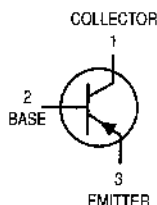


Amplifier Transistors

PNP Silicon



BC327,-16,-25
BC328,-16,-25



CASE 29-04, STYLE 17
TO-92 (TO-226AA)

MAXIMUM RATINGS

Rating	Symbol	BC327	BC328	Unit
Collector-Emitter Voltage	V_{CEO}	-45	-25	Vdc
Collector-Base Voltage	V_{CBO}	-50	-30	Vdc
Emitter-Base Voltage	V_{EBO}	-5.0		Vdc
Collector Current — Continuous	I_C	-800		mA dc
Total Device Dissipation @ $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	625 5.0		mW mW/°C
Total Device Dissipation @ $T_C = 25^\circ\text{C}$ 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 ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
----------------	--------	-----	-----	-----	------

OFF CHARACTERISTICS

Collector-Emitter Breakdown Voltage ($I_C = -10\text{ mA}, I_B = 0$)	BC327 BC328	$V_{(BR)CEO}$	-45 -25	— —	— —	Vdc
Collector-Emitter Breakdown Voltage ($I_C = -100\text{ }\mu\text{A}, I_E = 0$)	BC327 BC328	$V_{(BR)CES}$	-50 -30	— —	— —	Vdc
Emitter-Base Breakdown Voltage ($I_E = -10\text{ }\mu\text{A}, I_C = 0$)		$V_{(BR)EBO}$	-5.0	—	—	Vdc
Collector Cutoff Current ($V_{CB} = -30\text{ V}, I_E = 0$) ($V_{CB} = -20\text{ V}, I_E = 0$)	BC327 BC328	I_{CBO}	— —	— —	-100 -100	nA dc
Collector Cutoff Current ($V_{CE} = -45\text{ V}, V_{BE} = 0$) ($V_{CE} = -25\text{ V}, V_{BE} = 0$)	BC327 BC328	I_{CES}	— —	— —	-100 -100	nA dc
Emitter Cutoff Current ($V_{EB} = -4.0\text{ V}, I_C = 0$)		I_{EBO}	—	—	-100	nA dc

6367255 0092860 772

BC327,-16,-25 BC328,-16,-25

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

Characteristic	Symbol	Min	Typ	Max	Unit
ON CHARACTERISTICS					
DC Current Gain ($I_C = -100\text{ mA}$, $V_{CE} = -1.0\text{ V}$)	h_{FE}	BC327/BC328	100	—	630
		BC327-16/BC328-16	100	—	250
		BC327-25/BC328-25	160	—	400
($I_C = -300\text{ mA}$, $V_{CE} = -1.0\text{ V}$)			40	—	—
Base-Emitter On Voltage ($I_C = -300\text{ mA}$, $V_{CE} = -1.0\text{ V}$)	$V_{BE(on)}$	—	—	-1.2	Vdc
Collector-Emitter Saturation Voltage ($I_C = -500\text{ mA}$, $I_B = -50\text{ mA}$)	$V_{CE(sat)}$	—	—	-0.7	Vdc

SMALL-SIGNAL CHARACTERISTICS

Output Capacitance ($V_{CB} = -10\text{ V}$, $I_E = 0$, $f = 1.0\text{ MHz}$)	C_{ob}	—	11	—	pF
Current-Gain — Bandwidth Product ($I_C = -10\text{ mA}$, $V_{CE} = -5.0\text{ V}$, $f = 100\text{ MHz}$)	f_T	—	260	—	MHz

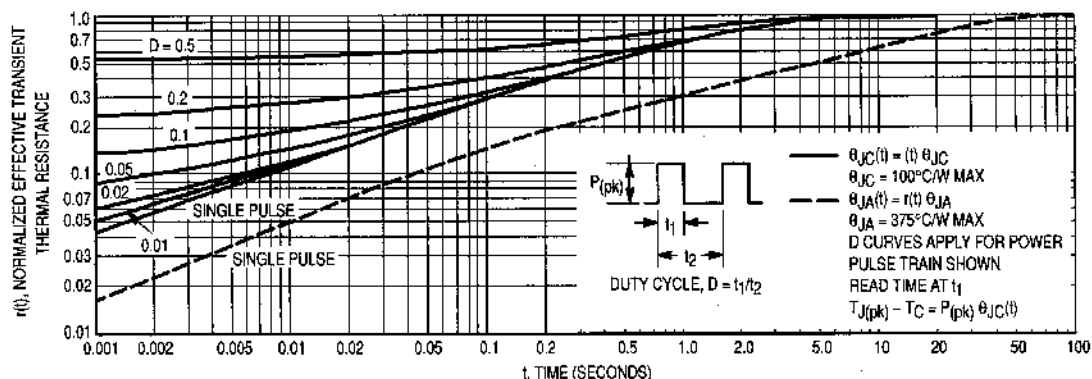


Figure 1. Thermal Response

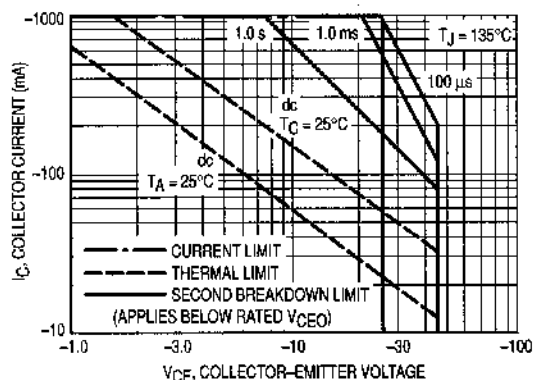


Figure 2. Active Region — Safe Operating Area

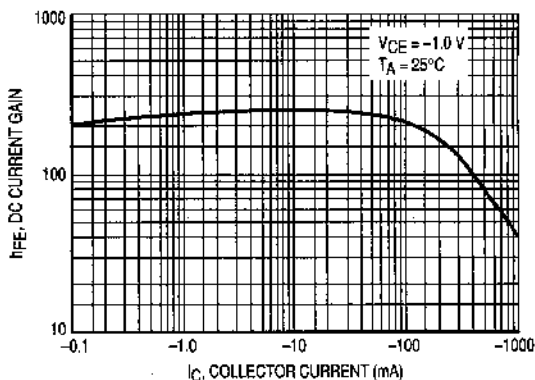


Figure 3. DC Current Gain

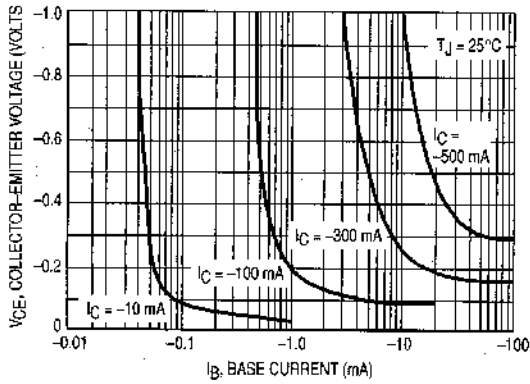


Figure 4. Saturation Region

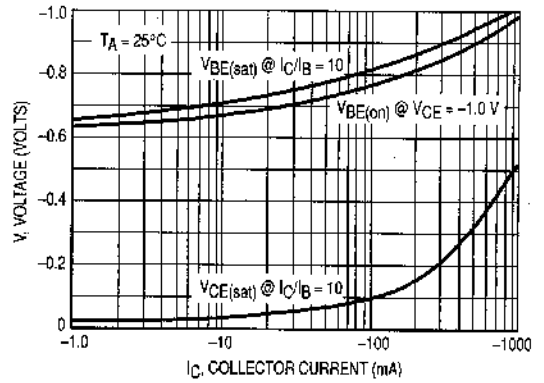


Figure 5. "On" Voltages

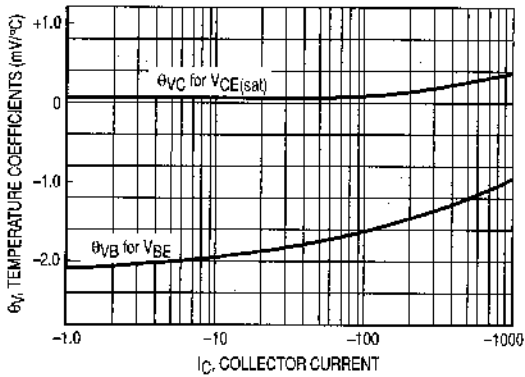


Figure 6. Temperature Coefficients

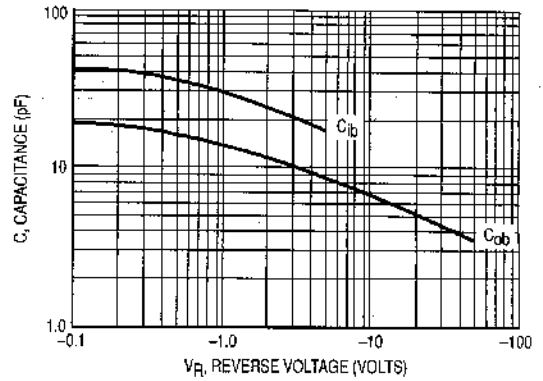


Figure 7. Capacitances