

**LA5667****Multifunction Multiple Voltage Regulator****Overview**

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

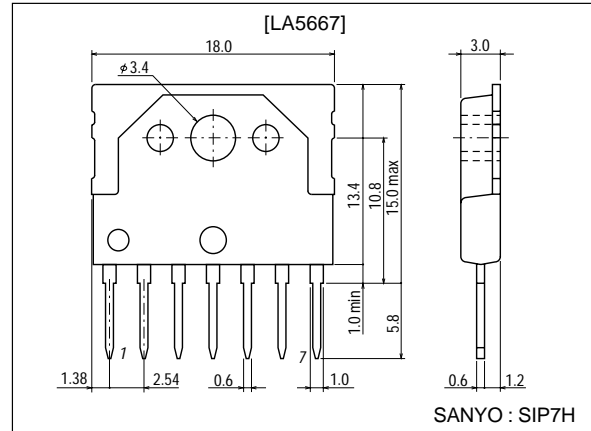
Features

- Two independent regulators contained in a single chip (13.0V/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 13.0V input and reset output to deliver the muting signal (We have the LA5665 whose detection function for reset, muting is provided on the output 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	$V_{IN1, 2}$		36	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}	$I_{OUT1}=200\text{mA}$	16.2 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}	$I_{OUT1}=200\text{mA}$	12.3	13.0	13.7	V
	V_{O2}	$I_{OUT2}=50\text{mA}$	5.2	5.6	6.0	V

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LA5667

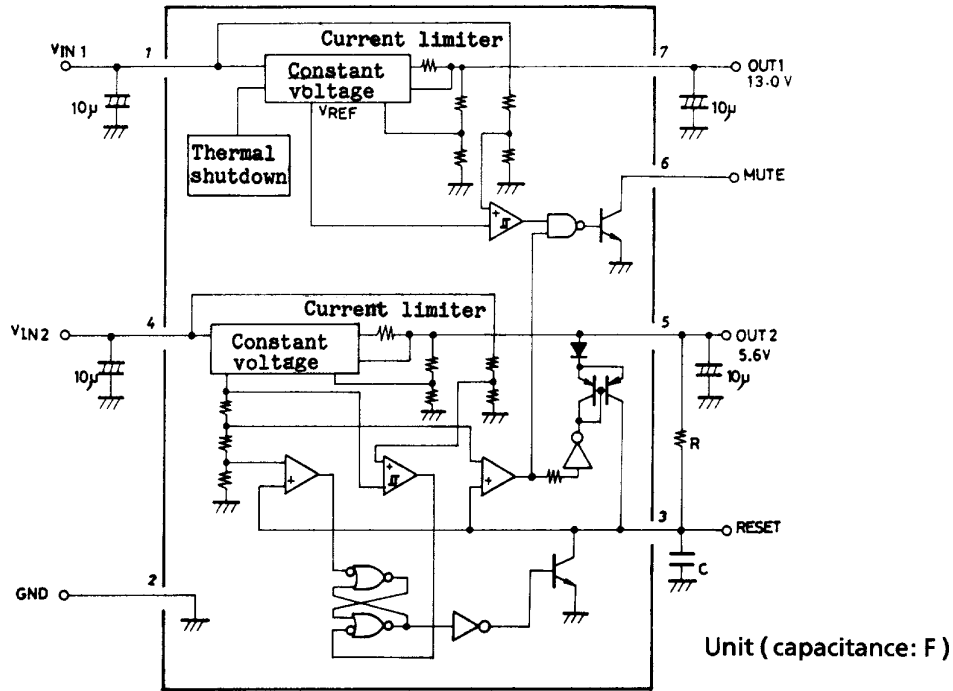
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Line regulation	V_{ol1}	$V_{IN2}=19$ to $27V$		6	20	mV
	V_{ol2}	$V_{IN2}=9$ to $18V$		2	20	mV
Load regulation	V_{old1}	$I_O=0$ to $350mA$		10	30	mV
	V_{old2}	$I_O=0$ to $100mA$		2	20	mV
Ripple rejection	$Rr1$	$f=120Hz, I_O=200mA$	56	65		dB
	$Rr2$	$f=120Hz, I_O=50mA$	60	75		dB
Input-output voltage drop	V_{dr1}	$I_O=200mA$		1.6	2.5	V
	V_{dr2}	$I_O=50mA$		1.5	2.5	V
Reset detect voltage	ΔV_R	$\Delta V_R=V_R-V_{O2}, I_{O2}=50mA$ (Note 1)	1.65	1.9	2.2	V
Reset detect hysteresis voltage	ΔV_H		50	75	110	mV
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	ΔV_M	$\Delta V_M=V_{RM}-V_{O1}, I_{O1}=200mA$ (Note 2)	1.0	1.5	2.0	V
Muting output voltage	V_{OMUTE}	$I_{OMUTE}=5mA$		0.1	0.15	V
Muting detect hysteresis voltage	ΔV_{MH}		110	160	210	mV

Note 1 : V_R is the voltage of V_{IN2} at the time reset is turned OFF.

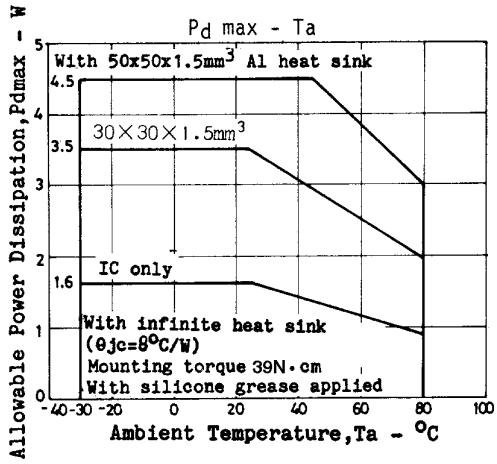
Note 2 : V_M is the voltage of V_{IN1} at the time muting is turned OFF.

Equivalent Circuit Block Diagram, Pin Assignment, and Peripheral Circuit

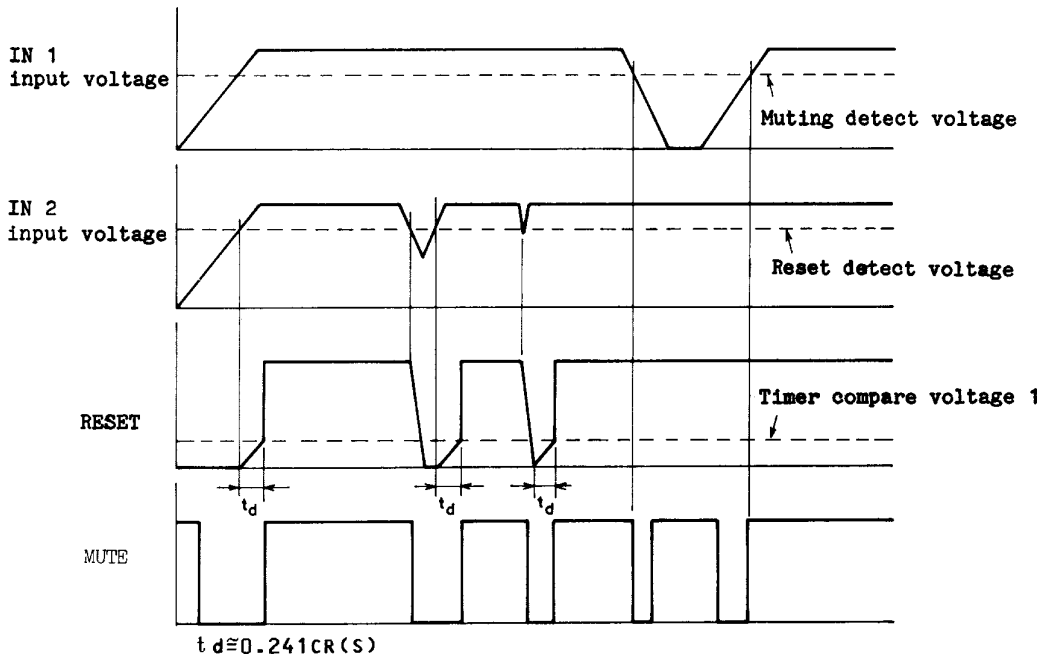


(Note) The reset delay time is set by R, C.

Pin No.	Name	Description
1	V_{IN1}	Input pin for 13.0V 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	13.0V output pin



Operating Waveforms



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