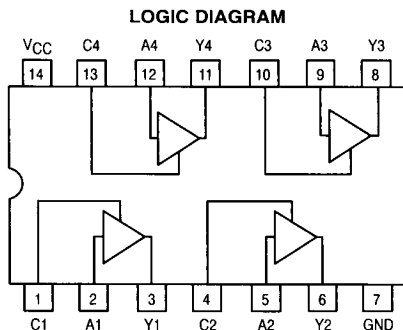


Quad 3-State Buffer High Enable

ELECTRICALLY TESTED PER:
MPG54F126

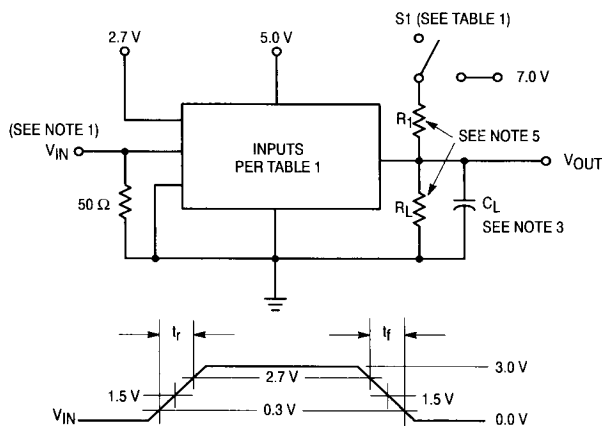


Positive Logic:

$$Y = A$$

Output is off (disabled) when C is high.

AC TEST CIRCUIT



REFERENCE NOTES ON PAGE 4-42

Military 54F126

**AVAILABLE AS:**

- 1) JAN: N/A
2) SMD: N/A
3) 883: 54F126/BXAJC

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

**THE LETTER "M" APPEARS
BEFORE THE / ON LCC.**

PIN ASSIGNMENTS

FUNCT.	DIL 632-08	FLATS 717-04	LCC 756A-02	BURN-IN (COND. A)
C1	1	1	2	VCC
A1	2	2	3	VCC
Y1	3	3	4	OPEN
C2	4	4	6	VCC
A2	5	5	8	VCC
Y2	6	6	9	OPEN
GND	7	7	10	GND
Y3	8	8	12	OPEN
A3	9	9	13	VCC
C3	10	10	14	VCC
Y4	11	11	16	OPEN
A4	12	12	18	VCC
C4	13	13	19	VCC
VCC	14	14	20	VCC

BURN-IN CONDITIONS:
V_{CC} = 5.0 V MIN/6.0 V MAX

FUNCTION TABLE		
Inputs		Output
C	A	Y
H	L	L
H	H	H
L	X	(Z)

H = HIGH Voltage Level

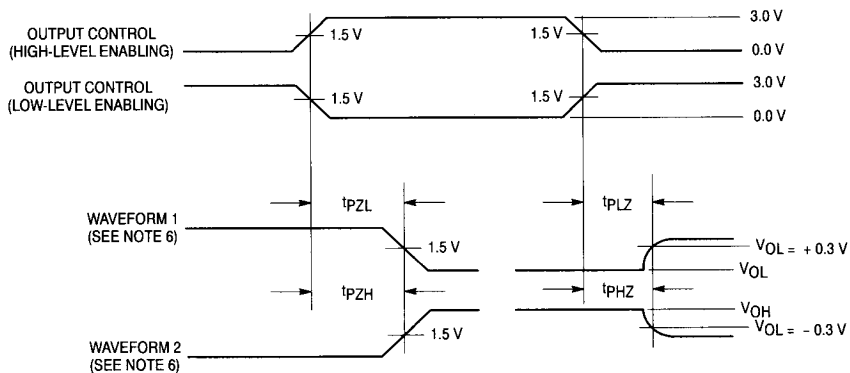
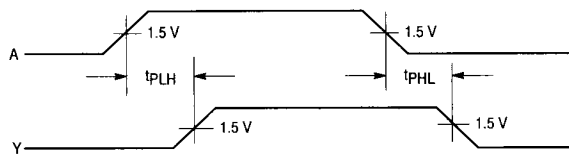
L = LOW Voltage Level

X = Don't Care

Table 1

Test Type	S1
t_{PLH}	open
t_{PHL}	open
t_{PHZ}	open
t_{PZH}	open
t_{PLZ}	closed
t_{PZL}	closed

ENABLE AND DISABLE TIMES THREE-STAGE OUTPUT VOLTAGE WAVEFORMS



NOTES:

1. Input pulse generator has the following characteristics:
 $PRR = 1.0 \text{ MHz}$, $t_r = t_f \leq 2.5 \text{ ns}$ and $Z_{OUT} \approx 50 \Omega$.
2. Terminal conditions (pins not designated may be high $\geq 2.0 \text{ V}$, low $\leq 0.8 \text{ V}$, or open).
3. $C_L = 50 \text{ pF} \pm 10\%$ including scope probe, wiring and stray capacitance, without package in test fixture.
4. Voltage measurements are to be made with respect to network ground terminal.
5. $R_L = R_1 = 500 \Omega \pm 5.0\%$.
6. Waveform 1 is for an output with terminal conditions such that the output is low except when disabled by the output control. Waveform 2 is for an output with terminal conditions such that the output is high except when disabled by the output control.
7. In the example above, the phase relationships between inputs and outputs have been chosen arbitrarily.

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Symbol	Parameter	Limits						Unit	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		
V _{OH}	Logical "1" Output Voltage	2.4		2.4		2.4		V	V _{CC} = 4.5 V, I _{OH} = –3.0 mA, V _{IN} = 2.0 V (both inputs).
V _{OL}	Logical "0" Output Voltage		0.5		0.5		0.5	V	V _{CC} = 4.5 V, I _{OL} = 48 mA, V _{IN} = 0.8 V (other input is = 2.0 V).
V _{IC}	Input Clamping Voltage		–1.2					V	V _{CC} = 4.5 V, I _{IN} = –18 mA, other inputs are open.
I _{IH}	Logical "1" Input Current		20		20		20	μA	V _{CC} = 5.5 V, V _{IH} = 2.7 V, V _{IN} = 5.5 V, other inputs are open.
I _{IHH}	Logical "1" Input Current		100		100		100	μA	V _{CC} = 5.5 V, V _{IHH} = 7.0 V, V _{IN} = 5.5 V, other inputs are open.
I _{IL}	Logical "0" Input Current	0	–20	0	–20	0	–20	μA	V _{CC} = 5.5 V, V _{IL} = 0.5 V, other inputs are open.
I _{IL}	Logical "0" Input Current	0	–20	0	–20	0	–20	μA	V _{CC} = 5.5 V, V _{IL} = 0.5 V, other input = 5.5 V.
I _{OS}	Output Short Circuit Current	–100	–225	–100	–225	–100	–225	mA	V _{CC} = 5.5 V, V _{IN} = 4.5 V, other input = 0 V, V _{OUT} = GND.
I _{IOZH}	Output Off Current High		50		50		50	μA	V _{CC} = 5.5 V, V _{IN} = 0.8 V, other input = 0 V, V _{OUT} = 2.7 V.
I _{IOZL}	Output Off Current Low		–50		–50		–50	μA	V _{CC} = 5.5 V, V _{IN} = 0.8 V, other input = 4.5 V, V _{OUT} = 0.5 V.
I _{CCH}	Power Supply Current		30		30		30	mA	V _{CC} = 5.5 V, V _{IN} = 4.5 V (all inputs).
I _{CCL}	Power Supply Current		48		48		48	mA	V _{CC} = 5.5 V, V _{IN} = 4.5 V, other inputs = 0 V.
I _{CCZ}	Power Supply Current Off		39		39		39	mA	V _{CC} = 5.5 V, V _{IN} = 0 V, other inputs are open.
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.

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Symbol	Parameter	Limits						Unit	Test Condition (Unless Otherwise Specified)
	Functional Tests	+ 25°C		+ 125°C		– 55°C			per Truth Table with V _{CC} = 4.5 V, (Repeat at) V _{CC} = 5.5 V, V _{INL} = 0.5 V, and V _{INH} = 2.4 V.
		Subgroup 7		Subgroup 8A		Subgroup 8B			

Symbol	Parameter	Limits						Unit	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		
t _{PHL}	Propagation Delay /Data-Output Output <u>High-Low</u>	3.0	8.0	3.0	9.5	3.0	9.5	ns	V _{CC} = 5.0 V, C _L = 50 pF, R _L = R ₁ = 500 Ω.
t _{PLH}	Propagation Delay /Data-Output Output <u>Low-High</u>	2.0	6.5	2.0	8.0	2.0	8.0	ns	V _{CC} = 5.0 V, C _L = 50 pF, R _L = R ₁ = 500 Ω.
t _{PLZ}	Propagation Delay /Data-Output Output <u>Low-High</u>	3.0	7.5	3.0	9.0	3.0	9.0	ns	V _{CC} = 5.0 V, C _L = 50 pF, R _L = R ₁ = 500 Ω.
t _{PHZ}	Propagation Delay /Data-Output Output <u>High-Low</u>	2.0	6.5	2.0	8.5	2.0	8.5	ns	V _{CC} = 5.0 V, C _L = 50 pF, R _L = R ₁ = 500 Ω.
t _{PZL}	Propagation Delay /Data-Output Output <u>Low-High</u>	3.0	8.0	3.0	9.5	3.0	9.5	ns	V _{CC} = 5.0 V, C _L = 50 pF, R _L = R ₁ = 500 Ω.
t _{PZH}	Propagation Delay /Data-Output Output <u>High-Low</u>	3.0	7.5	3.0	9.5	3.0	9.5	ns	V _{CC} = 5.0 V, C _L = 50 pF, R _L = R ₁ = 500 Ω.