SILICON PLANAR EPITAXIAL TRANSISTORS

P-N-P small-signal transistors in plastic TO-92 package intended for low-noise applications in audio equipment.

Complementary types are MPS6520 and MPS6521.

QUICK REFERENCE DATA

Collector-emitter voltage (open base)	$-V_{CEO}$	max.	25	V
Collector-base voltage (open emitter)	$-V_{CBO}$	max.	25	V
Collector current (d.c.)	$-I_C$	max.	100	mA
Total device dissipation up to T_{amb} = 25 °C	P_{tot}	max.	625	mW
Collector-emitter saturation voltage $-I_C$ = 50 mA; $-I_B$ = 5 mA	$-V_{CEsat}$	max.	0,5	V
			MPS6522 | MPS6523	
D.C. current gain				
$-I_C$ = 100 μA; $-V_{CE}$ = 10 V	h_{FE}	min.	100 | 150	
$-I_C$ = 2 mA; $-V_{CE}$ = 10 V	h_{FE}	min.	200 | 300	
		max.	400 | 600	

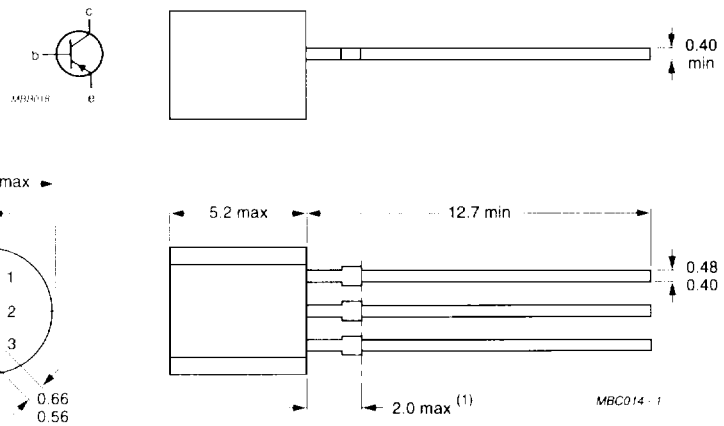
MECHANICAL DATA

Dimensions in mm

Fig. 1 TO-92.

Pinning

1 = collector
2 = base
3 = emitter



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

RATINGS

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

Collector-emitter voltage (open base)	$-V_{CEO}$	max.	25	V
Collector-base voltage (open emitter)	$-V_{CBO}$	max.	25	V
Emitter-base voltage (open collector)	$-V_{EBO}$	max.	4,0	V
Collector current (d.c.)	$-I_C$	max.	100	mA
Total device dissipation up to T_{amb} = 25 °C	P_{tot}	max.	625	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	$R_{th\ j\text{-}a}$	=	200	K/W

CHARACTERISTICS

T_j = 25 °C unless otherwise specified

Collector-emitter breakdown voltage I_B = 0; $-I_C$ = 0,5 mA	$-V_{(BR)CEO}$	min.	25	V
Emitter-base breakdown voltage $-I_E$ = 10 μA; I_C = 0	$-V_{(BR)EBO}$	min.	4,0	V
Collector cut-off current $-V_{CB}$ = 30 V; I_E = 0	$-I_{CBO}$	max.	50	nA
Collector-emitter saturation voltage $-I_C$ = 50 mA; $-I_B$ = 5 mA	$-V_{CEsat}$	max.	0,5	V
Output capacitance at f = 100 kHz $-V_{CB}$ = 10 V; I_E = 0	C_c	max.	3,5	pF
Noise figure at T_{amb} = 25 °C $-I_C$ = 10 μA; $-V_{CE}$ = 5 V; R_S = 10 kΩ; f = 10 Hz to 10 kHz	F	max.	3,0	dB

			MPS6522	MPS6523
D.C. current gain $-I_C$ = 100 μA; $-V_{CE}$ = 10 V	h_{FE}	min.	100	150
$-I_C$ = 2 mA; $-V_{CE}$ = 10 V	h_{FE}	min.	200	300
		max.	400	600