

Video signal switcher for AV amplifiers

BA7626/BA7626F/BA7626FS

The BA7626 and BA7626F and BA7626FS are video signal switches that two five-channel analog multiplexers for switching chroma and audio signals, and two wide-band 6dB amplifiers. By simply adding transistor buffer to the outputs, it is possible to construct a record / playback switch for two record / playback VCRs, and three video playback machines (eg. laser desk players). Input switching and VCR record switching can be done independently. The inputs are terminated with $20\text{k}\Omega$ resistors, and are suitable for switching chroma and audio signals.

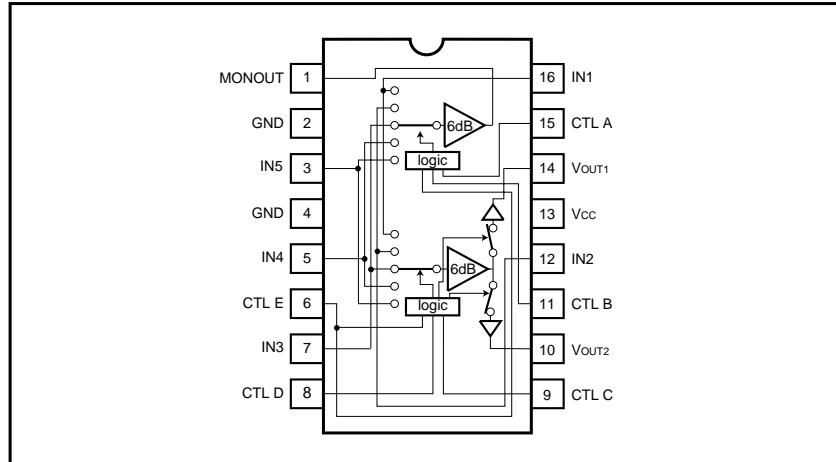
● Applications

AV amplifiers (audio signals and S-pin chroma signals) and video selectors

● Features

- 1) 5-input / 3-output switches.
- 2) $20\text{k}\Omega$ input impedance.
- 3) Built-in 6dB amplifiers.
- 4) 5V supply voltage.

● Block diagram



● Truth table

A	B	E	MONOUT
L	L	*	IN1
H	L	*	IN2
L	H	*	IN3
H	H	L	IN4
H	H	H	IN5

C	D	E	V _{OUT1}
L	L	*	—
H	L	*	IN2
L	H	*	IN3
H	H	L	IN4
H	H	H	IN5

C	D	E	V _{OUT2}
L	L	*	IN1
H	L	*	—
L	H	*	IN3
H	H	L	IN4
H	H	H	IN5

Note 1: * indicates "don't care" (H or L).

Multimedia ICs

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Power supply voltage	Vcc	9	V
Power dissipation	BA7626	500*1	mW
	BA7626F	300*2	
	BA7626FS	600*3	
Operating temperature	Topr	-25 to +70	°C
Storage temperature	Tstg	-55 to +125	°C

*1 Reduced by 5.0mW for each increase in Ta of 1°C over 25°C. (BA7626)

*2 Reduced by 3.0mW for each increase in Ta of 1°C over 25°C. (BA7626F)

*3 Reduced by 6.5mW for each increase in Ta of 1°C over 25°C. (BA7626FS)

●Equivalent input / output circuits (Unless otherwise noted, Ta=25°C, Vcc=5V)

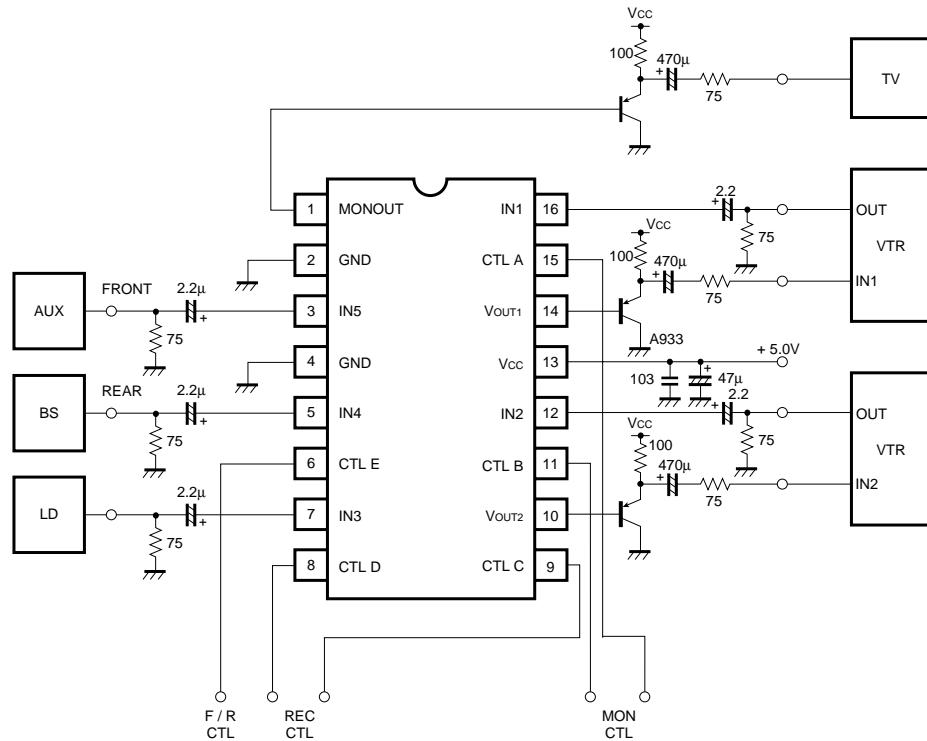
Pin No.	Pin name	Standard voltage (no input signal)	Equivalent input / output circuit
3 5 7 12 16	IN5 IN4 IN3 IN2 IN1	3.6V	
6 8 9 11 15	CTL E CTL D CTL C CTL B CTL A	0.6V	
1	MONOUT	2.0V	
10 14	Vout2 Vout1	2.0V	

● Electrical characteristics (Unless otherwise noted, $T_a=25^\circ\text{C}$, $V_{cc}=5\text{V}$)

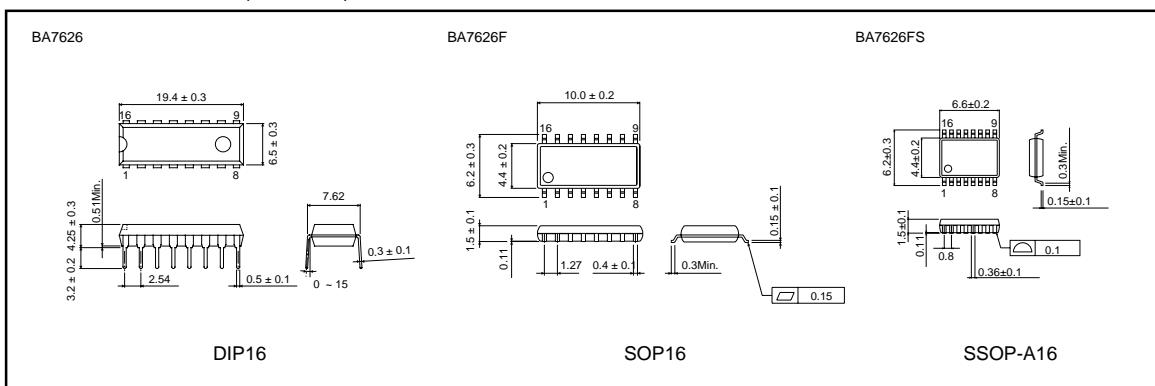
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Operating voltage	V_{cc}	4.5	5.0	5.5	V	—
Supply current	I_{cc}	—	15.0	20.0	mA	—
Maximum output level	V_{om}	2.3	2.5	—	$\text{V}_{\text{P-P}}$	$f = 1\text{kHz}$, THD = 0.5%
Voltage gain	G_v	5.7	6.2	6.7	dB	$f = 1\text{MHz}$, $V_{IN} = 1\text{V}_{\text{P-P}}$
Interchannel crosstalk	C_T	—	-65	-45	dB	$f = 4.43\text{MHz}$, $V_{IN} = 1\text{V}_{\text{P-P}}$
Mute level	CTM	—	-35	-25	dB	$f = 4.43\text{MHz}$, $V_{IN} = 1\text{V}_{\text{P-P}}$
Frequency characteristic	G_f	-3	0	+3	dB	$10\text{MHz} / 1\text{MHz}$, $V_{IN} = 1\text{V}_{\text{P-P}}$
Input impedance	Z_{IN}	16	20	24	$\text{k}\Omega$	—
CTL pin switch level	V_{TH}	2.2	—	3.3	V	—

○ Not designed for radiation resistance.

● Application example



●External dimensions (Unit : mm)



Appendix

Notes

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