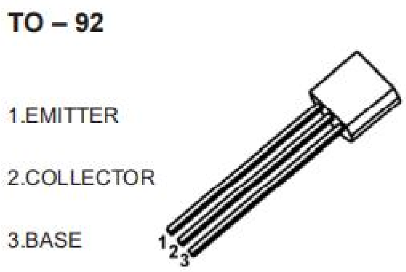
TO-92 Bipolar Transistor 双极型三极管



■Features 特点

PNP General Purpose 通用

■Absolute Maximum Ratings 最大额定值

Characteristic 特性参数	Symbol 符号	Rat 额定值	Unit 单位
Collector-Base Voltage 集电极基极电压	V_{CBO}	-35	V
Collector-Emitter Voltage 集电极发射极电压	V_{CEO}	-30	V
Emitter-Base Voltage 发射极基极电压	V_{EBO}	-5	V
Collector Current 集电极电流	I_C	-800	mA
Power dissipation 耗散功率	$P_C(T_a=25℃)$	625	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\theta JA}$	200	℃/W
Junction and Storage Temperature 结温和储藏温度	T_J,T_{stg}	-55to+150℃	

■Device Marking 产品打标

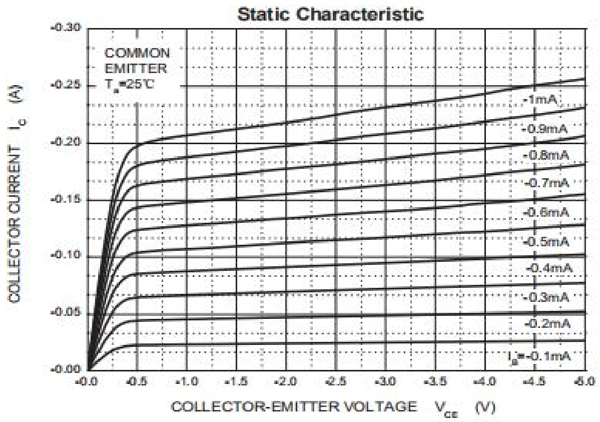
$H_{FE}(1)$	100-200(O)	160-320(Y)
Mark	A1271	

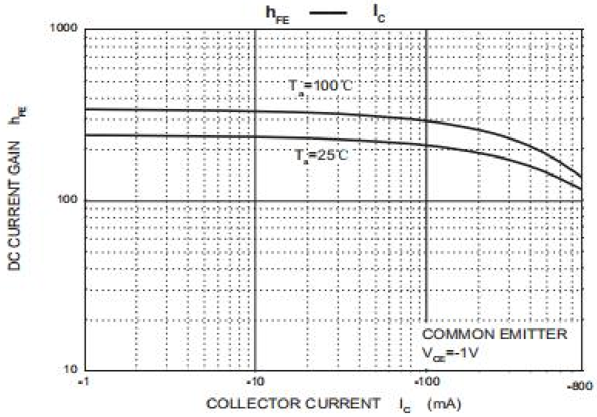
■Electrical Characteristics 电特性

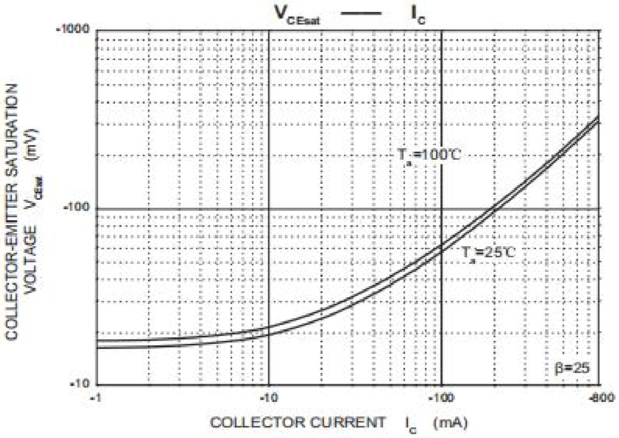
(T_A=25℃ unless otherwise noted 如无特殊说明，温度为 25℃)

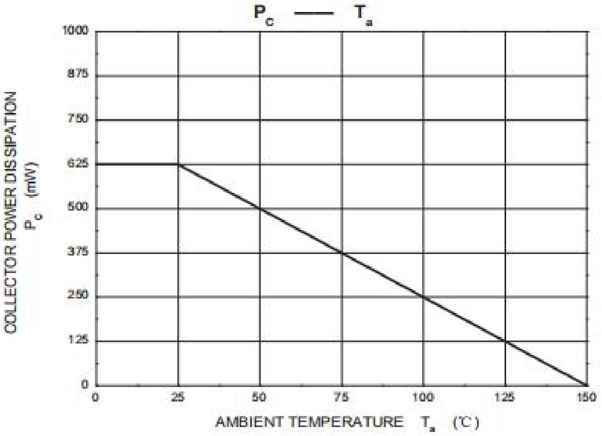
Characteristic 特性参数	Symbol 符号	Min 最小值	Type 典型值	Max 最大值	Unit 单位
Collector-Base Breakdown Voltage 集电极基极击穿电压(I_C= -100μA，I_E=0)	BV_{CBO}	-35	—	—	V
Collector-Emitter Breakdown Voltage 集电极发射极击穿电压(I_C= -10mA，I_B=0)	BV_{CEO}	-30	—	—	V
Emitter-Base Breakdown Voltage 发射极基极击穿电压(I_E= -100μA，I_C=0)	BV_{EBO}	-5	—	—	V
Collector-Base Leakage Current 集电极基极漏电流(V_{CB}= -35V，I_E=0)	I_{CBO}	—	—	-0.1	μA
Collector-Emitter Leakage Current 集电极发射漏电流(V_{CE}= -25V，I_E=0)	I_{CBO}	—	—	-0.2	μA
Emitter-Base Leakage Current 发射极基极漏电流(V_{EB}= -5V，I_C=0)	I_{EBO}	—	—	-0.1	μA
DC Current Gain 直流电流增益(V_{CE}= -1V，I_C= -100mA)	$H_{FE}(1)$	100	—	320	
DC Current Gain 直流电流增益(V_{CE}= -1V，I_C= -700mA)	$H_{FE}(2)$	35	—	—	
Collector-Emitter Saturation Voltage 集电极发射极饱和压降(I_C= -500mA，I_B= -20mA)	$V_{CE(sat)}$	—	—	-0.7	V
Base-Emitter On Voltage 基极发射极导通电压(V_{CE}= -1V，I_C= -10mA)	$V_{BE(on)}$	—	—	-0.8	V
Output Capacitance 输出电容(V_{CB}= -10V, I_E=0, f=1MHz)	Cob	—	19	—	pF
Transition Frequency 特征频率(V_{CE}= -5V，I_C= -10mA)	f_T	—	120	—	MHz

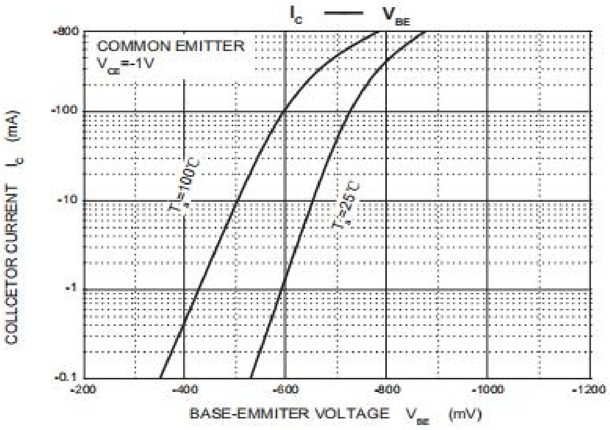
■Typical Characteristic Curve 典型特性曲线

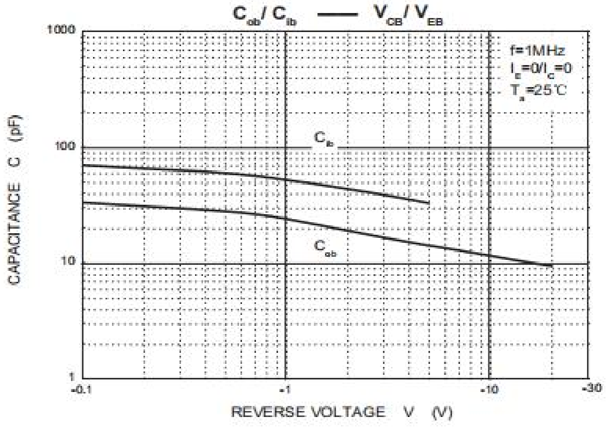

Static Characteristic


h_{FE} —— I_C

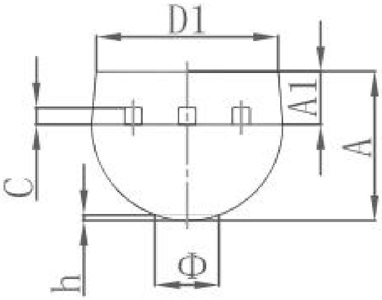

V_{CEsat} —— I_C

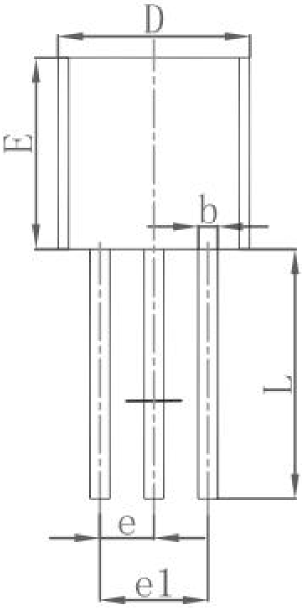

P_C —— T_a


I_C —— V_{BE}


C_{ob}/ C_{ib} —— V_{CB}/ V_{EB}

■Dimension 外形封装尺寸





Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	3.300	3.700	0.130	0.146
A1	1.100	1.400	0.043	0.055
b	0.380	0.550	0.015	0.022
c	0.360	0.510	0.014	0.020
D	4.300	4.700	0.169	0.185
D1	3.430		0.135	
E	4.300	4.700	0.169	0.185
e	1.270 TYP		0.050 TYP	
e1	2.440	2.640	0.096	0.104
L	14.100	14.500	0.555	0.571
Φ		1.600		0.063
h	0.000	0.380	0.000	0.015