



HF SILICON PLANAR EPITAXIAL TRANSISTORS

PNP transistors in a plastic envelope intended for HF and IF applications in radio receivers, especially for mixer stages in AM receivers and IF stages in AM/FM receivers with negative earth.

QUICK REFERENCE DATA

Collector-base voltage (open emitter)		$-V_{CB0}$	max.	40 V
Collector-emitter voltage (open base)		$-V_{CE0}$	max.	40 V
Collector current (DC)		$-I_C$	max.	25 mA
Total power dissipation up to $T_{amb} = 25\text{ }^\circ\text{C}$		P_{tot}	max.	300 mW
Junction temperature		T_j	max.	150 $^\circ\text{C}$
DC current gain	BF450:	h_{FE}		62 to 200
$-I_C = 1\text{ mA}; -V_{CE} = 10\text{ V}$	BF451:	h_{FE}		30 to 90
Transition frequency		f_T	min.	350 MHz
$-I_C = 1\text{ mA}; -V_{CE} = 10\text{ V}$				

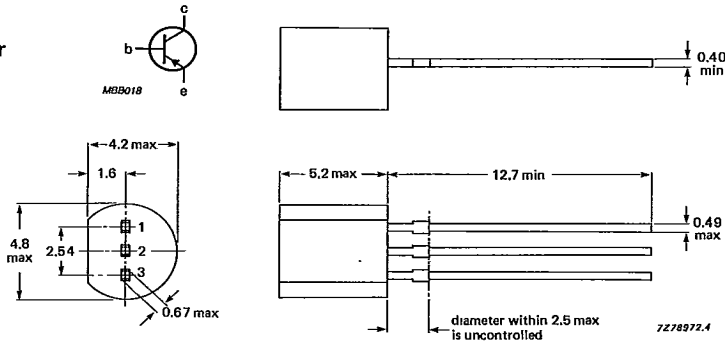
MECHANICAL DATA

Dimensions in mm

Fig. 1 TO-92.

Pinning:

- 1 = base
- 2 = emitter
- 3 = collector



RATINGS

Limiting values in accordance with the Absolute Maximum System (IEC 134)

Collector-base voltage (open emitter)	-V _{CBO}	max.	40 V
Collector-emitter voltage (open base)	-V _{CEO}	max.	40 V
Emitter-base voltage (open collector)	-V _{EBO}	max.	4 V
Collector current (DC)	-I _C	max.	25 mA
Total power dissipation up to T _{amb} = 25 °C	P _{tot}	max.	300 mW
Storage temperature range	T _{stg}		-65 to +150 °C
Junction temperature	T _j	max.	150 °C

THERMAL RESISTANCE

From junction to ambient in free air	R _{th j-a}	=	420 K/W
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CHARACTERISTICS

T_{amb} = 25 °C unless otherwise stated

Collector cut-off current

I _E = 0; -V _{CB} = 30 V	-I _{CBO}	max.	50 nA
I _E = 0; -V _{CB} = 30 V; T _{amb} = 150 °C	-I _{CBO}	max.	4 μA

Emitter-cut-off current

I _C = 0; -V _{EB} = 3 V	-I _{EBO}	max.	100 nA
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DC current gain

-I _C = 1 mA; -V _{CE} = 10 V	BF450	h _{FE}	62 to 200 μA
	BF451	h _{FE}	30 to 90 μA

Base-emitter voltage

-I _C = 1 mA; -V _{CE} = 10 V	-V _{BE}	680 to 780 mV
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Transition frequency at f = 100 MHz

-I _C = 1 mA; -V _{CE} = 10 V	f _T	min.	350 MHz
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Feedback capacitance at f = 1 MHz

-I _C = 1 mA; -V _{CE} = 10 V	C _{re}	max.	0.43 pF
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