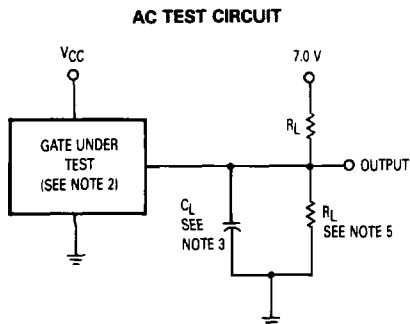
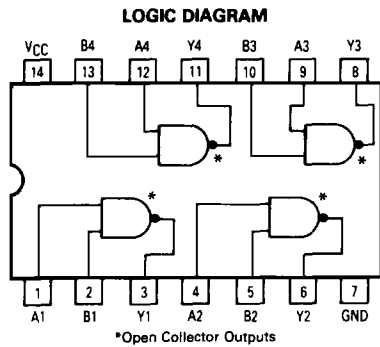




Advance Information

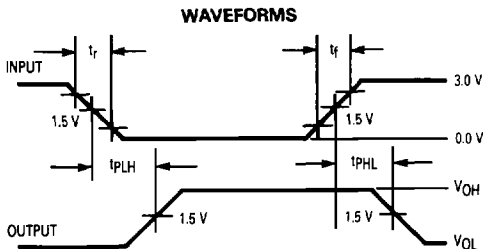
Quad 2-Input NAND Buffer With Open Collector Outputs

ELECTRICALLY TESTED PER:
MPG54F38



NOTES:

- The pulse generator has the following characteristics: $t_r = t_f \approx 2.5$ ns, PRR = 1.0 MHz and $Z_{out} = 50 \Omega$.
- Terminal conditions (pins not designated) may be high ≥ 2.0 V, low ≤ 0.8 V, or open).
- $C_L = 50$ pF = 10%, including scope probe, wiring and stray capacitance, without package in test fixture.
- Voltage measurements are to be made with respect to network ground terminal.
- $R_L = 499 \Omega \pm 5.0\%$.



This document contains information on a new product. Specifications and information herein are subject to change without notice.

Military 54F38



AVAILABLE AS:

- 1) JAN: *
- 2) SMD: *
- 3) 883C: *

X = CASE OUTLINE AS FOLLOWS:
PACKAGE: CERDIP: C
CERFLAT: D
LCC: 2

*Call Factory for latest update

PIN ASSIGNMENTS

FUNCTION	DIL	FLATS	LCC	BURN-IN (CONDITION A)
A1	1	1	2	VCC
B1	2	2	3	GND
Y1	3	3	4	VCC
A2	4	4	6	VCC
B2	5	5	8	GND
Y2	6	6	9	VCC
GND	7	7	10	GND
Y3	8	8	12	VCC
A3	9	9	13	VCC
B3	10	10	14	GND
Y4	11	11	16	VCC
A4	12	12	18	VCC
B4	13	13	19	GND
VCC	14	14	20	VCC

BURN-IN CONDITIONS:
VCC = 5.0 V MIN/6.0 V MAX

TRUTH TABLE

A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

Positive Logic Y = \overline{AB}
0 = Low Voltage Level
1 = High Voltage Level

54F38

Symbol	Parameter	Limits						Units	Test Condition (Unless Otherwise Specified)
		+ 25°C		+ 125°C		- 55°C			
		Subgroup 1		Subgroup 2		Subgroup 3			
		Min	Max	Min	Max	Min	Max		
I _{CEX}	Open Collector Input Current		250		250		250	μA	V _{CC} = 4.5 V, V _{IL} = 0.8 V, other input = 5.5 V, V _{OUT} = 4.5 V.
V _{OL}	Logical "0" Output Voltage		0.5		0.5		0.5	V	V _{CC} = 4.5 V, I _{OL} = 20 mA, V _{IH} = 2.0 V.
V _{IC}	Input Clamping Voltage		- 1.2					V	V _{CC} = 4.5 V, I _{IN} = - 18 mA, other input is open.
I _{IH}	Logical "1" Input Current		20		20		20	μA	V _{CC} = 5.5 V, V _{IN} = 2.7 V.
I _{IHH}	Logical "1" Input Current		100		100		100	μA	V _{CC} = 5.5 V, V _{IN} = 7.0 V.
I _{IL}	Logical "0" Input Current		- 1.2		- 1.2		- 1.2	mA	V _{CC} = 5.5 V, V _{IN} = 0.5 V.
I _{CCH}	Power Supply Current		7.0		7.0		7.0	mA	V _{CC} = 5.5 V, V _{IN} = GND.
I _{CCL}	Power Supply Current		30		30		30	mA	V _{CC} = 5.5 V, V _{IN} = 5.5 V.
V _{IH}	Logical "1" Input Voltage	2.0		2.0		2.0		V	V _{CC} = 4.5 V.
V _{IL}	Logical "0" Input Voltage		0.8		0.8		0.8	V	V _{CC} = 4.5 V.
	Functional Tests	Subgroup 7		Subgroup 8A		Subgroup 8B			per Truth Table with V _{CC} = 5.0 V, V _{INL} = 0.5 V, and V _{INH} = 2.5 V.

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Symbol	Parameter	Limits						Units	Test Condition (Unless Otherwise Specified)
		+ 25°C		+ 125°C		- 55°C			
		Subgroup 9		Subgroup 10		Subgroup 11			
		Min	Max	Min	Max	Min	Max		
t _{PHL}	Propagation Delay :Data-Output A, B to Y	1.0	6.0	1.0	6.0	1.0	6.0	ns	V _{CC} = 5.0 V, C _L = 50 pF, R _L = 499 Ω.
t _{PLH}	Propagation Delay :Data-Output A, B to Y	7.0	15	7.0	15	7.0	15	ns	V _{CC} = 5.0 V, C _L = 50 pF, R _L = 499 Ω.