



## T78041

### LINEAR INTEGRATED CIRCUIT

## VERTICAL DEFLECTION OUTPUT CIRCUIT

### DESCRIPTION

The UTC **T78041** is a monolithic integrated circuit and designed for use in high-definition TV and CRT monitors. It is intended to directly drive the deflection coil. Besides, the T78041 offers a maximum deflection current of 2.2A peak to peak to suitable for large diameter CRTs.

### FEATURES

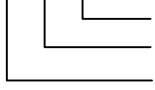
- \* Deflection current can be 2.2A peak value
- \* Deflection voltage up to 70V
- \* Flyback Generator
- \* Thermal Protection Circuit
- \* Low cross-over distortion
- \* Supports DC Coupling

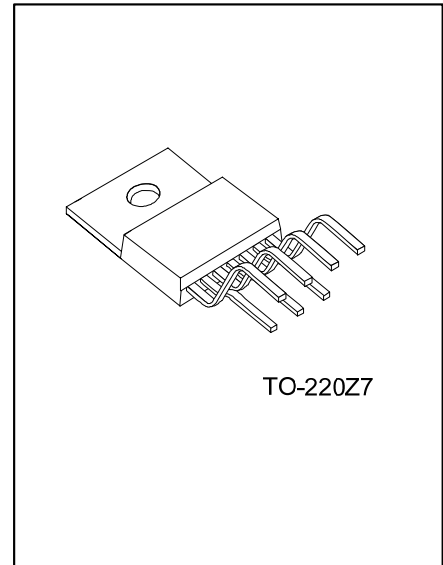
### APPLICATIONS

- \* Vertical deflection for monitors and TVs

### ORDERING INFORMATION

| Order Number |                   | Package  | Packing |
|--------------|-------------------|----------|---------|
| Normal       | Lead Free Plating |          |         |
| T78041-TB7-T | T78041L-TB7-T     | TO-220Z7 | Tube    |

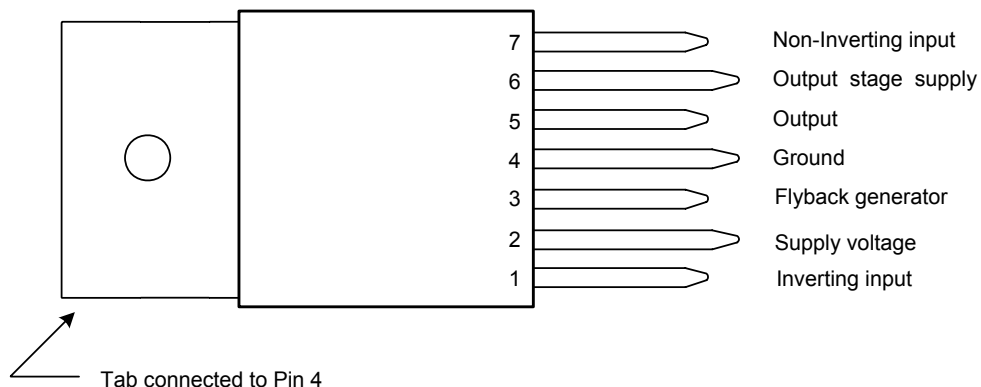
|                                                                                                          |                                                                |                                                                                  |
|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------------------------|
| <p>T78041L-TB7-T</p>  | <p>(1)Packing Type<br/>(2)Package Type<br/>(3)Lead Plating</p> | <p>(1) T: Tube<br/>(2) TB7: TO-220Z7<br/>(3) Lead Free Plating, Blank: Pb/Sn</p> |
|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------------------------|



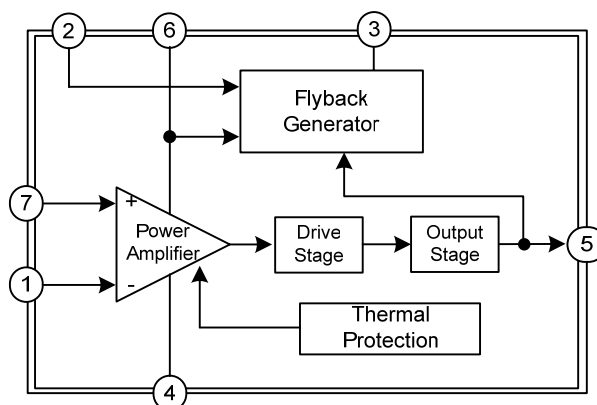
TO-220Z7

\*Pb-free plating product number: T78041L

### PIN CONFIGURATIONS



### BLOCK DIAGRAM



## ■ ABSOLUTE MAXIMUM RATINGS

| PARAMETER                             | SYMBOL            | RATINGS     | UNIT |
|---------------------------------------|-------------------|-------------|------|
| Supply Voltage (pin 2 to Pin4)        | V <sub>CC2</sub>  | 34          | V    |
| Output Supply Voltage (pin 6 to Pin4) | V <sub>CC6</sub>  | 70          | V    |
| Output Peak Current                   | I <sub>5MAX</sub> | -1.5 ~ +1.5 | A    |
| Power Dissipation                     | P <sub>D</sub>    | 9           | W    |
| Junction Temperature                  | T <sub>J</sub>    | 150         | °C   |
| Operating Temperature                 | T <sub>OPR</sub>  | -20 ~ +85   | °C   |
| Storage Temperature                   | T <sub>STG</sub>  | -40 ~ +150  | °C   |

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.  
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

## ■ THERMAL DATA

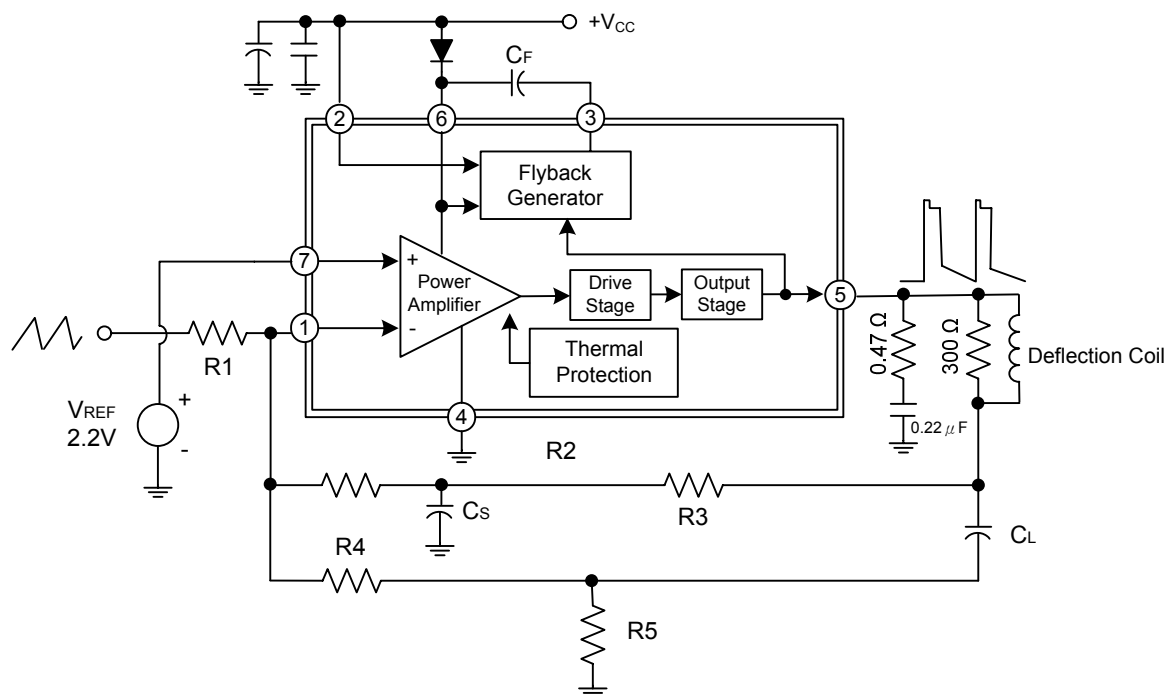
| PARAMETER                        | SYMBOL        | RATINGS | UNIT |
|----------------------------------|---------------|---------|------|
| Thermal Resistance Junction-Case | $\theta_{JC}$ | 3.0     | °C/W |

■ ELECTRICAL CHARACTERISTICS (Ta=25°C, V<sub>CC</sub>=24V, unless otherwise specified)

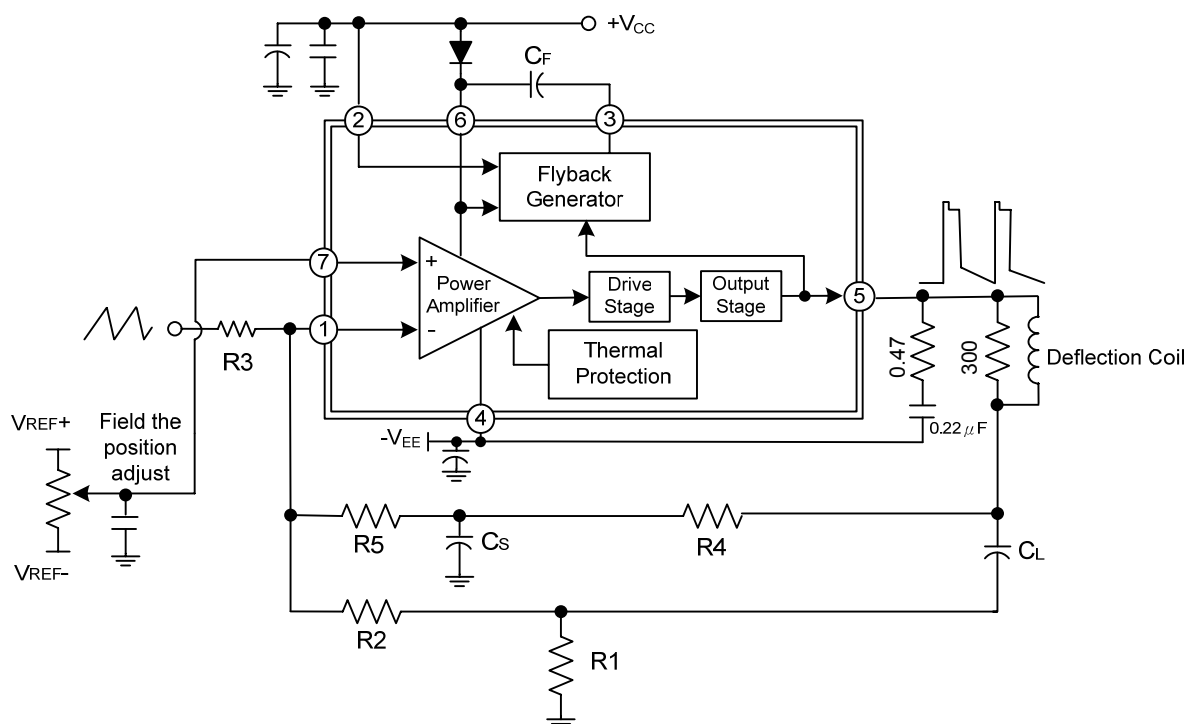
| PARAMETER                                                            | SYMBOL              | TEST CONDITIONS       | MIN. | TYP. | MAX. | UNIT |
|----------------------------------------------------------------------|---------------------|-----------------------|------|------|------|------|
| Supply Voltage                                                       | V <sub>CC</sub>     |                       | 16   | 24   | 33   | V    |
| Quiescent Current                                                    | I <sub>Q</sub>      |                       | 35   | -    | 65   | mA   |
| Recommend Biggest Deflect Current                                    | I <sub>5P-P</sub>   |                       |      |      | 2.2  | A    |
| Output Saturated Voltage to GND                                      | V <sub>5L</sub>     | I <sub>5</sub> =1.1A  |      |      | 1.5  | V    |
| Output Saturated Voltage to Supply                                   | V <sub>5H</sub>     | I <sub>5</sub> =-1.1A |      |      | 3.5  | V    |
| Pin 3 Saturation Voltage to GND                                      | V <sub>3L</sub>     | I <sub>3</sub> =20mA  |      |      | 1.8  | V    |
| Pin 3 Saturation Voltage to GND<br>(Return to Sweep the Second Part) | V <sub>3(2)</sub>   | I <sub>3</sub> =-1.1A |      |      | 3.2  | V    |
| Output Middle Point Voltage                                          | V <sub>O(MID)</sub> |                       | 11   | 12   | 13   | V    |
| Thermal Shutdown Temperature                                         |                     |                       |      | 140  |      | °C   |

# APPLICATION CIRCUIT

## For AC Coupling (Single Power Supply)



## For DC Coupling (Dual Power Supply)



UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.