



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



# BC327, BC327-16, BC327-25, BC327-40

## Amplifier Transistors

### PNP Silicon

#### Features

- These are Pb-Free Devices\*

#### MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	$V_{CEO}$	-45	Vdc
Collector-Emitter Voltage	$V_{CES}$	-50	Vdc
Emitter-Base Voltage	$V_{EBO}$	-5.0	Vdc
Collector Current - Continuous	$I_C$	-800	mAdc
Total Power Dissipation @ $T_A = 25^\circ\text{C}$ Derate above $T_A = 25^\circ\text{C}$	$P_D$	625 5.0	mW mW/ $^\circ\text{C}$
Total Power Dissipation @ $T_A = 25^\circ\text{C}$ Derate above $T_A = 25^\circ\text{C}$	$P_D$	1.5 12	W mW/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	$T_J, T_{stg}$	-55 to +150	$^\circ\text{C}$

#### THERMAL CHARACTERISTICS

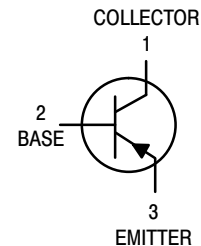
Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	200	$^\circ\text{C}/\text{W}$
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	83.3	$^\circ\text{C}/\text{W}$

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

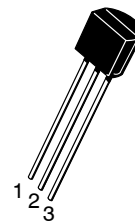


ON Semiconductor®

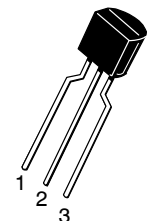
<http://onsemi.com>



TO-92  
CASE 29  
STYLE 17

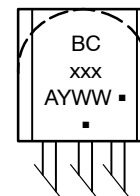


STRAIGHT LEAD  
BULK PACK



BENT LEAD  
TAPE & REEL  
AMMO PACK

#### MARKING DIAGRAM



BCxxx = Device Code  
A = Assembly Location  
Y = Year  
WW = Work Week  
▪ = Pb-Free Package

(Note: Microdot may be in either location)

#### ORDERING INFORMATION

See detailed ordering, marking, and shipping information in the package dimensions section on page 4 of this data sheet.

\*For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

# BC327, BC327-16, BC327-25, BC327-40

## ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
<b>OFF CHARACTERISTICS</b>					
Collector-Emitter Breakdown Voltage (I <sub>C</sub> = -10 mA, I <sub>B</sub> = 0)	V <sub>(BR)CEO</sub>	-45	-	-	Vdc
Collector-Emitter Breakdown Voltage (I <sub>C</sub> = -100 μA, I <sub>E</sub> = 0)	V <sub>(BR)CES</sub>	-50	-	-	Vdc
Emitter-Base Breakdown Voltage (I <sub>E</sub> = -10 μA, I <sub>C</sub> = 0)	V <sub>(BR)EBO</sub>	-5.0	-	-	Vdc
Collector Cutoff Current (V <sub>CB</sub> = -30 V, I <sub>E</sub> = 0)	I <sub>CBO</sub>	-	-	-100	nAdc
Collector Cutoff Current (V <sub>CE</sub> = -45 V, V <sub>BE</sub> = 0)	I <sub>CES</sub>	-	-	-100	nAdc
Emitter Cutoff Current (V <sub>EB</sub> = -4.0 V, I <sub>C</sub> = 0)	I <sub>EBO</sub>	-	-	-100	nAdc
<b>ON CHARACTERISTICS</b>					
DC Current Gain (I <sub>C</sub> = -100 mA, V <sub>CE</sub> = -1.0 V)	h <sub>FE</sub>	100	-	630	-
		100	-	250	
		160	-	400	
		250	-	630	
		40	-	-	
Base-Emitter On Voltage (I <sub>C</sub> = -300 mA, V <sub>CE</sub> = -1.0 V)	V <sub>BE(on)</sub>	-	-	-1.2	Vdc
Collector-Emitter Saturation Voltage (I <sub>C</sub> = -500 mA, I <sub>B</sub> = -50 mA)	V <sub>CE(sat)</sub>	-	-	-0.7	Vdc
<b>SMALL-SIGNAL CHARACTERISTICS</b>					
Output Capacitance (V <sub>CB</sub> = -10 V, I <sub>E</sub> = 0, f = 1.0 MHz)	C <sub>ob</sub>	-	11	-	pF
Current-Gain-Bandwidth Product (I <sub>C</sub> = -10 mA, V <sub>CE</sub> = -5.0 V, f = 100 MHz)	f <sub>T</sub>	-	260	-	MHz

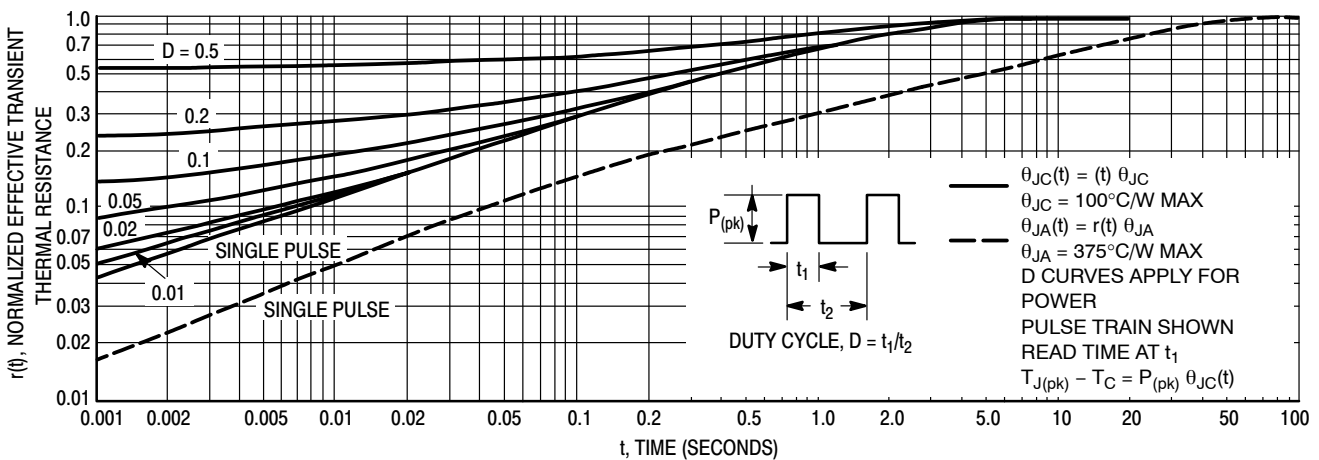


Figure 1. Thermal Response

BC327, BC327-16, BC327-25, BC327-40

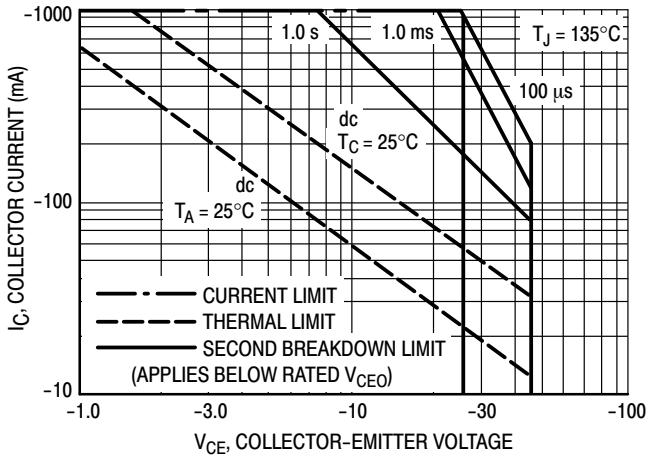


Figure 2. Active Region - Safe Operating Area

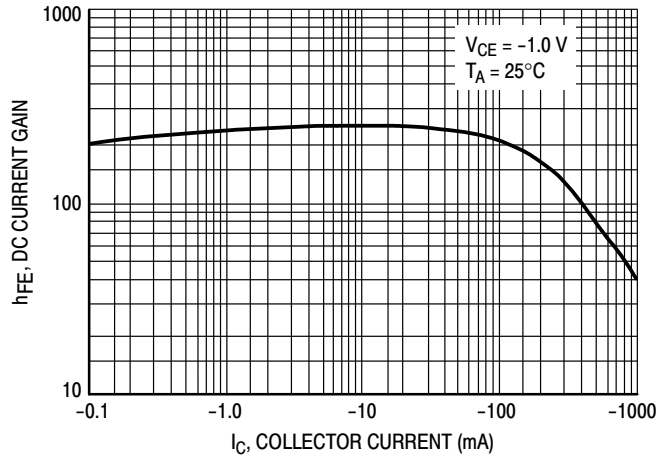


Figure 3. DC Current Gain

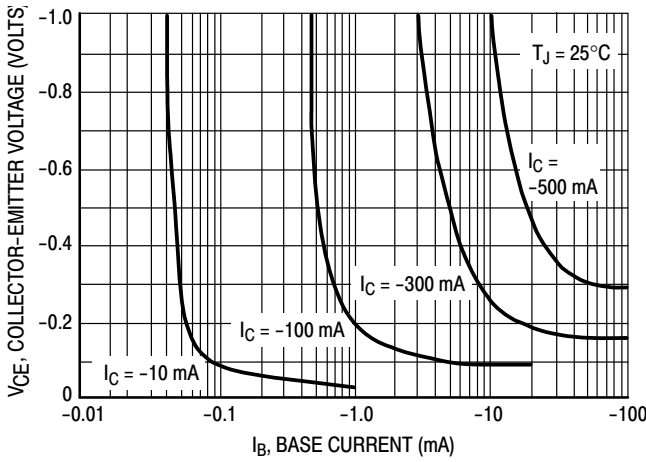


Figure 4. Saturation Region

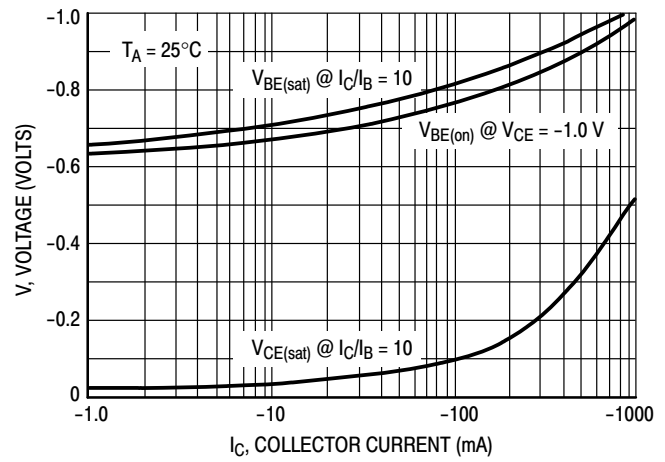


Figure 5. "On" Voltages

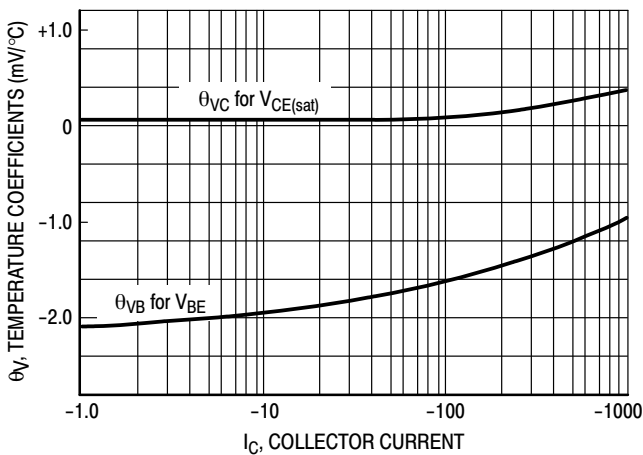


Figure 6. Temperature Coefficients

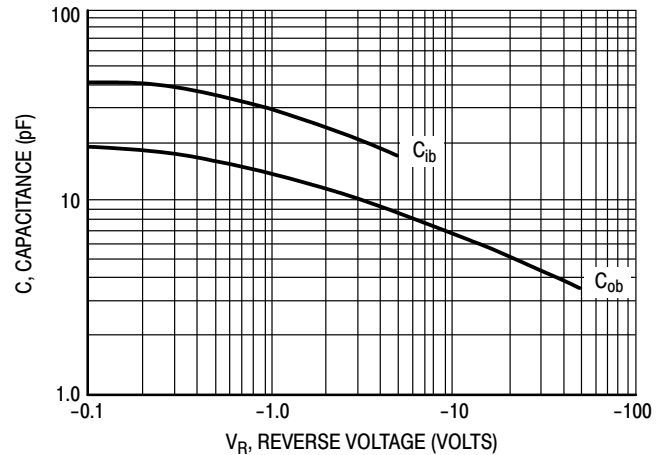


Figure 7. Capacitances

## BC327, BC327-16, BC327-25, BC327-40

### ORDERING INFORMATION

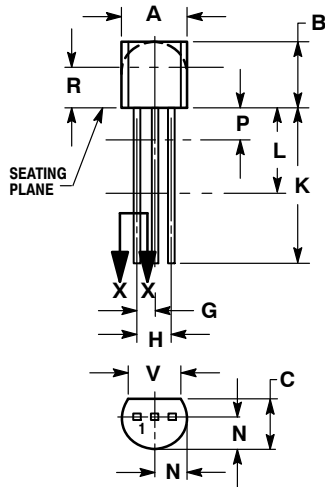
Device Order Number	Specific Device Marking	Package Type	Shipping†
BC327G	7	TO-92 Straight Lead (Pb-Free)	5000 Units / Bulk
BC327RL1G	327	TO-92 Bent Lead (Pb-Free)	2000 / Tape & Reel
BC327-025G	327	TO-92 Straight Lead (Pb-Free)	5000 Units / Bulk
BC327-25RL1G	7-25	TO-92 Bent Lead (Pb-Free)	2000 / Tape & Reel
BC327-25ZL1G	32725	TO-92 Bent Lead (Pb-Free)	2000 / Tape & Ammo Box
BC327-40ZL1G	7-40	TO-92 Bent Lead (Pb-Free)	2000 / Tape & Ammo Box

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

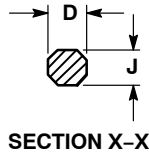
# BC327, BC327-16, BC327-25, BC327-40

## PACKAGE DIMENSIONS

TO-92 (TO-226)  
CASE 29-11  
ISSUE AM



STRAIGHT LEAD  
BULK PACK

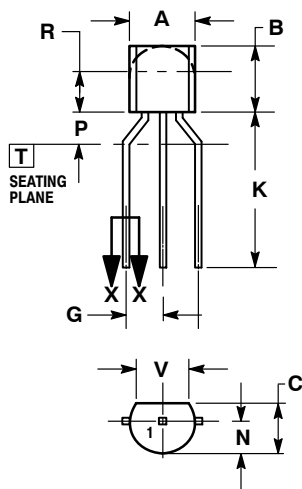


SECTION X-X

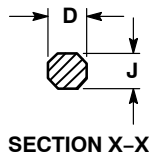
NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. CONTOUR OF PACKAGE BEYOND DIMENSION R IS UNCONTROLLED.
4. LEAD DIMENSION IS UNCONTROLLED IN P AND BEYOND DIMENSION K MINIMUM.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.175	0.205	4.45	5.20
B	0.170	0.210	4.32	5.33
C	0.125	0.165	3.18	4.19
D	0.016	0.021	0.407	0.533
G	0.045	0.055	1.15	1.39
H	0.095	0.105	2.42	2.66
J	0.015	0.020	0.39	0.50
K	0.500	---	12.70	---
L	0.250	---	6.35	---
N	0.080	0.105	2.04	2.66
P	---	0.100	---	2.54
R	0.115	---	2.93	---
V	0.135	---	3.43	---



BENT LEAD  
TAPE & REEL  
AMMO PACK



SECTION X-X

NOTES:

1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. CONTOUR OF PACKAGE BEYOND DIMENSION R IS UNCONTROLLED.
4. LEAD DIMENSION IS UNCONTROLLED IN P AND BEYOND DIMENSION K MINIMUM.

DIM	MILLIMETERS	
	MIN	MAX
A	4.45	5.20
B	4.32	5.33
C	3.18	4.19
D	0.40	0.54
G	2.40	2.80
J	0.39	0.50
K	12.70	---
N	2.04	2.66
P	1.50	4.00
R	2.93	---
V	3.43	---

STYLE 17:

1. COLLECTOR
2. BASE
3. EMITTER

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