

NPN Silicon Transistor

CZT5551

■ Features

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■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CB0}	180	V
Collector-Emitter Voltage	V_{CE0}	160	V
Emitter-Base Voltage	V_{EB0}	6	V
Collector Current	I_C	600	mA
Power Dissipation	P_D	2	W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to 150	$^\circ\text{C}$
Thermal Resistance	Θ_{JA}	62.5	$^\circ\text{C/W}$

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Symbol	Testconditons	Min	Max	Unit
I_{CBO}	$V_{CB}=120\text{V}$		50	nA
I_{CBO}	$V_{CB}=120\text{V}, T_A=100^\circ\text{C}$		50	mA
I_{EBO}	$V_{EB}=4.0\text{V}$		50	nA
B_{VCBO}	$I_C=100\mu\text{A}$	180		V
B_{VCEO}	$I_C=1.0\text{mA}$	160		V
B_{VEBO}	$I_E=10\mu\text{A}$	6.0		V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		0.15	V
$V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		0.20	V
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		1.00	V
$V_{BE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		1.00	V
h_{FE}	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}$	80		
	$V_{CE}=5.0\text{V}, I_C=10\text{mA}$	80	250	
	$V_{CE}=5.0\text{V}, I_C=50\text{mA}$	30		
f_T	$V_{CE}=10\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	100	300	MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		6.0	pF
C_{ib}	$V_{EB}=0.5\text{V}, I_C=0, f=1.0\text{MHz}$		20	pF
h_{fe}	$V_{CE}=10\text{V}, I_C=1.0\text{mA}, f=1.0\text{kHz}$	50	200	
NF	$V_{CE}=5.0\text{V}, I_C=200\mu\text{A}, R_s=10\Omega, f=10\text{Hz to } 15.7\text{kHz}$		8.0	dB

