

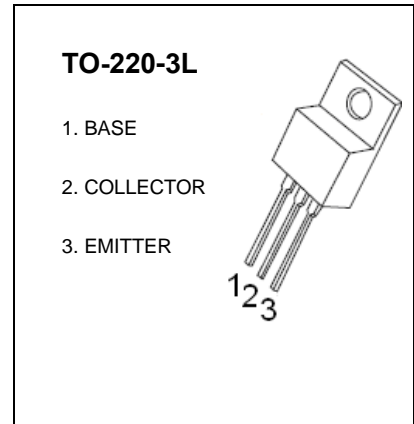


TO-220-3L Plastic-Encapsulate Transistors

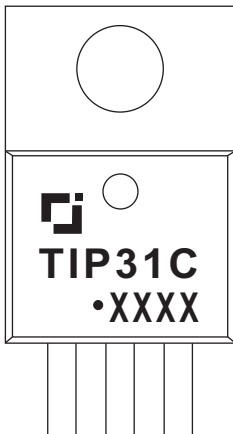
TIP31C TRANSISTOR (NPN)

FEATURES

- Medium Power Linear Switching Applications

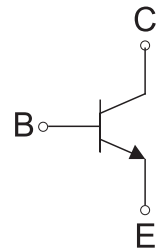


MARKING



TIP31C=Device code
 Solid dot=Green moldinn compound device,
 if none,the normal device
 XXXX=Code

Equivalent Circuit



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

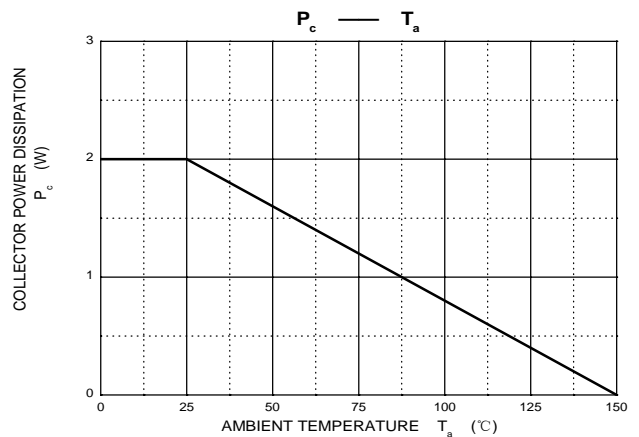
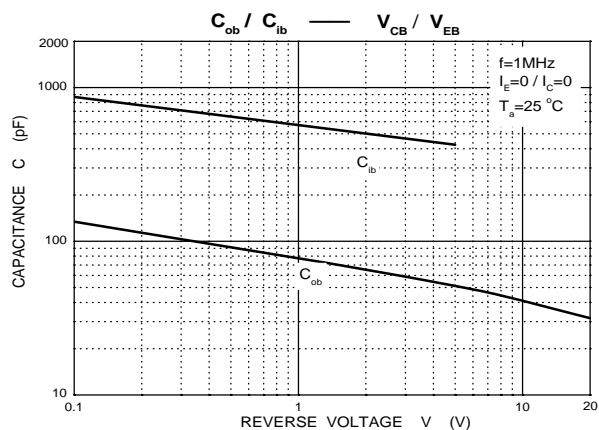
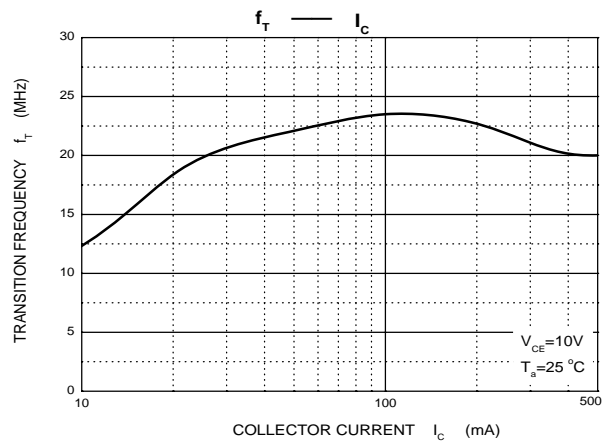
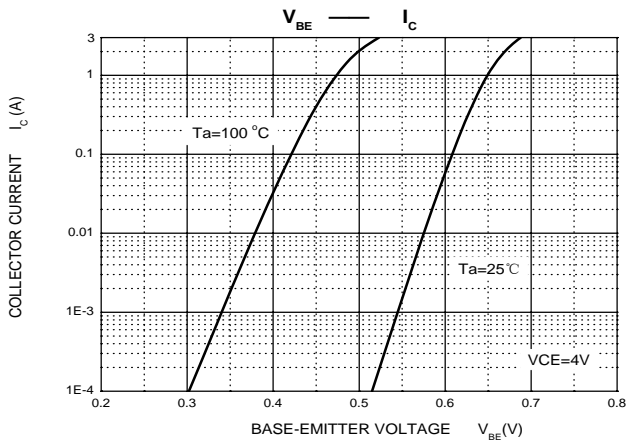
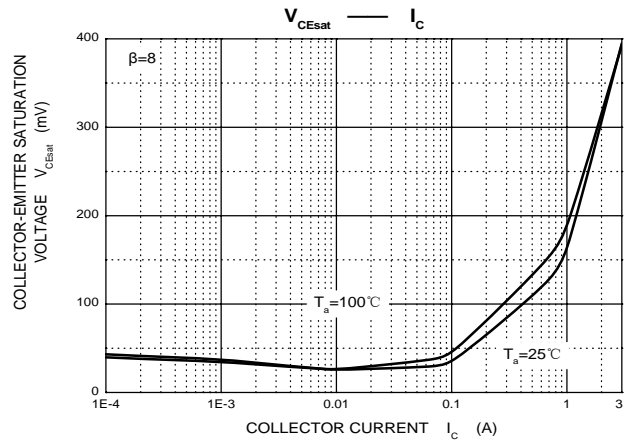
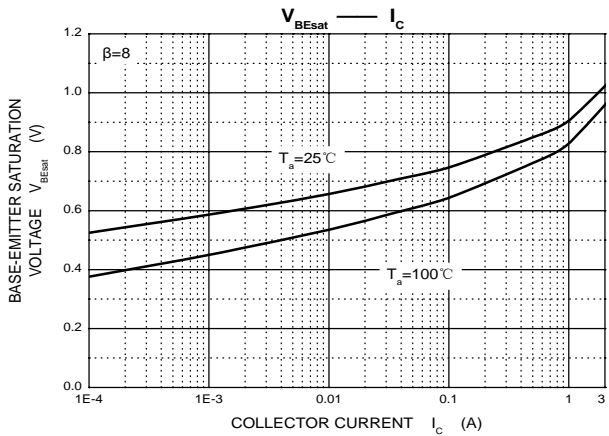
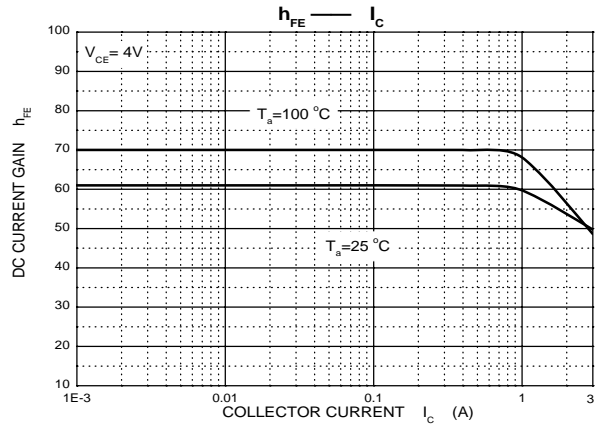
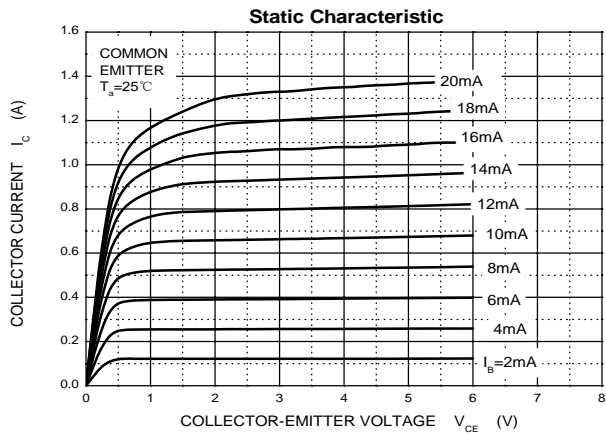
Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	100	V
V _{CEO}	Collector-Emitter Voltage	100	V
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current	3	A
P _C	Collector Power Dissipation	2	W
R _{θJA}	Thermal Resistance from Junction to Ambient	62.5	°C/W
T _j , T _{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C unless other wise specified)

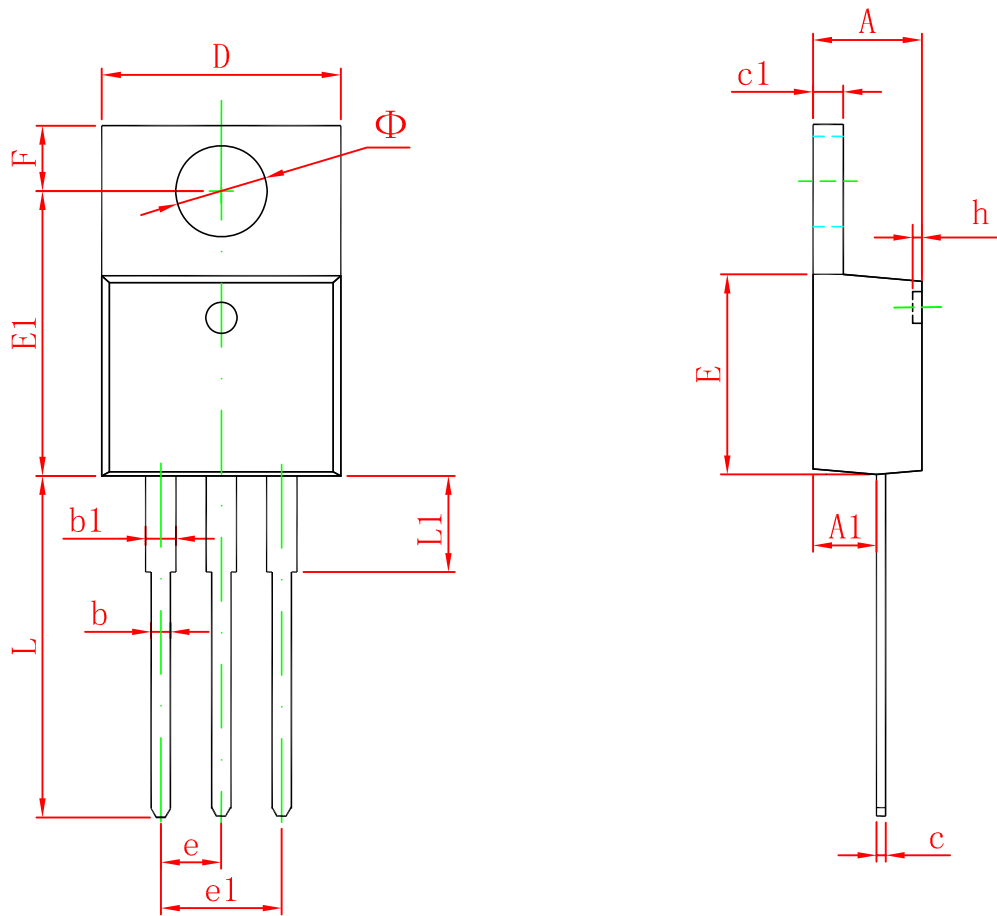
Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=1\text{mA}, I_E=0$	100		V
Collector-emitter breakdown voltage *	$V_{CEO(sus)}$	$I_C=30\text{mA}, I_B=0$	100		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=1\text{mA}, I_C=0$	5		V
Collector cut-off current	I_{CBO}	$V_{CB}=100\text{V}, I_E=0$		200	μA
Collector cut-off current	I_{CEO}	$V_{CE}=60\text{V}, I_B=0$		0.3	mA
Emitter cut-off current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$		1	mA
DC current gain	$h_{FE(1)}$	$V_{CE}=4\text{V}, I_C=1\text{A}$	25		
	$h_{FE(2)}$	$V_{CE}=4\text{V}, I_C=3\text{A}$	15	75	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=3\text{A}, I_B=0.375\text{A}$		1.2	V
Base-emitter voltage	$V_{BE(on)}$	$V_{CE}=4\text{V}, I_C=3\text{A}$		1.8	V
Transition frequency	f_T	$V_{CE}=10\text{V}, I_C=0.5\text{A}$			MHz

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

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
Φ	3.735	3.935	0.147	0.155

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Bipolar Transistors - BJT category](#):

Click to view products by [Changjing Electronics Technology manufacturer](#):

Other Similar products are found below :

[619691C](#) [MCH4017-TL-H](#) [MMBT-2369-TR](#) [BC546/116](#) [BC557/116](#) [BSW67A](#) [NJVMJD148T4G](#) [NTE123AP-10](#) [NTE153MCP](#) [NTE16](#)
[NTE195A](#) [NTE92](#) [C4460](#) [2N4401-A](#) [2N6728](#) [2SA1419T-TD-H](#) [2SA2126-E](#) [2SB1204S-TL-E](#) [2SC2712S-GR,LF](#) [2SC5488A-TL-H](#)
[2SD2150T100R](#) [SP000011176](#) [2N2907A](#) [2N3904-NS](#) [2N5769](#) [2SC2412KT146S](#) [2SD1816S-TL-E](#) [CPH6501-TL-E](#) [MCH4021-TL-E](#)
[MJE340](#) [US6T6TR](#) [NJL0281DG](#) [732314D](#) [CPH3121-TL-E](#) [CPH6021-TL-H](#) [873787E](#) [IMZ2AT108](#) [UMX21NTR](#) [MCH6102-TL-E](#)
[NJL0302DG](#) [2N3583](#) [30A02MH-TL-E](#) [TN6717A](#) [NSV40301MZ4T1G](#) [NTE13](#) [NTE26](#) [NTE282](#) [NTE323](#) [NTE350](#) [NTE81](#)