



M3355

Preliminary

LINEAR INTEGRATED CIRCUIT

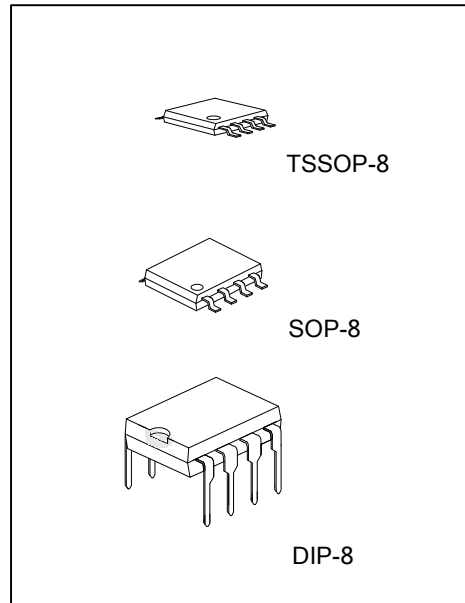
2-INPUT SINGLE VIDEO SWITCH

DESCRIPTION

The UTC M3355 is 2-input signal video switch selecting one of two video or audio signals. Its operating voltage is 4.75 ~ 13V and bandwidth is 10MHz. Crosstalk is 70dB (at 4.43MHz). It is applied to both NTSC and PAL VTR.

FEATURES

- * Operating Voltage: +4.75V ~ +13V
- * 2 Input-1 Output
- * Crosstalk 70dB (at 4.43MHz)



ORDERING INFORMATION

Ordering Number		Package	Packing
Lead Free	Halogen Free		
M3355L-S08-R	M3355G-S08-R	SOP-8	Tape Reel
M3355L-S08-T	M3355G-S08-T	SOP-8	Tube
M3355L-D08-T	M3355G-D08-T	DIP-8	Tube
M3355L-P08-R	M3355G-P08-R	TSSOP-8	Tape Reel

<p>M3355L-S08-R</p> <p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Lead Free</p>	<p>(1) R: Tape Reel, T: Tube</p> <p>(2) S08: SOP-8, D08: DIP-8, P08: TSSOP-8</p> <p>(3) G: Halogen Free, L: Lead Free</p>
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■ EQUIVALENT CIRCUIT

PIN NO.	PIN NAME	INSIDE EQUIVALENT CIRCUIT
1	V _{IN1}	
2	SW1	
3	V _{IN2}	
4	NC	-
5	NC	-
6	V ⁺	-
7	V _{OUT}	
8	GND	-

■ ABSOLUTE MAXIMUM RATING (T_A=25°C)

PARAMETER		SYMBOL	RATINGS	UNIT
Supply Voltage		V ⁺	15	V
Power Dissipation	DIP-8	P _D	500	mW
	SOP-8		300	
	TSSOP-8		250	
Operating Temperature		T _{OPR}	-20~+75	°C
Storage Temperature		T _{STG}	-40~+125	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (V⁺=5V, T_A=25°C)

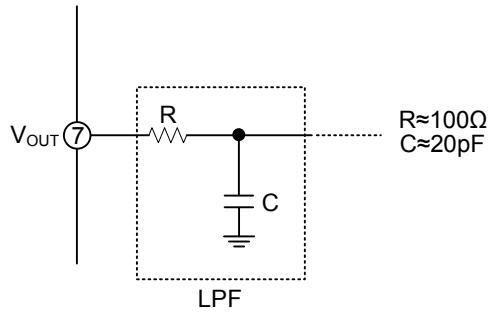
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Operating Voltage	V ⁺		4.75		13.0	V
Operating Current	I _{CC}	S1=S2=S3=1		8.5	11.0	mA
Frequency Characteristic (1)	G11	V _i =2.5V _{pp} , V _o (20Hz)/V _o (100kHz)		0	±1.0	dB
Frequency Characteristic (2)	G12	V _i =2.0V _{pp} , V _o (10MHz)/V _o (100kHz)		0	±1.0	dB
Voltage Gain	G _v	V _i =2.5V _{pp} , 100kHz, V _o /V _i	-0.5	0		dB
Total Harmonic Distortion	THD	V _i =2.5V _{pp} , 1kHz		0.01		%
Differential Gain	DG	V _i =2V _{pp} standard staircase signal		0		%
Differential Phase	DP	V _i =2V _{pp} standard staircase signal		0		deg
Output Offset Voltage	V _{off}	S1=S2=1, S3=1~2, V _o voltage change		0	±15	mV
Crosstalk	CT	(S1=S3=1, S2=2) and (S1=S3=2, S2=1), V _i =2.0V _{p-p} , 4.43MHz, V _o /V _i		-70		dB
Switch Change Voltage	V _{CH}	Garanteed voltage of all switch on	2.4			V
	V _{CL}	Garanteed voltage of all switch off			0.8	
Input Impedance	R _I			15		kΩ
Output impedance	R _O			10		Ω

■ **CONTROL SIGNAL-OUTPUT SIGNAL**

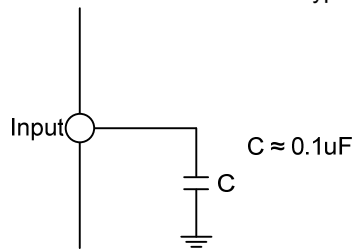
SW1	OUTPUT SIGNAL
L	Vin 1
H	Vin 2

■ **APPLICATION**

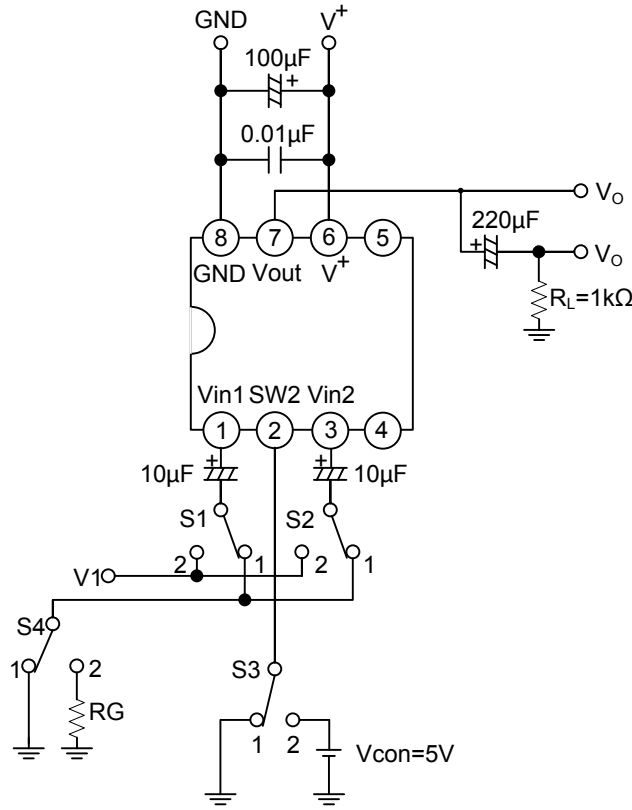
Oscillation Prevention on light loading conditions
 Recommended under circuit



This IC requires 0.1μF capacitor between INPUT and GND for bias type input at mute mode



■ TEST CIRCUIT



■ DC VOLTAGE EACH TERMINAL (Typ. on Test Circuit $T_A=25^\circ\text{C}$)

Terminal Name	V_{IN1}	SW1	V_{IN2}	V^+	V_{OUT}	GND
DC Voltage	$\frac{3}{5}V^+$		$\frac{3}{5}V^+$		$\frac{3}{5}V^+ - 0.7$	

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