

LINEAR MONOLITHIC INTEGRATED CIRCUITS

IC's For Radio, Audio

| Type No. | Function | Maximum Ratings ($T_a=25^\circ\text{C}$) | Electrical Characteristics ($T_a=25^\circ\text{C}$) | | | | | | |
|---------------------------|----------------------------|---|---|----------|--|------------------|------|------|------|
| | | | Item | Symbol | Condition | min. | typ. | max. | Unit |
| AN7110 | 1.2W Audio Power Amplifier | $V_{CC}(V_{9-2})=18\text{V}$ $I_{CC}=2\text{A}$ $P_D=1.5\text{W}$ $(T_a=30^\circ\text{C})$ $(\theta_{j-c}=80^\circ\text{C/W})$ $T_{opr}=-20\sim+75^\circ\text{C}$ $T_{stg}=-40\sim+150^\circ\text{C}$ | $(V_{CC}=9\text{V}, R_L=8\Omega, f=1\text{kHz})$ | | | | | | |
| | | | Quiescent Current | I_{CQ} | $V_i=0$ | 10 | 20 | 50 | mA |
| | | | Closed Loop Voltage Gain | G_{VC} | $V_i=5\text{mV}$ | 43 | 46 | 49 | dB |
| | | | Output Power | P_o | THD=10% | 0.8 | 1.2 | | W |
| | | | | | $V_{CC}=6\text{V}, \text{THD}=10\%, R_L=8\Omega$ | | 0.55 | | W |
| | | | | | $V_{CC}=6\text{V}, \text{THD}=10\%, R_L=4\Omega$ | | 0.9 | | W |
| | | | Total Harmonic Distortion | THD | $V_i=5\text{mV}$ | | 0.5 | 1.5 | % |
| | | | Output Noise Voltage | V_{no} | $R_g=10\text{k}\Omega$ | | 0.5 | 1.2 | mV |
| Input Impedance | Z_i | | | 25 | | $\text{k}\Omega$ | | | |
| AN7111 | 1.2W Audio Power Amplifier | $V_{CC}(V_{9-2})=18\text{V}$ $I_{CC}=2\text{A}$ $P_D=1.5\text{W}$ $(T_a=30^\circ\text{C})$ $T_{opr}=-30\sim+75^\circ\text{C}$ $T_{stg}=-40\sim+150^\circ\text{C}$ | $(V_{CC}=9\text{V}, R_L=8\Omega, f=1\text{kHz})$ | | | | | | |
| | | | Quiescent Current | I_{CQ} | $V_i=0$ | 7 | 17 | 35 | mA |
| | | | Closed Loop Voltage Gain | G_{VC} | $V_i=3\text{mV}$ | 51.5 | 53.5 | 55.5 | dB |
| | | | Output Power | P_o | THD=10% | 0.8 | 1.2 | | W |
| | | | | | $V_{CC}=6\text{V}, R_L=4\Omega, \text{THD}=10\%$ | | 0.9 | | W |
| | | | Total Harmonic Distortion | THD | $V_i=3\text{mV}$ | | 0.3 | 1 | % |
| | | | Output Noise Voltage | V_{no} | $R_g=10\text{k}\Omega$ | | 1.5 | 3 | mV |
| Input Impedance | Z_i | | | 30 | | $\text{k}\Omega$ | | | |
| AN7114 | 1W Audio Power Amplifier | $V_{CC}(V_{7-10})=11\text{V}$ $I_{CC(\text{Peak})}=1.5\text{A}$ $P_D=1.2\text{W}$ $P_D=2.25\text{W}^*$ $T_{opr}=-20\sim+70^\circ\text{C}$ $T_{stg}=-40\sim+150^\circ\text{C}$ *With heat sink | $(V_{CC}=6\text{V}, R_L=4\Omega, f=1\text{kHz})$ | | | | | | |
| | | | Quiescent Current | I_{CQ} | $V_i=0$ | | 15 | 25 | mA |
| | | | Open Loop Voltage Gain | G_{VO} | $V_i=0.2\text{mV}$ | | 70 | | dB |
| | | | Closed Loop Voltage Gain | G_{VC} | $V_i=5\text{mV}$ | 42 | 45 | 48 | dB |
| | | | | | | 0.63 | 0.89 | 1.25 | V |
| | | | Output Power | P_o | THD=10% | 0.65 | 1 | | W |
| | | | | | $V_{CC}=6\text{V}, R_L=8\Omega, \text{THD}=10\%$ | | 0.6 | | W |
| | | | | | $V_{CC}=7.5\text{V}, \text{THD}=10\%, R_L=4\Omega$ | 0.95 | 1.5 | | W |
| | | | | | $V_{CC}=7.5\text{V}, \text{THD}=10\%, R_L=8\Omega$ | | 0.9 | | W |
| Total Harmonic Distortion | THD | $V_i=5\text{mV}$ | | 0.5 | 1.5 | % | | | |
| Output Noise Voltage | V_{no} | $R_g=10\text{k}\Omega$ | | | 3 | mV | | | |
| Input Impedance | Z_i | | 12 | 20 | | $\text{k}\Omega$ | | | |
| AN7115 | 2.1W Audio Power Amplifier | $V_{CC}(V_{7-10})=13\text{V}$ $I_{CC(\text{Peak})}=1.5\text{A}$ $P_D=1.2\text{W}$ $P_D=2.25\text{W}^*$ $T_{opr}=-20\sim+70^\circ\text{C}$ $T_{stg}=-40\sim+150^\circ\text{C}$ *With heat sink | $(V_{CC}=9\text{V}, R_L=4\Omega, f=1\text{kHz})$ | | | | | | |
| | | | Quiescent Current | I_{CQ} | $V_i=0$ | | 15 | 25 | mA |
| | | | Open Loop Voltage Gain | G_{VO} | $V_i=0.2\text{mV}$ | | 70 | | dB |
| | | | Closed Loop Voltage Gain | G_{VC} | $V_i=5\text{mV}$ | 42 | 45 | 48 | dB |
| | | | | | | 0.63 | 0.89 | 1.25 | V |
| | | | Output Power | P_o | THD=10% | 1.3 | 2.1 | | W |
| | | | | | $V_{CC}=9\text{V}, R_L=8\Omega, \text{THD}=10\%$ | | 1.4 | | W |
| | | | Total Harmonic Distortion | THD | $V_i=5\text{mV}$ | | 0.5 | 1.5 | % |
| Output Noise Voltage | V_{no} | $R_g=10\text{k}\Omega$ | | | 3 | mV | | | |
| Input Impedance | Z_i | | 12 | 20 | | $\text{k}\Omega$ | | | |

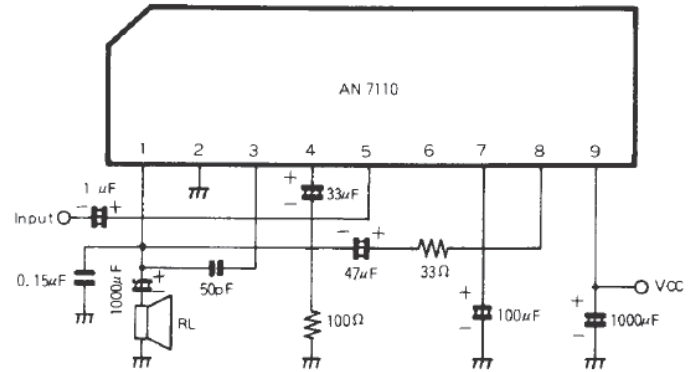
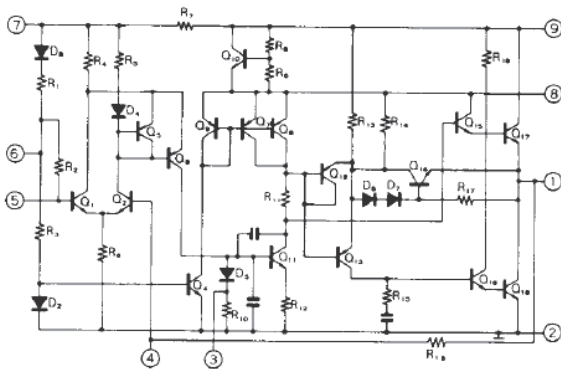
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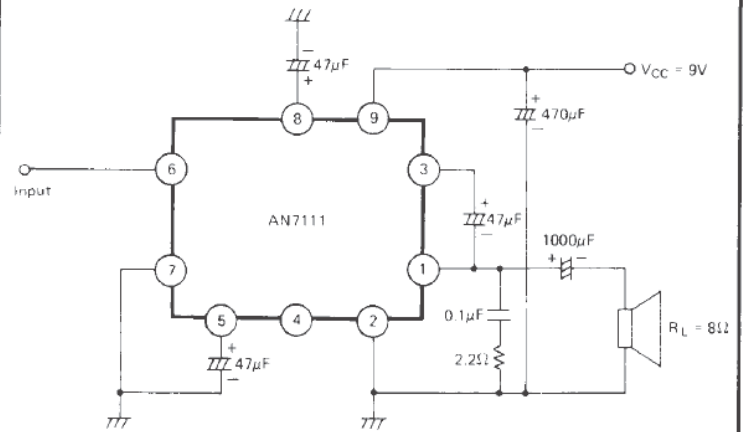
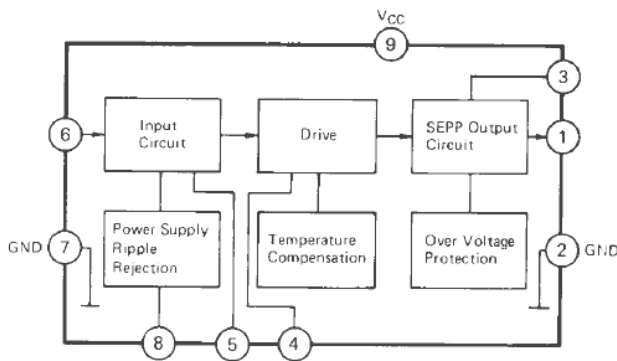
Circuit Diagram

Application Circuit

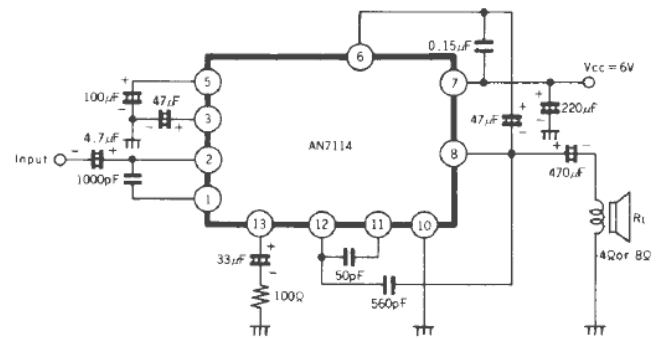
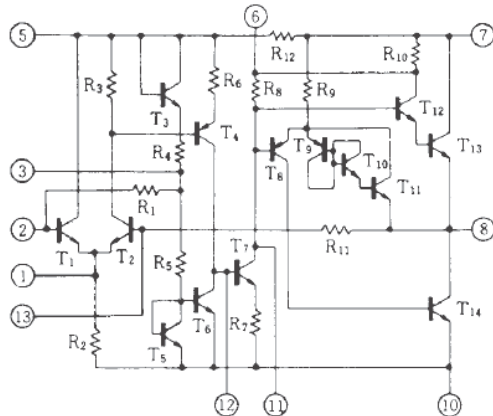
AN7110 (Package I-7,9-Lead Plastic SIL)



AN7111 (Package I-7,9-Lead Plastic SIL)



AN7114 (Package I-17,14-Lead Plastic DIL with Fin)



AN7115 (Package I-17,14-Lead Plastic DIL with Fin)

