

**Electrical Characteristics** over recommended operating free-air temperature range (unless otherwise noted).

Parameter		Conditions	DM54/74			DM54/74			DM54/74			DM54/74			Units
			32			L32			LS32			S32			
			Min	Typ (1)	Max	Min	Typ (1)	Max	Min	Typ (1)	Max	Min	Typ (1)	Max	
V _{IH}	High Level Input Voltage		2			2			2			2			V
V _{IL}	Low Level Input Voltage	DM54			0.8			0.7			0.8			0.8	V
		DM74			0.8			0.7			0.8			0.8	V
V _I	Input Clamp Voltage				-1.5			N/A							V
		V _{CC} = Min						N/A			-1.5			-1.2	V
		V _I = -18 mA													
I _{OH}	High Level Output Current				-800						-200			-1000	μA
V _{OH}	High Level Output Voltage		2.4	3.4		2.4	2.8		2.5	3.4		2.5	3.4		V
		V _{CC} = Min, V _{IH} = 2 V, I _{OH} = Max	2.4	3.4		2.4	2.8		2.7	3.4		2.7	3.4		V
I _{OL}	Low Level Output Current	DM54			16			2			4			20	mA
		DM74			16			3.6			8			20	mA
V _{OL}	Low Level Output Voltage			0.2	0.4		0.15	0.3		0.25	0.4		0.25	0.5	V
		V _{CC} = Min V _{IL} = Max		0.2	0.4			0.4		0.35	0.5		0.25	0.5	V
		I _{OL} = 4 mA								0.25	0.4				V
I _I	Input Current at Maximum Input Voltage				1			0.1						1	mA
		V _{CC} = Max													mA
		V _I = 7 V									0.1				mA
I _{IH}	High Level Input Current				40			10							μA
		V _{CC} = Max									20			50	μA
		V _I = 2.4 V													μA
		V _I = 2.7 V													μA
I _{IL}	Low Level Input Current														μA
		V _{CC} = Max													μA
		V _I = 0.3 V													μA
		V _I = 0.4 V													μA
		V _I = 0.5 V													μA
I _{OS}	Short Circuit Output Current	DM54	-20		-55	-3	-9	-15	-20		-100	-40		-100	mA
		DM74	-18		-55	-3	-9	-15	-20		-100	-40		-100	mA
I _{CC}	Supply Current			15	22		1.5	2.2		3.1	6.2		18	32	mA
	Total Outputs High			23	38		2.3	3.8		4.9	9.8		38	68	mA
	Total Outputs Low														mA

Note 1: All typical values are at V_{CC} = 5 V, T_A = 25°C.

Note 2: Not more than one output should be shorted at one time, and for DM54LS/DM74LS and DM54S/74S duration of short circuit should not exceed one second.

**Switching Characteristics** at $V_{CC} = 5\text{ V}$, $T_A = 25^\circ\text{C}$.

Device	Conditions	t _{PLH} (ns) Propagation Delay Time, Low-To-High Level Output			t _{pHL} (ns) Propagation Delay Time, High-To-Low Level Output		
		Min	Typ	Max	Min	Typ	Max
32	$C_L = 15\text{ pF}$ $R_L = 400\ \Omega$		10	15		14	22
L32	$C_L = 50\text{ pF}$ $R_L = 4\text{ k}\Omega$		40	80		50	100
LS32	$C_L = 15\text{ pF}$ $R_L = 2\text{ k}\Omega$	3	7	11	3	7	11
	$C_L = 50\text{ pF}$ $R_L = 2\text{ k}\Omega$	4	10	15	4	10	15
S32	$C_L = 15\text{ pF}$ $R_L = 280\ \Omega$	2	4	7	2	4	7
	$C_L = 50\text{ pF}$ $R_L = 280\ \Omega$	2	5	9	2	5	9