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.

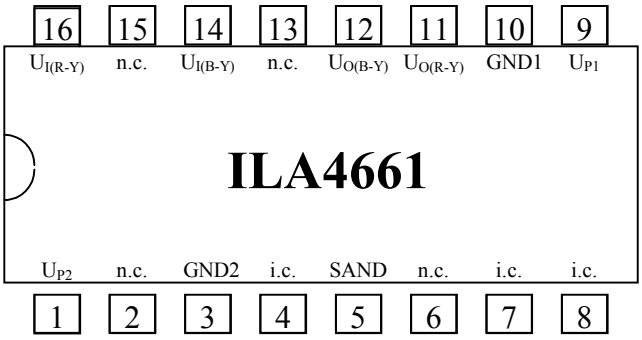
FEATURES

- 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)

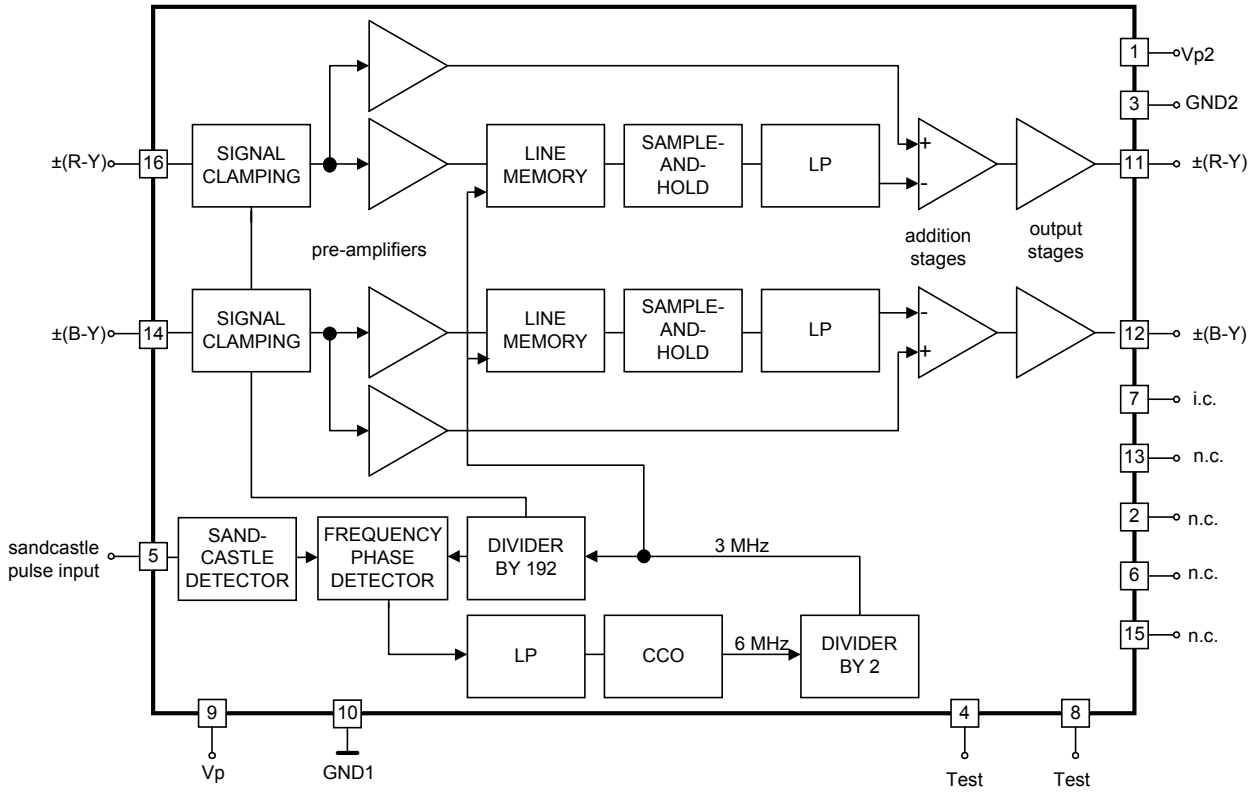
QUICK REFERENCE DATA

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) ± (R-Y) on pin 11 ± (B-Y) on pin 12	 U_{011} U_{012}	 - -	 1.05 1.33	 - -
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 Gain for SECAM (ratio U_O/U_I), dB	Gv	5.3 -0.6	- -	6.3 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



INTEGRAL