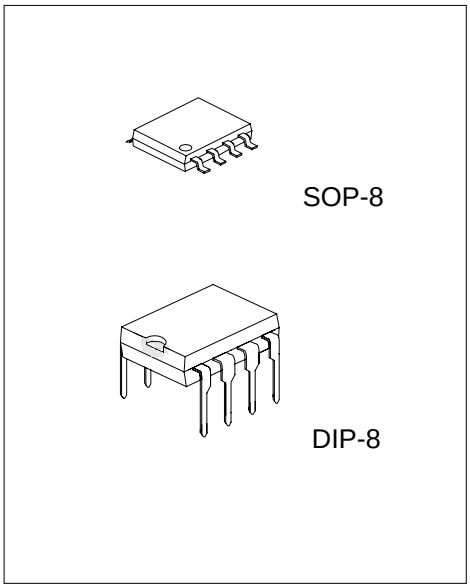
3-INPUT VIDEO SWITCH WITH 6dB AMPLIFIER



*Pb-free plating product number: M3368L

DESCRIPTION

The UTC M3368 is three input integrated video switch witch selects one video or audio signal from three input signals.

It contains 6dB amplifier and its operating supply voltage range is 4.75 to 13V and bandwidth is 5MHz.

Crosstalk is 65dB (at 4.43MHz)

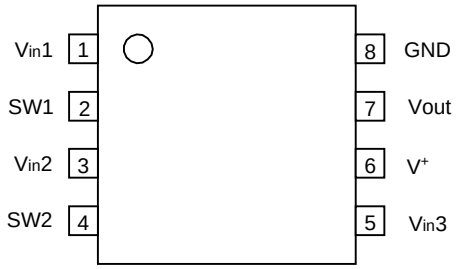
FEATURES

*Operating Voltage: 4.75 to 13V
*3 Input-1 Output
*Internal 6dB Amplifier
*Muting Function available
*Internal Clamp Function
*Cross-talk 65dB (at 4.43MHz)
*Wide Frequency Range 5MHz (1Vp-p Input)

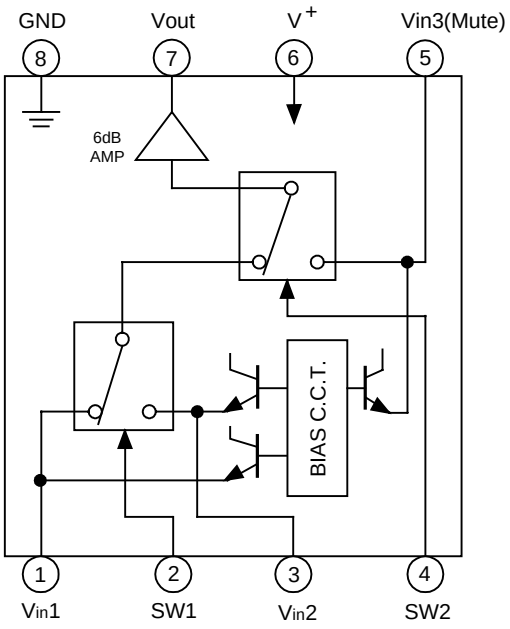
APPLICATION

*VCR, AV -TV, Video Disc Player

PIN CONFIGURATION



BLOCK DIAGRAM



INPUT CONTROL SIGNAL-OUTPUT SIGNAL

SW1	SW2	OUTPUT SIGNAL
L	L	Vin1
H	L	Vin2
L/H	H	Vin3

Note: Input clamp voltage is about 2/5 of supply voltage

ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V^+	15	V
Power Dissipation DIP-8 SOP-8	P_D	 500 300	mW
Operating Temperature Range	Topr	-40 ~ +85	°C
Storage Temperature Range	Tstg	-40 ~ +125	°C

ELECTRICAL CHARACTERISTICS (V^+=5V,Ta=25°C)

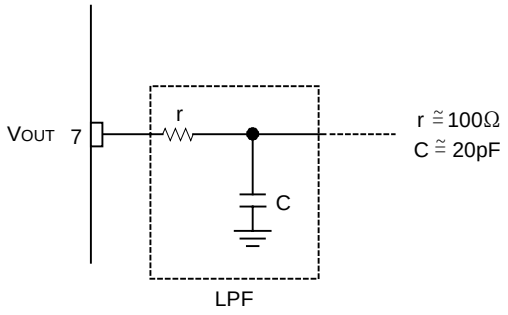
PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Recommended Supply Voltage	V^+		4.75		13.0	V
Operating Current	Icc	S1=S2=S3=S4=S5=2	9.5	14.0	21.0	mA
Voltage Gain	Gv	Vin=1.0Vp-p, 1MHz, Vo/Vi, R_L=1kΩ	5.5	6.0	6.5	dB
Frequency Characteristic	Gf	Vin=1.0Vp-p, Vo(10MHz)/Vo(1MHz)R_L=1kΩ	-1.0		+1.0	dB
Differential Gain	DG	Vin=1.0Vp-p, staircase, R_L=1kΩ		0.3		%
Differential Phase	DP	Vin=1.0Vp-p, staircase, R_L=1kΩ		0.3		deg.
Output Offset Voltage	Voff	S1=S2=S3=2, S5=1→2, Vo:voltage change			±60	mV
Crosstalk	CT	Vin=1Vp-p, 4.43MHz, Vo/Vi		-65		dB
Switch Change Voltage	V_{CH}	All inside SW: ON	2.4			V
	V_{CL}	All inside SW: OFF			0.8	

Note: Unless specified,tested with three mode below.

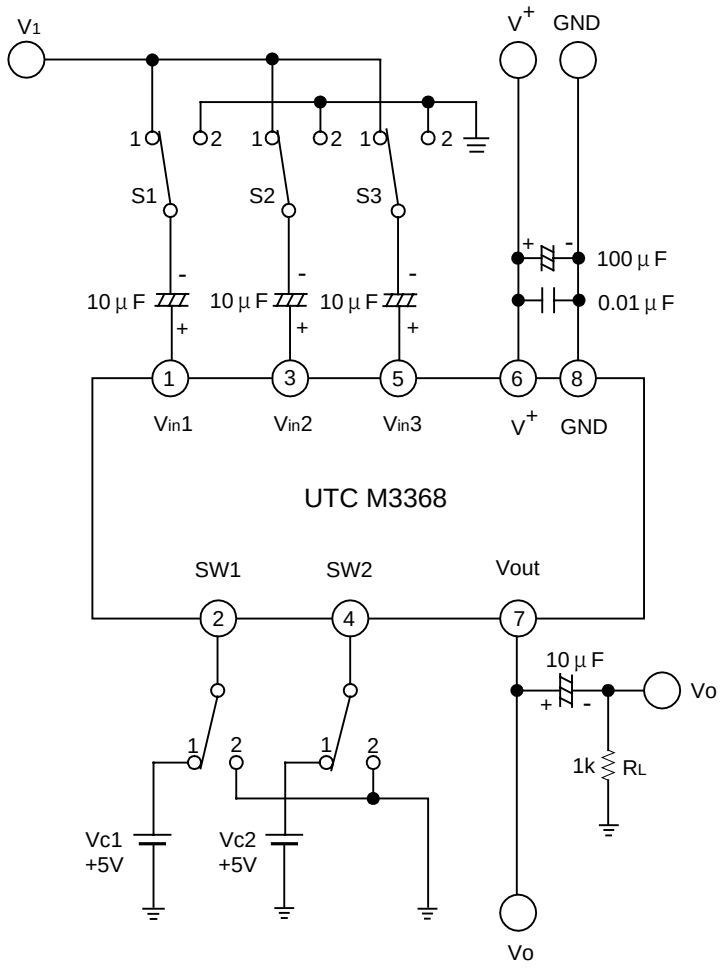
(a) S1=1, S2=S3=S4=S5=2
(b) S2=S4=1, S1=S3=S5=2
(c) S1=S2=2, S3=S5=1, S4=1 or 2

APPLICATION

Oscillation Prevention on light loading conditions Recommended under circuit.
This IC requires 1MΩ resistance between INPUT and GND pin for clamp type input since the minute current causes an unstable pin voltage.



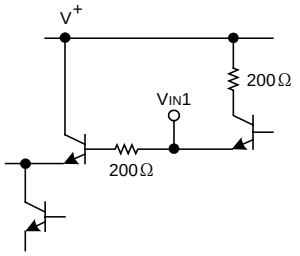
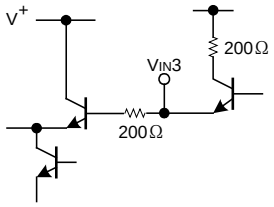
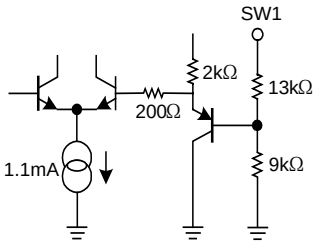
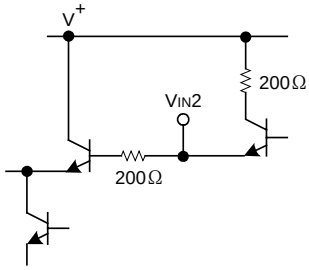
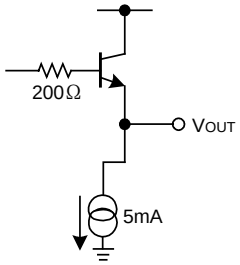
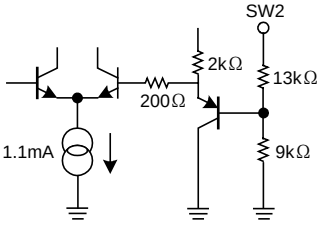
TEST CIRCUIT



DC Voltage Each Terminal (Typ.on Test Circuit Ta=25℃)

Terminal Name	V_{IN1}	SW1	V_{IN2}	SW2	V_{IN3}	V^+	V_{OUT}	GND
DC Voltage	$\frac{2}{5}V^+$	——	$\frac{2}{5}V^+$	——	$\frac{2}{5}V^+$	——	$\frac{2}{5}V^+$-0.7	——

EQUIVALENT CIRCUIT

PIN NO.	FUNC-TION	INSIDE EQUIVALENT CIRCUIT	PIN NO.	FUNC-TION	INSIDE EQUIVALENT CIRCUIT
1	$V_{IN}1$		5	$V_{IN}3$ (Mute)	
2	SW1		6	V^+	
3	$V_{IN}2$		7	V_{OUT}	
4	SW2		8	GND	

APPLICATION

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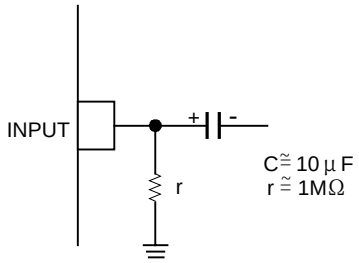

This IC requires 0.1μF capacitor between INPUT and GND ,1MΩ resistance between INPUT and GND for clamp type input at mute mode.