SANKEN ELECTRIC COMPANY, LTD.

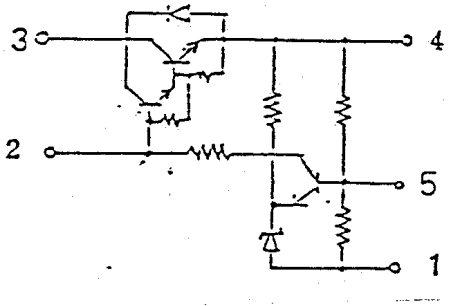
S P E C I F I C A T I O N

Sanken Hybrid IC Voltage Regulator STR30000 Series

Date : December 2, 1986
Specification No. : SSE-15051

1. Features:
   A. Hybrid IC Voltage Regulator incorporated triple diffused planar darlington transistor
   B. For Line-Operated CTV
   C. Fixed Output Voltage

2. Equivalent Circuit



1. Common
2. Base
3. Input
4. Output
5. Blank

* STR30110 has pin No.5 for output voltage adjustment.

3. Outline Drawings, Marking and Pin connections are as per attached Fig.-1.

4. The type number, votlage 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	200
Maximum Output Current	I_O	A	1.0
Maximum Power Dissipation	P_D	W	27 (Tc=100°C)
Operating Temperature	T_{op}	°C	-20 ~ +125(Tc)
Storage Temperature	T_{stg}	°C	-30 ~ +125
Junction Temperature of Power Transistor	T_j	°C	+150 Max

*1. Recommended Case Temperature : $T_C(op)$=100°C

6. Electrical Characteristics T_a=25°C

Description	Conditions	Ratings
Fixed Output Voltage (Measuring Circuit 1 and 2)	See the Table	See the Table **
Line Regulation (Measuring Circuit 1)	"	"
Load Regulation (Measuring Circuit 1)	"	"
Output Voltage Temperature Coefficient	"	"
In-Out Saturation Voltage ($V_{CE(sat)}$)	I_C=1.0A, I_B=10mA	1.5V Max
In-Out Breakdown Voltage (V_{CEO})	I_{CEO}=10mA, I_B=0A	200V Min
DC Current Gain (h_{FE})	I_C=1.0A, V_{CE}=4V	1,500 ~ 6,500
Thermal Resistance ($R_{th(j-c)}$)	Junction and Cupper plate of IC	1.8°C/W
In-Out Leak Current (I_{CEO})	V_{CE}(Pin 3-4)=200V Pin 1,2 and 5 open	100μA Max
Reverse Surge Current Between Pin 4 and 2	t=65msec	300mA Max

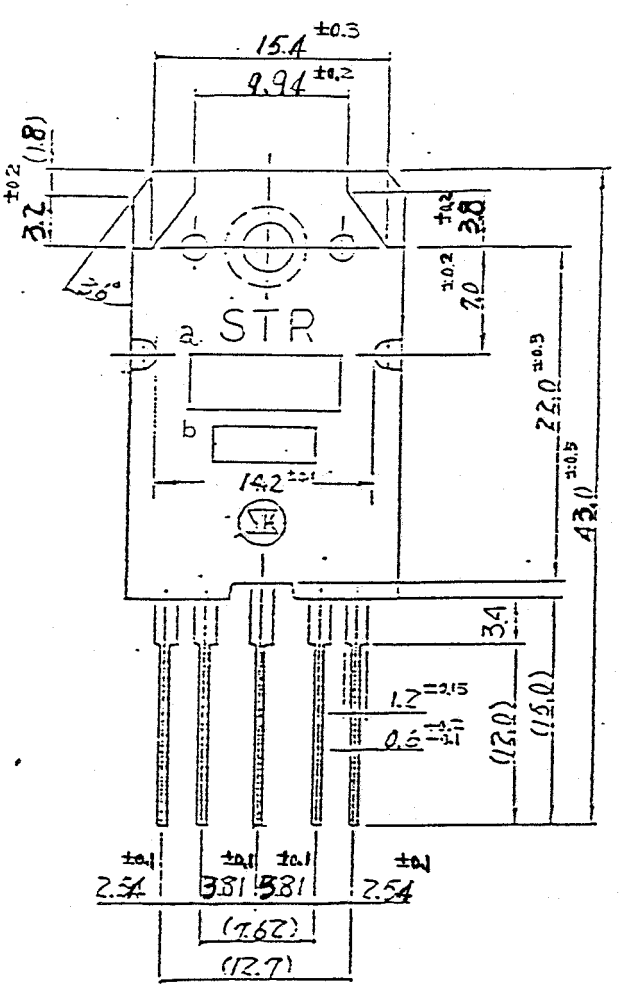
** The fixed output voltage is to be measured at 5 seconds passed after power switch turned on.
When the output voltage at the measuring circuit 1 is deviated from the specified, it is to be judged by the measuring circuit 2.

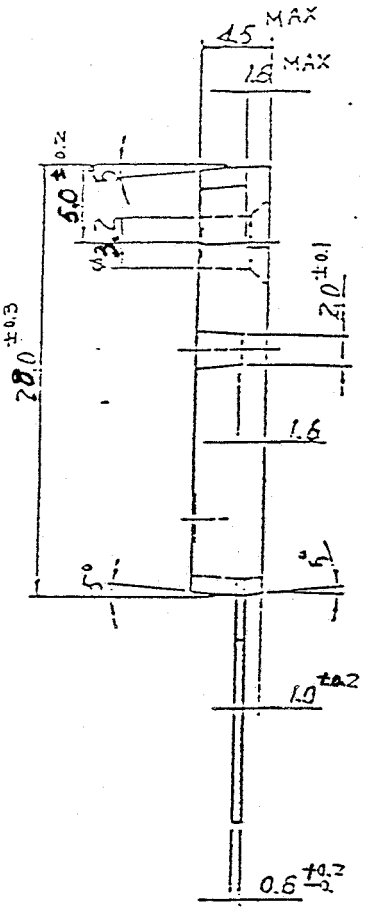
Suggested Silicone Grease

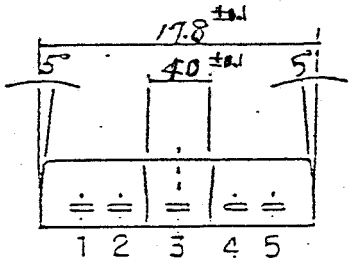
C746: SHIN-ETSU CHEMICAL INDUSTRY CO., LTD.
C747: SHIN-ETSU CHEMICAL INDUSTRY CO., LTD.
YG6260: TOSHIBA SILICONE CO., LTD.
SC102: TORAY SILICONE CO., LTD.

Table

Description \ Type No.		STR30110	STR30112	STR30113	STR30115	STR30120	STR30123	STR30125	STR30130	STR30134	STR30135
1	Specified Voltage	110±0.8V	112±0.8V	113±0.8V	115±0.8V	120±0.8V	123±0.8V	125±0.8V	130±0.8V	134±0.8V	135±0.8V
	Conditions 1 (Measuring Circuit 2)	I_{IN} = 5.9mA				I_{IN} = 7.2mA			I_{IN} = 6.9mA		
	Conditions 2 (Measuring Circuit 1)	V_{IN} = 134V(DC), Io = 0.5A				V_{IN} = 161V(DC), Io = 0.5A					
2	Specified Regulation	Δ2.4V max									
	Conditions (Measuring Circuit 1)	V_{IN} = 125～150V(DC) Io = 0.5A				V_{IN} = 145～170V(DC) Io = 0.5A				V_{IN} = 150～175V(DC) Io = 0.5A	
3	Specified Regulation	Δ0.5V max									
	Conditions (Measuring Circuit 1)	V_{IN} = 134V(DC) Io = 0.25～0.5A				V_{IN} = 161V(DC) Io = 0.25～0.5A					
4	Specified Coefficient	±0mV/℃ typ									
	Conditions (Measuring Circuit 1)	V_{IN} = 134V(DC), Io = 0.5A Io = −20～100℃				V_{IN} = 161V(DC), Io = 0.5A Tc = −20～100℃					
Value of resistors used in Measuring Circuit 1		R_3 = 10KΩ R_4 = 220KΩ			R_3 = 10KΩ R_4 = 330KΩ	R_3 = 12KΩ R_4 = 220KΩ			R_3 = 12KΩ R_4 = 330KΩ		







a. Type number
b. Lot number
   1st character for year
   2nd character for month
      Jan ~ Sept: 1 ~ 9
      October : O
      November : N
      December : D
   3rd and 4th characters
      for date : 01 ~ 31

1. Common (Ground)
2. Base Drive
3. Input
4. Output
5. Blank

* STR30110 has pin No.5 for output voltage adjustment.

4版				Outline Drawings for Plastic Molded STR (2GR)
3版				
2版				
1版				