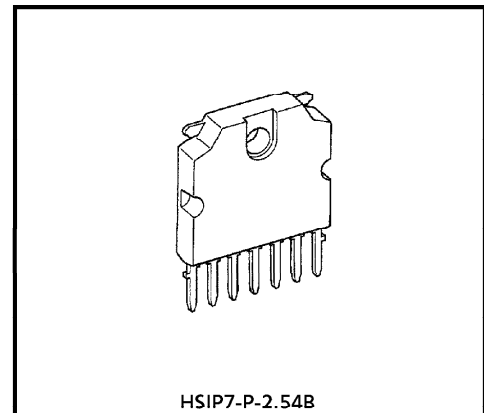


TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

TA8403K

POWER AMPLIFIER FOR DRIVING A DEFLECTION CIRCUIT OF A COLOR TELEVISION

TA8403K is a power amplifier for driving a vertical deflection circuit of a small and medium screen size color television. TA8403K is available for constructing a stable deflection circuit with small number parts in an application with a single chip signal processing IC TA8879N.

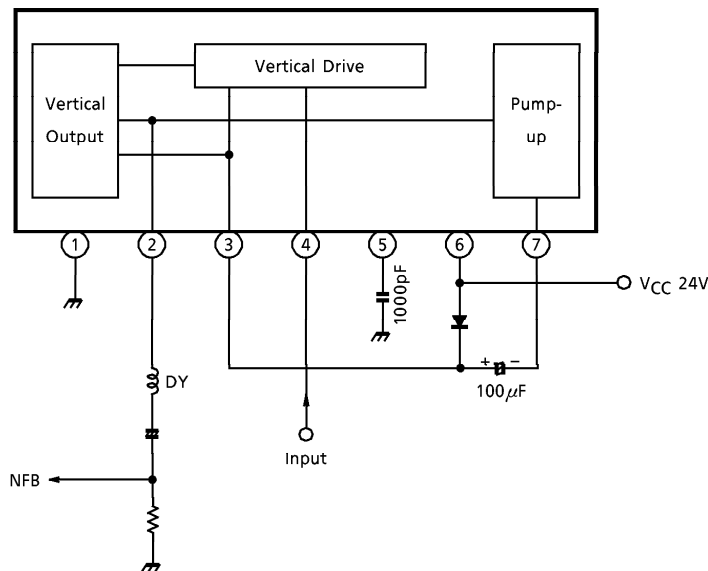


Weight : 0.7g (Typ.)

FEATURES

- Large output current : 1.8Ap-p (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

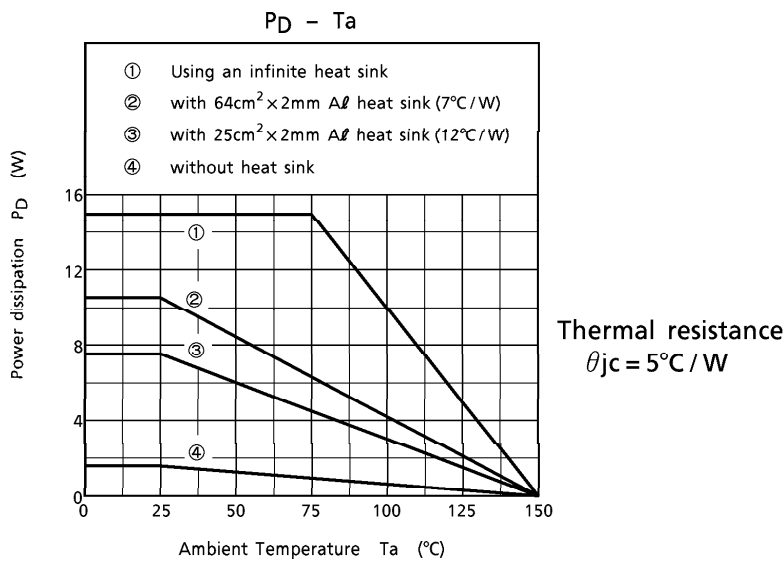
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MAXIMUM RATINGS (Ta = 25°C)

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
Power Dissipation	P _D	15 (Note)	W
Operating Temperature	T _{opr}	- 20 ~ 85	°C
Storage Temperature	T _{stg}	- 55 ~ 150	°C

(Note) Using an infinite heat sink



RECOMMENDED OPERATING CONDITION

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT
Power Supply	V _{CC}	—	24	27	V
Deflection Output Current	I _{2p-p}	—	—	1.8	A _{p-p}

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)	0.3	0.8	1.6	V
Output Current with no input	I_b	1	(Note 5)	10.0	15.0	30.0	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 pin2.

(Note 2) SW₁ : ON, SW₂ : C, SW₃ : ON, SW₄ : A, SW₅ : A, SW₆ : B
 Measure the voltage of pin2, V₂. $V_V (sat) 2 = V_{CC} - V_2$

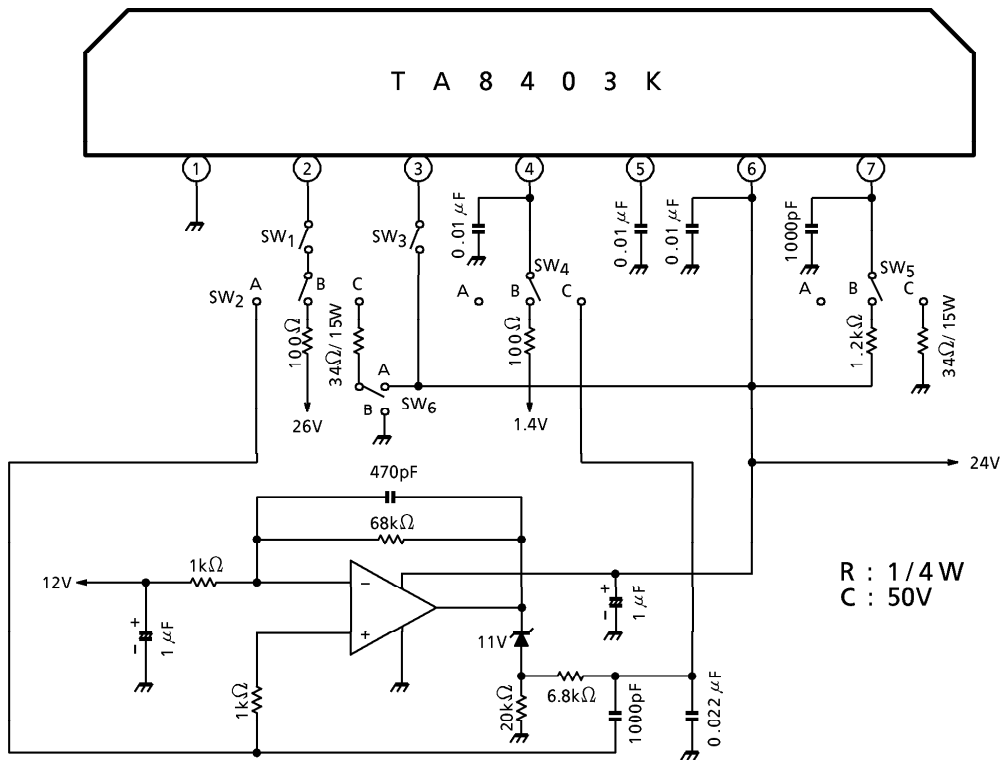
(Note 3) SW₁ : ON, SW₂ : B, SW₃ : OFF, SW₄ : A, SW₅ : C, SW₆ : A
 Measure the voltage of pin7, V₇. $V_P (sat) 1 = V_{CC} - V_7$

(Note 4) SW₁ : OFF, SW₂ : C, SW₃ : OFF, SW₄ : A, SW₅ : B, SW₆ : B
 Measure the voltage of pin7.

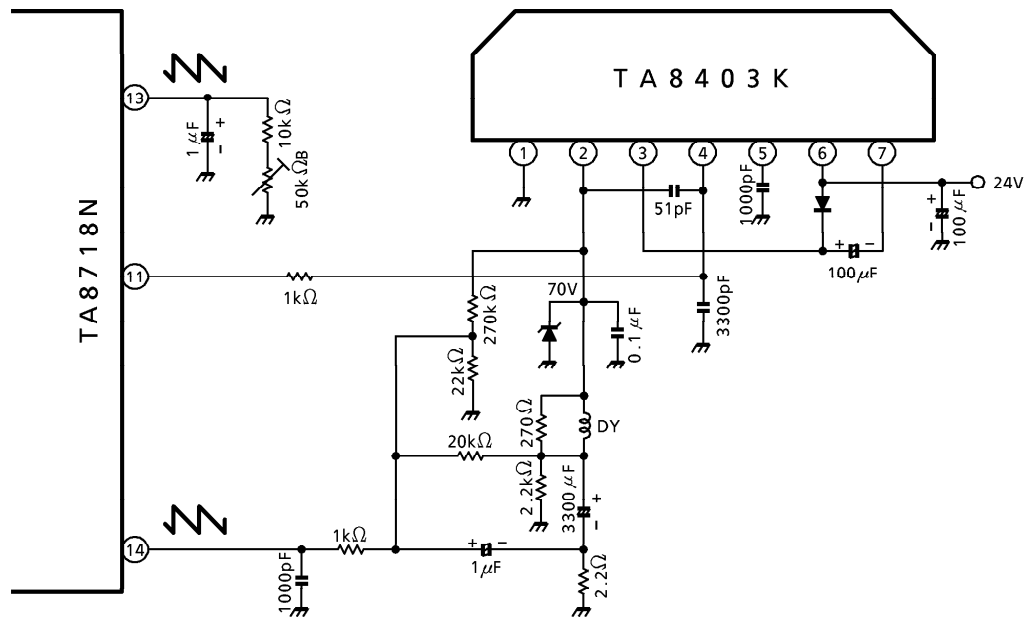
(Note 5) SW₁ : ON, SW₂ : A, SW₃ : ON, SW₄ : C, SW₅ : A, SW₆ : B
 Measure the sink current into pin3.
 Measure the voltage of pin2.

(Note 6) TA8403K is checked its output wave form in a real operating circuit.

TEST CIRCUIT 1

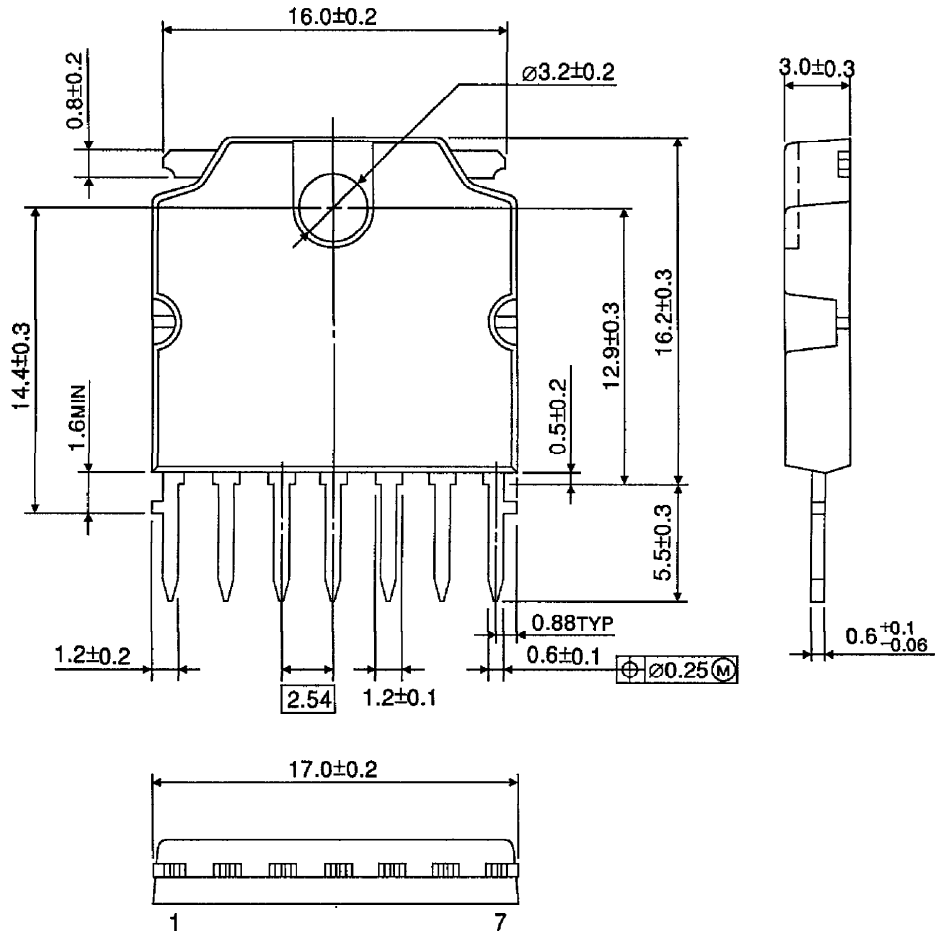


APPLICATION EXAMPLE CIRCUIT



OUTLINE DRAWING
HSIP7-P-2.54B

Unit : mm



Weight : 0.7g (Typ.)