



SANKEN ELECTRIC COMPANY, LTD.

SPECIFICATION

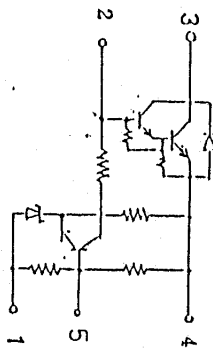
Sanken Hybrid IC Voltage Regulator STR30000 Series

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, voltage 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 ($T_c=100^{\circ}C$)
Operating Temperature	T_{op}	$^{\circ}C$	-20 ~ +125 (T_c)
Storage Temperature	T_{stg}	$^{\circ}C$	-30 ~ +125
Junction Temperature of Power Transistor	T_j	$^{\circ}C$	+150 Max

*1. Recommended Case Temperature : $T_c(op)=100^{\circ}C$



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6. Electrical Characteristics $T_a = 25^{\circ}\text{C}$

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 ($V_{CE(sat)}$)	$I_C = 1.0\text{A}$, $I_B = 10\text{mA}$	1.5V Max
In-Out Breakdown Voltage (V_{CEO})	$I_{CEO} = 10\text{mA}$, $I_B = 0\text{A}$	200V Min
DC Current Gain (h_{FE})	$I_C = 1.0\text{A}$, $V_{CE} = 4\text{V}$	1,500 ~ 6,500
Thermal Resistance ($R_{th(j-c)}$)	Junction and Cupper plate of IC	1.8 $^{\circ}\text{C/W}$
In-Out Leak Current (I_{CEO})	V_{CE} (Pin 3-4) = 200V P_{IH} 1, 2 and 5 open	100 μA Max
Reverse Surge Current Between Pin 4 and 2	$t = 65\text{msec}$	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

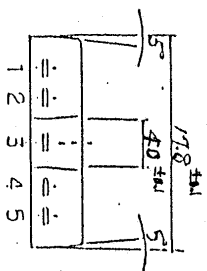
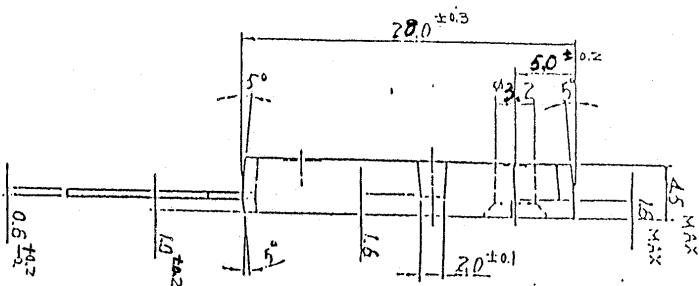
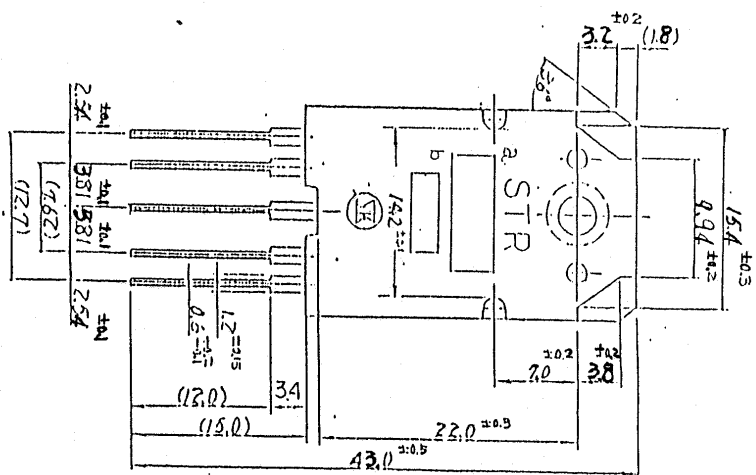
- C746: SHIN-ETSU CHEMICAL INDUSTRY CO., LTD.
- C747: SHIN-ETSU CHEMICAL INDUSTRY CO., LTD.
- YG6260: TOSHIBA SILICONE CO., LTD.
- SCI02: TORAY SILICONE CO., LTD.

Table

Description		Type No.									
		STR30110	STR30112	STR30113	STR30115	STR30120	STR30123	STR30125	STR30130	STR30134	STR30135
1	Specified Voltage	110 $\pm$ 0.8V	112 $\pm$ 0.8V	113 $\pm$ 0.8V	115 $\pm$ 0.8V	120 $\pm$ 0.8V	123 $\pm$ 0.8V	125 $\pm$ 0.8V	130 $\pm$ 0.8V	134 $\pm$ 0.8V	135 $\pm$ 0.8V
	Conditions 1 (Measuring Circuit 2)	$I_{IN}=5.9\text{mA}$					$I_{IN}=7.2\text{mA}$				
	Conditions 2 (Measuring Circuit 1)	$V_{IN}=134\text{V(DC)}, I_o=0.5\text{A}$					$V_{IN}=161\text{V(DC)}, I_o=0.5\text{A}$				
2	Specified Regulation	$\Delta 2.4\text{V Max}$									
	Conditions (Measuring Circuit 1)	$V_{IN}=125\sim 150\text{V(DC)}$ $I_o=0.5\text{A}$					$V_{IN}=145\sim 170\text{V(DC)}$ $I_o=0.5\text{A}$				
							$V_{IN}=150\sim 175\text{V(DC)}$ $I_o=0.5\text{A}$				
3	Specified Regulation	$\Delta 0.5\text{V Max}$									
	Conditions (Measuring Circuit 1)	$V_{IN}=134\text{V(DC)}$ $I_o=0.25\sim 0.5\text{A}$					$V_{IN}=161\text{V(DC)}$ $I_o=0.25\sim 0.5\text{A}$				
4	Specified Coefficient	$\pm 0\text{mV}/^{\circ}\text{C typ}$									
	Conditions (Measuring Circuit 1)	$V_{IN}=134\text{V(DC)}, I_o=0.5\text{A}$ $I_o=-20\sim 100^{\circ}\text{C}$					$V_{IN}=161\text{V(DC)}, I_o=0.5\text{A}$ $T_o=-20\sim 100^{\circ}\text{C}$				
Value of resistors used in Measuring Circuit 1		$R_3=10\text{K}\Omega$ $R_4=220\text{K}\Omega$		$R_3=10\text{K}\Omega$ $R_4=330\text{K}\Omega$		$R_3=12\text{K}\Omega$ $R_4=220\text{K}\Omega$		$R_3=12\text{K}\Omega$ $R_4=330\text{K}\Omega$			

STR30000 Series

Fig.-1



1. Common (Ground)
 2. Base Drive
 3. Input
 4. Output
 5. Blank
- * STR301J10 has pin No.5 for output voltage adjustment.

- a. Type number
b. Lot number
1st character for year
2nd character for month
Jan ~ Sept: 1 ~ 9
October : 0
November : N
December : D
3rd and 4th characters
for date : 01 ~ 31

[illegible]