

Pin Configuration:

- 1. Base
- 2. Collector
- 3. Emitter
- 4. Collector

Feature:

- Complementary Silicon Transistors Intended for a Wide Variety of Switching and Amplifier Applications, Series and Shunt Regulators, Driver and Output Stages of Hi-Fi Amplifiers

Absolute Maximum Ratings (T_a = 25°C):

Description	Symbol	TIP41C	Unit
Collector Emitter Voltage	V _{CEO}	100	V
Collector Base Voltage	V _{CBO}		
Emitter Base Voltage	V _{EBO}		
Collector Current Continuous	I _C	6	A
Collector Current Peak	I _{CM}	10	
Base Current	I _B	2	
Power Dissipation upto T _c = 25°C Derate above 25°C	P _D	65	W
Power Dissipation upto T _a = 25°C Derate above 25°C		520	
Unclamped Inductive Load Energy	*E	62.5	mJ
Storage Temperature	T _{stg}	150	°C
Junction Temperature	T _j	- 65 to +150	

Thermal Resistance

Junction to Case	R _{th(j-c)}	1.92	°C/W
Junction to Ambient in Free Air	R _{th(j-a)}	62.5	

* I_c = 2.5A, L = 20mH, P.R.F. = 10Hz, V_{cc} = 10V, R_{BE} = 100Ω

Electrical Characteristics ($T_C = 25^\circ\text{C}$ unless specified otherwise):

Description	Symbol	Test Condition	Min.	Max.	Unit
Collector Emitter Voltage	$*V_{CEO}$	$I_C = 30\text{mA}, I_B = 0$	100	-	V
Collector Cut off Current	I_{CEO}	$V_{CE} = 60\text{V}, I_B = 0$	-	0.7	mA
Collector Cut off Current	I_{CES}	$V_{CE} = V_{CEO} (\text{max.}), V_{BE} = 0$	-	0.4	
Emitter Cut off Current	I_{EBO}	$V_{EB} = 5\text{V}, I_C = 0$	-	1	
DC Current Gain	$*h_{FE}$	$I_C = 0.3\text{A}, V_{CE} = 4\text{V}$ $I_C = 3\text{A}, V_{CE} = 4\text{V}$	30 15	75	-
Collector Emitter Saturation Voltage	$*V_{CE(sat)}$	$I_C = 6\text{A}, I_B = 0.6\text{A}$	-	1.5	V
Base Emitter on Voltage	$*V_{BE(on)}$	$I_C = 6\text{A}, V_{CE} = 4\text{V}$	-	2	

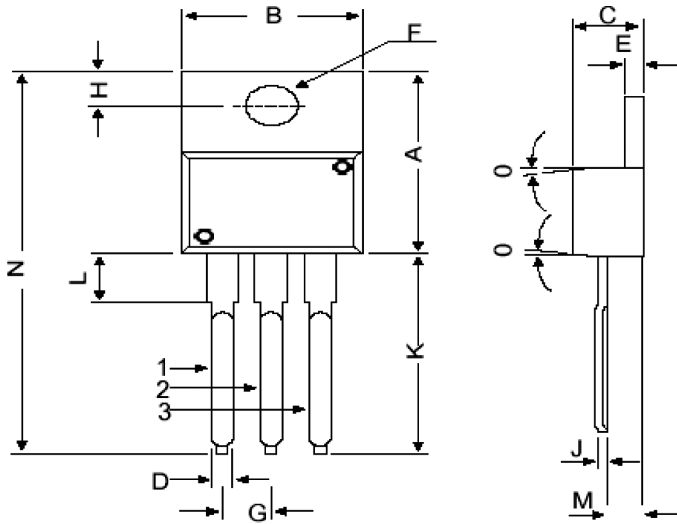
*Pulse Test : Pulse width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$.

Dynamic Characteristics

Description	Symbol	Test Condition	Min.	Max.	Unit
Small Signal Current Gain	h_{fe}	$I_C = 0.5\text{A}, V_{CE} = 10\text{V}, f = 1\text{kHz}$	20	-	-
Transition Frequency	f_T	$I_C = 0.5\text{A}, V_{CE} = 10\text{V}, f = 1\text{MHz}$	3	-	MHz

Switching Characteristics

Description	Symbol	Test Condition	Typical	Unit
Turn On Time	t_{on}	$V_{cc} = 30\text{V}, I_C = 6\text{A}, I_{B1} = I_{B2} = 0.6\text{A},$ $RL = 5\Omega$	0.6	μs
Turn Off Time	t_{off}		1.4	



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Dimensions	Min.	Max.
A	14.42	16.51
B	9.63	10.67
C	3.56	4.83
D	-	0.9
E	1.15	1.4
F	3.75	3.88
G	2.29	2.79
H	2.54	3.43
J	-	0.56
K	12.7	14.73
L	2.8	4.07
M	2.03	2.92
N	-	31.24
O	7°	

Dimensions : Millimetres

Part Number Table

Description	Part Number
Transistor, NPN, TO-220	TIP41C

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