

Video signal switcher

BA7001

The BA7001 is switching IC for switching audio and video signals. The circuit is designed to keep switching noise and the DC output voltage to an absolute minimum. The input signal switching frequency range is from the audio band to several MHz.

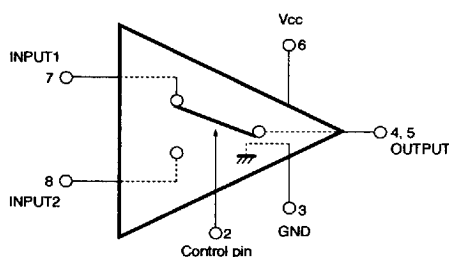
●Applications

Video cassette recorders and audio equipment

●Features

- 1) Low DC offset output voltage.
- 2) Low switching noise.
- 3) Wide input frequency range (suitable for both audio and video signal).
- 4) Excellent crosstalk characteristics (-50dB Typ. at 3.58MHz).
- 5) High control pin input impedance.

●Block diagram



●Absolute maximum ratings ($T_a=25^\circ\text{C}$)

Parameter	Symbol	Limits	Unit
Power supply voltage	V_{CC}	15	V
Power dissipation	P_d	540 *	mW
Operating temperature	T_{opr}	$-10 \sim 60$	$^\circ\text{C}$
Storage temperature	T_{stg}	$-25 \sim 125$	$^\circ\text{C}$
Input voltage 1	V_{IN1}	3	V
Input voltage 2	V_{IN2}	3	V

* Reduced by 5.4mW for each increase in T_a of 1°C over 25°C .

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●Electrical characteristics (Unless otherwise specified Ta=25°C and Vcc=12V)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Quiescent current	I _Q	5	13	18	mA	—
Crosstalk	CT	—	—50	—40	dB	f _{IN} =3.58MHz
Total-harmonic distortion	THD	—	0.01	0.3	%	V _{IN} =1kHz, 0dBm
Control threshold voltage	V _{TH}	0.8	2.0	3.0	V	—
Input impedance	Z _{IN}	10	15	—	kΩ	—

●Measurement circuit

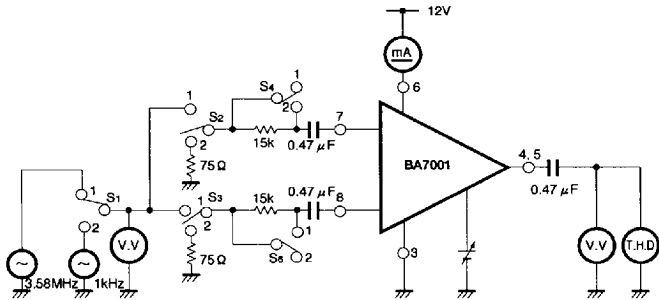
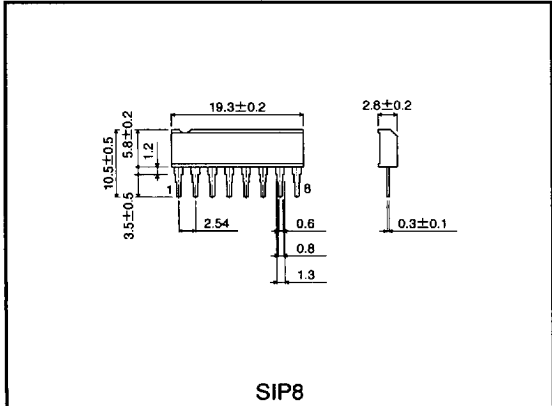


Fig.1

Parameter	S ₁	S ₂	S ₃	S ₄	S ₅	Remarks
I _{CC}	1	2	2	2	1	—
CT	1	1 - 2	1 - 2	2	1	—
THD	2	1	1	2	1	—
V _{TH}	2	2	1	2	1	Pin 2 voltage measurement
Z _{IN}	2	1	1	1 - 2	1 - 2	—

●External dimensions (Units: mm)



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