

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

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

Symbol	Parameter	Value	Unit
V_{CES}	Collector-Emitter Voltage	-50	V
V_{CEO}	Collector-Emitter Voltage	-45	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current (DC)	-800	mA
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	-55 to +150	$^\circ\text{C}$

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.

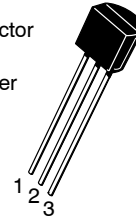
THERMAL CHARACTERISTICS

($T_A = 25^\circ\text{C}$ unless otherwise noted.) (Note 1)

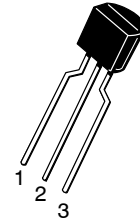
Symbol	Characteristic	Value	Unit
P_D	Power Dissipation Derate Above 25°C	625 5.0	mW mW/ $^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	200	$^\circ\text{C}/\text{W}$

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.

1. Collector
2. Base
3. Emitter

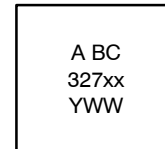


TO-92 3
CASE 135AN



TO-92 3 LF
CASE 135AR

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

BC327

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted.)

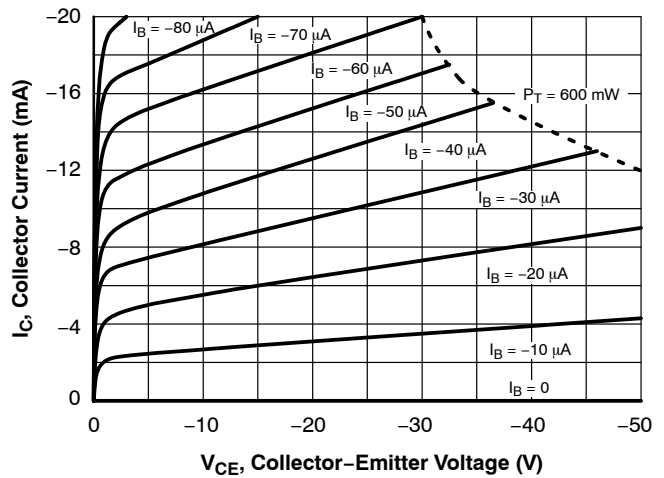
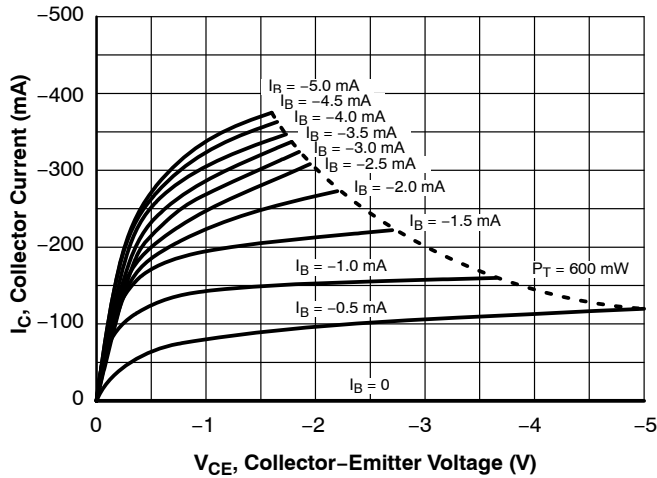
Symbol	Parameter	Conditions	Min	Typ	Max	Unit
BV _{CEO}	Collector-Emitter Breakdown Voltage	I _C = -10 mA, I _B = 0	-45	-	-	V
BV _{CES}	Collector-Emitter Breakdown Voltage	I _C = -0.1 mA, V _{BE} = 0	-50	-	-	V
BV _{EBO}	Emitter-Base Breakdown Voltage	I _E = -10 μA, I _C = 0	-5	-	-	V
I _{CES}	Collector Cut-Off Current	V _{CE} = -45 V, I _B = 0	-	-2	-100	nA
h _{FE1}	DC Current Gain	V _{CE} = -1 V, I _C = -100 mA	100	-	630	
h _{FE2}		V _{CE} = -1 V, I _C = -300 mA	60	-	-	
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = -500 mA, I _B = -50 mA	-	-	-0.7	V
V _{BE(on)}	Base-Emitter On Voltage	V _{CE} = -1 V, I _C = -300 mA	-	-	-1.2	V
f _T	Current Gain Bandwidth Product	V _{CE} = -5 V, I _C = -10 mA, f = 20 MHz	-	100	-	MHz
C _{ob}	Output Capacitance	V _{CB} = -10 V, I _E = 0, f = 1 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



TYPICAL CHARACTERISTICS (Continued)

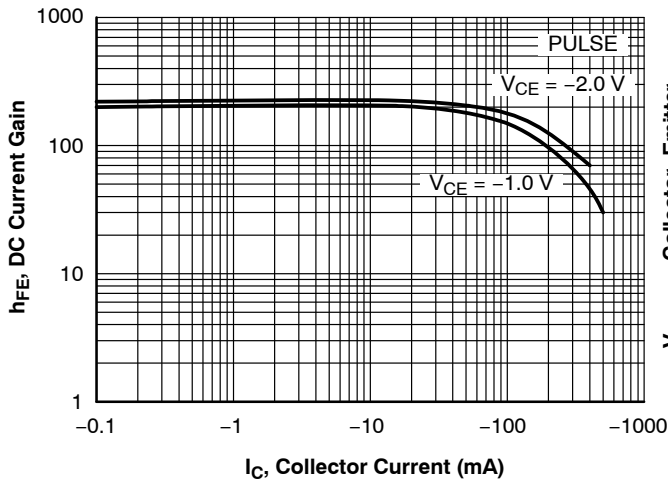


Figure 3. DC Current Gain

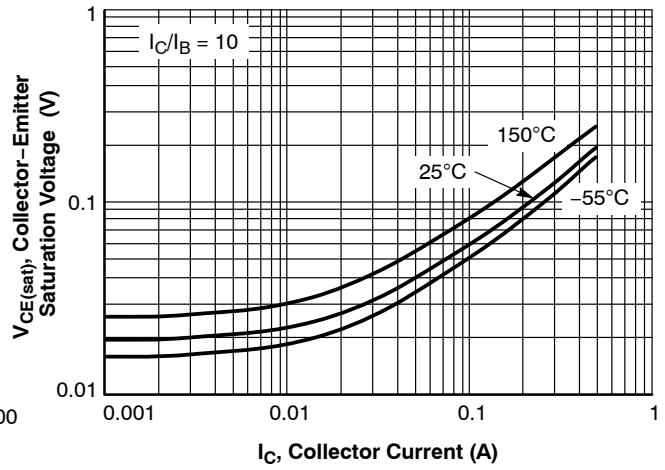


Figure 4. Collector-Emitter Saturation Voltage vs. Collector Current

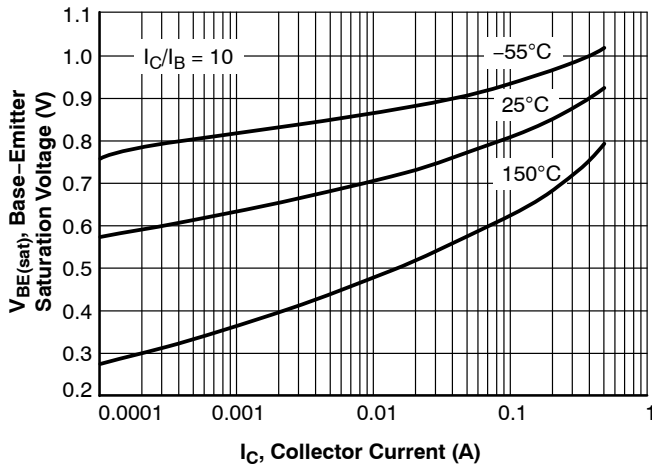


Figure 5. Base-Emitter Saturation Voltage vs. Collector Current

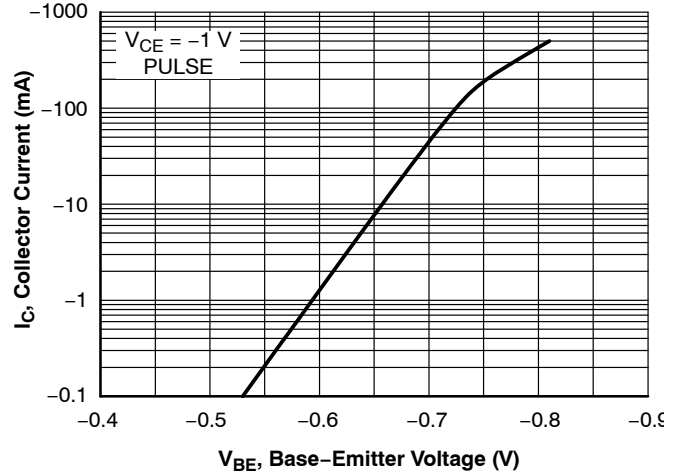


Figure 6. Base-Emitter On Voltage

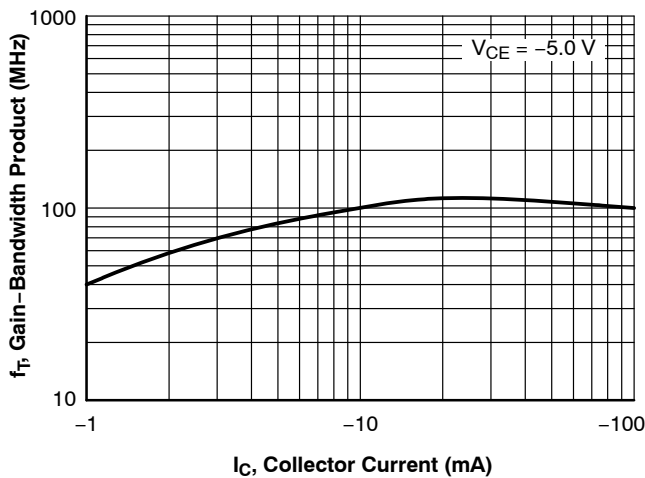
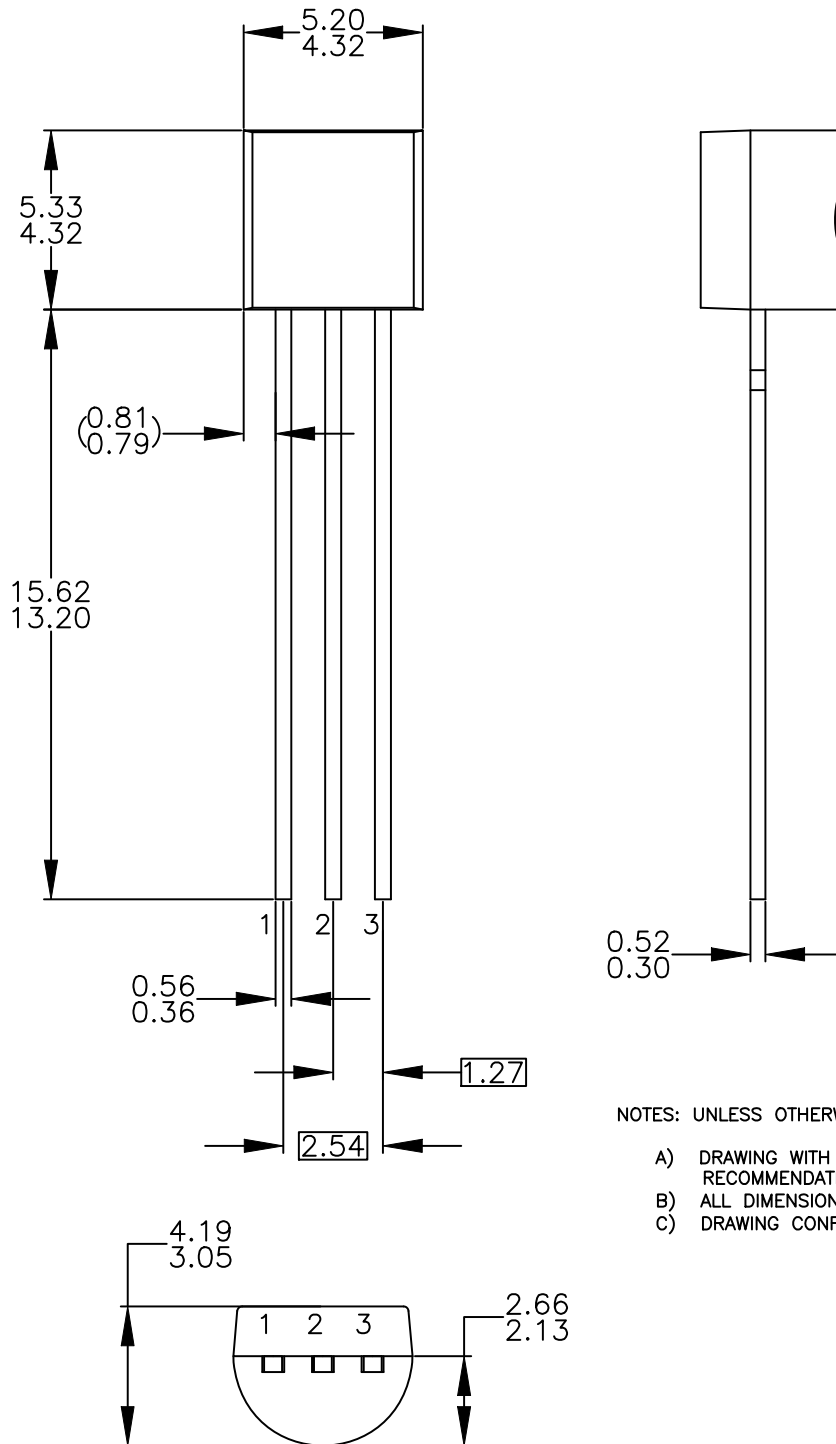


Figure 7. Gain Bandwidth Product

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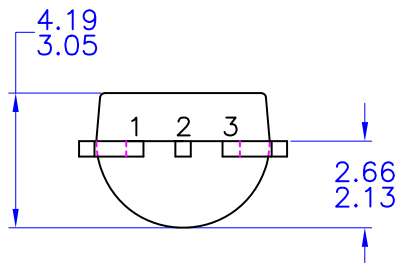
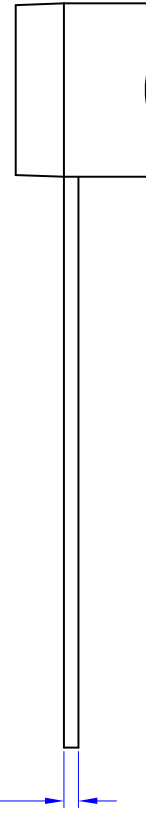
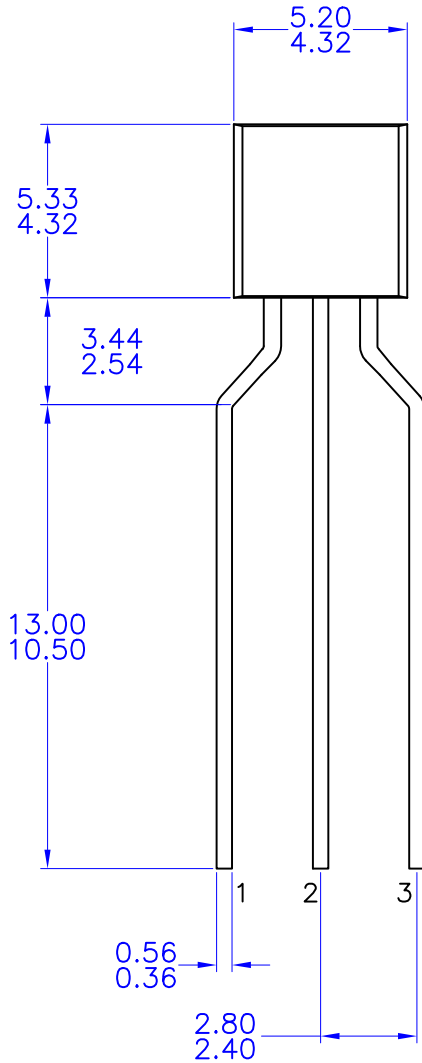


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NOTES: UNLESS OTHERWISE SPECIFIED

- A) DRAWING WITH REFERENCE TO JEDEC TO-92 RECOMMENDATIONS.
- B) ALL DIMENSIONS ARE IN MILLIMETERS.
- C) DRAWING CONFORMS TO ASME Y14.5M-1994

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