



SANKEN ELECTRIC COMPANY, LTD.

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

Sanken Hybrid Voltage Regulator Module, STR Series
Sanken Part No: STR54041

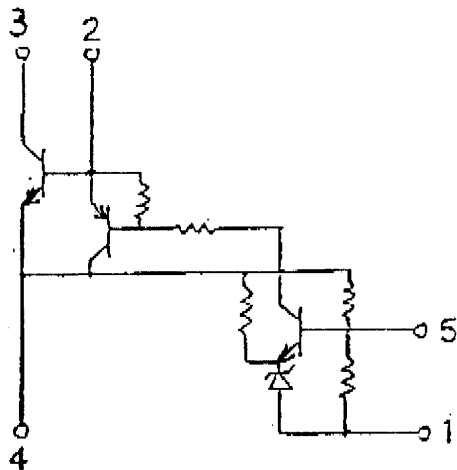
Messrs :

Date : October 8, 1985
Specification No. : ES85044

1. Features:

- a. Hybrid Voltage Regulator Module incorporated triple diffused planar transistor chips
- b. Transfer Molded
- c. For TV Switch Mode Power Supply
- d. Fixed Output Voltage

2. Equivalent Circuit



- 1. Vout SENSE (-)
- 2. BASE DRIVE (B)
- 3. IN PUT (C)
- 4. EARTH (E)
- 5. Vo CONT

3. Outline Drawing, Marking and Pin Connections

Refer to Figure 1

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



5. Absolute Maximum Ratings

| Description | Symbol | Unit | Ratings |
|---------------------------------------|-----------|------------------|---------------------------------|
| Maximum Peak Input Voltage | V_{IN} | V | 900 |
| Input Current | I_{IN} | A | 6 (Pulse 12) |
| Maximum Power Dissipation | P_D | W | 27 ($T_c=100^\circ\text{C}$)* |
| Operating Temperature | T_{op} | $^\circ\text{C}$ | -20-+125 (T_c) |
| Storage Temperature | T_{stg} | $^\circ\text{C}$ | -30-+125 |
| Power Transistor Junction Temperature | T_j | $^\circ\text{C}$ | +150 |

* Recommendation Case Temperature $T_{op}(T_c)=100^\circ\text{C}$ Max

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.



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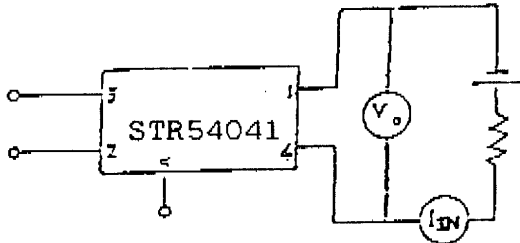
6. Electrical Characteristics 1

| Description | | Conditions | Ratings | |
|---|------------------|--|----------------------|-------------------|
| Fixed Output Voltage (Detecting Voltage) | | $I_{IN}=7mA$, Measurement Circuit 1 | $41.8 \pm 0.5V$ | |
| Output Voltage Temperature Coefficient | | $T_C = -20 \text{--} +100^\circ C$, $I_{IN}=7mA$ Measurement Circuit 1 | $\pm 2.0mV/^\circ C$ | |
| Power Transistor Characteristics | $V_{CE(sat)}$ | $I_C=2A$, $I_B=0.4A$ | 1.0V Max | |
| | h_{FE} | $V_{CE}=4V$, $I_C=1A$ | Min 10 Max 30 | |
| | I_{CEX} | $V_{CE}=900V$, $V_{BE}=-1.5V$ | 1.0mA Max | |
| | $V_{BE(sat)}$ | $I_C=2A$, $I_B=0.4A$ | 1.5V Max | |
| | $R_{\theta j-c}$ | Between Junction and Stem Upper Surface | 1.8 $^\circ C/W$ | |
| | Switching Time | Measurement Circuit 2 | t_s | 7 μsec Max |
| | | | t_f | 1.0 μsec Max |

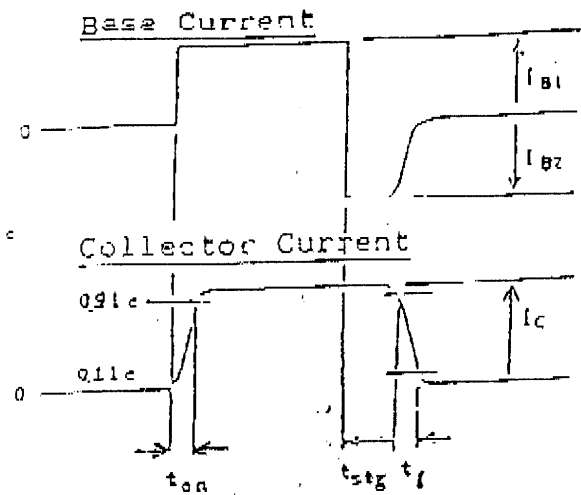
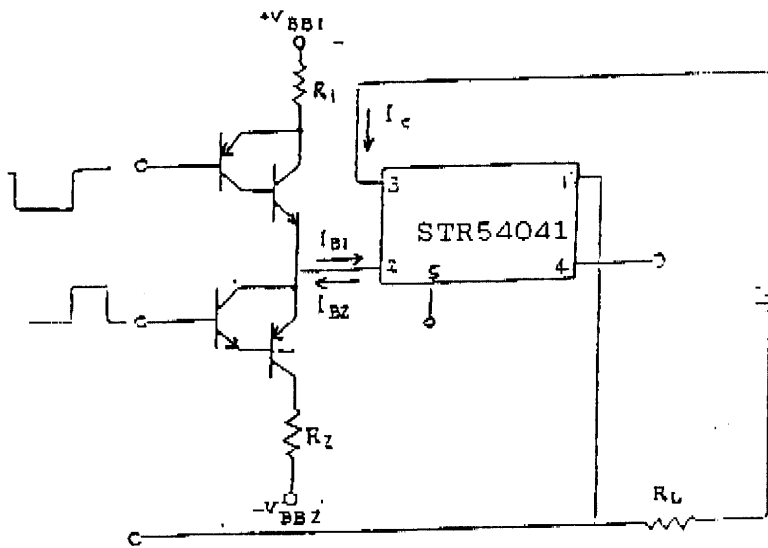


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Measurement Circuit 1.



Measurement Circuit 2



$I_c = 2A$, $R_L = 50\Omega$
 $I_{B1} = 300mA$, $I_{B2} = 1.0A$

7. Electrical Characteristics 2

| Description | Conditions | Ratings |
|-----------------|---|------------------------|
| Output Voltage | $V_{IN} = 220V$, $I_o = 0.5A$ Actual Working Circuit 1. | $114.5 \pm 1.5V$ |
| Line Regulation | $V_{IN} = 180 \sim 280V$, $I_o = 0.5A$ Actual Working Circuit 1 | Initial Value $\pm 1V$ |
| Load Regulation | $V_{IN} = 220V$, $I_o = 0.3A \sim 0.5A$ Actual Working Circuit 1. | Initial Value $\pm 2V$ |

