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

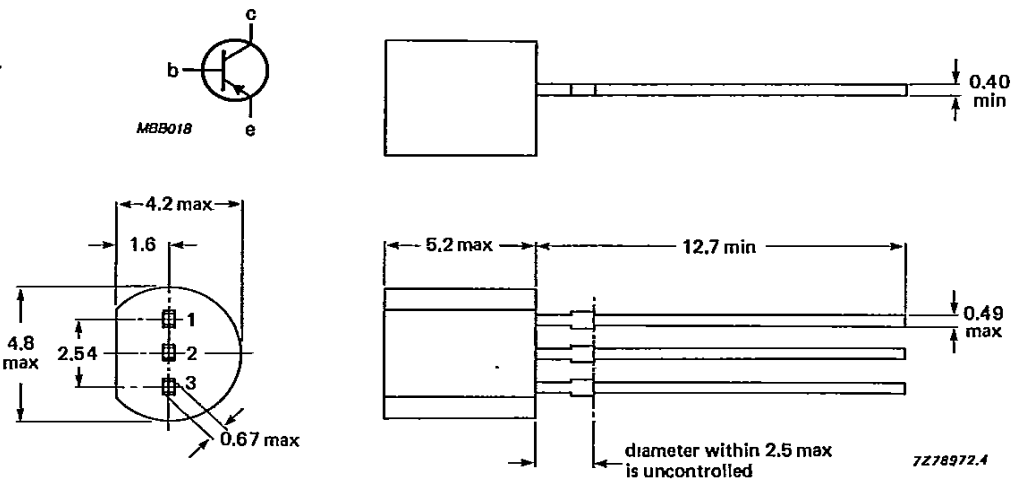
MECHANICAL DATA

Dimensions in mm

Fig. 1 TO-92.

Pinning:

1 = base
2 = emitter
3 = collector



Capability approved to CECC NECC-C-002

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		$R_{th\ j\text{-}a}$	=	420 K/W

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
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
Transition frequency at f = 100 MHz				
$-I_C$ = 1 mA; $-V_{CE}$ = 10 V		f_T	min.	350 MHz
Feedback capacitance at f = 1 MHz				
$-I_C$ = 1 mA; $-V_{CE}$ = 10 V		C_{re}	max.	0.43 pF