

TIP41C

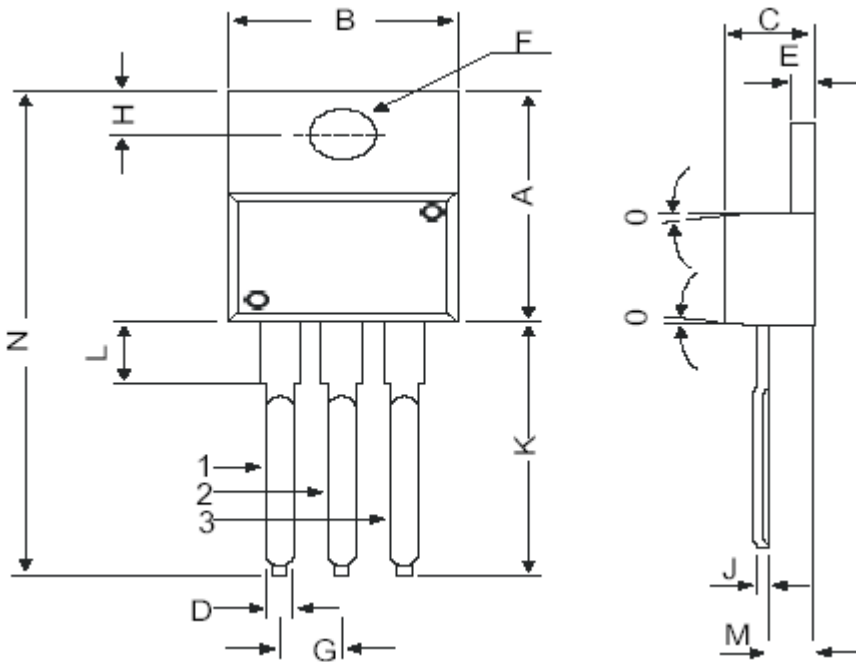
Plastic Power Transistors



Feature:

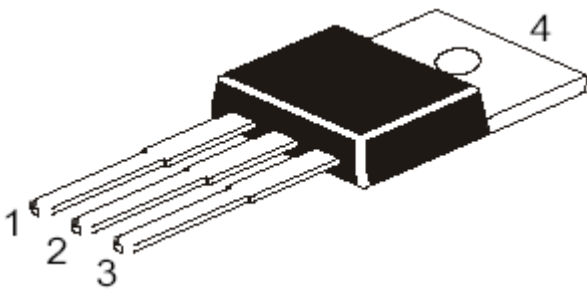
- Complementary Silicon Transistors Intended for a Wide Variety of Switching and Amplifier Applications, Series and Shunt Regulators, Driver and Output Stages of Hi-Fi Amplifiers.

TO-220 Plastic Package



Dimensions	Minimum	Maximum
A	14.42	16.51
B	9.63	10.67
C	3.56	4.83
D	-	0.90
E	1.15	1.40
F	3.75	3.88
G	2.29	2.79
H	2.54	3.43
J	-	0.56
K	12.70	14.73
L	2.80	4.07
M	2.03	2.92
N	-	31.24
O	7°	

Dimensions : Millimetres



Pin Configuration:

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



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

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	6.0	A
Collector Current Peak	I_{CM}	10	
Base Current	I_B	2.0	
Power Dissipation upto $T_c = 25^\circ\text{C}$ Derate above 25°C	P_D	65	W
Power Dissipation upto $T_a = 25^\circ\text{C}$ Derate above 25°C		520	
		2.0	mW/°C
		16	
Unclamped Inductive Load Energy	*E	62.5	mJ
Storage Temperature	T_{stg}	150	°C
Junction Temperature	T_j	- 65 to +150	

Thermal Resistance

Description	Symbol	TIP41C	Unit
Junction to Case	$R_{th(j-c)}$	1.92	°C/W
Junction to Ambient in Free Air	$R_{th(j-a)}$	62.5	

* $I_C = 2.5\text{A}$, $L = 20\text{mH}$, P.R.F. = 10Hz, $V_{CC} = 10\text{V}$, $R_{BE} = 100\Omega$

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

Description	Symbol	Test Condition	Minimum	Maximum	Unit
Collector Emitter Voltage	* V_{CEO}	$I_C = 30\text{mA}$, $I_B = 0$ TIP41C	100	-	V
Collector Cut off Current	I_{CEO}	$V_{CE} = 60\text{V}$, $I_B = 0$ TIP41C	-	0.7	mA
Collector Cut off Current	I_{CES}	$V_{CE} = V_{CEO}$ (maximum), $V_{BE} = 0$	-	0.4	
Emitter Cut off Current	I_{EBO}	$V_{EB} = 5\text{V}$, $I_C = 0$	-	1.0	
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	* $V_{BE(on)}$	$I_C = 6\text{A}$, $V_{CE} = 4\text{V}$	-	2.0	

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



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Dynamic Characteristics

Description	Symbol	Test Condition	Minimum	Maximum	Unit
Small Signal Current Gain	h_{fe}	$I_C = 0.5A, V_{CE} = 10V, f = 1KHz$	20	-	-
Transition Frequency	f_T	$I_C = 0.5A, V_{CE} = 10V, f = 1MHz$	3	-	MHz

Switching Characteristics








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

Part Number Table

Description	Part Number
Transistor, NPN, TO-220	TIP41C

Notes:

International Sales Offices:

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