Memory/Clock Drivers

MH0009/MH0009C dc coupled two phase MOS clock driver

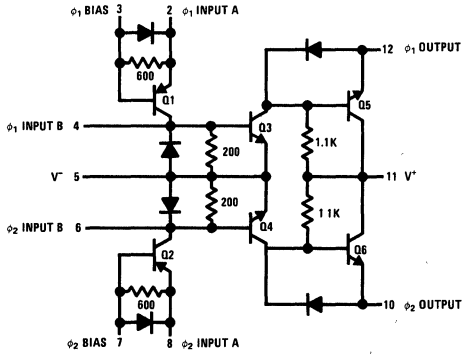
general description

The MH0009/MH0009C is high speed, DC coupled, dual MOS clock driver designed to operate in conjunction with high speed line drivers such as the DM8830, DM7440, or DM7093. The transition from TTL/DTL to MOS logic level is accomplished by PNP input transistors which also assure accurate control of the output pulse width.

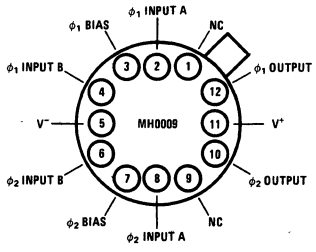
features

- DC logically controlled operation
- Output Swings – to 30V
- Output Currents – in excess of ±500 mA
- High rep rate – in excess of 2 MHz
- Low standby power

schematic and connection diagrams



12-Lead TO-8 Package



$V^+ = +5.0V$

V^- V^+ −12V

Order Number MH0009G or MH0009CG
See Package 6

typical application

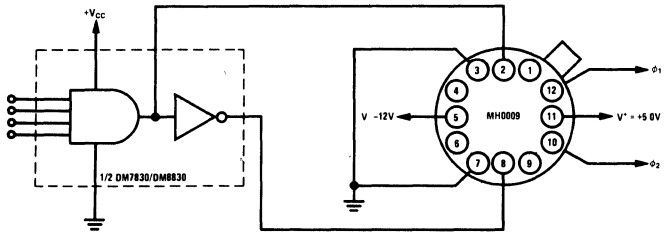


FIGURE 1

absolute maximum ratings

V^- Supply Voltage: Differential (Pin 5 to Pin 3) or (Pin 5 to Pin 7)	-40V
V^+ Supply Voltage: Differential (Pin 11 to Pin 5)	30V
Input Current. (Pin 2, 4, 6 or 8)	±75 mA
Peak Output Current	±500 mA
Power Dissipation (Note 2 and Figure 2)	1.5W
Storage Temperature	-65°C to +150°C
Operating Temperature: MH0009	-55°C to +125°C
MH0009C	0°C to 85°C
Lead Temperature (Soldering, 10 Sec.)	300°C

electrical characteristics (Note 1)

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
t_{ON}	C_{IN} = .0022 μF C_L = 001 μF		10	35	ns
t_{rise}	C_{IN} = .0022 μF C_L = 001 μF		40	50	ns
Pulse Width (50% to 50%)	C_{IN} = 0022 μF C_L = .001 μF	340	400	440	ns
t_{fall}	C_{IN} = 0022 μF C_L = .001 μF		80	120	ns
t_{delay}	C_{IN} = 600 pF C_L = 200 pF		10		ns
t_{rise}	C_{IN} = 600 pF C_L = 200 pF		15		ns
Pulse Width (50% to 50%)	C_{IN} = 600 pF C_L = 200 pF	40	70	120	ns
t_{fall}	C_{IN} = 600 pF C_L = 200 pF		40		ns

Note 1: Characteristics apply for circuit of Figure 1 With V^- = -20 volts; V^+ = 0 volts; V_{CC} = 5 0 volts. Minimum and maximum limits apply from -55°C to +125°C for the MH0009 and from 0°C to +85°C for the MH0009C Typical values are for T_A = 25°C

Note 2: Transient power is given by $P = fC_L (V^+ - V^-)^2$ watts, where f = repetition rate, C_L = load capacitance, and $(V^+ - V^-)$ = output swing

Note 3: For typical performance data see the MH0013/MH0013C data sheet.

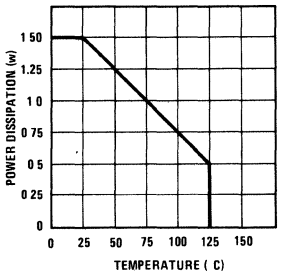


FIGURE 2. Maximum Power Dissipation