

**LA9511W****AV Remote Coupler Transmitter****Overview**

The LA9511W is a transmitter IC developed for free-space infrared transmission of stereo audio and video signals. It integrates all the required functions for transmission, including audio signal modulation, video signal modulation, LED drive, and other functions on a single chip. An AV coupler system can be implemented easily using this IC and a receiver IC (such as the LA9520V).

Functions**[Audio Block]**

- Audio input block ALC with wide AGC operating range
- Integration of passive components used for preemphasis and time constants onto the chip.
- Deviation adjustment amplifier. Adjustable from an externally applied voltage: supports an electronic variable resistor function.
- Filter: Removes unneeded high-frequency components.
- Audio VCO. PLL circuit adopted for adjustment-free operation.

[Video Block]

- Video deviation amplifier. Adjustable from an externally applied voltage: supports an electronic variable resistor function.

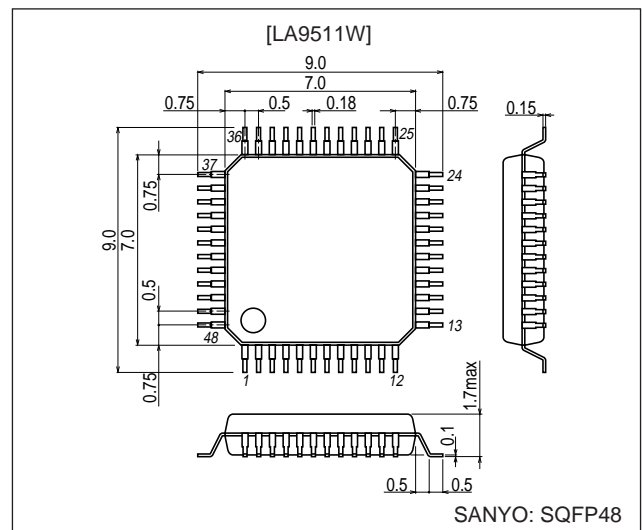
- Video preemphasis
- Video VCO. f_0 adjustment from an externally applied voltage: supports an electronic variable resistor function.
- Filter. Removes unneeded high-frequency components.

[Driver Block]

- Mixer and driver amplifier. Features excellent high-frequency characteristics and allows addition of external data (remote control).

Package Dimensions

unit: mm

3163A-SQFP48

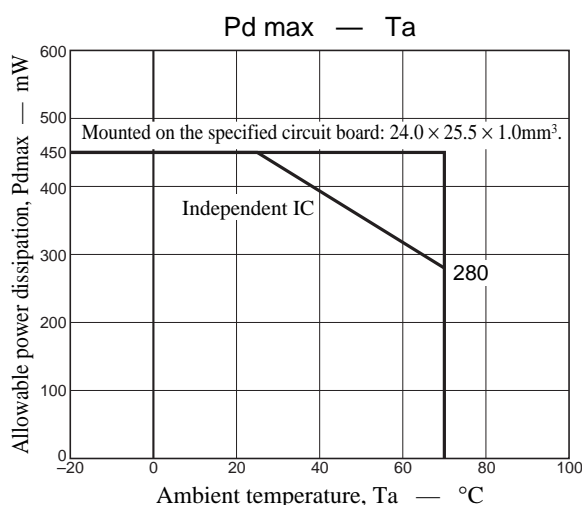
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LA9511W



Specifications

Maximum Ratings at Ta = 25°C

| Parameter | Symbol | Conditions | Ratings | Unit |
|-----------------------------|---------------------|---|-------------|------|
| Maximum supply voltage | V _{CC} max | | 5.5 | V |
| Allowable power dissipation | Pd max | Mounted on the specified circuit board. | 450 | mW |
| Operating temperature | T _{opr} | | -20 to +70 | °C |
| Storage temperature | T _{stg} | | -40 to +150 | °C |

Note: * Specified circuit board: 24.0 × 25.5 × 1.0 mm³.

Operating Conditions at Ta = 25°C

| Parameter | Symbol | Conditions | Ratings | Unit |
|-----------------------------------|---------------------|------------|------------|------|
| Recommended supply voltage | V _{CC} | | 4.8 | V |
| Allowable operating voltage range | V _{CC} opg | | 4.5 to 5.2 | V |

Electrical Characteristics at Ta = 25°C, V_{CC} = 4.8 V

Carrier frequency (Audio left channel: 4.3 MHz, right channel: 4.8 MHz, video: 11.8 MHz)

Audio input frequency: 400 Hz, input level: -30 dBs,

video input: 0.5 V_{pp} NTSC composite video signal 0 dBs = 775 mV_{rms}.

| Parameter | Symbol | Conditions | Ratings | | | Unit |
|--------------------------------|---------------------|--|---------|------|-------|------|
| | | | min | typ | max | |
| Current drain | I _{CC1} | No input, except for the driver current Test pins: 12, 31, and 32 | 43 | 53 | 63 | mA |
| | I _{CC2} | No input, driver current Test pin: 24 | 14.5 | 19 | 23.5 | mA |
| | I _{CC3} | No input, current in standby mode Test pins: 12, 31, and 32 | | 1.0 | 3 | mA |
| [Audio Block] | | | | | | |
| Deviation adjustment range | V _{de-adj} | Standard input, the control voltage for ±22.5 kHz Test pin: 45 | 0.1 | | 1.25 | V |
| Left channel preemphasis gain | G _{vpL} | The gain difference between 400 Hz and 10 kHz with the AGC off Test pin: 3 | 11.7 | 13.7 | 15.7 | dB |
| Right channel preemphasis gain | G _{vpR} | The gain difference between 400 Hz and 10 kHz with the AGC off Test pin: 5 | 11.7 | 13.7 | 15.7 | dB |
| ALC output level (L) | V _{ALCL} | AGC off, Test pin: 3 | -32.0 | -30 | -28.0 | dBs |
| ALC output level (R) | V _{ALCR} | AGC off, Test pin: 5 | -32.0 | -30 | -28.0 | dBs |

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| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---|----------------------|--|---------|-------|-------|------|
| | | | min | typ | max | |
| ALC on output (L) | V _{ALONL} | AGC on, V _{IN} = -15 dBs (1 kHz), Left and right input Test pin: 3 | -25.5 | -22.0 | -19.0 | dBs |
| ALC on output (R) | V _{ALONR} | AGC on, V _{IN} = -15 dBs (1 kHz), Left and right input Test pin: 5 | -25.5 | -22.0 | -19.0 | dBs |
| ALC on output L/R deviation | V _{ALONL/R} | AGC on, V _{IN} = -15 dBs (1 kHz), The output difference for left and right input, Test pins: 3 and 5 | -2.5 | 0 | 2.5 | dB |
| THDL (ALCOUT) | THDL1 | V _{IN} = -22 dBs (1 kHz), Test pin: 3 | | 0.5 | 1.5 | % |
| THDR (ALCOUT) | THDR1 | V _{IN} = -22 dBs (1 kHz), Test pin: 5 | | 0.5 | 1.5 | % |
| THDL (ALCOUT) | THDL2 | V _{IN} = -3 dBs (1 kHz), Test pin: 3 | | 1.0 | 3.0 | % |
| THDR (ALCOUT) | THDR2 | V _{IN} = -3 dBs (1 kHz), Test pin: 5 | | 1.0 | 3.0 | % |
| Left channel oscillator frequency 1 | f _{oLN} | No signal, SIG (pin 7), with a 3.579545 MHz input Test pin: 15 | 4.298 | 4.300 | 4.302 | MHz |
| Right channel oscillator frequency 1 | f _{oRN} | No signal, SIG (pin 7), with a 3.579545 MHz input Test pin: 15 | 4.798 | 4.800 | 4.802 | MHz |
| Left channel oscillator frequency 2 | f _{oLP} | No signal, SIG (pin 7), with a 4.433619 MHz input, Test pin: 15 | 4.298 | 4.300 | 4.302 | MHz |
| Right channel oscillator frequency 2 | f _{oRP} | No signal, SIG (pin 7), with a 4.433619 MHz input, Test pin: 15 | 4.798 | 4.800 | 4.802 | MHz |
| Oscillator amplitude (L) | VL | Audio VCO output, Test pin: 15 | 150 | 220 | 300 | mVpp |
| Oscillator amplitude (R) | VR | Audio VCO output, Test pin: 15 | 150 | 230 | 300 | mVpp |
| Oscillator output R/L deviation | ΔVR/L | The R/L difference for the audio VCO outputs | -3.5 | 0 | +3.5 | dB |
| Left second harmonic level | 2HL | No input, the level difference with the fundamental, Test pin: 15 | | -39 | | dB |
| Right second harmonic level | 2HR | No input, the level difference with the fundamental, Test pin: 15 | | -39 | | dB |
| Left third harmonic level | 3HL | No input, the level difference with the fundamental, Test pin: 15 | | -28 | | dB |
| Right third harmonic level | 3HR | No input, the level difference with the fundamental, Test pin: 15 | | -28 | | dB |
| [Video Block] | | | | | | |
| Carrier frequency adjustment range | V _{car-aj} | No input, the pin 35 voltage when adjusted to be f ₀ = 11.8 MHz, Test pin: 35 | 0.1 | | 1.25 | Vdc |
| Deviation frequency adjustment range | V _{dev-aj} | V _{IN} = 0.5 Vpp, the pin 39 voltage when the deviation is adjusted to 2 MHz, Test pin: 39 | 0.1 | | 1.25 | Vdc |
| DC clamp level | V _{CLAMP} | No input, the voltage V ₃₆ - V ₃₇ Test pins: 36 and 37 | 5 | 80 | | mVdc |
| Preemphasis gain | GV _{pre} | The gain difference between 10 kHz and 5 kHz Test pin: 33 | | 12 | | dB |
| Video amplitude | V _v | No input, the 11.8 MHz oscillator level Test pin: 16 | 280 | 385 | 510 | mVpp |
| Second harmonic level | 2HV | No input, the level difference with the fundamental Test pin: 16 | | -32 | | dB |
| Third harmonic level | 3HV | No input, the level difference with the fundamental Test pin: 16 | | -35 | | dB |
| [Mixer and Driver Block] | | | | | | |
| AC gain | GVMD | SIG16 = 0.38 Vpp (12 MHz), Test pin: 22 | | 6.6 | | dB |
| Frequency characteristics | FC | The gain difference between 20 MHz and 1 MHz Test pin: 22 | -3.0 | -0.5 | | dB |
| Second harmonic | 2HMD | SIG16 = 0.38 Vpp (12 MHz), Test pin: 22 | | -34 | | dB |
| Third harmonic | 3HMD | SIG16 = 0.38 Vpp (12 MHz), Test pin: 22 | | -35 | | dB |

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| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---|-------------------|--|---------|-----|-----|-------|
| | | | min | typ | max | |
| [Control Voltages] | | | | | | |
| Xtal SELECT [L] | V4L | The voltage applied to pin 4 when a 4.43 MHz band crystal is used. Test pin: 4 | | | 0.4 | Vdc |
| Xtal SELECT [H] | V4H | The voltage applied to pin 4 when a 3.58 MHz band crystal is used. Test pin: 4 | 1.1 | | | Vdc |
| STANBY SW [L] | V14L | The voltage applied to pin 14 to perform a standby operation. Test pin: 14 | | | 0.8 | Vdc |
| STANBY SW [H] | V14H | The voltage applied to pin 14 to clear standby. Test pin: 14 | 2.0 | | | Vdc |
| DRIVE SW [L] | V21L | The voltage applied to pin 21 to perform a LED off operation. Test pin: 21 | | | 0.8 | Vdc |
| DRIVE SW [H] | V21H | The voltage applied to pin 21 to perform a LED on operation. Test pin: 21 | 2.0 | | | Vdc |
| [In Combination with a Demodulator] Using the IFR-C1 (4 MHz version) Sony receiver IC | | | | | | |
| Audio left channel amplitude | V _{AL} | V _{IN} = -30 dBs (400 Hz) Deviation ±22.5 kHz, demodulator output | | 250 | | mVrms |
| Audio right channel amplitude | V _{AR} | V _{IN} = -30 dBs (400 Hz) Deviation ±22.5 kHz, demodulator output | | 250 | | mVrms |
| L/R output difference | V _{AL/R} | V _{IN} = -30 dBs (400 Hz), simultaneous L/R inputs Deviation ±22.5 kHz, demodulator output | -3 | 0 | +3 | dB |
| Audio left channel distortion | THDLT | V _{IN} = -3 dBs (1 kHz), demodulator output | | 1.5 | | % |
| Audio right channel distortion | THDRT | V _{IN} = -3 dBs (1 kHz), demodulator output | | 1.5 | | % |
| Audio left channel noise | V _{NL} | No input, R _g = 3 kΩ, IHFA filter Demodulator output | | -56 | | dBs |
| Audio right channel noise | V _{NR} | No input, R _g = 3 kΩ, IHFA filter Demodulator output | | -56 | | dBs |

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Switch Position Table

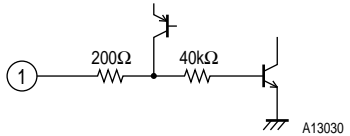
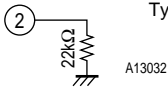
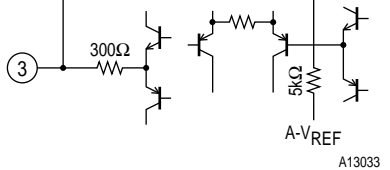
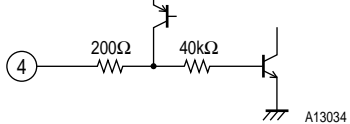
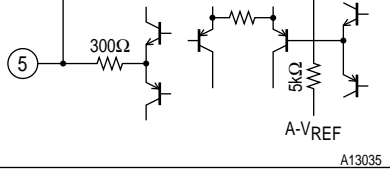
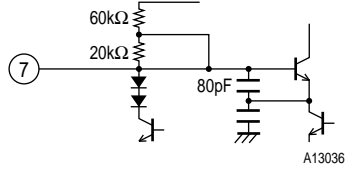
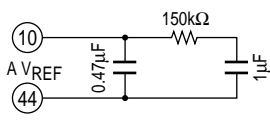
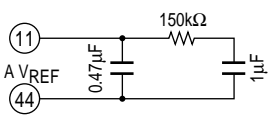
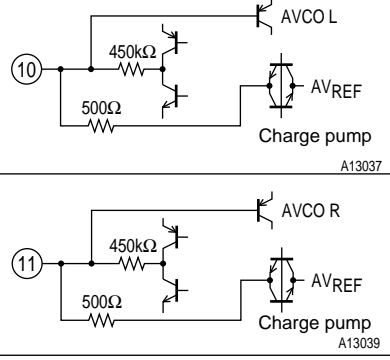
*: The bias values Va, Vb, and Vc, indicate the voltage values after adjustment.

Units: Vdc

| Parameter | | Switch position | | | | | | | | Bias | | | | | |
|-----------|----------------------|-----------------|-----|------|------|------|------|------|------|------|-----|-----|----------------|----------------|----------------|
| No. | Symbol | SW4 | SW7 | SW14 | SW16 | SW21 | SW41 | SW46 | SW48 | V4 | V14 | V21 | V45 | V35 | V39 |
| 1 | I _{CC1} | A | A | A | A | A | A | A | A | — | — | — | — | — | — |
| 2 | I _{CC2} | A | A | A | A | A | A | A | A | — | — | — | — | — | — |
| 3 | I _{CC3} | A | A | B | A | A | A | A | A | — | — | — | — | — | — |
| 4 | V _{de-adj} | A | A | A | A | A | A | B | B | — | — | — | V _a | — | — |
| 5 | G _{vpL} | A | A | A | A | A | A | B | A | — | — | — | V _a | — | — |
| 6 | G _{vpR} | A | A | A | A | A | A | A | B | — | — | — | V _a | — | — |
| 7 | V _{ALCL} | A | A | A | A | A | A | B | A | — | — | — | V _a | — | — |
| 8 | V _{ALCR} | A | A | A | A | A | A | A | B | — | — | — | V _a | — | — |
| 9 | V _{ALONL} | A | A | A | A | A | A | B | A | — | — | — | V _a | — | — |
| 10 | V _{ALONR} | A | A | A | A | A | A | A | B | — | — | — | V _a | — | — |
| 11 | V _{ALONL/R} | A | A | A | A | A | A | A | A | — | — | — | V _a | — | — |
| 12 | THDL1 | A | A | A | A | A | A | B | A | — | — | — | V _a | — | — |
| 13 | THDR1 | A | A | A | A | A | A | A | B | — | — | — | V _a | — | — |
| 14 | THDL2 | A | A | A | A | A | A | B | A | — | — | — | V _a | — | — |
| 15 | THDR2 | A | A | A | A | A | A | A | B | — | — | — | V _a | — | — |
| 16 | f _{oLN} | A | C | A | A | A | A | A | A | — | — | — | V _a | — | — |
| 17 | f _{oRN} | A | C | A | A | A | A | A | A | — | — | — | V _a | — | — |
| 18 | f _{oLP} | B | C | A | A | A | A | A | A | — | — | — | V _a | — | — |
| 19 | f _{oRP} | B | C | A | A | A | A | A | A | — | — | — | V _a | — | — |
| 20 | VL | A | A | A | A | A | A | A | A | — | — | — | V _a | — | — |
| 21 | VR | A | A | A | A | A | A | A | A | — | — | — | V _a | — | — |
| 22 | ΔVR/L | A | A | A | A | A | A | A | A | — | — | — | V _a | — | — |
| 23 | 2HL | A | A | A | A | A | A | A | A | — | — | — | V _a | — | — |
| 24 | 2HR | A | A | A | A | A | A | A | A | — | — | — | V _a | — | — |
| 25 | 3HL | A | A | A | A | A | A | A | A | — | — | — | V _a | — | — |
| 26 | 3HR | A | A | A | A | A | A | A | A | — | — | — | V _a | — | — |
| 27 | V _{car-aj} | A | A | A | A | A | A | A | A | — | — | — | V _a | V _b | — |
| 28 | V _{dev-aj} | A | A | A | A | A | B | A | A | — | — | — | V _a | V _b | V _c |
| 29 | V _{CLAMP} | A | A | A | A | A | A | A | A | — | — | — | V _a | V _p | V _c |
| 30 | G _{Vpre} | A | A | A | A | A | B | A | A | — | — | — | V _a | V _b | V _c |
| 31 | V _v | A | A | A | A | A | A | A | A | — | — | — | V _a | V _b | V _c |
| 32 | 2HV | A | A | A | A | B | A | A | A | — | — | — | V _a | V _b | V _c |
| 33 | 3HV | A | A | A | A | B | A | A | A | — | — | — | V _a | V _b | V _c |
| 34 | G _{VMD} | A | A | A | B | A | A | A | A | — | — | — | V _a | V _b | V _c |
| 35 | FC | A | A | A | B | A | A | A | A | — | — | — | V _a | V _b | V _c |
| 36 | 2HMD | A | A | A | B | A | A | A | A | — | — | — | V _a | V _b | V _c |
| 37 | 3HMD | A | A | A | B | A | A | A | A | — | — | — | V _a | V _b | V _c |
| 38 | V _{4L} | C | B | A | A | A | A | A | A | 0.4 | — | — | V _a | V _b | V _c |
| 39 | V _{4H} | C | A | A | A | A | A | A | A | 1.1 | — | — | V _a | V _b | V _c |
| 40 | V _{14L} | A | A | C | A | A | A | A | A | — | 0.8 | — | V _a | V _b | V _c |
| 41 | V _{14H} | A | A | C | A | A | A | A | A | — | 2.0 | — | V _a | V _b | V _c |
| 42 | V _{21L} | A | A | A | A | C | A | A | A | — | — | 0.8 | V _a | V _b | V _c |
| 43 | V _{21H} | A | A | A | A | C | A | A | A | — | — | 2.0 | V _a | V _b | V _c |
| 44 | VAL | A | A | A | A | A | A | B | B | — | — | — | V _a | V _b | V _c |
| 45 | VAR | A | A | A | A | A | A | B | B | — | — | — | V _a | V _b | V _c |
| 46 | VAL/R | A | A | A | A | A | A | B | B | — | — | — | V _a | V _b | V _c |
| 47 | THDLT | A | A | A | A | A | A | B | B | — | — | — | V _a | V _b | V _c |
| 48 | THDRT | A | A | A | A | A | A | B | B | — | — | — | V _a | V _b | V _c |
| 49 | VNL | A | A | A | A | A | A | A | A | — | — | — | V _a | V _b | V _c |
| 50 | VNR | A | A | A | A | A | A | A | A | — | — | — | V _a | V _b | V _c |

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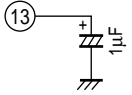
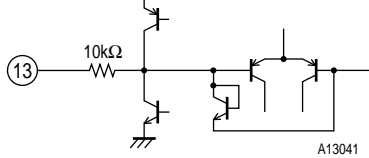
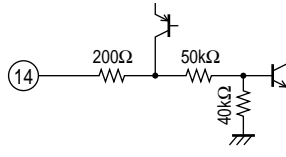
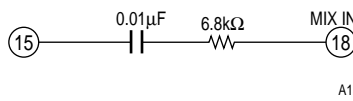
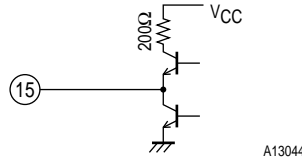
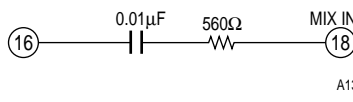
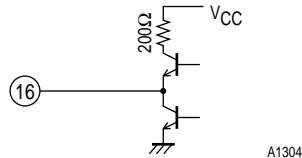
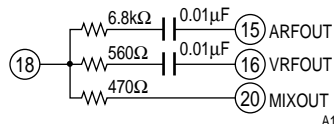
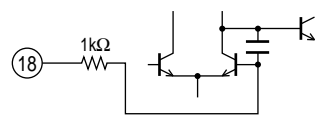
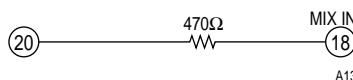
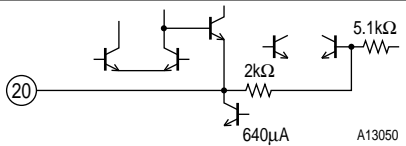
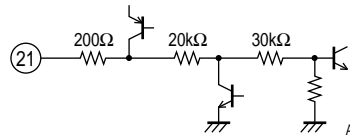
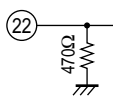
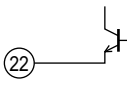
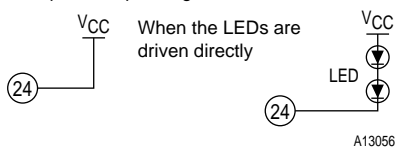
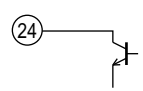
Pin Functions

| Pin No. | Pin | Voltage | Function | Equivalent circuit |
|---------|---------------------|---------------------------------|--|---|
| 1 | BNDSEL | 1.2 | Must be connected to ground in normal operation. |  |
| 2 | REF-R | 1.25 | Sets the external reference current. Typical value (1% metal film resistor) |  |
| 3 | ALC L OUT | $V_{CC}/2$ | Left channel ALC monitor output |  |
| 4 | Xtal-SEL | 1.2 | Selects 3.58 or 4.43 MHz for the Xtal-IN pin. Open or high: 3.58 MHz Low: 4.43 MHz |  |
| 5 | ALC R OUT | $V_{CC}/2$ | Right channel ALC monitor output |  |
| 6 | NC | — | | |
| 7 | Xtal-IN | $V_{CC}/2$ | Crystal element connection. Alternatively, an external fsc clock signal may be input. The fsc signal must have an amplitude greater than 0.2 Vpp. |  |
| 8 | A-GND | 0 | Audio system ground | |
| 9 | A-GND | 0 | Audio system ground | |
| 10 | LPF-L | $V_{CC}/2$ (When PLL locked) | Audio PLL loop filter |  |
| 11 | LPF-R | $V_{CC}/2$ (When PLL locked) | Audio PLL loop filter |  |
| 12 | OSC-V _{CC} | V_{CC} | Crystal oscillator power supply |  |

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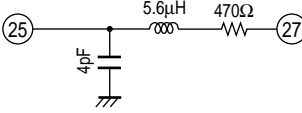
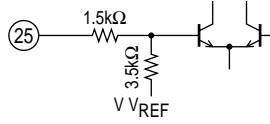
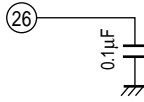
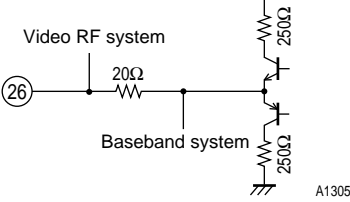
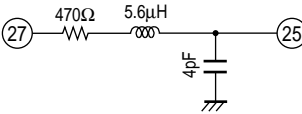
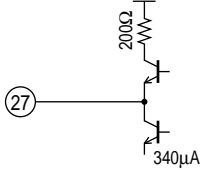
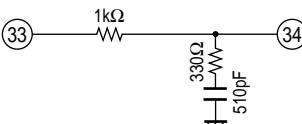
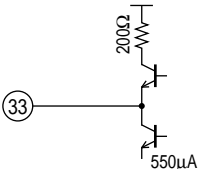
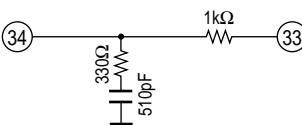
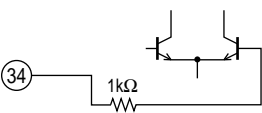
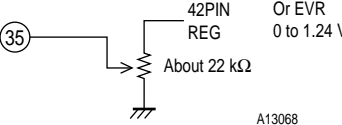
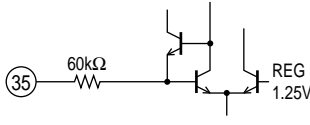
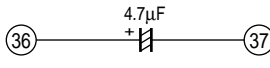
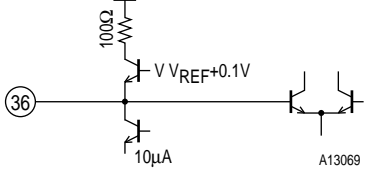
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| Pin No. | Pin | Voltage | Function | Equivalent circuit |
|---------|------------|------------|---|---|
| 13 | CHUPC | 3.2 | Audio PLL loop filter capacitor charge pump time constant setting capacitor connection  A13042 |  A13041 |
| 14 | STBY | 2.2 | Sets the IC to standby mode. Open or high: normal operation Low: Standby mode operation |  A13043 |
| 15 | ARF-OUT | $V_{CC}/2$ | Audio RF output  A13045 |  A13044 |
| 16 | VRF-OUT | $V_{CC}/2$ | Video RF output  A13047 |  A13046 |
| 17 | NC | — | | |
| 18 | MIX-IN | 1.3 | Drive mixer amplifier inverting input  A13049 |  A13048 |
| 19 | NC | — | | |
| 20 | MIX-OUT | 1.3 | Drive mixer amplifier output and driver amplifier inverting input  A13051 |  A13050 |
| 21 | DRV-SW | 2.2 | Sets the driver amplifier to the standby state. (LED off) Open or high: normal operation Low: Standby mode operation |  A13052 |
| 22 | DRV EM-OUT | 0.6 | Driver amplifier output stage transistor emitter  A13054 |  A13053 |
| 23 | NC | — | | |
| 24 | DRV CL OUT | V_{CC} | Driver amplifier output stage transistor collector  A13056 |  A13055 |

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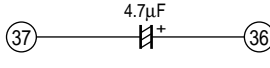
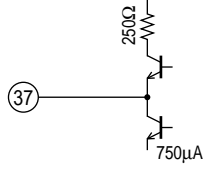
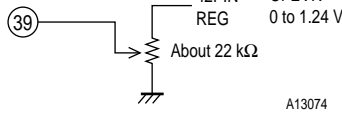
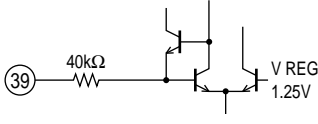
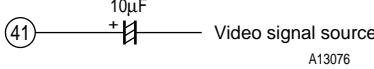
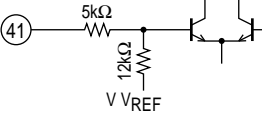
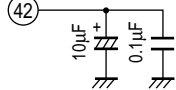
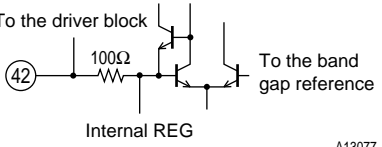
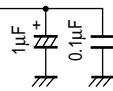
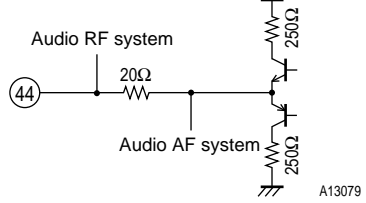
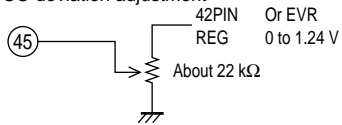
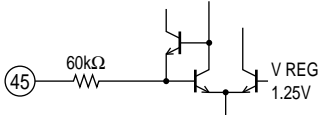
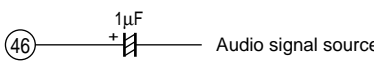
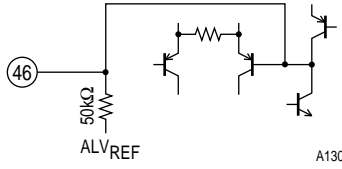
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| Pin No. | Pin | Voltage | Function | Equivalent circuit |
|---------|-----------|------------------|---|---|
| 25 | VRF IN | $V_{CC}/2$ | FAMP input  |  |
| 26 | V VREF | $V_{CC}/2$ | Video system $V_{CC}/2$ line bypass capacitor connection The pin voltage approaches the supply voltage in standby mode.  |  |
| 27 | HPF OUT | $V_{CC}/2$ | VCO + HPF output 0.29 Vpp  |  |
| 28 | V GND | 0 | Video system ground | |
| 29 | V GND | 0 | Video system ground | |
| 30 | NC | — | | |
| 31 | V VCC | V_{CC} | Video V_{CC} | |
| 32 | A VCC | V_{CC} | Audio V_{CC} | |
| 33 | PREEM OUT | $V_{CC}/2$ | Video preemphasis amplifier output  |  |
| 34 | PREEM IN | $V_{CC}/2$ | Video preemphasis amplifier input  |  |
| 35 | CAR ADJ | 1.25 | Video VCO free-running adjustment  |  |
| 36 | CLAMP C2 | $V_{CC}/2 + 0.1$ | Clamp side of the sync tip clamp  |  |

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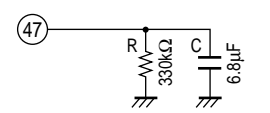
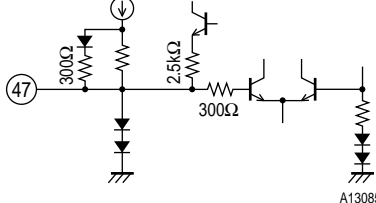

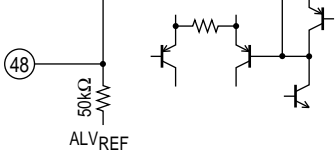
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| Pin No. | Pin | Voltage | Function | Equivalent circuit |
|---------|-------------|------------|---|--|
| 37 | CLAMP C1 | $V_{CC}/2$ | Sync tip clamp output  <small>A13072</small> |  <small>A13071</small> |
| 38 | NC | — | | |
| 39 | V DEV ADJ | 1.25 | Video VCO deviation adjustment  <small>A13074</small> |  <small>A13073</small> |
| 40 | NC | — | | |
| 41 | V_{IN} | $V_{CC}/2$ | Video input Reference input level: 0.5 V _{pp} Input impedance: 17 kΩ  <small>A13076</small> |  <small>A13075</small> |
| 42 | REG | 1.25 | Reference voltage supply bypass capacitor connection Discharges in standby mode.  <small>A13078</small> |  <small>A13077</small> |
| 43 | A GND | 0 | Audio ground | |
| 44 | A V_{REF} | $V_{CC}/2$ | Audio system $V_{CC}/2$ line bypass capacitor The pin voltage approaches the V_{CC} voltage in standby mode.  <small>A13080</small> |  <small>A13079</small> |
| 45 | A DEV ADJ | 1.25 | Audio VCO deviation adjustment  <small>A13082</small> |  <small>A13081</small> |
| 46 | L CH IN | $V_{CC}/2$ | Audio left channel input Reference input level: -30 dBs Input impedance: 10 kΩ  <small>A13084</small> |  <small>A13083</small> |

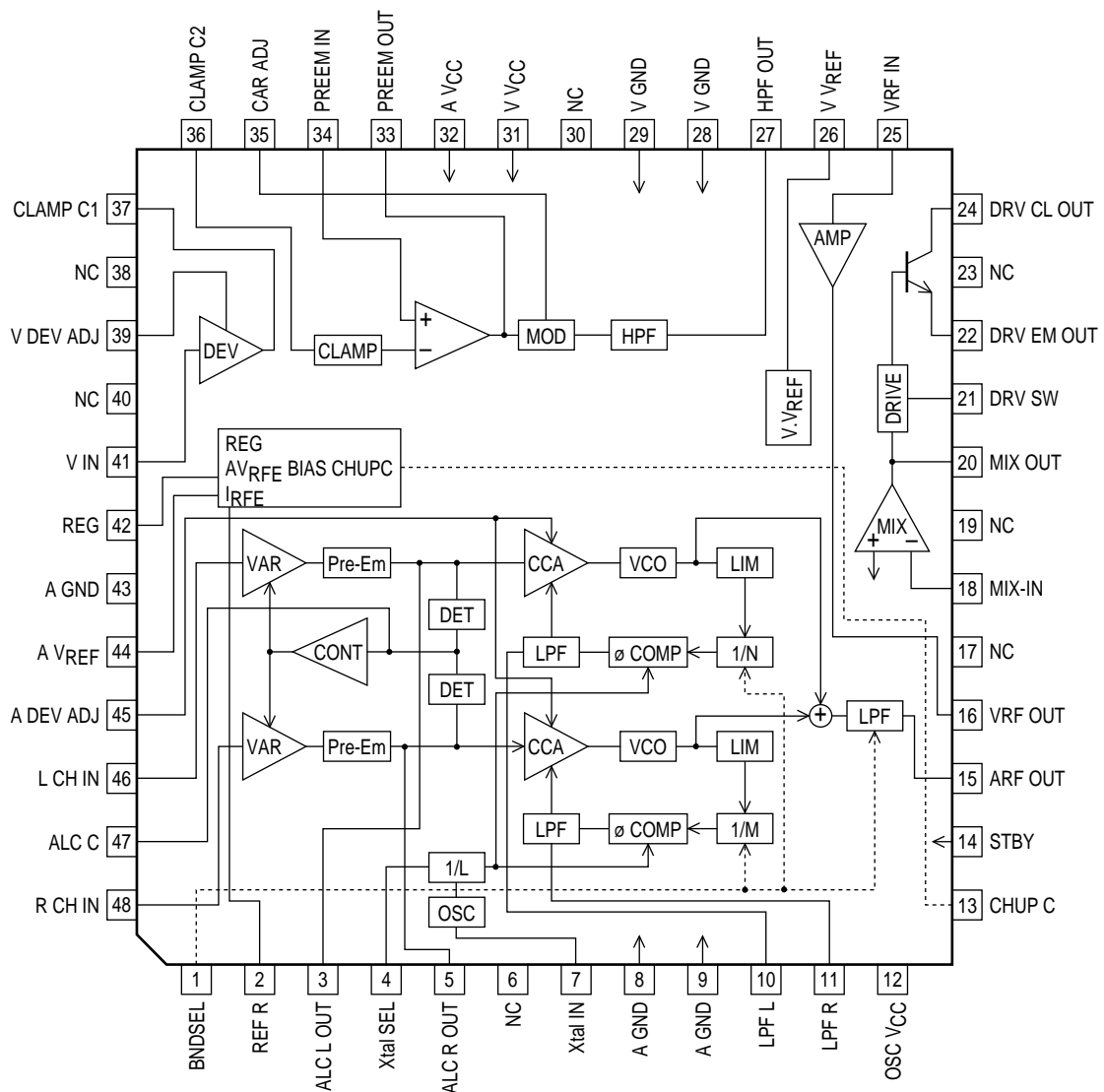
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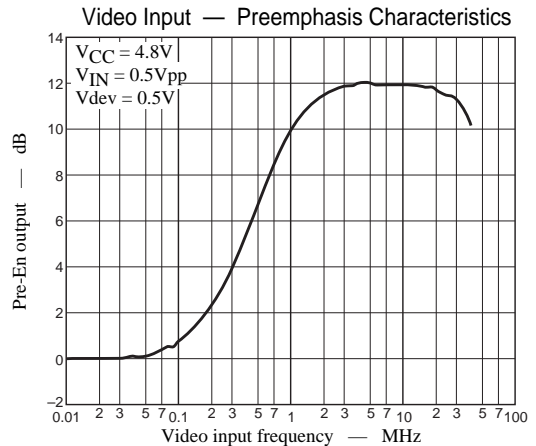
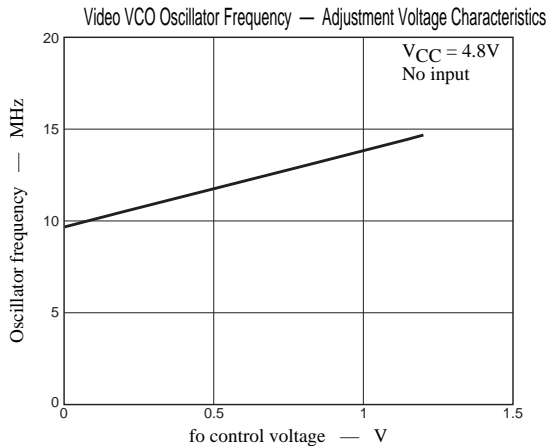
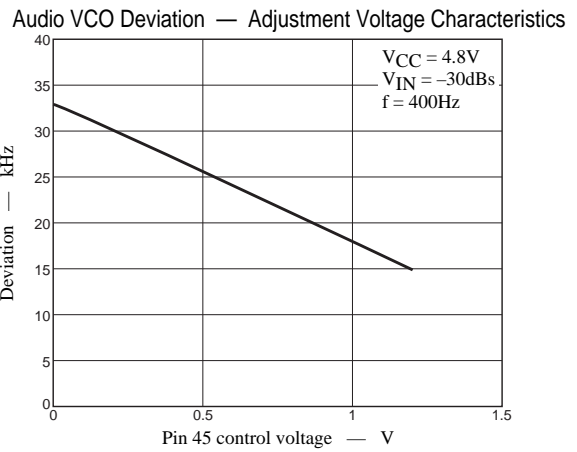
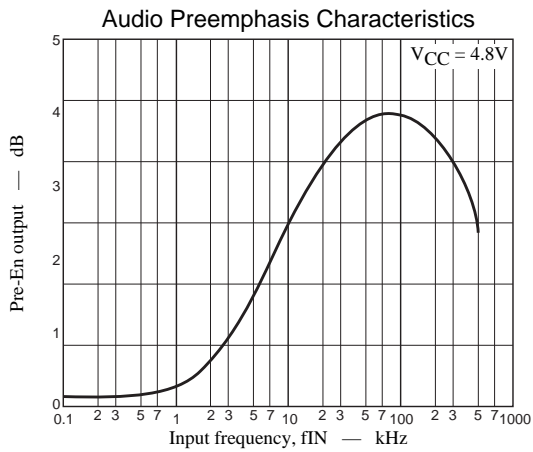
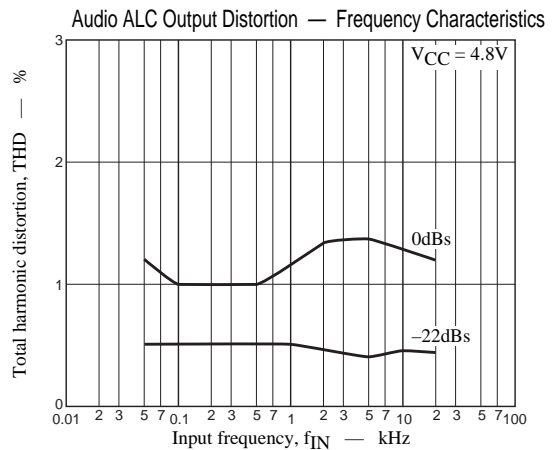
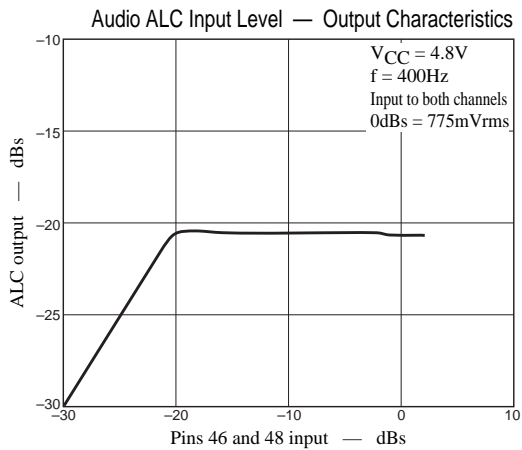
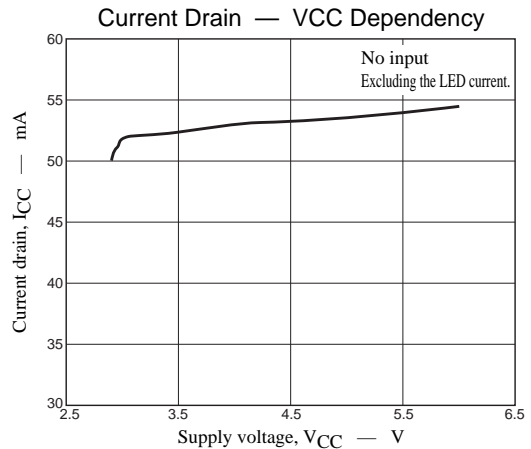
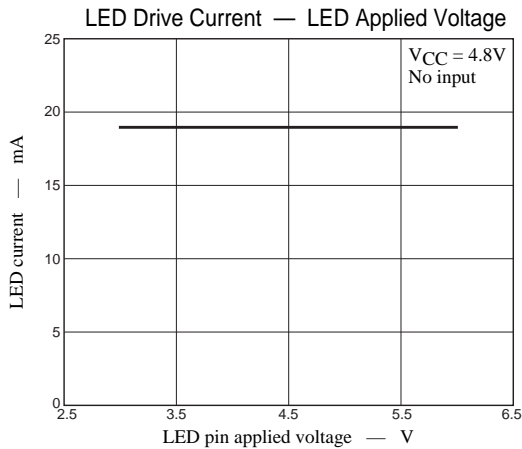
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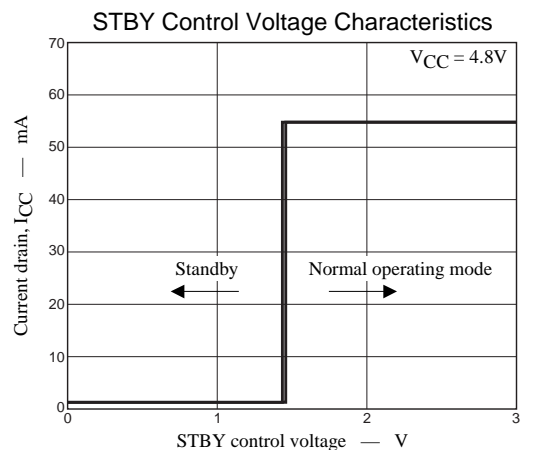
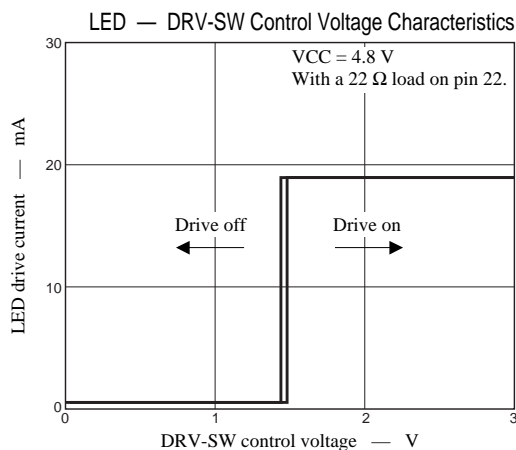
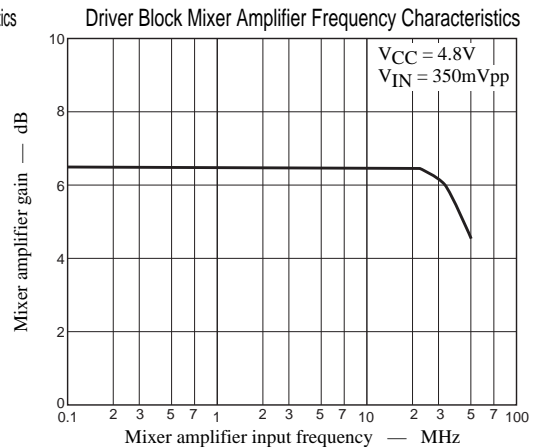
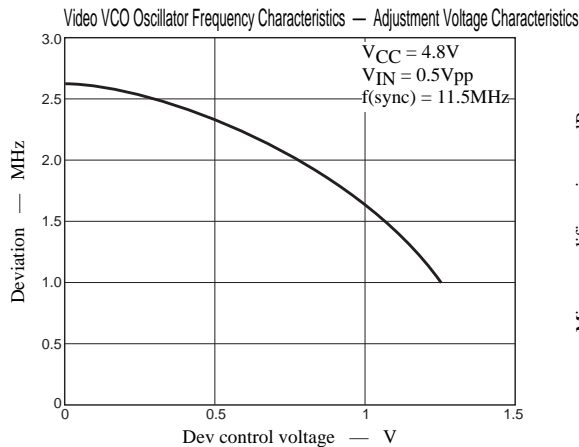
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| Pin No. | Pin | Voltage | Function | Equivalent circuit |
|---------|---------|------------|--|--|
| 47 | ALC C | 0.7 | <p>Audio ALC capacitor connection</p> <p>The attack and recovery times can be adjusted with the resistor and capacitor.</p>  <p style="text-align: right;">A13086</p> |  <p style="text-align: right;">A13085</p> |
| 48 | R CH IN | $V_{CC}/2$ | <p>Audio right channel input</p> <p>Reference input level: -30 dBs</p> <p>Input impedance: 10 kΩ</p>  <p style="text-align: right;">A13088</p> |  <p style="text-align: right;">A13087</p> |

Block Diagram







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