

PNP DARLINGTON TRANSISTOR

PNP small-signal Darlington transistors, each in a plastic TO-92 package.

NPN complementary types are MPSA25, 26, and 27.

QUICK REFERENCE DATA

			MPSA75	76	77
Collector-emitter voltage	$-V_{CEO}$	max.	40	50	60 V
Emitter-base voltage	$-V_{EB0}$	max.		10	V
Collector current (DC)	$-I_C$	max.		500	mA
Total power dissipation up to $T_{amb} = 25^\circ\text{C}$	P_{tot}	max.		500	mW
DC current gain $-I_C = 10\text{ mA}; -V_{CE} = 5\text{ V}$	h_{FE}	min.		10 000	

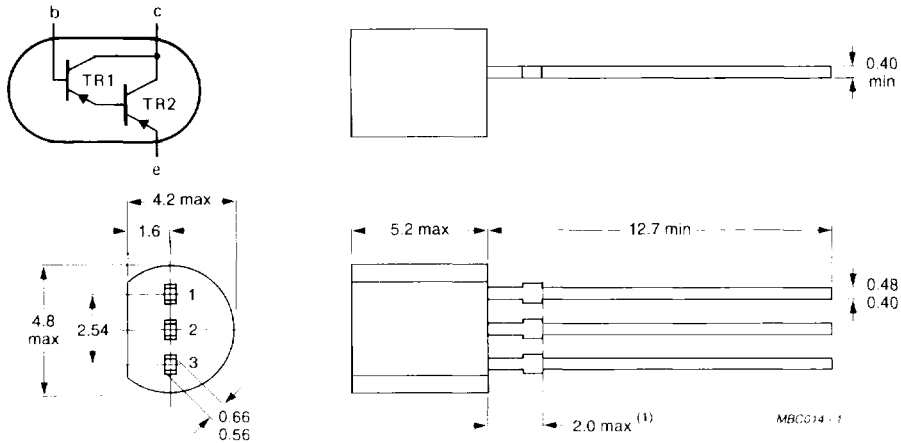
MECHANICAL DATA

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)

			MPSA75	76	77
Collector-emitter voltage	$-V_{CEO}$	max.	40	50	60 V
Emitter-base voltage	$-V_{EBO}$	max.		10	V
Collector current (DC)	$-I_C$	max.		500	mA
Total power dissipation up to $T_{amb} = 25^\circ\text{C}$	P_{tot}	max.		500	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 in free air	R_{thj-a}	=		250	K/W
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CHARACTERISTICS

$T_j = 25^\circ\text{C}$ unless otherwise specified

			MPSA75	76	77
Collector-emitter breakdown voltage $-I_C = 100\ \mu\text{A}; -V_{BE} = 0$	$-V_{(BR)CES}$	min.	40	50	60 V
Collector-base breakdown voltage $-I_C = 100\ \mu\text{A}; -I_E = 0$	$-V_{(BR)CBO}$	min.	40	50	60 V
Collector cut-off current $-V_{CB} = 40\ \text{V}; -I_E = 0$ $-V_{CB} = 50\ \text{V}; -I_E = 0$	$-I_{CBO}$ $-I_{CBO}$	max. max.	100 —	100 —	— 100 nA
Emitter cut-off current $-V_{EB} = 40\ \text{V}; -I_C = 0$	$-I_{EBO}$	max.		100	nA
DC current gain $-I_C = 10\ \text{mA}; -V_{CE} = 5\ \text{V}$ $-I_C = 100\ \text{mA}; -V_{CE} = 5\ \text{V}$	h_{FE} h_{FE}	min. min.		10 000 10 000	
Collector-emitter saturation voltage $-I_C = 100\ \text{mA}; -I_B = 0.1\ \text{mA}$	$-V_{CEsat}$	max.		1.5	V
Base-emitter on-voltage $-I_C = 10\ \text{mA}; -V_{CE} = 5\ \text{V}$	$-V_{BEon}$	max.		2.0	V
Transition frequency at $T_{amb} = 25^\circ\text{C}$ $-I_C = 30\ \text{mA}; -V_{CE} = 5\ \text{V}; f = 100\ \text{MHz}$	f_T	min. typ.		125 220	MHz MHz