

Sanken Switching Regulator Hybrid IC

Type : STR50041A

1. Scope:

The present specification shall only apply to Sanken Switching Regulator Hybrid IC, type STR50041A.

2. Appearance and Configuration

2-1. Appearance:

The body shall be clean and shall not bear any stain, rust or flaw.

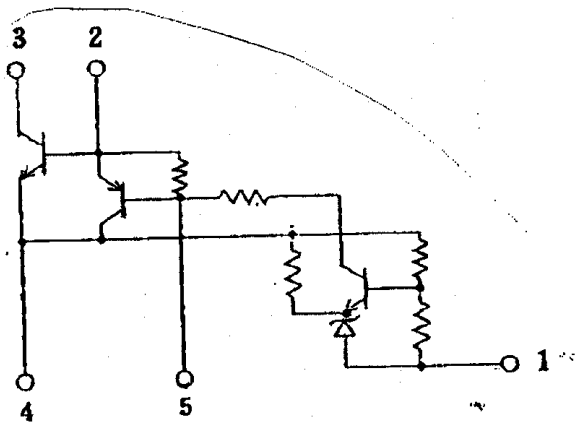
2-2. Appearance, Outline Dimensions, Equivalent Circuit and Basic Application Circuit

Refer to Fig. 1

2-3. Markings

The type number and lot number shall be legitimately be marked in white.

3. Equivalent Circuit



- 1. V_{OUT} SENSE(-)
- 2. Base Drive (B)
- 3. Input (C)
- 4. Earth (E)
- 5. Soft start

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4. Ratings

4-1. Absolute Maximum Ratings (Ta=25°C)

| Description | Symbol | Unit | Rating |
|-----------------------|------------------|------|---------------|
| Peak Input Voltage | V _{IN} | V | 500 |
| Input Current | I _{IN} | A | 10(Pulse 20A) |
| Power Dissipation *1 | P _D | W | 27(Tc=100°C) |
| Operating Temperature | T _{OP} | °C | -20~+125 (Tc) |
| Storage Temperature | T _{stg} | °C | -30~+125 |
| Junction Temperature | T _J | °C | +150 |

4-2. Electrical Characteristics (Ta=25°C) (Per Fig. 1-1)

| Description | Symbol | Unit | Rating | | | Conditions | |
|--|--------------------------------|----------------------------------|-----------------------|------|------|--|------------------------------------|
| | | | MIN. | TYP. | MAX. | | |
| Set Output Voltage | V _O | V | 41.3 | 41.8 | 42.3 | I _{IN} =7mA, Test Circuit #1 | |
| Temperature Coefficient of Output Voltage | | mv/°C | ±2 | | | Tc=-20~+100°C, I _{IN} =7mA Test Circuit #1 | |
| Power Transistor Characteristic | Collector Saturated Voltage | V _{CE(SAT)} | | | 0.5 | I _C = 5A I _B = 1A | |
| | DC Current Gain | h _{FE} | 15 | | 40 | V _{CE} =4V, I _C =1A | |
| | Collector Cutoff Current | I _{CEX} | mA | | | 1 V _{CE} =500V V _{BE} =-1.5V | |
| | Base-Emitter Saturated Voltage | V _{BE(SAT)} | V | | | 1.5 I _C = 5A I _B = 1A | |
| | Thermal Resistance | θ _{J-C} | °C/W | 1.8 | | | Upper of Junction Stem |
| | Switching Time | t _s t _r | μs μs | | | 10 0.4 | Test Circuit #2 Test Circuit #2 |
| Output Voltage *2 | | V | 115±2 | | | V _{IN} =100V, I _{O1} =1.2A | |
| Line Regulation 1 *2 (vs. Input Voltage) | | V | Initial Value ±2V | | | V _{IN} = 85~132V I _O = 1.2A | |
| Line Regulation 2 *2 (vs. Output Current) | | V | Initial Value ± 2V | | | V _{IN} =100V I _{O1} =0.4~1.2A | |

*1: Suggested Case Temperature Top (Tc) = 100 °C.

*2: Please refer to the Application Circuit.

Date: August 22, 1990

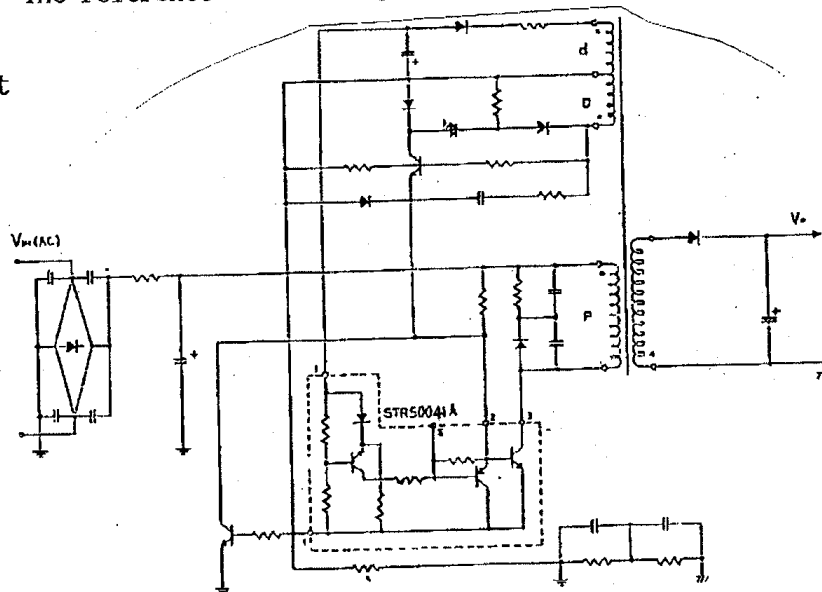
Specification No.: SSE-17760E

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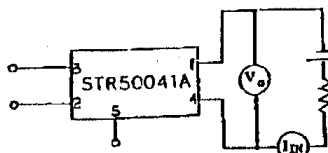
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The Output Voltage can be determined by the number of winding wires D and S of transformer. The reference value is $V_o=115V$.

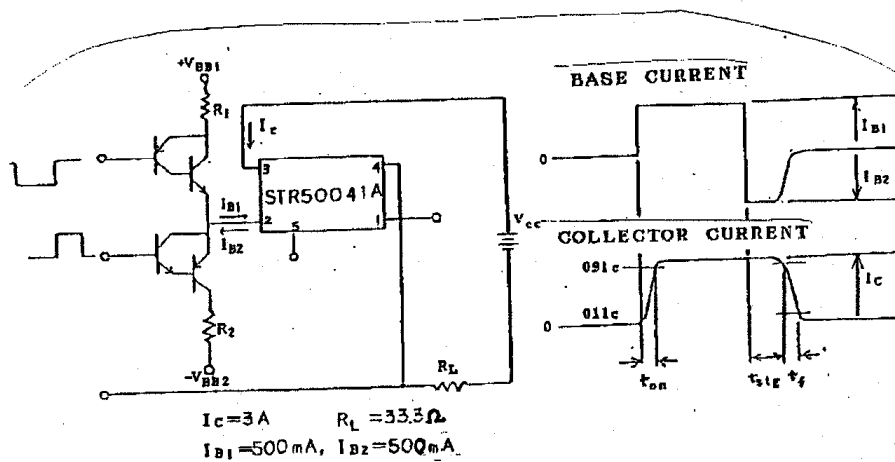
Application Circuit



Test Circuit #1



Test Circuit #2

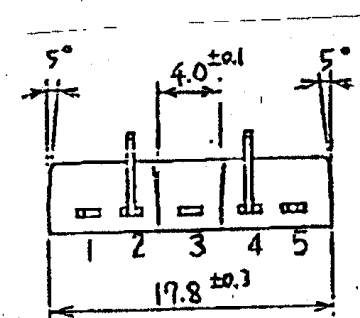
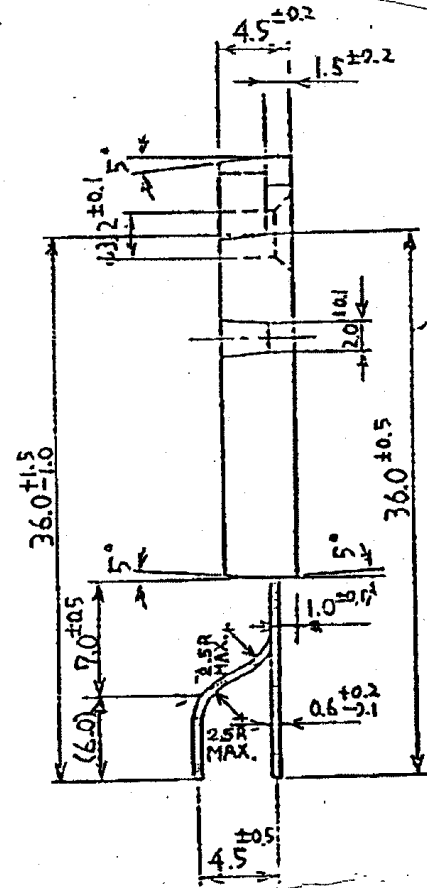
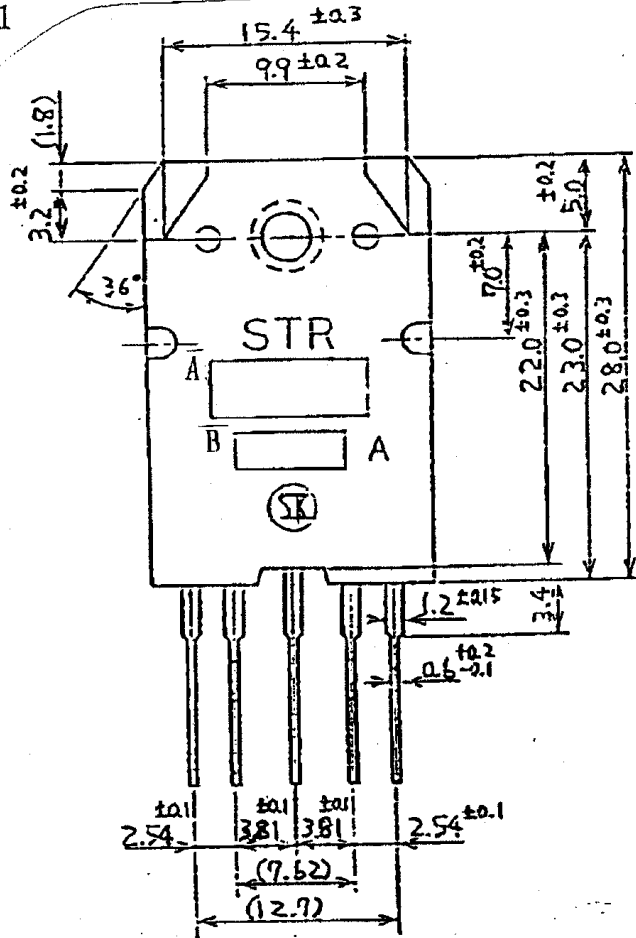


4-4. Suggested Silicone Grease

- G-746: SHIN-ETSU CHEMICALS
- YG6280: TOSHIBA SILICONE
- SC102: TORAY SILICONE

5. Marking and Dimension

Fig. 1



Pin Connection

- ① - V_{OUT} SENSE
- ② - Base Drive (B)
- ③ - Input (C)
- ④ - Earth (E)
- ⑤ - Soft Start

Unit: mm

A. Part Number: STR50041A

B. Lot Number:

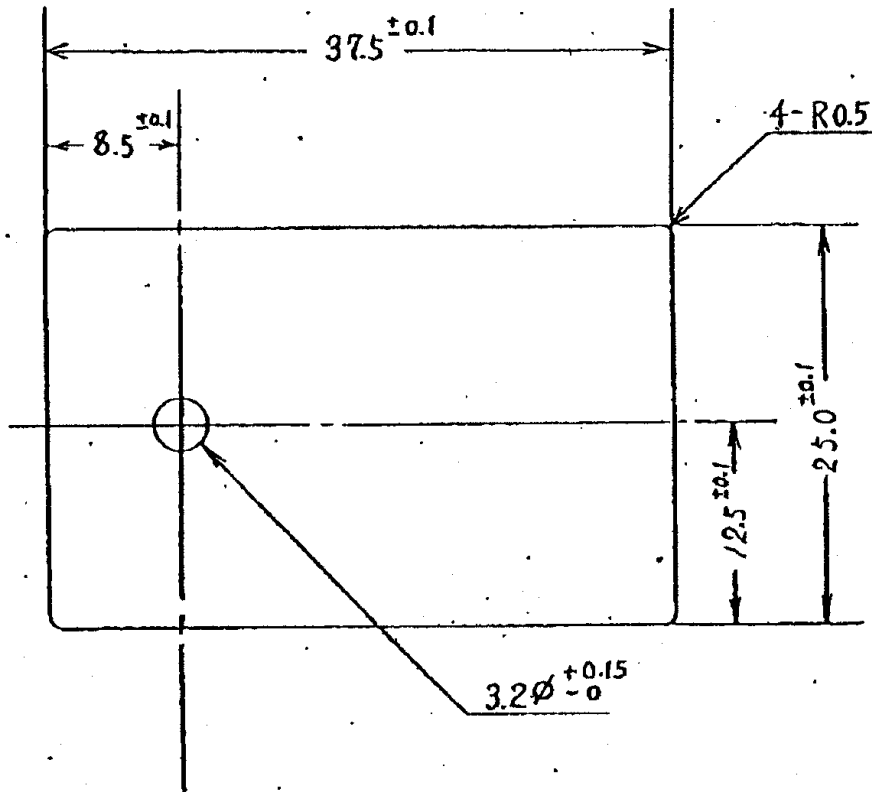
1st digit - Last digit of Year
2nd digit - Month

Jan. ~ Sept.: 1 ~ 9
Oct.: 0
Nov.: N
Dec.: D

3rd & 4th digit - Day (01 ~ 31)

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MICA No.23 for STR Series



Material : MICA

t : 0.08~0.15

Unit : mm