STK7702

Thick Film Hybrid IC

Voltage Regulator for Office Automation Equipment

TENTATIVE

Case Outline : 18-pin SEP (See attached case outline drawing.)

Function : Chopper + series regulator

Application : Voltage regulator for office automation equipment

Absolute Maximum Ratings at Ta = 25°C

			Output 1	Output 2	Output 3	Output 4	Output 5	Output 6	unit
Maximum DC Input Voltage	Vin (DC) max				25				V
Maximum Output Current	*1	Average	0.5	0.5	2.0	0.03	0.05	0.03	A
	Io max	Peak	1.0	1.0	3.0	0.03	0.05	0.03	A
Thermal Resistance	θj-c		7	7	7	24	24	24	°C/W
Junction Temperature	Tj max				150				°C
Operating Case Temperature	Tc max				105				°C
Storage Temperature	Tstg				−30 to +105				°C

*1. The time allowed for the peak current to flow is 0.2sec. or less.

Electrical Characteristics at Ta = 25°C, See Test Circuit.

	Condition	Output 1	Output 2	Output 3	Output 4	Output 5	Output 6	unit
Output Voltage *2	①	12.0±0.2	8.2±0.8	5.05±0.2	−12.4±0.3	5.0±0.25	−15.3±0.3	V
Ripple Voltage	①	15	25	30	200	50	150	mVrms max
Line Regulation	②	20	—	—	—	—	—	mV/V
	③	—	20	18	10	18	10	max
Load Regulation	④	50	40	30	—	800	—	mV/A max
	④	—	—	—	250	—	80	mV max
Output Cutoff Residual Voltage *3	①	—	0.1	—	—	0.1	0.1	V max
Efficiency	①	—	—	80	65	—	50	% typ
Operating Frequency	①	—	—	28	—	—	—	kHz typ
Temperature Coefficient *4	①	0.035	0.035	0.13	0.04	0.13	0.04	%/°C max

Condition ① : Vin (DC) = 15V
Io1 = 250mA, Io2 = 120mA, Io3 = 2A Io4 = 30mA, Io5 = Io6 = 10mA

Condition ② : Vin (DC) = 12.7V to 20V
Io1 = 250mA, Io2 = 120mA, Io3 = 2A Io4 = 30mA, Io5 = Io6 = 10mA

Condition ③ : Vin (DC) = 10.5V to 20V
Io1 = 250mA, Io2 = 120mA, Io3 = 2A Io4 = 30mA, Io5 = Io6 = 10mA

Condition ④ : Vin (DC) = 15V
Io1 = 50 to 300mA, Io2 = 50 to 350mA, Io3 = 0.2A to 2A, Io4 = 10 to 30mA
Io5 = 10mA to 50mA, Io6 = 0 to 10mA
For other than the output to be tested, the load setting under Condition ① shall apply.

*2. Must be measured within 1 to 2 seconds after turning ON the input switch in the Test Circuit.

*3. Cutoff pins in the Test Circuit (pins 2, 15)
4.5V or greater (20V max) Output ON
0.4V or less Output OFF (Vo2, Vo5, Vo6)

*4. Coefficient for IC case temperature Tc, with the elements in the Test Circuit kept at room temperature

Specifications and information herein are subject to change without notice.

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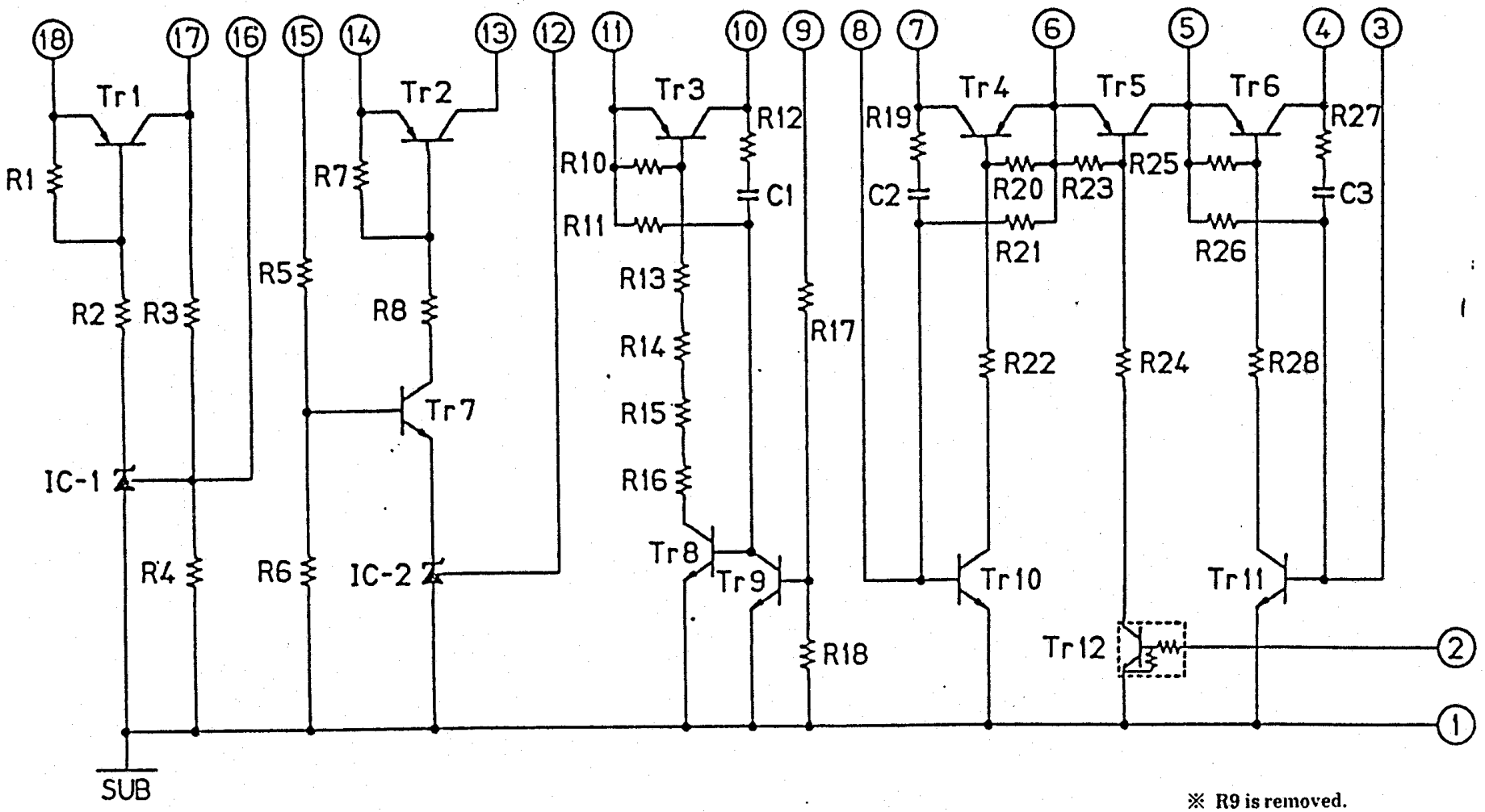
STK7702 Internal Equivalent Circuit



※ R9 is removed.

Since pin 1 is grounded to the substrate, noise may be affected when a heat sink is connected to the FG (Frame Ground), GND line, etc. In this case, bring the heat sink to floating state or use an insulating sheet.

Case Outline
(unit : mm)