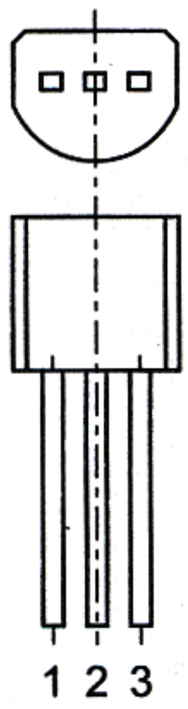
TO-92 Plastic-Encapsulate Transistors

BC337(BC338),-16,-25,-40 TRANSISTOR(NPN)



TO-92

1.COLLECTOR

2.BASE

3.EMITTER

FEATURES

Power dissipation

P_{CM}: 0.625W (Tamb=25℃)

Collector current

I_{CM}: 0.8 A

Collector-base voltage

V_{CBO}: BC337 : 50V

BC338 : 30V

Operating and storage junction temperature range

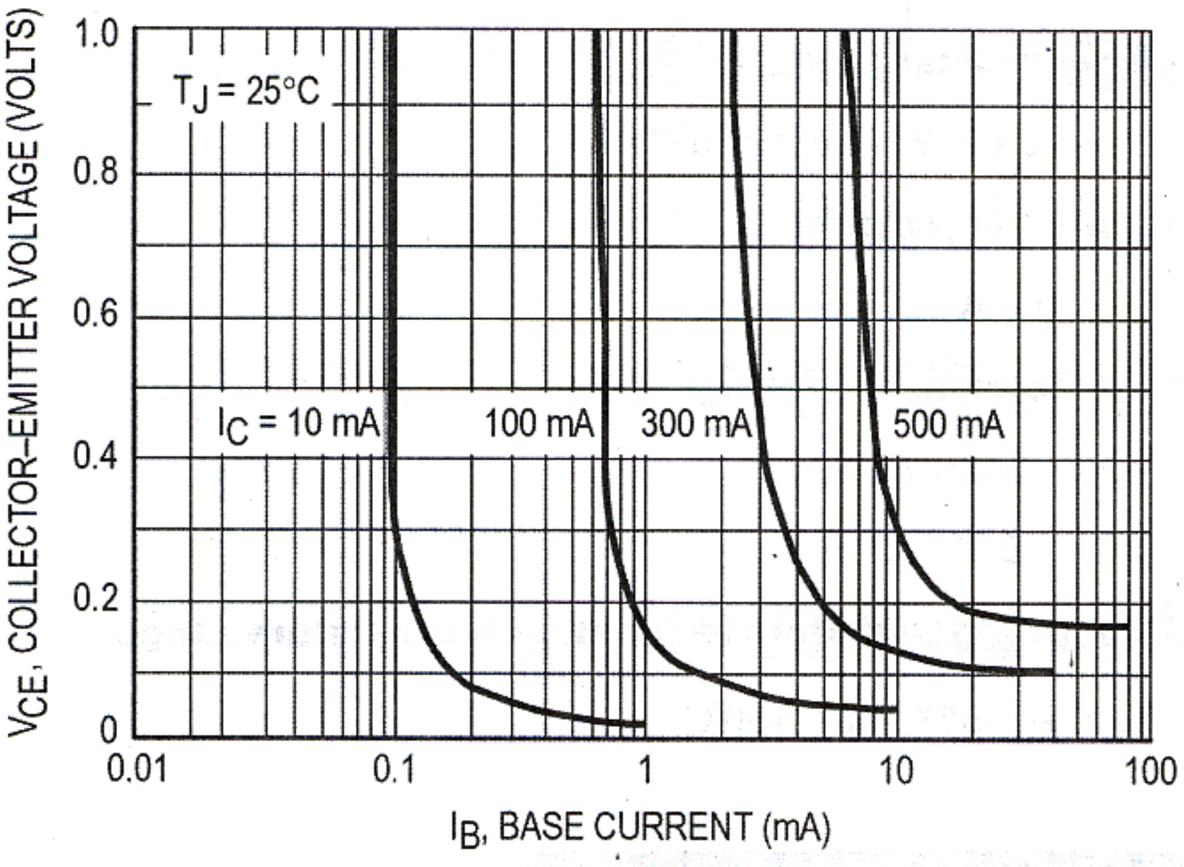
T_J, T_{stg}: -55℃ to + 150℃

ELECTRICAL CHARACTERISTICS

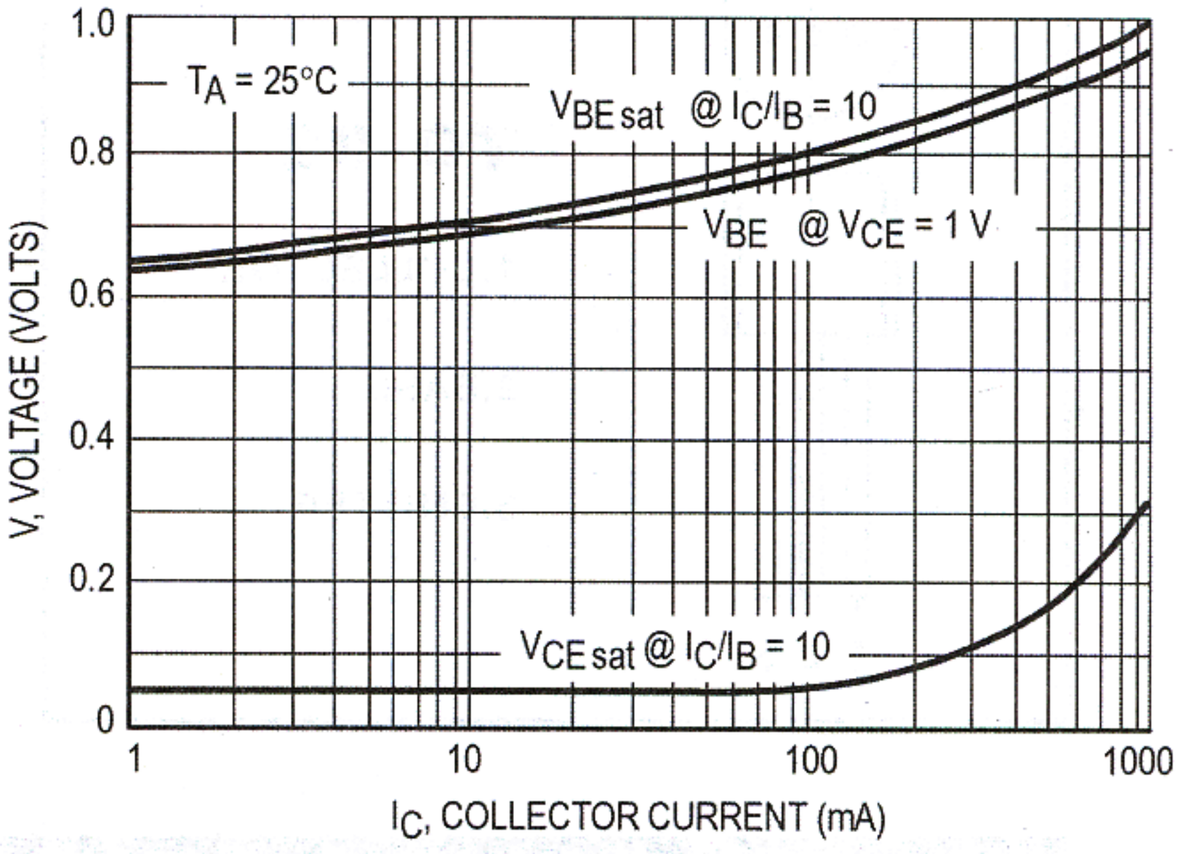
(Tamb=25℃ unless otherwise specified)

Parameter		Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	BC337	V_{CBO}	I_C= 100 μ A, I_E=0	50		V
	BC338			30		V
Collector-emitter breakdown voltage	BC337	V_{CEO}	I_C= 10 mA, I_B=0	45		V
	BC338			25		V
Emitter-base breakdown voltage		V_{EBO}	I_E= 10 μ A, I_C=0	5		V
Collector cut-off current	BC337	I_{CBO}	V_{CB}= 45 V, I_E=0		0.1	μ A
	BC338		V_{CB}= 25 V, I_E=0			
Collector cut-off current	BC337	I_{CEO}	V_{CE}= 40 V, I_B=0		0.2	μ A
	BC338		V_{CE}= 20 V, I_B=0			
Emitter cut-off current		I_{EBO}	V_{EB}= 4 V, I_C=0		0.1	μ A
DC current gain	BC337/BC338	$h_{FE(1)}$	V_{CE}= 1 V, I_C= 100 mA	100	630	
	BC337-16/BC338-16			100	250	
	BC337-25/BC338-25			160	400	
	BC337-40/BC338-40			250	630	
		$h_{FE(2)}$	V_{CE}= 1 V, I_C= 300 mA	60		
Collector-emitter saturation voltage		V_{CEsat}	I_C= 500 mA, I_B= 50 mA		0.7	V
Base-emitter saturation voltage		V_{BEsat}	I_C= 500 mA, I_B= 50 mA		1.2	V
Transition frequency		f_T	V_{CE}= 5 V, I_C= 10 mA f =100MHz	210		MHz

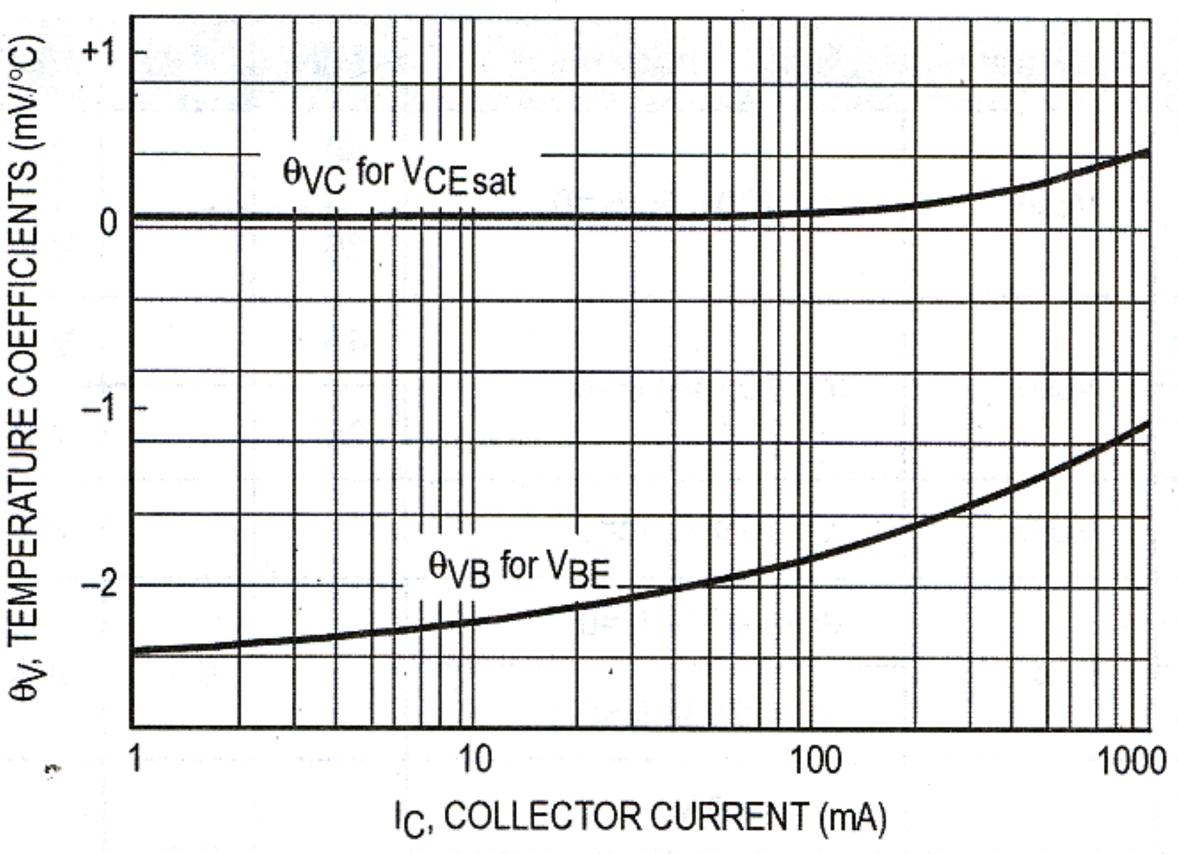
Typical Characteristics



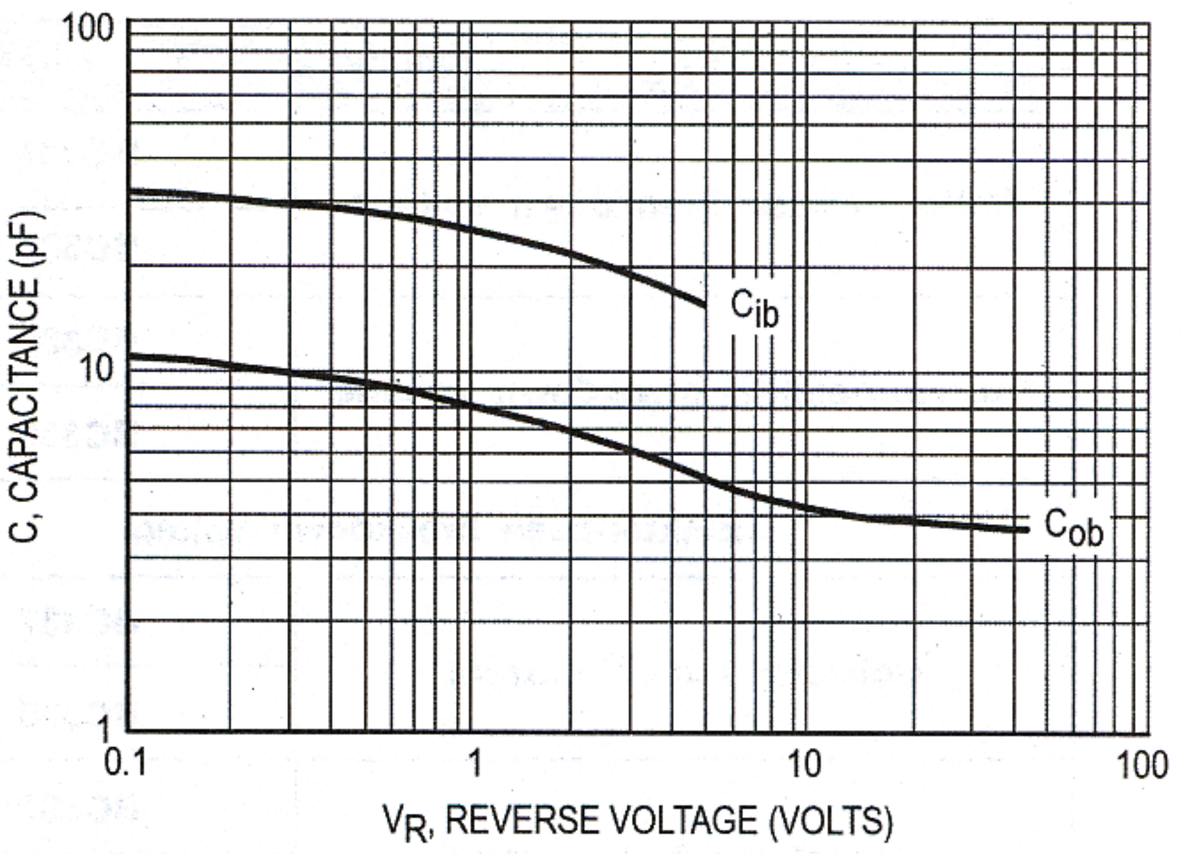
Saturation Region



"On" Voltages



Temperature Coefficients



Capacitances

Active Region — Safe Operating Area

DC Current Gain