

LA5655

Voltage Regulator for FLT Display Desk-Top Calculator

Overview

The LA5655 is an IC containing all the voltage regulators required for an FLT display desk-top calculator with a printer.

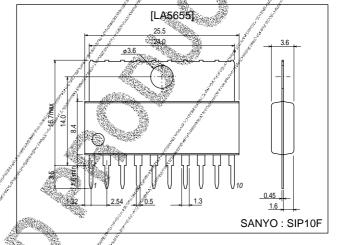
Features and Functions

- a. On-chip voltage regulators required for dest-top calculator (FLT display) with a printer.
 - 1. Printer voltage regulator.
 - 2. IC voltage regulator.
 - 3. FLT anode, grid voltage regulator.
 - 4. FLT heater grid voltage regulator.
 - 5. FLT bias grid voltage regulator.
- b. On-chip printer motor brake circuit.

Package Dimensions

unit:mm

3046B-SIP10F



Specifications

Maximum Ratings at Ta = 25°C

Parameter	Symbol	Ratings	Unit
Voltage regulator input voltage 1	Vint	50	V
Voltage regulator input voltage 2	Vinz'	25	V
Output current 1	OUT1	40	mA
Output current 2	OUT2	2.0	mA
Output current 3	JOUTX (X=3,4,5) other regulator	40	mA
Allowable power dssipation	Pd max IC alone	2.45	W
Operating temperature	Topr	-20 to +75	°C
Storage temperature	* Tstg	-40 to +125	°C

Operating Conditions at $Ta = 25^{\circ}$

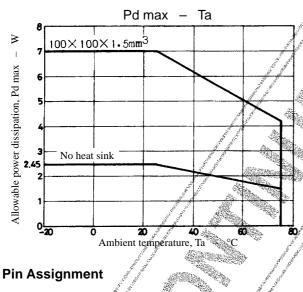
Parameter	Symbol	Conditions	Ratings	Unit
Voltage regulator input voltage range	V _{IN} 1		20 to 50	V
MT pin H voltage	[∀] ENAH /	<u> </u>	2.0 to 7.0	V
MT pin L voltage	VENAL		-0.3 to +0.3	V

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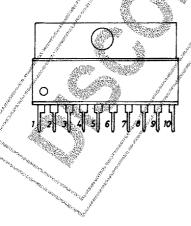
LA5655

Operating Characteristics at Ta = 25 $^{\circ}\text{C},\,V_{IN1}\text{=}35\text{V},\,V_{IN2}\text{=}10\text{V},\,I_{OUT2}\text{=}200\text{mA}$

_ Ratings						
Parameter	Symbol	Conditions	min	typ	max	Unit
Output voltage 1	VOUT1	① → ⑧ I _{OUT1} =30mA	28.5	30	32.5	V
Output voltage 2	V _{OUT2}	7→8	5.3	5.6	6.0	V
Output voltage 3	V _{OUT3}	① → ⑩ I _{OUT3} =–12mA	13.8	15	16.2	V
Output voltage 4	V _{OUT4}	$3 \rightarrow 4 I_{OUT4} = -30 \text{mA}$	4.6	* \ 5 .		V
Output voltage 5	V _{OUT5}	③ → ⑧ I _{IN5} =30mA	7.3	-8		V
Load regulation 1	∆VO1LOAD	10mA <i<sub>OUT1<30mA</i<sub>	48	90.	250	mA
Load regulation 2	∆V _{O2} LOAD	100mA <i<sub>OUT2<2A</i<sub>			250	mA
Load regulation 3	∆V _{O3} LOAD	-20mA <i<sub>OUT3<-5mA</i<sub>	2500	Q.	100	/ mA
Load regulation 4	∆VO4LOAD	-40mA <i<sub>OUT4<-10mA</i<sub>		â۱	100	mA
Load regulation 5	∆V _{O5} LOAD	20mA <i<sub>IN5<40mA</i<sub>	V		200	mA
Line regulation 1	∆V _{O1} LINE	33V <v<sub>IN1<45V</v<sub>			250	mA
Line regulation 2	ΔV _{O2} LINE	7.5V <v<sub>IN2<20V</v<sub>	84	A de	100	mA
Line regulation 3	ΔV _{O3LINE}	33V <v<sub>IN1<45V</v<sub>		d d	100	mA
Line regulation 4	ΔV _{O4LINE}	6.5V <v<sub>IN5<8V</v<sub>	i i	()	100	mA
Quiescent current 1	I _{CC1}		ga ^r	<i>,</i> 6.5	9.0	mA
Quiescent current 2	I _{CC2}		all the said and	8.5	12.0	mA
	V _{D1}	V _{OUT1} ΔV _{O1} =10%, l _{OUT1} =35mA	A. Salah		1.3	V
Input-output voltage drop	V _{D2-1}	V _{OUT2} ΔV _{O2} =10%, l _{OUT2} =1A		1.4	V	
	V _{D2-2}	V _{OUT2} ΔV _{O2} =10%; I _{OUT2} =2A	ů,		1.9	V
Saturation voltage at V _{OUT2} off mode	V _{O2} OFF(sat)	I _{OUT2} =-1A			1.4	V

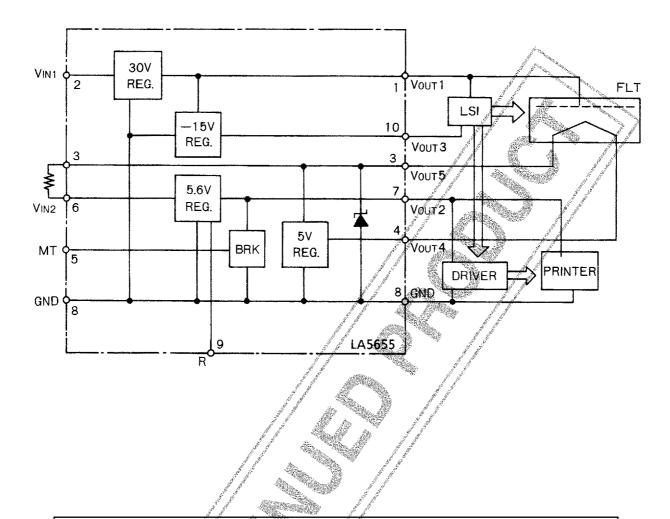






Pin No.	Pin Name	Pin No.	Pin Name
1	V _{OUT1}	6	V _{IN2}
2	V _{IN1}	7	V _{OUT2}
3	V _{OUT5}	8	GND
4	V _{OUT4}	9	R
5	MT	10	VOUT3

Block Diagram and Sample Application Circuit



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