

Sanken Switching Regulator Hybrid IC

Type: STR59041

1. Scope:

The present specification shall only apply to Sanken Switching Regulator Hybrid IC, type STR59041.

2. Appearance and Configuration

2-1. Appearance:

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

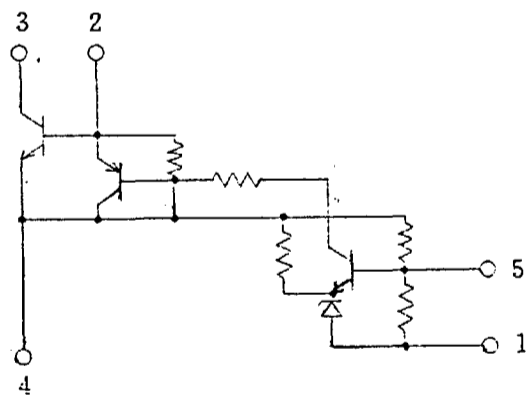
2-2. Appearance, Outline Dimensions, Equivalent Circuit and Basic Application Circuit

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. V_o Cont.

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4. Ratings

4-1. Absolute Maximum Ratings (Ta=25°C)

Description	Symbol	Unit	Rating
Peak Input Voltage	V _{IN}	V	850
Input Current	I _{IN}	A	6 (Pulse 12A)
Power Dissipation	P _D	W	27 (Tc=100 °C)
Operating Temperature	T _{OP}	°C	-20~+125 (Tc) *1
Storage Temperature	T _{stg}	°C	-30~+125
Junction Temperature	T _J	°C	+150

4-2. Electrical Characteristics (Ta=25°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} =7mA, Test Circuit #1	
Temperature Coefficient of Output Voltage		mv/°C	±2			Tc=-20~+100°C, I _{IN} =7mA Test Circuit #1	
Power Transistor Characteristic	Collector Saturated Voltage	V _{CE(SAT)}			0.4	I _C = 3A I _B = 0.6A	
	DC Current Gain	h _{FE}	15		38	V _{CE} =4V, I _C =1A	
	Collector Cutoff Current	I _{CEX}	mA			1 V _{CE} =850V V _{BE} =-1.5V	
	Base-Emitter Saturated Voltage	V _{BE(SAT)}	V			1.5 I _C = 3A I _B = 0.6A	
	Thermal Resistance	θ _{J-C}	°C/W	1.8			Upper of Junction Stem
	Switching Time	t _s t _f	μs μs			11 0.5	Test Circuit #2 Test Circuit #2
Output Voltage *2		V	110±1.5			V _{IN} =220V, I _O =0.9A	
Line Regulation 1 *2 (vs. Input Voltage)		V	Initial Value ± 1V			V _{IN} =180~280V I _O = 0.9A	
Line Regulation 2 *2 (vs. Output Current)		V	Initial Value ± 2V			V _{IN} =220V I _O =0.55~0.9A	

*1:Suggested Case Temperature Top (Tc) = 100 °C.
*2:Please refer to the Application Circuit.

Date: August 20, 1990

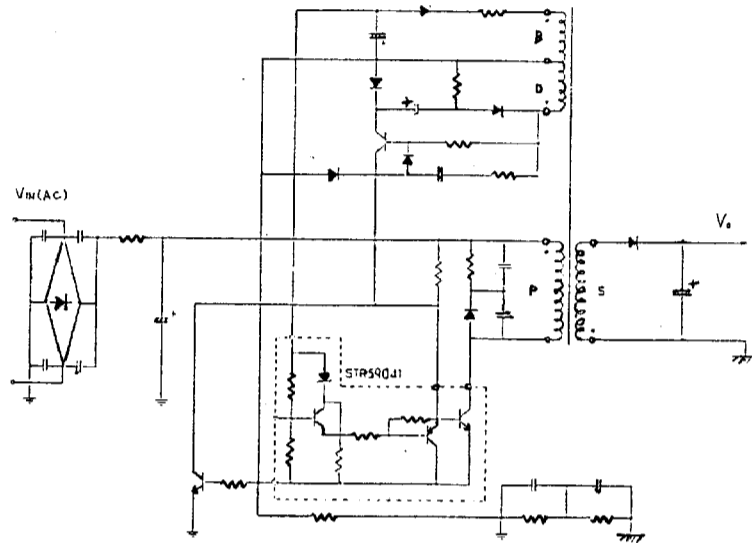
Specification No.: SSE-15921E

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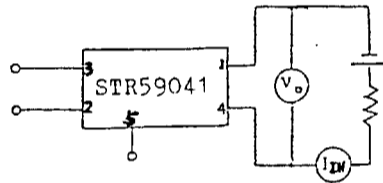
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The Output Voltage can be determined by the number of winding wires D and S of transformer. The reference value is $V_o=110V$.

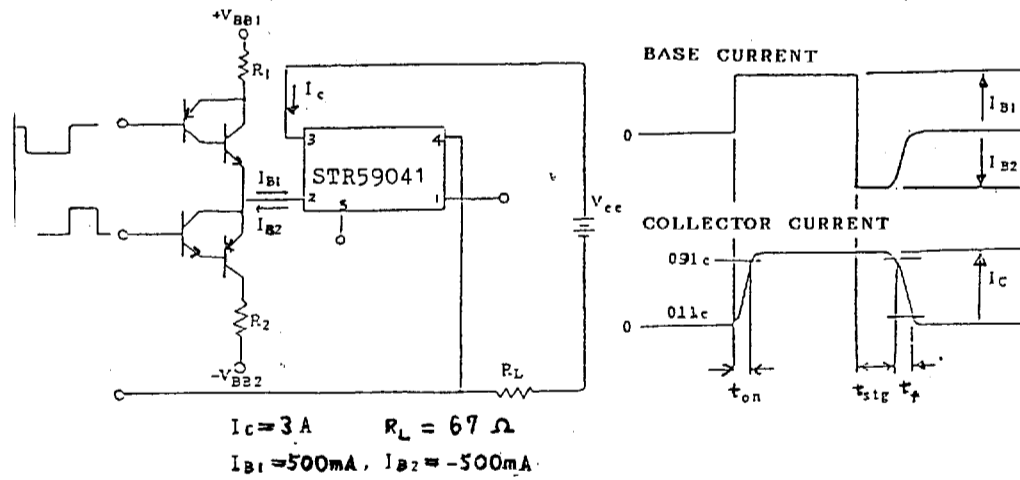
Application Circuit



Test Circuit #1



Test Circuit #2



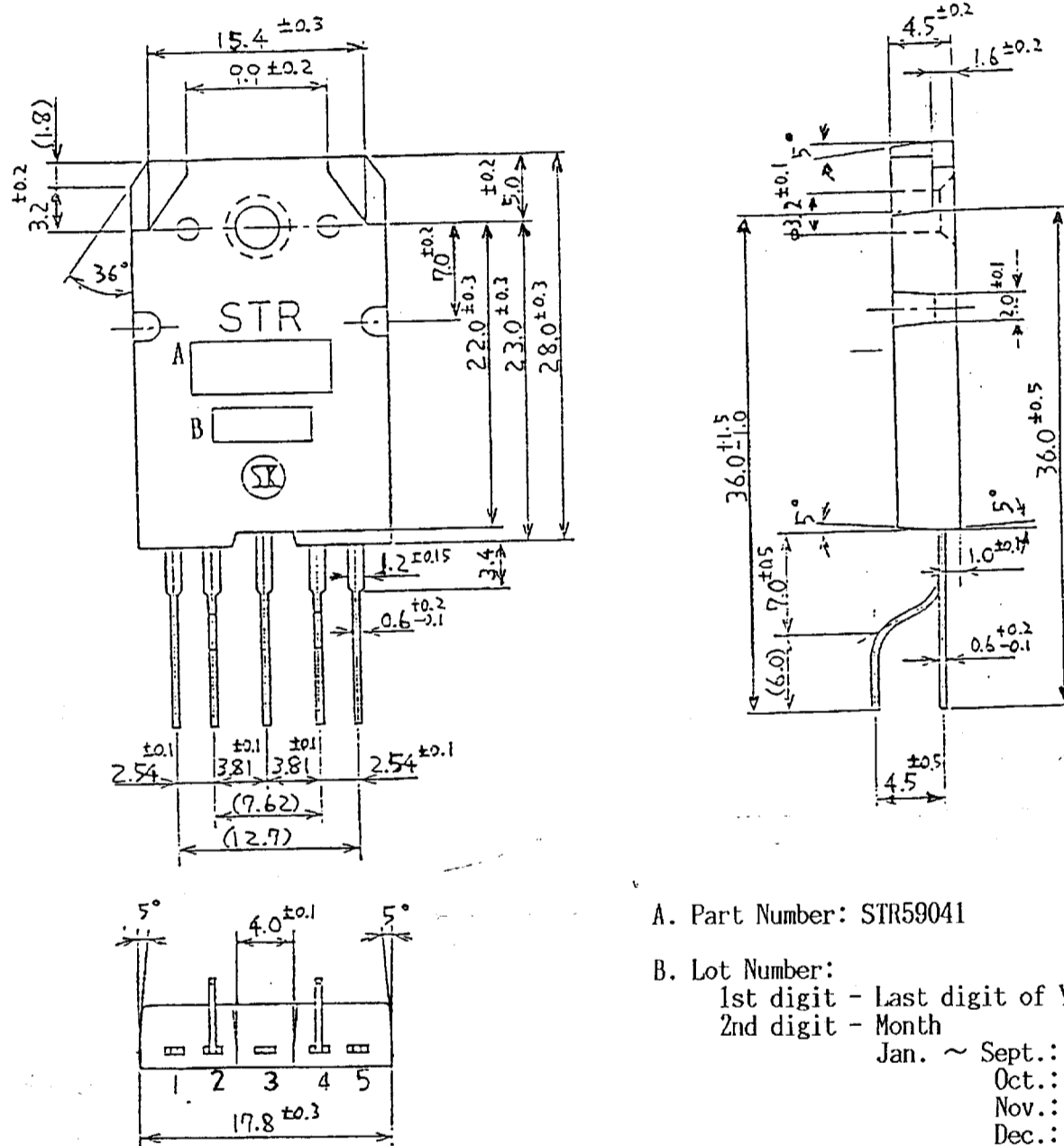
4-4. Suggested Silicone Grease

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

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5. Marking and Dimension

Fig. 1



Pin Connection

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

Unit: mm

A. Part Number: STR59041

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 20, 1990

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