

BC337...BC338

NPN Silicon Epitaxial Planar Transistor

FEATURES

For switching and amplifier applications

These types are subdivided into three groups -16,

-25 and -40, according to their DC current gain.



1. Collector 2. Base 3. Emitter

TO-92 Plastic Package

MAXIMUM RATINGS AND CHARACTERISTICS

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

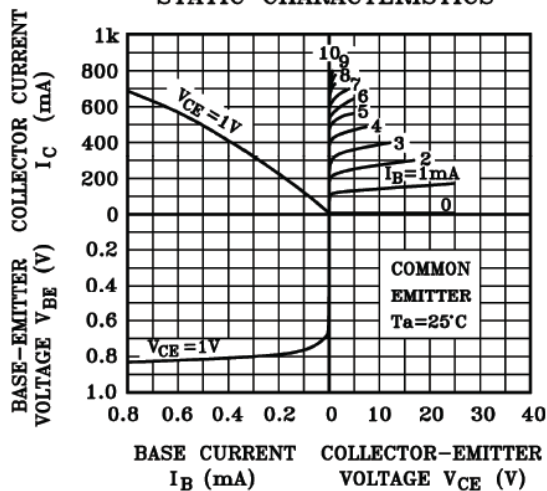
PARAMETER	SYMBOL	BC337	BC338	UNIT
Collector Base Voltage	V_{CBO}	50	30	V
Collector Emitter Voltage	V_{CEO}	45	25	V
Emitter Base Voltage	V_{EBO}	5		V
Collector Current	I_C	800		mA
Peak Collector Current	I_{CM}	1		A
Total Power Dissipation	P_{tot}	625		mW
Junction Temperature	T_j	150		$^\circ\text{C}$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

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

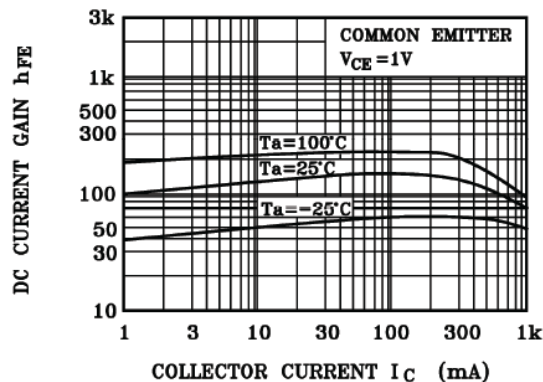
Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE} = 1\text{ V}$, $I_C = 100\text{ mA}$ Current Gain Group	h_{FE}	100	-	250	-
	h_{FE}	160	-	400	-
	h_{FE}	250	-	630	-
at $V_{CE} = 1\text{ V}$, $I_C = 300\text{ mA}$	h_{FE}	60	-	-	-
Collector Base Cutoff Current at $V_{CB} = 50\text{ V}$ BC337 at $V_{CB} = 30\text{ V}$ BC338	I_{CBO}	-	-	100	nA
Collector Base Breakdown Voltage at $I_C = 100\text{ }\mu\text{A}$ BC337 BC338	$V_{(BR)CBO}$	50 30	- -	- -	V
Collector Emitter Breakdown Voltage at $I_C = 2\text{ mA}$ BC337 BC338	$V_{(BR)CEO}$	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

RATINGS AND CHARACTERISTIC CURVES BC337...BC338

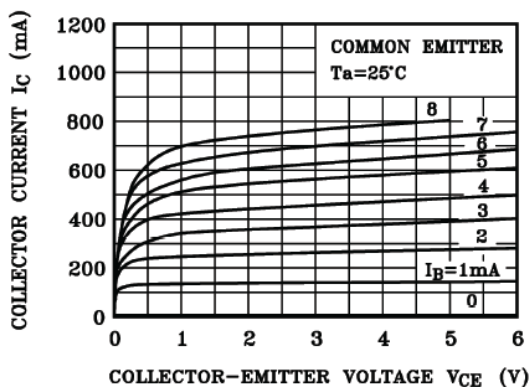
STATIC CHARACTERISTICS



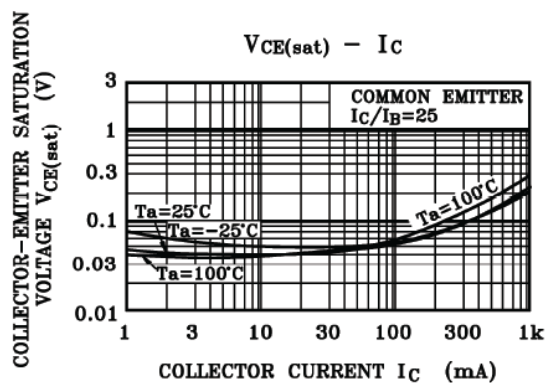
$h_{FE} - I_C$



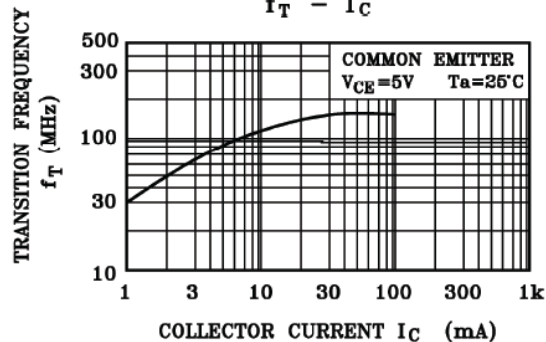
$I_C - V_{CE}$ (LOW VOLTAGE REGION)



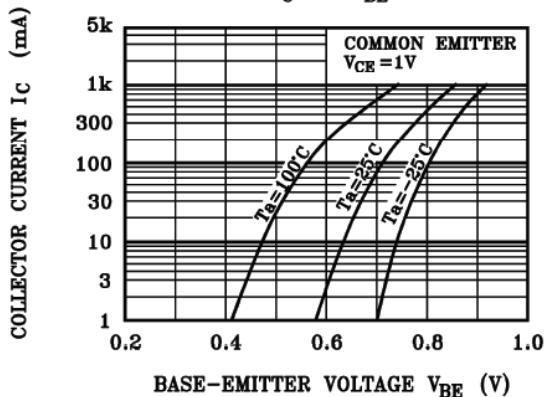
$V_{CE(sat)} - I_C$



$f_T - I_C$



$I_C - V_{BE}$



$P_C - T_a$

