



PZT5551

NPN SILICON TRANSISTOR

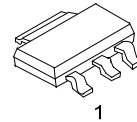
HIGH VOLTAGE SWITCHING TRANSISTOR

■ FEATURES

* High Collector-Emitter Voltage:

$V_{CEO}=160V$

* High current gain



SOT-223

■ 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

PZT5551L-x-AA3-R

- (1)Packing Type
- (2)Package Type
- (3)Rank
- (4)Lead Free

- (1) R: Tape Reel
- (2) AA3: SOT-223
- (3) x: refer to Classification of Hfe
- (4) G: Halogen Free, L: Lead Free

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

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	θ_{JA}	62.5	$^\circ\text{C/W}$

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

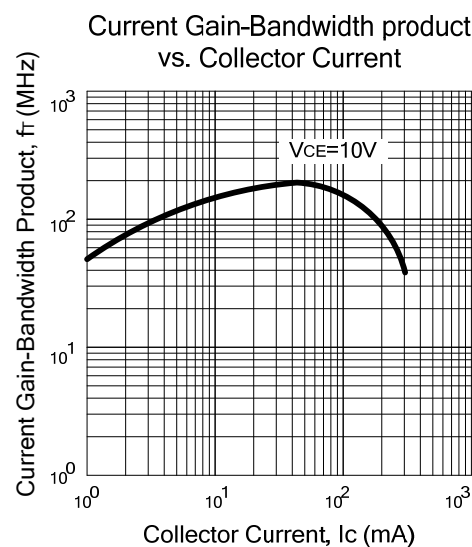
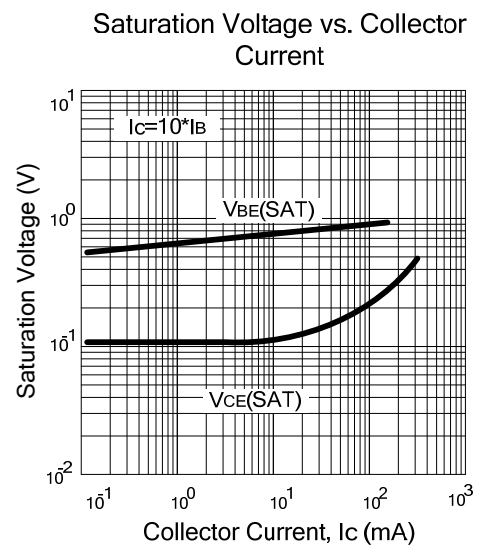
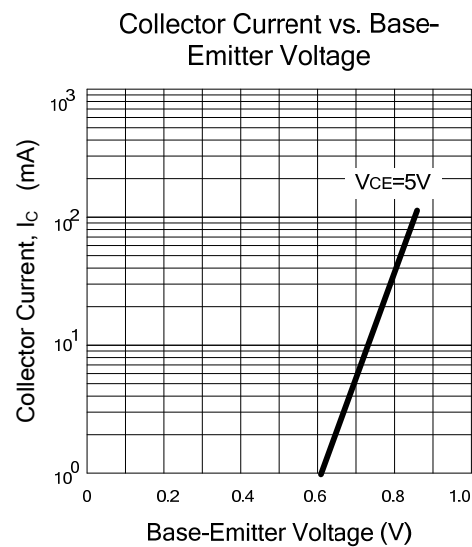
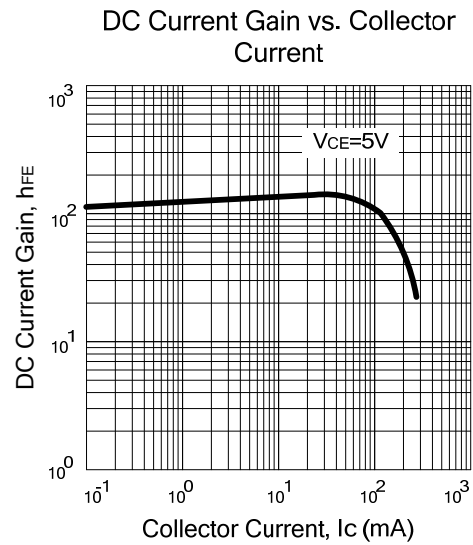
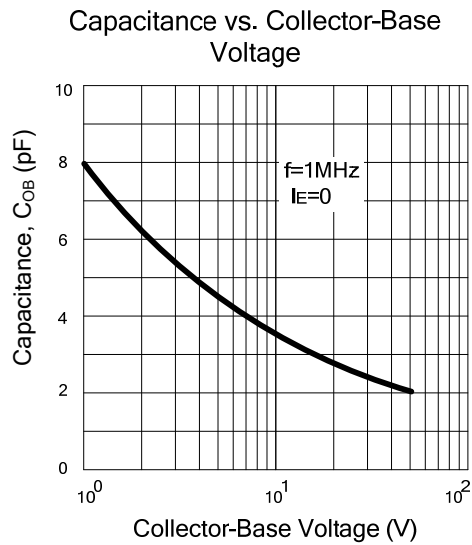
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C=100\mu\text{A}$, $I_E=0$	180			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C=1\text{mA}$, $I_B=0$	160			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E=10\mu\text{A}$, $I_C=0$	6			V
Collector Cut-off 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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