

BC327/328

Switching and Amplifier Applications

- Suitable for AF-Driver stages and low power output stages
- Complement to BC337/BC338



PNP Epitaxial Silicon Transistor

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

Symbol	Parameter	Value	Units
V_{CES}	Collector-Emitter Voltage		
	: BC327	-50	V
	: BC328	-30	V
V_{CEO}	Collector-Emitter Voltage		
	: BC327	-45	V
	: BC328	-25	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current (DC)	-800	mA
P_C	Collector Power Dissipation	625	mW
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	-55 ~ 150	$^\circ\text{C}$

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

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C = -10\text{mA}, I_B = 0$				
	: BC327		-45			V
	: BC328		-25			V
BV_{CES}	Collector-Emitter Breakdown Voltage	$I_C = -0.1\text{mA}, V_{BE} = 0$				
	: BC327		-50			V
	: BC328		-30			V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E = -10\mu\text{A}, I_C = 0$	-5			V
I_{CES}	Collector Cut-off Current					
	: BC307	$V_{CE} = -45\text{V}, V_{BE} = 0$		-2	-100	nA
	: BC338	$V_{CE} = -25\text{V}, V_{BE} = 0$		-2	-100	nA
h_{FE1} h_{FE2}	DC Current Gain					
		$V_{CE} = -1\text{V}, I_C = -100\text{mA}$	100		630	
		$V_{CE} = -1\text{V}, I_C = -300\text{mA}$	40			
$V_{CE}(\text{sat})$	Collector-Emitter Saturation Voltage	$I_C = -500\text{mA}, I_B = -50\text{mA}$			-0.7	V
$V_{BE}(\text{on})$	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 Characteristics

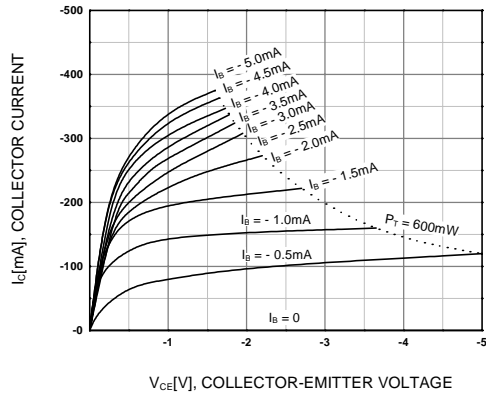


Figure 1. Static Characteristic

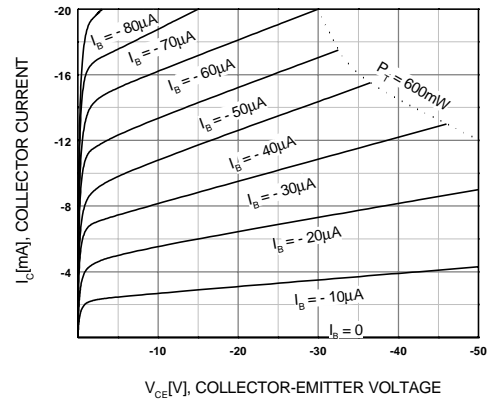


Figure 2. Static Characteristic

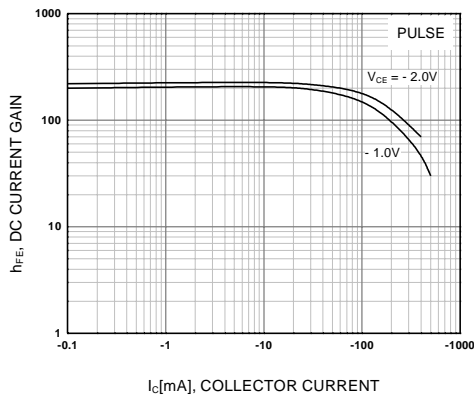


Figure 3. DC current Gain

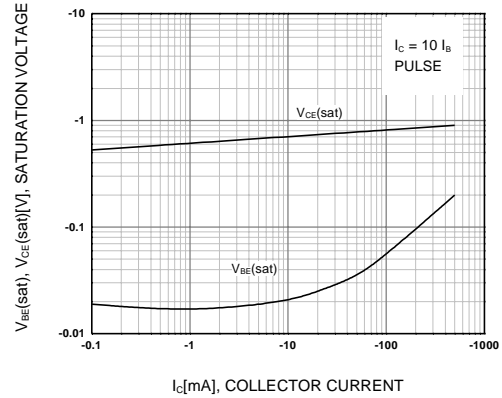


Figure 4. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

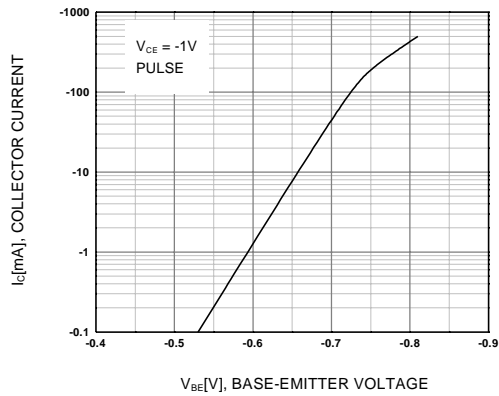


Figure 5. Base-Emitter On Voltage

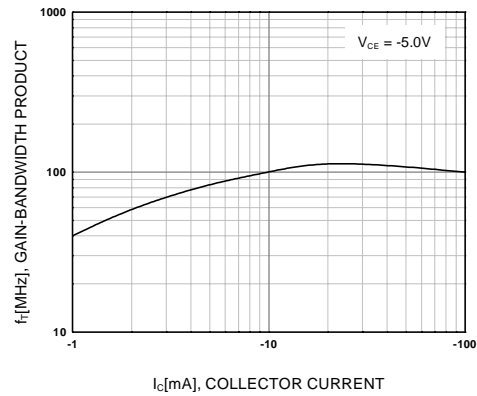


Figure 6. Gain Bandwidth Product

Typical Characteristics (Continued)



Figure 7. Input and Output Capacitance vs. Reverse Voltage

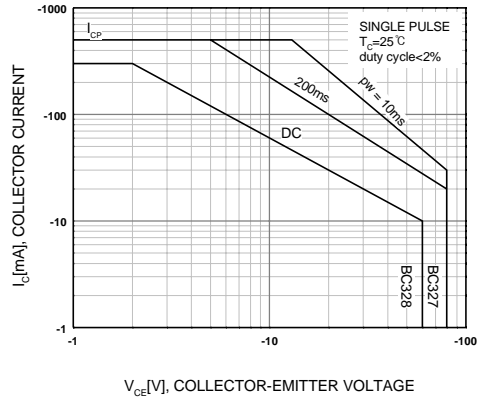


Figure 8. Safe Operating Area



Figure 9. Power Derating

Package Dimensions

TO-92



Dimensions in Millimeters

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Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
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Product	Product status	Pricing*	Package type	Leads	Package marking	Packing method
BC32816TA	Full Production	\$0.053	TO-92	3	N/A	TAPE REEL
BC32840BU	Full Production	\$0.053	TO-92	3	N/A	BULK
BC32816BU	Full Production	\$0.053	TO-92	3	N/A	BULK
BC32825TA	Full Production	\$0.053	TO-92	3	N/A	TAPE REEL
BC328	Full Production	\$0.078	TO-92	3	\$Y&3 BC328	BULK
BC32840TA	Full Production	\$0.053	TO-92	3	N/A	TAPE REEL
BC32825BU	Full Production	\$0.053	TO-92	3	N/A	BULK
BC32825	Full Production	\$0.078	TO-92	3	\$Y&3 BC328 -25	BULK

* 1,000 piece Budgetary Pricing

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BC32740TA	Full Production	\$0.058	TO-92	3	N/A	TAPE REEL
BC32716BU	Full Production	\$0.058	TO-92	3	N/A	BULK
BC32725	Full Production	\$0.098	TO-92	3	\$Y&3 BC327 -25	BULK
BC32725TA	Full Production	\$0.058	TO-92	3	N/A	TAPE REEL
BC32725BU	Full Production	\$0.058	TO-92	3	N/A	BULK
BC327	Full Production	\$0.098	TO-92	3	\$Y&3 BC327	BULK
BC32740BU	Full Production	\$0.058	TO-92	3	N/A	BULK

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