

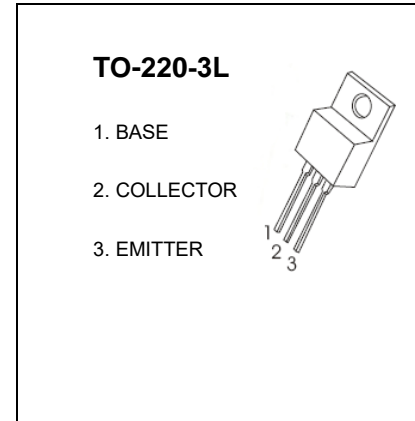


# TO-220-3L Plastic-Encapsulate Transistors

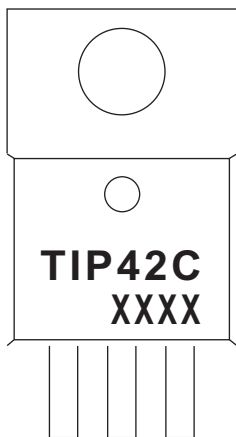
## TIP42C TRANSISTOR (PNP)

### FEATURES

- Medium Power Linear Switching Applications
- Complement to TIP41/41A/41B/41C

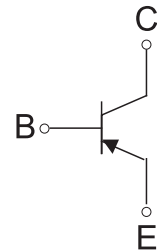


### MARKING



TIP42C=Device code  
XXXX=Code

### Equivalent Circuit



### MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

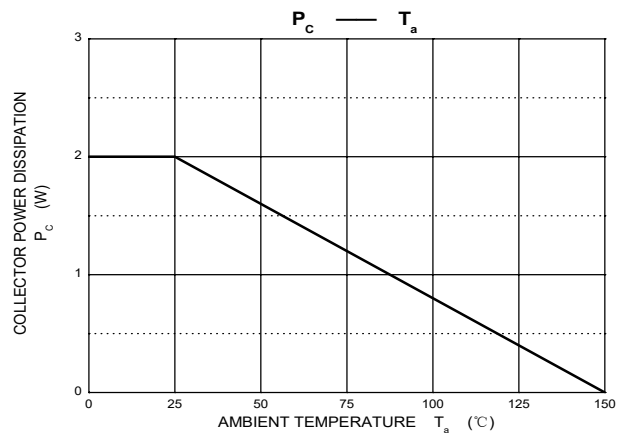
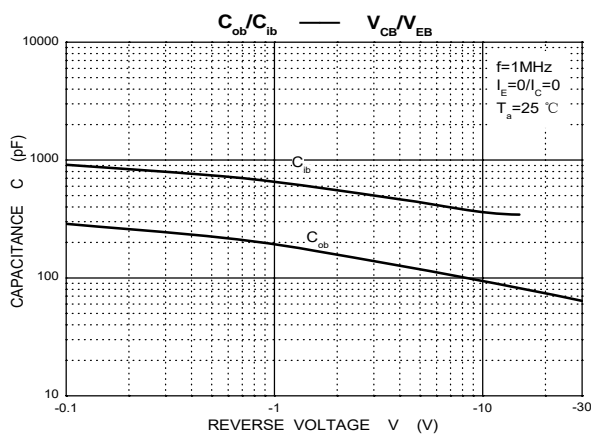
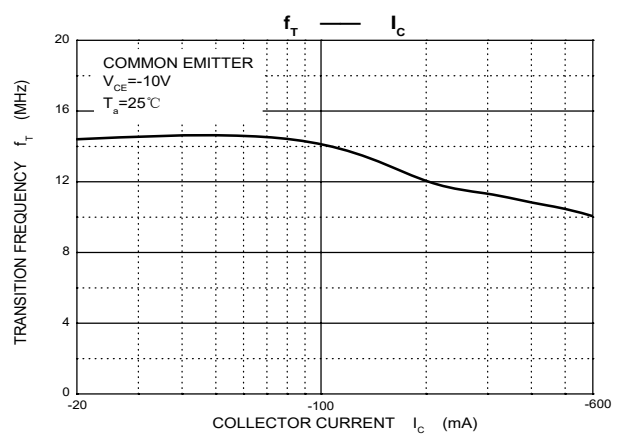
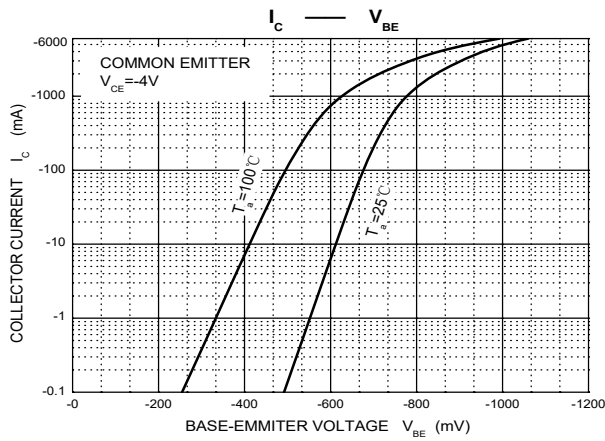
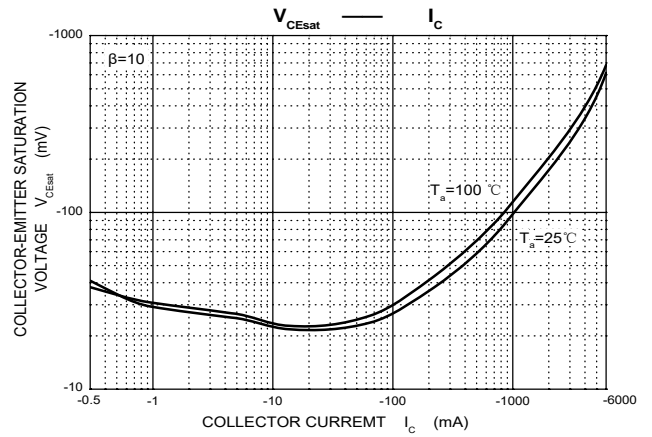
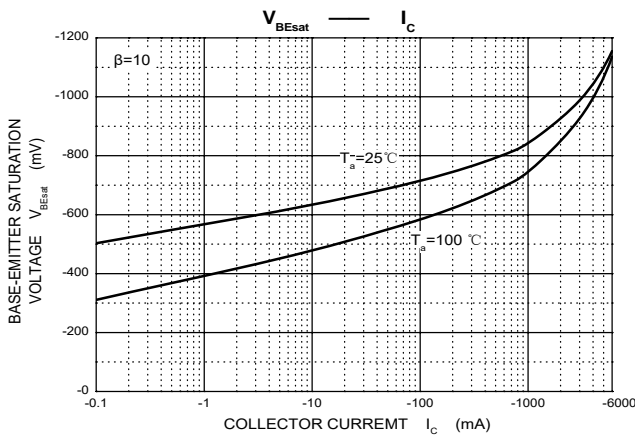
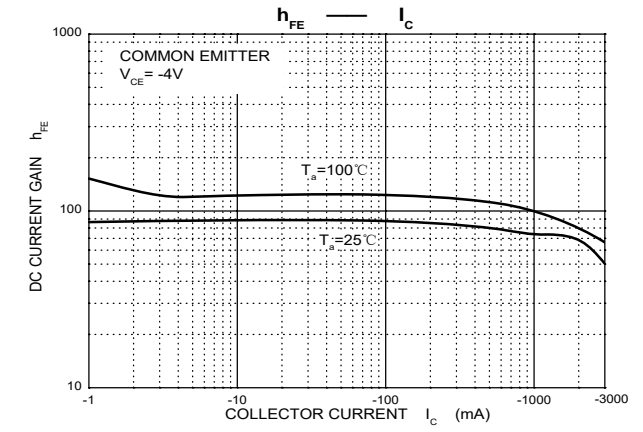
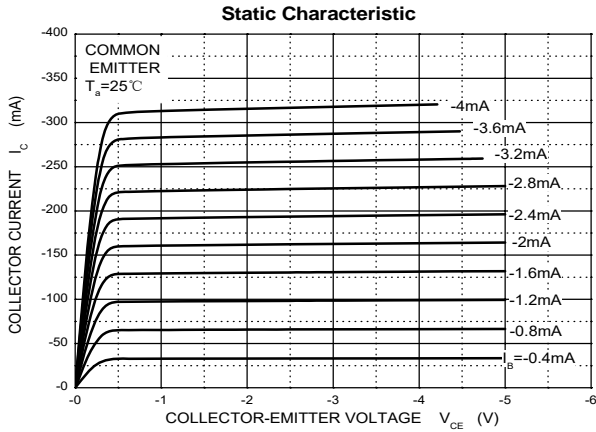
Symbol	Parameter	Value	Unit
V <sub>CB0</sub>	Collector-Base Voltage	-100	V
V <sub>CEO</sub>	Collector-Emitter Voltage	-100	V
V <sub>EBO</sub>	Emitter-Base Voltage	-5	V
I <sub>c</sub>	Collector Current -Continuous	-6	A
P <sub>c</sub>	Collector Power Dissipation	2	W
T <sub>J</sub> , T <sub>stg</sub>	Operation Junction and Storage Temperature Range	-55to+150	°C

**ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless otherwise specified)**

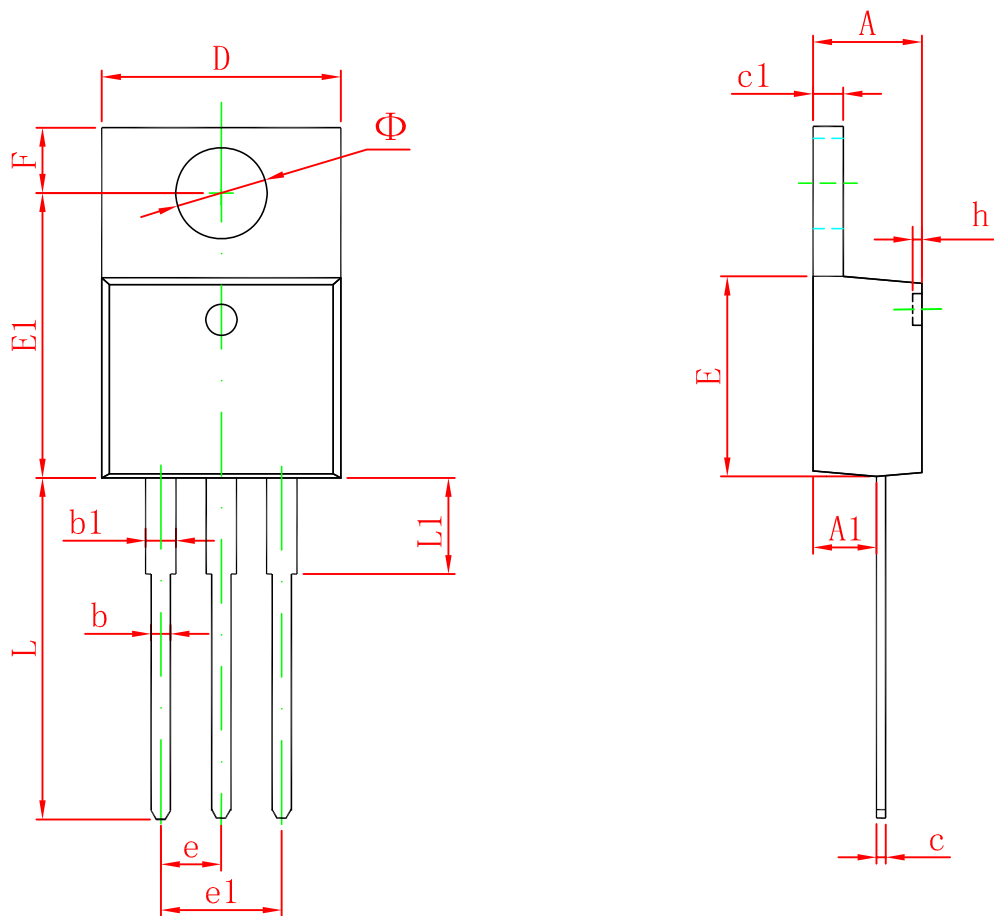
Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -1\text{mA}, I_E = 0$	-100		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}^*$	$I_C = -30\text{mA}, I_B = 0$	-100		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -1\text{mA}, I_C = 0$	-5		V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -100\text{V}, I_E = 0$		-0.4	mA
Collector cut-off current	$I_{CEO}$	$V_{CE} = -60\text{V}, I_B = 0$		-0.7	mA
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -5\text{V}, I_C = 0$		-1	mA
DC current gain	$h_{FE(1)}$	$V_{CE} = -4\text{V}, I_C = -0.3\text{A}$	30		
	$h_{FE(2)}$	$V_{CE} = -4\text{V}, I_C = -3\text{A}$	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 voltage	$V_{BE}$	$V_{CE} = -4\text{V}, I_C = -6\text{A}$		-2	V
Transition frequency	$f_T$	$V_{CE} = -10\text{V}, I_C = -0.5$	3		MHz

\* Pulse test

# Typical Characteristics



# TO-220-3L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	4.470	4.670	0.176	0.184
A1	2.520	2.820	0.099	0.111
b	0.710	0.910	0.028	0.036
b1	1.170	1.370	0.046	0.054
c	0.310	0.530	0.012	0.021
c1	1.170	1.370	0.046	0.054
D	10.010	10.310	0.394	0.406
E	8.500	8.900	0.335	0.350
E1	12.060	12.460	0.475	0.491
e	2.540 TYP		0.100 TYP	
e1	4.980	5.180	0.196	0.204
F	2.590	2.890	0.102	0.114
h	0.000	0.300	0.000	0.012
L	13.400	13.800	0.528	0.543
L1	3.560	3.960	0.140	0.156
$\Phi$	3.735	3.935	0.147	0.155