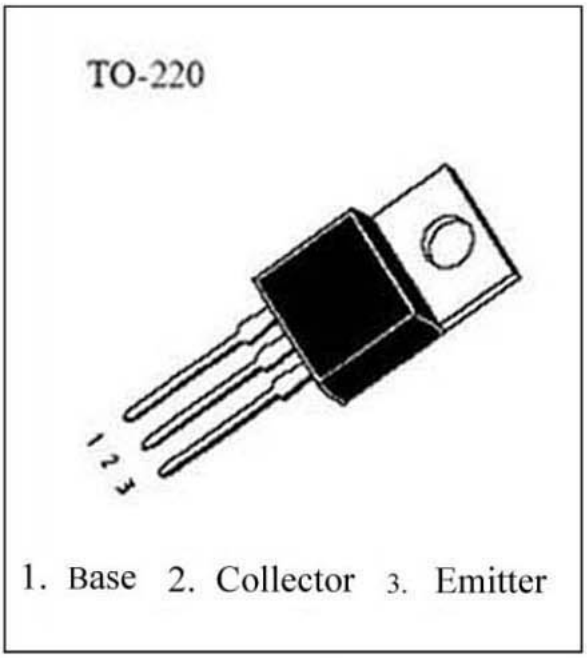
TO-220 Plastic-Encapsulate Transistors

D304X TRANSISTOR(NPN)



ABSOLUTE MAXIMUM RATINGS (Ta=25℃)

Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	700	V
Collector-Emitter Voltage	V_{CEO}	400	V
Emitter-Base voltage	V_{EBO}	9	V
Collector Current	Ic	10	A
Collector Power Dissipation	Pc	80	W
Junction Temperature	Tj	150	℃
Storage Temperature	Tstg	-55~+150	℃

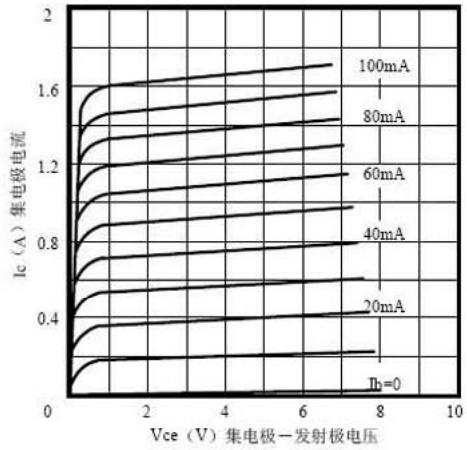
ELECTRICAL CHARACTERISTICS (Ta=25℃ , unless otherwise specified)

Characteristic	Symbol	Test conditions	MIN	TYP	MAX	Unit
Collector -base breakdown voltage	$V_{(BR)CBO}$	Ic=1000μA ,I_E=0	700			V
*Collector -emitter Sustaining Voltage	$V_{(BR)CEO}$	Ic=10mA ,I_B=0	400			V
Emitter cut-off current	I_{EBO}	V_{EB}= 9 V, I_C=0			1000	μA
DC current gain	H_{FE}（1） H_{FE}（2）	V_{CE}=2V,I_C=0.5A V_{CE}=10V,I_C=0.5m A	8 5		40	
Collector -emitter saturation voltage	$V_{CE(sat)}$	IC=1000m A ,IB= 250 m A			1	V
Base-emitter saturation voltage	$V_{BE(sat)}$	IC=1000m A, IB= 250m A			1.2	V
Base Emitter Voltage	$V_{BE(ON)}$	IE= 2000 m A			3	V
Current Gain Bandwidth Product	f_T	VCE=10V,Ic=100mA f =1MHz	5			MHZ
Turn On Time	T_{ON}	Ic=1A,I_{B1}=I_{B2}=0.2A V_{CC}=100V				μs
Storage Time	ts				0.5	μs
Fall Time	tf				0.5	μs

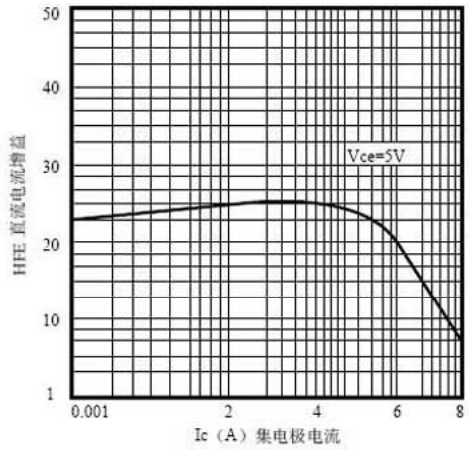
Typical Characteristics

D304X

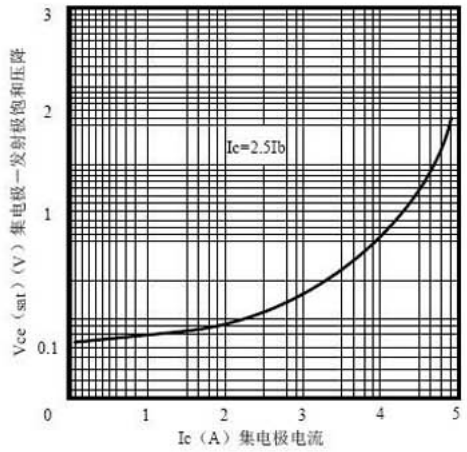
静态输出特性



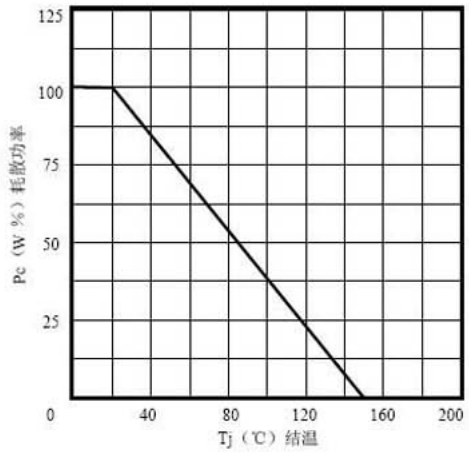
HFE 直流电流增益－ Ic 集电极电流



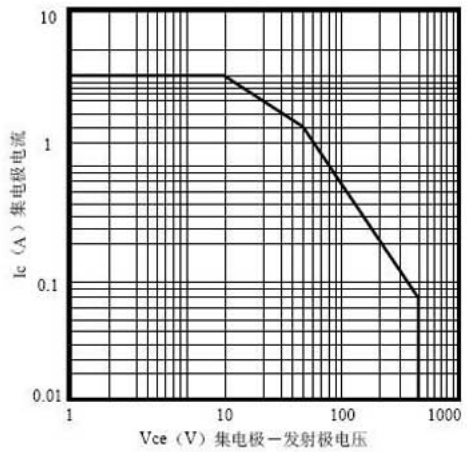
Vce（sat）集电极 - 发射极饱和压降－ Ic 集电极电流



Pc 耗散功率－ Tj 结温

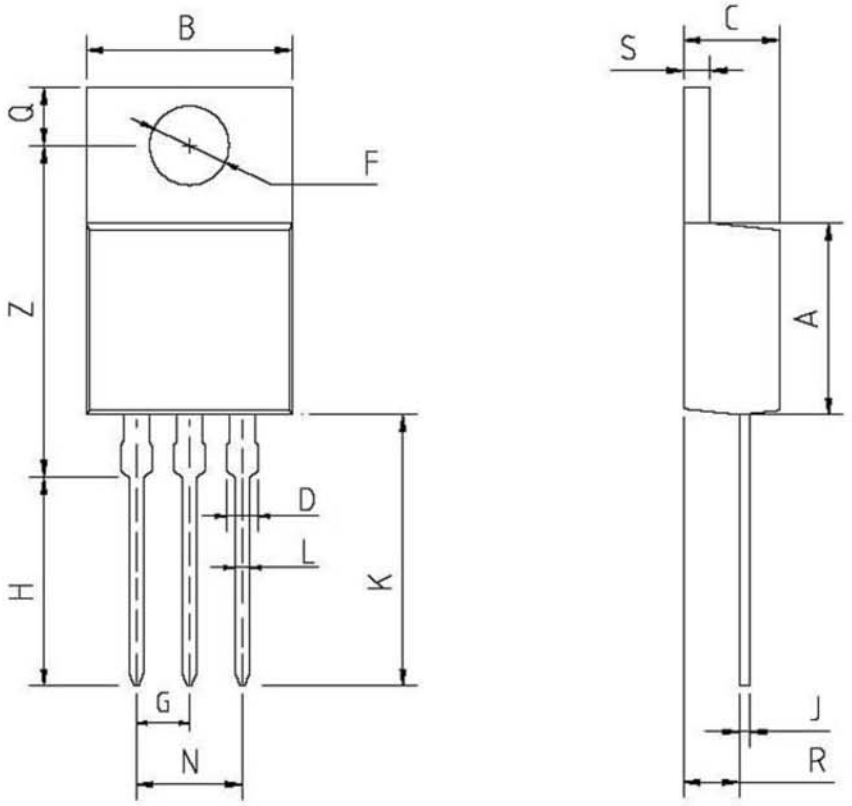


SOA（DC）安全工作区



TO－220 外形尺寸图

单位：mm



符 号	最小值	典型值	最大值
A	8.8	9	9.2
B	9.5	10	10.5
C	4.2	4.5	4.8
D	1.2	1.25	1.3
F	φ3.4	φ3.6	φ3.8
G		2.54	
H	9.5	10	10.5
J	0.43	0.45	0.47
K	13	13.5	14
L	0.75	0.8	0.85
N		5.08	
P			
Q	2.7	2.8	2.9
R	2.7	2.75	2.8
S	1.2	1.25	1.3
Z	15.7	15.9	16.1