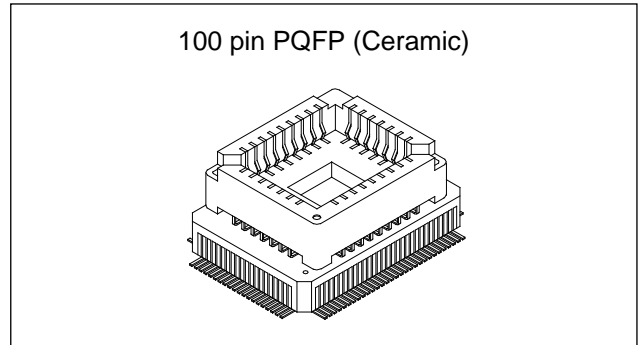


CMOS 8-bit Single Chip Microcomputer

**Piggyback/
evaluator type**

Description

The CXP82400A is a CMOS 8-bit single chip micro-computer of piggyback/evaluator combined type, which is developed for evaluating the function of the CXP82432A/82440A.



Features

- Wide-range instruction system (213 instructions) to cover various types of data
 - 16-bit operation/multiplication and division/Boolean bit operation instructions
- Minimum instruction cycle 400ns at 10MHz operation
 122µs at 32kHz operation
- Applicable EPROM LCC type 27C512 (Maximum 40K bytes are available.)
- Incorporated RAM capacity 1120 bytes (Including fluorescent display data area)
- Peripheral functions
 - A/D converter 8-bit, 8-channel, successive approximation method
 (Conversion time of 32µs/10MHz)
 - Serial interface Incorporated 8-bit, 8-stage FIFO
 (Auto transfer for 1 to 8 bytes), 1 channel
 - Timers 8-bit clock sync type, 1 channel
 8-bit timer
 8-bit timer/counter
 19-bit time base timer
 16-bit capture timer/counter
 32kHz timer/counter
 - Fluorescent display panel controller/driver
 Maximum of 384 segments display possible
 1 to 16-digit dynamic display
 Dimmer function
 High voltage drive output (40V)
 On-chip pull-down resistor (Mask option)
 Hardware key scan function
 (Maximum 16 × 8 key matrix compatible)
 - Remote control receiving circuit 8-bit pulse measurement counter with on-chip 6-stage FIFO
 - PWM output 14 bits, 1 channel
 - CTL duty detection circuit
 - High-speed output circuit RTG 4pins
- Interruption 19 factors, 15 vectors, multi-interruption possible
- Standby mode SLEEP/STOP
- Package 100-pin ceramic QFP

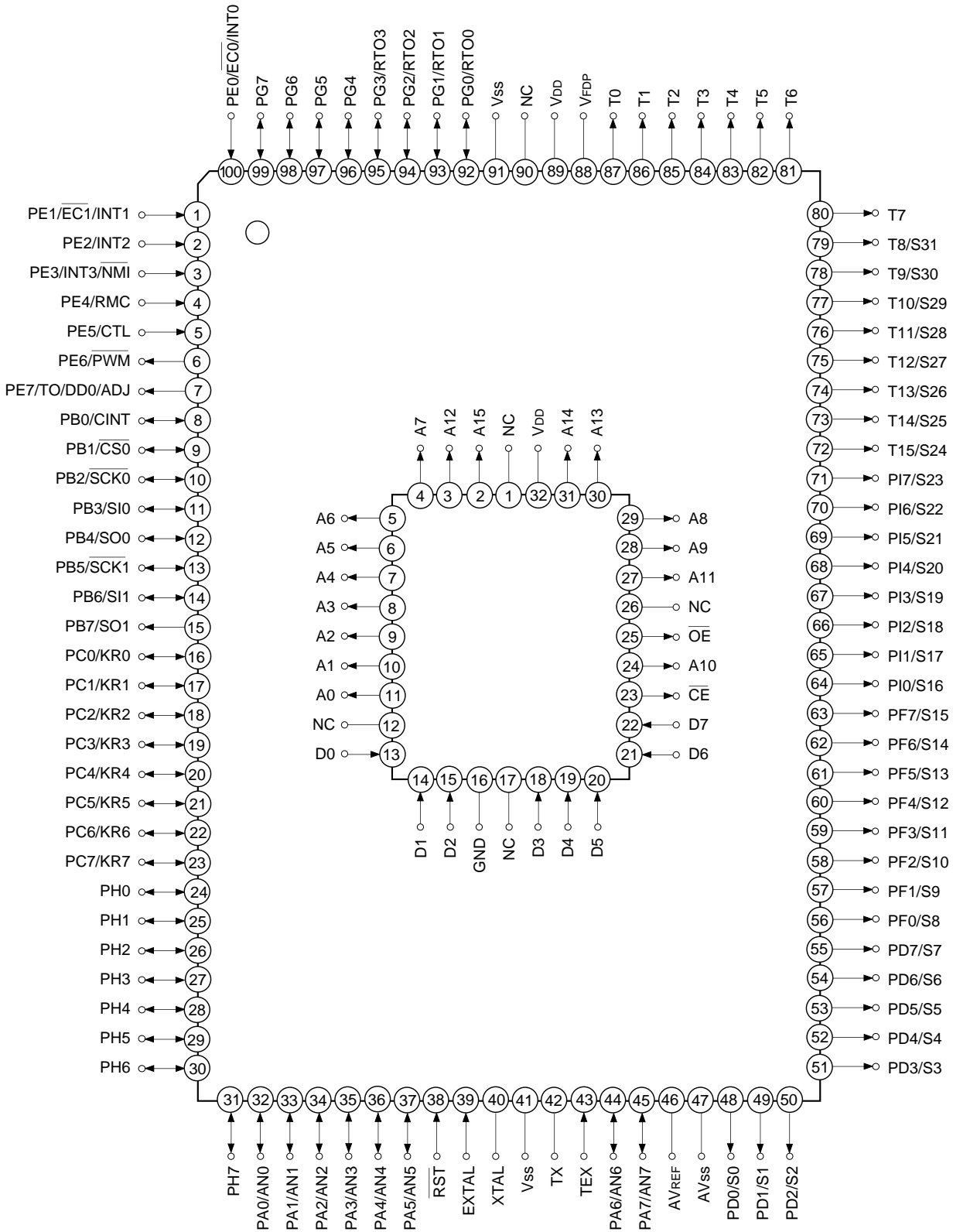
Note) Mask option depends on the type of the CXP82400A. Refer to the Products List for details.

Structure

Silicon gate CMOS IC

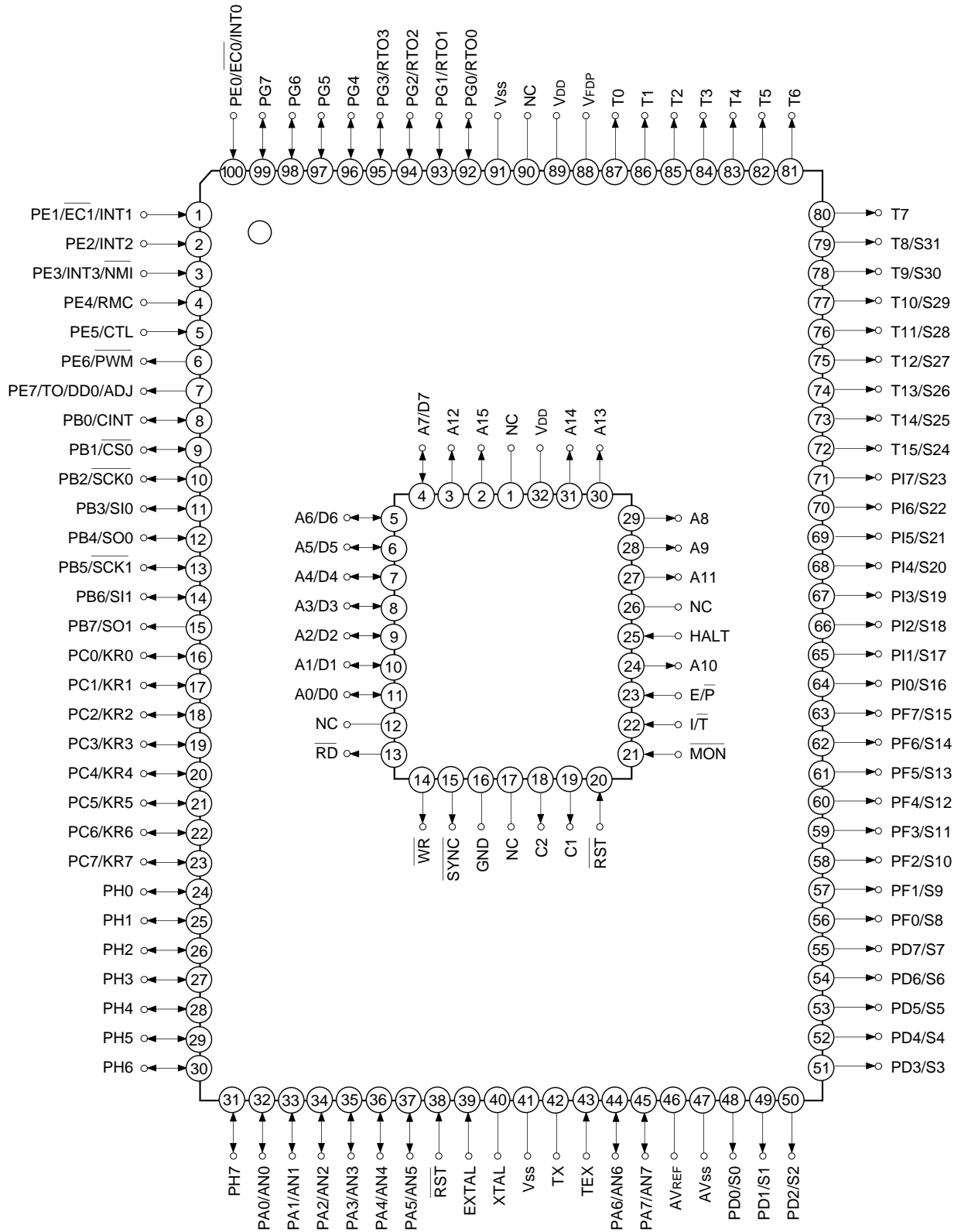
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Pin Configuration in Piggyback Mode



- Note)**
1. NC (Pin 90) is always connected to V_{DD}.
 2. V_{ss} (Pins 41 and 91) are both connected to GND.

Pin Configuration in Evaluator Mode

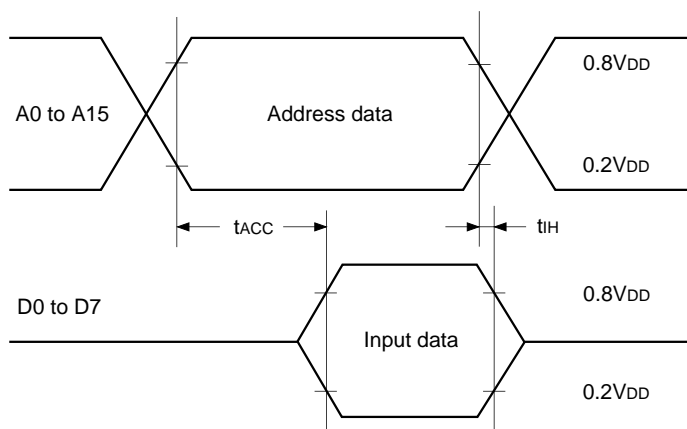


Note) 1. NC (Pin 90) is always connected to VDD.
 2. Vss (Pins 41 and 91) are both connected to GND.

EPROM Read Timing

($T_a = -20$ to $+75^\circ\text{C}$, $V_{cc} = 4.5$ to 5.5V , $V_{ss} = 0\text{V}$ reference)

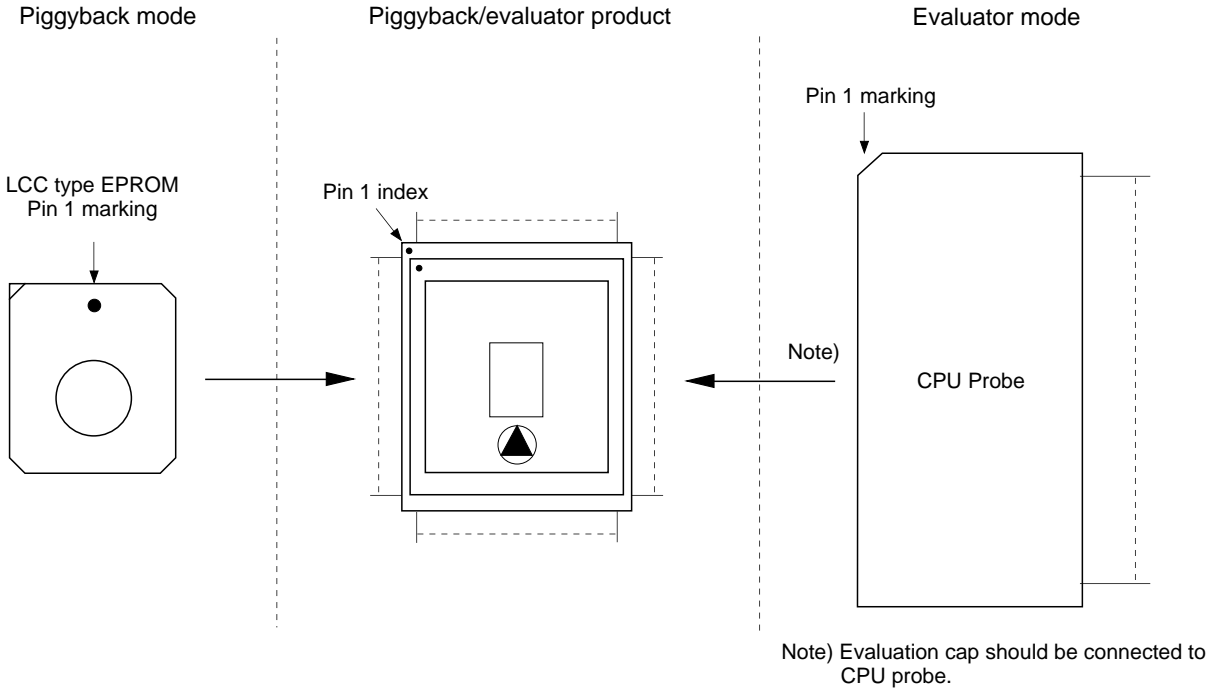
Item	Symbol	Pins	Min.	Max.	Unit
Address → Data Input delay time	t_{ACC}	A0 to A15 D0 to D7		120	ns
Address → Data Hold time	t_{IH}	A0 to A15 D0 to D7	0		ns



Products List

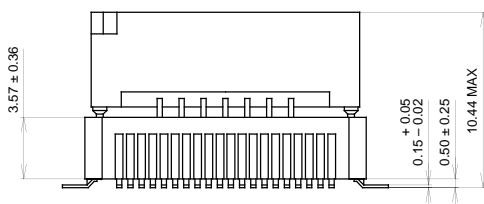
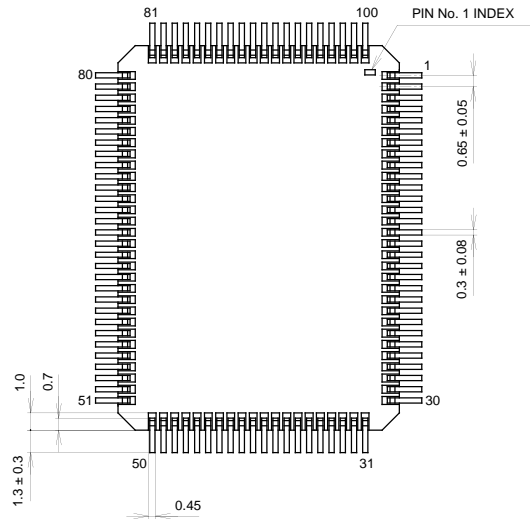
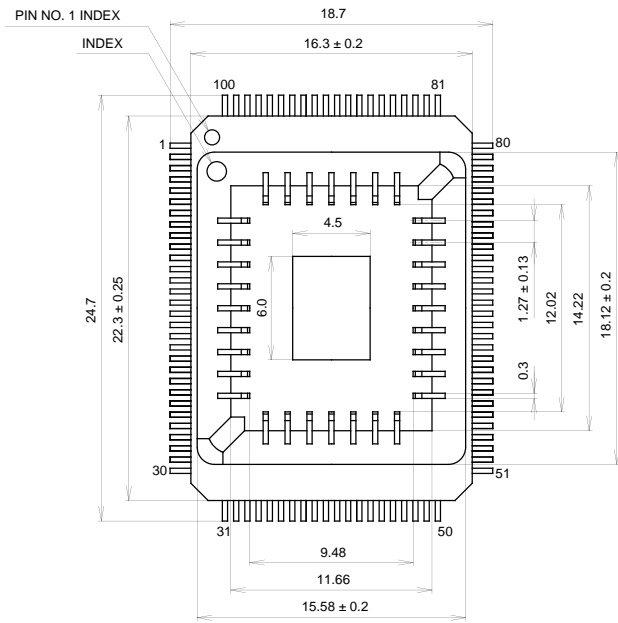
Option item	Products		
	Mask type		Piggyback/evaluator type
	CXP82432A	CXP82440A	CXP82400A-U01Q
Package	100-pin plastic QFP		100-pin ceramic PQFP
ROM capacitance	32K bytes	40K bytes	EPROM 40K bytes
Pull-up resistance for reset pin	Existent/Non-existent		Existent
Pull-down resistance for high voltage drive pin	Existent/Non-existent		Existent: T0 to T15/S24 Non-existent: PD0/S0 to PI7/S23

Piggyback mode/evaluator mode can be switched as shown below.



Package Outline Unit: mm

100PIN PQFP (CERAMIC)



PACKAGE STRUCTURE

SONY CODE	PQFP-100C-L01
EIAJ CODE	AQFP100-C-0000-A
JEDEC CODE	—

PACKAGE MATERIAL	CERAMIC
LEAD TREATMENT	GOLD PLATING
LEAD MATERIAL	42 ALLOY
PACKAGE WEIGHT	5.7g