

MOTOROLA
SEMICONDUCTOR
 TECHNICAL DATA

**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)

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
Storage 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 + 75

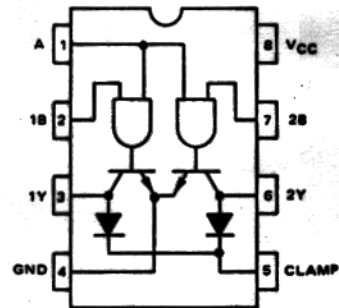
MC1472

**DUAL PERIPHERAL
 POSITIVE "NAND" DRIVER
 SILICON MONOLITHIC
 INTEGRATED CIRCUITS**



**P1 SUFFIX
 PLASTIC PACKAGE
 CASE 626**

PIN CONNECTIONS



Positive Logic: Y=AB*

TRUTH TABLE

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

MC1472

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

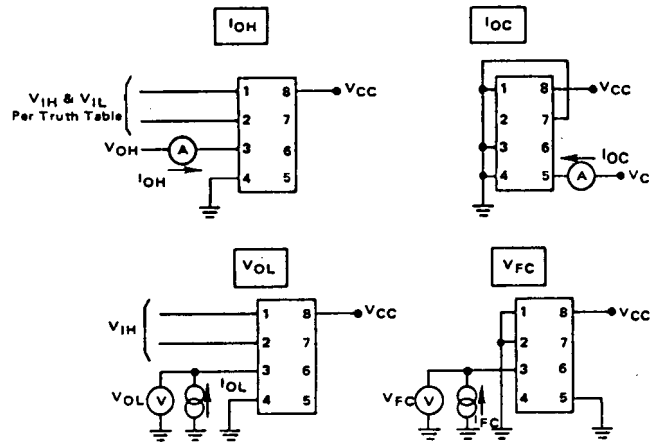
Characteristic	Symbol	Min	Typ	Max	Unit
Input Voltage — High Logic State	V_{IH}	2.0	—	5.5	Vdc
Input Voltage — Low Logic State	V_{IL}	0	—	0.8	Vdc
Input Current — Low Logic State ($V_{IL} = 0.4\text{ V}$) A Input B Input	I_{IL}	—	—	-0.3 -0.15	mA
Input Current — High Logic State ($V_{IH} = 2.4\text{ V}$)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

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 $V_{CC} = 5.0\text{V}$, $T_A = 25^\circ\text{C}$

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

TEST CIRCUITS



SWITCHING TEST CIRCUIT AND WAVEFORM

