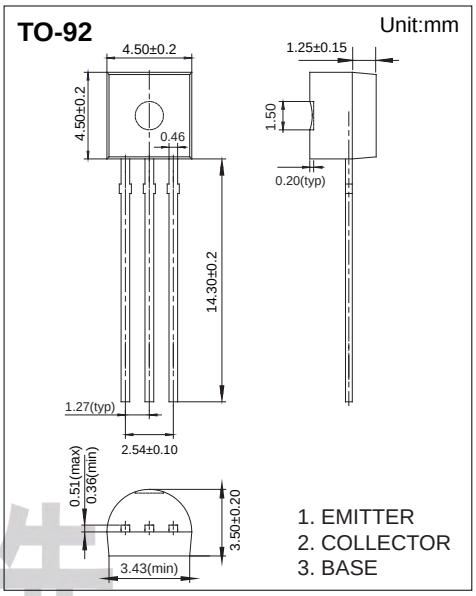
NPN Transistors

C945



■ Features

- Collector current: I_C=0.15A
- Low noise
- Complementary to A733

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	60	V
Collector - Emitter Voltage	V_{CEO}	50	
Emitter - Base Voltage	V_{EBO}	5	
Collector Current - Continuous	I_C	0.15	A
Collector Power Dissipation	P_C	400	mW
Junction Temperature	T_J	125	℃
Storage Temperature	T_{stg}	-55 to 125	

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■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collecto- base breakdown voltage	V_{CBO}	I_C= 1 mA， I_E=0	60			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= 0.1 mA， I_B=0	50			
Emitter - base breakdown voltage	V_{EBO}	I_E= 100 μA， I_C=0	5			
Collector cut-off current	I_{CBO}	V_{CB}= 60 V , I_E=0			0.1	μA
Collector cut-off current	I_{CEO}	V_{CE}= 45 V , I_B=0			0.1	
Emitter cut-off current	I_{EBO}	V_{EB}= 5 V , I_C=0			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=100 mA, I_B= 10mA			0.3	V
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C=100 mA, I_B= 10mA			1	
DC current gain	$h_{FE(1)}$	V_{CE}= 6V, I_C= 1 mA	70		700	
	$h_{FE(2)}$	V_{CE}= 6V, I_C= 0.1 mA	40			
Noise figure	NF	V_{CE}=6V,I_C=0.1mA R_G=10kΩ,f=1MHz			10	dB
Collector output capacitance	C_{ob}	V_{CB}=10V,I_E=0,f=1MHz			3	pF
Transition frequency	f_T	V_{CE}= 6V, I_C= 10mA,f=30MHz	200			MHz

■ Classification of hFE(1)

Rank	O	Y	GR	BL
Range	70-140	120-240	200-400	350-700

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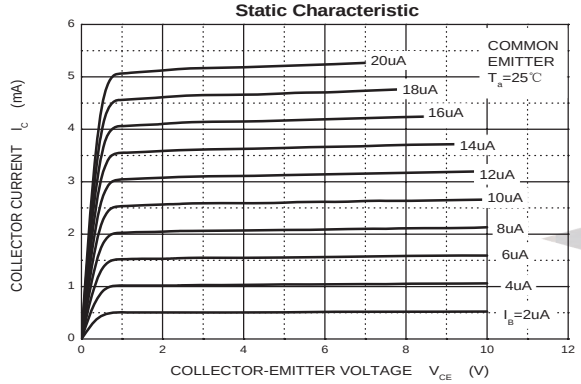
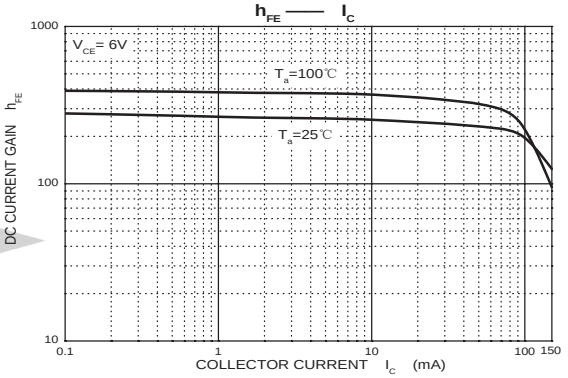
■ Typical Characterisitics

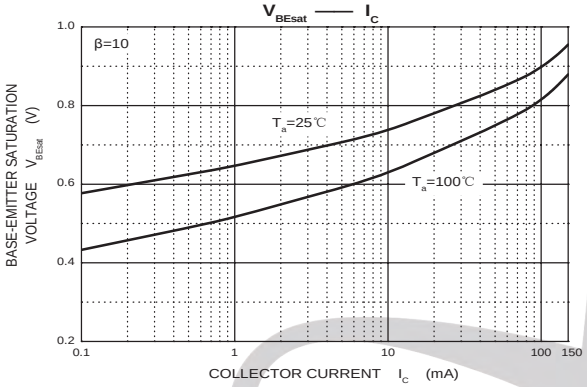
Static Characteristic



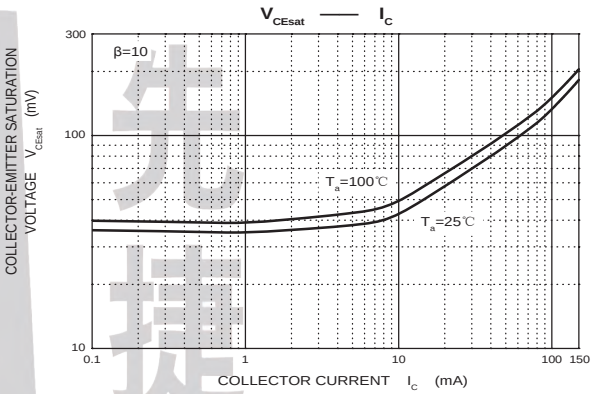
hFE —— IC



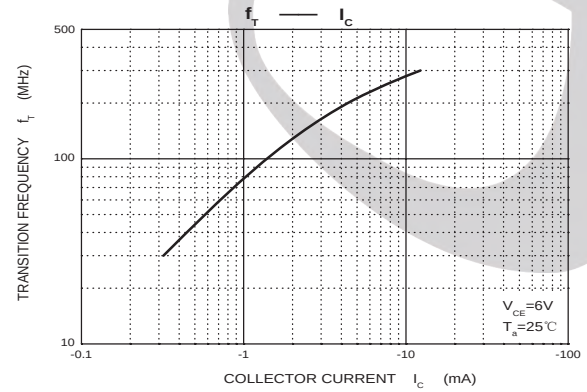
VBEsat —— IC



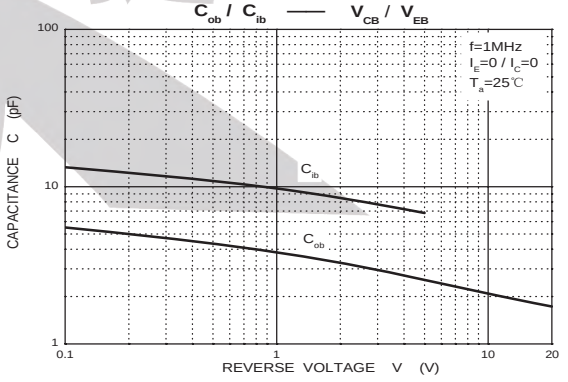
VCEsat —— IC



fT —— IC



Cob / Cib —— VCB / VEB



Pc —— Ta