

<b>SANYO</b>	No.857C	<b>LA7806</b>
		<b>B/W TV Synchronization, Deflection Circuit</b>

The LA7806 is a multifunctional integrated circuit which is based on the internal circuit of the LA7800, incorporates various functions required for synchronization and deflection circuits of monochromatic television set, and operates on line voltage or from battery. This IC was so designed as to streamline the set by making the device more compact (DIP-16) and reducing the number of parts.

The LA7806 differs from the LA7800 in the following points.

- . No X-ray protection circuit is used.
- . The ground pins for horizontal and vertical are provided separately.
- . No horizontal regulator is used.
- . Synchronizing separation output is for vertical only.

**Functions**

- . Synchro separator
- . Horizontal AFC
- . Vertical driver
- . Horizontal oscillator
- . Vertical oscillator
- . Vertical blanking pulse making

**Features**

- . Multifunction and small-size (DIP-16).
- . Minimum number of parts required.
- . Horizontal and vertical oscillators being stable to variation of ambient temperature and supply voltage owing to small warming-up drift.
- . Small variation of horizontal oscillation frequency.
- . Good linearity and interlace owing to DC bias at vertical output stage being sampling controlled within retrace time.
- . Vertical blanking pulse width being freely set up according to peripheral parts.

**Maximum Ratings at Ta=25°C**

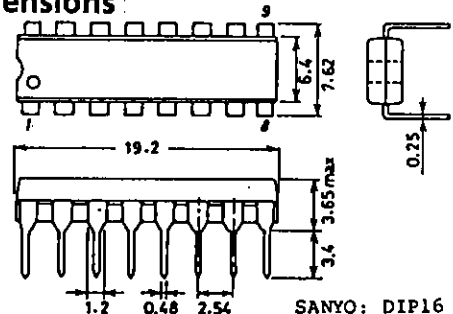
Maximum Supply Voltage	$V_{12}, V_{15}$	14	unit	V
Allowable Power Dissipation	$P_{dmax}$	450	Ta=60°C	mW
Operating Temperature	$T_{opr}$	-20 to +85		°C
Storage Temperature	$T_{stg}$	-55 to +125		°C

**Recommended Operating Condition at Ta=25°C**

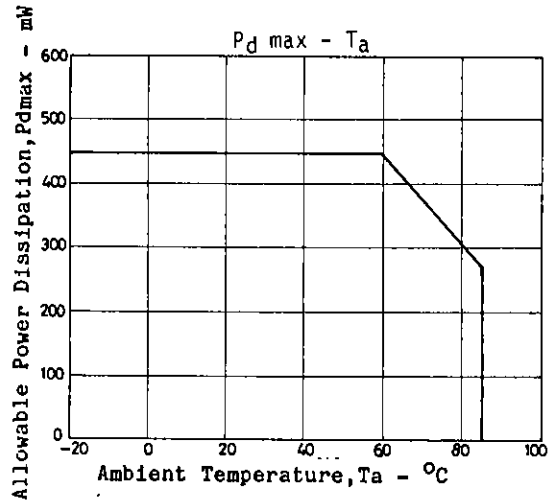
Recommended Supply Voltage	$V_{12}, V_{15}$	12	unit	V
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**Package Dimensions**

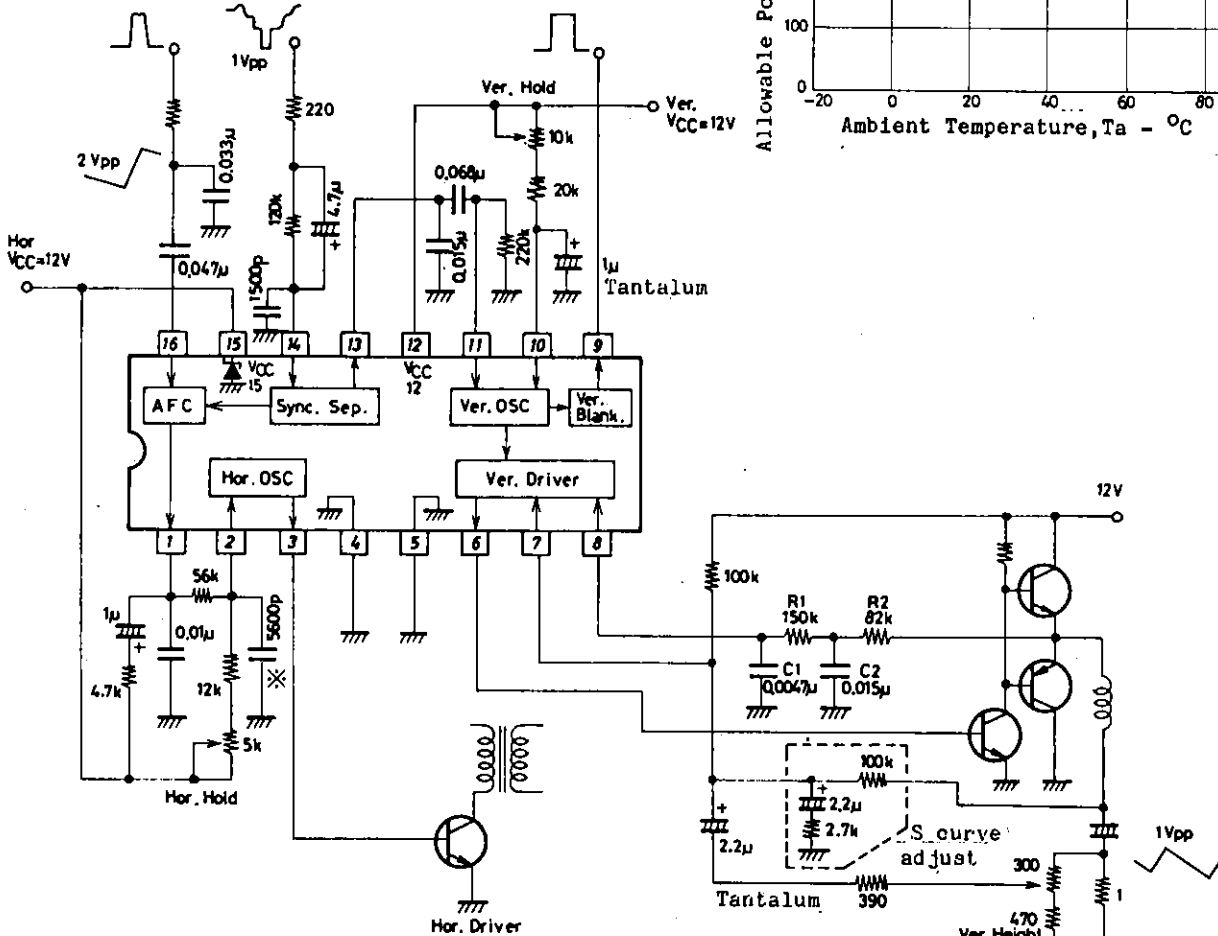
(unit :mm)  
3006B



Operating Characteristics at $T_a=25^{\circ}\text{C}, V_{12}=V_{15}=12\text{V}$		min	typ	max	unit
$V_{CC12}$ Current Dissipation	$I_{CC12}$	10.0	19.0		mA
$V_{CC15}$ Current Dissipation	$I_{CC15}$	6.0	11.0		mA
Vertical Frequency Pull-in Range		9.0	11.0		Hz
Vertical Free-running Frequency	$f_v$ center	55	60		Hz
Supply Voltage Dependence of Vertical Frequency	$V_{12}=12\pm 1\text{V}$ , 55Hz at 12V	-0.5	0.5		Hz
Temperature Characteristic of Vertical Frequency	$T_a=-10$ to $+60^{\circ}\text{C}$	-0.028	0.028		Hz/ $^{\circ}\text{C}$
Vertical Driver Amplification Factor		4.0	7.0		times
Horizontal Free-Running Frequency	$f_H$ center	15.750	15.750		kHz
Supply Voltage Dependence of Horizontal Frequency	$V_{15}=12\pm 1\text{V}$ , 15.750kHz at 12V	-50	50		Hz
Temperature Characteristic of Horizontal Frequency	$T_a=-10$ to $+60^{\circ}\text{C}$	-3.4	3.4		Hz/ $^{\circ}\text{C}$
Horizontal Output Pulse Width	$f_H=15.750\text{kHz}$	21.5	26.5		$\mu\text{s}$
Horizontal Output Drive Current		4.2	7.8		mA



Sample Application Circuit



\*: Polyester-polypropylene film capacitor

Unit (resistance:  $\Omega$ , capacitance: F)

## Note)

1. The vertical output circuit is shown by the basic circuit.
2. The peripheral parts at pin 8 should be changed in accordance with the Ver. Out circuit conditions.
3. The limiting resistor ( $220\ \Omega$  : 1Vpp) at pin 14 should be changed in proportion to the magnitude of the input video signal.
4. In the time constant circuit ( $120k\ \Omega$  4.7 $\mu$ F) at pin 14, the time constant should be changed by changing the resistance value in accordance with the DC level of the input video signal and then by changing the capacitance value.

## Peripheral parts at pin 8 (other applications)

	R1	C1	R2	C2
Line operate	220k $\Omega$	0.01 $\mu$ F	68k $\Omega$	0.068 $\mu$ F
Battery drive (pump-up)	220k $\Omega$	0.0033 $\mu$ F	82k $\Omega$	0.068 $\mu$ F

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