





# 10H507 QUIESCENT LIMIT TABLE \*

### \* ELECTRICAL CHARACTERISTICS

Each MECL 10H series circuit has been designed to meet the dc specifications shown in the test table, after thermal equilibrium has been established. The circuit is in a test socket or mounted on a printed circuit board and transverse air flow greater than 500 linear fpm is maintained. Outputs are terminated through a 100 Ω resistor to - 2.0 volts.

Test Temperature	Test Voltage Values (Volts)							
	V <sub>IH1</sub>	V <sub>IL1</sub>	V <sub>IH2</sub>	V <sub>IL2</sub>	PS1	PS2	VEE1	VEE2
T <sub>A</sub> = 25 °C	-0.78	-1.95	-1.11	-1.480	+1.11	+0.31	-5.46	-4.94
T <sub>A</sub> = 125 °C	-0.65	-1.95	-0.96	-1.465	+1.24	+0.36	-5.46	-4.94
T <sub>A</sub> = -55 °C	-0.84	-1.95	-1.16	-1.510	+1.01	+0.28	-5.46	-4.94

Symbol	Parameter	Limits						Units	TEST VOLTAGE APPLIED TO PINS BELOW												
		+ 25 °C		+ 125 °C		- 55 °C			Pinouts referenced are for DIL package, check Pin Assignments VCC = 0 V, Output Load = 100 Ω to - 2.0 V												
		Subgroup 1	Subgroup 2	Subgroup 2	Subgroup 3	Subgroup 3															
	Functional Parameters:	Min	Max	Min	Max	Min	Max														
V <sub>OH</sub>	High Output Voltage	-1.01	-0.78	-0.86	-0.65	-1.06	-0.84	V	V <sub>IH1</sub>	V <sub>IL1</sub>	V <sub>IH2</sub>	V <sub>IL2</sub>	V <sub>EE1</sub>	V <sub>EE2</sub>	V <sub>CC</sub>					P.U.T.	
V <sub>OL</sub>	Low Output Voltage	-1.95	-1.58	-1.95	-1.565	-1.95	-1.61	V	4, 5, 7, 9, 14, 15	4, 5, 7, 9, 14, 15			8		1, 16					2, 3, 10-13	
V <sub>OH1</sub>	High Output Voltage	-1.01	-0.78	-0.86	-0.65	-1.06	-0.84	V	4, 5, 7, 9, 14, 15	4, 5, 7, 9, 14, 15			8		1, 16						2, 3, 10-13
V <sub>OL1</sub>	Low Output Voltage	-1.95	-1.58	-1.95	-1.565	-1.95	-1.61	V	5, 9, 15	4, 5, 7, 9, 14, 15			8		1, 16						2, 3, 10-13
I <sub>EE</sub>	Power Supply Current	-28		-31		-31		mA	5, 7, 15				8		1, 16						8
I <sub>IH</sub>	Input Current High		220		425		425	μA	4, 9, 14				8		1, 16						4, 9, 14
I <sub>IH1</sub>	Input Current High		265		425		425	μA	5, 7, 15				8		1, 16						5, 7, 15
I <sub>IL</sub>	Input Current Low	0.5		0.3		0.5		μA		4, 5, 7, 9, 14, 15				8							4, 5, 7, 9, 14, 15

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Test Temperature	Test Voltage Values (Volts)									
	V <sub>IH1</sub>	V <sub>IL1</sub>	V <sub>IH2</sub>	V <sub>IL2</sub>	PS1	PS2	VEE1	VEE2	VEEL	VEEL
T <sub>A</sub> = 25 °C	-0.78	-1.95	-1.11	-1.480	+1.11	+0.31	-5.46	-4.94	-2.94	-2.94
T <sub>A</sub> = 125 °C	-0.65	-1.95	-0.96	-1.465	+1.24	+0.36	-5.46	-4.94	-2.94	-2.94
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Symbol	Parameter	Limits						Units	TEST VOLTAGE APPLIED TO PINS BELOW									
		+ 25 °C		+ 125 °C		- 55 °C			Pinouts referenced are for DIL package, check Pin Assignments V <sub>CC</sub> = 2.0 V, Output Load = 100 $\Omega$ to GND									
		Subgroup 9		Subgroup 10		Subgroup 11			V <sub>IN</sub>	V <sub>OUT</sub>	V <sub>CC</sub>	VEEL	PS1	PS2	P.U.T.			
t <sub>TLH</sub>	Rise Time	0.5	1.6	0.5	1.9	0.5	1.5	ns	4	3	1, 16	8	5	5	2, 10-13			
t <sub>THL</sub>	Fall Time	0.5	1.6	0.5	1.9	0.5	1.5	ns	5	2	1, 16	8	5	5	3, 10-13			
t <sub>pHL</sub>	Propagation Delay High to Low	0.4		0.4		1.9		ns	7	11	1, 16	8	9	9	2, 3, 10, 12, 13			
t <sub>pLH</sub>	Propagation Delay Low to High	0.4		0.4		1.9		ns	14	13	1, 16	8	14	14	2, 3, 10-12			