

Video signal switcher

BA7131F

The BA7131F is a video signal switcher with built-in video clamp circuit, developed for use in televisions and VCRs. It comes in a small 8-pin SOP package, and operates off a 5V supply (Typ.) with low power consumption.

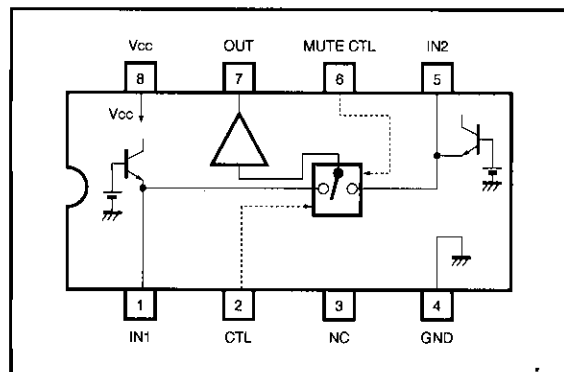
●Applications

Video cassette recorders and televisions, and video disc players

●Features

- 1)2-inputs, 1-output..
- 2)Built-in video clamp circuit.
- 3)Built-in muting circuit.
- 4)Operates off a 5V supply (Typ.) with low power consumption.
- 5)Small SOP 8pin package.

●Block diagram



●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Power supply voltage	V _{cc}	10	V
Power dissipation	P _d	450*	mW
Operating temperature	T _{opr}	-25~60	°C
Storage temperature	T _{stg}	-55~125	°C

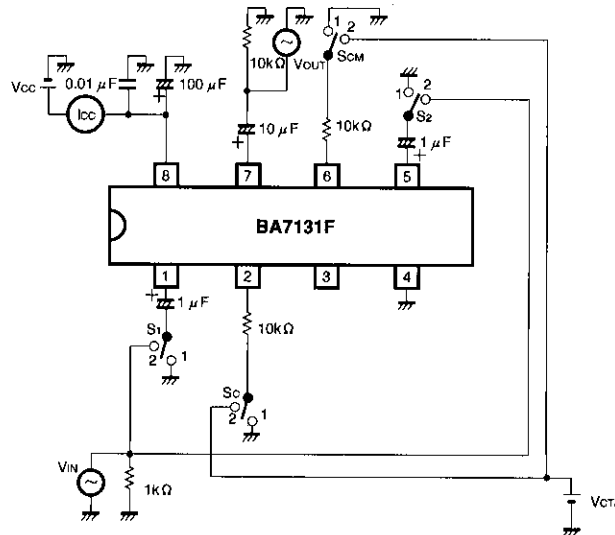
* Reduced by 4.5mW for each increase in Ta of 1°C over 25°C.

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●Electrical characteristics (Unless otherwise specified $T_a=25^{\circ}\text{C}$ and $V_{CC}=5\text{V}$)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Operating voltage	V_{CC}	4.5	5.0	6.0	V	—
Quiescent current	I_Q	—	5	8	mA	—
Maximum output level	V_{OM}	1.9	2.7	—	V _{P-P}	—
Voltage gain	G_V	-0.5	0	0.5	dB	$f_{IN}=1\text{MHz}$, $V_{IN}=2\text{V}_{P-P}$ Switch operation 1
Interchannel crosstalk	CT	—	-55	-45	dB	$f_{IN}=4.43\text{MHz}$, $V_{IN}=2\text{V}_{P-P}$ Switch operation 2
Mute function	CT_M	—	-50	-40	dB	$f_{IN}=4.43\text{MHz}$, $V_{IN}=2\text{V}_{P-P}$ Switch operation 3
Frequency characteristic	ΔG_V	-0.5	0	0.5	dB	Ratio of values at $f_{IN}=1\text{MHz}$ and $f_{IN}=4.43\text{MHz}$ $V_{IN}=2\text{V}_{P-P}$ Switch operation 1
CTL pin switch level	V_{TH}	—	0.7	—	V	2pin, 6pin

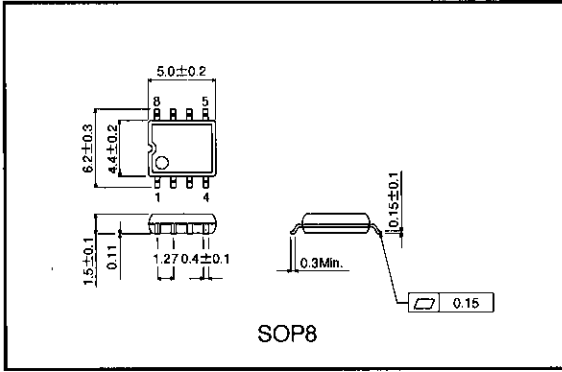
●Measurement circuit



●Switch operation table

Measurement parameter	Input mode	S ₁	S ₂	S _C	S _{CM}	Remarks
1 Input/Output characteristic	1pin	2	1	2	1	1pin→7pin
	5pin	1	2	1	1	5pin→7pin
2 Crosstalk	1pin	1	2	2	1	Input from pin 5
	5pin	2	1	1	1	Input from pin 1
3 Muting	1pin	2	1	2	2	
	5pin	1	2	1	2	

●External dimensions (Units: mm)



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AV switches

Notes

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