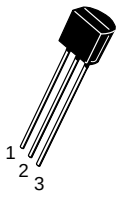
Amplifier Transistors
PNP Silicon

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



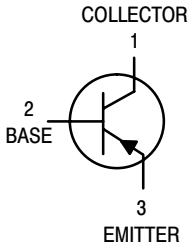
CASE 29–11, STYLE 17
TO–92 (TO–226AA)

MAXIMUM RATINGS

Rating	Symbol	BC327	Unit
Collector–Emitter Voltage	V_{CEO}	–45	Vdc
Collector–Base Voltage	V_{CBO}	–50	Vdc
Emitter–Base Voltage	V_{EBO}	–5.0	Vdc
Collector Current – Continuous	I_C	–800	mAdc
Total Device Dissipation @ T_A = 25°C Derate above 25°C	P_D	625 5.0	mW mW/°C
Total Device Dissipation @ T_C = 25°C Derate above 25°C	P_D	1.5 12	Watt mW/°C
Operating and Storage Junction Temperature Range	T_J, T_{stg}	–55 to +150	°C

THERMAL CHARACTERISTICS

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



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

Characteristic	Symbol	Min	Typ	Max	Unit
OFF CHARACTERISTICS					
Collector–Emitter Breakdown Voltage (I_C = –10 mA, I_B = 0)	$V_{(BR)CEO}$	–45	–	–	Vdc
Collector–Emitter Breakdown Voltage (I_C = –100 μA, I_E = 0)	$V_{(BR)CES}$	–50	–	–	Vdc
Emitter–Base Breakdown Voltage (I_E = –10 μA, I_C = 0)	$V_{(BR)EBO}$	–5.0	–	–	Vdc
Collector Cutoff Current (V_{CB} = –30 V, I_E = 0)	I_{CBO}	–	–	–100	nAdc
Collector Cutoff Current (V_{CE} = –45 V, V_{BE} = 0)	I_{CES}	–	–	–100	nAdc
Emitter Cutoff Current (V_{EB} = –4.0 V, I_C = 0)	I_{EBO}	–	–	–100	nAdc

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Publication Order Number:
BC327/D

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

Characteristic		Symbol	Min	Typ	Max	Unit
ON CHARACTERISTICS						
DC Current Gain		h_{FE}				–
(I_C = –100 mA, V_{CE} = –1.0 V)	BC327		100	–	630	
	BC327–16		100	–	250	
	BC327–25		160	–	400	
	BC327–40		250	–	630	
(I_C = –300 mA, V_{CE} = –1.0 V)			40	–	–	
Base–Emitter On Voltage (I_C = –300 mA, V_{CE} = –1.0 V)		$V_{BE(on)}$	–	–	–1.2	Vdc
Collector–Emitter Saturation Voltage (I_C = –500 mA, I_B = –50 mA)		$V_{CE(sat)}$	–	–	–0.7	Vdc
SMALL–SIGNAL CHARACTERISTICS						
Output Capacitance (V_{CB} = –10 V, I_E = 0, f = 1.0 MHz)		C_{ob}	–	11	–	pF
Current–Gain – Bandwidth Product (I_C = –10 mA, V_{CE} = –5.0 V, f = 100 MHz)		f_T	–	260	–	MHz

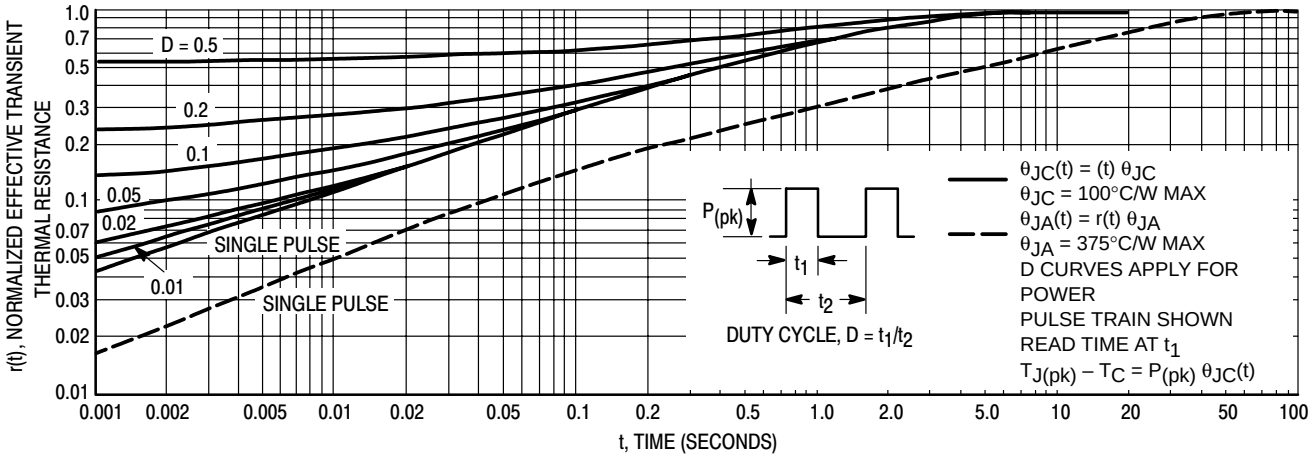


Figure 1. Thermal Response

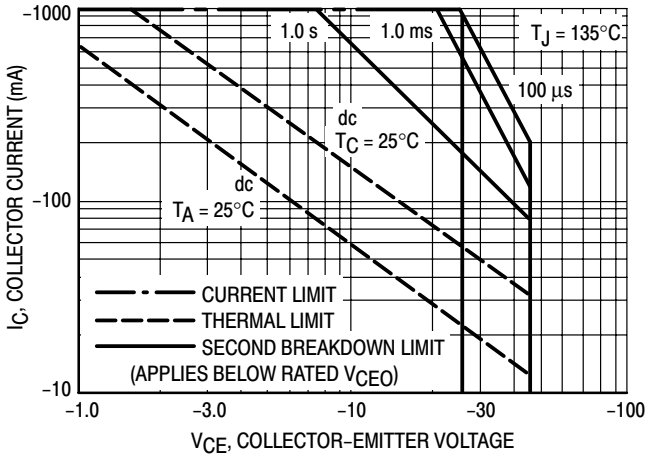


Figure 2. Active Region − Safe Operating Area

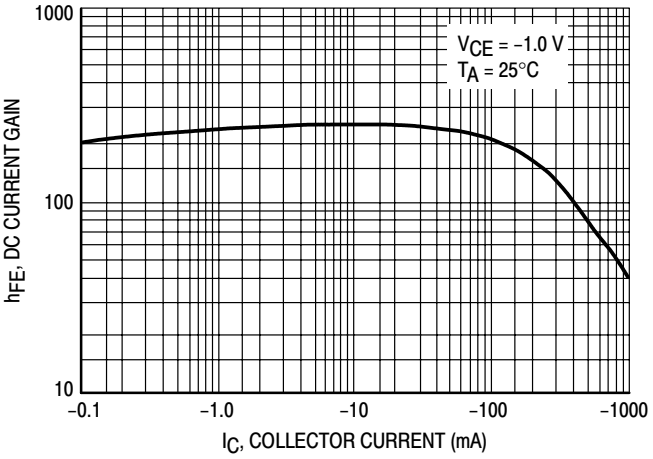


Figure 3. DC Current Gain

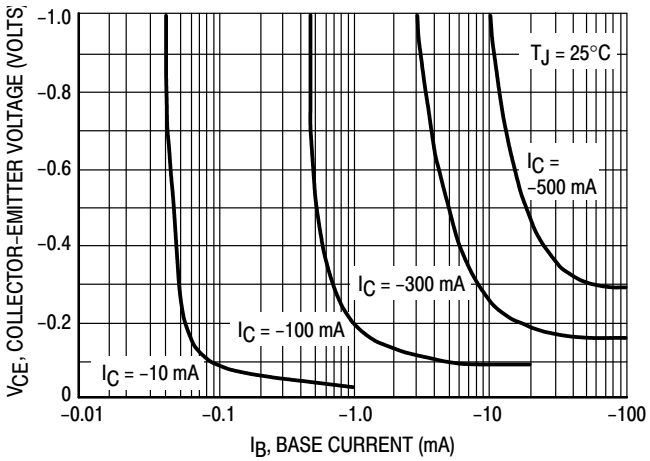


Figure 4. Saturation Region

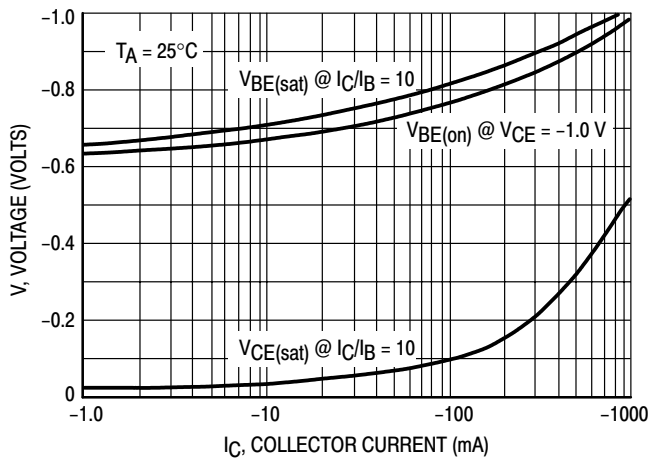


Figure 5. “On” Voltages

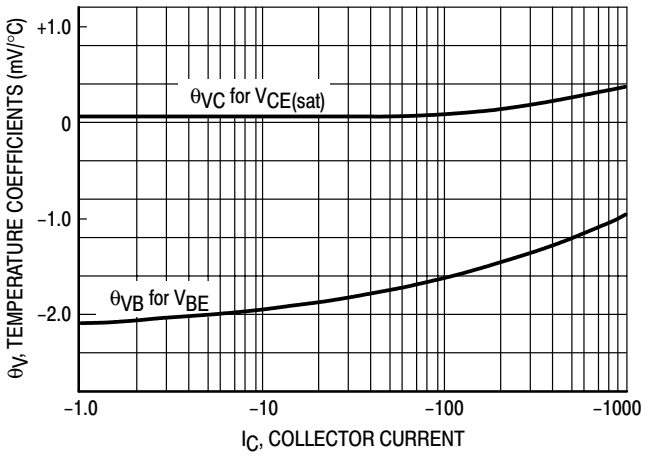


Figure 6. Temperature Coefficients

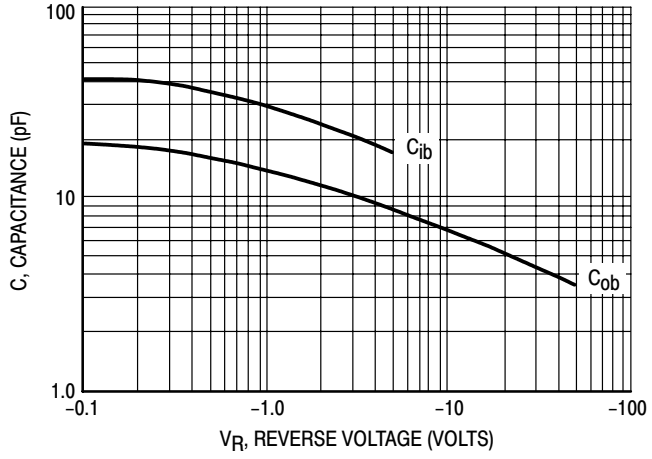
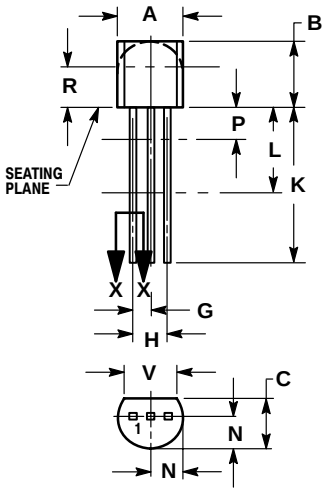
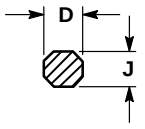


Figure 7. Capacitances

PACKAGE DIMENSIONS

TO–92 (TO–226)
CASE 29–11
ISSUE AL





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.

	INCHES		MILLIMETERS	
DIM	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	---

STYLE 17:
PIN 1. COLLECTOR
2. BASE
3. EMITTER

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