Videokombinationen Video combinations

A 270 D

Video- und Leuchtdichtesignalverstärker mit Strahlstrombegrenzung und gleichspannungsgesteuerter Kontrast- und Helligkeitseinstellung für Schwarzweiß- und Farbfernsehempfänger.
Der Anschluß einer Verzögerungsleitung beliebiger Impedanz ist möglich.

Video and luminous density amplifier with beam current limitting and d. c. voltage regulated brigthness control and contrast control for monochrome and colour television receivers.
The connexion of a raudom impedance delay line is possible.

Grenzdaten max. ratings				Informationsdaten characteristics	bei at $U_{CC} = 12$ V, $\vartheta_a = 25$ °C, $U_7 = 3{,}9$ V			Bauform Figure
U_{CC}	= 15,5 V	U_{15}	= 5 V	I_{CC}	≦ 36 mA	bei U_{12}	= 1,2 V			
U_4	= 15,5 V	—Io	= 20 mA	$U_{4,6sat}$	≦ 120 mV	at I_5	= 0,2 mA,	I_4	= 0,8 mA	6
$U_{4,6}$	= 13,2 V	UBAS	= 2 V	U_{15}	< 0,5 V		U_{12} = 1,2 V			
$I_{6,5}$	= 5 V	P_{tot}	= 700 mW [1]	U_{15}	> 3,0 V		U_{12} = 4,2 V			
I_4	= 10 mA			ΔU_{15}	< 20 mV		U_{12} = 2 V [2]			
I_5	= 2 mA			A_u	= 2,0...2,8		U_7 = 3,3 V [2]			
P_{npn}	= 20 mW [1]			$\Delta u_{1,16}$	< 160 mV		U_8 = 2,1 V,	U_7	= 3,3 V [3]	
ϑ_a	= —10...+55 °C			$\Delta u_1(U_7)$	> 20 dB		$U_7(_1)$ = 1,2 V,	$U_{7(2)}$	= 3,3 V [3]	
U_8, U_9	= —2...+4 V			B_{video}	> 6 MHz		U_7 = 3,3 V,	u_3	= 0,5 Vss,	
U_{10}, U_{11}	= —5...+6 V							ΔV_u	= —3 dB	
				B_{video}	> 7 MHz		U_7 = 3,3 V,	u_3	= 0,5 Vss,	
								ΔV_u	= —3 dB	

[1] $\vartheta_a = 25$ °C
[2] ΔU_3 = Sprung von 2,8 auf 3,6 V
[3] ΔU_3 = Sprung von 3,2 auf 4,0 V

[1] $\vartheta_a = 25$ °C
[2] ΔU_3 = jump from 2,8 to 3,6 V
[3] ΔU_3 = jump from 3,2 to 4,0 V

A 3501 D

Video-Kombination für Farbfernsehempfänger mit Einblendmöglichkeiten für lineare RGB-Signale und 2 elektronischen Potentiometern für Weißabgleich im Grün- und Blaukanal sowie der Möglichkeit zur Spitzenstrahlstrombegrenzung

Video-combination for colour television receiver with superimposing facilities for linear RGB-signals and with electronic potentiometers for withe balance in the green-and blue channel as well as with the possibility of limiting the peak beam current

Grenzwerte max. ratings		Informationsdaten characteristics		Bauform Figure
U_{CC}	= 10,8...13,2 V	I_{CC}	< 122 mA	13
$U_{1,4,26}$	= Ucc/2...Ucc + 1 V	$A_{u\ 17\text{-}27}$ / $A_{u\ 18\text{-}5}$	—2...0,5 dB	
$U_{2,5,27}$	= 0...Ucc V	$A_{u\ 15\text{-}27}$ / $A_{u\ 15\text{-}2}$ / $A_{u\ 15\text{-}5}$	8...11 dB	
U_{10}	= 0...Ucc V	Regelbereich Helligkeit	± 45 %	
U_{11}	= —0,5...3 V	Regelbereich Sättigung	5,5...—40 dB	
$U_{16,19,20}$	= 0...Ucc/2 V	Regelbereich Kontrast	2,5...—16 dB	
$U_{21,22,23}$	= 0...Ucc V	Regelbereich dyn. Weißregler	± 40 %	
I_{20}	= 5 mA	interne Signalbegrenzung	+ 12 %...— 20 %	
P_{tot}	= 1,7 W			
ϑ_a	= 0...+70 °C			

PAL-Dekoder PAL-decoder

A 3510 D

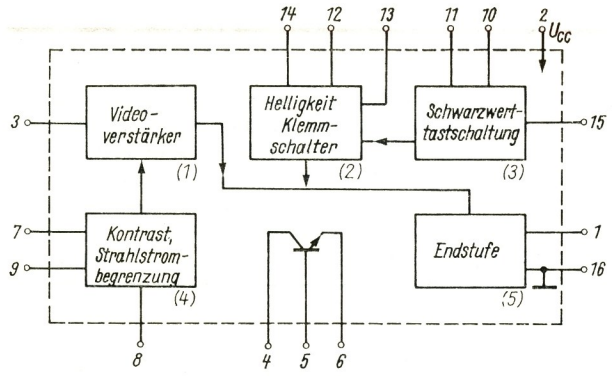
PAL-Dekoder für Farbfernsehgeräte

PAL-decoder for colour television receivers

Grenzdaten max. ratings		Informationsdaten characteristics	bei at $\vartheta_a = 25$ °C — 5 K, $U_{CC} = 12$ V	Bauform Figure
U_{CC}	= 10,8...13,2 V	u_{11SS}	= 0,74...1,48 V	bei $U_{ISS} \pm v = 100$ mV [1]	11
U_{19}	< Ucc V	u_{10SS}	= 0,94...1,88 V	at $U_{ISS} \pm u = 72$ mV [2]	
$-I_5$	< 10 mA	$d_{R\text{-}Y}$	> 60 dB	$U_{ISS} \pm v = 200$ mV [1]	
I_{21}	< 10 mA	$d_{B\text{-}Y}$	> 60 dB	$U_{ISS} \pm u = 144$ mV [2]	
$-I_{10,11}$	< 1 mA	I_{CC}	= 40...75 mA	u_I = 0, $u_{20} = 1$ V	
ϑ_a	= 0...70 °C	U_{5SS}	< 2,2 V	u_{ISS} = 10 mV	
		d	> 56 dB	u_{ISS} = 200 mV	
		U_{21}	< 500 mV	u_I = 0, $U_{20} = 1$ V, $U_{16} = U_{18}$, $I_{21} = 10$ mA	
		U_{21}	> 12 V	u_I = 0, $U_{20} = 1$ V, $U_{16} = 4$ V, $I_{21} = 10\ \mu$A	

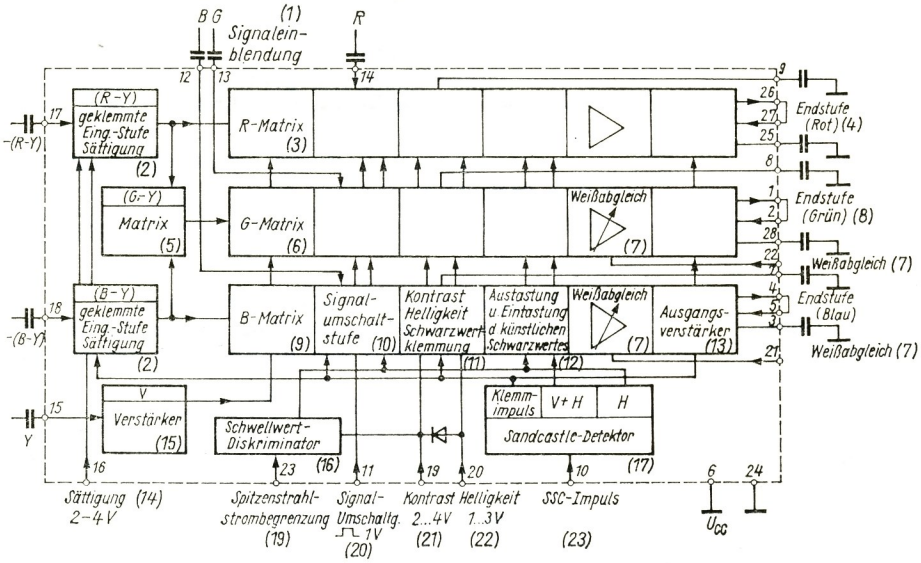
[1] PAL-Signal, ± u-Sprung in Zeilenmitte
[2] PAL-Signal, ± v-Sprung in Zeilenmitte

[1] PAL-signal, ± u-jump circuit in line centre
[2] PAL-signal, ± v-jump circuit in line centre



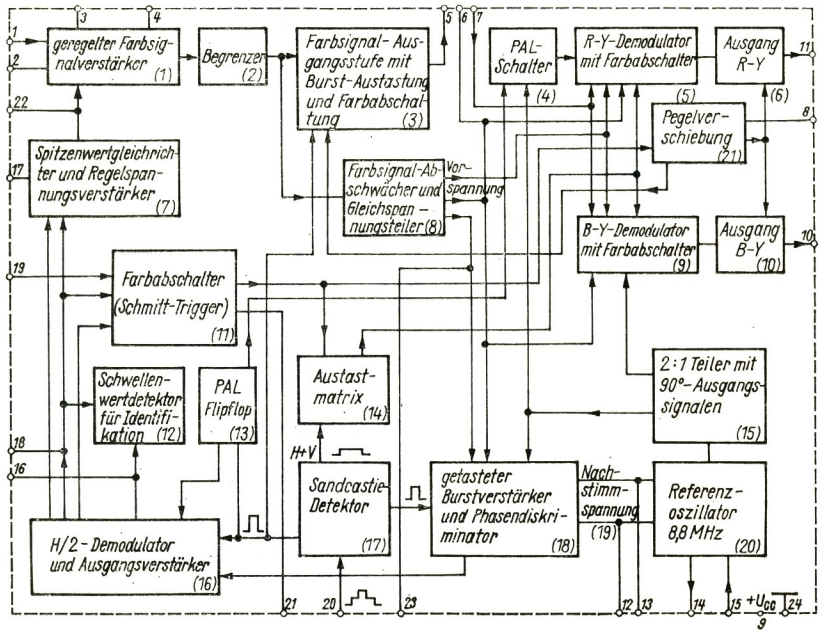
A 270 D Blockschaltung
block diagram

1 video amplifier
2 brightness clamping circuit
3 keyed black level circuit
4 contrast control, beam current limiting
5 output stage



A 3501 D Blockschaltung
block diagram

1 signal insert
2 clamped input stage saturation
3 R-matrix
4 final stage (red)
5 matrix
6 G-matrix
7 white balance
8 final stage (green)
9 B-matrix
10 signal commutating stage
11 contrast intensity black value clamping
12 blanking and scanning the artificial black value
13 output amplifier
14 final stage (blue)
15 amplifier
16 threshold value — discriminator
17 clamping pulse / Sandcastle-detector
18 saturation
19 peak beam current limitation
20 signal change over
21 contrast
22 intensity
23 SSC-impulse



A 3510 D Blockschaltung
block diagram

1 regulated colour signal amplifier
2 limiter
3 colour signal-output stage with burst-blanking and colour disconnection
4 PAL-switch
5 R-Y-demodulator with colour disconnection
6 output R-Y
7 peak value rectifier and control voltage amplifier
8 colour signal-attenuator
9 B-Y-demodulator with colour cut-out
10 output B-Y
11 colour cut-out (Schmitt-trigger)
12 threshold detector for identification
13 PAL-flip-flop
14 blaning matrix
15 2 : 1 divider with 90°-output signals
16 H/2-demodulator and output amplifier
17 Sandcastle-detector
18 scanned burst-amplifier and phase discriminator
19 voltage for subsequent adjustment
20 reference oscillator 8.8 MHz