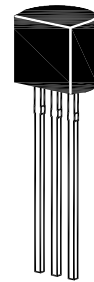


BC237...BC239

NPN Silicon Epitaxial Planar Transistor

for switching and amplifier applications

The transistor is subdivided into three groups, A, B, and C, according to its DC current gain.



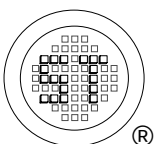
1. Collector 2. Base 3. Emitter
TO-92 Plastic Package

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

Parameter	Symbol	BC237	BC238	BC239	Unit
Collector Base Voltage	V _{CBO}	50	30	30	V
Collector Emitter Voltage	V _{CEO}	45	25	25	V
Emitter Base Voltage	V _{EBO}	6	5		V
Collector Current	I _C	100			mA
Total Power Dissipation	P _{tot}	500			mW
Junction Temperature	T _j	150			°C
Storage Temperature Range	T _S	- 55 to + 150			°C

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

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $V_{CE} = 5\text{ V}$, $I_C = 2\text{ mA}$	Current Gain Group A B C h_{FE} h_{FE} h_{FE}	120	220	-
		180	460	-
		380	800	-
Collector Base Cutoff Current at $V_{CB} = 50\text{ V}$ at $V_{CB} = 30\text{ V}$	I_{CBO}	- -	15 15	nA
Collector Emitter Breakdown Voltage at $I_C = 2\text{ mA}$	$V_{(BR)CEO}$	45 25	- -	V
Emitter Base Breakdown Voltage at $I_E = 100\text{ }\mu\text{A}$	$V_{(BR)EBO}$	6 5	- -	V
Collector Emitter Saturation Voltage at $I_C = 10\text{ mA}$, $I_B = 0.5\text{ mA}$ at $I_C = 100\text{ mA}$, $I_B = 5\text{ mA}$	$V_{CE(sat)}$	- -	0.2 0.6	V
Base Emitter Saturation Voltage at $I_C = 10\text{ mA}$, $I_B = 0.5\text{ mA}$ at $I_C = 100\text{ mA}$, $I_B = 5\text{ mA}$	$V_{BE(sat)}$	- -	0.83 1.05	V
Base Emitter On Voltage at $V_{CE} = 5\text{ V}$, $I_C = 2\text{ mA}$	$V_{BE(on)}$	0.55	0.7	V
Current Gain Bandwidth Product at $V_{CE} = 5\text{ V}$, $I_C = 10\text{ mA}$, $f = 100\text{ MHz}$	f_T	150	-	MHz
Collector Base Capacitance at $V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{ob}	-	4.5	pF



SEMTECH ELECTRONICS LTD.

(Subsidiary of Sino-Tech International Holdings Limited, a company
listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002
Certificate No. 05103



ISO 14001:2004
Certificate No. 7116



ISO 9001:2000
Certificate No. 0506098

Dated : 27/12/2007

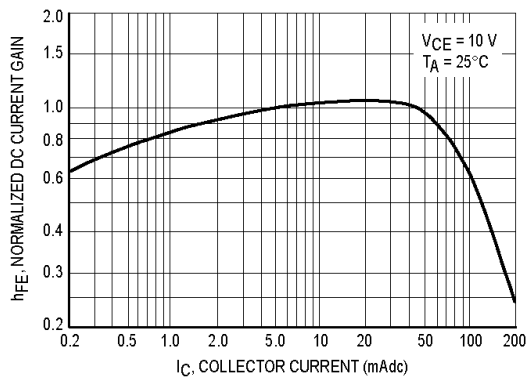


Figure 1. Normalized DC Current Gain

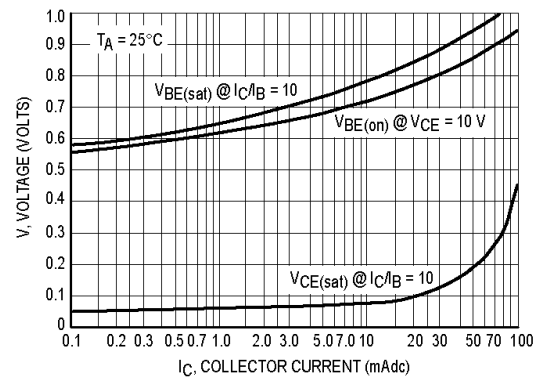


Figure 2. "Saturation" and "On" Voltages

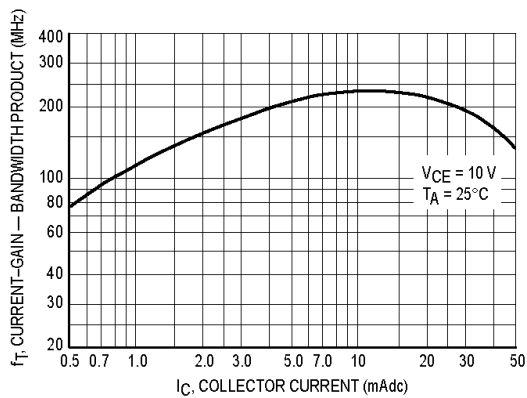


Figure 3. Current-Gain — Bandwidth Product

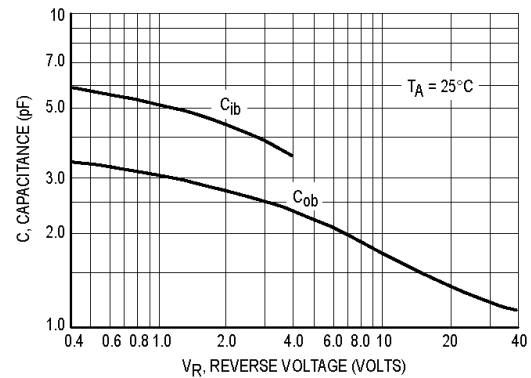
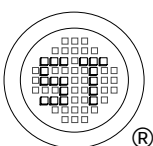


Figure 4. Capacitances



SEMTECH ELECTRONICS LTD.
(Subsidiary of Sino-Tech International Holdings Limited, a company
listed on the Hong Kong Stock Exchange, Stock Code: 724)

