



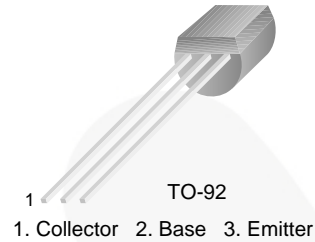
October 2014

# BC327

## PNP Epitaxial Silicon Transistor

### Features

- Switching and Amplifier Applications
- Suitable for AF-Driver Stages and Low-Power Output Stages
- Complement to BC337 / BC338



### Ordering Information

Part Number	Top Mark	Package	Packing Method
BC327BU	BC327	TO-92 3L	Bulk
BC32716BU	BC32716	TO-92 3L	Bulk
BC32716TA	BC32716	TO-92 3L	Ammo
BC32725BU	BC32725	TO-92 3L	Bulk
BC32725TA	BC32725	TO-92 3L	Ammo
BC32740BU	BC32740	TO-92 3L	Bulk
BC32740TA	BC32740	TO-92 3L	Ammo

### Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at  $T_A = 25^\circ\text{C}$  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	$^\circ\text{C}$

**Thermal Characteristics<sup>(1)</sup>**

Values are at  $T_A = 25^\circ\text{C}$  unless otherwise noted.

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

**Note:**

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

**Electrical Characteristics**

Values are at  $T_A = 25^\circ\text{C}$  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

 **$h_{FE}$  Classification**

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

Typical Performance Characteristics

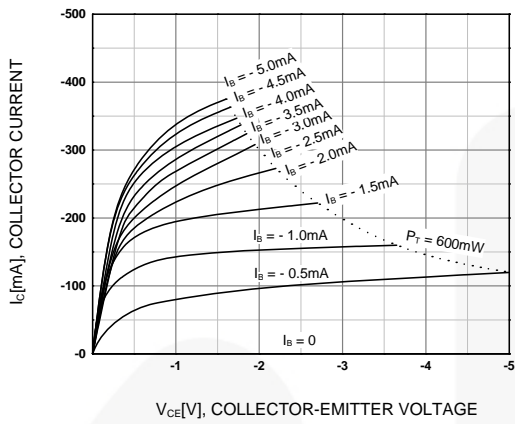


Figure 1. Static Characteristic

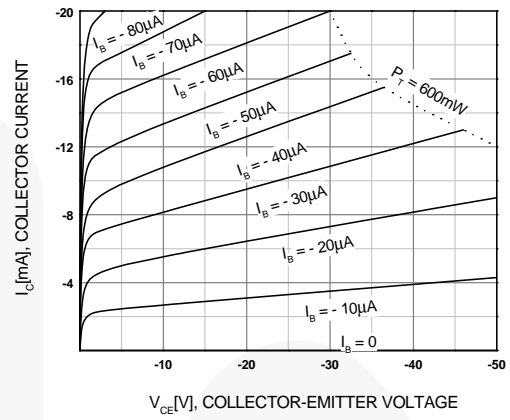


Figure 2. Static Characteristic

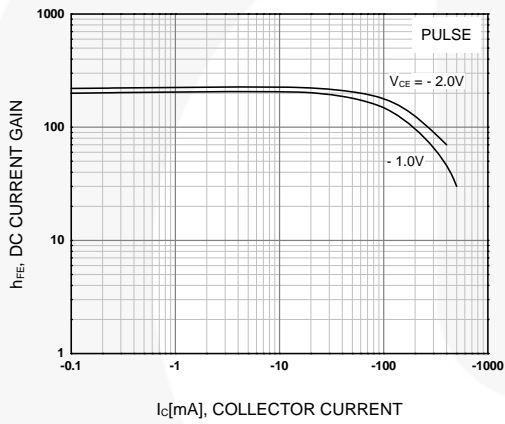


Figure 3. DC current Gain

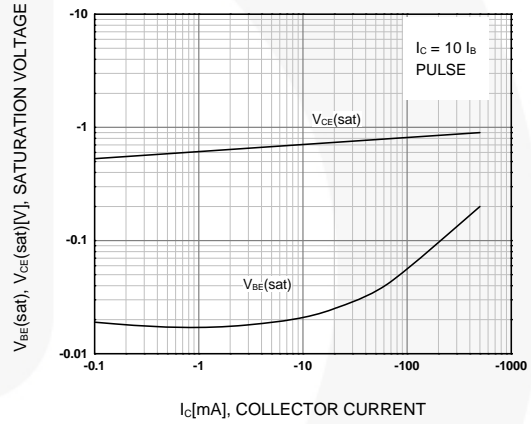


Figure 4. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

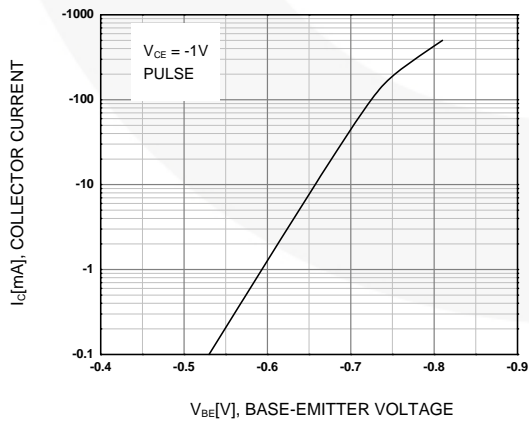


Figure 5. Base-Emitter On Voltage

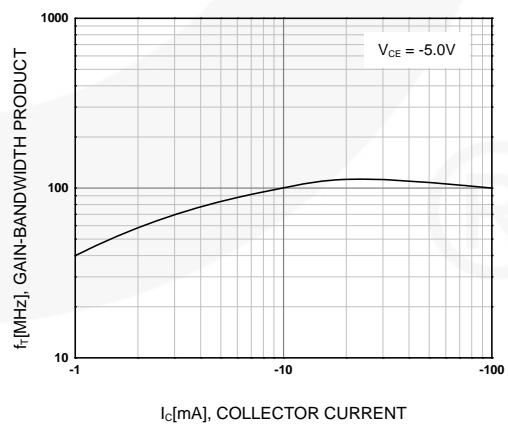
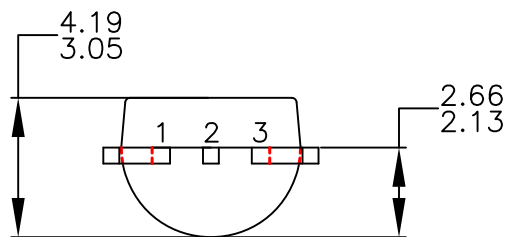
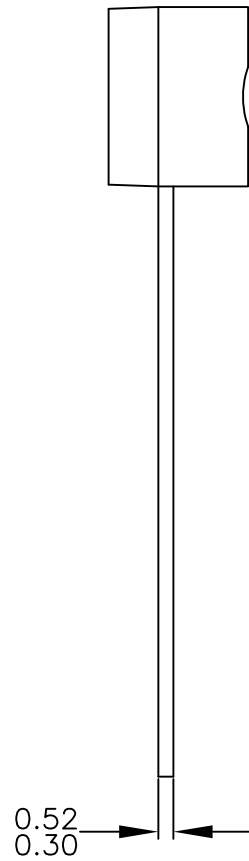
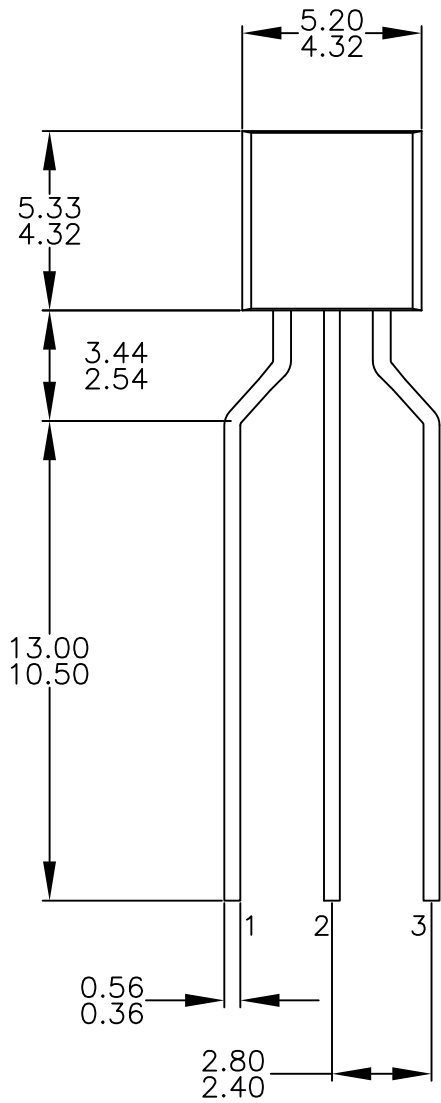
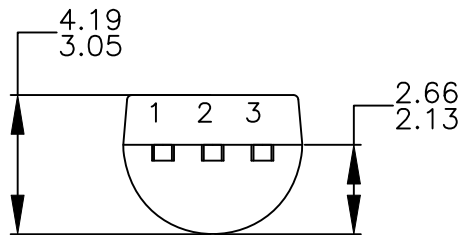
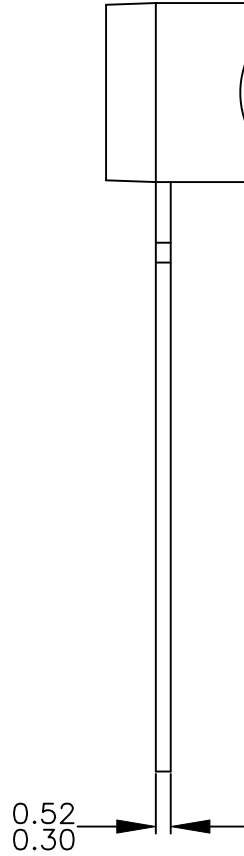
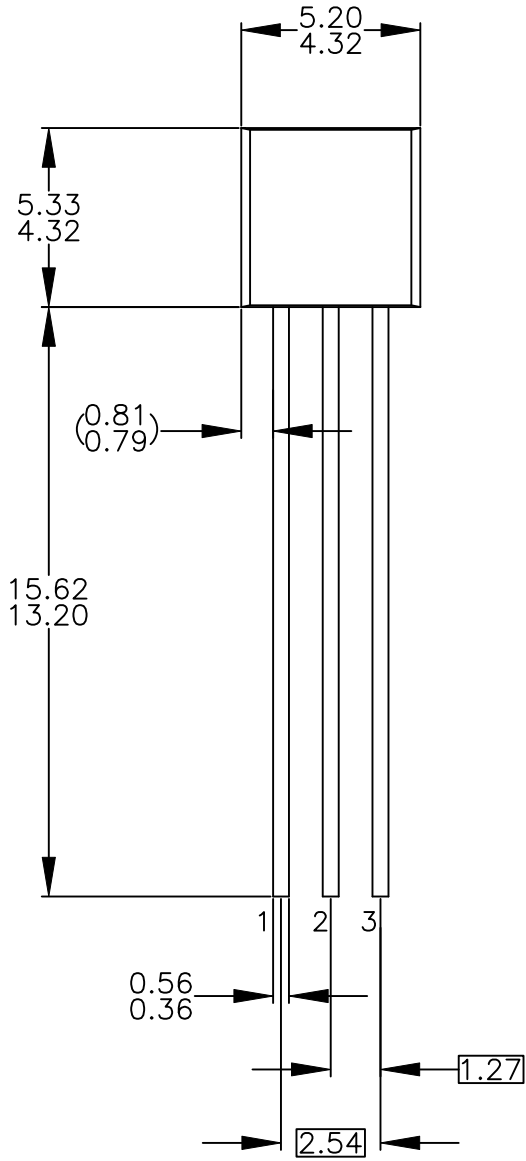


Figure 6. Gain Bandwidth Product



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