

SANYO**LA5666****Multifunction Multiple Voltage Regulator****Overview**

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

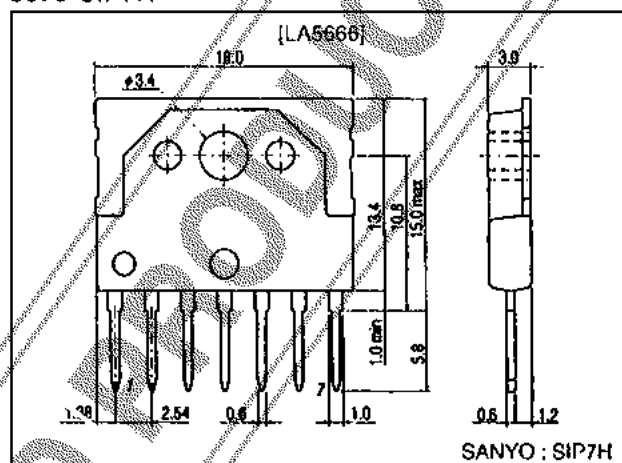
Features

- Two independent voltage 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	Rating	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	Rating	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	Rating			Unit
			min	typ	max	
Quiescent current	I_{IN1}		1.8	2.0	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

Continued on next page.

■ Any and all SANYO products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your SANYO representative nearest you before using any SANYO products described or contained herein in such applications.

■ SANYO assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all SANYO products described or contained herein.

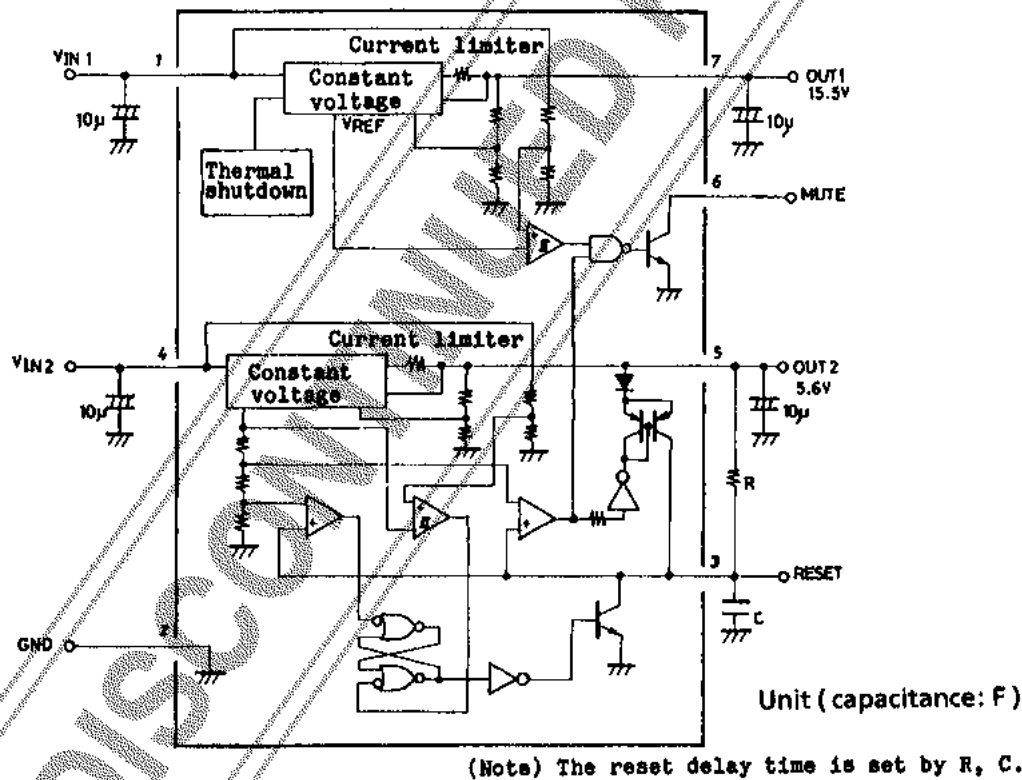
SANYO Electric Co., Ltd. Semiconductor Company

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

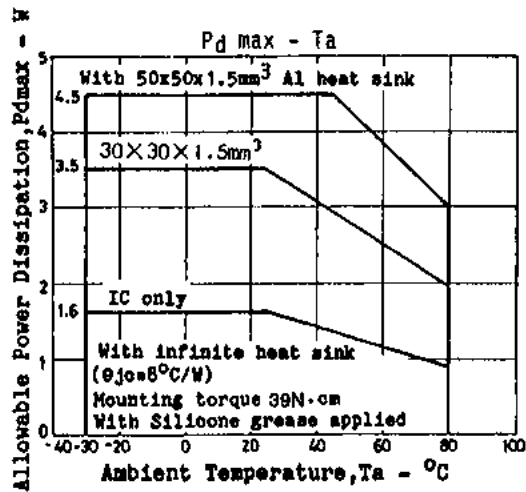
40500FN (KT)/O1995YK/7256K1, TS No.2118-1/4

Continued from preceding page.

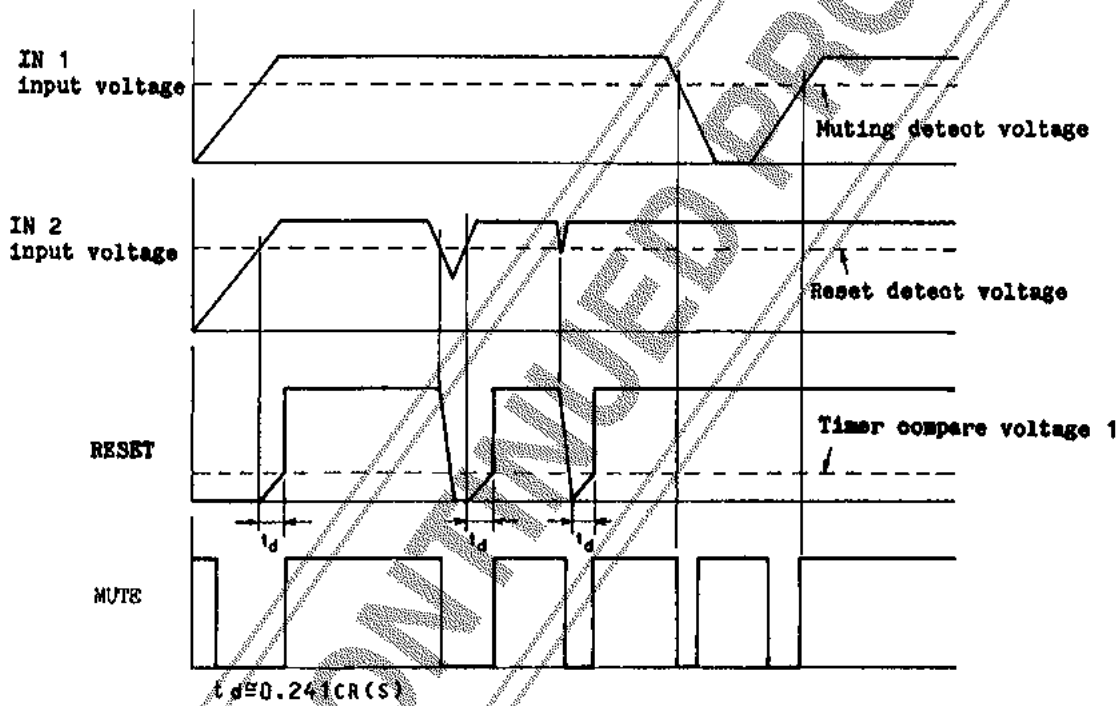
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Line regulation	V_{ol1}	$V_{IN2}=19$ to $27V$		6	20	mV
	V_{ol2}	$V_{IN2}=9$ to $18V$		2	20	mV
Load regulation	V_{old1}	$I_O=0$ to $350mA$		10	30	mV
	V_{old2}	$I_O=0$ to $100mA$		2	20	mV
Ripple rejection	$Rr1$	$f=120Hz, I_O=200mA$	56	65		dB
	$Rr2$	$f=120Hz, I_O=50mA$	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	$\Delta V_R=V_{IN}-V_{O2}, I_{O2}=50mA$ (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}		0.96	0.13	0.18	V
Timer input bias current	I_{TB}				250	nA
Muting detect voltage	ΔV_M	$\Delta V_M=V_{RM}-V_{O2}, I_{O2}=200mA$ (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

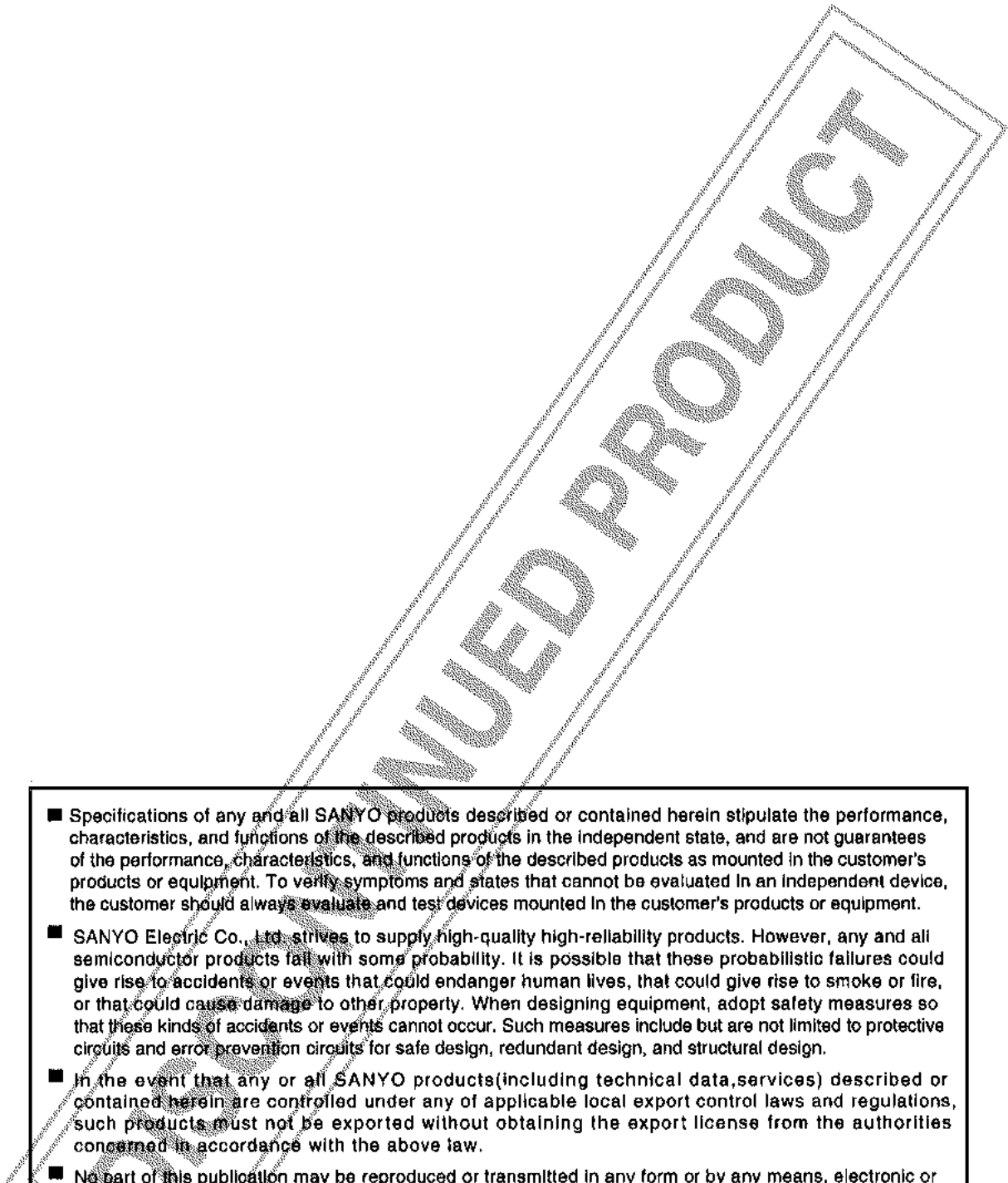
Note 1 : V_R is the voltage of V_{IN2} at the time reset is turned OFF.Note 2 : V_M is the voltage of V_{IN1} at the time muting is turned OFF.**Equivalent Circuit Block Diagram, Pin Assignment, and Peripheral Circuit**

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



- 
- Specifications of any and all SANYO products described or contained herein stipulate the performance, characteristics, and functions of the described products in the independent state, and are not guarantees of the performance, characteristics, and functions of the described products as mounted in the customer's products or equipment. To verify symptoms and states that cannot be evaluated in an independent device, the customer should always evaluate and test devices mounted in the customer's products or equipment.
 - SANYO Electric Co., Ltd. strives to supply high-quality high-reliability products. However, any and all semiconductor products fail with some probability. It is possible that these probabilistic failures could give rise to accidents or events that could endanger human lives, that could give rise to smoke or fire, or that could cause damage to other property. When designing equipment, adopt safety measures so that these kinds of accidents or events cannot occur. Such measures include but are not limited to protective circuits and error prevention circuits for safe design, redundant design, and structural design.
 - In the event that any or all SANYO products (including technical data, services) described or contained herein are controlled under any of applicable local export control laws and regulations, such products must not be exported without obtaining the export license from the authorities concerned in accordance with the above law.
 - No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or any information storage or retrieval system, or otherwise, without the prior written permission of SANYO Electric Co., Ltd.
 - Any and all information described or contained herein are subject to change without notice due to product/technology improvement, etc. When designing equipment, refer to the "Delivery Specification" for the SANYO product that you intend to use.
 - Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.

This catalog provides information as of April, 2000. Specifications and information herein are subject to change without notice.