

NPN Silicon Epitaxial Planar Transistor

for switching and AF amplifier applications.

The transistor is subdivided into one group according to its DC current gain.

On special request, these transistors can be manufactured in different pin configurations.

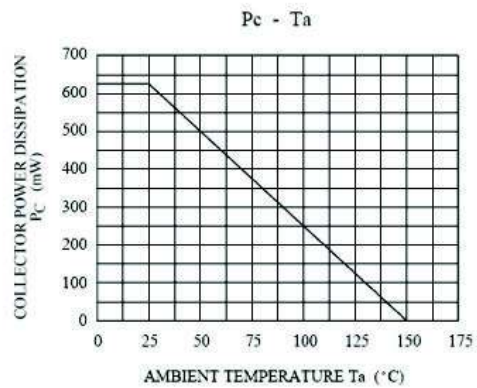
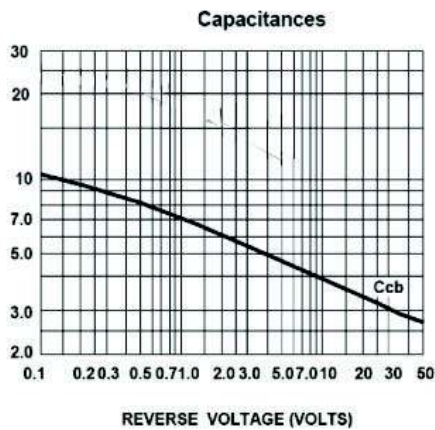
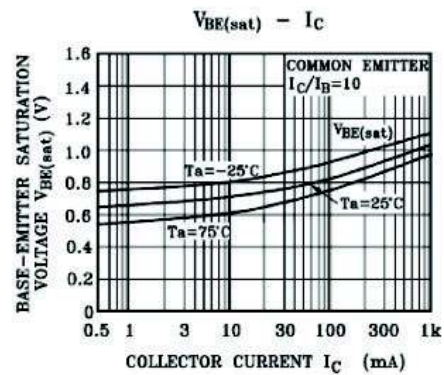
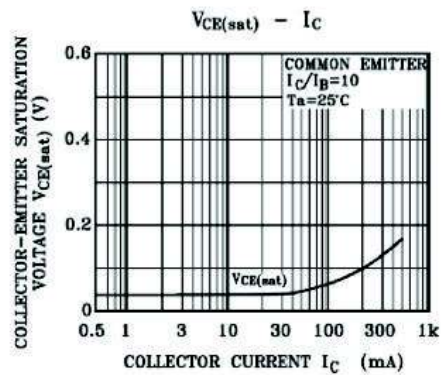
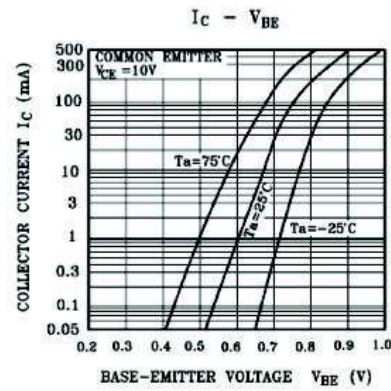
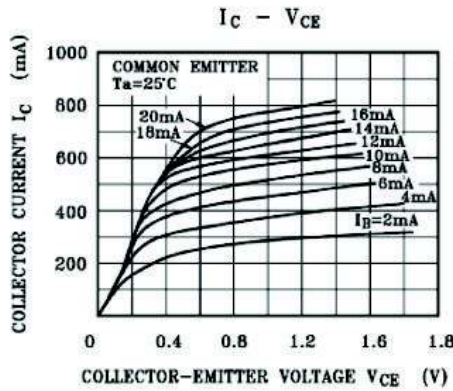
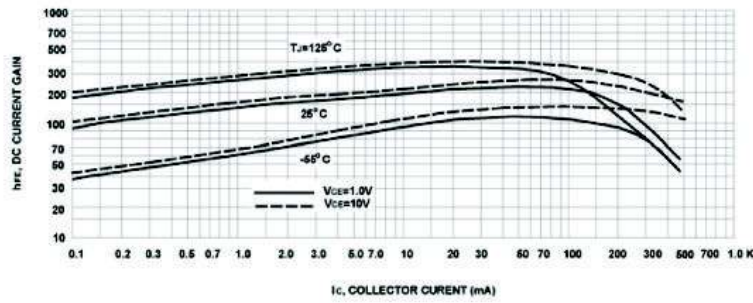


1. Emitter 2. Base 3. Collector
TO-92 Plastic Package

Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V _{CBO}	2N2222 60	V
2N2222A 75			
Collector Emitter Voltage	V _{CEO}	2N2222 30	V
2N2222A 40			
Emitter Base Voltage	V _{EBO}	2N2222 5	V
2N2222A 6			
Collector Current	I _C	600	mA
Power Dissipation	P _{tot}	625	mW
Junction Temperature	T _J	150	°C
Storage Temperature Range	T _{stg}	- 55 to + 150	°C

Figure 1. DC Current Gain



Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $V_{CE} = 10\text{ V}$, $I_C = 0.1\text{ mA}$ at $V_{CE} = 10\text{ V}$, $I_C = 1\text{ mA}$ at $V_{CE} = 10\text{ V}$, $I_C = 10\text{ mA}$ at $V_{CE} = 10\text{ V}$, $I_C = 150\text{ mA}$ at $V_{CE} = 10\text{ V}$, $I_C = 500\text{ mA}$	h_{FE} h_{FE} h_{FE} h_{FE} h_{FE} h_{FE}	35 50 75 100 30 40	- - - 300 - -	- - - - - -
Collector Base Cutoff Current at $V_{CB} = 50\text{ V}$ at $V_{CB} = 60\text{ V}$	I_{CBO}	- -	10 10	nA
Collector Base Breakdown Voltage at $I_C = 10\text{ }\mu\text{A}$	$V_{(BR)CBO}$	60 75	- -	V
Collector Emitter Breakdown Voltage at $I_C = 10\text{ mA}$	$V_{(BR)CEO}$	30 40	- -	V
Emitter Base Breakdown Voltage at $I_E = 10\text{ }\mu\text{A}$	$V_{(BR)EBO}$	5 6	- -	V
Collector Emitter Saturation Voltage at $I_C = 150\text{ mA}$, $I_B = 15\text{ mA}$ at $I_C = 500\text{ mA}$, $I_B = 50\text{ mA}$	$V_{CE(sat)}$	- - - -	0.4 0.3 1.6 1	V
Base Emitter Saturation Voltage at $I_C = 150\text{ mA}$, $I_B = 15\text{ mA}$ at $I_C = 500\text{ mA}$, $I_B = 50\text{ mA}$	$V_{BE(sat)}$	- 0.6 - -	1.3 1.2 2.6 2	V
Gain Bandwidth Product at $I_C = 20\text{ mA}$, $V_{CE} = 20\text{ V}$, $f = 100\text{ MHz}$	f_T	250	-	MHz
Collector Output Capacitance at $V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{ob}	-	8	pF