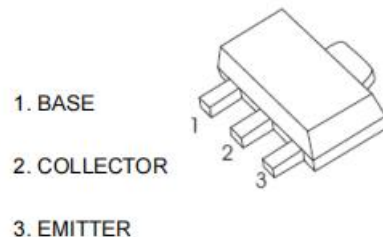


## SOT-89 Bipolar Transistor 双极型三极管

### ■ Features 特点

NPN Switching 开关



### ■ 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	$V_{CBO}$	60	V
Collector-Emitter Voltage 集电极发射极电压	$V_{CEO}$	40	V
Emitter-Base Voltage 发射极基极电压	$V_{EBO}$	6	V
Collector Current 集电极电流	$I_C$	200	mA
Power dissipation 耗散功率	$P_C(T_a=25^\circ\text{C})$	500	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\theta JA}$	250	$^\circ\text{C}/\text{W}$
Junction and Storage Temperature 结温和储藏温度	$T_J, T_{stg}$	-55to+150 $^\circ\text{C}$	

### ■ Device Marking 产品打标

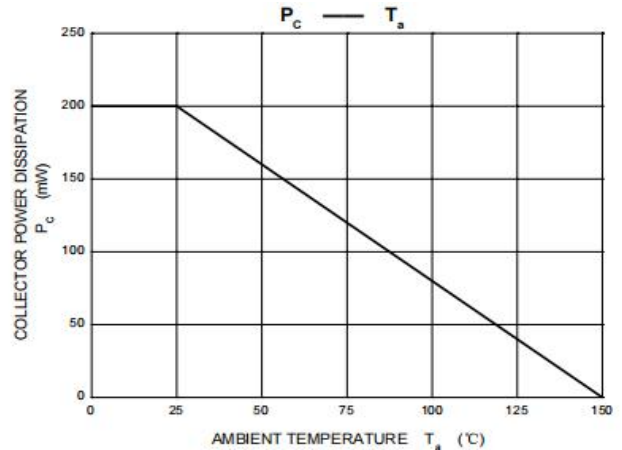
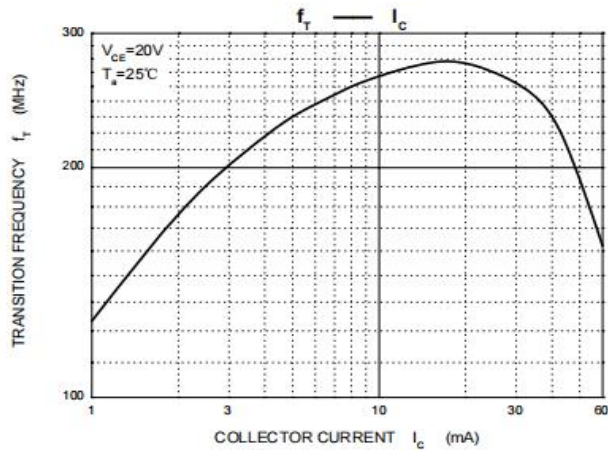
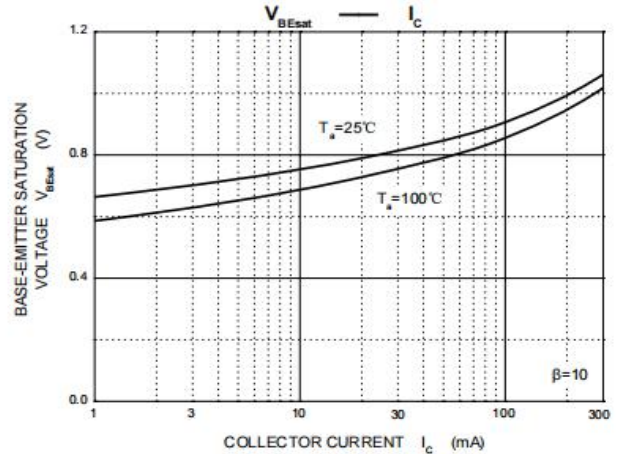
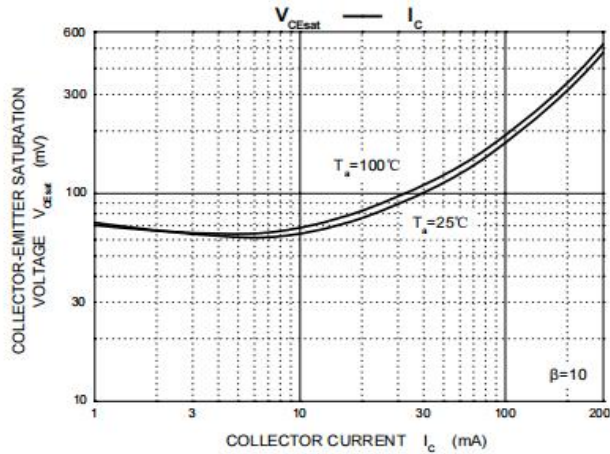
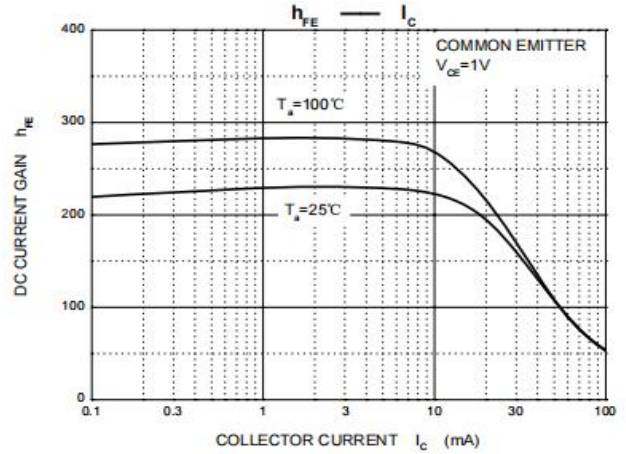
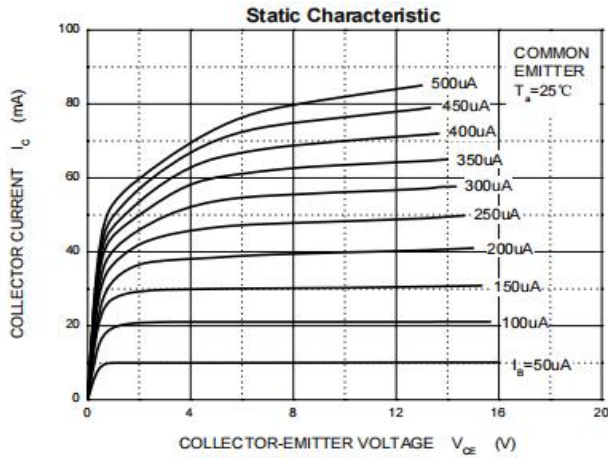
PXT3904=1A

■ Electrical Characteristics 电特性

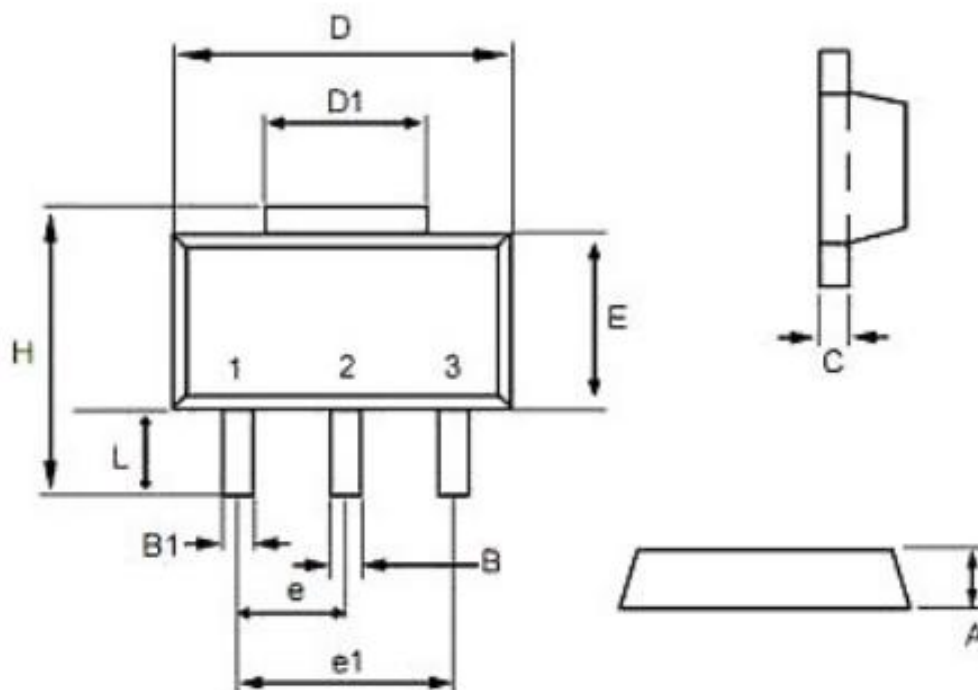
( $T_A=25^{\circ}\text{C}$  unless otherwise noted 如无特殊说明, 温度为  $25^{\circ}\text{C}$ )

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( $I_C=10\mu\text{A}$ , $I_E=0$ )	$BV_{CBO}$	60	—	—	V
Collector-Emitter Breakdown Voltage 集电极发射极击穿电压( $I_C=1\text{mA}$ , $I_B=0$ )	$BV_{CEO}$	40	—	—	V
Emitter-Base Breakdown Voltage 发射极基极击穿电压( $I_E=10\mu\text{A}$ , $I_C=0$ )	$BV_{EBO}$	6	—	—	V
Collector-Base Leakage Current 集电极基极漏电流( $V_{CB}=60\text{V}$ , $I_E=0$ )	$I_{CBO}$	—	—	100	nA
Collector-Emitter Leakage Current 集电极发射极漏电流( $V_{CE}=30\text{V}$ , $V_{BE}=-3\text{V}$ )	$I_{CEX}$	—	—	100	nA
Emitter-Base Leakage Current 发射极基极漏电流( $V_{EB}=5\text{V}$ , $I_C=0$ )	$I_{EBO}$	—	—	100	nA
DC Current Gain( $V_{CE}=1\text{V}$ , $I_C=10\text{mA}$ ) 直流电流增益( $V_{CE}=1\text{V}$ , $I_C=50\text{mA}$ ) ( $V_{CE}=1\text{V}$ , $I_C=100\text{mA}$ )	$H_{FE}$	100 60 30	—	300	
Collector-Emitter Saturation Voltage 集电极发射极饱和压降( $I_C=50\text{mA}$ , $I_B=5\text{mA}$ )	$V_{CE(sat)}$	—	—	0.3	V
Base-Emitter Saturation Voltage 基极发射极饱和压降( $I_C=50\text{mA}$ , $I_B=5\text{mA}$ )	$V_{BE(sat)}$	—	—	0.95	V
Transition Frequency 特征频率( $V_{CE}=20\text{V}$ , $I_C=10\text{mA}$ )	$f_T$	300	—	—	MHz
Delay Time 延迟时间 ( $V_{CC}=3\text{V}$ , $V_{BE}=-0.5\text{V}$ , $I_C=10\text{mA}$ , $I_{B1}=1\text{mA}$ )	$t_d$	—	—	35	ns
Rise Time 上升时间 ( $V_{CC}=3\text{V}$ , $V_{BE}=-0.5\text{V}$ , $I_C=10\text{mA}$ , $I_{B1}=1\text{mA}$ )	$t_r$	—	—	35	ns
Storage Time 贮存时间 ( $V_{CC}=3\text{V}$ , $I_C=10\text{mA}$ , $I_{B1}=I_{B2}=1\text{mA}$ )	$t_s$	—	—	200	ns
Fall Time 下降时间 ( $V_{CC}=3\text{V}$ , $I_C=10\text{mA}$ , $I_{B1}=I_{B2}=1\text{mA}$ )	$t_f$	—	—	50	ns

■ Typical Characteristic Curve 典型特性曲线



■Dimension 外形封装尺寸



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.40	1.60	0.055	0.063
B	0.40	0.56	0.016	0.022
B1	0.35	0.48	0.014	0.019
C	0.35	0.44	0.014	0.017
D	4.40	4.60	0.173	0.181
D1	1.35	1.83	0.053	0.072
e	1.45	1.55	0.057	0.061
e1	2.95	3.05	0.116	0.120
E	2.29	2.60	0.090	0.102
H	3.75	4.25	0.148	0.167
L	0.80	1.20	0.031	0.047