CZT5551 NPN

SOT-223 Plastic-Encapsulate Transistors

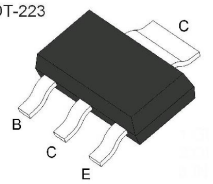
Applications

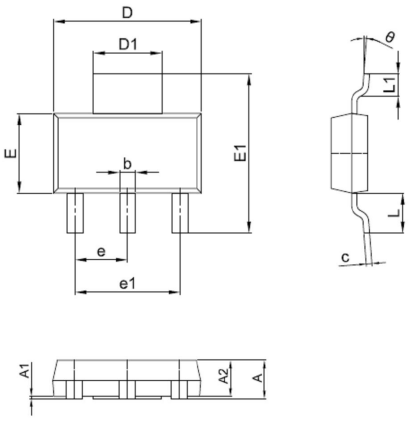
- Telephone Switching Circuit
- Amplifier

Features

- High Collector-Emitter Voltage : BV_{CEO}=160V
- High current gain

SOT-223





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

Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	BV_{CBO}	180	V
Collector-Emitter Voltage	BV_{CEO}	160	V
Emitter-Base Voltage	BV_{EBO}	6	V
Collector Current	I_C	600	mA
Collector Power Dissipation	P_C	2	W
Junction Temperature	Tj	150	℃
Storage Temperature	Tstg	-55～＋150	℃

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Electrical Characteristics (Ta=25℃)

Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Collector-base breakdown voltage	BV_{CBO}	I_C = 100μA，I_E = 0	180			V
Collector-emitter breakdown voltage	BV_{CEO}	I_C = 1mA，I_B = 0	160			V
Emitter-base breakdown voltage	BV_{EBO}	I_E = 100μA，I_C = 0	6			V
Collector cut-off current	I_{CBO}	V_{CB} =120V，I_E = 0			50	nA
Emitter cut-off current	I_{EBO}	V_{EB} = 4V，I_C = 0			50	nA
DC current gain	h_{FE}	V_{CE} = 5V，I_C= 1mA	80			
		V_{CE} = 5V，I_C= 10mA	80		400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 50mA，I_B = 5mA			0.2	V
Base -emitter saturation voltage	$V_{BE(sat)}$	I_C = 50mA，I_B = 5mA			1.0	V
Transition frequency	f_T	V_{CE} = 10V，I_B = 10mA	100			MH_Z
Output Capacitance	C_{ob}	V_{CB} =10V,I_E = 0,f=1MHz			6	pF

Note: Pulse test: P W <300μs, Duty Cycle<2%

h_{FE} Classification

Classification	A	B	C
Range	80~170	150~240	200~400

RATING AND CHARACTERISTIC CURVES (CZT5551)

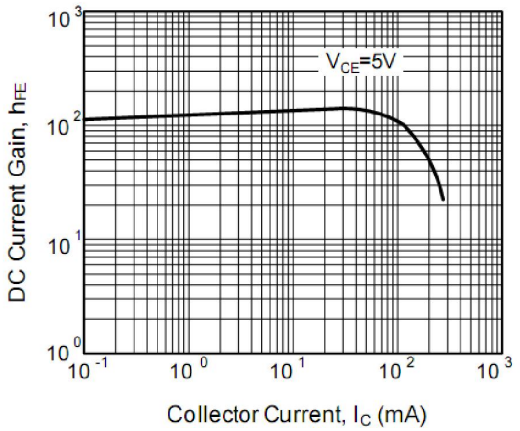

Figure 1. TDC Current Gain

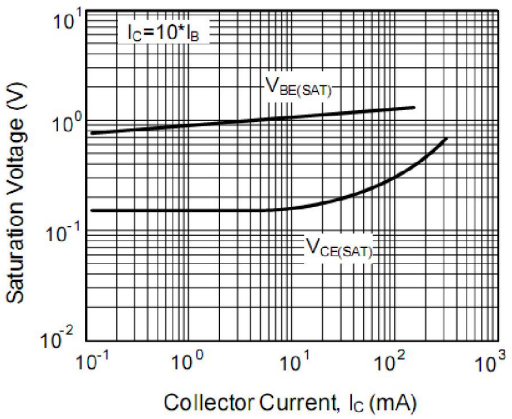

Figure 2. Saturation Voltage

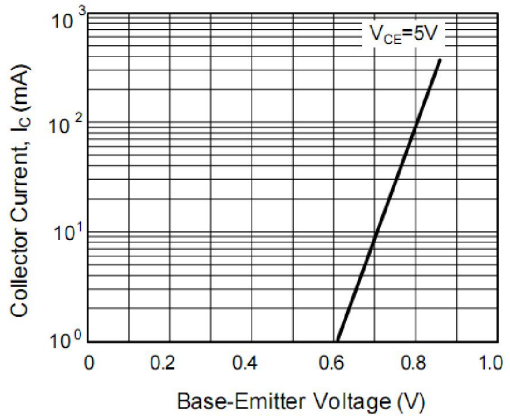

Figure 3. Base-Emitter on Voltage

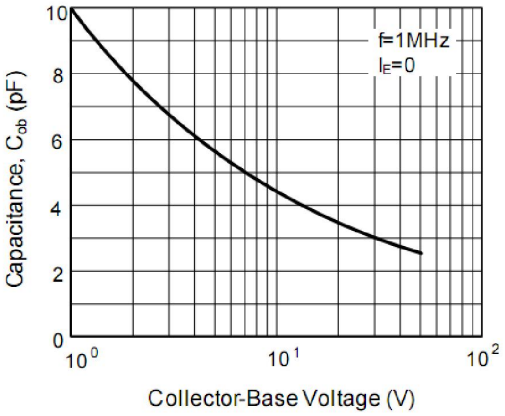

Figure 4. Collector Output Capacitance

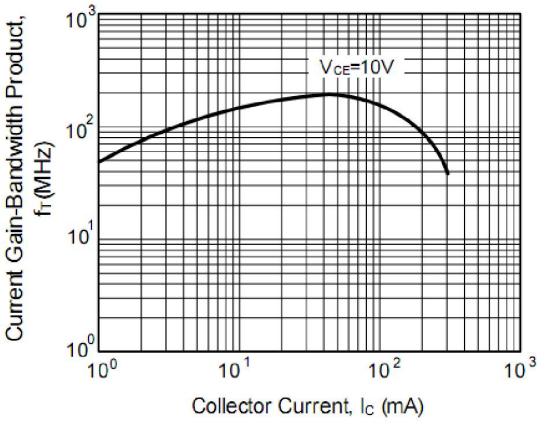

Figure 5. Current Gain-Bandwidth Product