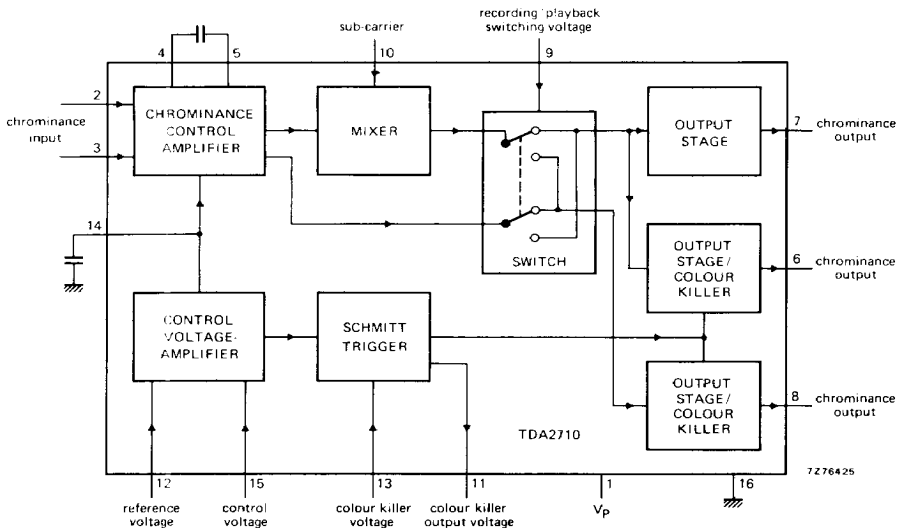


CHROMINANCE SIGNAL/MIXER FOR VIDEO RECORDERS

The TDA2710 is a monolithic integrated circuit for video recorders incorporating the following functions:

- controlled chrominance amplifier
- control voltage amplifier
- mixer for the chrominance signal
- electronic recording/playback switch
- Schmitt trigger for killing the chrominance signal
- colour killer output stage

BLOCK DIAGRAM



PACKAGE OUTLINE

16-lead DIL; plastic (SOT-38).

January 1980

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RATINGS Limiting values in accordance with the Absolute Maximum System (IEC 134)

Voltages

Supply voltage (pin 1)	$V_P (V_{1-16})$	0 to 13, 2	V
At pin 4	V_{4-16}	0 to V_P	V
At pin 5	V_{5-16}	0 to V_P	V
At pin 12	V_{12-16}	0 to V_P	V
At pin 13	V_{13-16}	0 to V_P	V
At pin 15	V_{15-16}	0 to V_P	V
At pin 9	$\pm V_{9-16}$	max. 4	V

Currents

At pin 6	$-I_6$	max. 5	mA
At pin 7	$-I_7$	max. 5	mA
At pin 8	$-I_8$	max. 5	mA
At pin 11	I_{11}	max. 5	mA

Power dissipation

Total power dissipation	P_{tot}	max. 700	mW
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Temperatures

Storage temperature	T_{stg}	-25 to +125	°C
Operating ambient temperature	T_{amb}	-20 to +60	°C

CHARACTERISTICS at $V_P = 12$ V; $T_{amb} = 25$ °C; measured in circuit on page 4

Inputs

Chrominance input (pins 2 and 3)

Input resistance	$R_{2,3-16}$	typ. 3, 3	k Ω
D.C. input voltage (without signal)	$V_{2,3-16}$	typ. 5, 9	V
Input voltage range at a peak-to-peak burst of 0, 5 V	$V_{2,3-16}$	2, 5 to 75	mV

Sub-carrier (pin 10)

Input resistance	R_{10-16}	typ. 2	k Ω
D.C. input voltage (without signal)	V_{10-16}	typ. 4, 4	V
Input voltage range (peak-to-peak value)	$V_{10-16(p-p)}$	60 to 500	mV

CHARACTERISTICS (continued)Reference voltage (pin 12)

External reference voltage	V_{12-16}	typ.	7	V
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Control voltage (pin 15)

Voltage at control voltage input

for colour on	V_{15-16}	$\leq$	5,7	V
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for colour off	V_{15-16}	$\geq$	6,1	V
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Colour killer input (pin 13)

Input voltage for colour off	V_{13-16}	$\geq$	6	V
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Recording/playback switch (pin 9)

Input resistance	R_{9-16}	typ.	1	k Ω
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Input voltage : for recording

V_{9-16}	$\leq$	0,3	V
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for playback

V_{9-16}	$\geq$	0,85	V
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OutputsColour killer output (pin 11)

Output resistance for colour on	R_{11-1}	typ.	10	k Ω
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Output voltage for colour off	V_{11-16}	$\leq$	0,5	V
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Recording

Output voltages (peak-to-peak values)

at a peak-to-peak burst of 0,5 V	$V_{6;7-16(p-p)}$	typ.	0,5	V
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Output voltage at pin 8 (peak-to-peak value)

at $V_{6-16(p-p)} = 0,5$ V	$V_{8-16(p-p)}$	0,35 to 0,5	V
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Playback

Sub-carrier suppression at pins 6 and 7

at $V_{10-16(p-p)} = 300$ mV; $V_{6-16(p-p)} =$ $V_{7-16(p-p)} = 1$ V; sub-carrier suppression

at pins 4 and 5	$\geq$	60	dB
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APPLICATION INFORMATION

