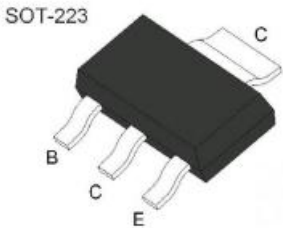




SOT-223 Bipolar Transistor 双极型三极管

■ Features 特点

NPN High Voltage 高压



■ 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}	180	V
Collector-Emitter Voltage 集电极发射极电压	V_{CEO}	160	V
Emitter-Base Voltage 发射极基极电压	V_{EBO}	6	V
Collector Current 集电极电流	I_C	600	mA
Power dissipation 耗散功率	$P_C(T_a=25^{\circ}C)$	2000	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\theta JA}$	250	$^{\circ}C/W$
Junction and Storage Temperature 结温和储藏温度	T_J, T_{stg}	-55to+150 $^{\circ}C$	

■ Device Marking 产品打标

CZT5551-2AF=CZT5551



■Electrical Characteristics 电特性

($T_A=25^{\circ}\text{C}$ unless otherwise noted 如无特殊说明, 温度为 25°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($I_C=100\mu\text{A}$, $I_E=0$)	BV_{CBO}	180	—	—	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}	160	—	—	V
Emitter-Base Breakdown Voltage 发射极基极击穿电压($I_E=100\mu\text{A}$, $I_C=0$)	BV_{EBO}	6	—	—	V
Collector-Base Leakage Current 集电极基极漏电流($V_{CB}=120\text{V}$, $I_E=0$)	I_{CBO}	—	—	50	nA
Emitter-Base Leakage Current 发射极基极漏电流($V_{EB}=4\text{V}$, $I_C=0$)	I_{EBO}	—	—	50	nA
DC Current Gain 直流电流增益($V_{CE}=5\text{V}$, $I_C=1\text{mA}$)	$H_{FE}(1)$	80	—	—	
DC Current Gain 直流电流增益($V_{CE}=5\text{V}$, $I_C=10\text{mA}$)	$H_{FE}(2)$	80	—	400	
DC Current Gain 直流电流增益($V_{CE}=5\text{V}$, $I_C=100\text{mA}$)	$H_{FE}(3)$	30	—	—	
Collector-Emitter Saturation Voltage 集电极发射极饱和压降($I_C=10\text{mA}$, $I_B=1\text{mA}$) ($I_C=50\text{mA}$, $I_B=5\text{mA}$)	$V_{CE(sat)}$	—	—	0.15 0.2	V
Base-Emitter Saturation Voltage 基极发射极饱和压降($I_C=10\text{mA}$, $I_B=1\text{mA}$) ($I_C=50\text{mA}$, $I_B=5\text{mA}$)	$V_{BE(sat)}$	—	—	1 1	V
Transition Frequency 特征频率($V_{CE}=10\text{V}$, $I_C=10\text{mA}$)	f_T	100	—	—	MHz
Output Capacitance 输出电容($V_{CB}=10\text{V}$, $I_E=0$, $f=1\text{MHz}$)	C_{ob}	—	—	6	pF

■ Typical Characteristic Curve 典型特性曲线

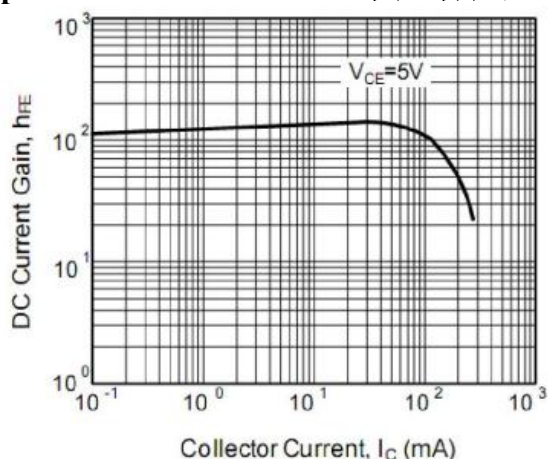


Figure 1. TDC Current Gain

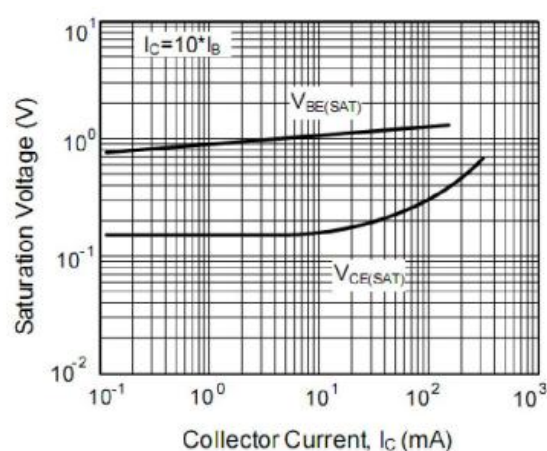


Figure 2. Saturation Voltage

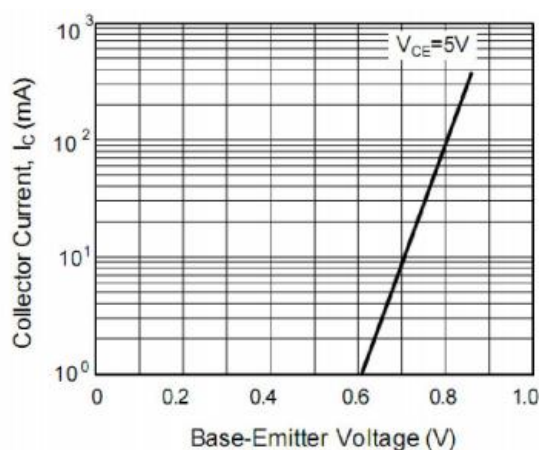


Figure 3. Base-Emitter on Voltage

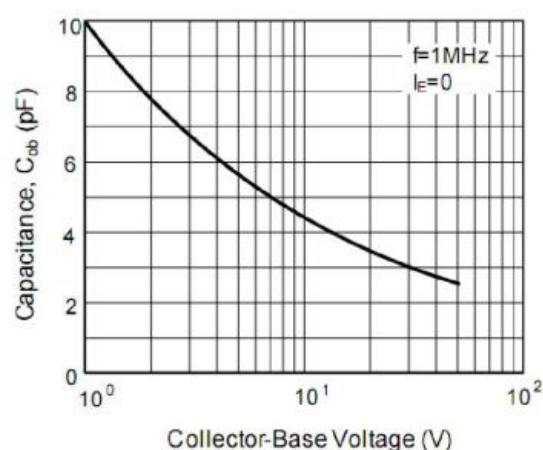


Figure 4. Collector Output Capacitance

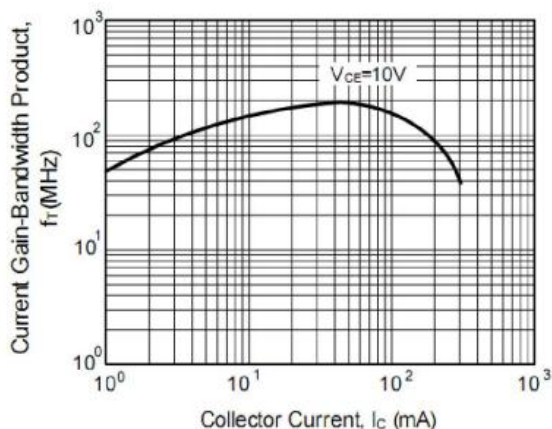
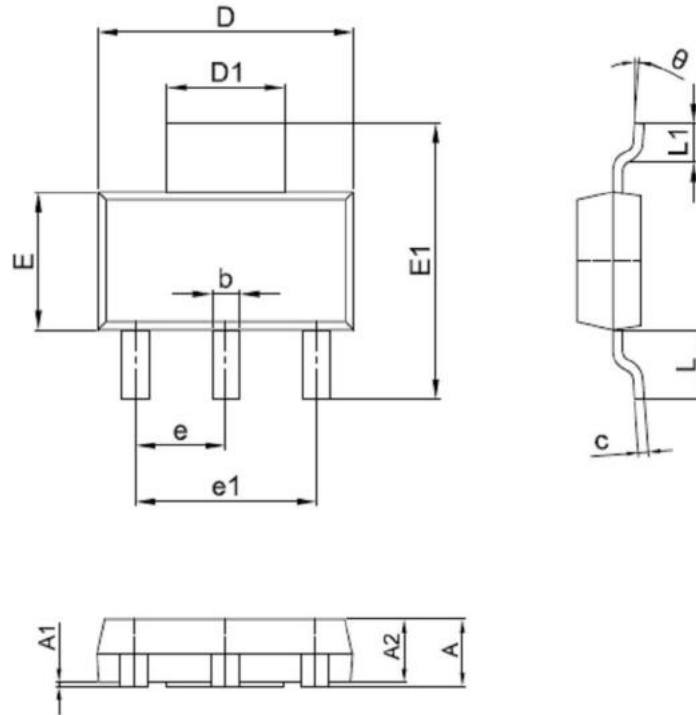


Figure 5. Current Gain-Bandwidth Product

■Dimension 外形封装尺寸



Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	1.50	1.80	0.059	0.071
A1	0.00	0.10	0.000	0.004
A2	1.50	1.70	0.059	0.067
b	0.65	0.75	0.026	0.030
c	0.20	0.30	0.008	0.012
D	6.40	6.60	0.252	0.260
D1	2.90	3.10	0.114	0.122
E	3.30	3.70	0.130	0.146
E1	6.85	7.15	0.270	0.281
e	2.20	2.40	0.087	0.094
e1	4.40	4.80	0.173	0.189
L	1.65	1.85	0.065	0.073
L1	0.90	1.15	0.035	0.045