

TA8445K

POWER AMPLIFIER FOR DRIVING A DEFLECTION CIRCUIT OF A COLOR TELEVISION

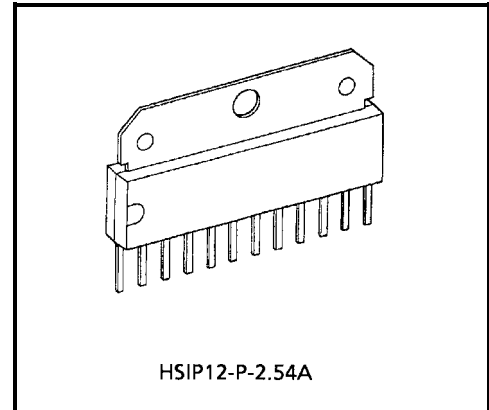
The TA8445K is a power amplifier for driving a deflection circuit of a middle and large screen size color television.

The TA8445K combines the vertical output circuit and the Ramp-generator in a 12-pin shrink DIP plastic package.

The TA8445K requires only vertical deflection positive pulse for vertical operation.

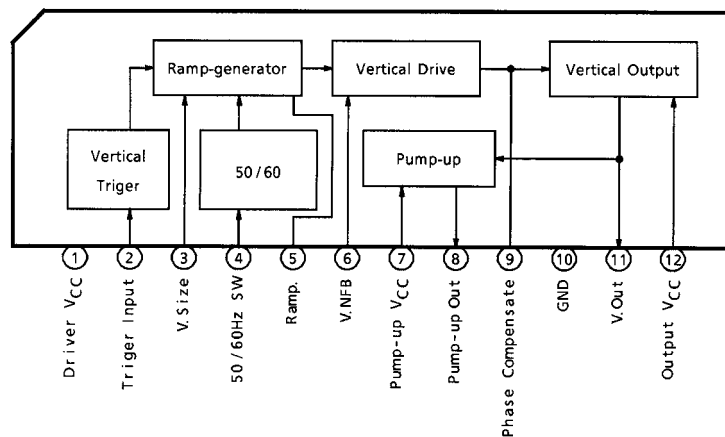
FEATURES

- Large output current : 2.2Ap-p (MAX.)
- Built-in Ramp-generator circuit
- Built-in V.Driver circuit
- 50 / 60Hz sw circuit
- Small power dissipation with a pump-up circuit
- Vertical output circuit
- Small number external parts

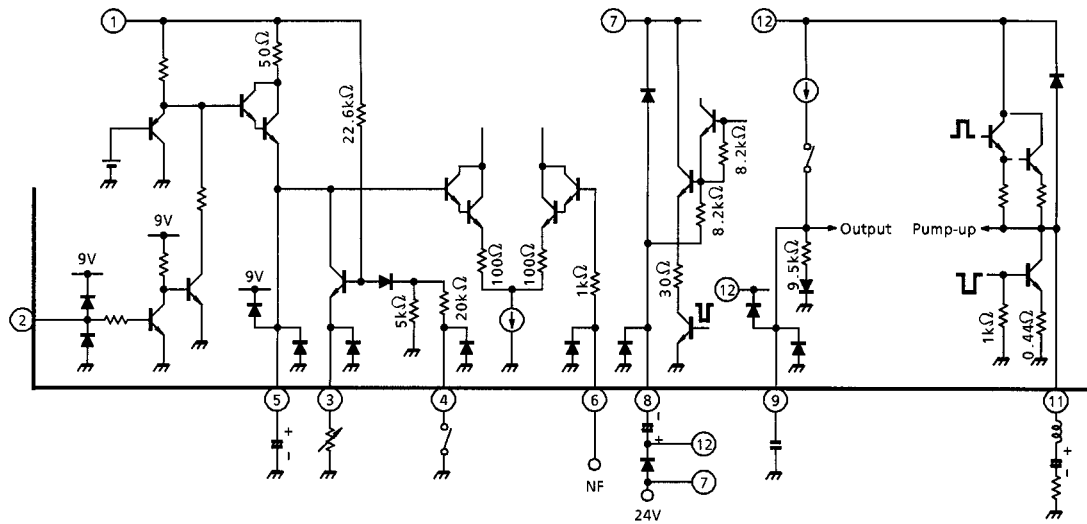


Weight: 3.2g(Typ.)

BLOCK DIAGRAM



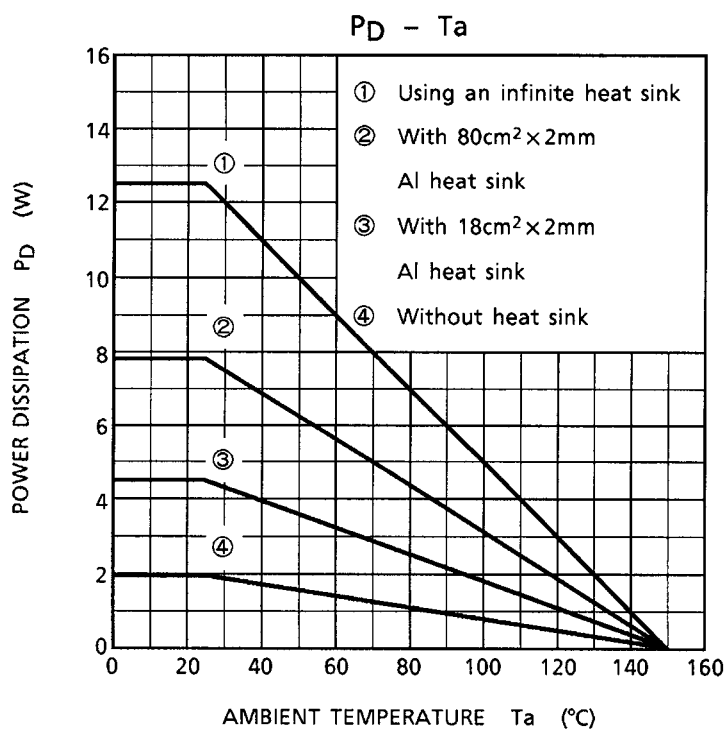
TERMINAL INTERFACE



MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
V.Driver Power Supply	V _{CC}	15	V
Pump-up Power Supply Voltage	V _{CC}	30	V
Vertical Output Supply Voltage	V _{CC}	60	V
Power Dissipation	P _D max	12.5 (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 (Ta = 25°C)

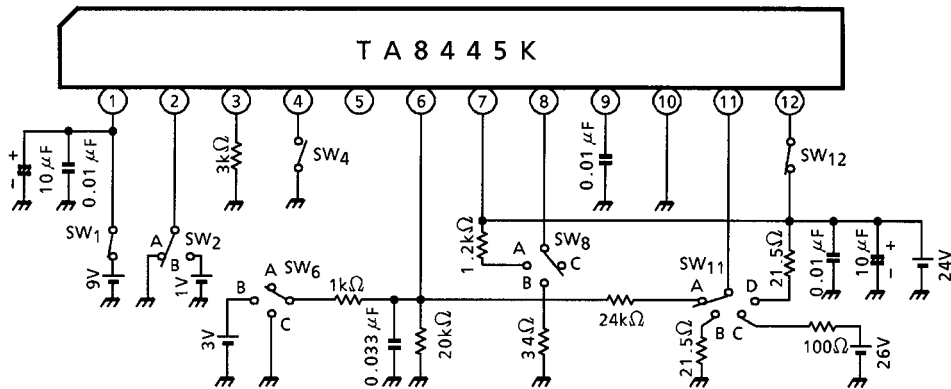
CHARACTERISTIC	SYMBOL	MIN	TYP.	MAX	UNIT
V.Driver Supply Voltage	V _{CC1}	8.1	9.0	9.9	V
Pump-up Supply Voltage	V _{CC2}	—	24	29	V
Deflection Output Current	I _{11p-p}	—	—	2.2	A _{p-p}

ELECTRICAL CHARACTERISTICS (Ta = 25°C, V_{CC1} = 9V, V_{CC2} = 24V)

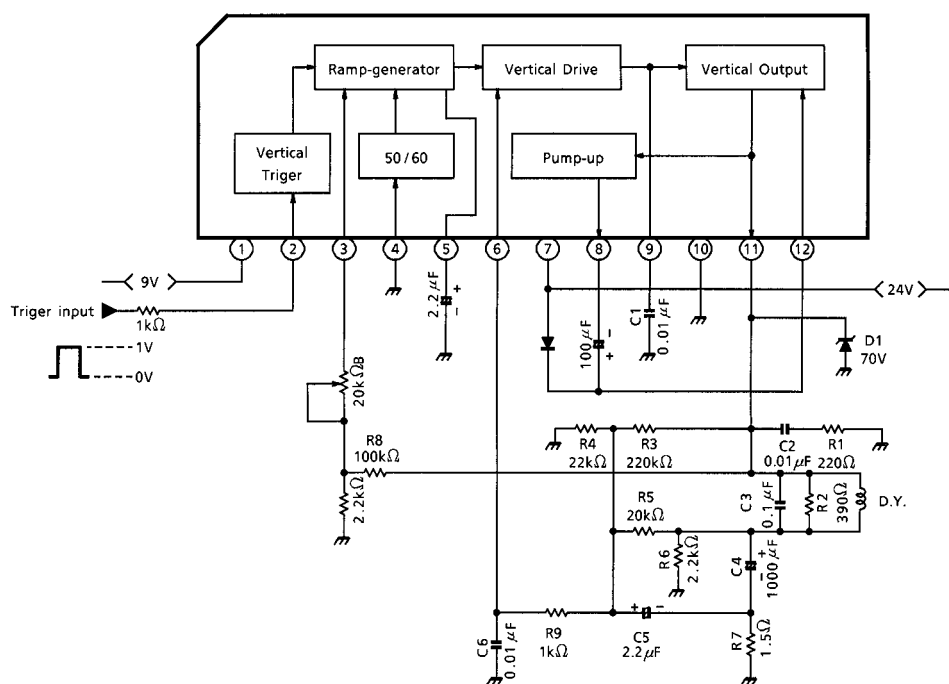
CHARACTERISTIC	SYMBOL	TEST CIR-CUIT	TEST CONDITION	MIN	TYP.	MAX	UNIT
V.Driver Supply Current	I _{CC1}	—	(Note 1)	2.0	5.0	12	mA
Vertical Triger Threshold Voltage	V ₂	—	(Note 2)	—	—	1.0	V
Vertical Amplitude Cont. Voltage (1)	V ₃ ⁶⁰	—	(Note 3)	1.0	1.5	2.0	V
Vertical Amplitude Cont. Voltage (2)	V ₃ ⁵⁰	—	(Note 11)	0.75	1.25	1.75	V
Ramp-signal Maximum Voltage	V ₅	—	(Note 4)	3.5	4.8	6.0	V
Ramp-signal Maximum Amplitude	V _{5p-p}	—	(Note 4)	3.5	4.5	5.5	V _{p-p}
Output Triger Satulation Voltage (1)	V _{S11-10}	—	(Note 5)	0.3	0.5	1.0	V
Output Triger Satulation Voltage (2)	V _{S12-11}	—	(Note 6)	1.0	1.8	3.6	V
Pump-up Triger Satulation Voltage (1)	V _{S7-8}	—	(Note 7)	1.0	2.0	3.0	V
Pump-up Triger Satulation Voltage (2)	V _{S8-10}	—	(Note 8)	0.2	0.8	1.6	V
Idling Current	I _b	—	(Note 9)	—	26	—	mA
Vertical Output Center Voltage	V _{CENTER}	—	(Note 10)	8.0	12.0	14.0	V

NOTE	SW MODE							TEST TERMINAL
	1	2	4	6	8	11	12	
1	ON	A	OFF	A	C	A	ON	1
2	ON	B	OFF	A	C	A	ON	5
3	ON	A	OFF	A	C	A	ON	3
4	ON	A	OFF	A	C	A	ON	5
5	ON	B	OFF	B	C	D	ON	11
6	OFF	A	OFF	C	C	B	ON	11 – 12
7	OFF	A	OFF	A	B	C	OFF	7 – 8
8	OFF	A	OFF	A	A	A	OFF	8
9	ON	A	OFF	A	C	A	ON	12
10	ON	A	OFF	A	C	A	ON	11
11	ON	A	ON	A	C	A	ON	3

TEST CIRCUIT



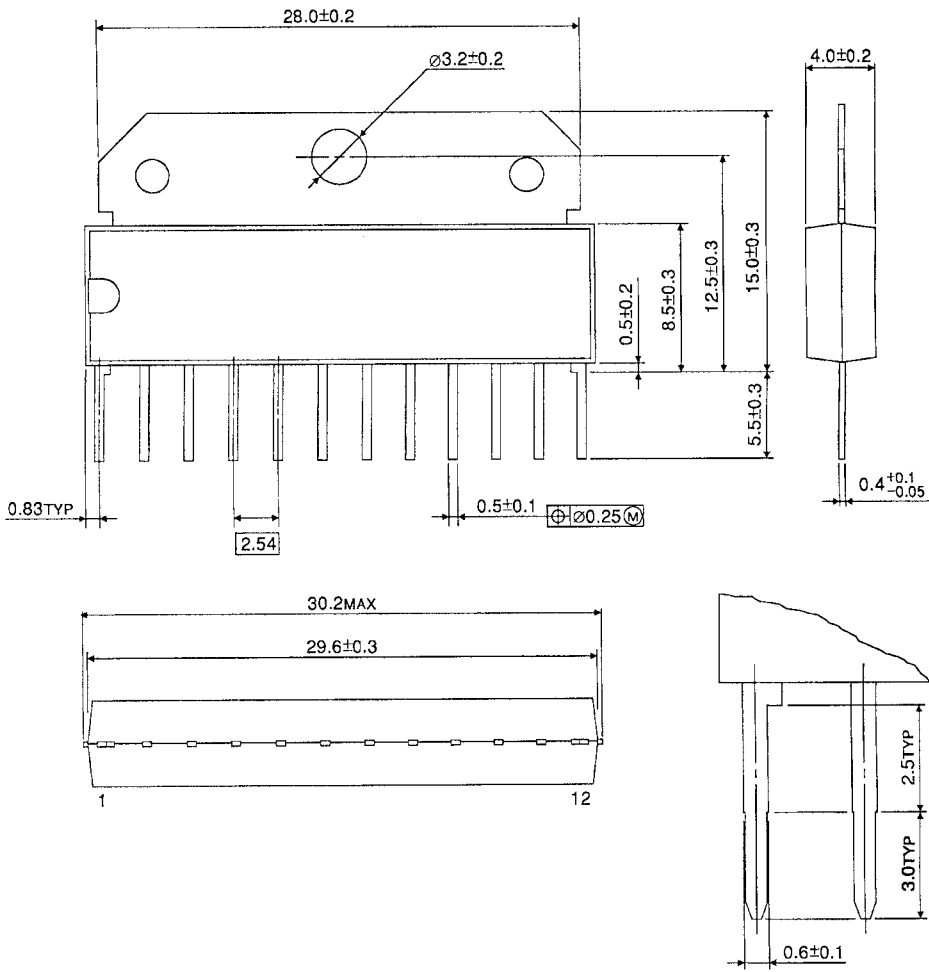
APPLICATION CIRCUIT



PACKAGE DIMENSIONS

HSIP12-P-2.54A

Unit : mm



Weight: 3.2g (Typ.)

RESTRICTIONS ON PRODUCT USE

000707EBA

- TOSHIBA is continually working to improve the quality and reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to comply with the standards of safety in making a safe design for the entire system, and to avoid situations in which a malfunction or failure of such TOSHIBA products could cause loss of human life, bodily injury or damage to property.
In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent TOSHIBA products specifications. Also, please keep in mind the precautions and conditions set forth in the "Handling Guide for Semiconductor Devices," or "TOSHIBA Semiconductor Reliability Handbook" etc..
- The TOSHIBA products listed in this document are intended for usage in general electronics applications (computer, personal equipment, office equipment, measuring equipment, industrial robotics, domestic appliances, etc.). These TOSHIBA products are neither intended nor warranted for usage in equipment that requires extraordinarily high quality and/or reliability or a malfunction or failure of which may cause loss of human life or bodily injury ("Unintended Usage"). Unintended Usage include atomic energy control instruments, airplane or spaceship instruments, transportation instruments, traffic signal instruments, combustion control instruments, medical instruments, all types of safety devices, etc.. Unintended Usage of TOSHIBA products listed in this document shall be made at the customer's own risk.
- The products described in this document are subject to the foreign exchange and foreign trade laws.
- The information contained herein is presented only as a guide for the applications of our products. No responsibility is assumed by TOSHIBA CORPORATION for any infringements of intellectual property or other rights of the third parties which may result from its use. No license is granted by implication or otherwise under any intellectual property or other rights of TOSHIBA CORPORATION or others.
- The information contained herein is subject to change without notice.