Ordering number:ENN2301B

Monolithic Linear IC

LA5665

Multifunction Multiple Voltage Regulator

Overview

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

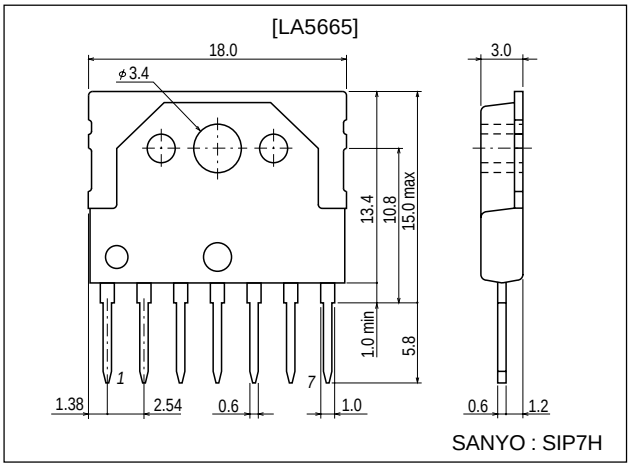
Features

• 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 Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Input voltage	V_{IN}1, 2		35	V
Output current	I_{OUT}1, 2	Internal		
Allowable power dissipation	Pd max	IC only	1.6	W
Operating temperature	Topr		–30 to +80	˚C
Storage temperature	Tstg		–40 to +125	˚C

Operating Conditions at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Input voltage	V_{IN}1	I_{OUT}1=200mA	19 to 35	V
	V_{IN}2	I_{OUT}2=50mA	8.7 to 35	V

Operating Characteristics at Ta = 25˚C, V_{IN}1=20V, V_{IN}2=10V

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Quiescent current	I_{IN}1		1.8	2.8	3.8	mA
	I_{IN}2		3.8	5.8	7.8	mA
Output voltage	V_O1	I_{OUT}1=200mA	14.5	15.5	16.5	V
	V_O2	I_{OUT}2=50mA	5.1	5.6	6.2	V

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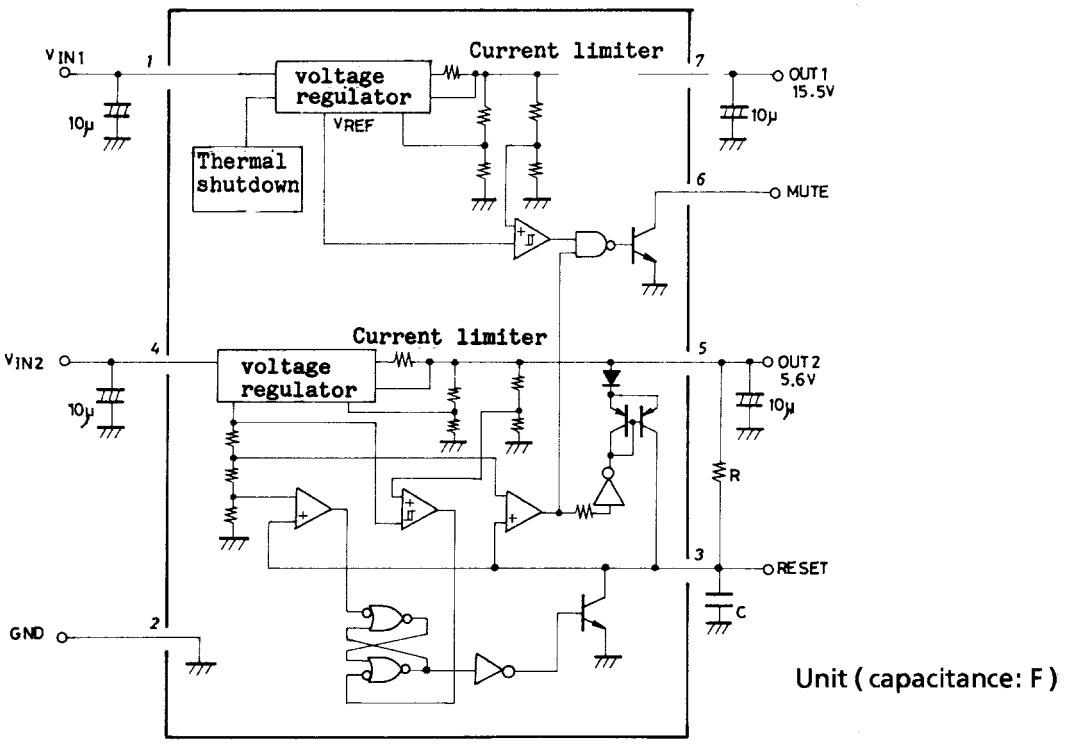
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Line regulation	$V_{ol}1$	$V_{IN}2$=19 to 27V		6	20	mV
	$V_{ol}2$	$V_{IN}2$=9 to 18V		2	20	mV
Load regulation	$V_{old}1$	I_O=0 to 350mA		10	30	mV
	$V_{old}2$	I_O=0 to 100mA		2	20	mV
Ripple rejection	Rr1	f=120Hz, I_O=200mA	56	65		dB
	Rr2	f=120Hz, 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

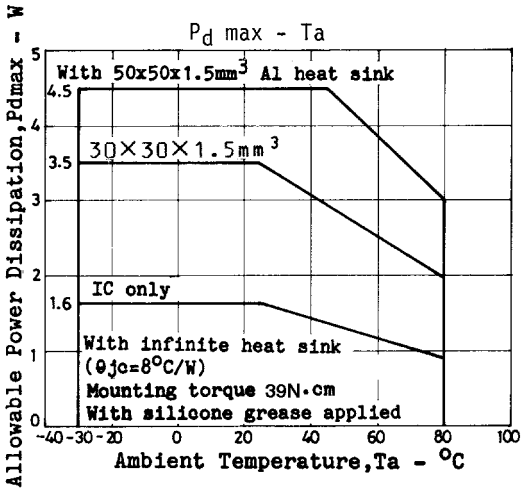
Note 1 : V_R is the voltage of V_O2 at the time reset is turned OFF.
Note 2 : V_M is the voltage of V_O1 at the time muting is turned OFF.

Equivalent Circuit Block Diagram, Pin Assignment, and Peripheral Circuit



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

Pin No.	Name	Description
1	$V_{IN}1$	Input pin for 15.5V output line
2	GND	Ground
3	RESET	Reset delay time and output pin
4	$V_{IN}2$	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