JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

SOT-223 Plastic-Encapsulate Transistors

CZT31C TRANSISTOR (NPN)

SOT-223

1. BASE
2. COLLECTOR
3. EMITTER

FEATURES

- Complementary to CZT32C
- Power amplifier applications up to 3.0 amps.

MAXIMUM RATINGS (T_A=25℃ 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	3	A
P_C	Collector Power Dissipation	1	W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-65-150	℃

ELECTRICAL CHARACTERISTICS(Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=1m A,I_E=0	100			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=30mA,I_B=0	100			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=3mA,I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=100V,I_E=0			200	uA
Base cut-off current	I_{CEO}	V_{CE}=60V,I_B=0			300	uA
Emitter cut-off current	I_{EBO}	V_{EB}=5V,I_C=0			1	mA
DC current gain	$h_{FE(1)}$*	V_{CE}=4V,I_C=1A	25			
	$h_{FE(2)}$ *	V_{CE}=4V,I_C=3A	10		100	
Collector-emitter saturation voltage	$V_{CE(sat)}$ *	I_C=3.0A,I_B=375mA			1.2	V
Base-emitter voltage	V_{BE} *	V_{CE}=4V,I_C=3A			1.8	V
Transition frequency	f_T	V_{CE}=10V,I_C=500mA,f=1MHz	3			MHz

*** Pulsed , 2%D.C.**

Typical Characteristics

CZT31C

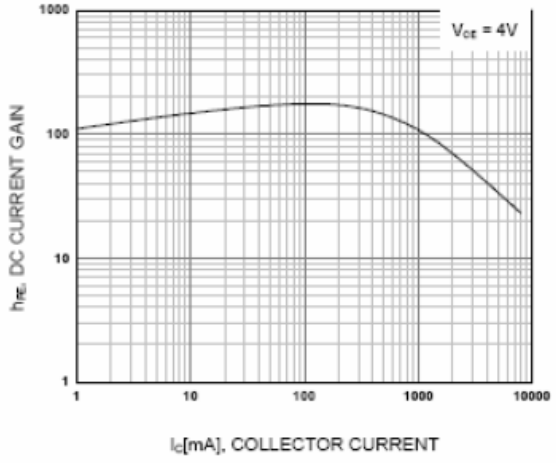

Figure 1. DC current Gain

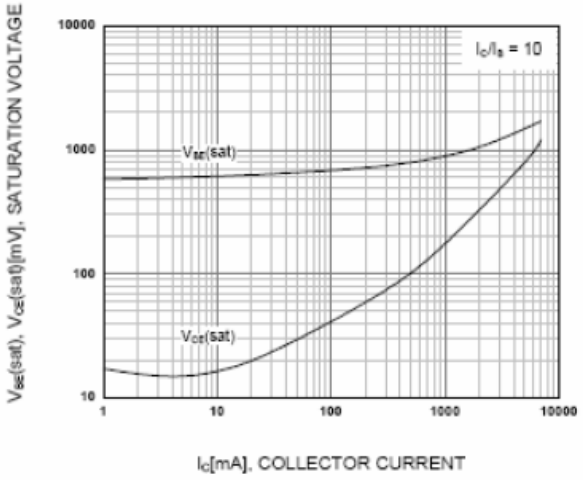

Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

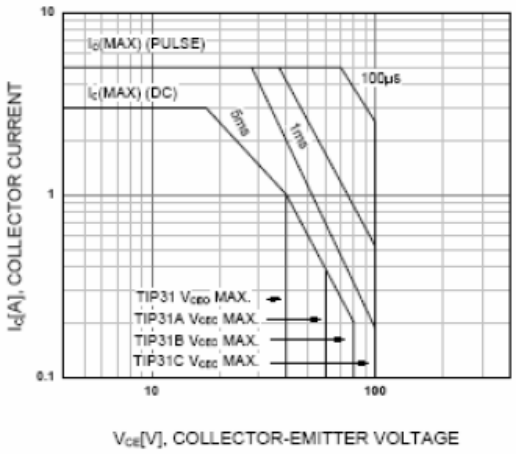

Figure 3. Safe Operating Area

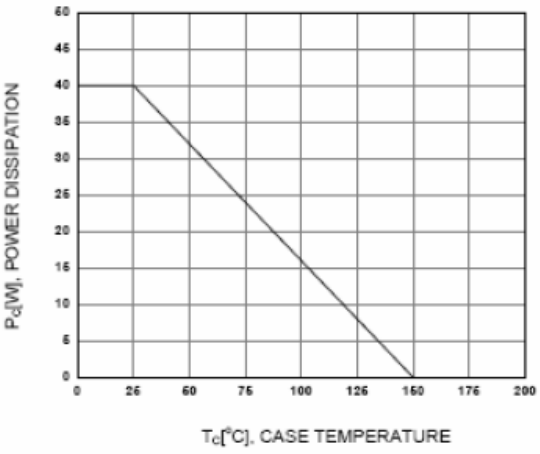

Figure 4. Power Derating