

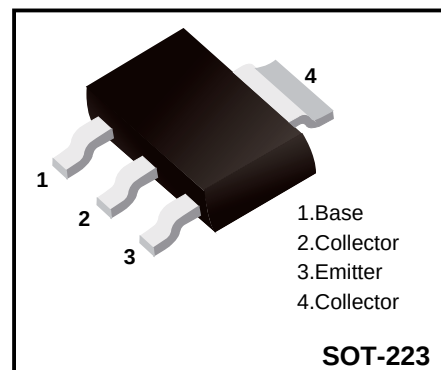
NPN Plastic-Encapsulate Transistors

Applications

➤Linear and switching industrial application

Features

➤Complementary to CZT32C



Marking Code

CZT31C

YFW CZT31C

Absolute Maximum Rating (Ta=25℃)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	BV_{CBO}	100	V
Collector-Emitter Voltage	BV_{CEO}	100	V
Emitter-Base Voltage	BV_{EBO}	5	V
Collector Current(DC)	I_C	3	A
Collector peak current	I_{CM}	5	A
Collector Dissipation	P_C	2	W
Junction Temperature	T_j	150	℃
Storage Temperature	T_{stg}	-65~150	℃

Electrical Characteristics (Ta=25℃)

Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Collector-Emitter Sustaining Voltage	$V_{CEO(sus)}$	$I_C = 30mA, I_B = 0$	100			V
Collector cut-off current	I_{CEO}	$V_{CE} = 60V, I_E = 0$			0.3	mA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5V, I_E = 0$			1	mA
Collector cut-off current	I_{CES}	$V_{CE} = 100V, V_{BE} = 0$			0.2	mA
DC current gain*	h_{FE}	$V_{CE} = 4V, I_C = 1A$ $V_{CE} = 4V, I_C = 3A$	25 10		100	
Collector-emitter saturation voltage*	$V_{CE(sat)}$	$I_C = 3A, I_B = 375mA$			1.2	V
Base-Emitter ON Voltage*	$V_{BE(on)}$	$V_{CE} = 4V, I_C = 3A$			1.8	V
Current Gain Bandwidth Product*	f_T	$V_{CE} = 10V, I_C = 500mA$	3.0			MHz

* Pulse Test : $PW \leq 300\mu s$, Duty cycle $\leq 2\%$

Electrical characteristics

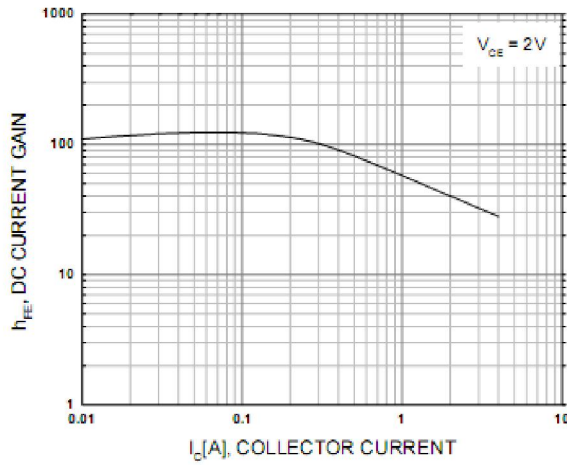
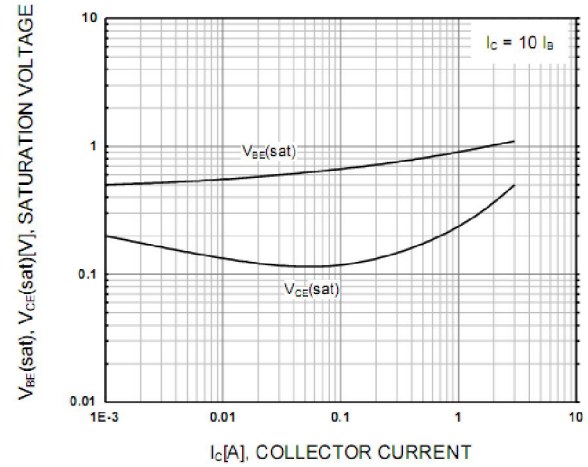


Figure 1. DC current Gain



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

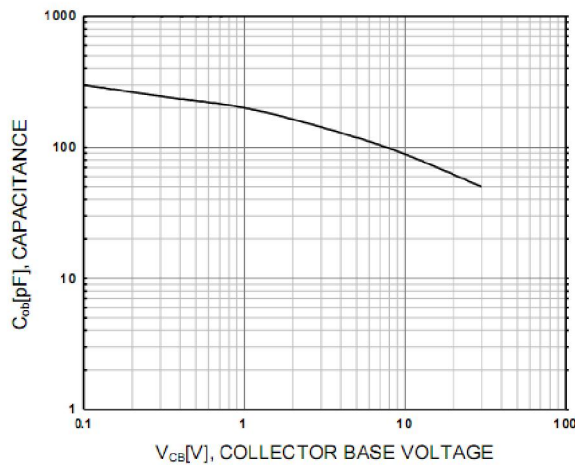


Figure 3. Collector Capacitance

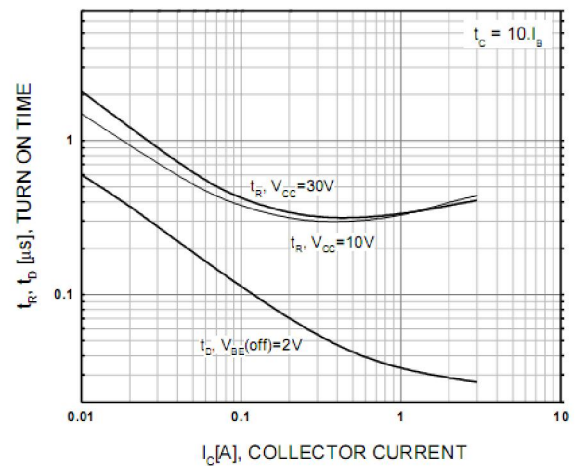


Figure 4. Turn On Time

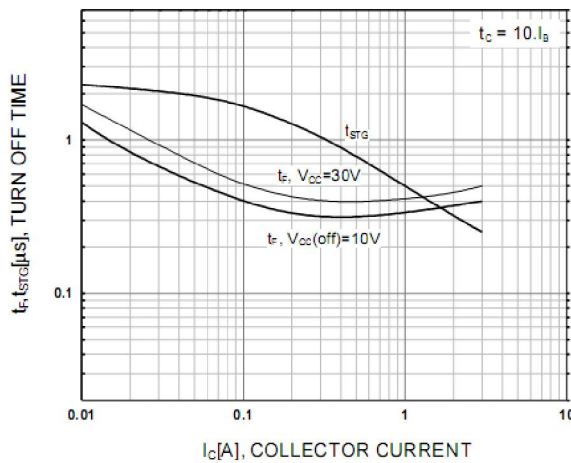


Figure 5. Turn Off Time

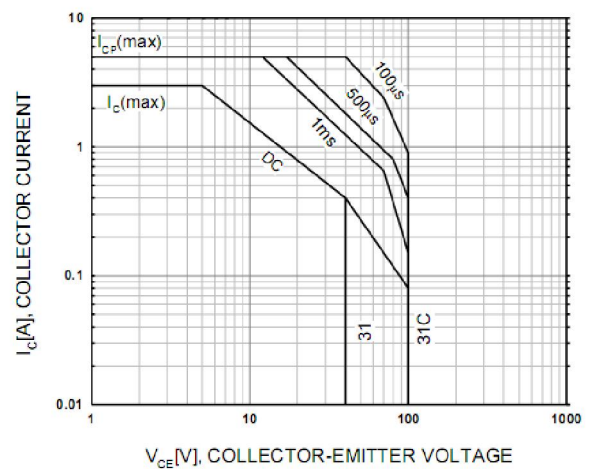


Figure 6. Safe Operating

Ordering information

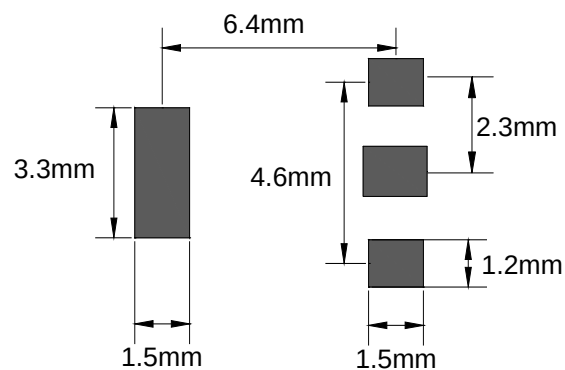
Package	Packing Description	Base Quantity	Packing Quantity
SOT-223	Tape/Reel, 7" reel	1000pcs/Reel	6000PCS/Box 30000PCS/Carton
	Tape/Reel, 13" reel	2500pcs/Reel	5000PCS/Box 30000PCS/Carton

Package Dimensions

SOT-223

Dlm	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

The recommended mounting pad size



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