



PZT5401

PNP EPITAXIAL SILICON TRANSISTOR

HIGH VOLTAGE SWITCHING TRANSISTOR

■ FEATURES

*High Collector-Emitter Voltage:

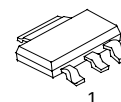
$V_{CE0} = -150V$

*High current gain

APPLICATIONS

*Telephone Switching Circuit

*Amplifier



SOT-223

*Pb-free plating product number: PZT5401L

■ PIN CONFIGURATION

PIN NO.	PIN NAME
1	Base
2	Collector
3	Emitter

www.DataSheet4U.com

■ ORDERING INFORMATION

Order Number		Package	Packing
Normal	Lead Free Plating		
PZT5401-AA3-R	PZT5401L-AA3-R	SOT-223	Tape & Reel

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

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	-160	V
Collector-Emitter Voltage	V_{CEO}	-150	V
Emitter-Base Voltage	V_{EBO}	-5	V
DC Collector Current	I_C	-600	mA
Power Dissipation	P_D	2	W
Operating Junction Temperature	T_J	+150	
Storage Temperature	T_{STG}	-40 ~ +150	

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	V_{CBO}	$I_C = 100\mu\text{A}$, $I_E = 0$	-160			V
Collector-Emitter Breakdown Voltage	V_{CEO}	$I_C = 1\text{mA}$, $I_B = 0$	-150			V
Emitter-Base Breakdown Voltage	V_{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}	$V_{BE} = -3\text{V}$, $I_C = 0$			-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		400	
		$V_{CE} = -5\text{V}$, $I_C = -50\text{mA}$	80			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -10\text{mA}$, $I_B = -1\text{mA}$			-0.2	V
		$I_C = -50\text{mA}$, $I_B = -5\text{mA}$			-0.5	
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		400	MHz
Output Capacitance	C_{ob}	$V_{CB} = -10\text{V}$, $I_E = 0$, $f = 1\text{MHz}$			6.0	pF
Noise Figure	N_F	$I_C = -0.25\text{mA}$, $V_{CE} = -5\text{V}$ $R_S = 1\text{k}\Omega$, $f = 10\text{Hz} \sim 15.7\text{kHz}$			8	dB

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

■ CLASSIFICATION OF h_{FE}

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

■ TYPICAL CHARACTERISTICS

Fig.1 Collector output Capacitance

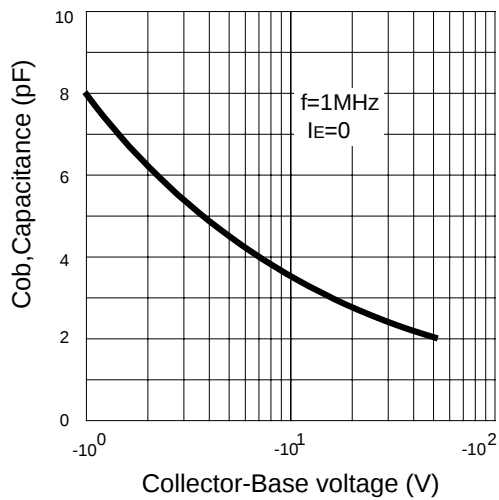


Fig.2 DC current Gain

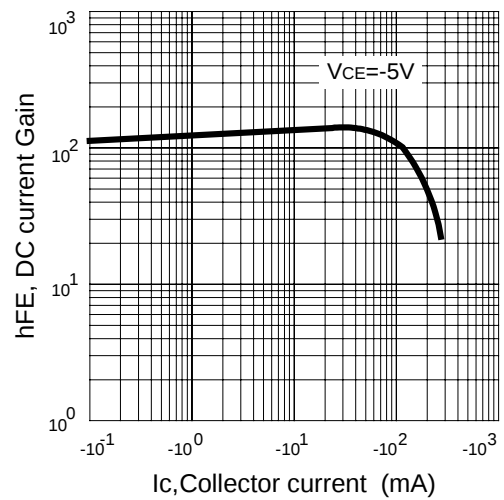


Fig.3 Base-Emitter on Voltage

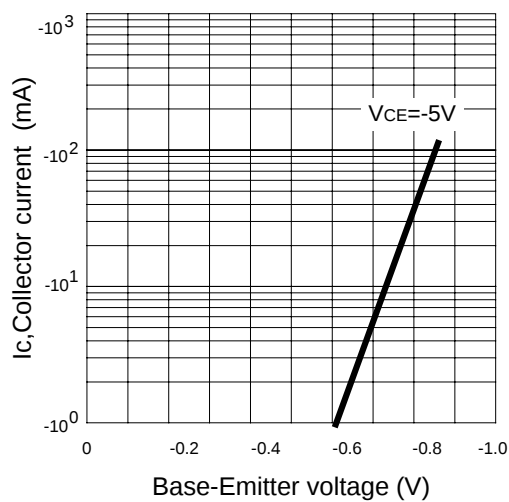


Fig.4 Saturation voltage

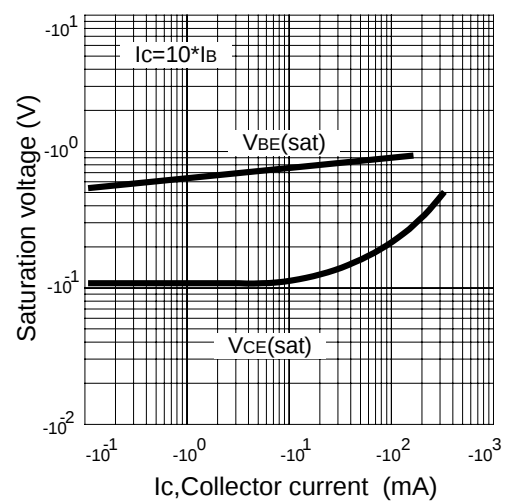
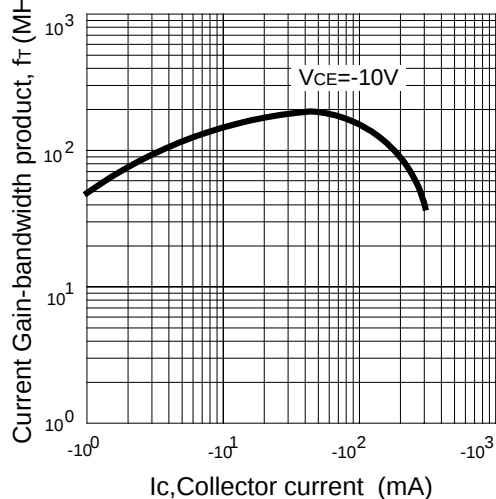


Fig.5 Current gain-bandwidth product



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