

TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

TA8403K

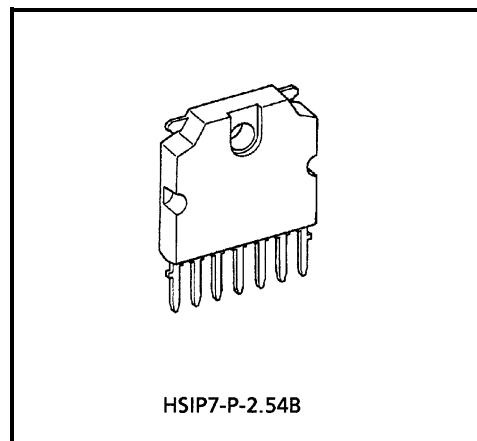
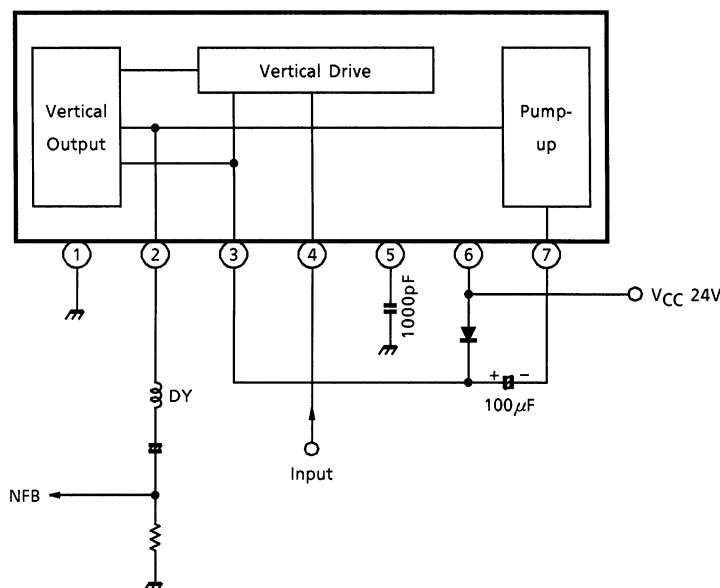
POWER AMPLIFIER FOR DRIVING A DEFLECTION CIRCUIT OF A COLOR TELEVISION

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.

FEATURES

- Large output current : 1.8Ap-p (Max.)
- Small power dissipation with a pump-up circuit
- Small number external parts

BLOCK DIAGRAM



Weight : 2.2 g (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

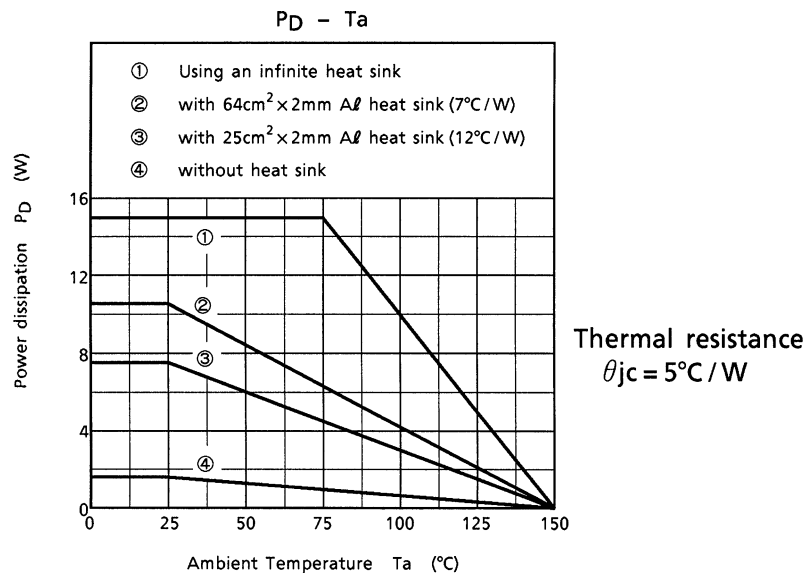
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MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Power Supply Voltage	VCC	30	V
Pump-up Power Supply Voltage	VVt	60	V
Terminal Voltage	E _{in}	GND -0.3 ~ VVt +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	VCC	—	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. $V_{V(sat)2} = V_{CC} - V_2$

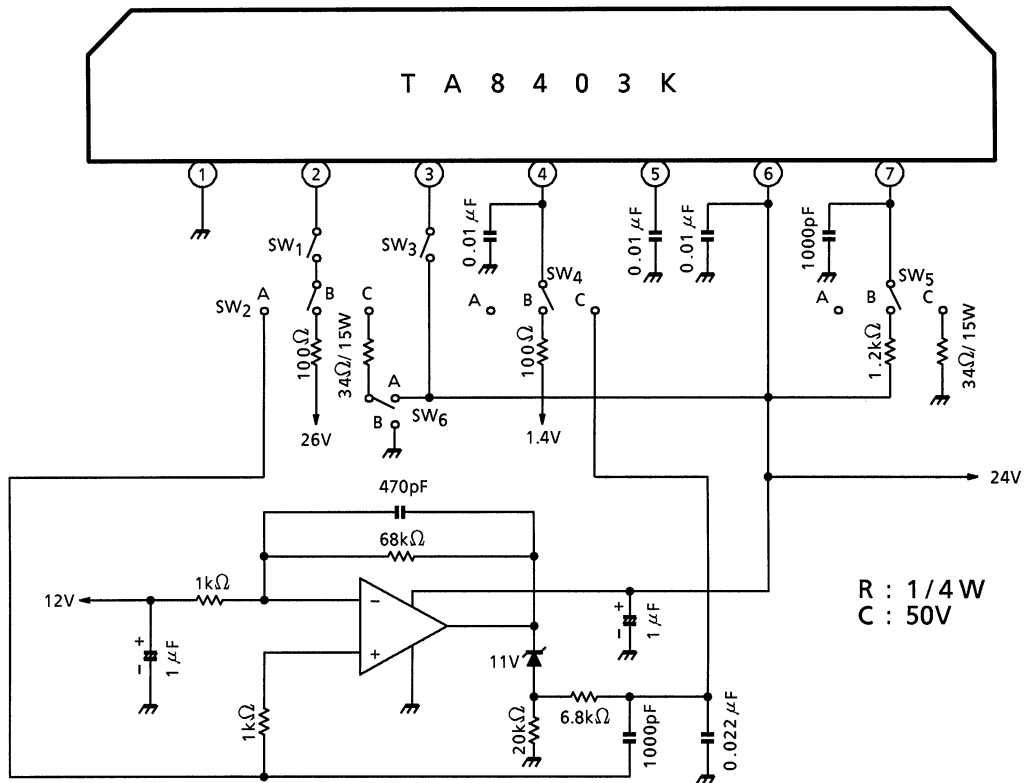
Note 3: SW₁ : ON, SW₂ : B, SW₃ : OFF, SW₄ : A, SW₅ : C, SW₆ : A
Measure the voltage of pin7, V₇. $V_{P(sat)1} = V_{CC} - V_7$

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

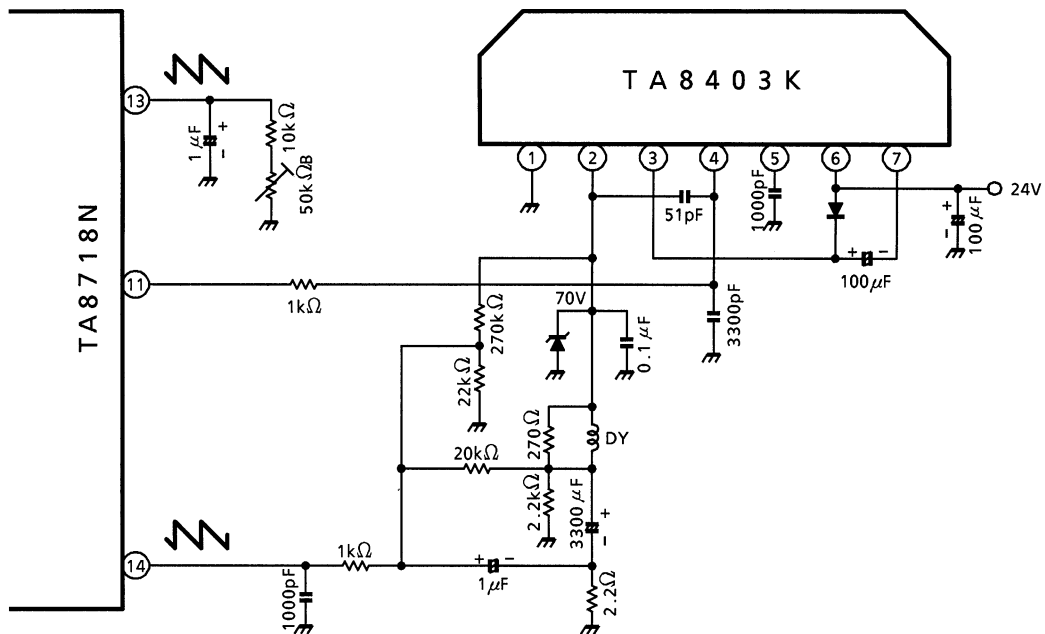
Note 5: SW₁ : ON, SW₂ : A, SW₃ : ON, SW₄ : C, SW₅ : A, SW₆ : B
Measure the sink current into pin3.
Measure the voltage of pin2.

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

TEST CIRCUIT 1



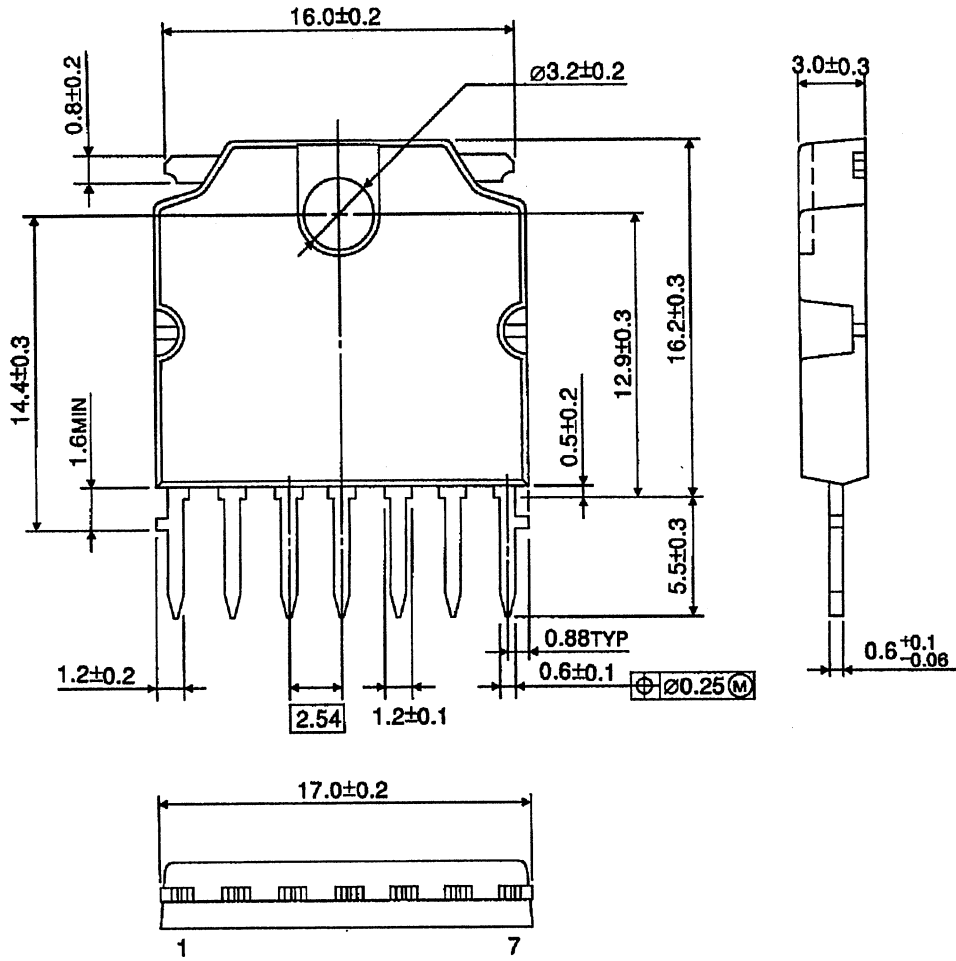
APPLICATION EXAMPLE CIRCUIT



PACKAGE DIMENSIONS

HSIP7-P-2.54B

Unit : mm



Weight: 2.2 g (Typ.)