



SILICON PLANAR EPITAXIAL TRANSISTORS

P-N-P silicon planar epitaxial transistors in plastic TO-92 envelope for general purpose applications.

QUICK REFERENCE DATA

			MPSA55	MPSA56
Collector-emitter voltage (open base)	$-V_{CEO}$	max.	60	80 V
Collector-base voltage (open emitter)	$-V_{CBO}$	max.	60	80 V
Collector current (d.c.)	$-I_C$	max.	500	mA
Total device dissipation at $T_{amb} = 25^\circ\text{C}$	P_{tot}	max.	625	mW
Collector-emitter saturation voltage $-I_C = 100\text{ mA}; -I_B = 10\text{ mA}$	$-V_{CEsat}$	max.	0,25	V
D.C. current gain $-I_C = 100\text{ mA}; -V_{CE} = 1,0\text{ V}$	h_{FE}	min.	50	

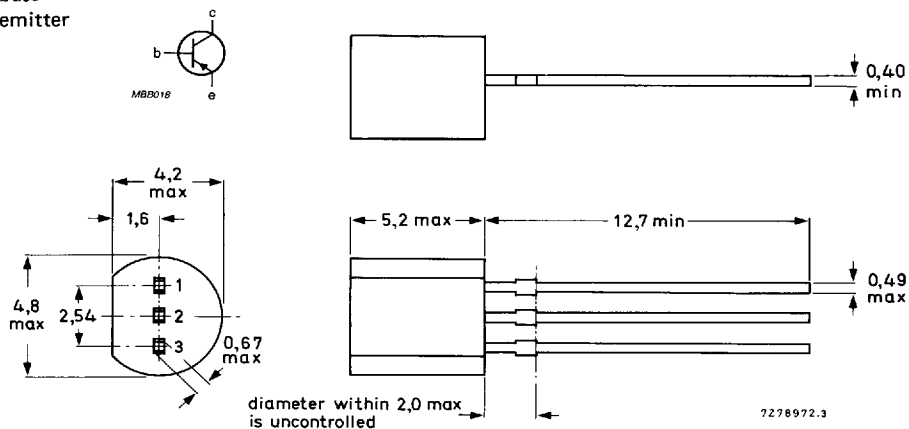
MECHANICAL DATA

Dimensions in mm

Fig. 1 TO-92.

Pinning

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



Capability approved to CECC NECC-C-002

MPSA55
MPSA56
RATINGS

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

			MPSA55	MPSA56
Collector-emitter voltage (open base)	$-V_{CEO}$	max.	60	80 V
Collector-base voltage (open emitter)	$-V_{CBO}$	max.	60	80 V
Emitter-base voltage (open collector)	$-V_{EBO}$	max.	4,0	V
Collector current (d.c.)	$-I_C$	max.	500	mA
Total device dissipation at $T_{amb} = 25^\circ\text{C}$	P_{tot}	max.	625	mW
Storage temperature range	T_{stg}		-65 to +150	$^\circ\text{C}$
Junction temperature	T_j	max.	150	$^\circ\text{C}$

THERMAL RESISTANCE

From junction to ambient	$R_{th\ j-a}$	=	200	K/W
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CHARACTERISTICS
 $T_j = 25^\circ\text{C}$ unless otherwise specified

Collector-emitter breakdown voltage $I_B = 0; I_C = 1,0\text{ mA}$	$-V_{(BR)CEO}$	min.	60	80 V
Emitter-base breakdown voltage $-I_E = 100\ \mu\text{A}; -I_C = 0$	$-V_{(BR)EBO}$	min.	4,0	V
Collector cut-off current $I_E = 0; -V_{CB} = 60\text{ V}$ $I_E = 0; -V_{CB} = 80\text{ V}$	$-I_{CBO}$ $-I_{CBO}$	max. max.	0,1	μA $0,1\ \mu\text{A}$
Collector-emitter cut-off current $I_B = 0; -V_{CE} = 60\text{ V}$	$-I_{CEO}$	max.	0,1	μA
D.C. current gain $-I_C = 10\text{ mA}; -V_{CE} = 1,0\text{ V}$ $-I_C = 100\text{ mA}; -V_{CE} = 1,0\text{ V}$	h_{FE} h_{FE}	min. min.	50 50	
Saturation voltage $-I_C = 100\text{ mA}; -I_B = 10\text{ mA}$	$-V_{CEsat}$	max.	0,25	V
Base-emitter on-voltage $-I_C = 100\text{ mA}; -V_{CE} = 1,0\text{ V}$	$-V_{BE(on)}$	max.	1,2	V
Transition frequency at $f = 100\text{ MHz}^*$ $-I_C = 100\text{ mA}; -V_{CE} = 1,0\text{ V}$	f_T	min.	50	MHz

 f_T is defined as the frequency at which $|h_{fe}|$ extrapolates to unity.