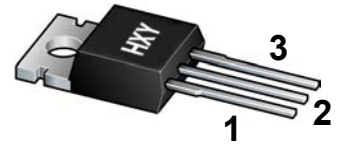




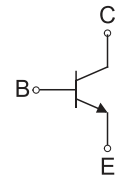
Features

- Power switching applications



1.BASE
2.COLLECTOR
3.EMITTER

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Maximum Ratings (Ta=25°C unless otherwise noted)

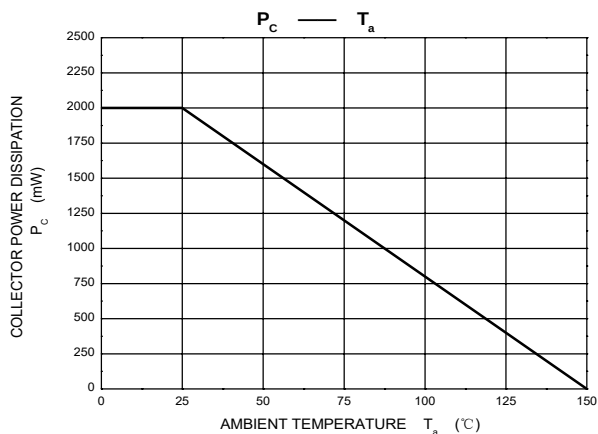
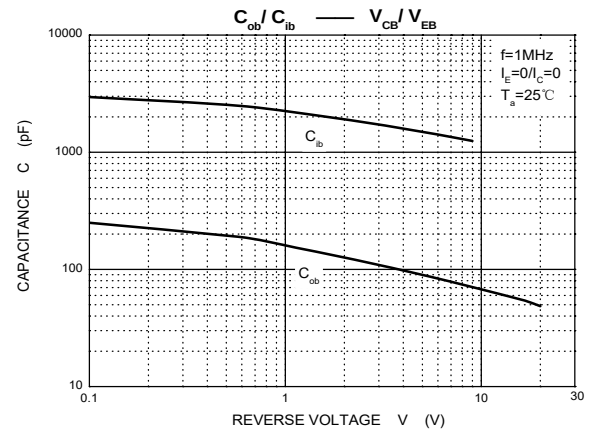
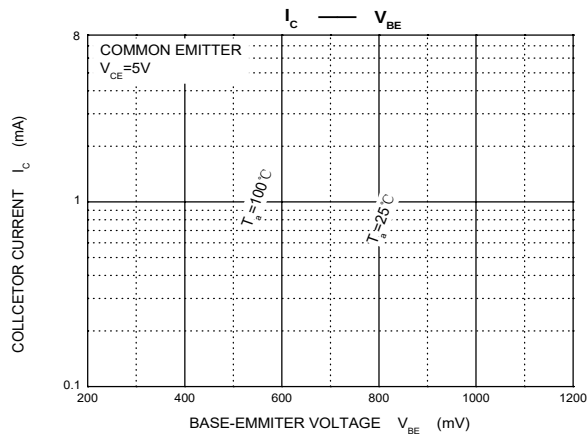
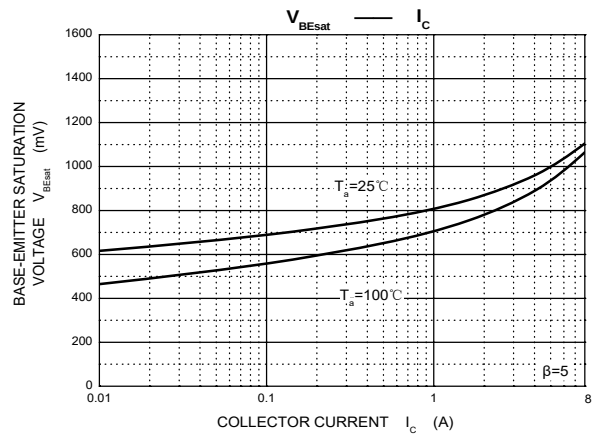
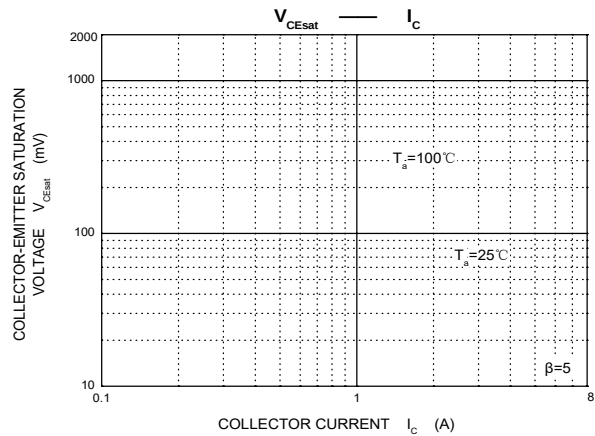
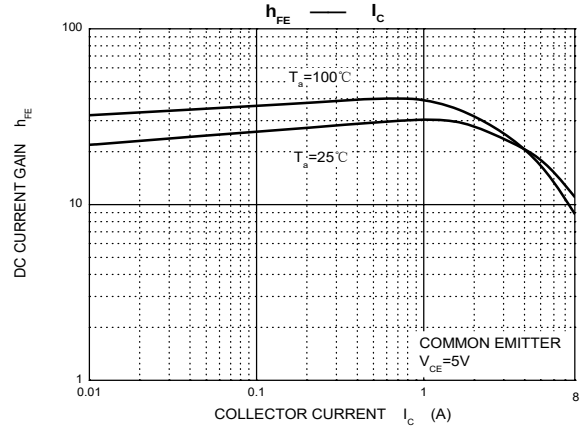
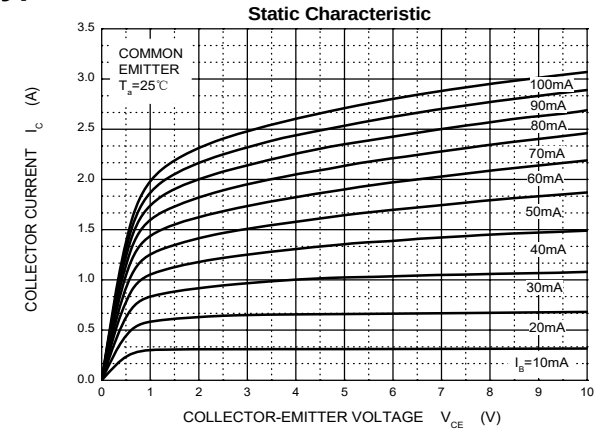
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	700	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	9	V
I_C	Collector Current	8	A
P_C	Collector Power Dissipation	2	W
P_C	Collector Power Dissipation($T_C=25^\circ\text{C}$)	80	W
$R_{\theta JC}$	Thermal Resistance from Junction to Case	1.56	$^\circ\text{C/W}$
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	$^\circ\text{C}$

Electrical Characteristics(Ta=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=1\text{mA}, I_E=0$	700		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}, I_B=0$	400		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=1\text{mA}, I_C=0$	9		V
Collector cut-off current	I_{CBO}	$V_{CB}=700\text{V}, I_E=0$		100	μA
Collector cut-off current	I_{CEO}	$V_{CE}=400\text{V}, I_B=0$		100	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=9\text{V}, I_C=0$		100	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=5\text{V}, I_C=2\text{A}$	10		
	$h_{FE(2)}$	$V_{CE}=5\text{V}, I_C=8\text{A}$	5		
Collector-emitter saturation voltage	$V_{CE(sat)1}$	$I_C=2\text{A}, I_B=0.4\text{A}$		1	V
	$V_{CE(sat)2}$	$I_C=5\text{A}, I_B=1\text{A}$		2	V
	$V_{CE(sat)3}$	$I_C=8\text{A}, I_B=2\text{A}$		3	V
Base-emitter saturation voltage	$V_{BE(sat)1}$	$I_C=2\text{A}, I_B=0.4\text{A}$		1.2	V
	$V_{BE(sat)2}$	$I_C=5\text{A}, I_B=1\text{A}$		1.6	V
Storage time	t_S	$I_C=500\text{mA}$ (UI9600)	3	6	μs
Fall time	t_f	$I_C=500\text{mA}$ (UI9600)		0.5	μs
Transition frequency	f_T	$V_{CE}=10\text{V}, I_C=0.5\text{A}, f=1\text{MHz}$	4		MHz

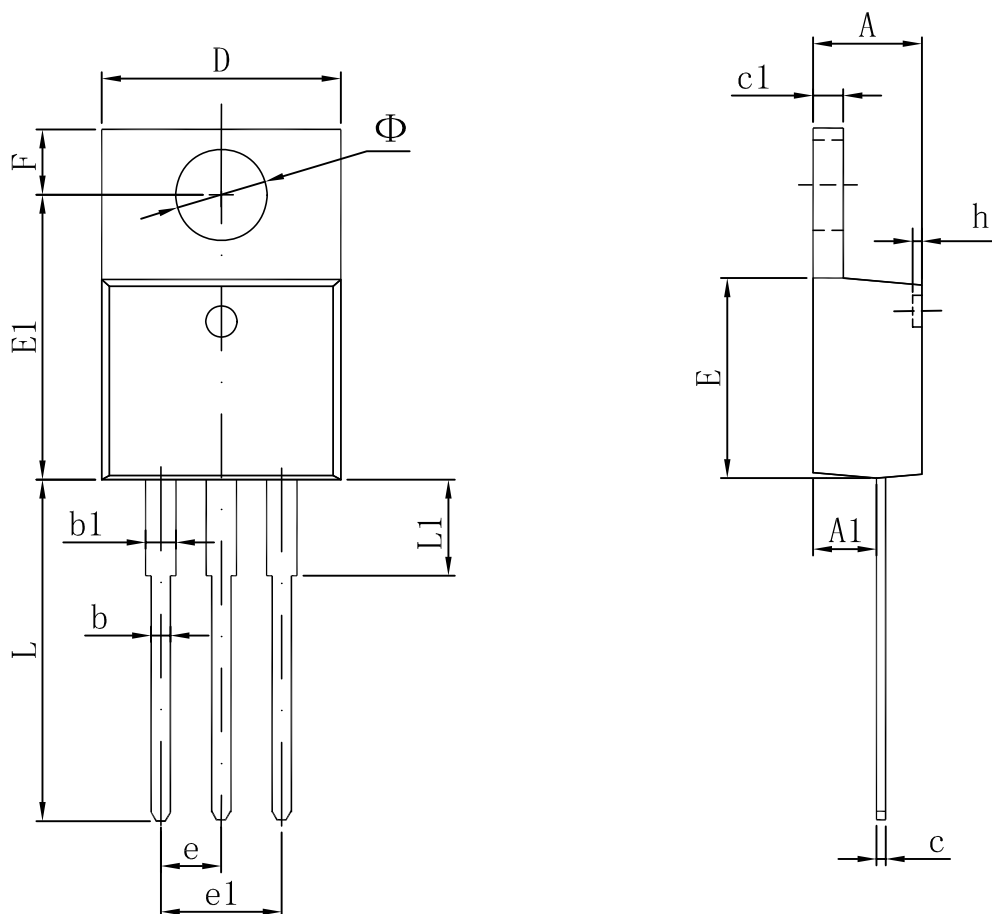


Typical Characteristics





Package Information
TO-220



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



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