



**BICMOS-4, -4A, -5**

Device	Integration (Gate)	Delay Time			Number of Buffers		Power Dissipation
		Gate (ns)	Output Buffer (ns)	Input Buffer (ns)	Output	Input	
<b>BICMOS-4 (1.5-micron CMOS and Bipolar with <math>f_T = 4</math> GHz)</b>							
$\mu$ PD67001	624	0.8	3	1.2	64	64	18 $\mu$ W/MHz/cell (F/O = 3, L = 3 mm)
$\mu$ PD67010	1124	0.8	3	1.2	84	84	
$\mu$ PD67020	2248	0.8	3	1.2	120	120	
$\mu$ PD67030	3140	0.8	3	1.2	140	140	
<b>BICMOS-4A (1.5-micron CMOS and Bipolar with <math>f_T = 4</math> GHz)</b>							
$\mu$ PD67060	6372	0.8	3.0	1.2	180	180	18 $\mu$ W/MHz/gate (F/O = 3, L = 3 mm)
$\mu$ PD67100	10,348	0.8	3.0	1.2	228	228	
<b>BICMOS-5 (1.2-micron CMOS and Bipolar with <math>f_T = 8</math> GHz)</b>							
$\mu$ PD67021	2208	0.3	1.3 (ECL) 1.9 (TTL)	1.8 (ECL) 0.9 (TTL)	80	80	48 $\mu$ W/MHz/gate
$\mu$ PD67031	3240	0.3	1.3 (ECL) 1.9 (TTL)	1.8 (ECL) 0.9 (TTL)	96	96	
$\mu$ PD67050	5320	0.3	1.3 (ECL) 1.9 (TTL)	1.8 (ECL) 0.9 (TTL)	124	124	
$\mu$ PD67070	7216	0.3	1.3 (ECL) 1.9 (TTL)	1.8 (ECL) 0.9 (TTL)	148	148	
$\mu$ PD67101	10,152	0.3	1.3 (ECL) 1.9 (TTL)	1.8 (ECL) 0.9 (TTL)	176	176	
$\mu$ PD67240	24,528	0.3	1.3 (ECL) 1.9 (TTL)	1.8 (ECL) 0.9 (TTL)	272	272	

- Notes:
- (1) Number of macros: 146; 180 (BICMOS-5)
  - (2) Ambient temperature: 0 to 85°C; 0 to 70°C (BICMOS-5)
  - (3) Power source: 5 V  $\pm$ 0.5 V; BICMOS-5: 5 V  $\pm$ 5% CMOS/TTL; -5.2 V  $\pm$ 5% ECL-10KH; -4.5 V  $\pm$ 0.3 V ECL-100K
  - (4) Input/output interface: CMOS, ALS-TTL (input/output) and ECL-10KH, -100K for BICMOS-5

**Standard Cell-4, -5**

Device	Integration (Gate)	Delay Time			Number of Buffers Input/Output Total	Power Dissipation	RAM	ROM
		Gate (ns)	Output Buffer (ns)	Input Buffer (ns)				
<b>SC-4 (1.5-micron CMOS)</b>								
$\mu$ PD91000	Up to 17,000	1.4	4	2	256	15 $\mu$ W/gate	1 port: 64 Kb max; 2 port: 16 Kb max	None
$\mu$ PD92000	Up to 17,000	1.4	4	2	256	15 $\mu$ W/MHz/gate	1 port: 64 Kb max; 2 port: 16 Kb max	256 Kb max
<b>SC-5 (1.2-micron CMOS)</b>								
$\mu$ PD93000	Up to 60,000	1.0	2.5	2.0	280	18 $\mu$ W/MHz/gate	128 Kb max	1 Mb max

- Notes:
- (1) Number of macros: 180
  - (2) Ambient temperature: -40 to +85°C
  - (3) Power source: 5 V  $\pm$ 10% for CMOS; 5 V  $\pm$ 5% for TTL
  - (4) Input/output interface: TTL, CMOS compatible
  - (5) Technology: silicon-gate CMOS, two-layer Al metallization

