



# SANKEN ELECTRIC COMPANY, LTD.

## S P E C I F I C A T I O N S

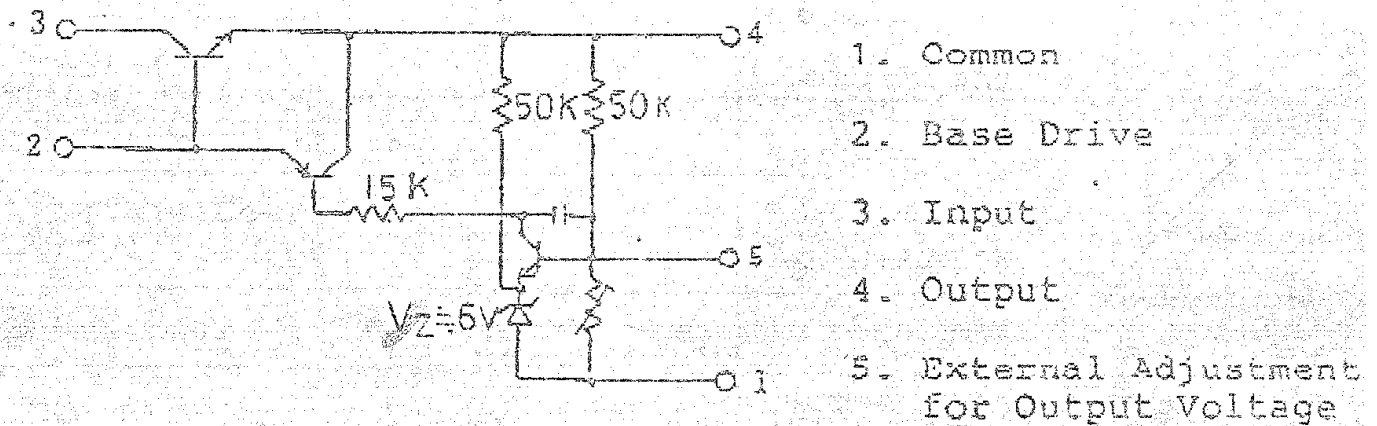
Sanken Hybrid IC Voltage Regulator STR50330

Date : November 30, 1987  
Specification : SSE-

### Structure and Application

- a. Hybrid IC Voltage Regulator with built in Power Transistor NPN Triple Diffused Planar
- b. On Line SMPS for Color TV
- c. Output voltage fixed

### Equivalent Circuit



Outline Drawings, Dimensions and Pin Assignment as per attached drawing Fig.1

The type number and lot number shall be legitimately marked by white color.

### \*Suggested Silicone Grease

- C746: SHIN-ETSU CHEMICAL INDUSTRY CO., LTD.
- C747: SHIN-ETSU CHEMICAL INDUSTRY CO., LTD.
- YG6260: TOSHIBA SILICONE CO., LTD.
- SC102: TORAY SILICONE CO., LTD.

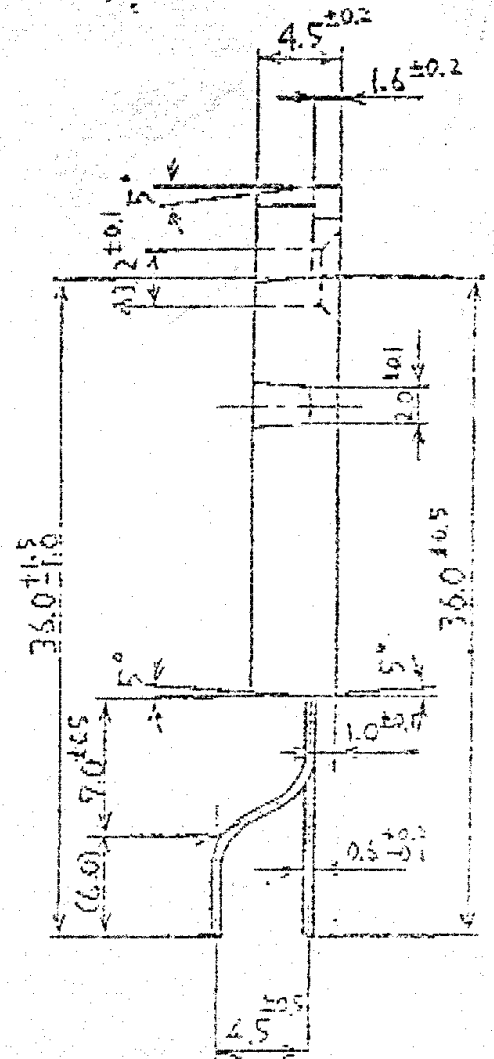
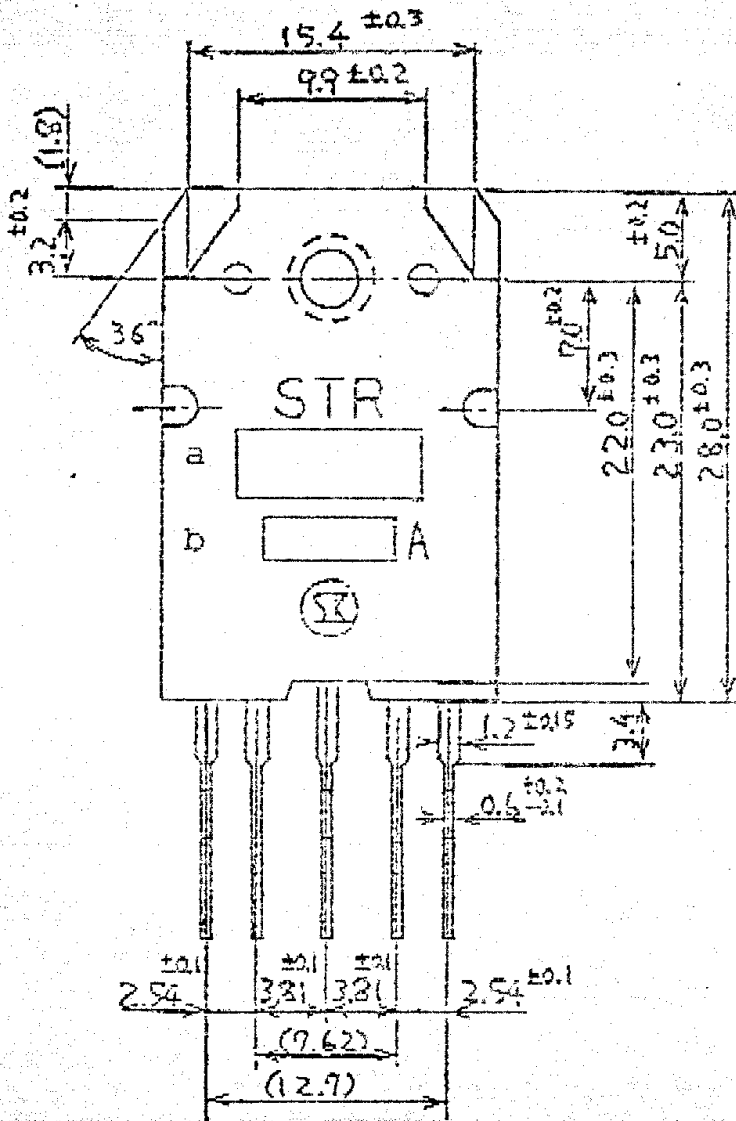
## 5. Maximum Ratings

| Description                   | Symbol    | Unit             | Rating                         |
|-------------------------------|-----------|------------------|--------------------------------|
| Maximum Peak Input Voltage    | $V_{IN}$  | V                | 500                            |
| Input Current                 | $I_{IN}$  | A                | 6                              |
| Maximum Power Dissipation     | $P_D$     | W                | 27 ( $T_C=100^\circ\text{C}$ ) |
| Operational Temperature       | $T_{op}$  | $^\circ\text{C}$ | -20 ~ +125 ( $T_C$ )           |
| Storage Temperature           | $T_{stg}$ | $^\circ\text{C}$ | -30 ~ +125                     |
| Power Tr Junction Temperature | $T_j$     | $^\circ\text{C}$ | +150                           |

## 6. Electrical Characteristics

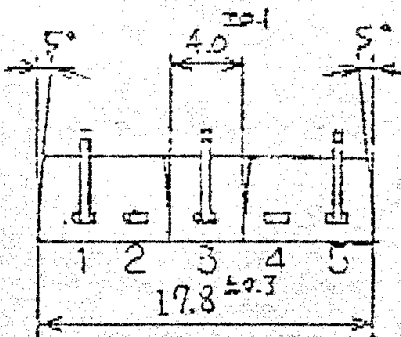
| Description                               | Symbol        | Conditions  | Rating                            |             |
|---|---------------|---|-----------------------------------|-------------|
| Fixed Output Voltage                      | $V_O$         | $I_{IN}=7\text{mA}$ , **1   | $3.0 \pm 1\text{V}$               |             |
| Temperature Coefficient of Output Voltage |               | $T_C=-20\sim+100^\circ\text{C}$<br>$I_{IN}=6\text{mA}$ , **1                                | $\pm 4.0\text{mV}/^\circ\text{C}$ |             |
| Power Transistor                          |               |   |                                   |             |
| Collector Saturation Voltage              | $V_{CE(sat)}$ | $I_C=2\text{A}$ , $I_B=0.4\text{A}$   | 1.0V Max.                         |             |
| DC Current Gain                           | $h_{FE}$      | $V_{CE}=4\text{V}$ , $I_C=1\text{A}$  | Min.14, Max.40                    |             |
| Collector Cutoff Current                  | $I_{CEX}$     | $V_{CE}=00\text{V}$ , $V_{BE}=-1.5\text{V}$   | 1.0mA Max.                        |             |
| Emitter Cutoff Current                    | $I_{EBO}$     | $V_{BE}=5.5\text{V}$  | 1.0mA Max.                        |             |
| Base Saturation Voltage                   | $V_{BE(sat)}$ | $I_C=2\text{A}$ , $I_B=0.4\text{A}$   | 1.5V Max.                         |             |
| Thermal Resistance                        | $R_{th(j-c)}$ | Junction to case  | $1.8^\circ\text{C}/\text{W}$      |             |
| Switching Time                            |               | $V_{CE}=50\text{V}$ , $I_C=1\text{A}$<br>$I_{B1}=0.1\text{A}$ , $I_{B2}=0.1\text{A}$<br>**2 | $t_s$                             | 13μsec Max  |
|   |               |   | $t_f$                             | 1.0μsec Max |

Fig. 1



Marking

- a. Type number: STR50300
- b. Lot number
  - 1st number for year
  - 2nd number for month
  - 1 ~ 9: Jan ~ Sept
  - O : Oct
  - N : Nov
  - D : Dec
  - 3rd and 4th for date
  - 01 ~ 31



- 1. Common
- 2. Base Drive
- 3. Input
- 4. Output
- 5. External Adjustment for Output Voltage