

**SANYO**

No. 4713

**LA7845****Vertical Deflection Output Circuit****Overview**

The LA7845 is a vertical deflection output IC for high-resolution television and CRT display systems that use a bus controller system signal processing IC. It can directly drive the deflection yoke (including the required DC component) from the bus controller system signal processing IC's sawtooth waveform output. Connecting the LA7845 and a Sanyo TV bus control system signal processing IC in the LA7615 series allows all functions of a color television signal system to be processed by the bus system. Since the LA7845 has a maximum deflection current of 2.2 Ap-p, it is optimal for use in large aperture products, and is capable of driving 33 to 37 inch class monitors.

**Features**

- Low power dissipation due to the provision of a built-in pump circuit
- Vertical output circuit
- On-chip thermal protection circuit
- Good crossover characteristics
- Supports DC coupling

**Specifications****Maximum Ratings at Ta = 25°C**

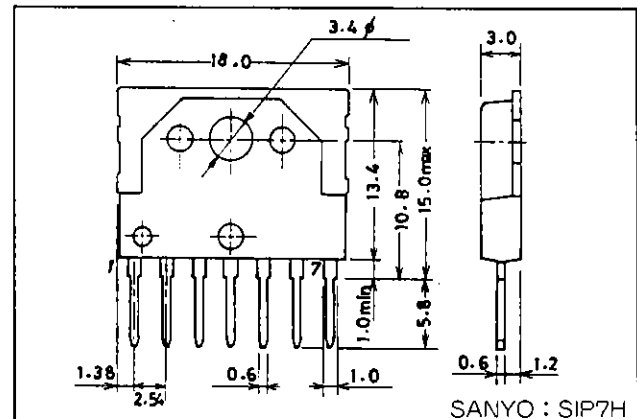
| Parameter                   | Symbol         | Conditions                          | Ratings      | Unit |
|-----------------------------|----------------|-------------------------------------|--------------|------|
| Maximum supply voltage      | $V_{CC6}$ max  |                                     | 40           | V    |
| Output block supply voltage | $V_{CC3}$ max  |                                     | 85           | V    |
| Deflection output current   | $I_2$ max      |                                     | -1.5 to +1.5 | Ap-o |
| Thermal resistance          | $\theta_{j-c}$ |                                     | 4.0          | °C/W |
| Allowable power dissipation | $P_d$ max      | With an arbitrarily large heat sink | 11           | W    |
| Operating temperature       | $T_{op}$       |                                     | -20 to +85   | °C   |
| Storage temperature         | $T_{stg}$      |                                     | -40 to +150  | °C   |

**Operating Conditions at Ta = 25°C**

| Parameter                             | Symbol       | Conditions | Ratings   | Unit |
|---------------------------------------|--------------|------------|-----------|------|
| Recommended supply voltage            | $V_{CC6}$    |            | 24        | V    |
| Operating supply voltage range        | $V_{CC6}$ op |            | 10 to 38  | V    |
| Recommended deflection output current | $I_2$ p-p    |            | up to 2.2 | Ap-p |

**Package Dimensions**

unit: mm

**3075-SIP7H****SANYO Electric Co., Ltd. Semiconductor Business Headquarters**

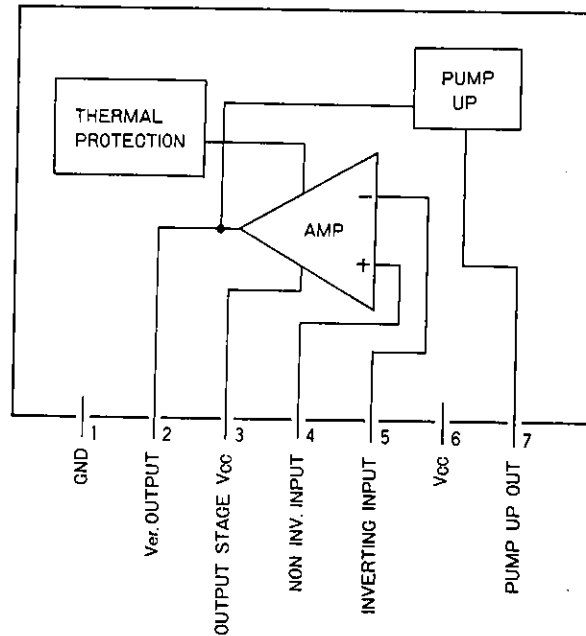
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# LA7845

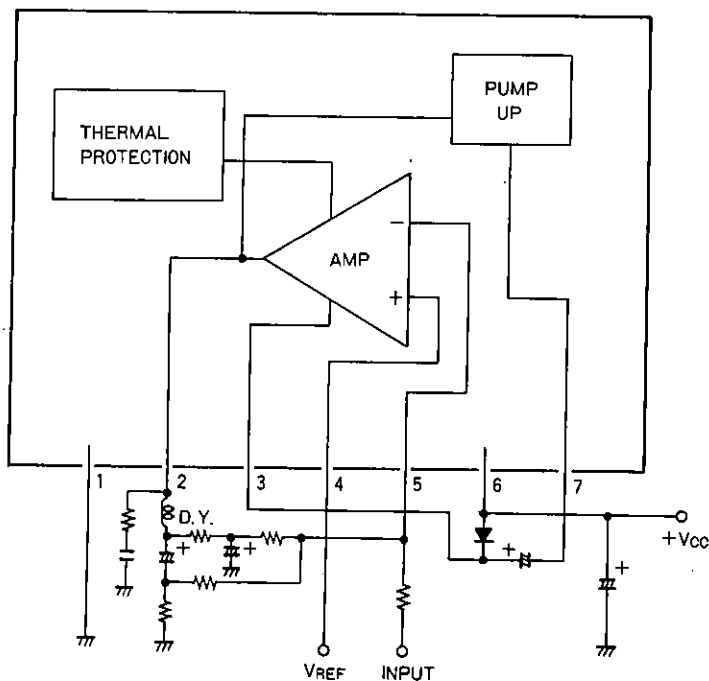
## Operating Characteristics at $T_a = 25^\circ\text{C}$ , $V_{CC6} = 24\text{ V}$

| Parameter                                    | Symbol     | Conditions            | min  | typ  | max  | Unit |
|--|------------|-----------------------|------|------|------|------|
| Pump circuit charge saturation voltage       | $V_{S7-1}$ | $I_7 = 20\text{ mA}$  |      |      | 1.8  | V    |
| Pump circuit discharge saturation voltage    | $V_{S6-7}$ | $I_7 = -1.1\text{ A}$ |      |      | 3.2  | V    |
| Deflection output saturation voltage (lower) | $V_{S2-1}$ | $I_2 = 1.1\text{ A}$  |      |      | 1.5  | V    |
| Deflection output saturation voltage (upper) | $V_{S3-2}$ | $I_2 = -1.1\text{ A}$ |      |      | 3.5  | V    |
| Idling current                               | $I_{DL}$   |                       | 35   |      | 70   | mA   |
| Midpoint voltage                             | $V_{MID}$  |                       | 11.0 | 12.0 | 13.0 | V    |

## Block Diagram

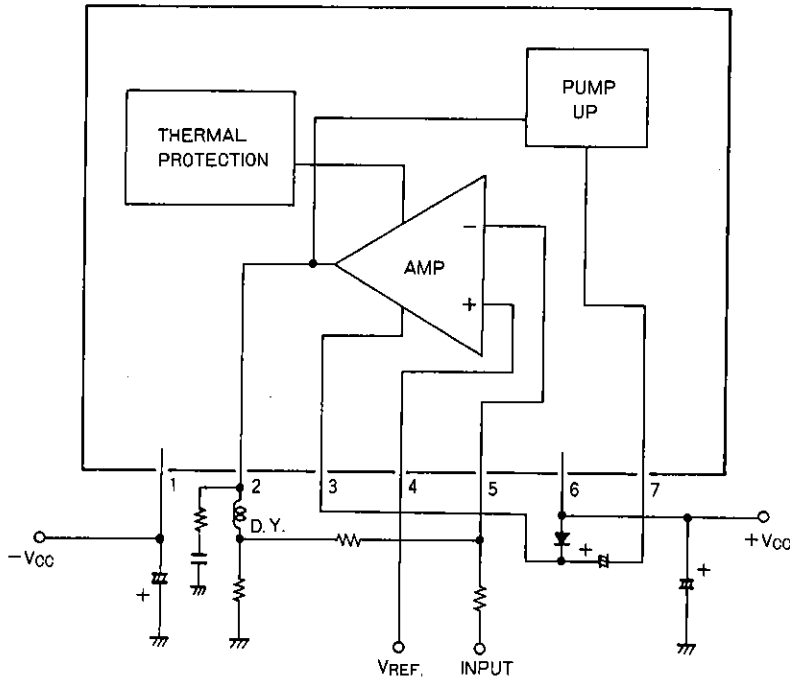


## Application Circuit Example (Single power supply)



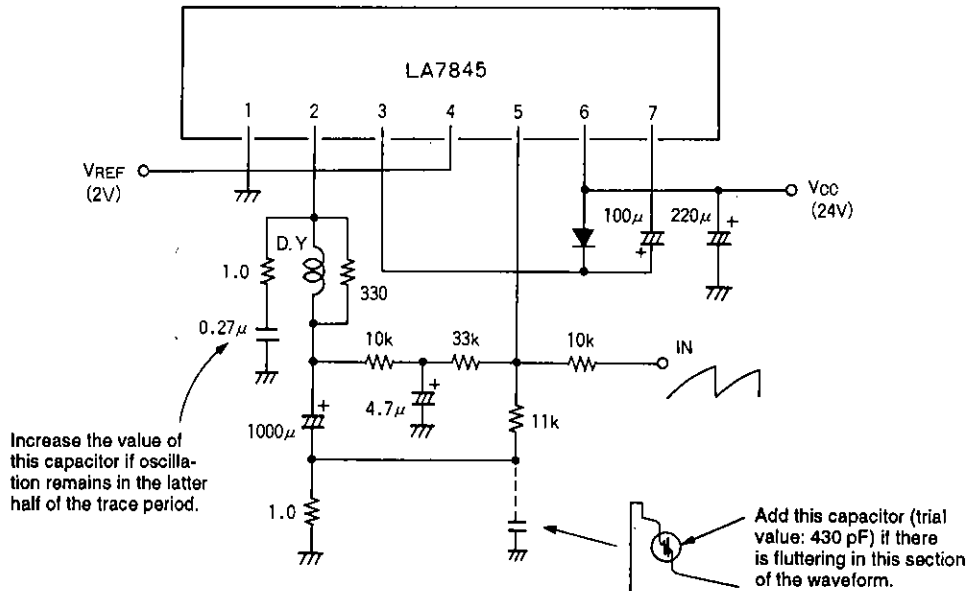
# LA7845

## Application Circuit Example (Dual power supply)



## Application Circuit Example

Unit (Resistance:  $\Omega$ , Capacitance: F)



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