



LA5665

Multifunction Multiple Voltage Regulator

Overview

- Especially suited for use in micromputer-controlled tuners, receivers, preamplifiers and the like.

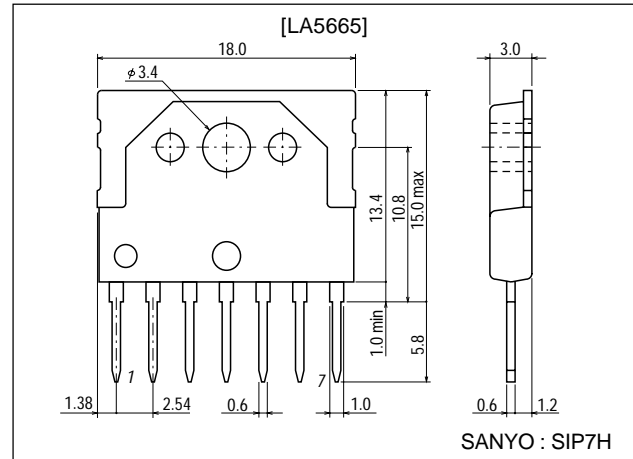
Features

- Two independent voltage regulators contained in a single chip (15.5V/350mA, 5.6V/100mA).
- Reset circuit which delivers the reset signal on the positive transition, negative transition of the 5.6V output.
- Muting circuit which detects the 15.5V output and reset output to deliver the muting signal (We have the LA5666 whose detection function for reset, muting is provided on the input voltage side).

Package Dimensions

unit:mm

3075-SIP7H



Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Input voltage	$V_{IN1, 2}$		35	V
Output current	$I_{OUT1, 2}$	Internal		
Allowable power dissipation	$P_d \text{ max}$	IC only	1.6	W
Operating temperature	T_{opr}		-30 to +80	$^\circ\text{C}$
Storage temperature	T_{stg}		-40 to +125	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	Ratings	Unit
Input voltage	V_{IN1}	$I_{OUT1}=200\text{mA}$	19 to 35	V
	V_{IN2}	$I_{OUT2}=50\text{mA}$	8.7 to 35	V

Operating Characteristics at $T_a = 25^\circ\text{C}$, $V_{IN1}=20\text{V}$, $V_{IN2}=10\text{V}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Quiescent current	I_{IN1}		1.8	2.8	3.8	mA
	I_{IN2}		3.8	5.8	7.8	mA
Output voltage	V_{O1}	$I_{OUT1}=200\text{mA}$	14.5	15.5	16.5	V
	V_{O2}	$I_{OUT2}=50\text{mA}$	5.1	5.6	6.2	V

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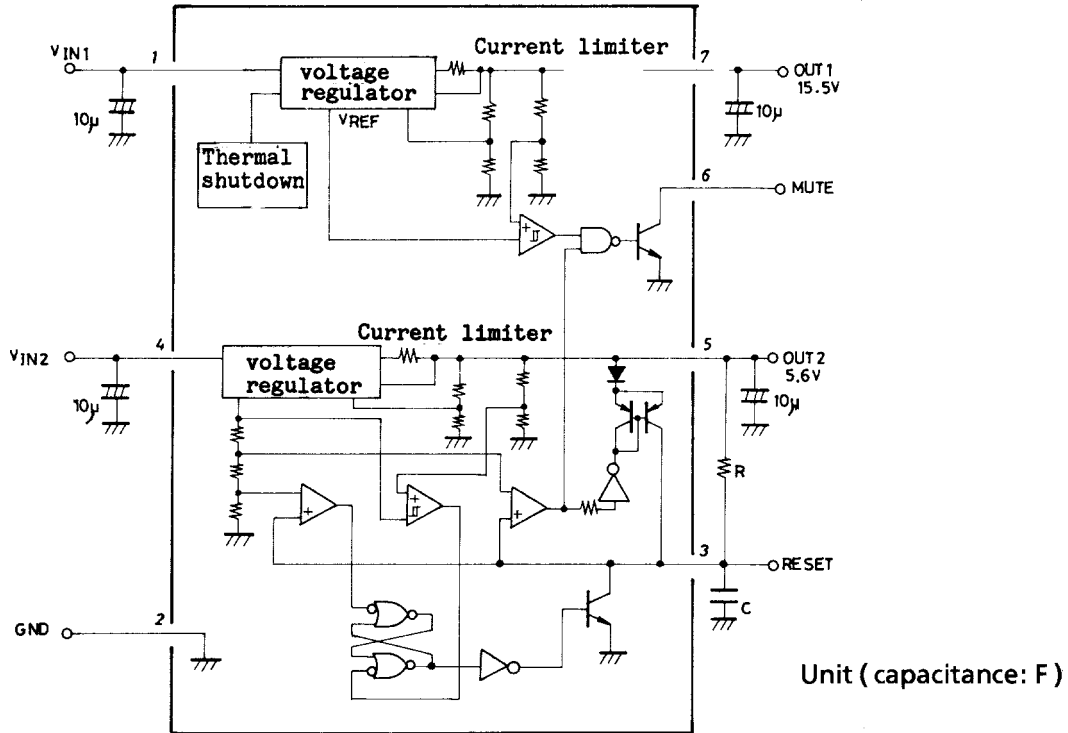
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Line regulation	V_{ol1}	$V_{IN2}=19$ to $27V$		6	20	mV
	V_{ol2}	$V_{IN2}=9$ to $18V$		2	20	mV
Load regulation	V_{old1}	$I_O=0$ to $350mA$		10	30	mV
	V_{old2}	$I_O=0$ to $100mA$		2	20	mV
Ripple rejection	Rr1	$f=120Hz$, $I_O=200mA$	56	65		dB
	Rr2	$f=120Hz$, $I_O=50mA$	60	75		dB
Input-output voltage drop	Vdr1	$I_O=200mA$		1.6	2.5	V
	Vdr2	$I_O=50mA$		1.5	2.5	V
Reset detect voltage	V_R	(Note 1)	4.9	5.1	5.5	V
Timer compare voltage	V_{C1}		1.0	1.2	1.4	V
	V_{C2}		0.06	0.13	0.18	V
Timer input bias current	I_{TB}				250	nA
Muting detect voltage	V_M	(Note 2)	13.5	14.5	15.5	V
Muting output voltage	V_{OMUTE}	$I_{OMUTE}=5mA$		0.1	0.15	V

Note 1 : V_R is the voltage of V_{O2} at the time reset is turned OFF.

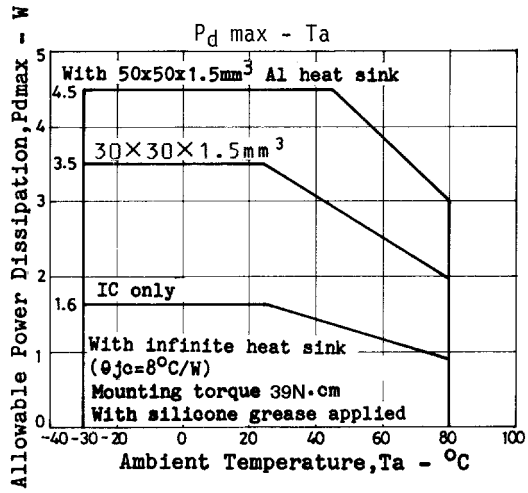
Note 2 : V_M is the voltage of V_{O1} at the time muting is turned OFF.

Equivalent Circuit Block Diagram, Pin Assignment, and Peripheral Circuit

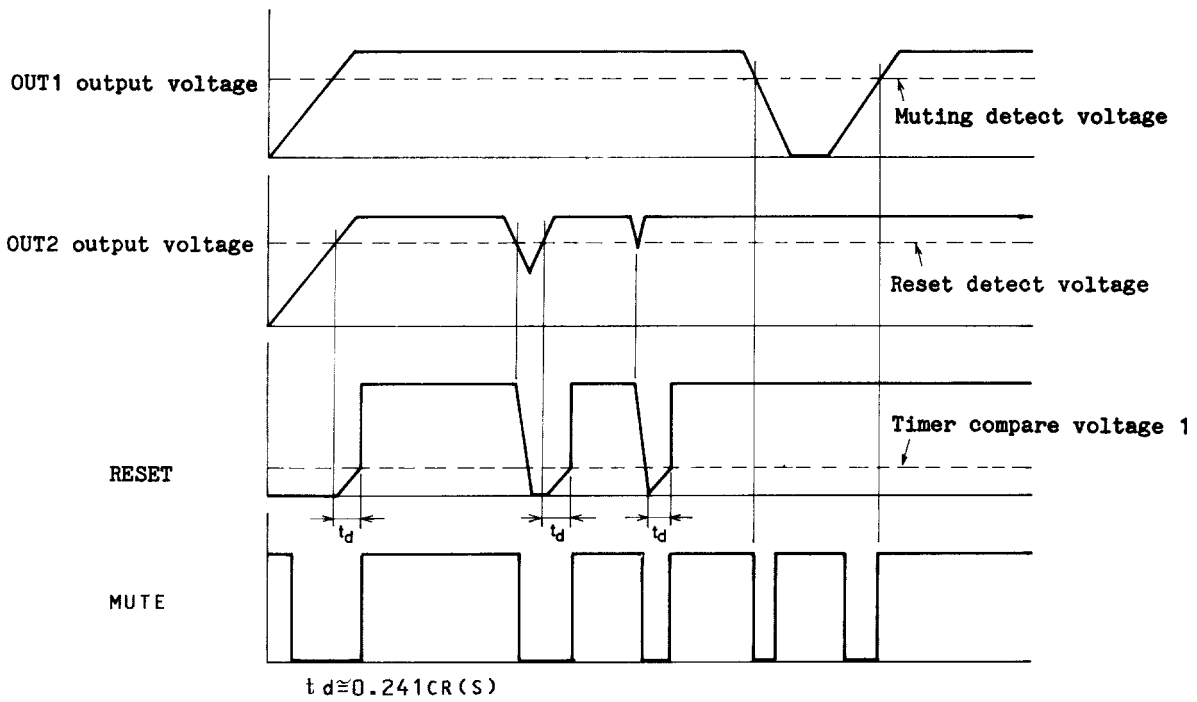


(Note) The reset delay time is set by R, C.

Pin No.	Name	Description
1	V_{IN1}	Input pin for 15.5V output line
2	GND	Ground
3	RESET	Reset delay time and output pin
4	V_{IN2}	Input pin for 5.6V output line
5	OUT2	5.6V output pin
6	MUTE	Muting signal output pin
7	OUT1	15.5V output pin



Operating Waveforms



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