Monolithic Linear IC



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**

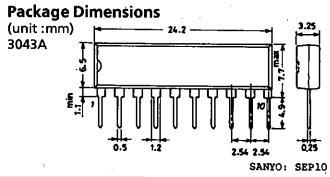
. Sync separation

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

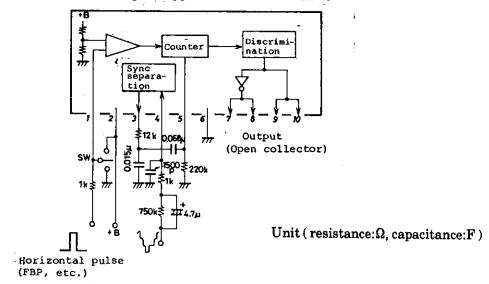
#### **Features**

- . 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 Maximum Supply Voltage Load Current Allowable Power Dissipation Operating Temperature Storage Temperature	V <sub>2</sub> max I <sub>7</sub> ,8,9,10 Pd max Topr Tstg	Ta≦60°C	-20 t -40 to	_	n C	v V DA W C C	
Operating Conditions at Ta=25	С				un	it	
Recommended Supply Voltage V2				12		V	
Operating Voltage Range			6 to	13.2		V	
Operating Characteristics at	Ta=25°C.V	=12V.See T	est Circuit.	min	tvo	max	unit
V <sub>CC2</sub> Current Dissipation	- , 2		Pin 1 GND			16	mA
Sync Separation Output Volta	age	002	20kohm across				V
•		3	pin 4 and GND	10.5	11.0	11.5	•
Pin 1 DC Voltage		V <sub>DC1</sub>		4.8	5.3	5.8	V
Forced PAL Operation Start	Voltage	VPOS			_	11.2	V
Forced PAL Nonoperation Max	. Voltage	VPNH		8.6			V
Forced NTSC Operation Start	Voltage	NOS		0.4			v
Forced NTSC Nonoperation Mi	n. Voltage	VNNL	•	_		2	v
Output Saturation Voltage	_	TATATA	<sup>1</sup> 7,8,9,10=10mA			0.7	. <b>v</b>

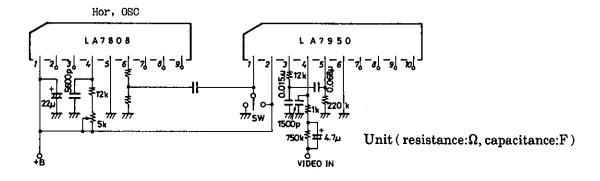


### Functional Blocks and Sample Application Circuit 1



		Discrimination of	Output		
		field frequency	Pins 7,8	Pins 9,10	
Number of horizontal scanning lines per field	240 to 287		off	on	
(Number of horizontal pulses)	288 to 340	50Hz (PAL)	on	off	
Forced select SW	GND	60Hz (NTSC)	off	on	
	+B	50Hz (PAL)	on	off	

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



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