SILICON PLANAR EPITAXIAL TRANSISTORS

P-N-P silicon planar epitaxial transistors in plastic TO-92 package 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 °C	P_{tot}	max.	625		mW
Collector emitter saturation voltage $-I_C$ = 100 mA; $-I_B$ = 10 mA	$-V_{CEsat}$	max.	0,25		V
D.C. current gain $-I_C$ = 100 mA; $-V_{CE}$ = 1,0 V	h_{FE}	min.	50		

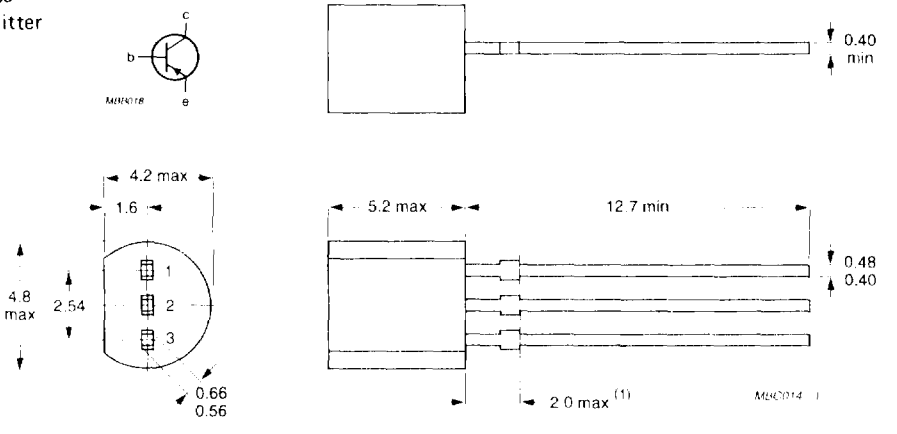
MECHANICAL DATA

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)

			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 °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	$R_{th\ j\text{-}a}$	=	200		K/W

CHARACTERISTICS

T_j = 25 °C unless otherwise specified

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

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