

SANYO	No.3177A	LA5640N
	Voltage Regulator for LCD	

The LA5640N is a voltage regulator IC for use in LCD-used sets as well as desk-top calculators. This IC, designed for LSI which drives LCD, regulates LCD driving voltage of LSI according to the temperature characteristic of LCD so that the variations in temperature cause no shading of LCD.

Features

- Small quiescent current : 20 μ A typ.
- Small input-output voltage drop : 0.1V typ.
- Output voltage : 3.15V typ.
- Temperature coefficient of output voltage : 11.2mV/ $^{\circ}$ C typ.

Maximum Ratings at Ta = 25 $^{\circ}$ C

		unit
Maximum Supply Voltage	V _{CC} max	8.5 V
Maximum Output Current	I _O max	300 μ A
Allowable Power Dissipation	P _d max	300 mW
Operating Temperature	T _{opr}	-25 to +75 $^{\circ}$ C
Storage Temperature	T _{stg}	-55 to +125 $^{\circ}$ C

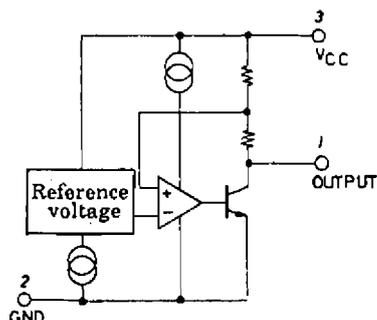
Recommended Operating Conditions at Ta = 25 $^{\circ}$ C

		unit
Supply Voltage	V _{CC}	4.0 to 7.0 V
Output Current	I _O	50 to 250 μ A

Operating Characteristics at Ta = 25 $^{\circ}$ C, V_{CC} = 6V

		min	typ	max	unit
Output Voltage 1	V _O V _{CC} = 4 to 7V, I _O = 50 to 250 μ A (Pins 3-1)	2.90	3.15	3.4	V
Output Voltage 2	H-V _O I _O = 50 to 250 μ A, Ta = 40 $^{\circ}$ C	2.7	2.95	3.2	V
Output Voltage 3	C-V _O I _O = 50 to 250 μ A, Ta = 0 $^{\circ}$ C	3.1	3.45	3.8	V
Reactive Voltage	V _C I _O = 250 μ A		0.1	0.3	V
Quiescent Current	I _{CC}	20	40		μ A
Line Regulation	Δ V _O		2		mV/V
Temperature Coefficient of Output Voltage	Δ V _O / Δ T	-11.2			mV/ $^{\circ}$ C

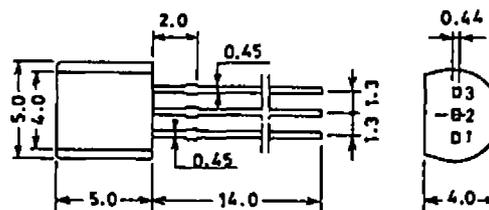
Equivalent Circuit



Package Dimensions

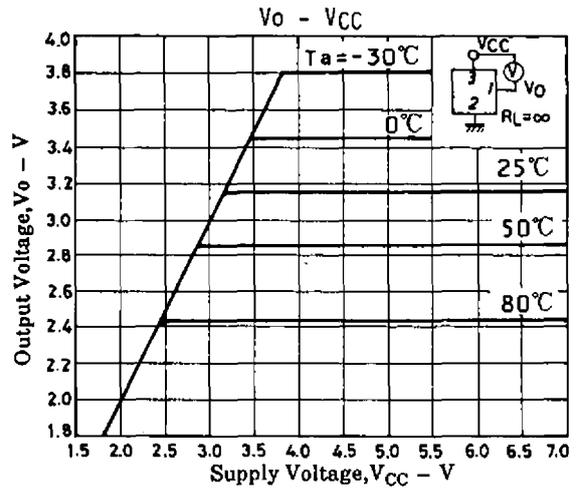
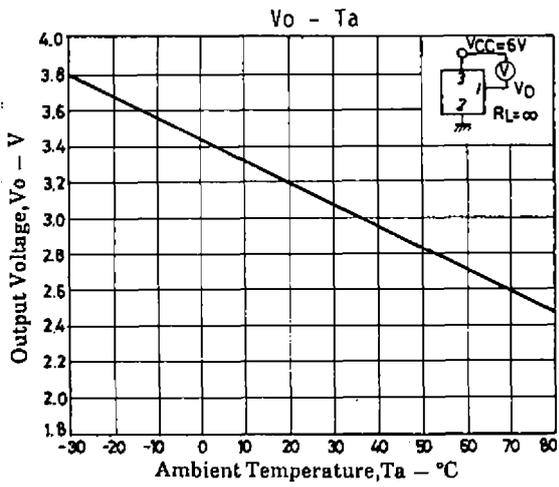
(unit: mm)

3131

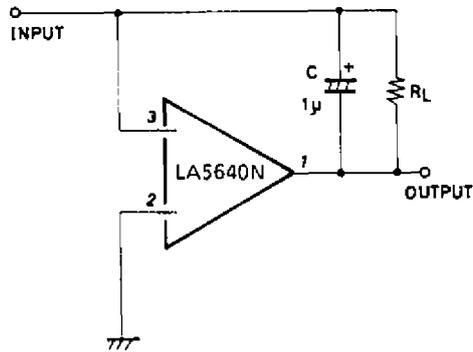


JEDEC: TO-92 3: V_{CC}
 EIAJ: SC-43 2: GND
 SANYO: NP 1: OUTPUT

LA5640N



Sample Application Circuit



Unit (capacitance: F)

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