HF SILICON PLANAR EPITAXIAL TRANSISTORS

NPN transistors in a plastic package, recommended for AM mixers and IF amplifiers in AM/FM receivers.

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
			BF240 | BF241		
DC current gain					
I_C = 1 mA; V_{CE} = 10 V	h_{FE}		67 to 220 | 35 to 125		
Transition frequency					
I_C = 1 mA; V_{CE} = 10 V	f_T	min.	150		MHz
Feedback capacitance at f = 1 MHz					
I_C = 1 mA; V_{CE} = 10 V	C_{re}	max.		0,5	pF

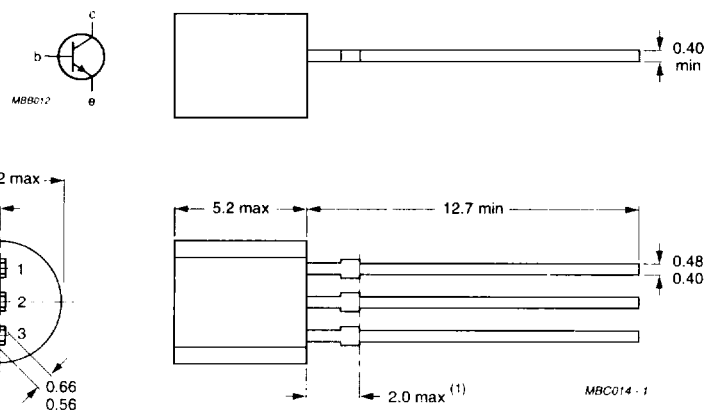
MECHANICAL DATA

Dimensions in mm

Fig. 1 TO-92.

Pinning

1 = base
2 = emitter
3 = collector



Note (1) Terminal dimensions within this zone are uncontrolled to allow for plastic and terminal irregularities.

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

CHARACTERISTICS

T_{amb} = 25 °C unless otherwise specified

Collector cut-off current				
I_E = 0; V_{CB} = 20 V	I_{CBO}	max.	100	nA
I_E = 0; V_{CB} = 20 V; T_{amb} = 150 °C	I_{CBO}	max.	4	μA
Base-emitter voltage				
I_C = 1 mA; V_{CE} = 10 V	V_{BE}	typ.	700	mV
			650 to 740	mV
DC current gain				
I_C = 1 mA; V_{CE} = 10 V	h_{FE}	**BF240**	67 to 220	
		BF240B	100 to 220	
		BF241	35 to 125	
		BF241C	67 to 125	
		BF241D	35 to 76	
Transition frequency at f = 100 MHz				
I_C = 1 mA; V_{CE} = 10 V	f_T	min.	150	MHz
Feedback capacitance at f = 1 MHz				
I_C = 1 mA; V_{CE} = 10 V	C_{re}	max.	0,5	pF
Emitter-base cut-off current				
I_C = 0; V_{EB} = 3 V	I_{EBO}	max.	100	nA