



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

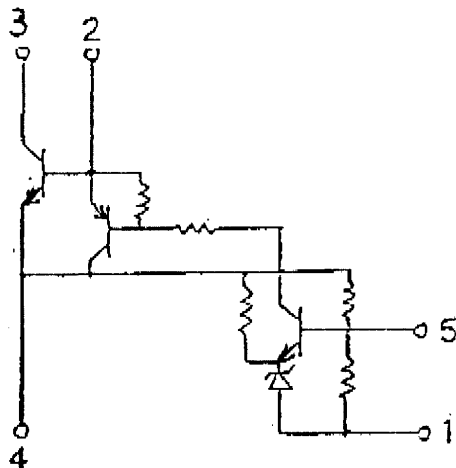
Messrs :

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.



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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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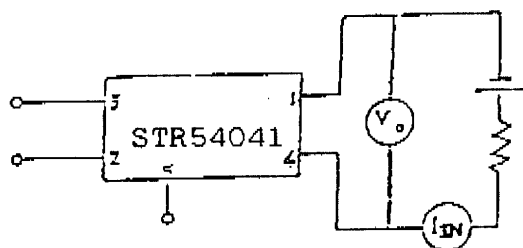
6. Electrical Characteristics 1

Description		Conditions	Ratings
Fixed Output Voltage (Detecting Voltage)		$I_{IN}=7\text{mA}$, Measurement Circuit 1	$41.8\pm0.5\text{V}$
Output Voltage Temperature Coefficient		$T_C = -20\text{--}+100^\circ\text{C}$, $I_{IN}=7\text{mA}$ Measurement Circuit 1	$\pm 2.0\text{mV}/^\circ\text{C}$
Power Transistor Characteristics	$V_{CE}(\text{sat})$	$I_C=2\text{A}$, $I_B=0.4\text{A}$	1.0V Max
	h_{FE}	$V_{CE}=4\text{V}$, $I_C=1\text{A}$	Min 10 Max 30
	I_{CEX}	$V_{CE}=900\text{V}$, $V_{BE}=-1.5\text{V}$	1.0mA Max
	$V_{BE}(\text{sat})$	$I_C=2\text{A}$, $I_B=0.4\text{A}$	1.5V Max
	$R_{\theta j-c}$	Between Junction and Stem Upper Surface	$1.8^\circ\text{C}/\text{W}$
	Switching Time	Measurement Circuit 2	t_s 7 μsec Max
			t_f 1.0 μsec Max

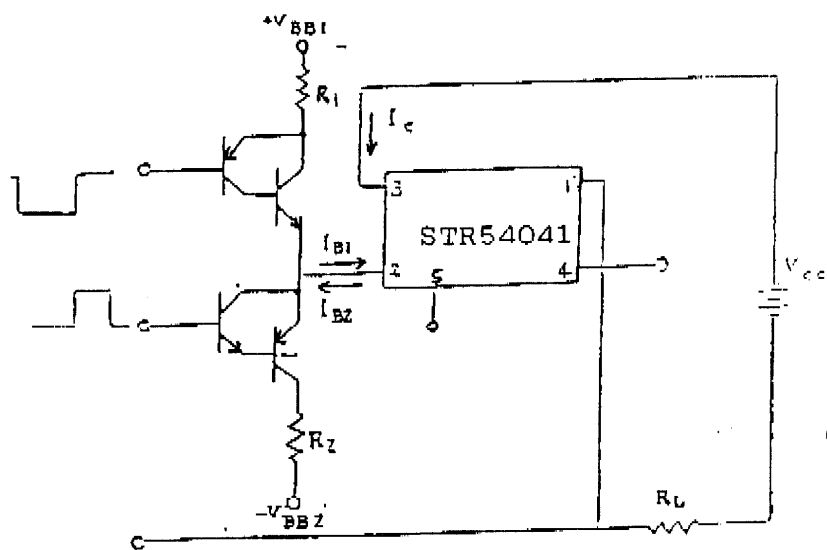


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Measurement Circuit 1.

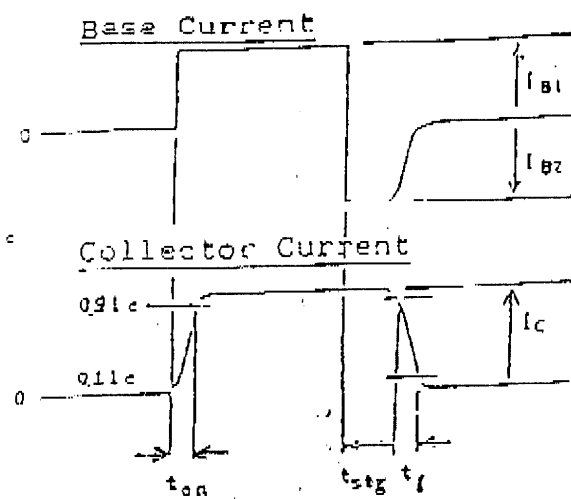


Measurement Circuit 2



$$I_c = 2A, R_L = 50\Omega$$

$$I_{B1} = 300mA, I_{B2} = 1.0A$$



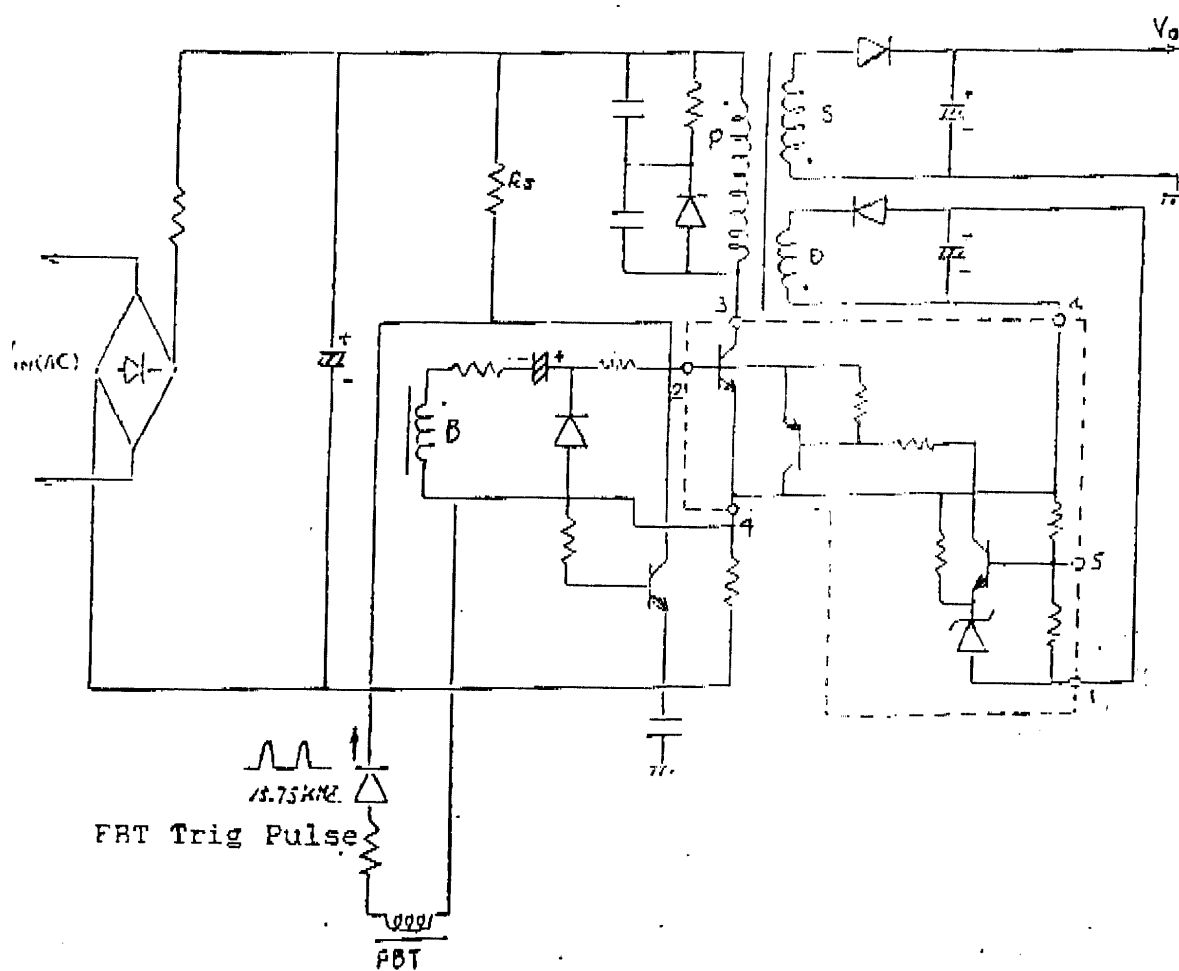
7. Electrical Characteristics 2

Description	Conditions	Ratings
Output Voltage	V _{IN} =220V, I _o =0.5A Actual Working Circuit 1.	114.5 ± 1.5V
Line Regulation	V _{IN} =180~280V, I _o =0.5A Actual Working Circuit 1	Initial Value ± 1V
Load Regulation	V _{IN} =220V, I _o =0.3A~0.5A Actual Working Circuit 1.	Initial Value ± 2V



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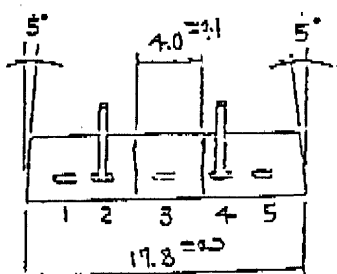
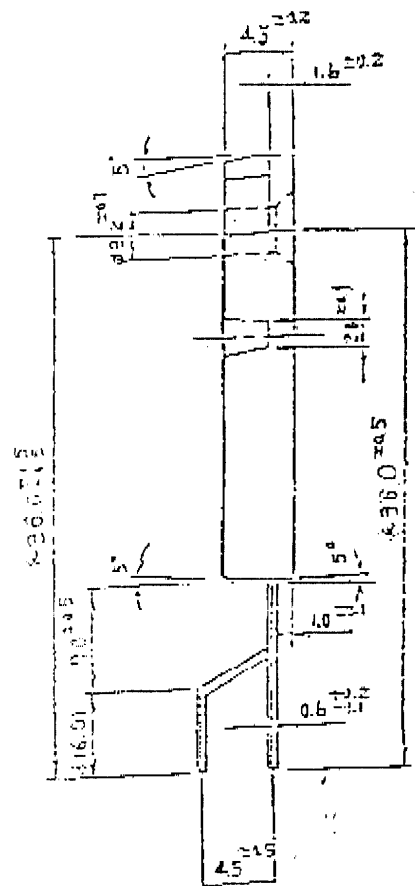
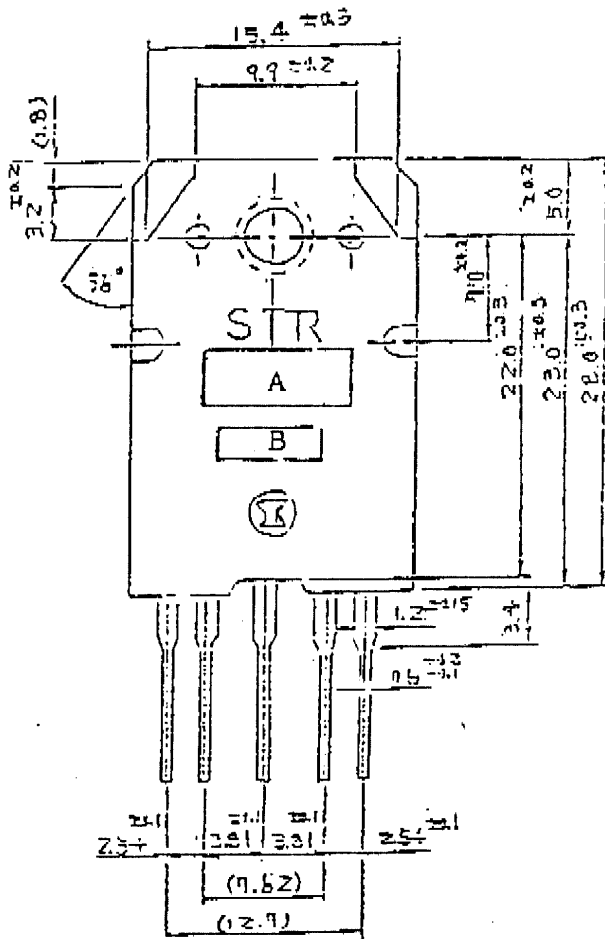
Actual Working Circuit 1.
(Reference Circuit Diagram)





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Figure 1.



A. Type Number : 54041

B. Lot Number

1st letter: The last numerical figure of calendar year

2nd letter: Month (1 to 9 for Jan to Sep.,
O for Oct.,
N for Nov.,
D for Dec.)

3rd, 4th letter: Date

1. Vout SENSE (-)

2. BASE DRIVE

3. IN PUT

4. EARTH

5. Vout SENSE (+)