# ILA4661

## BASEBAND DELAY LINE

### GENERAL DESCRIPTION

The ILA4661 is an integrated baseband delay line circuit with one line delay. It is suitable for decoders with colour-difference signal outputs ±(R-Y) and ±(B-Y). Device is functionally identical to the TDA4661 Philips.

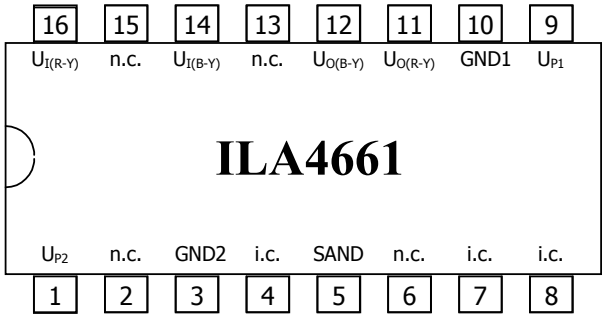
### FEATURES

- Two comb filters, using the switched-capacitor technique, for one line delay time (64 μS)
- 3 MHz internal clock signal derived from a 6 MHz CCO, line-locked by the sandcastle pulse (64 μS line)
- Comb filtering functions for NTSC colour-difference signals to suppress cross-colour
- Clamping of AC-coupled input signals ±(R-Y) and ±(B-Y)

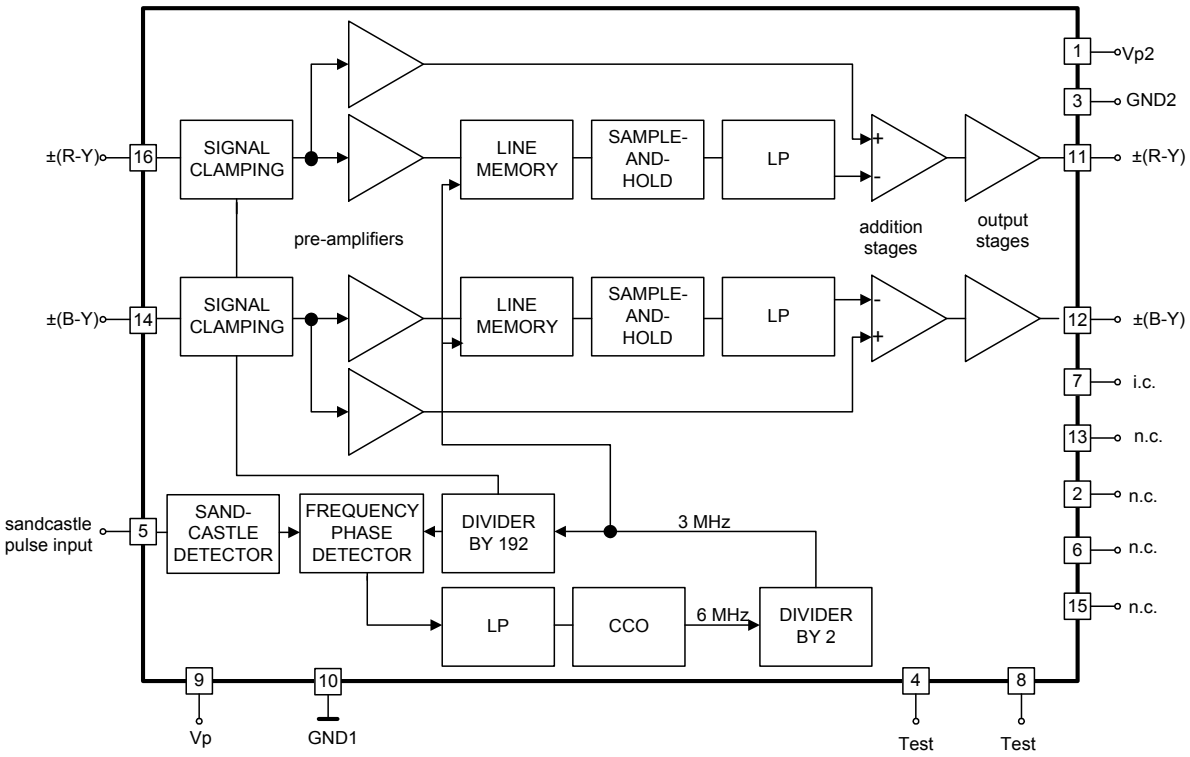
### QUICK REFERENCE DATA

| Parameter | Symbol | Type $U_{VCC}$=5.0 V | | |
|---|---|---|---|---|
| | | Min. | Type | Max |
| Analogy supply current, mA | Ip1 | - | - | 6.0 |
| Digital supply current, mA | Ip2 | - | - | 1.0 |
| Input fixing voltage (on pins 14 and 16), V | $U_{14,16}$ | 1.3 | - | 1.7 |
| Output voltage (on pins 11 and 12), V | $U_{11,12}$ | 2.5 | - | 3.3 |
| Output signal (peak-to peak value)<br>±(R-Y) on pin 11<br>±(B-Y) on pin 12 | <br>$U_{011}$<br>$U_{012}$ | <br>-<br>- | <br>1.05<br>1.33 | <br>-<br>- |
| Ratio of output amplitudes at equal input signals ($U_{14}$=$U_{16}$=1.33V), dB | $U_{11}/U_{12}$ | -0.4 | - | 0.4 |
| Ratio of output signals on pins 11 and 12 for adjacent time samples at constant input signals ($U_{14}$=$U_{16}$=1.33V), dB | $U_n/U_{n+1}$ | -0.1 | - | 0.1 |
| Gain for PAL and NTSC<br>Gain for SECAM<br>(ratio $U_O/U_I$), dB | Gv | 5.3<br>-0.6 | -<br>- | 6.3<br>0.4 |
| Delay of delayed signals, μS | $t_d$ | 63.94 | - | 64.06 |
| Delay of non-delayed signals, nS | $t_{dn}$ | 40 | - | 80 |
| Transient time of delayed signal on pins 11 respectively 12, nS | $t_{tr}$ | - | 350 | - |
| Transient time of non-delayed signal on pins 11 respectively 12, nS | $t_{trn}$ | - | 320 | - |
| Noise voltage (RMS value; pins 11 and 12), mV | Un | - | - | 1.2 |
| Weighted signal-to-noise ratio, dB | S/N(w) | - | 54 | - |

## PIN CONFIGURATION




## BLOCK DIAGRAM



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