Ordering number:ENN1340C

Monolithic Linear IC

LA5310M

Voltage Divider for LCD Applications

Overview

The LA5310M is a voltage divider IC for use in LCD matrix multidrive applications.

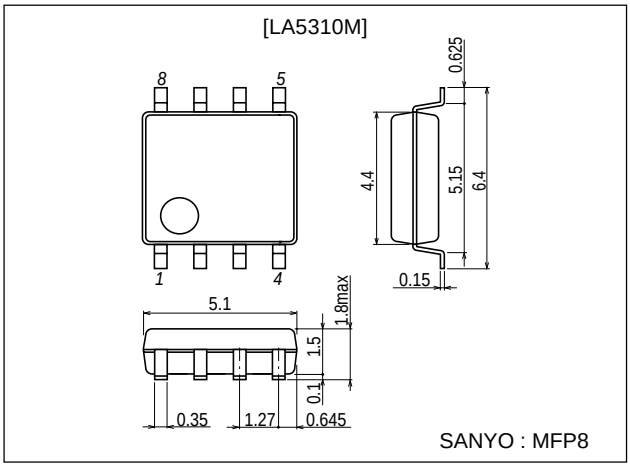
Features

- Power supply for 1/9 bias LCD applications.
- 5 operational amplifiers producing 5 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		35	V
Output current	I_{OUT}		5	mA
Allowable power dissipation	Pd max		300	mW
Operating temperature	Topr		–20 to +75	˚C
Storage temperature	Tstg		–30 to +125	˚C

Operating Conditions at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Supply voltage range	V_{CC} op		11 to 25	V
Recommended output current	I_1		0 to 3	mA
	I_2, I_3		–3 to +3	mA
	I_4, I_5		–3 to 0	mA

Operating Characteristics at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Current drain	I_{CC}	V_{CC}=25V			1.0	mA
Output voltage	V_1		–1.25	–1.20	–1.15	V

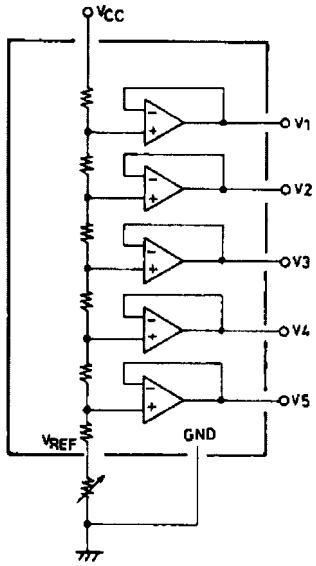
Continued on next page.

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 ratio1	R_{a1}	V_2/V_1, V_{CC}=0, Vref=–12V, GND=–25V	1.96	2.00	2.04	V
Output ratio2	R_{a2}	$V_5–V_3/V_5–V_4$, V_{CC}=0, Vref=–12V, GND=–25V	1.96	2.00	2.04	V
Output ratio3	R_{b1}	$–V_5/–V_1$, V_{CC}=0, Vref=–12V, GND=–25V	8.73	9.00	9.27	V
Output ratio4	R_{b2}	$–V_5/–V_2$, V_{CC}=0, Vref=–12V, GND=–25V	4.37	4.50	4.63	V
Output ratio5	R_{b3}	$–V_5/–V_5+V_3$, V_{CC}=0, Vref=–12V, GND=–25V	4.37	4.50	4.63	V
Output ratio6	R_{b4}	$–V_5/–V_5+V_4$, V_{CC}=0, Vref=–12V, GND=–25V	8.73	9.00	9.27	V
Load regulation	ΔV_1	$+100\mu A<I_{OUT}<+3mA$			20	mV
	ΔV_2	$+100\mu A<I_{OUT}<+3mA$			20	mV
	ΔV_3	$+100\mu A<I_{OUT}<+3mA$			20	mV
	$–\Delta V_2$	$–3mA<I_{OUT}<–100\mu A$			20	mV
	$–\Delta V_3$	$–3mA<I_{OUT}<–100\mu A$			20	mV
	$–\Delta V_4$	$–3mA<I_{OUT}<–100\mu A$			20	mV
	$–\Delta V_5$	$–3mA<I_{OUT}<–100\mu A$			20	mV

Equivalent Circuit



Pin Assingment