PNP POWER TRANSISTOR

PNP power transistor, housed in a TO-39 metal envelope. It is intended for use in amplifier and switching applications.

QUICK REFERENCE DATA

Collector-base voltage (open emitter)	$-V_{CBO}$	max.	90 V
Collector-emitter voltage (open base)	$-V_{CEO}$	max.	65 V
Collector current (DC)	$-I_C$	max.	1.0 A
Total power dissipation up to T_{amb} = 25 °C	P_{tot}	max.	7.0 W
DC current gain $-I_C$ = 150 mA; $-V_{CE}$ = 2 V	h_{FE}	20 to 200	

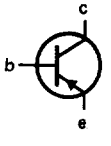
MECHANICAL DATA

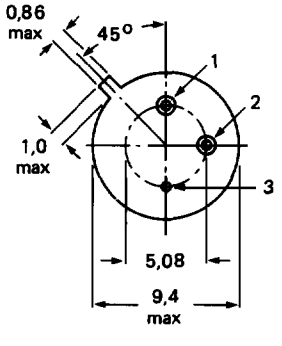
Dimensions in mm

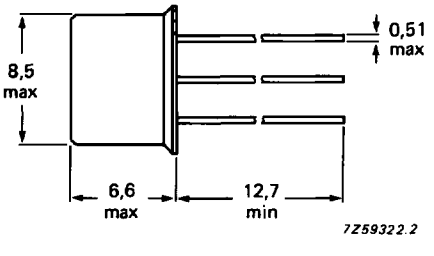
Fig. 1 TO-39.

Pinning:

1 = emitter
2 = base
3 = collector







RATINGS

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

Collector-base voltage (open emitter)	$-V_{CBO}$	max.	90 V
Collector-emitter voltage (open base)	$-V_{CEO}$	max.	65 V
Emitter-base voltage (open collector)	$-V_{EBO}$	max.	7.0 V
Collector current (DC)	$-I_C$	max.	1.0 A
Base current	$-I_B$	max.	0.5 A
Total power dissipation up to T_{amb} = 25 °C	P_{tot}	max.	7.0 W
Storage temperature range	T_{stg}		−55 to + 200 °C
Junction temperature	T_j	max.	200 °C

THERMAL RESISTANCE

From junction to case	$R_{th\ j\text{-}c}$		25 K/W

CHARACTERISTICS

T_{amb} = 25 °C unless stated otherwise

Collector-emitter sustaining voltage			
$-I_C$ = 100 mA; I_B = 0	$-V_{CEOsus}$	>	65 V
Collector cut-off current			
$-V_{CE}$ = 85 V; $-V_{EB}$ = 1.5 V	$-I_{CEX}$	<	100 mA
$-V_{CE}$ = 30 V; $-V_{EB}$ = 1.5 V; T_C = 150 °C	$-I_{CEX}$	<	0.1 mA
Collector cut-off current			
$-V_{CB}$ = 90 V; I_E = 0	$-I_{CEO}$	<	100 μA
Emitter cut-off current			
$-V_{EB}$ = 7 V; I_C = 0	$-I_{EBO}$	<	10 μA
DC current gain			
$-I_C$ = 150 mA; $-V_{CE}$ = 2 V	h_{FE}		20 to 200
$-I_C$ = 0.1 mA; $-V_{CE}$ = 10 V	h_{FE}	>	20
$-I_C$ = 150 mA; $-V_{CE}$ = 10 V	h_{FE}		40 to 140
$-I_C$ = 150 mA; $-V_{CE}$ = 10 V	h_{FE}	>	20
Saturation voltages			
$-I_C$ = 150 mA; $-I_B$ = 15 mA	$-V_{CEsat}$	<	0.65 V
	$-V_{BEsat}$	<	1.4 V
Base-emitter on-state voltage			
$-I_C$ = 150 mA; $-V_{CE}$ = 10 V	$-V_{BE\ on}$	<	1.5 V
Collector-base capacitance			
$-V_{CB}$ = 10 V; f = 1 MHz	C_{cb}	<	30 pF
High-frequency current gain			
$-I_C$ = 50 mA; $-V_{CE}$ = 10 V; f = 20 MHz	h_{FE}	>	3.0
Switching characteristics			
rise time; I_{B1} = 15 mA	t_r	<	70 ns
storage time; I_{B2} = 15 mA	t_s	<	600 ns
fall time; I_{B2} = 15 mA	t_f	<	100 ns
turn-on time; I_{B1} = I_{B2}	t_{on}	<	110 ns
turn-off time; I_{B1} = I_{B2}	t_{off}	<	700 ns