

TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

# TA8427K

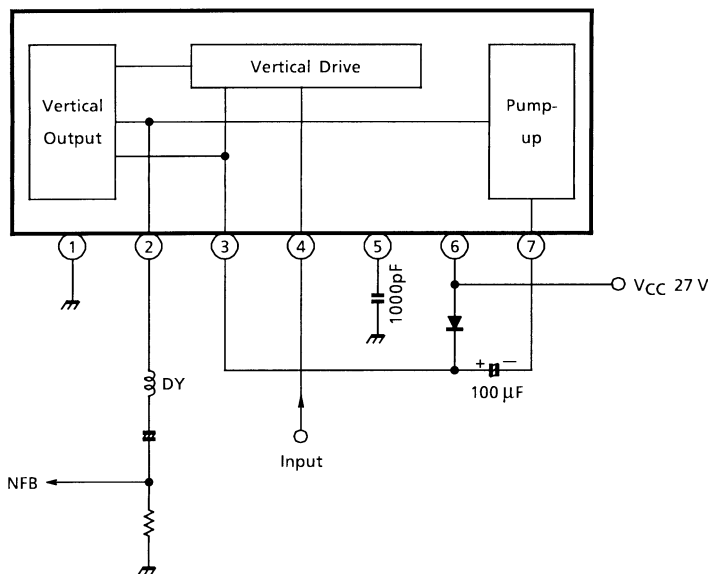
## POWER AMPLIFIER FOR DRIVING A DEFLECTION CIRCUIT OF A COLOR TELEVISION

TA8427K is a power amplifier for driving a deflection circuit of a large and medium screen size color television. TA8427K is available for constructing a stable deflection circuit with small number parts in an application with a single chip signal processing IC TA8879N.

### FEATURES

- Large output current ; 2.2A<sub>p-p</sub> (Max.)
- Small power dissipation with a pump-up circuit
- Small number external parts

### BLOCK DIAGRAM



### TERMINAL NAME

1. GND
2. Vertical Output
3. Pump-up Power Supply
4. Input
5. Phase Compensation
6. Power Supply
7. Pump-up Output

HSIP7-P-2.54B

Weight : 2.2g (Typ.)

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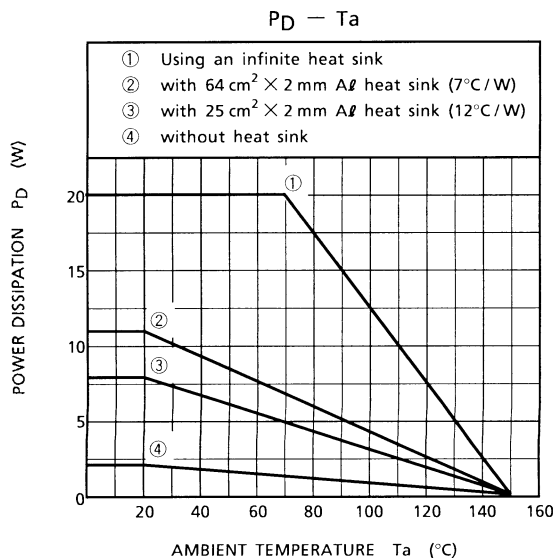
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## MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Power Supply Voltage	V <sub>CC</sub>	30	V
Pump-up Power Supply Voltage	V <sub>Vt</sub>	60	V
Terminal Voltage	E <sub>in</sub>	GND -0.3 ~ V <sub>Vt</sub> +0.3	V
Input Signal Voltage	e <sub>in</sub>	0 ~ 1.2	V
Deflection Current	i <sub>d</sub>	±1.5 (Note 1:)	A
Power Dissipation	P <sub>D</sub>	20 (Note 2:)	W
Operating Temperature	T <sub>opr</sub>	-20 ~ 85	°C
Storage Temperature	T <sub>stg</sub>	-55 ~ 150	°C

Note 1: Power on time ; 2ms, V<sub>CEO</sub> = 60V

Note 2: Using an infinite heat sink



## RECOMMENDED OPERATING CONDITION

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT
Power Supply	V <sub>CC</sub>	—	27	29	V
Deflection Output Current	I <sub>2p-p</sub>	—	—	2.2	A <sub>p-p</sub>

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## ELECTRICAL CHARACTERISTICS (Ta = 25°C, VCC = 24V)

CHARACTERISTIC	SYMBOL	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Saturation Voltage Of The Vertical Output Transistor (1)	$V_{V(sat)1}$	1	Note 1:	0.3	0.5	1.0	V
Saturation Voltage Of The Vertical Output Transistor (2)	$V_{V(sat)2}$	1	Note 2:	1.0	1.8	3.6	V
Saturation Voltage Of The Pump-up Output Transistor (1)	$V_{P(sat)1}$	1	Note 3:	1.0	2.0	3.0	V
Saturation Voltage Of The Pump-up Output Transistor (2)	$V_{P(sat)2}$	1	Note 4:	0.2	0.8	1.6	V
Output Current With No Input	$I_b$	1	Note 5:	—	26.0	—	mA
Center Output Voltage	$V_{center}$			10.0	12.0	14.0	V

Note 1: SW<sub>1</sub> : ON, SW<sub>2</sub> : C, SW<sub>3</sub> : ON, SW<sub>4</sub> : B, SW<sub>5</sub> : A, SW<sub>6</sub> : A  
Measure the voltage of pin 2.

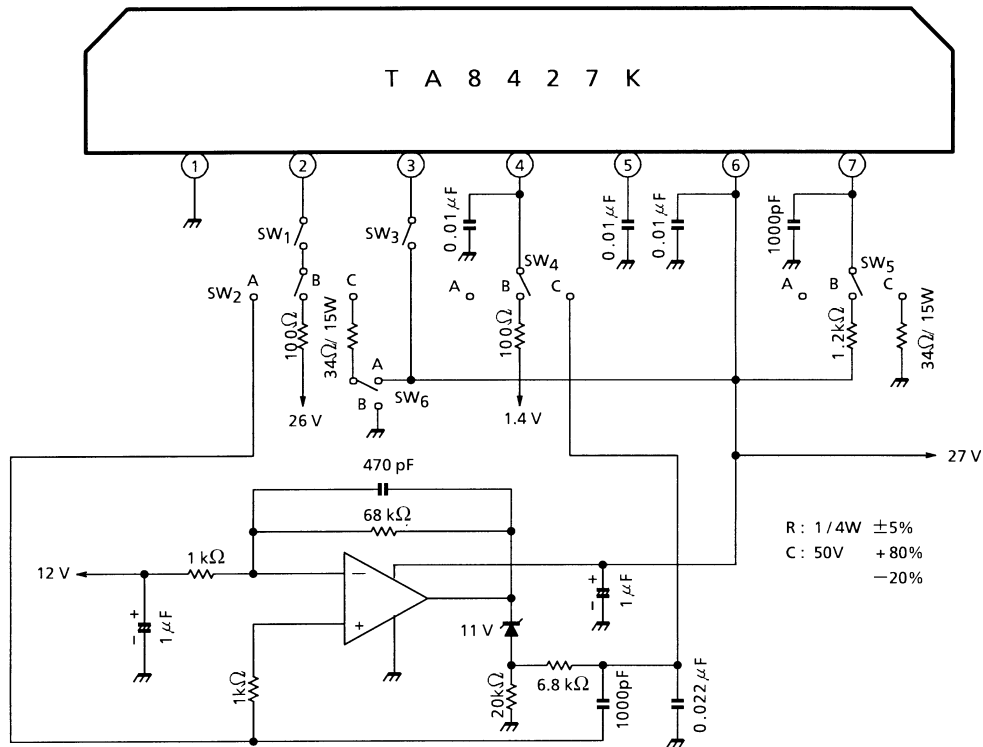
Note 2: SW<sub>1</sub> : ON, SW<sub>2</sub> : C, SW<sub>3</sub> : ON, SW<sub>4</sub> : A, SW<sub>5</sub> : A, SW<sub>6</sub> : B  
Measure the voltage of pin 2, V<sub>2</sub>.  $V_{V(sat)2} = V_{CC} - V_2$

Note 3: SW<sub>1</sub> : ON, SW<sub>2</sub> : B, SW<sub>3</sub> : OFF, SW<sub>4</sub> : A, SW<sub>5</sub> : C, SW<sub>6</sub> : A  
Measure the voltage of pin 7, V<sub>7</sub>.  $V_{P(sat)1} = V_{CC} - V_7$

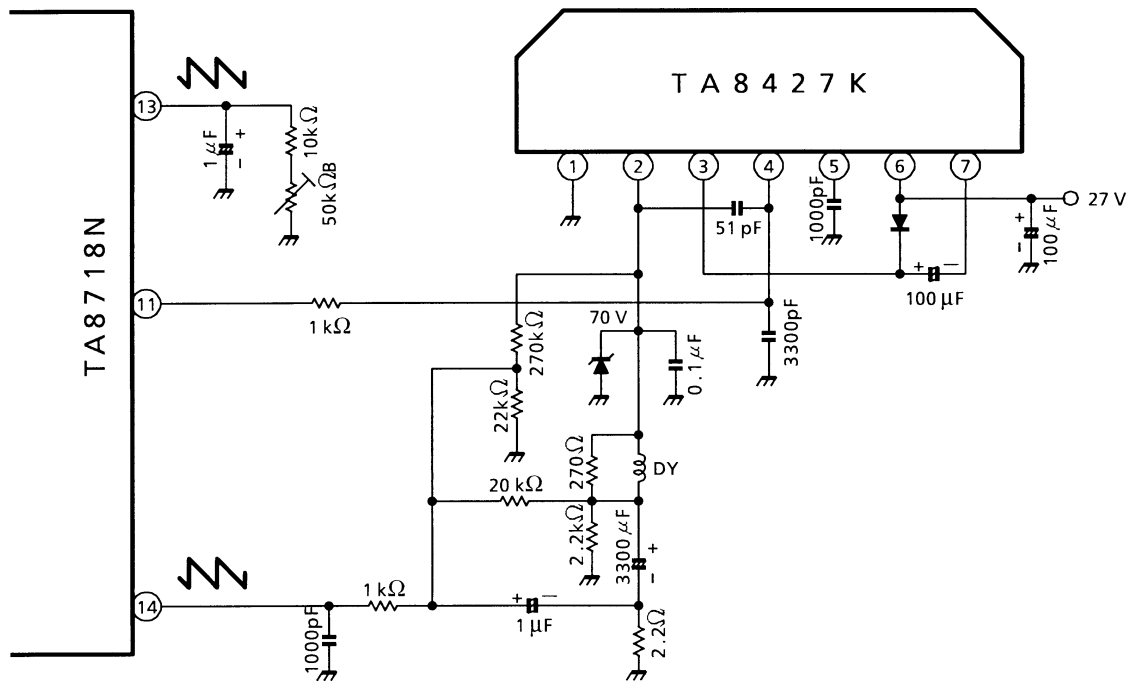
Note 4: SW<sub>1</sub> : OFF, SW<sub>2</sub> : C, SW<sub>3</sub> : OFF, SW<sub>4</sub> : A, SW<sub>5</sub> : B, SW<sub>6</sub> : B  
Measure the voltage of pin 7.

Note 5: SW<sub>1</sub> : ON, SW<sub>2</sub> : A, SW<sub>3</sub> : ON, SW<sub>4</sub> : C, SW<sub>5</sub> : A, SW<sub>6</sub> : B  
Measure the sink current into pin 3.  
Measure the voltage of pin 2.

## TEST CIRCUIT 1



## APPLICATION CIRCUIT



HSIP7-P-2.54B

Technical drawing of a 7-pin D-sub connector. The drawing includes a top view, a side view, and a front view. The top view shows a rectangular body with a central circular feature and seven pins. Dimensions include a width of  $16.0 \pm 0.2$ , a height of  $14.4 \pm 0.3$ , and a pin pitch of  $2.54$ . The side view shows a height of  $3.0 \pm 0.3$ . The front view shows a width of  $17.0 \pm 0.2$ . A detail view of a pin shows a diameter of  $\phi 0.25 (M)$  and a length of  $0.6 \pm 0.1$ . A note indicates a typical length of  $0.88$  for the pins.

Weight: 2.2g (Typ.)