



Octal D-Type Transparent Latch With 3-State Outputs

ELECTRICALLY TESTED PER:
MPG54ALS573

Military 54ALS573



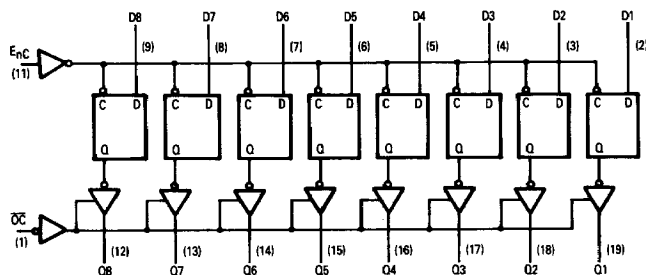
AVAILABLE AS:

- 1) JAN: N/A
- 2) SMD: 8401201
- 3) 883C: 54ALS573/BXAJC

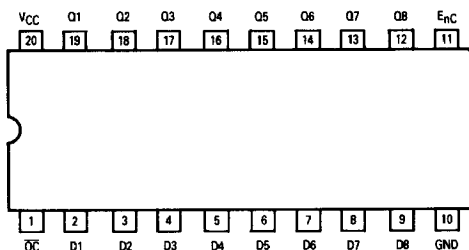
X = CASE OUTLINE AS FOLLOWS:
PACKAGE: CERDIP: R
CERFLAT: S
LCC: 2

*Call Factory for latest update

LOGIC DIAGRAM



CONNECTION DIAGRAM



PIN ASSIGNMENTS

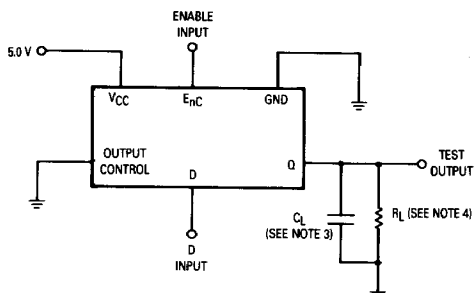
FUNCTION	DIL	FLATS	LCC	BURN-IN (CONDITION A)
$\overline{OC}$	1	1	1	VCC
D1	2	2	2	VCC
D2	3	3	3	VCC
D3	4	4	4	VCC
D4	5	5	5	VCC
D5	6	6	6	VCC
D6	7	7	7	VCC
D7	8	8	8	VCC
D8	9	9	9	VCC
GND	10	10	10	GND
EnC	11	11	11	VCC
O8	12	12	12	OPEN
O7	13	13	13	OPEN
O6	14	14	14	OPEN
O5	15	15	15	OPEN
O4	16	16	16	OPEN
O3	17	17	17	OPEN
O2	18	18	18	OPEN
O1	19	19	19	OPEN
VCC	20	20	20	VCC

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

MOTOROLA MILITARY ALS/FAST/LS/TTL DATA

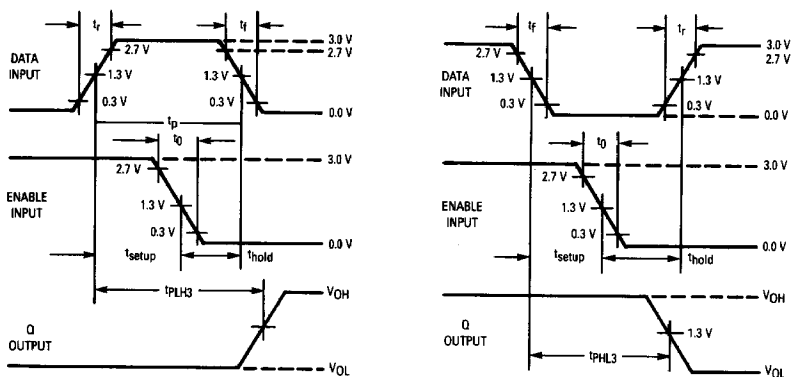
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DATA SWITCHING TEST CIRCUIT AND WAVEFORMS

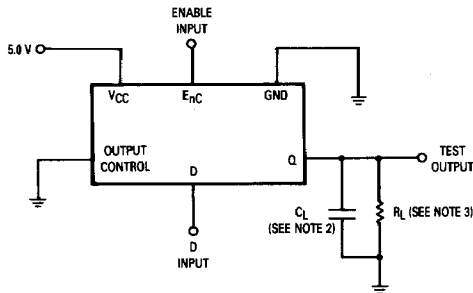


NOTES:

1. Enable input pulse characteristics: $t_f = 6.0 \pm 1.5$ ns, $t_p = 10$ ns, $PRR \leq 1.0$ MHz and $Z_{OUT} \approx 50 \Omega$.
2. D input pulse characteristics: $t_r = t_f = 6.0 \pm 1.5$ ns, $t_{setup} = 10$ ns, $t_{hold} = 7.0$ ns, $t_p = 17$ ns, PRR is 60% of Enable PRR and $Z_{OUT} \approx 50 \Omega$.
3. $C_L = 50$ pF $\pm 10\%$ (including jig and probe capacitance).
4. $R_L = 499 \pm 1.0\%$.

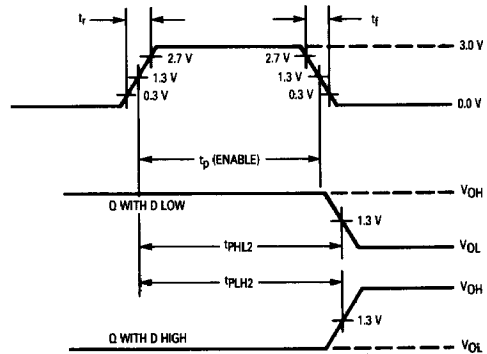


ENABLE SWITCHING TEST CIRCUIT AND WAVEFORMS

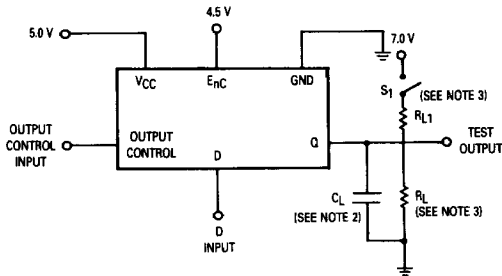


NOTES:

1. Enable input pulse characteristics: $t_r = t_f = 6.0 \pm 1.5$ ns, $t_p(\text{ENABLE}) = 10$ ns, $\text{PRR} \leq 1.0$ MHz and $Z_{\text{out}} = 50 \Omega$.
2. $C_L = 50$ pF $\pm 10\%$ (including jig and probe capacitance).
3. $R_L = 499 \Omega \pm 1.0\%$.

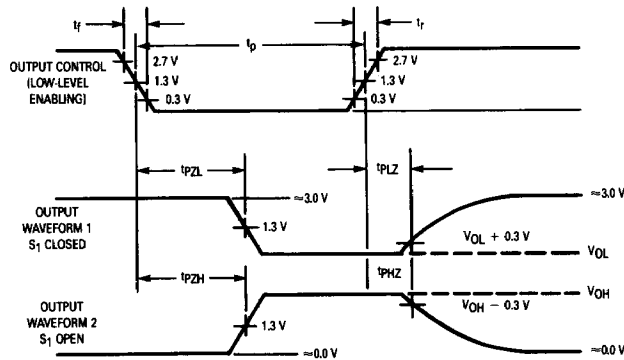


TRI-STATE SWITCHING TEST CIRCUIT AND WAVEFORMS



SWITCH POSITIONS

Symbol	S1
t_{PZH}	Open
t_{PZL}	Closed
t_{PLZ}	Closed
t_{PHZ}	Closed



NOTES:

1. Output control input pulse characteristics: $t_r = t_f = 6.0 \pm 1.5$ ns, $t_p \geq 200$ ns, $\text{PRR} \leq 1.0$ ns and $Z_{\text{out}} = 50 \Omega$.
2. $C_L = 50$ pF $\pm 10\%$ (including jig and probe capacitance).
3. $R_L = 499 \Omega \pm 1.0\%$.

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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		
V _{OH}	Logic “1” Output Voltage	2.4		2.4		2.4		V	V _{CC} = 4.5 V, I _{OH} = –1.0 mA, OC = 0.8 V, E _{NC} = 2.0 V, V _{IH} = 2.0 V, other inputs are open.
V _{OL}	Logic “0” Output Voltage		0.4		0.4		0.4	V	V _{CC} = 4.5 V, I _{OL} = 12 mA, other inputs are open, V _{IL} = 0.8 V, OC = 0.8 V, E _{NC} = 2.0 V.
V _{IC}	Input Clamping Voltage		– 1.5					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, other inputs are open.
I _{IHH}	Logical “1” Input Current		100		100		100	μA	V _{CC} = 5.5 V, V _{IHH} = 7.0 V, other inputs are open.
I _O	Output Short Circuit Current	– 15	– 110	– 15	– 110	– 15	– 110	mA	V _{CC} = 5.5 V, V _{IN} = 5.0 V, other inputs are open, V _{OUT} = 2.25 V, OC = GND, E _{NC} = 5.0 V.
I _{OZH}	Output Off Current High		20		20		20	μA	V _{CC} = 5.5 V, V _{IN} = 2.0 V, other inputs are open, V _{OUT} = 2.7 V, OC = 5.0 V, E _{NC} = 5.0 V.
I _{OZL}	Output Off Current Low		– 20		– 20		– 20	μA	V _{CC} = 5.5 V, V _{IN} = 0.8 V, other inputs are open, V _{OUT} = 0.4 V, OC = 5.0 V, E _{NC} = 5.0 V.
I _{IL}	Logical “0” Input Current	0	– 100	0	– 100	0	– 100	μA	V _{CC} = 5.5 V, V _{IN} = 0.4 V, other inputs are open.
I _{CCH}	Power Supply Current Off		19		19		19	mA	V _{CC} = 5.5 V, V _{IN} = 5.0 V (all inputs), OC = GND.
I _{CCL}	Power Supply Current Off		24		24		24	mA	V _{CC} = 5.5 V, V _{IN} = GND (all inputs), E _{NC} = 5.0 V.
I _{CCZ}	Power Supply Current Off		27		27		27	mA	V _{CC} = 5.5 V, V _{IN} = GND (all inputs), OC = 5.0 V, E _{NC} = 5.0 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} = 0.4 V, and V _{INH} = 2.5 V.

MOTOROLA MILITARY ALS/FAST/LS/TTL DATA

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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 _{PHL2}	Propagation Delay /Data-Output E _{nC} to Q _n	6.0	19	8.0	20	8.0	20	ns	V _{CC} = 5.0 V, C _L = 50 pF, R _L = 499 Ω.
t _{PLH2}	Propagation Delay /Data-Output E _{nC} to Q _n	8.0	20	8.0	27	8.0	27	ns	V _{CC} = 5.0 V, C _L = 50 pF, R _L = 499 Ω.
t _{PHL3}	Propagation Delay /Data-Output D _n to Q _n	2.0	12	2.0	15	2.0	15	ns	V _{CC} = 5.0 V, C _L = 50 pF, R _L = 499 Ω.
t _{PLH3}	Propagation Delay /Data-Output D _n to Q _n	2.0	12	2.0	15	2.0	15	ns	V _{CC} = 5.0 V, C _L = 50 pF, R _L = 499 Ω.
t _{PZH}	Propagation Delay /Data-Output OC to Q _n	4.0	18	4.0	21	4.0	21	ns	V _{CC} = 5.0 V, C _L = 50 pF, R _L = 499 Ω.
t _{PZL}	Propagation Delay /Data-Output OC to Q _n	4.0	18	4.0	21	4.0	21	ns	V _{CC} = 5.0 V, C _L = 50 pF, R _L = 499 Ω.
t _{PHZ}	Propagation Delay /Data-Output OC to Q _n	2.0	8.0	2.0	10	2.0	10	ns	V _{CC} = 5.0 V, C _L = 50 pF, R _L = 499 Ω.
t _{PLZ}	Propagation Delay /Data-Output OC to Q _n	3.0	13	3.0	15	3.0	15	ns	V _{CC} = 5.0 V, C _L = 50 pF, R _L = 499 Ω.

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