

<b>SANYO</b>	No.3804A	<b>LA7217,7217M</b>
	<b>Synchronizing Signal Separator with AFC and Sync Detector</b>	

The LA7217 and 7217M are synchronizing signal separator ICs with AFC and AFC Lock detector designed to be used in video equipments such as VCR and TV sets. VCO with ceramic oscillator and PLL horizontal sync detector provide an adjust-free, precision sync detection system.

**Functions**

- Horizontal sync separation
- Vertical sync separation
- VCO (32f<sub>H</sub>)
- AFC
- Sync signal detection

**Features**

- Use of a ceramic oscillator requires no adjustment
- Negative polarity output
- High impedance video signal input pin
- 5 V supply voltage

**Maximum Ratings at Ta = 25°C**

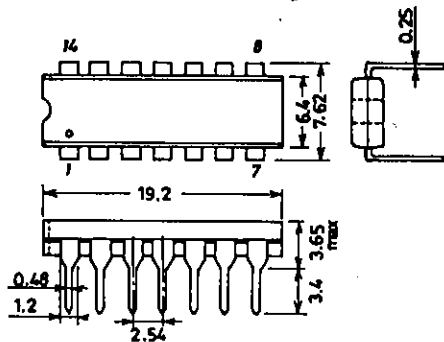
Maximum Supply Voltage	V <sub>CC</sub> max	Quiescent time	7	unit
Allowable Power Dissipation	Pd max		150	mW
Operating Temperature	Topr		-15 to +65	°C
Storage Temperature	Tstg		-40 to +125	°C

**Operating Conditions at Ta = 25°C**

Recommended Supply Voltage	V <sub>CC</sub>		5.0	unit
Operating Voltage Range	V <sub>CC</sub> op		4.5 to 5.5	V

**Package Dimensions 3003A**

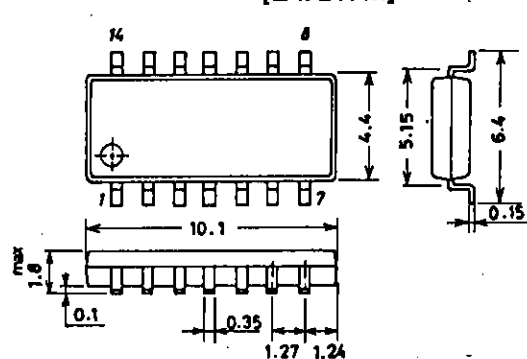
(unit: mm) [LA7217]



SANYO : DIP14

**Package Dimensions 3034A**

(unit: mm) [LA7217M]

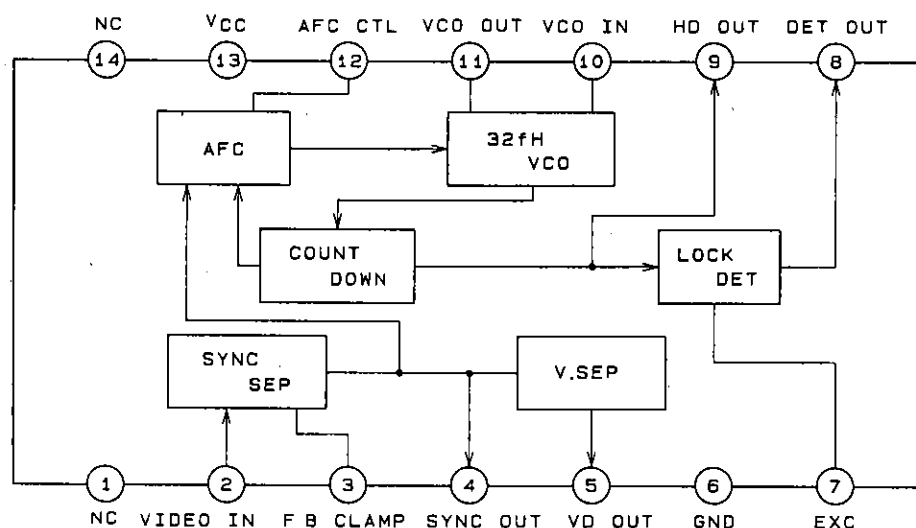


SANYO : MFP14

Operating Characteristics at Ta = 25°C, V<sub>CC</sub> = 5 V

			min	typ	max	unit
Current Dissipation	I <sub>CC</sub>	Standard color bar input	4.9	7	9.1	mA
Minimum Separable Input Voltage	V <sub>I min</sub>		-15	-11	-8	dB
HD Output Delay Time	T <sub>HD</sub>	From pin 2 to pin 9	0.1	0.5	0.9	μs
HD Output Pulse Width	T <sub>HW</sub>		3.6	4.0	4.4	μs
VD Output Delay Time	T <sub>VD</sub>	From pin 2 to pin 5	9	13	17	μs
VD Output Pulse Width	T <sub>VW</sub>		0.16	0.21	0.26	ms
Free-running Frequency	FO	SW1 off	15.4	15.75	16.1	kHz
Capture Range 1	F <sub>CH</sub>	Judgment by comparison of pin 9 with pin 2	300	500		Hz
Capture Range 2	F <sub>CL</sub>	Judgment by comparison of pin 9 with pin 2	1000	1500		Hz
SYNC Out, H Voltage	V <sub>SH</sub>	Level on pin 4	3.9	4.2		V
SYNC Out, L Voltage	V <sub>SL</sub>	Level on pin 4		0.8	1.0	V
HD Out, H Voltage	V <sub>HH</sub>	Level on pin 9	3.9	4.2		V
HD Out, L Voltage	V <sub>HL</sub>	Level on pin 9		0.8	1.0	V
VD Out, H Voltage	V <sub>VH</sub>	Level on pin 5	3.9	4.2		V
VD Out, L Voltage	V <sub>VL</sub>	Level on pin 5		0.8	1.0	V
DET Out, H Voltage	V <sub>DH</sub>		4.8	5.0		V
DET Out, L Voltage	V <sub>DL</sub>	SW1 off		0.1	0.3	V
Comparator Threshold H Voltage	V <sub>TH</sub>	SW2-a	2.7	2.95	3.2	V
Comparator Threshold L Voltage	V <sub>TL</sub>	SW2-a	2.4	2.7	3.0	V
Threshold Width	V <sub>TW</sub>	V <sub>TH</sub> -V <sub>TL</sub>	0.10	0.22	0.40	V
DET Operating Current, H	I <sub>DH</sub>	SW2-b	40	65	90	μA
DET Operating Current, L	I <sub>DL</sub>	SW2-b	40	65	90	μA

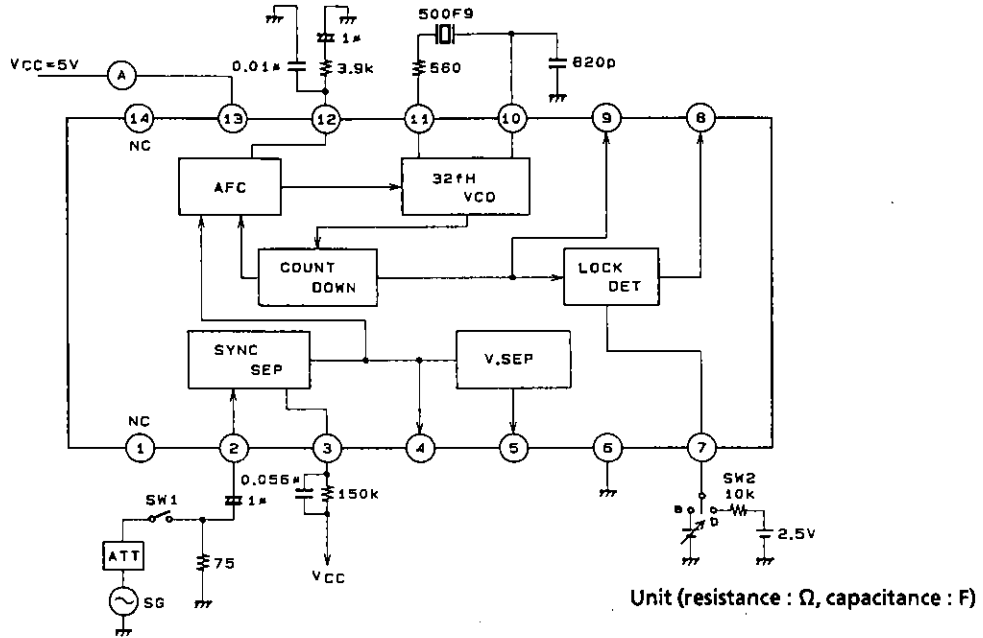
Block Diagram



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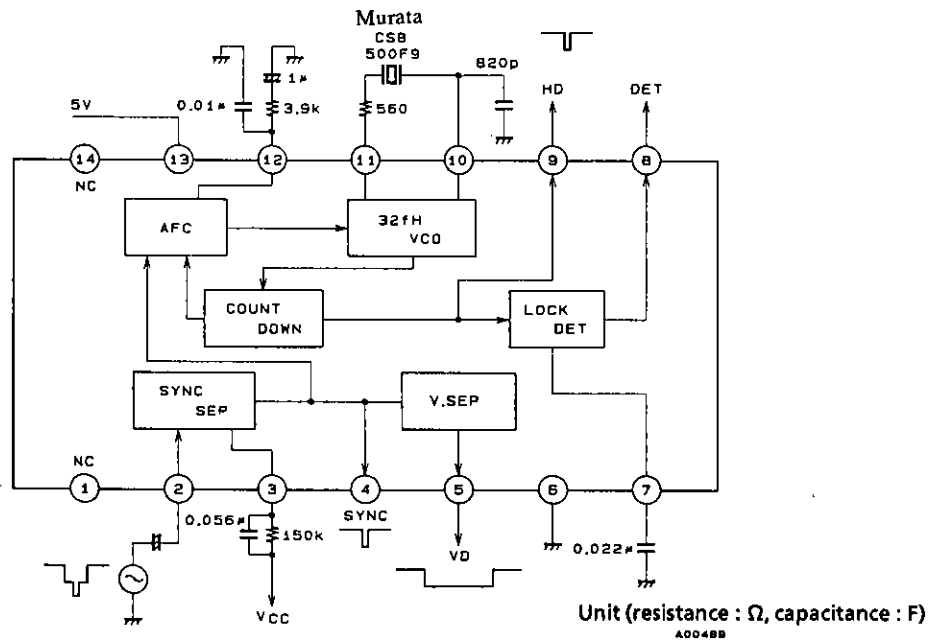
# LA7217, 7217M

## Test Circuit



A00488

## Typical Application



A00488

- DET OUT becomes H upon lock
- When feeding video signal to the input pin directly, keep DC level between 2 and 3.5 volts.
- Standard video input is 1 Vp-p

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