

TOSHIBA BIPOLAR DIGITAL INTEGRATED CIRCUIT SILICON MONOLITHIC

TD62785P, TD62785F

8CH SOURCE DRIVER

勝特力材料 886-3-5753170
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 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

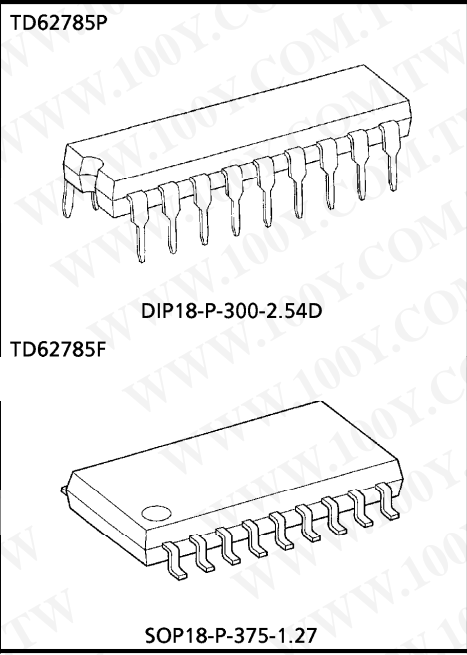
The TD62785P, TD62785F are eight Channel Non-Inverting Source current transistor Array.

All units feature input pull-up resistors and output pull-down resistors. These device are specifically designed for multiplexed digit driving of eight digit common-anode LED and also can be employed as a source drivers for multiplexed LED displays using with the TD62381P, TD62381F at standard supply voltage, 5V.

Applications include relay, hammer and lamp drivers.

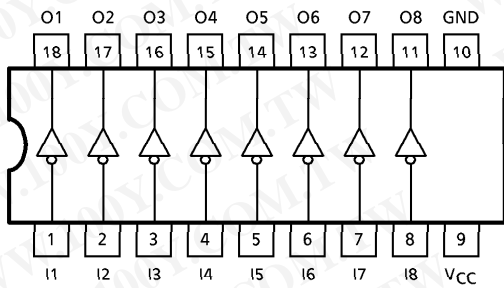
FEATURES

- Low saturation voltage $V_{CE(sat)} = 1.35V \text{ MAX.}$
 $@I_{OUT} = -500mA$
- Output current (single output) $I_{OUT} = -500mA \text{ MIN.}$
- Input pull-up resistor $R_{IN} = 5.6k\Omega \text{ Typ.}$
- Output pull-down resistor $R_{IN} = 15k\Omega \text{ Typ.}$
- Low level active inputs
- Package Type-P : DIP-18pin
- Package Type-F : SOP-18pin

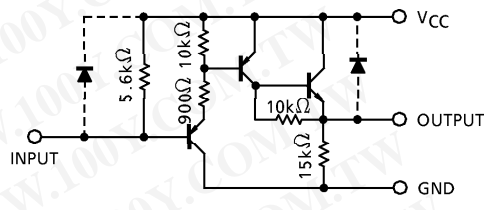


Weight
 DIP18-P-300-2.54D : 1.47g (Typ.)
 SOP18-P-375-1.27 : 0.41g (Typ.)

PIN CONNECTION (TOP VIEW)



SCHEMATICS (EACH DRIVER)



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

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MAXIMUM RATING (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Supply Voltage		V _{CC}	7.0	V
Output Voltage		V _{OUT}	V _{CC}	V
Output Current		I _{OUT}	- 500	mA / ch
Input Voltage		V _{IN}	V _{CC}	V
Input Current		I _{IN}	- 10	mA
Power Dissipation	P	P _D (Note 1)	1.47	W
	F		0.96	
Operating Temperature		T _{opr}	- 40~85	°C
Storage Temperature		T _{stg}	- 55~150	°C

(Note 1) Delated above 25°C in the proportion of 11.7mW/°C (P-Type), 7.7mW/°C (F-Type).

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

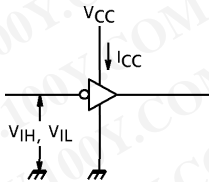
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT			
Supply Voltage		V _{CC}	—	4.5	5.0	5.5	V			
Output Voltage		V _{OUT}	—	0	—	- V _{CC}	V			
Output Current	P	I _{OUT}	DC 1 Circuit, Ta = 25°C	0	—	- 400	mA / ch			
				F	0	—		- 400		
	P			T _{pw} ≤ 25ms	Duty = 10%	0		—	- 376	
				8 Circuits On		Duty = 50%		0	—	- 67
	F			Ta = 85°C	T _j = 120°C	Duty = 10%		0	—	- 248
						Duty = 50%		0	—	- 38
Input Voltage	V _{IN}		—	0	—	V _{CC}	V			
	Output On	V _{IN (ON)}	—	0	—	0.8	V			
	Output Off	V _{IN (OFF)}	—	V _{CC} - 1.0	—	V _{CC}	V			
Power Dissipation	P	P _D	—	—	—	0.52	W			
	F		—	—	—	0.35				

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

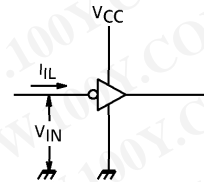
CHARACTERISTIC		SYMBOL	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Input Voltage	"H" Level	V _{IH}	1	—	V _{CC} - 1.0	—	—	V	
	"L" Level	V _{IL}		—	—	—	0.8		
Input Current	"L" Level	I _{IL}	2	V _{CC} = 5.5V, V _{IN} = 0.8V	—	- 1.5	- 2.3	mA	
Input Pull-Up Resistor		R _{ip}	—	—	—	5.6	—	kΩ	
Output Pull-Down Resistor		R _{op}	—	—	—	15	—	kΩ	
Output Voltage	"H" Level	V _{OH}	3	V _{CC} = 0V GND = - 4.5V V _{IN} = GND	I _{OUT} = - 500mA	—	—	V _{CC} - 1.35	V
				I _{OUT} = - 350mA	—	—	V _{CC} - 1.30		
Supply Current		I _{CC (ON)}	1	V _{CC} = 55V, V _{IN} = GND	—	—	12.5	mA / ch	
		I _{CC (OFF)}		V _{CC} = 55V, V _{IN} = OPEN	—	—	10	μA	
Turn-On Delay		t _{ON}	4	V _{CC} = 5V, R _L = 16Ω C _L = 15pF	—	0.1	—	μs	
Turn-Off Delay		t _{OFF}			—	3.5	—	μs	

TEST CIRCUIT

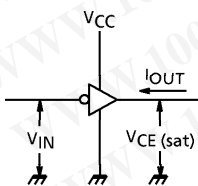
1. V_{IH} , V_{IL} , I_{CC}



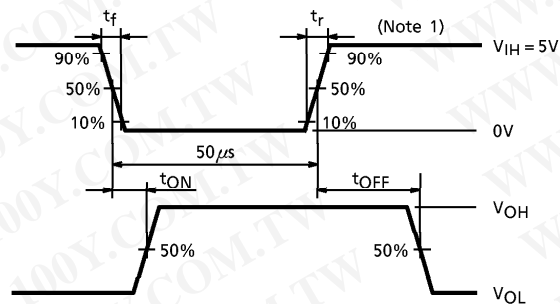
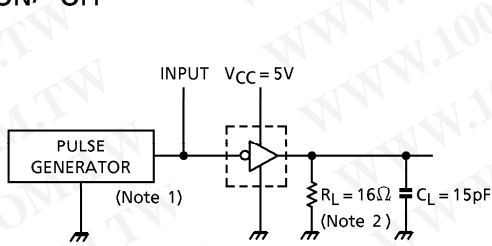
2. I_{IL}



3. $V_{CE(sat)}$



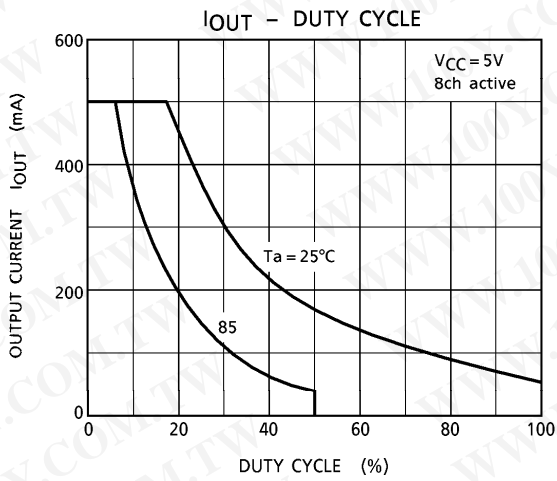
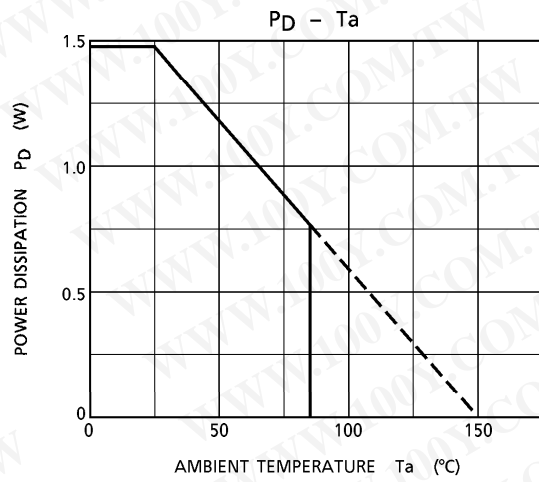
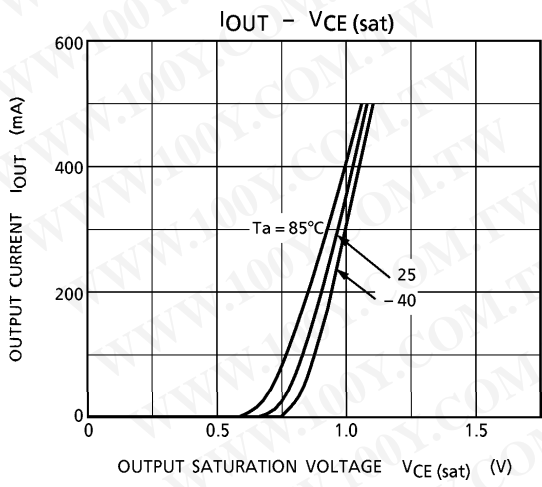
4. t_{ON} , t_{OFF}



- (Note 1) Pulse width $50\mu s$, duty cycle 10%
Output impedance 50Ω , $t_r \leq 5ns$, $t_f \leq 10ns$
- (Note 2) C_L includes probe and jig capacitance

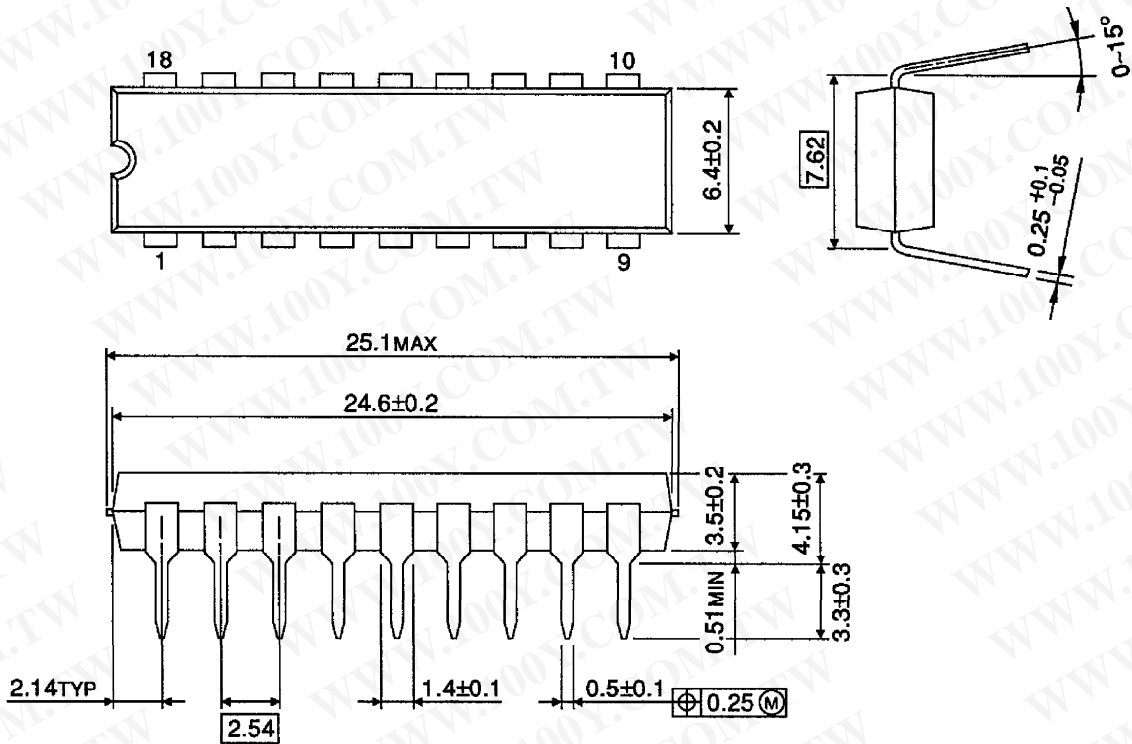
PRECAUTIONS for USING

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.



OUTLINE DRAWING
DIP18-P-300-2.54D

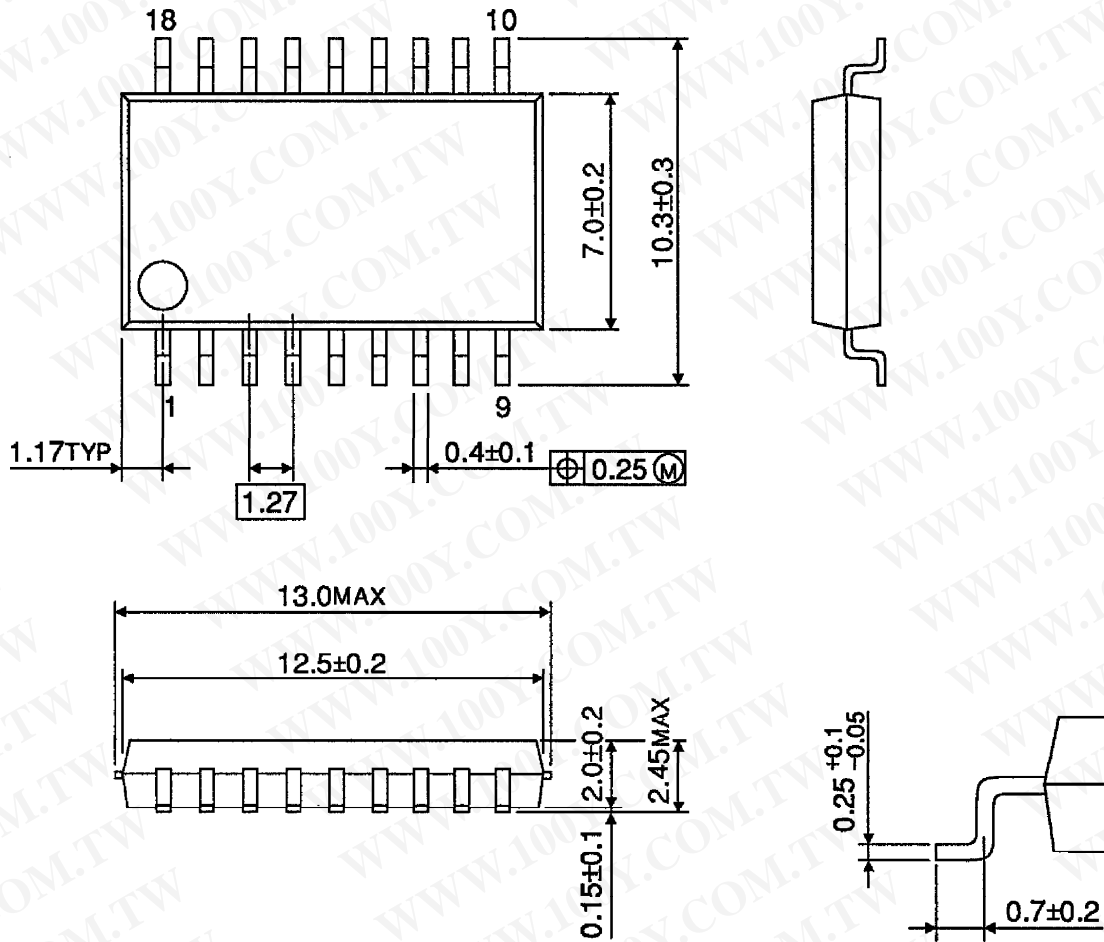
Unit : mm



Weight : 1.47g (Typ.)

OUTLINE DRAWING
SOP18-P-375-1.27

Unit : mm



Weight : 0.41g (Typ.)