

Descriptions

- General purpose amplifier
- High voltage application

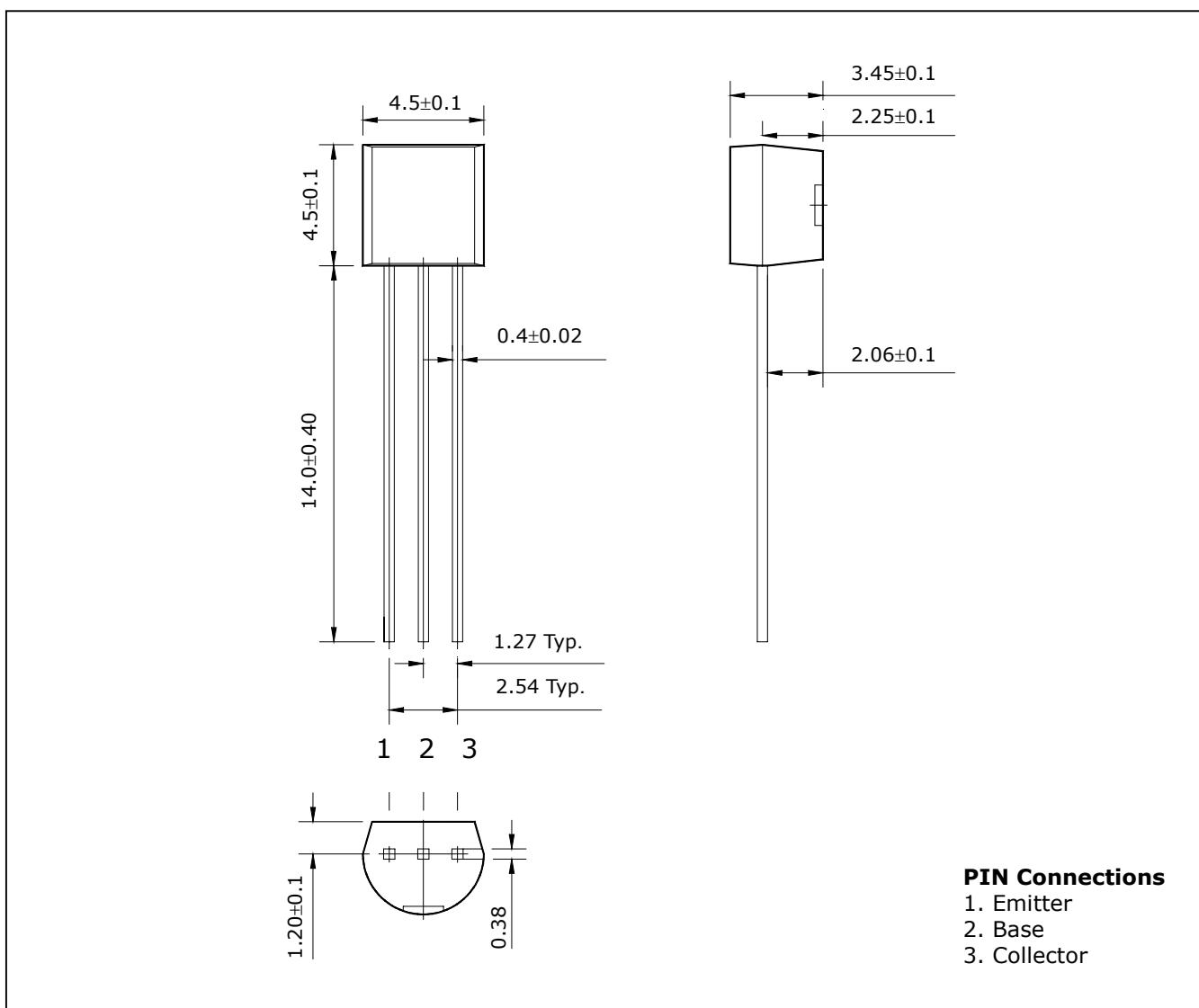
Features

- High collector breakdown voltage : $V_{CBO} = 180V$, $V_{CEO} = 160V$
- Low collector saturation voltage : $V_{CE(sat)}=0.5V(\text{MAX.})$
- Complementary pair with 2N5401

Ordering Information

Type NO.	Marking	Package Code
2N5551	2N5551	TO-92

Outline Dimensions

unit : mm


Absolute maximum ratings

(Ta=25°C)

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	V _{CBO}	180	V
Collector-Emitter voltage	V _{CEO}	160	V
Emitter-Base voltage	V _{EBO}	6	V
Collector current	I _C	600	mA
Collector dissipation	P _C	625	mW
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-55~150	°C

Electrical Characteristics

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	BV _{CBO}	I _C =100μA, I _E =0	180	-	-	V
Collector-Emitter breakdown voltage	BV _{CEO}	I _C =1mA, I _B =0	160	-	-	V
Emitter-Base breakdown voltage	BV _{EBO}	I _E =10μA, I _C =0	6	-	-	V
Collector cut-off current	I _{CBO}	V _{CB} =120V, I _E =0	-	-	100	nA
Emitter cut-off current	I _{EBO}	V _{EB} =4V, I _C =0	-	-	100	nA
DC current gain	h _{FE} (1)	V _{CE} =5V, I _C =1mA	80	-	-	-
DC current gain	h _{FE} (2)	V _{CE} =5V, I _C =10mA	80	-	250	-
DC current gain	h _{FE} (3)	V _{CE} =5V, I _C =50mA	30	-	-	-
Collector-Emitter saturation voltage	V _{CE(sat)(1)} *	I _C =10mA, I _B =1mA	-	-	0.2	V
Collector-Emitter saturation voltage	V _{CE(sat)(2)} *	I _C =50mA, I _B =5mA	-	-	0.5	V
Base-Emitter saturation voltage	V _{BE(sat)(1)} *	I _C =10mA, I _B =1mA	-	-	1	V
Base-Emitter saturation voltage	V _{BE(sat)(2)} *	I _C =50mA, I _B =5mA	-	-	1	V
Transition frequency	f _T	V _{CE} =10V, I _C =10mA	100	-	400	MHz
Collector output capacitance	C _{ob}	V _{CB} =10V, I _E =0, f=1MHz	-	-	6	pF

*: Pulse Tester : Pulse Width ≤ 300μs, Duty Cycle ≤ 2.0%

Electrical Characteristic Curves

Fig. 1 P_C - T_a

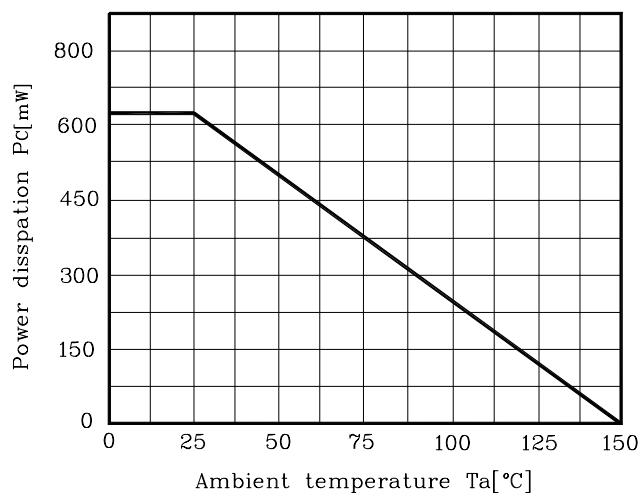


Fig. 2 I_C - V_{BE}

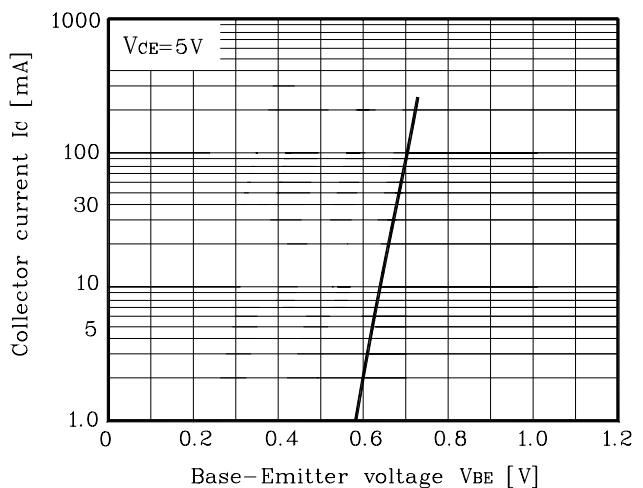


Fig. 3 f_T - I_C

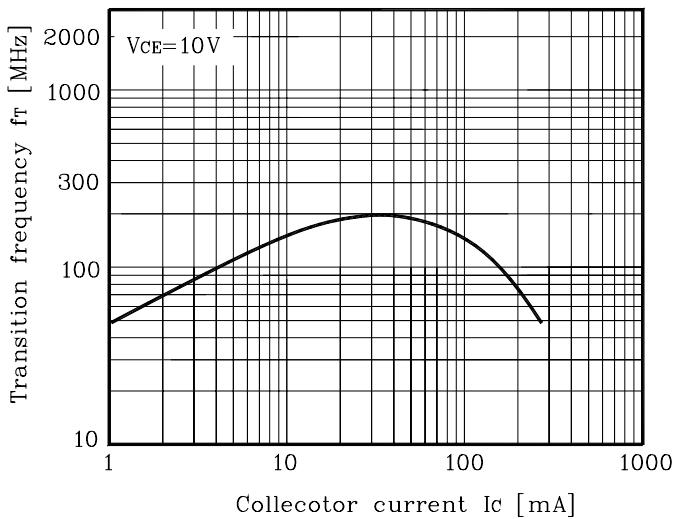


Fig. 4 $V_{CE(sat)}$, $V_{BE(sat)}$ - I_C

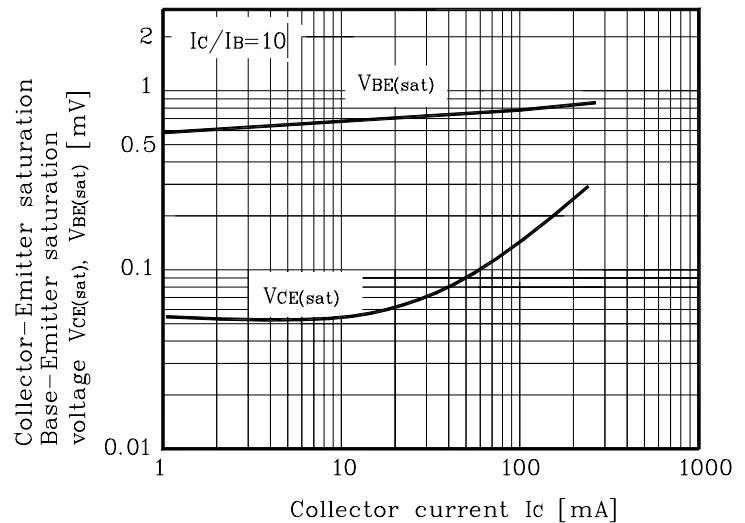


Fig. 5 C_{ob} - V_{CB}

