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VIDEO CONTROL COMBINATION

MDA3505

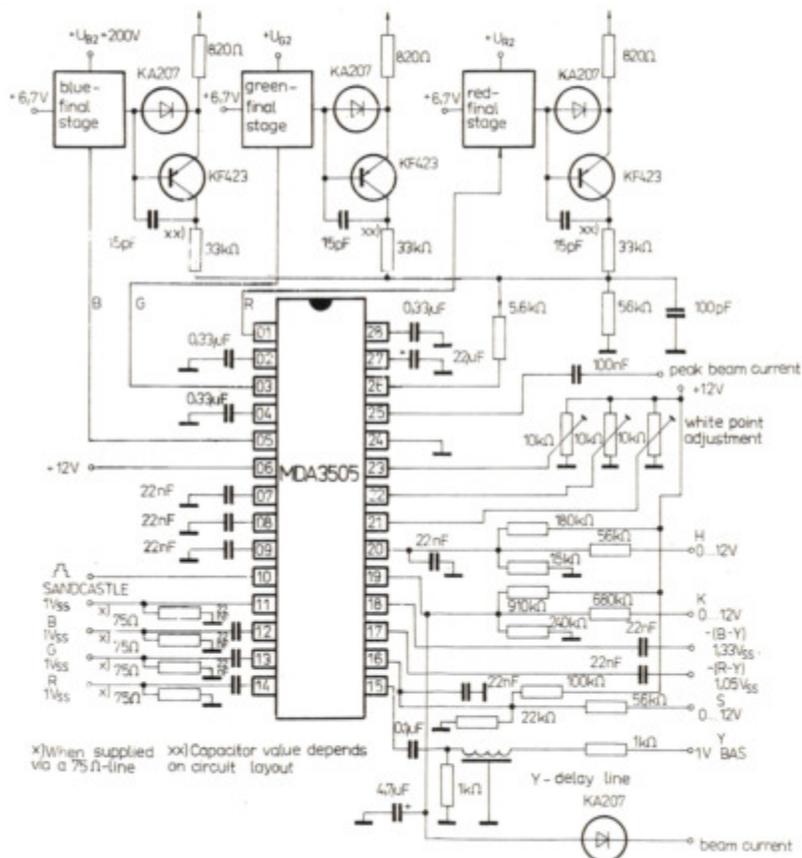
VIDEO CONTROL COMBINATION FOR LINEAR RGB SIGNALS, WITH AUTOMATIC CUT-OFF CONTROL.

Maximum ratings

	min.	max.	
U_{CC} ($U_{B/24}$)		13,2	V
$U_1, 3, 5/24$ $U_2, 4, 28/24$ $U_7, 8, 9/24$	no d. c. voltage		
$U_{10/24}$	0	$0,5 \cdot U_{CC}$	V
$U_{16, 19, 20/24}$	0	U_{CC}	V
$U_{21, 22, 23/24}$	0	U_{CC}	V
$U_{25, 26/24}$	0	U_{CC}	V
$U_{11/24}$	-0,5	3	V
$U_{12, 13, 14/24}$ $U_{15, 17, 18/24}$ $U_{27/24}$	no d. c. voltage		
$-I_{1, 3, 5}$		3	mA
I_{19}		10	mA
I_{20}		5	mA
I_{25}		5	mA
P_{tot}		1,7	W
T_s	0	70	°C
T_{*9}	-25	+125	°C

Analog: TDA3505

Package: G3-4D



Application diagram

Characteristic data

$U_{CC} = 12\text{ V}$; $T_s = +25\text{ °C}$ unless otherwise noted

	nom.	min. - max.	
Supply voltage range	U_{CC} ($U_{B/24}$)	12,0	V
Supply current	I_{CC} (I_6)	85	mA
Colour difference inputs	$U_{18/24}$ MM	1,33	V
	$U_{17/24}$ MM	1,05	V
Input resistance	$R_{17, 18/24}$	≥ 100	kΩ
Internal d. c. voltage due to clamping	$U_{17, 18}$	4,2	V
Saturation control voltage range for a change of saturation from -20 dB to +6 dB	U_{16}	2,1 ... 4,3	V
nom. saturation (6 dB below max.)	U_{16}		V
(G-Y) matrix	$U_{(G-Y)}$	$-0,51U_{(R-Y)} - 0,19U_{(B-Y)}$	
Y amplifier	$U_{15/24}$ MM	450	mV
BAS input signal	$R_{15/24}$	≥ 100	kΩ
Input resistance	$U_{15/24}$	2,9	V
Internal d. c. voltage due to clamping	$U_{11/24}$	0 ... 0,4	V
RGB channels	$U_{11/24}$	0,9 ... 3,0	V
Signal switching input voltage for insertion off level	I_{11}	-100 ... +200	µA
on level	$U_{12, 13, 14/24}$		V
Input current	$U_{12, 13, 14/24}$	4	V
Signal insertion			
Internal d. c. voltage due to clamping	$U_{19/24}$	2 ... 4,3	V
Contrast control			
Control voltage range for a change of contrast from -13 dB to +3 dB			

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		nom.	min. - max.	
nominal contrast (3 dB below max.) Input current at $U_{25} > 6$ V	$U_{19/24}$ I_{19}	3,6	$\leq 2,0$	V μ A
Brightness control Control voltage range Input current	$U_{20/24}$ $-I_{20}$		1 ... 3 ≤ 10	V μ A
White point adjustment A. C. voltage gain $U_{21}, U_{22}, U_{23} = 5,5$ V $U_{21}, U_{22}, U_{23} = 0$ V $U_{21}, U_{22}, U_{23} = 12$ V Input resistance	A_{11}, A_{31}, A_{51} A_{11}, A_{31}, A_{51} A_{11}, A_{31}, A_{51} $R_{211}, R_{221}, R_{231}$	100 60 140 20		% % % k Ω
Cut-off control Input voltage range Input voltage change	$U_{26/24}$ $\Delta U_{26/24}$	0,7	0 ... 6,5	V V
Gains (RGB-output) Voltage gain Y inputs (B-Y) and (R-Y) display inputs	$G_{1,3,5/15}$ $G_{5/18}, G_{1/17}$ $G_{1/14}, G_{3/13}, G_{5/12}$	16 6 6		dB dB dB
Sandcastle detector Sandcastle signal for clamping Horizontal blanking pulses Vertical blanking pulses	$U_{10/24}$ $U_{10/24}$ $U_{10/24}$	4,5 2,5	$\geq 8,5$ 4,0 ... 5,0 2,0 ... 3,0	V V V

¹⁾ Pulse duration > 3,5 μ s