

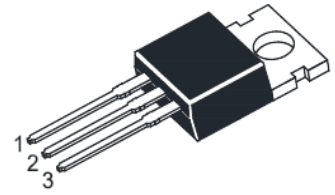
TIP41C-HAF

NPN Silicon Epitaxial Planar Transistor

for power switching and amplifier applications

Features

- Halogen and Antimony Free(HAF), RoHS compliant



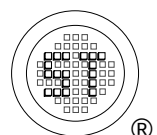
1.Base 2.Collector 3.Emitter
TO-220FB Plastic Package

Absolute Maximum Ratings ($T_a = 25\text{ }^{\circ}\text{C}$)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	100	V
Collector Emitter Voltage	V_{CEO}	100	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	6	A
Collector Current (Pulse)	I_{CP}	10	A
Power Dissipation ($T_a = 25\text{ }^{\circ}\text{C}$)	P_{tot}	2	W
Power Dissipation ($T_c = 25\text{ }^{\circ}\text{C}$)	P_{tot}	65	W
Junction Temperature	T_j	150	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	- 65 to + 150	$^{\circ}\text{C}$

Thermal Characteristics

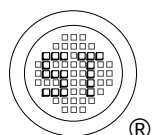
Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Case	$R_{\theta JC}$	1.9	$^{\circ}\text{C/W}$
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	62.5	$^{\circ}\text{C/W}$



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Characteristics at $T_a = 25\text{ }^{\circ}\text{C}$

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $V_{CE} = 4\text{ V}$, $I_C = 0.3\text{ A}$ at $V_{CE} = 4\text{ V}$, $I_C = 3\text{ A}$	h_{FE} h_{FE}	30 15	- 75	- -
Collector Emitter Cutoff Current at $V_{CE} = 100\text{ V}$	I_{CES}	-	0.4	mA
Collector Emitter Cutoff Current at $V_{CE} = 60\text{ V}$	I_{CEO}	-	0.7	mA
Emitter Base Cutoff Current at $V_{EB} = 5\text{ V}$	I_{EBO}	-	1	mA
Collector Emitter Breakdown Voltage at $I_C = 30\text{ mA}$	$V_{(BR)CEO}$	100	-	V
Collector Base Breakdown Voltage at $I_C = 100\text{ }\mu\text{A}$, $I_E = 0$	$V_{(BR)CBO}$	100	-	V
Emitter Base Breakdown Voltage at $I_E = 1\text{ mA}$, $I_C = 0$	$V_{(BR)EBO}$	5	-	V
Collector Emitter Saturation Voltage at $I_C = 6\text{ A}$, $I_B = 600\text{ mA}$	$V_{CE(sat)}$	-	1.5	V
Base Emitter Saturation Voltage at $I_C = 6\text{ A}$, $I_B = 600\text{ mA}$	$V_{BE(sat)}$	-	2	V
Base Emitter On Voltage at $V_{CE} = 4\text{ V}$, $I_C = 6\text{ A}$	$V_{BE(on)}$	-	2	V
Transition Frequency at $V_{CE} = 10\text{ V}$, $I_C = 500\text{ mA}$, $f = 1\text{ MHz}$	f_T	3	-	MHz



Electrical Characteristics Curves

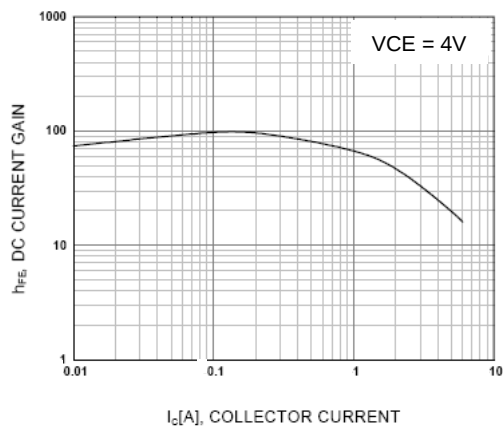


Figure 1. DC current Gain

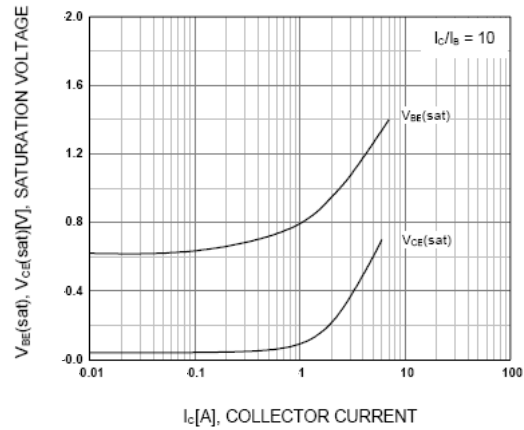


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

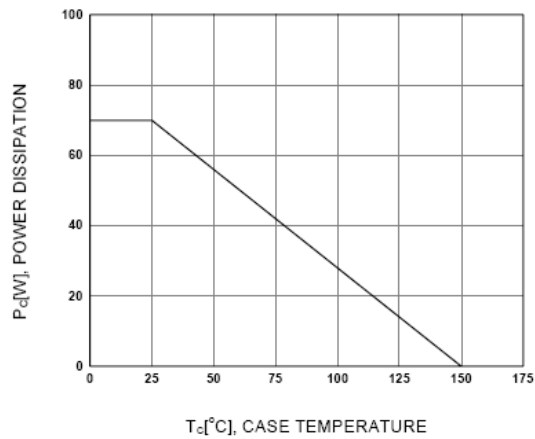
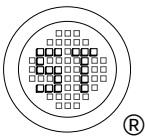


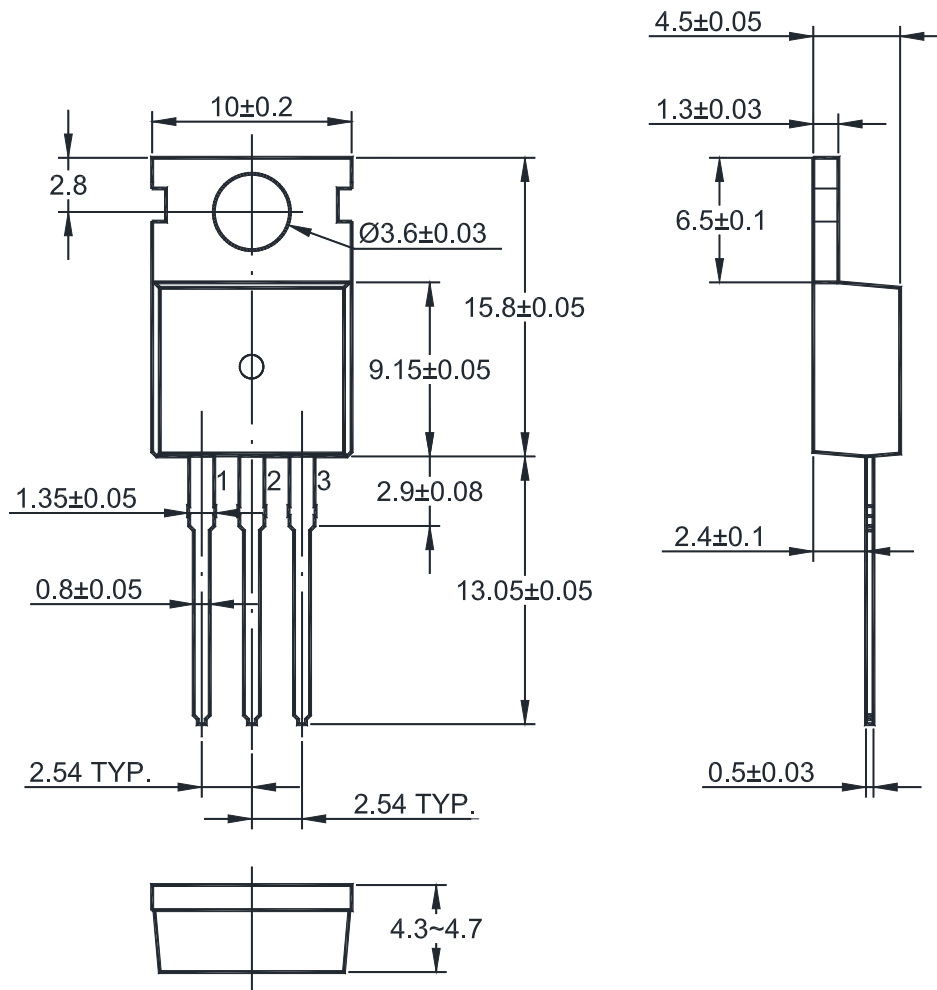
Figure 3. Power derating



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Package Outline Dimensions (Units: mm)

TO-220FB



Marking information

" TIP41C " = Part No.

" ***** " = Date Code Marking

Font type: Arial

