

SANYO	No.1692C	STK7561G
		Chopper Type Parallel 2-Output Voltage Regulator

Applications

- Serial printers, line printers, office automation equipment
- Floppy disk units, portable VCRs

Features

- 2 outputs for microcomputer power supply (5V) and motor drive power supply (12V) and capable of delivering 2 regulated voltage outputs from 1 rectifier
- Chopper type permitting high efficiency, and separate excitation type oscillator common to 2 outputs causing no beat trouble
- Independent overcurrent protectors for 2 outputs (Foldback characteristics)
- External signal-used output cutoff function (Output 2)
- High-precision setting of output voltage eliminating the need to use a variable resistor for adjustment
- One input/output GND line making it possible for other negative voltage to be used jointly
- A negative voltage regulator (−5V, −12V, etc.) can be connected externally.
- Output voltage, output current constituting a series

Maximum Ratings at $T_a = 25^\circ\text{C}$

			Output 1	Output 2	unit
Maximum DC Input Voltage	$V_{in(DC)}$ max		50	50	V
Maximum Output Current	I_O max	A_v	3	5	A
		P_k	3.6	10	A
Thermal Resistance	θ_{j-c}		4.7	2.7	$^\circ\text{C/W}$
Operating Case Temperature	T_c			105	$^\circ\text{C}$
Junction Temperature	T_j			150	$^\circ\text{C}$
Storage Temperature	T_{stg}			−30 to +105	$^\circ\text{C}$

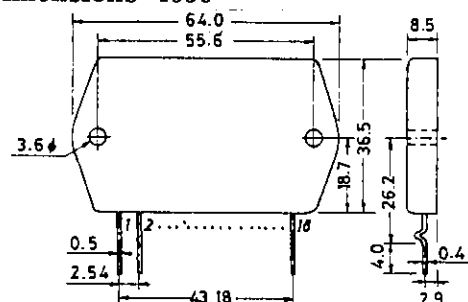
Operating Characteristics at $T_a = 25^\circ\text{C}$,

	See specified Test Circuit.	Output 1			Output 2			unit
		min	typ	max	min	typ	max	
Output Voltage	Condition 1	4.9	5.0	5.1	11.8	12.0	12.2	V
Ripple Voltage	Condition 1			5			20	mVrms
Line Regulation	Condition 2			25			20	mV/V
Load Regulation	Condition 3			80			40	mV/A
Overcurrent Trip Start Current	Condition 4	3.6			10			A
Efficiency	Condition 5	75% typ at outputs 1,2 operating mode						
Operating Frequency	Condition 1	35kHz typ at outputs 1,2 operating mode						
Cutoff Voltage	Condition 1	—						
		3V or more ON 1V or less OFF						
Temperature Coefficient	Condition 1	−0.025			−0.01			%/ $^\circ\text{C}$

- (Note) Condition 1: $V_{in(DC)} = 25\text{V}, 5\text{V1A}, 12\text{V1A}$
 Condition 2: $V_{in(DC)} = 20 \text{ to } 30\text{V}, 5\text{V1A}, 12\text{V1A}$
 Condition 3 Output 1: $V_{in(DC)} = 25\text{V}, 5\text{V1 to } 3.6\text{A}$
 Output 2: $V_{in(DC)} = 25\text{V}, 12\text{V1 to } 10\text{A}$
 Condition 4: $V_{in(DC)} = 25\text{V}$
 Condition 5: $V_{in(DC)} = 25\text{V}, 5\text{V1.5A}, 12\text{V2.5A}$

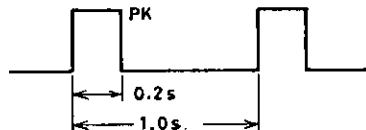
Package Dimensions 4050

(unit : mm)

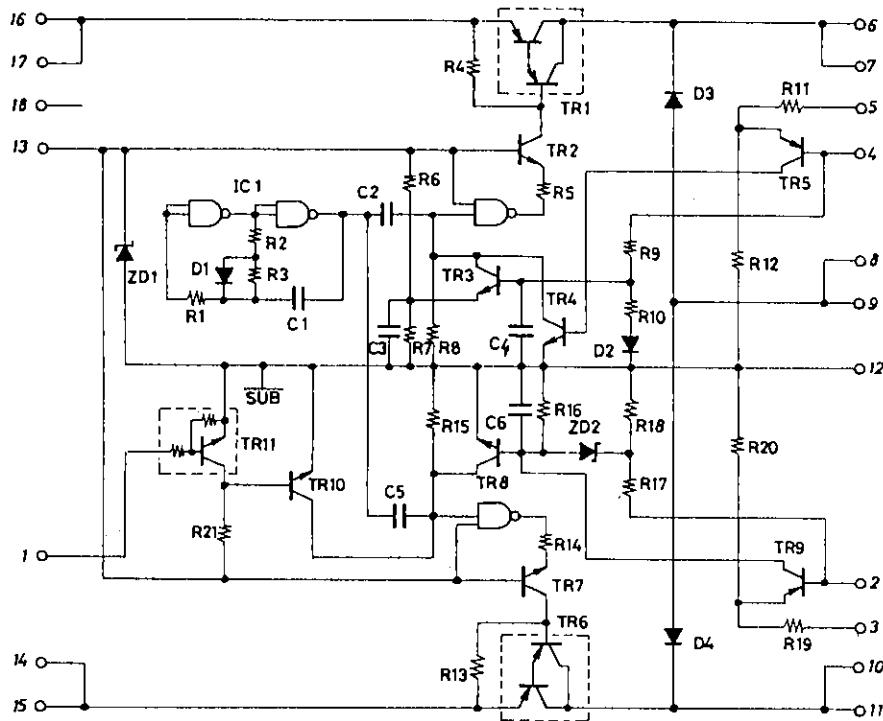


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Definition of Peak Current

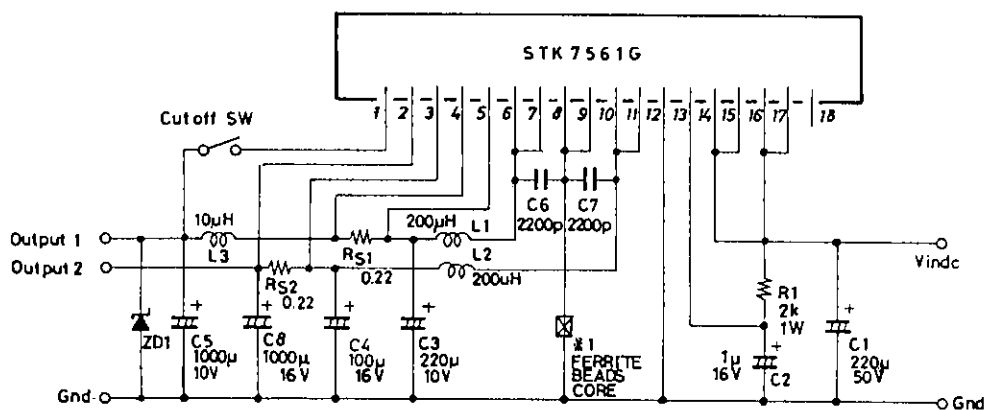


Equivalent Circuit



- Since pin 12 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.

Test Circuit



ZD1 : $V_z \approx 6.8V/D.H.D.$ type (for overvoltage protection)

Unit (resistance: Ω , capacitance: F)

*The N.C. pin (pin 18) must not be used as a relay pin for other line, pin.

*Pins connected inside the IC (6-7, 8-9, 10-11, 14-15, 16-17) must be also connected on the printed circuit board.

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