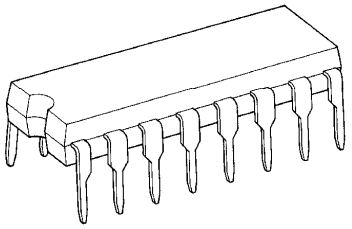
TOSHIBA BIPOLAR DIGITAL INTEGRATED CIRCUIT SILICON MONOLITHIC

TD62771AP

7CH HIGH-VOLTAGE SOURCE DRIVER

The TD62771AP is comprised of seven source current Transistor Array.
This driver is specifically designed for fluorescent display applications.
Applications include relay, hammer and lamp drivers.



DIP16-P-300-2.54A

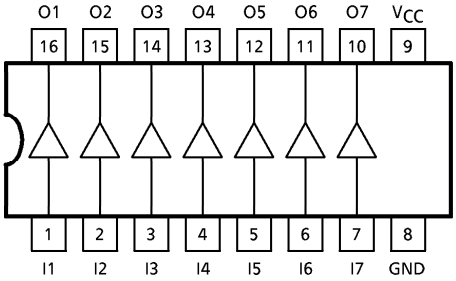
Weight : 1.11g (Typ.)

FEATURES

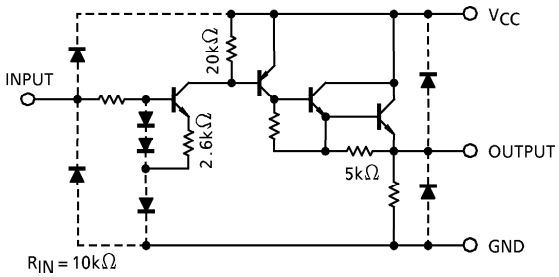
- High output voltage V_{CC} = 60V MIN.
- Output current (single output) I_{OUT} = −50mA MIN.
- Input compatible with TTL. 5V CMOS
- Pull-down resistors / each output
- Single supply voltage
- Package Type-AP : DIP-16pin

CHARACTERISTIC	DESIGNATION
TD62771AP	TTL, 5V CMOS

PIN CONNECTION (TOP VIEW)



SCHEMATICS (EACH DRIVER)



(Note) The input and output parasitic diodes cannot be used as clamp diodes.

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● TOSHIBA is continually working to improve the quality and the reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to observe standards of safety, and to avoid situations in which a malfunction or failure of a TOSHIBA product could cause loss of human life, bodily injury or damage to property. In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent products specifications. Also, please keep in mind the precautions and conditions set forth in the TOSHIBA Semiconductor Reliability Handbook.

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V_{CC}	60	V
Output Voltage	V_{OUT}	V_{CC}	V
Output Current	I_{OUT}	− 50	mA / ch
Input Voltage	V_{IN}	20	V
Power Dissipation	P_D (Note)	1.47	W
Operating Temperature	T_{opr}	− 40~85	°C
Storage Temperature	T_{stg}	− 55~150	°C

(Note) Delated above 25°C in the proportion of 11.7mW / °C

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Voltage	V_{CC}	—	4.5	—	55	V
Output Voltage	V_{OUT}	—	0	—	V_{CC}	V
Output Current	I_{OUT}	—	0	—	− 40	mA / ch
Input Voltage	V_{IN}	—	0	—	7	V
Power Dissipation	P_D	—	—	—	0.52	W

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

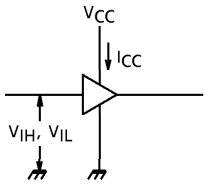
CHARACTERISTIC		SYMBOL	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Voltage	"H" Level	V_{IH}	1	—	2.0	—	—	V
	"L" Level	V_{IL}	1	—	0	—	0.8	
Input Current	"H" Level	I_{IH}	2	—	—	40	75	μA
Output Current	"L" Level	I_{OL}	3	V_{IN} = 2.4V	—	200	—	μA
Output Voltage	"H" Level	V_{OH}	4	I_{OUT} = − 40mA, V_{IN} = V_{IH} MIN.	V_{CC} − 2.5	V_{CC} − 1.7	—	V
	"L" Level	V_{OL}		I_{OUT} = 0, V_{IN} = V_{IL} MAX.	—	50	250	mV
Supply Current		I_{CC} (ON)	1	V_{CC} = 55V, V_{IN} = V_{IH} MIN.	—	—	20	mA
		I_{CC} (OFF)		V_{CC} = 55V, V_{IN} = V_{IL} MAX.	—	—	1	
Turn-On Delay		t_{ON}	5	V_{CC} = 55V, C_L = 15pF	—	0.2	—	μs
Turn-Off Delay		t_{OFF}			—	6.0	—	μs

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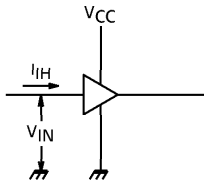
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TEST CIRCUIT

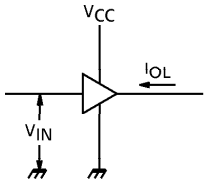
1. V_{IH}, V_{IL}, I_{CC}



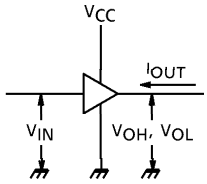
2. I_{IH}



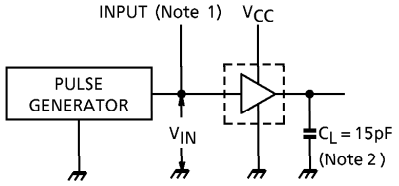
3. I_{OL}

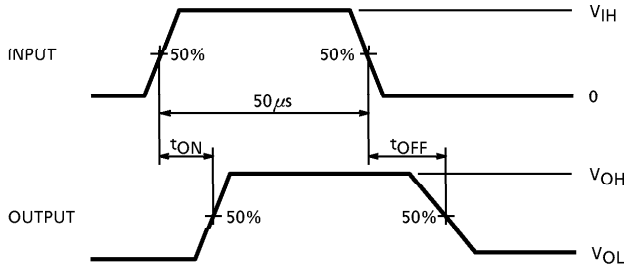


4. V_{OH}, V_{OL}



5. t_{ON}, t_{OFF}





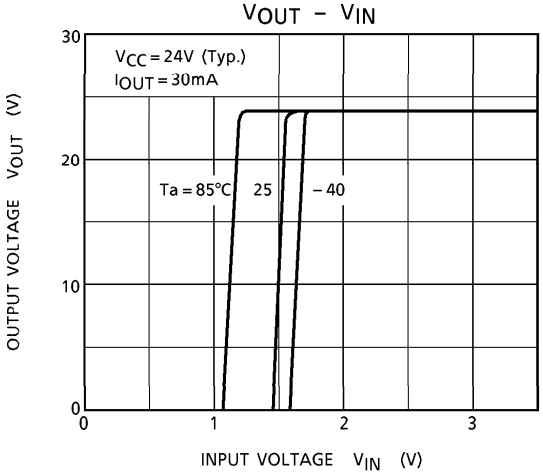
(Note 1) Pulse width 50μs, duty cycle 10%
Output impedance 50Ω, $t_r \leqq 100$ns, $t_f \leqq 100$ns

(Note 2) C_L includes probe and jig capacitance

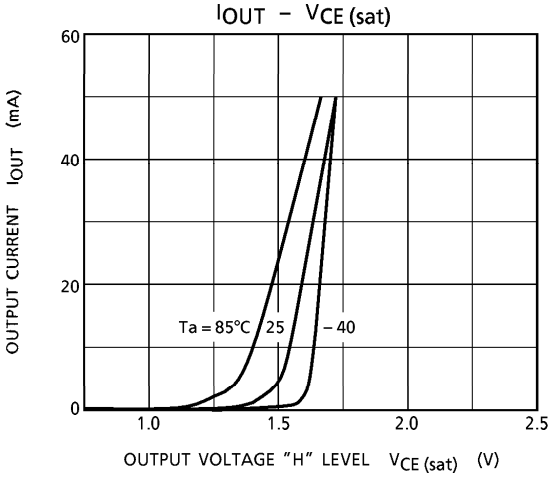
PRECAUTIONS for USING

Utmost care is necessary in the design of the output line, V_{CC} and GND line since IC may be destroyed due to short-circuit between outputs, air contamination fault, or fault by improper grounding.

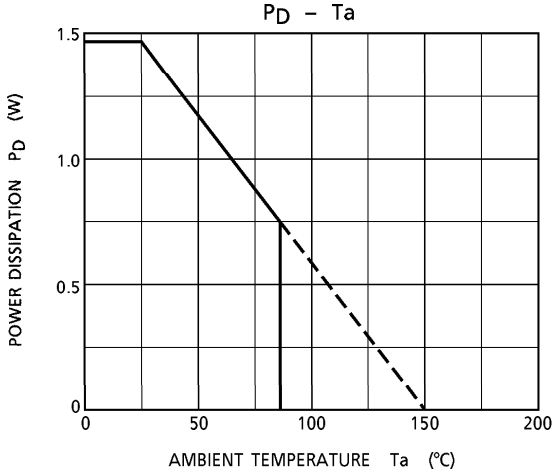
V_{OUT} – V_{IN}



I_{OUT} – $V_{CE\ (sat)}$



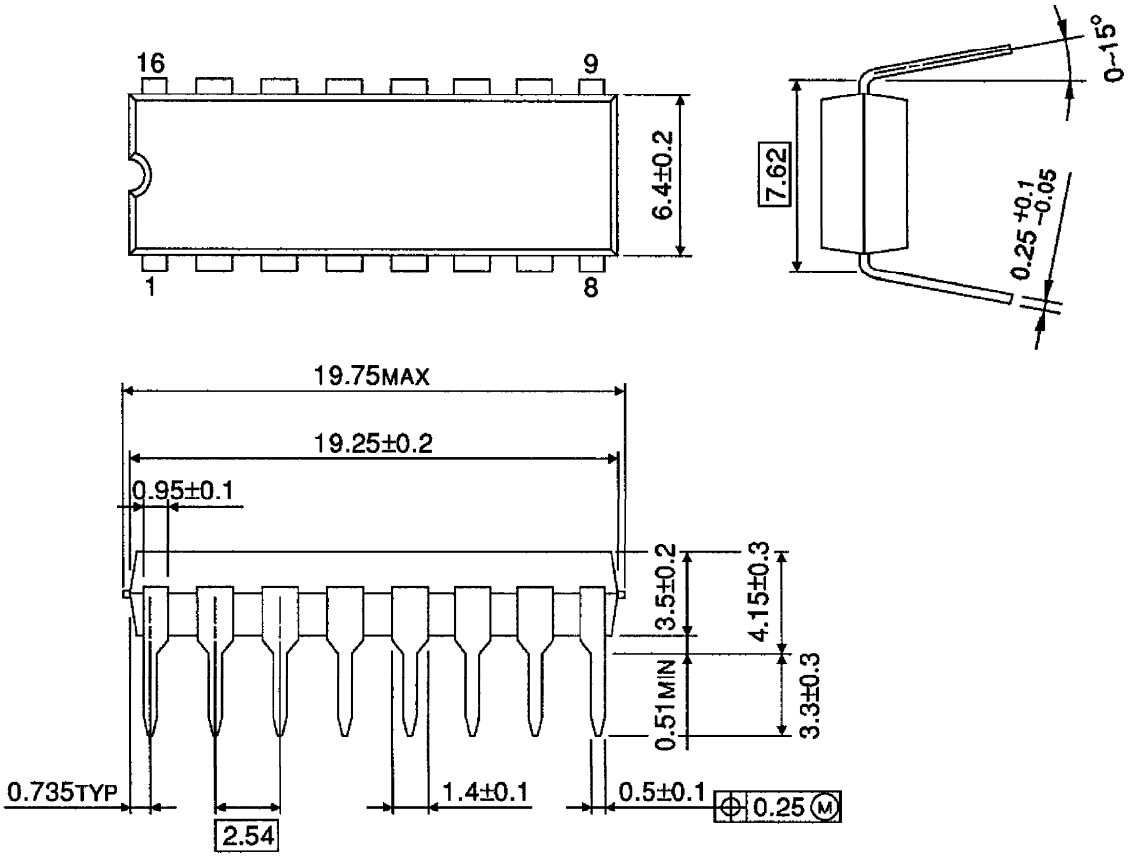
P_D – Ta



OUTLINE DRAWING

DIP16-P-300-2.54A

Unit : mm



Weight : 1.11g (Typ.)