

**SANYO**

No.2682

**LA7058**

Monolithic Linear IC  
Video / Audio Signal Processor for  
UHF Band RF Modulator Use

The LA7058, being a video/audio signal processor IC for UHF band RF modulator use, is suited for RF modulators that require no TSG (test signal generator).

The LA7058 contains a video clamp circuit, a white clip circuit, and an audio FM modulator. The characteristics of the LA7058 are highly stable to supply voltage variations because the LA7058 has an internal voltage regulator.

#### Functions

- Audio FM modulator
- White clip
- Sync pulse peak clamp
- Voltage regulator

#### Features

- Capable of being operated from low supply voltage ( $V_{CC} = 5V$ )
- Highly stable to supply voltage variations because of on-chip voltage regulator
- Excellent frequency characteristic of white clip
- Large amplitude of audio carrier and less high-frequency spurious radiation
- Low current dissipation (30% less compared with our similar ICs)
- Minimum number of external parts required
- Low audio distortion

#### Maximum Ratings at $T_a = 25^\circ C$

			unit
Maximum Supply Voltage	$V_{CC \text{ max}}$	9.0	V
Allowable Power Dissipation	$P_d \text{ max}$ $T_a \leq 70^\circ C$	250	mW
Operating Temperature	$T_{opg}$ $V_{CC} = 5V$	-20 to +80	$^\circ C$
Storage Temperature	$T_{stg}$	-40 to +150	$^\circ C$

#### Operating Conditions at $T_a = 25^\circ C$

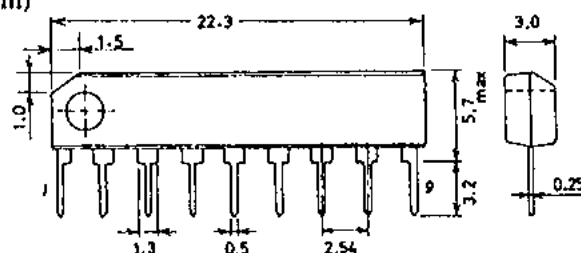
			unit
Recommended Supply Voltage	$V_{CC}$	5.0	V
Operating Voltage Range	$V_{CC \text{ op}}$	4.25 to 7.00	V

#### Operating Characteristics at $T_a = 25^\circ C, V_{CC} = 5.0V$

			min	typ	max	unit
Current Dissipation	$I_{CC}$	SW1,2:A	7	10	13	mA
Video Clamp Voltage	$V_{CL}$	SW1→A, SW2→B	1.35	1.60	1.85	V
White Clip Level	$V_{WC}$	Output voltage at SW1:C is taken as $V_1$ . $V_{WC} = V_1 - V_{CL}$	1.10	1.14	1.18	Vp-p
Video Output Amplitude	$V_{VO}$	SW1,2:A, 1Vp-p stair step signal is input.	0.95	0.995	1.05	Vp-p

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#### Case Outline 3017B-S9IC (unit:mm)



The application circuit diagrams and circuit constants herein are included as an example and provide no guarantee for designing equipment to be mass-produced. The information herein is believed to be accurate and reliable. However, no responsibility is assumed by SANYO for its use, nor for any infringements of patents or other rights of third parties which may result from its use.

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Specifications and information herein are subject to change without notice.

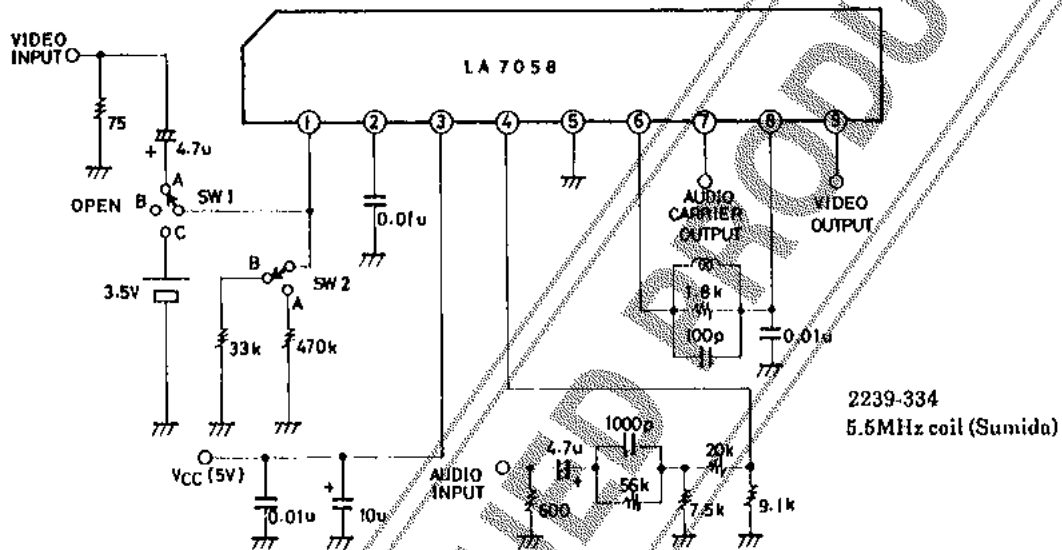
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		min	typ	max	unit	
Audio Carrier Amplitude	$V_{AO}$	1.05	1.30	1.55	Vp-p	
Audio Modulation A	ms	73	81	89	%	
B	1kHz, 4.5Vp-p signal is input. ± 50kHz is taken as 100%	81	90	99	%	
C		90	100	110	%	
D		99	110	121	%	
E		109	121	133	%	
Audio Distortion	THD	1kHz, 4.5Vp-p signal is input. ± 50kHz is taken as 100%.		0.2	1.5	%

## Test Circuit



## Equivalent Circuit Block Diagram

