

TO-220-3L Plastic-Encapsulate Transistors

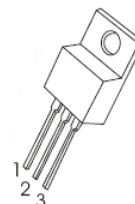
TIP42/42A/42B/42C TRANSISTOR (PNP)

FEATURES

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

TO-220-3L

1. BASE
2. COLLECTOR
3. EMITTER



MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter	TIP42	TIP42A	TIP42B	TIP42C	Unit
V _{CBO}	Collector-Base Voltage	-40	-60	-80	-100	V
V _{CEO}	Collector-Emitter Voltage	-40	-60	-80	-100	V
V _{EBO}	Emitter-Base Voltage	-5				V
I _C	Collector Current -Continuous	-6				A
P _C	Collector Power Dissipation	2				W
T _J	Junction Temperature	150				°C
T _{stg}	Storage Temperature Range	-55to+150				°C

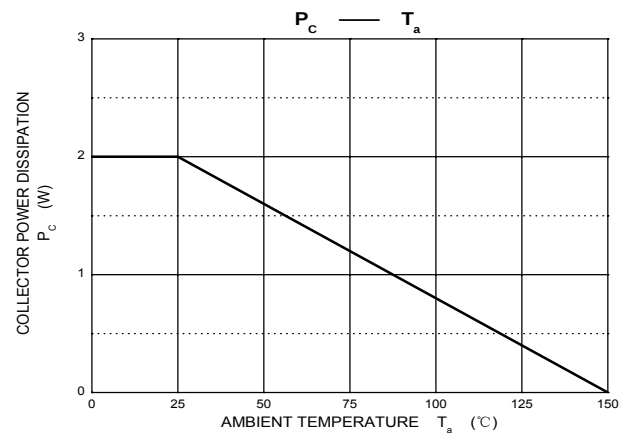
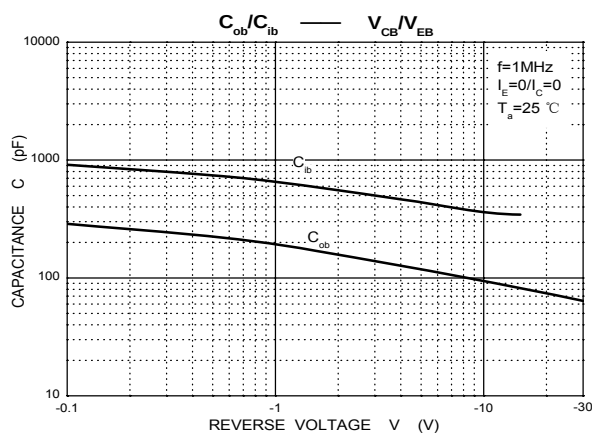
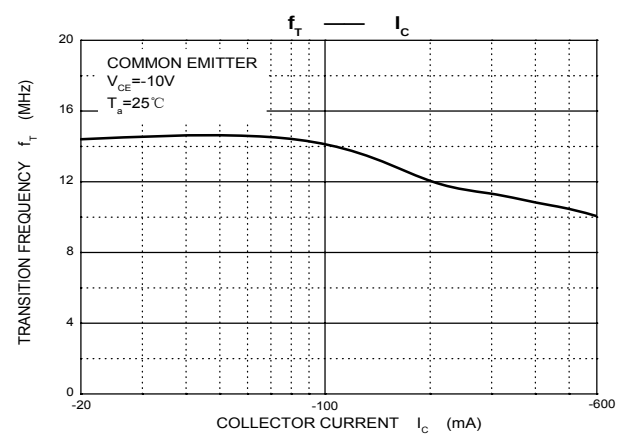
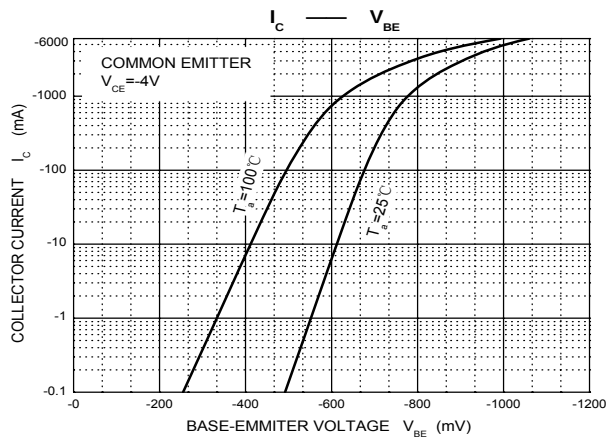
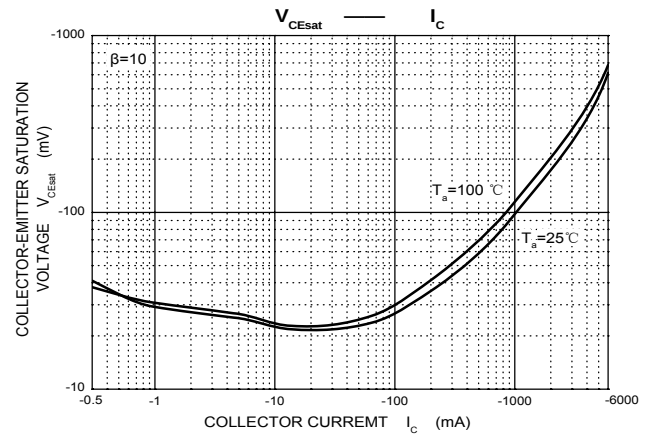
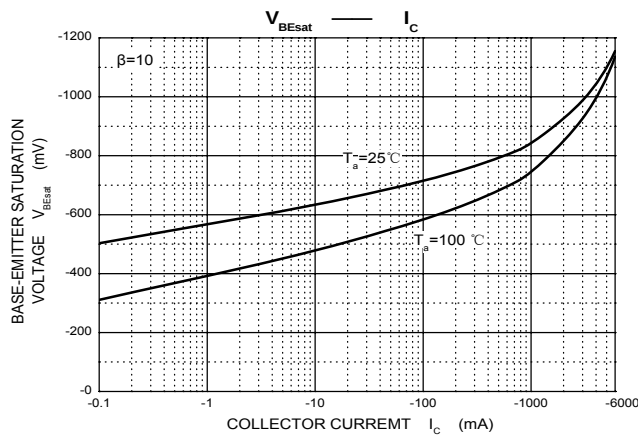
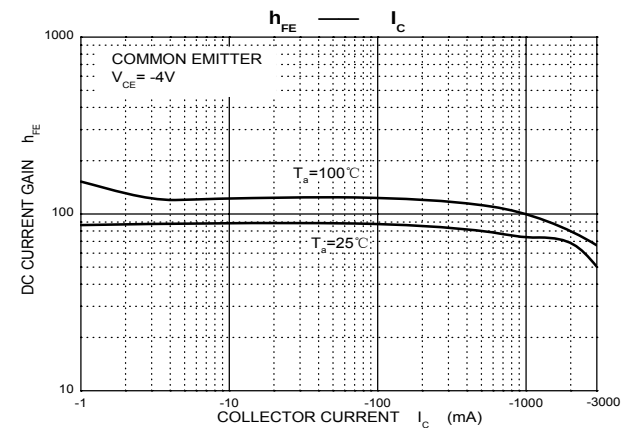
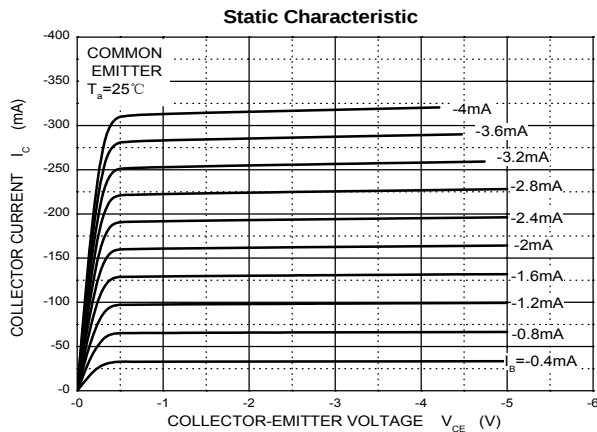
ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage TIP42 TIP42A TIP42B TIP42C	V _{(BR)CBO}	I _C = -1mA, I _E =0	-40 -60 -80 -100		V
Collector-emitter breakdown voltage TIP42 TIP42A TIP42B TIP42C	V _{(BR)CEO} *	I _C = -30mA, I _B =0	-40 -60 -80 -100		V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E = -1mA, I _C =0	-5		V
Collector cut-off current TIP42 TIP42A TIP42B TIP42C	I _{CBO}	V _{CB} =-40V, I _E =0 V _{CB} =-60V, I _E =0 V _{CB} =-80V, I _E =0 V _{CB} =-100V, I _E =0		-0.4	mA
Collector cut-off current TIP42/42A TIP42B/42C	I _{CEO}	V _{CE} = -30V, I _B = 0 V _{CE} = -60V, I _B = 0		-0.7	mA
Emitter cut-off current	I _{EBO}	V _{EB} =-5V, I _C =0		-1	mA
DC current gain	h _{FE(1)}	V _{CE} =-4V, I _C =-0.3A	30		
	h _{FE(2)}	V _{CE} =-4 V, I _C = -3A	15	75	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =-6A, I _B =-0.6A		-1.5	V
Base-emitter voltage	V _{BE}	V _{CE} =-4V, I _C =-6A		-2	V
Transition frequency	f _T	V _{CE} =-10V, I _C =-0.5	3		MHz

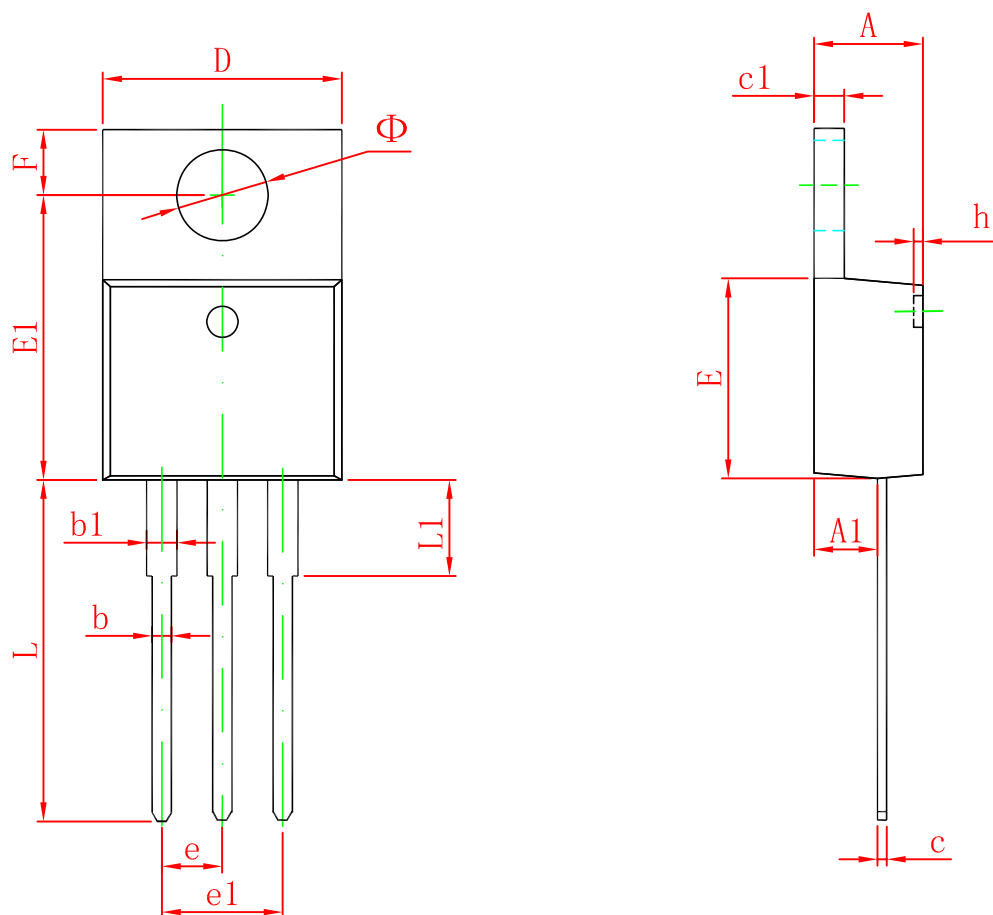
* Pulse test

Typical Characteristics

TIP42C



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
Φ	3.735	3.935	0.147	0.155