

TRAILING EDGE PRODUCT - MINIMUM ORDER APPLIES



PUMA68F4006X - 70/90/12

Issue 5.0 December 1999

128 K x 32 Flash Module

Description

The PUMA68 range of devices provide a high density surface mount industry standard memory solution which may accommodate various memory technologies including SRAM, EEPROM and Flash. The devices are designed to offer a defined upgrade path and may be user configured as 8, 16 or 32 bits wide.

The PUMA68F4006X is a 128Kx32 FLASH module housed in a 68 Jleaded package which complies with the JEDEC 68 PLCC standard. Access times of 70, 90 or 120ns are available. The 5V device is available to commercial and industrial temperature grade.

512K x 32, 1M x 32 and 2Mx32 FLASH PUMA68 devices are available in the same footprint to offer a defined upgrade path.

Features

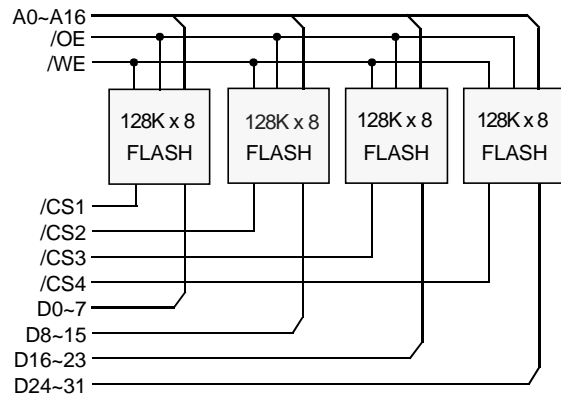
- Access times of 70, 90 and 120ns.
- 5V \pm 10%.
- Commercial and Industrial temperature grades
- JEDEC Standard 68 PLCC footprint.
- Industry standard pinout.
- User configurable as 8 / 16 / 32 bits wide.
- 10 Year Data Retention
- Write Erase Cycle Endurance 100,000 (min)
- Automatic Write/Erase by Embedded Algorithm
- Uniform Sector Device.

Package Details

Plastic 'J' Leaded JEDEC PLCC

Max. Dimensions (mm) - 25.27 x 25.27 x 5.08

Block Diagram



Pin Definition

See page 2.

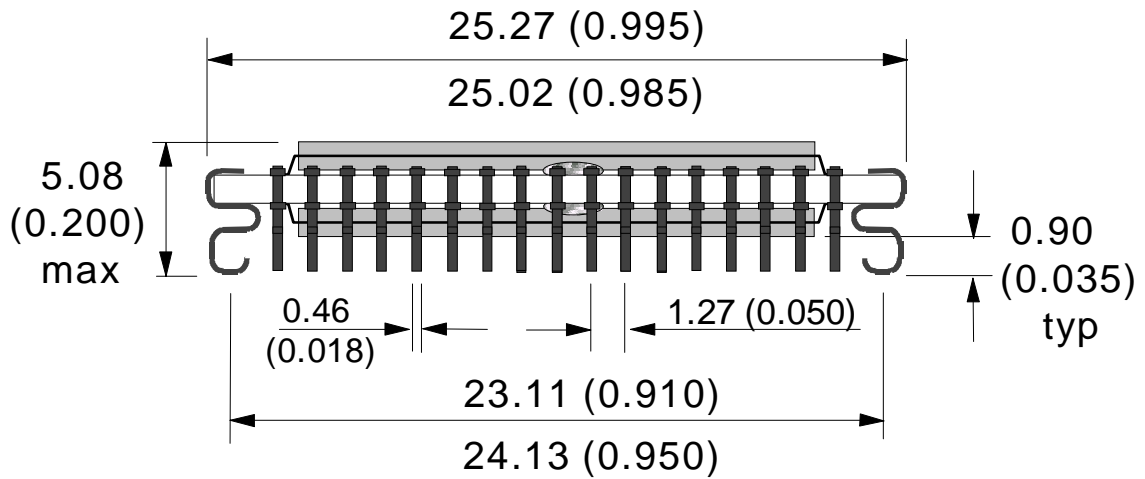
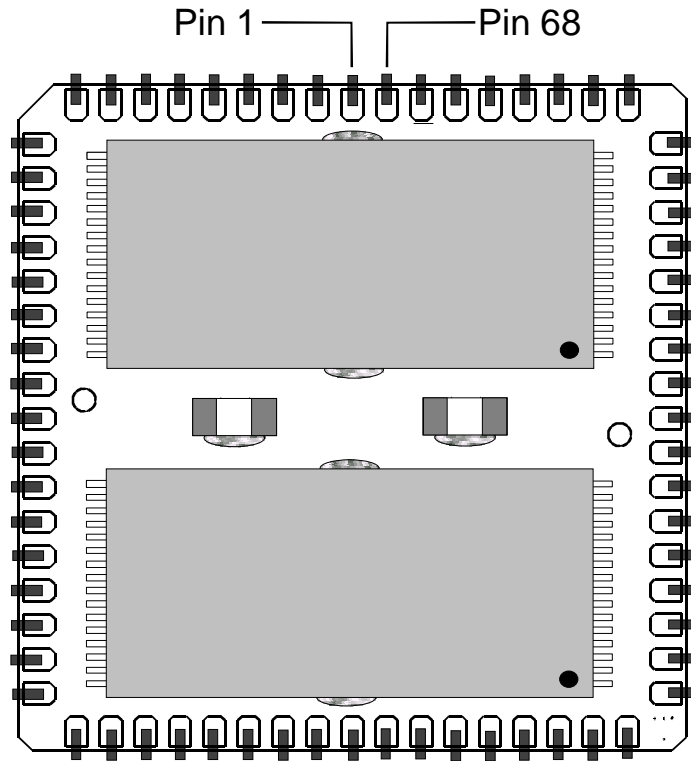
Pin Functions

| Description | Signal |
|-------------------|-----------------|
| Address Input | A0~A16 |
| Data Input/Output | D0~D31 |
| Chip Select | /CS1~4 |
| Write Enable | /WE |
| Output Enable | /OE |
| No Connect | NC |
| Power | V _{CC} |
| Ground | V _{SS} |

Pin Definition - PUMA68F4006X

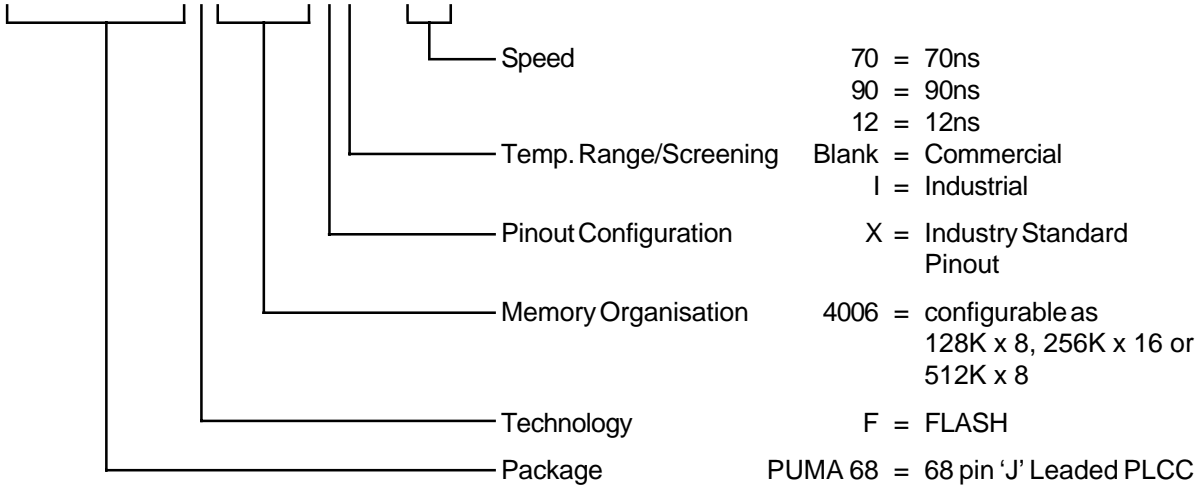
| Pin | Signal | Pin | Signal |
|-----|-----------------|-----|-----------------|
| 1 | V _{CC} | 35 | V _{CC} |
| 2 | NC | 36 | A13 |
| 3 | /CS1 | 37 | A12 |
| 4 | /CS2 | 38 | A11 |
| 5 | /CS3 | 39 | A10 |
| 6 | /CS4 | 40 | A9 |
| 7 | NC | 41 | A8 |
| 8 | NC | 42 | A7 |
| 9 | D16 | 43 | D0 |
| 10 | D17 | 44 | D1 |
| 11 | D18 | 45 | D2 |
| 12 | D19 | 46 | D3 |
| 13 | V _{SS} | 47 | V _{SS} |
| 14 | D20 | 48 | D4 |
| 15 | D21 | 49 | D5 |
| 16 | D22 | 50 | D6 |
| 17 | D23 | 51 | D7 |
| 18 | V _{CC} | 52 | V _{CC} |
| 19 | D24 | 53 | D8 |
| 20 | D25 | 54 | D9 |
| 21 | D26 | 55 | D10 |
| 22 | D27 | 56 | D11 |
| 23 | V _{SS} | 57 | V _{SS} |
| 24 | D28 | 58 | D12 |
| 25 | D29 | 59 | D13 |
| 26 | D30 | 60 | D14 |
| 27 | D31 | 61 | D15 |
| 28 | A6 | 62 | A14 |
| 29 | A5 | 63 | A15 |
| 30 | A4 | 64 | A16 |
| 31 | A3 | 65 | /WE |
| 32 | A2 | 66 | /OE |
| 33 | A1 | 67 | NC |
| 34 | A0 | 68 | NC |

PUMA 68 pin JEDEC Surface Mounted PLCC



Ordering Information

PUMA 68F4006XI - 70



Note :
 Although this data is believed to be accurate the information contained herein is not intended to and does not create any warranty of merchantability or fitness for a particular purpose.
 Our products are subject to a constant process of development. Data may be changed without notice.
 Products are not authorised for use as critical components in life support devices without the express written approval of a company director.

Co Planarity

Specified as +/- 2 thou max.

Visual Inspection Standard

All devices inspected to ANSI/J-STD-001B Class 2 standard

Moisture Sensitivity

Devices are **moisture sensitive**.

Shelf Life in Sealed Bag 12 months at <40°C and <90% relative humidity (RH).

After this bag has been opened, devices that will be subjected to infrared reflow, vapour phase reflow, or equivalent processing (peak package body temp 220°C) **must be** :

A : Mounted within 72 Hours at factory conditions of <30°C/60% RH

OR

B : Stored at <20% RH

If these conditions are not met or indicator card is >20% when read at 23°C +/-5% devices **require baking** as specified below.

If baking is required, devices may be baked for :-

A : 24 hours at 125°C +/-5% for high temperature device containers

OR

B : 192 hours at 40°C +5°C/-0°C and <5% RH for low temperature device containers.

Packaging Standard

Devices packaged in dry nitrogen, JED-STD-020.

Packaged in trays as standard.

Tape and reel available for shipment quantities exceeding 200pcs upon request.

Soldering Recommendations

| | | |
|-----------------|-------------------------|----------------|
| IR/Convection - | Ramp Rate | 6°C/sec max. |
| | Temp. exceeding 183°C | 150 secs. max. |
| | Peak Temperature | 225°C |
| | Time within 5°C of peak | 20 secs max. |
| | Ramp down | 6°C/sec max. |
| Vapour Phase - | Ramp up rate | 6°C/sec max. |
| | Peak Temperature | 215 - 219°C |
| | Time within 5°C of peak | 60 secs max. |
| | Ramp down | 6°C/sec max. |

The above conditions must not be exceeded.

Note : The above recommendations are based on standard industry practice. Failure to comply with the above recommendations invalidates product warranty.