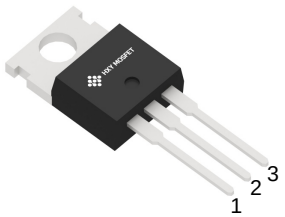
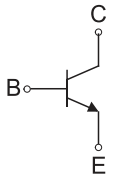
Features

- Medium Power Complementary Silicon Transistors



1.BASE
2.COLLECTOR
3.EMITTER

TO-220



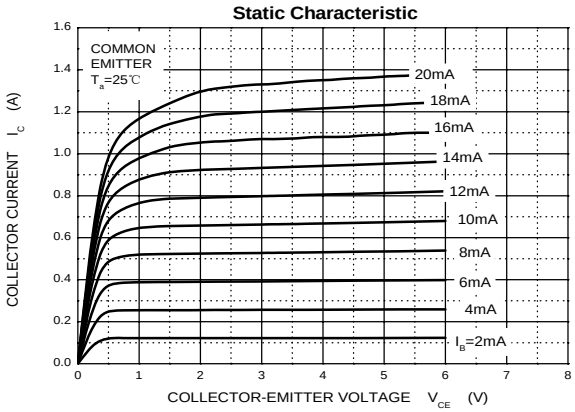
Maximum Ratings (Ta=25°C unless otherwise noted)

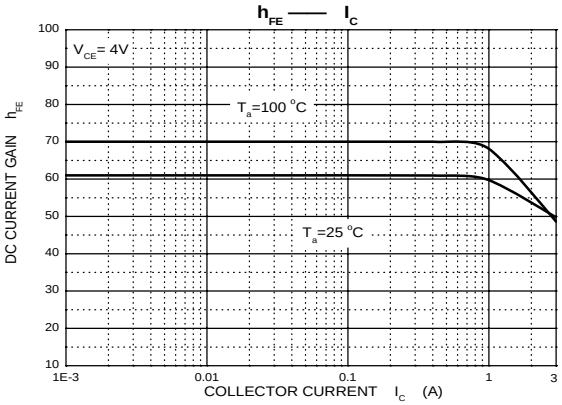
Symbol	Parameter	TIP41A	TIP41B	TIP41C	Unit
V_{CBO}	Collector-Base Voltage	60	80	100	V
V_{CEO}	Collector-Emitter Voltage	60	80	100	V
V_{EBO}	Emitter-Base Voltage	5			V
I_C	Collector Current -Continuous	3			A
P_C	Collector Power Dissipation	2			W
$R_{\Theta JA}$	Thermal Resistance From Junction To Ambient	62.5			℃/W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55~+150			℃

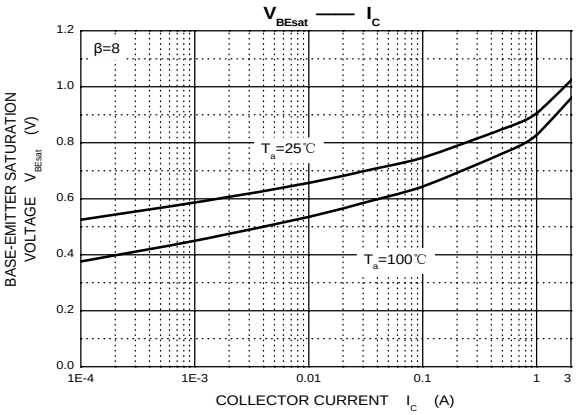
Electrical Characteristics (Ta=25℃ unless otherwise specified)

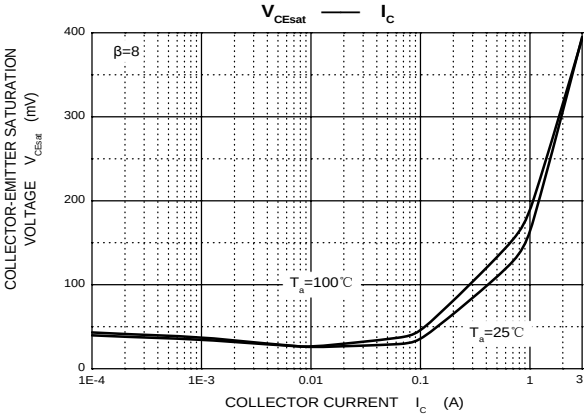
Parameter		Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	**TIP41**	$V_{(BR)CBO}$	I_C= 1mA, I_E=0	40		V
	TIP4 1A			60		
	TIP41B			80		
	TIP41C			100		
Collector-emitter breakdown voltage	**TIP41**	$V_{CEO(sus)}$	I_C= 30mA, I_B=0	40		V
	TIP41A			60		
	TIP41B			80		
	TIP41C			100		
Emitter-base breakdown voltage		$V_{(BR)EBO}$	I_E= 1mA, I_C=0	5		V
Collector cut-off current	**TIP41**	I_{CBO}	V_{CB}=40V, I_E=0		0.3	mA
	TIP4 1A		V_{CB}=60V, I_E=0			
	TIP41B		V_{CB}=80V, I_E=0			
	TIP41C		V_{CB}=100V, I_E=0			
Collector cut-off current	**TIP41/41A**	I_{CEO}	V_{CE}= 30V, I_B= 0		0.7	mA
	TIP41B/41C		V_{CE}= 60V, I_B= 0			
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= 1A	25		
		$h_{FE(2)}$	V_{CE}=4V , I_C= 3A	15	75	
Collector-emitter saturation voltage		$V_{CE(sat)}$	I_C=3A, I_B=0.375A		1.2	V
Base-emitter voltage		$V_{BE(on)}$	V_{CE}= 4V, I_C=3A		1.8	V
Transition frequency		f_T	V_{CE}=10V , I_C=0.5A f =1MHz	3		MHz

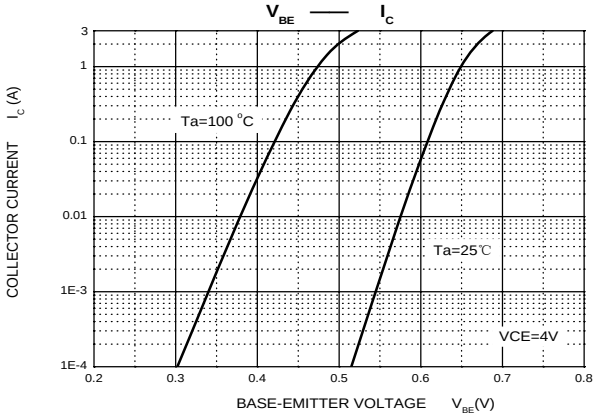
Typical Characteristics

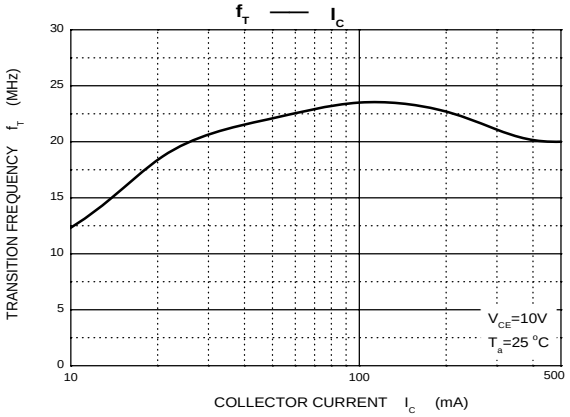


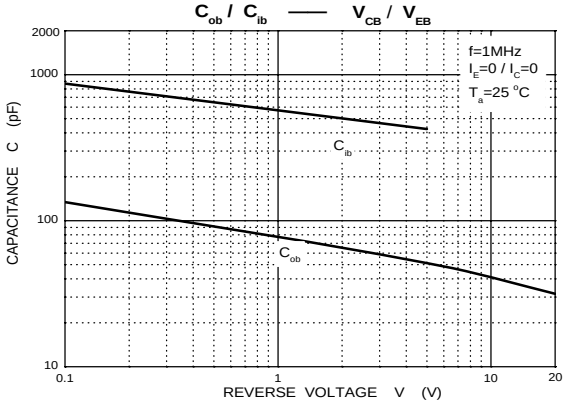


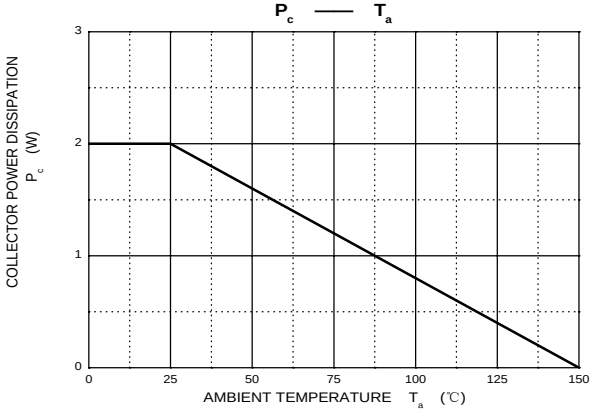




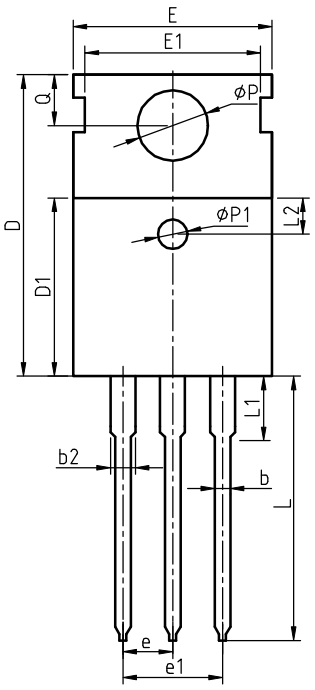


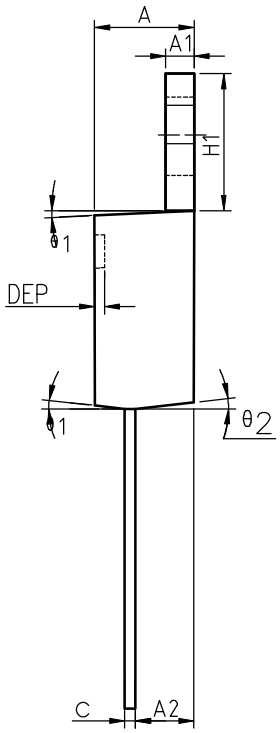


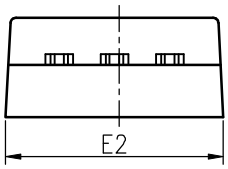




Package Information
TO-220







COMMON DIMENSIONS

SYMBOL	MIN	NOM	MAX	MIN	NOM	MAX
A	4.40	4.57	4.70	0.173	0.180	0.185
A1	1.27	1.30	1.33	0.050	0.051	0.052
A2	2.35	2.40	2.50	0.093	0.094	0.098
b	0.77	0.80	0.90	0.030	0.031	0.035
b2	1.17	1.27	1.36	0.046	0.050	0.054
c	0.48	0.50	0.56	0.019	0.020	0.022
D	15.40	15.60	15.80	0.606	0.614	0.622
D1	9.00	9.10	9.20	0.354	0.358	0.362
DEP	0.05	0.10	0.20	0.002	0.004	0.008
E	9.80	10.00	10.20	0.386	0.394	0.402
E1	-	8.70	-	-	0.343	-
E2	9.80	10.00	10.20	0.386	0.394	0.402
e		2.54	BSC		0.100	BSC
e1		5.08	BSC		0.200	BSC
H1	6.40	6.50	6.60	0.252	0.256	0.260
L	12.75	13.50	13.65	0.502	0.531	0.537
L1	-	3.10	3.30	-	0.122	0.130
L2		2.50	REF		0.098	REF
P	3.50	3.60	3.63	0.138	0.142	0.143
P1	3.50	3.60	3.63	0.138	0.142	0.143
Q	2.73	2.80	2.87	0.107	0.110	0.113
θ1	5°	7°	9°	5°	7°	9°
θ2	1°	3°	5°	1°	3°	5°
θ3	1°	3°	5°	1°	3°	5°

Attention

■ Any and all HUA XUAN YANG ELECTRONICS products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your HUA XUAN YANG ELECTRONICS representative nearest you before using any HUA XUAN YANG ELECTRONICS products described or contained herein in such applications.

■ HUA XUAN YANG ELECTRONICS assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all HUA XUAN YANG ELECTRONICS products described or contained herein.

■ Specifications of any and all HUA XUAN YANG ELECTRONICS products described or contained herein stipulate the performance, characteristics, and functions of the described products in the independent state, and are not guarantees of the performance, characteristics, and functions of the described products as mounted in the customer's products or equipment. To verify symptoms and states that cannot be evaluated in an independent device, the customer should always evaluate and test devices mounted in the customer's products or equipment.

■ HUA XUAN YANG ELECTRONICS CO.,LTD. strives to supply high-quality high-reliability products. However, any and all semiconductor products fail with some probability. It is possible that these probabilistic failures could
give rise to accidents or events that could endanger human lives, that could give rise to smoke or fire, or that could cause damage to other property. When designing equipment, adopt safety measures so that these kinds of accidents or events cannot occur. Such measures include but are not limited to protective circuits and error prevention circuits for safe design, redundant design, and structural design.

■ In the event that any or all HUA XUAN YANG ELECTRONICS products(including technical data, services) described or contained herein are controlled under any of applicable local export control laws and regulations, such products must not be exported without obtaining the export license from the authorities concerned in accordance with the above law.

■ Information (including circuit diagrams and circuit parameters) herein is for example only ; it is not guaranteed for volume production. HUA XUAN YANG ELECTRONICS believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.

■ Any and all information described or contained herein are subject to change without notice due to product/technology improvement, etc. When designing equipment, refer to the "Delivery Specification" for the HUA XUAN YANG ELECTRONICS product that you intend to use.