

**SANYO**

No.1351B

**LA7950****TV Field Frequency Discriminator**

The LA7950 is an IC designed to discriminate the field frequency based on the relation between TV vertical signal and horizontal signal. It is suited for use in automatically setting various types of video equipment, such as color TV, to PAL/NTSC mode.

**Functions**

- . Sync separation
- . Field frequency counter
- . Vertical sync separation
- . Forced (manual) output select

**Features**

- . Small-sized package (SEP10)
- . Stable to external disturbance such as noise
- . Many output pins for mode select (4 outputs)
- . Wide operating voltage range (6 to 13V)

**Maximum Ratings at Ta=25°C**

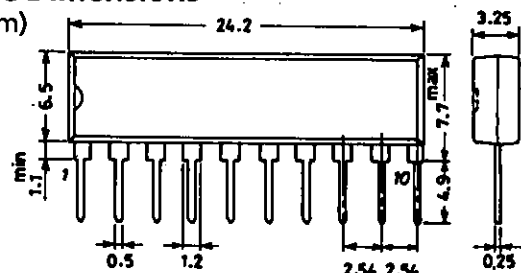
			unit
Maximum Supply Voltage	$V_2$ max	14	V
Load Current	$I_{7,8,9,10}$	20	mA
Allowable Power Dissipation	$P_d$ max, $T_a \leq 60^\circ\text{C}$	300	mW
Operating Temperature	$T_{opr}$	-20 to +85	°C
Storage Temperature	$T_{stg}$	-40 to +125	°C

**Operating Conditions at Ta=25°C**

			unit
Recommended Supply Voltage	$V_2$	12	V
Operating Voltage Range	$V_2$ op	6 to 13.2	V

**Operating Characteristics at Ta=25°C, V<sub>2</sub>=12V, See Test Circuit.**

		min	typ	max	unit
$V_{CC2}$ Current Dissipation	$I_{CC2}$	8	12	16	mA
Sync Separation Output Voltage	$V_3$	10.5	11.0	11.5	V
Pin 1 DC Voltage	$V_{DC1}$	4.8	5.3	5.8	V
Forced PAL Operation Start Voltage	$V_{POS}$			11.2	V
Forced PAL Nonoperation Max. Voltage	$V_{PNH}$	8.6			V
Forced NTSC Operation Start Voltage	$V_{NOS}$	0.4			V
Forced NTSC Nonoperation Min. Voltage	$V_{NNL}$			2	V
Output Saturation Voltage	$V_{7,8,9,10}$ $I_{7,8,9,10}=10\text{mA}$			0.7	V

**Package Dimensions**(unit : mm)  
3043A

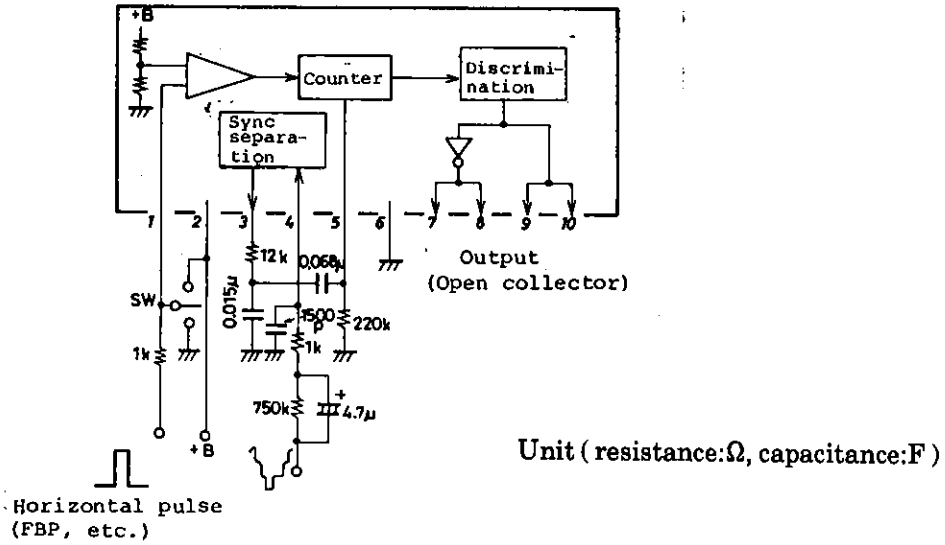
SANYO: SEP10

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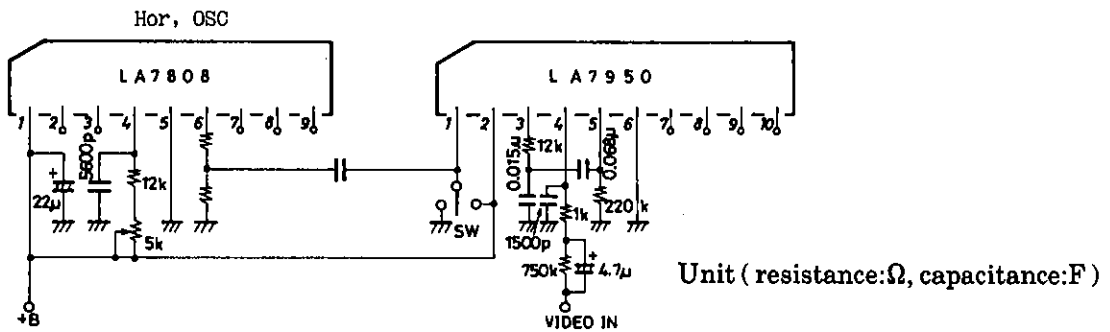
# LA7950

## Functional Blocks and Sample Application Circuit 1



	Discrimination of field frequency	Output	
		Pins 7,8	Pins 9,10
Number of horizontal scanning lines per field (Number of horizontal pulses)	240 to 287	off	on
	288 to 340	on	off
Forced select SW	GND	off	on
	+B	on	off

## Sample Application Circuit 2: Using dedicated clock (LA7808)



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