



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

SOT-223 Plastic-Encapsulate Transistors

CZT122 TRANSISTOR (NPN)

FEATURES

- Complementary to CZT127
- Silicon Power Darlington Transistors
- Low speed switching and amplifier applications

MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	5	A
P_C	Collector Power Dissipation	1	W
T_j	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-65-150	$^{\circ}\text{C}$

SOT-223

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1. BASE
2. COLLECTOR
3. EMITTER

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=1\text{mA}, I_E=0$	100			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=30\text{mA}, I_B=0$	100			V
Collector cut-off current	I_{CBO}	$V_{CB}=100\text{V}, I_E=0$			200	μA
Base cut-off current	I_{CEO}	$V_{CE}=50\text{V}, I_B=0$			500	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			2	mA
DC current gain	$h_{FE(1)}$	$V_{CE}=3\text{V}, I_C=0.5\text{A}$	1000			
	$h_{FE(2)}$	$V_{CE}=3\text{V}, I_C=3\text{A}$	1000			
Collector-emitter saturation voltage	$V_{CE(sat)1}$	$I_C=3\text{A}, I_B=12\text{mA}$			2	V
	$V_{CE(sat)2}$	$I_C=5\text{A}, I_B=20\text{mA}$			4	V
Base-emitter voltage	$V_{BE(on)}$	$V_{CE}=3\text{V}, I_C=3\text{A}$			2.5	V
Transition frequency	f_T	$V_{CE}=4\text{V}, I_C=3\text{A}, f=1\text{MHz}$	4			MHz
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$			200	pF

Typical Characteristics

CZT122

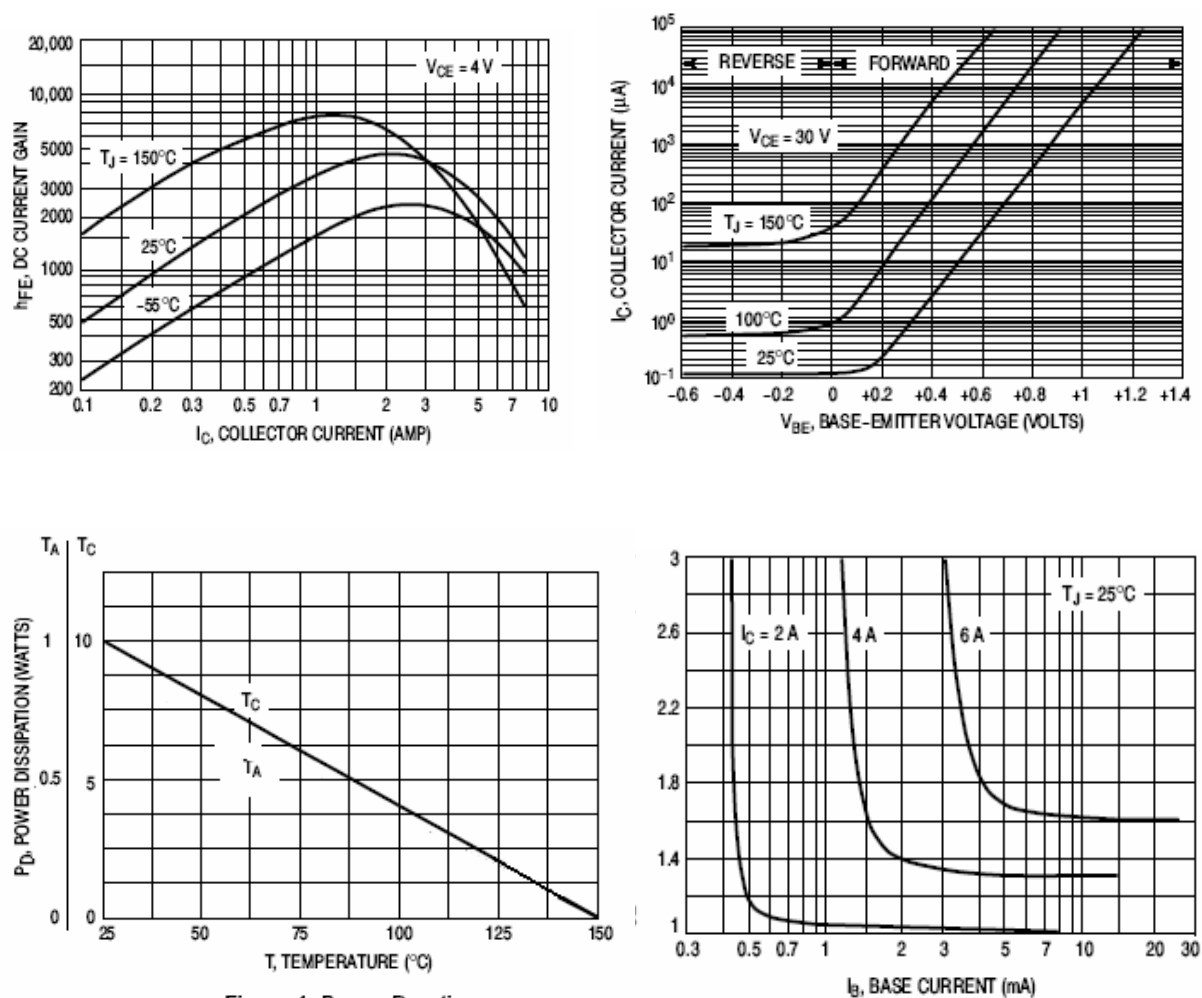


Figure 1. Power Derating