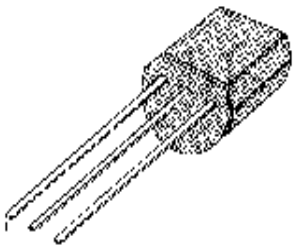
BC546/547/548/549/550

NPN EPITAXIAL SILICON TRANSISTOR

SWITCHING AND AMPLIFIER

- HIGH VOLTAGE: BC546, V_{CEO}=65V
- LOW NOISE: BC549, BC550
- Complement to BC556 ... BC560

TO-92



1. Collector 2. Base 3. Emitter

ABSOLUTE MAXIMUM RATINGS (T_A=25°C)

Characteristic	Symbol	Rating	Unit
Collector Base Voltage	V_{CBO}		
: BC546		80	V
: BC547/550		50	V
: BC548/549		30	V
Collector-Emitter Voltage	V_{CEO}		
: BC546		65	V
: BC547/550		45	V
: BC548/549/550		30	V
Emitter-Base Voltage	V_{EBO}		V
: BC546/547		6	V
: BC548/549/550		5	V
Collector Current (DC)	I_C	100	mA
Collector Dissipation	P_C	500	mW
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-65 ~ 150	°C

ELECTRICAL CHARACTERISTICS (T_A=25°C)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-off Current	I_{CBO}	V_{CB}=30V, I_E=0			15	nA
DC Current Gain	h_{FE}	V_{CE}=5V, I_C=2mA	110		800	
Collector Emitter Saturation Voltage	V_{CE} (sat)	I_C=10mA, I_B=0.5mA		90	250	mA
		I_C=100mA, I_B=5mA		200	600	mA
Collector Base Saturation Voltage	V_{BE} (on)	I_C=10mA, I_B=0.5mA		700		mA
		I_C=100mA, I_B=5mA		900		mA
Base Emitter On Voltage	V_{BE} (on)	V_{CE}=5V, I_C=2mA	580	660	700	mA
		V_{CE}=5V, I_C=10mA			720	mA
Current Gain Bandwidth Product	f_T	V_{CE}=5V, I_C=10mA		300		MHz
Collector Base Capacitance	C_{CBO}	V_{CB}=10V, f=1MHz		3.5	6	pF
Emitter Base Capacitance	C_{EBO}	V_{EB}=0.5V, f=1MHz		9		pF
Noise Figure : BC546/547/548	NF	V_{CE}=5V, I_C=200μA		2	10	dB
: BC549/550		f=1KHz, R_G=2KΩ		1.2	4	dB
: BC549	NF	V_{CE}=5V, I_C=200μA		1.4	4	dB
: BC550		R_G=2KΩ, f=30~15000MHz		1.4	3	dB

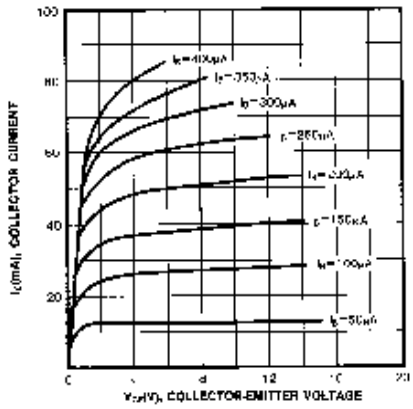
h_{FE} CLASSIFICATION

Classification	A	B	C
h_{FE}	110-220	200-450	420-800

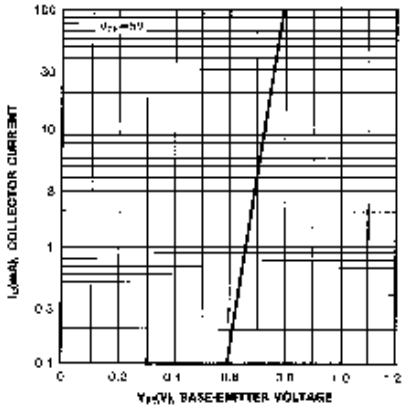
FAIRCHILD SEMICONDUCTOR

Rev. B

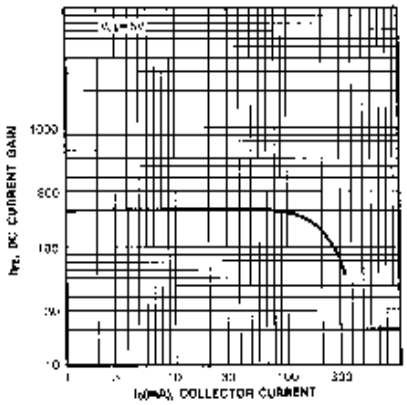
STATIC CHARACTERISTIC



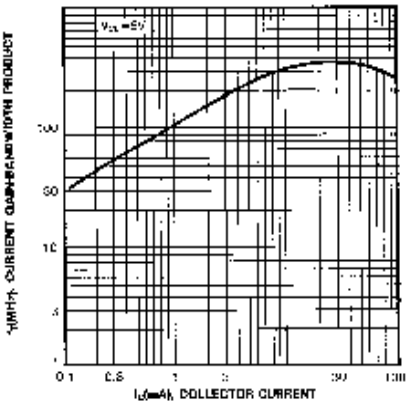
TRANSFER CHARACTERISTIC



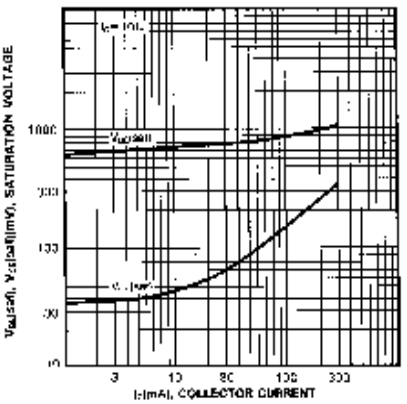
DC CURRENT GAIN



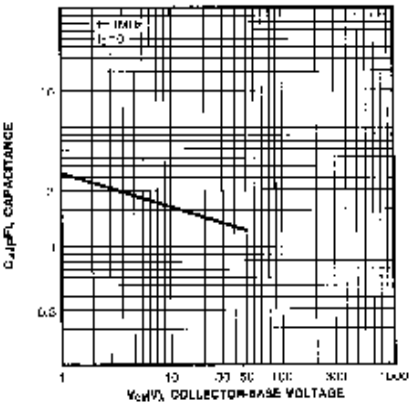
CURRENT GAIN BANDWIDTH PRODUCT



BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE



OUTPUT CAPACITANCE



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