

TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

TA8427K

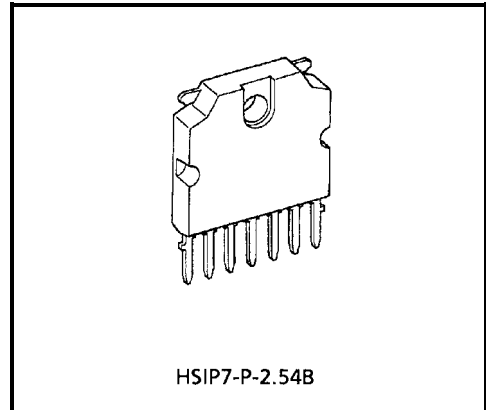
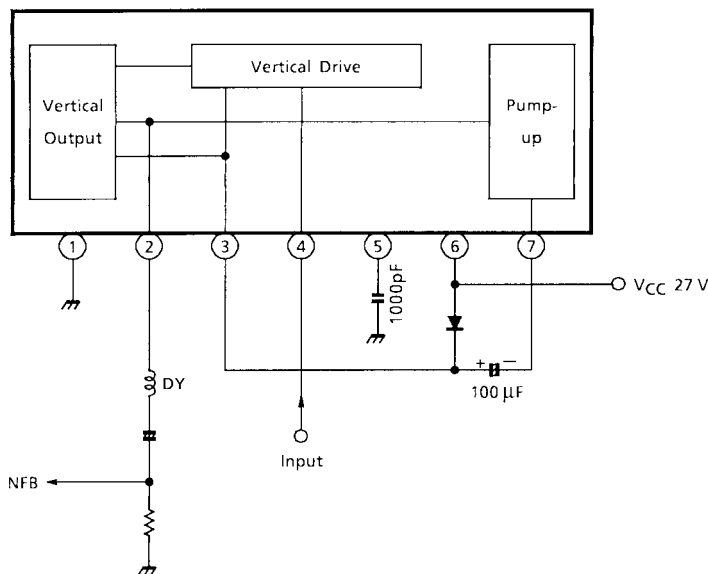
POWER AMPLIFIER FOR DRIVING A DEFLECTION CIRCUIT OF A COLOR TELEVISION

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 ; $2.2A_{p-p}$ (Max.)
- Small power dissipation with a pump-up circuit
- Small number external parts

BLOCK DIAGRAM



Weight : 2.2g (Typ.)

TERMINAL NAME

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

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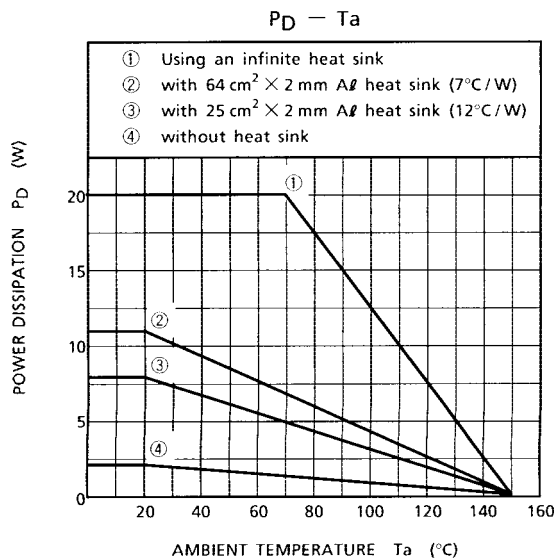
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MAXIMUM RATINGS (Ta = 25°C)

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

Note 1: Power on time ; 2ms, V_{CEO} = 60V

Note 2: Using an infinite heat sink



Thermal resistance
 $\theta_{jc} = 4^{\circ}\text{C/W}$

RECOMMENDED OPERATING CONDITION

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT
Power Supply	V _{CC}	—	27	29	V
Deflection Output Current	I _{2p-p}	—	—	2.2	A _{p-p}

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

CHARACTERISTIC	SYMBOL	TEST CIRCUIT	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: SW₁ : ON, SW₂ : C, SW₃ : ON, SW₄ : B, SW₅ : A, SW₆ : A
 Measure the voltage of pin 2.

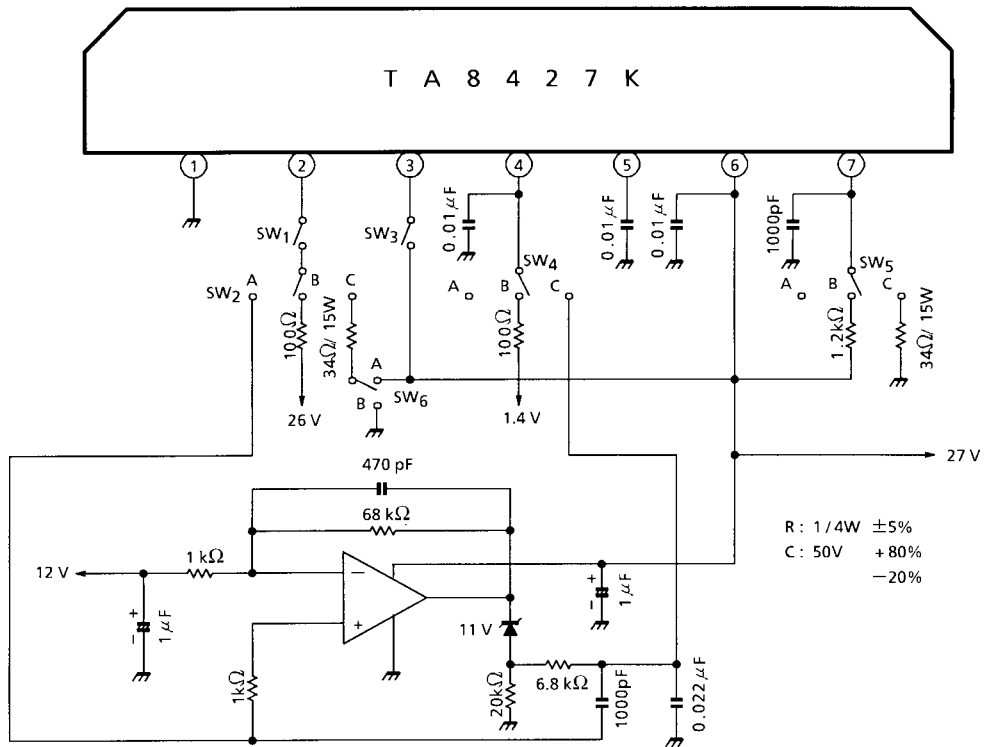
Note 2: SW₁ : ON, SW₂ : C, SW₃ : ON, SW₄ : A, SW₅ : A, SW₆ : B
 Measure the voltage of pin 2, V₂. $V_{V(sat)2} = V_{CC} - V_2$

Note 3: SW₁ : ON, SW₂ : B, SW₃ : OFF, SW₄ : A, SW₅ : C, SW₆ : A
 Measure the voltage of pin 7, V₇. $V_{P(sat)1} = V_{CC} - V_7$

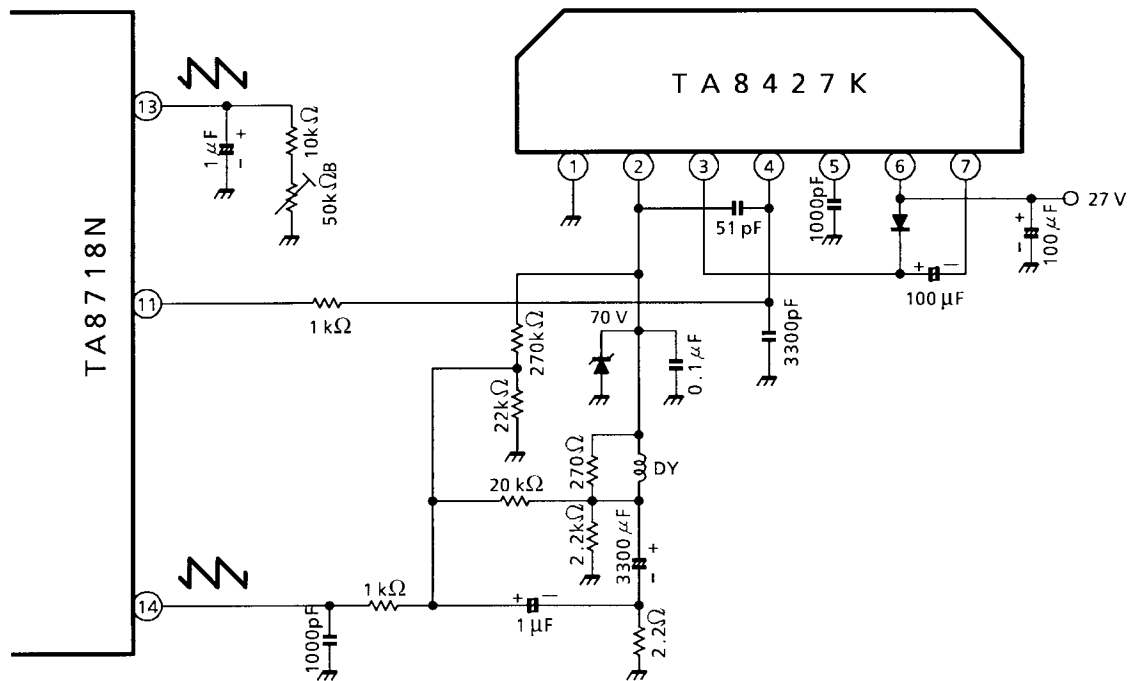
Note 4: SW₁ : OFF, SW₂ : C, SW₃ : OFF, SW₄ : A, SW₅ : B, SW₆ : B
 Measure the voltage of pin 7.

Note 5: SW₁ : ON, SW₂ : A, SW₃ : ON, SW₄ : C, SW₅ : A, SW₆ : B
 Measure the sink current into pin 3.
 Measure the voltage of pin 2.

TEST CIRCUIT 1



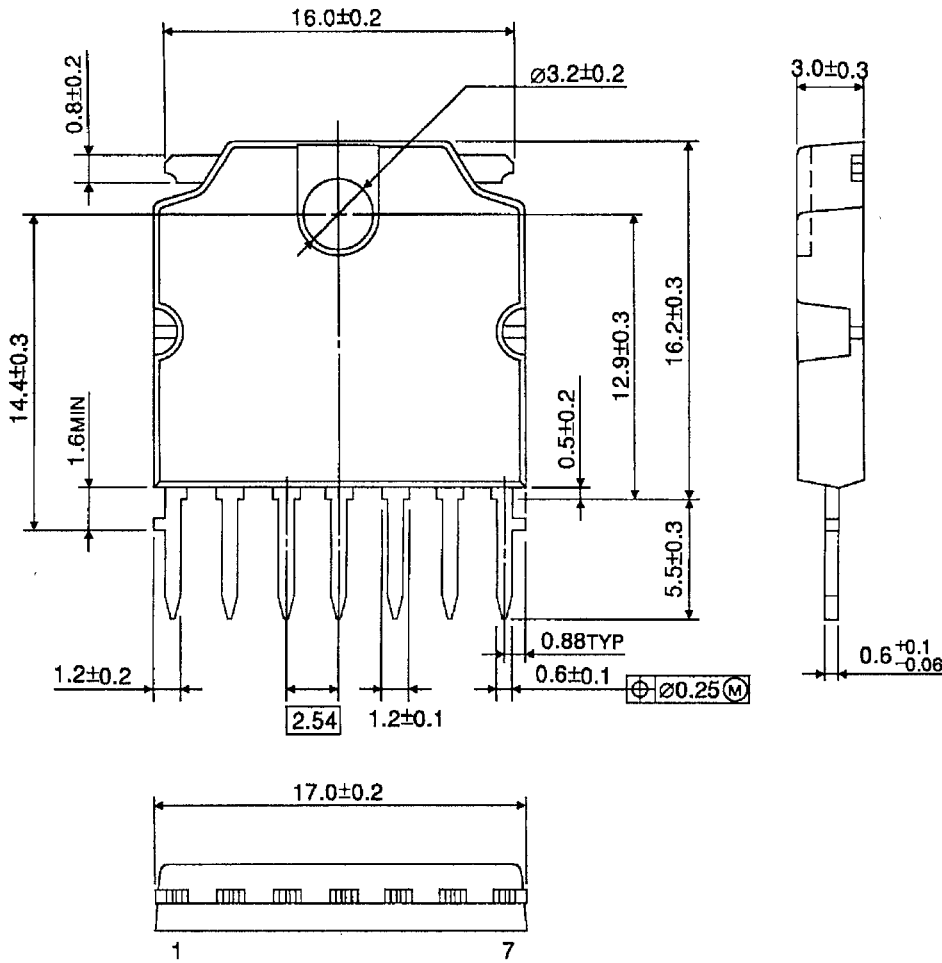
APPLICATION CIRCUIT



PACKAGE DIMENSIONS

HSIP7-P-2.54B

Unit : mm



Weight: 2.2g (Typ.)