

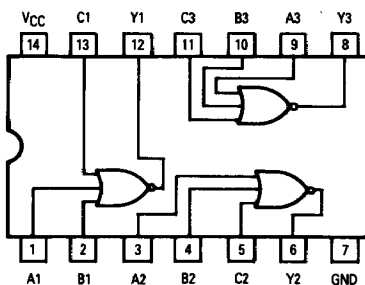


Advance Information

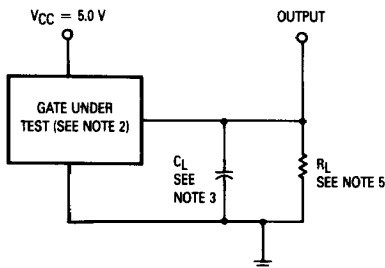
Triple 3-Input NOR Gate

ELECTRICALLY TESTED PER:
MPG54F27

LOGIC DIAGRAM



AC TEST CIRCUIT



NOTES:

1. Pulse generator has the following characteristics: $t_r = t_f \leq 2.5$ ns, PRR = 1.0 MHz and duty cycle = 50%.
2. Terminal conditions (pins not designated may be high ≥ 2.0 V, low ≤ 0.8 V, or open).
3. $C_L = 50$ pF $\pm 10\%$, including scope

4. probe, wiring and stray capacitance, without package in test fixture.
4. Voltage measurements are to be made with respect to network ground terminal.
5. $R_L = 498 \Omega \pm 5.0\%$.
6. The outputs are measured one at a time with one transition per measurement.

Military 54F27



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	GND
B1	2	2	3	GND
A2	3	3	4	GND
B2	4	4	6	GND
C2	5	5	8	GND
Y2	6	6	9	VCC
GND	7	7	10	GND
Y3	8	8	12	VCC
A3	9	9	13	GND
B3	10	10	14	GND
C3	11	11	16	GND
Y1	12	12	18	VCC
C1	13	13	19	GND
VCC	14	14	20	VCC

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

TRUTH TABLE

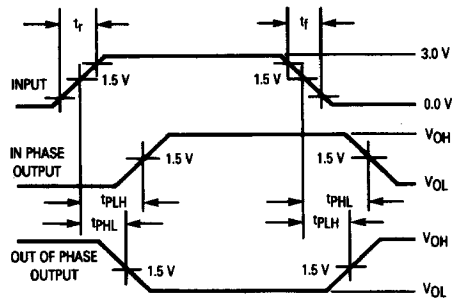
Inputs			Output
A	B	C	Y
H	X	X	L
X	H	X	L
X	X	H	L
L	L	L	H

H = HIGH Voltage Level
L = LOW Voltage Level
X = Irrelevant

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

MOTOROLA MILITARY ALS/FAST/LS/TTL DATA

WAVEFORMS



Symbol	Parameter	Limits						Units	Test Condition (Unless Otherwise Specified)
	Static Parameters:	+ 25°C		+ 125°C		− 55°C			
		Subgroup 1		Subgroup 2		Subgroup 3			
		Min	Max	Min	Max	Min	Max		
VOH	Logical “1” Output Voltage	2.5		2.5		2.5		V	VCC = 4.5 V, IOH = − 1.0 mA, VIH = 2.0 V, VIL = 0.8 V.
VOL	Logical “0” Output Voltage		0.5		0.5		0.5	V	VCC = 4.5 V, IOL = 20 mA, VIL = 0.8 V, VIH = 2.0 V.
VIC	Input Clamping Voltage		− 1.2					V	VCC = 4.5 V, IIN = − 18 mA, other inputs are open.
IIH	Logical “1” Input Current		20		20		20	μA	VCC = 5.5 V, VIH = 2.7 V.
IIHH	Logical “1” Input Current		100		100		100	μA	VCC = 5.5 V, VIHH = 7.0 V.
IIL	Logical “0” Input Current	− 0.03	− 0.6	− 0.03	− 0.6	− 0.03	− 0.6	mA	VCC = 5.5 V, VIL = 0.5 V.
IOS	Output Short Circuit Current	− 60	− 150	− 60	− 150	− 60	− 150	mA	VCC = 5.5 V, VOUT = 0 V.
ICCH	Power Supply Current		5.5		5.5		5.5	mA	VCC = 5.5 V, VIN = 0 V.
ICCL	Power Supply Current		12		12		12	mA	VCC = 5.5 V, VIN = 4.5 V, other inputs = 0 V.
VIH	Logical “1” Input Voltage	2.0		2.0		2.0		V	VCC = 4.5 V.
VIL	Logical “0” Input Voltage		0.8		0.8		0.8	V	VCC = 4.5 V.
	Functional Tests	Subgroup 7		Subgroup 8A		Subgroup 8B			per Truth Table with VCC = 5.0 V, VINL = 0.5 V, and VINH = 2.5 V.

Symbol	Parameter	Limits						Units	Test Condition (Unless Otherwise Specified)
	Switching Parameters	+ 25°C		+ 125°C		− 55°C			
		Subgroup 9		Subgroup 10		Subgroup 11			
		Min	Max	Min	Max	Min	Max		
tPHL	Propagation Delay /Data-Output A or B to Y	1.0	4.5	1.0	5.5	1.0	5.5	ns	VCC = 5.0 V, CL = 50 pF, RL = 499 Ω.
tPLH	Propagation Delay /Data-Output A or B to Y	1.2	5.0	1.0	6.0	1.0	6.0	ns	VCC = 5.0 V, CL = 50 pF, RL = 499 Ω.