

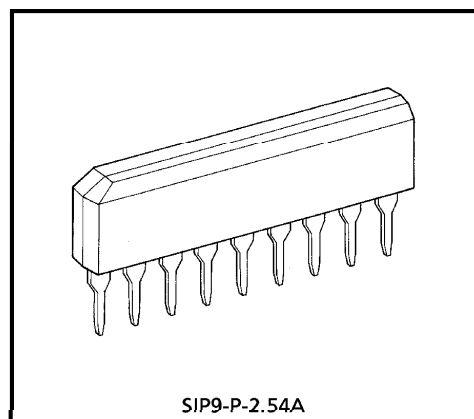
**TD62551S, TD62553S, TD62554S, TD62555S**

**4CH SINGLE DRIVER : COMMON EMITTER**

The TD62551S are comprised of four NPN transistor arrays.  
Applications include relay, hammer, lamp and display (LED) drivers.

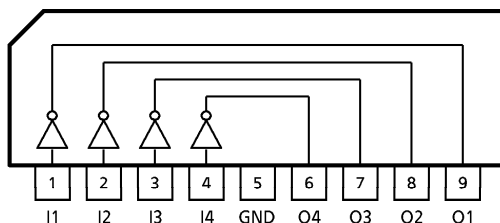
**FEATURES**

- Output current (single output) 150mA (Max.)
- High sustaining voltage output 25V (Min.)
- Low saturation voltage  $V_{CE(sat)} = 0.5V @ I_{OUT} = 50mA$
- Inputs compatible with various types of logic.
- TD62551S : External
- TD62553S :  $R_{IN} = 2.7k\Omega$  ..... TTL, 5V CMOS
- TD62554S :  $R_{IN} = 10.5k\Omega$  .... 6~15V PMOS, CMOS
- TD62555S :  $R_{IN} = 20k\Omega$  ..... 12~24V PMOS
- Package type-S : SIP-9 pin

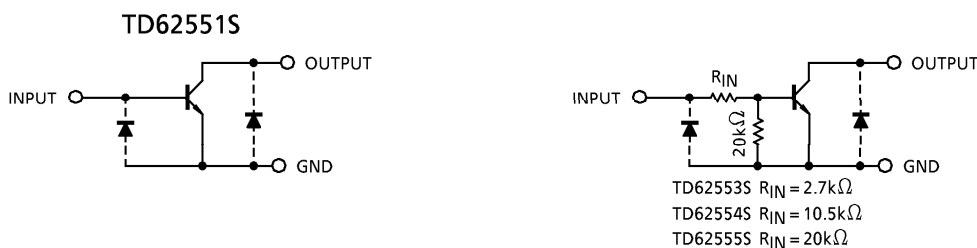


Weight : 0.92g (Typ.)

**PIN CONNECTION**



**SCHEMATICS (EACH DRIVER)**



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

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## MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Emitter Voltage	V <sub>CEO</sub>	25	V
Collector-Base Voltage	V <sub>CBO</sub>	35	V
Collector Current	I <sub>C</sub>	150	mA / ch
Input Voltage	V <sub>IN</sub> (Note 1)	20	V
Input Current	I <sub>IN</sub> (Note 2)	10	mA
Power Dissipation	P <sub>D</sub> (Note 3)	0.75	W
Operating Temperature	T <sub>opr</sub>	-40~85	°C
Storage Temperature	T <sub>stg</sub>	-55~150	°C

(Note 1) Except TD62551S

(Note 2) Only TD62551S

(Note 3) Delated above 25°C in the proportion of 6.0mW/°C.

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

CHARACTERISTIC	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Collector-Emitter Voltage	V <sub>CEO</sub>	—	0	—	25	V
Collector-Base Voltage	V <sub>CBO</sub>	—	0	—	35	V
Collector Current	TD62551S	I <sub>C</sub>	—	—	100	mA / ch
	TD62553S					
	TD62554S					
	TD62555S				60	
Input Voltage	TD62553S TD62554S TD62555S	V <sub>IN</sub>	—	—	20	V
Input Current	TD62551S	I <sub>IN</sub>	—	—	5	mA
Power Dissipation	P <sub>D</sub>	—	—	—	0.27	W

## ELECTRICAL CHARACTERISTICS (Ta = 25°C)

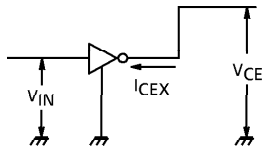
CHARACTERISTIC	SYMBOL	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Leakage Current	I <sub>CEX</sub>	1	V <sub>CE</sub> = 25V, V <sub>IN</sub> = 0V	—	—	10	μA
Collector-Emitter Saturation Voltage	V <sub>CE</sub> (sat)	2	I <sub>IN</sub> = 0.5mA, I <sub>C</sub> = 10mA	—	0.15	0.2	V
			I <sub>IN</sub> = 2.5mA, I <sub>C</sub> = 50mA	—	0.35	0.5	
DC Current Transfer Ratio	(Note 1)	h <sub>FE</sub>	V <sub>CE</sub> = 5V, I <sub>C</sub> = 10mA	60	—	400	—
	(Note 2)			50	—	400	
Input Voltage	TD62553S	V <sub>IN</sub> (ON)	I <sub>IN</sub> = 0.5mA, I <sub>C</sub> = 10mA	1.7	2.1	2.5	V
	TD62554S			4.4	6.0	7.6	
	TD62555S			7.7	10.7	13.8	
Turn-On Delay	t <sub>ON</sub>	4	V <sub>OUT</sub> = 25V, R <sub>L</sub> = 210Ω C <sub>L</sub> = 15pF	—	100	—	ns
Turn-Off Delay	t <sub>OFF</sub>			—	500	—	

(Note 1) Except TD62551S.

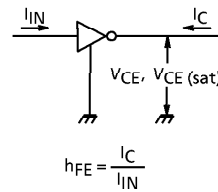
(Note 2) Only TD62551S.

**TEST CIRCUIT**

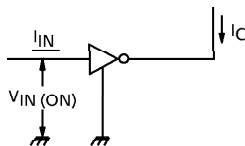
1.  $I_{CEX}$



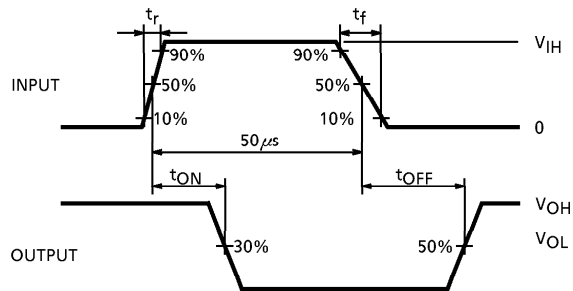
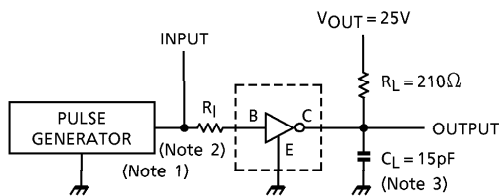
2.  $h_{FE}$ ,  $V_{CE(sat)}$



3.  $V_{IN(ON)}$



4.  $t_{ON}$ ,  $t_{OFF}$



(Note 1) Pulse Width  $50\mu s$ , Duty Cycle 10%  
Output Impedance  $50\Omega$   
 $t_r \leq 5ns$ ,  $t_f \leq 10ns$

(Note 2) See right.

(Note 3)  $C_L$  includes probe and jig capacitance.

**INPUT CONDITION**

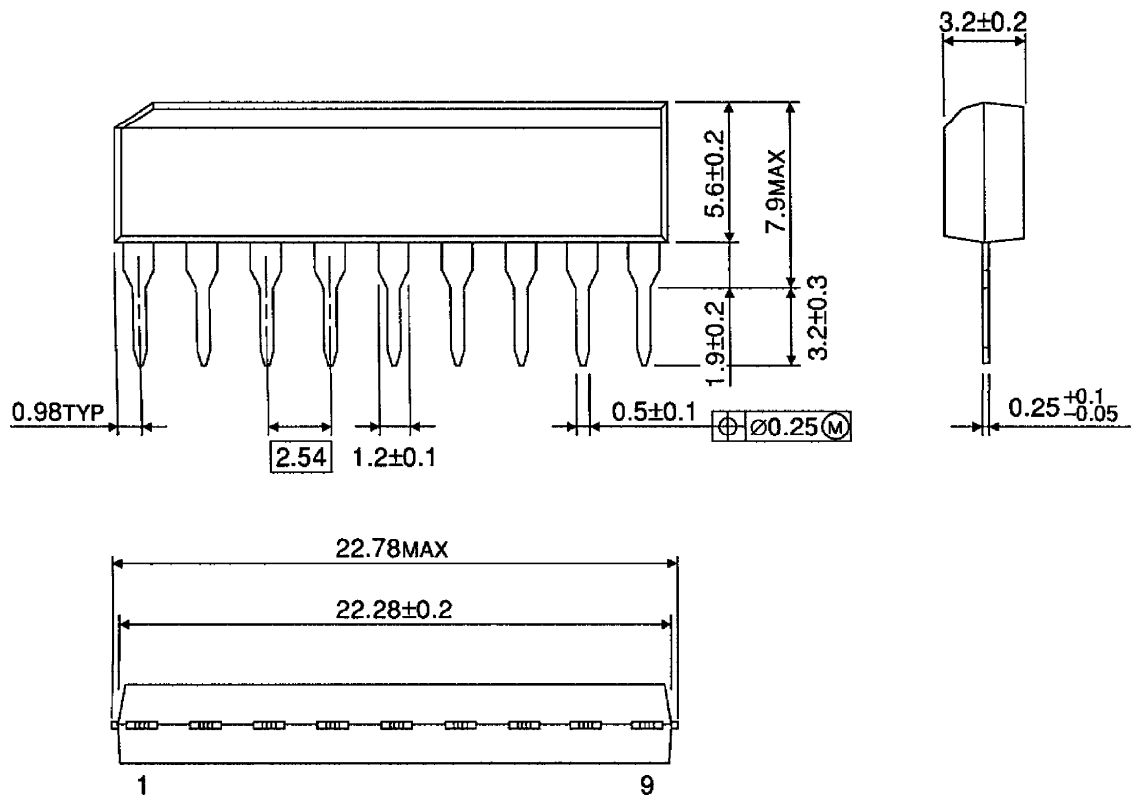
TYPE NUMBER	$R_I$	$V_{IH}$
TD62551S	$2.7k\Omega$	3V
TD62553S	$0\Omega$	3V
TD62554S	$0\Omega$	10V
TD62555S	$0\Omega$	14V

**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  
SIP9-P-2.54A

Unit : mm



Weight : 0.92g (Typ.)