



M3355

Preliminary

LINEAR INTEGRATED CIRCUIT

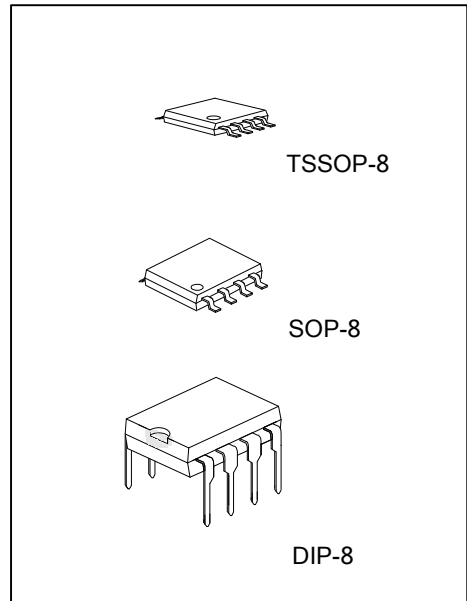
2-INPUT SINGLE VIDEO SWITCH

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)

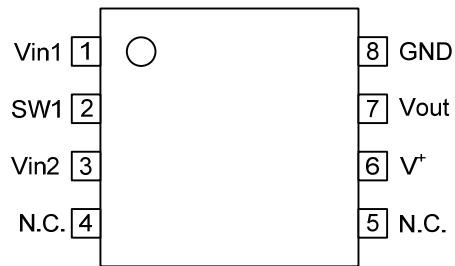


ORDERING INFORMATION

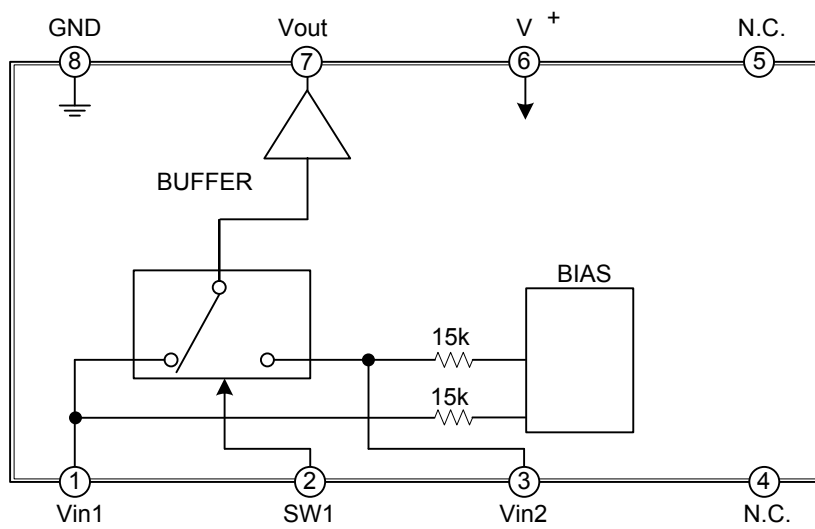
Ordering Number		Package	Packing
Lead Free	Halogen Free		
M3355L-S08-R	M3355G-S08-R	SOP-8	Tape Reel
M3355L-S08-T	M3355G-S08-T	SOP-8	Tube
M3355L-D08-T	M3355G-D08-T	DIP-8	Tube
M3355L-P08-R	M3355G-P08-R	TSSOP-8	Tape Reel

<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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■ PIN CONFIGURATION



■ BLOCK DIAGRAM



■ 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 ($T_A=25^\circ\text{C}$)

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	$^\circ\text{C}$
Storage Temperature		T_{STG}	-40~+125	$^\circ\text{C}$

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 ($V^+=5\text{V}$, $T_A=25^\circ\text{C}$)

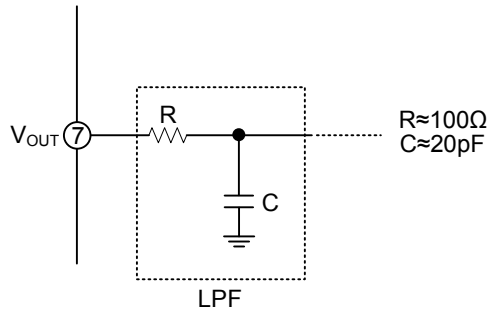
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Operating Voltage	V^+		4.75		13.0	V
Operating Current	I_{CC}	$S1=S2=S3=1$		8.5	11.0	mA
Frequency Characteristic (1)	G11	$V_i=2.5\text{V}_{pp}$, $V_o(20\text{Hz})/V_o(100\text{kHz})$		0	± 1.0	dB
Frequency Characteristic (2)	G12	$V_i=2.0\text{V}_{pp}$, $V_o(10\text{MHz})/V_o(100\text{kHz})$		0	± 1.0	dB
Voltage Gain	G_v	$V_i=2.5\text{V}_{pp}$, 100kHz, V_o/V_i	-0.5	0		dB
Total Harmonic Distortion	THD	$V_i=2.5\text{V}_{pp}$, 1kHz		0.01		%
Differential Gain	DG	$V_i=2\text{V}_{pp}$ standard staircase signal		0		%
Differential Phase	DP	$V_i=2\text{V}_{pp}$ standard staircase signal		0		deg
Output Offset Voltage	V_{off}	$S1=S2=1$, $S3=1\sim 2$, V_o voltage change		0	± 15	mV
Crosstalk	CT	($S1=S3=1$, $S2=2$) and ($S1=S3=2$, $S2=1$), $V_i=2.0\text{V}_{p-p}$, 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		k Ω
Output impedance	R_o			10		Ω

■ CONTROL SIGNAL-OUTPUT SIGNAL

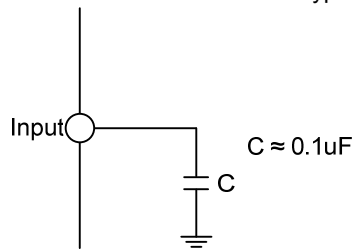
SW1	OUTPUT SIGNAL
L	Vin 1
H	Vin 2

■ APPLICATION

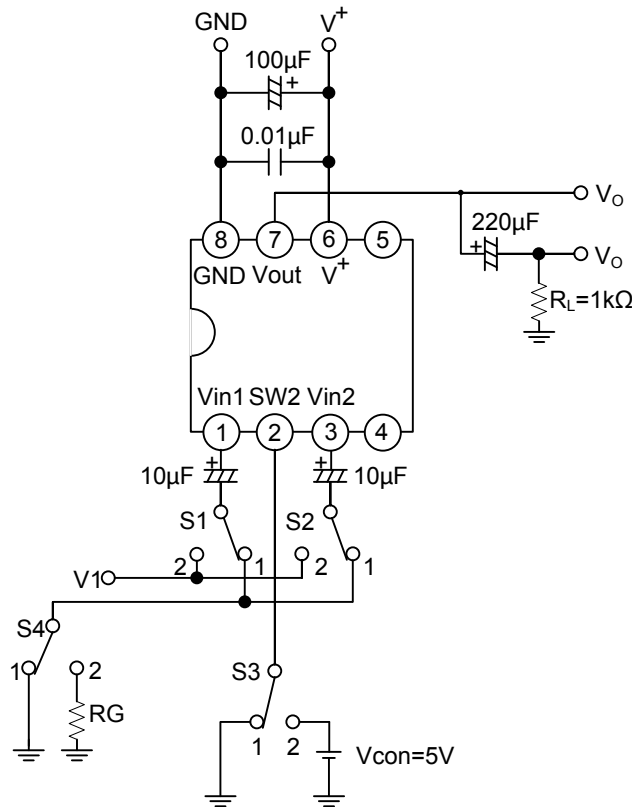
Oscillation Prevention on light loading conditions
 Recommended under circuit



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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