

Monolithic Linear IC

	No. 1531B	<h1 style="text-align: center;">LA5311M</h1> <p style="text-align: center;">Variable Divided Voltage Generator for LCD</p>

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

**Features**

- . Power supply for variable bias LCD drive.
- . 4 OP amps to deliver 4 voltage outputs.
- . Low current dissipation (1.0mA max.)
- . Miniflat package.

**Maximum Ratings at Ta=25°C**

			unit
Maximum Supply Voltage	V <sub>CC</sub> max	30	V
Output Current	I <sub>OUT</sub>	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**

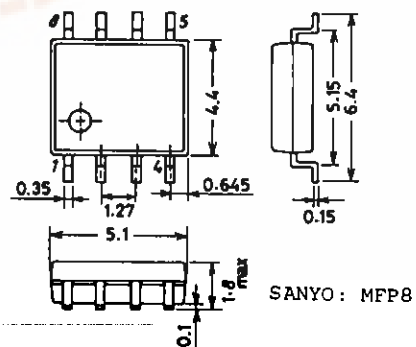
			unit
Supply Voltage Range	V <sub>CC</sub> op V <sub>CC</sub> -V <sub>1</sub> >1.0V	11 to 28	V
Recommended Output Current	I <sub>1</sub>	0 to 3	mA
Recommended Output Current	I <sub>2</sub> , I <sub>3</sub>	-3 to +3	mA
Recommended Output Current	I <sub>4</sub>	-3 to 0	mA

**Operating Characteristics at Ta=25°C, V<sub>CC</sub>=20V**

			min	typ	max	unit
Current Dissipation	I <sub>CC</sub>				1.0	mA
Output Ratio 1	R1	V <sub>2</sub> /V <sub>1</sub> , V <sub>CC</sub> =0: GND=-20V=V <sub>5</sub> External R <sub>A</sub> =100kohms	1.94		2.06	
Output Ratio 2	R2	V <sub>5</sub> -V <sub>3</sub> /V <sub>5</sub> -V <sub>4</sub> "	1.94		2.06	
Output Ratio 3	R3	V <sub>2</sub> /V <sub>5</sub> -V <sub>3</sub> "	0.97		1.03	
Output Ratio 4	R4	V <sub>1</sub> /V <sub>5</sub> -V <sub>4</sub> "	0.97		1.03	
Load Regulation	ΔV1	+100uA<I <sub>OUT</sub> <+3mA			20	mV
"	ΔV2	"			20	mV
"	ΔV3	"			20	mV
"	-ΔV2	-3mA<I <sub>OUT</sub> <-100uA			20	mV
"	-ΔV3	"			20	mV
"	-ΔV4	"			20	mV
R <sub>1</sub> +R <sub>2</sub>	R	0.5V applied across R <sub>1</sub> +R <sub>2</sub>	33	40	47	kohm

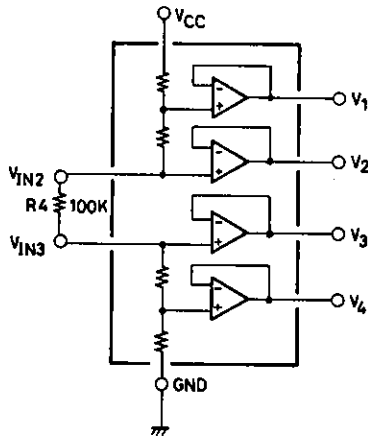
**Package Dimensions 3032B**

(unit: mm)

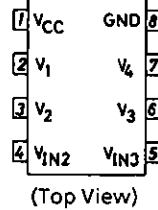


# LA5311M

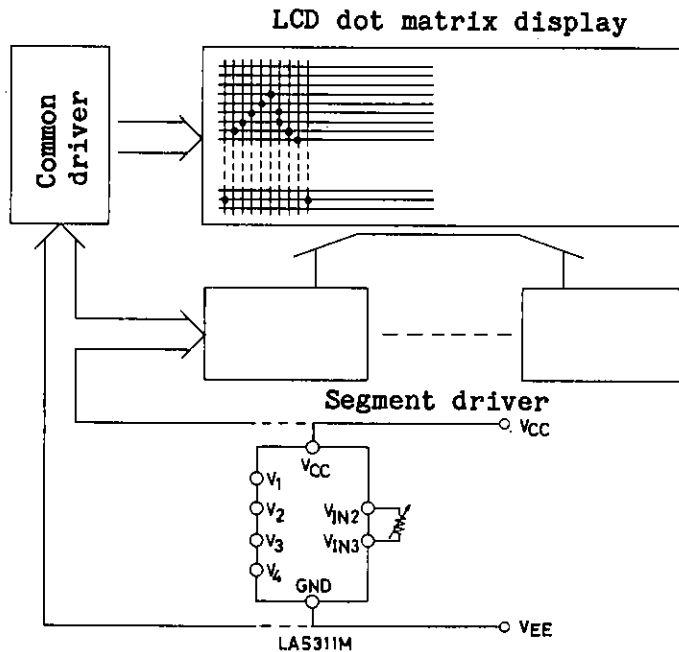
## Equivalent Circuit



## Pin Assignment



## Sample Application Circuit



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