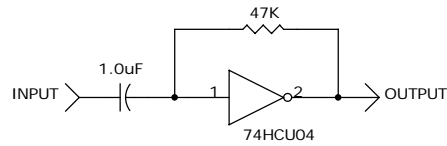


CURRENT DRAIN @3V = 3uA
 CURRENT DRAIN @3.6V = 46uA
 CURRENT DRAIN @5V = 480uA
 CURRENT DRAIN @6V = 1.07mA
 CURRENT DRAIN @9V = 3.8mA
 CURRENT DRAIN @12V = 7.8mA
 CURRENT DRAIN @15V = 12mA

VOLTAGE GAIN @3V = 25
 VOLTAGE GAIN @3.6V = 60
 VOLTAGE GAIN @5V = 55
 VOLTAGE GAIN @6V = 45
 VOLTAGE GAIN @9V = 30
 VOLTAGE GAIN @12V = 25
 VOLTAGE GAIN @15V = 20

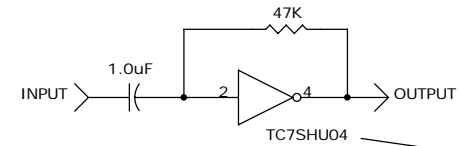
MAX FREQ. @3V = 30KHz
 MAX FREQ. @3.6V = 200KHz
 MAX FREQ. @5V = 400KHz
 MAX FREQ. @6V = 1MHz
 MAX FREQ. @9V = 2MHz
 MAX FREQ. @12V = 3MHz
 MAX FREQ. @15V = 3MHz



CURRENT DRAIN @1.5V = 40uA
 CURRENT DRAIN @3V = 4.7mA
 CURRENT DRAIN @3.5V = 8.5mA
 CURRENT DRAIN @4.5V = 15.5mA
 CURRENT DRAIN @5V = 20mA
 CURRENT DRAIN @6V = 30mA

VOLTAGE GAIN @1.5V = 55
 VOLTAGE GAIN @3V = 25
 VOLTAGE GAIN @3.5V = 20
 VOLTAGE GAIN @4.5V = 18
 VOLTAGE GAIN @5V = 18
 VOLTAGE GAIN @6V = 18

MAX FREQ. @1.5V = 400KHz
 MAX FREQ. @3V = 4MHz
 MAX FREQ. @3.5V = 5MHz
 MAX FREQ. @4.5V = 6MHz
 MAX FREQ. @5V = 6MHz
 MAX FREQ. @6V = 6MHz



CURRENT DRAIN @1.5V = 5uA
 CURRENT DRAIN @3V = 3mA
 CURRENT DRAIN @3.5V = 4mA
 CURRENT DRAIN @4.5V = 10mA
 CURRENT DRAIN @5V = 13mA
 CURRENT DRAIN @6V = 20mA

VOLTAGE GAIN @1.5V = WILL NOT OPERATE
 VOLTAGE GAIN @3V = 50
 VOLTAGE GAIN @3.5V = 40
 VOLTAGE GAIN @4.5V = 40
 VOLTAGE GAIN @5V = 40
 VOLTAGE GAIN @6V = 40

MAX FREQ. @1.5V = WILL NOT OPERATE
 MAX FREQ. @3V = 4MHz
 MAX FREQ. @3.5V = 5MHz
 MAX FREQ. @4.5V = 20MHz
 MAX FREQ. @5V = 50MHz
 MAX FREQ. @6V = 50MHz

TOSHIBA SINGLE GATE HIGH SPEED INVERTER

NOTE, DEVICE MAY BE USEFUL BEYOND MAX FREQ LISTED
 GAIN MEASURED WITH NO OUTPUT LOAD RESISTOR
 LOAD RESISTOR AT OUTPUT WILL DECREASE GAIN

DESIGNED BY DAVE JOHNSON
 DISCOVERCIRCUITS.COM
 ALL RIGHTS RESERVED

DRAWN BY: DAVE JOHNSON

DAVID JOHNSON AND ASSOCIATES			
Title C-MOS LOGIC INVERTER VOLTAGE AMPLIFIERS			
Size B	Document Number INVERTAMP1.DSN	Rev A	
Date: Tuesday, July 11, 2006	Sheet	1	of 1

C-MOS LOGIC INVERTER AMPLIFIER CHARACTERISTICS