



LA5655

VOLTAGE REGULATOR FOR
FLT DISPLAY DESK-TOP CALCULATOR

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

Features and Functions

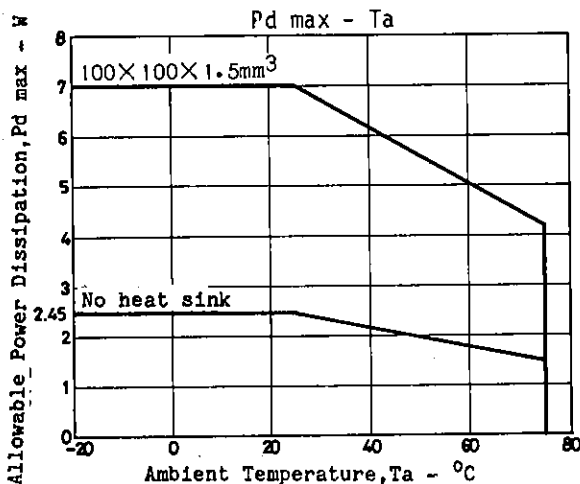
- a. On-chip voltage regulators required for desk-top calculator (FLT display) with a printer.
 1. Printer voltage regulator.
 2. LSI voltage regulator.
 3. FLT anode, grid voltage regulator.
 4. FLT heater grid voltage regulator.
 5. FLT bias grid voltage regulator.
- b. On-chip printer motor brake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

Maximum Ratings at Ta=25°C

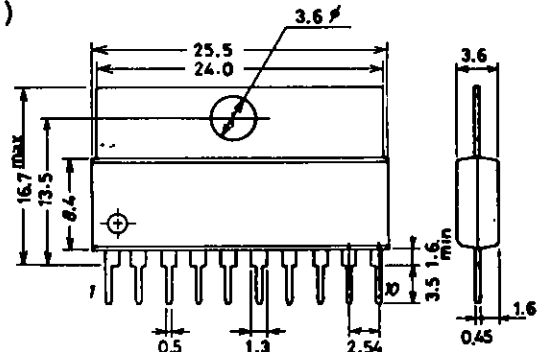
			unit
Voltage Regulator Input Voltage 1	V_{IN1}	50	V
Voltage Regulator Input Voltage 2	V_{IN2}	25	V
Output Current 1	I_{OUT1}	40	mA
Output Current 2	I_{OUT2}	2.0	A
Output Current 3	I_{OUTX} (X=3,4,5) other regulator	40	mA
Allowable Power Dissipation	P_{dmax} IC alone	2.45	W
Operating Temperature	T_{opr}	-20 to +75	°C
Storage Temperature	T_{stg}	-40 to +125	°C

Operating Conditions at Ta=25°C

			unit
Voltage Regulator Input Voltage Range	V_{IN1}	+20 to +50	V
MT Pin H Voltage	V_{ENAH}	2.0 to 7.0	V
MT Pin L Voltage	V_{ENAL}	-0.3 to +0.3	V



Package Dimensions 3046A-S10FIC
(unit: mm)



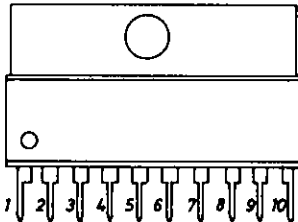
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Operating Characteristics at Ta=25°C

V_{IN1}=35V, V_{IN2}=10V, I_{OUT2}=200mA

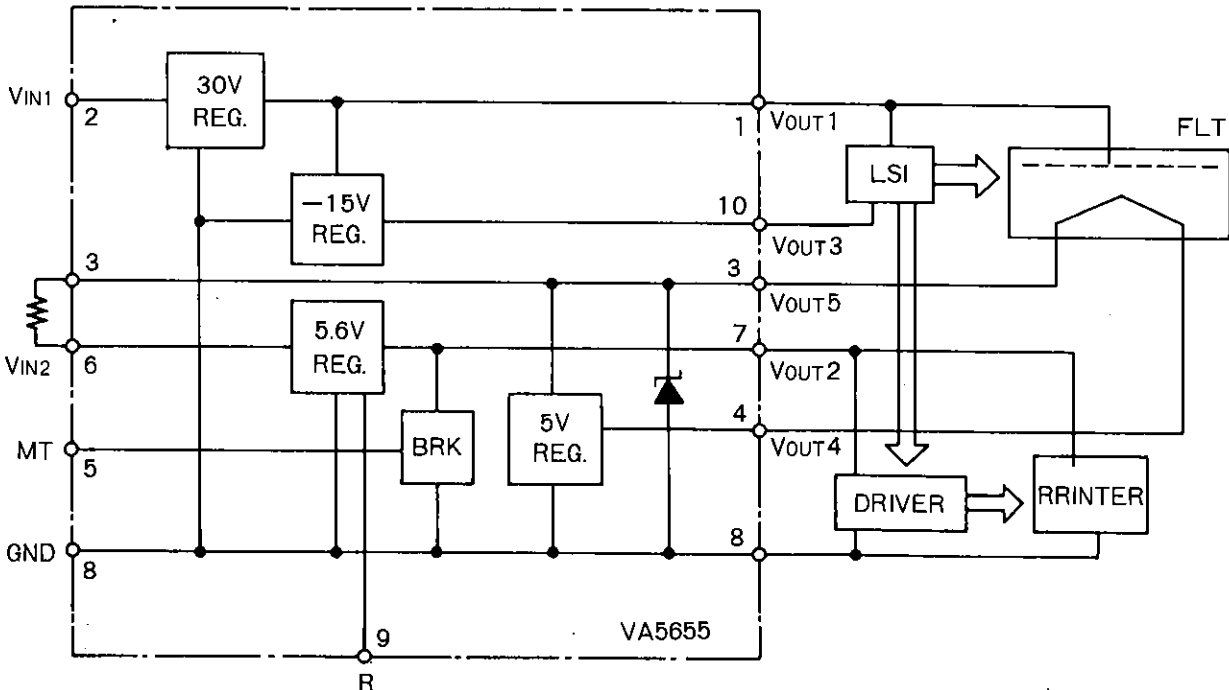
			min	typ	max	unit
Output Voltage 1	V _{OUT1}	①→⑧ I _{OUT1} =30mA	28.5	30	32.5	V
Output Voltage 2	V _{OUT2}	⑦→⑧	5.3	5.6	6.0	V
Output Voltage 3	V _{OUT3}	①→⑩ I _{OUT3} =-12mA	13.8	15	16.2	V
Output Voltage 4	V _{OUT4}	③→④ I _{OUT4} =-30mA	4.6	5	5.4	V
Output Voltage 5	V _{OUT5}	③→⑧ I _{IN5} =30mA	7.3	8	8.7	V
Load Regulation 1	ΔV _{O1LOAD}	10mA<I _{OUT1} <30mA			250	mA
Load Regulation 2	ΔV _{O2LOAD}	100mA<I _{OUT2} <2A			250	mA
Load Regulation 3	ΔV _{O3LOAD}	-20mA<I _{OUT3} <-5mA			100	mA
Load Regulation 4	ΔV _{O4LOAD}	-40mA<I _{OUT4} <-10mA			100	mA
Load Regulation 5	ΔV _{O5LOAD}	20mA<I _{IN5} <40mA			200	mA
Line Regulation 1	ΔV _{O1LINE}	33V<V _{IN1} <45V			250	mA
Line Regulation 2	ΔV _{O2LINE}	7.5V<V _{IN2} <20V			100	mA
Line Regulation 3	ΔV _{O3LINE}	33V<V _{IN1} <45V			100	mA
Line Regulation 4	ΔV _{O4LINE}	6.5V<V _{IN5} <8V			100	mA
Quiescent Current 1	I _{CC1}			6.5	9.0	mA
Quiescent Current 2	I _{CC2}			8.5	12.0	mA
Input-Output Voltage Drop	V _{D1}	V _{OUT1} ΔV _{O1} =10%, I _{OUT1} =35mA			1.3	V
	V _{D2-1}	V _{OUT2} ΔV _{O2} =10%, I _{OUT2} =1A			1.4	V
	V _{D2-2}	V _{OUT2} ΔV _{O2} =10%, I _{OUT2} =2A			1.9	V
Saturation Voltage at V _{OUT2} OFF Mode	V _{O2 OFF(sat)}	I _{OUT2} =-1A			1.4	V

Pin Assignment



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	V _{OUT3}

Block Diagram and Sample Application Circuit



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