

TD62583AP, TD62583F, TD62583AF

8CH SINGLE DRIVER

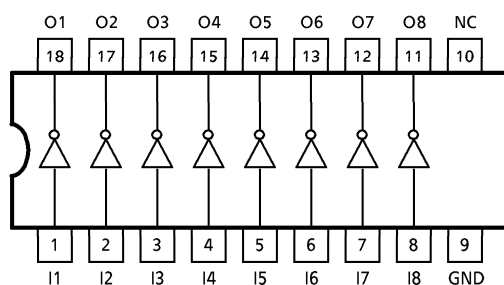
The TD62583AP/F/AF have a $2.7k\Omega$ series base resistor, and thus allows operation directly with TTL or CMOS operating at supply voltage of 5V.

Applications include relay, hammer, lamp and display (LED) drivers.

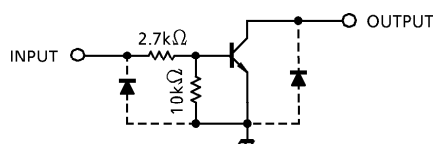
FEATURES

- Output current (single output) 50mA (Max.)
- High sustaining voltage output 35V (Min.) (TD62583F)
50V (Min.) (TD62583AP / AF)
- Low saturation voltage $V_{CE(sat)} = 0.4V$ @ $I_C = 16mA$
- Inputs compatible with TTL, 5V CMOS
- Package type-AP : DIP-18 pin
- Package type-F, AF : SOP-18 pin

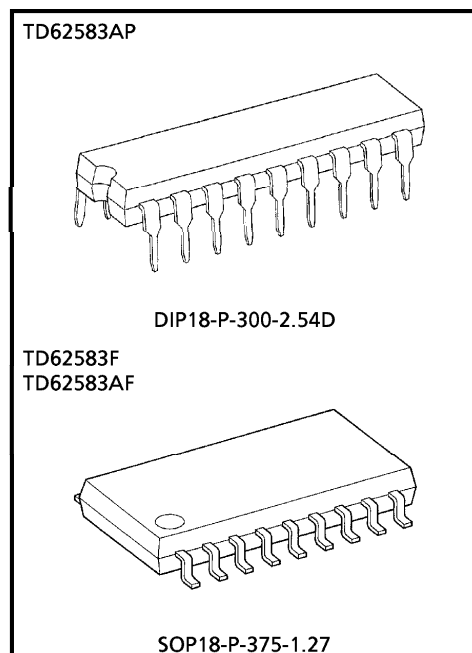
PIN CONNECTION (TOP VIEW)



SCHEMATICS (EACH DRIVER)



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



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

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MAXIMUM RATINGS (Ta = 25°C)

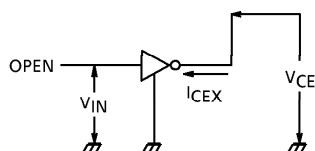
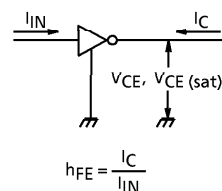
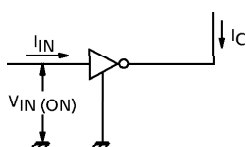
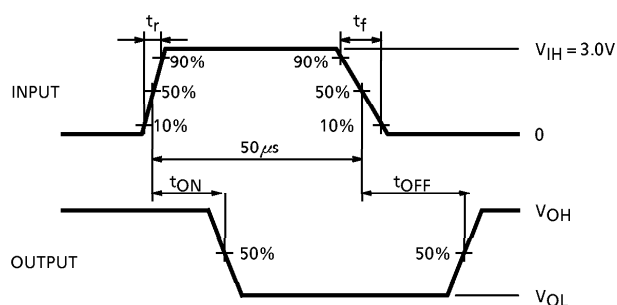
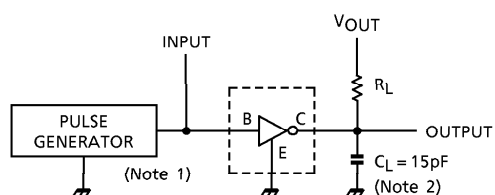
CHARACTERISTIC		SYMBOL	RATING	UNIT
Output Sustaining Voltage	AP, AF	V _{CEO}	50	V
	F		35	
Output Current		I _{OUT}	50	mA / ch
Input Voltage		V _{IN}	10	V
Power Dissipation	AP	P _D	1.47	W
	F, AF		0.96	
Operating Temperature		T _{opr}	– 40~85	°C
Storage Temperature		T _{stg}	– 55~150	°C

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

CHARACTERISTIC		SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Output Sustaining Voltage	AP, AF	V _{CEO}	—	0	—	50	V
	F		—	0	—	35	
Output Current		I _{OUT}	—	0	—	30	mA / ch
Input Voltage		V _{IN}	—	0	—	7	V
	Output On	V _{IN (ON)}	—	3.5	—	7	
Power Dissipation	AP	P _D	—	—	—	0.52	W
	F, AF		—	—	—	0.4	

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

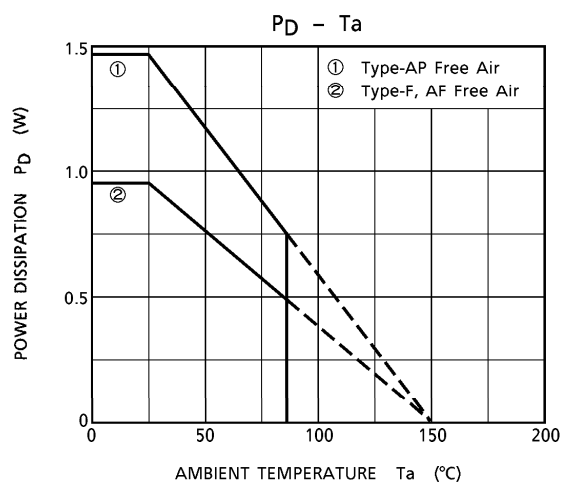
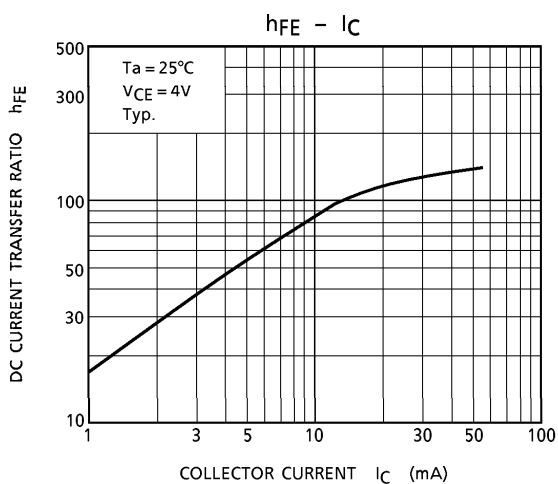
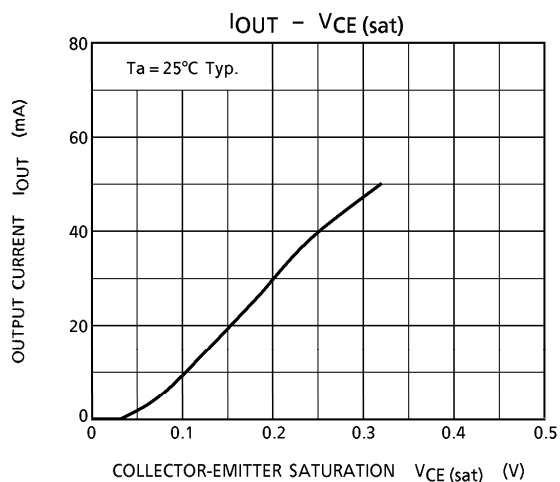
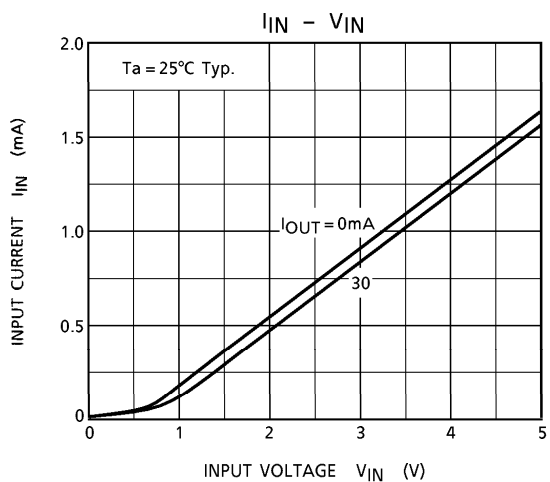
CHARACTERISTIC		SYMBOL	TEST CIRCUIT	TEST CONDITION		MIN.	TYP.	MAX.	UNIT
Output Leakage Current	AP, AF	I _{CEX}	1	V _{CE} = 50V	V _{IN} = 0V	—	—	10	μA
	F			V _{CE} = 35V		—	—	10	
Output Saturation Voltage		V _{CE (sat)}	2	I _C = 16mA, I _{IN} = 0.3mA		—	0.2	0.4	V
				I _C = 30mA, I _{IN} = 0.45mA		—	0.3	0.7	
DC Current Transfer Ratio		h _{FE}	2	V _{CE} = 4V, I _C = 30mA		70	130	—	—
Input Current		I _{IN (ON)}	3	V _{IN} = 2.5V, I _C = 16mA		—	0.65	1.7	mA
Turn-On Delay	F	t _{ON}	4	V _{OUT} = 35V, R _L = 0.87kΩ		—	0.1	—	μs
	AP, AF			V _{OUT} = 50V, R _L = 1.25kΩ		—	0.1	—	
Turn-Off Delay	F	t _{OFF}		V _{OUT} = 35V, R _L = 0.87kΩ		—	0.5	—	
	AP, AF			V _{OUT} = 50V, R _L = 1.25kΩ		—	0.5	—	

TEST CIRCUIT
1. I_{CEX}

2. h_{FE} , $V_{CE(sat)}$

3. $V_{IN(ON)}$

4. t_{ON} , t_{OFF}


- (Note 1) Pulse Width 50 μ s, Duty Cycle 10%
Output Impedance 50 Ω , $t_r \leq 5$ ns, $t_f \leq 10$ ns
(Note 2) C_L includes probe and jig capacitance.

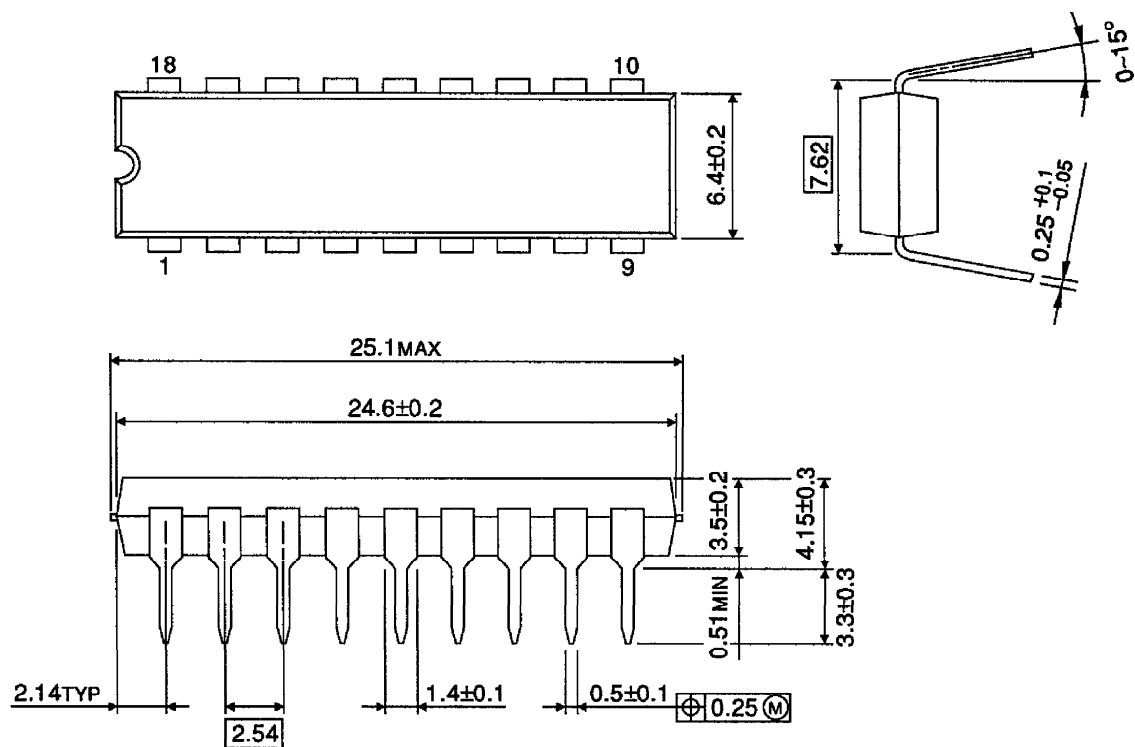
PRECAUTIONS for USING

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.



OUTLINE DRAWING
DIP18-P-300-2.54D

Unit : mm

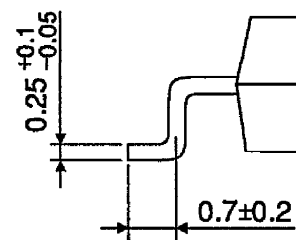
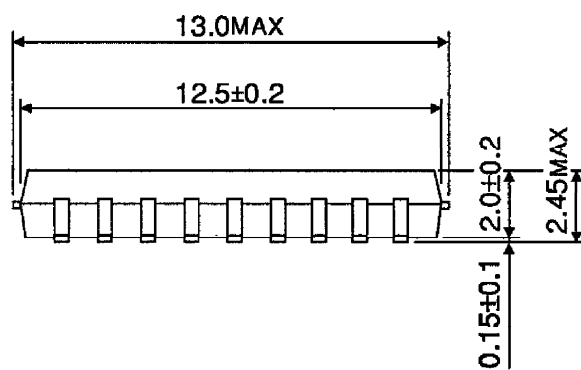
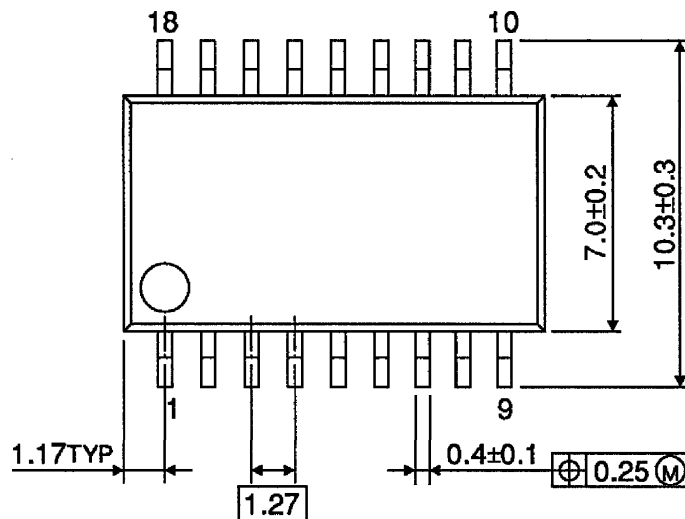


Weight : 1.47g (Typ.)

OUTLINE DRAWING

SOP18-P-375-1.27

Unit : mm



Weight : 0.41g (Typ.)