



SANKEN ELECTRIC COMPANY, LTD.

SPECIFICATION

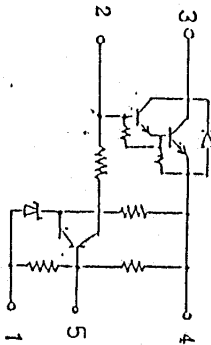
SanKen Hybrid IC Voltage Regulator STR30000 Series

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 $^{\circ}\text{C}/\text{W}$
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

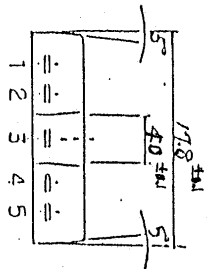
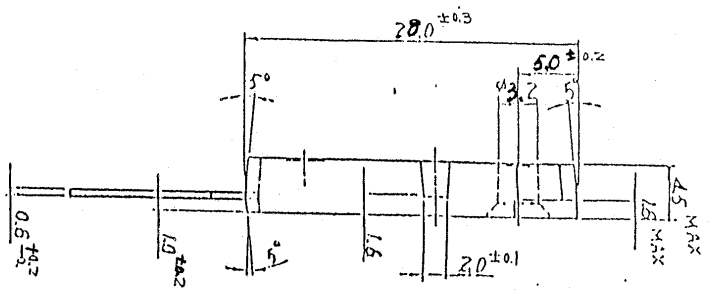
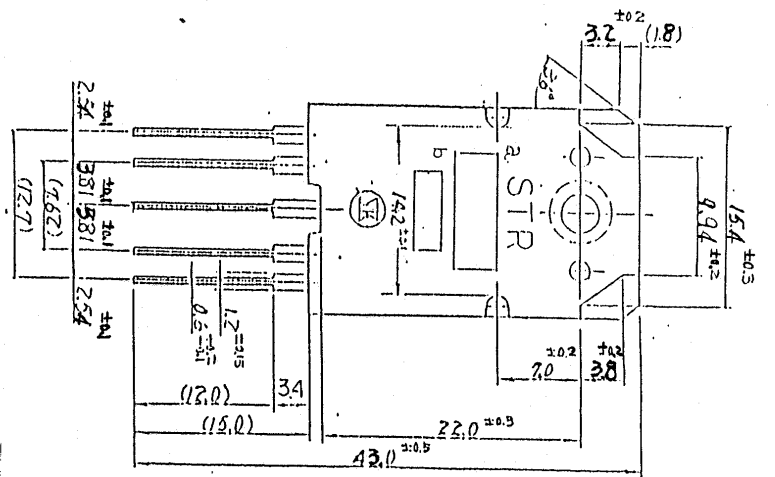
- C746: SHIN-ETSU CHEMICAL INDUSTRY CO., LTD.
- C747: SHIN-ETSU CHEMICAL INDUSTRY CO., LTD.
- YG6260: TOSHIBA SILICONE CO., LTD.
- SCI02: TORAY SILICONE CO., LTD.

Table

Type No.		Description											
		STR30110	STR30112	STR30113	STR30115	STR30120	STR30123	STR30125	STR30130	STR30134	STR30135		
1	Specified Voltage	110 $\pm$ 0.8 V	112 $\pm$ 0.8 V	113 $\pm$ 0.8 V	115 $\pm$ 0.8 V	120 $\pm$ 0.8 V	123 $\pm$ 0.8 V	125 $\pm$ 0.8 V	130 $\pm$ 0.8 V	134 $\pm$ 0.8 V	135 $\pm$ 0.8 V		
	Conditions 1 (Measuring Circuit 2)	$I_{IN} = 5.9 \text{ mA}$					$I_{IN} = 7.2 \text{ mA}$					$I_{IN} = 6.9 \text{ mA}$	
	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)	$V_{IN} = 125 \sim 150 \text{ V (DC)}$ $I_o = 0.5 \text{ A}$					$V_{IN} = 145 \sim 170 \text{ V (DC)}$ $I_o = 0.5 \text{ A}$					$V_{IN} = 150 \sim 175 \text{ V (DC)}$ $I_o = 0.5 \text{ A}$	
	Specified Regulation	$\Delta 0.5 \text{ V Max}$											
3	Conditions (Measuring Circuit 1)	$V_{IN} = 134 \text{ V (DC)}$ $I_o = 0.25 \sim 0.5 \text{ A}$					$V_{IN} = 161 \text{ V (DC)}$ $I_o = 0.25 \sim 0.5 \text{ A}$						
	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
- * STR301.10 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

4	1次試験	2次試験	3次試験	4次試験	5次試験	6次試験	7次試験	8次試験	9次試験	10次試験	11次試験	12次試験	13次試験	14次試験	15次試験	16次試験	17次試験	18次試験	19次試験	20次試験	21次試験	22次試験	23次試験	24次試験	25次試験	26次試験	27次試験	28次試験	29次試験	30次試験	31次試験	32次試験	33次試験	34次試験	35次試験	36次試験	37次試験	38次試験	39次試験	40次試験	41次試験	42次試験	43次試験	44次試験	45次試験	46次試験	47次試験	48次試験	49次試験	50次試験	51次試験	52次試験	53次試験	54次試験	55次試験	56次試験	57次試験	58次試験	59次試験	60次試験	61次試験	62次試験	63次試験	64次試験	65次試験	66次試験	67次試験	68次試験	69次試験	70次試験	71次試験	72次試験	73次試験	74次試験	75次試験	76次試験	77次試験	78次試験	79次試験	80次試験	81次試験	82次試験	83次試験	84次試験	85次試験	86次試験	87次試験	88次試験	89次試験	90次試験	91次試験	92次試験	93次試験	94次試験	95次試験	96次試験	97次試験	98次試験	99次試験	100次試験
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