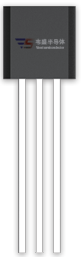
2N5550 TRANSISTOR (NPN)



1.EMITTER
2.COLLECTOR
3.BASE

TO-92

FEATURES

- **Switching and Amplification in High Voltage**
- **Applications such as Telephony**
- **Low Current(Max. 600mA)**
- **High Voltage(Max.160V)**

ORDERING INFORMATION

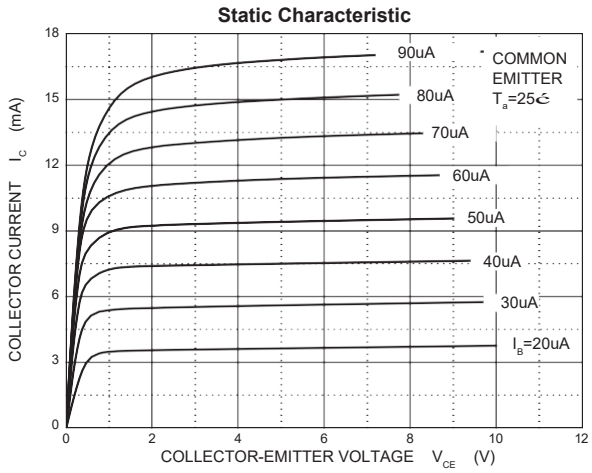
Part Number	Package	Packing Method	Pack Quantity
2N5550	TO-92	Bulk	1000pcs/Bag
2N5550-TA	TO-92	Tape	2000pcs/Box

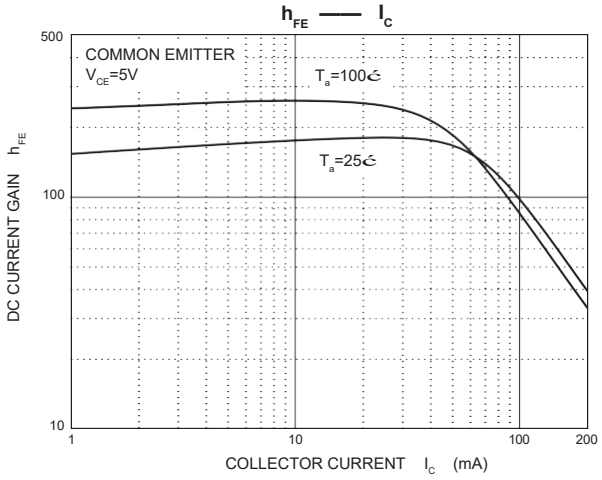
MAXIMUM RATINGS (T_a =25℃ unless otherwise noted)

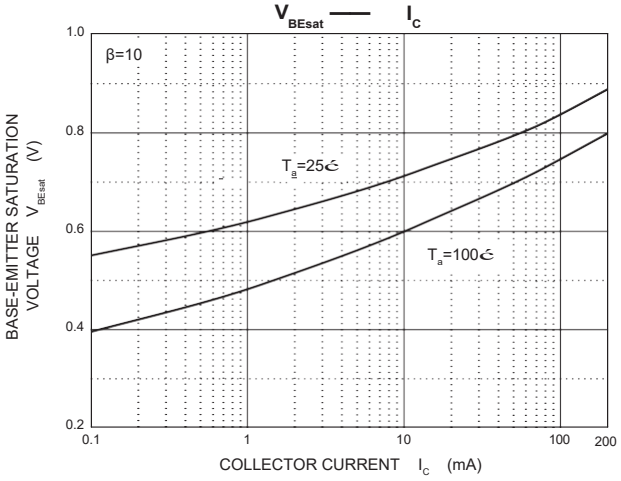
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	160	V
V_{CEO}	Collector-Emitter Voltage	140	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	0.6	A
P_C	Collector Power Dissipation	0.625	W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55-150	℃

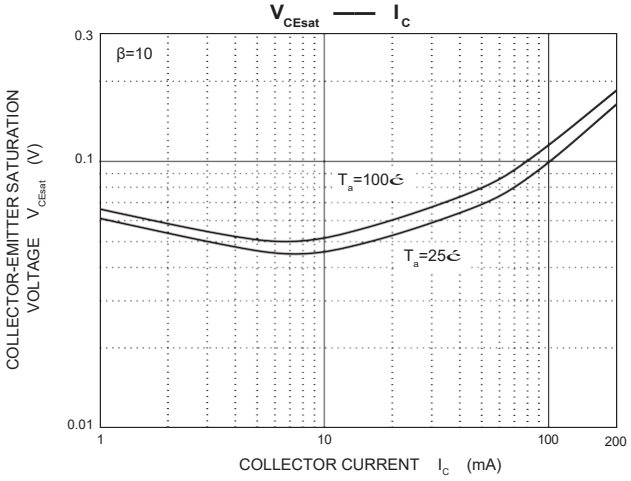
T_a=25℃ unless otherwise specified

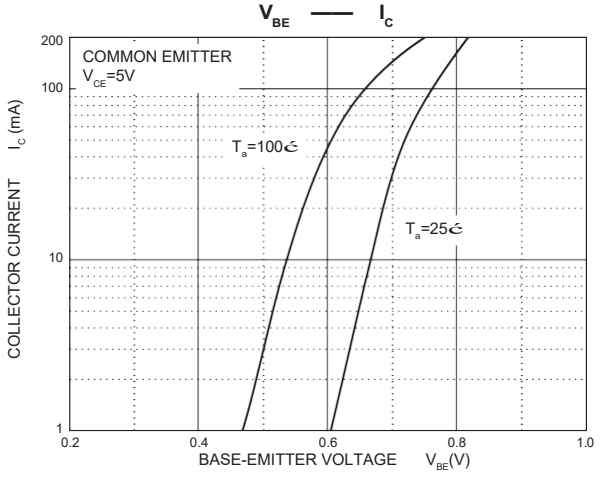
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100 A,I_E=0	160			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA, I_B=0	140			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=10 A, I_C=0	6			V
Collector cut-off current	I_{CBO}	V_{CB}=100V,I_E=0			0.1	A
Emitter cut-off current	I_{EBO}	V_{EB}=4V, I_C=0			0.05	A
DC current gain	$h_{FE(1)}$	V_{CE}=5V,I_C=1mA	60			
	$h_{FE(2)}$	V_{CE}=5V,I_C =10mA	60		250	
	$h_{FE(3)}$	V_{CE}=5V,I_C=50mA	20			
Collector-emitter saturation voltage	V_{CEsat}	I_C= 10mA, I_B=1mA I_C= 50mA, I_B=5mA			0.15 0.25	V
Base-emitter saturation voltage	V_{BEsat}	I_C= 10mA, I_B=1mA I_C= 50mA, I_B=5 mA			1 1.2	V
Transition frequency	f_T	V_{CE}=10V,I_C=10mA,,f=100MHz	100		300	MHz
Collector output capacitance	C_{ob}	V_{CB}=10V,I_E=0,f=1MHz			6	pF
Noise figure	NF	V_{CE}=5V,I_c=0.25mA, f=1KHZ,Rs=1kΩ			10	dB

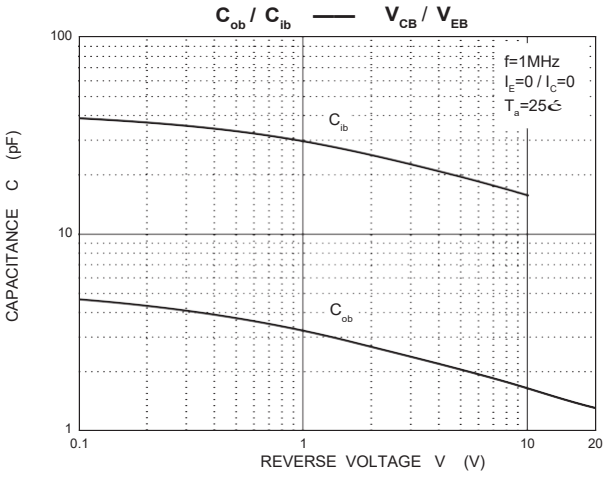

Static Characteristic
COMMON EMITTER
T_a=25℃
90uA
80uA
70uA
60uA
50uA
40uA
30uA
I_B=20uA
COLLECTOR CURRENT I_C (mA)
COLLECTOR-EMITTER VOLTAGE V_{CE} (V)

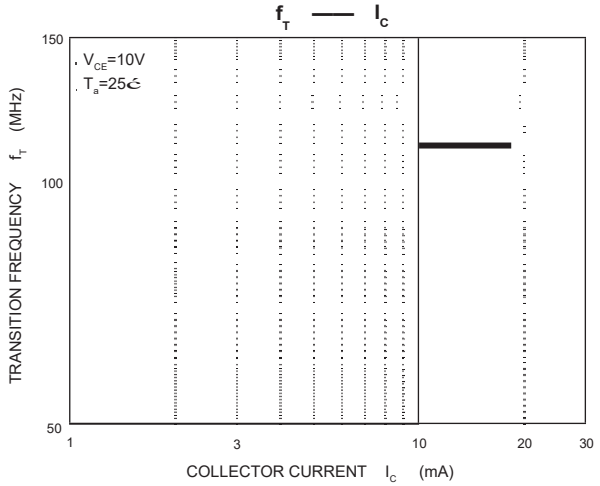

h_{FE} — I_C
COMMON EMITTER
V_{CE}=5V
T_a=100℃
T_a=25℃
DC CURRENT GAIN h_{FE}
COLLECTOR CURRENT I_C (mA)

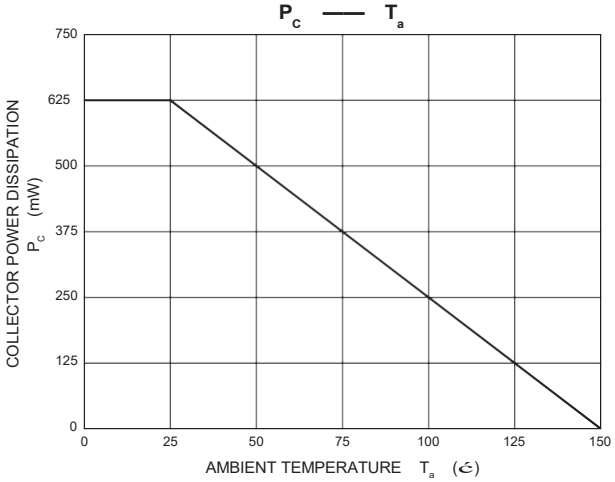

V_{BEsat} — I_C
β=10
T_a=25℃
T_a=100℃
BASE-EMITTER SATURATION VOLTAGE V_{BEsat} (V)
COLLECTOR CURRENT I_C (mA)


V_{CEsat} — I_C
β=10
T_a=100℃
T_a=25℃
COLLECTOR-EMITTER SATURATION VOLTAGE V_{CEsat} (V)
COLLECTOR CURRENT I_C (mA)


V_{BE} — I_C
COMMON EMITTER
V_{CE}=5V
T_a=100℃
T_a=25℃
COLLECTOR CURRENT I_C (mA)
BASE-EMITTER VOLTAGE V_{BE}(V)


C_{ob} / C_{ib} — V_{CB} / V_{EB}
f=1MHz
I_E=0 / I_C=0
T_a=25℃
C_{ib}
C_{ob}
CAPACITANCE C (pF)
REVERSE VOLTAGE V (V)


f_T — I_C
V_{CE}=10V
T_a=25℃
TRANSITION FREQUENCY f_T (MHz)
COLLECTOR CURRENT I_C (mA)


P_C — T_a
COLLECTOR POWER DISSIPATION P_C (mW)
AMBIENT TEMPERATURE T_a (℃)