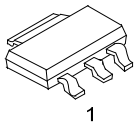
PZT5551

NPN SILICON TRANSISTOR

HIGH VOLTAGE SWITCHING TRANSISTOR



SOT-223

■ FEATURES

* High Collector-Emitter Voltage:
  V_{CEO}=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

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

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■ ABSOLUATE MAXIUM RATINGS (T_A = 25°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	°C
Storage Temperature	T_{STG}	-65 ~ +150	°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	°C/W

■ ELECTRICAL CHARACTERISTICS (T_A= 25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
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=10μA, 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_{BE}=4V, I_C=0			50	nA
DC Current Gain (Note)	h_{FE}	V_{CE}=5V, I_C=1mA	80			
		V_{CE}=5V, I_C=10mA	80	160	400	
		V_{CE}=5V, I_C=50mA	80			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C=10mA, I_B=1mA			0.15	V
		I_C=50mA, I_B=5mA			0.2	
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	I_C=10mA, I_B=1mA			1	V
		I_C=50mA, I_B=5mA			1	
Current Gain Bandwidth Product	f_T	V_{CE}=10V, I_C=10mA, f=100MHz	100		300	MHz
Output Capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz			6.0	pF
Noise Figure	NF	I_C=0.25mA, V_{CE}=5V R_S=1kΩ, f=10Hz ~ 15.7kHz			8	dB

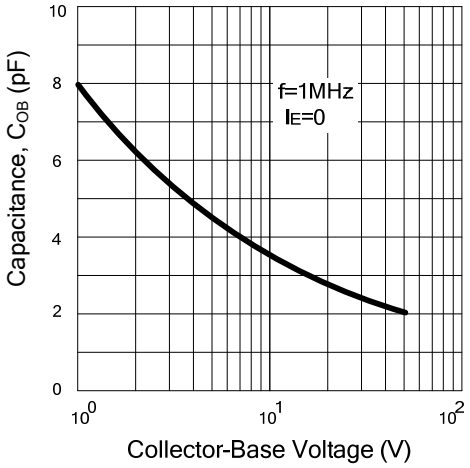
Note: Pulse test: P_W<300μs, Duty Cycle<2%

■ CLASSIFICATION OF h_{FE}

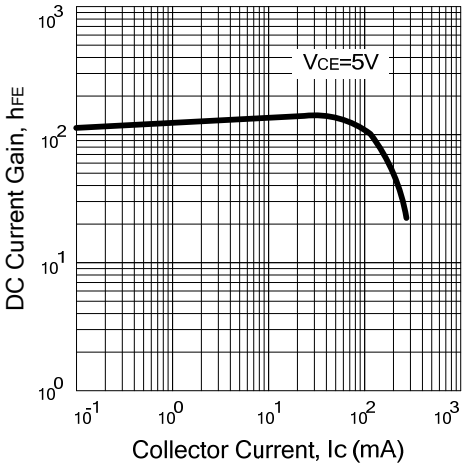
RANK	A	B	C
RANGE	80-170	150-240	200-400

■ TYPICAL CHARACTERICS

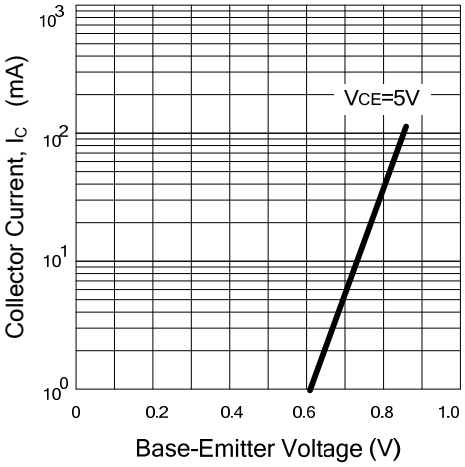
Capacitance vs. Collector-Base Voltage



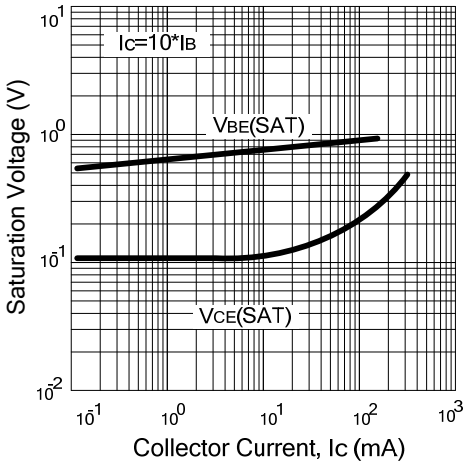
DC Current Gain vs. Collector Current



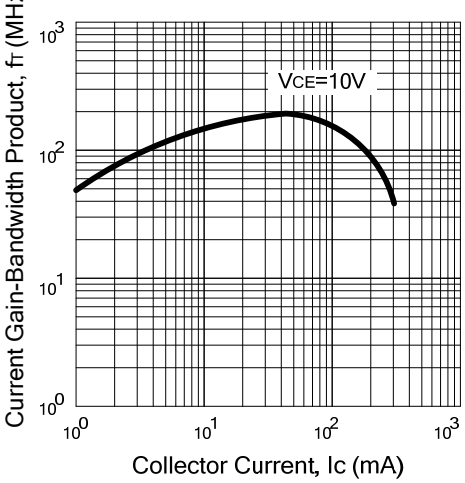
Collector Current vs. Base-Emitter Voltage



Saturation Voltage vs. Collector Current



Current Gain-Bandwidth product vs. Collector Current



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