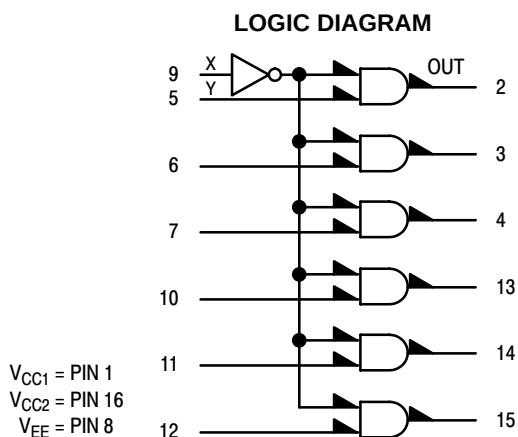


MC10188

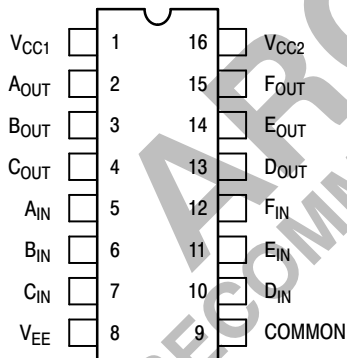
Hex Buffer With Enable

The MC10188 is a high-speed hex buffer with a common Enable input. When Enable is in the high state, all outputs are in the low state. When Enable is in the low state, the outputs take the same state as the inputs.

- Power Dissipation = 180 mW typ/pkg (No Load)
- Propagation Delay = 2.0 ns typ (B – Q)
2.5 ns typ (A – Q)



DIP PIN ASSIGNMENT



Pin assignment is for Dual-in-Line Package.
 For PLCC pin assignment, see the Pin Conversion Tables on page 18 of the ON Semiconductor MECL Data Book (DL122/D).

TRUTH TABLE

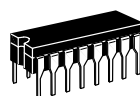
Inputs		Output
X	Y	OUT
L	L	L
L	H	H
H	L	L
H	H	L



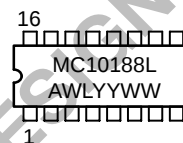
ON Semiconductor

<http://onsemi.com>

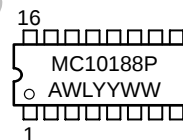
MARKING DIAGRAMS



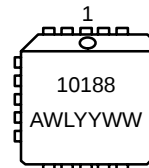
CDIP-16
L SUFFIX
CASE 620



PDIP-16
P SUFFIX
CASE 648



PLCC-20
FN SUFFIX
CASE 775



A = Assembly Location
 WL = Wafer Lot
 YY = Year
 WW = Work Week

ORDERING INFORMATION

Device	Package	Shipping
MC10188L	CDIP-16	25 Units / Rail
MC10188P	PDIP-16	25 Units / Rail
MC10188FN	PLCC-20	46 Units / Rail

ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Pin Under Test	Test Limits						Unit
			−30°C		+25°C		+85°C		
			Min	Max	Min	Max	Min	Max	
Power Supply Drain Current	I _E	8		46		42		46	mAdc
Input Current	I _{inH}	5		425		265		265	μAdc
	I _{inH}	9		460		290		290	μAdc
Output Voltage Logic 1	V _{OH}	2	−1.060	−0.890	−0.960	−0.810	−0.890	−0.700	Vdc
Output Voltage Logic 0	V _{OL}	2	−1.890	−1.675	−1.850	−1.650	−1.825	−1.615	Vdc
Threshold Voltage Logic 1	V _{OHA}	2	−1.080		−0.980		−0.910		Vdc
Threshold Voltage Logic 0	V _{OLA}	2		−1.655		−1.630		−1.595	Vdc
Switching Times (50Ω Load)									ns
Propagation Delay Enable	t _{PHL}	2	1.1	3.9	1.1	3.5	1.1	3.9	
	t _{PLH}	2	1.0	3.3	1.0	2.9	1.0	3.3	
Rise/Fall Time (20 to 80%)	t _{TLH}	2	1.1	3.7	1.1	3.3	1.1	3.7	
	t _{THL}								

ELECTRICAL CHARACTERISTICS (continued)

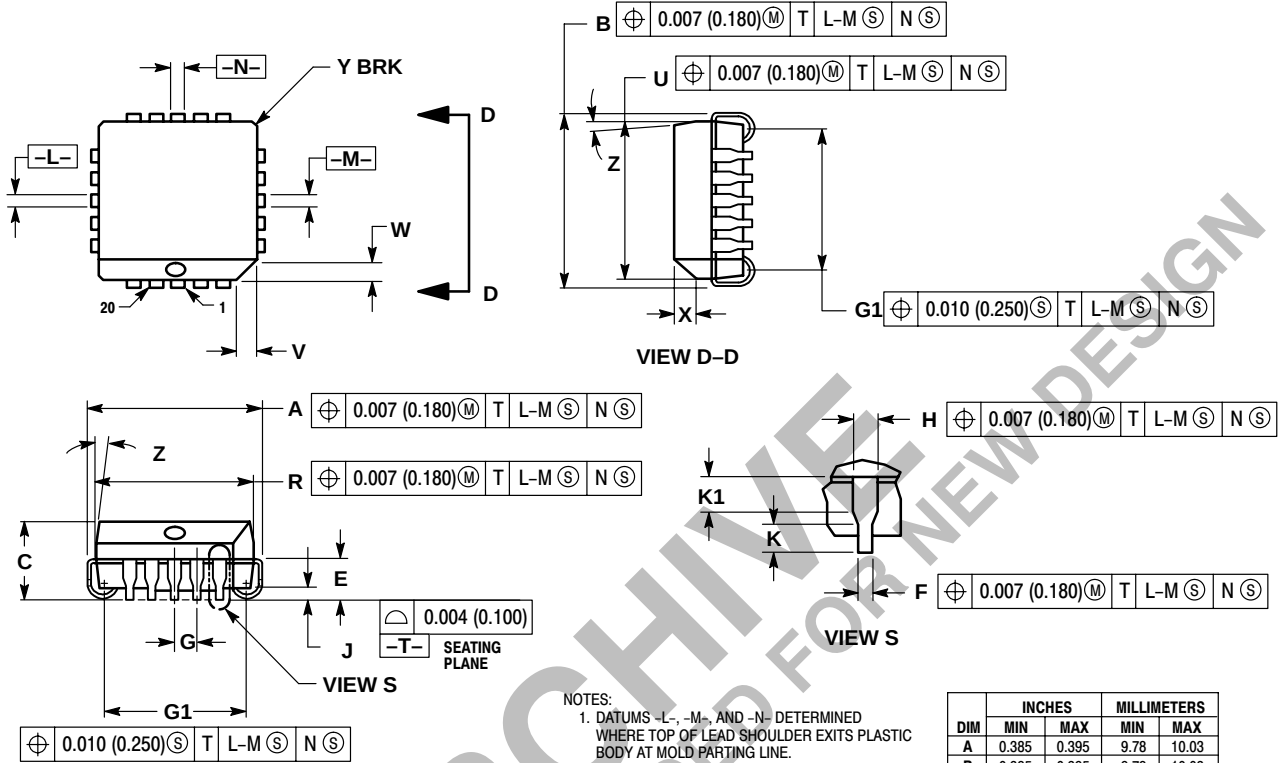
@ Test Temperature			TEST VOLTAGE VALUES (Volts)					(V _{CC}) Gnd
			V_{IHmax}	V_{ILmin}	V_{IHmin}	V_{ILmax}	V_{EE}	
			-30°C	-0.890	-1.890	-1.205	-1.500	-5.2
			+25°C	-0.810	-1.850	-1.105	-1.475	-5.2
			+85°C	-0.700	-1.825	-1.035	-1.440	-5.2
Characteristic	Symbol	Pin Under Test	TEST VOLTAGE APPLIED TO PINS LISTED BELOW					(V _{CC}) Gnd
			V_{IHmax}	V_{ILmin}	V_{IHmin}	V_{ILmax}	V_{EE}	
Power Supply Drain Current	I_E	8					8	1, 16
Input Current	I_{inH}	5	5				8	1, 16
	I_{inH}	9	9				8	1, 16
Output Voltage Logic 1	V_{OH}	2	5				8	1, 16
Output Voltage Logic 0	V_{OL}	2		9			8	1, 16
Threshold Voltage Logic 1	V_{OHA}	2			5		8	1, 16
Threshold Voltage Logic 0	V_{OLA}	2				5	8	1, 16
Switching Times (50 Ω Load)					Pulse In	Pulse Out	-3.2 V	+2.0 V
Propagation Delay	Enable t_{PHL}	2			9	2	8	1, 16
	Data t_{PLH}	2			5	2	8	1, 16
Rise/Fall Time (20 to 80%)	t_{TLH}	2			5	2	8	1, 16
	t_{THL}							

Each MECL 10,000 series circuit has been designed to meet the dc specifications shown in the test table, after thermal equilibrium has been established. The circuit is in a test socket or mounted on a printed circuit board and transverse air flow greater than 500 linear fpm is maintained. Outputs are terminated through a 50-ohm resistor to -2.0 volts. Test procedures are shown for only one gate. The other gates are tested in the same manner.

MC10188

PACKAGE DIMENSIONS

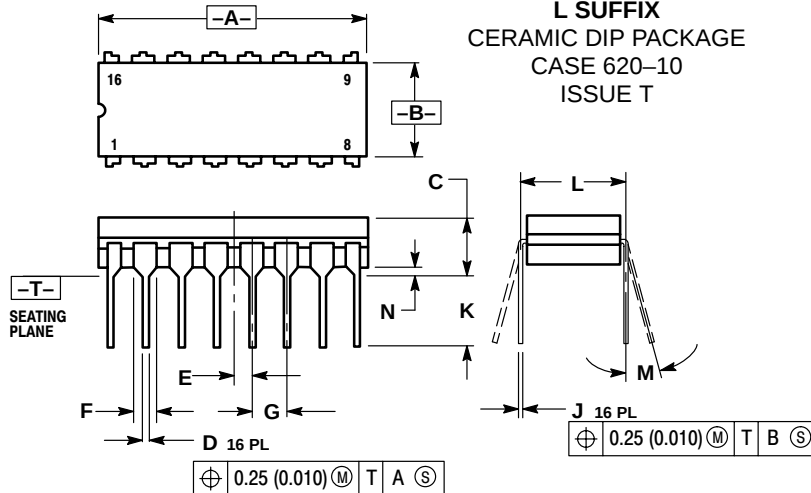
PLCC-20
FN SUFFIX
PLASTIC PLCC PACKAGE
CASE 775-02
ISSUE C



DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.385	0.395	9.78	10.03
B	0.385	0.395	9.78	10.03
C	0.165	0.180	4.20	4.57
E	0.090	0.110	2.29	2.79
F	0.013	0.019	0.33	0.48
G	0.050 BSC	1.27 BSC		
H	0.026	0.032	0.66	0.81
J	0.020	---	0.51	---
K	0.025	---	0.64	---
R	0.350	0.356	8.89	9.04
U	0.350	0.356	8.89	9.04
V	0.042	0.048	1.07	1.21
W	0.042	0.048	1.07	1.21
X	0.042	0.056	1.07	1.42
Y	---	0.020	---	0.50
Z	2 °	10 °	2 °	10 °
G1	0.310	0.330	7.88	8.38
K1	0.040	---	1.02	---

MC10188

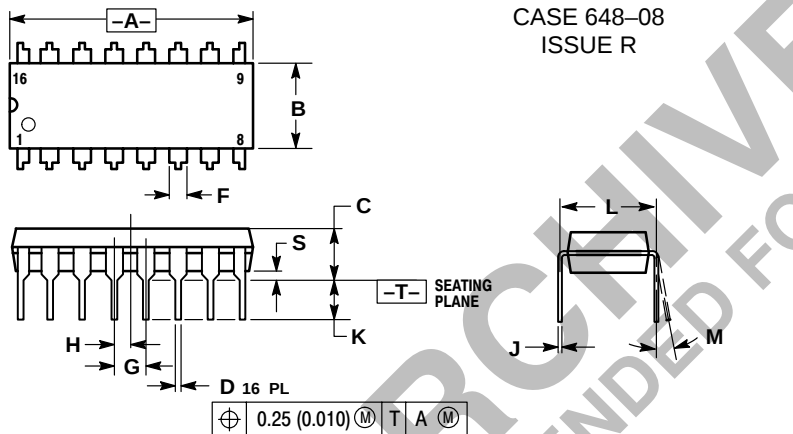
CDIP-16 L SUFFIX CERAMIC DIP PACKAGE CASE 620-10 ISSUE T



- NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
 2. CONTROLLING DIMENSION: INCH.
 3. DIMENSION L TO CENTER OF LEAD WHEN FORMED PARALLEL.
 4. DIMENSION F MAY NARROW TO 0.76 (0.030) WHERE THE LEAD ENTERS THE CERAMIC BODY.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.750	0.785	19.05	19.93
B	0.240	0.295	6.10	7.49
C	---	0.200	---	5.08
D	0.015	0.020	0.39	0.50
E	0.050 BSC		1.27 BSC	
F	0.055	0.065	1.40	1.65
G	0.100 BSC		2.54 BSC	
H	0.008	0.015	0.21	0.38
K	0.125	0.170	3.18	4.31
L	0.300 BSC		7.62 BSC	
M	0°	15°	0°	15°
N	0.020	0.040	0.51	1.01

PDIP-16 P SUFFIX PLASTIC DIP PACKAGE CASE 648-08 ISSUE R



- NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
 2. CONTROLLING DIMENSION: INCH.
 3. DIMENSION L TO CENTER OF LEADS WHEN FORMED PARALLEL.
 4. DIMENSION B DOES NOT INCLUDE MOLD FLASH.
 5. ROUNDED CORNERS OPTIONAL.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.740	0.770	18.80	19.55
B	0.250	0.270	6.35	6.85
C	0.145	0.175	3.69	4.44
D	0.015	0.021	0.39	0.53
F	0.040	0.70	1.02	1.77
G	0.100 BSC		2.54 BSC	
H	0.050 BSC		1.27 BSC	
J	0.008	0.015	0.21	0.38
K	0.110	0.130	2.80	3.30
L	0.295	0.305	7.50	7.74
M	0°	10°	0°	10°
S	0.020	0.040	0.51	1.01

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