

CMOS 8-bit Single Chip Microcomputer

Piggyback/
evaluator type**Description**

The CXP82900 is a CMOS 8-bit single chip micro-computer of piggyback/evaluator combined type, which is developed for evaluating the function of the CXP82940/82948/82952/82960.

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 250ns at 16MHz operation
 122μs at 32kHz operation
- Applicable EPROM LCC type 27C512 (Maximum 60K bytes are available.)
- Incorporated RAM capacity 2048 bytes (Including fluorescent display data area.)
- Peripheral functions
 - A/D converter 8-bit, 8-channel, successive approximation method (Conversion time of 20μs/16MHz)
 - Serial interface Incorporated buffer RAM (Auto transfer for 1 to 32bytes), 1 channel
 Incorporated 8-bit, 8-stage FIFO (Auto transfer for 1 to 8 bytes), 1 channel
 - Timer 8-bit timer
 8-bit timer/counter
 19-bit time base timer
 32kHz timer/counter
 - Fluorescent display panel controller/driver
 Maximum 196-segment display possible
 1 to 16-digit dynamic display
 Dimmer function
 High voltage drive output (40V)
 Pull-down function
 Hardware key scan function (Maximum 12 × 8 key matrix compatible)
 - I²C bus interface
 - Remote control transmission circuit
 Auto transmission for 1 to 32 bytes, restart function, carrier output function
 - Remote control reception circuit
 8-bit pulse measurement counter with on-chip 6-stage FIFO
- Interruption 16 factors, 15 vectors, multi-interruption possible
- Standby mode SLEEP/STOP
- Package 80-pin ceramic QFP

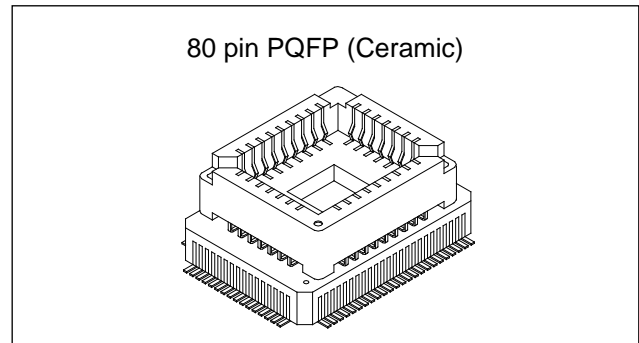
Note) Mask option depends on the type of the CXP82900. Refer to the Products List for details.

Structure

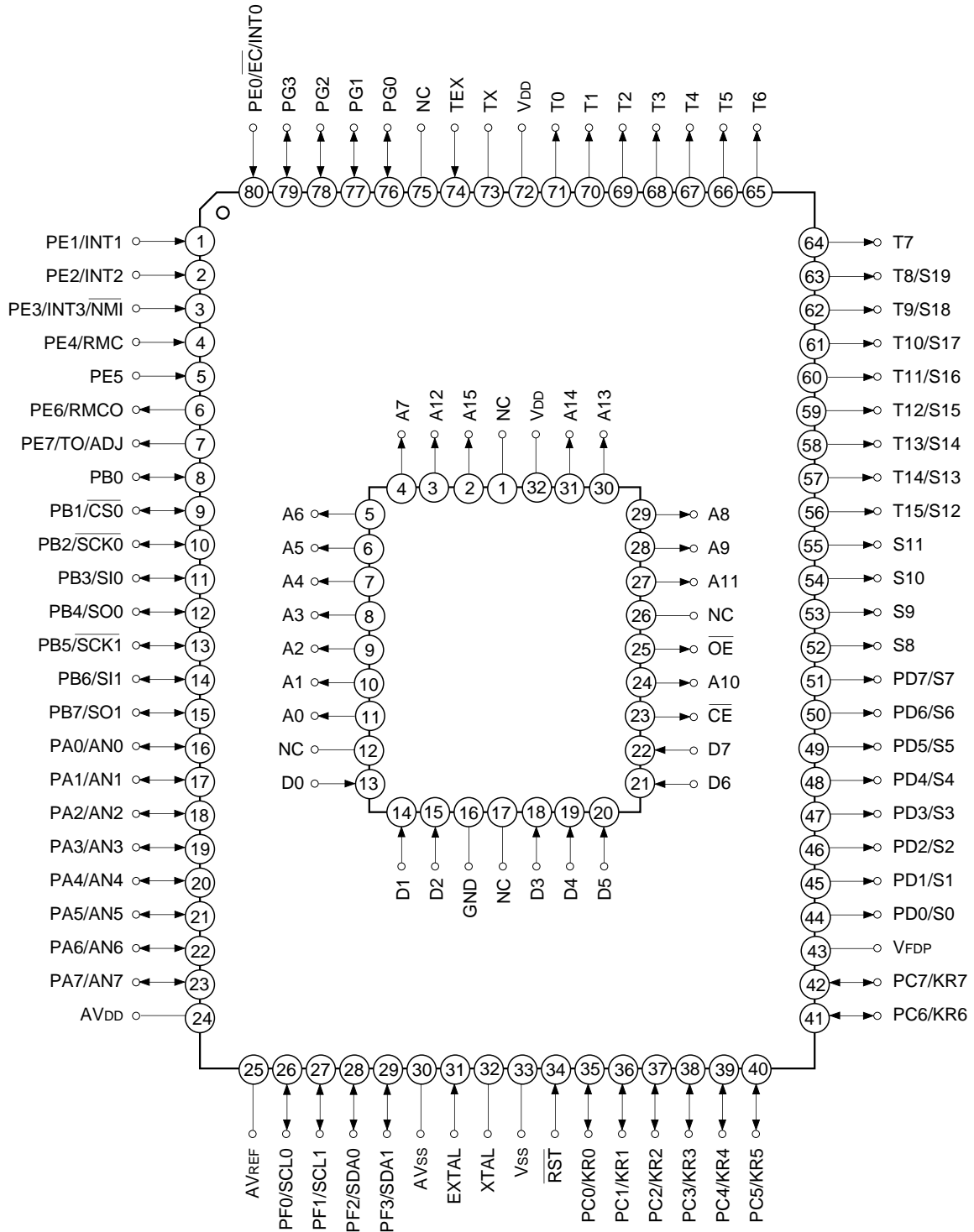
Silicon gate CMOS IC

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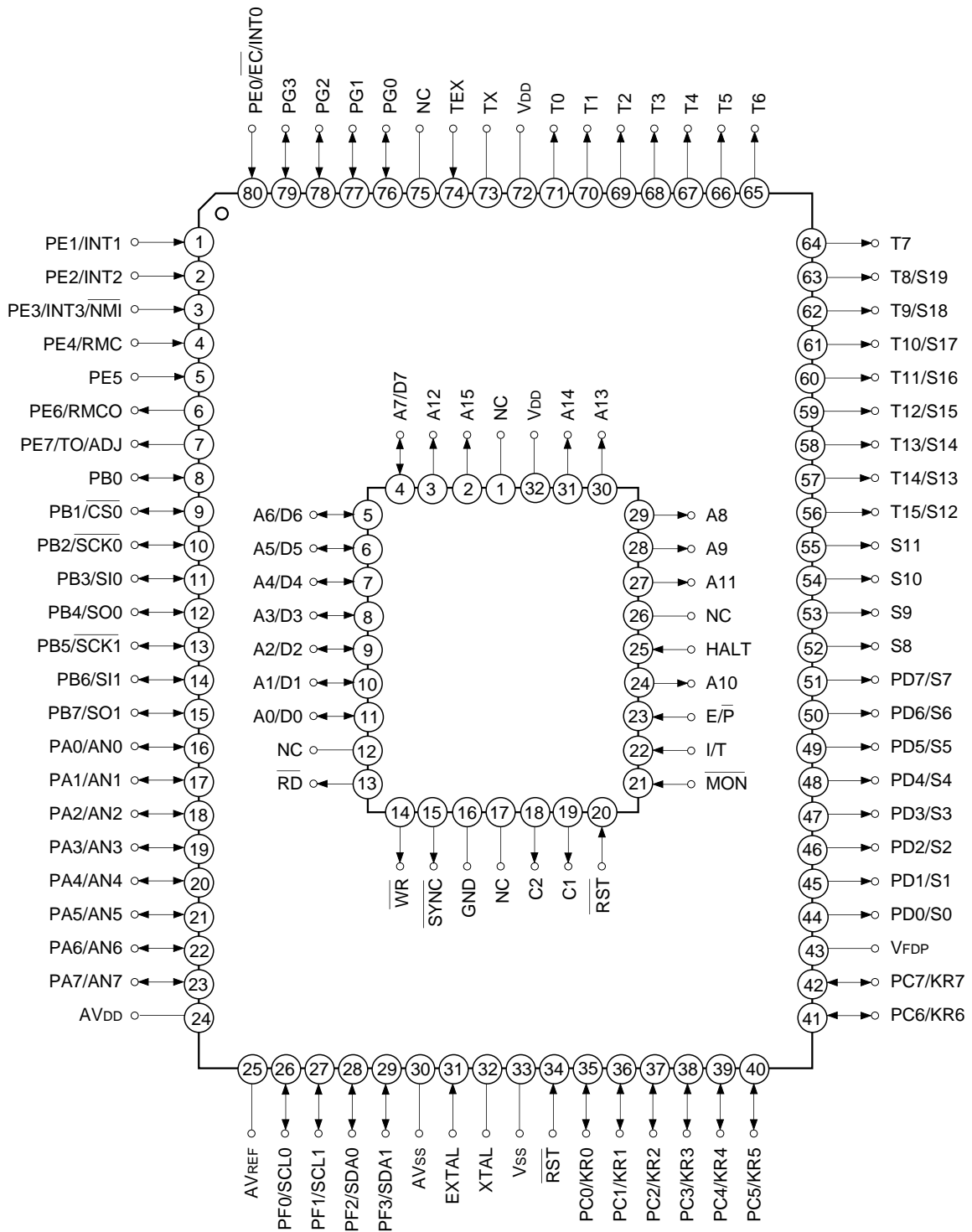


Pin Configuration in Piggyback Mode



Note) NC (Pin 75) is always connected to VDD.

Pin Configuration in Evaluator Mode

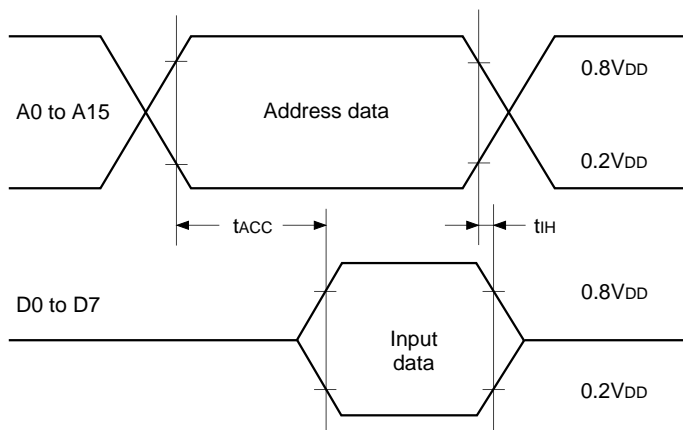


Note) NC (Pin 75) is always connected to VDD.

EPROM Read Timing

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

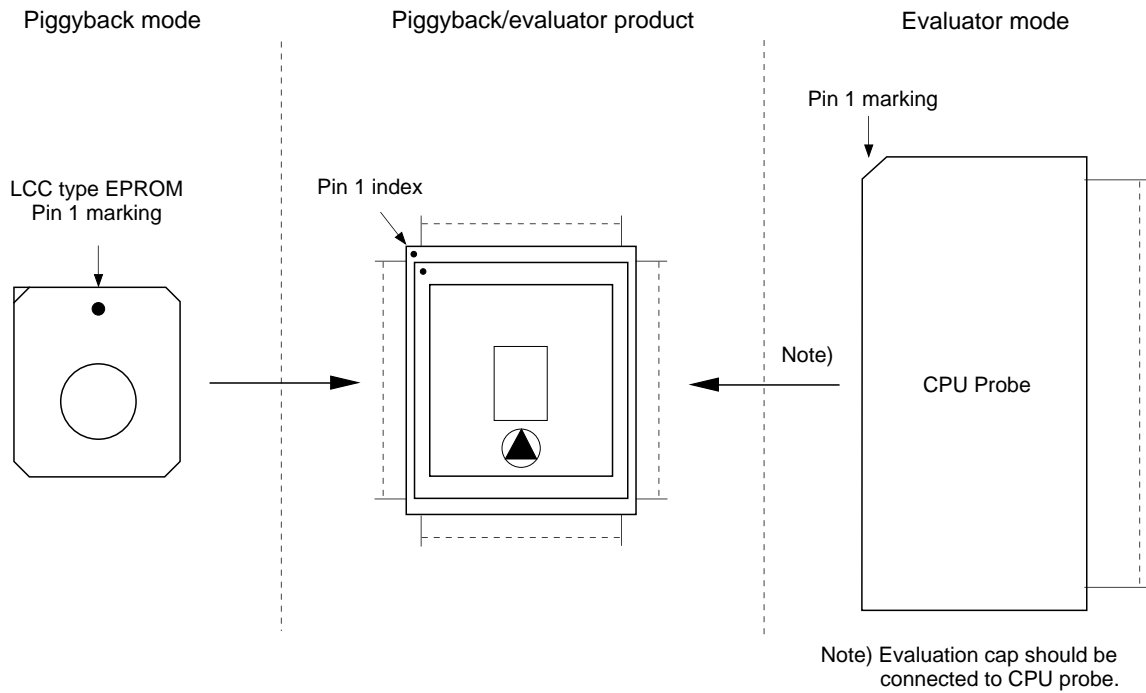
Item	Symbol	Pins	Min.	Max.	Unit
Address → Data Input delay time	t_{ACC}	A0 to A15 D0 to D7		75	ns
Address → Data Hold time	t_{IH}	A0 to A15 D0 to D7	0		ns



Products List

Option item	Products				
	Mask type				Piggyback/evaluator product
	CXP82940	CXP82948	CXP82952	CXP82960	CXP82900-U01Q
Package	80-pin plastic QFP				80-pin ceramic QFP
ROM capacitance	40K bytes	48K bytes	52K bytes	60K bytes	EPROM 60K 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 T7, S8 to T8/S19 Non-existent: PD0/S0 to PD7/S7

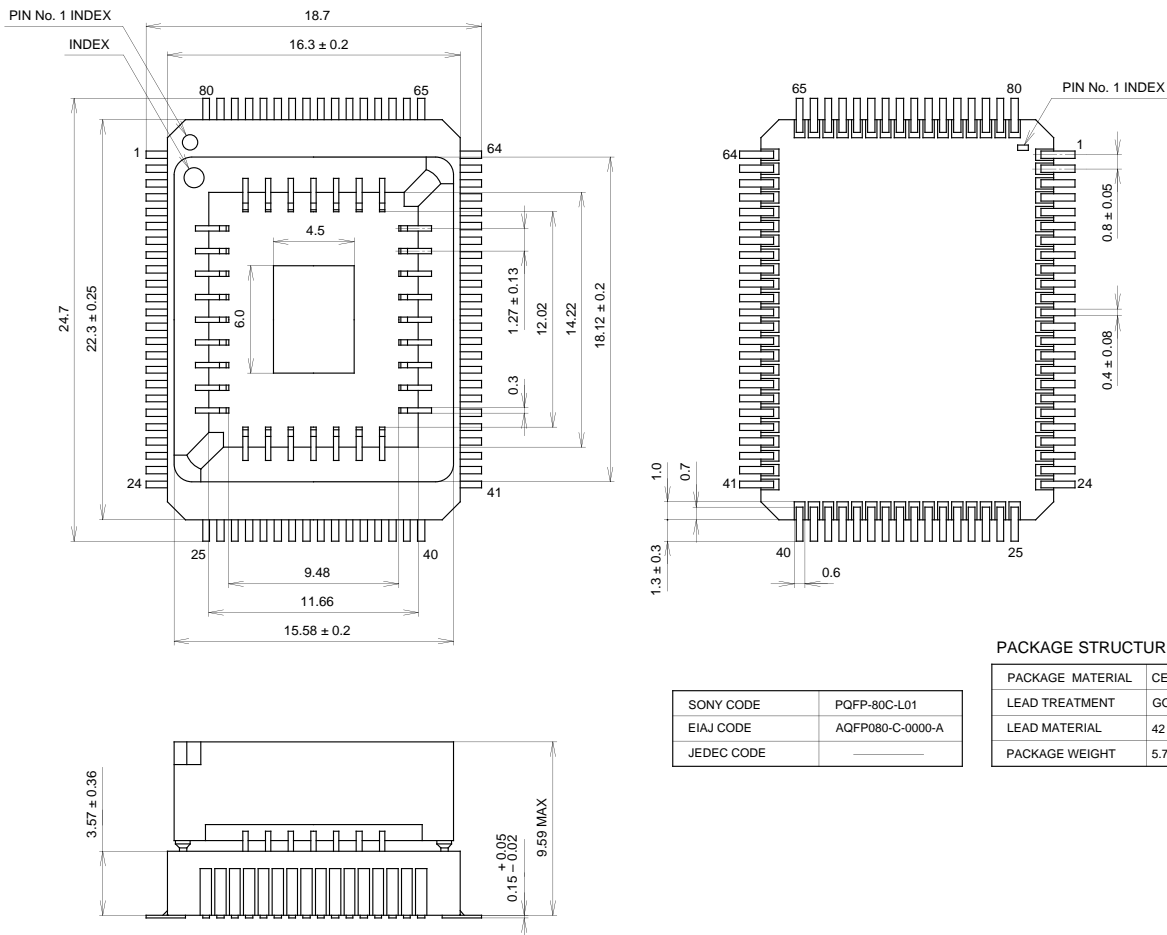
Piggyback mode/evaluator mode can be switched as shown below.



Package Outline

Unit: mm

80PIN PQFP (CERAMIC)





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