

PNP general purpose transistors

**BC327; BC327A;
BC328**

FEATURES

- High current (max. 500 mA)
- Low voltage (max. 60 V).

APPLICATIONS

- General purpose switching and amplification, e.g. driver and output stages of audio amplifiers.

DESCRIPTION

PNP transistor in a TO-92; SOT54 plastic package.
NPN complements: BC337, BC337A and BC338.

PINNING

PIN	DESCRIPTION
1	emitter
2	base
3	collector

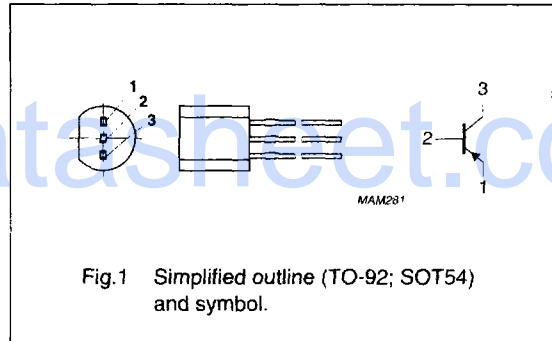


Fig.1 Simplified outline (TO-92; SOT54) and symbol.

QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V _{CBO}	collector-base voltage	open emitter			
	BC327		-	-50	V
	BC327A		-	-60	V
	BC328		-	-30	V
V _{CEO}	collector-emitter voltage	open base			
	BC327		-	-45	V
	BC327A		-	-60	V
	BC328		-	-25	V
I _{CM}	peak collector current		-	-1	A
P _{tot}	total power dissipation	T _{amb} ≤ 25 °C	-	625	mW
h _{FE}	DC current gain	I _C = -100 mA; V _{CE} = -1 V			
	BC327; BC328		100	600	
	BC327A		100	400	
f _T	transition frequency	I _C = -10 mA; V _{CE} = -5 V; f = 100 MHz	80	-	MHz

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LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V _{CB0}	collector-base voltage	open emitter			
	BC327		-	-50	V
	BC327A		-	-60	V
	BC328		-	-30	V
V _{CEO}	collector-emitter voltage	open base			
	BC327		-	-45	V
	BC327A		-	-60	V
	BC328		-	-25	V
V _{EBO}	emitter-base voltage	open collector	-	-5	V
I _C	collector current (DC)		-	-500	mA
I _{CM}	peak collector current		-	-1	A
I _{BM}	peak base current		-	-200	mA
P _{tot}	total power dissipation	T _{amb} ≤ 25 °C; note 1	-	625	mW
T _{stg}	storage temperature		-65	+150	°C
T _j	junction temperature		-	150	°C
T _{amb}	operating ambient temperature		-65	+150	°C

Note

1. Transistor mounted on an FR4 printed-circuit board.

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
R _{th j-a}	thermal resistance from junction to ambient	note 1	0.2	K/mW

Note

1. Transistor mounted on an FR4 printed-circuit board.

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CHARACTERISTICS

$T_j = 25\text{ }^\circ\text{C}$ unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT	
I_{CBO}	collector cut-off current	$I_E = 0; V_{CB} = -20\text{ V}$	-	-	-100	nA	
		$I_E = 0; V_{CB} = -20\text{ V}; T_j = 150\text{ }^\circ\text{C}$	-	-	-5	μA	
I_{EBO}	emitter cut-off current	$I_C = 0; V_{EB} = -5\text{ V}$	-	-	-100	nA	
h_{FE}	DC current gain	$I_C = -100\text{ mA}; V_{CE} = -1\text{ V};$ see Figs 2, 3 and 4	100	-	600		
							BC327; BC328
							BC327A
							BC327-16; BC328-16
							BC327-25; BC328-25
h_{FE}	DC current gain	$I_C = -500\text{ mA}; V_{CE} = -1\text{ V};$ see Figs 2, 3 and 4	40	-	-		
							BC327-40; BC328-40
V_{CEsat}	collector-emitter saturation voltage	$I_C = -500\text{ mA}; I_B = -50\text{ mA}$	-	-	-700	mV	
V_{BE}	base-emitter voltage	$I_C = -500\text{ mA}; V_{CE} = -1\text{ V};$ note 1	-	-	-1.2	V	
C_c	collector capacitance	$I_E = I_B = 0; V_{CB} = -10\text{ V}; f = 1\text{ MHz}$	-	10	-	pF	
f_T	transition frequency	$I_C = -10\text{ mA}; V_{CE} = -5\text{ V}; f = 100\text{ MHz}$	80	-	-	MHz	

Note

- V_{BE} decreases by about -2 mV/K with increasing temperature.

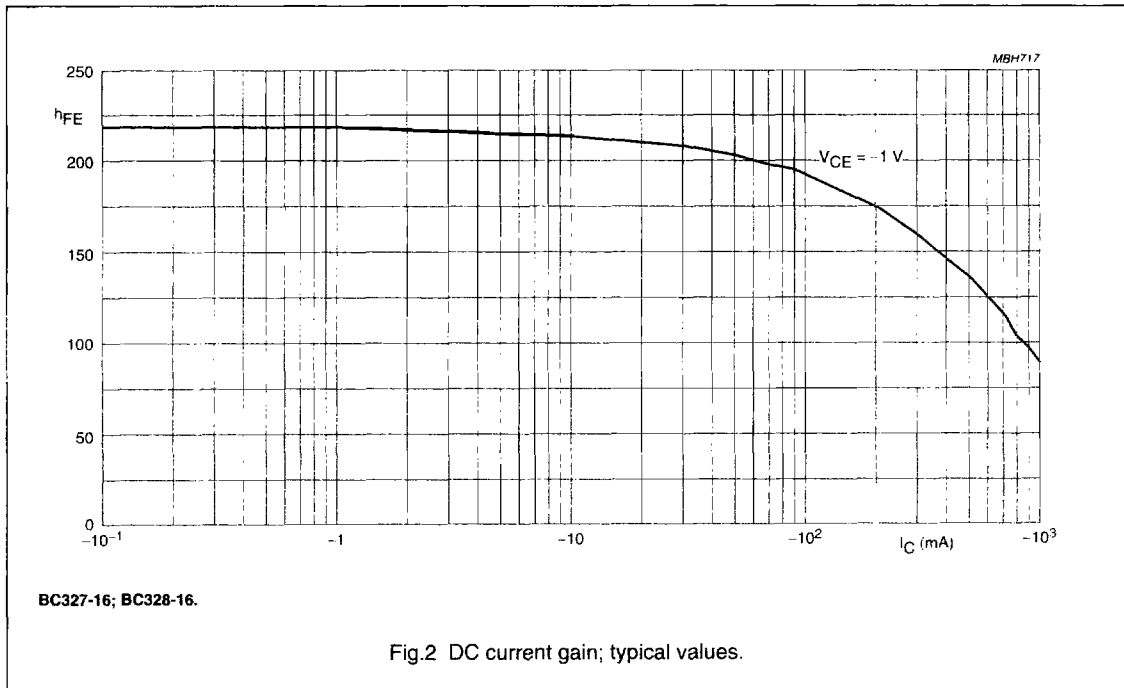


Fig.2 DC current gain; typical values.

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