


LC5813C	c-mos LSI	CIRCUIT DRAWING No.100B
SINGLE-CHIP 4-BIT MICROCOMPUTER WITH LCD DRIVER		 3026B

The LC5813C is a C MOS 4-bit microcomputer that operates on low voltage, low current and contains an LCD driver. It also contains a 4-bit parallel processing ALU, a program memory ROM, a data memory RAM, a 4-bit serial port, abundant LCD segment outputs, abundant I/O ports, a prescaler, and a 32.768kHz crystal oscillator.

It is especially suited for use in electronic tuning system, multifunctional telephone, camera, speech synthesis LSI, equipment control applications.

Hardware Features

- Supply voltage: 3.0V typ.
- On-chip CR oscillator (C, R are connected externally.)
- On-chip crystal oscillator for time-keeping (A 32.768kHz crystal is connected externally.)
- On-chip 15 bit divider for time-keeping.
- On-chip 4bit serial port.
- On-chip 8-bit programmable timer.
- Abundant output pins for LCD panel drive (24 pins)

Drivable LCD panel	Number of drivable LCD segments
1/2 bias 1/2 duty	48 segments
Static	24 segments
- Abundant input/output pins
 - Input-only: 2 ports/8 pins
 - Input/output-common ports: 3 ports/12 pins (One of 3 ports is also used for serial port.)
 - Control output pins: 5 pins
- Possible to use LCD panel drive output pins as output-only ports (mask option).
- Initial reset pin.
- ROM: 2048 x 16 bits
- RAM: 152 x 4 bits
- Cycle time: 40usec.
- Shipping style: QIP64 (or chip)

Software Features

- Powerful instruction set: 121 instructions.
- 8-level subroutine nesting (also used for interrupt).
- External interrupt function.
- Possible to use the whole RAM area as working register (bank-selectable).
- Halt function.
- Direct addressing.
- All instructions: 1-step operation.
- On-chip data pointer.