

Sanken Switching Regulator Hybrid IC

Type : STR50041A

1. Scope:

The present specification shall only apply to Sanken Switching Regulator Hybrid IC, type STR50041A.

2. Appearance and Configuration

2-1. Appearance:

The body shall be clean and shall not bear any stain, rust or flaw.

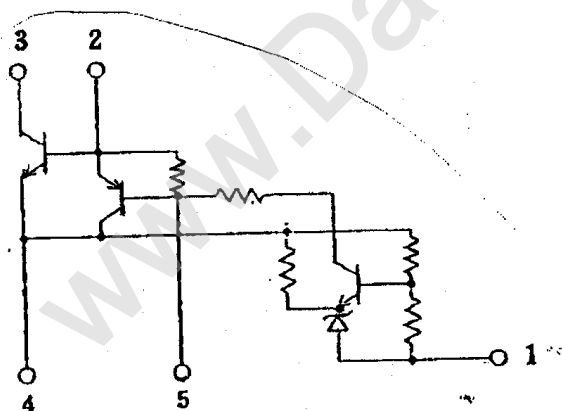
2-2. Appearance, Outline Dimensions, Equivalent Circuit and Basic Application Circuit

Refer to Fig. 1

2-3. Markings

The type number and lot number shall be legitimately be marked in white.

3. Equivalent Circuit



1. V_{OUT} SENSE(-)
2. Base Drive (B)
3. Input (C)
4. Earth (E)
5. Soft start

4. Ratings

4-1. Absolute Maximum Ratings ($T_a=25^\circ\text{C}$)

Description	Symbol	Unit	Rating
Peak Input Voltage	V_{IN}	V	500
Input Current	I_{IN}	A	10(Pulse 20A)
Power Dissipation *1	P_D	W	27($T_c=100^\circ\text{C}$)
Operating Temperature	T_{OP}	$^\circ\text{C}$	$-20\sim+125$ (T_c)
Storage Temperature	T_{STG}	$^\circ\text{C}$	$-30\sim+125$
Junction Temperature	T_J	$^\circ\text{C}$	+150

4-2. Electrical Characteristics ($T_a=25^\circ\text{C}$) (Per Fig. 1-1)

Description	Symbol	Unit	Rating			Conditions
			MIN.	TYP.	MAX.	
Set Output Voltage	V_O	V	41.3	41.8	42.3	$I_{IN}=7\text{mA}$, Test Circuit #1
Temperature Coefficient of Output Voltage		mv/ $^\circ\text{C}$	± 2			$T_c=-20\sim+100^\circ\text{C}$, $I_{IN}=7\text{mA}$ Test Circuit #1
Power Transistor Characteristic	Collector Saturated Voltage	$V_{CE(SAT)}$	V		0.5	$I_C = 5\text{A}$ $I_B = 1\text{A}$
	DC Current Gain	h_{FE}		15	40	$V_{CE}=4\text{V}$, $I_C=1\text{A}$
	Collector Cutoff Current	I_{CEX}	mA		1	$V_{CE}=500\text{V}$ $V_{BE}=-1.5\text{V}$
	Base-Emitter Saturated Voltage	$V_{BE(SAT)}$	V		1.5	$I_C = 5\text{A}$ $I_B = 1\text{A}$
	Thermal Resistance	θ_{J-C}	$^\circ\text{C}/\text{W}$	1.8		Upper of Junction Stem
	Switching Time	t_s t_f	μs μs		10 0.4	Test Circuit #2 Test Circuit #2
Output Voltage *2		V	115 ± 2			$V_{IN}=100\text{V}$, $I_{O1}=1.2\text{A}$
Line Regulation 1 *2 (vs. Input Voltage)		V	Initial Value $\pm 2\text{V}$			$V_{IN}=85\sim 132\text{V}$ $I_O = 1.2\text{A}$
Line Regulation 2 *2 (vs. Output Current)		V	Initial Value $\pm 2\text{V}$			$V_{IN}=100\text{V}$ $I_{O1}=0.4\sim 1.2\text{A}$

*1:Suggested Case Temperature T_{OP} (T_c) = 100°C .

*2:Please refer to the Application Circuit.

Date: August 22, 1990

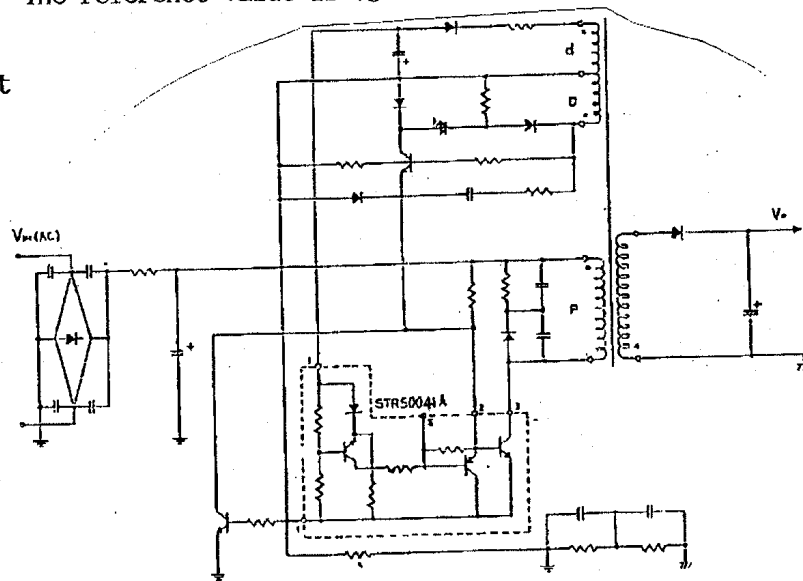
Specification No.: SSE-17760E

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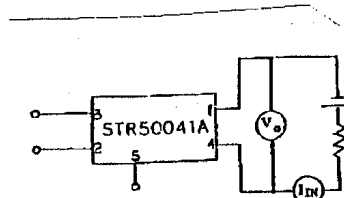
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The Output Voltage can be determined by the number of winding wires D and S of transformer. The reference value is $V_o=115V$.

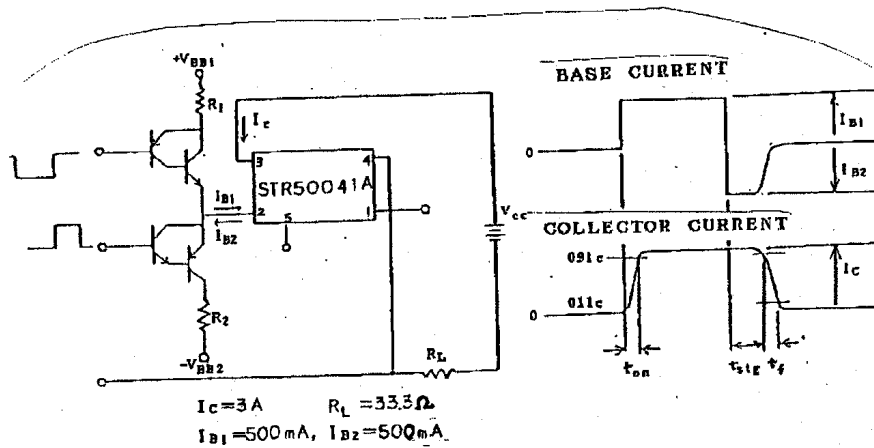
Application Circuit



Test Circuit #1



Test Circuit #2

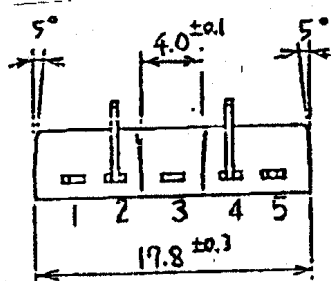
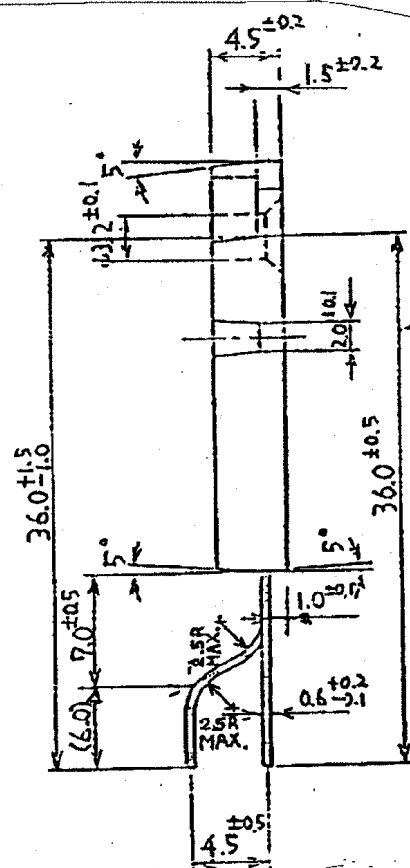
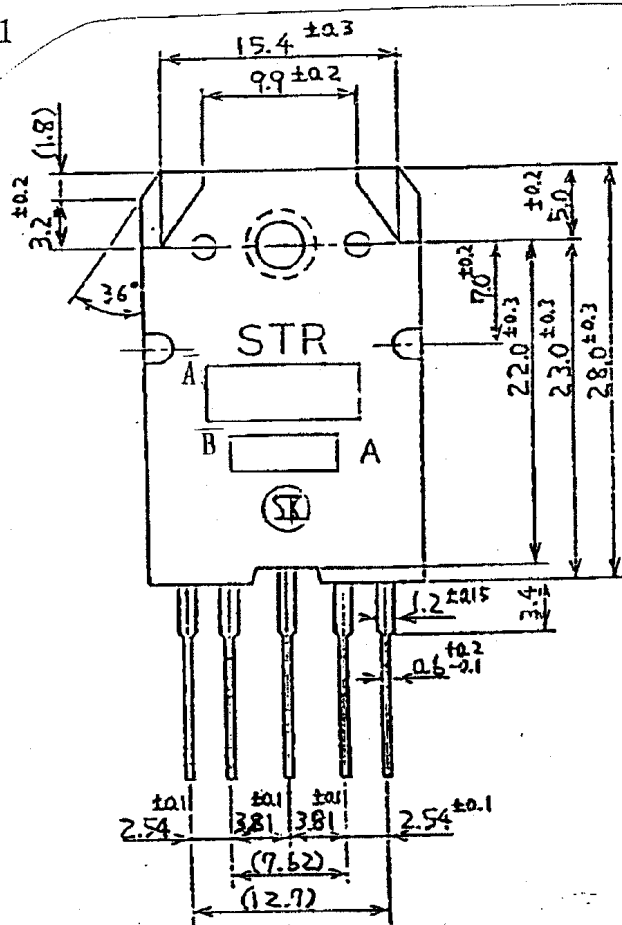


4-4. Suggested Silicone Grease

G-746: SHIN-ETSU CHEMICALS
 YG6260: TOSHIBA SILICONE
 SC102: TORAY SILICONE

5. Marking and Dimension

Fig. 1



Pin Connection

- ① - V_{OUT} SENSE
- ② - Base Drive (B)
- ③ - Input (C)
- ④ - Earth (E)
- ⑤ - Soft Start

Unit: mm

A. Part Number: STR50041A

B. Lot Number:

1st digit - Last digit of Year

2nd digit - Month

Jan. ~ Sept.: 1 ~ 9

Oct.: 0

Nov.: N

Dec.: D

3rd & 4th digit - Day (01 ~ 31)

Date: August 22, 1990

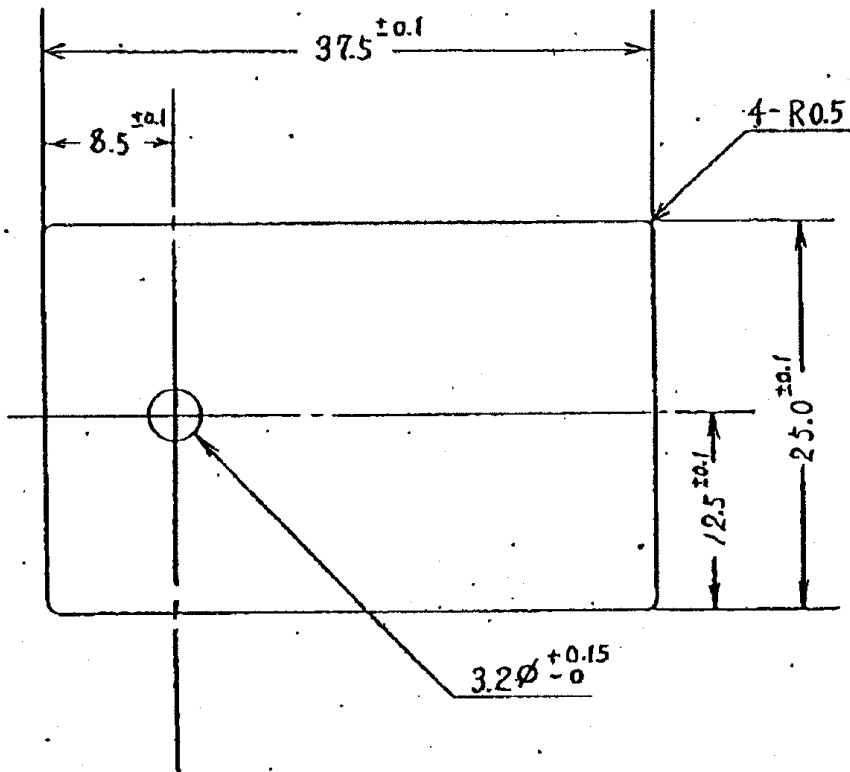
Specification No.:

SSE-17760E

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MICA No.23 for STR Series



Material : MICA

t : 0.08~0.15

Unit : mm