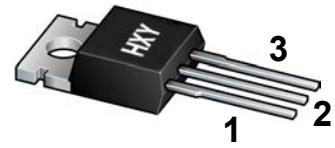




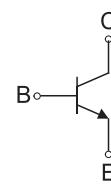
## Features

- Power switching applications



1.BASE  
2.COLLECTOR  
3.EMITTER

**TO-220**



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

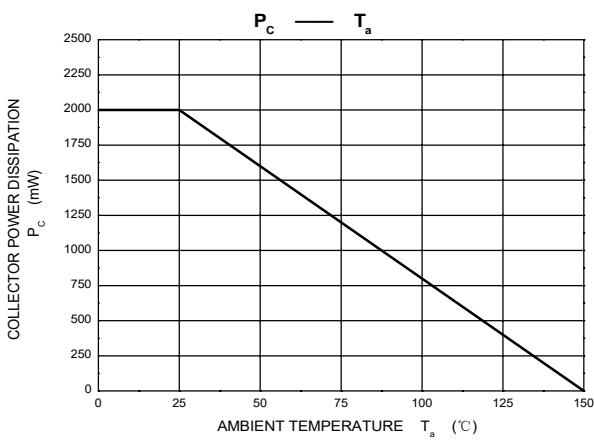
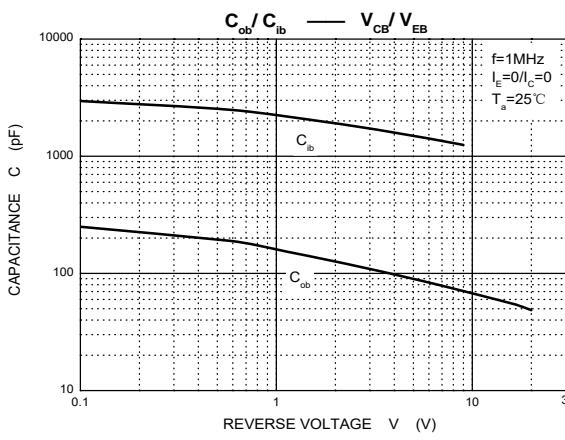
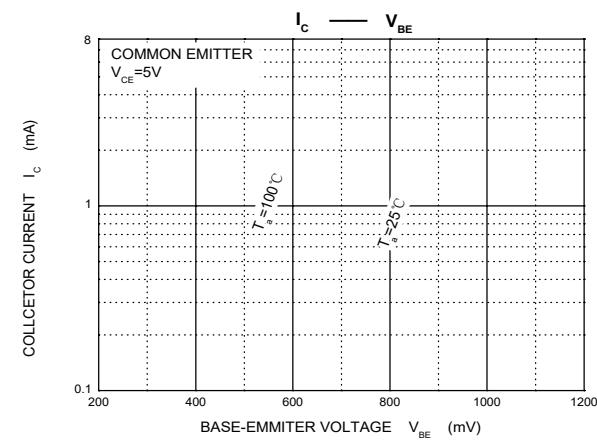
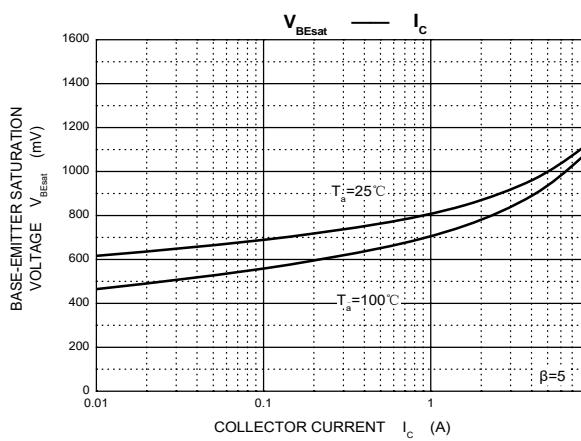
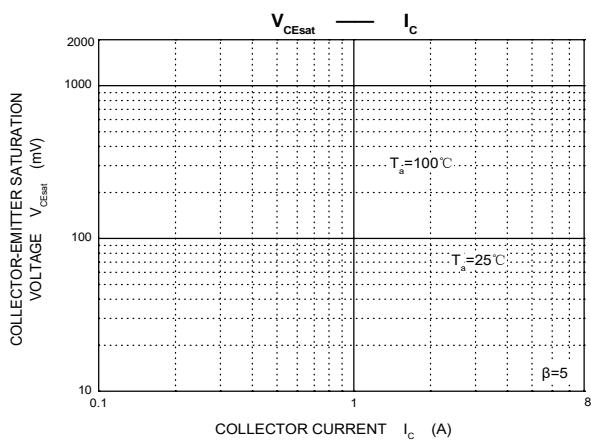
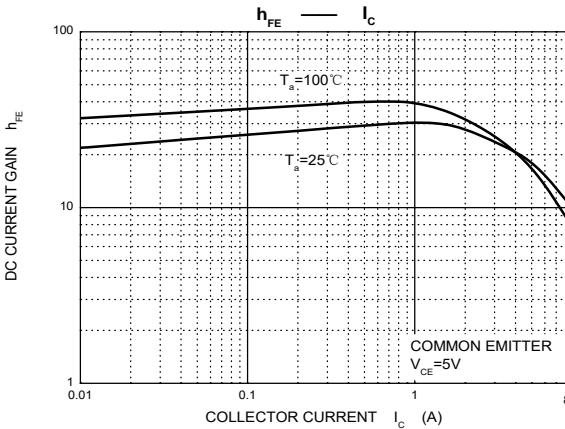
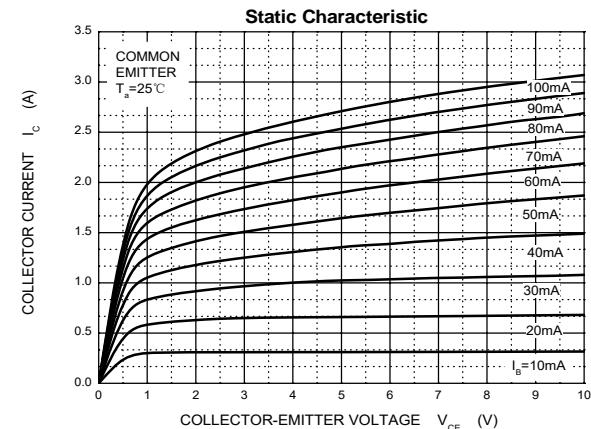
Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	700	V
$V_{CEO}$	Collector-Emitter Voltage	400	V
$V_{EBO}$	Emitter-Base Voltage	9	V
$I_C$	Collector Current	8	A
$P_C$	Collector Power Dissipation	2	W
$P_C$	Collector Power Dissipation( $T_c=25^\circ C$ )	80	W
$R_{\theta JC}$	Thermal Resistance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

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

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

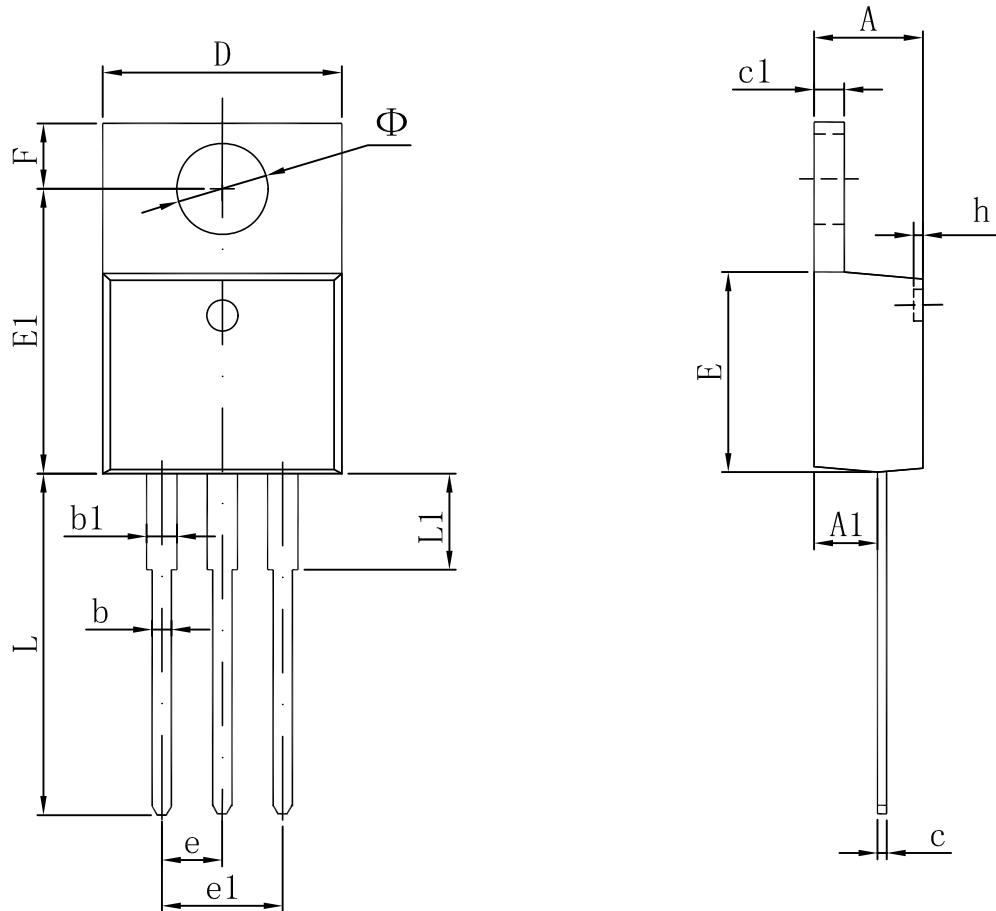


## Typical Characteristics





**Package Information**  
**TO-220**



<b>Symbol</b>	<b>Dimensions In Millimeters</b>		<b>Dimensions In Inches</b>	
	<b>Min</b>	<b>Max</b>	<b>Min</b>	<b>Max</b>
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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