

SPECIFICATION

MESSRS.

DEVICE TYPE NAME

SanKen Hybrid Voltage Regulator - STR30130

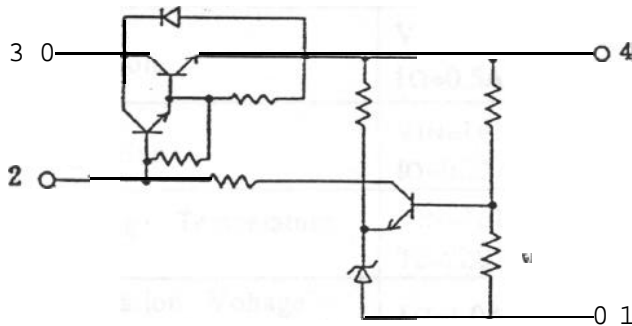
1. scope

The present specification shall only apply to SanKen Hybrid Voltage Regulator, type STR30130.

2. Features

- a) Hybrid Voltage Regulator with a triple diffused planar darlington transistor.
- b) For Line-operated TV
- c) Fixed output voltage
- d) Plastic package (Transfer Mold)

3. Equivalent circuit



- 1. COMMON (-)
- 2. BASE
- 3. INPUT
- 4. OUTPUT

4. Outline drawings, dimension and pin connections are as Fig-1.

5. The type number and lot number shall be marked clearly with white.

DATE ISSUED : Nov. 27 ,1992

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APPLICATION ENGINEERING
SEMICONDUCTOR DIVISION

SPECIFICATION NUMBER

SSE-19077E

6 Absolute Maximum Ratings($T_a=25^{\circ}\text{C}$)

Description	Symbol	Unit	Ratings
Peak Input Voltage	V_{IN}	V	200
Output Current	I_O	A	1.0
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 $^{\circ}\text{C}$ Max

(Note1)

 7 Electrical Characteristics($T_a=25^{\circ}\text{C}$)

Description	Conditions	Ratings
Fixed Output Voltage	$I_{IN}=6.9\text{mA}$, Test Circuit 2	$130 \pm 0.8\text{V}$
	$V_{IN}=16\text{V(D.C)}$, $I_O=0.5\text{A}$ Test Circuit 1	
Line Regulation	$V_{IN}=145 \sim 170\text{V(D.C)}$ $I_O=0.5\text{A}$, Test Circuit 1	$\Delta 2.4\text{V Max}$
Load Regulation	$V_{IN}=16\text{V(D.C)}$ $I_O=0.25\text{A} \sim 0.5\text{A}$, Test Circuit 1	$\pm 0.5\text{V Max}$
Output Voltage Temperature Coefficient	$V_{IN}=16\text{V(D.C)}$, $I_O=0.5\text{A}$ $T_c=-20^{\circ}\text{C} \sim +100^{\circ}\text{C}$	$\pm 0\text{mV}/^{\circ}\text{C Typ}$
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}	$I_C=1.0\text{A}$, $V_{CE}=4\text{V}$	1500~6500
Power Transistor Thermal Resistance : θ_{jc}	between Junction and frame	1.8 $^{\circ}\text{C}/\text{W}$
In-Gut Leak Current : I_{CEO}	3, 4 Terminal (V_{CE})=200V 1, 2 Terminal : Open	100 μA Max
Output (Emitter) - Base Reverse Breakdown : $I_{EB(S/B)}$	$t=65\text{ms}$	300mA Min

(Note2)

(Note1) Recommended Case Temperature : $T_{op}(T_c)=100^{\circ}C$ Max.

(Note2) Fixed Output Voltage is prescribed on 5 sec after Switch ON. In case a doubt should be occurred, Fixed Output Voltage is prescribed in Test Circuit 2.

Recommended sqrewing torque : $6-8 \text{ kg} \cdot \text{f} \cdot \text{cm}$

Recommended Silicone Grease :

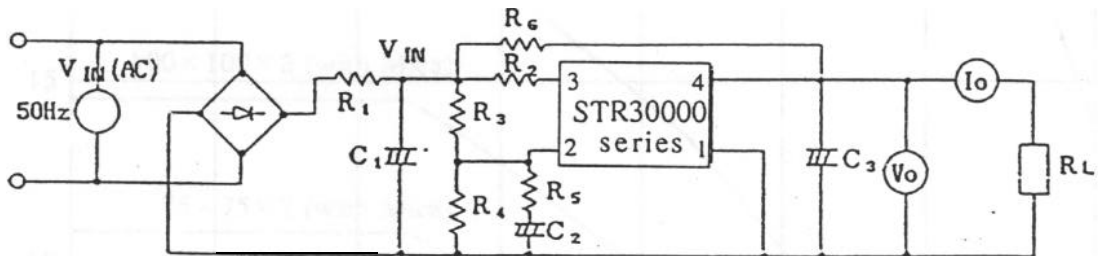
G-746 (Shinetsu Chemical Industries Ltd.)

YG6260 (Toshiba Silicone Co.; Ltd.)

SC1 02 (Toray Silicone Co., Ltd.)

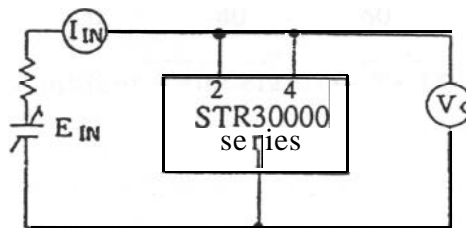
Since this product is developed and produced for general application, radiation ray design has not been considered.

Test Circuit 1



$R_1:1.0\Omega$, $R_2:2.2\Omega$, $R_3:12K\Omega$, $R_4:330K\Omega$, $R_5:47\Omega$, $R_6:220\Omega$
 $C_1:470\mu F$, $C_2:33\mu F$, $C_3:33\mu F$

Test Circuit 2



STR30000 Series Derating Curves

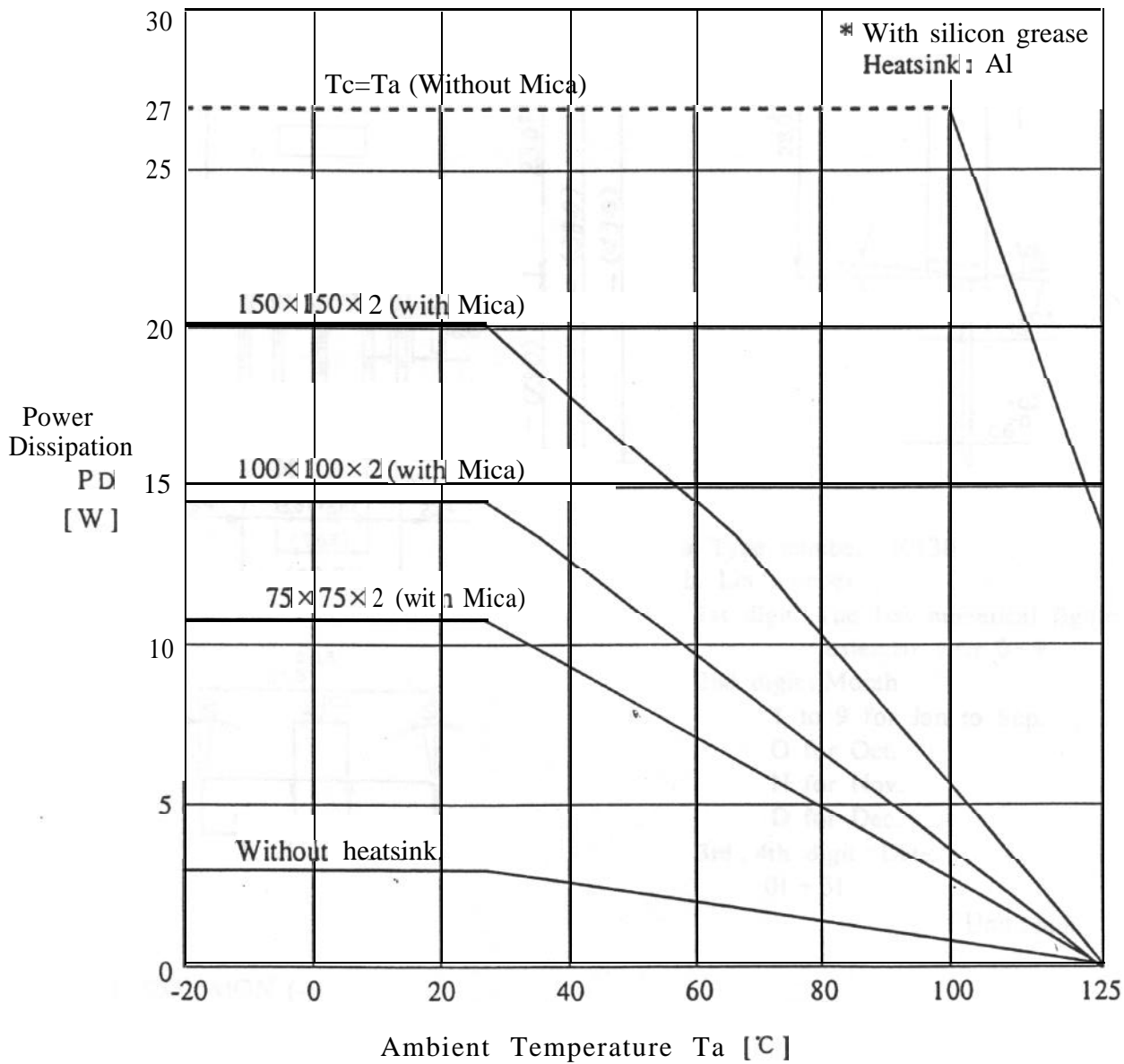
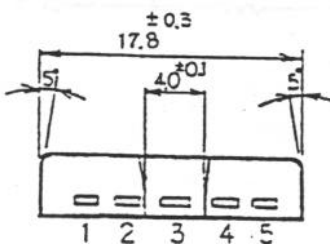
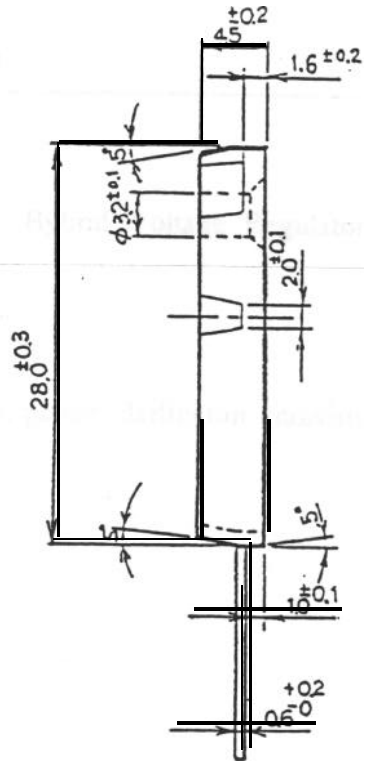
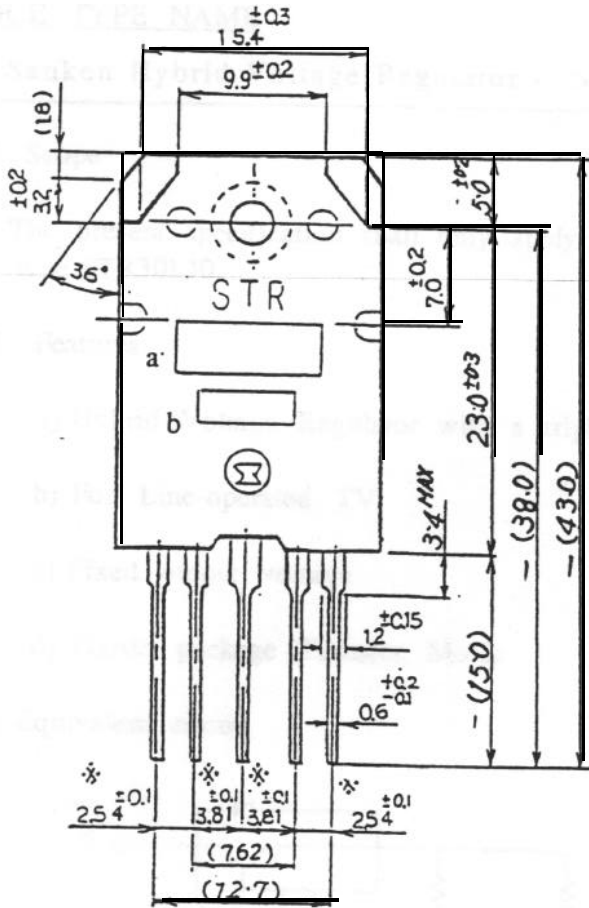


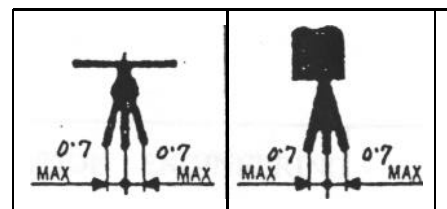
Fig-1 Outline Drawings, Dimensions and Pin Connections
 [SanKen lead forming LF500]



- a. Type number : 30130
- b. Lot number
 - 1st digit : The last numerical figure of calendar year. 0 ~ 9
 - 2nd digit : Month
 - 1 to 9 for Jan. to Sep.
 - 0 for Oct.
 - N for Nov.
 - D for Dec.
 - 3rd , 4th digit : Date
 - 01 ~ 31

Unit: mm

- 1. COMMON (-)
- 2. BASE
- 3. IN PUT
- 4. OUT PUT
- 5. BLANK



Remarks : The dimensions marked ※ is measured at the base of lead wires.