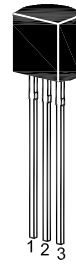


# BC337...BC338

## 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.



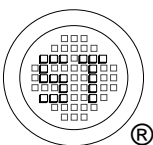
1. Collector 2. Base 3. Emitter  
TO-92 Plastic Package

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

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

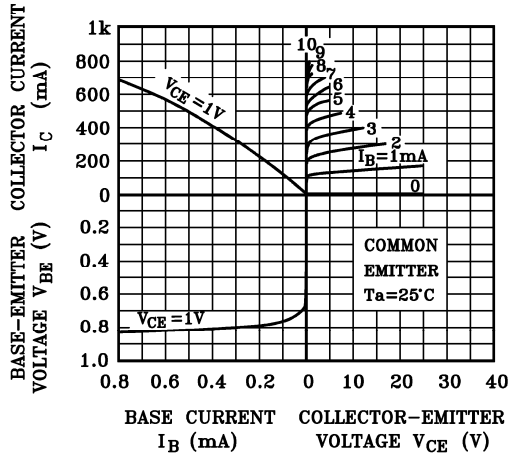
Parameter	Symbol	Min.	Typ.	Max.	Unit	
DC Current Gain at $V_{CE} = 1\text{ V}$ , $I_C = 100\text{ mA}$ Current Gain Group	-16	$h_{FE}$	100	-	250	-
	-25	$h_{FE}$	160	-	400	-
	-40	$h_{FE}$	250	-	630	-
		$h_{FE}$	60	-	-	-
Collector Base Cutoff Current at $V_{CB} = 50\text{ V}$ at $V_{CB} = 30\text{ V}$	BC337	$I_{CBO}$	-	-	100	nA
	BC338	$I_{CBO}$	-	-	100	nA
Collector Base Breakdown Voltage at $I_C = 100\text{ }\mu\text{A}$	BC337	$V_{(BR)CBO}$	50	-	-	V
	BC338	$V_{(BR)CBO}$	30	-	-	V
Collector Emitter Breakdown Voltage at $I_C = 2\text{ mA}$	BC337	$V_{(BR)CEO}$	45	-	-	V
	BC338	$V_{(BR)CEO}$	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	



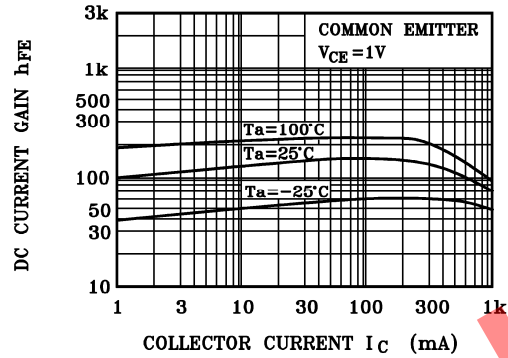
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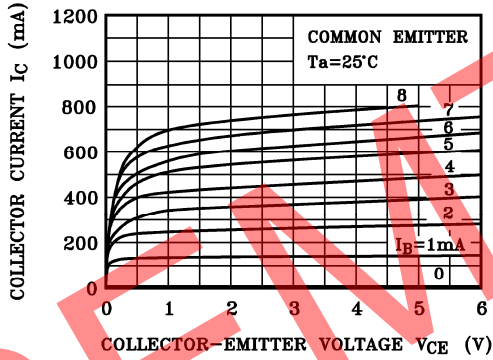
STATIC CHARACTERISTICS



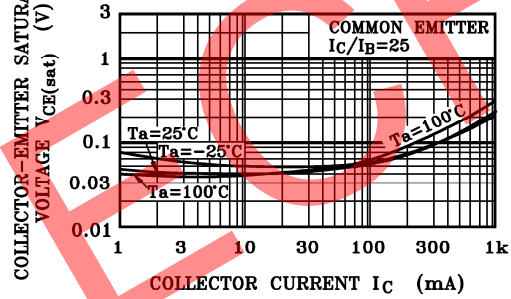
$h_{FE} - I_C$



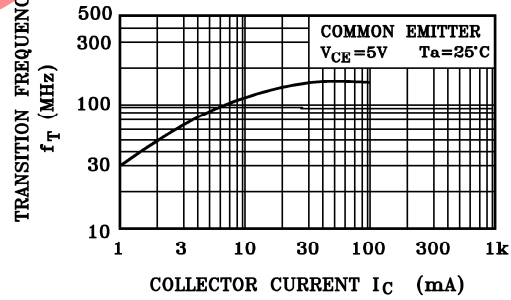
$I_C - V_{CE}$  (LOW VOLTAGE REGION)



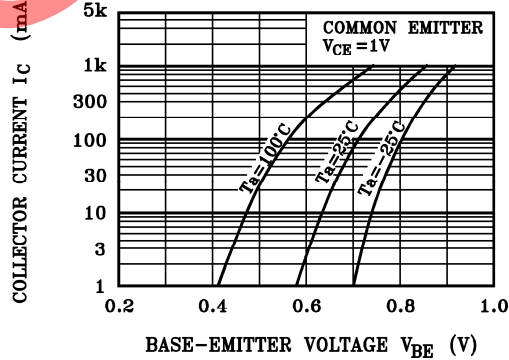
$V_{CE(sat)} - I_C$



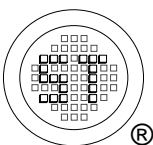
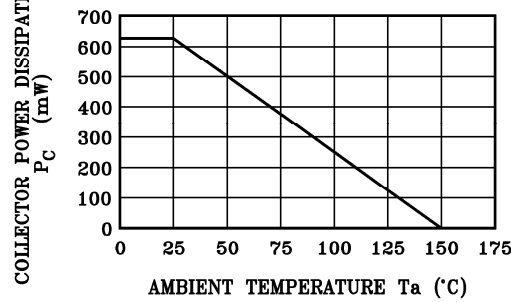
$f_T - I_C$



$I_C - V_{BE}$



$P_C - T_a$



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