

# PNP Epitaxial Silicon Transistor

## BC327

### Features

- Switching and Amplifier Applications
- Suitable for AF-Driver Stages and Low-Power Output Stages
- Complement to BC337/BC338
- These are Pb-Free Devices

### ABSOLUTE MAXIMUM RATINGS

(T<sub>A</sub> = 25°C unless otherwise noted.)

Symbol	Parameter	Value	Unit
V <sub>CES</sub>	Collector-Emitter Voltage	-50	V
V <sub>CEO</sub>	Collector-Emitter Voltage	-45	V
V <sub>EBO</sub>	Emitter-Base Voltage	-5	V
I <sub>C</sub>	Collector Current (DC)	-800	mA
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>STG</sub>	Storage Temperature	-55 to +150	°C

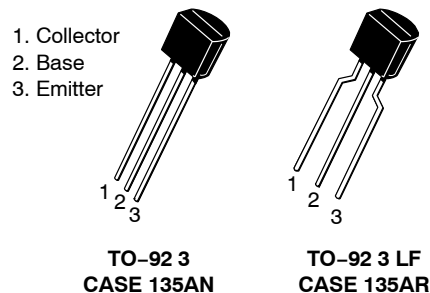
Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

### THERMAL CHARACTERISTICS

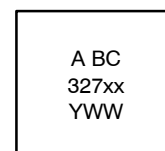
(T<sub>A</sub> = 25°C unless otherwise noted.) (Note 1)

Symbol	Characteristic	Value	Unit
P <sub>D</sub>	Power Dissipation Derate Above 25°C	625 5.0	mW mW/°C
R <sub>θJA</sub>	Thermal Resistance, Junction to Ambient	200	°C/W

1. PCB size: FR-4, 76 mm × 114 mm × 1.57 mm (3.0 inch × 4.5 inch × 0.062 inch) with minimum land pattern size.



### MARKING DIAGRAM



A = Assembly Location  
BC327xx = Specific Device Code  
xx = 25, 40  
Y = Year  
W = Work Week

### ORDERING INFORMATION

Device	Package	Shipping
BC327BU	TO-92 3 (Pb-Free)	10,000 Units / BLKBG
BC32740BU	TO-92 3 (Pb-Free)	10,000 Units / BLKBG
BC32725BU	TO-92 3 (Pb-Free)	10,000 Units / BLKBG
BC32725TA	TO-92 3 LF (Pb-Free)	2,000 Units / FNFLD
BC32740TA	TO-92 3 LF (Pb-Free)	2,000 Units / FNFLD

**ELECTRICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$  unless otherwise noted.)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -10\text{ mA}$ , $I_B = 0$	-45	-	-	V
$BV_{CES}$	Collector-Emitter Breakdown Voltage	$I_C = -0.1\text{ mA}$ , $V_{BE} = 0$	-50	-	-	V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E = -10\text{ }\mu\text{A}$ , $I_C = 0$	-5	-	-	V
$I_{CES}$	Collector Cut-Off Current	$V_{CE} = -45\text{ V}$ , $I_B = 0$	-	-2	-100	nA
$h_{FE1}$	DC Current Gain	$V_{CE} = -1\text{ V}$ , $I_C = -100\text{ mA}$	100	-	630	
$h_{FE2}$		$V_{CE} = -1\text{ V}$ , $I_C = -300\text{ mA}$	60	-	-	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -500\text{ mA}$ , $I_B = -50\text{ mA}$	-	-	-0.7	V
$V_{BE(on)}$	Base-Emitter On Voltage	$V_{CE} = -1\text{ V}$ , $I_C = -300\text{ mA}$	-	-	-1.2	V
$f_T$	Current Gain Bandwidth Product	$V_{CE} = -5\text{ V}$ , $I_C = -10\text{ mA}$ , $f = 20\text{ MHz}$	-	100	-	MHz
$C_{ob}$	Output Capacitance	$V_{CB} = -10\text{ V}$ , $I_E = 0$ , $f = 1\text{ MHz}$	-	12	-	pF

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

 **$h_{FE}$  Classification**

Classification	16	25	40
$h_{FE1}$	100 ~ 250	160 ~ 400	250 ~ 630
$h_{FE2}$	60 ~	100 ~	170 ~

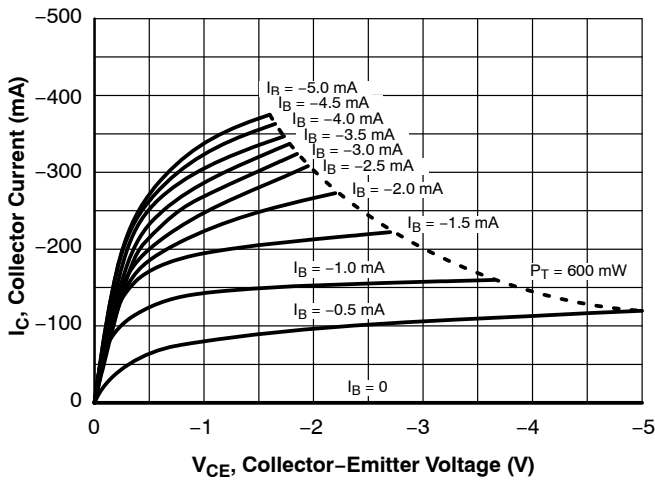
**TYPICAL CHARACTERISTICS**

Figure 1. Static Characteristic

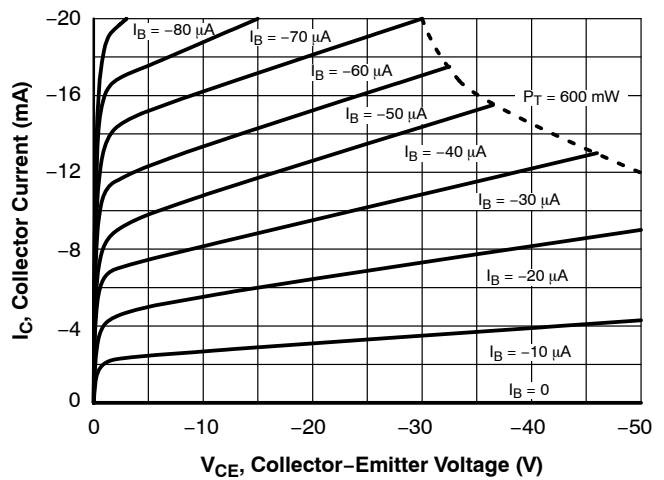


Figure 2. Static Characteristic

## TYPICAL CHARACTERISTICS (Continued)

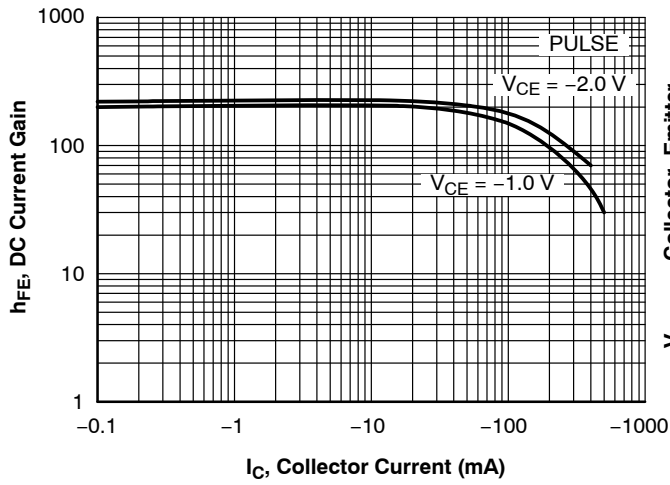


Figure 3. DC Current Gain

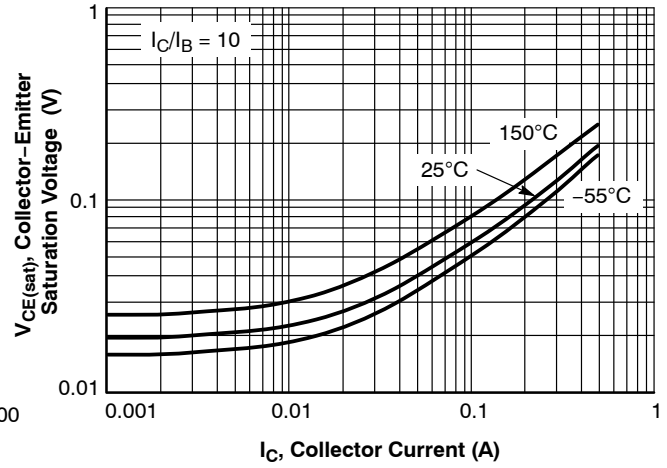


Figure 4. Collector-Emitter Saturation Voltage vs. Collector Current

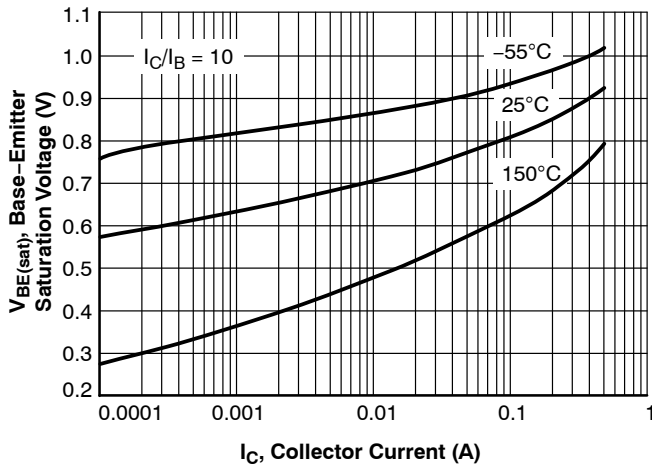


Figure 5. Base-Emitter Saturation Voltage vs. Collector Current

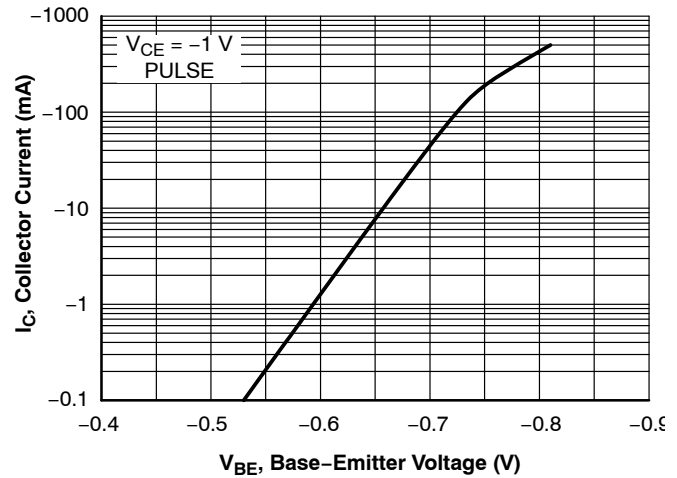


Figure 6. Base-Emitter On Voltage

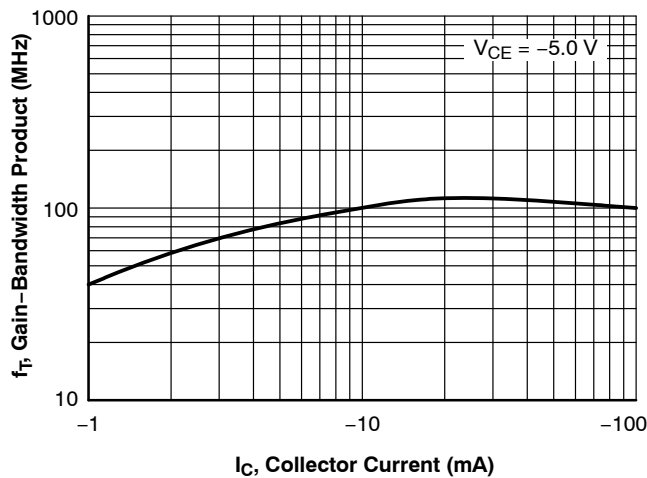
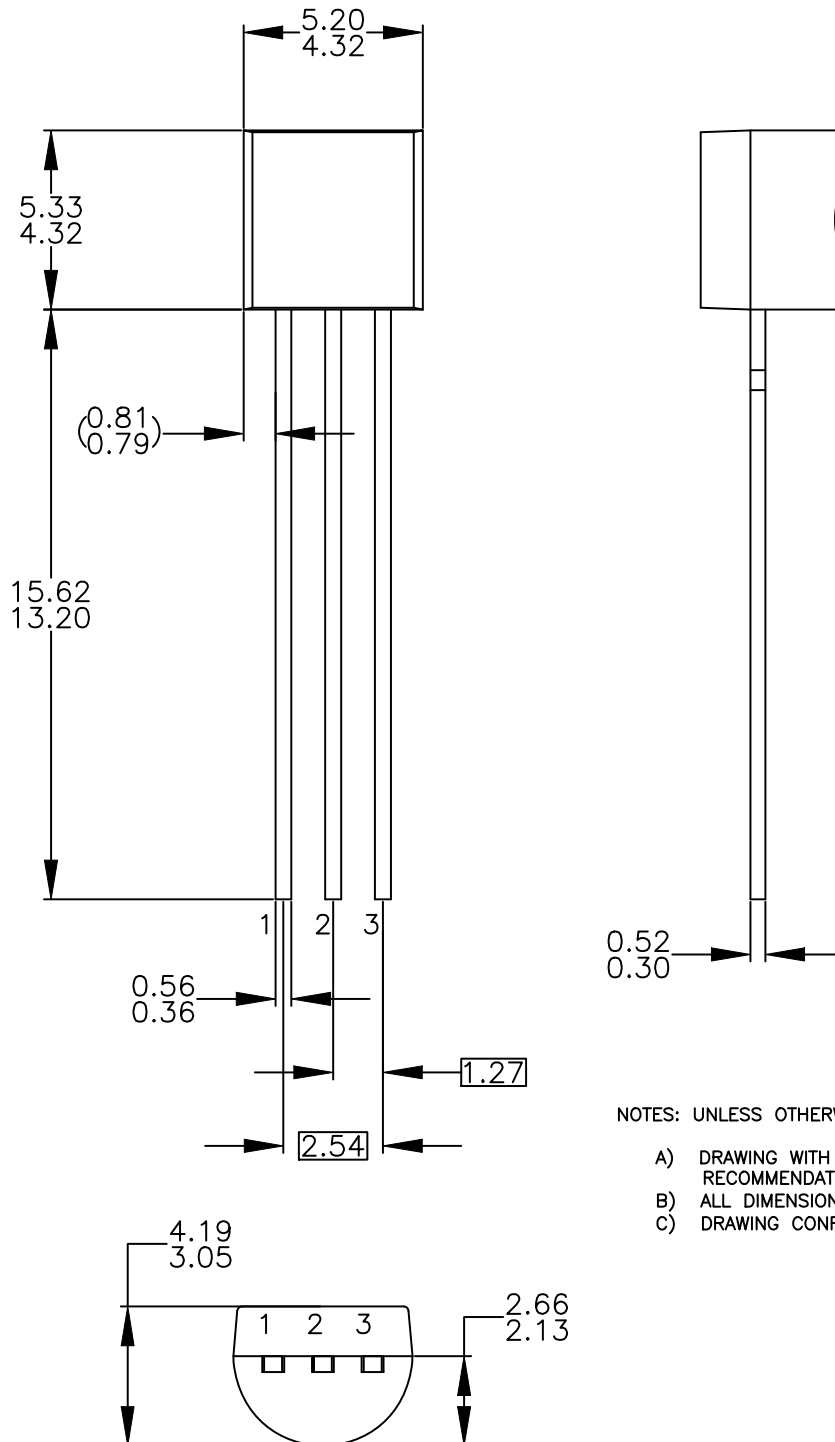


Figure 7. Gain Bandwidth Product

**TO-92 3 4.825x4.76**  
**CASE 135AN**  
**ISSUE O**

DATE 31 JUL 2016



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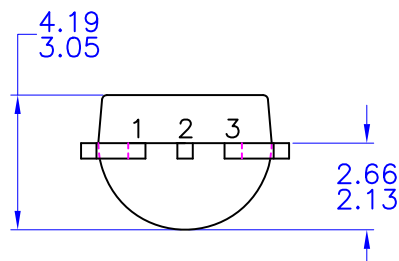
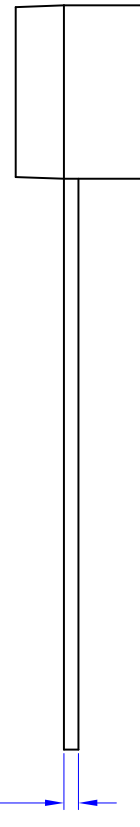
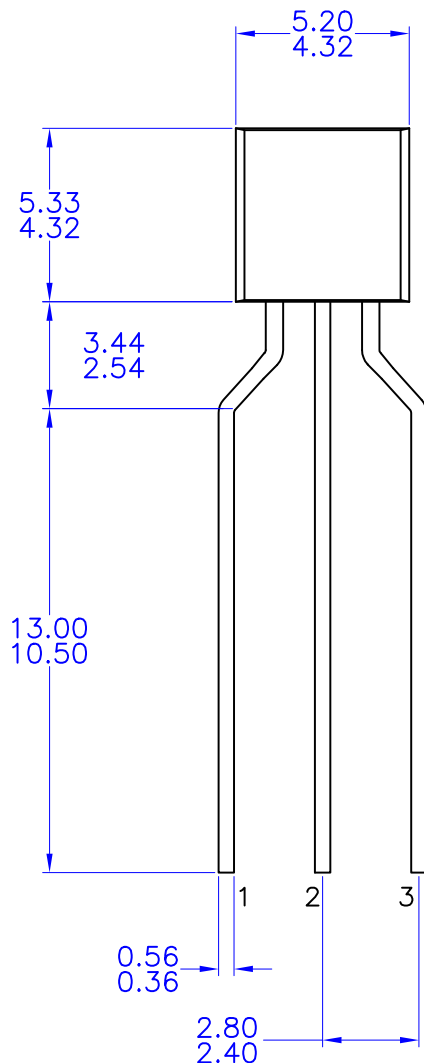
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