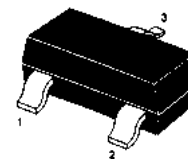


BC337...BC338 NPN Silicon Epitaxial Planar Transistor

for switching and amplifier applications

These types are subdivided into three groups -16, -25 and -40, according to their DC current gain.



1 .Base 2.Emitter 3.Collector
SOT-23 Plastic Package

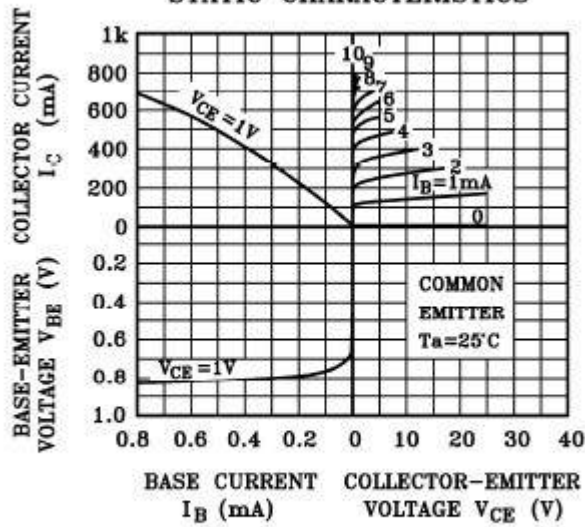
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	BC337	BC338	Unit
Collector Base Voltage	V_{CBO}	50	30	V
Collector Emitter Voltage	V_{CEO}	45	25	V
Emitter Base Voltage	V_{EBO}	5		V
Collector Current	I_C	800		mA
Peak Collector Current	I_{CM}	1		A
Total Power Dissipation	P_{tot}	625		mW
Junction Temperature	T_j	150		$^\circ\text{C}$
Storage Temperature Range	T_S	- 55 to + 150		$^\circ\text{C}$

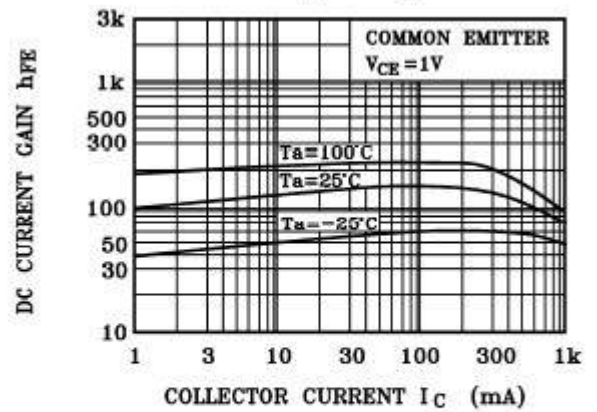
Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE} = 1\text{ V}$, $I_C = 100\text{ mA}$	Current Gain Group h_{FE}	-16 100	-	250	-
		-25 160	-	400	-
		-40 250	-	630	-
at $V_{CE} = 1\text{ V}$, $I_C = 300\text{ mA}$		-16 60	-	-	-
		-25 100	-	-	-
		-40 170	-	-	-
Collector Base Cutoff Current at $V_{CB} = 50\text{ V}$ at $V_{CB} = 30\text{ V}$	I_{CBO}	-	-	100 100	nA
Collector Base Breakdown Voltage at $I_C = 100\text{ }\mu\text{A}$	$V_{(BR)CBO}$	50 30	-	-	V
Collector Emitter Breakdown Voltage at $I_C = 2\text{ mA}$	$V_{(BR)CEO}$	45 25	-	-	V
Emitter Base Breakdown Voltage at $I_E = 100\text{ }\mu\text{A}$	$V_{(BR)EBO}$	5	-	-	V
Collector Emitter Saturation Voltage at $I_C = 500\text{ mA}$, $I_B = 50\text{ mA}$	$V_{CE(sat)}$	-	-	0.7	V
Base Emitter On Voltage at $V_{CE} = 1\text{ V}$, $I_C = 300\text{ mA}$	$V_{BE(on)}$	-	-	1.2	V
Gain Bandwidth Product at $V_{CE} = 5\text{ V}$, $I_C = 10\text{ mA}$, $f = 50\text{ MHz}$	f_T	-	100	-	MHz
Collector Base Capacitance at $V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{CBO}	-	12	-	pF

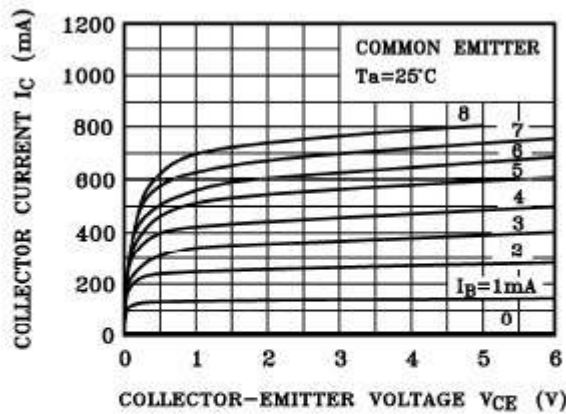
STATIC CHARACTERISTICS



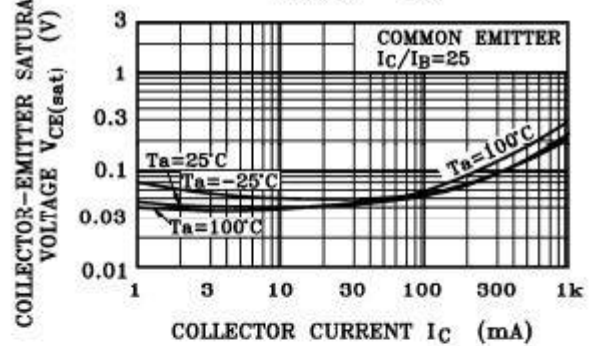
$h_{FE} - I_C$



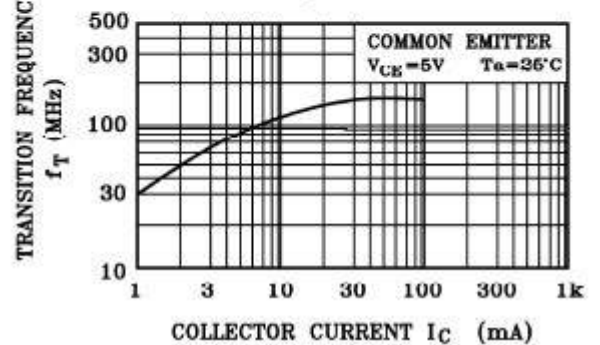
$I_C - V_{CE}$ (LOW VOLTAGE REGION)



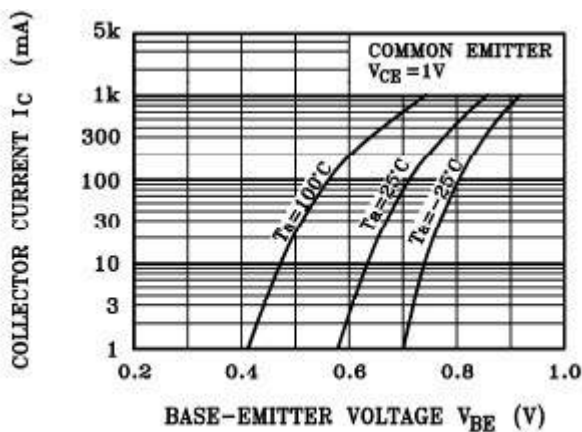
$V_{CE(sat)} - I_C$



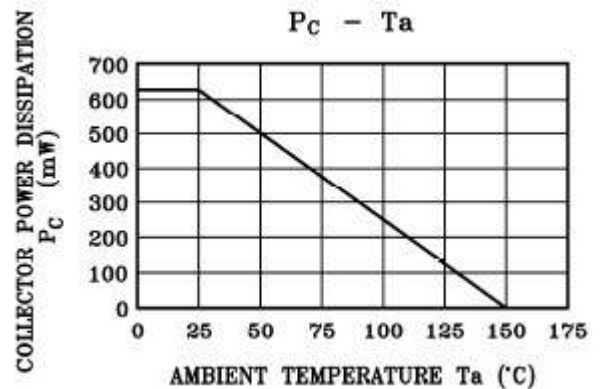
$f_T - I_C$



$I_C - V_{BE}$



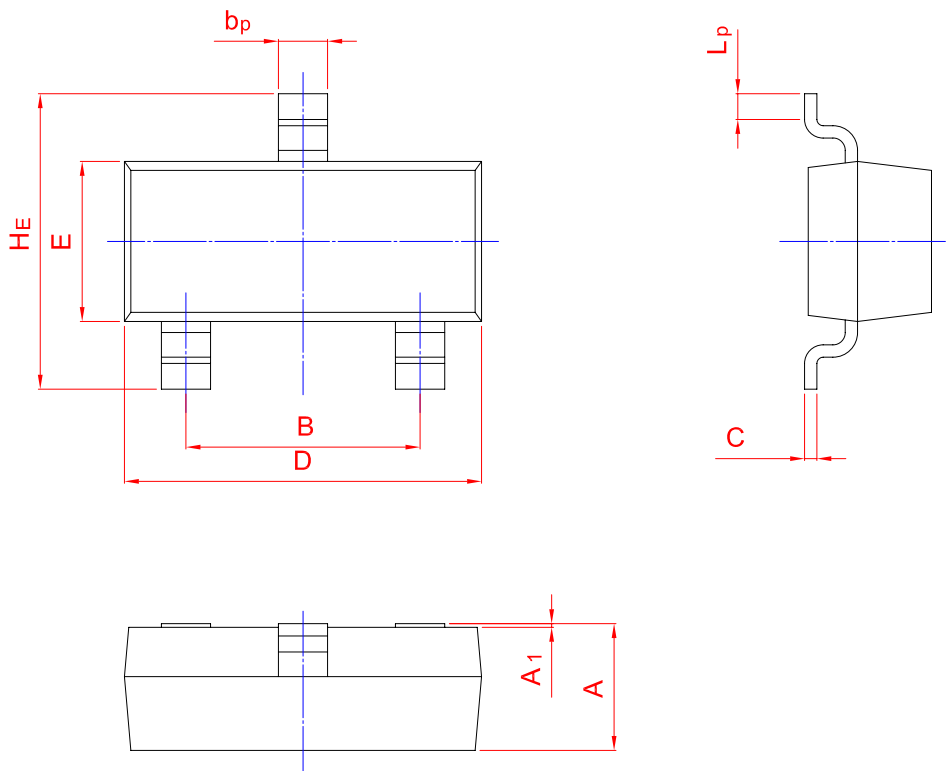
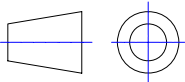
$P_C - T_a$



PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



UNIT	A	B	b _p	C	D	E	H _E	A ₁	L _p
mm	1.40 0.95	2.04 1.78	0.50 0.35	0.19 0.08	3.10 2.70	1.65 1.20	3.00 2.20	0.100 0.013	0.50 0.20