



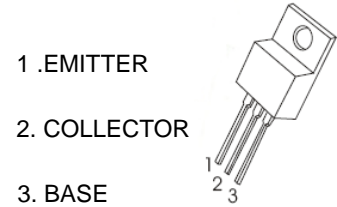
TO-220-3L

FEATURES

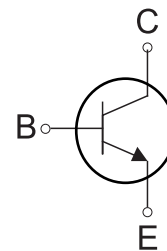
- Power Dissipation

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

Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	40	V
V _{CE0}	Collector-Emitter Voltage	30	V
V _{EBO}	Emitter-Base Voltage	6	V
I _C	Collector Current -Continuous	3	A
P _C	Collector Power Dissipation	2	W
T _J , T _{stg}	Operation Junction and Storage Temperature Range	-55-150	°C



Equivalent Circuit



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

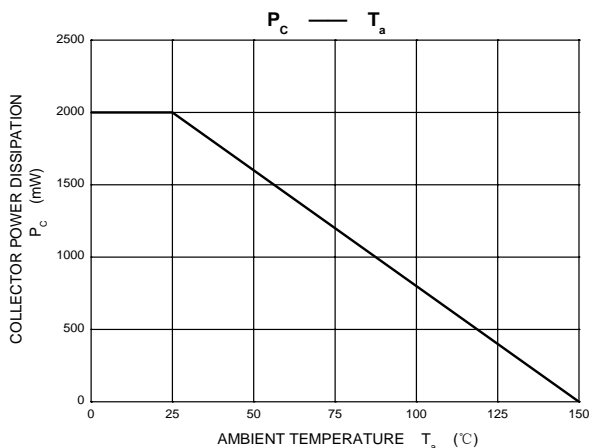
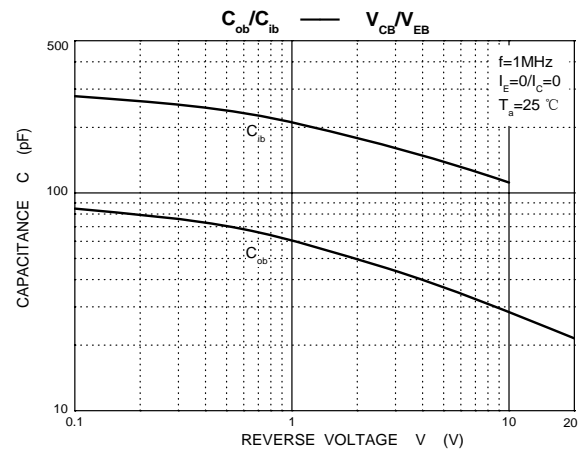
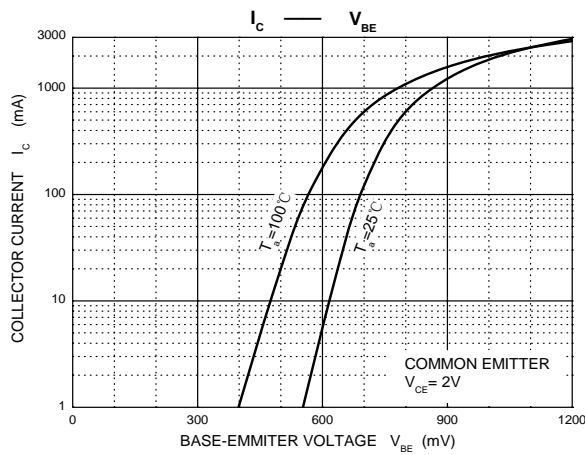
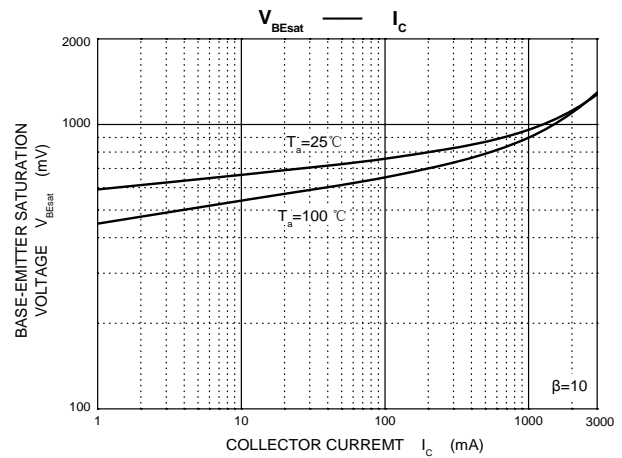
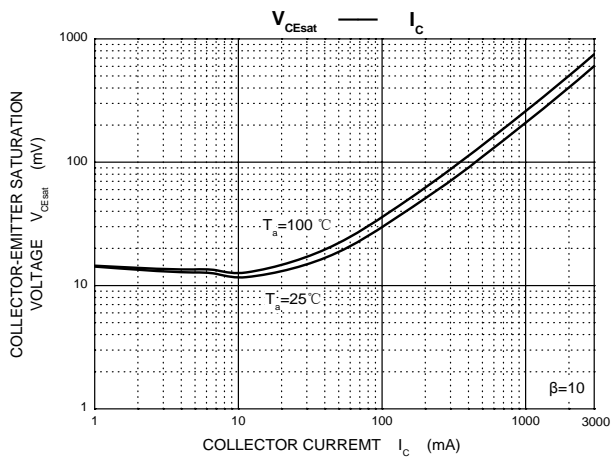
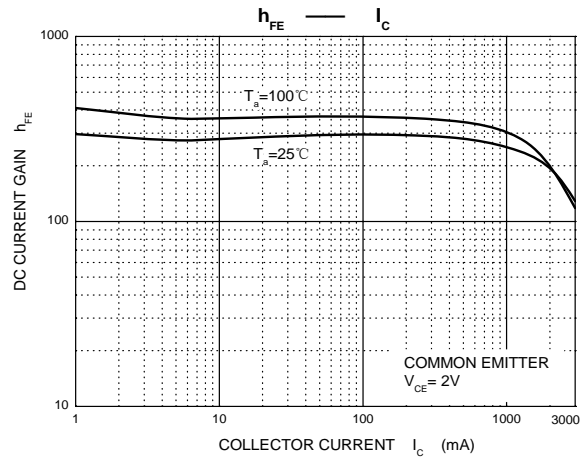
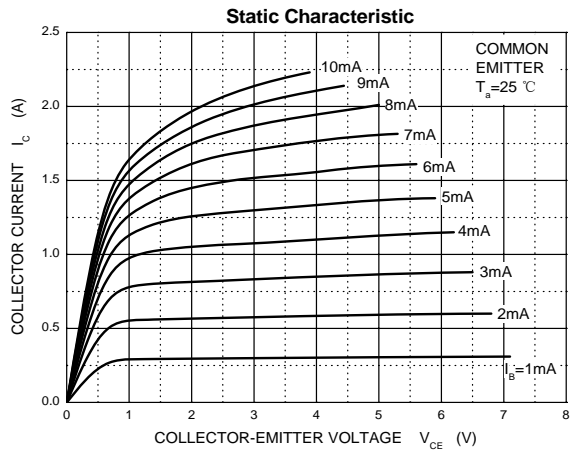
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V(BR) _{CBO}	I _C = 100μA, I _E =0	40			V
Collector-emitter breakdown voltage	V(BR) _{CEO}	I _C = 10mA, I _B =0	30			V
Emitter-base breakdown voltage	V(BR) _{EBO}	I _E = 100μA, I _C =0	6			V
Collector cut-off current	I _{CBO}	V _{CB} = 40 V, I _E =0			1	μA
Collector cut-off current	I _{CEO}	V _{CE} = 30 V, I _B =0			10	μA
Emitter cut-off current	I _{EBO}	V _{EB} = 6 V, I _C =0			1	μA
DC current gain	h _{FE}	V _{CE} = 2 V, I _C = 1A	60		400	
Collector-emitter saturation voltage	V _{CE (sat)}	I _C = 2A, I _B = 0.2 A			0.5	V
Base-emitter saturation voltage	V _{BE (sat)}	I _C = 2A, I _B = 0.2 A			1.5	V
Transition frequency	f _T	V _{CE} = 5V, I _C =0.1A f =10MHZ		90		MHz

CLASSIFICATION OF h_{FE}

Rank	R	O	Y	GR
Range	60-120	100-200	160-320	200-400

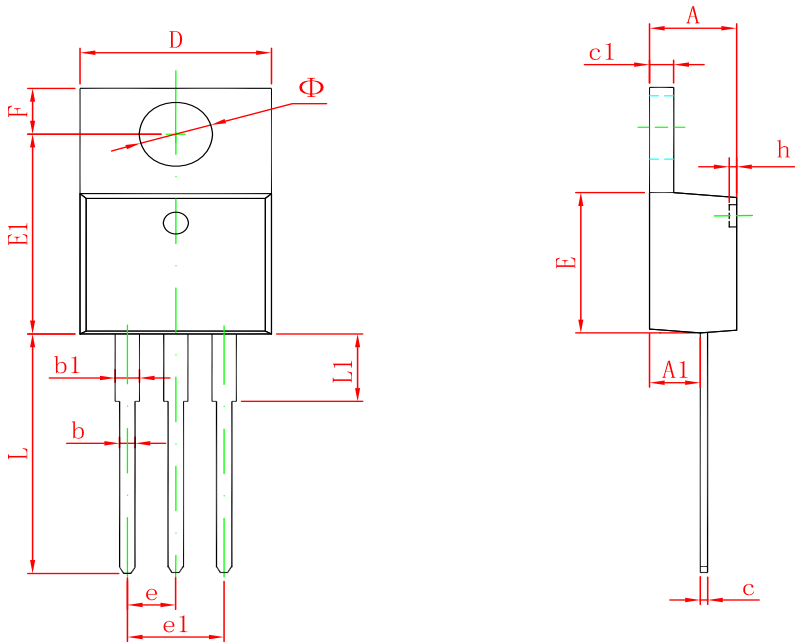


Typical Characteristics





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

Package	Packing	Box Size L×W×H(mm)	Quatity(pcs/box)	Carton Size L×W×H(mm)	Quatity(pcs/carton)
TO-220	50pcs/Tube	560×150×50	1000	570×290×180	5000