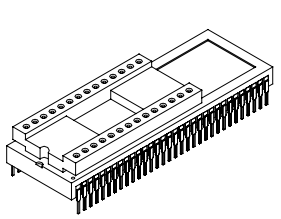
SONY

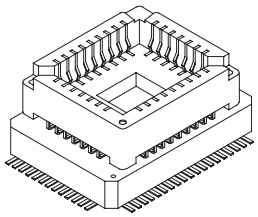
CXP5080

CMOS 4-bit Single Chip Microcomputer

Piggyback/ evaluator type

64 pin PSDIP (Ceramic) 64 pin PQFP (Ceramic)





Description

CXP5080 is a CMOS 4-bit single chip microcomputer of piggyback/evaluator combined type which has been developed for functional evaluation of the CXP5084/5086.

Features

- Instruction cycle 3.8µs/4.19MHz (CXP5080)
  1.9µs/4.19MHz (CXP5080H)
- ROM capacity Maximum 8K bytes (EPROM 27C64, LCC/DIP type 27C64)
- RAM capacity 400 × 4 bits (Including stack, display area)
- 32 general purpose I/O ports
- 16 large current output ports
- LCD controller/driver (Enables to direct drive)
  — Enables to specify the segment output of 24, 20 and 16 optionally
  — Enables to select program of the duty, 1/2, 1/3 and 1/4
  — 1/3 bias
- 2 external interruption input pins
- 8-bit timer, 8-bit timer/event counter and 18-bit time base timer, independently controlled
- Arithmetic and logical operations possible between the entire RAM area, I/O area and the accumulator by means of memory mapped I/O
- Reference to the entire ROM area is possible with the table look-up instruction
- 2 kinds of power down modes of sleep and stop
- Power on reset circuit (mask option)
- The oscillation circuit may be optionally specified as the crystal oscillation type or the CR oscillation type
- 64-pin ceramic SDIP/QFP

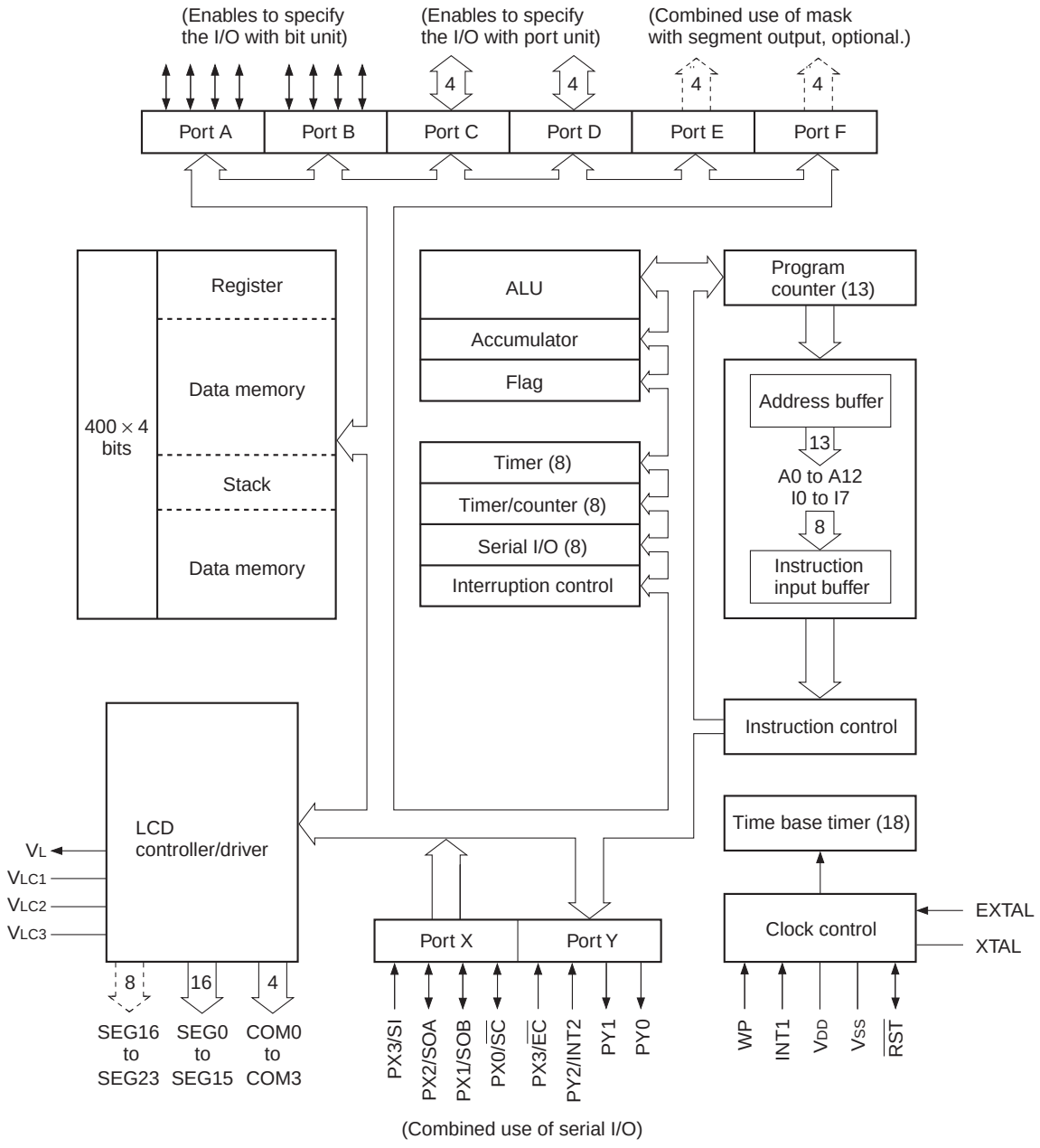
Note) Mask options are determined according to the CXP5080 category.
For details refer to the product list.

Structure

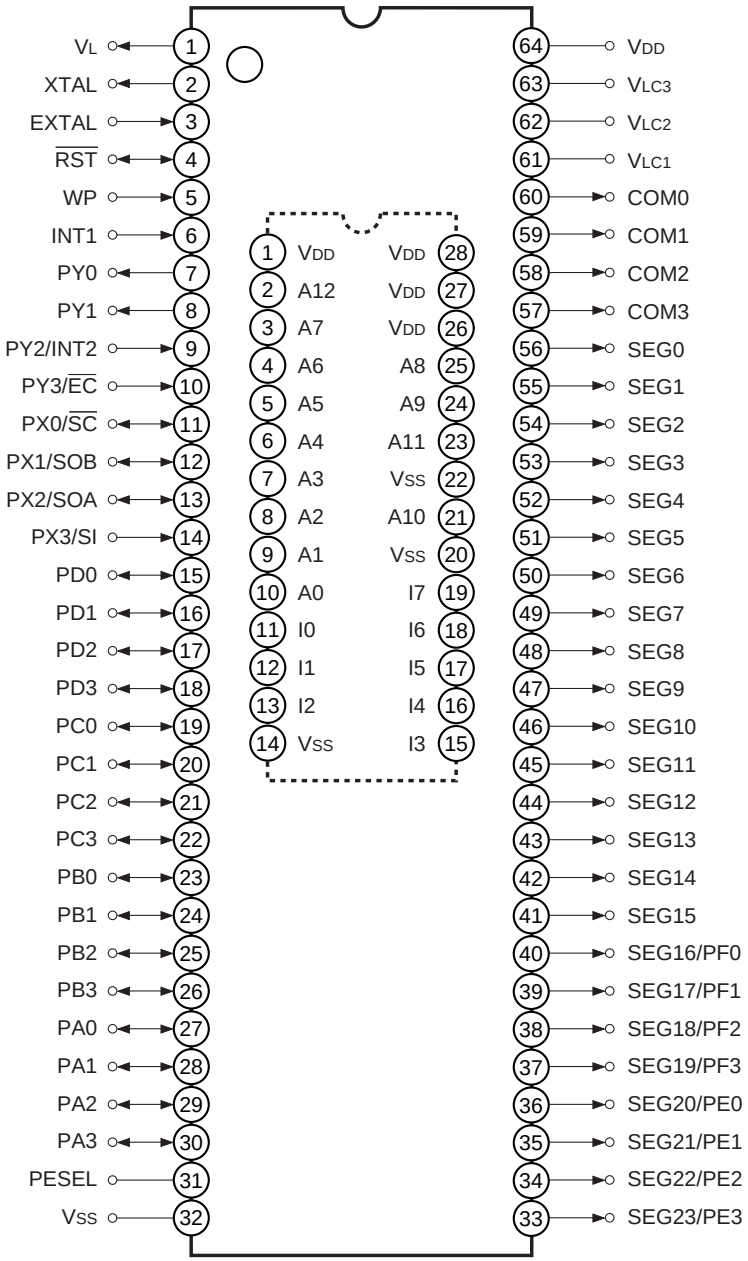
Silicon gate CMOS IC

E61113A7Z-PS

Block Diagram

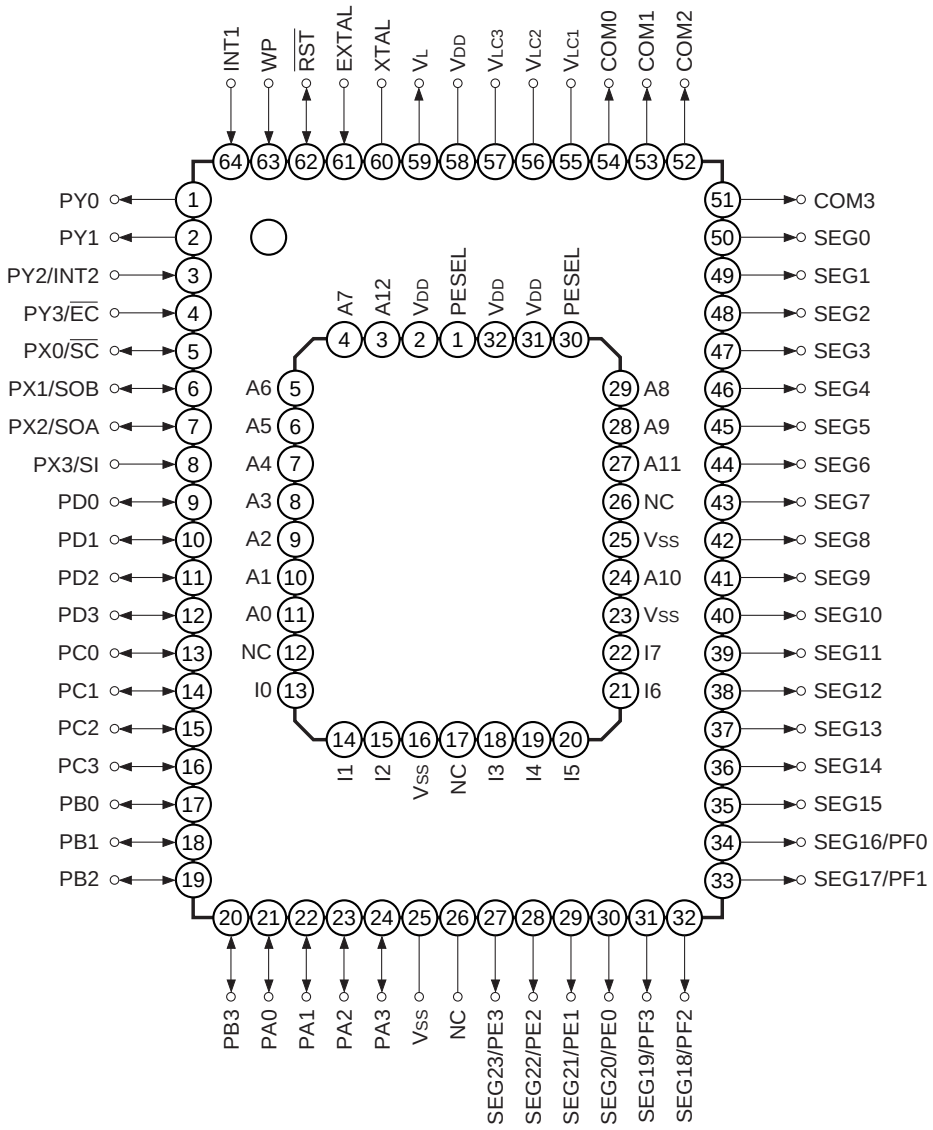


Pin Assignment 1 (Top View) 64 pin PSDIP Package



Note) PESEL pin serves to switch the I/O signal of the socket on top of the package from interface with the evaluator (Eva mode) to interface with EPROM (Piggyback mode).
Setting PESEL pin to H Ievel brings Eva mode to enable the connection with the evaluator. Setting it to L level brings piggyback mode to enable the mounting of EPROM. For QFP piggyback, it is necessary only to exchange EVACAP (or EPROM) for EPROM (or EVACAP) and no other special measures are required.

Pin Assignment 2 (Top View) 64 pin PQFP Package



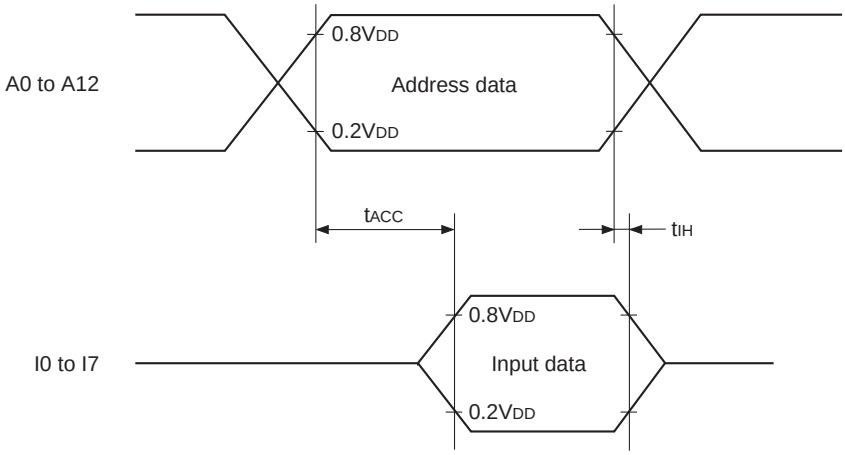
Note 1) PESEL pin serves to switch the I/O signal of the socket on top of the package from interface with the evaluator (Eva mode) to interface with EPROM (Piggyback mode).
Setting PESEL pin to H Ievel brings Eva mode to enable the connection with the evaluator. Setting it to L level brings piggyback mode to enable the mounting of EPROM. For QFP piggyback, it is necessary only to exchange EVACAP (or EPROM) for EPROM (or EVACAP) and no other special measures are required.

Note 2) Do not make any connections to NC pin.

EPROM read timing

(Ta = –20 to +75°C, V_{DD} = 4.5 to 5.5V, V_{SS} = 0V reference)

Item	Symbol	Pin	Min.	Max.	Unit
Address → Data input delay time	t_{ACC}	A0 to A12 I0 to I7		300	ns
Address → input holding time	t_{IH}	A0 to A12 I0 to I7	0		ns



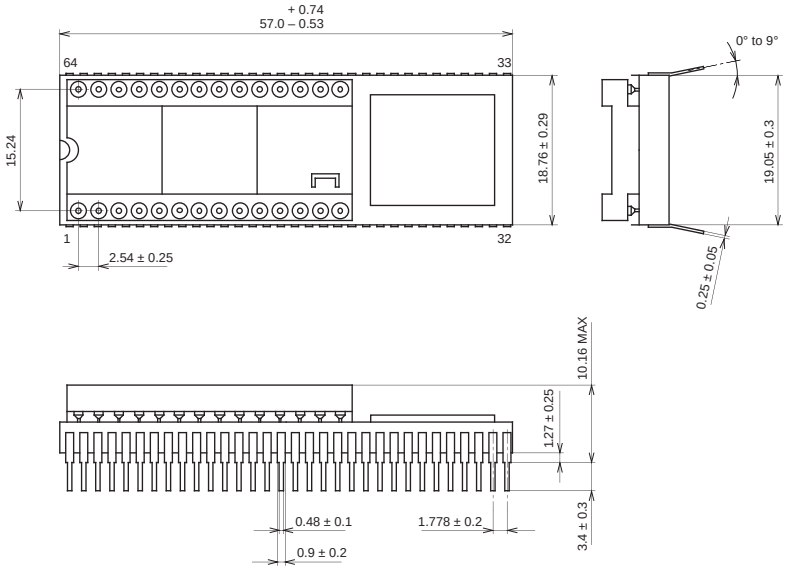
Products List

Optional item	Mask ROM CXP5086	CXP5080HU02AS CXP5080HU02AQ	CXP5080HU03AS CXP5080HU03AQ	CXP5080HU04AS CXP5080HU04AQ
Package	64-pin plastic SDIP/QFP	64-pin ceramic PSDIP/PQFP	64-pin ceramic PSDIP/PQFP	64-pin ceramic PSDIP/PQFP
ROM capacity	6K byte	EPROM 8K byte	EPROM 8K byte	EPROM 8K byte
Speed	Standard/High speed	High speed	High speed	High speed
Oscillation type	Crystal/CR	Crystal	Crystal	Crystal
Segment output	16/20/24	20	24	16
Output type	Tri-state/ Pull-up resistance/ Open drain	Tri-state	Tri-state	Tri-state
PY0 and PY1 output type	Pull-up resistance/ Inverter	Pull-up resistance	Pull-up resistance	Pull-up resistance
Output state during standby	Holding state/Hi-Z	Hi-Z	Hi-Z	Hi-Z
Pull-up resistance of reset pin	Existent/non-existent	Existent	Existent	Existent
Incorporated power on reset circuit	Existent/non-existent	Existent	Existent	Existent
SOA pin output	Normal/Input	Input	Input	Input
SOB pin output	Normal/Input	Normal	Normal	Normal

Note) All of the above products are combined chips of piggyback and evaluator.

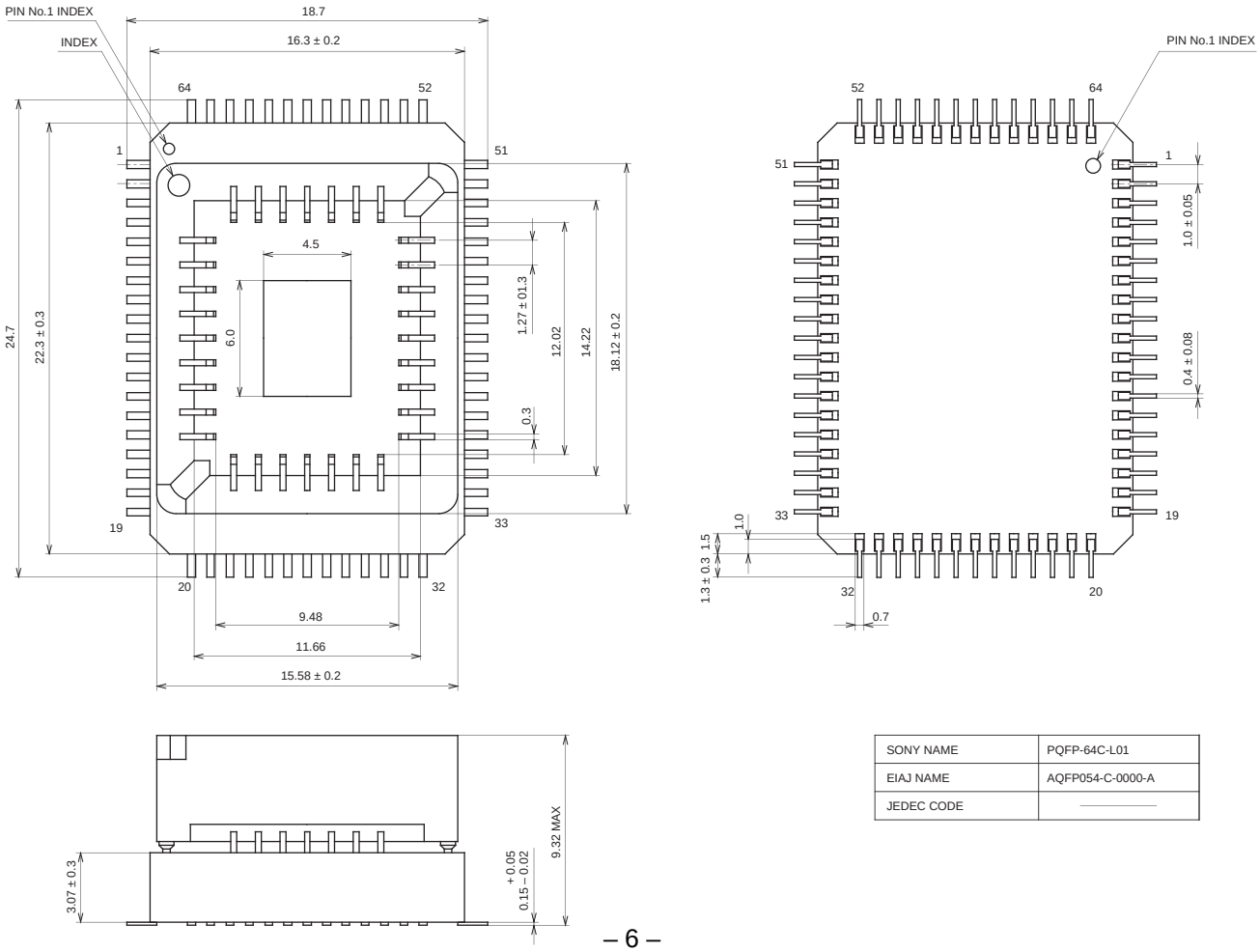
Package Outline Unit: mm

64PIN PSDIP (CERAMIC) 750mil



SONY NAME	PSDIP-64C-021
EIAJ NAME	ADIP064-C-0750-AF
JEDEC CODE	

64PIN PQFP (CERAMIC)



SONY NAME	PQFP-64C-L01
EIAJ NAME	AQFP054-C-0000-A
JEDEC CODE	