

BF926

SILICON PLANAR EPITAXIAL TRANSISTOR

P-N-P transistor in a TO-92 envelope intended for use as preamplifier, mixer and oscillator in v.h.f. and u.h.f. tuners.

QUICK REFERENCE DATA

Collector-base voltage (open emitter)	$-V_{CB0}$	max.	30 V
Collector-emitter voltage (open base)	$-V_{CEO}$	max.	20 V
Collector current (d.c.)	$-I_C$	max.	25 mA
Total power dissipation up to $T_{amb} = 45^\circ\text{C}$	$P_{tot}$	max.	250 mW
Junction temperature	$T_j$	max.	150 $^\circ\text{C}$
Transition frequency at $f = 100$ MHz $I_E = 1$ mA; $-V_{CB} = 10$ V	$f_T$	typ.	350 MHz
Noise figure at $f = 200$ MHz $I_E = 1$ mA; $-V_{CB} = 10$ V	F	<	6 dB
Transducer gain (common base) $I_E = 3$ mA; $-V_{CB} = 10$ V	$G_{tr}$	>	14 dB

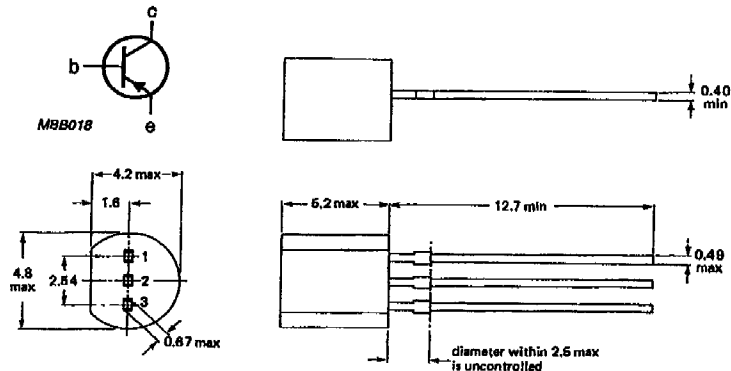
MECHANICAL DATA

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.	30 V
Collector-emitter voltage (open base)	$-V_{CEO}$	max.	20 V
Emitter-base voltage (open collector)	$-V_{EBO}$	max.	4 V
Collector current (d.c.)	$-I_C$	max.	25 mA
Total power dissipation up to $T_{amb} = 45\text{ }^{\circ}\text{C}$	$P_{tot}$	max.	250 mW
Storage temperature	$T_{stg}$		$-65$ to $+150\text{ }^{\circ}\text{C}$
Junction temperature	$T_j$	max.	150 $^{\circ}\text{C}$

## THERMAL RESISTANCE

From junction to ambient in free air	$R_{th\ j-a}$	=	420 K/W
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## CHARACTERISTICS

$T_{amb} = 25\text{ }^{\circ}\text{C}$

Collector cut-off current $I_E = 0; -V_{CB} = 20\text{ V}$	$-I_{CBO}$	<	50 nA
Base current $I_E = 1\text{ mA}; -V_{CB} = 10\text{ V}$	$-I_B$	<	33 $\mu\text{A}$
Collector-base breakdown voltage open emitter; $-I_C = 10\text{ }\mu\text{A}$	$-V_{(BR)CBO}$	>	30 V
Collector-emitter breakdown voltage open base; $-I_C = 2\text{ mA}$	$-V_{(BR)CEO}$	>	20 V
Emitter-base breakdown voltage open collector; $-I_E = 10\text{ }\mu\text{A}$	$-V_{(BR)EBO}$	>	4 V
Transition frequency at $f = 100\text{ MHz}$ $I_E = 1\text{ mA}; -V_{CB} = 10\text{ V}$	$f_T$	typ.	350 MHz
$I_E = 5\text{ mA}; -V_{CB} = 10\text{ V}$	$f_T$	typ.	500 MHz 400 to 700 MHz
Feedback capacitance at $f = 1\text{ MHz}$ $I_E = 1\text{ mA}; -V_{CB} = 10\text{ V}$	$C_{re}$	typ.	0,5 pF
Noise figure at $f = 200\text{ MHz}$ $I_E = 1\text{ mA}; -V_{CB} = 10\text{ V}$	F	typ. <	5 dB 6 dB
Transducer gain (common base) at $f = 200\text{ MHz}$ $I_E = 3\text{ mA}; -V_{CB} = 10\text{ V}; R_S = 60\text{ }\Omega; R_L = 920\text{ }\Omega$	$G_{tr}$	> typ.	14 dB 17,5 dB