Silicon PNP Power Transistor

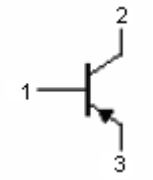
Feature:

- DC current gain h_{FE} = 40 (Minimum) at I_C = 1 A

Applications:

Designed for use in general purpose power amplifier and switching applications

Fig. 1 Simplified Outline (TO-3PN) and Symbol



Pinning

Pin	Description
1	Base
2	Collector; connected to mounting base
3	Emitter

Absolute Maximum Ratings (T_a = 25°C)

Symbol	Parameter	Conditions	Value	Unit
V_{CBO}	Collector - base voltage	Open emitter	-100	V
V_{CEO}	Collector - emitter voltage	Open base	-100	V
V_{EBO}	Emitter - base voltage	Open collector	-5	V
I_C	Collector current	-	-10	A
I_{CM}	Collector current - peak	-	-15	A
I_B	Base current	-	-3	A
P_C	Collector power dissipation	T_C = 25°C	80	W
T_j	Junction temperature	-	150	°C
T_{stg}	Storage temperature	-	-65 to 150	°C

Thermal Characteristics

Symbol	Parameter	Maximum	Unit
$R_{th\ j\text{-}c}$	Thermal resistance junction to case	1.56	°C/W

Characteristics (T_j = 25°C Unless Otherwise Specified)

Symbol	Parameter	Conditions	Minimum	Typical	Maximum	Unit
$V_{CEO\ (SUS)}$	Collector - emitter sustaining voltage	I_C = -30 mA; I_B = 0	-100	-	-	V
$V_{CEsat\text{-}1}$	Collector - emitter saturation voltage	I_C = -3 A; I_B = -0.3 A	-	-	-1	V
$V_{CEsat\text{-}2}$	Collector - emitter saturation voltage	I_C = -10 A; I_B = -2.5 A	-	-	-4	V

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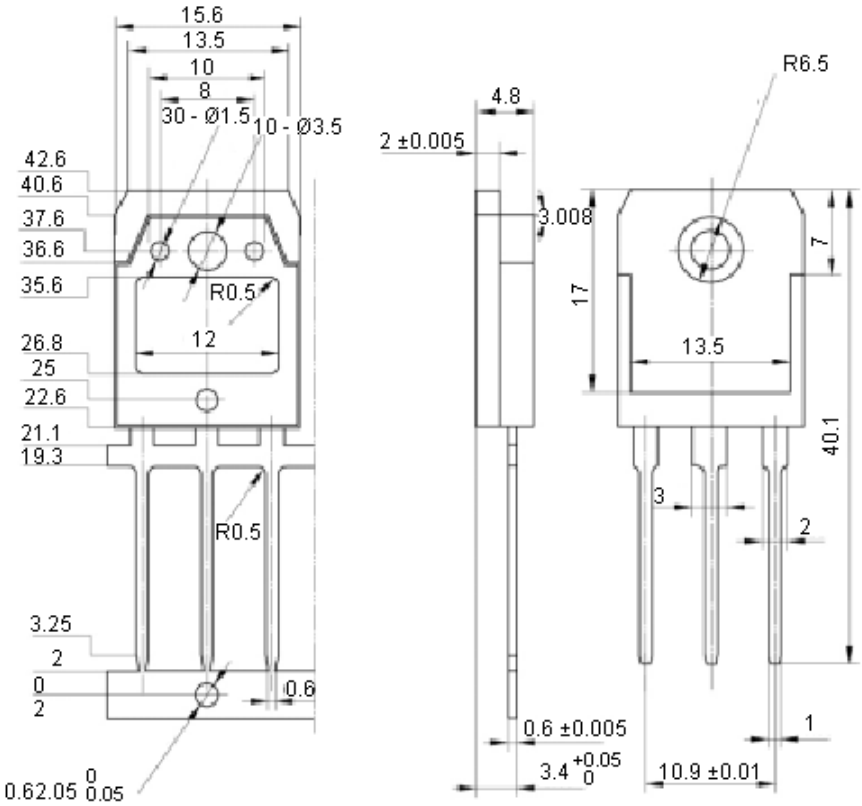
Characteristics (T_j = 25°C Unless Otherwise Specified)

Symbol	Parameter	Conditions	Minimum	Typical	Maximum	Unit
V_{BE-1}	Base - emitter on voltage	I_C = -3 A; V_{CE} = -4 V	-	-	-1.6	V
V_{BE-2}	Base - emitter on voltage	I_C = -10 A; V_{CE} = -4 V	-	-	-3	V
I_{CEO}	Collector cut-off current	V_{CE} = -60 V; I_B = 0	-	-	-0.7	mA
I_{CES}	Collector cut-off current	V_{CE} = -100 V; V_{EB} = 0	-	-	-0.4	mA
I_{EBO}	Emitter cut-off current	V_{EB} = -5 V; I_C = 0	-	-	-1	mA
h_{FE-1}	DC current gain	I_C = -1 A; V_{CE} = -4 V	40	-	-	-
h_{FE-2}	DC current gain	I_C = -3 A; V_{CE} = -4 V	20	-	100	-
f_T	Transition frequency	I_C = -0.5 A; V_{CE} = -10 V; f = 1 MHz	3	-	-	MHz

Package Outline



Dimensions : Millimetres

Fig. 2 Outline Dimensions (Unindicated Tolerance : ±0.1 mm)

Part Number Table

Description	Part Number
Silicon PNP Power Transistor	TIP34C