

SANYO	No.1712C	STK7563A
		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 (24V) 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	$V_{in(DC)} \text{ max}$	50	50	V
Maximum Output Current	$I_O \text{ max}$	2	2	A
	A_v P_k	2.4	4	A
Thermal Resistance	θ_{j-c}	4.9	4.9	$^\circ\text{C/W}$
Operating Case Temperature	T_c		105	$^\circ\text{C}$
Junction Temperature	T_j		150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-30 to +105		$^\circ\text{C}$

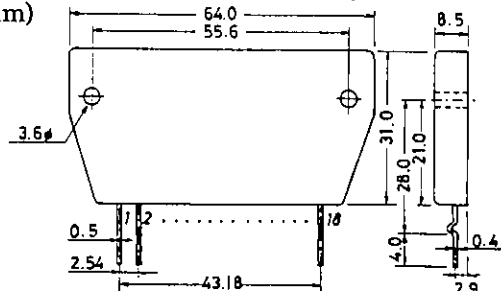
Operating Characteristics at $T_a = 25^\circ\text{C}$,

	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	23.6	24.0	24.4	V
Ripple Voltage	Condition 1			5				20 mVrms
Line Regulation	Condition 2			25				30 mV/V
Load Regulation	Condition 3			80				50 mV/A
Overcurrent Trip Start Current	Condition 4	2.4			4			A
Efficiency	Condition 1	80% 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 : $V_{in(DC)} = 35\text{V}, 5\text{V}1\text{A}, 24\text{V}1\text{A}$
 Condition 2 : $V_{in(DC)} = 30 \text{ to } 40\text{V}, 5\text{V}1\text{A}, 24\text{V}1\text{A}$
 Condition 3 Output 1 : $V_{in(DC)} = 35\text{V}, 5\text{V}1 \text{ to } 2.4\text{A}$
 Output 2 : $V_{in(DC)} = 35\text{V}, 12\text{V}1 \text{ to } 4\text{A}$
 Condition 4 : $V_{in(DC)} = 35\text{V}$

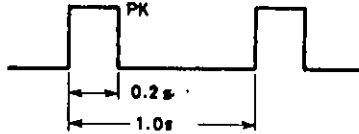
Package Dimensions 4049

(unit : mm)

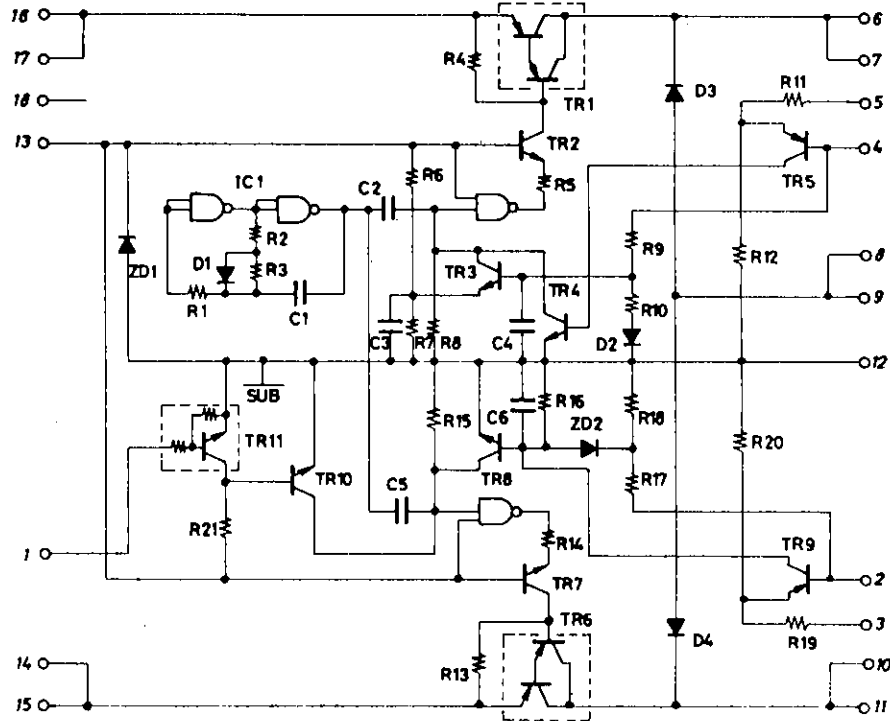


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Definition of Peak Current

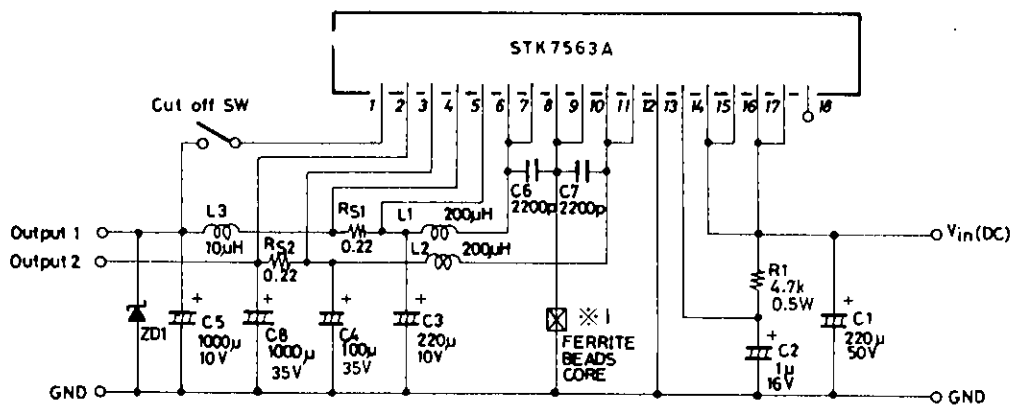


Equivalent Circuit



- 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 : Vz ≒ 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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