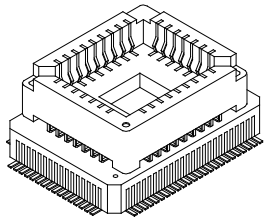
SONY

CXP84600

CMOS 8-bit Single Chip Microcomputer

Piggyback/ evaluator type

80 pin PQFP (Ceramic)



Description

The CXP84600 is a CMOS 8-bit single chip microcomputer of piggyback/evaluator combined type, which is developed for evaluating the function of the CXP84632/84640/84648.

Features

- A wide instruction set (213 instructions) which covers various types of data
  - — 16-bit operation/multiplication and division/ Boolean bit operation instructions
- Minimum instruction cycle: 250ns at 16MHz operation (4.5 to 5.5V)
  333ns at 12MHz operation (3.0 to 5.5V)
  122µs at 32kHz operation (2.7 to 5.5V)
- Applicable EPROM: LCC type 27C512 (Maximum 60K bytes are available.)
- Incorporated RAM capacity: 2048 bytes
- Peripheral functions
  - — A/D converter: 8 bits, 8 channels, successive approximation method (Conversion time of 20µs at 16MHz)
  - — Serial interface: Srart-stop synchronization (UART), 1 channel
    Incorporated buffer RAM (Auto transfer for 1 to 32 bytes), 1 channel
    Incorporated 8-bit, 10-stage FIFO (Auto transfer for 1 to 10 bytes), 1 channel
    8-bit clock synctype (MSB/LSB first selectable), 1 channel
  - — Timer: 8-bit timer, 8-bit timer/counter, 19-bit time base timer, 16-bit capture timer/counter, 32kHz timer/counter
  - — I^2C bus interface
  - — Remote control reception circuit: 8-bit pulse measurement counter, 6-stage FIFO
  - — PWM output circuit: 12 bits, 2 channels
- Interruption: 21 factors, 15 vectors, multi-interruption possible
- Standby mode: SLEEP/STOP
- Package: 80-pin ceramic PQFP

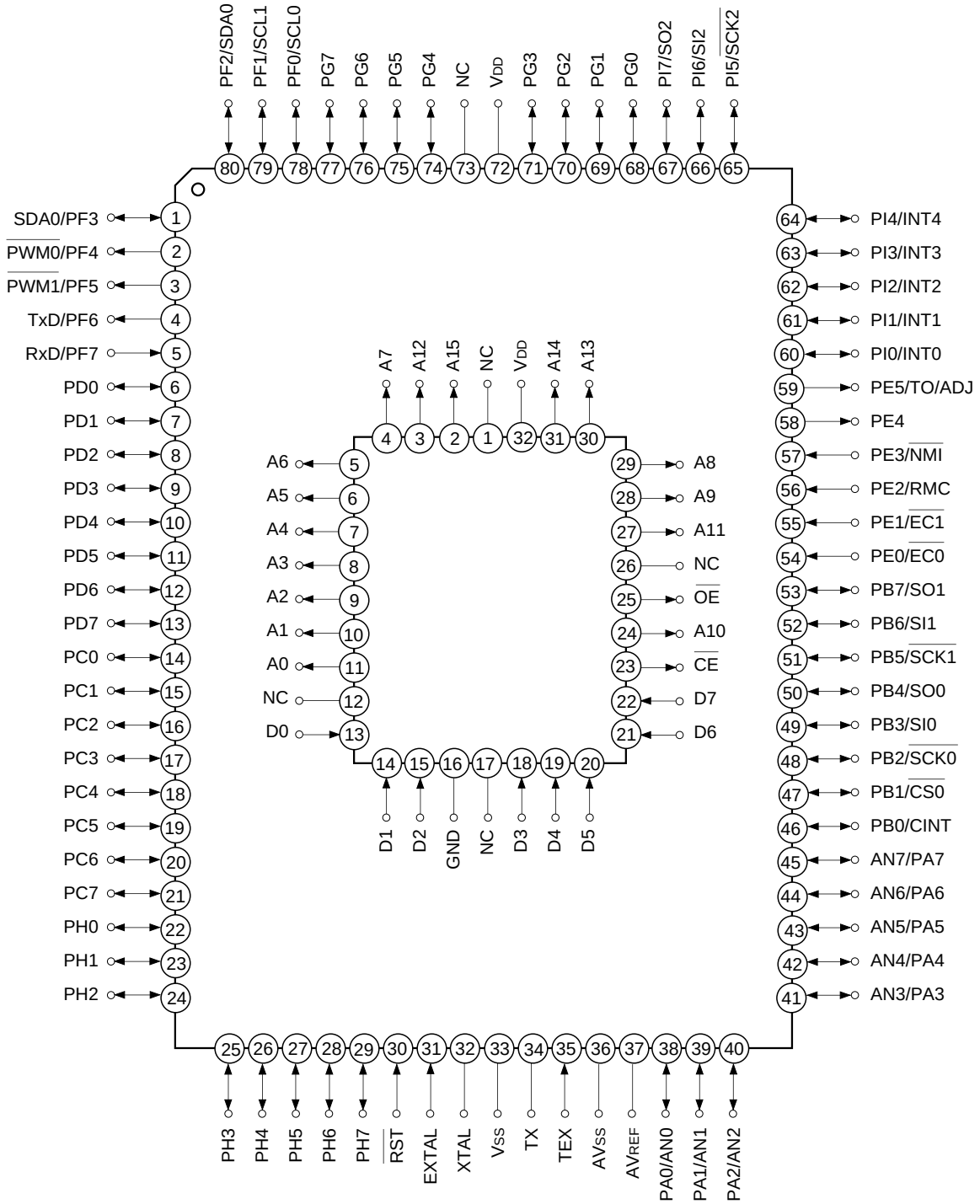
Note) Mask option depends on the type of the CXP84600. Refer to the Products List for details.

Structure

Silicon gate CMOS IC

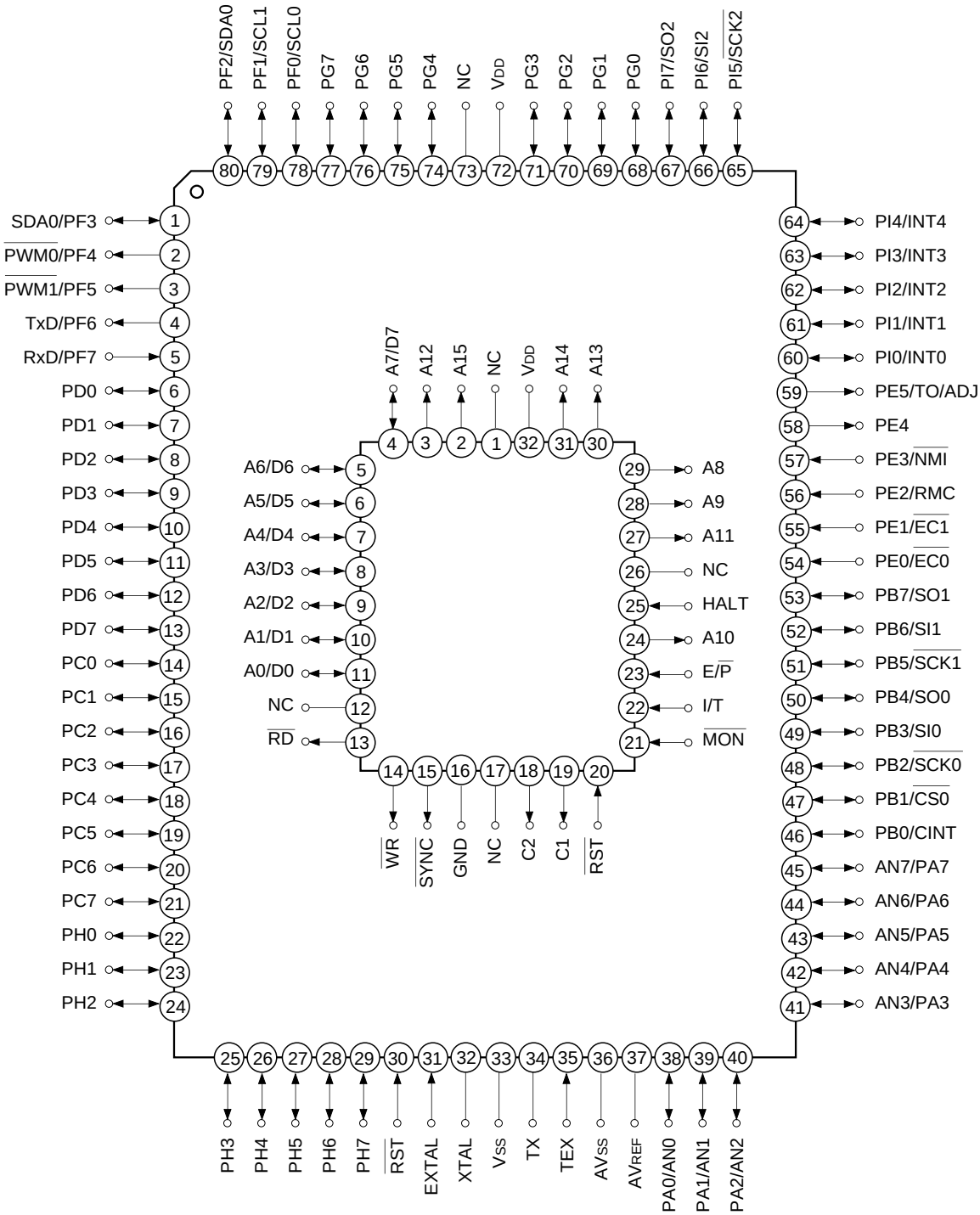
E96707-PS

Pin Assignment in Piggyback Mode



Note) NC (Pin 73) is always connected to V_{DD}.

Pin Assignment in Evaluator Mode



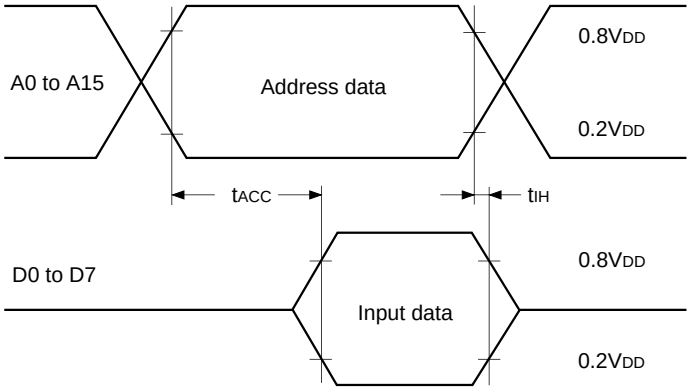
Note) NC (Pin 73) is always connected to V_{DD}.

EPROM Read Timing (Ta = –20 to +75°C, V_{DD} = 3.0 to 5.5V, Vss = 0V reference)

Item	Symbol	Pin	Min.	Max.	Unit
Address → data input delay time	t_{ACC}	A0 to A15 D0 to D7		100*1 75*2	ns
Address → data hold time	t_{IH}	A0 to A15 D0 to D7	0		ns

*1 At 12MHz operation (V_{DD} = 4.5 to 5.5V)

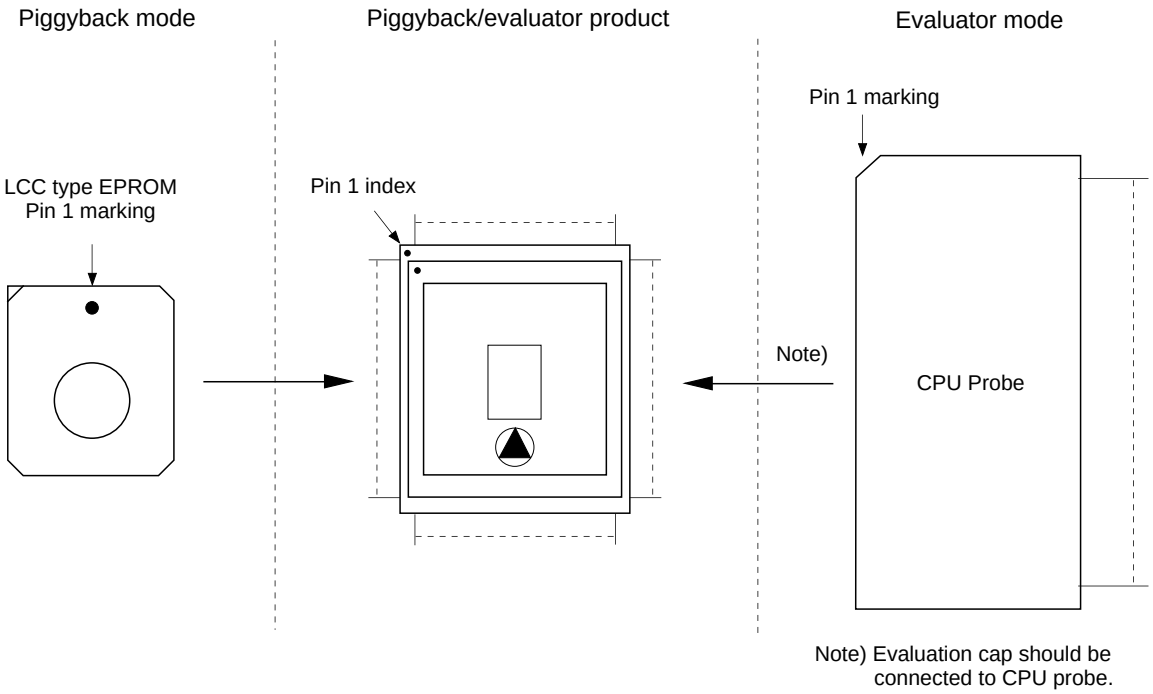
*2 At 12MHz operation (V_{DD} = 3.0 to 5.5V), At 16MHz operation (V_{DD} = 4.5 to 5.5V)



Products List

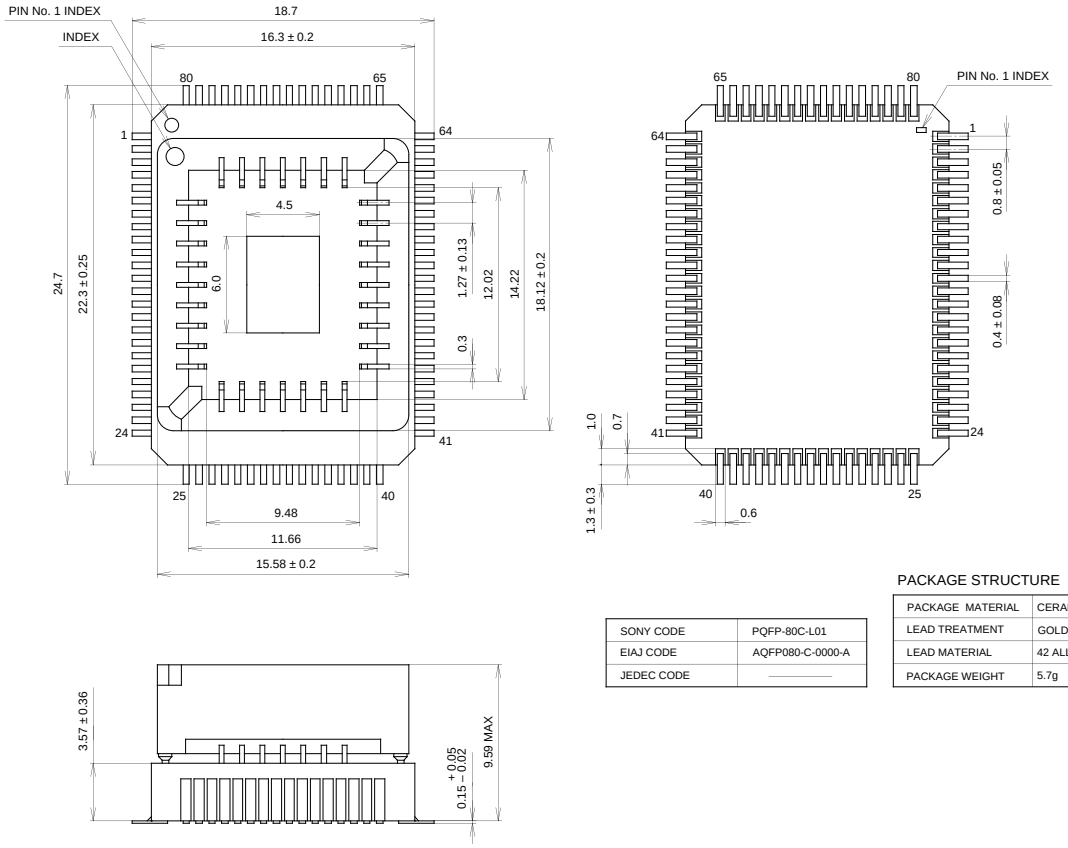
Option item	Products			
	Mask			Piggyback/evaluator
	CXP84632	CXP84640	CXP84648	CXP84600-U01Q
Package	80-pin plastic QFP			80-pin ceramic QFP
ROM capacity	32K bytes	40K bytes	48K bytes	EPROM 60K bytes
Reset pin pull-up resistor	Existent/Non-existent			Existent

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



Package Outline Unit: mm

80PIN PQFP (CERAMIC)



PACKAGE STRUCTURE

SONY CODE	PQFP-80C-L01
EIAJ CODE	AQFP080-C-0000-A
JEDEC CODE	————

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