

DATA SHEET

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| Part No. | AN30071A |
| Package Code No. | HZIP007-P-0750A |

Maintenance/Discontinued includes following product lifecycle stage.
planned maintenance type
maintenance type
planned discontinued type
discontinued type
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AN30071A

3 A, step-down or inverting DC-DC converter

■ Overview

AN30071A is a DC-DC converter which can be configured for step-down or inverting applications with a 3 A internal switch. The operating input voltage is between 4.5 V to 27 V.

■ Features

- Output voltage adjustable with $\pm 4\%$ accuracy.
- Internal switching frequency is fixed at 150 kHz.
- Standby function available with one external transistor.
- Thermal shut-down protection.
- Pulse-by-pulse over-current protection.
- Short circuit protection.
- Soft-start function.
- Under-voltage-lockout function.

■ Applications

- For LCD, home theater, DVD player

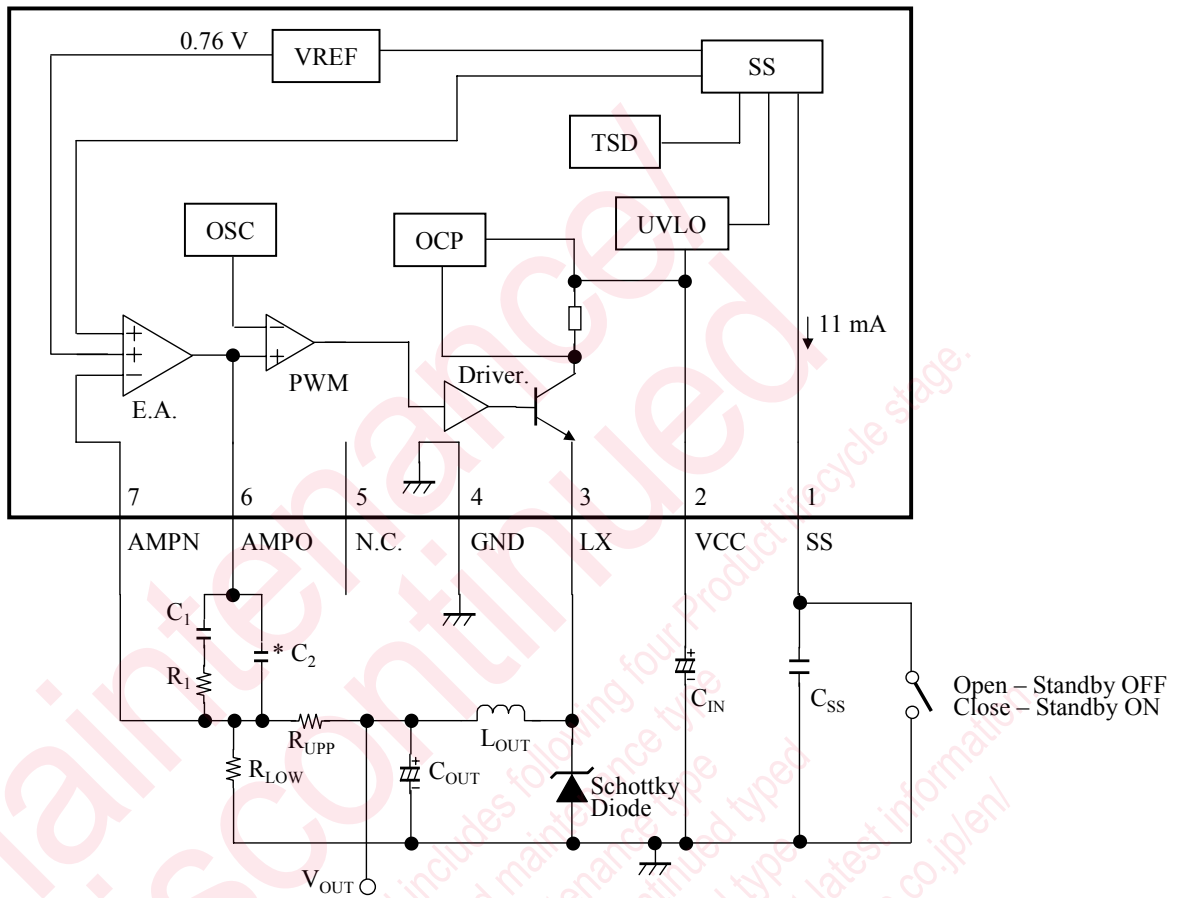
■ Package

- 7-pin plastic zigzag inline package with heat sink (ZIP type)

■ Type

- Silicon monolithic bipolar IC

■ Block Diagram (Application Circuit Example)



Note) *: C_2 is optional.

■ Pin Descriptions

| Pin No. | Pin name | Type | Description |
|---------|----------|--------------|---|
| 1 | SS | — | Soft-start pin with standby function |
| 2 | VCC | Power Supply | Power supply input for IC |
| 3 | LX | Output | Power transistor emitter, switching node |
| 4 | GND | Ground | Ground |
| 5 | N.C. | — | No connection |
| 6 | AMPO | Output | Error amp output |
| 7 | AMPN | Input | Error amp negative input Negative feedback |

■ Absolute Maximum Ratings

| A No. | Parameter | Symbol | Rating | Unit | Note |
|-------|-------------------------------|-----------|-------------|------|------|
| 1 | Supply voltage | V_{CC} | 30.5 | V | *1 |
| 2 | Supply current | I_{CC} | 3 | A | *2 |
| 3 | Power dissipation | P_D | 976 | mW | *3 |
| 4 | Operating ambient temperature | T_{opr} | -30 to +85 | °C | *4 |
| 5 | Storage temperature | T_{stg} | -50 to +150 | °C | *4 |

Note) *1: The values under the condition not exceeding the above absolute maximum ratings and the power dissipation.

*2: Without P_D and ASO constraint.

*3: The power dissipation shown is the value at $T_a = 85^\circ\text{C}$ for the independent (unmounted) IC package without heat sink.

*4: Except for the power dissipation, operating ambient temperature and storage temperature, all ratings are for $T_a = 25^\circ\text{C}$.

■ Operating Supply Voltage Range

| Parameter | Symbol | Range | Unit | Note |
|----------------------|----------|-----------|------|------|
| Supply voltage range | V_{CC} | 4.5 to 27 | V | * |

Note) *: The values under the condition not exceeding the above absolute maximum ratings and the power dissipation.

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