



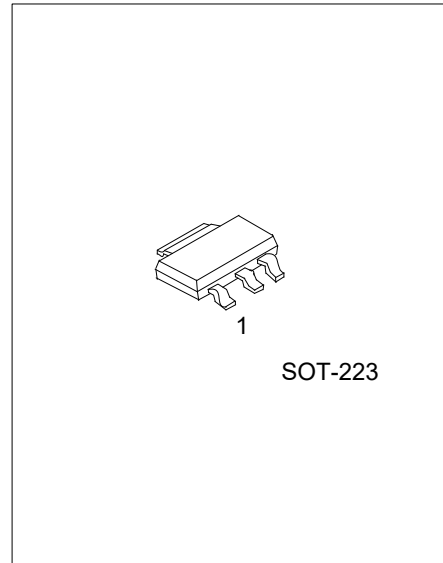
## PZT5551

## NPN SILICON TRANSISTOR

### HIGH VOLTAGE SWITCHING TRANSISTOR

#### FEATURES

- \* High Collector-Emitter Voltage:  
 $V_{CE0}=160V$
- \* High current gain



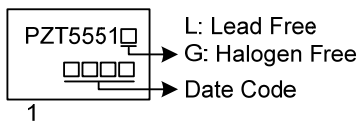
#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
PZT5551L-x-AA3-R	PZT5551G-x-AA3-R	SOT-223	B	C	E	Tape Reel

Note: Pin Assignment: B: Base C: Collector E: Emitter

<p>PZT5551G-x-AA3-R</p>	<p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Rank</p> <p>(4) Green Package</p>	<p>(1) R: Tape Reel</p> <p>(2) AA3: SOT-223</p> <p>(3) x: refer to Classification of hFE</p> <p>(4) G: Halogen Free and Lead Free, L: Lead Free</p>
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#### MARKING



■ ABSOLUTE MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ , unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	$V_{CBO}$	180	V
Collector-Emitter Voltage	$V_{CEO}$	160	V
Emitter-Base Voltage	$V_{EBO}$	6	V
DC Collector Current	$I_C$	600	mA
Power Dissipation	$P_C$	2	W
Operating Junction Temperature	$T_J$	+150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-65 ~ +150	$^\circ\text{C}$

Note Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	$\theta_{JA}$	62.5	$^\circ\text{C/W}$

■ ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ , unless otherwise specified)

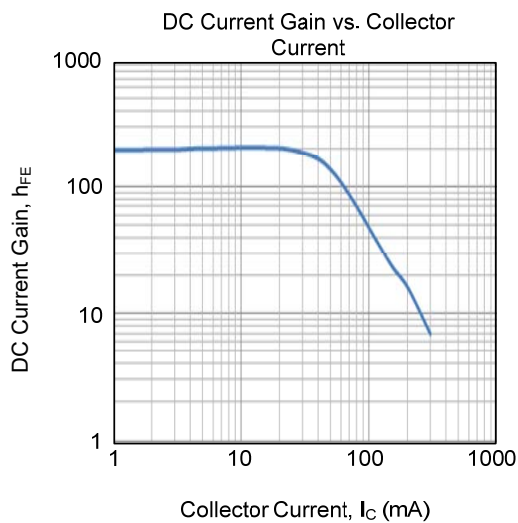
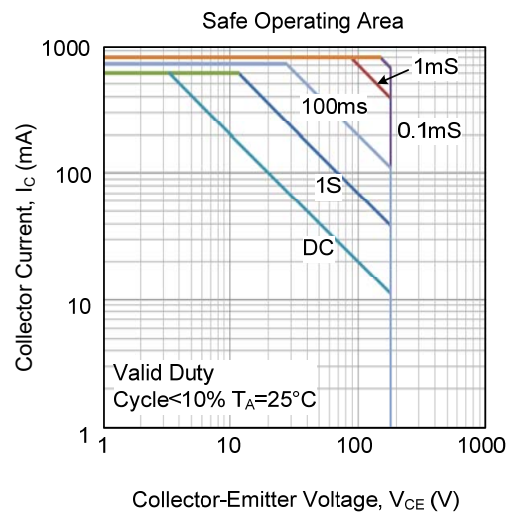
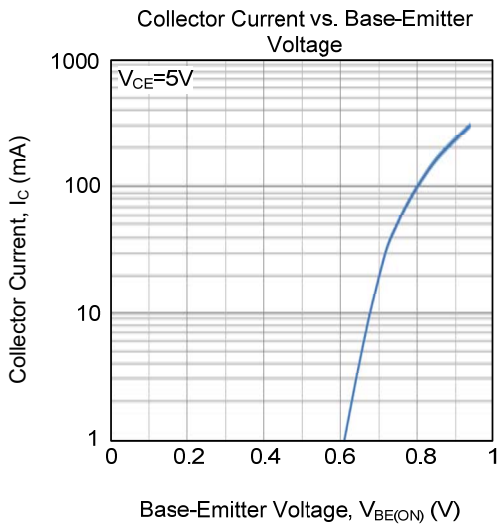
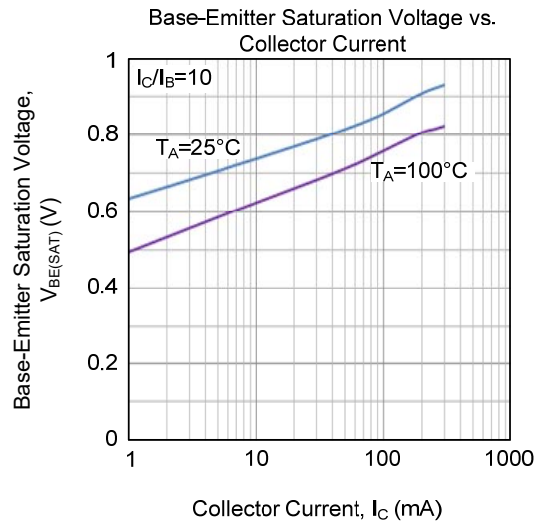
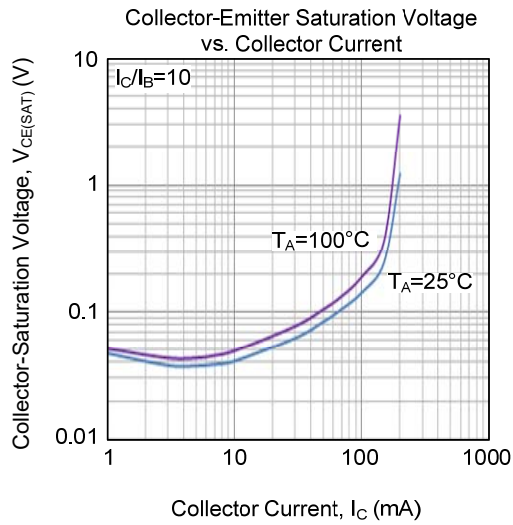
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	$BV_{CBO}$	$I_C=100\mu\text{A}, I_E=0$	180			V
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C=1\text{mA}, I_B=0$	160			V
Emitter-Base Breakdown Voltage	$BV_{EBO}$	$I_E=10\mu\text{A}, I_C=0$	6			V
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=120\text{V}, I_E=0$			50	nA
Emitter Cut-off Current	$I_{EBO}$	$V_{BE}=4\text{V}, I_C=0$			50	nA
DC Current Gain (Note)	$h_{FE}$	$V_{CE}=5\text{V}, I_C=1\text{mA}$	80			
		$V_{CE}=5\text{V}, I_C=10\text{mA}$	80	160	400	
		$V_{CE}=5\text{V}, I_C=50\text{mA}$	80			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=1\text{mA}$			0.15	V
		$I_C=50\text{mA}, I_B=5\text{mA}$			0.2	
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=1\text{mA}$			1	V
		$I_C=50\text{mA}, I_B=5\text{mA}$			1	
Current Gain Bandwidth Product	$f_T$	$V_{CE}=10\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	100		300	MHz
Output Capacitance	$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$			6.0	pF
Noise Figure	NF	$I_C=0.25\text{mA}, V_{CE}=5\text{V}$ $R_S=1\text{k}\Omega, f=10\text{Hz} \sim 15.7\text{kHz}$			8	dB

Note: Pulse test:  $P_W < 300\mu\text{s}$ , Duty Cycle  $< 2\%$ .

■ CLASSIFICATION OF  $h_{FE}$

RANK	A	B	C
RANGE	80-170	150-240	200-400

## TYPICAL CHARACTERISTICS



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