

2SA1943 SERIES

用途

- 应用于功率放大器

产品特性

- 高集电极电压: $V_{CEO}=230V$ (min)
 $V_{CEO}=250V$ (min)
- 与 2SC5200 互补
- 推荐用于 100W 音响频率放大器输出电路
- 环保 (RoHS) 产品

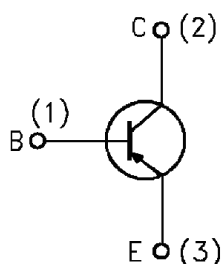
APPLICATIONS

- Power Amplifier Applications

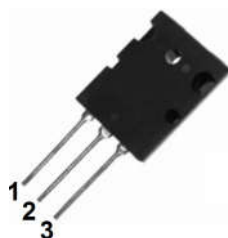
FEATURES

- High collector voltage: $V_{CEO}=230V$ (min)
 $V_{CEO}=250V$ (min)
- Complementary to 2SC5200
- Recommended for 100W audio frequency amplifier output
- RoHS product

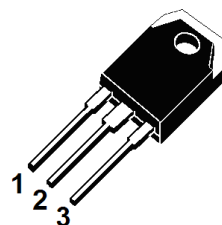
封装 Package



TO-3PL(T)



TO-3P



- 1 基极 BASE 3 发射极 EMITTER
2 集电极 (热沉) COLLECTOR (HEAT SINK)

订货信息 ORDER MESSAGE

订货型号 Order codes	印 记 Marking	无卤素 Halogen Free	封 装 Package	包 装 Packaging	器件重量 Weight
2SA1943	2SA1943	否 NO	TO-3PL(T)	泡沫盒 Foam Box	9.53g(typ)
2SA1943	2SA1943	否 NO	TO-3PL(T)	条管 Tube	9.53g(typ)
2SA1943	A1943	否 NO	TO-3P	条管 Tube	6.03g(typ)
2SA1943A	2SA1943	否 NO	TO-3PL(T)	泡沫盒 Foam Box	9.53g(typ)
2SA1943A	2SA1943	否 NO	TO-3PL(T)	条管 Tube	9.53g(typ)
2SA1943A	A1943	否 NO	TO-3P	条管 Tube	6.03g(typ)
2SA1943B	2SA1943	否 NO	TO-3PL(T)	条管 Tube	9.53g(typ)
2SA1943B	2SA1943	否 NO	TO-3PL(T)	泡沫盒 Foam Box	9.53g(typ)
2SA1943B	A1943	否 NO	TO-3P	条管 Tube	6.03g(typ)
2SA1943C	2SA1943	否 NO	TO-3PL(T)	条管 Tube	9.53g(typ)
2SA1943C	2SA1943	否 NO	TO-3PL(T)	泡沫盒 Foam Box	9.53g(typ)
2SA1943C	A1943	否 NO	TO-3P	条管 Tube	6.03g(typ)

绝对最大额定值 ABSOLUTE RATINGS (Tc=25℃ unless otherwise noted)

项 目 Parameter		符 号 Symbol	数 值 Value				单 位 Unit
			-	A	B	C	
集电极—基极直流电压	Collector- Base Voltage	V _{CBO}	-230	-230	-350	-350	V
集电极—发射极直流电压	Collector- Emitter Voltage	V _{CEO}	-230	-230	-250	-250	V
发射极—基极直流电压	Emitter-Base Voltage	V _{EBO}	-5				V
最大集电极电流	Collector Current	I _C	-15	-15	-16	-16	A
最大基极电流	Base Current	I _B	-1.5		-1.6		A
最大集电极耗散功率	TO-3P Collector Dissipation(Tc=25℃)	P _C	120		150		W
最大集电极耗散功率	TO-3PL Collector Dissipation(Tc=25℃)	P _C	160		200		W
最高结温	Junction Temperature	T _j	150				℃
贮存温度	Storage Temperature	T _{sta}	-65~150				℃

电特性 ELECTRICAL CHARACTERISTIC

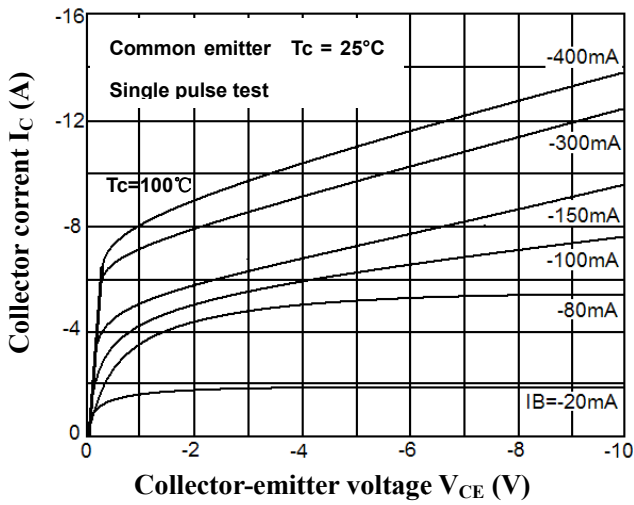
项 目 Parameter	测试条件 Tests conditions	最小值 Value(min)				典型值 Value(typ)	最大值 Value(max)				单位 Unit
		1943	A	B	C		1943	A	B	C	
I _{CBO}	V _{CB} =-230(-300)V, I _E =0	-				-	5.0@-230V	5.0@-300V			μA
I _{EBO}	V _{EB} =-5V, I _C =0	-				-	-5.0			mA	
V _{(BR)CEO}	I _C =-50mA, I _B =0	-230		-250		-	-			V	
hFE	V _{CE} =-5V, I _C =-0.5A	-		75		-	-		135		
	V _{CE} =-5V, I _C =-1.0A	80		75		-	160		135	-	
	V _{CE} =-5V, I _C =-3.0A	-		75		-	-		135		
	V _{CE} =-5V, I _C =-7.0A	35		-		-	-			-	
V _{CE(sat)}	I _C =-5.0A, I _B =-0.5A	-				-	-		-1.0	V	
	I _C =-8.0A, I _B =-0.8A	-				-	-3.0		-	V	
V _{BE}	V _{CE} =-5V, I _C =-7.0A	-				-	-1.5			V	
f _T	V _{CE} =-5V, I _C =-1.0A	10	30	10	30	-	-			MHz	
C _{Ob}	V _{CE} =-10V, I _E =0, f=1MHz	-				240	-			pF	

热特性 THERMAL CHARACTERISTIC

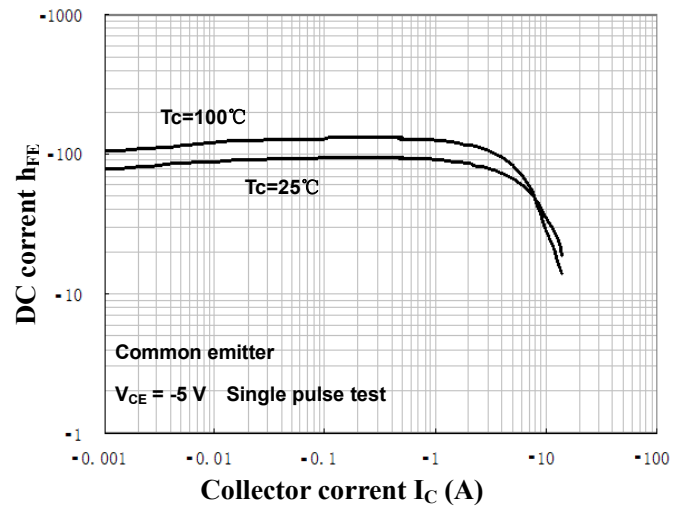
项 目 Parameter	符 号 Symbo	最小值 min	最大值 max	单 位 Unit
2SA1943 2SA1943A				
结到管壳的热阻 Thermal Resistance Junction Case TO-3P	R _{th(j-c)}	-	1.042	℃/W
结到管壳的热阻 Thermal Resistance Junction Case TO-3PL(T)	R _{th(j-c)}	-	0.781	℃/W
2SA1943B 2SA1943C				
结到管壳的热阻 Thermal Resistance Junction Case TO-3P	R _{th(j-c)}	-	0.83	℃/W
结到管壳的热阻 Thermal Resistance Junction Case TO-3PL(T)	R _{th(j-c)}	-	0.625	℃/W

特征曲线 ELECTRICAL CHARACTERISTICS(2SA1943 curves)

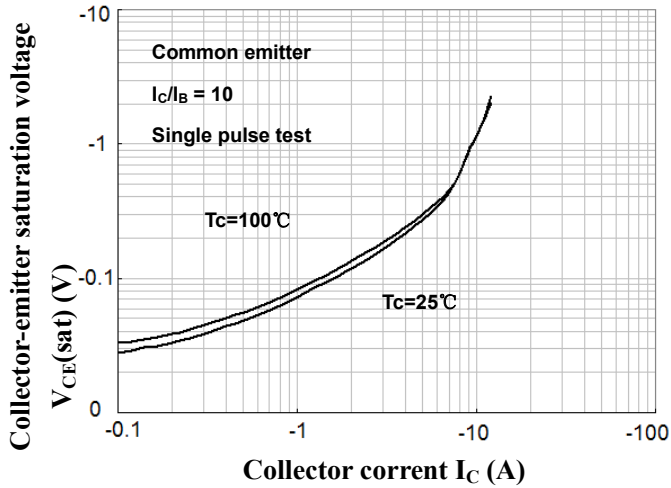
IC-VCE



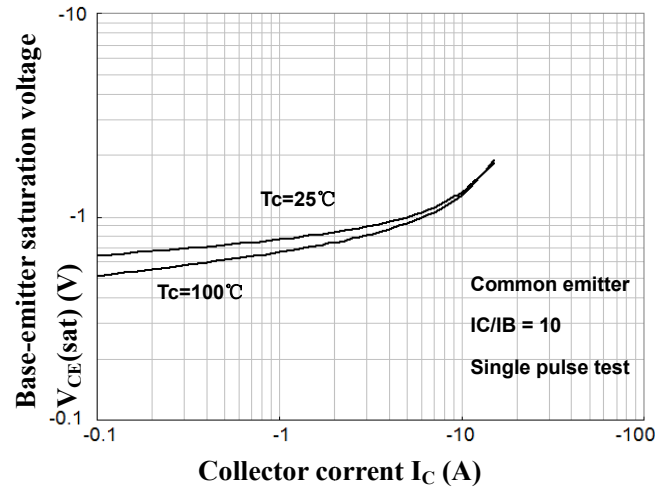
DC Current Gain



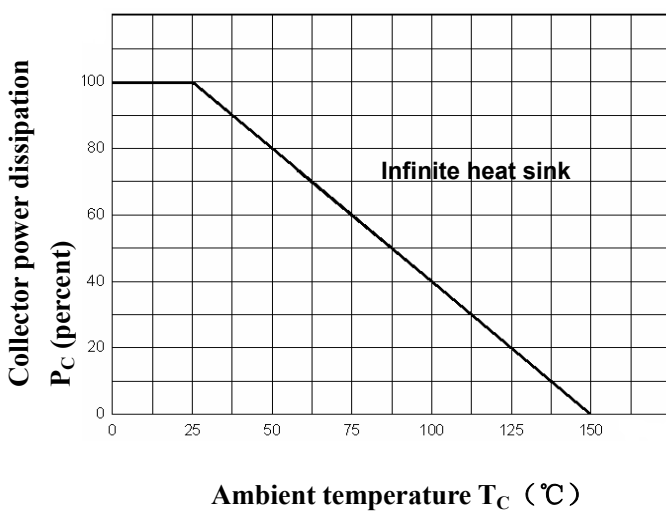
Saturation Voltage



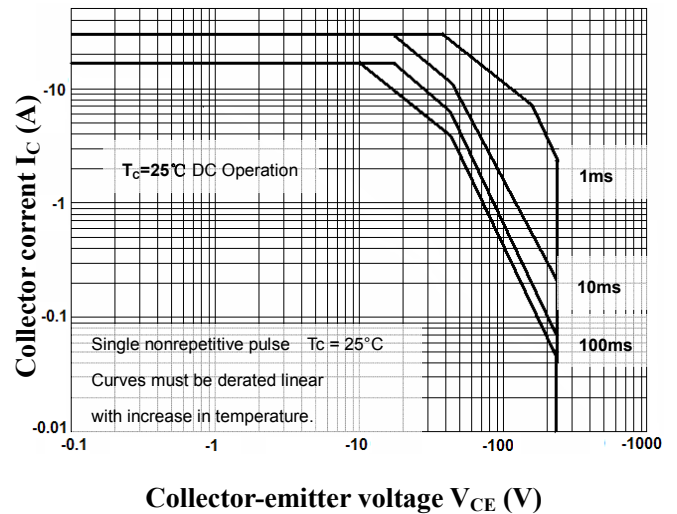
Base-Emitter Voltage



Power Derating

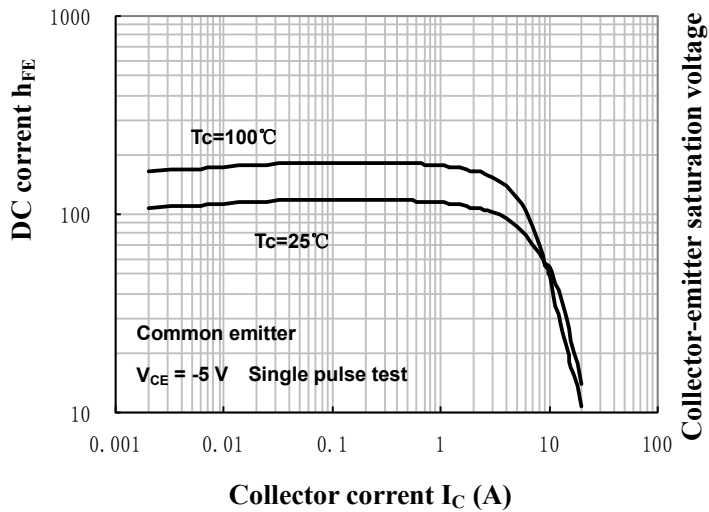


Safe Operating Area

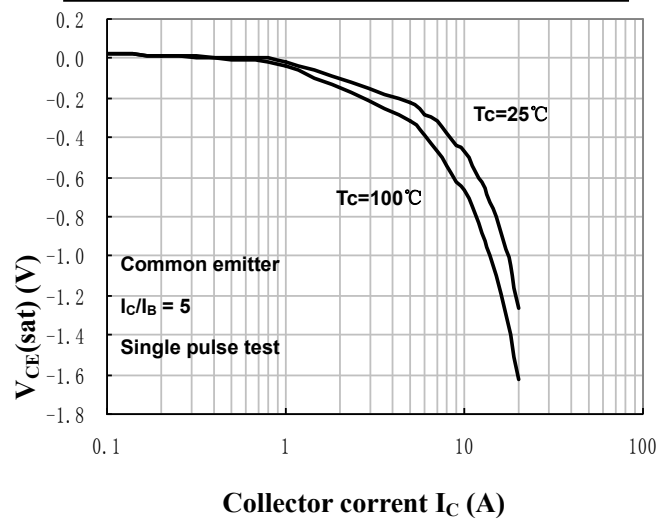


特征曲线 ELECTRICAL CHARACTERISTICS (2SA1943A curves)

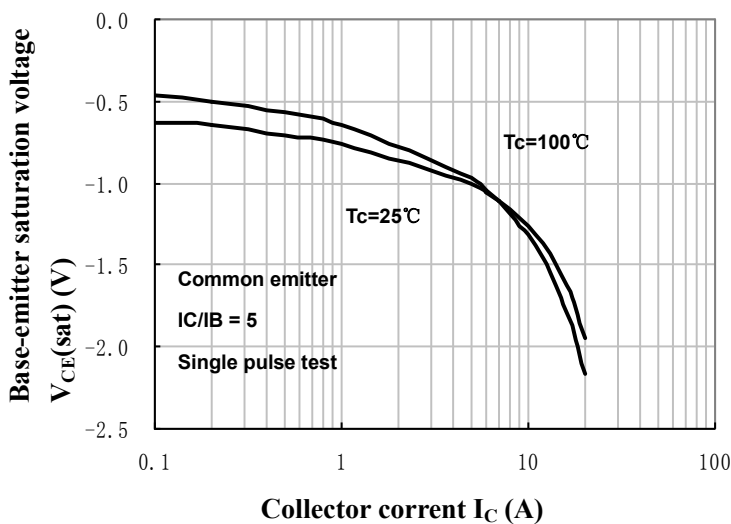
DC Current Gain



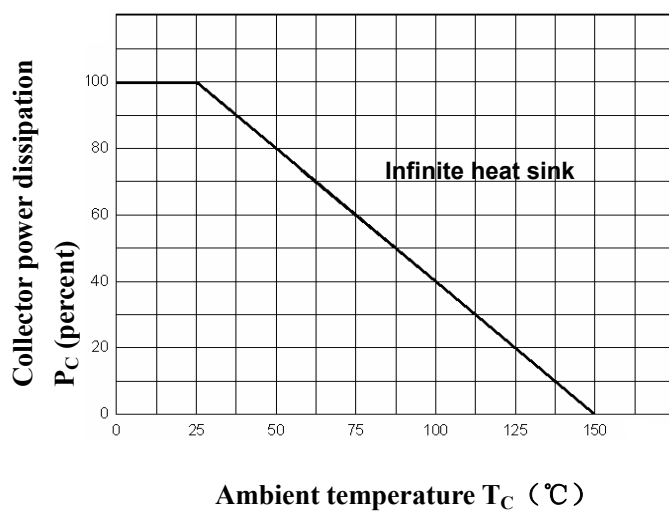
Saturation Voltage



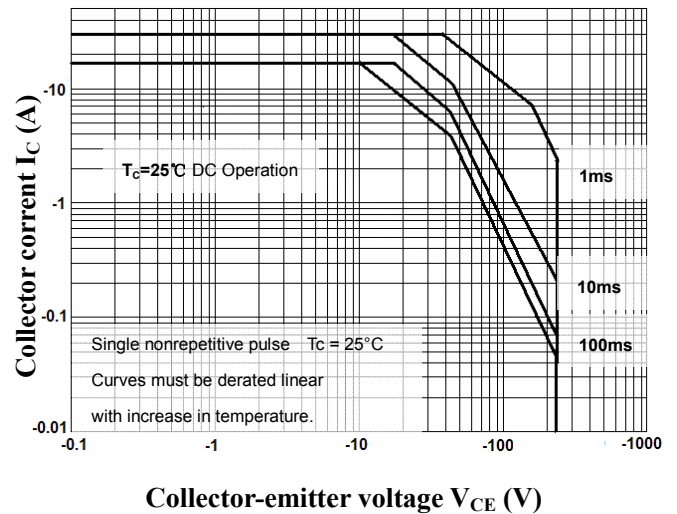
Base-Emitter Voltage



Power Derating

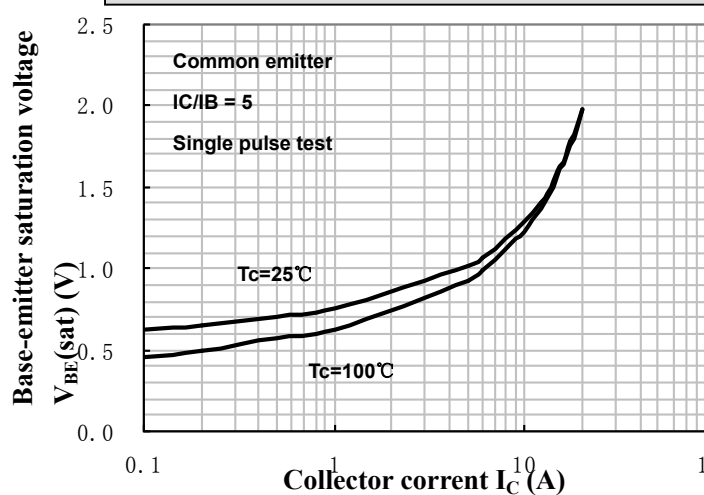


Safe Operating Area

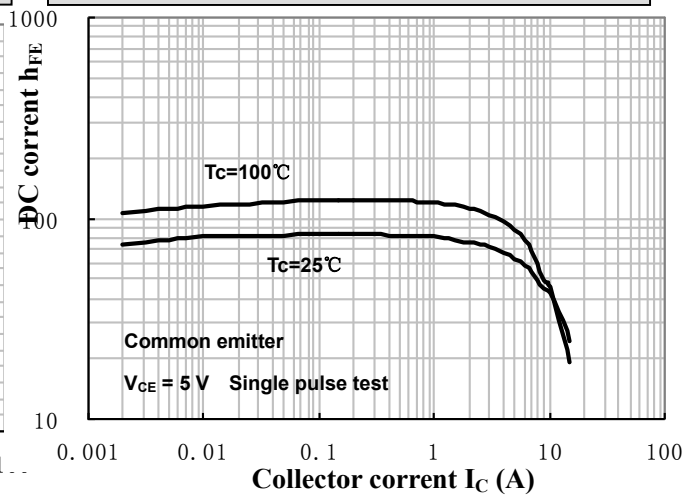


特征曲线 ELECTRICAL CHARACTERISTICS (2SA1943B curves)

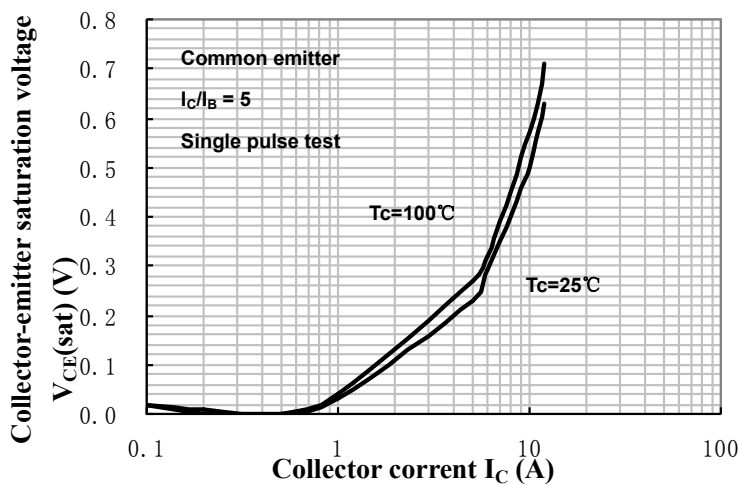
Base-Emitter Voltage



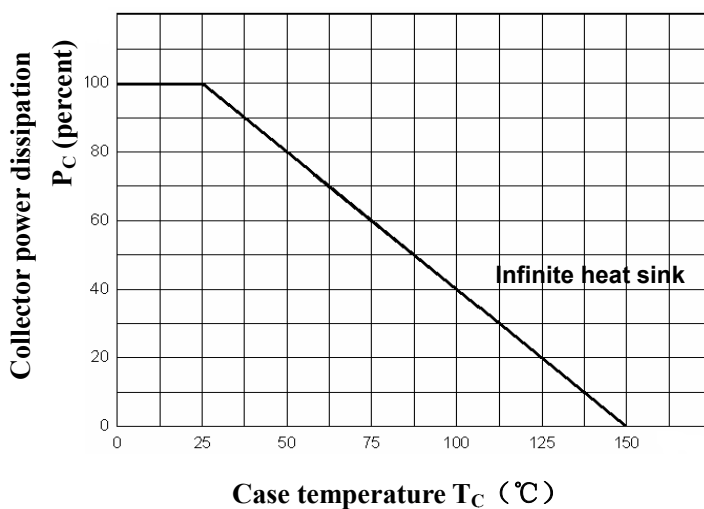
DC Current Gain



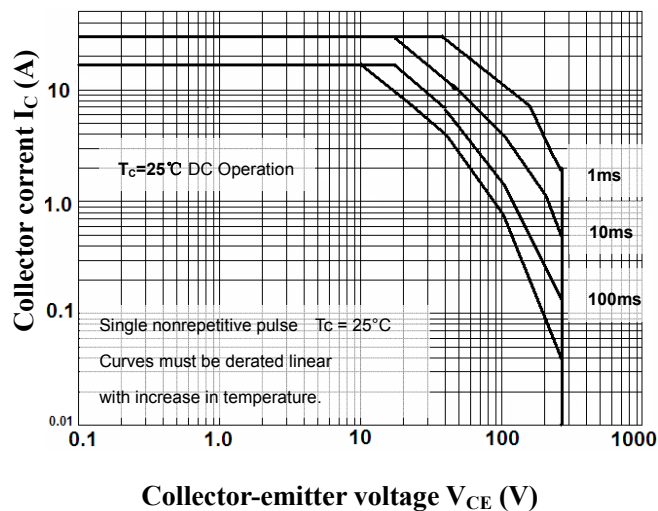
Saturation Voltage



Power Derating

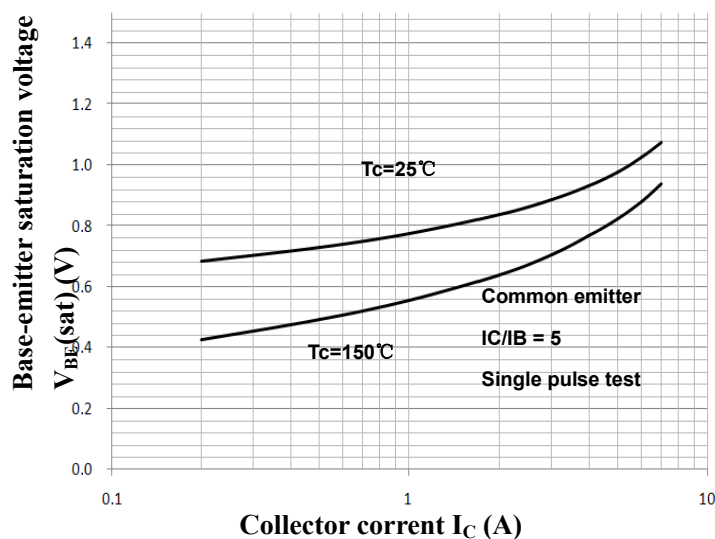


Safe Operating Area

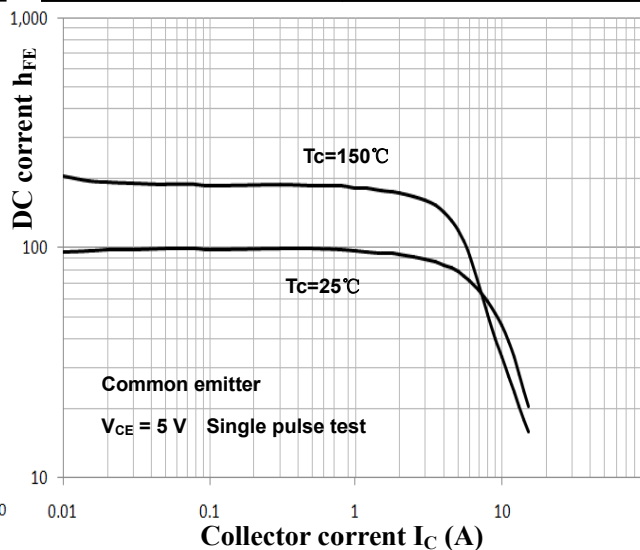


特征曲线 ELECTRICAL CHARACTERISTICS (2SA1943C curves)

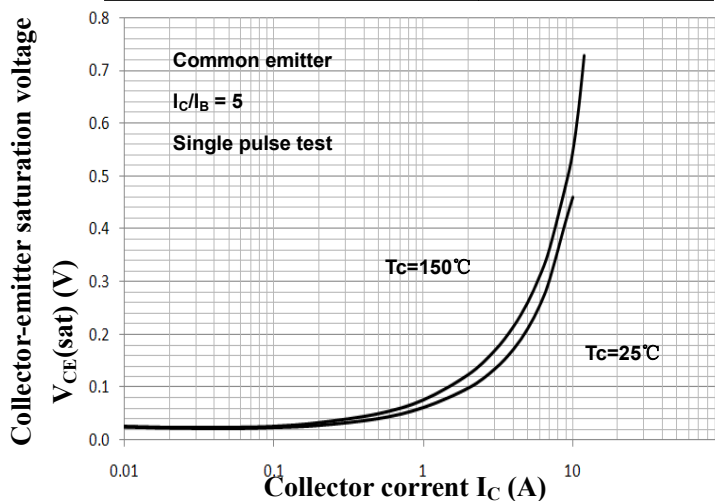
Base-Emitter Voltage



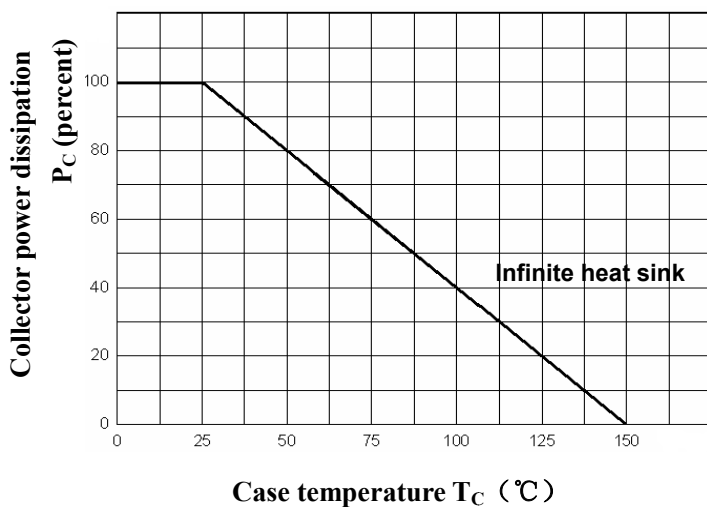
DC Current Gain



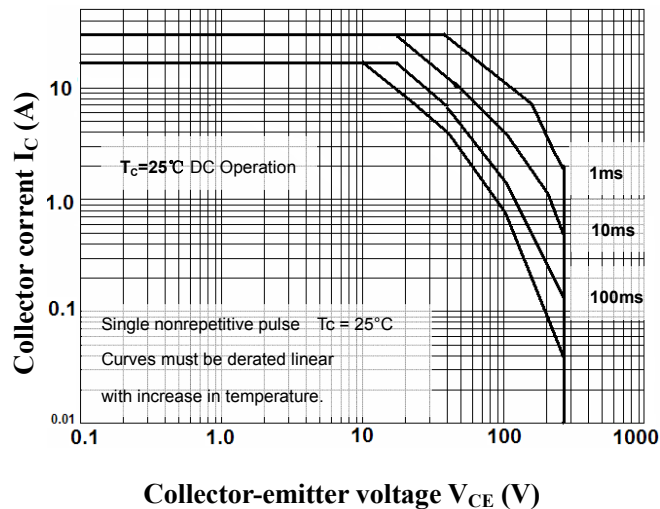
Saturation Voltage



Power Derating

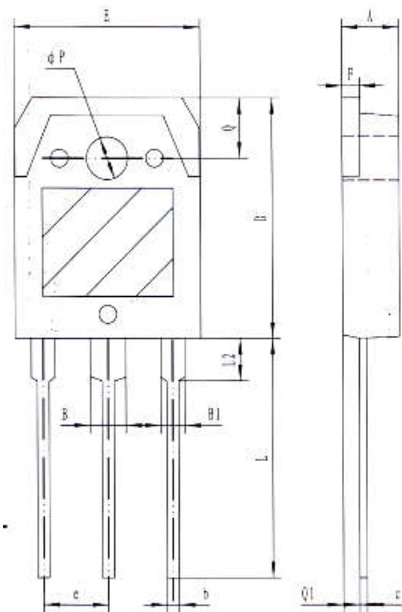


Safe Operating Area



外形尺寸 PACKAGE MECH MECHANICAL
TO-3P

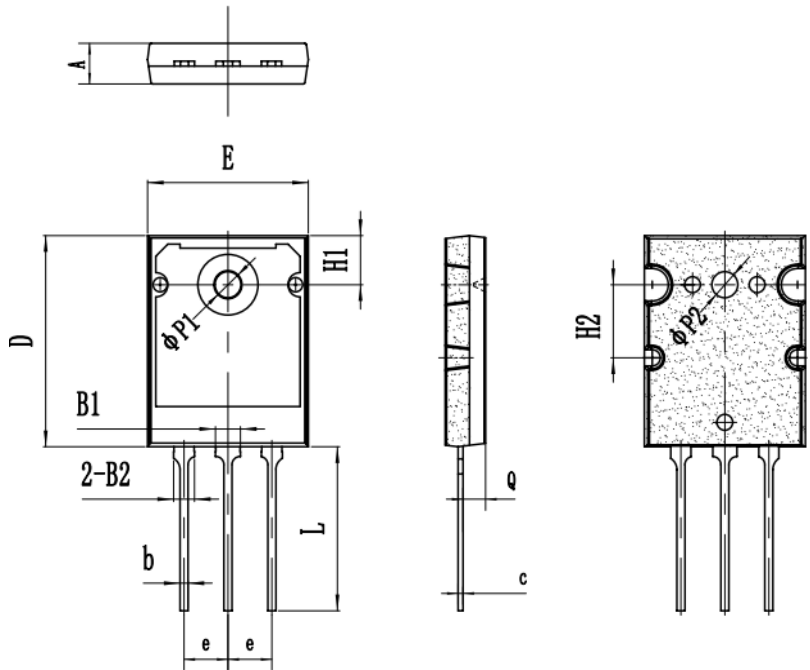
单位 Unit : mm



符号	尺寸 (mm)
A	4.60-5.00
B	2.90-3.20
B1	1.90-2.20
b	0.90-1.10
c	0.50-0.70
D	19.40-20.40
E	15.40-15.80
e	5.45(TYP)
F	1.40-1.60
L	19.50-20.50
L2	3.30-3.70
P	3.10-3.50
Q	4.90-5.10
Q1	1.30-1.50

外形尺寸 PACKAGE MECHANICAL DATA
TO-3PL(T)

单位 Unit : mm



符号	尺寸 (mm)
A	4.70-5.30
B1	2.80-3.20
B2	2.30-2.70
b	0.80-1.25
c	0.59-0.61
D	25.5-26.5
E	19.5-20.5
e	5.45(typ)
H1	6.00-6.10
H2	8.95-9.05
L	20.0-20.4
Q	2.75-2.85
P1	3.45-3.55
P2	3.20-3.30