



FLIP CHIP MODULES TEST SPECS

TYPE: M119
3 - 8 INPUT NAND GATES

TEST	CONDITIONS	MAXIMUM	MINIMUM
V_{OUT}	$V_{CC} = +4.75 \text{ V}$ $V_{IN} = +2.0 \text{ V}$ $I_{LOAD} = +16 \text{ MA}$	+0.4 V	
V_{OUT}	$V_{CC} = +4.75 \text{ V}$ $V_{IN} = +0.8 \text{ V}$ $I_{LOAD} = -400 \mu\text{A}$		+2.4 V
I_{IN}	$V_{CC} = +5.25 \text{ V}$ MEASURED TO +0.4 V	-1.6 MA	
I_{IN}	$V_{CC} = +5.25 \text{ V}$ MEASURED TO +2.4 V	+40 μA	
TD_1	$V_{CC} = +5.00 \text{ V}$ ONE (RISE) DELAY 50% TO 50%	30 NS	
TD_0	$V_{CC} = +5.00 \text{ V}$ ZERO (FALL) DELAY 50% TO 50%	15 NS	
V_S	$V_{CC} = +5.00 \text{ V}$ OPEN CIRCUIT VOLTAGE	+4.0 V	+3.0 V
	$V_{CC} = +5.00 \text{ V}$ SHORT CIRCUIT CURRENT TO GND	-17.0 MA	-13.0 MA

TECHNICAL INFORMATION

Instruction literature and technical bulletins are available on all digital products, if you would like to be added to our mailing list for this type of material or if you have any questions about the equipment you have purchased, please contact the nearest Digital Sales Office.

MAINTENANCE INFORMATION

Repair of printed circuitry should be done with a low voltage, fairly cool soldering iron to prevent damage to the transistors and keep the copper from lifting. Oscilloscopes used to troubleshoot a module or system should be grounded to prevent damaging transients.

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