74188 256-Bit Programmable Read-Only Memory (256-Bit PROM)

	Schotty TTL					High-Speed TTL					Low-Power Schottky TTL					Standard TTL					Low-Power TTL				
	Device Type	Package				Device Type	Package				Device Type	Package				Device Type	Package				Device Type	Package			
		C	P	M	CF		C	P	M	CF		C	P	M	CF		C	P	M	CF		C	P	M	CF
T. I.																SN74188A	J ① N ①								
FAIRCHILD																									
MOTOROLA																									
N. S. C.																DM54188 DM74188									
PHILIPS																									
SIGNETICS																									
SIEMENS																									
FUJITSU																									
HITACHI																									
MITSUBISHI																									
NEC																									
TOSHIBA																									

Eiectrical Characteristcs /SN74188A

absolute maximum ratings over operating free-air temperature range

Supply voltage, V_{CC} (See Notes 1 and 4)	7V	operating free-air temperature range		
Input voltage	5.5V		SN74	0°C to 70°C
		Storage temperature range		−65°C to 150°C

recommended conditions for programming

		MIN	NOM	MAX	UNIT
Supply voltage, V_{CC} (See Note 1)	Steady state	0	5	5.5	V
	Program pulse	9	10	11 #	
Input voltage	Low level			0.5	V
	High level	2.4		5	
Output conditions for programming	To a low logic level	Open circuit			V
	To a high logic level	−0.6		−0.8	
Duration of programming pulse (See Note 2)		700			ms
Case temperarature (See Note 3)				75	°C

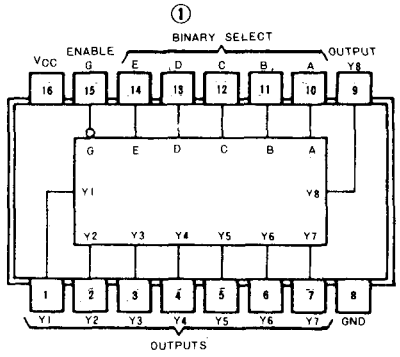
recommended operating conditions

	SN74188A			UNIT
	MIN	NOM	MAX	
Supply voltage, V_{CC}	4.75	5	5.25	V
High-level output voltage, V_{OH}			5.5	V
Low-level output current, I_{OL}			12	mA
Operating free-air temperature, T_A	0		70	°C

electrical characteristics over recommended operating free-air temperature range

PARAMETER*		TEST CONDITIONS †		MIN	TYP ‡	MAX	UNIT
V_{IH}	High-level input voltage			2			V
V_{IL}	Low-level input voltage					0.8	V
V_I	Input clamp voltage	V_{CC} = MIN, I_I = −12mA				−1.5	V
I_{OH}	High-level output current	V_{CC} = MIN, V_{IH} = 2V, V_{IL} = 0.8V, V_{OH} = 5.5V				100	μA
V_{OL}	Low-level output voltage	V_{CC} = MIN, V_{IH} = 2V, V_{IL} = 0.8V, I_{OL} = 12mA				0.45	V
I_I	Input current at maximum input voltage	V_{CC} = MAX, V_I = 5.5V				1	mA
I_{IH}	High-level input current	V_{CC} = MAX, V_I = 2.4V				40	μA
I_{IL}	Low-level input current	V_{CC} = MAX, V_I = 0.4V				−1	mA
I_{CCH}	Supply current, all outputs high	V_{CC} = MAX	See Note 5		50	80	mA
I_{CCL}	Supply current, all outputs low		See Note 6		82	110	
t_{PLH}	from Enable to	V_{CC} = 5V, T_A = 25°C, C_L = 30 pF to GND, R_{L1} = 400 Ω to V_{CC}, R_{L2} = 600 Ω to GND,			23	50	ns
t_{PHL}	Any output				34	50	
t_{PLH}	from Select to				28	50	ns
t_{PHL}	Any output				31	50	

Pin Assignments (Top View)



logic :

NOTES: 1. All voltage values are with respect to network ground terminal.
2. Programming is guaranteed if the pulse is applied for 700 ms. Typically, programming occurs in less than 200 ms.
3. This refers the temperature measured at the center of the bottom of the case.
4. This rating applies at all times except during programming.
5. I_{CCH} is measured with all inputs at 4.5 V, all outputs open.
6. I_{CCL} is measured with enale input grounded, all other inputs at 4.5 V, and all outputs open. The typical value shown is for the worst-case condition of all eight outputs low at one time. This condition may not be possible after the device has been programmed.

†For conditions shown as MIN or MAX, use the appropriate value specified under recommended operating conditions.
‡All typical values are at V_{CC} = 5V, T_A = 25°C.
*t_{PLH} = Propagation delay time, low-to-high-level output
t_{PHL} = Propagation delay time, high-to-low-level output
#Absolute maximum rating.