LM6402L, 6405L	n channel e/d mos LSI	CIRCUIT DRAWING No.1001

4-BIT SINGLE-CHIP MICROCOMPUTER

3014A   3025B

Features

LM6402L/6405L are 4-bit microcomputers fabricated on single chips using N channel MOS technology. They are designed for use in controller applications and contains ROM (2048 bytes (2K bytes) max.), RAM (128x4 bits max.), ALU, I/O ports, timer, clock generator, PLA, etc. in a single chip. 35 pins are available for I/O ports.

Features in hardware (Reduction in external parts)
- Single 4.5 to 9.5V supply, N channel E/D MOS
- Low power consumption
- LED driver-contained output ports (2 ports/8 pins)
- 24-character PLA
- Input/output common ports (7 ports/27 pins)
- Flexible output type (Open drain/pull-up resistor attached)
- Clock generator (R-C circuitry externally attached)
- Cycle time 20μs

- LM6402L and LM6405L are identical in all functions except ROM, RAM capacity.
- Input threshold voltage selectable (Normal/high threshold)
- Initial reset and external interrupt input pins containing Schmitt gate

Features in software (Effective use of ROM capacity)
- 4-level subroutine nesting
- Interrupt function (External/internal)
- Programmable timer with wide setting range (Timer, pulse count, pulse width measure)
- Powerful instruction set of 82 instructions
- Automatic page select
- LM6402L/LM6405L instructions compatible

LM6413E	n channel e/d mos LSI	CIRCUIT DRAWING No.1002

SINGLE-CHIP 4-BIT MICROCOMPUTER FOR USE IN CONTROL-ORIENTED APPLICATIONS

3029A

Hardware features (Reduction in external parts) [Identical to LM6416E except I_{DD}]
- Cycle time: 4 to 40μs
- Capable of interfacing direct with 15V (max) peripheral circuits.
- Clock generator (400kHz, 800kHz ceramic resonator or typ. 770kHz CR attached externally.)
- All output ports containing LED driver (5

ports/17 pins, I_{OL} = 10mA/V_{OL} = 1.5V).
- Input/output common ports (2 ports/8 pins).
- Single 5V (typ) supply and wide operating range (V_{DD} = 4.5 to 6.5V).
- Initial reset and external pseudo interrupt input pins containing Schmitt gate.

Software features (Effective use of ROM capacity) [Identical to LM6416E except ROM capacity, RAM capacity]
- 65 instructions compatible with LM6402/05.
- 2-level subroutine nesting.
- Pseudo interrupt function (External/internal).

- Programmable timer with wide setting range.
- Automatic page select.

Evaluation chip
- Evaluation chip LM6498 and piggyback LM64PG98 are available for use in the application development of the LM6413E.

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