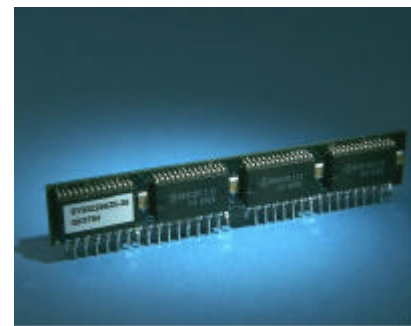
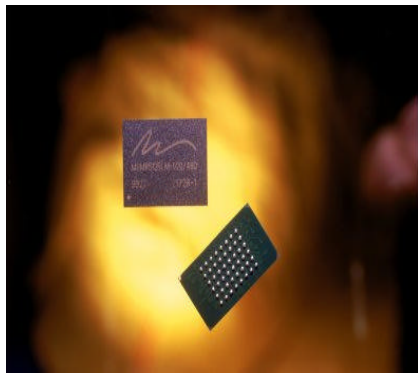
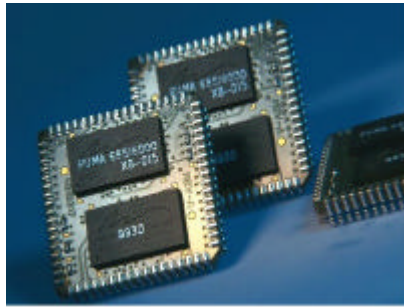


Part Numbering



MSM 8 V 512BB L L - 85



1. TECHNOLOGY

The memory technology is represented by a single character:-

S Static RAM E EEPROM
D Dynamic RAM F FLASH
SD SYNCH DRAM

2. DATA WIDTH (Bits)

3. V_{CC} VOLTAGE

Blank 5V V 3.3V

4. ORGANISATION

Memory depth in Kbytes

5. DIE REVISION

6. BGA

7. Power

Blank Standard
L Low power

8. TEMPERATURE

Blank Commercial
I Industrial

9. ACCESS TIME

010	10ns	45	45ns
012	12ns	55	55ns
015	15ns	70	70ns
017	17ns	85	85ns
020	20ns	10	100ns
25	25ns	12	120ns
35	35ns	15	150ns

PUMA68 E V 16006 X L L - 12



1. PRODUCT DESIGNATOR

PUMA68 68 pin PLCC
PUMA84 84 pin PLCC

2. TECHNOLOGY

S SRAM E EEPROM
D DRAM F FLASH

3. V_{CC} VOLTAGE

Blank 5V
V 3.3V

4. DEVICE CAPACITY

Total memory array capacity in KBits

5. PINOUT OPTION IDENTIFIER

6. POWER CONSUMPTION

Blank Standard
L Low Power

7. TEMPERATURE

Blank Commercial (0° - +70°C)
I Industrial (-40 - +85°C)

8. ACCESS TIME

010	10ns	45	45ns
012	12ns	55	55ns
015	15ns	70	70ns
017	17ns	85	85ns
020	20ns	10	100ns
25	25ns	12	120ns
35	35ns	15	150ns



Commercial Products Shortform Guide

Apta design and manufacture memory solutions. We have a limited standard product range but our main focus is to apply our extensive design, manufacture and test expertise to provide customer / application specific memory solutions. If one of our standard products is not suitable for your application please call to discuss your requirements in detail with one of our engineers.

Organisation	Generic	Packages	Speed (ns)
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SRAM PUMA (User configurable 8,16 or 32 bits wide)

16 Mbit 512K x 32	PUMA68S16000XB	68 PLCC	12 - 25
16 Mbit 512K x 32	PUMA68SV16000XB	68 PLCC	12 - 25
32 Mbit 1M x 32	PUMA68S32000XB	68 PLCC	12 - 20
32 Mbit 1M x 32	PUMA68SV32000XB	68 PLCC	12 - 20
32 Mbit 1M x 32	PUMA84S32000	84 PLCC	12 - 20
32 Mbit 1M x 32	PUMA84SV32000	84 PLCC	12 - 20
64 Mbit 2M x 32	PUMA84SV64000	84 PLCC	12 - 20

SRAM Chip Size Package

4MBit 512K x 8	MSM8512CB	BGA (48)	20
4MBit 512K x 8	MSM8V512CB	BGA (48)	20

FLASH PUMA (User configurable 8,16 or 32 bits wide)

128MBit 4M x 32	PUMA84FV128006	84 PLCC	90 - 150
256MBit 8M x 32	PUMA84FV256006	84 PLCC	90 - 150

FLASH Chip Size Package

4MBit 512K x 8	MFM8516BB	BGA (48)	70-120
16MBit 512K x 32	MFM32512BB	BGA (95)	70-120

' V ' Variants 3.3V Vcc

HMP is a brand name of Apta Group Ltd