ATTN: Paul

STR-D SERIES

SANKEN HYBRID VOLTAGE REGULATOR MODULE

PART NUMBER STR-D10057

Post-it™ brand fax transmittal memo 7671

To	From
Fax #	

Date: February 22, 1988

Specification No.: SSE16935

1. Features:

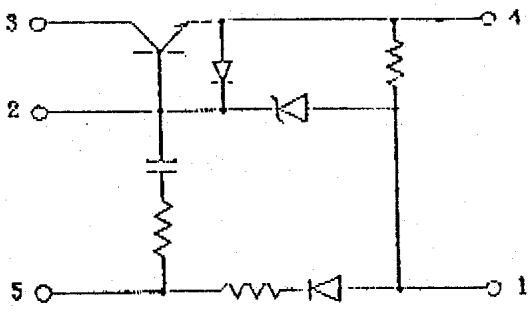
   a. Hybrid Voltage Regulator Module incorporated triple diffused planar transistor chips.

   b. Transfer Molded.

   c. For TV Switch Mode Power Supply.

   d. Fixed Output Voltage.

2. Equivalent Circuit



1. Vcc ( )
2. BASE
3. INPUT (C)
4. EARTH (E)
5. DRIVE INPUT

3. Outline Drawing, Marking, and Pin Connections

   Refer to Figure 1.

4. The type number and lot number shall be legibly marked by white color.

5. Absolute Maximum Ratings

Description	Symbol	Unit	Rating
Maximum Peak Input Voltage	V_{IN}	V	800
Input Current	I_{IN}	A	1.5 (Pulse 3.0)
Maximum Power Dissipation	P_D	W	20 (T_{C_1} = 100°C) (* NOTE 1)
Operating Temperature	T_C	°C	-20 ~ +125 (T_{C_2}) (* NOTE 2)
Storage Temperature	T_{stg}	°C	-30 ~ +125
Power Transistor Junction Temperature	Tj	°C	+150
Output Current	I_O	A	0.4 (V_O = 12V)

* NOTE 1: T_{C_1} - Temperature was measured directly on the plastic case under transistor die.

* NOTE 2: Recommendation case temperature T_{OP} (T_{C_2}) = 100°C Max.
(T_{C_2}: Internal flame temperature)

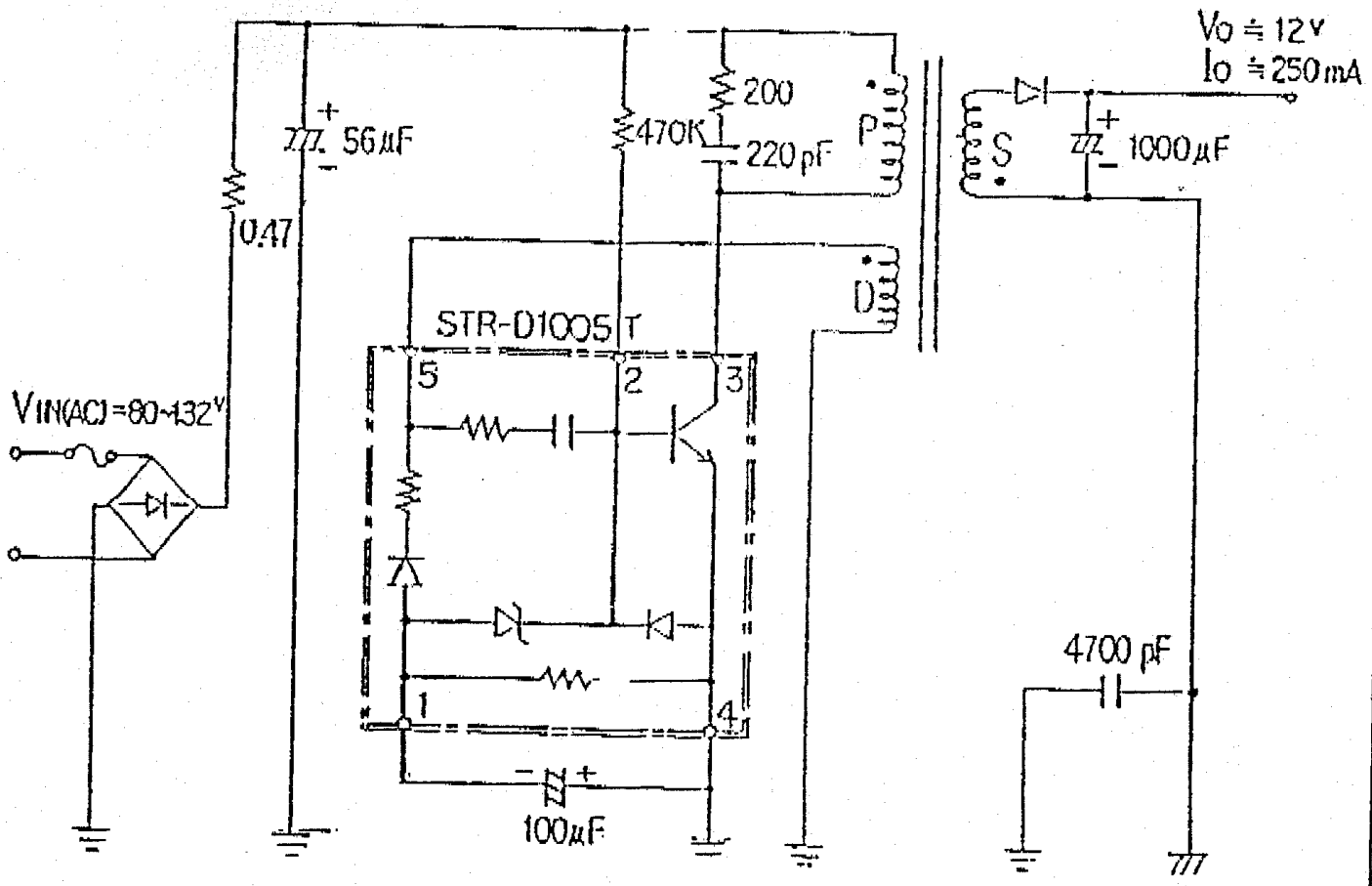
Electrical Characteristics

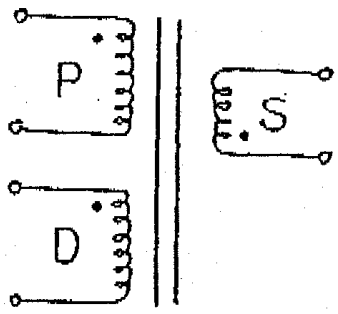
	Description	Symbol	Conditions		Ratings
Characteristics	Fixed Reference Voltage (Detecting Voltage)	V_{REF}	I_{IN} = 17mA Measurement Circuit 1		5.35 ± 0.20V
	Collector - Emitter (Saturation Voltage)	$V_{CE(SAT)}$	Ic = 300mA, I_B = 30mA		1.0V Max.
	DC Gain	h_{FE}	V_{CE} = 4V, Ic = 100mA		15 Min/45 Max
	Collector Cut Off Current	I_{CEX}	V_{CE} = 800V, V_{BE} = -1.5V		1.0mA Max
	Base Emitter Saturation Voltage	$V_{BE(SAT)}$	Ic = 300mA, I_B = 30mA		1.5V Max
	Thermal Resistance	θ_{jc}	Between Junction & Stem Upper Surface		1.8 °C/W Max
	Switching Time		See Test Circuit 2	t_s	7μsec Max
				t_f	1.0μsec Max

Suggested Silicone Grease

C746/C747: SHIN-ETSU CHEMICAL INDUSTRY CO., LTD.
YG6260: TOSHIBA SILICONE CO., LTD.
SC102: TORAY SILICONE CO., LTD.

7. Application Circuit



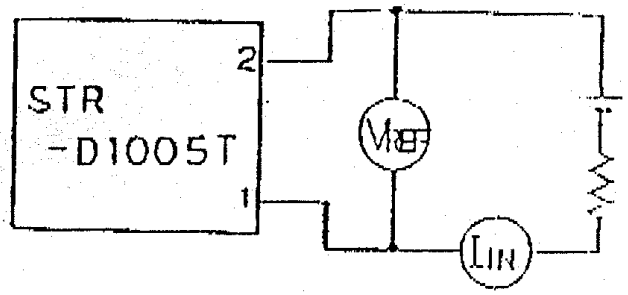


CORE SIZE : EE-16
GAP(CENTER) : 0.2mm
L_P ≒ 6.4mH

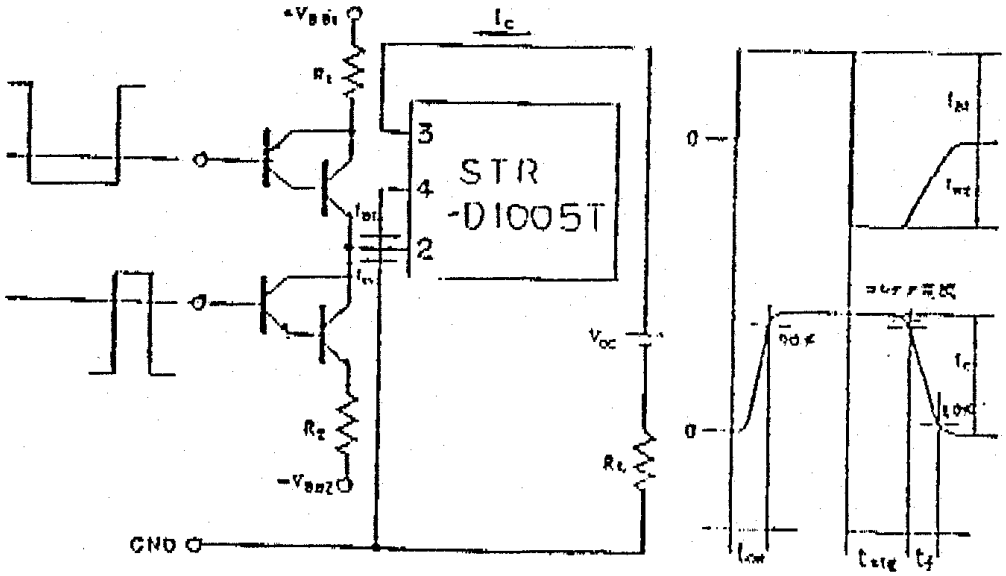
P : φ0.18 220T
D : φ0.18 9T
S : φ0.26 21T

OUTPUT VOLTAGE V_O CAN BE VARIED BY CHANGING TRANSFORMER TURN RATIOS.

Measurement Circuit 1.

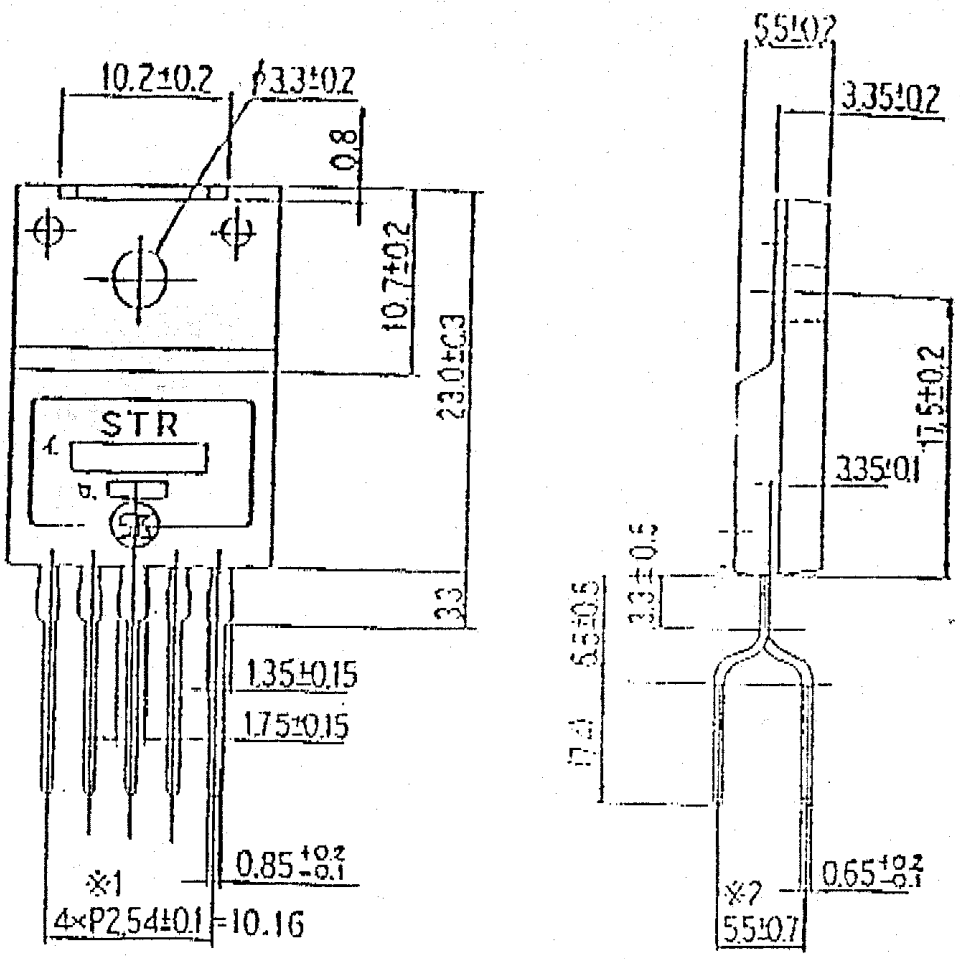


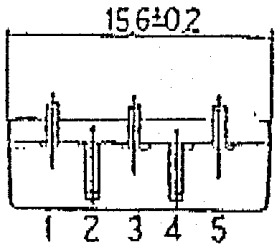
Measurement Circuit 2.



I_C = 300mA R_L = 333Ω

I_{B1} = 50 mA I_{B2} = 100mA





1. V⁻ (−)
2. BASE
3. INPUT (C)
4. EARTH (E)
5. DRIVE INPUT

A. Type Number : D1005T

B. Lot Number
   1st letter: The last numerical figure of calendar year
   2nd letter: Month (1 to 9 for Jan to Sep., O for Oct., N for Nov., D for Dec.)
   3rd, 4th letter: Date

FIGURE 1