

SANKEN ELECTRIC COMPANY, LTD.

SPECIFICATION

Sanken Hybrid Voltage Regulator Module - STR53041  
 DATE ISSUED : September 24, 1991

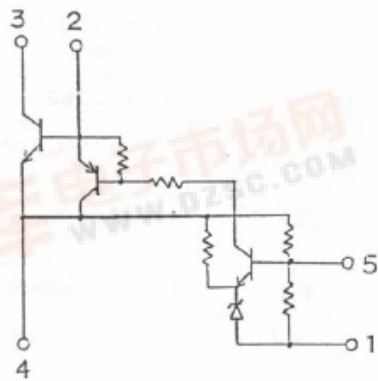
1. Scope :

The present specification shall only apply to Sanken Hybrid Voltage Regulator, Type STR53041.

2. Features :

- a) Hybrid voltage regulator module with a triple diffused planar transistor incorporated.
- b) For TV switch mode power supply application.
- c) Fixed output voltage.

3. Equivalent Circuit :



- 1. Vout SENSE(-)
- 2. BASE DRIVE (B)
- 3. INPUT (C)
- 4. EARTH (E)
- 5. Vd CONT

4. Outline Drawing, Dimension and Pin Connections are per Fig-1.

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

Application Engineering Division	DRAWN BY	
	CHECKED BY	
DATE: Sept. 24, '91	APPROVED BY	SSE-15327E 1/7

6. Absolute Maximum Ratings (Ta=25°C)

Description	Symbol	Unit	Ratings
Maximum Peak Input Voltage	VIN	V	550
Input Current	I IN	A	6
Maximum Power Dissipation	PD	W	27 (Tc=100°C)
Operating Temperature	Top	°C	-20 to +125 (Tc)
Storage Temperature	Tstg	°C	-30 to +125
Power Tr Junction Temp.	Tj	°C	+150

\*\*

7. Electrical characteristics (Ta=25°C)

Description	Symbol	Condition	Ratings
Fixed Output Voltage	vo	I IN=7mA, Test circuit 1	41.8±0.5
Temp. coefficient of Output Voltage		Tc=-20 to +100°C I IN=7mA, Test circuit 1	±2.0mV/°C
Collector Sat. Voltage	Vce(sat)	Ic=2A, Ib=0.4A	1.0VMax
DC Current Gain	hfe	Vce=4V, Ic=1A	Min 13 Max 40
* Collector Cutoff Current	I CEX	Vce=550V, Vbe=-1.5V	1.0A Max
Emitter-Base Current	I EBO	Ic=2A, Ib=0.4A	1.5VMax
Thermal Resistance	θj-c	Junction system up	1.8°C/W
Switching Time	ts	Test circuit 2	12.0μsec
	tfl		0.7μsec

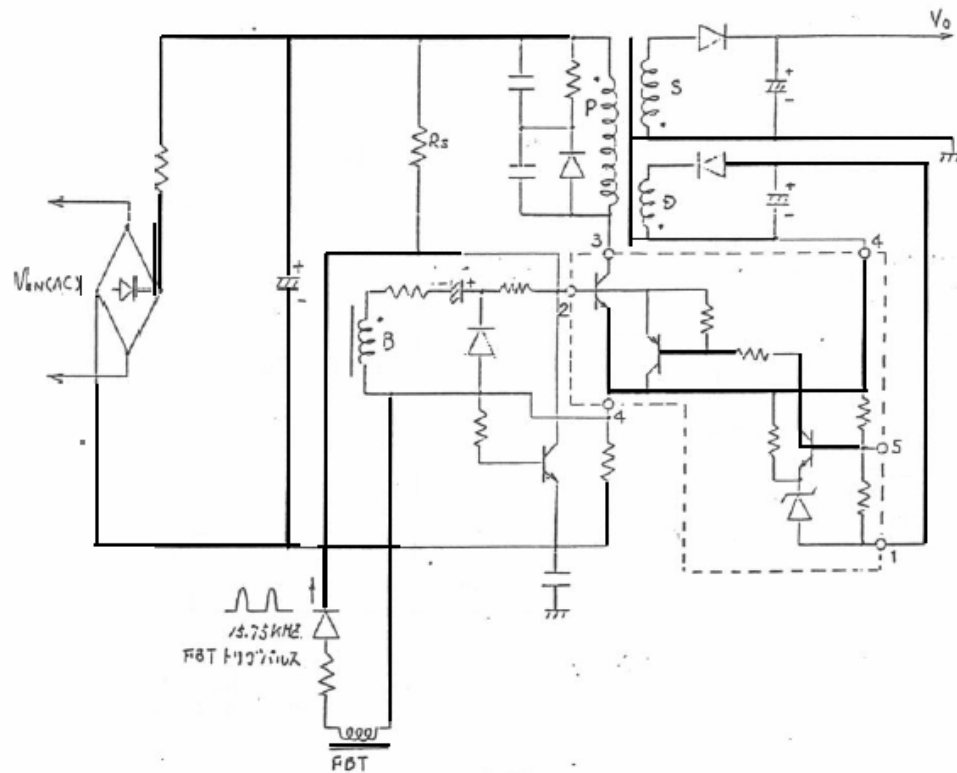
\*Power Transistor Characteristics.

\*\*Recommended Case Temperature : Top(tc) = 100°C

8. Electrical characteristics 2

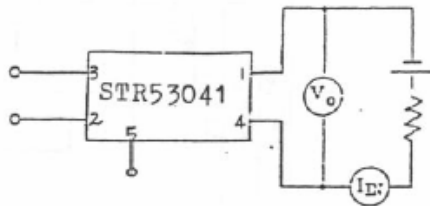
Description	Condition	Rating
Output Voltage	V <sub>IN</sub> =120V, I <sub>O</sub> =0.9A Test circuit 1	116.0±1.5V
Load Regulation	V <sub>IN</sub> =90 to 145V, I <sub>O</sub> =0.9A Test circuit 1	Initial Value ±1V
Load Regulation	V <sub>IN</sub> =120V, I <sub>O</sub> =0.5 to 0.9A Test circuit 1	Initial Value ±2V

9. Test Circuit 1. (Reference circuit)

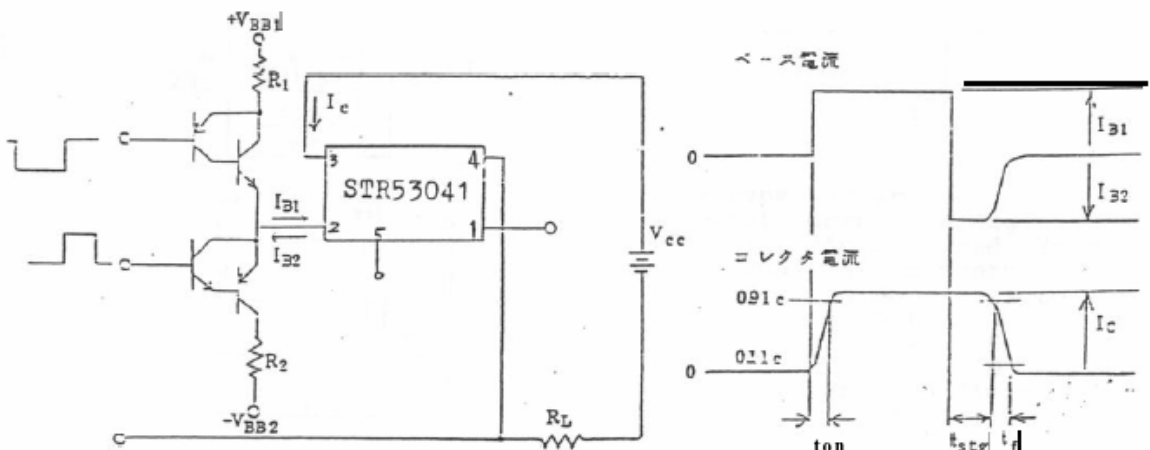


10. Fixed Output Voltage Test circuit:

Output terminal 2, Set at Open IN-Output characteristics.

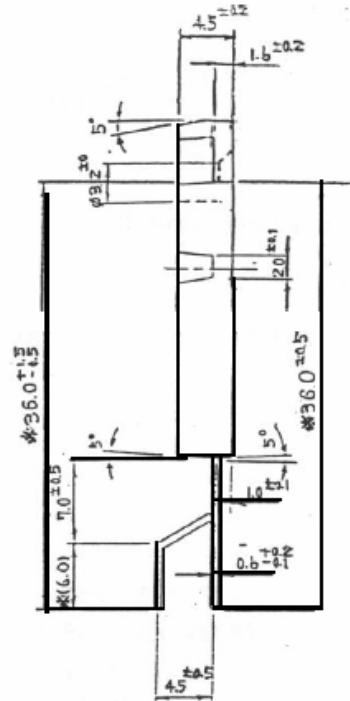
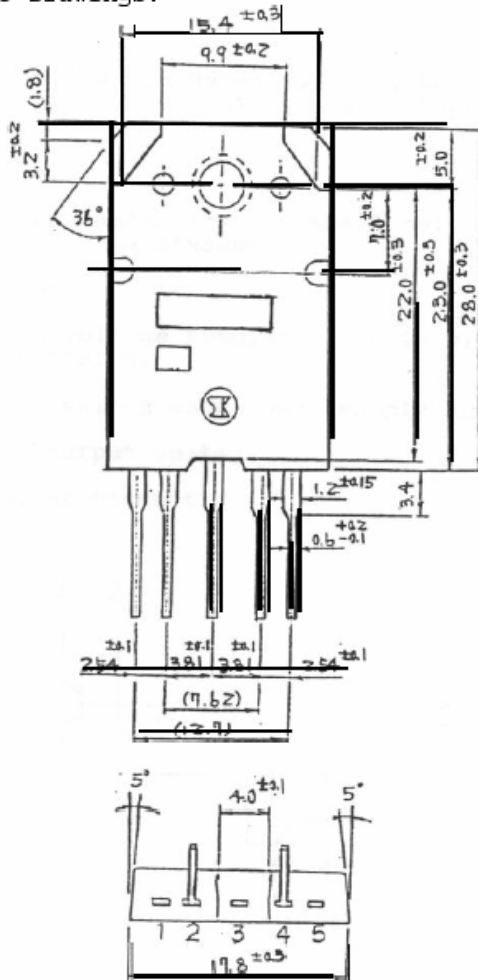


Switching time Test circuit 2



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

Outline Drawings.



- a) Type Number
- b) Lot Number : 4 digit.
  - 1st digit : Prod. Year
  - 2nd digit : Month
  - Jan. to Sept. : 1 to 9
  - Oct. : 0
  - Nov. : N
  - Dec. : D
  - 3rd and 4th digit: Date
  - 01 to 31

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