No.1177B

LA5640

Monolithic Linear IC

VOLTAGE REGULATOR FOR LCD

The LA5640 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 : 20uA typ.
- Small input-output voltage drop : 0.1V typ.
- Output voltage : 3.15V typ.
- Temperature coefficient of output voltage : 11.2mV/°C typ.

Maximum Ratings at T_a=25°C

			unit
Maximum Supply Voltage	V_{CC}max	8.5	V
Maximum Output Current	$I_O$max	300	uA
Allowable Power Dissipation	$P_d$max	300	mW
Operating Temperature	Topg	-25 to +75	°C
Storage Temperature	Tstg	-55 to +125	°C

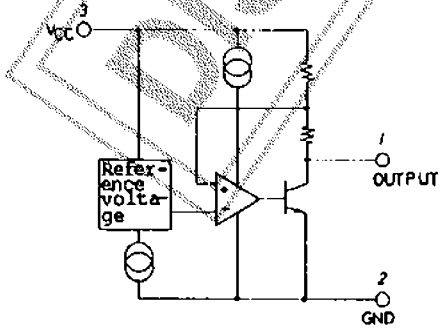
Recommended Operating Conditions at T_a=25°C

			unit
Supply Voltage	V_{CC}	4.0 to 7.0	V
Output Current	I_O	50 to 250	uA

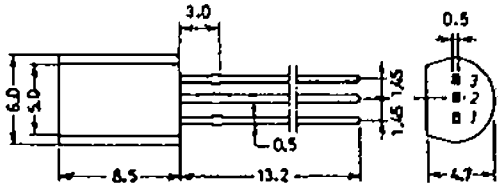
Operating Characteristics at T_a=25°C, V_{CC}=6V

			min	typ	max	unit
Output Voltage	V_O (Pins 3-1)	V_{CC}=4 to 7V, I_O=50 to 250uA	2.90	3.15	3.4	V
Output Voltage (40°C)	H-V_O	I_O=50 to 250uA	2.7	2.95	3.2	V
Output Voltage (0°C)	C-V_O	I_O=50 to 250uA	3.1	3.45	3.8	V
Reactive Voltage	V_C	I_O=250uA		0.1	0.3	V
Quiescent Current	I_{CC}			20	40	uA
Line Regulation	ΔV_O			2		mV/V
Temperature Characteristic of Output Voltage	$\Delta V_O/\Delta T$			-11.2		mV/°C

Equivalent Circuit



Case Outline 3039-S3TR
(unit:mm)



EIAJ: SC-51
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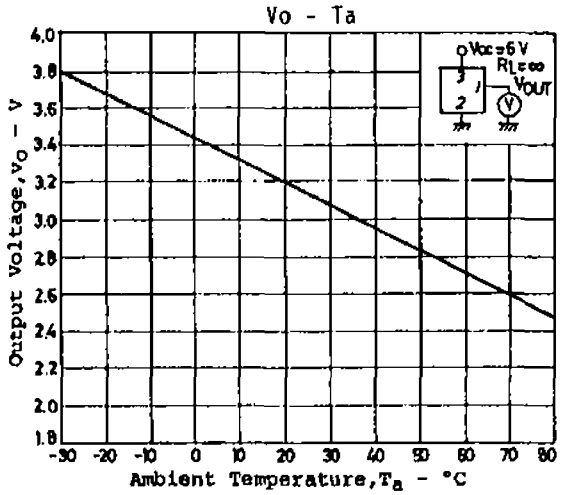

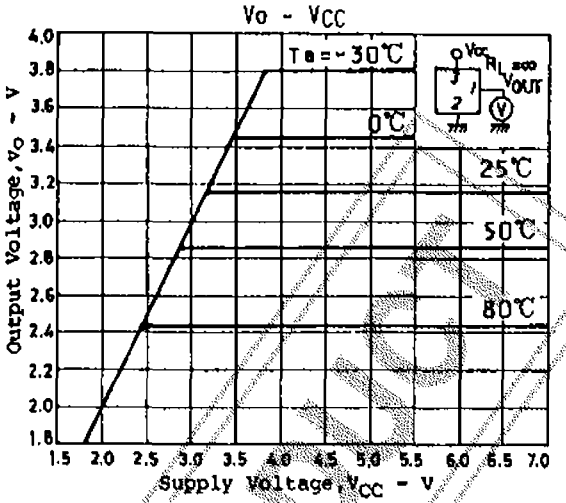

Sample Application Circuit