MOTOROLA
SEMICONDUCTOR
TECHNICAL DATA

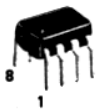
MC1472

DUAL PERIPHERAL-HIGH-VOLTAGE POSITIVE "NAND" DRIVER

The dual driver consists of a pair of PNP buffered AND gates connected to the bases of a pair of high voltage NPN transistors. They are similar to the MC75452 drivers but with the added advantages of: 1) 70 Volt capability 2) output suppression diodes and 3) PNP buffered inputs for MOS compatibility. These features make the MC1472 ideal for mating MOS logic or microprocessors to lamps, relays, printer hammers and incandescent displays.

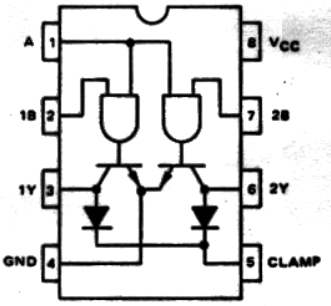
- 300 mA Output Capability (each transistor)
- 70 Vdc Breakdown Voltage
- Internal Output Clamp Diodes
- Low Input Loading for MOS Compatibility (PNP buffered)

DUAL PERIPHERAL POSITIVE "NAND" DRIVER
SILICON MONOLITHIC INTEGRATED CIRCUITS



P1 SUFFIX
PLASTIC PACKAGE
CASE 626

PIN CONNECTIONS



Positive Logic: Y=AB*

MAXIMUM RATINGS (T_A = 25°C)

Rating	Symbol	Value	Unit
Supply Voltage	V_{CC}	7.0	V
Input Voltage	V_{in}	5.5	V
Output Voltage	V_{out}	80	V
Clamp Voltage	V_C	80	V
Output Current (Continuous)	I_O	300	mA
Operating Junction Temperature	T_J	+ 150	°C
ige Temperature Range	T_{stg}	– 65 to + 150	°C

Rating	Symbol	Min	Max	Unit
Supply Voltage	V_{CC}	4.5	5.5	Volts
Operating Ambient Temperature	T_A	0	70	°C
Output Voltage	V_O	V_{CC}	70	Volts
Clamp Voltage	V_C	V_O	70	Volts

ORDERING INFORMATION

Device	Temperature Range
	0 to + 7[illegible]

TRUTH TABLE

A	B	Y
L	L	H ("OFF" STATE)
L	H	
H	L	
H	H	L ("ON" STATE)

ELECTRICAL CHARACTERISTICS (Unless otherwise noted min/max limits apply across the 0°C to 70°C temperature range with 4.5 V ≤ V_{CC} ≤ 5.5 V. All typical values are for T_A = 25°C, V_{CC} = 5.0 Volts.)

Characteristic	Symbol	Min	Typ	Max	Unit
Input Voltage — High Logic State	V_{IH}	2.0	—	5.5	Vdc
Input Voltage — Low Logic State	V_{IL}	0	—	0.8	Vdc
Input Current — Low Logic State (V_{IL} = 0.4 V)	I_{IL}				mA
A Input		—	—	−0.3	
B Input				−0.15	
Input Current — High Logic State	I_{IH}				μA
(V_{IH} = 2.4 V)					
A Input		—	—	40	
B Input		—	—	20	
(V_{IH} = 5.5 V)					
A Input		—	—	200	
B Input		—	—	100	
Input Clamp Voltage (I_{CC} = −12 mA)	V_{IK}	—	—	−1.5	V
Output Leakage Current — High Logic State (V_O = 70 V, See Test Figure)	I_{OH}		—	100	μA
Output Voltage — Low Logic State	V_{OL}				V
(I_{OL} = 100 mA)		—	—	0.4	
(I_{OL} = 300 mA)		—	—	0.7	
Output Clamp Diode Leakage Current (V_C = 70 V, See Test Figure)	I_{OC}	—	—	100	V
Output Clamp Forward Voltage (I_{FC} = 300 mA, See Test Figure)	V_{FC}		—	1.7	V
Power Supply Current	I_{CC}				mA
(All Inputs at V_{IH})		—	—	70	
(All Inputs at V_{IL})		—	—	15	

NOTE: All currents into device pins are shown as positive, out of device pins as negative. All voltages referenced to ground unless otherwise noted.

SWITCHING CHARACTERISTICS V_{CC} = 5.0V, T_A = 25°C

Characteristic	Symbol	Min	Typ	Max	Unit
Propagation Delay Time					
Output High to Low	t_{PHL}	–	–	1.0	μs
Output Low to High	t_{PLH}	–	–	0.75	
Output Transition Time					
Output High to Low	t_{THL}	–	–	0.1	μs
Output Low to High	t_{TLH}	–	–	0.1	

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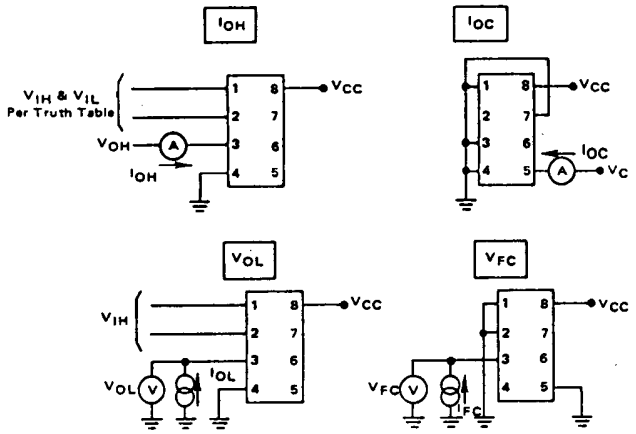
TEST CIRCUITS



SWITCHING TEST CIRCUIT AND WAVEFORM