

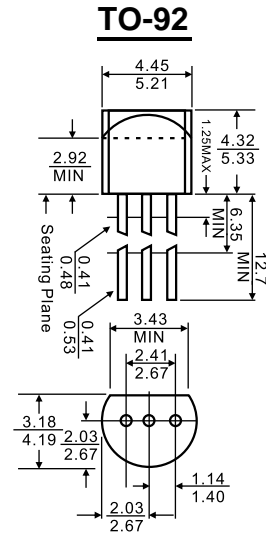


Features

- Amplifier dissipation NPN Silicon

MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

Symbol	Parameter	Value	Units
V _{CEO}	Collector-Emitter Voltage BC307	-45	V
	BC308/309	-25	
V _{EBO}	Emitter-Base Voltage BC307	-6	V
	BC308/309	-5	
I _C	Collector Current -Continuous	-0.1	A
P _C	Collector Power Dissipation	500	mW
R _{θJA}	Thermal Resistance, Junction to Ambient	357	°C/W
R _{θJC}	Thermal Resistance, Junction to Case	125	°C/W
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55-150	°C



Dimensions in inches and (millimeters)

ELECTRICAL CHARACTERISTICS (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =-10μA, I _E =0 BC307	-50			V
		BC308/309	-30			
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =-2mA, I _B =0 BC307	-45			V
		BC308/309	-25			
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =-10μA, I _C =0	-5			V
Collector cut-off current	I _{CBO}	V _{CB} =-45V, I _E =0 BC307			-15	nA
		V _{CB} =-25V, I _E =0 BC308/309				
Emitter cut-off current	I _{EBO}	V _{EB} =-5V, I _C =0			-15	nA
DC current gain	h _{FE}	V _{CE} =-5V, I _C =-2mA	120		800	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =-10mA, I _B =-0.5mA			-0.3	V
		I _C =-100mA, I _B =-5mA			-0.6	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C =-10mA, I _B =-0.5mA			-0.75	V
		I _C =-100mA, I _B =-5mA			-1	V
Base-emitter voltage	V _{BE}	V _{CE} =-5V, I _C =-2mA	-0.55		-0.75	V
Transition frequency	f _T	V _{CE} =-5V, I _C =-10mA, f=50MHz		130		MHz
Collector output capacitance	C _{ob}	V _{CB} =-10V, I _E =0, f=1MHz			6	pF
Noise figure	NF	V _{CE} =-5V, I _C =-0.2mA, f=1KHz, R _G =2KΩ BC307/BC308			10	dB
		BC309			4	
		V _{CE} =-5V, I _C =-0.2mA, f=30-15KHz, R _G =2KΩ BC309			4	

CLASSIFICATION OF h_{FE}

Rank	A	B	C
Range	120-220	180-460	380-800



Typical Characteristics

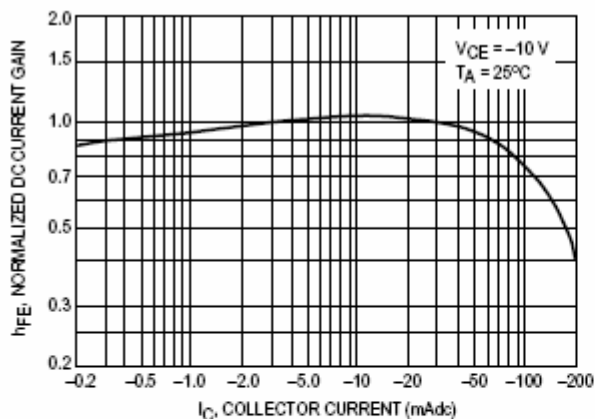


Figure 1. Normalized DC Current Gain

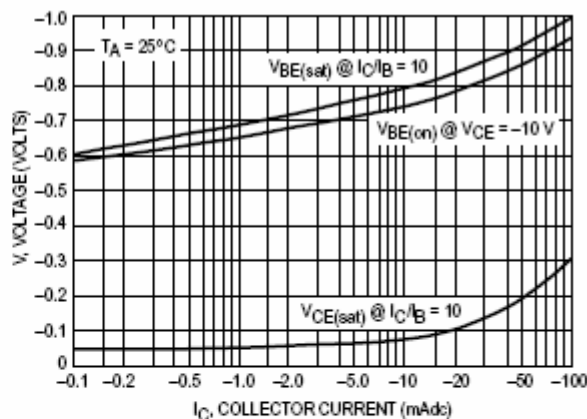


Figure 2. "Saturation" and "On" Voltages

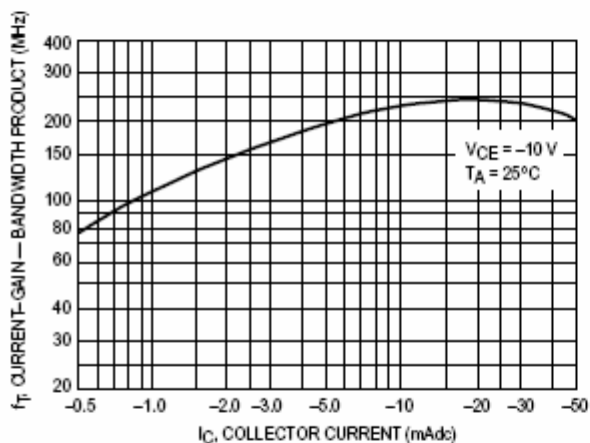


Figure 3. Current-Gain — Bandwidth Product

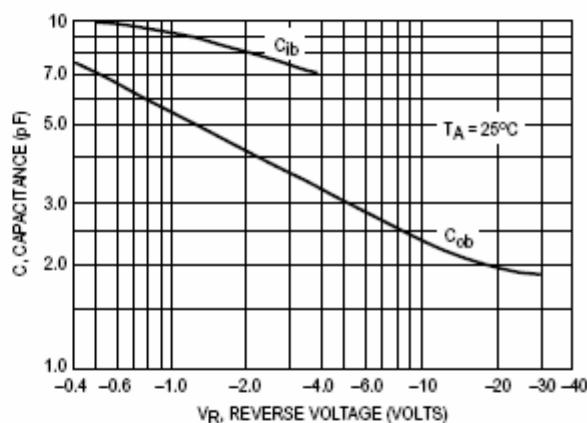


Figure 4. Capacitances

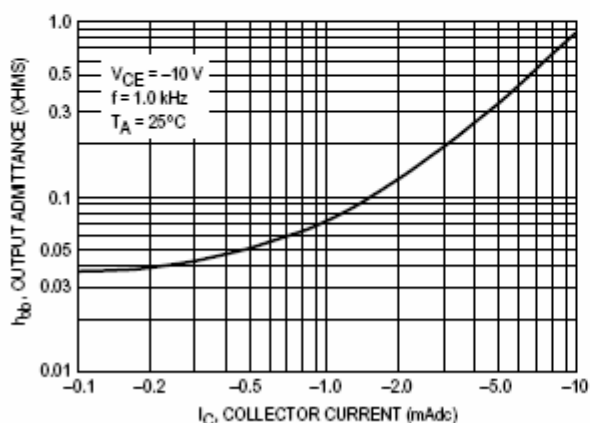


Figure 5. Output Admittance

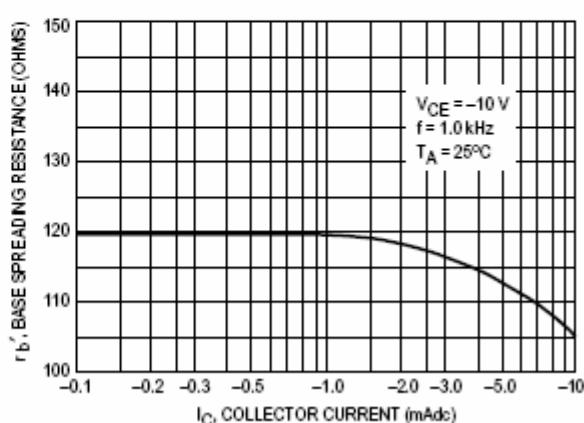


Figure 6. Base Spreading Resistance

Package	Packing	Quantity	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-92	Bulk	1000pcs/BP	10,000pcs	245×170×100	100,000pcs	525×375×270
TO-92	Tape	2000pcs/TP	2000pcs	333×162×43	20,000pcs	350×340×250