

**Mask ROM**

■ **Mask ROM**

Capacity (bits)	Organization (words ∞ bits)	Part number	Access time MAX. (ns)	Maximum supply current		Supply voltage (V)	Package	Remarks
				Active (mA)	Standby (mA)			
32M	2M ∞ 16 or 1M ∞ 32 (selectable)	μPD23C32140*	100/30	120	0.1	5 ±10 %	• 70-pin SSOP (500 mil) • 70-pin TSOP II (400 mil)	with page access read mode
	4M ∞ 8 or 2M ∞ 16 (selectable)	μPD23C32000	120	70			• 44-pin SOP (600 mil) • 48-pin TSOP I (12 ∞ 18 mm)* • 44-pin TSOP II (400 mil)*	—
16M	2M ∞ 8 or 1M ∞ 16 (selectable)	μPD23C16000W	120	70			• 42-pin DIP (600 mil) • 44-pin SOP (600 mil) • 48-pin TSOP I (12 ∞ 18 mm) • 44-pin TSOP II (400 mil)	μPD16040A ... with page access read mode
		μPD23C16040A	120/35	100				Pin-compatible with PROM μPD27C8000
8M	1M ∞ 8 or 512K ∞ 16 (selectable)	μPD23C8000W	120	70			• 32-pin DIP (600 mil) • 32-pin SOP (525 mil)	Pin-compatible with PROM μPD27C8001
	1M ∞ 8	μPD23C8001EJ	120	50				Pin-compatible with PROM μPD27C8000
4M	512K ∞ 8 or 256K ∞ 16 (selectable)	μPD23C4000S	100	100			• 40-pin DIP (600 mil) • 40-pin SOP (525 mil)	Pin-compatible with PROM μPD27C4000 μPD23C4040 ... with page access read mode
		μPD23C4040	10/50	150				Pin-compatible with PROM μPD27C4001
4M	512K ∞ 8	μPD23C4001EJ	120	50			• 32-pin DIP (600 mil) • 32-pin SOP (525 mil)	Pin-compatible with PROM μPD27C4001
							• 40-pin TSOP I (10 ∞ 20 mm)	Pin-compatible with PROM μPD27C2001
2M	256K ∞ 8	μPD23C2001E	200	40			Pin-compatible with PROM μPD27C2001	
1M	128K ∞ 8	μPD23C1001EA	150	40			Pin-compatible with PROM μPD27C1001A	
		μPD23C1000EB				• 32-pin DIP (600 mil)	Pin-compatible with PROM μPD27C1000A	
		μPD23C1000B						
		μPD23C1010B				• 28-pin DIP (600 mil)	—	

\*: Under development

■ **Mask ROM (Low Voltage Operation)**

Capacity (bits)	Organization (words ∞ bits)	Part number	Access time MAX. (ns)	Maximum supply current		Supply voltage (V)	Package	Remarks
				Active (mA)	Standby (mA)			
32M*	4M ∞ 8 or 2M ∞ 16 (selectable)	μPD23C32000	200	20	20	3.0±0.3	• 44-pin SOP (600 mil) • 48-pin TSOP I (12 ∞ 18 mm) • 44-pin TSOP II (400 mil)	—
16M	2M ∞ 8 or 1M ∞ 16 (selectable)	μPD23C16000LW	200	20	20		• 42-pin DIP (600 mil) • 44-pin SOP (600 mil) • 48-pin TSOP I (12 ∞ 18 mm) • 44-pin TSOP II (400 mil)	
8M	1M ∞ 8 or 512K ∞ 16 (selectable)	μPD23C8000LW	230	30	30			

\*: Under development

**PROM**

■ **UV EPROM**

Capacity (bits)	Organization (words ∞ bits)	Part number	Access time MAX. (ns)	Maximum supply current		Supply voltage (V)	Package	Remarks
				Active (mA)	Standby (mA)			
8M	1M ∞ 8 or 512K ∞ 16 (selectable)	μPD27C8000	120 150 170	50	0.1	V <sub>PP</sub> = 12.5±0.3  V <sub>CC</sub> = 5 ±10 %	• 42-pin DIP (600 mil)	Pin-compatible with Mask ROM μPD23C8000 series
	1M ∞ 8	μPD27C8001	120 150 170	30			• 32-pin DIP (600 mil)	Pin-compatible with Mask ROM μPD23C8001E series
4M	512K ∞ 8 or 256K ∞ 16 (selectable)	μPD27C4000	150 170 200	50			• 40-pin DIP (600 mil)	Pin-compatible with Mask ROM μPD23C4000 series
	256K ∞ 16	μPD27C240	100 120 150					–
	512K ∞ 8	μPD27C4001	120* 150 170 200	30			• 32-pin DIP (600 mil)	Pin-compatible with Mask ROM μPD23C4001E series
		μPD27C040	100 120 150	50				
2M	256K ∞ 8	μPD27C020	120 150	30			Pin-compatible with Mask ROM μPD23C2001E series	
1M	128K ∞ 8	μPD27C010A	100 120 150					Pin-compatible with Mask ROM μPD23C1001E series
	64K ∞ 16	μPD27C210A	120 150	50			• 40-pin DIP (600 mil)	Pin-compatible with Mask ROM μPD23C1024E series

★: Under development

■ **ONE TIME PROM**

Capacity (bits)	Organization (words ∞ bits)	Part number	Access time MAX. (ns)	Maximum supply current		Supply voltage (V)	Package	Remarks
				Active (mA)	Standby (mA)			
8M	1M ∞ 8 or 512K ∞ 16 (selectable)	μPD27C8000	150 170	50	0.1	V <sub>PP</sub> = 12.5±0.3  V <sub>CC</sub> = 5 ±10 %	• 42-pin DIP (600 mil) • 44-pin SOP (600 mil) • 48-pin TSOP I (12 ∞ 18 mm)	Pin-compatible with Mask ROM μPD23C8000 series
	1M ∞ 8	μPD27C8001	150 170	30			• 32-pin DIP (600 mil) • 32-pin SOP (525 mil)	Pin-compatible with Mask ROM μPD23C8001E series
4M	512K ∞ 8 or 256K ∞ 16 (selectable)	μPD27C4000	150 170 200	50			• 40-pin DIP (600 mil) • 40-pin SOP (525 mil)	Pin-compatible with Mask ROM μPD23C4000 series
	512K ∞ 8	μPD27C4001	120* 150 170 200	30			• 32-pin DIP (600 mil) • 32-pin SOP (525 mil) • 40-pin TSOP I (10 ∞ 20 mm)	Pin-compatible with Mask ROM μPD23C4001E series

★: Under development

**PROM**

■ **EEPROM**

Capacity (bits)	Organization (words ∞ bits)	Part number	Access time MAX. (ns)	Maximum supply current		Supply voltage (V)	Package	Remarks
				Active (mA)	Standby (mA)			
256K	32K ∞ 8	μPD28C256	200 250	50	0.1	5 ±10 %	• 28-pin DIP (600 mil)	–
64K	8K ∞ 8	μPD28C64A	150 200				• 28-pin DIP (600 mil) • 28-pin SOP (450 mil) • 32-pin TSOP I (600 mil)	

■ **SERIAL EEPROM**

Capacity (bits)	Organization (words ∞ bits)	Part number	Serial interface	Active current (mA)	Standby current (mA)	Supply voltage (V)	Package
2K	256 ∞ 8	μPD6252	CE, CS, SCL, SDA (2-wire BUS)	1.5	0.02	5 V ±10 %	• 8-pin DIP (300 mil) • 8-pin SOP (300 mil)
1K	128 ∞ 8	μPD6253					
4K	512 ∞ 8	μPD6254					
2K	256 ∞ 8	μPD6272	CE, CS, I <sup>2</sup> C BUS	1.0	0.005	1.8 to 3.5 V	
1K	128 ∞ 8	μPD6273					
4K	512 ∞ 8	μPD6274					
2K	256 ∞ 8	μPD6255	CS, SCL, SDA (2-wire BUS)	1.0	0.005	1.8 to 3.5 V	
4K	512 ∞ 8	μPD6257	CS, SCK, SI, SO (3-wire BUS)	1.5	0.003	5 V ±10 %	
8K	1024 ∞ 8	μPD6258					

**Flash MEMORY**

■ **Flash MEMORY**

Capacity (bits)	Organization (words ∞ bits)	Part number	Access time MAX. (ns)	Maximum supply current		Supply voltage (V)	Package	Remarks
				Active (mA)	Standby (mA)			
1M	128K ∞ 8	μPD28F001	80 100 120	50	0.1	V <sub>PP</sub> = 12±0.6 V <sub>CC</sub> = 5 ±10 %	• 32-pin SOP (525 mil) • 32-pin TSOP I (8 ∞ 20 mm) • 32-pin QFJ	–

## Other

## ■ Dual-Port Graphic Buffer

Capacity (bits)	Organization (words ∞ bits)	Part number	Random access time MAX. (ns)	Serial read cycle time (ns)	Maximum supply current		Supply voltage (V)	Package	Remarks
					Active (mA)	Standby (mA)			
4M	256K ∞ 16	μPD482444	60 70 80	20 22 25	130 110 90	10	5±10 %	• 64-pin SSOP (525 mil)	2WE Byte Control Fast Page Flash/Block Write Split Buffer Stopping Column
		μPD482445	60 70 80	20 22 25	130 110 90				
		μPD482445L	70 80	22 25	110 90	7	3.3±0.3	• 64-pin SSOP (525 mil) • 70-pin TSOP II (400 mil)	2WE Byte Control Hyper Page Flash/Block Write Split Buffer Stopping Column
2M	256K ∞ 8	μPD482234	60 70 80	20 22 25	155 195 190	10	5±10 %	• 40-pin SOJ • 44-pin TSOP II	Fast page Flash write Block write Split buffer
		μPD482235	60 70 80	20 22 25	155 195 190				

## ■ Synchronous Graphics RAM

Capacity (bits)	Organization	Part number	Cycle time MIN. (ns)	Refresh cycle (cycles/ms)	Maximum supply current (mA)			Interface	Supply voltage (V)	Package	Function
					Active Normal/Burst (Grade=10, C.L=3)	Standby power down mode	Self refresh				
8M	128K ∞ 2 banks ∞ 32 bits	μPD481850	10 (100 MHz) 12 (83 MHz) 15 (66 MHz)	1024/16	105/365 90/310 85/285	3	2	LVTTTL	3.3±0.3	• 100-pin QFP (14 ∞ 20 mm)	Synchronous Interface Write-per-bit (Old Mask) 8 column Block Write

## ■ Graphic Memory

Capacity (bits)	Organization (words ∞ bits)	Part number	Random access time MAX. (ns)	Page mode access time MAX. (ns)	Maximum supply current		Supply voltage (V)	Package	Remarks
					Active (mA)	Standby (mA)			
4M	256K ∞ 16	μPD481440	70 80	35 40	180 165	2	5±10 %	• 40-pin SOJ (400 mil)	2WE Byte Control Flash write Block write

Other

■ Silicon File

Capacity (bits)	Organization (words ∞ bits)	Part number	Random access time MAX. (ns)	Page mode access time MAX. (ns)	Maximum supply current		Supply voltage (V)	Package
					Active (mA)	Self refresh (μA)		
16M	16M ∞ 1	μPD426171	60 70 80	40 45 50	100 90 80	Ta=0 to 55 °C: 30 (-L) Ta=0 to 55 °C: 50	3.3±0.3	• 26-pin SOJ (300 mil) • 26-pin TSOP II (300 mil)
	4M ∞ 4	μPD426174	60 70 80	40 45 50	100 90 80			
4M	4M ∞ 1	μPD42641	80	20	90	Ta=0-70°C: 240 Ta=0-60°C: 120 Ta=0-50°C: 60	5±10 %	• 26-pin SOJ • 26-pin TSOP II
	1M ∞ 4	μPD42644						
	4M ∞ 1	μPD42641-L						
	1M ∞ 4	μPD42644-L						

■ Field/Line Buffer

Capacity (bits)	Organization (words ∞ bits)	Part number	Read/Write cycle time MIN. (ns)	Data hold period (ms)	Maximum supply current active (mA)	Supply voltage (V)	Package	Remarks	
2M	256 ∞ 8	μPD42280	30/30 40/40 60/60	-	90 75 60	5±10 %	• 28-pin SOP • 28-pin ZIP	Field buffer FIFO structure	
80K	10096 ∞ 8 5048 ∞ 16	μPD485506	25/25 27/27 35/35		140		• 44-pin TSOP II	FAX, PPC Line buffer FIFO structure	
40K	5048 ∞ 8	μPD485505	25/25 27/27 35/35		90		• 24-pin SOP		
7K	910 ∞ 8	μPD42101	34/34 34/69 69/69		1		70 60 35	• 24-pin DIP • 24-pin SOP	NTSC Line buffer FIFO structure
9K	1135 ∞ 8	μPD42102	25/25 28/28 28/56 56/56				80 80 70 40		PAL Line buffer FIFO structure