11,C12      |            |
| 100pF cap (RF shunt)  | 8   | \$0.03           | \$0.24   | Mouser   | 594-K101J10C0GF5UH5   | A,B             | C1-C8               |            |
| 1/4 W resistors, 68R  | 4   | \$0.12           | \$0.48   | Mouser   | 660-MF1/4DC68R0F      | A,B             | C13-C16             |            |
| 1/4 W resistors, 91R  | 2   | \$0.12           | \$0.24   | Mouser   | 660-MF1/4DC91R0F      | A,B             | R22,R32             |            |
| 1/4 W resistors, 100R | 4   | \$0.12           | \$0.48   | Mouser   | 660-MF1/4DC1000F      | A,B             | R17,R18,R19,R24     |            |
| 1/4 W resistors, 1k   | 6   | \$0.12           | \$0.72   | Mouser   | 660-MF1/4DC1001F      | A,B             | R3,R4,R7,R8,R23,R33 | see NOTE 2 |
| 1/4 W resistors, 3.3k | 4   | \$0.12           | \$0.48   | Mouser   | 660-MF1/4DC3301F      | A,B             | R9,R10,R11,R12      | see NOTE 2 |
| 1/4 W resistors, 22k  | 4   | \$0.12           | \$0.48   | Mouser   | 660-MF1/4DC2202F      | A,B             | R1,R2,R5,R6         |            |
| DIP-8 socket          | 2   | \$0.81           | \$1.62   | Mouser   | 571-2-1571552-2       | A,B             |                     |            |
| LME49720 op-amp       | 2   | \$3.16           | \$6.32   | Mouser   | 926-LME49720NA/NOPB   | A,B             |                     |            |
| signal I/O connectors | 8   |                  |          |          |                       | A,B             | IN 1-4, OUT 1-4     | see NOTE 3 |

Estimated Cost for Parts for version A \$39.07

Estimated Cost for Parts for version B \$16.20

NOTE 1: Two separate 15-18Vac (nominal) secondaries are typically required.

NOTE 2: four 1k and four 3.3k resistors set the gain to about 12dB. Other gains will require different resistor values

NOTE 3: designed for pin headers. 2-pole 2.54mm LS screw terminals or directly soldering the wires to the board are also options.