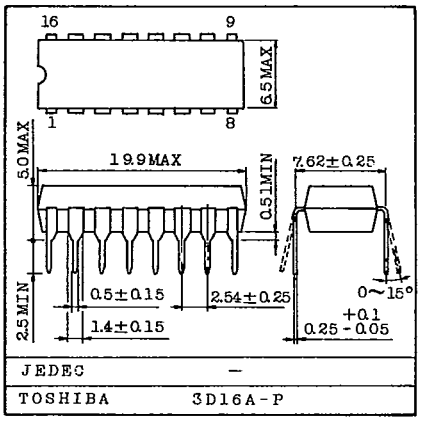
TD62308BP

BIPOLAR DIGITAL INTEGRATED CIRCUIT
SILICON MONOLITHIC

TD62308BP LOW INPUT ACTIVE 1.5A DRIVER

Unit in mm



Weight : 1.0g

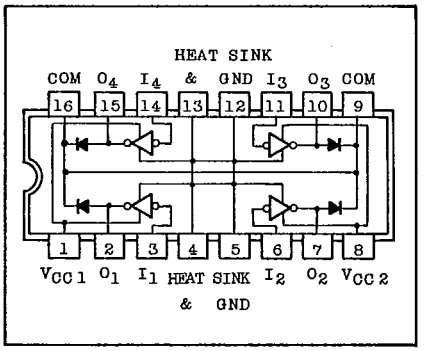
Features

- Output Current..... 1.5A Max.
- High Sustaining Voltage..... 80V Min.
- Low Level Active Inputs
- TTL and C-MOS Compatible Inputs
- Standard Supply Voltage
- Two V_{CC} Terminals V_{CC1}, V_{CC2} (Separated)

Description

The TD62308BP is a non inverting transistor array, which is comprised of four NPN High-Voltage darlington output stage and PNP input stages. This device is low input active driver and is suitable for operation with TTL, 5V C-MOS and 5V Microprocessor which have sink current output drivers.

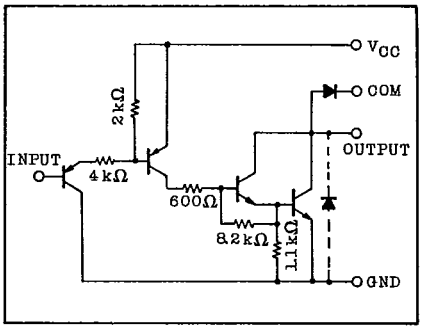
PIN CONNECTION (TOP VIEW)



MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V_{CC}	7	V
Output Sustaining Voltage	$V_{CE(SUS)}$	80	V
Output Current	I_{OUT}	1.5	A
Input Current	I_{IN}	-10	mA
Input Voltage	V_{IN}	7	V
Clamp Reverse Voltage	V_R	80	V
Diode Forward Current	I_F	1.5	A
Common Terminal Current	I_{COM}	3.0	A
GND Terminal Current	I_{GND}	5.0	A
Power Dissipation	P_D	2.7	W
Operating Temperature	T_{opr}	-40~85	°C
Storage Temperature	T_{stg}	-55~150	°C

SCHEMATICS (EACH DRIVER)



RECOMMENDED OPERATING CONDITIONS (Ta=-40～85°C)

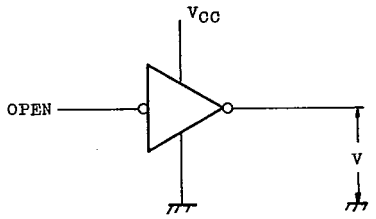
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Voltage	V_{CC}		4.5	-	5.5	V
Output Sustaining Voltage	$V_{CE(SUS)}$		0	-	80	V
Output Current	I_{OUT}		0	-	1.25	A
Input Voltage	V_{IN}		0	-	7	V
Clamp Diode Reverse Voltage	V_R		0	-	80	V
Clamp Diode Forward Current	I_F		0	-	1.25	A
Power Dissipation	P_D		0	-	1.0	W

ELECTRICAL CHARACTERISTICS (Ta=25°C, Unless otherwise noted)

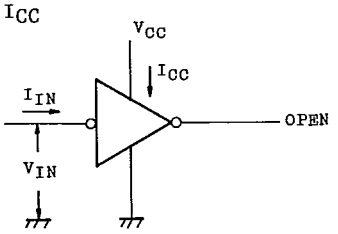
CHARACTERISTIC	SYMBOL	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
"H" Level Input Voltage	V_{IH}	-		V_{CC} -1.6	-	-	V
"L" Level Input Voltage	V_{IL}	-		-	-	V_{CC} -3.6	V
"H" Level Input Current	I_{IH}	2		-	-	10	μA
"L" Level Input Current	I_{IL}	2	V_{CC}=5.5V, V_{IN}=0.4V	-	-0.05	-0.36	mA
Output Leak Current	I_{CEX}	1	V_{OUT}=80V, Ta=85°C	-	-	100	μA
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	3	V_{CC}=4.5V, I_{OUT}=1.25A	-	1.3	1.8	V
			V_{CC}=4.5V, I_{OUT}=0.7A	-	-	1.3	
Clamp Diode Reverse Current	I_R	4	V_R=80V	-	-	50	μA
Clamp Diode Forward Voltage	V_F	5	I_F=1.25A	-	1.5	2.0	V
Supply Current	$I_{CC(ON)}$	2	V_{CC}=5.5V, V_{IN}=0V	-	-	12.5	mA/ Gate
	$I_{CC(OFF)}$	2	V_{CC}=5.5V, V_{IN}=V_{CC}	-	-	10	μA
Turn-ON Delay	t_{ON}	6	V_{CC}=5.0V, R_L=66Ω	-	0.2	-	μs
Turn-OFF Delay	t_{OFF}		V_{OUT}=80V, C_L=15pF	-	9.0	-	

TEST CIRCUIT

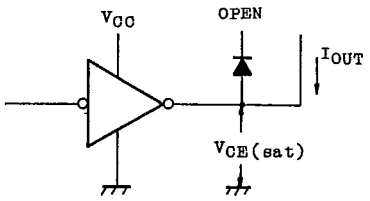
1. I_{CEX}



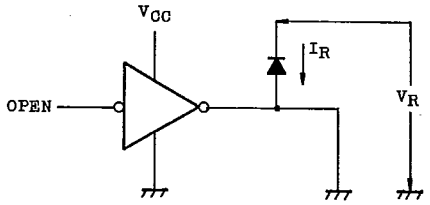
2. I_{CC}



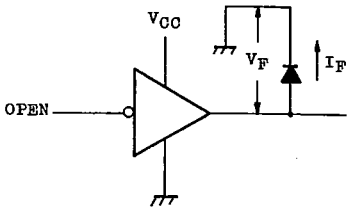
3. $V_{CE(sat)}$



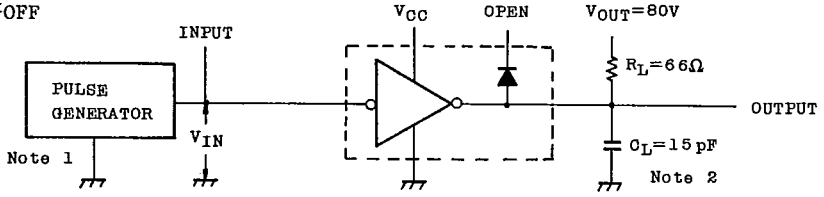
4. I_R

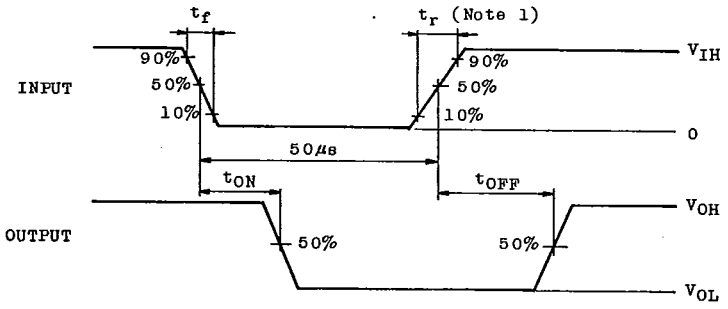


5. V_F



6. t_{ON}, t_{OFF}





Notes: 1. Pulse Width 50μs, Duty Cycle 10%
Output Impedance 50Ω, $t_r \leqq 5$ns, $t_f \leqq 10$ns.
2. C_L includes probe and jig capacitance.