Ordering number:ENN1531B

Monolithic Linear IC

LA5311M

Variable Divided Voltage Generator for LCD

Overview

The LA5311M is a variable divided voltage generator IC for multiple drive of LCD matrix.

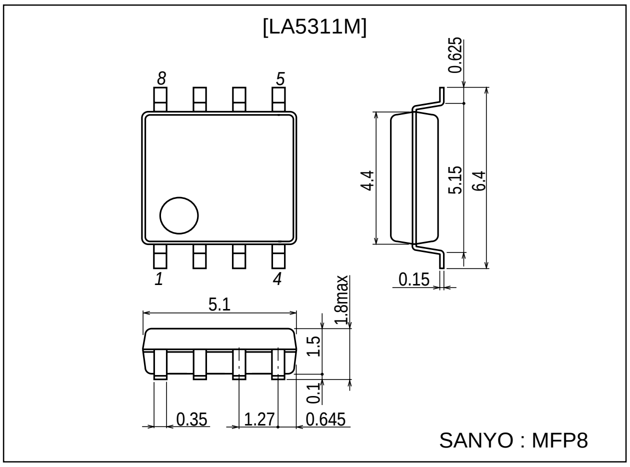
Features

- Power supply for variable bias LCD drive.
- 4 operational amplifiers deliver 4 voltage outputs.
- Low current drain (1.0mA max).
- Miniflat package.

Package Dimensions

unit:mm

3032B-MFP8



Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V_{CC} max		30	V
Output current	I_{OUT}		5	mA
Allowable power dissipation	Pd max		300	mW
Operating temperature	Topr		–20 to +75	˚C
Storage temperature	Tstg		–40 to +125	˚C

Operating Conditions at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Supply voltage range	V_{CC} op	V_{CC}–V_1>1.0V	11 to 28	V
Recommended output current	I_1		0 to 3	mA
	I_2, I_3		–3 to +3	mA
	I_4		–3 to 0	mA

Operating Characteristics at Ta = 25˚C, V_{CC}=20V

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Current drain	I_{CC}				1.0	mA
Output ratio1	R1	V2/V1, V_{CC}=0, GND=–20V=V_5 External R_A=100kΩ	1.94		2.06	
Output ratio2	R2	V5–V3/V5–V4, V_{CC}=0, GND=–20V=V_5 External R_A=100kΩ	1.94		2.06	

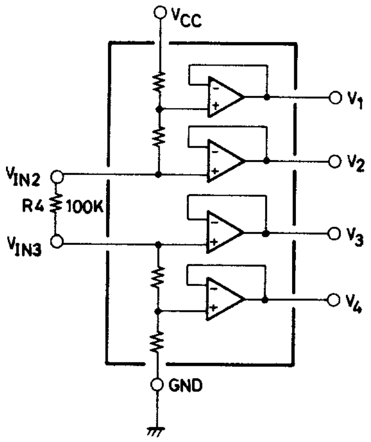
Continued on next page.

SANYO Electric Co.,Ltd. Semiconductor Company
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

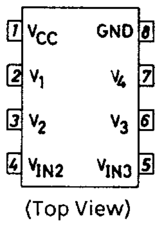
Continued from preceding page.

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Output ratio3	R3	V2/V5–V3, V_{CC}=0, GND=–20V=V_5 External R_A=100kΩ	0.97		1.03	
Output ratio4	R4	V1/V5–V4, V_{CC}=0, GND=–20V=V_5 External R_A=100kΩ	0.97		1.03	
Load regulation	ΔV1	+100µA<I_{OUT}<+3mA			20	mV
	ΔV2	+100µA<I_{OUT}<+3mA			20	mV
	ΔV3	+100µA<I_{OUT}<+3mA			20	mV
	–ΔV2	–3mA<I_{OUT}<–100µA			20	mV
	–ΔV3	–3mA<I_{OUT}<–100µA			20	mV
	–ΔV4	–3mA<I_{OUT}<–100µA			20	mV
R_1+R_2	R	0.5V applied across R_1+R_2	33	40	47	kΩ

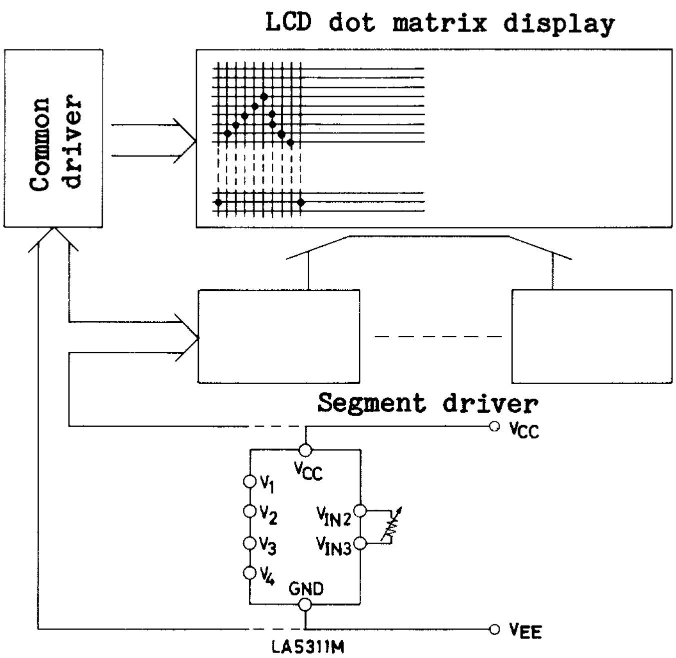
Equivalent Circuit



Pin Assignment



Sample Application Circuit



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