

### VERTICAL DEFLECTION OUTPUT CIRCUIT FOR COLOR TELEVISION

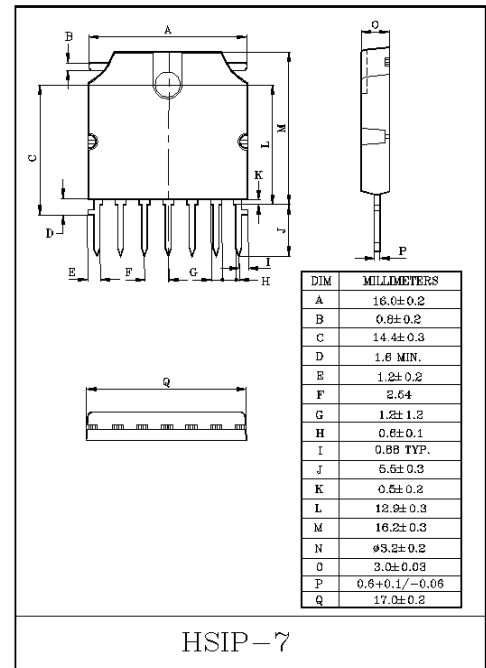
The KIA8403K is a power amplifier for driving a vertical deflection circuit of a small and medium screen size color television. Which is available for constructing a stable deflection circuit with small number parts in an application.

#### FEATURES

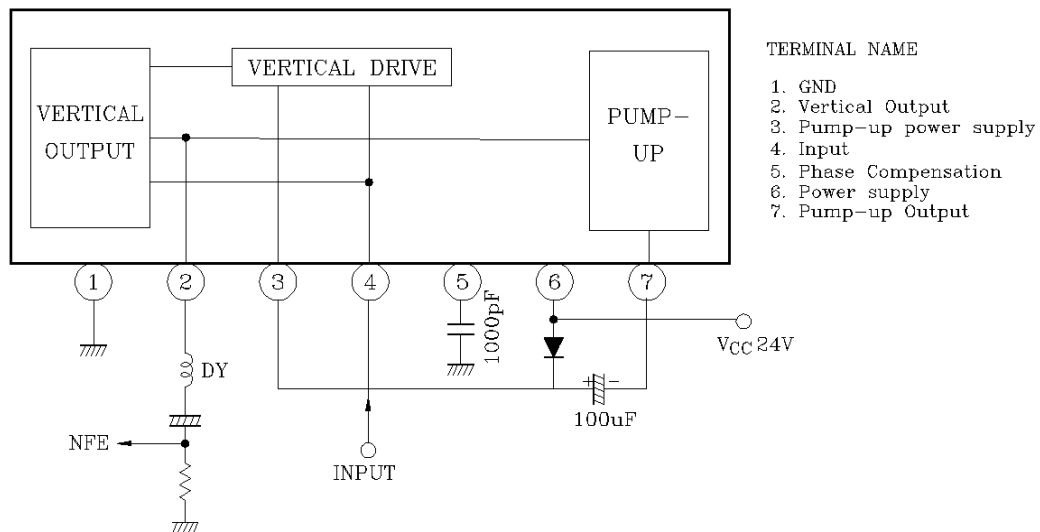
- Large output current : 1.8A<sub>p-p</sub> (Max.)
- Small power dissipation with a Pump-up circuit
- Small number external parts

#### MAXIMUM RATINGS (T<sub>a</sub>=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
Power Dissipation	P <sub>D</sub>	15 (Note)	W
Operating Temperature	T <sub>opr</sub>	-20~85	°C
Storage Temperature	T <sub>stg</sub>	-55~150	°C

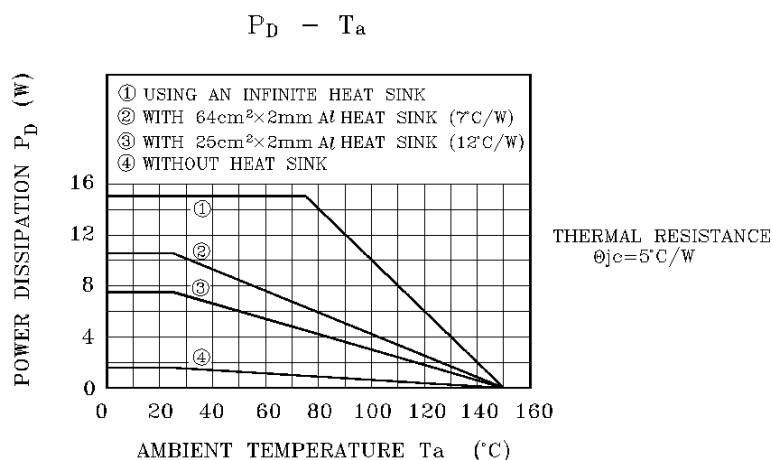


#### BLOCK DIAGRAM



# KIA8403K

## TERMINAL INTERFACE



## RECOMMENDED OPERATING CONDITIONS ( $T_a=25^\circ\text{C}$ )

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT
Supply Voltage	$V_{CC}$	-	24	27	V
Deflection Output Current	$I_{2P-P}$	-	-	1.8	$A_{P-P}$

## ELECTRICAL CHARACTERISTICS

(Unless otherwise specified,  $V_{CC1}=9\text{V}$ ,  $V_{CC2}=24\text{V}$ ,  $T_a=25^\circ\text{C}$ )

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)	0.3	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) 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,  $V_2 \cdot V_{V(sat)2} = V_{CC} - V_2$

(Note 3) SW<sub>1</sub>:ON, SW<sub>2</sub>:C, 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,  $V_7 \cdot V_{P(sat)1} = V_{CC} - V_7$

(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.

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

