M37451E4DXXXSP/FP
M37451E8DXXXSP/FP

PROM VERSION of
M37451M4DXXXSP/FP, M37451M8DXXXSP/FP

DESCRIPTION

The M37451E4DXXXSP/FP is a single-chip microcomputer designed with CMOS silicon gate technology. It is housed in a 64-pin shrink plastic molded DIP or an 80-pin plastic molded QFP (0.8mm pitch). The features of this chip are similar to those of the M37451M4DXXXSP/FP except that this chip has a 8192 bytes PROM built-in. This single-chip microcomputer is useful for office automation appliances and consumer appliance controllers.

In addition to its simple instruction sets, the PROM, RAM and I/O addresses are placed on the same memory map to enable easy programming. It also has a unique feature that enables it to be used as a slave microcomputer.

Apart from the expansion in operating temperature range and consequent differences in electrical characteristics (Note), functions are the same as those of the M37451E4-XXXSP/FP.

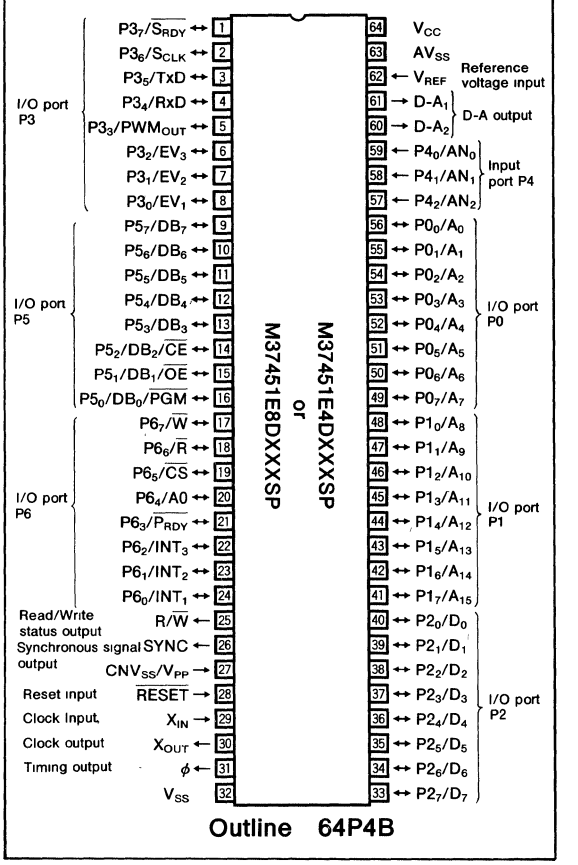
The differences between the M37451E4DXXXSP/FP and M37451E8DXXXSP/FP are as shown below.

Type name	ROM size	RAM size
M37451E4DXXXSP/FP	8192 bytes	256 bytes
M37451E8DXXXSP/FP	16384 bytes	384 bytes

The number of analog input pins for the 80-pin model (FP version) is different from the 64-pin model (SP version). In addition, the 80-pin model has special pins for $\overline{RD}$, $\overline{WR}$, $RESET_{OUT}$, DAV_{REF}, ADV_{REF}, AV_{CC}, and the 64-pin model has a special V_{REF} pin.

Note : The maximum value of supply current is 20mA.
All other values are the same as that of M37451E4-XXXSP/FP.

PIN CONFIGURATION (TOP VIEW)



Outline 64P4B

FEATURES

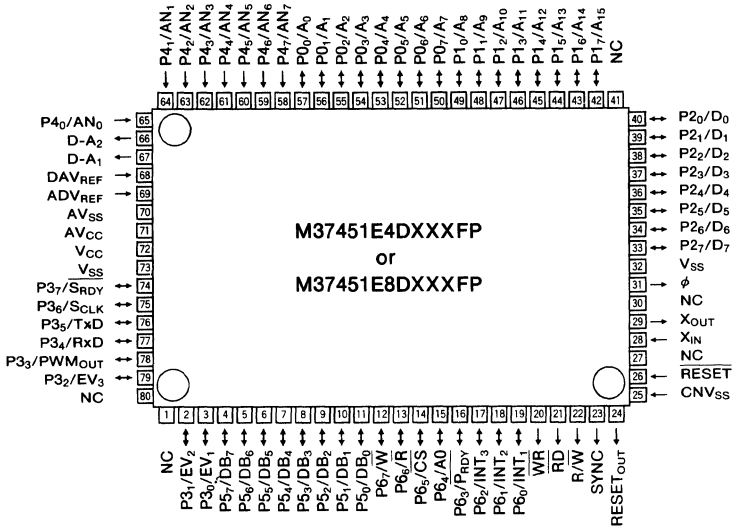
- Number of basic instructions 71
  69 MELPS 740 basic instructions + 2 multiply/divide instructions
- Instruction execution time
  (minimum instructions at 12.5 MHz frequency) ... 0.64μs
- Single power supply ..... 5V±5%
- Power dissipation normal operation mode
  (at 12.5 MHz frequency) 40mW
- Subroutine nesting ..... 96 levels max.
- Interrupt ..... 15 events
- Master CPU bus interface ..... 1 byte
- 16-bit timer 3
- 8-bit timer (Serial I/O use) 1
- Serial I/O (UART or clock synchronous) 1
- A-D converter (8-bit resolution) ..... 3 channels (DIP)
  8 channels (QFP)
- D-A converter (8-bit resolution) ..... 2 channels
- PWM output with 8-bit prescaler
  (Either resolution 8-bit or 16-bit is software selectable) ... 1
- Programmable I/O ports
  (Ports P0, P1, P2, P3, P5, P6) 48
- Input port (Port P4) ..... 3 (DIP), 8 (QFP)
- Output ports (Ports D-A_1, D-A_2) 2
- PROM (equivalent to the M5L27256)
  program voltage 12.5V
- Operating temperature ..... −40 to 85℃

APPLICATION

Industrial machinery

MITSUBISHI ELECTRIC

PIN CONFIGURATION (TOP VIEW)



Outline 80P6N

NC : No connection