SILICON SMALL-SIGNAL TRANSISTORS

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

They are intended for use in audio amplifier driver stages and other general purpose applications.

NPN complementary types are 2PC1815 and 2PC1815L.

QUICK REFERENCE DATA

Collector-base voltage (open emitter)	$-V_{CBO}$	max.	50 V
Collector-emitter voltage (open base)	$-V_{CEO}$	max.	50 V
Collector current (DC)	$-I_C$	max.	150 mA
Total power dissipation at $T_{amb} \leq 25$ °C	P_{tot}	max.	500 mW
Collector-emitter saturation voltage $-I_C$ = 100 mA; $-I_B$ = 10 mA	$-V_{CEsat}$	max.	0.3 V
DC current gain $-I_C$ = 2 mA; $-V_{CE}$ = 6 V	h_{FE}	min. max.	120 700

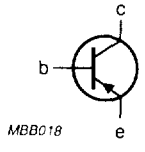
MECHANICAL DATA

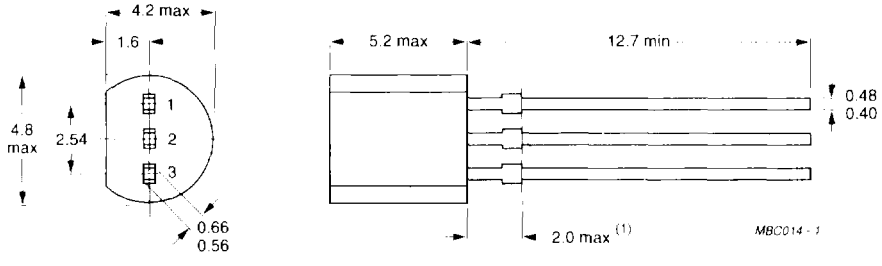
Dimensions in mm

Fig.1 TO-92

Pinning

1 = base
2 = collector
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-base voltage (open emitter)	$-V_{CBO}$	max.	50 V
Collector-emitter voltage (open base)	$-V_{CEO}$	max.	50 V
Emitter-base voltage (open collector)	$-V_{EBO}$	max.	5.0 V
Collector current (DC)	$-I_C$	max.	150 mA
Base current (DC)	$-I_B$	max.	50 mA
Total power dissipation at $T_{amb} \leqslant 25\ ^oC$	P_{tot}	max.	500 mW
Junction temperature	T_j	max.	150 °C
Storage temperature range	T_{stg}		−65 to + 150 °C

THERMAL RESISTANCE

From junction to ambient in free air	$R_{th\ j\text{-}a}$	=	250 K/W

CHARACTERISTICS

$T_j = 25\ ^oC$ unless otherwise specified

Collector cut-off current $-I_E = 0$; $-V_{CB} = 50$ V		$-I_{CBO}$	max.	100 nA
Emitter cut-off current $-I_C = 0$; $-V_{EB} = 5$ V		$-I_{EBO}$	max.	100 nA
DC current gain $-I_C = 150$ mA; $-V_{CE} = 6$ V		h_{FE}	min.	25
$-I_C = 2$ mA; $-V_{CE} = 6$ V *		h_{FE}	min. max.	120 700
Collector-emitter saturation voltage $-I_C = 100$ mA; $-I_B = 10$ mA		$-V_{CEsat}$	max.	0.3 V
Base-emitter saturation voltage $-I_C = 100$ mA; $-I_B = 10$ mA		$-V_{BEsat}$	max.	1.1 V
Transition frequency $-I_C = 1$ mA; $-V_{CE} = 10$ V		f_T	min.	80 MHz
Collector-output capacitance $-I_E = 0$; $-V_{CB} = 10$ V; f = 1 MHz		C_c	typ. max.	4 pF 7 pF
Noise figure $-I_C = 100\ \mu$A; $-V_{CE} = 6$ V; $R_s = 10$ kΩ; f = 1 kHz	2PA1015	F	max.	10 dB
	2PA1015L	F	max.	6 dB

* Classification of h_{FE}

Group	Y	GR	BL
Range	120 – 240	200 – 400	350 – 700