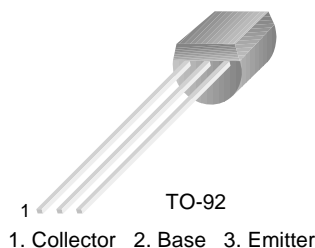


BC546/547/548/549/550

Switching and Applications

- High Voltage: BC546, $V_{CE0}=65V$
- Low Noise: BC549, BC550
- Complement to BC556 ... BC560



NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_a=25^\circ C$ unless otherwise noted

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

Electrical Characteristics $T_a=25^\circ C$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
I_{CBO}	Collector Cut-off Current	$V_{CB}=30V, I_E=0$			15	nA
h_{FE}	DC Current Gain	$V_{CE}=5V, I_C=2mA$	110		800	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=10mA, I_B=0.5mA$		90	250	mV
		$I_C=100mA, I_B=5mA$		200	600	mV
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=10mA, I_B=0.5mA$		700		mV
		$I_C=100mA, I_B=5mA$		900		mV
$V_{BE(on)}$	Base-Emitter On Voltage	$V_{CE}=5V, I_C=2mA$	580	660	700	mV
		$V_{CE}=5V, I_C=10mA$			720	mV
f_T	Current Gain Bandwidth Product	$V_{CE}=5V, I_C=10mA, f=100MHz$		300		MHz
C_{ob}	Output Capacitance	$V_{CB}=10V, I_E=0, f=1MHz$		3.5	6	pF
C_{ib}	Input Capacitance	$V_{EB}=0.5V, I_C=0, f=1MHz$		9		pF
NF	Noise Figure : BC546/547/548 : BC549/550 : BC549 : BC550	$V_{CE}=5V, I_C=200\mu A$ $f=1KHz, R_G=2K\Omega$		2	10	dB
		$V_{CE}=5V, I_C=200\mu A$ $R_G=2K\Omega, f=30\sim 15000MHz$		1.2	4	dB
				1.4	4	dB
				1.4	3	dB

h_{FE} Classification

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

Typical Characteristics

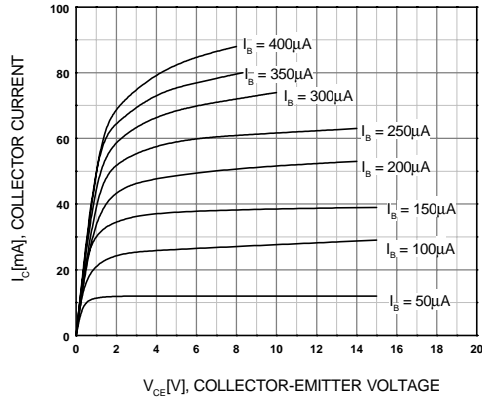


Figure 1. Static Characteristic

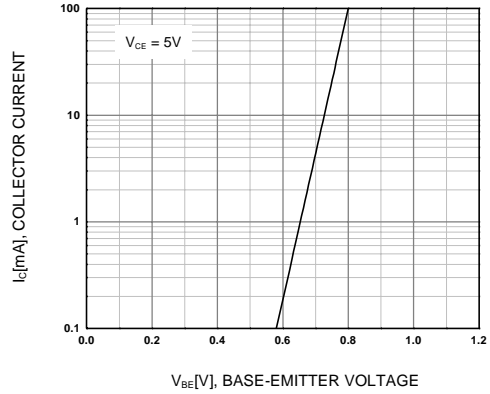


Figure 2. Transfer Characteristic

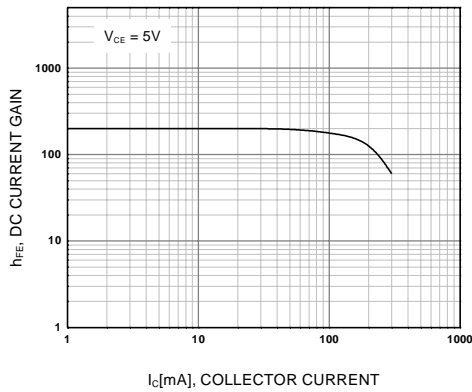


Figure 3. DC current Gain

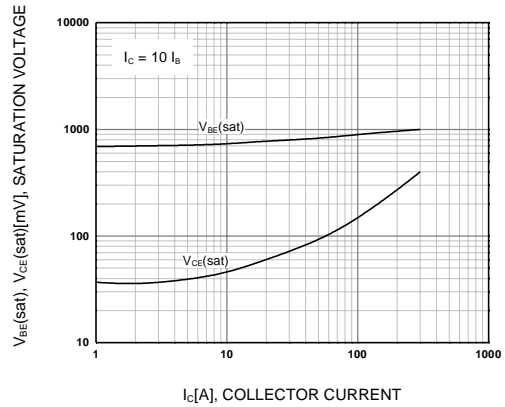


Figure 4. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

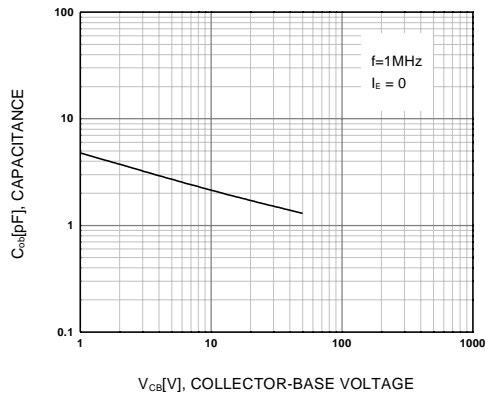


Figure 5. Output Capacitance

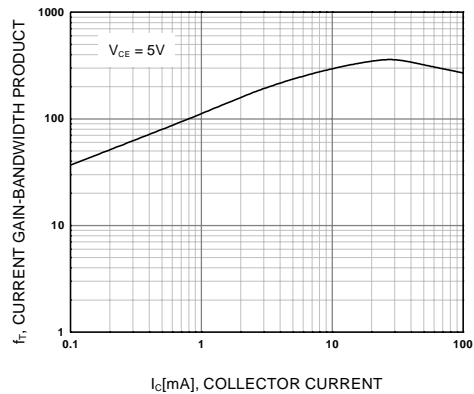
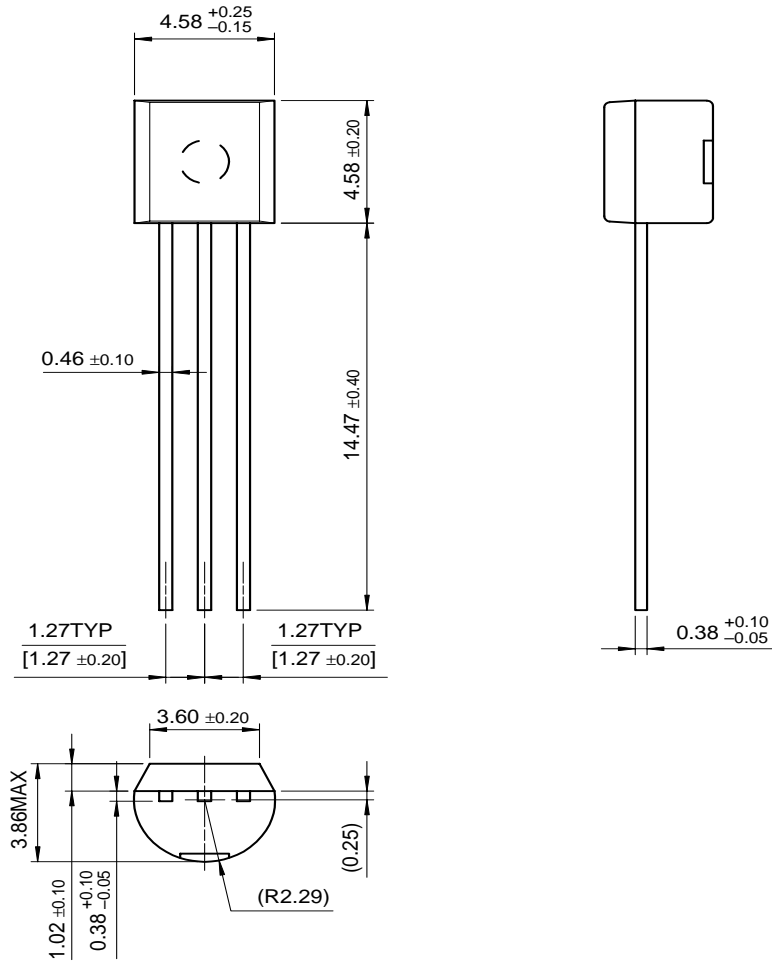


Figure 6. Current Gain Bandwidth Product

Package Dimensions

TO-92



Dimensions in Millimeters

BC546/547/548/549/550

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BC547
NPN Epitaxial Silicon Transistor

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Features

- High Voltage $V_{CEO}=65V$
- Low Noise: BC549,BC550
- Complement to BC556...BC560

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Product	Product status	Pb-free Status	Pricing*	Package type	Leads	Packing method	Package Marking Convention**
BC547	Full Production		\$0.0473	TO-92	3	BULK	Line 1: \$Y (Fairchild logo) &Z (Asm. Plant Code) &3 (3-Digit Date Code) Line 2: BC547
BC547A	Full Production		\$0.0473	TO-92	3	BULK	Line 1: \$Y (Fairchild logo) &Z (Asm. Plant Code) &3 (3-Digit Date Code) Line 2: BC Line 3: 547A


BC547ABU	Full Production		\$0.0238	TO-92	3	BULK	Line 1: BC547 Line 2: A Line 3: -&3
BC547ATA	Full Production		\$0.0238	TO-92	3	AMMO	Line 1: BC547 Line 2: A Line 3: -&3
BC547ATAR	Full Production		\$0.0238	TO-92	3	AMMO	Line 1: BC547 Line 2: A Line 3: -&3
BC547B	Full Production		\$0.0473	TO-92	3	BULK	Line 1: \$Y (Fairchild logo) &Z (Asm. Plant Code) &3 (3-Digit Date Code) Line 2: BC Line 3: 547B
BC547BBU	Full Production		\$0.0238	TO-92	3	BULK	Line 1: BC547 Line 2: B Line 3: -&3
BC547BNMBU	Full Production		\$0.0238	TO-92	3	BULK	Line 1: NO MARK
BC547BTA	Full Production		\$0.0238	TO-92	3	AMMO	Line 1: BC547 Line 2: B Line 3: -&3
BC547BTAR	Full Production		\$0.0238	TO-92	3	AMMO	Line 1: BC547 Line 2: B Line 3: -&3
BC547BTF	Full Production		\$0.0238	TO-92	3	TAPE REEL	Line 1: BC547 Line 2: B Line 3: -&3
BC547BTFR	Full Production		\$0.0238	TO-92	3	TAPE REEL	Line 1: BC547 Line 2: B Line 3: -&3
BC547BU	Full Production		\$0.0238	TO-92	3	BULK	Line 1: BC547 Line 3: -&3

BC547B_L34Z	Lifetime Buy		N/A	TO-92	3	BULK	Line 1: Y (Fairchild logo) & Z (Asm. Plant Code) & 3 (3-Digit Date Code) Line 2: BC Line 3: 547B
BC547C	Full Production	 Full Production	\$0.0473	TO-92	3	BULK	Line 1: Y (Fairchild logo) & Z (Asm. Plant Code) & 3 (3-Digit Date Code) Line 2: BC Line 3: 547C
BC547CBU	Full Production	 Full Production	\$0.0238	TO-92	3	BULK	Line 1: BC547 Line 2: C Line 3: -&3
BC547CNMBU	Full Production	 Full Production	\$0.0238	TO-92	3	BULK	N/A
BC547CTA	Full Production	 Full Production	\$0.0238	TO-92	3	AMMO	Line 1: BC547 Line 2: C Line 3: -&3
BC547CTAR	Full Production	 Full Production	\$0.0238	TO-92	3	AMMO	Line 1: BC547 Line 2: C Line 3: -&3
BC547CTF	Full Production	 Full Production	\$0.0238	TO-92	3	TAPE REEL	Line 1: BC547 Line 2: C Line 3: -&3
BC547CTFR	Full Production	 Full Production	\$0.0238	TO-92	3	TAPE REEL	Line 1: BC547 Line 2: C Line 3: -&3
BC547TA	Full Production	 Full Production	\$0.0238	TO-92	3	AMMO	Line 1: BC547 Line 3: -&3
BC547TAR	Full Production	 Full Production	\$0.0238	TO-92	3	AMMO	Line 1: BC547 Line 3: -&3
BC547TF	Full Production	 Full Production	\$0.0238	TO-92	3	TAPE REEL	Line 1: BC547 Line 3: -&3

BC547TFR	Full Production	 Full Production	\$0.0238	TO-92	3	TAPE REEL	Line 1: BC547 Line 3: -&3
BC547_J22Z	Full Production	 Full Production	N/A	TO-92	3	BULK	Line 1: \$Y (Fairchild logo) &Z (Asm. Plant Code) &3 (3-Digit Date Code) Line 2: BC547
BC547_J61Z	Full Production	 Full Production	N/A	TO-92	3	BULK	Line 1: \$Y (Fairchild logo) &Z (Asm. Plant Code) &3 (3-Digit Date Code) Line 2: BC547

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BC547BTA
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BC547BTF
BC547BTFR
BC547BU

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BC547C
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